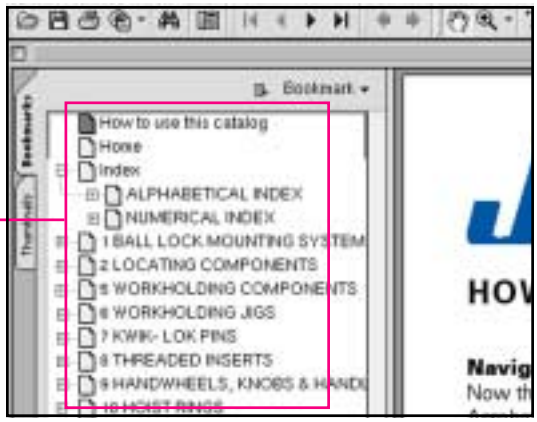
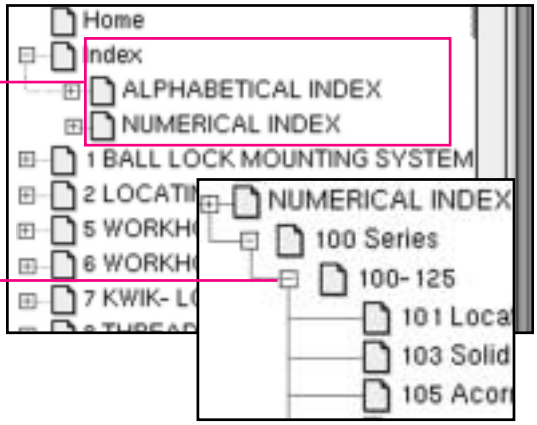
HOW TO USE THIS CATALOG

Welcome to the Jergens Master Catalog which contains a vast product offering from workholding, tooling and fixture components to hoist rings and power clamping systems.

You can find what you need several different ways.
You can find any part by using the Alphabetical Index, the Numerical Index, or by section. Each item is bookmarked, which will link directly to the page the items appear on.



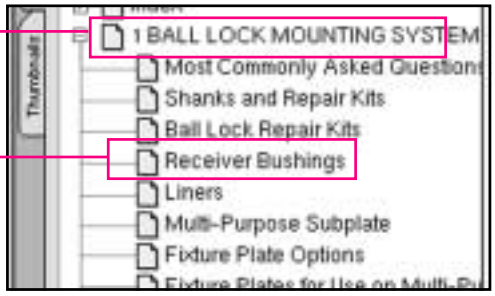
To find a part using the numerical index, click the **INDEX BOX** to expand the list, and then click **NUMERICAL INDEX**. Each series of parts will be listed in **GROUPS OF NUMBERS** *(Example: 100 Series, parts 100-125)*.
The first three numbers for that part series will be shown. Once you find the part or series of parts, click once and it will link directly to that part. You can navigate back to the index by clicking the **BACK BUTTON** on the top of your menu bar, or click **NUMERICAL** in the index bookmark.



To view an index by **SECTION**, click on the section bookmark once. This will bring you directly to the index for that section only. You can navigate through that section the same way as the Alphabetical Index.

If you know exactly what part you want. Find the **PART NAME** listed in the section bookmark and click once.

Example: Ball Lock Receiver Bushings.
Find it and click once.



Page Viewing
For better page viewing, use one of the "Zoom In" tools from the tool bar. IE: Click on the magnifying glass with the plus ('+) symbol, then click anywhere on the catalog page to increase the zoom. Note: Multi clicks will increase the level of zoom.



MASTER CATALOG

Jergens®

The Standard Components With the Highest Standards





REGISTERED COMPANY ISO 9001: 2000

Quality System Certified

www.jergensinc.com

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Online Worldwide



- Online Catalog
- Downloadable CAD Drawings
- New Product Information
- Stock Check
- Price Check
- Part Number Cross Reference
- Application Aids
- News and Product Releases
- Contact Information

Please note that the Web Site Catalog will have the most current product information. If Jergens, Inc. changes any dimensional data, it will be updated on our Web Site Catalog.

- The Jergens Tooling Components On-line Catalog is fully indexed and is searchable by category, key words, and part numbers. Additionally, once you have entered a section of the catalog, you easily page backward and forward to find related products.
- You can easily cross reference competitor's part numbers.
- You can quickly check stock status and list price for every product in the Jergens catalog.
- With one click, you can download CAD drawings for most products in seconds. CAD formats include DWG, DXF, IGES formats, and 3D solid models.

www.jergensinc.com

WORKHOLDING SOLUTIONS



1 Quick Change Fixturing



2 Production Vises



3 Power Clamping

TOOLING COMPONENTS



4 Locating Components



5 Spring Loaded Devices



6 Workholding Components

TOOLING COMPONENTS



7 Toggle Clamps



8 Handwheels, Knobs & Handles

SPECIALTY FASTENERS



9 Kwik-Lok™ Pins



10 Threaded Inserts

LIFTING SOLUTIONS



11 Hoist Rings & Lifting Products

Distribution of Jergens Products

Jergens is proud to be represented by a network of qualified distributors throughout the world. If you do not know the name of the distributor nearest you, please call Jergens Customer Service at 1-800-JERGENS (537-4367) or visit www.jergensinc.com.

Quality Policy

Jergens, Inc. manufactures and supplies only *quality* products. Our quality system is ISO 9001: 2000 Certified. Center-Pull and Side-Pull Hoist Rings are CE Certified. If there is a problem with any of our products, please contact your local Jergens Distributor or contact our Customer Service Department.

Design Aids

Jergens, Inc. offers several CAD drawing formats for use in fixture design. Our FixturePro™ software is available on CD. Our internet site (www.jergensinc.com) offers our complete catalog with hot links to CAD drawings on most of our products. We also offer 3D solid models of our products via the internet.

Application Assistance

Jergens Inc. maintains a complete Technical Sales Department to work with you. Please feel free to call upon their knowledge and experience. Application videos are available for the Ball Lock Mounting System™, StayLock Clamps™, and Swivel Eyebolt™ products.

Engineering Changes

Product improvement is a continuing process at Jergens, Inc. Specifications and engineering data are subject to change without notice. **If current information is critical to your design, it is suggested that you contact the Jergens Customer Service Department, or download the most current drawing from our website*, to verify any dimensions or specifications**.

*** 3D Solid Models are available from www.jergensinc.com**

Bar Coding

Jergens' boxed and bagged products are fully bar coded for automatic identification. The bar code labels contain the ASCII Code 39 format, which was chosen as being suitable for most bar code readers. Jergens' bar codes will identify part numbers and manufacturer's codes.

Specials

Jergens, Inc. will modify any item that is similar to our standard component parts. Please contact your Jergens Distributor with your request for a quote. Prints or sketches should be furnished if possible.

TCMA Standards

Products throughout this catalog meet the standards of the Tooling Component Manufacturers' Association. The items are asterisked and are interchangeable with other tooling component manufacturer's products.

Material and Finish Specifications

Stressproof®: A severely cold worked, furnace treated steel bar. Produced by a LaSalle patented process to obtain high strength, free machinability, good wear, and minimum warpage in the bar.

Alloy Steel - 4140 or equivalent

Low Carbon Steel - Free Machining 1215, 1018, or equivalent

52100: QQS-624

Zinc Plate: ASTM B633, Type III, Class FE/ZN 5

Cadmium Plate: AMS-QQ-P-416, Class 3, Type 1

Black Oxide: MIL-DTL-13924 and AMS-2485

Black Anodize: per Mil. Spec. MIL-A-8625, Type II, Class 2 and AMS-2472

Passivate: AMS 2700

Alternate Finishes available upon request.

Jergens, Inc.
Manufacturing Number: 697830
FSCM #94882

ISO 9001: 2000
Registration #9711001



Jergens Company Profile

Jergens Inc. was founded in 1942 by Jack Schron, Sr. and his father Christy, to provide standard components for building jigs and fixtures. Today the fourth generation of family involvement continues stronger than ever. Throughout it's sixty-year history the company has grown into four separate operating divisions: Tooling Component Division (TCD), Jergens Industrial Supply (JIS), Acme Industrial Company (AIC), and Advanced Systems Group (ASG) Division of Jergens. While all divisions are vital to the Jergens family, the TCD Division is the centerpiece of our manufacturing capabilities. In June 1999, Jergens moved into a new 110,000 square foot facility and prides itself by manufacturing over 80% of it's product offering, as well as setting the standard for producing the highest quality components in our industry.

Here at Jergens we have a very diverse product offering, which ranges from basic workholding components, to hydraulic clamps and high quality hoist rings through TCD. Innovative products such as the Ball Lock™ Mounting System demonstrate the Jergens commitment to providing the industrial marketplace with superior engineered solutions and products. Additionally, we offer a wide range of metalworking tools, clamps, and supplies to manufacturers in Northeastern Ohio, through our JIS Division. Acme Industrial, located in Carpentersville, Illinois, is a premium manufacturer of precision drill bushings and keylocking thread inserts. Our ASG Division specializes in products for light assembly ranging from torque-controlled electric screwdrivers to automation systems.

In addition to our unique product designs, we lead the industry with unparalleled customer service and delivery. Our website is a good example of our commitment to be the most innovative company in our industry. Customers and distributors can check stock and order on-line, view the Jergens catalog, and even download 2D, 3D and solid model CAD drawings in a variety of formats. **Visit our website at** www.jerginsinc.com **for the latest news and product information, as well as links to our other divisions**. The Jergens family thanks you for your business.

On April 21, 2001, we were proud to launch ***Tooling University LLC*** that provides on-line training designed to serve the educational needs for the manufacturing community. This is another example of how Jergens is committed to maintaining our leadership position by providing our customers with the best source for innovative products and engineering expertise in the industry. To take a tour or a free trial class please visit www.toolingu.com.

Helpful Charts and Information

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StayLock Clamps Explanation 3.32-3.33
Threaded Inserts Installation Information 10.2
Zero-Point System 1.36-1.39

aqa INTERNATIONAL

attests that:

Jergens, Inc.
15700 South Waterloo Rd.
Cleveland, OH 44110

with a Scope of:

Design and Manufacture of Tooling Components, Lifting Products, and Quick-Change Devices and the ASG Division of Jergens Distributes Assembly Tools used in Light Assembly

is in compliance with the International Quality System Standard ISO 9001:2000.

"Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2000 requirements may be obtained by consulting the organization."

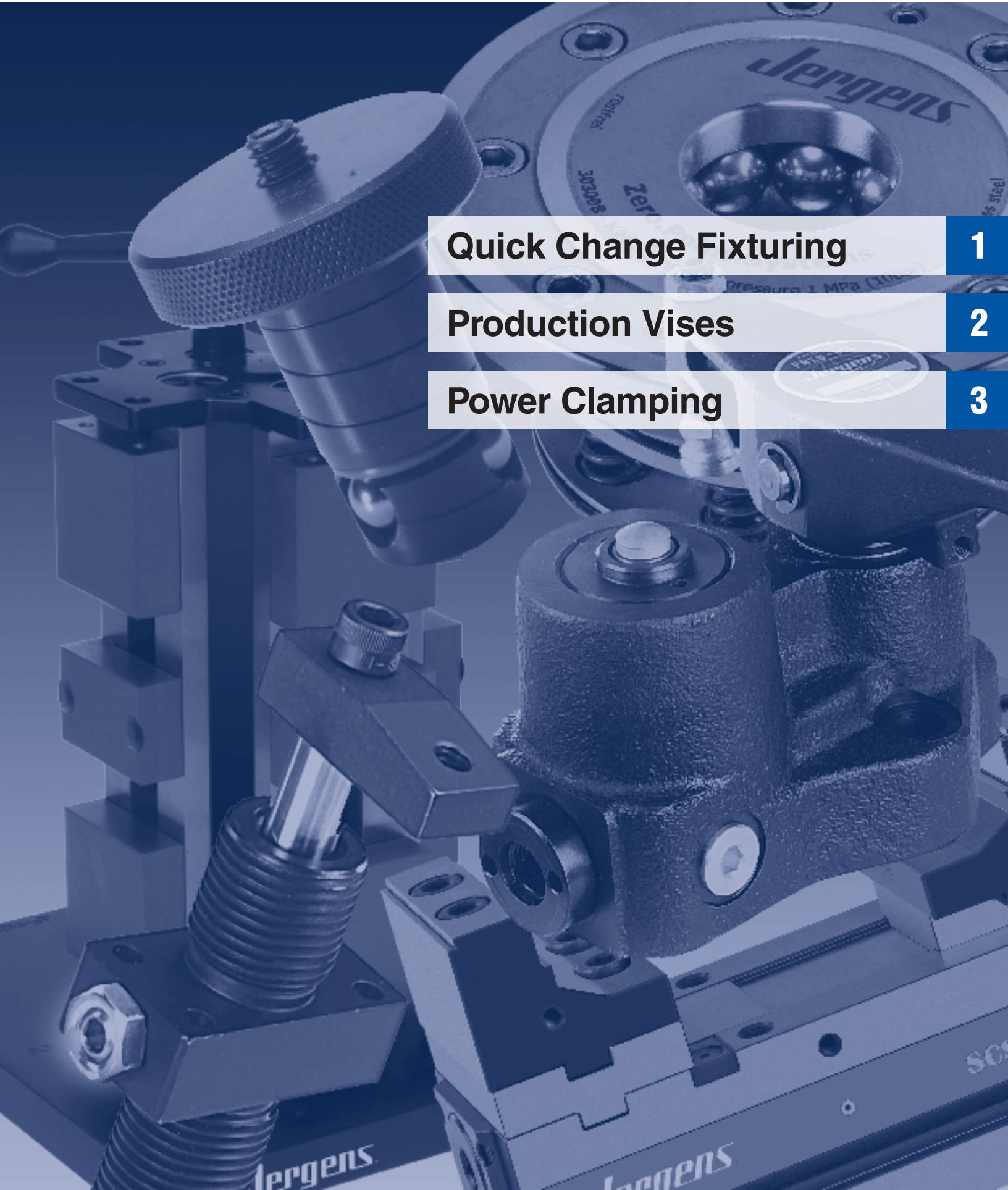
Certificate No.:	00004197
Registration Period:	2/16/2007 to 2/15/2010
Initial Registration:	7/2/2004

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ANAB

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Workholding Solutions



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Production Vises 2

Power Clamping 3



Quick Change Fixturing

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We Put It All Together… In Seconds.

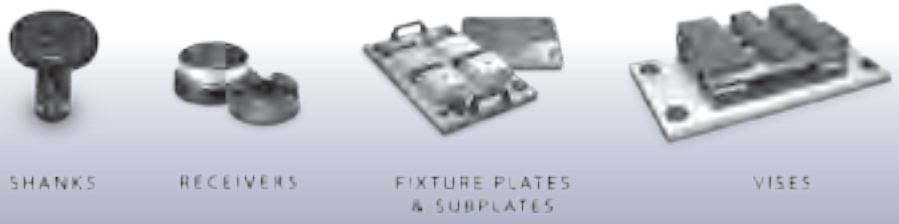
Ball Lock™ MOUNTING SYSTEM

Maximize productivity levels and dramatically increase throughput with Ball Lock™.

Looking to realize the full benefits of lean manufacturing? Then you need the one system that puts it all together, so you can put it all together…and that's Ball Lock™.

Ball Lock™ is the industry's most popular quick-change, fixturing-flexible mounting system that can be configured to create lean-optimized solutions for your most demanding needs.

The original quick change system for fast set-ups and machine changeover.

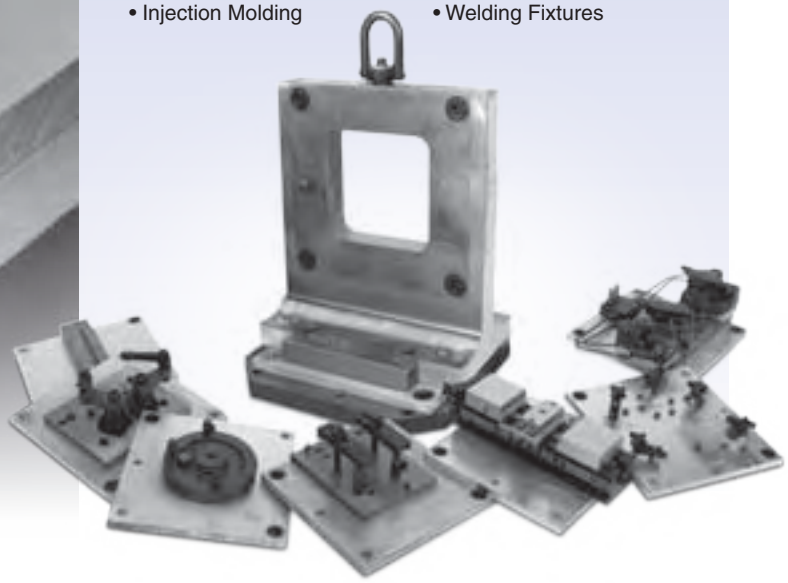


SHANKS | RECEIVERS | FIXTURE PLATES & SUBPLATES | VISES



The Ball Lock™ Mounting System is used as a Quick Change Solution on the following:

- CNC Machines
- Palletized Fixtures
- Stamping
- Fabricating
- Injection Molding
- Packaging Machines
- Assembly Machines
- EDM
- Robotics
- Welding Fixtures



Lean Manufacturing and Set Up Reduction Applications

Accurately Locate and Lock Fixture Plates to Subplates in Seconds… With No Indicating Required.

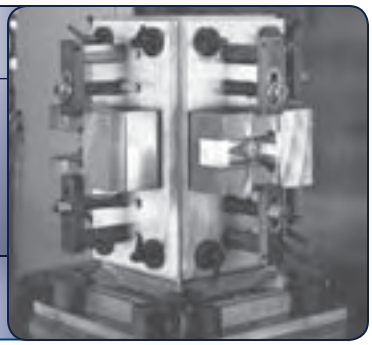
Machining Cast Part

Previous Set Up Method:
Located part with dowel pins, bolted part to tombstone fixture. Indicated part to zero datum point.

Set Up Using Ball Lock System:
Mount parts to fixture plate while machining other parts. Mount fixture plate to tombstone using Ball Lock shanks. No indicating required because system provides ±0.0005 (±0.013mm)repeatability.

Previous Set-Up Time:
15 minutes

Set Up Time With Ball Lock System:
60 seconds



CNC Machine Base:

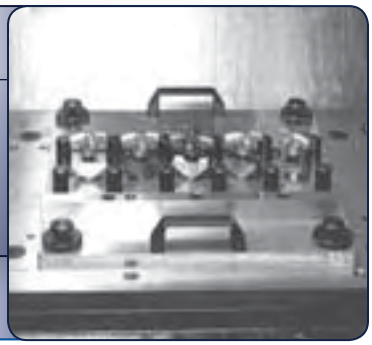
Drilling and reaming forged part.

Previous Set Up Method:
Fixture plate located with dowel pins bolted to machine base. Fixture plate and parts indicated.

Set Up Using Ball Lock System:
Parts are pre-mounted on fixture plate, which is then mounted to machine base using Ball Lock shanks. No need to indicate.

Previous Set Up Time:
7 minutes

Set Up Time with Ball Lock System:
60 seconds



CNC Vertical Machining Center

Machining aircraft valve parts

Previous Set Up Method: New Project. New Machine.No Prior History.

Set Up Using Ball Lock System: Using Ball Lock Jig Saw Plate on Multi-Purpose Subplate enables operator to mount two more vises on the fixture. No indicating needed.

Previous Set Up Time:
New Set Up.

Set Up Time With Ball Lock System:
80 seconds setting up six vises.



Two-Sided Tombstone

Drilling and tapping cylindrical bodies.

Previous Set Up Method:
Fixture located and bolted to tombstone. Had to be indicated.

Set Up Using Ball Lock System:
Fixture plate mounted and located with Ball Lock shanks. No need to indicate.

Previous Set Up Time:
12 minutes

Set Up Time with Ball Lock System:
45 seconds

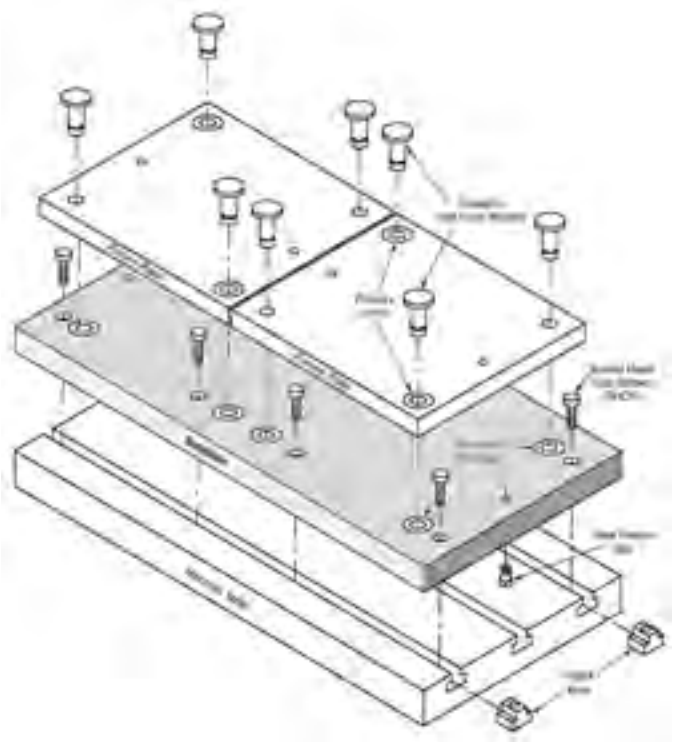




Locates
The Ball Lock™ System accurately positions your fixtureplate with a repeatability of ±0.0005" (±0.013mm) or better, minimizing the need to indicate your fixture.



Locks
The Ball Lock System securely holds fixture plates to subplates with up to 20,000 lbs. (9000 kg) of hold-down force per shank.



The Ball Lock Mounting System is designed to speed the accurate locating and locking of fixture plates to subplates. The system consists of three parts: a Locating Shank, a Liner Bushing, and a Receiver Bushing. Using the Ball Lock Mounting System is a simple process: Install a subplate with receiver bushings on your machine table; add your fixture plate with two locating liner bushings; then insert two locating shanks through the liners and into the receiver bushings to provide accurate location. 2½ turns of the set screw in each of the locating shanks provides positive holding force. Additional Ball Lock™ Shanks are inserted through clearance holes in the fixture plate and set screws tightened for additional holding force distributed across the fixture plate.

It is recommended that the use of the Ball Lock Mounting System for locating and clamping of fixture plates be incorporated in a systematic process. All fixture plates should have two locating points positioned as far apart as possible. There is no advantage to having more than two

The Ball Lock™ Mounting System provides a method of quickly and accurately locating fixtures onto machine tables. The Ball Lock™ Mounting System has done for machining centers what the Japanese SMED concept did for presses. Instead of single minute exchange of dies, Ball Lock™ provides single minute exchange of fixtures. Fixtures can often be exchanged in less than a minute and with position repeatability of ±0.0005" (±0.013mm). Fixtures can be exchanged between different machines when both are using the Jergens Ball Lock™ Mounting System.

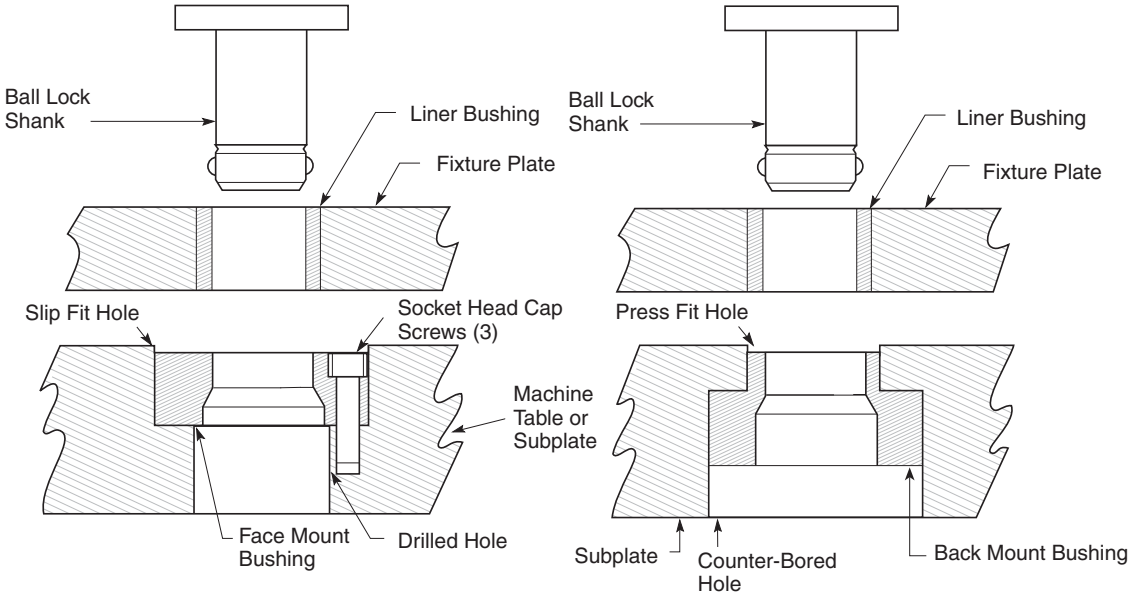
Commonly Asked Questions

Q. What is the Ball Lock™ Mounting System?
A. It is a means of locating and locking two flat surfaces together, normally a fixture plate and a sub-plate.

Q. How does it locate?
A. Similar to locating pins, two Ball Lock™ shanks (pins) pass through two precision liner bushings on the fixture plate and into two precision receiver bushings on the subplate.

Q. How does it lock?
A. Inside the shank are three balls that expand into a tapered groove in the receiver bushing. This action draws the plates together. The locking balls are activated by turning a setscrew in the head of the shank, which pushes a 4th ball to distribute the clamping forces between the 3 locking balls.

Q. How many shanks are required to locate and lock each fixture?
A. Only two shanks, passing through bushings in the fixture plates, are required for location. However, additional shanks passing through clearance holes in the fixture plate will provide additional holding force distributed across the plate.



Mounting Method With Face Mount Bushing

Mounting Method With Back Mount Bushing

locating points. If more than two flanged shanks are required to provide additional hold- down force, omit liner bushings in the additional holes in the fixture plate and allow 0.030" (0.76mm) over the nominal size. The additional clearance will insure that these holes have no influence on the locating holes.

How accurate should positioning be?
The center distance of the receiver bushings in the machine table, tombstone, or subplate should be as accurate as possible ±0.0002" (±0.005mm) recommended. Accurate location will assure interchangeability of numerous fixture plates. For accurate repeatability within ±0.0005" (±0.013mm) of true position, both liner bushings in the fixture plate should be *primary* liners and the center distance tolerance should be ±0.0002" (±0.005mm). For a slightly looser fit, repeatability within 0.0015" (0.04mm) of true position, use one *primary* and one *secondary* liner with a center distance tolerance of ±0.001" (±0.003mm).

Q. Is there a preferable location for the liner bushing?
A. System repeatability is improved if the liners are located at opposite corners of a rectangular fixture plate. For consistency, we recommend locating the liner bushings at top left and bottom right.

Q. What are the advantages of using the Ball Lock™ System over the conventional method of dowel pins and cap screws?
A. Both locating and locking are accomplished in the same motion. Ball lock™ shanks require only 2.5 turns to lock a 1/2–13 (M12) screw with ¾" (18mm) of thread engagement require 10 turns to lock. On CNC machines, the repeatability of fixture locations makes indicating of the fixture unnecessary.

Q. How do I recess the fixtureplate for a clear surface ?
A. Counterbore the fixture plate to a diameter large enough to allow easy removal of the shank.
Note: The thickness of the plate section under the head of the shank is critical and must conform to mounting instructions .

Q. What if my plate is thinner than the recommended thickness?
A. By adjusting the depth of the counterbore for the receiver bushing in the subplate, you can still use the Ball Lock™ System. If there are any questions on this type of application, please call 1-800-JERGENS.

Q. Can I use the shanks in a heated environment?
A. The shank is made of alloy steel, heat treated to 40-45Rc and should with stand temperatures up to 400°F. (200°C).
Note: Thermal expansion of fixture plates may affect the center distance tolerance and repeatability.

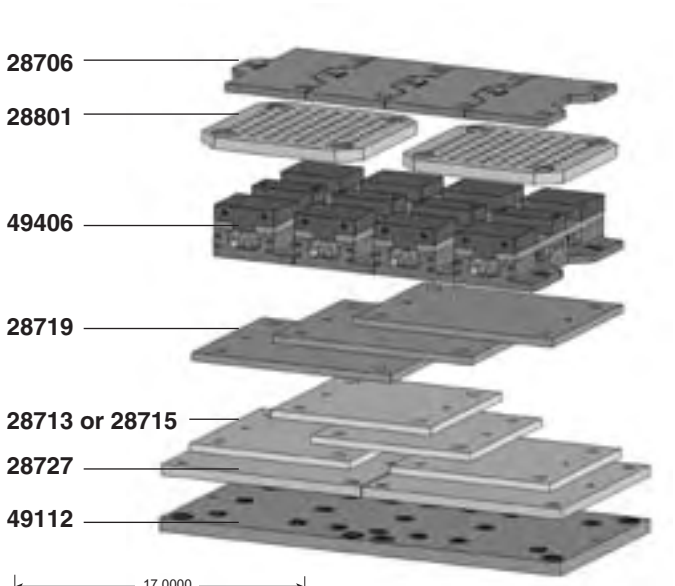
Multi-Purpose Subplates

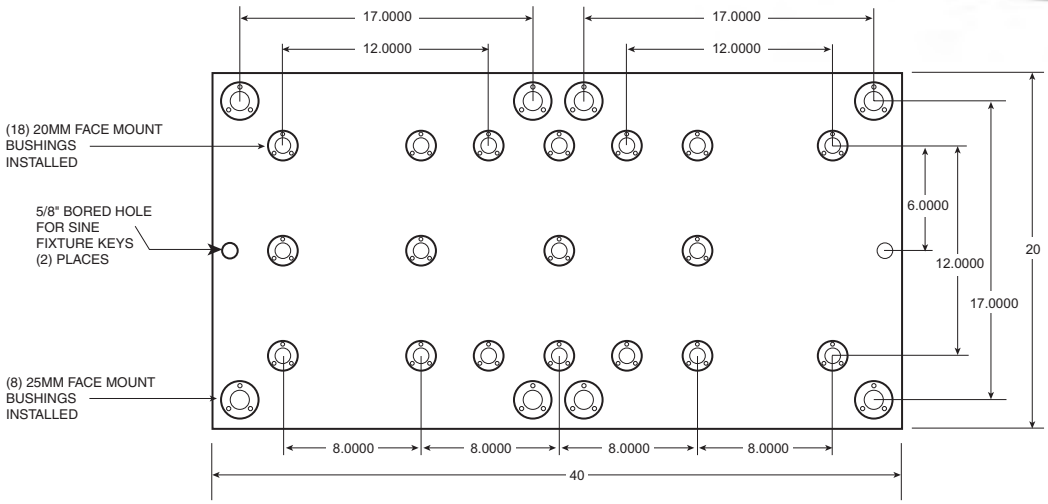
40x20 Multi-Purpose Subplate

Part Number	Wt. (lbs)
49112	285

The Jergens Multi-Purpose Subplate accommodates a wide variety of fixture plates and vises. This versatility facilitates using the same VMC for diverse products in repetitive runs, long and short batch sizes.

- FreMax™ 15 Steel or Equivalent
- Thickness: 1 1/4" ±0.005"
- Parallel within 0.001"





Fixture Plate Options for Multi-Purpose Subplates – Aluminum or Steel

Fixture Plate*/Vise Part Number	Thickness of Fixture Plate	Number of Fixture Plates/Vises That Mount on Multi-Purpose Subplate	Receiver Bushing Center Distance	Receiver Bushing Size	Required Ball Lock Shank Part Number	Number of Shanks Required Per Fixture Plate/Vise
28713 (14 x 14) Fixture Plate	3/4"	2	12 x 12	20 mm	**49601**	4
28715 (16 x 16) Fixture Plate	3/4"	2	12 x 12	20 mm	**49601**	4
28801 (16 x 16) Modular Grid Plate	1 1/8"**	2	12 x 12	20 mm	**49602**	4
28706 Jigsaw Interlocking Plate	3/4"	4	8 x 12	20 mm	**49601**	3
28727 (20 x 20) Fixture Plate	1"	2	17 x 17	25 mm	**49612**	4
28719 (20 x 16) Fixture Plate	3/4"	1	16 x 12	20 mm	**49601**	4
49406 6" Jigsaw Base Vise	3/4"	4	8 x 12	20 mm	**49601**	3

* See next page for dimensional data on fixture plates. Part numbers shown for aluminum plates, also available in steel.
** Counterbored to 1" at mounting holes.

Fixture Plates for Multi-Purpose Subplate

14x14x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28713	14

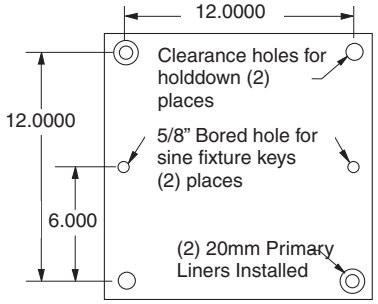
Steel Plate Part Number	Wt. (lbs)
28813	42

16x16x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28715	18

Steel Plate Part Number	Wt. (lbs)
28815	55

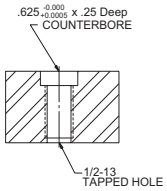
- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 3/4" ±0.005"
- Parallel within 0.001" Steel
- Mounts to subplates with Ball Lock™ Shank 49601 (20 X 3/4")

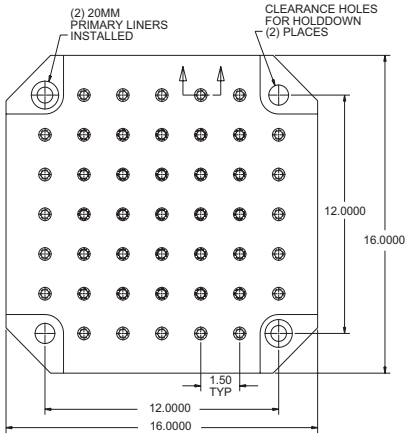


16x16 Modular Grid Fixture Plate

Steel Plate Part Number	Wt. (lbs)
28801	80

- FreMax™ 15 Steel or equivalent
- Thickness: 1 1/8" ±0.005"
- Parallel within 0.001"
- Mounts to subplates with Ball Lock™ Shank 49602 (20 x 1")

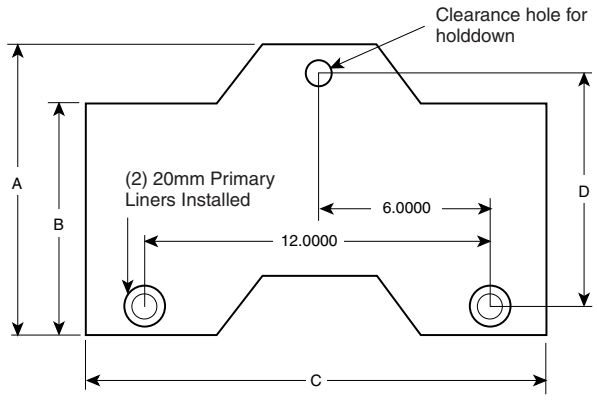




Jigsaw Interlocking Fixture Plate

Aluminum Plate Part No	Wt.	Steel Plate Part No	Wt.	A	B	C	Jergens D	Vise P/N
28705	6	-	-	7.97	5.97	15.00	6.0000	49401
28706	11	28806	34	9.97	7.97	16.00	8.0000	49402

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 3/4" ±0.005"
- Parallel within 0.001" Steel
- For use with narrow base 4" or 6" vise models
- Design allows close vise spacing for more parts per run
- Easily mounts to Subplates using the Ball Lock™ Shank 49601 (20 x 3/4")
- Useful for high density fixturing of small parts

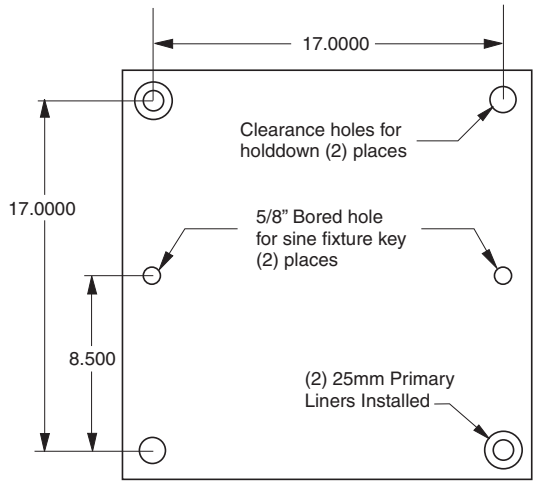


20x20x1" Fixture Plate

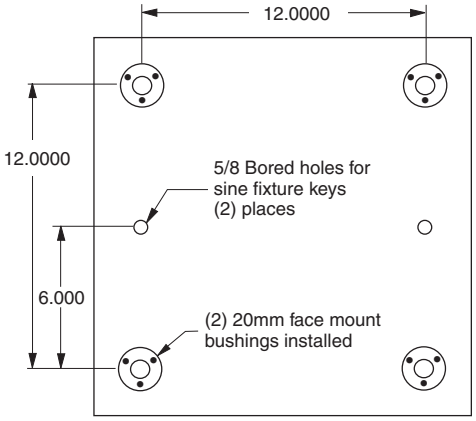
Aluminum Plate Part Number	Wt. (lbs)
28727	38

Steel Plate Part Number	Wt. (lbs)
28827	114

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 1" ±0.005"
- Parallel within 0.001" Steel
- Mounts to subplates with Ball Lock™ Shank 49612 (25 X 1")



Ball Lock™ Standard Subplates

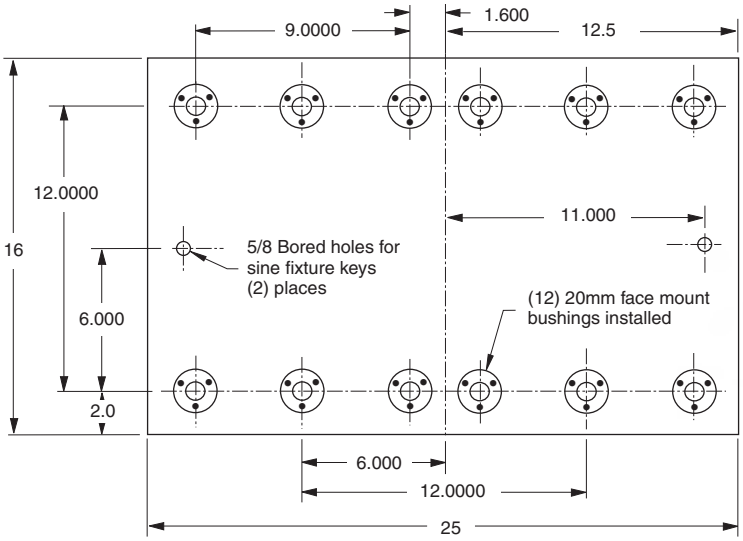


16x16 Subplate

Part Number	Wt (lbs)
49101	81

Equipped with four 20mm receiver bushings for use with 14x14 or 16x16 fixture plates. Ideal for horizontal machining centers or multiple pallet machining centers.

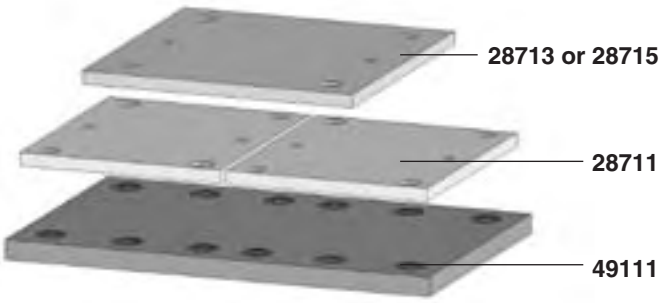
- Fremax™ 15 steel plate or equivalent
- Thickness: 1-1/8" ±0.005"
- Parallel within 0.001"



Aluminum Plate Part Number	Steel Plate Part Number	Number of Fixture Plates	Plate Width and Length
28713	**28813**	1	14"x14"
28715	**28815**	1	16"x16"
28711	**28811**	2	12"x14"

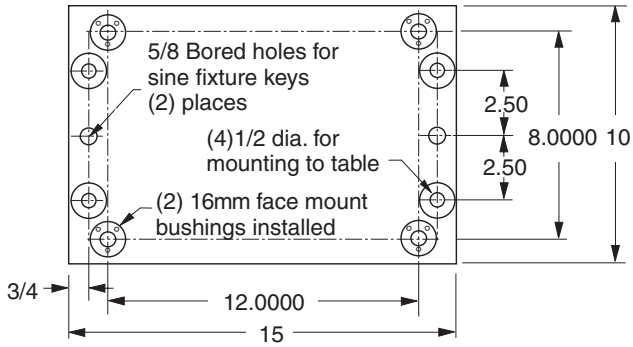
25x16 Dual Station Subplate

Part Number	Wt (lbs)
49111	128



Equipped with twelve installed 20mm receiver bushings to easily locate and mount Jergens Standard Fixture Plates:

- Fremax™ 15 steel plate or equivalent
- Thickness: 1-1/8" ±0.005"
- Parallel within 0.001"



15x10 Bridgeport™ - Style Subplate

Part Number	Wt (lbs)
49121	32

Equipped with four installed 16mm receiver bushings and 1/2" mounting holes. Used with the Bridgeport™ style fixture plates 28731 or 28831.

- Thickness: 3/4" ±0.005"
- Parallel within 0.001"

Ball Lock™ Quick Change Kits include all components needed in a single package. See page 1.13 for details.

Ball Lock™ Fixture Plates

- Cast Aluminum or FreeMax™ 15 Steel or equivalent
- Thickness tolerance ±0.005"
- Parallel within 0.001" Steel
- 6061–T-651 Aluminum plates, within .001 available upon request

Aluminum Ball Lock™ Fixture Plates with 2 Primary Liners Installed

Plate Part Number Aluminum	Weight (lbs)	Plate Part Number Steel	Weight (lbs)	Plate Dimensions (in.)	Plate Thickness (in.) ±.005	Ball Lock	
						Shank Size Dia. (mm)	Shank Part Number
28706	9	**28806**	34	9.97 x 16	3/4	20	**49601**
28711	12	**28811**	36	12 x14	3/4	20	**49601**
28713	14	**28813**	42	14 x14	3/4	20	**49601**
28715	18	**28815**	55	16 x 16	3/4	20	**49601**
28722	16	**28822**	48	12 x 14	1	25	**49612**
28724	19	**28824**	56	14 x 14	1	25	**49612**
28726	24	**28826**	73	16 x 16	1	25	**49612**
28719	23	**28819**	68	20 x 16	3/4	20	**49601**
28727	38	**28827**	114	20 x 20	1	25	**49612**
28731	11	**28831**	32	15 x 10	3/4	16	**49608**
–	–	**28801**	80	16 x 16	1 1/8	20	**49602**

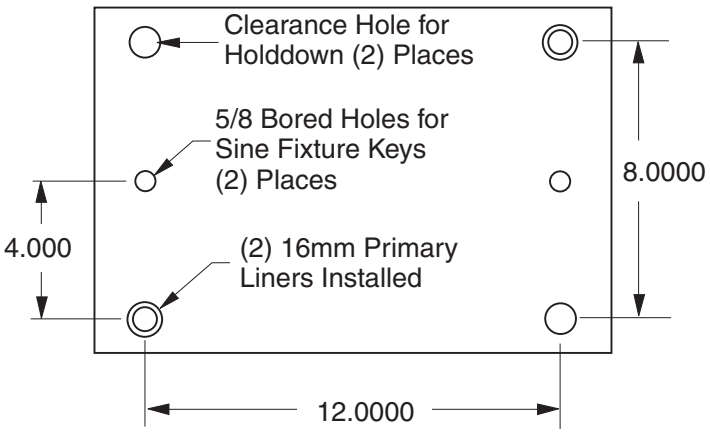
- Machined to close tolerances
- Repeatability ±0.0005" or better
- Reduces fixture set-up and assembly time
- Provided with 5/8" bored holes for sine fixture keys
- For horizontal or vertical machining centers, Tool Room Mills, or multiple pallet machining centers

Custom Sizes Available
Jergens will make Ball Lock™ fixture plate or subplates to your specifications. Call 1-800-JERGENS for further information.

15x10x3/4" Fixture Plate Bridgeport™ Style

Aluminum Plate Part Number	Wt. (lbs)
28731	11

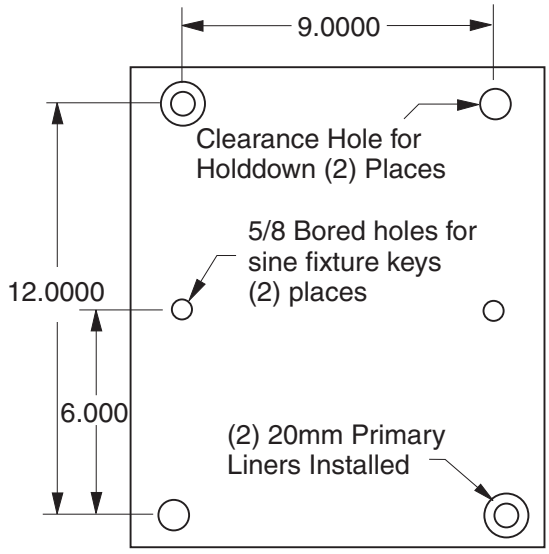
Steel Plate Part Number	Wt. (lbs)
28831	32



12x14x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28711	12

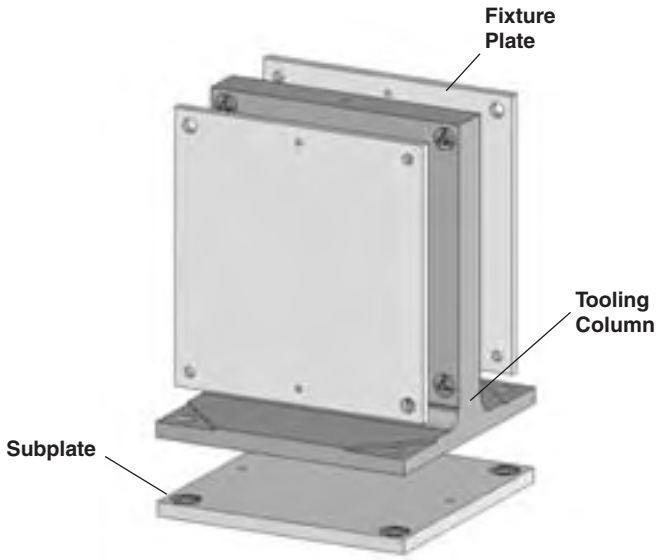
Steel Plate Part Number	Wt. (lbs)
28811	36



Ball Lock™ T-Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock™ Receiver Bushings and Liner Bushings installed
- Perpendicularity is 0.001" per foot

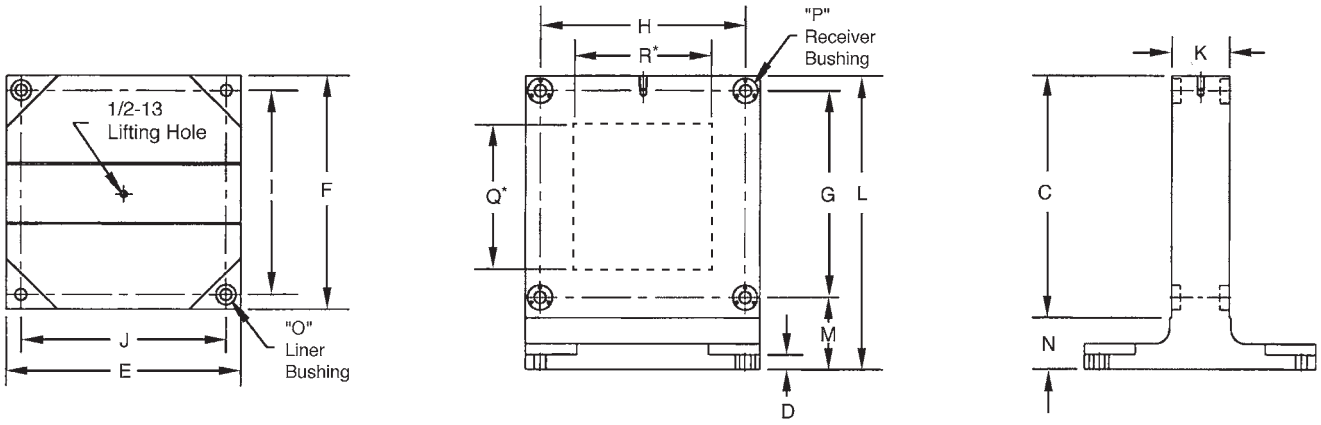
Custom Sizes Available with or without Ball Lock™
We are able to quote you on your special requirement with or without the Ball Lock™ Mounting System. Call 1-800-JERGENS for design specification information.



Cast Iron T-Columns With Ball Lock™ Receiver Bushings Installed

See page 1.12 for Fixture Plates and Subplates

Pallet Size (mm)	Part Number	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (lbs)
400	**69101**	16.375	1	16	16	14	14	14	14	4	19.875	4.875	3.5	20	20	425
500	**69111**	22.375	1	20	20	19	17	17	17	4.7	25.875	5.375	3.5	25	25	700
630	**69121**	26.375	1.5	25	25	23	22	21	21	4	29.875	5.375	3.5	35	25	1125



***Note**: Window sections are also available on T-Columns. Specify window size and location (Q and R Dimensions).

Corresponding Fixture Plates, Subplates and Ball Lock Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock Shank Part Number	Shank Size
400	**69101**	**28717**	**28817**	16 x 16	**49601**	20mm x 3/4	**49102**	**49602**	20mm x 1
500	**69111**	**28745**	**28845**	20 x 22	**49612**	25mm x 1	**49103**	**49612**	25mm x 1
630	**69121**	**28746**	**28846**	25 x 26	**49612**	25mm x 1	**49104**	**49633**	35mm x 1-1/2

Use Hoist Ring **23411,** see page 11.8 for lifting and handling – Order separately.

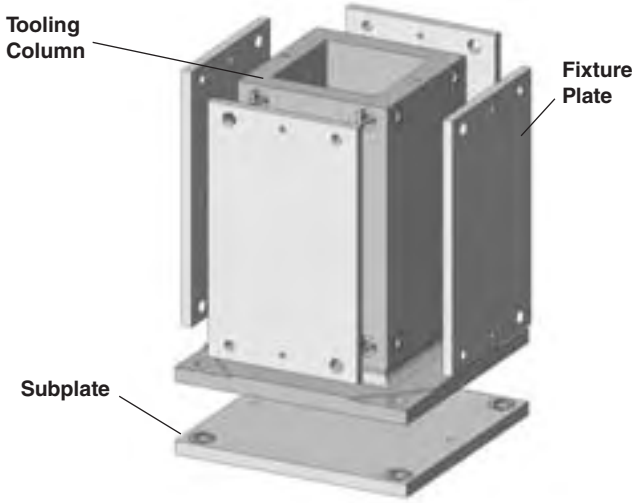
Engineering Changes

Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

Ball Lock™ 4-Sided Tooling Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock™ Receiver Bushings and Liners installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.001" per foot

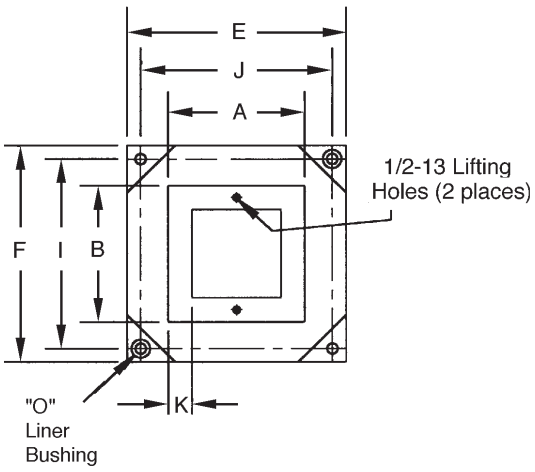
Custom Sizes Available with or without Ball Lock™
We are able to quote you on your special requirement with or without the Ball Lock™ Mounting System.
Call 1-800-JERGENS for design specification information.

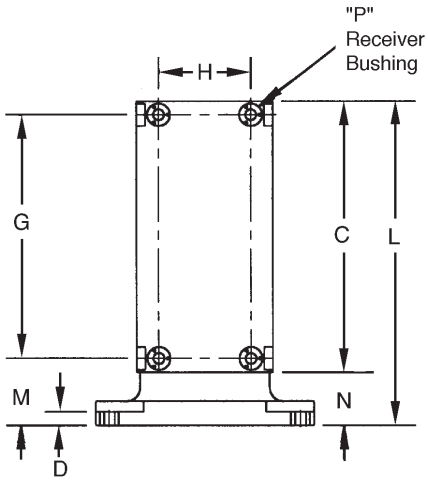


Cast Iron 4-Sided Tooling Columns With Ball Lock™ Receiver Bushings Installed

See page 1.12 for Fixture Plates and Subplates

Pallet Size (mm)	Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (lbs)
400	**69001**	10	10	20	1	16	16	18	6.75	14	14	1.75	23.875	4.875	3.875	20	20	510
500	**69011**	12	12	25	1	20	20	22	8	17	17	1.625	28.875	5.375	3.875	25	25	736
630	**69021**	16	16	26	1.5	25	25	23	11.50	21	21	2	29.875	5.375	3.875	35	25	1122





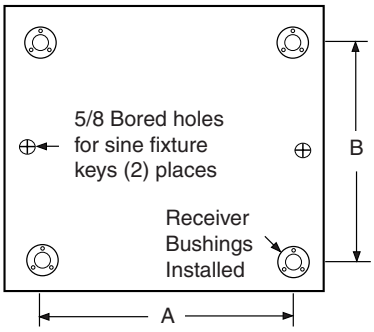
Corresponding Fixture Plates, Subplates and Ball Lock Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball-Lock Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock Shank Part Number	Shank Size
400	**69001**	**28741**	**28841**	10 x 20	**49601**	20mm x 3/4	**49102**	**49602**	20mm x 1
500	**69011**	**28742**	**28842**	12 x 25	**49612**	25mm x 1	**49103**	**49612**	25mm x 1
630	**69021**	**28743**	**28843**	16 x 26	**49612**	25mm x 1	**49104**	**49633**	35mm x 1-1/2

Use Hoist Ring **23411,** see page 11.8 for lifting and handling – Order separately.

Engineering Changes
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

Subplates For Tooling Columns and Fixture Plates

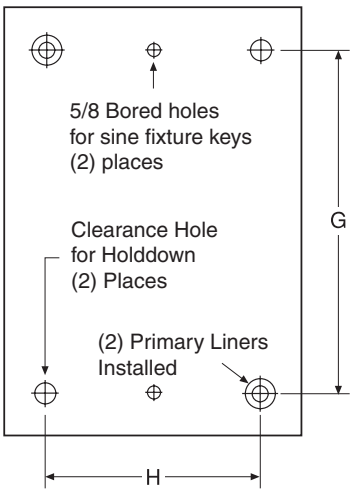


Standard Steel Subplates for Tooling Columns

Subplate Mounting holes can be provided per customer specification.
Supplied with Ball Lock Receiver Bushings installed.

Part Number	Pallet Size (mm)	For Tooling Columns	Ball Lock Pattern A (in.)	Ball Lock Pattern B (in.)	Receiver Size (mm)	Thickness of Subplate (in.) ±.005	Wt (lbs)
49102	400	**69001, 69101**	14	14	20	1 1/8	79
49103	500	**69011, 69111**	17	17	25	1 1/4	137
49103-C*	500	**69101, 69001** **69111, 69011**	14/17 Dual	14/17 Dual	20/25 Dual	1 1/4 1 1/4	137
49104	630	**69021, 69121**	21	21	35	1 3/8	240

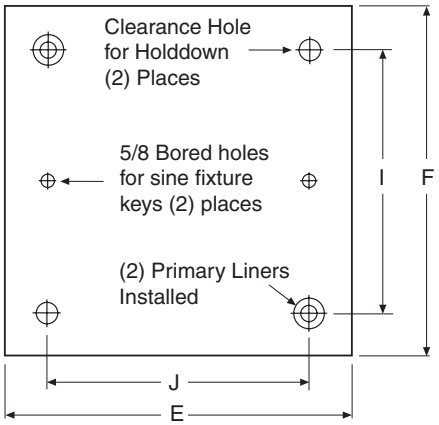
*49103-C is a dual pattern subplate. Please contact Jergens Technical Service at 1-800-Jergens for design specific information.



Fixture Plates for Standard Tooling Columns and T-Columns

Supplied with 2 primary Ball Lock Liner Bushings installed.

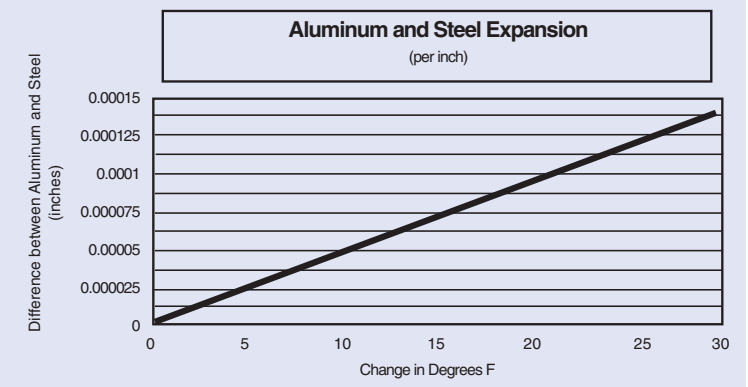
Pallet Size (mm)	Part Number Aluminum	(lbs)	Steel	(lbs)	For Tooling Columns	Type	Fixture Plate Size (in.)	Fixture Plate Thickness ±0.005"	Ball Lock Pattern H (In.)	Ball Lock Pattern G (In.)	Liner Size (mm)
400	**28741**	14	**28841**	43	**69001**	4-S	10x20	3/4	6.75	18	20
500	**28742**	28	**28842**	85	**69011**	4-S	12x25	1	8	22	25
630	**28743**	39	**28843**	118	**69021**	4-S	16x26	1	11.50	23	25
400	**28717**	18	**28817**	55	**69101**	T	16x16	3/4	14	14	20
500	**28745**	41	**28845**	125	**69111**	T	20x22	1	17	19	25
630	**28746**	61	**28846**	184	**69121**	T	25x26	1	22	23	25



Fixture Plates for Tooling Column Subplates

Supplied with 2 primary Ball Lock Liner Bushings installed.

Pallet Size (mm)	Part Number Aluminum	(lbs)	Steel	(lbs)	For Subplate	Plate Dim. E (In.)	Plate Dim. F (in.)	Fixture Plate Thickness ±0.005"	Ball Lock Pattern I (In.)	Ball Lock Pattern J (In.)	Liner Size (mm)
400	**28717**	18	**28817**	55	**49102**	16	16	3/4	14	14	20
500	**28727**	38	**28827**	114	**49103**	20	20	1	17	17	25
630	**28732**	58	**28832**	177	**49104**	25	25	1	21	21	35



NOTE: Aluminum and steel expand at different rates. Please take this information into consideration when creating your own Ball Lock fixture and subplates.

Quick Change Kits

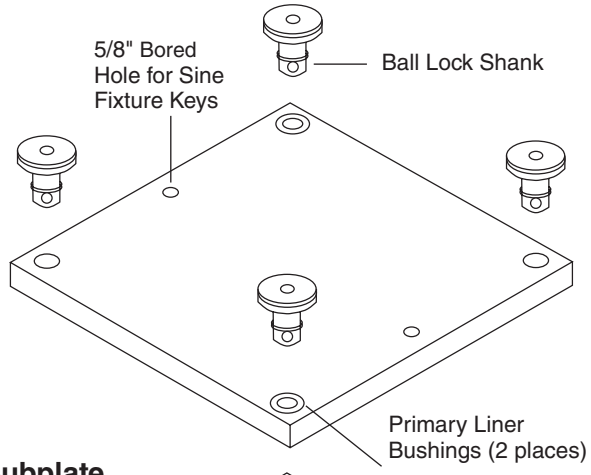


The Jergens Ball Lock™ Quick Change Kits speed fixture changeover in all types of manufacturing operations. Each kit includes two aluminum fixture plates with two primary liner bushings installed; one steel subplate with receiver bushings installed, and four 20mm Ball Lock shanks with working loads of 3000 lbs. each. While one fixture plate is on the machine, the operator can load parts on the other. This minimizes downtime for true set-up reduction. To enable the subplate to be mounted on a slotted table without the need to indicate the subplate, sine fixture keys can be used. The sine fixture key bored holes are oriented parallel to the receiver bushings on the subplate and to the liner bushings on the fixture plate. These also allow the fixture plate to be mounted on a toolroom mill without the need to indicate it. This is extremely useful when machining location points on your fixture.

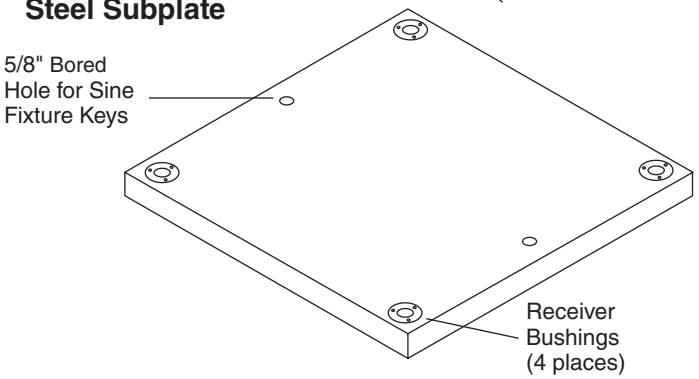
Ball Lock™ MOUNTING SYSTEM

Everything You Need to Change Fixtures in Less Than One Minute

Aluminum Fixture Plate



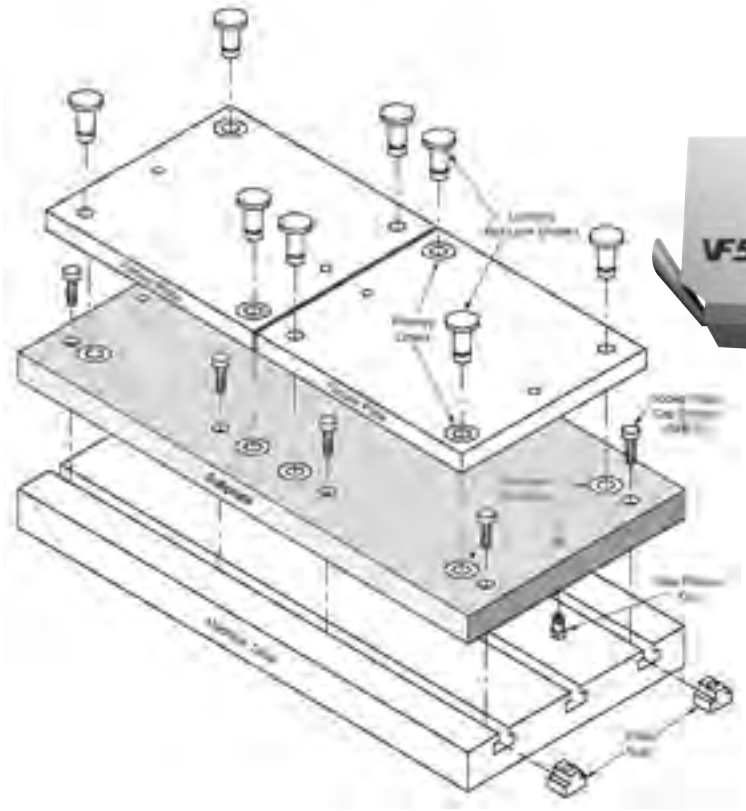
Steel Subplate



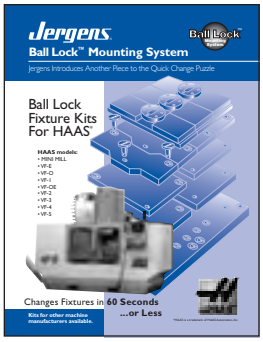
Quick Change Kits

Part No.	Kit Includes
49001	2 - 28713 (14"x14"x3/4") aluminum fixture plates with 20mm liner bushings installed
	1 - 49101 (16"x16"x1-1/8") steel subplate with receiver bushings installed
	4 - 49601 (20mm) Ball Lock Shanks
49002	2 - 28715 (16"x16"x3/4") aluminum fixture plates with 20mm liner bushings installed
	1 - 49101 (16"x16"x1-1/8") steel subplate with receiver bushings installed
	4 - 49601 (20mm) Ball Lock Shanks
49004	Bridgeport™-Style
	2 - 28731 (10"x15"x3/4") aluminum fixture plates with 16mm liner bushings installed
	1 - 49121 (10"x15"x3/4") steel subplate with receiver bushings installed
	4 - 49608 (16mm) Ball Lock Shanks

Pre-Engineered Ball-Lock™ Fixture Kits for HAAS*







Pre-Engineered HAAS Kits available. PDF Catalog Available at www.jergensinc.com

These kits include:

- Steel Subplate with receiver bushings
- Aluminum Fixture Plate(s) with 2 primary liner bushings
- Pre installed receiver and Liner Bushings
- Ball-Lock Shanks
- T-Slot nuts for mounting subplate to machine table
- 2 Sine Fixture Keys for accurate subplate locating
- Socket head cap screws

Benefits:

- Save time specifying and ordering
- Saves installation time and cost
- Eliminates potential installation errors

Ask about these other machine manufacturers where Ball Lock™ kits can be utilized.

Call customer support at 1-800-537-4367

Acer	Fanuc Robodrill	Kira Mill	Miyano
Bridgeport	HAAS	Kitamura	Mori-Seiki
Brother	Hardinge	Leadwell	OKK
Chevalier	Hitachi	MAG	Okuma
Chiron	Hitachi Seiki	Makino	Republic Lagun
DMG	Hurco	Matsuura	Toyoda
Enshu	Hyundai-Kia	Mazak	Tree
Excel	Johnsford	Milltronics	YCI

*HAAS is a trademark of HAAS Automation, Inc.

Set-Up Reduction Worksheet

Benefits of Set-Up Reduction (Capacity)

Current Method Minutes per set-up	=_____	minutes	**Example (actual case study):** 60 minutes
Number of set-ups per 8 hour shift	=_____	set-ups	1.5 set-ups
Total minutes of set-up per shift (set-up minutes x number of set-ups)	=_____	minutes	90 minutes
Using the Ball Lock System Minutes per set-up	=_____	minutes	8 minutes
Number of set-ups per 8 hour shift	=_____	set-ups	1.5 set-ups
Total minutes of set-up per shift (set-up minutes x number of set-ups)	=_____	minutes	12 minutes
Increased capacity per machine per shift (current method - Ball Lock method)	=_____	minutes	78 minutes
Savings per machine per shift	=_____	minutes	78 minutes
Increased capacity (number of minutes / 60)	=_____	hours	1.3 hours

Benefits of Set-Up Reduction (Profit)

Machine cost per hour	= $_____		$80.00
Increased production hours per shift (increased capacity from above)	=_____	hours	1.3 hours
Savings (profit) per machine per shift (machine cost per hour x increased production hours)	= $_____	per machine per shift	$104.00 per machine per shift

Ball Lock™ For 4th Axis Rotary Indexers

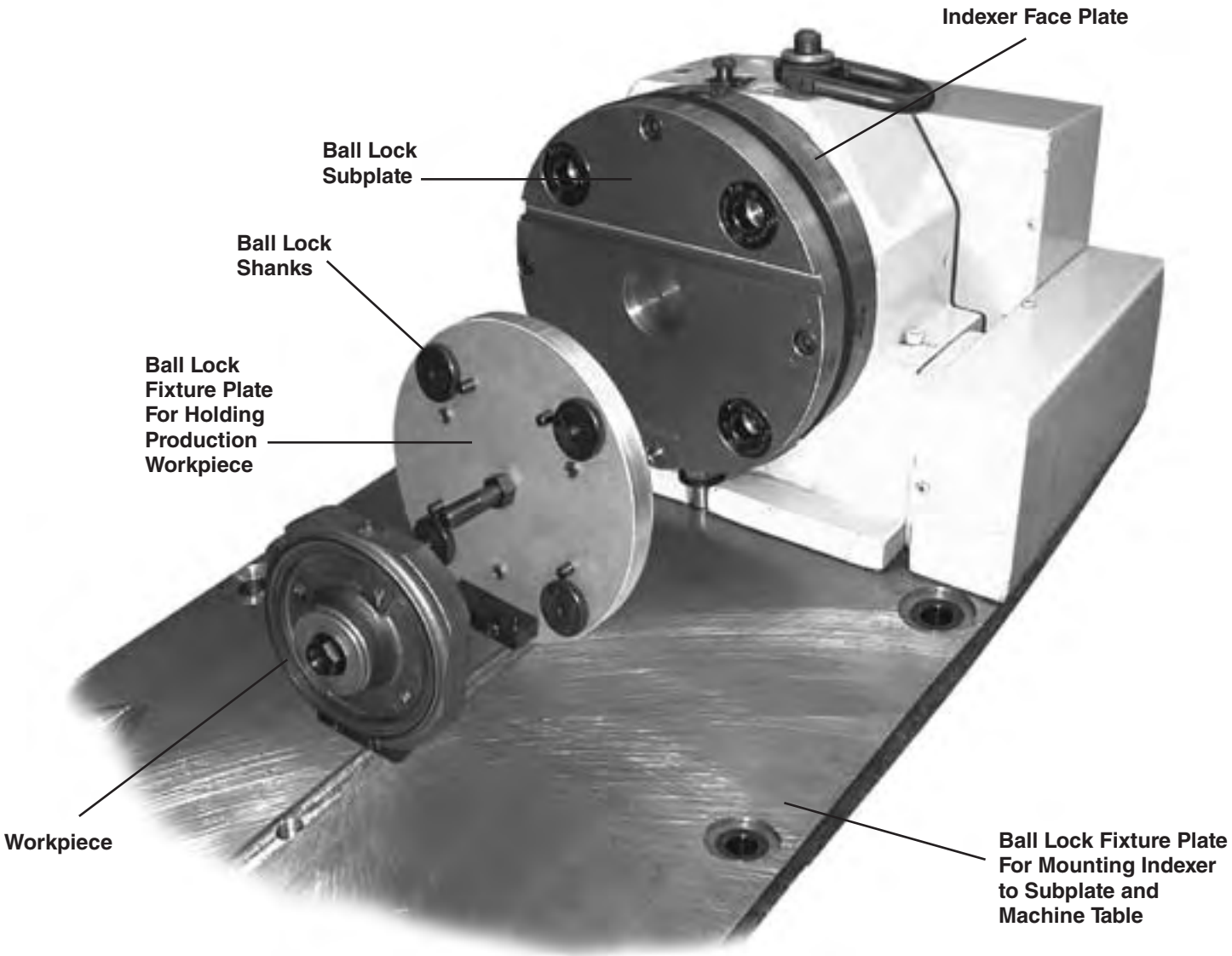
Problem:
Rotary indexers increase the versatility of vertical machining centers, yet they offer one major challenge: set-up is so time-consuming that it may limit a machine's flexibility. In many cases, machinists dedicate their 4th Axis tool to a single machine to avoid the agony of an extended set-up and changeover.

Benefits:
- Maximize indexer utilization
- Eliminate lengthy set-ups
- Accurate fixture plate changover in seconds

Jergen's Solution:
Ball Lock Mounting System for Indexers provides a double solution.

First, Ball Lock mounting plates free up your machine for additional work by allowing a fast and accurate installation and removal of the complete indexer. Avoid hours of set up. The Ball Lock System does it in minutes, with repeatability at ±.0005" (±.013mm). Low profile, positive clamping, proven in over many years of field use.

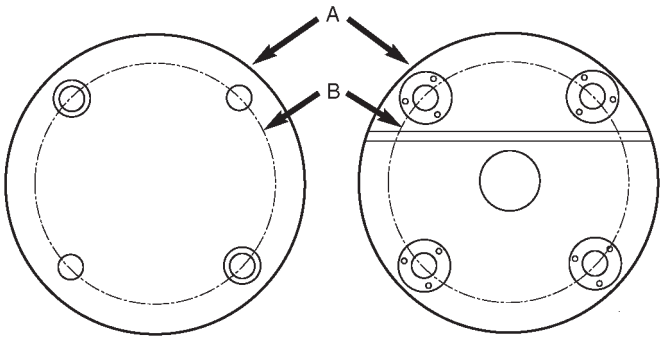
Second, the Ball Lock System provides your fixture plate changeover. By mounting the round subplate to the indexer faceplate, you'll "plug-in" new fixtures in record time (less than 60 seconds).



Subplates and fixture plates come with bushings pre-installed.

Round Ball Lock™ Fixture Plates and Subplates

Standard Round



Fixture Plate Subplate

Cast Aluminum, FreeMax™ or Steel equivalent

Fixture Plate

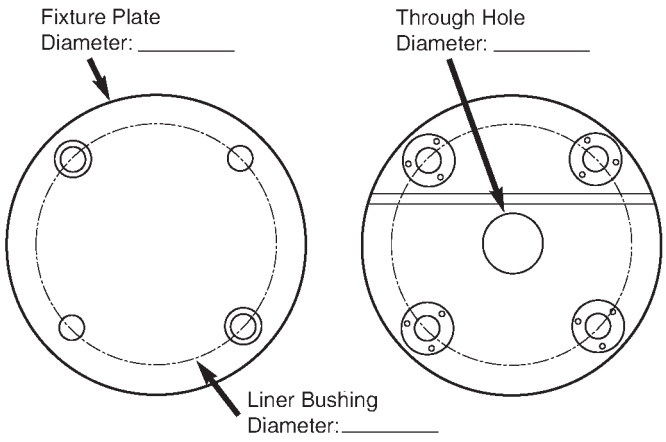
Part No.	A	B	Thickness ±0.005"	Ball Lock Liner	Ball Lock Shank	Weight (lbs)
28707	8"	6"	3/4	16mm	**49608**	3.5
28708	10"	8"	1	20mm	**49602**	7.0
28709	12"	10"	1	20mm	**49602**	11.0

Subplate

Part No.	A	B	Thickness ±0.005"	Ball Lock Receiver	Center Hole	Weight (lbs)
49107	8"	6"	3/4	16mm	1.00"	11.0
49108	10"	8"	1	20mm	2.00"	21.0
49109	12"	10"	1	20mm	2.00"	33.0

Metric sizes also available; please call for information.

Custom Round Plates



Indexer:

Make: _____

Model: _____

Diameter: _____

Light Duty or Heavy Duty: _____

Through Hole Bore: _____

CNC Machine:

Make: _____

Model: _____

Weight Capacity: _____

Indexer Faceplate:

T-Slot Size: _____

Configuration/Orientation: _____

or

Drilled Tapped Hole Size:

Configuration/Orientation: _____

Engineering Changes

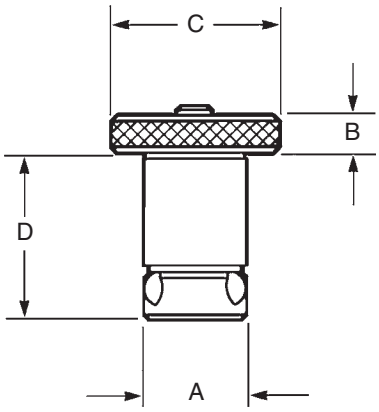
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change without notice. If current information is critical to your design, it is suggested that you contact Jergens Technical Sales Department to verify any dimensions or specifications.

Locating and Clamping Shanks



- Material: Shank/Bushing, 4340
  Liner, 52100
- Finish: Black Oxide
- Heat Treat: Shanks, RC 40-45
  Bushings, RC 50-54
  Liners, RC 62-64
- Operating Temperature Range
  -20° to 400°F, -30° to 200°C

Stainless Steel available



Ball Lock Repair Kits



Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

Any Ball Lock application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

See page 1.20 for Fast Acting Shanks.

Locating and Clamping Shank Dimensions

Shank Diameter (mm) A	Fixture Plate Thickness ± 0.005	Shank Part Number	Head of Shank		Length Under Head D	Hex Wrench Size for Set Screw	Maximum		Recommended		Shank Repair Kit Part Number
			Height B	Diameter C			Screw Torque (Ft/lb)	Hold-Down Force (lbs)	Screw Torque (Ft/lb)	Hold-Down Force (lbs)	
13	0.50	**49605**	0.25	0.87	1.08	3/32	1.2	750	1	625	**49905**
	0.75	**49606**			1.33						**49906**
16	0.50	**49607**	0.32	1.50	1.15	1/8	3	1200	2	800	**49907**
	0.75	**49608**			1.40						**49908**
20	0.75	**49601**	0.38	1.75	1.53	1/8	4	3000	3	2250	**49901**
	1.00	**49602**			1.78						**49902**
25	0.75	**49611**	0.38	2.00	1.70	5/32	9	7000	7	5444	**49911**
	1.00	**49612**			1.95						**49912**
30	0.75	**49621**	0.50	2.25	1.88	3/16	15	10000	12	8000	**49921**
	1.00	**49622**			2.13						**49922**
35	0.75	**49631**	0.50	2.25	1.97	1/4	25	15500	19	11780	**49931**
	1.00	**49632**			2.22						**49932**
	1.50	**49633**			2.72						**49933**
	2.00	**49634**			3.22						**49934**
50	0.75	**49641**	0.75	3.00	2.45	3/8	50	20000	38	15200	**49941**
	1.00	**49642**			2.70						**49942**
	1.50	**49643**			3.20						**49943**
	2.00	**49644**			3.70						**49944**

Receiver Bushings



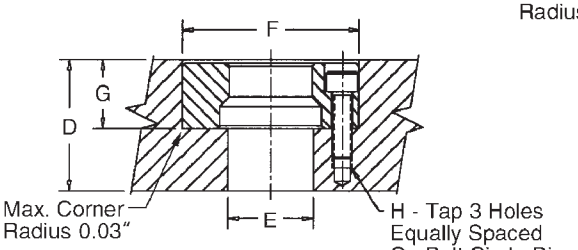
Back Mount



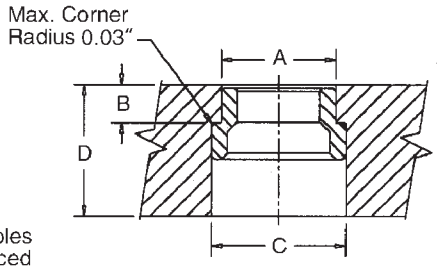
Face Mount

Two styles of receiver bushings are available. Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit). The back mount receiver bushing is used in through hole applications (Light Press Fit).

Note: Installed bushings should be approximately .012" below subplate surface.
See reference below for installation of back mount style bushings.



Face Mount Bushing Installation Instructions



Back Mount Bushing Installation Instructions

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. +0.0000 -0.0004	Clearance Drill Diameter E	Bore +0.0005 -0.0000 F	Depth +0.002 -0.000 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49506**	1.3750	11/16	1.3750	0.469	8-32x5/16	0.984	3/4
16	**49507**	1.4370	13/16	1.4370	0.469	8-32x5/16	1.125	3/4
20	**49501**	1.6873	13/16	1.6873	0.637	10-32x3/8	1.362	1
25	**49502**	2.0623	1	2.0623	0.799	1/4-28x1/2	1.644	1-1/4
30	**49503**	2.2654	1 3/16	2.2654	0.871	1/4-28x3/4	1.876	1-3/8
35	**49504**	2.6873	1 9/16	2.6873	0.904	5/16-24x7/8	2.178	1-1/2
50	**49505**	3.4998	2 5/32	3.4998	1.239	3/8-24x1	2.916	2

[1]Cap Screws Supplied with Face Mount Bushings.

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.0000 -0.0004 A	Depth +0.000 -0.002 B	C-Bore ±0.006 C	Min. Subplate Thickness D
13	**49516**	0.7870	.277	1.000	3/4
16	**49517**	0.8760	.285	1.155	3/4
20	**49511**	1.0950	.345	1.280	7/8
25	**49512**	1.3763	.416	1.593	1
30	**49513**	1.6264	.432	1.906	1-1/4
35	**49514**	1.8764	.493	2.155	1-5/16
50	**49515**	2.6269	.621	2.988	1-3/4

Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±.0005" can be maintained if the two holes for receiver bushings are held to a centerline distance of ±.0002" tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings:
To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed .0005".

Liner Dimensions

Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
.50	13	**49705**	**49805**	0.7518
.75	13	**49706**	**49806**	0.7518
.50	16	**49707**	**49807**	1.0018
.75	16	**49708**	**49808**	1.0018
.75	20	**49701**	**49801**	1.3772
1.00	20	**49702**	**49802**	1.3772
.75	25	**49711**	**49811**	1.3772
1.00	25	**49712**	**49812**	1.3772
.75	30	**49721**	**49821**	1.7523

Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
1.00	30	**49722**	**49822**	1.7523
.75	35	**49731**	**49831**	1.7523
1.00	35	**49732**	**49832**	1.7523
1.50	35	**49733**	**49833**	1.7523
2.00	35	**49734**	**49834**	1.7523
.75	50	**49741**	**49841**	2.5025
1.00	50	**49742**	**49842**	2.5025
1.50	50	**49743**	**49843**	2.5025
2.00	50	**49744**	**49844**	2.5025

Accessories

Tapered Caps and Plugs

Keep debris out of your subplate's receiver bushings when not in use. Polyethylene caps snap in and out easily.



Packaged 10 per pack.

Receiver Bushing Diameter	Part Number
13	**49201**
16	**49202**
20	**49203**
25	**49204**
30	**49205**
35	**49206**
50	**49207**



Lifting Handles

For easy handling of fixture plates up to 500 lbs.

Part Number	Length	Ht.	W	Mounting Distance
33701	**4.**21	1.42	0.83	3.68

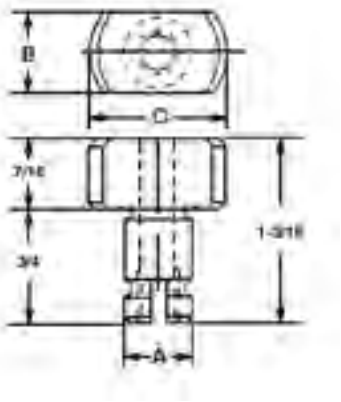
Sine Fixture Keys



Locate subplates or fixture plates to slotted machine tables without having to slot the plate. Available in inch sizes from 1/2" to 7/8" slots, and in metric sizes from 14mm to 22mm slots. NOTE: See page 4.21 for dimensions.

Part Number	A +0.000 -0.0005	B Table Slot Size +0.000 -0.0005	C	Part Number	A +0.000 -0.013	B Table Slot Size (mm) +0.000 -0.013	C
39501	.625	1/2	1	**39562**	16	14	1
39502	.625	9/16	1	**39563**	16	16	1
39503	.625	5/8	1	**39564**	16	18	1
39504	.625	11/16	1	**39565**	16	20	1-1/8
39505	.625	3/4	1-1/8	**39566**	16	22	1-1/8
39506	.625	13/16	1-1/8				
39507	.625	7/8	1-1/8				

NOTE: All shanks are 5/8" diameter



Fast Acting Ball Lock™ Shanks

Ball Lock Shank Diameter (mm)	Fixture Plate Thickness (in.)	FAST ACTING			
		Jergens Ball Lock Shank w/Jergens Thumb Screw		Jergens Ball Lock Shank Adjustable Handle	
		Part Number		Part Number	
		Assembly	T-Screw	Assembly	Handle
16	1/2	**49607-S**	**43904**	**49607-H**	**34314**
	3/4	**49608-S**	**43904**	**49608-H**	**34315**
20	3/4	**49601-S**	**43904**	**49601-H**	**34315**
	1	**49602-S**	**43905**	**49602-H**	**34316**
25	3/4	**49611-S**	**43907**	**49611-H**	**34328**
	1	**49612-S**	**43908**	**49612-H**	**34329**
30	3/4	**49621-S**	**43910**	**49621-H**	**34334**
	1	**49622-S**	**43911**	**49622-H**	**34335**
35	3/4	**49631-S**	**43913**	**49631-H**	**34339**
	1	**49632-S**	**43913**	**49632-H**	**34339**
	1-1/2	**49633-S**	**43914**	N/A	
	2	**49634-S**	**43914**	N/A	



Thumb Screw

- Fast acting thumb screws 2 1/2 turns. No tools needed.



Adjustable Handle

- Handle can be moved out of the work area to avoid interference.

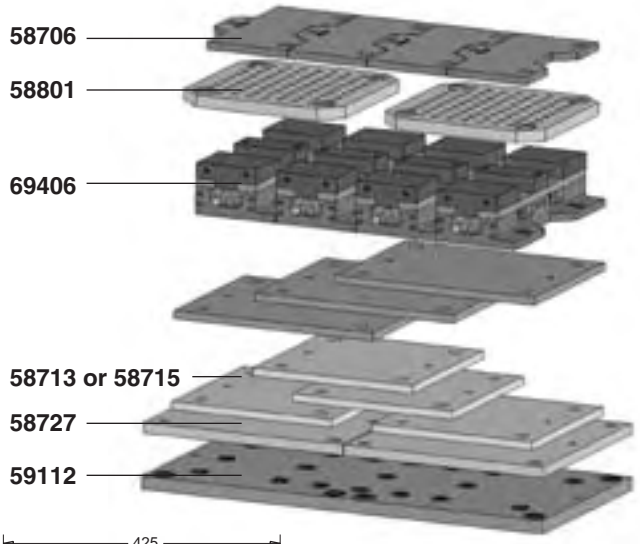
Multi-Purpose Subplate

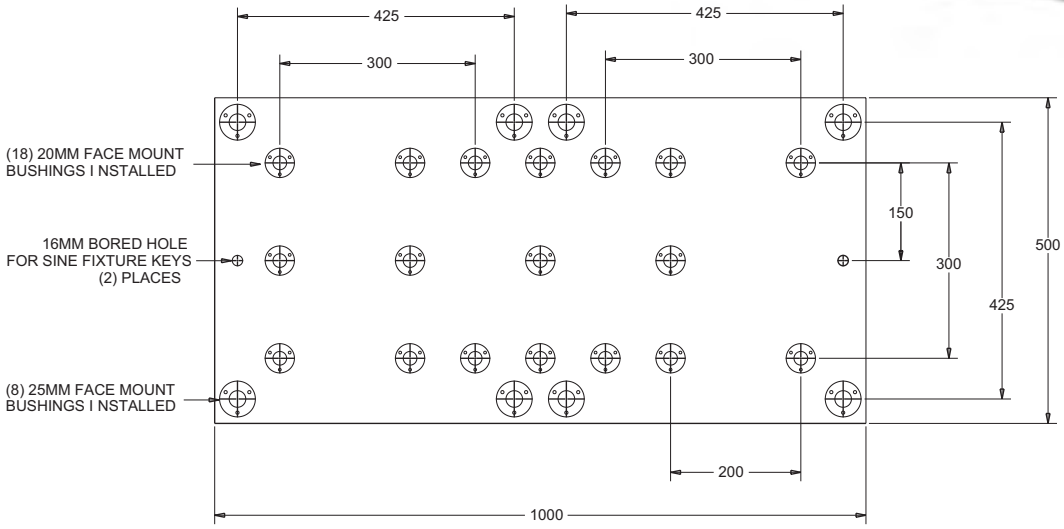
1000x500 Multi-Purpose Subplate

Part Number	Wt. (kg)
59112	130

The Jergens Multi-Purpose Subplate accommodates a wide variety of fixture plates and vises. This versatility facilitates using the same VMC for diverse products in repetitive runs-long and short batch sizes.

- FreMax™ 15 Steel or Equivalent
- Thickness: 31.75mm ±0.13mm
- Parallel within 0.025mm





Fixture Plate Options for Multi-Purpose Subplates – Aluminum or Steel

Fixture Plate*/Vise Part Number	Thickness of Fixture Plate	Number of Fixture Plates/Vise That Mount on Multi-Purpose Subplate	Receiver Bushing Center Distance	Receiver Bushing Size	Required Ball Lock Shank Part Number	Number of Shanks Required Per Fixture Plate/Vise
58713 (350 x 350) Fixture Plate	20mm	2	300 x 300	20 mm	**49651**	4
58715 (400 x 400) Fixture Plate	20mm	2	300 x 300	20 mm	**49651**	4
58801 (400 x 400) Modular Grid Plate	30mm**	2	300 x 300	20 mm	**49652**	4
58706 Jigsaw Interlocking Plate	20mm	4	300 x 200	20 mm	**49651**	3
58727 (500 x 500) Fixture Plate	25mm	2	425 x 425	25 mm	**49662**	4
69406 150mm Jigsaw Vise	20mm	4	300 x 200	20 mm	**49651**	3

* See next page for dimensional data on fixture plates. Part numbers shown for aluminum plates, also available in steel.
** Counterbored to 25mm at mounting holes.

Fixture Plates for Use on Multi-Purpose Subplate

350x350x20mm Fixture Plate

Aluminum Plate Part Number	Wt. (kg)
58713	6

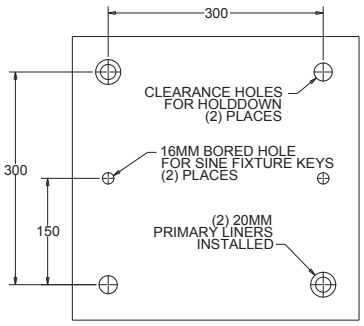
Steel Plate Part Number	Wt. (kg)
58813	19

400x400 Fixture Plate

Aluminum Plate Part Number	Wt. (kg)
58715	8

Steel Plate Part Number	Wt. (kg)
58815	25

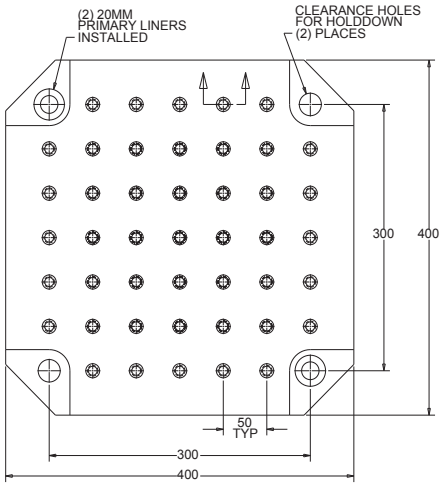
- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 20mm ±0.13mm
- Parallel within 0.025mm Steel
- Mounts to subplates with Ball™ Lock Shank 49651 (20x20mm)

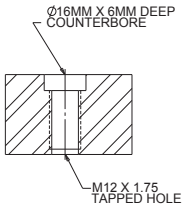


400x400 Modular Grid Fixture Plate

Aluminum Plate Part Number	Wt. (kg)
58801	38

- FreMax™ 15 Steel or equivalent
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm Steel





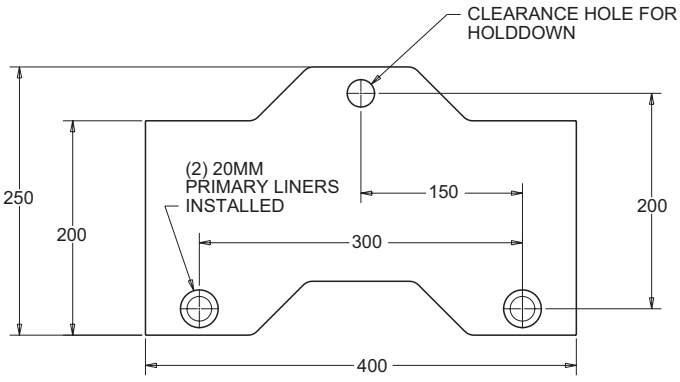
Mounts to Subplate with Ball™ Lock Shank 49652 (20x25mm)

Jigsaw Interlocking FixturePlate

Aluminum Plate Part Number	Wt. (kg)
58706	4

Steel Plate Part Number	Wt. (kg)
58806	12

- Material: Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 20mm ±0.13mm
- Parallel within 0.025mm Steel
- For use with narrow base 100mm or 150mm vise models
- Design allows close spacing of vises for more parts per run
- Mounts to Subplates using Ball Lock™ Shank 44651 (20x20mm)
- Useful for high density fixturing

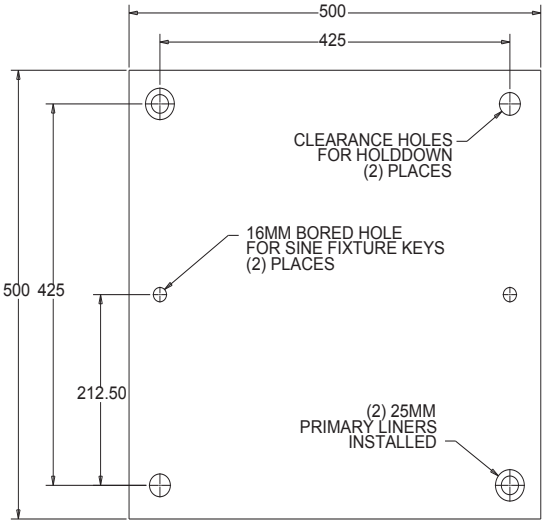


500x500x25mm Fixture Plate

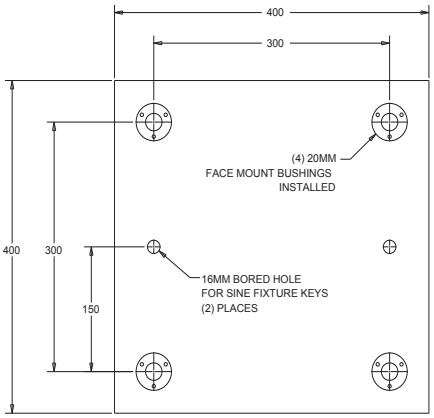
Aluminum Plate Part Number	Wt. (kg)
58727	17

Steel Plate Part Number	Wt. (kg)
58827	48

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 25mm ±0.13mm
- Parallel within 0.025mm Steel
- Mounts to Subplates using Ball Lock™ Shank 49662 (25x25mm)



Pre-Machined Ball Lock™ Steel Subplate

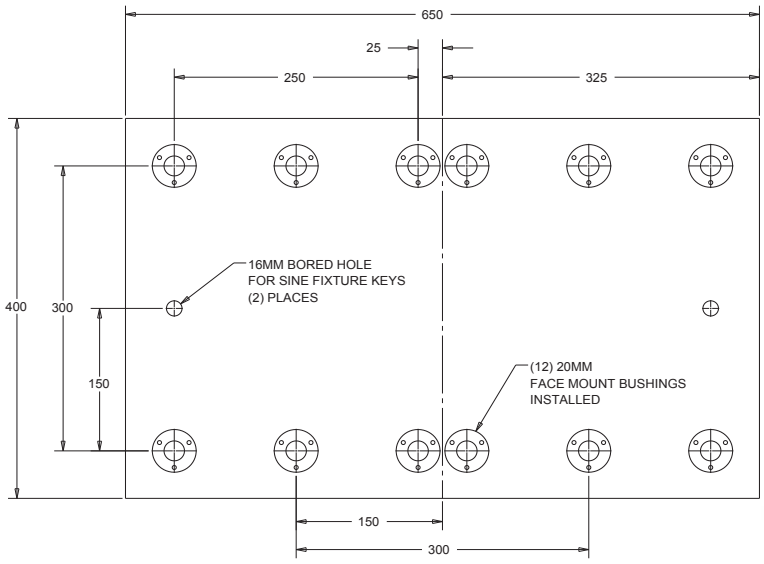


400 x400 Subplate

Part Number	Wt. (kg)
59101	37

Equipped with four 20mm receiver bushings for use with 350x350 or 400x400 (mm) fixture plates. Ideal for horizontal machining centers or multiple pallet machining centers.

- FreMax™ 15 steel plate or equivalent
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm



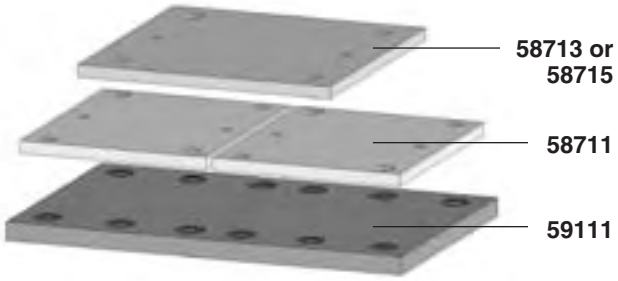
650x400 Dual Station Subplate

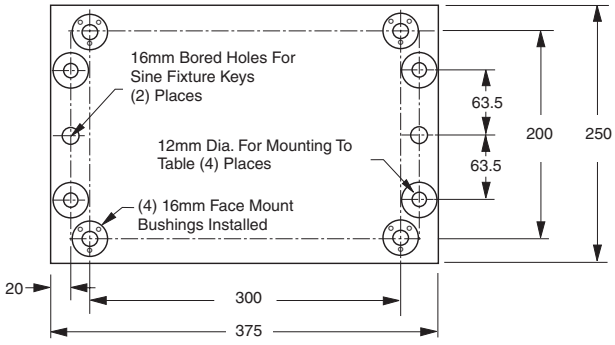
Part Number	Wt. (kg)
59111	58

Equipped with twelve installed 20mm receiver bushings to easily locate and mount Jergens Standard Fixture Plates.

- Ideal for vertical machining centers
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm

Aluminum Plate Part Number	Steel Plate Part Number	Number of Fixture Plates	Plate Width and Length (mm)
58713	**58813**	1	350x350
58715	**58815**	1	400x400
58711	**58811**	2	300x350





250x375 Bridgeport™- Style Subplate

Part Number	Wt. (kg)
59121	15

Equipped with four installed 16mm receiver bushings and 12mm mounting holes. Used with the Bridgeport™ style fixture plates 58731 or 58831.

- Thickness: 19.05mm ±0.13mm
- Parallel within 0.025mm

Ball Lock Quick Change Kits include all components needed in a single package. See page 1.25 for details.

Ball Lock™ Fixture Plates

- Cast Aluminum; or FreMax™ 15 Steel or equivalent
- Thickness ±0.13mm
- Parallel within .025mm Steel
- 6061–T-651 plates, flat within 0.03mm available upon request

Ball Lock™ Fixture Plates with 2 Primary Liners Installed

Part Number				Plate Dimensions (mm)	Plate Thickness ±0.13(mm)	Ball Lock Shank Size (mm)	Ball Lock Shank Part Number
Aluminum	Weight (Kgs)	Steel	Weight (Kgs)				
58706	4	**58806**	12	250 x400	20	20	**49651**
58711	5	**58811**	16	300 x350	20	20	**49651**
58713	6	**58813**	19	350 x 350	20	20	**49651**
58715	8	**58815**	25	400 x 400	20	20	**49651**
58727	17	**58827**	48	500 x 500	25	25	**49662**
		58801	38	400 x 400	28.57	20	**49652**
58731	5	**58831**	15	375x250	20	16	**49657**

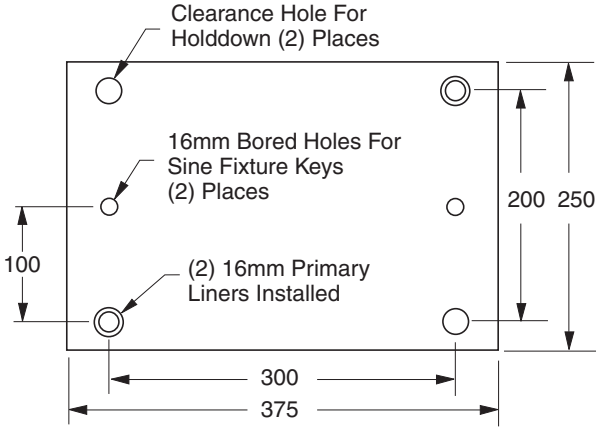
- Machined to close tolerances
- Repeatability ±0.013mm or better
- Reduces fixture set-up and assembly time
- Provided with 16mm bored holes for sine fixture keys
- For horizontal or vertical machining centers, Tool Room Mills machines, or multiple pallet machining centers

Custom Sizes Available
Jergens will make Ball Lock™ fixture plates or subplates to your specifications. Call 1-216-486-5540 for further information.

375x250x20mm Fixture Plate Bridgeport™ Style

Aluminum Plate Part Number	Wt. (kg)
58731	5

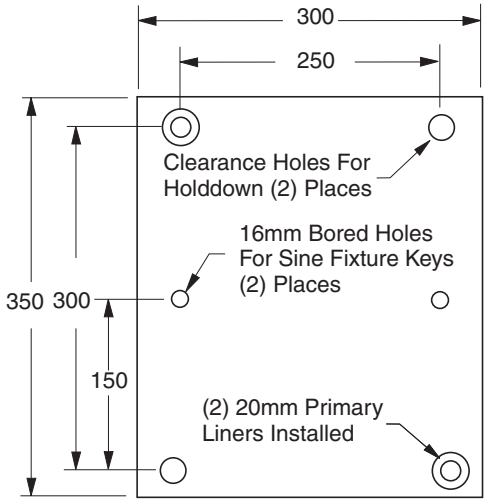
Steel Plate Part Number	Wt. (kg)
58831	15



300x350x20mm Fixture Plate

Aluminum Plate Part Number	Wt. (kg)
58711	5

Steel Plate Part Number	Wt. (kg)
58811	16



Quick Change Kits

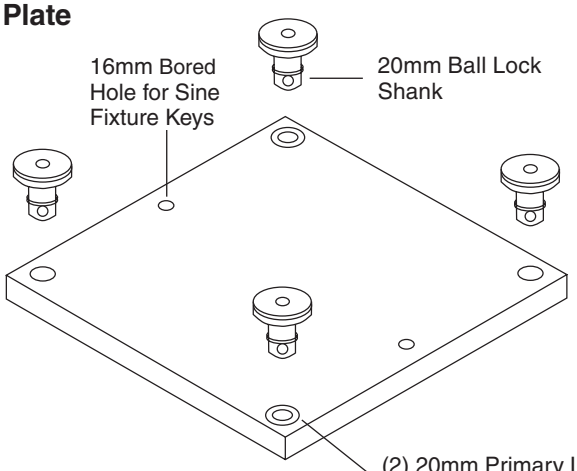


The Jergens Ball Lock™ Quick Change Kits speed fixture changeover in all types of manufacturing operations. Each kit includes two aluminum fixture plates with 2 primary liner bushings installed; one steel subplate with receiver bushings installed, and four 20mm Ball Lock shanks with working loads of 3000 lbs. each. While one fixture plate is on the machine, the operator can load parts on the other. This minimizes downtime for true set-up reduction. To enable the subplate to be mounted on a slotted table without the need to indicate the subplate, sine fixture keys can be used. The sine fixture key reamed holes are oriented parallel to the receiver bushings on the subplate and to the liner bushings on the fixture plate. These also allow the fixture plate to be mounted on a toolroom mill without the need to indicate it. This is extremely useful when machining location points on your fixture.

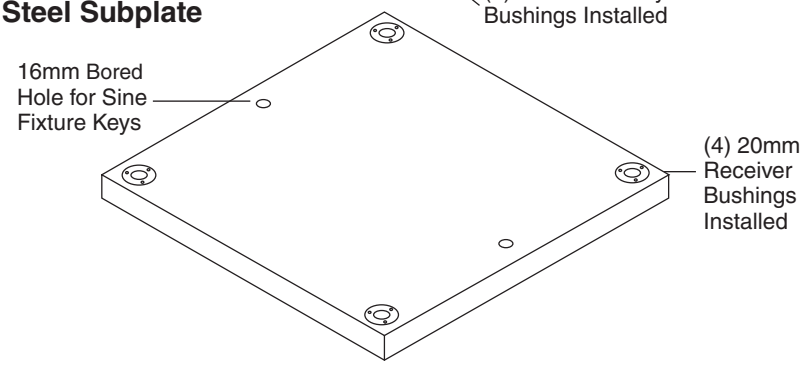
Ball Lock™ MOUNTING SYSTEM

Everything You Need to Change Fixtures in Less Than One Minute

Aluminum Fixture Plate



Steel Subplate



Quick Change Kits

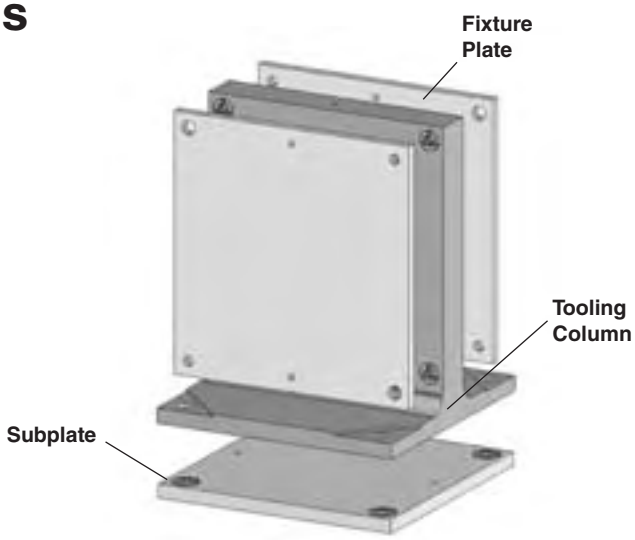
Part No.	Kit Includes
59002	2 - 58715 (400x400x20) aluminum fixture plates with 20mm liner bushings installed 1 - 59101 (400x400x25) steel subplate with receiver bushings installed 4 - 20mm Ball Lock Shanks (49651)

Custom Kits Available

Jergens manufactures ready to use kits including Ball Lock subplate and fixture plates.
For a special kit tailored to your CNC machine, please provide:
Name and Type of Machine _____
Travel of Machine Table (x, y, z) _____
Dimensions of Machine Table (x and y) _____
Maximum Weight allowed on Machine Table _____
T-slot Width and Center to Center Distance _____

Pre-Machined Ball Lock™ T-Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock™ Receiver Bushings and Liners installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.025 mm per 250 mm

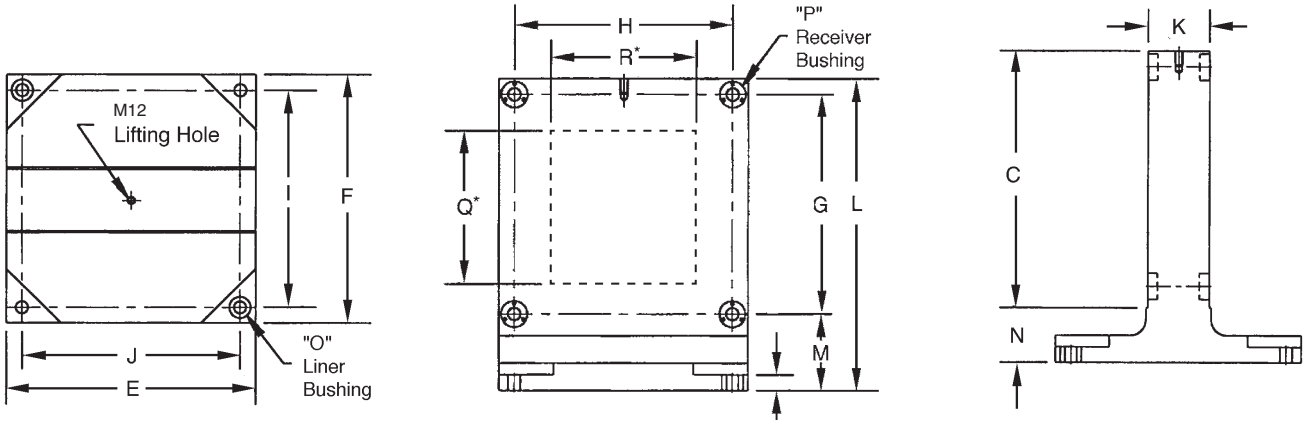


Custom Sizes Available with or without Ball Lock™
We are able to quote you on your special requirement with or without the Ball Lock™ Mounting System. Call 1-216-486-5540 for design specification information.

Cast Iron T-Columns With Ball Lock™ Receiver Bushings Installed

See page 1.28 for Metric Fixture Plates and Subplates

Pallet Size (mm)	Part Number	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (kg)
400	**69151**	410	25	400	400	350	350	350	350	100	500	125	90	20	20	190
500	**69161**	560	25	500	500	475	425	425	425	120	650	137.5	90	25	25	310
630	**69171**	660	40	630	630	575	550	525	525	100	750	137.5	90	35	25	500



***Note**: Window sections are also available on T-Columns. Specify window size and location (Q and R Dimensions).

Corresponding Fixture Plates, Subplates and Ball Lock Shanks

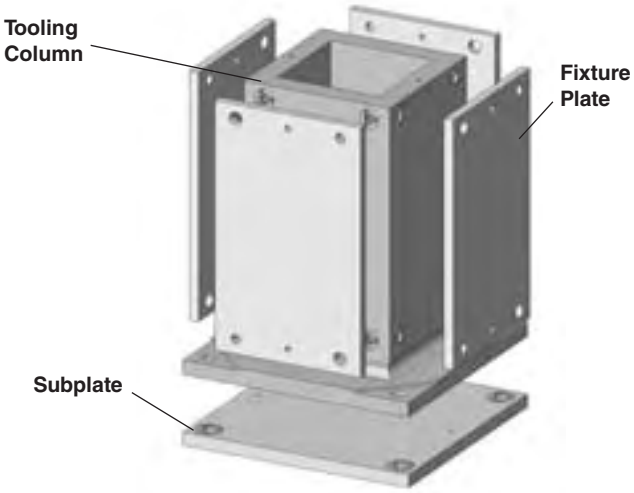
Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock Shank Part Number	Shank Size
400	**69151**	**58717**	**58817**	400 x 400	**49651**	20 x 20	**59102**	**49652**	20 x 25
500	**69161**	**58745**	**58845**	500 x 550	**49662**	25 x 25	**59103**	**49662**	25 x 25
630	**69171**	**58746**	**58846**	625 x 650	**49662**	25 x 25	**59104**	**49683**	35 x 40

Use Hoist Ring **23462,** see page 11.9 for lifting and handling – Order separately.

Engineering Changes
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

Pre-Machined Ball Lock™ 4-Sided Tooling Columns

- Class 40 cast iron
- Also available in Aluminum
- Ball Lock™ Receiver Bushings and Liner Bushings installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.025 mm per 250 mm

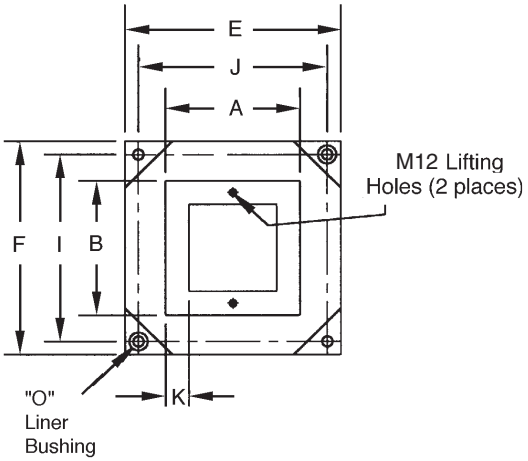


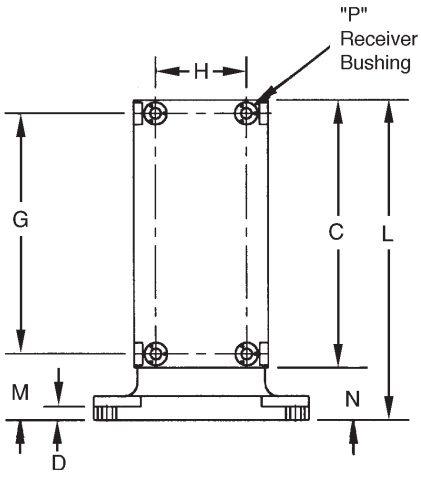
Custom Sizes Available with or without Ball Lock™
We are able to quote you on your special requirement with or without the Ball Lock™ Mounting System.
Call 1-216-486-5540 for design specification information.

Cast Iron 4-Sided Tooling Columns With Ball Lock™ Receiver Bushings Installed

See page 1.26 for Metric Fixture and Subplates

Pallet Size (mm)	Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (kg)
400	**69051**	250	250	505	25	400	400	450	150	350	350	40	600	125	95	20	20	225
500	**69061**	300	300	630	25	500	500	550	175	425	425	40	725	137.5	95	25	25	320
630	**69071**	400	400	655	40	630	630	575	275	525	525	45	750	137.5	95	35	25	495





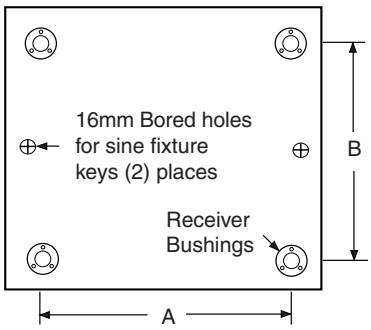
Corresponding Fixture Plates, Subplates and Ball Lock Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock Shank Part Number	Shank Size
400	**69051**	**58741**	**58841**	250 x 500	**49651**	20 x 20	**59102**	**49652**	20 x 25
500	**69061**	**58742**	**58842**	300 x 625	**49662**	25 x 25	**59103**	**49662**	25 x 25
630	**69071**	**58743**	**58843**	400 x 650	**49662**	25 x 25	**59104**	**49683**	35 x 40

Use Hoist Ring **23462,** see page 11.9 for lifting and handling – Order separately.

Engineering Changes
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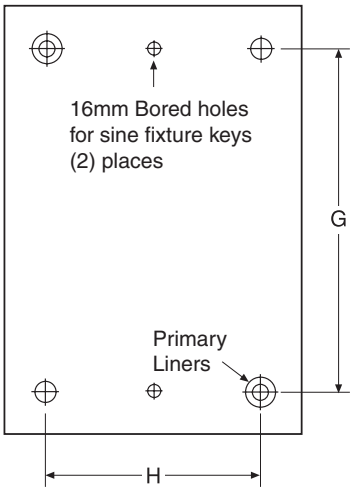
Subplates for Tooling Columns and Fixture Plates



Standard Steel Subplates for Tooling Columns

Subplate Mounting holes can be provided per customer specification.
Supplied with Ball Lock™ Receiver Bushings installed.

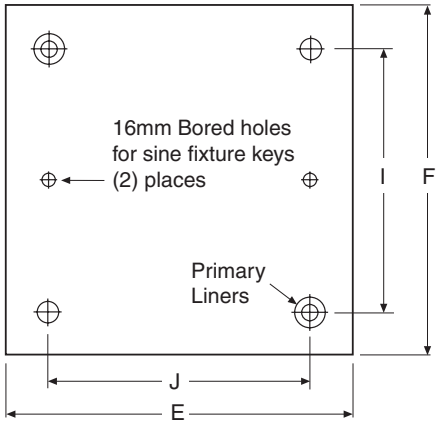
Part Number	Pallet Size (mm)	For Tooling Columns	Ball Lock Pattern A (mm)	Ball Lock Pattern B (mm)	Receiver Size (mm)	Thickness of Subplate (mm) ±0.13	Wt (Kgs)
59102	400	69151/69051	350	350	20	28.57	31
59103	500	69161/69061	425	425	25	31.75	59
59103-C*	500	**69151, 69051**	350/425	350/425	20/25	31.75	59
		69161, 69061	Dual	Dual	Dual		
59104	630	69171/69071	525	525	35	34.92	124



Fixture Plates for Standard Tooling Columns and T-Columns

Supplied with 2 primary Ball Lock™ Liner Bushings installed.

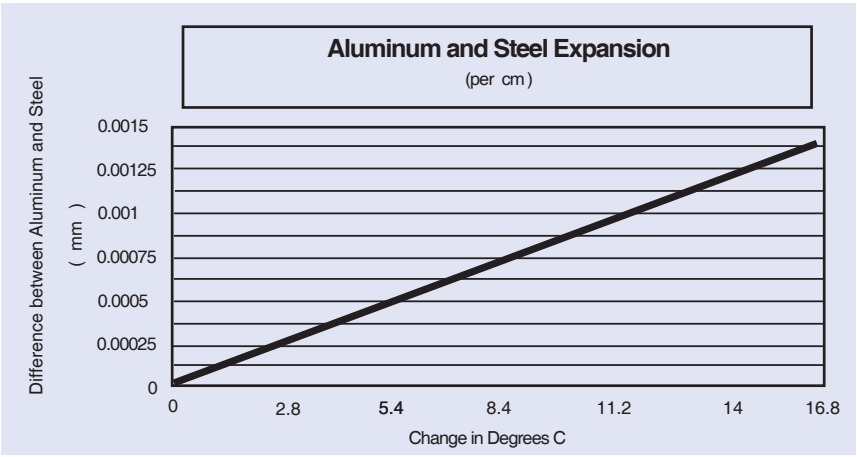
Pallet Size (mm)	Part Number Aluminum	(kg)	Steel	(kg)	For Tooling Columns	Type	Fixture Plate Size (mm)	Fixture Plate Thickness (mm) ±0.13	Ball Lock Pattern H (mm)	Ball Lock Pattern G (mm)	Liner Size (mm)
400	**58741**	7	**58841**	19	**69051**	4-S	250x500	150	450	20	20
500	**58742**	13	**58842**	36	**69061**	4-S	300x625	175	550	25	25
630	**58743**	18	**58843**	50	**69071**	4-S	400x650	275	575	25	25
400	**58717**	8	**58817**	25	**69151**	T	400x400	350	350	20	20
500	**58745**	19	**58845**	53	**69161**	T	500x550	425	475	25	25
630	**58746**	27	**58846**	63	**69171**	T	625x650	550	575	25	25



Fixture Plates for Tooling Column Subplates

Supplied with 2 primary Ball Lock™ Liner Bushings installed.

Pallet Size (mm)	Part Number Aluminum	(kg)	Steel	(kg)	For Subplate	Plate Dim. E (mm)	Plate Dim. F (mm)	Fixture Plate Thickness ±0.13 (mm)	Ball Lock Pattern I (mm)	Ball Lock Pattern J (mm)	Liner Size (mm)
400	**58717**	8	**58817**	25	**59102**	400	400	20	350	350	20
500	**58727**	17	**58827**	48	**59103**	500	500	25	425	425	25
630	**58732**	27	**58832**	76	**59104**	630	630	25	525	525	35



NOTE: Aluminum and steel expand at different rates. Please take this information into consideration when creating your own Ball Lock fixture and subplates.

Ball Lock™ For 4th Axis Rotary Indexers

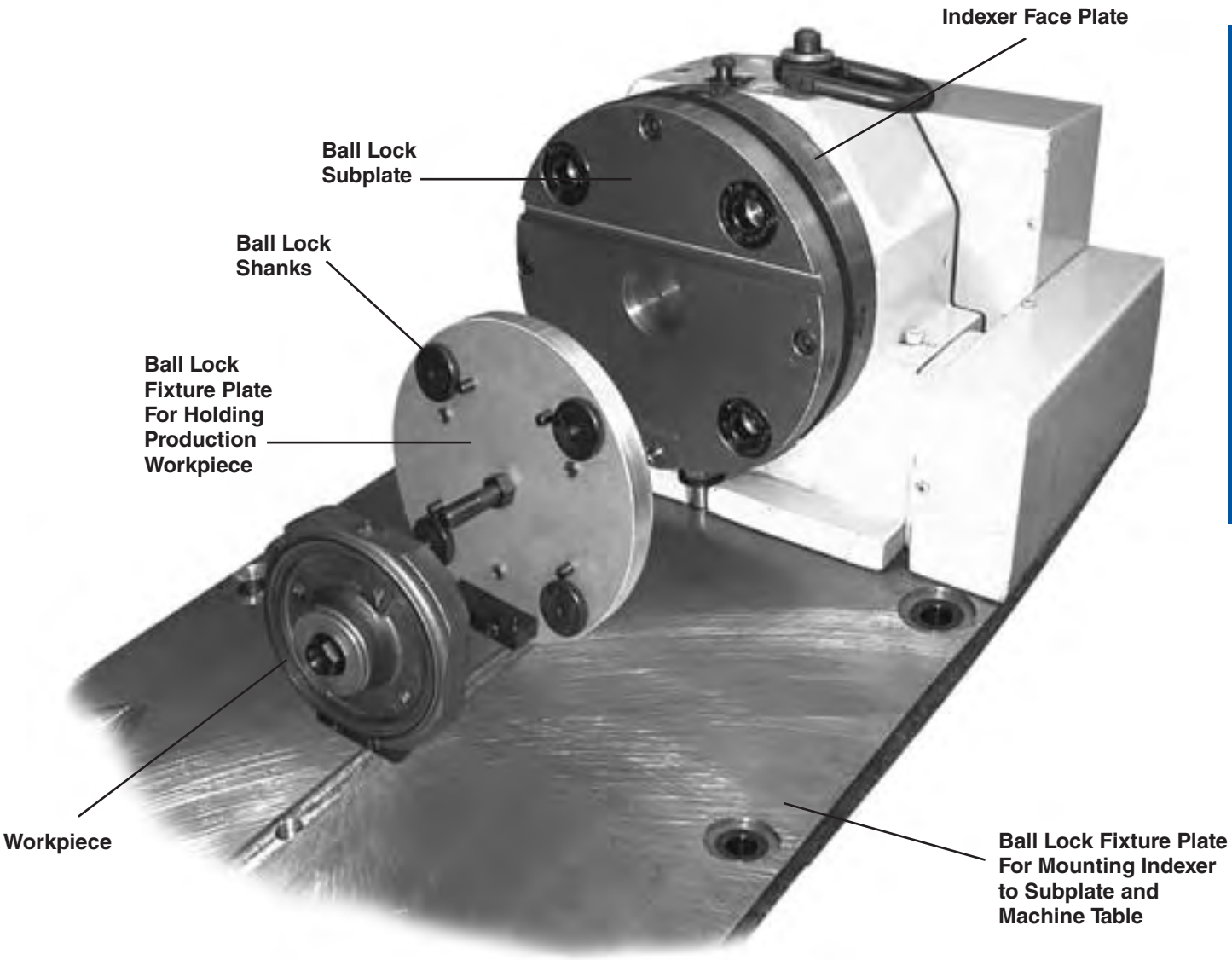
Problem:
Rotary indexers increase the versatility of vertical machining centers, yet they offer one major challenge: set-up is so time-consuming that it may limit a machine's flexibility. In many cases, machinists dedicate their 4th Axis tool to a single machine to avoid the agony of an extended set-up and changeover.

Benefits:
- Maximize indexer utilization
- Eliminate lengthy set-ups
- Accurate fixture plate changover in seconds

Jergen's Solution:
Ball Lock Mounting System for Indexers provides a double solution.

First, Ball Lock mounting plates free up your machine for additional work by allowing a fast and accurate installation and removal of the complete indexer. Avoid hours of set up. The Ball Lock System does it in minutes, with repeatability at ±.0005" (±.013mm). Low profile, positive clamping, proven in over many years of field use.

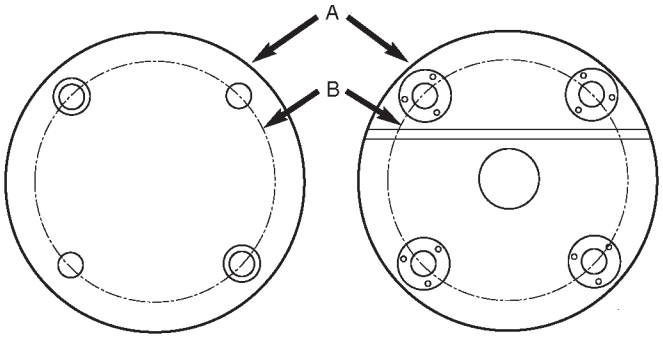
Second, the Ball Lock System provides your fixture plate changeover. By mounting the round subplate to the indexer faceplate, you'll "plug-in" new fixtures in record time (less than 60 seconds).



Subplates and fixture plates come with bushings pre-installed.

Round Ball Lock™ Fixture Plates and Subplates

Standard Round



Fixture Plate Subplate

Cast Aluminum, FreeMax™ or Steel equivalent

Fixture Plate (mm)

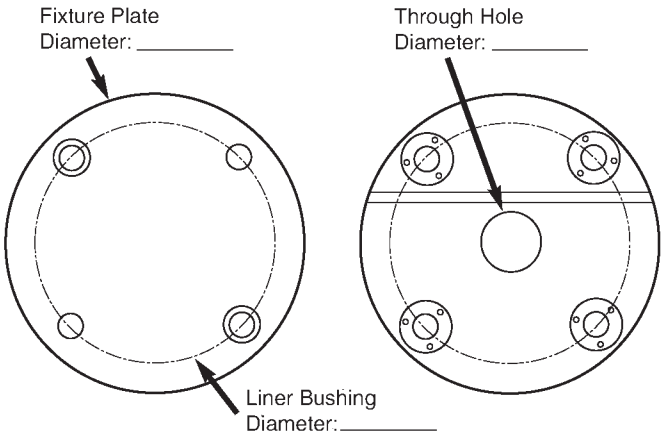
Part No.	A	B	Thickness	Ball Lock Liner	Ball Lock Shank	Weight (Kgs)
58707	200	150	20	16	49657	1.6
58708	250	200	25	20	49652	3.2
58709	300	250	25	20	49652	5.0

Subplate(mm)

Part No.	A	B	Thickness	Ball Lock Receiver	Center Hole	Weight (Kgs)
59107	200	150	20	16	25	5.0
59108	250	200	25	20	50	9.6
59109	300	250	25	20	50	15.0

Note: Equivalent system available in inch dimensions.

Custom Round Plates



Indexer:

Make: _____

Model: _____

Diameter: _____

Light Duty or Heavy Duty: _____

Through Hole Bore: _____

CNC Machine:

Make: _____

Model: _____

Weight Capacity: _____

Indexer Faceplate:

T-Slot Size: _____

Configuration/Orientation: _____

or

Drilled Tapped Hole Size:

Configuration/Orientation: _____

Engineering Changes

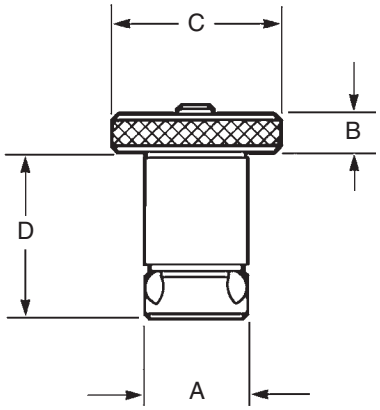
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change without notice. If current information is critical to your design, it is suggested that you contact Jergens Technical Sales Department to verify any dimensions or specifications.

Locating and Clamping Shanks



U.S. Patents: 3,498,653
4,135,418

- Material: Shank/Bushing, AISI 4340
  Liner, 52100
- Finish: Black Oxide
- Heat Treat: Shanks, RC 40-45
  Bushings, RC 50-54
  Liners, RC 62-64
- Operating Temperature Range: -30°C to 200°C
- Stainless Steel available



Replacement Kits



Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

Any Ball Lock application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

See page 1.33 for Fast Acting Shanks.

Locating and Clamping Shank Dimensions

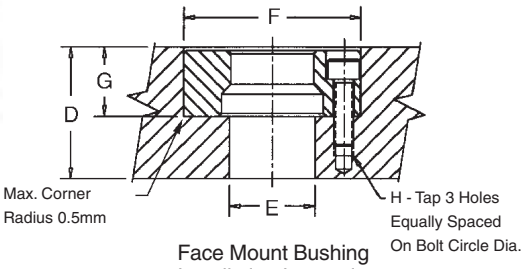
Shank Diameter (mm) A	Fixture Plate Thickness ±0.13mm	Shank Part Number	Head of Shank		D	Hex Wrench Size For Set Screw	Maximum		Recommended		Shank Repair Kit Part Number
			Height B	Diameter C			Screw Torque (N.m)	Holddown Force (KN)	Screw Torque (N.m)	Holddown Force (KN)	
13	13	**49655**	6	22	27.6	2.5	1.2	3.3	1	2.7	**49955**
	20	**49656**			34.6						**49956**
16	20	**49657**	8	32	36.5	3	4.5	5.3	3	3.5	**49957**
	25	**49658**			41.5						**49958**
20	20	**49651**	10	40	39.5	3	5.3	13.3	4	10	**49951**
	25	**49652**			44.5						**49952**
25	20	**49661**	10	45	44.0	4	11	30	9	23	**49961**
	25	**49662**			49.0						**49962**
30	20	**49671**	13	50	49.0	5	18	44	15	35	**49971**
	25	**49672**			54.0						**49972**
35	20	**49681**	13	60	51.0	6	33	68	25	52	**49981**
	25	**49682**			56.0						**49982**
	40	**49683**			71.0						**49983**
	50	**49684**			81.0						**49984**
50	20	**49691**	20	75	64.0	10	65	88	50	67	**49991**
	25	**49692**			69.0						**49992**
	40	**49693**			84.0						**49993**
	50	**49694**			94.0						**49994**

Receiver Bushings

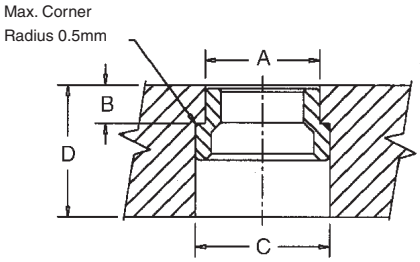
Two styles of receiver bushings are available. Installed bushings should be approximately 0.3mm below subplate surface.



Face Mount



Face Mount Bushing
Installation Instructions



Back Mount Bushing
Installation Instructions



Back Mount

Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit).

The back mount receiver bushing is used in through hole applications (Light Press Fit).

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. -0.01 -0.02	Clearance Drill Diameter E	Bore +0.010 +0.003 F	Depth +0.025 -0.025 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49556**	35	13.5	35	11.91	M4x0.7 x 7	25	20
16	**49557**	37	21.0	37	11.91	M4x0.7 x 7	29	20
20	**49551**	45	21.0	45	16.21	M5x0.8 x 9	35	25
25	**49552**	55	25.5	55	20.32	M6x1.0 x 10	42	30
30	**49553**	60	30.5	60	22.15	M6x1.0 x 11	48	35
35	**49554**	70	40.0	70	22.99	M8x1.25 x 17	56	40
50	**49555**	92	55.0	92	31.50	M10x1.5 x 18	75	50

[1]Cap Screws Supplied with Face Mount Bushings.

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.04 +0.03 A	Depth +0.025 -0.025 B	C-Bore ±0.15 C	Min. Subplate Thickness D
13	**49566**	20	6.92	26	20
16	**49567**	22	7.24	29	20
20	**49561**	28	8.74	33	25
25	**49562**	35	10.54	41	25
30	**49563**	42	10.95	49	30
35	**49564**	48	12.50	55	35
50	**49565**	67	15.75	76	45

Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±0.013 mm can be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.005 mm tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings:
To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed 0.013 mm.

Liner Dimensions

Shank Diameter (mm)	Fixture Plate Thickness +0.13 - 0.13	Primary Liner		Secondary Liner		Liner O.D. +0.00 - 0.01
		Part Number	I.D.	Part Number	I.D.	
13	13	**49755**	13.01	**49855**	13.04	19.040
	20	**49756**		**49856**		19.040
16	20	**49757**	16.01	**49857**	16.04	25.042
	25	**49758**		**49858**		25.042
20	20	**49751**	20.01	**49851**	20.04	35.042
	25	**49752**		**49852**		35.042
25	20	**49761**	25.01	**49861**	25.04	35.042
	25	**49762**		**49862**		35.042
30	20	**49771**	30.01	**49871**	30.04	45.042
	25	**49772**		**49872**		45.042
35	20	**49781**	35.01	**49881**	35.04	45.042
	25	**49782**		**49882**		45.042
	40	**49783**		**49883**		45.042
	50	**49784**		**49884**		45.042
50	20	**49791**	50.01	**49891**	50.04	63.546
	25	**49792**		**49892**		63.546
	40	**49793**		**49893**		63.546
	50	**49794**		**49894**		63.546

Accessories

Tapered Caps and Plugs

Keep debris out of your subplate's receiver bushings when not in use. Polyethylene caps snap in and out easily.



Packaged 10 per pack.

Receiver Bushing Diameter	Part Number
13	**49201**
16	**49202**
20	**49203**
25	**49204**
30	**49205**
35	**49206**
50	**49207**



Lifting Handles

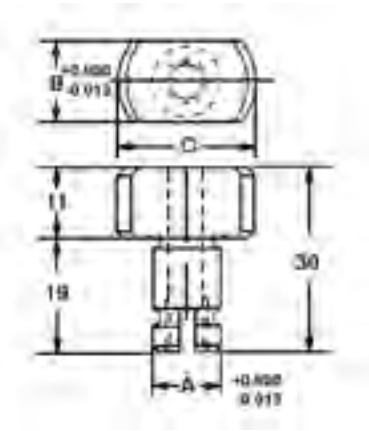
For easy handling of fixture plates up to 500 lbs.

Part Number	Length	Ht.	W	Mounting Distance
33701	107mm	36mm	.38kg	93.47mm

Sine Fixture Keys



Part Number	Shank Size A	Slot Size B	C	Wt. (kg)	Recommended Hole Diameter
39551	16	12	25	.04	
39552	16	14	25	.05	
39553	16	16	25	.05	16mm Shank Size: 16.01 ± 0.01
39554	16	18	29	.05	
39555	16	20	29	.06	
39556	16	22	29	.06	
39557	20	24	35	.07	
39558	20	28	35	.10	20mm Shank Size: 20.01 ± 0.01
39559	20	32	40	.10	



Locate subplates or fixture plates to slotted machine tables without having to slot the plate. Available in sizes from 12mm to 32mm slots.

Fast Acting Ball Lock™ Shanks

Ball Lock Shank Diameter (mm)	Fixture Plate Thickness (mm)	FAST ACTING BALL LOCK SHANKS			
		Shank with Thumb Screw		Shank with Adjustable Handle	
		Part Number		Part Number	
		Assenbly	T-Screw	Assenbly	Handle
13	13	**49655-S**	**43971**	**49655-H**	**34360**
	20	**49656-S**	**43972**	**49656-H**	**34361**
16	20	**49657-S**	**43974**	**49657-H**	**34365**
	25	**49658-S**	**43975**	**49658-H**	**34365**
20	20	**49651-S**	**43974**	**49651-H**	**34365**
	25	**49652-S**	**43975**	**49652-H**	**34365**
25	20	**49661-S**	**43977**	**49661-H**	**34378**
	25	**49662-S**	**43978**	**49662-H**	**34379**
30	20	**49671-S**	**43980**	**49671-H**	**34385**
	25	**49672-S**	**43980**	**49672-H**	**34385**
35	20	**49681-S**	**43985**	**49681-H**	**34393**
	25	**49682-S**	**43985**	**49682-H**	**34393**



Thumb Screw

- Fast acting thumb screws 2 1/2 turns. No tools needed.



Adjustable Handle

- Handle can be moved out of the work area to avoid interference.

Lite Lock™ Mounting System

Light Duty Mounting System Locates and Locks One Plate to Another

The Jergens Lite Lock Mounting System is a cost-effective method of eliminating downtime and reducing the changeover cycle in the production process. With only one moving part, changing assembly fixtures, fixture plates, or any process involving mounting one plate on top of another, becomes a simple and quick operation.

The Lite Lock Mounting System, like the heavier duty Jergens Ball Lock™ Mounting System, locates and locks two plates together accurately and quickly. By simply pushing the release button located on the Lite Lock cartridge, an operator can change the top plate, loaded with parts, in a matter of seconds!

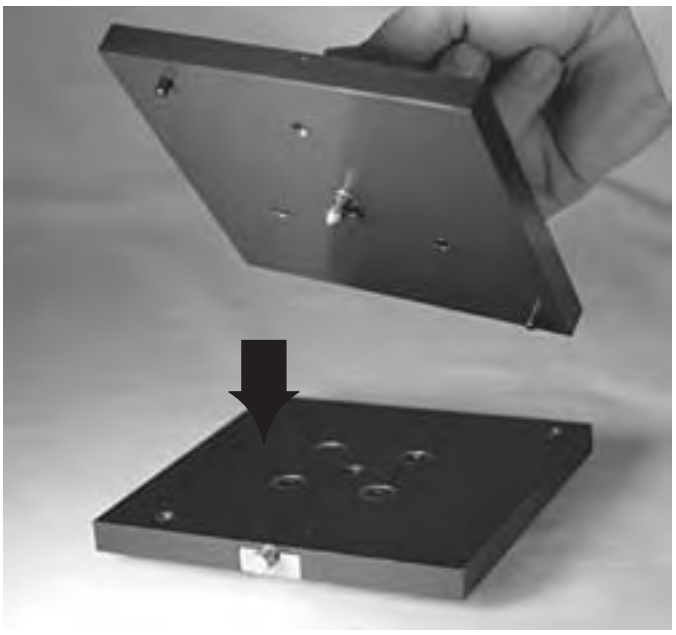
This quick release concept is adaptable to a wide range of applications and machinery. It eliminates the need for conventional fasteners such as bolts and screws.

The Lite Lock Mounting System is available as a complete assembly or as individual components for installation on your existing plates. Several sizes of top and receiver plates are available. The accurate repeatability and rugged design is ideal for the following applications:

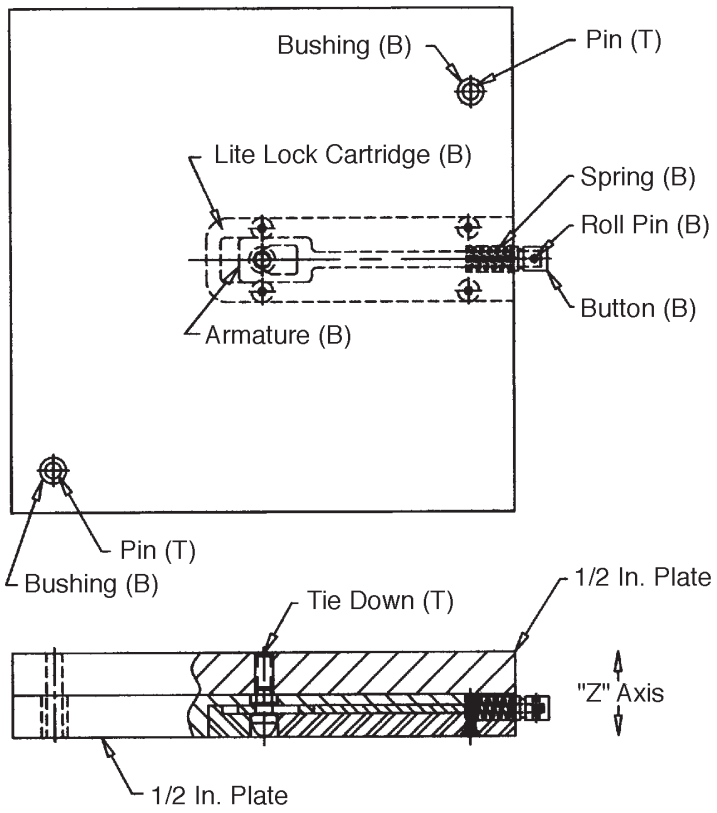
- Product assembly
- Part transfers
- Fusion welding
- Electronic assembly
- Laser machining
- Light machining
- Circuit board drilling
- Laser etching
- Product finishing

Plate Specifications:

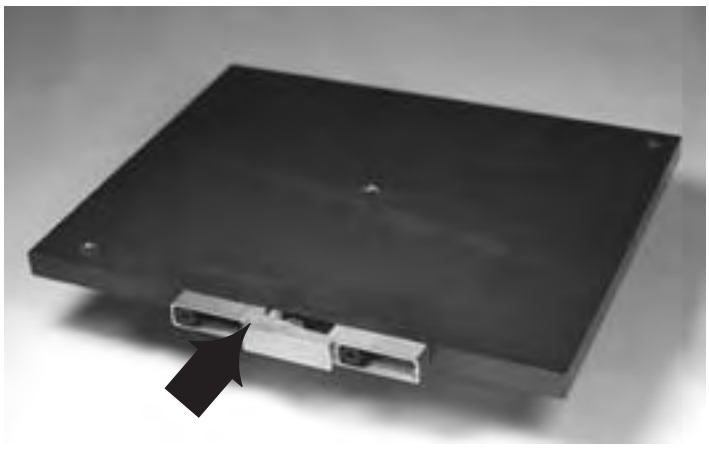
- Plate Material: 6061 T651 Aluminum
- Plate Thickness: 1/2", ±.003
- Plate Flatness: Flat and Parallel within ±.002
- Plate Width and Length: ±.003
- Repetitive Accuracy: ±.003



U.S. Patent No. 5,588,862



(T) Components in top actuating plate hardware kit
(B) Components in bottom plate hardware kit





Slide Lock Mechanism standard on 8"x10" and 12"x12" Receiver Plates.
Available as option for smaller plates. Order Part Number 49303.

Complete Assembly

Plate Size	Top and Receiver Plate Assembled Part Number
6” x 6” x 1/2”	**49341**
6” x 8” x 1/2”	**49342**
8” x 10” x 1/2”	**49343**
12” x 12” x 1/2”	**49344**

Top Plate Assembly
(includes installed hardware)

Plate Size	Top Plate Part Number
6” x 6” x 1/2”	**49336**
6” x 8” x 1/2”	**49337**
8” x 10” x 1/2”	**49338**
12” x 12” x 1/2”	**49339**

Receiver Plate Assembly
(includes installed hardware)

Plate Size	Receiver Plate Part Number
6” x 6” x 1/2”	**49331**
6” x 8” x 1/2”	**49332***
8” x 10” x 1/2”	**49333***
12” x 12” x 1/2”	**49334**

*Lite Lock Cartridge side-mounted on rectangular plates.

Kits

Top Plate Hardware Kit
(includes tie down pin and two dowel pins)

Part Number	49302

Receiver Plate Hardware Kit
(includes two bushings and an assembled cartridge)

Part Number	49301

Length of adjusting rod can be modified to size.

Blank Plates

Plate Size	Part Number
6” x 6” x 1/2”	**49321**
6” x 8” x 1/2”	**49322**
8” x 10” x 1/2”	**49323**
12” x 12” x 1/2”	**49324**

Special Orders

Call us with your special requirements for any product shown in the Ball Lock Mounting System section:

- Pre-Machined Ball Lock Fixture Plates
- Subplates
- Pre-Machined Tooling Columns
- Lite Lock™ Assemblies and Components

Features of the Jergens Zero-Point Mounting System

- **Positioning and clamping in one operation**
- **High repeatability and accuracy**
- **Low cost solution for quick pallet changing**



Typical applications for the Jergens Zero-Point System:

- Milling
- Assembly
- Welding
- Injection Molding
- Grinding
- Measuring



Pull Studs can also be installed directly into the workpieces, making 5-sided processing possible.



Best results with large and heavy workpieces.



Jergens Zero-Point clamping systems are made exclusively of rust-free materials and so are ideally suited for use in the food-service area as well as in the pharmaceutical and chemical industry.



Through different dimensions, the advantage of the Zero-Point clamping system are optimally used.

Pull Studs and Engagement Screws

Pages 1.42-1.43



Clamping Plates with Built-In Modules

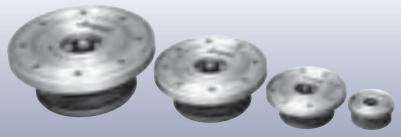
Pages 1.40-1.41

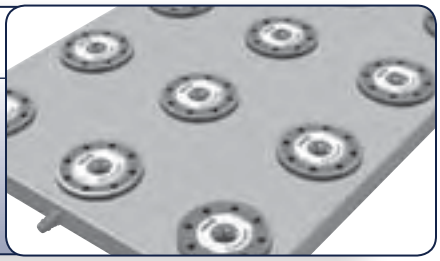


Threaded Clamping Modules

Pages 1.44-1.45

- Machine tables
- Plates
- 4-axis/5-axis machining
- Columns
- Pallets

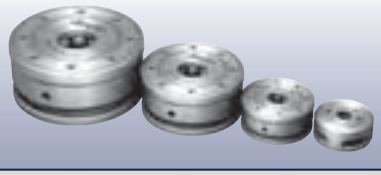


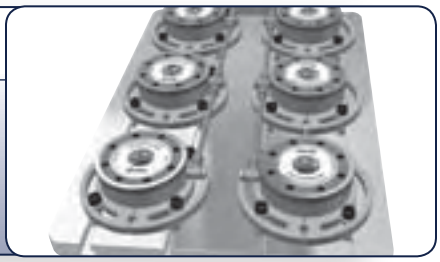


Raised/Mounted Clamping Modules

Pages 1.46-1.47

- For large & heavy workpieces
- Pull Studs installed directly into workpiece





Flange Type Module

Page 1.49

- Used to fasten surface-mounted clamping modules on the machine table
- Hydraulic release with or without blowout



Horizontal Rapid-Clamping Module

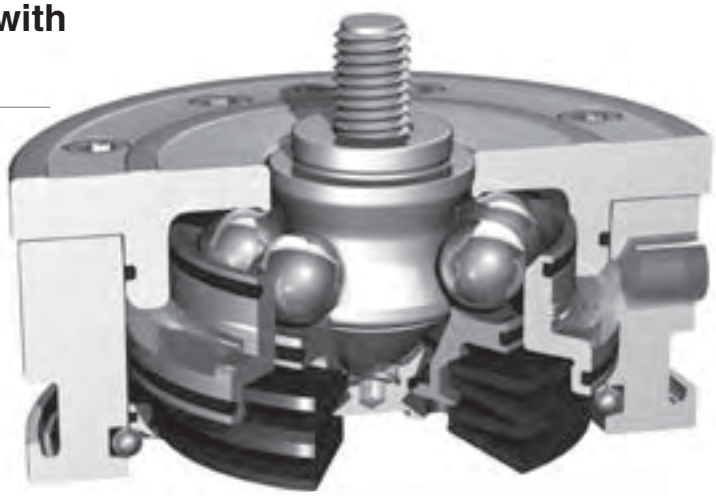
Page 1.50

- For easy handling of heavy fixtures



Jergens' Zero-Point Mounting System – Cut Set-up Times by Up to 90%.

Fix, Position and Clamp in a Single Step with Jergens' Zero-Point Mounting System.



Jergens is proud to introduce the best-engineered Zero-Point Mounting System (ZPS) on the market. This revolutionary technology cuts set-up time by up to 90% by combining fixing, positioning and clamping in a single operation. Available with either pneumatic or hydraulic release, these positive locking locating modules allow operators to quickly change out large and small machine fixtures with extreme accuracy and minimal effort. Other features include:

- **Repeatability <0.005mm (0.0002")**
- **Minimizes set-up time**
- **Hardened stainless (AISI 440B) steel construction**
- **Integrated safety system**
- **Compact design**
- **Positive locking**
- **High retaining force**



Pull-in / Locking Force up to 40kN / 9000lbs.

Pull-in / Locking Force up to 20kN / 4530lbs.

Pull-in / Locking Force up to 10kN / 2290lbs.

Pull-in / Locking Force up to 5kN / 1100lbs.

Smart Features for Process Improvement

Reduce set-up times and increase both accuracy and repeatability with design features exclusive to the Jergens ZPS:

Self Guiding

The self-guiding, tapered profile of the mounting stud allows heavy plates to be installed more easily.



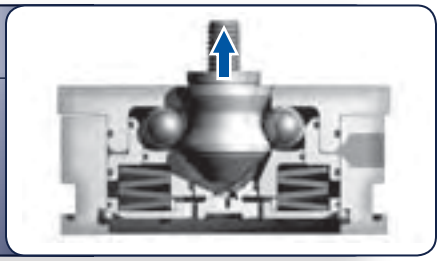
Alignment

Unique design eliminates the need for perfect lifts on entry and exit.



Mechanical Locking System

Experience high holding force without the need to maintain hydraulic pressure.



Large Ball Diameter

Provides increased strength and even load distribution.



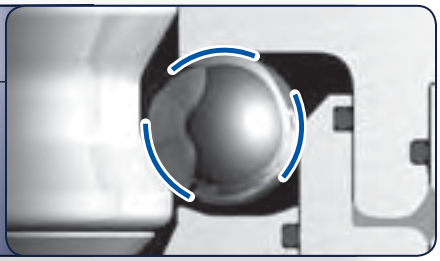
No Ball Cage

Free movement of the bearing balls reduces friction.



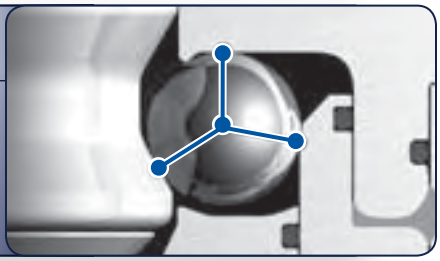
Form Fit Ball Channel

Tapered contact areas eliminate point loads and reduce failures.



Three-Point Load Distribution

Equal load spacing optimizes force distribution.



Integrated Safety System

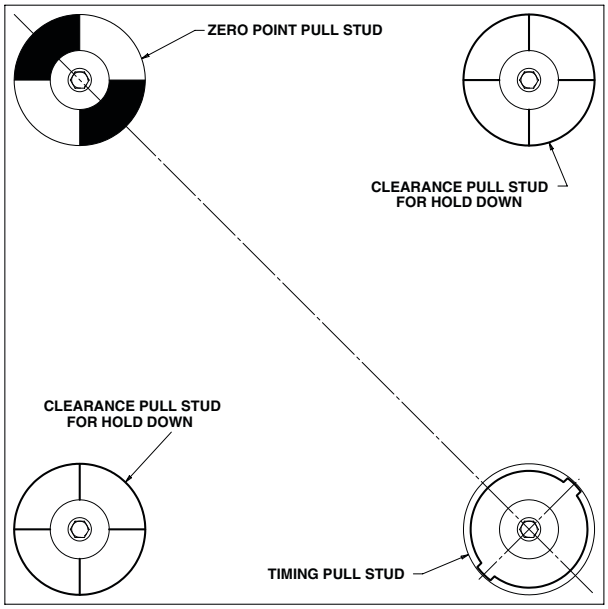
Process-sure clamping module can always be opened, eliminating the need to forcibly remove modules if a failure should occur.



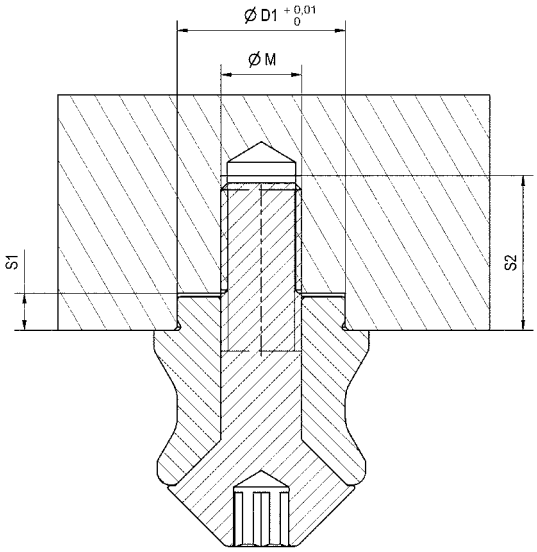
Clamping and Positioning

On each fixture use:
- 1 - Zero-Point Pull Stud
- 1 - Timing Pull Stud
- The Zero-Point and Timing Stud should be perpendicular
- Use any combination of clearance and/or protection Pull Stud





Dimensions for machining pull stud mountings



Size	ØD1	ØM	S1	S2
K5	10	M6	2.5	12
K10	15	M8	3.5	16
K20	25	M12	5.5	23
K40	25	M16	5.5	30

Note:
- Pull Stud with internal thread for clamping from above
- Pull Studs with different diameter D1, preventing interchange of the Zero-Point, timing and clearance Pull Stud during installation.
- Pull Stud for series production, (notch type), Floating Pull Stud for compensation of thermal expansion
- Automatic lifting of the pallet / fixture

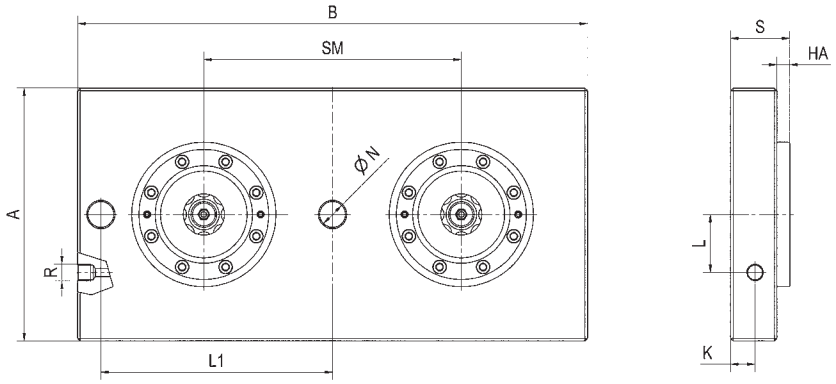
Figure:
Shown with Pull Stud and engagement screw

2-Way Clamping Station

Hydraulic Unlocking

Repeatability < 0.005 mm (0.0002")





Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	A	B	HA	K	L	L1	ØN	R	S	SM	kg
303289	20	2 x 20 / (2 x 4500)	196	396	10	19	45	180	20	G1/4	46	200	21.9
303297	40	2 x 40 / (2 x 9000)	296	546	15	26	57	250	25	G1/4	61	320	59.5

All linear dimensions in (mm)

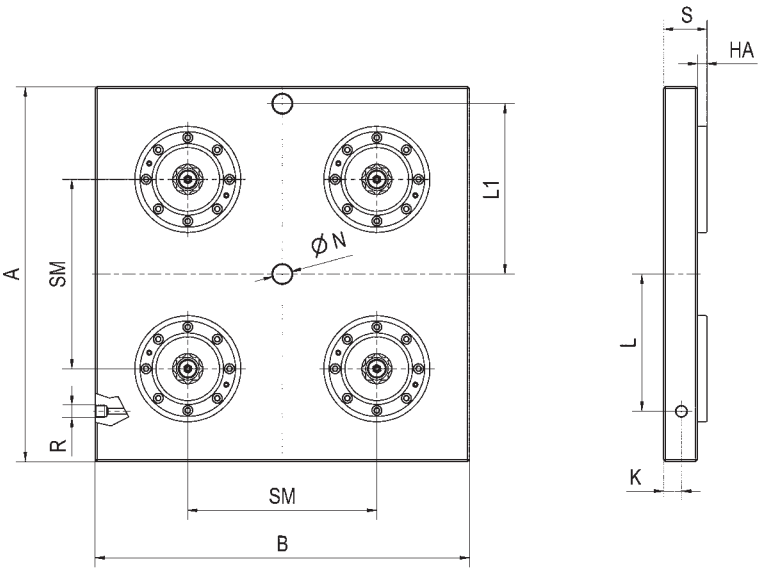
Note: On request, we can incorporate mounting holes to your requirements in the base plate. Other dimensions, gauges and number of clamping module layouts on request.

4-way clamping Station

Hydraulic Unlocking

Repeatability < 0.005 mm (0.0002")





Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	A	B	HA	K	L	L1	ØN	R	S	SM	kg
303321	20	4 x 20 / (4 x 4500)	396	396	10	18	148	180	20	G1/4	46	200	44.0
303339	40	4 x 40 / (4 x 9000)	546	546	15	26	217	250	25	G1/4	61	320	110.0

All linear dimensions in (mm)

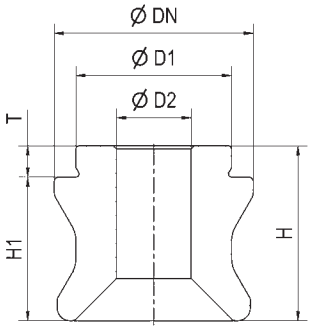
Note: On request, we can incorporate mounting holes to your requirements in the base plate. Other dimensions, gauges and number of clamping module layouts on request.

Pull Studs

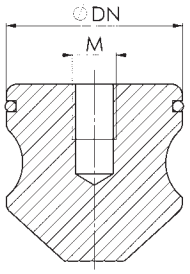
K5 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules





Zero Point Timing Clearance



Protection Pull Stud

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g
306019	K5	Zero-Point Stud	15.0	10	6	12.7	10.2	-	2.5	15
306035	K5	Timing Stud	15.0	10	6	12.7	10.2	-	2.5	15
306050	K5	Clearance Stud	15.0	10	6	12.7	10.2	-	2.5	15
306076	K5	Protection Plug	14.8	-	-	10.2	-	M 6	8.0	12

K10 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g
303610	K10	Zero-Point Stud	22.0	15	8	19	16	-	3	30
303636	K10	Timing Stud	22.0	15	8	19	16	-	3	30
304519	K10	Clearance Stud	22.0	15	8	19	16	-	3	30
304535	K10	Protection Plug	21.8	-	-	16	-	M 8	12	30

K20 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g
303149	K20	Zero-Point Stud	32.0	25	12	28	23	-	5	110
303156	K20	Timing Stud	32.0	25	12	28	23	-	5	110
303164	K20	Clearance Stud	32.0	25	12	28	23	-	5	110
303172	K20	Protection Plug	31.8	-	-	23	-	M8	16	110

K40 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

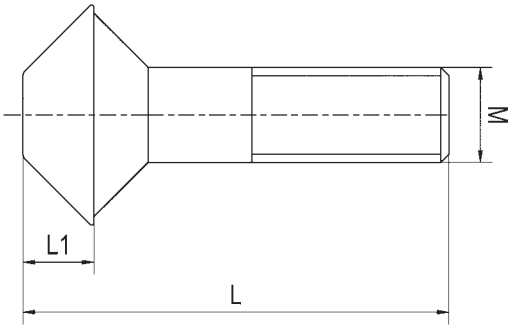
Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g
303180	K40	Zero-Point Stud	40.0	25	16	34	29	-	5	180
303198	K40	Timing Stud	40.0	25	16	34	29	-	5	180
303206	K40	Clearance Stud	40.0	25	16	34	29	-	5	180
303214	K40	Protection Plug	39.8	-	-	29	-	M8	20	180

Engagement Screws

Strength class 10.9

For installation and surface mounted clamping modules





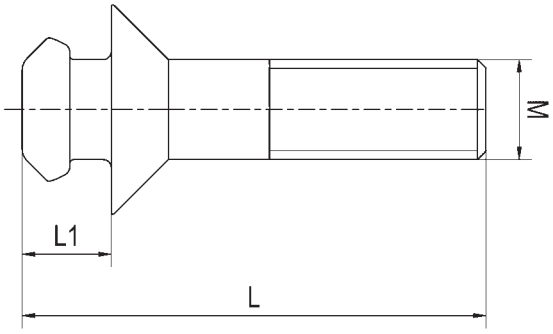
Part Number	Size	M	L	L1	g
306092	K 5	M 6	25	3.4	18
303578	K10	M 8	37	6.0	30
303222	K20	M12	54	9.0	70
303230	K40	M16	69	10.0	130

Horizontal Engagement Screws

Strength class 10.9

For horizontal rapid clamping cylinder on page 1.46





Part Number	Size	M	L	L1	g
303248	K20	M12	56	10.5	100
303255	K40	M16	73	13.0	200

Threaded Clamping Modules (K5)

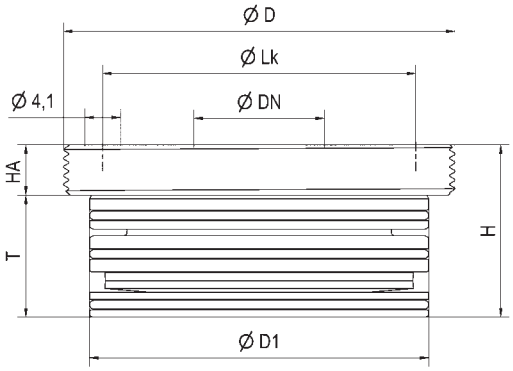
Round, Screw-In Version
Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

• Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØD	ØDN	ØD1	H	HA	ØLK	T	g
305953	K5	5 / (1100)	13 / (2900)	M45 x 1	15	39	19.8	5.8	36	14	300

All linear dimensions in (mm)

Note: Threaded clamping module with a low installation height of 19.8 mm and an installation diameter of 45 mm (M45 x 1).
Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

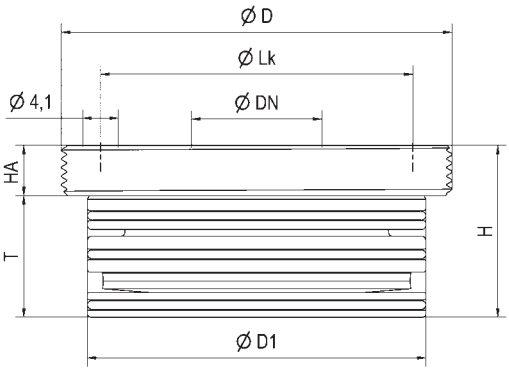
Round, Screw-in Version
Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets. Pneumatic modules are optimally suited for use in the food, pharmaceutical and chemical industries, as well as in oil-free applications.

• Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØD	ØDN	ØD1	H	HA	ØLK	T	g
305979	K5	1.5 / (330)	13 / (2900)	M45 x 1	15	39	19.8	5.8	36	14	300

All linear dimensions in (mm)

Note: Threaded clamping module with a low installation height of 19.8 mm and an installation diameter of 45 mm (M45 x 1).
Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

Threaded Clamping Modules (K10, K20, K40)

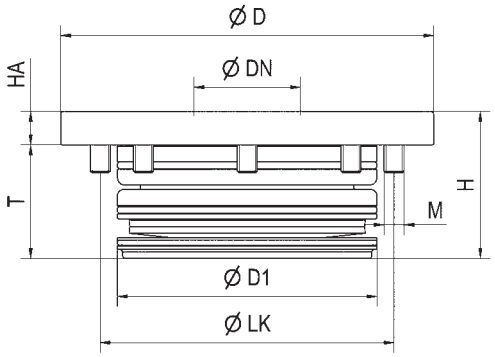
Round, Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small foot-print for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

• Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-in/locking force up to kN / (lbs)	Holding force kN / (lbs)	Blow out	ØD	ØDN	ØD1	H	HA	ØLK	M	T	kg
303628	K10	10 / (2250)	25 / (5620)	-	78	22	50	30	7	60	M5	23	0.45
305367	K10	10 / (2250)	25 / (5620)	Yes	78	22	50	30	7	60	M5	23	0.45
302984	K20	20 / (4500)	55 / (12350)	-	112	32	78	44	10	88	M6	34	1.40
302992	K20	20 / (4500)	55 / (12350)	Yes	112	32	78	44	10	88	M6	34	1.40
303024	K40	40 / (9000)	105 / (23600)	-	148	40	102	57	15	118	M8	42	3.45
303032	K40	40 / (9000)	105 / (23600)	Yes	148	40	102	57	15	118	M8	42	3.40

All linear dimensions in (mm)

Note: Threaded installation clamping modules have high holding and pull-in forces with very small installation dimensions.
Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

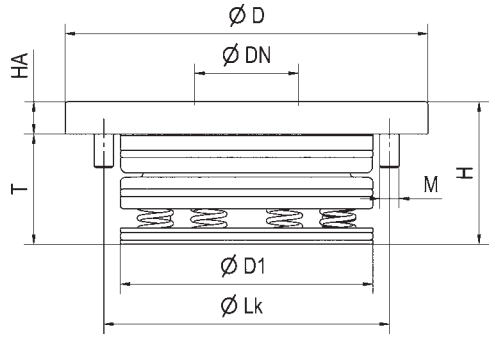
Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

• Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDN	ØD1	H	HA	ØLK	M	T	kg
303602	K10	8 / (1800)	25 / (5620)	-	78	22	50	30	7	60	M5	23	0.45
305375	K10	8 / (1800)	25 / (5620)	Yes	78	22	50	30	7	60	M5	23	0.45
303008	K20	17 / (3800)	55 / (12350)	-	112	32	78	44	10	88	M6	34	1.40
303016	K20	17 / (3800)	55 / (12350)	Yes	112	32	78	44	10	88	M6	34	1.40
303040	K40	30 / (6700)	105 / (23600)	-	148	40	102	57	15	118	M8	42	3.45
303057	K40	30 / (6700)	105 / (23600)	Yes	148	40	102	57	15	118	M8	42	3.40

All linear dimensions in (mm)

Note: The installation clamping modules have high holding and pull-in forces with very small installation dimensions.
Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

Raised/Mounted Clamping Modules (K5)

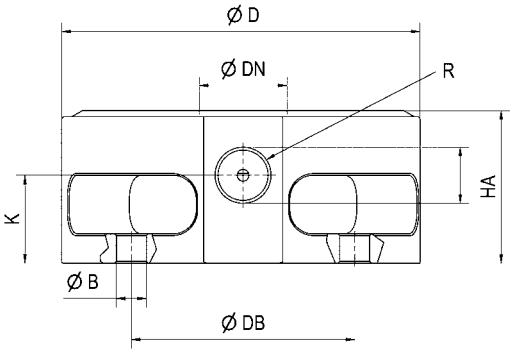
Round, Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines, assembly stations.

• Installation diagrams on request



Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØB	ØD	ØDB	ØDN	HA	K	R	g
306159	K5	5 / (1100)	13 / (2900)	5.8	62	54	15	26	15	G1/8	300

All linear dimensions in (mm)

Note: Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

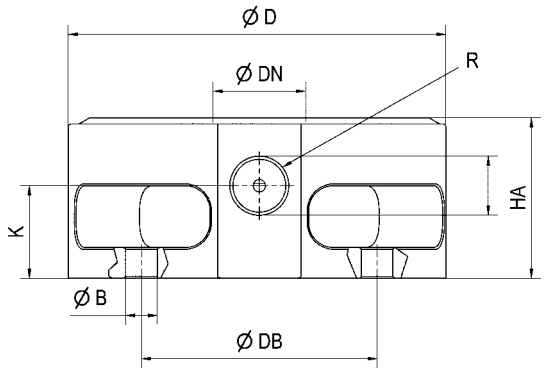
Round, Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines, assembly stations.

• Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØB	ØD	ØDB	ØDN	HA	K	R	g
306175	K5	1.5 / (330)	13 / (2900)	5.8	62	54	15	26	15	G1/8	300

All linear dimensions in (mm)

Note: Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

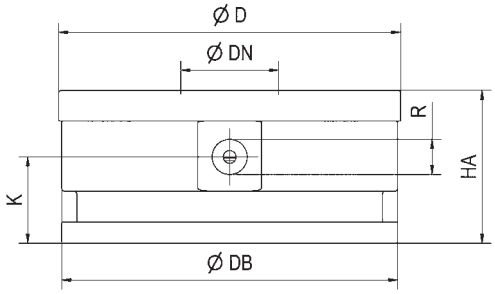
Raised/Mounted Clamping Modules (K10, K20, K40)

Round, Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines,assembly stations in connection with **clamping bracket** on page 1.48.



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDB	ØDN	HA	K	R	kg
303487	K10	10 / (2250)	25 / (5620)	-	78	77.5	22	30	16.50	G1/8	0.90
303545	K10	10 / (2250)	25 / (5620)	Yes	78	77.5	22	30	16.50	G1/8	0.90
302828	K20	20 / (4500)	55 / (12350)	-	112	110.0	32	50	28.25	G1/4	2.75
302836	K20	20 / (4500)	55 / (12350)	Yes	112	110.0	32	50	28.25	G1/4	2.70
302869	K40	40 / (9000)	105 / (23600)	-	148	146.0	40	62	32.50	G1/4	3.85
302877	K40	40 / (9000)	105 / (23600)	Yes	148	146.0	40	62	32.50	G1/4	3.80

All linear dimensions in (mm)

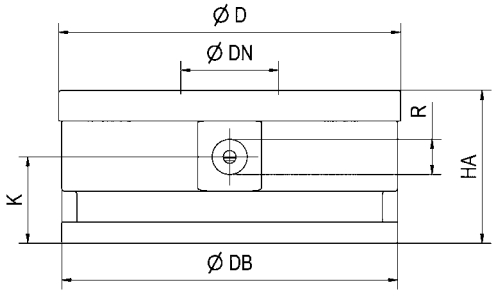
Note: Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines and no danger of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

Round, Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines,assembly stations in connection with **clamping bracket** on page 1.48.



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDB	ØDN	HA	K	R	kg
303529	K10	8 / (1800)	25 / (5620)	-	78	77.5	22	30	16.50	G1/8	0.90
305193	K10	8 / (1800)	25 / (5620)	Yes	78	77.5	22	30	16.50	G1/8	0.90
302844	K20	17 / (3800)	55 / (12350)	-	112	110.0	32	50	28.25	G1/4	2.60
302851	K20	17 / (3800)	55 / (12350)	Yes	112	110.0	32	50	28.25	G1/4	2.60
302885	K40	30 / (6700)	105 / (23600)	-	148	146.0	40	62	32.50	G1/4	6.45
302893	K40	30 / (6700)	105 / (23600)	Yes	148	146.0	40	62	32.50	G1/4	6.40

All linear dimensions in (mm)

Note: Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

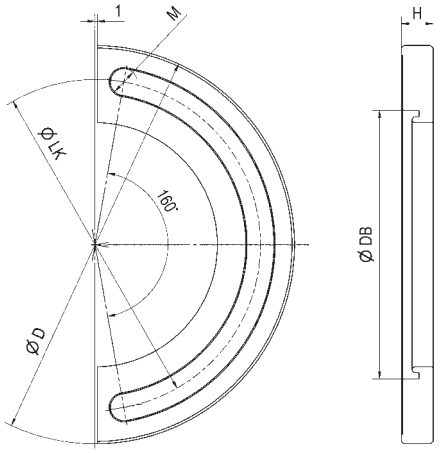
Clamping Bracket for Raised/Mounted Clamping Modules

Black Nitrided



Clamping flanges are used to fasten raised/mounted clamping modules on the machine table. See page 1.47.

- Special clamping flanges for various T-slot tables
- Clamping flange and housing manufactured as a single piece



Stainless Steel

Part Number	Size	Pieces Per Module	ØD	ØDB	H	ØLK	M	g
303495	10	2	114	77.5	7.75	94	8.5	180
302901	20	2	164	110.0	13.00	136	11.0	400
302919	40	2	202	146.0	16.00	172	13.0	550

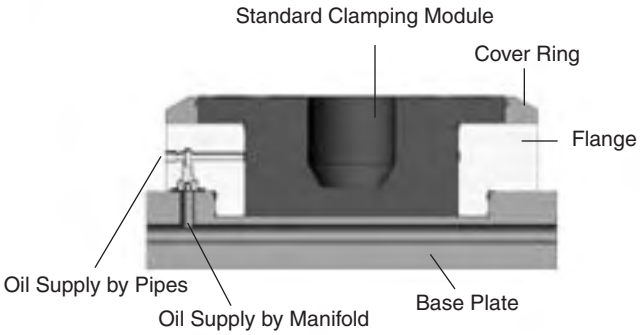
All linear dimensions in (mm)

Flange Type Installation Modules

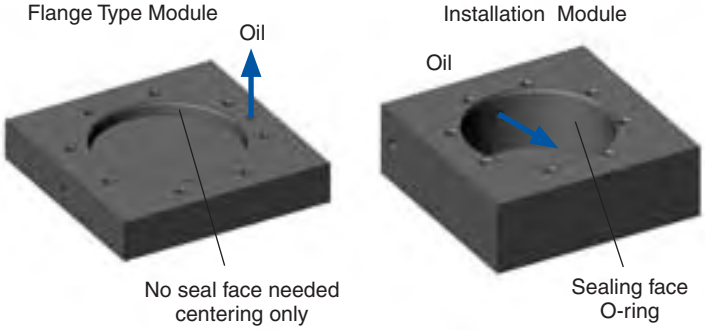


Features:
- Oil supply by pipes or manifolds
- Integrated centering
- Provided as assembled unit

Benefits:
- Simple design and manufacturing of adaptor plate
- Weight saving due to less thickness for adaptor plate
- Easy to adapt to existing mounting angles and cubes



Installation comparison

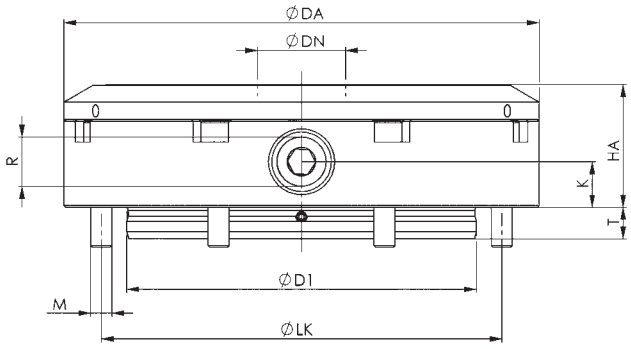


Flange Type Installation Modules

Hydraulic Release

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")





Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØDA	ØDN	ØD1	HA	K	ØLK	M	R	T	kg
424069	K10	10 / (1800)	25 / (5620)	-	100	22	67	24	9	90	M5	G1/8	5.9	1.35
424085	K10	10 / (1800)	25 / (5620)	Yes	100	22	67	24	9	90	M5	G1/8	5.9	1.35
423947	K20	20 / (3800)	55 / (12350)	-	136	32	100	35	13	124	M6	G1/8	8.9	3.75
423962	K20	20 / (3800)	55 / (12350)	Yes	136	32	100	35	13	124	M6	G1/8	8.9	3.76
424127	K40	40 / (6700)	105 / (23600)	-	180	40	120	45	15	163	M8	G1/8	11.9	4.97
424143	K40	40 / (6700)	105 / (23600)	Yes	180	40	120	45	15	163	M8	G1/8	11.9	4.97

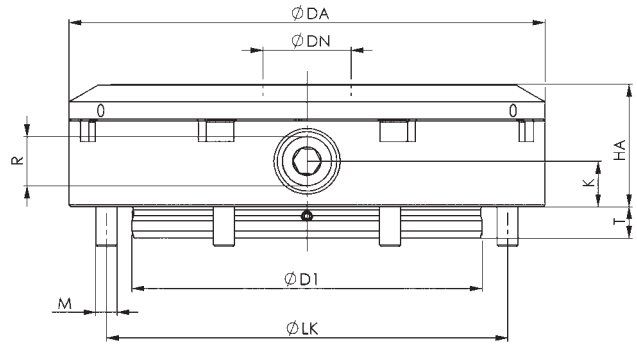
All linear dimensions in (mm)

Note: Combines features of the Threaded Module and Raised/Mounted module. Especially designed when installation space is limited and base plate or angle plate has relatively thin dimensions. The positioning of the module is simple and accurate when using the precision flange diameter. Hydraulic supply is possible by manifolds or pipes/hoses. Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The hydraulic design has 1 connection: 1 x unclamping

Pneumatic Release

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")





Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØDA	ØDN	ØD1	HA	K	ØLK	M	R	T	kg
424101	K10	6 / (1800)	25 / (5620)	-	100	22	67	24	9	90	M5	G1/8	5.9	1.35
423988	K20	17 / (1800)	55 / (5620)	-	136	32	100	35	13	124	M6	G1/8	8.9	4.97
424168	K40	30 / (3800)	105 / (12350)	-	180	40	120	45	15	163	M6	G1/8	11.9	4.97

All linear dimensions in (mm)

Note: Combines features of the Threaded Module and Raised/Mounted module. Especially designed when installation space is limited and base plate or angle plate has relatively thin dimensions. The positioning of the module is simple and accurate when using the precision flange diameter. Pneumatic supply is possible by manifolds or pipes/hoses. Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

Horizontal Rapid-Clamping Cylinder

Hydraulic Unlocking

Cover and piston hardened.

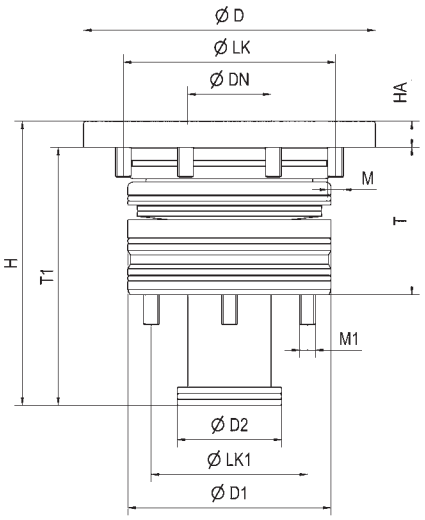
Repeatability < 0.005 mm (0.0002")



- For easy handling of heavy fixtures
- Makes palletization very quick by hooking into a hole at the top and moving downwards
- No searching for the holes
- No damage to Zero-Point bore or pull studs

Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Blow Out	Advance Motion, Hydr. Suspension Piston	kg
303065	K20	20 / (4500)	55 / (12350)			2.1
306217	K20	20 / (4500)	55 / (12350)		Yes	2.1
303073	K20	20 / (4500)	55 / (12350)	Yes		2.1
306233	K20	20 / (4500)	55 / (12350)	Yes	Yes	2.1
303107	K40	40 / (9000)	105 / (23600)			5.2
306258	K40	40 / (9000)	105 / (23600)		Yes	5.2
303115	K40	40 / (9000)	105 / (23600)	Yes		5.2
306274	K40	40 / (9000)	105 / (23600)	Yes	Yes	5.2

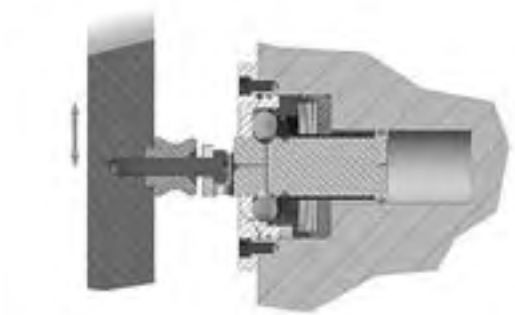


Dimensions (mm)

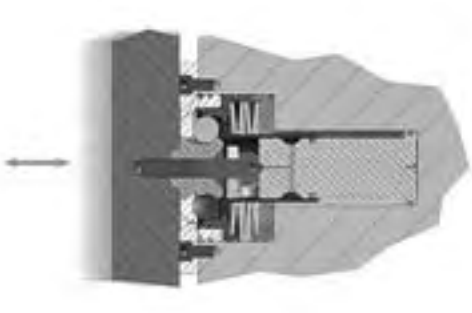
Part Number	ØD	ØDN	ØD1	ØD2	H	HA	ØLK	ØLK1	M	M1	T	T1
303065	112	32	78	40	109	10	88	60	M6	M6	56.5	99
306217	112	32	78	40	109	10	88	60	M6	M6	56.5	99
303073	112	32	78	40	109	10	88	60	M6	M6	56.5	99
306233	112	32	78	40	109	10	88	60	M6	M6	56.5	99
303107	148	40	102	48	144	15	118	76	M8	M6	73	129
306258	148	40	102	48	144	15	118	76	M8	M6	73	129
303115	148	40	102	48	144	15	118	76	M8	M6	73	129
306274	148	40	102	48	144	15	118	76	M8	M6	73	129

All linear dimensions in (mm)

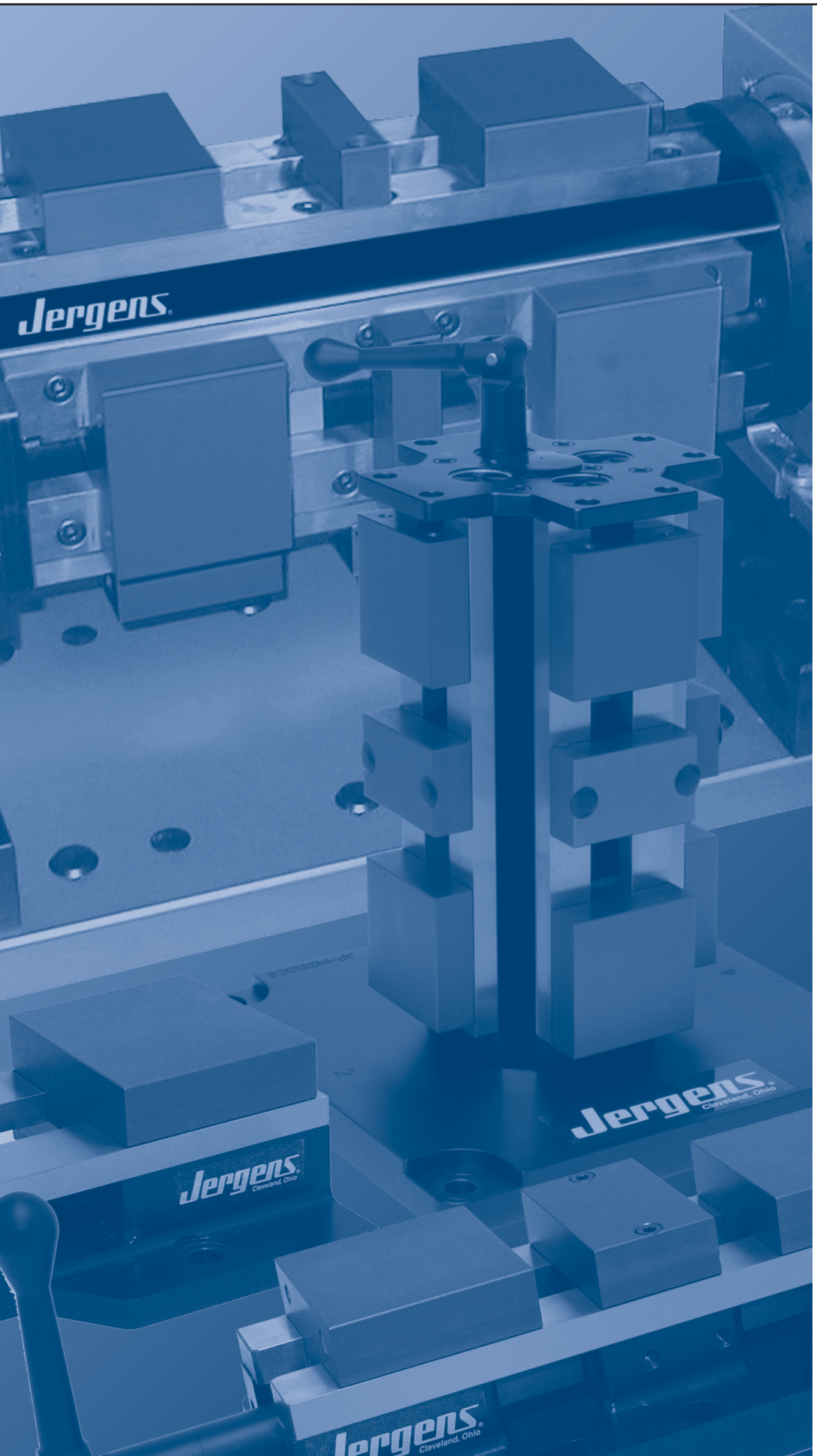
Note: As standard, there is a manaul or hydraulic advance motion of the suspension piston.



Release Mode



Clamped Mode

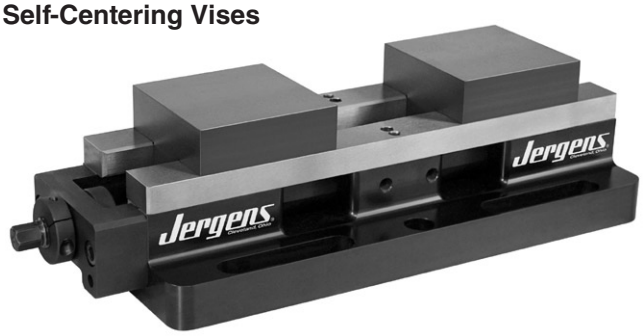


Vises

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VMC/HMC Solutions..... 2.4-2.5
Ball Lock™ Mounting System 2.6-2.7
Production Vises
4" (100 mm) Production Vises 2.8-2.9
6" (150 mm) Production Vises .. 2.10.-2.11
Self Centering Vises..... 2.12
4" (100 mm 2.13
6" (150 mm 2.14
Accessories 2.15
Production Vise Columns
4" (100 mm) Production Vise
4 Sided 2.16
3 Sided 2.17
6" (150 mm) Production Vise
4 Sided 2.18
3 Sided 2.19
12 Station Hex 2.20
12 & 16 Station Multi Quads..... 2.21-2.22
Hydraulic Production Vises 2.23
4" (100 mm 2.24
6" (150 mm 2.25-2.26
Hydraulic Vise Columns..... 2.27
4" (100 mm) 4 sided 2.28
4" (100 mm) 3 sided 2.29
6" (150 mm) 4 sided 2.30
6" (150 mm) 3 sided 2.31
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5 Axis Production Vises..... 2.41
Self Centering..... 2.42
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Fixed..... 2.45
Jaws/Accessories 2.46
Quick Clamping Block..... 2.47
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Jaws/Accessories 2.35-2.37
Vise Accessories 2.35-2.40
Jaw Selections..... 2.35-2.37
Ball Lock Shanks/Plates 2.38-2.39
Sine Fixture Keys/T-Slot Nuts 2.40
Cast Iron Shop Vises..... 2.51-2.52

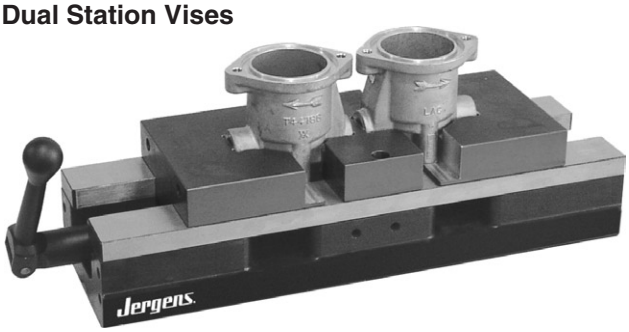
Jergens Production Vise System

Self-Centering Vises



• Quick, simple fixturing for concentric machining

Dual Station Vises



Maximum Holding Power

• Jaws machined to the contour of your workpiece maximizing holding force.

Production Vise Columns

2, 4, 6, 8, 12 and 16 station models available.

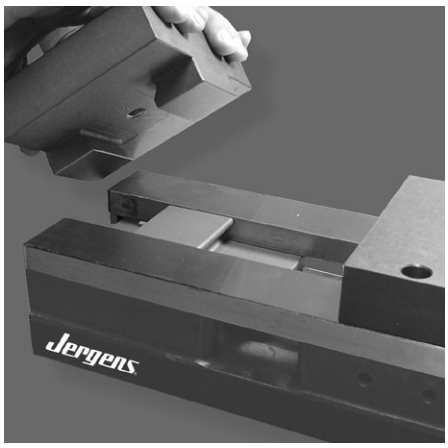


6" (150mm) MonoQuad

4" (100mm) MonoQuad

• Quick change reverseable soft jaws
• Single station adapter plate included
• Multiple base designs to meet any requirement

Fastest Quick Change Jaw System







Jergens Production Vises Features and Benefits:

Wide/Full jaw travel

Benefit: Larger workpiece holding capacity

Easy to remove center fixed jaw

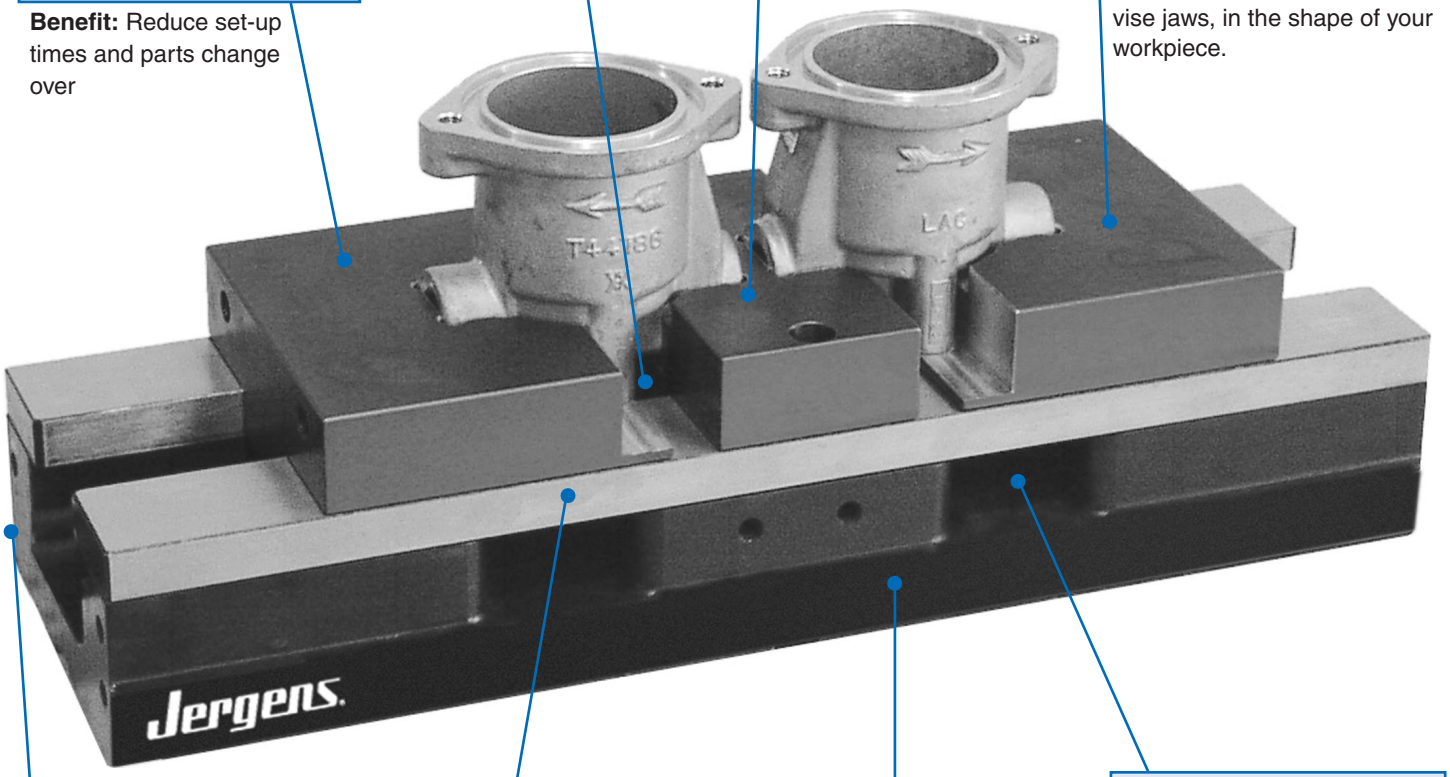
Benefit: Quick change over to single station vise for larger parts

Fully machinable and reversible jaws

Benefit: More workholding flexibility per jaw set. Machine "Pockets" into the vise jaws, in the shape of your workpiece.

Fastest quick change jaw system

Benefit: Reduce set-up times and parts change over



Chip and fluid flow through base

Benefit: Easier to keep clean, no more clogging

Rigid construction with hardened and ground steel rails

Benefit: High accuracy and repeatability

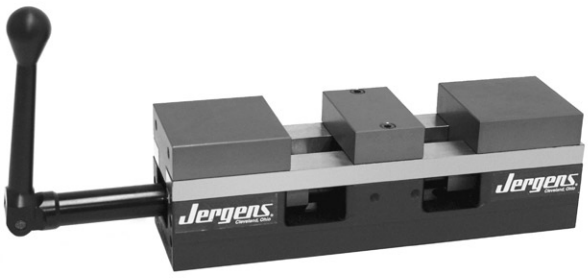
Multiple mounting base configurations available

Benefit: Increased flexibility and use with existing equipment and hardware

Fully sealed lead screw assembly

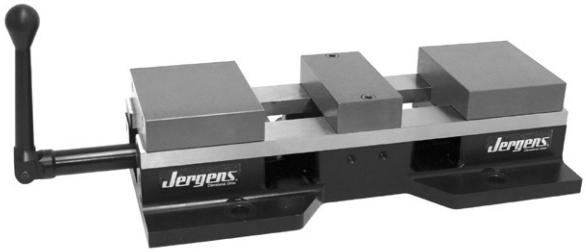
Benefit: Lower maintenance and repair problems/cost

Vertical Machine Solutions



Narrow Base Production Vises
Pages 2.9; 2.11

The small footprint allows maximum density of vises on your fixture or table. Best choice for applications where parts are held in multiple vises.



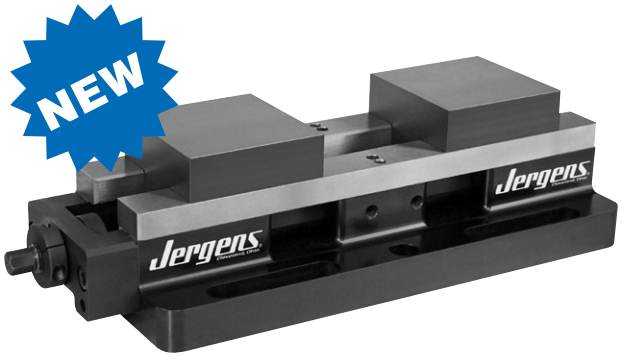
Ball Lock™ Base Production Vises
Pages 2.8; 2.10

The mounting flange is cut into a jigsaw pattern to allow vises to nest closely together. Designed for use with Jergens Ball Lock™ Mounting System.



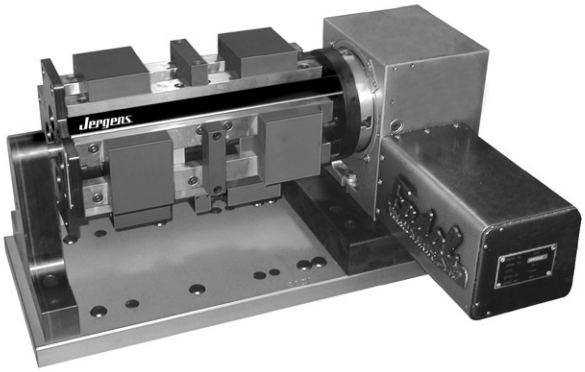
Universal Base Production Vises
Pages 2.9; 2.11

The mounting flange has slotted holes to allow mounting on any machine table.



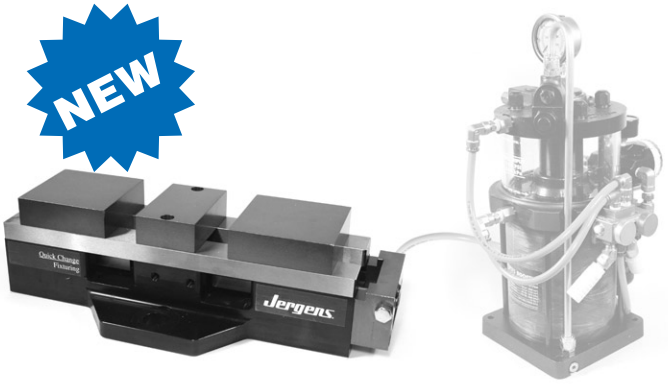
Self Centering Vises (3 Base Styles)
Pages 2.12-2.15

Self-Centering vises provide quick, simple fixturing for concentric machining of different sized workpieces.



Indexer Systems
Page 2.17

Indexer solutions can be customized to your requirements. Choose either three or four sided columns.



Hydraulic Vise
Pages 2.24-2.26

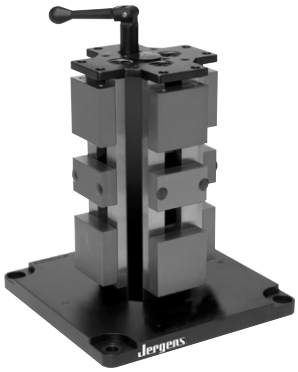
Innovative compact design. Reduced set-up time. Internal Slide Assembly with Hydraulic Clamping Cylinder.

Horizontal Machine Solutions



3-Sided Production Vise Columns
Pages 2.17; 2.19

For machining 3 faces of production parts on HMC's. Large spindle noses can access the workpiece. **Allows for up to 240° workpiece accessability.**



4-Sided Production Vise Columns
Pages 2.16; 2.18

Available with bases to fit directly onto machine table pallets or to a Ball Lock™ sub-plate.



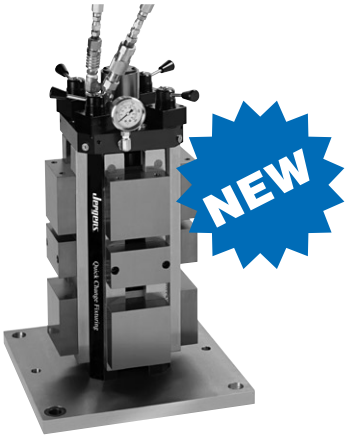
6-Sided Production Vise Columns
Page 2.20

Increase the number of parts per load, while maintaining a small footprint. Available with bases to fit directly onto machine tables or to a Ball Lock™ sub-plate.



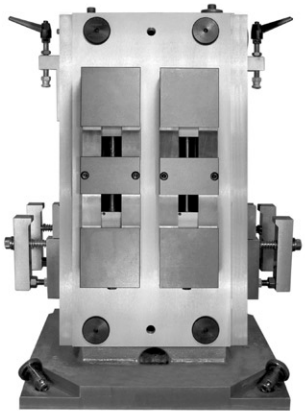
4-Sided Production Vise Multi-Columns
Pages 2.21 & 2.22

Multiple columns mounted on a single base provide 12 or 16 workstations. Available with bases to fit directly onto your machine table or to a Ball Lock™ sub-plate.



Hydraulic Vise Columns
Pages 2.27-2.33

Innovative compact design. Reduced set-up times, faster workpiece change overs.



Multi-Vise Fixtures
Pages 2.9; 2.11; 2.13; 2.15; 2.25

To maximize productivity, mount multiple narrow body vises onto a single fixture plate. Mount the fixture plate onto the tombstones with the Jergens Ball Lock™ Mounting System.

Ball Lock™ Fixture Mounting System for Jergens Production Vises



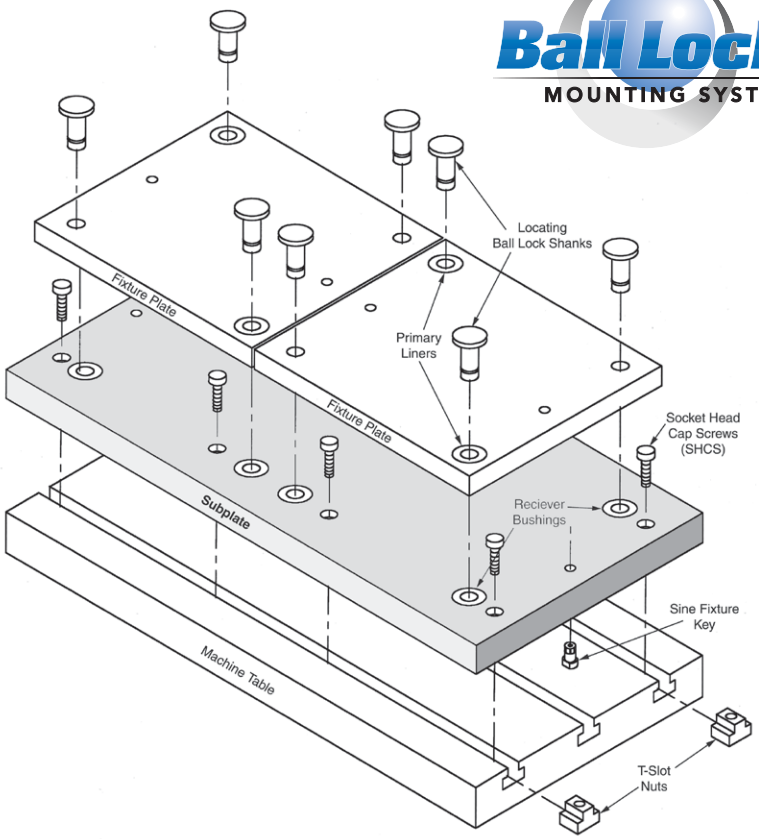
Locates

The Ball Lock™ System accurately positions your fixture plate...to within ±0.0005" (±0.013mm) repeatability or better, minimizing the need to indicate your fixture.



Locks

The Ball Lock™ System securely holds fixture plates to subplates with up to 20,000 lbs. (88kN) of hold-down force per shank.



The Ball Lock™ Mounting System provides a method of quickly and accurately locating fixtures onto machine tables. The Ball Lock™ Mounting System has done for machining centers what the Japanese SMED (Single Minute Exchange of Die) concept did for presses. Instead of SMED, Ball Lock™ provides single minute exchange of fixtures. Fixtures can often be exchanged in less than a minute with position repeatability of ±0.0005" (±0.013mm). Fixtures can be exchanged between different machines when both are using the Jergens Ball Lock™ Mounting System.

Commonly Asked Questions

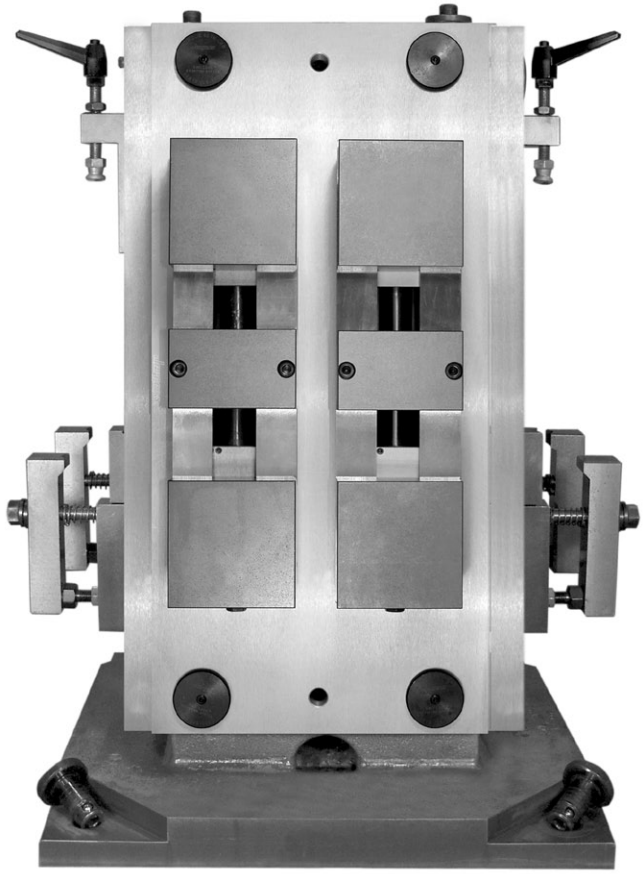
Q. What is the Ball Lock™ Mounting System?
A. It is a means of locating and locking two flat surfaces together, normally a fixture plate to a sub-plate.

Q. How does it locate?
A. Similar to locating pins, two Ball Lock™ shanks (pins) pass through two precision liner bushings on the fixture plate and into two precision receiver bushings on the subplate.

Q. How does it lock?
A. Inside the shank are three balls that expand into a tapered groove in the receiver bushing. This action draws the plates together. The locking balls are activated by turning a setscrew in the head of the shank, which pushes a 4th ball to distribute the clamping forces between the 3 locking balls.

Q. How many shanks are required to locate and lock each fixture?
A. Only two shanks, passing through bushings in the fixture plates, are required for location. However, additional shanks passing through clearance holes in the fixture plate will provide additional holding force distributed across the plate.

Unmatched Setup Speed and Workholding Flexibility



Q. Is there a preferable location for the liner bushing?
A. System repeatability is improved if the liners are located at opposite corners of a rectangular fixture plate. For consistency, we recommend locating the liner bushings at top left and bottom right.

Q. What are the advantages of using the Ball Lock™ System over the conventional method of dowel pins and cap screws?
A. Both locating and locking are accomplished in the same motion. Ball Lock™ shanks require only 2.5 turns to lock a 1/2–13 (M12) screw with ¾" (18mm) of thread engagement requires 10 turns to lock. On CNC machines, the repeatability of fixture locations makes indicating of the fixture unnecessary.

Q. How do I recess the fixtureplate for a clear surface ?
A. Counterbore the fixture plate to a diameter large enough to allow easy removal of the shank.

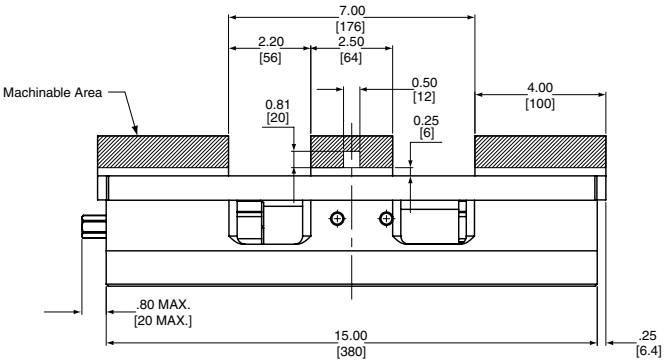
Note: The thickness of the plate section under the head of the shank is critical and must conform to mounting instructions .

Q. What if my plate is thinner than the recommended thickness?
A. By adjusting the depth of the counterbore for the receiver bushing in the subplate, you can still use the Ball Lock™ System. If there are any questions on this type of application, please call 1-800-JERGENS.

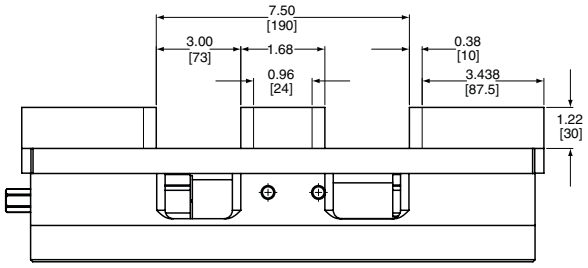
Q. Can I use the shanks in a heated environment?
A. The shank is made of alloy steel, heat treated to 40-45Rc and should with stand temperatures up to 400°F. (200°C).

Note: Thermal expansion of fixture plates may affect the center distance tolerance and repeatability.

Production Vises - 4" (100mm)



Vise With Machinable Soft Jaws



Vise With Hard Jaw Carrier Set and hardened steel inserts

Features and Benefits:

- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 2.36. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

Maximum Clamping Range With Shaped Jaws
Dual Station: 6.75" (170mm)
Single Station: 14.40" (365mm)

Clamping Force

Jergens 4" (100mm)

Torque		Clamping Force	
ft. lbs.	N•m	lbs.	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200*	3,250*

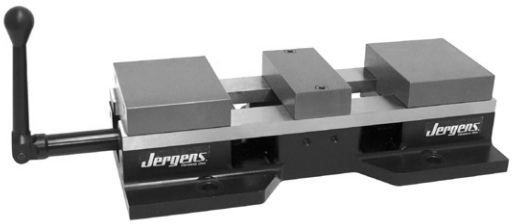
*Recommended Maximum

Ball Lock™ Base

The **Ball Lock Base Vise** is for use with the Jergens Ball Lock Quick Change Mounting System. The base has a "jig saw" pattern to allow the vises to be mounted close to each other. For more information about Ball Lock, see page 2.6-2.7

Inch

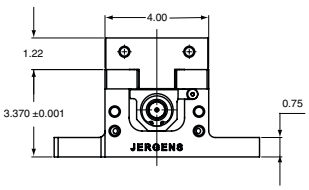
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
49405	31 lbs.	**49601**	20mm X 3/4"

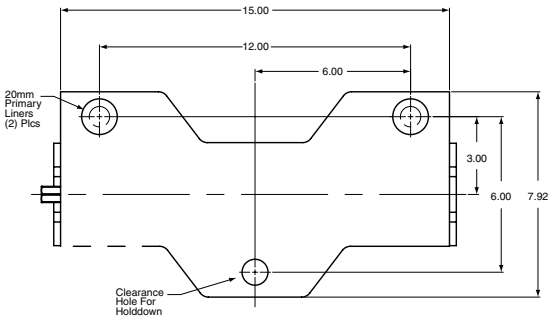


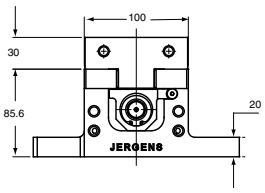
Metric

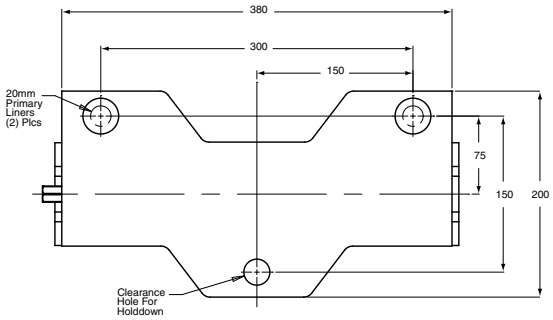
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
69405	14 kg	**49651**	20mm X 20mm

Mounting Dimensions





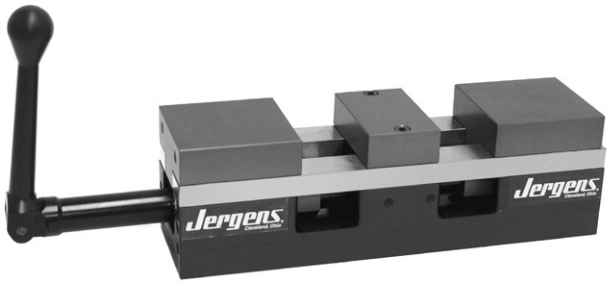




Production Vises - 4" (100mm)

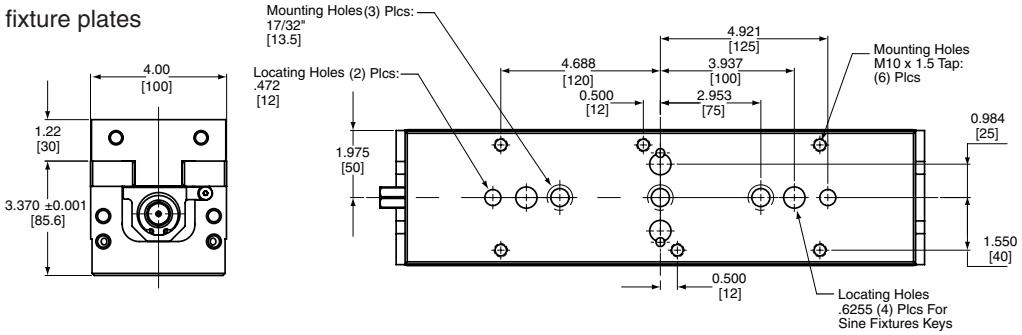
Narrow Base

Part Number	Wt. lbs/kg
49401	30/14



The **Narrow Base Vise** can be mounted as a stand-alone vise with traditional strap clamps. The narrow base has 2 locating holes for 12mm dowel pins and 2 locating holes for sine fixture keys to align vise in T-slots. Keys for inch and metric T-slots shown on page 2.40. Recessed mounting holes (3) are also provided for top mounting to fixture plates with socket head cap screws. Tapped mounting holes (6) are provided for bottom mounting. The slim design allows a high density of vises on machine tables, tombstones, or columns. Maximize flexibility by utilizing the Jergens Ball Lock™ Quick Change Mounting System. See page 2.6

- Easy to mount to Ball Lock or other fixture plates



Mounting Dimensions

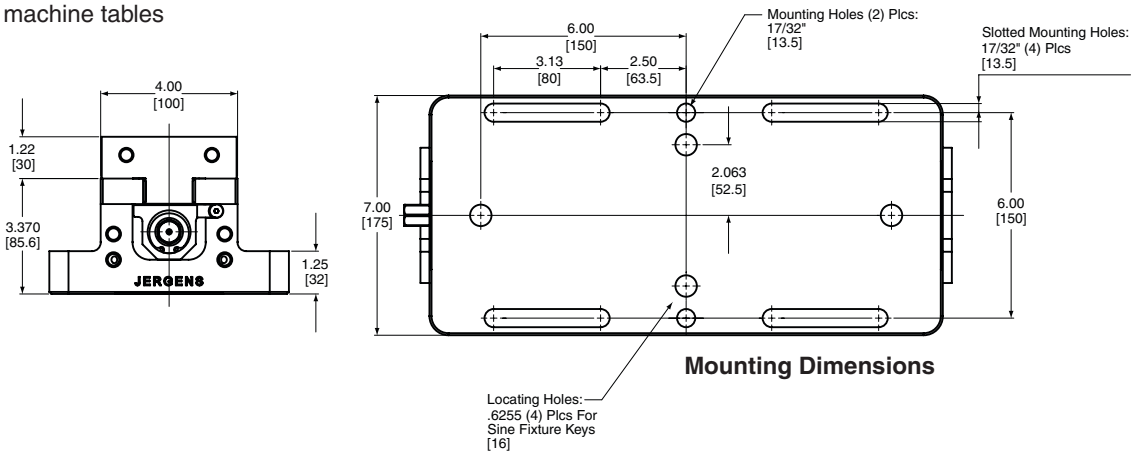
Universal Base

Part Number	Wt. lbs/kg
49471	31/14



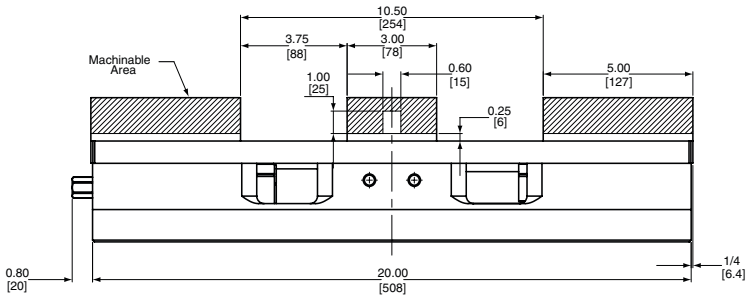
The **Universal Base Vise** is easily mounted directly to machine tool tables. Slotted mounting holes will match almost any table slot pattern. Location holes are provided for Jergens Sine Fixture Keys, to provide easy and accurate alignment with table slots.

- Easy to mount directly to machine tables

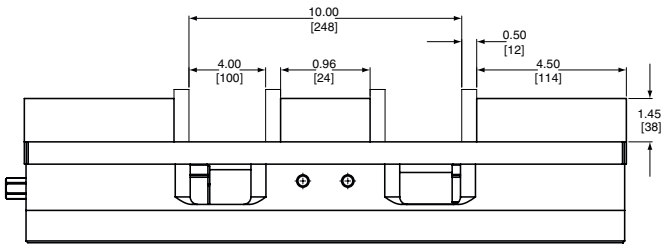


Mounting Dimensions

Production Vises - 6" (150mm)



Vise With Machinable Soft Jaws



Vise With Hard Jaws Carrier Set and hardened steel inserts

Features and Benefits:

- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 2.36. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

Maximum Clamping Range With Shaped Jaws
Dual Station: 9.2" (233mm)
Single Station: 19.5" (495mm)

Clamping Force

Jergens 6" (150mm)

Torque		Clamping Force	
ft. lbs.	N•m	lbs.	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200	3,250
70	95	8,400	3,800
80	108	9,200	4,150
90	122	10,100*	4,550*

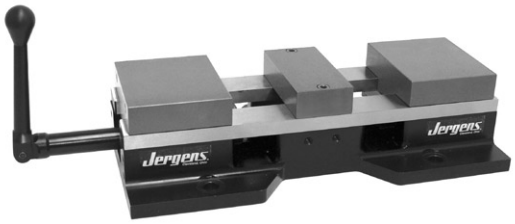
*Recommended Maximum

Ball Lock™ Base

The **Ball Lock Base Vise** is for use with the Jergens Ball Lock™ Quick Change Mounting System. The base has a "jigsaw" pattern to allow the vises to be mounted close to each other. For more information about Ball Lock, see page 2.6-2.7.

Inch

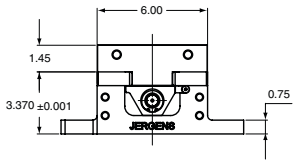
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
49406	68 lbs.	**45601**	20mm X 3/4"

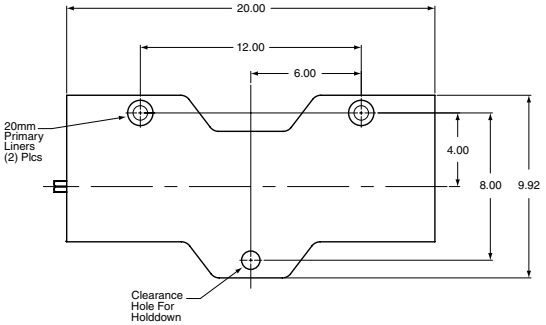


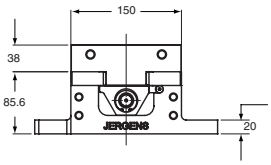
Metric

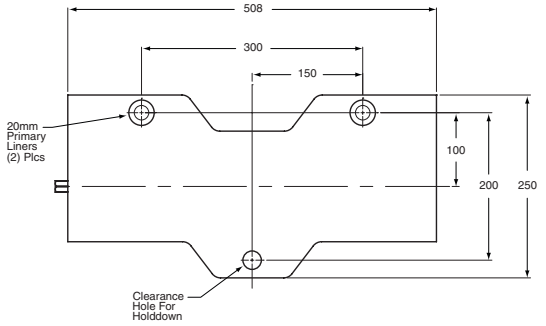
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
69406	31 kg	**49651**	20mm X 20mm

Mounting Dimensions





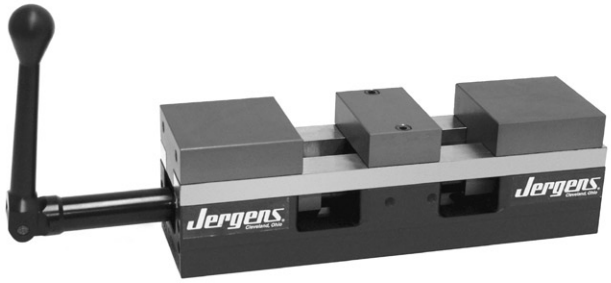




Production Vises - 6" (150mm)

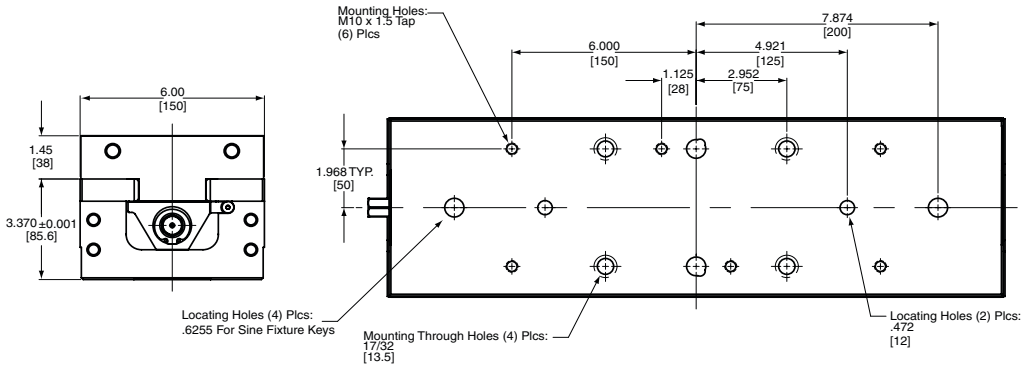
Narrow Base

Part Number	Wt. lbs/kg
49402	66/30



The **Narrow Base Vise** can be mounted as a stand-alone vise or mounted to a fixture plate. The slim design allows a high density of vises on machine tables, tombstones, or columns. Maximize flexibility by utilizing the Jergens Ball Lock Quick Change Mounting System. See page 2.6-2.7.

- Easy to mount to Ball Lock or other fixture plates



Mounting Dimensions

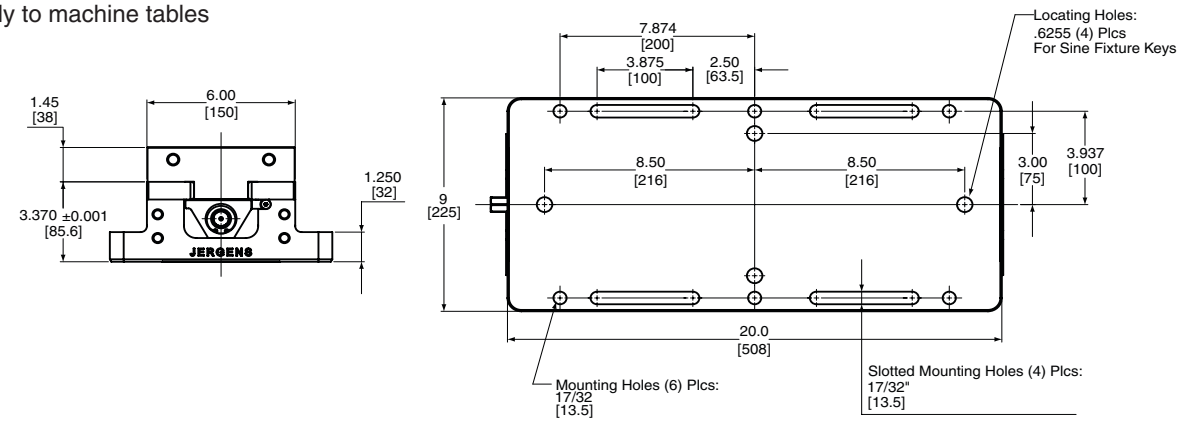
Universal Base

Part Number	Wt. lbs/kg
49472	68/31



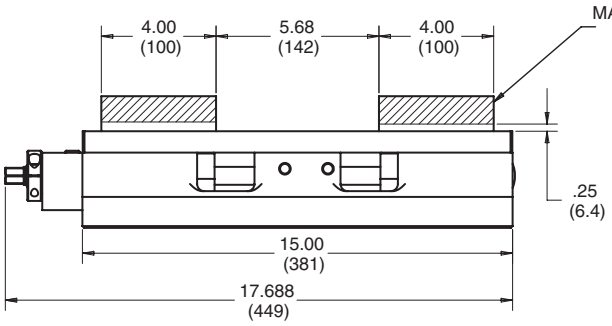
The **Universal Base Vise** is easily mounted directly to machine tool tables. Slotted mounting holes will match almost any table slot pattern. Location holes are provided for Jergens Sine Fixture Keys, to provide easy and accurate alignment with table slots.

- Easy to mount directly to machine tables

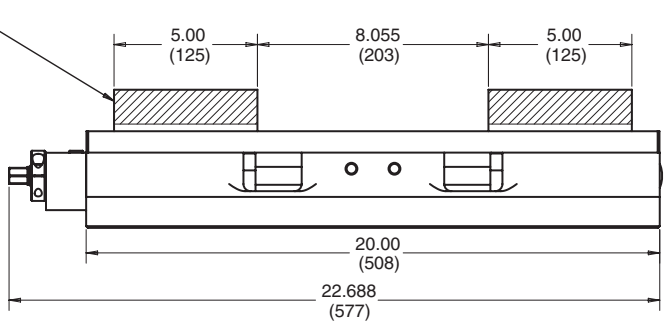


Mounting Dimensions

Self-Centering Precision Production Vises



4" (100mm) Self-Centering Vises



6" (150mm) Self-Centering Vises

Features and Benefits:

- Self-Centering vises provide quick, simple fixturing for concentric machining of different sized workpieces.
- Adjustable gib design increases accurracy.
- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.

Technical Specifications:

Maximum jaw opening (Unmachined jaws)
4" (100mm) model: 5.6" (142mm)
6" (150mm) model: 8" (200mm)
Centering accuracy from minimum to maximum opening: 0.0006" (0.015mm)
Repeatability: 0.0002" (0.005mm)
Maximum Clamping Force: 4600lbs (2000kgf)

Maximum Clamping Range

With Shaped Jaws
4" Vise: 13" (330mm)
6" Vise: 17.5" (440mm)

Clamping Force

Jergens 4" (100mm) & 6" (150mm) Self-Centering Vises

Torque		Clamping Force	
ft. lbs.	N•m	lbs.	kgf
20	27	1100	500
30	41	1500	680
40	54	2200	1000
50	68	2700	1220
60	81	3100	1400
70	95	3800	1720
80	108	4200*	1900*

*Recommended Maximum

- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 2.36. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

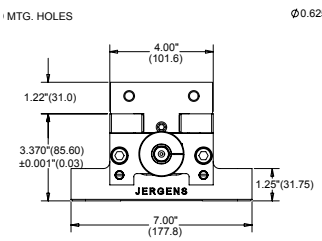
Self-Centering Vises - 4" (100mm)

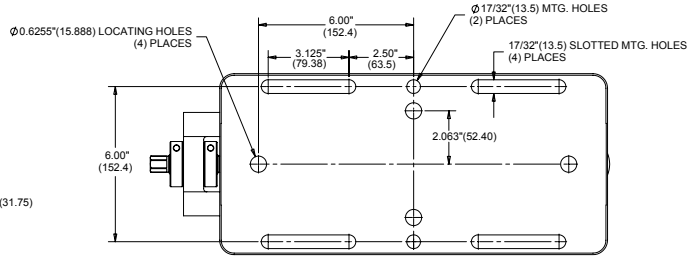
Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machinable centers

Part Number	Wt. (lbs)
49471SC	38





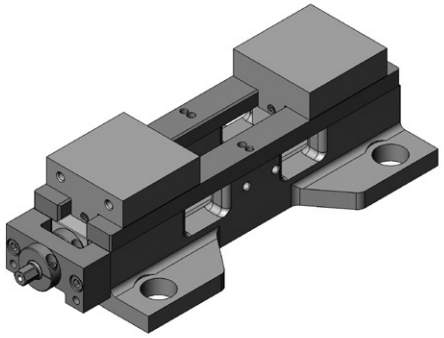


- **Shown in Universal Base, also available in Narrow Bases and Ball Lock™ Mounting Base.**

Self-Centering Vises - 4" (100mm)

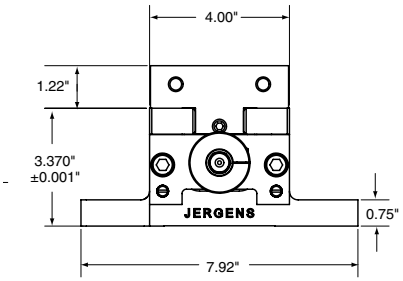
Ball Lock™

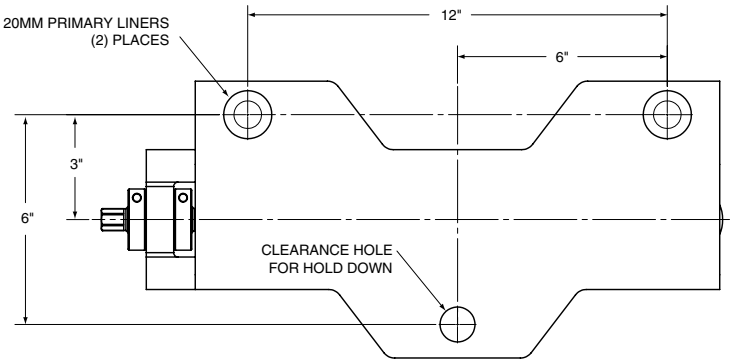
- Integrates with the Jergens Ball Lock™ mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock™ subplates



Inch

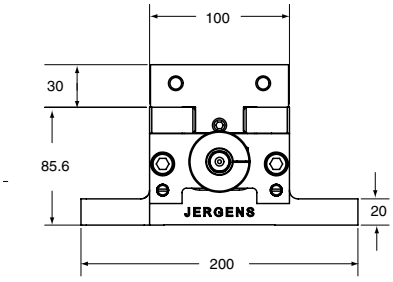
Part Number	Wt. lbs
49405SC	36

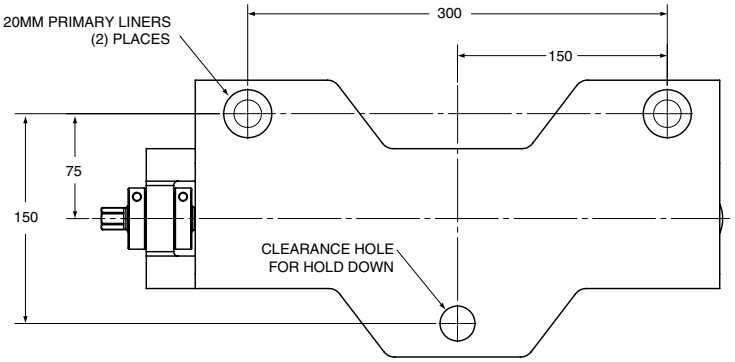




Metric

Part Number	Wt. kg
69405SC	17

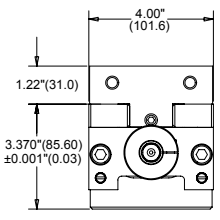


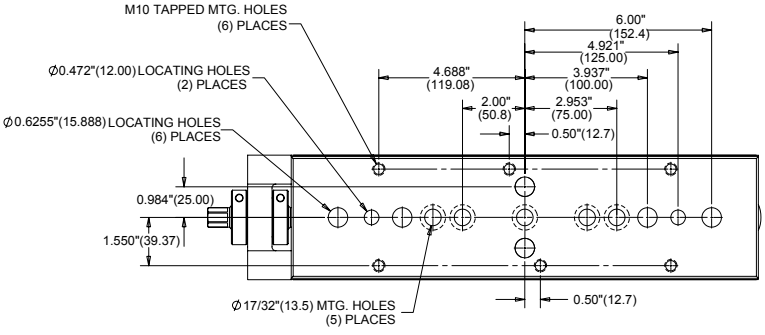


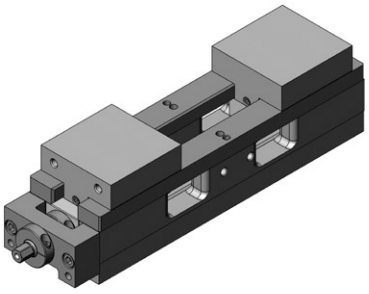
Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting

Part Number	Wt. (lbs)
49401SC	34



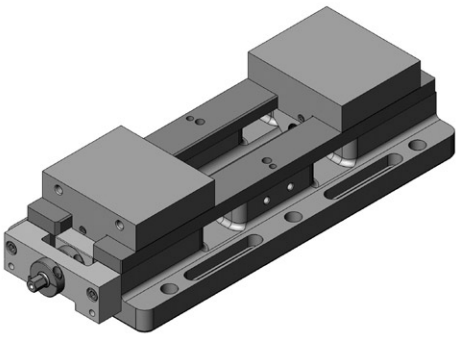




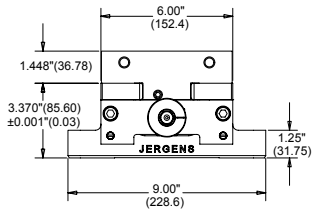
Self-Centering Vises - 6" (150mm)

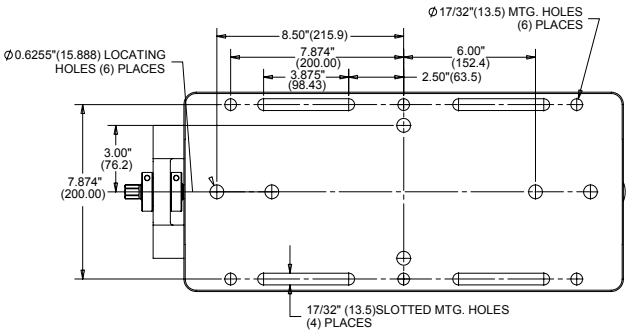
Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machinable centers



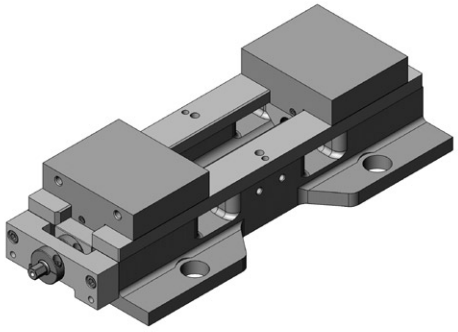
Part Number	Wt. (lbs)
49472SC	70





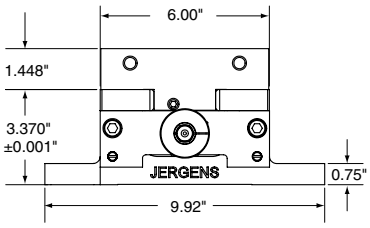
Ball Lock™ Base

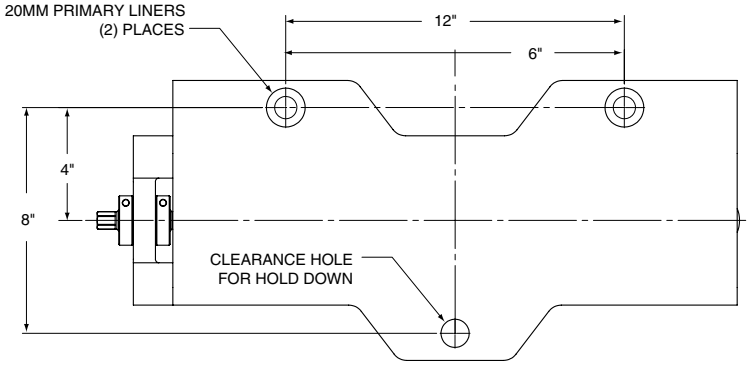
- Integrates with the Jergens Ball Lock™ mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock™ subplates



Inch

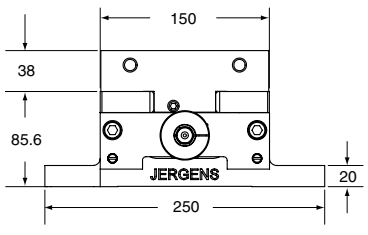
Part No.	Wt. lbs
49406SC	66

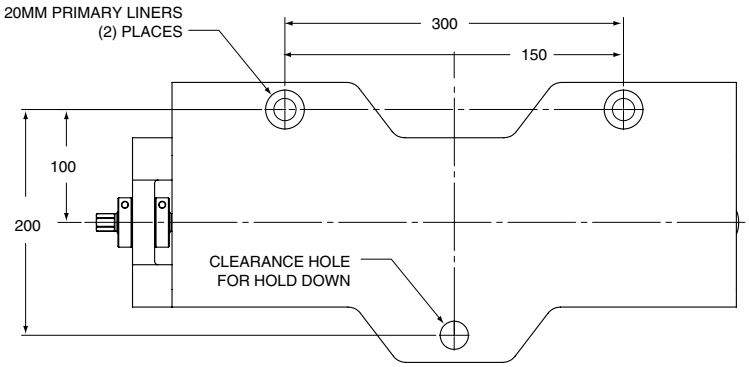




Metric

Part No.	Wt. kg
69406SC	30



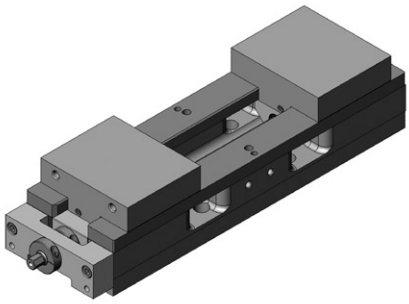


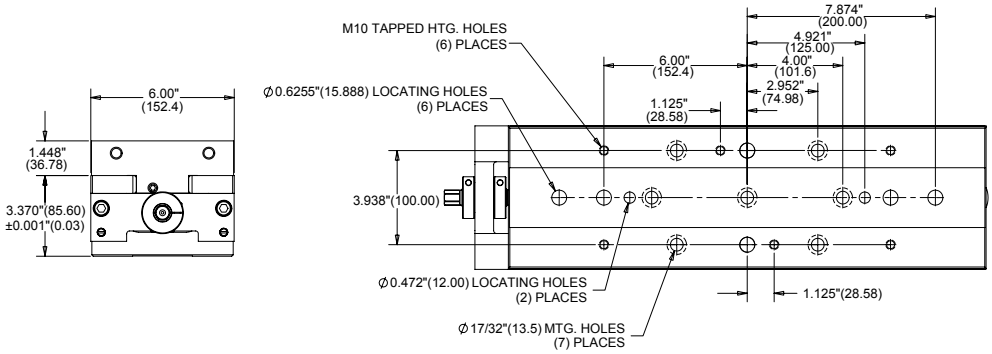
Self-Centering Vises - 6" (150mm)

Narrow Base

Part Number	Wt. (lbs)
49402SC	64

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting

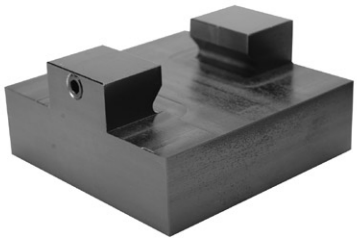


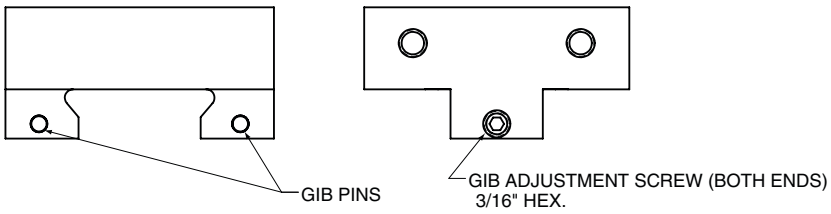


Self Centering Vise Accessories

Jaws with Adjustable Gib Screw*

• Better location accuracy than conventional Jergens Quick Change Vise Jaws

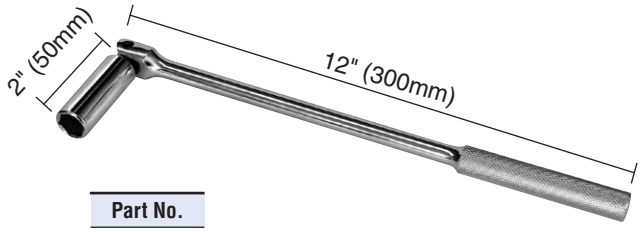




*Jergens Standard Jaws fully compatible, see complete selection on page 2.36
To order Jergens Production Vise Jaws with Adjustable Gib Screw, use standard jaw part no. followed by "SC".

Handle

Self-Centering Vise Handle
One Piece Included with 4" (100mm) & 6" (150mm) Self-Centering Vises



Part No.
49442SC

- Ergonomic hinge handle.
- Specification: Chrome Plated Steel, 9/16 Hex Socket

Production Vise Columns - 4" (100mm)

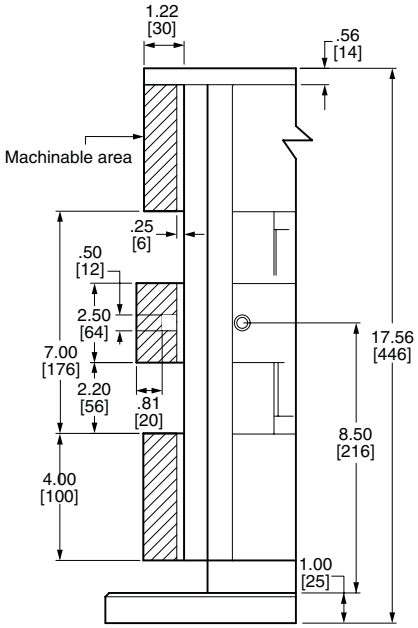
- 3 or 4-Sided Columns
- Multiple mounting systems
- Fastest quick-change jaw system
- Full jaw travel
- Hardened and ground steel rails support jaws and resist wear
- Fully sealed lead screw assembly
- Supplied with machinable soft jaws
- Available with hard jaws

Clamping Force

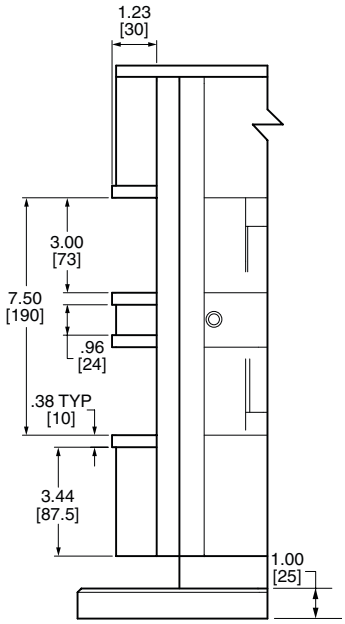
Jergens 4" (100mm)

Torque		Clamping Force	
ft. lbs.	N•m	lbs.	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200*	3,250*

*Recommended Maximum



Column With Soft Jaws



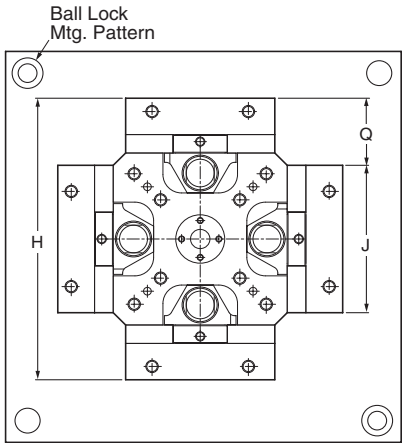
Column With Hard Jaws

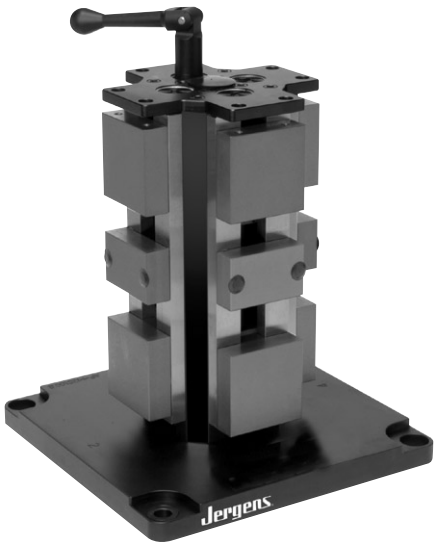
Production Vise Columns - 4" (100mm)

4-Sided

The 4-Sided Columns have eight stations for holding parts. Two standard bases and custom mounting patterns are available. The universal base mounts directly to most HMC tables using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm) or better. Please contact Jergens Customer Service for more information.





4-Sided 4" Vise Columns

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (lbs)	Ball Lock Part No.	Shank Size
Ball Lock	**49403**	9.56	4.00	2.80	15.75	15.75	14 x 14	n/a	n/a	132	**49602**	20mm x 1"
Universal	**49475**	9.56	4.00	2.80	11.81	11.81	n/a	80MM	100MM	122	-	-

4-Sided 100mm Vise Columns Metric Bases

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (kg)	Ball Lock Part No.	Shank Size
Ball Lock	**69403**	240	100	70	400	400	350 x 350	n/a	n/a	60	**49652**	20mm x 25mm
Universal	**69475**	240	100	70	300	300	n/a	80MM	100MM	55	-	-

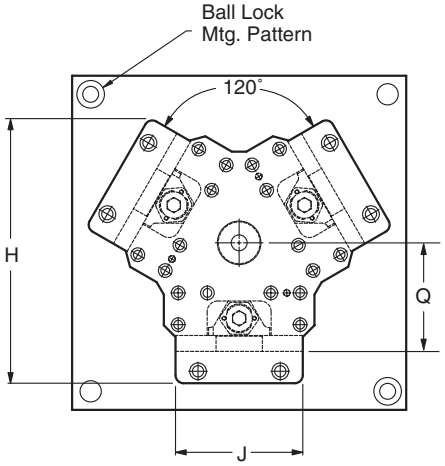
* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

Production Vise Columns - 4" (100mm)

3-Sided

The 3-Sided Columns have six workstations, and may provide greater access to three or more sides of your work pieces. This design is especially beneficial on machining centers with large spindles. No need to sacrifice tool rigidity for access, by having tools extended too far from the tool holders. The universal base mounts directly to most HMC tables using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up time with the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm)or better.





Tri-column design allows up to 240° accessability

3-Sided 4" Vise Columns

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (lbs)	Ball Lock Part No.	Shank Size
Ball Lock	**49409**	9.55	4.00	4.22	15.75	15.75	14 x 14	n/a	n/a	125	**49602**	20mm x 1"
Universal	**49473**	9.55	4.00	4.22	11.81	11.81	n/a	80MM	100MM	115	-	-

3-Sided 100mm Vise Columns Metric Bases

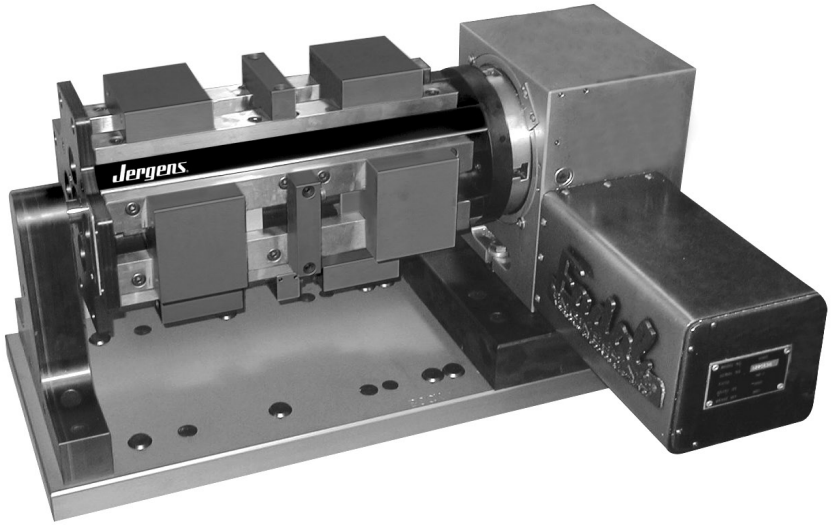
Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (kg)	Ball Lock Part No.	Shank Size
Ball Lock	**69409**	225	100	90	400	400	350 x 350	n/a	n/a	57	**49652**	20mm x 25mm
Universal	**69473**	225	100	90	300	300	n/a	80MM	100MM	52	-	-

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

Indexer Systems

Maximize the productivity of your Vertical Machining Center. Jergens Production Columns can be mounted onto most any indexer. Columns can be attached directly to an indexer or become part of a quick-change system by adding the Jergens Ball Lock™ Mounting System. **Contact Jergens Technical Service for help designing a system for your application**.

- Add capabilities to your VMC
- Reduce set-ups
- Mounts to most rotary table/indexer
- Hold 4, 6, or 8 parts in each load.
- Use standard jaws and accessories



Production Vise Columns - 6" (150mm)

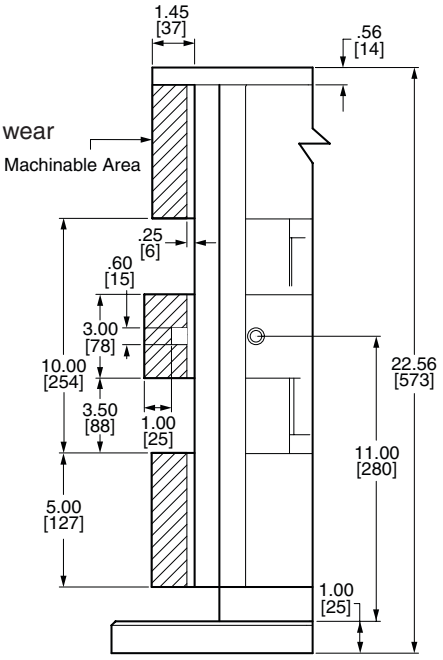
- 3 or 4-Sided Columns
- Multiple mounting systems
- Fastest quick-change jaw system
- Full jaw travel
- Hardened and ground steel rails support jaws and resist wear
- Fully sealed lead screw assembly
- Supplied with machinable soft jaws
- Available with hard jaws

Clamping Force

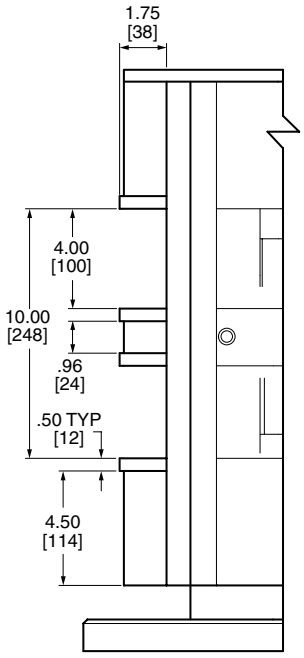
Jergens 6" (150mm)

Torque		Clamping Force	
lbs. ft.	N•m	lbs.	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200	3,250
70	95	8,400	3,800
80	108	9,200	4,150
90	122	10,100*	4,550*

*Recommended Maximum



Column With Soft Jaws



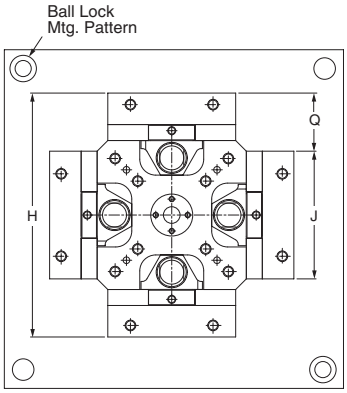
Column With Hard Jaws

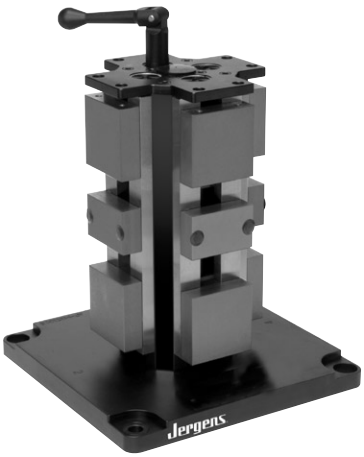
Production Vise Columns - 6" (150mm)

4-sided

The 4-Sided Columns are the workhorses of the Jergens Production Vise Columns. They have eight stations for holding your parts. Two standard bases are available. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm) or better.





4-Sided 6" (150mm) Vise Columns

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (lbs)	Ball Lock Part No.	Shank Size
Ball Lock	**49412**	11.50	6.00	2.75	15.75	15.75	14 x 14	n/a	n/a	244	**49602**	20mm x 1"
Ball Lock	**49404**	11.50	6.00	2.75	19.68	19.68	17 x 17	n/a	n/a	258	**49612**	25mm x 1"
Universal	**49476**	11.50	6.00	2.75	15.75	15.75	n/a	80MM	100MM	235	-	-

4-Sided 150mm Vise Columns Metric Bases

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (kg)	Ball Lock Part No.	Shank Size
Ball Lock	**69412**	290	150	70	400	400	350 x 350	n/a	n/a	111	**49652**	20mm x 25mm
Ball Lock	**69404**	290	150	70	500	500	425 x 425	n/a	n/a	117	**49662**	20mm x 25mm
Universal	**69476**	290	150	70	400	400	n/a	80MM	100MM	107	-	-

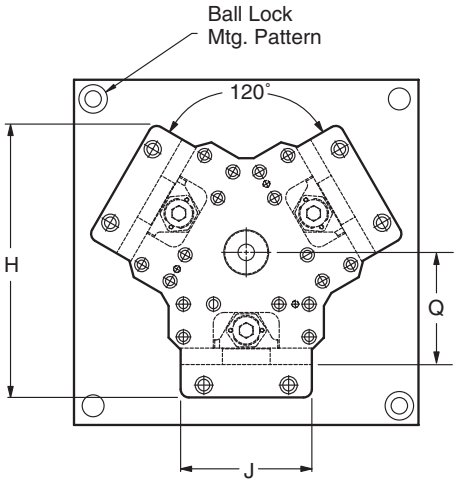
* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

Production Vise Columns - 6" (150mm)

3-Sided

The 3-Sided Columns have only six workstations, but provide much greater access to three or more sides of your work pieces. This design is especially beneficial on machining centers with large spindle noses. No need to sacrifice tool rigidity for access, by having tools extended too far from the tool holders. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.

Further reduce your set-up time by adding the Jergens Ball Lock™ Mounting system to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm)or better.



Tri-column design allows up to 240° accessability



3-Sided 6" Vise Columns

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (lbs)	Ball Lock Part No.	Shank Size
Ball Lock	**49408**	12.57	6.00	5.12	15.75	15.75	14 x 14	n/a	n/a	252	**49602**	20mm x 1"
Ball Lock	**49410**	12.57	6.00	5.12	19.68	19.68	17 x 17	n/a	n/a	266	**49612**	25mm x 1"
Universal	**49474**	12.57	6.00	5.12	19.68	19.68	n/a	80MM	100MM	240	-	-

3-Sided 150mm Vise Columns Metric Bases

Mounting	Part No.	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Wt. (kg)	Ball Lock Part No.	Shank Size
Ball Lock	**69408**	318	150	130	400	400	350 x 350	n/a	n/a	115	**49652**	20mm x 25mm
Ball Lock	**69410**	318	150	130	500	500	425 x 425	n/a	n/a	121	**49662**	25mm x 25mm
Universal	**69474**	318	150	130	500	500	n/a	80MM	100MM	109	-	-

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers.
Custom mounting patterns and base sizes are available upon request. .

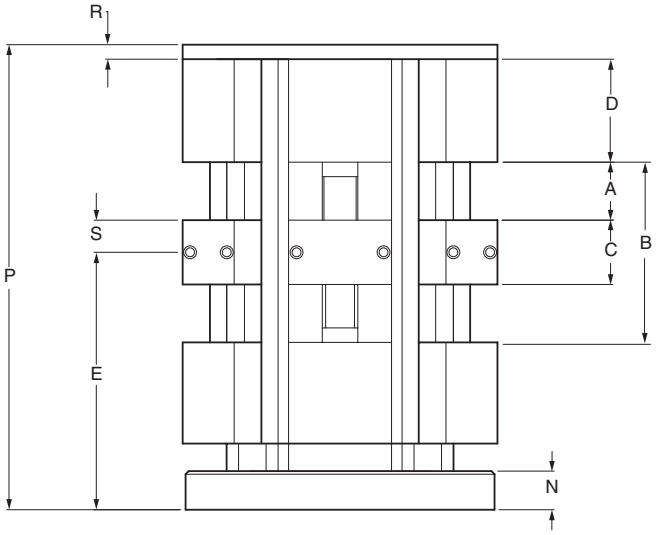
Production Vise Columns

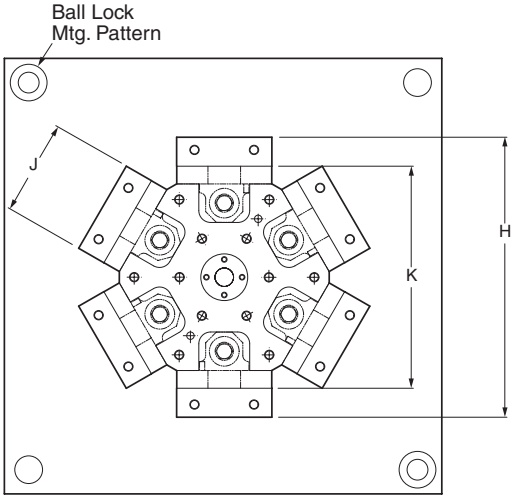
12 Station Hex

Jergens Hex Production Vise Columns provide 12 stations to maximize the number of parts per load. Available with bases to fit directly onto your machine table, or to a Ball Lock™ sub-plate.

- Reduce part processing costs by machining 3 sides of 12 parts
- Increase unattended machine time
- Improve part throughput
- One piece column with hardened steel guide ways
- Full jaw travel permits clamping a larger variety of parts







Hex Production Vise Columns (Inch & Metric)

Dimensions		Ball Lock Base		Universal Base		Ball Lock Base		Universal Base	
		49413	49414	49477	49478	69413	69414	69477	69478
	Vise Size	4"/100mm	6"/150mm	4"/100mm	6"/150mm	100mm	150mm	100mm	150mm
A	Max Jaw Opening*	2.25	3.50	2.25	3.50	56	88	56	88
B	Max Jaw Opening (1 station)*	7.00	10.00	7.00	10.00	178	254	178	254
C	Fixed Jaw Width	2.50	3.00	2.50	3.00	64	78	64	78
D	Moveable Jaw Length	4.00	5.00	4.00	5.00	100	127	100	127
E	Base to Center of Fixed Jaw	8.50	11.00	8.50	11.00	241	305	241	305
H	Overall Width	11.81	16.91	11.81	16.91	300	432	300	432
J	Jaw Width	4.00	6.00	4.00	6.00	100	150	100	150
K	Outside Rail to Rail	9.37	14.01	9.37	14.01	238	356	238	356
N	Base Plate Thickness	1.00	1.00	1.00	1.00	25	25	25	25
P	Overall Height	17.56	22.56	17.56	22.56	446	573	446	573
R	Top Plate Thickness	0.56	0.56	0.56	0.56	14	14	14	14
S	Center to Face	1.25	1.50	1.25	1.50	32	39	32	39
	Base Length & Width	15.75	19.68	15.75	19.68	400	500	400	500
	Ball Lock Mounting Pattern	14x14	17x17	n/a	n/a	350x350	425x425	n/a	n/a
	Mounting Pattern 1**	n/a	n/a	80MM	80MM	n/a	n/a	80MM	80MM
	Mounting Pattern 2**	n/a	n/a	100MM	100MM	n/a	n/a	100MM	100MM
	Weight	206 lbs	355 lbs	206 lbs	355 lbs	94 kg	161 kg	94 kg	161 kg

* Larger parts can be clamped by machining jaws to fit workpiece.

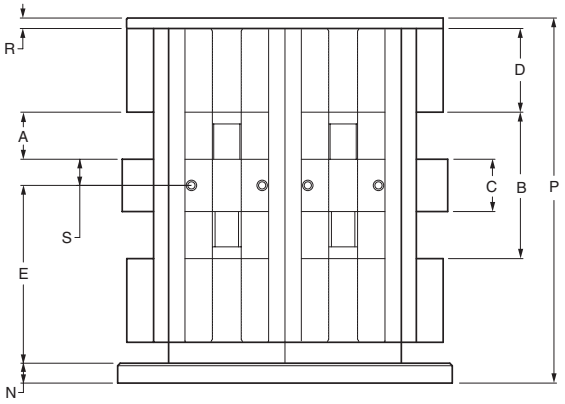
**Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

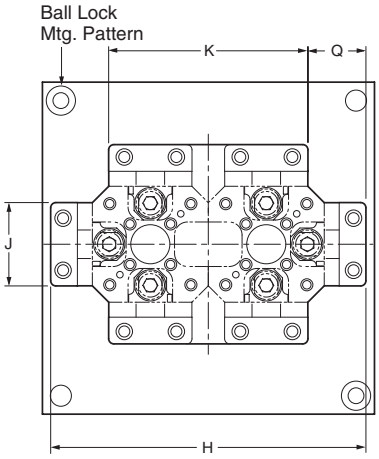
Production Vise Columns
12 & 16 Station Multi-Quads

Jergens Multi-Quad Production Vise Columns provide 12 or 16 stations to maximize the number of parts per load. Available with bases to fit directly onto your machine table, or to a Ball Lock™ sub-plate.

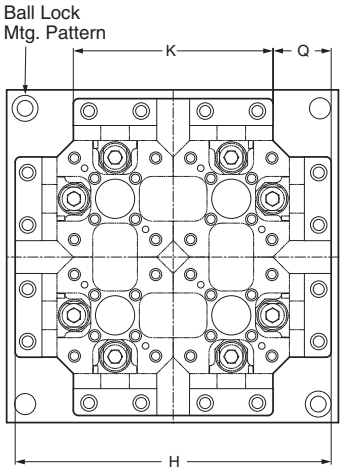
- Machine more parts per set-up
- Reduce changeover time
- Hold larger parts
- Reduce cost per part
- Run longer without operator involvement







12 Station



16 Station

Inch Multi-Quad Production Vise Columns

Dimensions		12 Station				16 Station			
		Ball Lock Base		Universal Base		Ball Lock Base		Universal Base	
		49415	49416	49479	49480	49417	49418	49481	49482
	Vise Size	4"/100mm	6"/150mm	4"/100mm	6"/150mm	4"/100mm	6"/150mm	4"/100mm	6"/150mm
A	Max Jaw Opening (2 station)*	2.25	3.50	2.25	3.50	2.25	3.50	2.25	3.50
B	Max Jaw Opening (1 station)*	7.00	10.00	7.00	10.00	7.00	10.00	7.00	10.00
C	Fixed Jaw Width	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00
D	Moveable Jaw Length	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00
E	Base to Center of Fixed Jaw	8.50	11.00	8.50	11.00	8.50	11.00	8.50	11.00
H	Overall Width	11.81	16.91	11.81	16.91	11.81	16.91	11.81	16.91
J	Jaw Width	4.00	6.00	4.00	6.00	4.00	6.00	4.00	6.00
K	Outside Rail to Rail	9.37	14.01	9.37	14.01	9.37	14.01	9.37	14.01
N	Base Plate Thickness	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P	Overall Height	17.56	22.56	17.56	22.56	17.56	22.56	17.56	22.56
Q	Clearance	2.80	2.75	2.80	2.75	2.80	2.75	2.80	2.75
R	Top Plate Thickness	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
S	Center to Face	1.25	1.50	1.25	1.50	1.25	1.50	1.25	1.50
	Base Length & Width	15.75	19.68	15.75	19.68	15.75	19.68	15.75	19.68
	Ball Lock Mounting Pattern	14x14	17x17	n/a	n/a	14x14	17x17	n/a	n/a
	Mounting Pattern 1**	n/a	n/a	80MM	80MM	n/a	n/a	80MM	80MM
	Mounting Pattern 2**	n/a	n/a	100MM	100MM	n/a	n/a	100MM	100MM
	Weight (lbs)	190	380	190	380	360	720	360	720

* Larger parts can be clamped by machining jaws to fit workpiece.

** Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request. Contact Jergens Technical Service for more information.

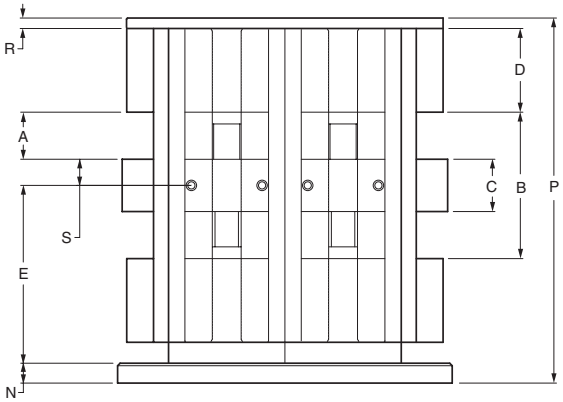
Production Vise Columns

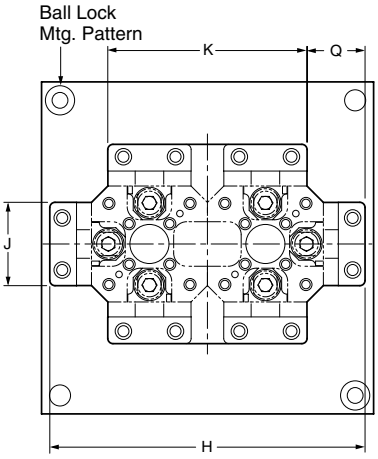
12 & 16 Station Multi-Quads

Jergens Multi-Quad Production Vise Columns provide 12 or 16 stations to maximize the number of parts per load. Available with bases to fit directly onto your machine table, or to a Ball Lock™ sub-plate.

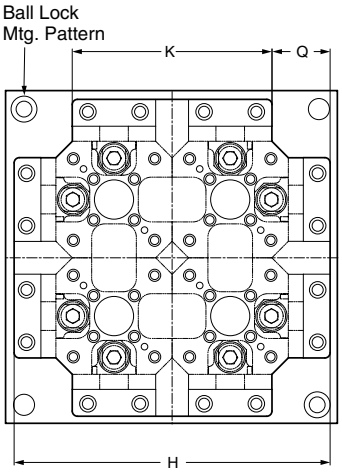
- Machine more parts per set-up
- Reduce changeover time
- Hold larger parts
- Reduce cost per part
- Run longer without operator involvement







12 Station



16 Station

Metric Multi-Quad Production Vise Columns

Dimensions		12 Station				16 Station			
		Ball Lock Base		Universal Base		Ball Lock Base		Universal Base	
		69415	69416	69479	69480	69417	69418	69481	69482
	Vise Size	100mm	150mm	100mm	150mm	100mm	150mm	100mm	150mm
A	Max Jaw Opening (2 station)*	56	88	56	88	56	88	56	88
B	Max Jaw Opening (1 station)*	176	254	176	254	176	254	176	254
C	Fixed Jaw Width	64	78	64	78	64	78	64	78
D	Moveable Jaw Length	100	127	100	127	100	127	100	127
E	Base to Center of Fixed Jaw	216	280	216	280	216	280	216	280
H	Overall Width	383	470	383	470	383	470	383	470
J	Jaw Width	100	150	100	150	100	150	100	150
K	Outside Rail to Rail	243	330	243	330	243	330	243	330
N	Base Plate Thickness	25	25	25	25	25	25	25	25
P	Overall Height	446	573	446	573	446	573	446	573
Q	Clearance	70	70	70	70	70	70	70	70
R	Top Plate Thickness	14	14	14	14	14	14	14	14
S	Center to Face	32	39	32	39	32	39	32	39
	Base Length & Width	400	500	400	500	400	500	400	500
	Ball Lock Mounting Pattern	350x350	425x425	n/a	n/a	350x350	425x425	n/a	n/a
	Mounting Pattern 1**	n/a	n/a	80mm	80mm	n/a	n/a	80mm	80mm
	Mounting Pattern 2**	n/a	n/a	100mm	100mm	n/a	n/a	100mm	100mm
	Weight (kgs)	86	172	86	172	164	326	164	326

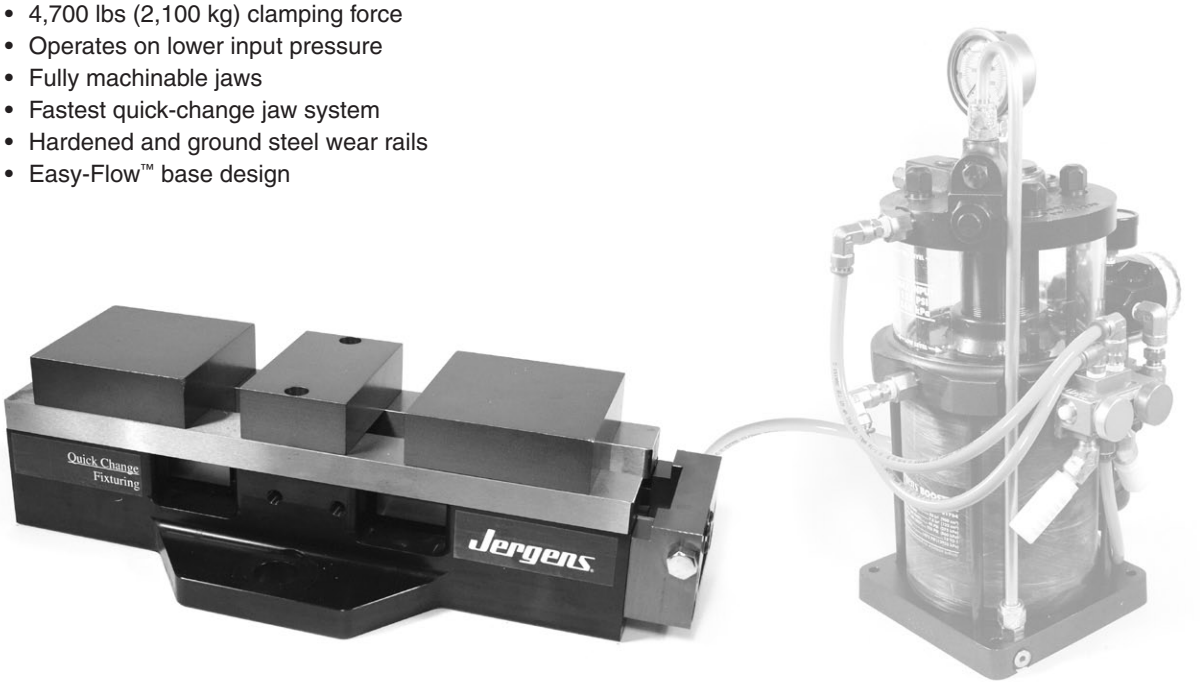
* Larger parts can be clamped by machining jaws to fit workpiece.

**Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request. Contact Jergens Technical Service for more information.

Hydraulic Production Vises

- Innovative compact design
- Internal hydraulics
- 4,700 lbs (2,100 kg) clamping force
- Operates on lower input pressure
- Fully machinable jaws
- Fastest quick-change jaw system
- Hardened and ground steel wear rails
- Easy-Flow™ base design

Hydraulic Power Sources Available



Technical Specifications:

Hydraulic Clamping Stroke: 1/4" (6.3mm)
Operating Volume: 0.4 Cu In (6.7 cm^3)
Maximum Input Pressure: 4000 P.S.I. (275 bar)
Minimum Input Pressure: 500 P.S.I. (35 bar)
Input Port: #4 SAE (7/16-20 UNF-2B)

Clamping Force (lbs) = Input Pressure x 1.19
Clamping Force (kg) = Input Pressure Bars x 7.67

Operation:

Using the Jergens Hydraulic Vise handle part number 49445, tighten vise jaws so the workpieces touch the fixed jaw. Next, turn the handle back 1/2 turn and activate the hydraulic cylinder. Handle included with vise.

Note: Only use the Jergens Hydraulic Vise Handle Part No. 49445 for adjustment purpose, do not use to operate vise.

Jergens hydraulic vises are available in 3 different base configurations. They offer the same unique features as Jergens manual vises.

Clamping Force

Input Pressure		Clamping Force	
PSI	Bars	lbs.	kgf
500	35	595	268
1,000	70	1,190	537
2,000	140	2,380	1,075
3,000	210	3,570	1,612
4,000	275*	4,760*	2,110*

*Recommended Maximum

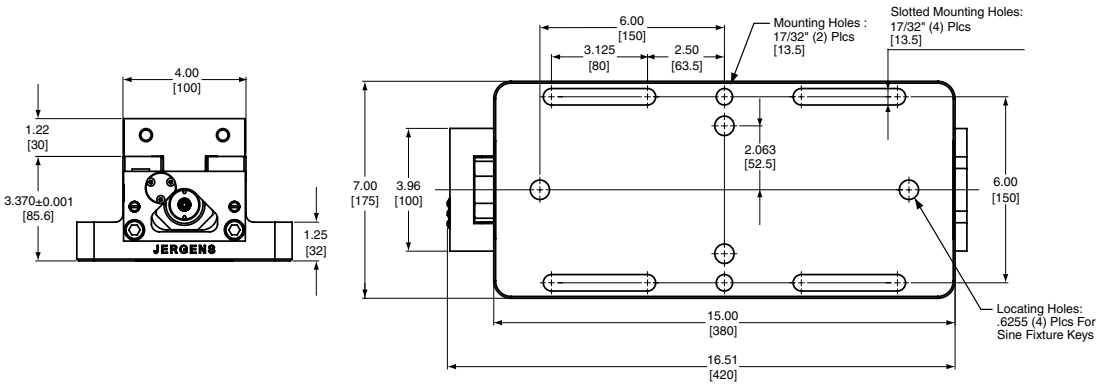
Hydraulic Production Vises - 4" (100mm)

Universal Base

Part Number	Wt. lbs/kg
49483	35/16

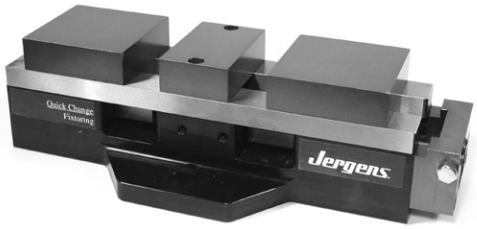


- Easy to mount directly to machine tables
- Slotted mounting holes fit most machines



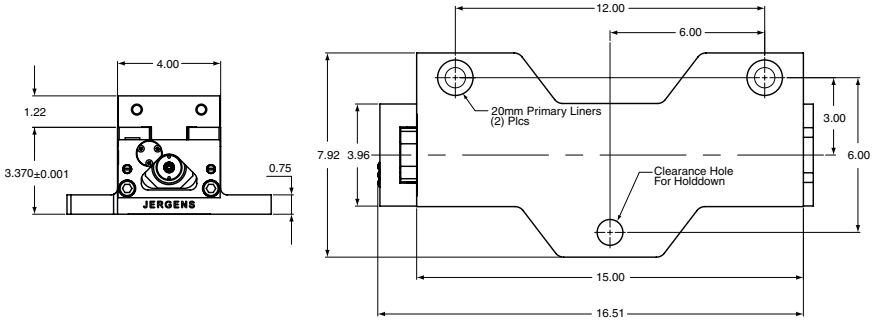
Ball Lock™ Base

- Designed for use with the Jergens Ball Lock™ mounting system
- Jigsaw pattern allows for “nesting” on Jergens Ball Lock™ subplates



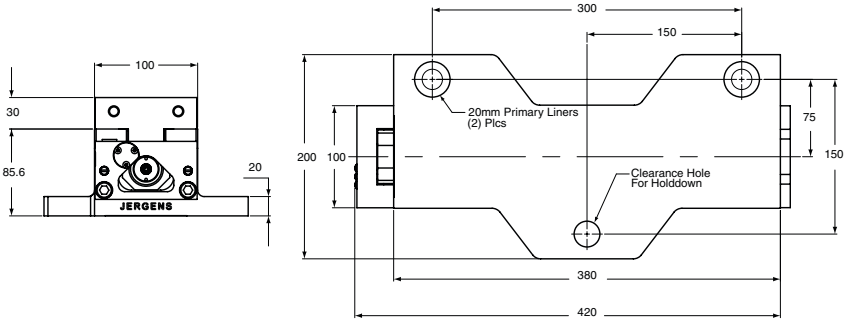
Inch

Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
49485	32 lbs.	**49601**	20mm x 3/4"



Metric

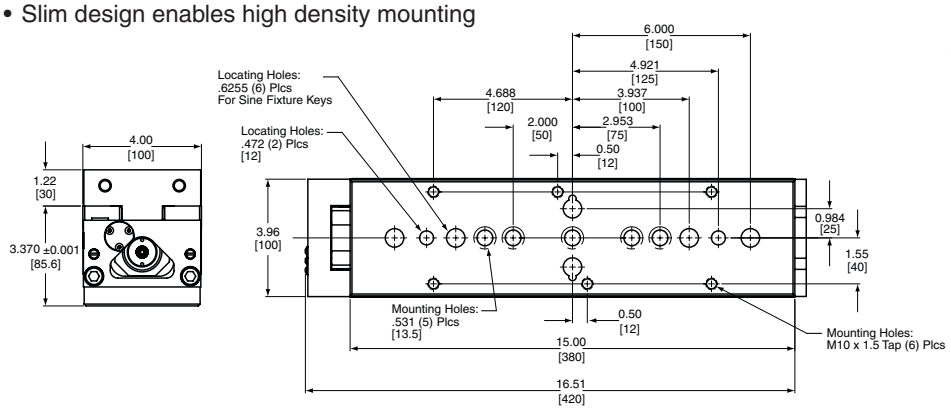
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
69485	15 kg	**49651**	20mm x 20mm



Hydraulic Production Vises - 4" (100mm)

Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting



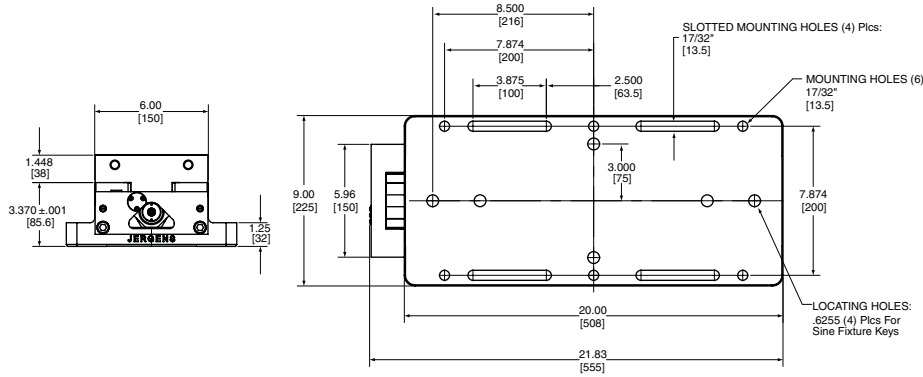


Part Number	Wt. lbs/kg
49487	30/14

Hydraulic Production Vises - 6" (150mm)

Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machines

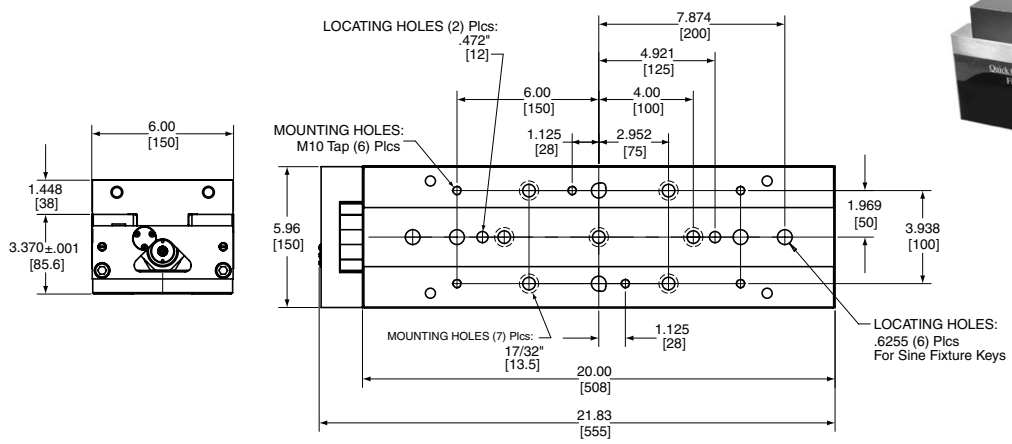




Part Number	Wt. lbs/kg
49484	65/29

Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting on fixture plates



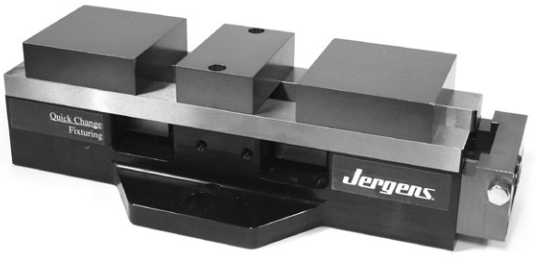


Part Number	Wt. lbs/kg
49488	60/27

Hydraulic Production Vises - 6" (150mm)

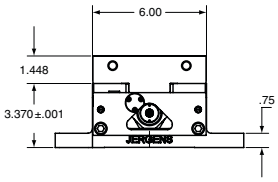
Ball Lock™ Base

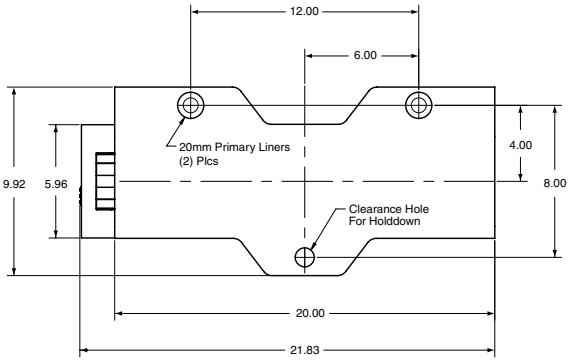
- Designed for use with the Jergens Ball Lock™ mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock™ subplates



Inch

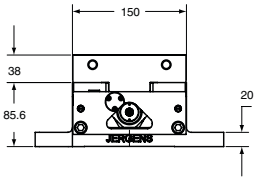
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
49486	62 lbs.	**49601**	20mm x 3/4"

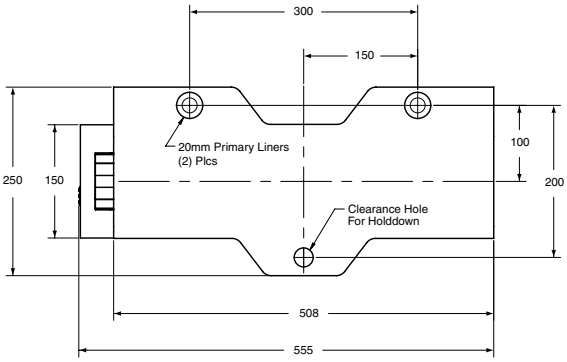




Metric

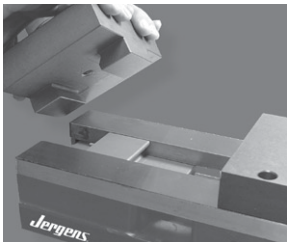
Part No.	Wt.	Ball Lock Shank Part No.	Shank Size
69486	28 kg	**49651**	20mm x 20mm

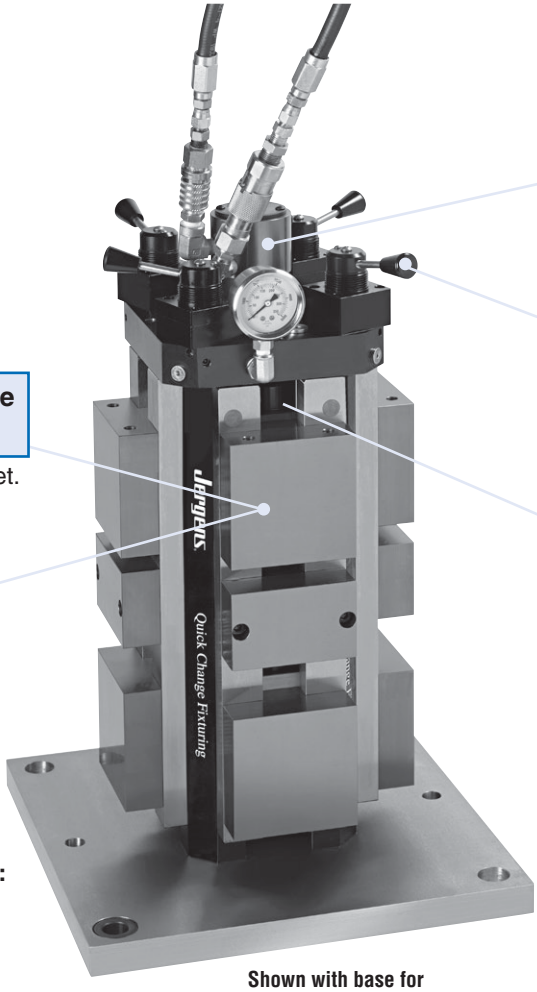


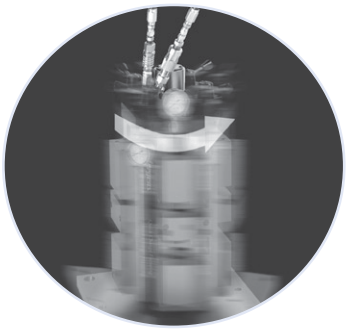


Hydraulic Vise Column

- Innovative compact design.
- Consistent clamping force:
  595 - 4,760 lbs
  268 - 2,110 kgs
- Available in 4"(100mm) and 6"(150mm) sizes, 3-sided and 4-sided models.







Rotary Hydraulic Union Dual Passage

Allows vise to rotate while hoses remain stationary.

Individual Control Valves

Operate Vises one at a time.

Built-in Accumulator with Check Valves

Permits easy disconnection when clamped.

Fully Machinable and Reversible Aluminum/Steel Jaws

More workholding flexibility per jaw set.

Fastest Quick-Change Jaw Mechanism.

Reduce set-up times, faster workpiece change over.

Hydraulic Vise Column Kits Include:

- Control Valves for each side.
- Rotary Coupler Dual Passage.
- Internal Accumulator.
- Pressure Gauge:
  500-4000 PSI (35-275 Bar).
- Adjustment Handle included with all columns.

Shown with base for

Ball Lock™ MOUNTING SYSTEM

Other bases offered.

Clamping Force Measured at Jaws

Input Pressure		Clamping Force	
psi	bars	lbs	kg
500	35	595	268
1,000	70	1,190	537
2,000	140	2,380	1075
3,000	210	3,570	1612
4,000*	275*	4,760	2110

*Recommended Maximum

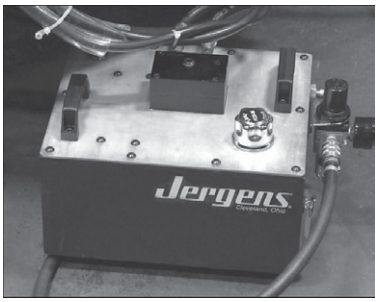
Download Cad Models! www.jergensinc.com

Technical Specifications:

Hydraulic Clamping Stroke: 1/4" (6.3 mm) total for both sides.
Operating Volume: 0.4 cu in (6.6 cm^3) - per station.
Input Pressure: 500-4000 psi (35-275 bar).
Dual station with center jaw for location; Cannot be used as a single station vise.

Setup & Operation:

1) Prepare machinable aluminum jaws or steel jaws to fit the workpiece.
2) Using the Jergens Hydraulic Vise adjustment handle to tighten vise jaws until the workpieces touch the fixed jaw.
3) Next, turn the handle back 1/2 to 2 revolutions to set opening.
4) Actuate the hydraulic source to operate control valves for each face.

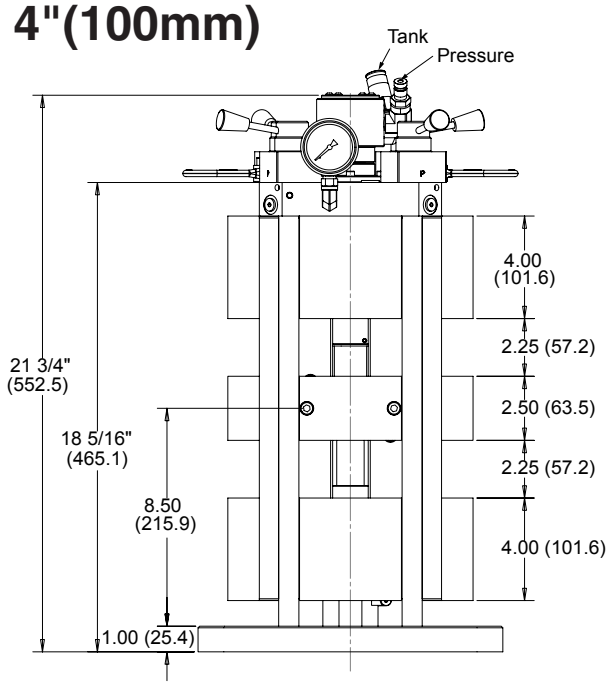


See page 2.34 for Air Powered Hydraulic Pump

Hydraulic Vise Tooling Columns - 4"(100mm)

- Individual valving allows each vise to operate independently.
- Hydraulic vise ensures repeatable results with minimal effort when compared to manual vises.
- Fast quick-change jaw mechanism.
- Hydraulic Vise Columns supplied with 4" (100mm) wide machinable aluminum jaws. Extra wide jaws, extra tall jaws and hardened jaw sets and all steel jaws are standard options. 3-sided and four-sided models available.
- All Jergens vises include machinable, reversible jaws; hardened and ground steel rails; and fully sealed lead screw assembly.

Standard and Custom Bases Available

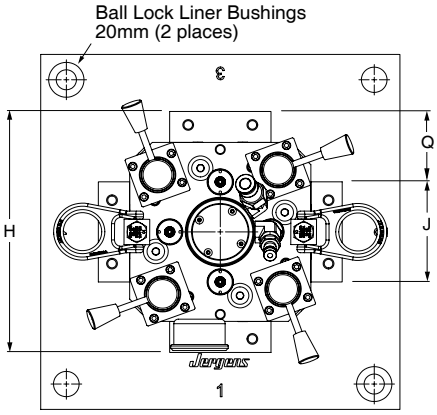


Column With Soft Jaws (Hard Jaws available)

4-Sided - 4"(100mm) wide

The 4-Sided Columns have eight stations for holding workpieces. Two standard bases are shown and custom mounting patterns and special base dimensions available. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of fixtures will repeat within ±0.0005" (0.013mm) or better.



Top View with Ball Lock Base shown

4-Sided 4"Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (lbs)
Ball Lock	**51403**	9.56	4.00	2.80	15.75	15.75	14 x 14	n/a	n/a	**49602**	150
Universal	**51475**	9.56	4.00	2.80	11.81	11.81	n/a	80MM	100MM	N/A	148

4-Sided 100mm Vise Columns Metric Bases

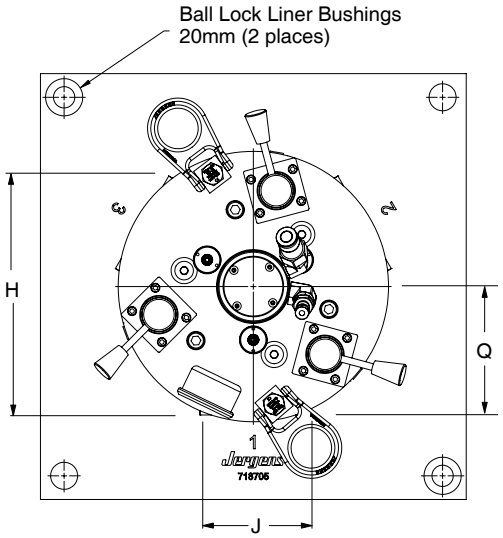
Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (kgs)
Ball Lock	**51453**	242.8	101.6	71.1	400	400	350 x 350	n/a	n/a	**49652**	68
Universal	**51475**	242.8	101.6	71.1	300	300	n/a	80MM	100MM	N/A	67

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

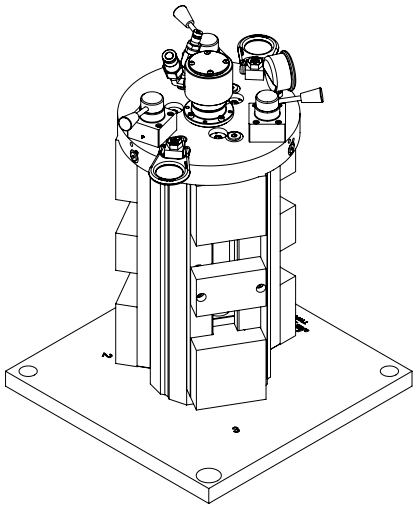
Hydraulic Vise Tooling Columns

3-Sided - 4"(100mm) wide

- Provide greater access to three or more sides of the workpiece.
- Design is beneficial on machining centers with large spindle noses.
- Reduce any sacrifice of tool rigidity for access.
- The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.
- Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005" (0.013mm) or better.



Top View with Ball Lock Base shown



Allows for up to 240° accessability.

3-Sided 4" Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (lbs)
Ball Lock	**51409**	9.55	4.00	4.22	15.75	15.75	14 x 14	n/a	n/a	**49602**	160
Universal	**51473**	9.55	4.00	4.22	11.81	11.81	n/a	80MM	100MM	N/A	145

3-Sided 100mm Vise Columns Metric Bases

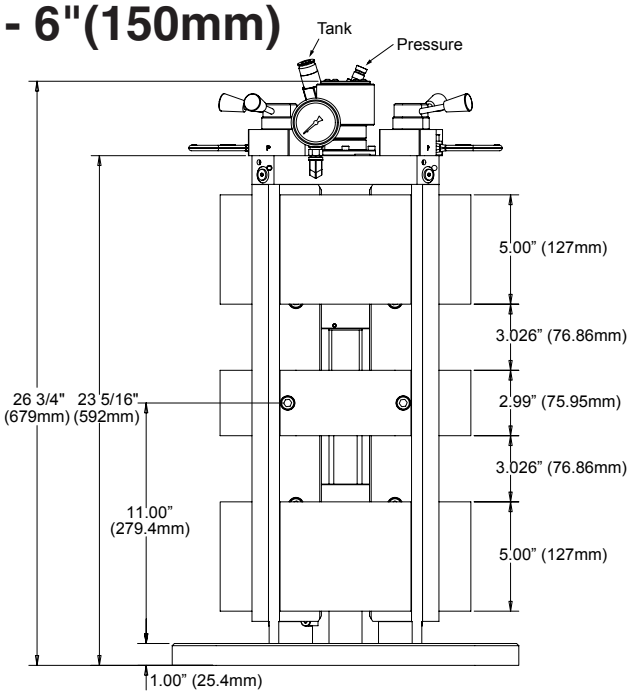
Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (kgs)
Ball Lock	**51459**	242.6	101.6	107.2	400	400	350 x 350	n/a	n/a	**49652**	72
Universal	**51473**	242.6	101.6	107.2	300	300	n/a	80MM	100MM	N/A	66

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

Hydraulic Vise Tooling Columns - 6"(150mm)

- Individual valving allows each vise to operate independently.
- Hydraulic vise ensures repeatable results with minimal effort when compared to manual vises.
- Fast quick-change jaw mechanism.
- Hydraulic Vise Columns supplied with 6" (150mm) wide machinable aluminum jaws. Extra wide jaws, extra tall jaws and hardened jaw sets and all steel jaws are standard options. 3-sided and four-sided models available.
- All Jergens vises include machinable, reversible jaws; hardened and ground steel rails; and fully sealed lead screw assembly.

Standard and Custom Bases Available

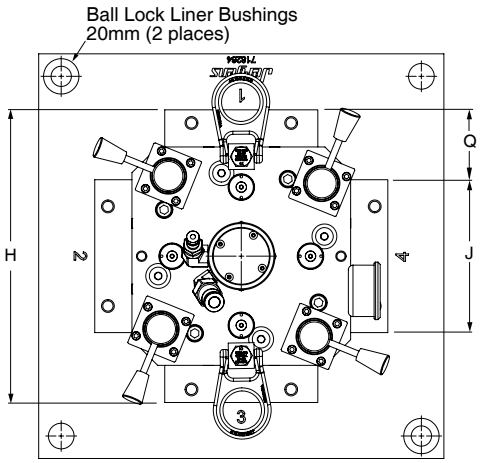


Column With Soft Jaws (Hard Jaws available)

4-Sided - 6"(150mm) wide

The 4-Sided Columns have eight stations for holding workpieces. Two standard bases are available. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of fixtures will repeat within ±0.0005" (0.013mm) or better.



Top View with Ball Lock Base shown

4-Sided 6" Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (lbs)
Ball Lock	**51412**	11.50	6.00	2.75	15.75	15.75	14 x 14	n/a	n/a	**49602**	270
Ball Lock	**51404**	11.50	6.00	2.75	19.68	19.68	17 x 17	n/a	n/a	**49612**	285
Universal	**51476**	11.50	6.00	2.75	15.75	15.75	n/a	80MM	100MM	N/A	270

4-Sided 150mm Vise Columns Metric Bases

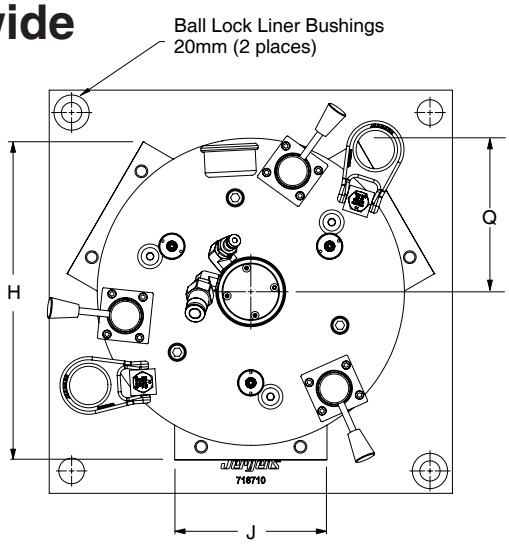
											(kgs)
Ball Lock	**51462**	292.1	152.4	69.9	400	400	350 x 350	n/a	n/a	**49652**	122
Ball Lock	**51454**	292.1	152.4	69.9	500	500	425 x 425	n/a	n/a	**49662**	130
Universal	**51476**	292.1	152.4	69.9	400	400	n/a	80MM	100MM	N/A	122

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

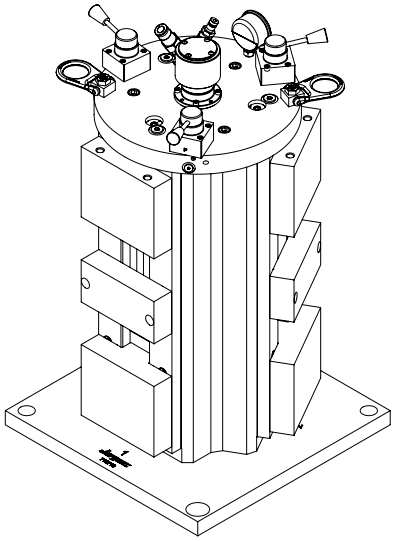
Hydraulic Vise Tooling Columns
3-Sided - 6"(150mm) wide

The 3-Sided Columns have six workstations to provide greater access to three or more sides of the workpiece. This design is especially beneficial on machining centers with large spindle noses. This can reduce any sacrifice of tool rigidity for access, by having tools extended too far from the tool holders. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80MM or 100MM centers.

Further reduce set-up times by adding the Jergens Ball Lock™ Mounting System to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005”(0.013mm) or better.



Top View with Ball Lock Base shown



Allows for up to 240° accessability.

3-Sided 6" Vise Columns

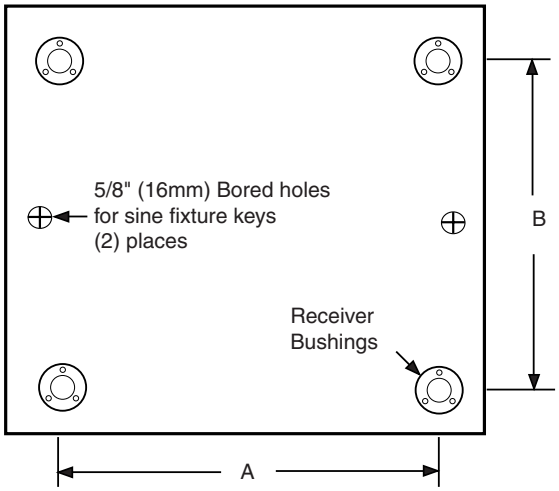
Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (lbs)
Ball Lock	**51408**	12.57	6.00	5.12	15.75	15.75	14 x 14	n/a	n/a	**49602**	300
Ball Lock	**51410**	12.57	6.00	5.12	19.68	19.68	17 x 17	n/a	n/a	**49612**	320
Universal	**51474**	12.57	6.00	5.12	19.68	19.68	n/a	80MM	100MM	N/A	320

3-Sided 150mm Vise Columns Metric Bases

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Ball Lock Shank Part No.	Wt. (kgs)
Ball Lock	**51458**	319.3	152.4	130	400	400	350 x 350	n/a	n/a	**49652**	136
Ball Lock	**51460**	319.3	152.4	130	500	500	425 x 425	n/a	n/a	**49662**	145
Universal	**51474**	319.3	152.4	130	500	500	n/a	80MM	100MM	N/A	145

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80MM and 100MM centers. Custom mounting patterns and base sizes are available upon request.

Hydraulic Vise Tooling Columns Standard Subplates



Standard Steel Subplates for Vise Columns

Part Number	Pallet Size (mm)	For Vise Columns	A (in.)	B (in.)	Receiver Size (mm)	Thickness of Subplate (in.)	Wt (lbs)
49102	400	**51403, 51409 51412,51408**	14	14	20	1.125	79
49103	500	**51404, 51410**	17	17	25	1.25	137
49103-C	500	**All above**	14	14	20	1.25	137
Combination Subplate			17	17	25		

Metric Steel Subplates for Vise Columns

Part Number	Pallet Size (mm)	For Vise Columns	A (mm)	B (mm)	Receiver Size (mm)	Thickness of Subplate (in.)	Wt (kg)
59102	400	**51453, 51459 51462, 51458**	350	350	20	28.57	31
59103	500	**51454, 51460**	425	425	25	31.75	59
59103-C	500	**All above**	350	350	20	31.75	59
Combination Subplate			425	425	25		

Hydraulic Production Vise Accessories

Pre-Fill Boosters Kit



Patent No. 3839866

Part Number
61725

Jergens Booster Kit provides a complete compact power source for hydraulic vises. The kit includes a Jergens 30:1 pre-fill self-bleeding booster with filter regulator, 4 way push button actuation valve, plumbed with all fittings and hoses.

This air operated booster provides enough hydraulic volume to power up to 8 Jergens Hydraulic vises.

- **Self Bleeding**
- **Easy View Reservoir**
- **30:1 Boost Ratios**

Kit 61725 Includes

- Jergens Pre-Fill Booster 61705 (see above)
- Filter Regulator
- Actuator Valve

Specifications

Part Number	61705
Reservoir Capacity (cu. in.) / Liters	50 / 0.8
High Pressure Volume (cu. in.) / cm^3	3 3/4 / 61
Minimum Input (psi) / bar	40 / 2.7
Maximum Input (psi) / bar	125 / 8.6
Boost Ratio	30:1 / 30:1
Maximum Output (psi) / bar	3,750 / 258.5
Weight (lbs.) / kg	28 / 13

Handle



Part Number
49445

- Ergonomic design
- Aluminum handle
- 1/4" Steel Drive Hex for Jergens Hydraulic Vises

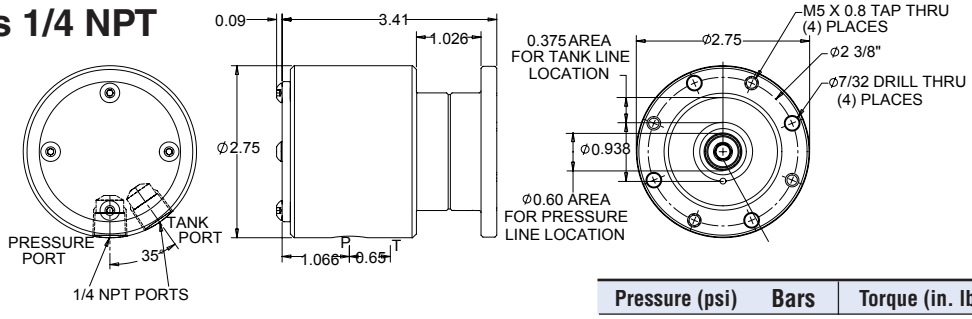
Handle for Hydraulic Vises, 4" (100mm) and 6" (150mm)

Rotary Hydraulic Union

Dual Passage, Ports 1/4 NPT



Part Number
61999



Max input pressure of Tank Port: 150 psi (10 bar)
Max input pressure of Pressure Port: 4000 psi (275 bar)
Max RPM: 30

Pressure (psi)	Bars	Torque (in. lbs.)	Nm
0	0	10	1.1
2000	140	25	2.8
4000	275	40	4.5

Hydraulic Production Vise Accessories

Air-Powered Hydraulic Pumps

Shoebox™ Pumps



Part Number
61757

The "Shoebox" Pump is a low cost, compact unit used on smaller hydraulic circuits. Its small size offers the versatility of mounting on wheels (such as a workcart) and moving the pump from workstation to workstation. The "Shoebox" is a cost effective power source for hydraulic tooling column vises.

Specifications

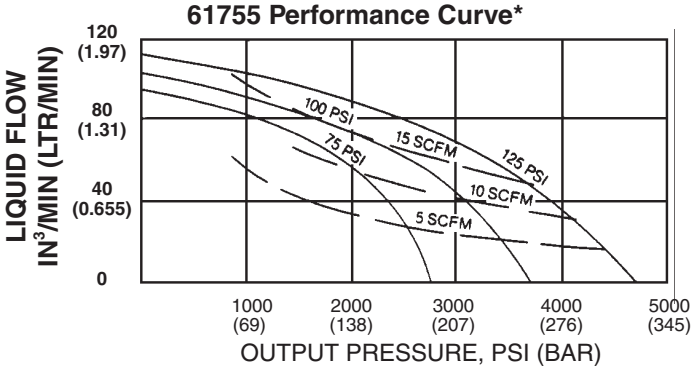
Part Number	61755
Reservoir Capacity	300 cu.in. (4.9 liter)
Minimum Input	25 psi (1.7 Bar)
Maximum Input	125 psi (8.5 Bar)
Boost Ratio	36:1
Maximum Output	4500 psi (306 Bar)
Free Flow @ 100 psi (6.8 Bar)	100 cu.in./min. (1.64 liter/min.)
Weight	24 lbs. (11kg)

Note: Do not use more than 4,000 PSI input pressure on Jergens Vises

Kit Includes

61755 36:1 Pump
61642 Four-way zero-leakage valve
61647 Subplate
60703 6000psi (414 Bar) gauge

61755 Performance Curve*



Quick Disconnect Couplers

Hydraulic Coupler

Sleeve	Nipple
1/4 NPT Female	1/4 NPT Male
61916	**61966**

Hydraulic couplers have dual checks.

Air Couplers

Sleeve	Nipple
1/8 NPT Female	1/8 NPT Male
61904	**61950**
1/4 NPT Female	1/4 NPT Male
61905	**61951**
	1/4 NPT Female
	61954

Air couplers have checks on sleeves only.

Adapters & Elbows

Adapter for BSP	Elbows
1/4 Male NPT	1/4 NPT x 1/4 Tube
1/4 Female BSP	
60221	**61004**

Air Hose

Low pressure flexible PVC air hose is sold by the foot in bulk lengths. Order the total footage and number of push-on fittings required by using the number to the right.

Low Pressure Air Hose

Hose I.D.	1/4"	3/8"	1/2"
Hose Part Number	**61106**	**61108**	**61110**
Fitting Part Number	**61107**	**61109**	**61111**

Hydraulic Hose



High pressure hose is supplied assembled and to lengths indicated. Lengths are measured from end of coupling to end of coupling. Hose is 3/8" ID and available in 4000 psi or 7000 psi rating. 3/8" female tubing fittings on each end.

High Pressure Hydraulic Hose

Length	12"	18"	24"	36"	72"
Part Number 4000 psi	**61201**	**61202**	**61203**	**61204**	**61205**
Part Number 7000 psi	**61211**	**61212**	**61213**	**61214**	**61215**

*Also available in 5000 psi.

Hydraulic Hose (Build Your Own)

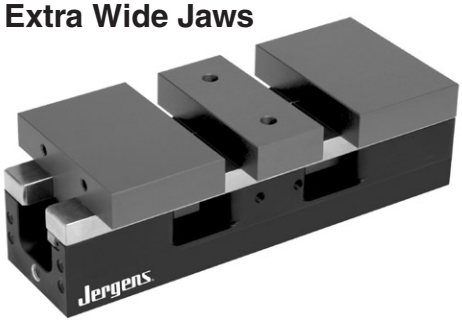
Length	25'	Hose Ends	Hose Ends
Part Number	**61221**	**61226**	**61227**
2750 psi	1/4 Hose	1/4 Npt Male	1/4 37° JIC Swivel Female

Jergens Production Vise System
Flexible Clamping - Flexible Production

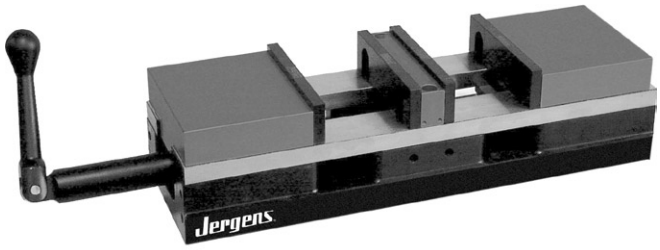
Variable batch sizes? Many different types of workpieces? Frequent set-ups?

The Jergens Production Vise System is the answer for these manufacturing flexibility issues!

Extra Wide Jaws



Dual Station with Hard Jaw



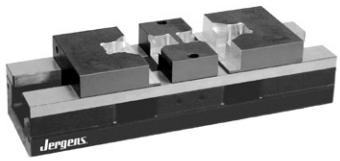
Full Face Vise Plate



Single Workpiece with Hard Jaws



Aluminum jaws can be completely milled, therefore a high degree of adaptability to the workpiece shape. For clamping, stop, and supporting surfaces.

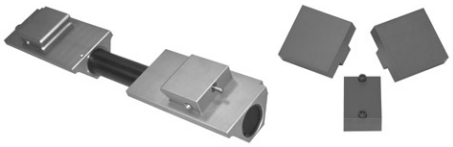


Hard coated base made of high-strength, light-weight, aluminum extrusion. Guideway Rails made of heat treated Alloy Steel.





Completely sealed lead screw assembly for trouble-free operation, power transmission through inserted steel nut, large slide stroke.



The clamping system consists of only a few components, for quick dismantling and minimum maintenance.

Aluminum or steel jaws suitable for milling:

- Milling of stop, supporting and clamping surfaces
- Quick set-up for formed parts and workpieces with complex clamping contours
- Significant reduction in expenditure on fixtures

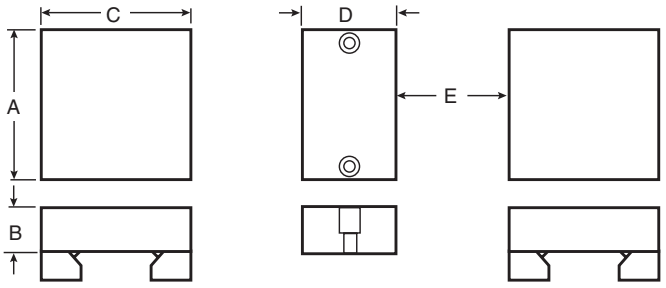
Jaws change in a few seconds:

- Rapid changeover from one workpiece to the next
- Machine downtimes are minimized

High versatility:

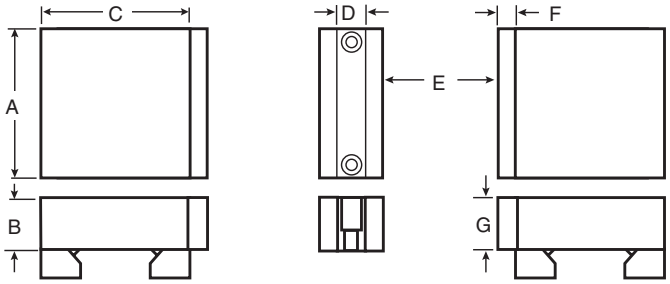
- The clamping element can be made available for simple and complex clamping applications in a very short time

Production Vise Jaws



Soft Jaws

• Standard Jaws are machinable aluminum.



Hard Jaw Carrier Set with hardened steel inserts

Jaws for 4" (100mm) Production Vises

Part Number	Description	A	B	C	D	E [1]	F	G
49420	Standard Machinable Soft Jaw Set (3pcs.)	3.95	1.22	4.00	2.50	2.20		
49421*	Pair of Std Moveable Jaws Only (2pcs.)	3.95	1.22	4.00				
49422	Std Fixed Jaw Only (1pc.)	3.95	1.22		2.50			
49423	Extra Wide Machinable Soft Jaw Set (3pcs.)	5.95	1.22	4.00	2.50	2.20		
49424*	Pair of Wide Moveable Jaws Only (2pcs.)	5.95	1.22	4.00				
49425	Wide Fixed Jaw Only (1pc.)	5.95	1.22		2.50			
49450	Extra Tall Machinable Soft Jaw Set (3pcs.)	3.95	2.00	5.00	2.50	1.70		
49451*	Pair of Tall Moveable Jaws Only (2pcs.)	3.95	2.00	5.00				
49452	Tall Fixed Jaw Only (1pc.)	3.95	2.00		2.50			
49426	Hard Jaw Carrier Set [2] (3pcs.)	3.95	1.22	3.44	.96	2.88		
	[2] Steel Jaw Plates not included							
49428*	Pair of Moveable Hard Jaws Only (2pcs.)	3.95	1.22	3.44				
49427	Fixed Hard Jaw Only (1pc.)	3.95	1.22		.96			
49429	Hardened Steel Jaw Insert [3] (4pcs.)	4.00					.35	1.23
	[3] Steel Jaw Plates have black-oxide finish, and are hardened to Rc 54/58.							

[1] Mounted Dimensions

Jaws for 6" (150mm) Production Vises

Part Number	Description	A	B	C	D	E [1]	F	G
49430	Standard Machinable Soft Jaw Set (3pcs.)	5.95	1.45	5.00	3.00	3.50		
49431*	Pair of Std Moveable Jaws Only (2pcs.)	5.95	1.45	5.00				
49432	Std Fixed Jaw Only (1pc.)	5.95	1.45		3.00			
49433	Extra Wide Machinable Soft Jaw Set (3pcs.)	7.95	1.45	5.00	3.00	3.50		
49434*	Pair of Wide Moveable Jaws Only (2pcs.)	7.95	1.45	5.00				
49435	Wide Fixed Jaw Only (1pc.)	7.95	1.45		3.00			
49455	Extra Tall Machinable Soft Jaw Set (3pcs.)	5.95	2.50	6.00	3.00	3.00		
49453*	Pair of Tall Moveable Jaws Only (2pcs.)	5.95	2.50	6.00				
49454	Tall Fixed Jaw Only (1pc.)	5.95	2.50		3.00			
49436	Hard Jaw Carrier Set [2] (3pcs.)	5.95	1.48	4.50	.96	4.00		
	[2] Steel Jaw Plates not included							
49438*	Pair of Moveable Hard Jaws Only (2pcs.)	5.95	1.48	4.50				
49437	Fixed Hard Jaw Only (1pc.)	5.95	1.48		.96			
49439	Hardened Steel Jaw Insert Set [3] (4pcs.)	6.00					.48	1.75
	[3] Steel Jaw Plates have black-oxide finish, and are hardened to Rc 54/58.							

[1] Mounted Dimensions

Note: Steel available for all soft jaw sets, add -S to the base part number. Example: 49420-S
*For Self Centering Vises. Moveable jaw sets available with gibs for tighter tolerances within rails. Add "SC" to part number. Example: 49421SC

Production Vise Accessories

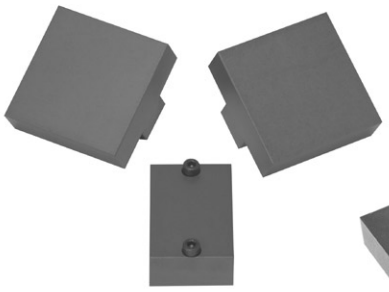
Jaws & Fixture Plates

Jaws

- **Standard** fully machinable soft jaws, as supplied on the Production Vises and Columns
- **Extra Wide** fully machinable soft jaws. (-W)
- **Extra Tall** fully machinable soft jaws. (-T)
- **Hard Jaw Carriers** are drilled and tapped to accept hard jaw plates. (-H)
- **Hard Jaw Plates** are hardened steel plates that bolt onto the hard jaw carriers. (-H)

Jaws are offered three ways:

- **Jaw Sets** include two moveable jaws and one fixed jaw.
- **Moveable Jaws** are sold in pairs
- **Fixed Jaws** are sold separately.



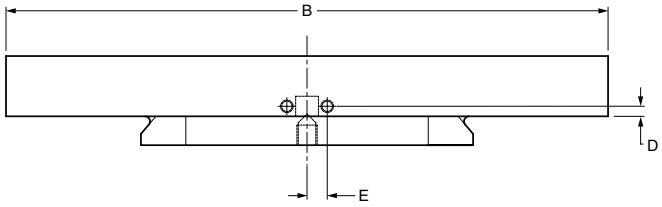
Machinable Soft Jaws
(Standard Sets included with Vises)

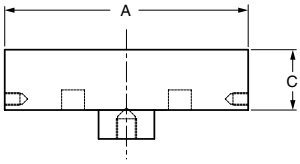


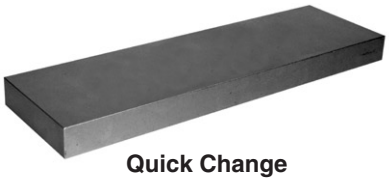
Hard Jaw Carriers
With Steel Inserts*

Quick Change Fixture Plates

Fixture plates provide an alternative to holding parts in the jaws. Build dedicated fixtures on the plates, and then just snap onto a vise or column. Switch between jaws and fixture plates without removing the vise or column from the machine.







Quick Change
Fixture Plate

Quick Change Fixture Plates for 4" (100mm) Production Vises

Part No.	Description	A	B	C	D	E
49446	Standard Fixture Plate	4	14.90	1.475	.25	.50
49448	Wide Fixture Plate	6	14.90	1.475	.25	.50

Quick Change Fixture Plates for 6" (150mm) Production Vises

Part No.	Description	A	B	C	D	E
49447	Standard Fixture Plate	6	19.90	1.475	.25	.688
49449	Wide Fixture Plate	8	19.90	1.475	.25	.688



Vise Handles

Part No.	Vise Size
49442	4"/100mm
49443	6"/150mm

- Ergonomic Design
- 5/8" Hex Size



Vise Work Stop

Part No.
49444

- Easily mounts to side of twin vise
- Allows for precise part location



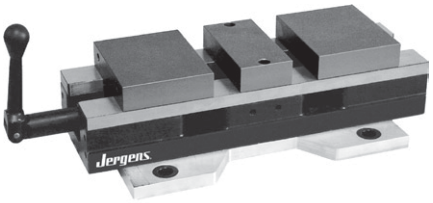
Vise Conversion Plates

Part No.	Vise Size
49440	4"/100mm
49441	6"/150mm

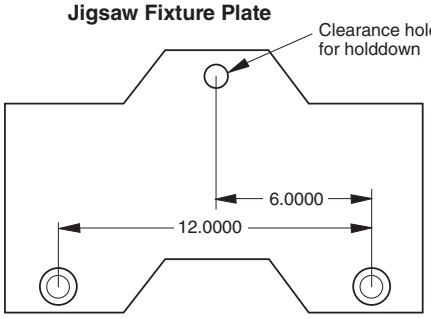
NOTE: Conversion plates include mounting screws.

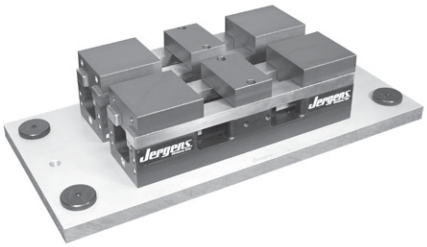
- Allows for easy conversion from twin station to single station vise
- Hard coat anodized aluminum

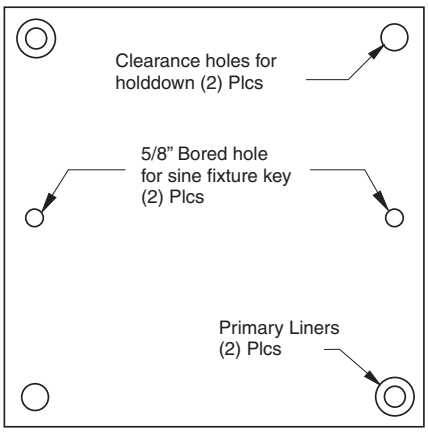
Production Vise Ball Lock™ Accessories - Inch



Jigsaw Fixture Plate







Ball Lock Shanks

Shank Diameter	Fixture Plate Thickness	Standard Shank	Shank with Thumbscrew
20	3/4	**49601**	**49601-S**
20	1"	**49602**	**49602-S**
25	3/4	**49611**	**49611-S**
25	1"	**49612**	**49612-S**



Standard Shank

Thumb Screw

Jigsaw Interlocking Fixture Plates

Plate Part No.	Jig Saw Pattern	Plate Thickness	Outer Dimensions	Use With Vise No.	Wt. (lbs)
28705	6 x 12	3/4	8 x 15	**49401**	9
28706	8 x 12	3/4	10 x 16	**49402**	9

Ball Lock Fixture Plates for Multiple Production Vises

Jergens manufactures standard Ball Lock Fixture Plates for various applications. A small sample is listed below. These fixture plates will accept multiple Jergens Production Vises. However, the Jergens Ball Lock Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper fixture and sub-plate for your applications.

Plate Part No.	Ball Lock Pattern	Shank Diameter	Plate Thickness	Outer Dimensions	Vises/ Plate	Use With Vise No.	Wt. (lbs)
28713	12 x 12	20MM	3/4	14 x 14	2	**49401**	14
28715	12 x 12	20MM	3/4	16 x 16	2	**49401**	18
28727	17 x 17	25MM	1"	20 x 20	3	**49401**	38
28727	17 x 17	25MM	1"	20 x 20	2	**49402**	38
***28742**	8 x 22	25MM	1"	12 x 25	2	**49401**	28

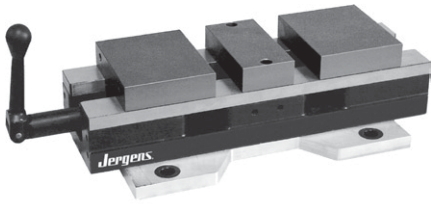
*Fits Jergens Tooling Column 69011

Ball Lock Sub-Plates for Ball Lock Vises, Columns, and Fixture Plates

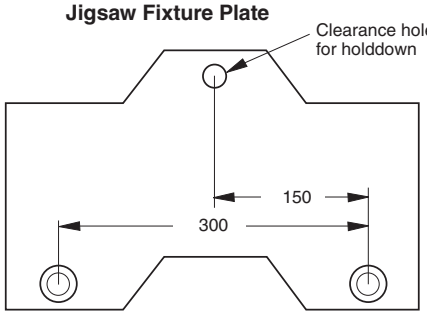
Jergens manufactures standard sub-plates for popular machine tools. Three standard plates are shown. These sub-plates will accept Jergens Ball Lock Vises, Columns and Fixture Plates. Some of the sub-plates have multiple mounting patterns that will allow multiple sizes and styles of fixture plates and vises to be used on the same machine. However, the Jergens Ball Lock Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper sub-plate for your machine.

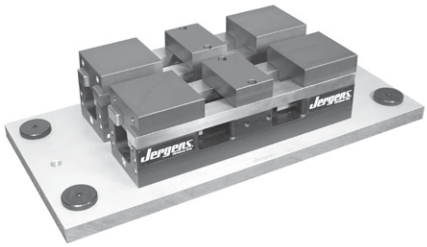
Plate Part Number	Machine Type	Table Size	Ball Lock Pattern	Applications
49102	HMC	400MM	14x14	Vise Columns, Tooling Columns, Other
49103-C	HMC	500MM	17x17&14x14	Vise Columns, Tooling Columns, Other
49112	VMC	20x40	Multiple Patterns	Jigsaw Vises & Plates, Multiple Vise Fixtures, Other

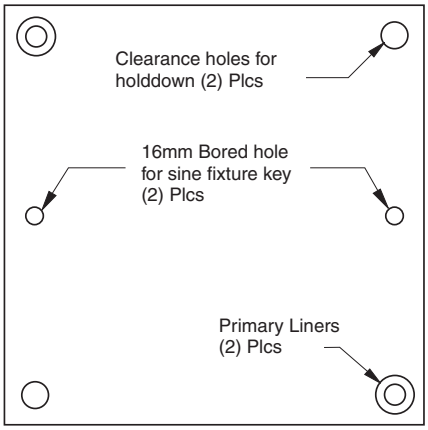
Production Vise Ball Lock™ Accessories - Metric



Jigsaw Fixture Plate







Ball Lock Shanks

Shank Diameter	Fixture Plate Thickness	Standard Shank	Shank with Thumbscrew
20	20	**49651**	**49651-S**
20	25	**49652**	**49652-S**
25	20	**49661**	**49661-S**
25	25	**49662**	**49662-S**



Standard Shank

Thumb Screw

Jigsaw Interlocking Fixture Plates

Plate Part No.	Jig Saw Pattern	Plate Thickness	Outer Dimensions	Use With Vise No.	Wt. (kg)
58706	200 x 300	20	250 x 400	**49402**	4

Ball Lock Fixture Plates for Multiple Production Vises

Jergens manufactures standard Ball Lock Fixture Plates for various applications. A small sample is listed below. These fixture plates will accept multiple Jergens Production Vises. However, the Jergens Ball Lock Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper fixture and sub-plate for your applications.

Plate Part No.	Ball Lock Pattern	Shank Diameter	Plate Thickness	Outer Dimensions	Vises/ Plate	Use With Vise No.	Wt. (kg)
58713	300 x 300	20MM	20	350 x 350	2	**49401**	6
58715	300 x 300	20MM	20	400 x 400	2	**49401**	8
58727	425 x 425	25MM	25	500 x 500	3	**49401**	18
58727	425 x 425	25MM	25	500 x 500	2	**49402**	18
58742	175 x 550	25MM	25	300 x 625	2	**49401**	12

Ball Lock Sub-Plates for Ball Lock Vises, Columns, and Fixture Plates

Jergens manufactures standard sub-plates for popular machine tools. Three standard plates are shown. These sub-plates will accept Jergens Ball Lock Vises, Columns and Fixture Plates. Some of the sub-plates have multiple mounting patterns that will allow multiple sizes and styles of fixture plates and vises to be used on the same machine. However, the Jergens Ball Lock Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper sub-plate for your machine.

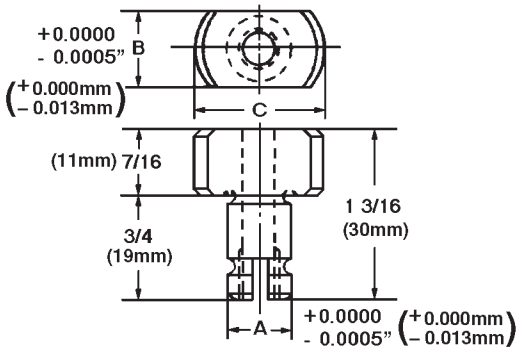
Plate Part Number	Machine Type	Table Size	Ball Lock Pattern	Applications
59102	HMC	400MM	350 x 350	Vise Columns, Tooling Columns, Other
59103-C	HMC	500MM	350 x 350 425 x 425	Vise Columns, Tooling Columns, Other
59112	VMC	500 x 1000	Multiple Patterns	Jigsaw Vises & Plates, Multiple Vise Fixtures, Other

Production Vise Accessories

Sine Fixture Keys for Vises



Locate subplates or fixture plates to T-slotted machine tables. Available in inch sizes for 1/2" to 7/8" slots, and in metric sizes for 12mm to 22mm slots.



Inch - 5/8" Shanks for Inch T-Slots

Part Number	Shank Size A	Table Slot Size B	C	Wt. (lbs)
39501	0.625	0.4995	1	.09
39502	0.625	0.562	1	.11
39503	0.625	0.6245	1	.11
39504	0.625	0.687	1	.11
39505	0.625	0.7495	1 1/8	.13
39506	0.625	0.812	1 1/8	.14
39507	0.625	0.8745	1 1/8	.15

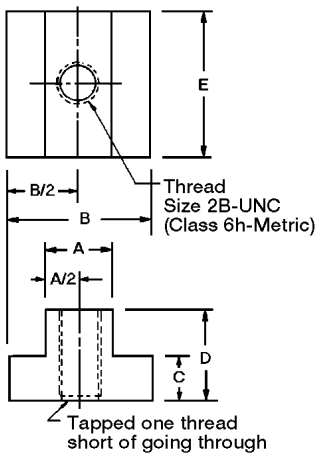
Metric - 5/8" Shanks for Metric T-Slots

Part Number	Shank Size A	Table Slot Size (mm) B	C	Wt. (kg)
39561	0.625	12	1	.04
39562	0.625	14	1	.04
39563	0.625	16	1	.05
39564	0.625	18	1 1/8	.05
39565	0.625	20	1 1/8	.06
39566	0.625	22	1 1/8	.07

Note: Complete offering of Metric/Metric Sine Fixture Keys available on page 4.21

T-Slot Nuts





Inch

Part Number	Thread	T-Slot Width A	B	C	D	E	Wt. (lbs) 10 Pcs.
43302*	3/8-16	7/16	11/16	7/32	1/2	7/8	0.50
43303*	3/8-16	1/2	7/8	9/32	1/2	7/8	0.70
43301	3/8-16	9/16	7/8	1/4	1/2	7/8	0.70
43305*	1/2-13	9/16	7/8	11/32	5/8	1 1/8	1.20
***43306**	1/2-13	5/8	1	11/32	5/8	1 1/8	1.50
***43304**	1/2-13	11/16	1 1/8	7/16	3/4	1 1/4	2.10
43308*	5/8-11	11/16	1 1/8	7/16	3/4	1 1/4	1.14
***43309**	5/8-11	3/4	1 1/4	15/32	3/4	1 1/4	1.60
***43307**	5/8-11	13/16	1 1/4	9/16	1	1 1/2	3.11

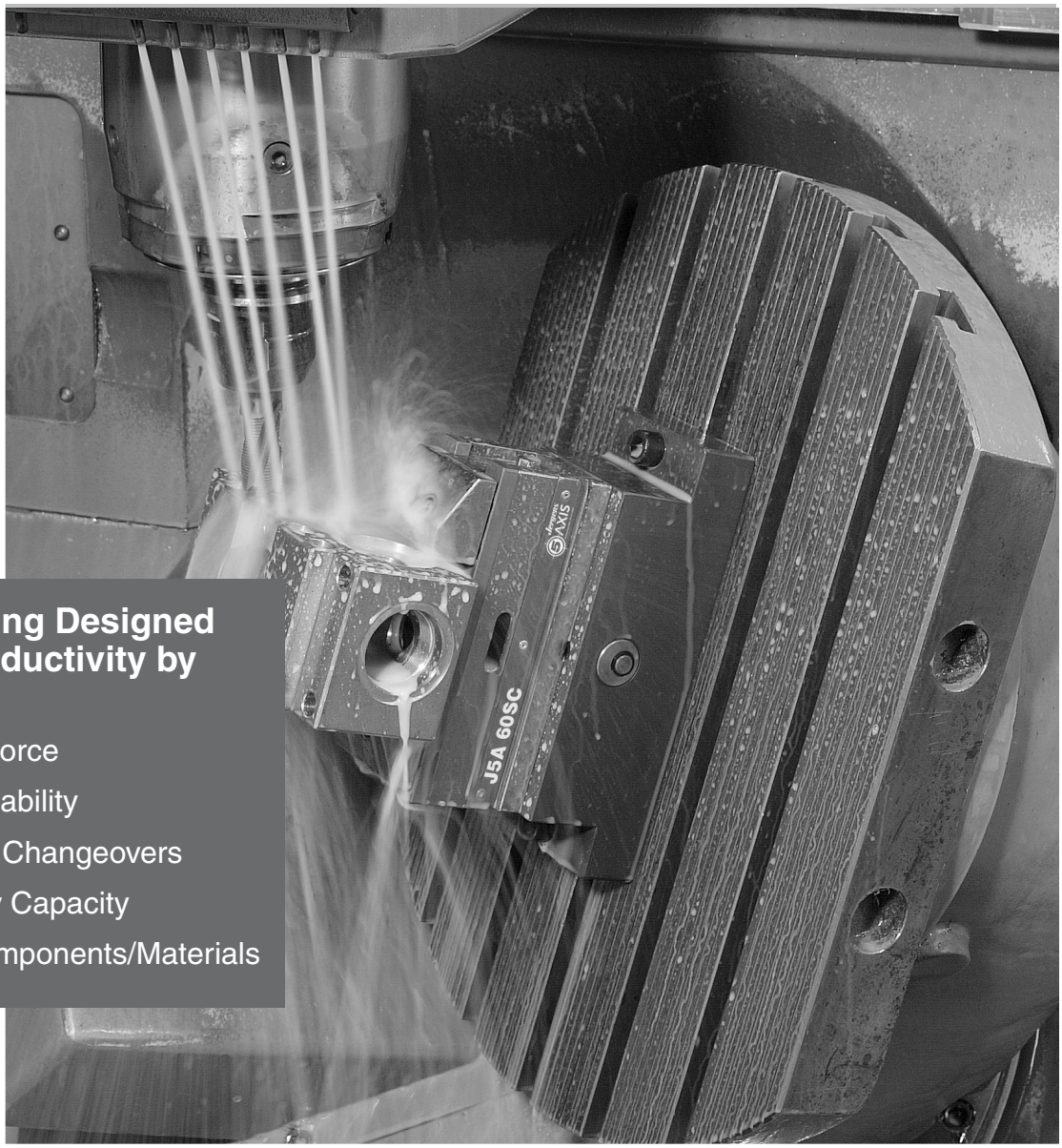
*Conforms to TCMA. **Not Hardened

Metric

Part Number	Thread	T-Slot Width A	B	C	D	E	Wt. (kg) 10 pcs.
43372	M10 x 1.5	12	19	7	13	25	0.25
43373	M10 x 1.5	14	22	9	16	29	0.35
43374	M10 x 1.5	16	25	9	16	29	0.35
43375	M12 x 1.75	14	22	9	16	29	0.60
43376	M12 x 1.75	16	25	9	16	29	0.75
43377	M12 x 1.75	18	29	11	19	32	1.1
43378	M16 x 2.0	18	29	11	19	32	0.57
43379	M16 x 2.0	20	32	14	25	38	0.80
43380	M16 x 2.0	22	35	14	25	38	1.56

Note: Complete offering of T-Slot Nuts available on page 6.35

Jergens 5 AXIS
WORKHOLDING SOLUTIONS



5-Axis Machining Designed to Improve Productivity by Providing:

- High Clamping Force
- Accurate Repeatability
- Fast Set-Up and Changeovers
- High Productivity Capacity
- For Complex Components/Materials

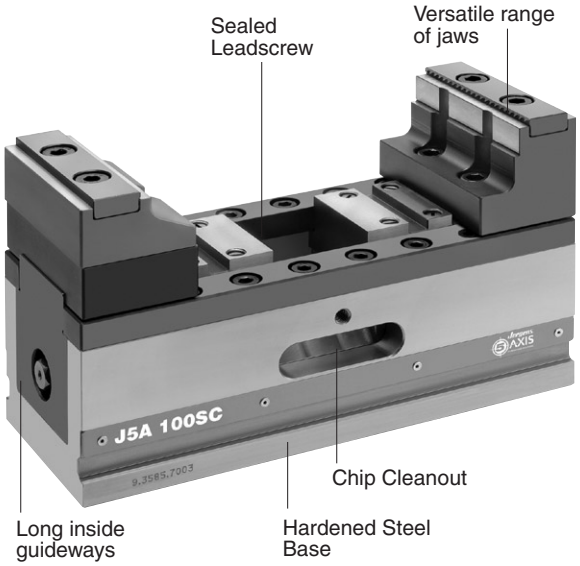
5-Axis Workholding Solutions

5-Axis Self Centering Vises

This series is suitable for many clamping tasks on 5-Axis machining centers and pallet systems. Whether the workpieces are angular or round, the concentric clamping system provides the same zero position.

The compact design, high stability and versatile selection of jaws (grip jaws, plain jaws, soft jaws, pendulum jaws, V-Type jaws) are additional features tailored for 5-Axis machining.

The 60 SC and 100 SC clamping systems are suitable for ID to OD clamping.
- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple, robust construction, smooth surfaces for easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection

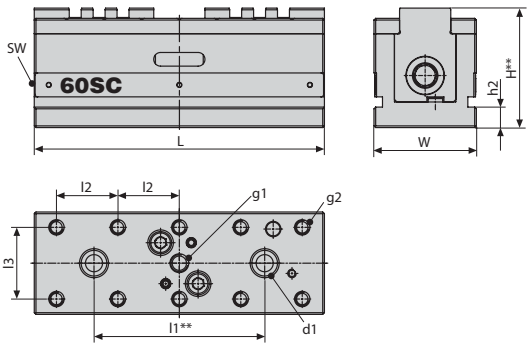


Customized design for positioning and fastening in the base on request.

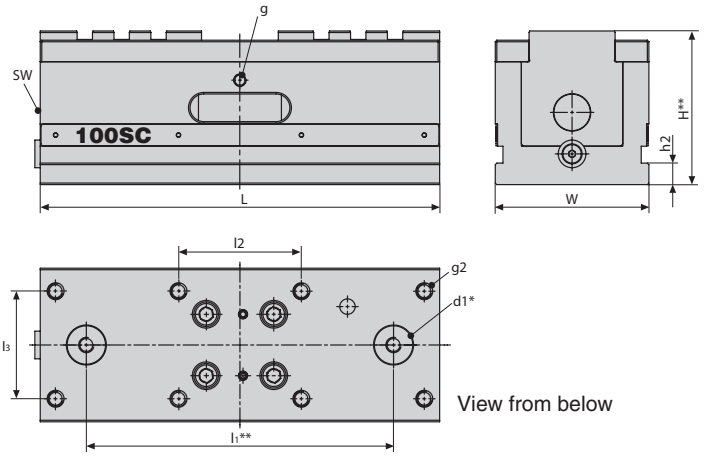
Model	Part Number	Clamping Force (kN/Nm)	Weight (kg)	Dimensions (mm)												Socket Wrench (mm)
				L	W	H**	d1*	g	g1	g2	h1**	h2	l1*	l2	l3	
60SC	**80000**	15 / 50	3.8	170	60	70	10F7		M10 x 11	M8 x 12		12	100	36.0	42	12
100SC	**80100**	25 / 80	18.0	260	100	100	25 x 5/ M10 x 14	M8 x 11		M10 x 14		14	200	80.0	70	14
125SC	**80200**	35 / 200	49.0	465	125	130	25 x 5/ M10 x 14	M12 x 16		M12 x 16	98	27	200	82.5	66	19

Note: Vise handles included with each Jergens 5-Axis Vise

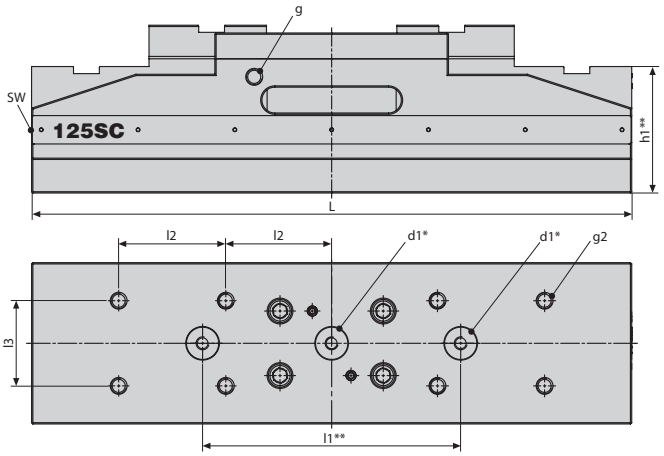
* Tolerance ±0.01mm
** Tolerance ±0.02mm



View from below

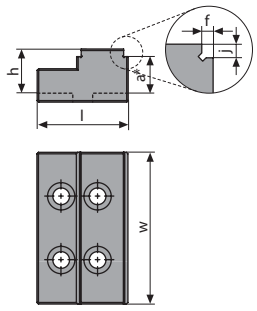


View from below



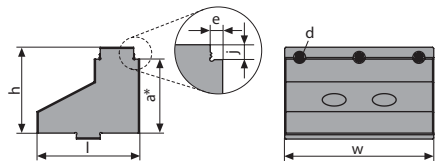
View from below

5-Axis Self Centering Jaws



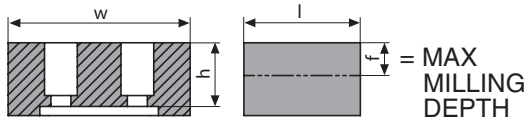
Reversible step jaw, 2 steps, hardened

Part Number	Model	Dimensions (mm)						Clamping range min./max. (mm)
		l	w	h	a*	f	j	
80010	60SC	49	60	23	18	3	5	6 - 150
80110	100SC	60	100	30	25	3	5	6 - 204



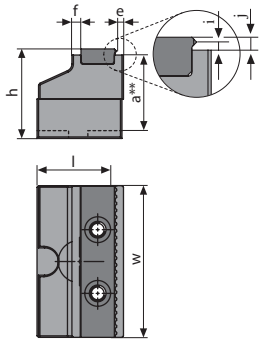
Reversible step jaw with interchangeable grip insert

Part Number	Model	Dimensions (mm)							Clamping range min./max. (mm)
		l	w	h	a*	d	e	j	
80210	125SC	86	125	72	62	6x d10	5	10	10 - 400



Soft jaw for milling workpiece contours

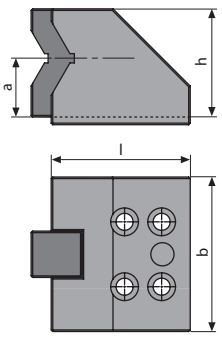
Part Number	Model	Dimensions (mm)			
		l	w	h	f
80015	60SC	42	60	25	8
80115	100SC	64	100	35	18
80215	125SC	88	125	55	32



Pendulum jaw with interchangeable insert, hardened

For safe clamping of one workpiece with non-parallel clamping surfaces or two workpieces with different tolerances.

Part Number	Model	Dimensions (mm)								Clamping range min./max. (mm)
		l	w	h	a**	e	f	i	j	
80120	100SC	56	100	54	50	4.5	6	2.5	4	12 - 204
80220	125SC	88	125	66	62	4.5	6	2.5	4	12 - 400



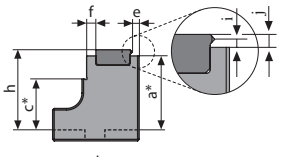
V-Type jaw with clamping inserts

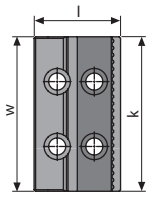
Part Number	Model	Dimensions (mm)				Clamping range min./max. (mm)
		l	w	h	a	
80030	60SC	60	60	70	40	D10-76 (1)
80130	100SC	64	100	70	38	D12-80 (2)

(1) = D10 - 20, D20 - 58, D58 - 76
(2) = D12 - 26, D25 - 54, D53 - 80

* Tolerance ±0.01mm
** Tolerance ±0.02mm

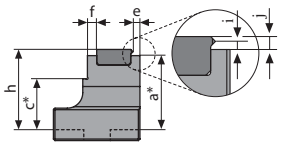
5-Axis Self Centering Step Jaws

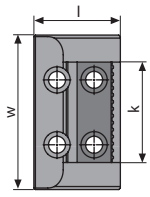




Step Jaw with Hardened Jaw Insert (Wide)

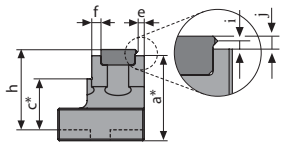
Part Number	Model	Dimensions (mm)										Clamping Range min./max.
		l	w	h	a*	c*	e	f	i	j	k	
80035	60SC	56	60	34	30		4.5	6	2.5	4	60	12 - 126
80135	100SC	56	100	54	50	35	4.5	6	2.5	4	100	12 - 204
80235	125SC	88	125	66	62	42	4.5	6	2.5	4	125	12 - 400

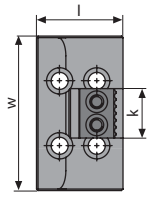




Step Jaw with Hardened Jaw Insert (Medium)

Part Number	Model	Dimensions (mm)										Clamping Range min./max.
		l	w	h	a*	c*	e	f	i	j	k	
80040	60SC	56	60	34	30		4.5	6	2.5	4	35	12 - 126
80140	100SC	56	100	54	50	35	4.5	6	2.5	4	65	12 - 204
80240	125SC	88	125	66	62	42	4.5	6	2.5	4	80	12 - 400



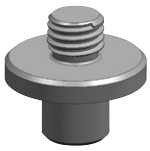


Step Jaw with Hardened Jaw Insert (Narrow)

Part Number	Model	Dimensions (mm)										Clamping Range min./max.
		l	w	h	a*	c*	e	f	i	j	k	
80145	100SC	56	100	54	50	35	4.5	6	2.5	4	32	12 - 204

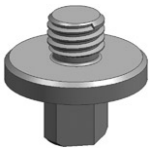
* Tolerance ±0.01mm

5 Axis Self Centering Accessories



Positioning Pins, Various Diameters, for Grid Plate, set of 2

Part Number	Model(s)	Ø (mm)
80060	60SC	10/12
80160	100SC / 125SC	25/12
80165	100SC / 125SC	25/16



Positioning Pins, Various Diameters, for Table with T-Slots, Set of 2

Part Number	Model(s)	Ø (mm)
80065	60SC	10/14
80260	100SC / 125SC	25/14
80265	100SC / 125SC	25/18

Torque wrench

Part Number	Model	Torque (Nm)
80070	60SC	5 - 60
80170	100SC	20 - 120
80270	125SC	40 - 200

Socket

Part Number	Model	Torque (Nm)
80071	60SC	12
80171	100SC	14
80271	125SC	19

Clamping Claws, Set of 4, Including Screws

Part Number	Model	Torque (Nm)
80050	60SC	M10
80053	60SC	M12
80150	100SC	M12
80250	125SC	M12
80253	125SC	M16

Jergens 5-Axis Fixed Jaw Vise

Designed especially for multi-face machining with a single clamping operation. Ideal for machining complicated workpieces in a single clamping operation, such as in mold making. These vises are small, but have a large holding capacity. A variety of jaw options increase the range of applications. Grip jaws and V-type jaws enhance the retention force of the workpiece. The hydraulic version provides automatic power clamping with exact force.

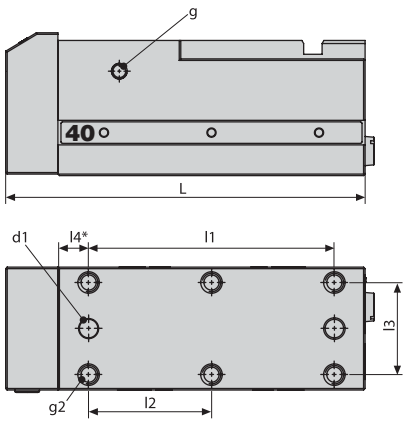


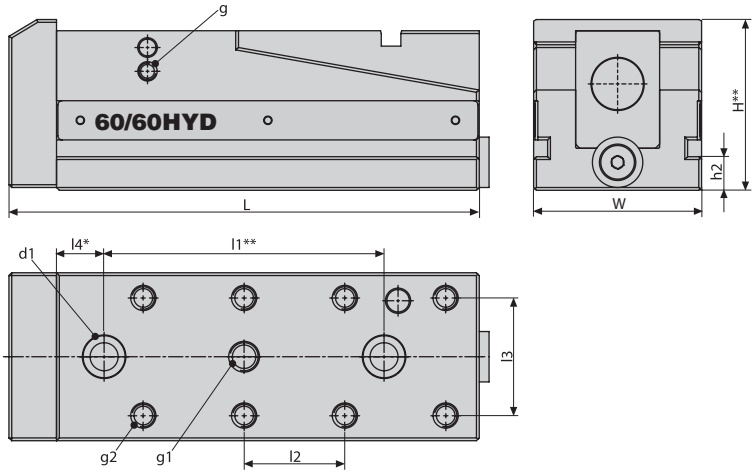
- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple and robust construction, smooth surfaces, easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection

Model	Part Number	Clamping Force (kN/Nm)	Weight (kg)	Dimensions (mm)													Socket
				Stroke	L	W	H**	d1	g	g1	g2	h2	l1**	l2	l3	14*	Wrench (mm)
40	**80300**	8.0 / 15 Nm	1.3		117	40	44	6H7	M5 x 6		M6 x 7		80	40	30	10	6
60	**80400**	15.0 / 25 Nm	3.3		168	60	57	10F7	M6 x 10	M10 x 11	M8 x 12	12	100	36	42	17	8
60Hyd	**80500**	15.0 / 260 bar	3.8	4	185	60	57	10F7	M6 x 10	M10 x 11	M8 x 12	12	100	36	42	17	8

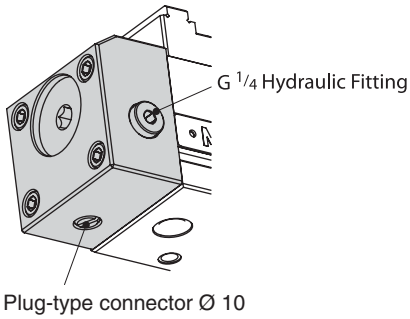
Note: Vise handles included with each Jergens 5-Axis Vise

* Tolerance ±0.01mm
** Tolerance ±0.02mm

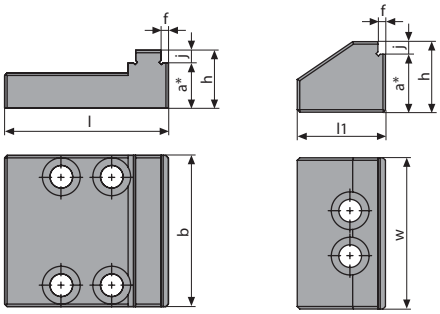




Hydraulic Drive Unit
60 HVD



5-Axis Jaws for Fixed Jaw Vises

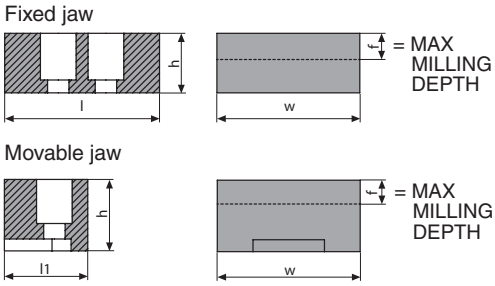


Fixed jaw Movable jaw

Step Jaw, Reversible

Part Number Fixed jaw	Part Number Movable jaw	Dimensions (mm)								Clamping Range min./max.
		Model	l	l1	w	h	a*	f	j	
80310	**80315**	40	40	34	40	15	12	3	3	6 - 70
80410	**80415**	60	65	35	60	23	18	3	5	6 - 106

l1 only for movable jaw



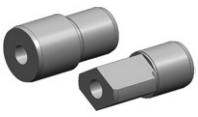
Block Jaw, Soft for Milling Workpiece Contours

Part Number Fixed jaw	Part Number Movable jaw	Dimensions (mm)					
		Model	l	l1	w	h	f
80420	**80425**	60	65	35	60	25	11

l1 only for movable jaw

* Tolerance ±0.01mm

5-Axis Fixed Jaw Accessories



Positioning Pins, Various Diameters, for Grid Plate, set of 2

Part Number	Model	Ø (mm)
80060	60	10/12



Positioning Pins, Various Diameters, for Table with T-Slots, Set of 2

Part Number	Model	Ø (mm)
80065	60	10/14

Torque Wrench

Part Number	Model	Torque (Nm)
80070	40/60	5 - 60

Socket

Part Number	Model	SW
80380	40	6
80430	60	8

Socket Wrench

Part Number	Model	SW
80531	60HYD	8

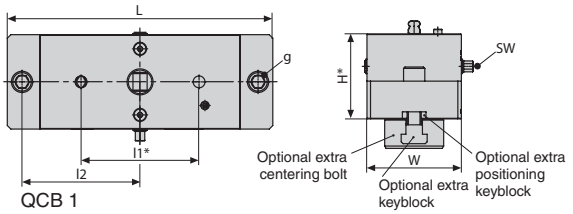
Clamping Claws, set of 4, Including Screws

Part Number	Model	Thread
80050	60	M10
80053	60	M12

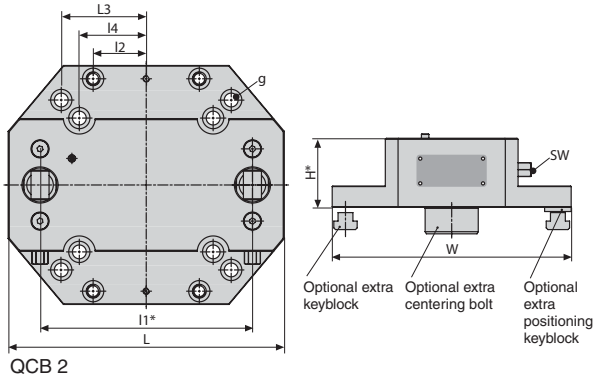
5-Axis Quick Clamping Block

The Jergens 5-Axis Quick Change System (QCB) is an ideal partner for the Jergens 5-Axis Clamping System. The QCB changes the workpiece position on 5-Axis machining centers. This helps reduce interference for the tool.

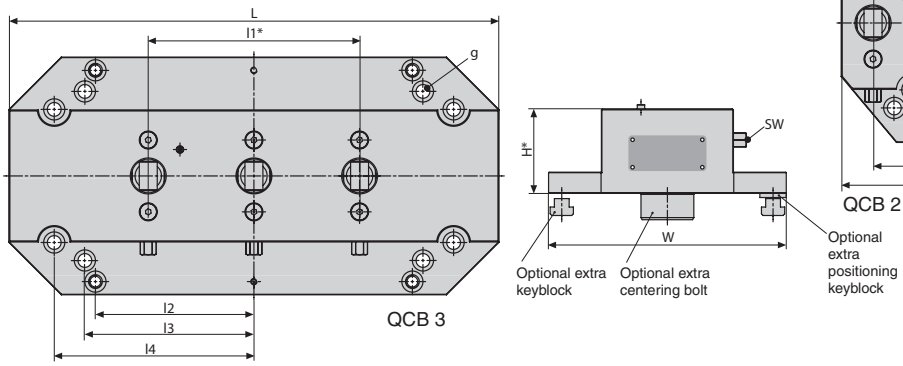
Rapid and precise change of clamping elements optimize efficiency. The QCB with its integral mechanical Zero-Point Clamping System provides you with the ability to increase productivity and lower costs.



QCB 1



QCB 2



QCB 3

* Tolerance ±0.01mm

Model	Part Number	L	W	H*	g	l1*	l2	l3	l4	Socket Wrench	Feeding force (kN / Nm)	Weight (kg)
QCB 1	**80600**	225	80	72	KM12	100	100			8	12 / 60	9
QCB 2	**80700**	260	225	65	KM12	200	50	80	63	13	2x 20 / 80	18
QCB 3	**80800**	464	225	80	KM12	200	150	160	189	13	3x 20 / 80	42

Accessories: Fastening and Positioning

Centering Bolts for QCB 1, 2, 3

Part Number	Ø mm	L
80610	D 30 g6	25 / 48
80615	D 32 g6	25 / 48
80620	D 50 g6	25 / 48
80625	D 50 g6	18 / 41

Centering Bolts, Set

Part Number	Models
80630	QCB 1 / 60SC + Compact 80
80710	QCB 2 / 100SC + Compact 120
80810	QCB 3 / 125SC

Positioning Keyblock with Screw

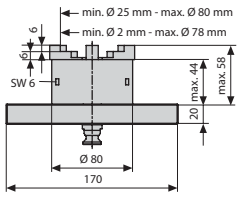
Part Number		T-Slot (mm)
80640	DIN 6322, 1 pc.	14

Positioning pin for QCB 2, 1 pc.

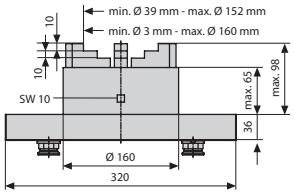
Part Number		Ø (mm)
80065		10/14

Keyblock with Screws

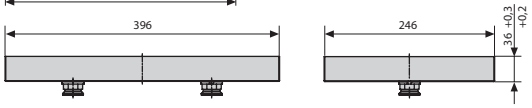
Part Number		T-Slot (mm)
80650	DIN 508, 4 pcs.	14



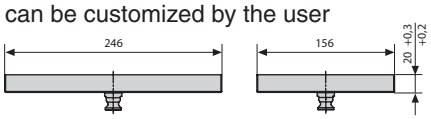
80655 Adapter Plate for QCB 1 with Self-Centering Chuck DIN 6350-1
with pull-in bolt, plate 170 x 80 mm



80715 Adapter Plate for QCB 2 with Self-Centering Chuck DIN 6350-1
with pull-in bolt, plate 320 x 160 mm



80716 Adapter Plate for QCB 2
with pull-in bolt, parallelism 0.008/100 mm
can be customized by the user



80656 Adapter Plate for QCB 1
with Pull-In Bolt, Parallelism 0.008/100 mm
can be customized by the user

5-Axis Compact Vises

New machining technologies and manufacturing methods call for the development of new solutions in clamping technology. The Jergens 5-Axis Compact Vise, with its short base and easy movement of the fixed jaw, is ideal for 5-sided machining.

The well balanced design of the guide between the base and the moveable jaw allows the use of high clamping jaws, for performing machining operations close to the workpiece.

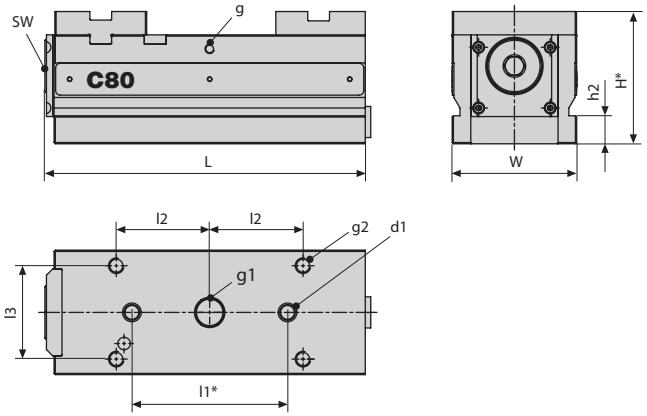
The base is made from cast steel for rigidity and dimensional stability. All sides are hardened and ground.



Model	Part Number	Clamping Force (kN/Nm)	Weight (kg)	Dimensions (mm)												Socket Wrench (mm)
				Stroke	L	W	H*	d1*	g	g1	g2	h2	l1*	l2	l3	
C80 MAN	**81000**	25/ 60 Nm	8.8		206	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12
C120 MAN	**81100**	40/100 Nm	18.4		260	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14
C80 HYD	**81200**	20/310 bar	9.0	4	227	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12
C120 HYD	**81300**	40/270 bar	20.4	4	282	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14

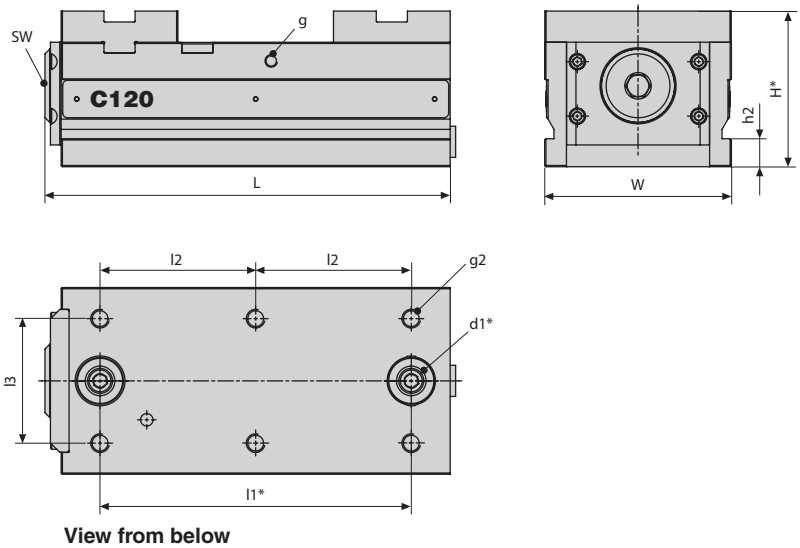
Note: Vise handles included with each Jergens 5-Axis Vise

* Tolerance ±0.01mm



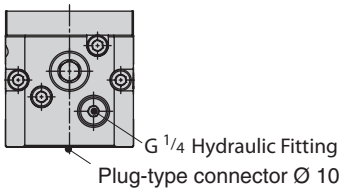
View from below

- High degree of freedom for spindle and tools; low risk of collision
- Well suited for short standard tools
- Repeatable and controllable clamping forces of up to 25 kN Compact 80 and 40 kN Compact 120
- Jaw with a special grip for maximum holding force (factor 3 as compared with standard jaw)

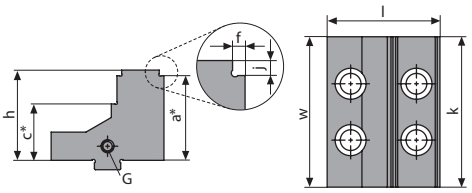


View from below

Figure:
Hydraulic drive unit
C80, C120

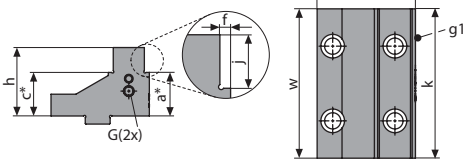


5-Axis Compact Vise Jaws



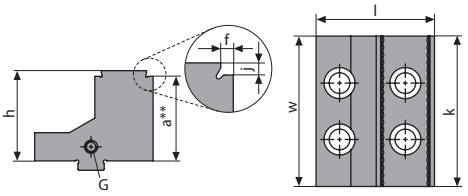
Precision Step Reversible Jaw for C80

Part Number	Model	Dimensions mm									Clamping range min./max.
		l	w	h	a*	c*	f	G	j	k	
81010	C80	60	50	48	45	30	2.5	M6 x 10	3	25	5 - 155
81015	C80	60	50	48	45	30	2.5	M6 x 10	3	50	5 - 155
81020	C80	60	80	48	45	30	2.5	M6 x 10	3	80	5 - 155



Precision Step Reversible Jaw for C120

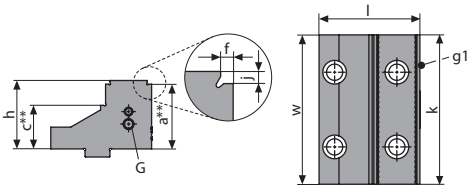
Part Number	Model	Dimensions (mm)										Clamping Range min./max.
		l	w	h	a*	c*	f	G	g1	j	k	
81110	C120	79	84	55	35	35	4	M8 x 14	M4 x 7	20	40	8 - 200
81120	C120	79	84	55	35	35	4	M8 x 14	M4 x 7	20	84	8 - 200
81125	C120	79	120	55	35	35	4	M8 x 14	M4 x 7	20	120	8 - 200



Special Grip Jaw for C80

Provides maximum retaining force

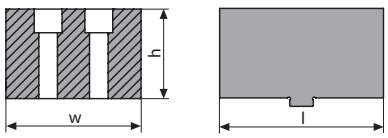
Part Number	Model	Dimensions (mm)								Clamping Range min./max.
		l	w	h	a**	f	G	j	k	
81025	C80	63	50	48	45	3.5	M6 x 10	3	25	7 - 151
81030	C80	63	50	48	45	3.5	M6 x 10	3	50	7 - 151
81040	C80	63	80	48	45	3.5	M6 x 10	3	80	7 - 151



Special Grip Jaw for C120

Provides maximum retaining force

Part Number	Model	Dimensions (mm)										Clamping Range min./max.
		l	w	h	a**	c**	f	G	g1	j	k	
81130	C120	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	40	7 - 195
81135	C120	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	84	7 - 195
81140	C120	81	120	55	52	35	3.5	M8 x 14	M4 x 7	3	120	7 - 195

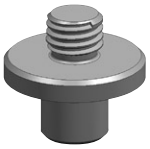


Soft Jaws

Part Number	Model	Dimensions (mm)			Material
		l	w	h	
81045	C80	97	80	53	Steel C 45
81050	C80	97	80	53	Aluminium
81145	C120	97	120	53	Steel C 45
81150	C120	97	120	53	Aluminium

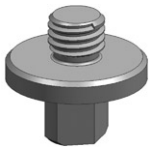
* Tolerance ±0.01mm
** Tolerance ±0.02mm

5-Axis Compact Vise Accessories



Positioning Pins, Various Diameters, for Grid Plate, set of 2

Part Number	Model	Ø (mm)
80060	C80	10/12
80160	C120	25/12
80165	C120	25/16



Positioning Pins, Various Diameters, for Table with T-Slots, set of 2

Part Number	Model	Ø (mm)
80065	C80	10/14
80260	C120	25/14
80265	C120	25/18

Clamping Claws, set with M10 Fastening Screws

Part Number	Model	Qty.
81075	C80	4
81180	C120	6

Double Clamping Claws, set with M10 Fastening Screws

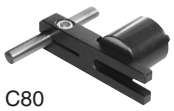
Part Number	Model	Qty.
81080	C80	4
81185	C120	6

Torque Wrench

Part Number	Model	Clamping Force (Nm)
80070	C80	5 - 60
80170	C120	20 - 120

Socket for Torque Wrench

Part Number	Model	SW
81060	C80	12, 3/8“
81160	C120	14, 1/2“



C80



C120

Workstops

Part Number	Model
81090	C80
81195	C120

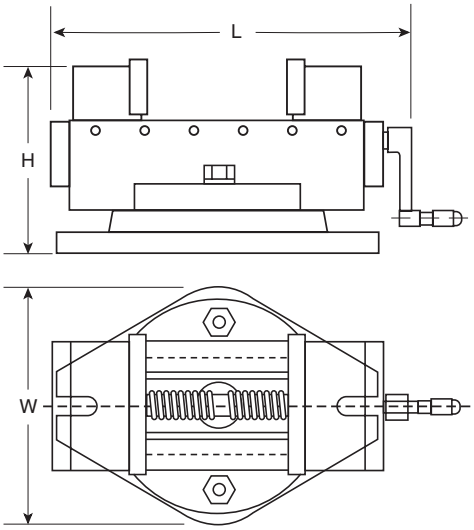
Cast Iron Shop Vises

Precision Self Centering Vises with Swivel Base



Characteristics

Made of close grained high tensile cast iron. Jaws ground and Hardened 55±3 HRC. Swivel base provided with positive locking and adjustable through 360°. Adjusts work piece to its center. Opposite threads for quick and accurate centering.



Technical Data

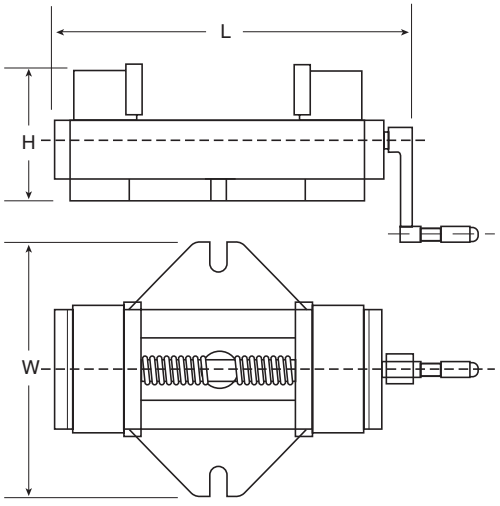
Part Number	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110080	2	50	2	50	1	25	6 3/4	171	3 3/4	95	3 1/8	80	3.25
110081	4	100	4	100	1 5/8	42	10	254	6 1/2	165	5 1/2	140	16.00
110082	5	125	5	125	2	50	11 1/2	292	7 3/4	195	6	150	22.00
110083	6	150	6	150	2	50	14 1/2	367	8	200	6 3/8	162	32.00

Precision Self Centering Vises (Low Profile)



Characteristics

Made of close grained high tensile cast iron. Jaws ground and Hardened 55±3 HRC. Adjusts workpiece to its center. Opposite threads for quick and accurate centering. This is a low profile vise.

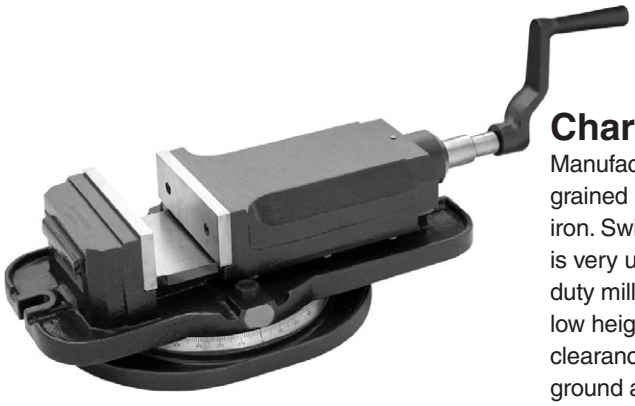


Technical Data

Part Number	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110085	3	75	5	127	1 3/8	35	12	304	6	150	3	75	6.75
110086	4	100	4	100	1 3/4	44	10 1/2	266	8 1/2	215	4 1/4	107	13.00

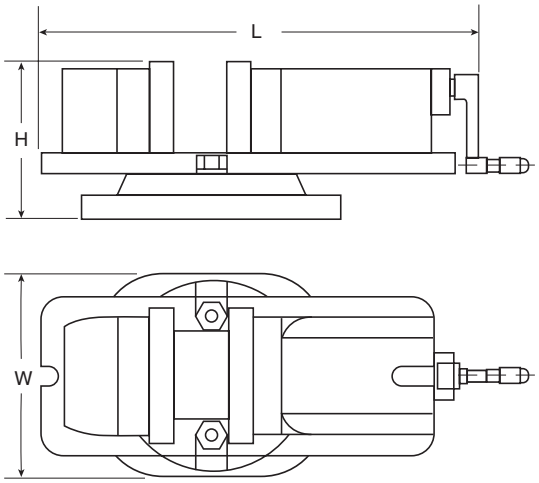
Cast Iron Shop Vises

Milling Machine Vises with Swivel Base (Heavy Duty)



Characteristics

Manufactured from close grained high tensile cast iron. Swivel is full 360°. This is very useful for heavy duty milling jobs. Vise is low height for maximum clearances. Jaws are fully ground and precision with parallelism of 0.0012 (30 microns) the hardness of jaws is 55±33 HRC.



Technical Data

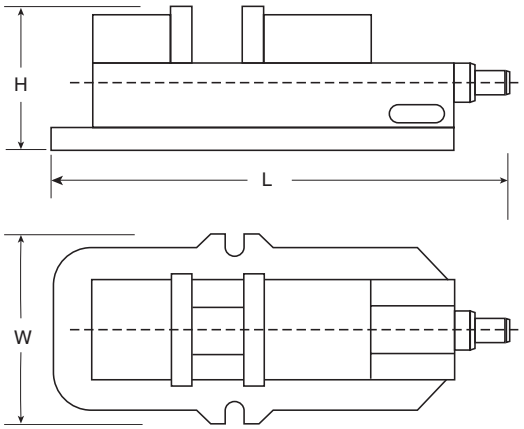
Part Number	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110230	4	100	4	100	1 3/4	45	15	381	8	200	5	125	19.00
110231	6	150	6	150	2 3/16	55	19	482	10 1/2	267	5 3/4	146	39.00
110232	8	200	8	200	2 3/8	60	24	609	12	304	6 1/4	159	63.00

Machine Vises



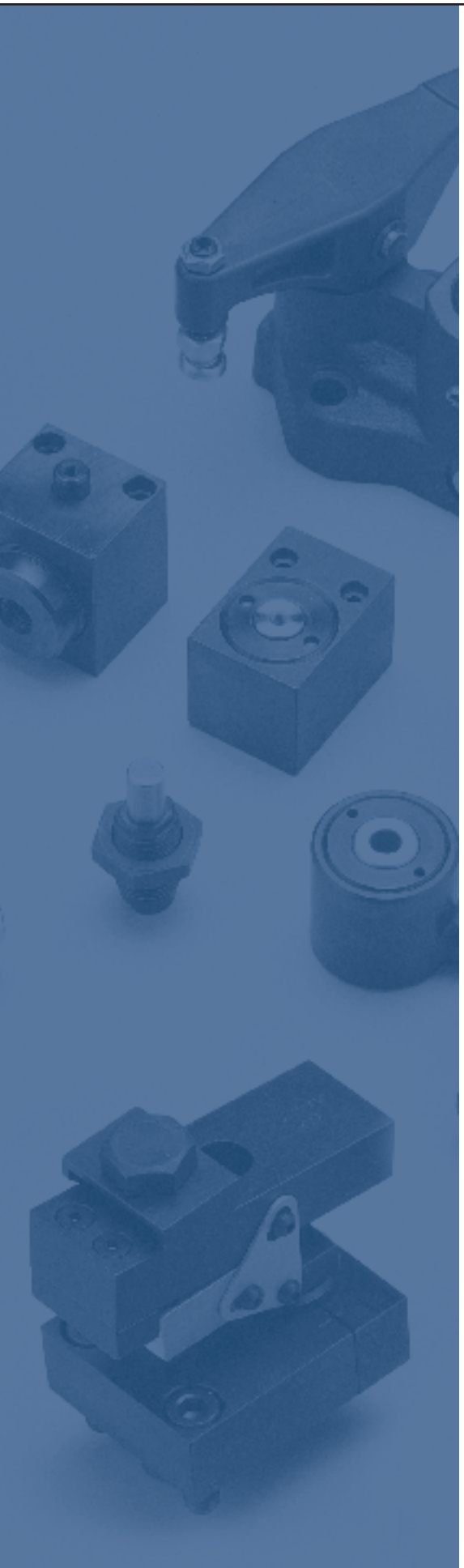
Characteristics

Manufactured from graded cast iron and precision ground. These vises have a needle bearing thrust collar. Vise jaws are in pairs and replaceable.



Technical Data

Part Number	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110250	6	150	7 1/2	188	1 1/2	38	20	507	9	225	6 3/4	170	36.00
110255	8	200	10	250	2	50	21	533	11 1/2	292	7	175	68.00

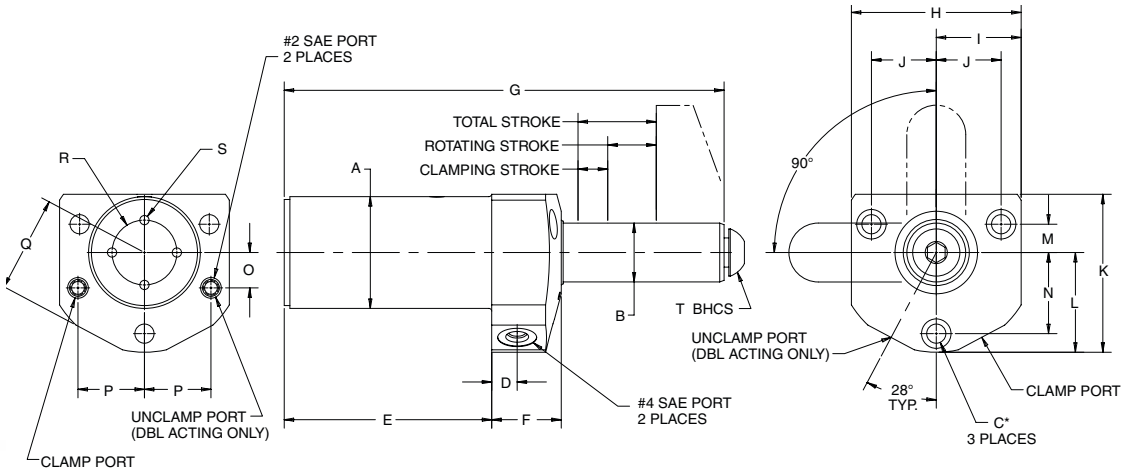


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Swing Cylinder – Top Flange/Manifold Mount



The piston rotates 90° to the right, but may be ordered with 90° left rotation (add - LH to clamp part no.) or no rotation (add - SP to clamp part no.)



- Clamping capacity from 1,100-5,000 lbs. max.
- Versatile manifold mount or conventionally plumbed
- Single and Double Acting available
- Available in three body sizes
- Assortment of Clamping Arms (sold separately) See page 3.4
- Popular top flange mounting design

These popular and highly adaptable swing style cylinders contain built in features, which allow users to simplify the design process. They are directly interchangeable with competitive products.

Specifications	Single Acting			Double Acting		
	60660	60662	60664	60670	60672	60674
Maximum Output Force (lbs)	1100	2600	5000	1100	2600	5000
Stroke (in) Total	.79	1.16	1.66	.76	1.16	1.66
Rotating	.48	.66	1.03	.45	.64	1.03
Clamping	.31	.50	.63	.31	.52	.63
Operating Volume Clamp (cu in)	.23	.72	1.95	.23	.72	1.98
Operating Volume Unclamp (cu in)	N/A	N/A	N/A	0.46	1.43	4.00
Minimum Operating Pressure (psi)	750	750	750	500	500	500
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Effective Piston Area (sq in)	.30	.62	1.18	.30	.62	1.18

CAUTION! DON'T ALLOW SWING ARM TO CONTACT THE WORKPIECE OR FIXTURE WHILE ROTATING.

Part No.		*Counter Bore Size
60660	60670	1/4" S.H.C.S.
60662	60672	5/16" S.H.C.S.
60664	60674	3/8" S.H.C.S.

* Mounting Hole Counter Bore

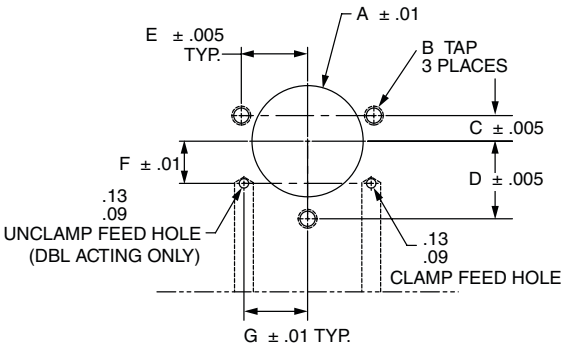
WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 3.8.

Top Flange Mount

Single Acting Part No.	Double Acting Part No.	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
60660	60670	1.43	0.623	0.38	2.57	1.03	5.28	2.31	1.16	0.88	2.06	1.32	0.34	1.03	0.56	.845	1.23	0.66	0.136	3/8-24 x 5/8
60662	60672	1.75	0.874	0.41	3.35	1.06	6.78	2.69	1.35	1.00	2.53	1.63	0.44	1.25	0.53	1.05	1.53	1.00	0.196	1/2-20 x 3/4
60664	60674	2.37	1.247	0.54	4.40	1.48	9.33	3.60	1.80	1.38	3.35	2.12	0.60	1.72	0.75	1.41	2.04	1.38	0.196	5/8-18 x 1

Manifold Mounting Dimensions - Top Flange

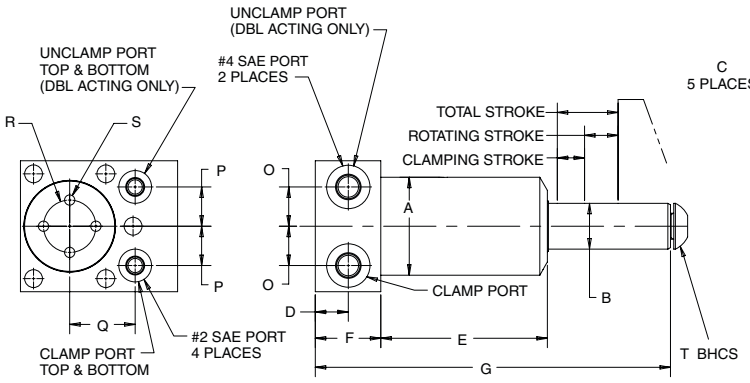
Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G
60660	60670	1.476	1/4-20	0.340	1.030	0.880	0.560	0.845
60662	60672	1.809	5/16-18	0.440	1.250	1.000	0.530	1.050
60664	60674	2.433	3/8-16	0.600	1.720	1.375	0.750	1.410



Swing Cylinder – Bottom Flange/Manifold Mount

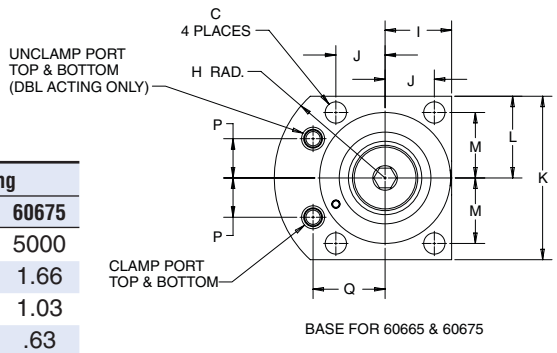


The piston rotates 90° to the right, but may be ordered with 90° left rotation (add - LH to clamp part no.) or no rotation (add - SP to clamp part no.)



- Clamping capacity from 1,100-5,000 lbs. max.
- Manifold mounting or standard plumbing
- Single and Double Acting available
- Highly adaptable flange mount design (Clamping Arms sold separately)

Bottom Flange Swing Cylinders offer versatility as a through hole bottom mount or top plate mounting device.



BASE FOR 60665 & 60675

Specifications	Single Acting			Double Acting		
	60661	60663	60665	60671	60673	60675
Maximum Output Force (lbs)	1100	2600	5000	1100	2600	5000
Stroke (in) Total	.79	1.16	1.66	.76	1.16	1.66
Rotating	.48	.66	1.03	.45	.64	1.03
Clamping	.31	.50	.63	.31	.52	.63
Operating Volume Clamp (cu in)	.23	.72	1.96	.23	.72	1.98
Operating Volume Unclamp (cu in)	N/A	N/A	N/A	0.46	1.43	4.00
Minimum Operating Pressure (psi)	750	750	750	500	500	500
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Effective Piston Area (sq in)	.30	.62	1.18	.30	.62	1.18

CAUTION! DON'T ALLOW SWING ARM TO CONTACT THE WORKPIECE OR FIXTURE WHILE ROTATING.

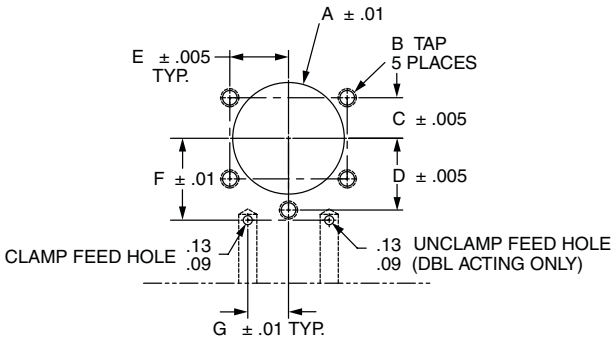
WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 3.8.

Bottom Flange Mount

Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
60661	**60671**	1.50	0.623	0.28	0.63	2.40	1.25	5.29	2.50	0.75	0.56	2.00	1.00	0.81	0.99	0.56	0.56	1.13	0.66	0.136	3/8-24 x 5/8
60663	**60673**	1.87	0.874	0.34	0.63	3.18	1.25	6.78	3.00	0.94	0.69	2.50	1.25	1.00	1.21	0.75	0.75	1.25	1.00	0.196	1/2-20 x 3/4
60665	**60675**	2.50	1.247	0.41	0.74	4.39	1.50	9.34	3.39	1.27	0.94	3.12	1.56	1.25	–	–	0.75	1.38	1.38	0.196	5/8-18 x 1

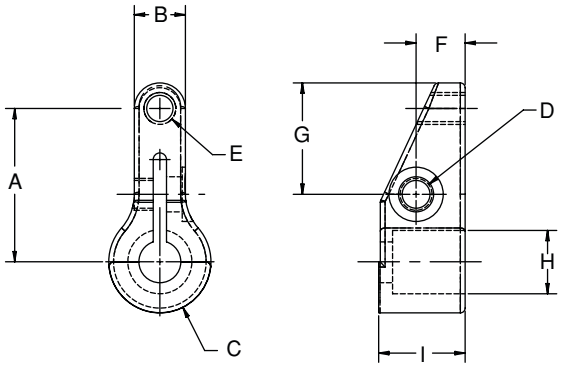
Manifold Mounting Dimensions - Bottom Flange

Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G
60661	**60671**	1.540	1/4-20	0.560	0.990	0.810	1.130	0.562
60663	**60673**	1.920	5/16-18	0.690	1.210	1.000	1.250	0.750
60665	**60675**	2.550	3/8-16	0.940	–	1.250	1.375	0.750



Swing Cylinder Arms

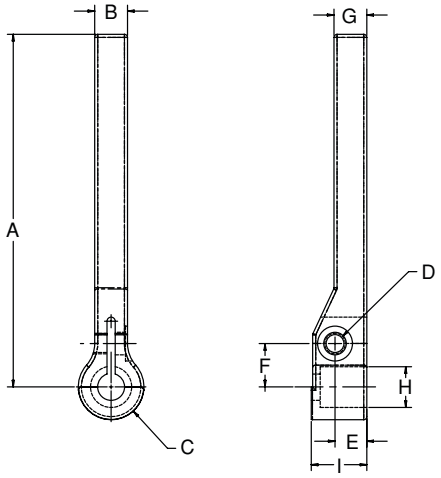




Single Arms - Standard Length

Part No.	A	B	C	D	E	F	G	H	I
60930	1 1/2	1/2	1	5/16-24	5/16-18	31/64	1 3/32	.6255/.6275	27/32
60931	2	3/4	1 3/8	3/8-24	3/8-16	43/64	1 9/16	.8755/.8775	1 5/32
60932	2 1/2	1 1/4	1 7/8	5/8-18	5/8-11	7/8	1 7/8	1.2505/1.2525	1 21/32

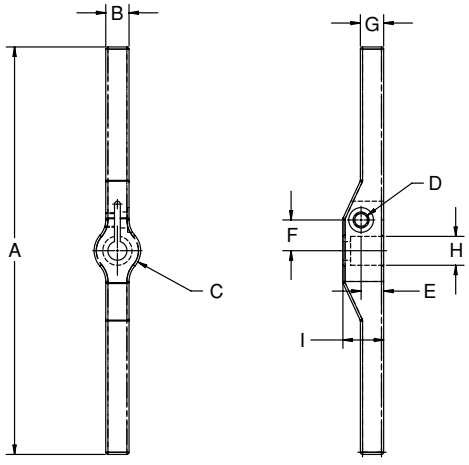




Single Arms - Long

Part No.	A	B	C	D	E	F	G	H	I
60933	5 3/8	1/2	1	5/16-24	31/64	21/32	1/2	.6255/.6275	27/32
60934	6 3/8	3/4	1 3/8	3/8-24	43/64	13/16	5/8	.8755/.8775	1 5/32
60935	6 1/2	1 1/4	1 7/8	5/8-18	7/8	1 1/4	3/4	1.2505/1.2525	1 21/32





Double Arms - Long

Part No.	A	B	C	D	E	F	G	H	I
60936	8 3/4	1/2	1	5/16-24	31/64	21/32	1/2	.6255/.6275	7/8
60937	10 3/4	3/4	1 3/8	3/8-24	43/64	13/16	5/8	.8755/.8775	1 13/64
60938	11	1 1/4	1 7/8	5/8-18	7/8	1 1/4	3/4	1.2505/1.2525	1 45/64

Swing Cylinder - Application Information

- Arm length can effect clamping pressure - See Chart and Data
- Weight should be considered when utilizing modified or special arms, other than those provided by Jergens. Excessive weight and length may damage external rotating components.
- Speed of operation is a major consideration. All swing cylinders **MUST BE USED WITH FLOW LIMIT VALVES** to show the rotation action.
- Full second rotation time is recommended.
- Care should be used when select hydraulic power sources - be aware of maximum operating pressures.

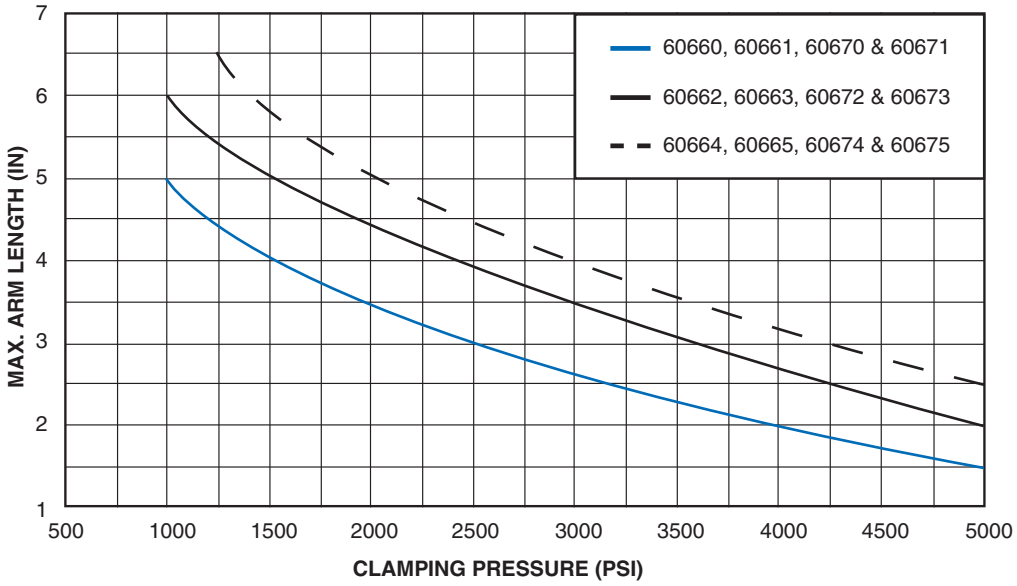
Swing Cylinder Arm Ratings

Small Cylinders (1,100#) p/n's 60660, 60670, 60661, & 60671	
input pressure (psi)	max. arm length (in)
1,500	5.0
1,750	4.3
2,000	3.8
2,250	3.3
2,500	3.0
2,750	2.7
3,000	2.5
3,250	2.3
3,500	2.1
3,750	2.0
4,000	1.9
4,250	1.8
4,500	1.7
4,750	1.6
5,000	1.5

Medium Cylinders (2,600#) p/n's 60662, 60672, 60663, & 60673	
input pressure (psi)	max. arm length (in)
1,666	6.0
1,750	5.7
2,000	5.0
2,250	4.4
2,500	4.0
2,750	3.6
3,000	3.3
3,250	3.1
3,500	2.9
3,750	2.7
4,000	2.5
4,250	2.4
4,500	2.2
4,750	2.1
5,000	2.0

Large Cylinders (5,000#) p/n's 60664, 60674, 60665, & 60675	
input pressure (psi)	max. arm length (in)
1,923	6.5
2,000	6.3
2,250	5.6
2,500	5.0
2,750	4.5
3,000	4.2
3,250	3.8
3,500	3.6
3,750	3.3
4,000	3.1
4,250	2.9
4,500	2.8
4,750	2.6
5,000	2.5

Max. Arm Length vs. Pressure



Swing Cylinders

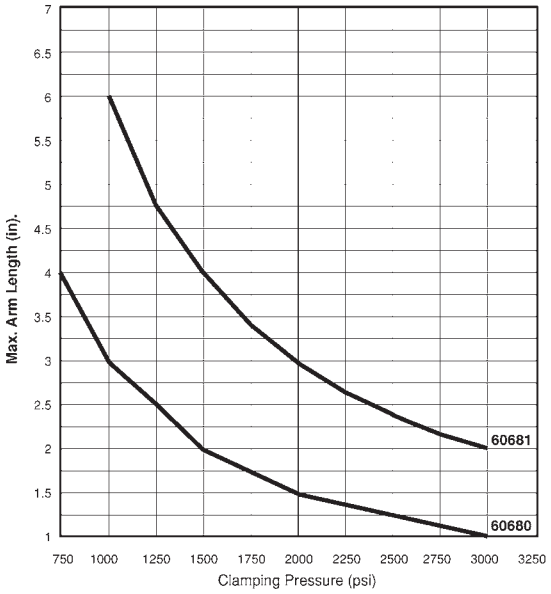


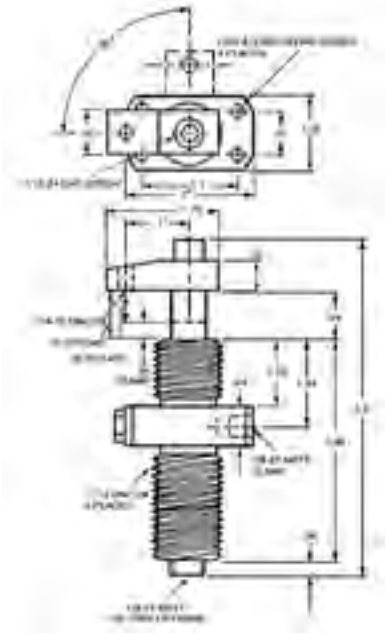
These versatile swing cylinders/clamps can be used as single or double acting rotating clamps, or push/pull cylinders. The piston in the Swing Cylinders rotate 90˚ to the right, but may easily be changed to 90˚ left rotation, or to no rotation at all.

WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 3.8.

- Can be mounted using four #10 cap screws or the 1"-12 thread on the O.D. of the cylinder
- Optional components include the threaded mounting bracket and jam nut shown below
- Can be used as a non-rotating clamp
- Maximum recommended flow rate is 20 cubic inches per minute per clamp (approximately 1 second clamp time)
- **Note: Arm length can affect clamping pressures. See chart at right for more information.**
- Available in FixturePro™ Design Software

Maximum Arm Length Vs. Pressure
Swing Cylinder with Single Arm



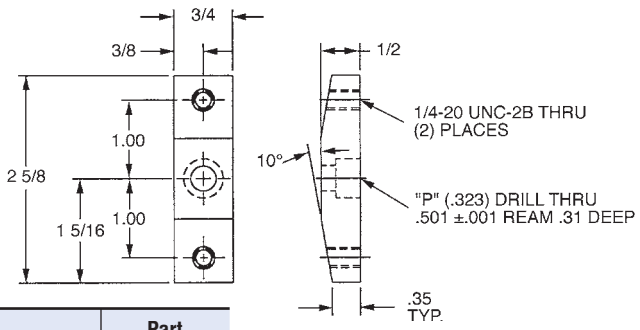


Specifications

60680 Swing Cylinder	Clamp (pull)	Return (push)
Operating Volume (cu in)	.18	.33
Effective Piston Area (sq in)	.24	.44
Minimum Operating Pressure (psi)	120	–
Maximum Operating Pressure (psi)	3000	3000
Maximum Output Force (lbs)	730	1320
Stroke (in): Full	.75	.75
Rotating	.50	.50
Clamping	.25	.25
Weight (lbs)	1	1

Accessories

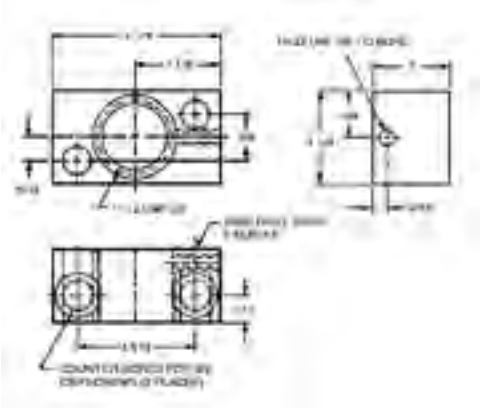
Double Arm



Description	Part Number
Mounting Block	60953
Hex Jam Nut	60964
Optional Double Arm	60923

See page 3.21

Mounting Block



Swing Cylinders

Large

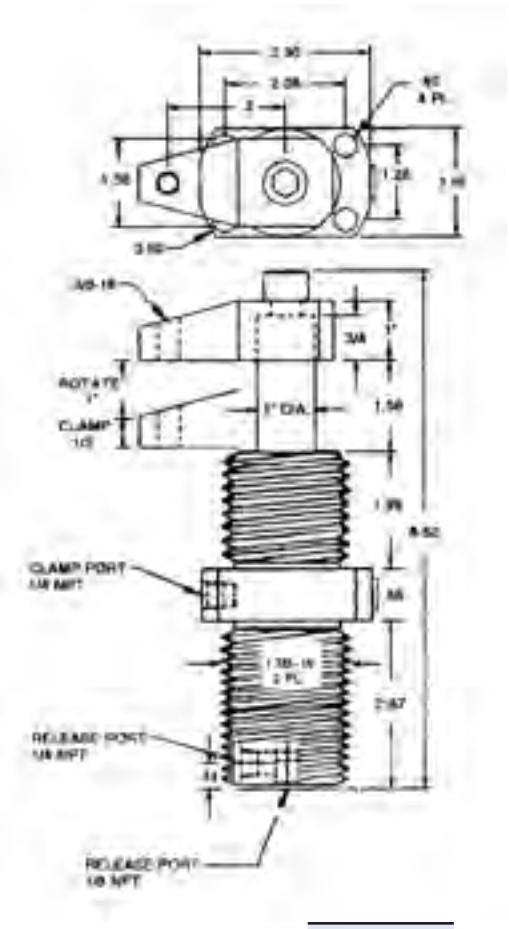


- Standard without an arm.
- Socket Head Cap Screw is included.
- Single or double arms are available.
- Can be mounted using four 3/8" cap screws, or the 1 7/8"-16 O.D. thread of the cylinder.
- Optional components include a jam nut or a mounting bracket to replace old Jergens part number 60621.
- Can be used as a non-rotating clamp.
- Maximum recommended flow rate is 90 cubic inches per minute per clamp. (Approximately 1 second clamp time.)
- **Note: Arm length can affect clamping pressures. See chart, page 3.6, for more information.**
- Available in FixturePro™ Design Software

WARNING:
All swing cylinders must be used with flow limit valves (see page 3.8) to dampen the rotating action. Please see maximum flow rate shown above.

Specifications

60681 Swing Cylinder	Clamp (pull)	Return (push)
Operating Volume (cu in)	1.5	2.7
Effective Piston Area (sq in)	.98	1.77
Minimum Operating Pressure (psi)	200	—
Maximum Operating Pressure (psi)	3000	3000
Maximum Output Force (lbs)	2900	5300
Stroke (in): Full	1.5	1.5
Rotating	1	1
Clamping	.50	.50
Weight (lbs)	5	5

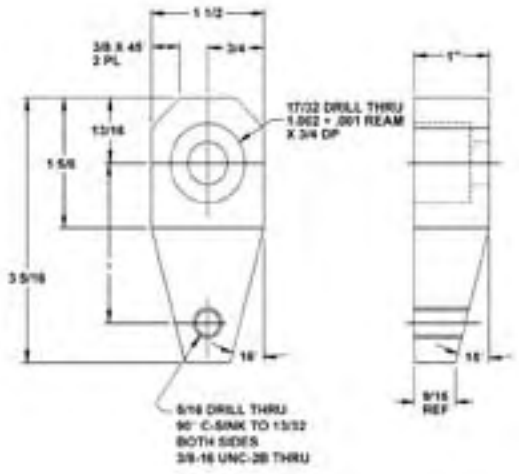


Jam Nut Part Number
60967

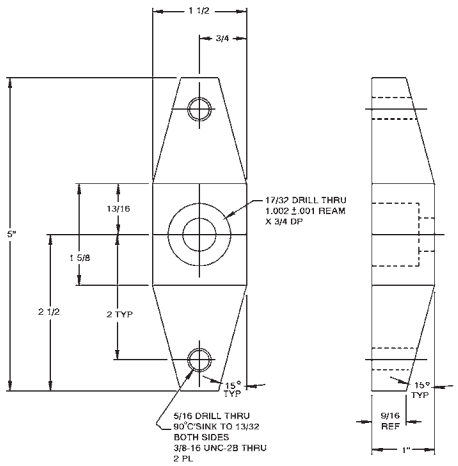
See page 3.21

Accessories

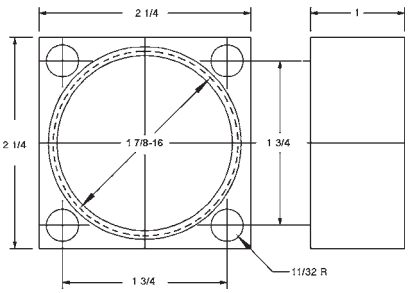
Single Arm Part Number
60921



Double Arm Part Number
60922



Mounting Bracket Part Number
60954

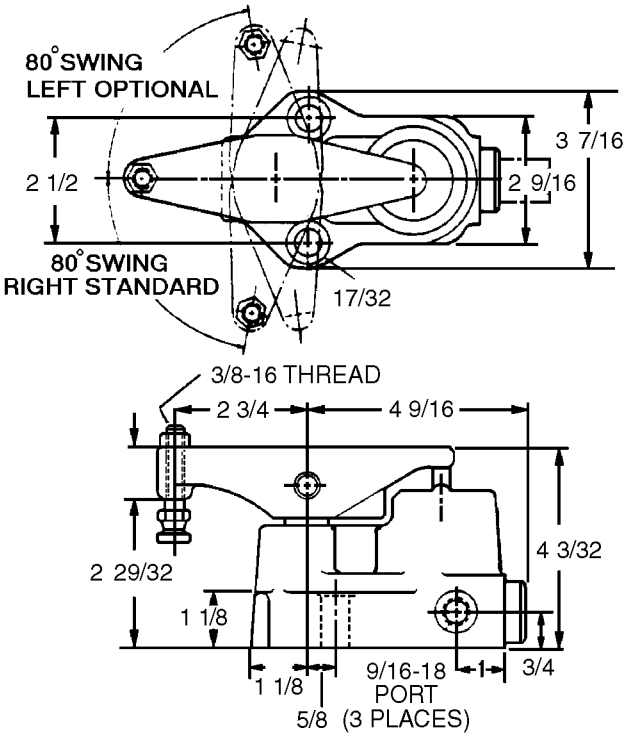


Swing Clamps



Jergens Swing Clamps are designed to swing 80° away from the workpiece to allow easy accessibility for part insertion or removal. Swing Clamps may be used in any attitude. The clamping arm may be positioned to swing either to the left or right by repositioning one cap screw. The right hand swing is standard.

- Right or Left Hand Swing
- 4800 lbs. Clamping Force
- Operates in any position
- Clamp arm has 1/4" of vertical travel
- Can be used with flood coolant
- Available in FixturePro™ Design Software



Specifications

Part Number	60685
Operating Volume (Cu. In.)	1.6
Minimum Operating Pressure (psi)	80*
Maximum Operating Pressure (psi)	3000
Maximum Output Force (lbs.)	4800
Weight (lbs.)	9.25

*80 psi to swing, 200 psi to clamp.

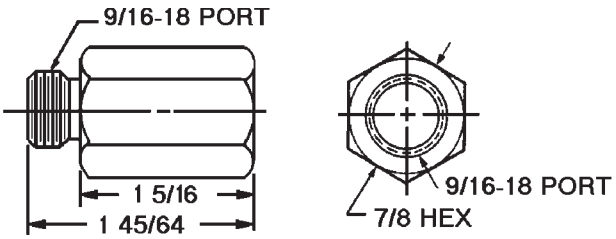
IMPORTANT:
Jergens Swing Clamps are built to operate on pre-fill systems allowing much larger circuits to be used. To use a Jergens Swing Clamp with a standard booster or with any other power source you ***must*** use the Flow Limit Valve shown below.

Flow Limit Valves

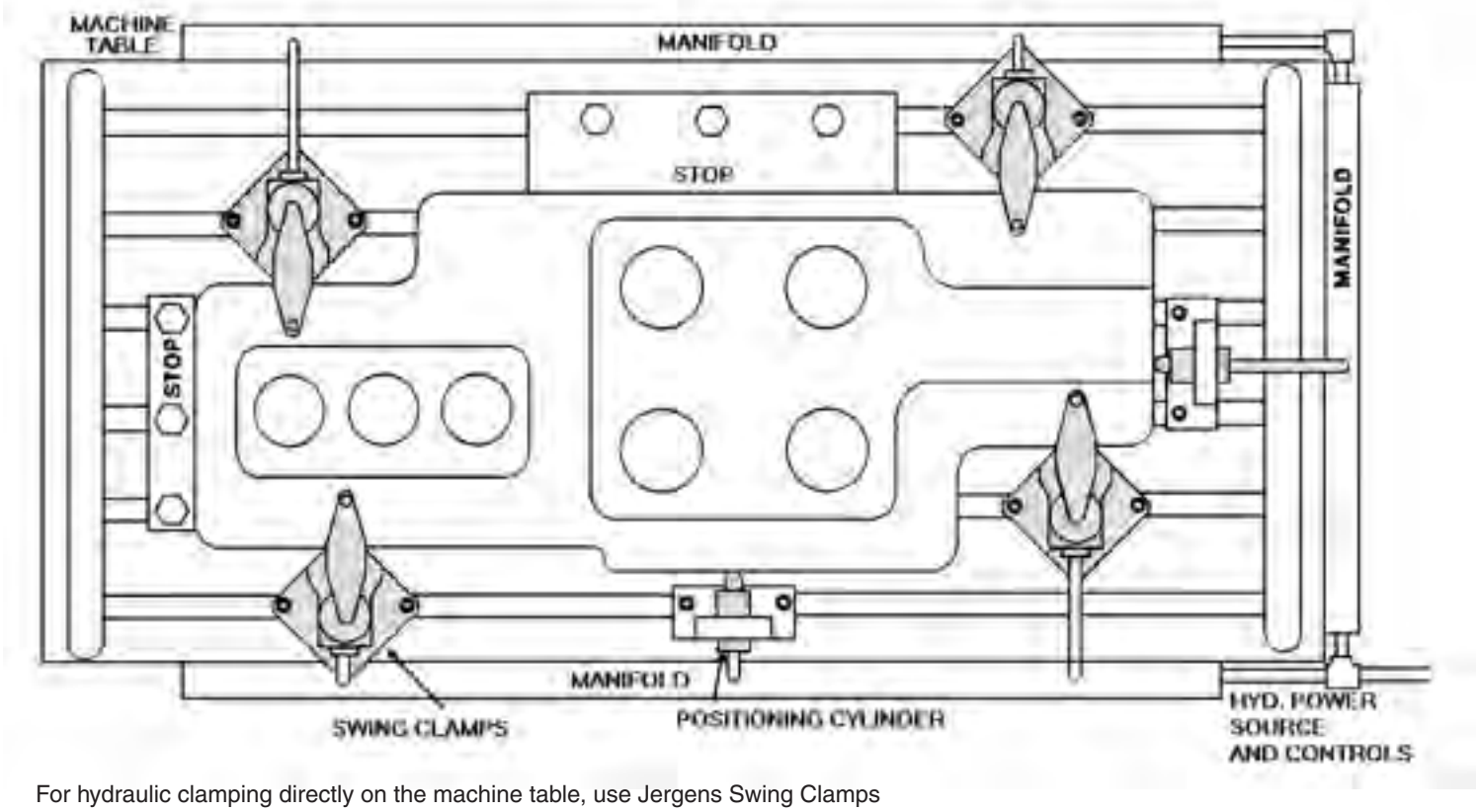


Part Number
61648

The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. Flow Limit Valves are not needed with 36:1 or 71:1 Air Powered Hydraulic Pumps. (Part Number **61755** or **61756**).



Swing Clamp
Application

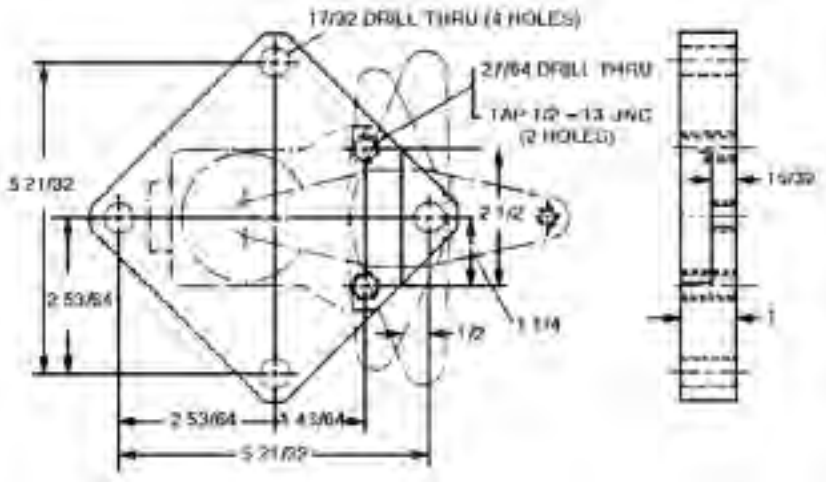


For hydraulic clamping directly on the machine table, use Jergens Swing Clamps and Mounting Plates. The workpiece is positioned using Threaded Cylinders and fixed stops. Manifolds at the edges of the table, with hydraulic quick disconnects, allow any number of clamps to be used.

Mounting Plates



- Material: Low Carbon Steel
- Finish: Black Oxide
- Available in FixturePro™ Design Software



Part Number
60971

Mounting plates are subplates for Swing Clamps and are designed to save fixturing cost and allow versatility in set-ups. Mounting Plates may be bolted directly to your machine table and moved to any location on the table. Each mounting plate has pre-drilled mounting holes or can be easily adapted to your machine table or application.

Retracting Clamps

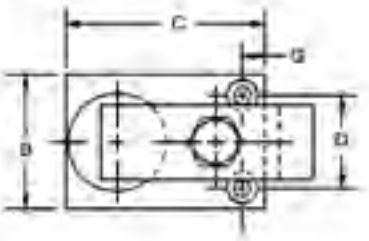


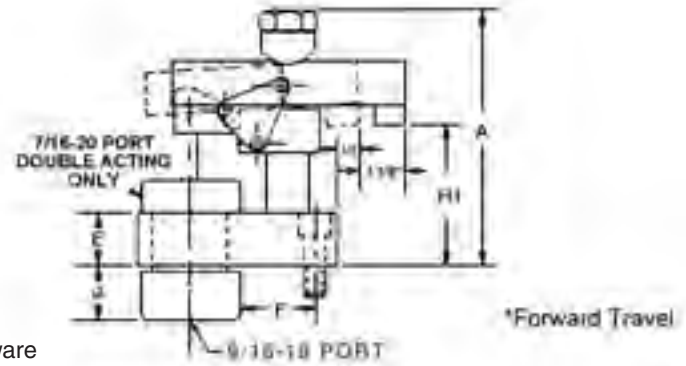
Patent Number
3,337,210

Retracting Clamps lift, then pull back over one inch, to allow easy access for insertion or removal of the workpiece. The clamps are available in single acting (spring return) and double acting (air or hydraulic return) styles. The clamp strap is supplied with a removable steel pad.
See page 6.7 for replacement steel or brass pads.

Specifications

Part Number	60601	60602	60650	60651
Operating Volume (cu. in.)	1.11	2.85	1.00	2.85
Effective Piston Area (sq. in.)	1.22	3.14	1.10	3.14
Minimum Operating Pressure (psi)	25	25	25	25
Maximum Operating Pressure (psi)	3000	3000	3000	3000
Maximum Output Force (lbs.)	3600	9300	3300	9300
Weight (lbs.)	8.5	10	9.5	12.5





- Available in FixturePro™ Design Software

Single Acting Style*

Part Number	A	B	C	D	E	F	G	H†	J	Clamp Strap Size	Mounting Bolt Size
60601	5 1/8	3 1/8	4	2 1/8	1 1/4	1 3/4	1/2	2 5/8 ± 1/16	1 1/8	1 x 1 3/4 x 5	1/2-13 x 1 1/2
60602	5 1/8	4 3/8	4 1/2	3 1/4	1 1/4	1 3/16	9/16	2 5/8 ± 1/16	1 1/8	1x 1 3/4 x 5	5/8-11 x 1 1/2

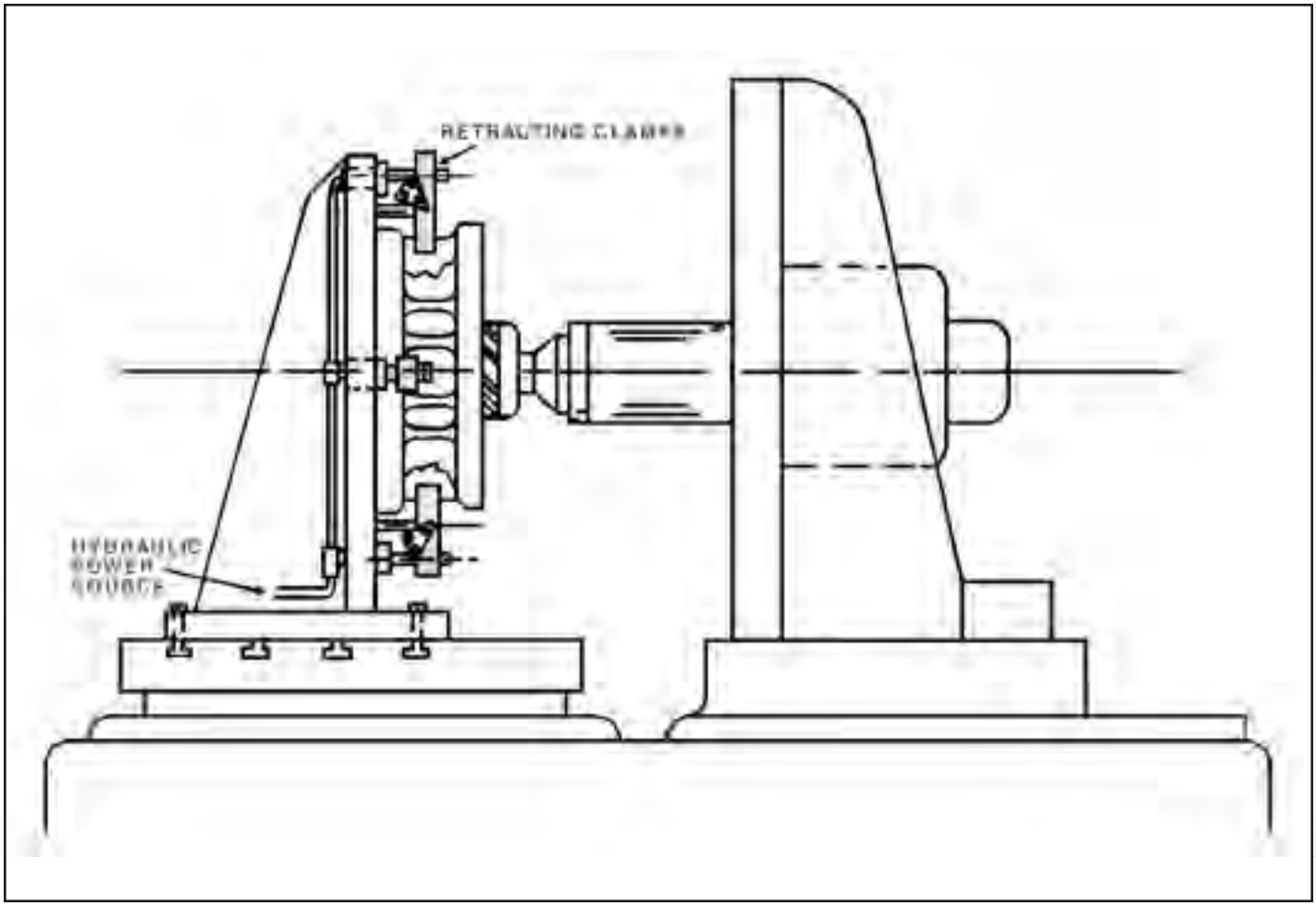
*Not recommended for applications where coolant or chips are prevalent. Use the double acting style for these applications.

Double Acting Style

Part Number	A	B	C	D	E	F	G	H†	J	Clamp Strap Size	Mounting Bolt Size
60650	5 5/8	3 1/8	4	2 1/8	1 1/4	1 1/4	1/2	3 1/8 ± 1/16	1 3/16	1 x 1 3/4 x 5	1/2-13 x 1 1/2
60651	5 5/8	4 3/8	4 1/2	3 1/4	1 1/4	15/16	9/16	3 1/8 ± 1/16	1 7/16	1 x 1 3/4 x 5	5/8-11 x 1 1/2

† Clamping Height Not Adjustable

Retracting Clamps
Application



Boring Mill Application

The I.D. of the casting is located with a pilot locator on its vertical face. The Retracting Clamps move into a clamping position between the ribs in the casting. When it is time to change parts, the clamps retract out of the way for easier part removal. Jergens Swing Clamps or Swing Cylinders could also be used in this application.

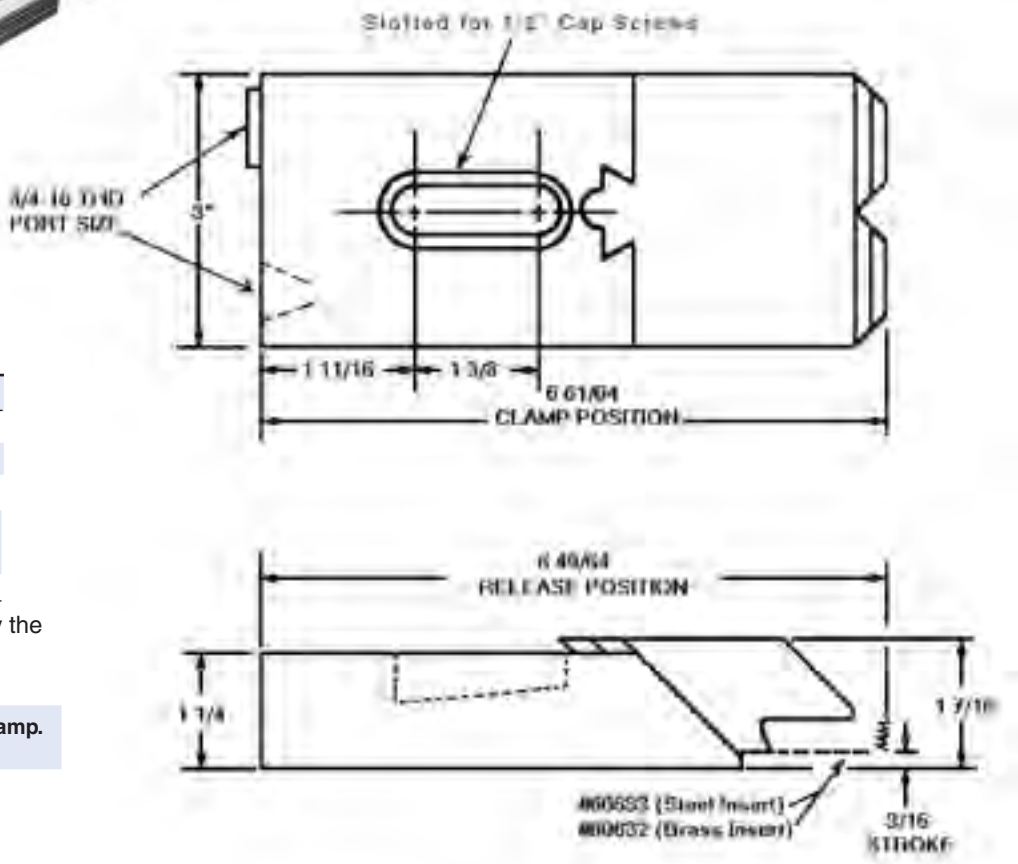
Toe Clamps



Features

- Single Acting
- Low Profile
- Direct Mounting
- 3/16" Stroke
- 3000 lbs. Force
- Steel or Brass Toe Insert Available
- Available in FixturePro™ Design Software

U.S. Patents:
No. 4406445



Specifications

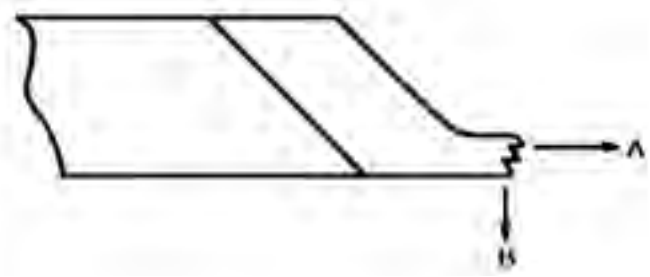
Part Number	60631
Operating Volume (cu. in.)	.115
Minimum Operating Pressure (psi)	200
Maximum Output Force (lbs.)	3000
Overall Stroke	3/16

A washer (60636), to prevent damage by the cap screw, is included with each clamp.

Toe Insert is not supplied with the Toe Clamp. See below to order the Toe Inserts.

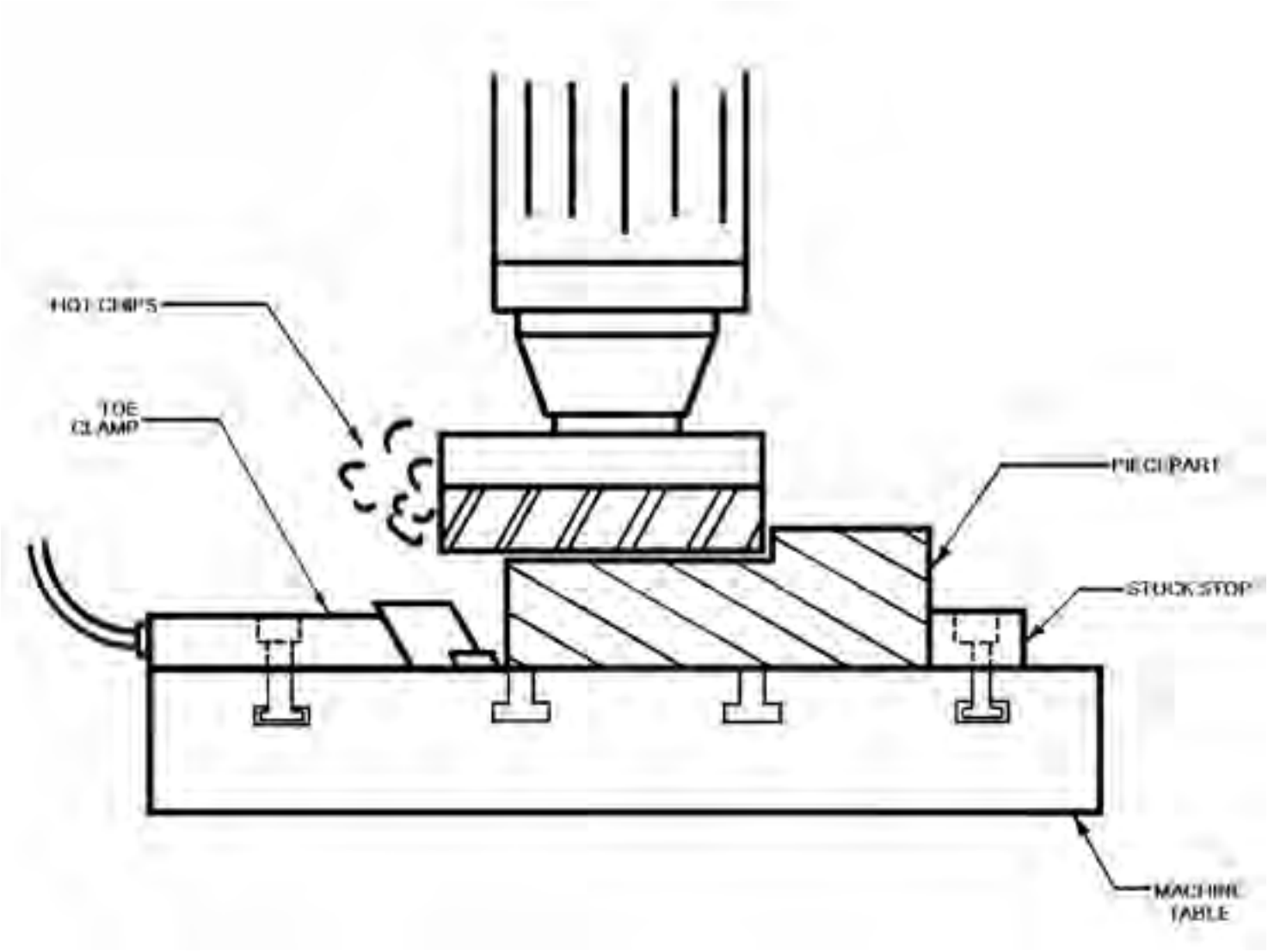
Toe Inserts

Part Number	Insert
60633	Steel
60632	Brass



Hydraulic Pressure	Force in Pounds	
	A	B
1500	900	750
3000	1800	1500
5000	3000	2500

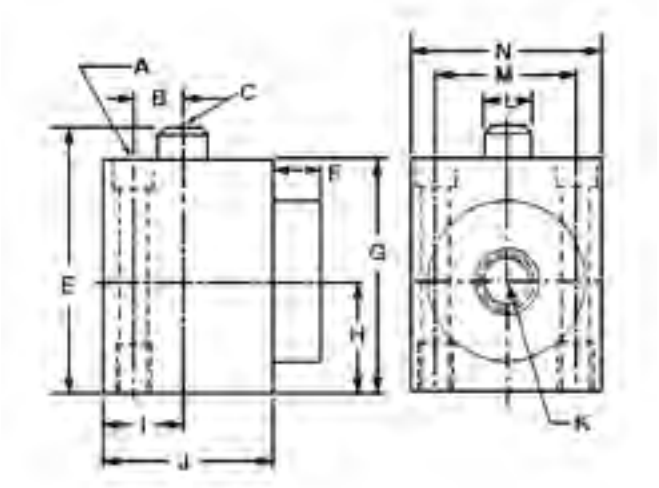
Toe Clamp
Application



A Toe Clamp is used in applications where clamps cannot be on top of the workpiece due to the fact that the cutter must pass over that area. The clamp holds the workpiece against stop and down on the table. T-Slot mounting gives clamping versatility.

Work Supports





Part Number	Bolt Size Thru A	Bolt Size Tapped A	B	Tap C	Height E Min	Height E Max	F	G	H	I	J	Port K	L	M	N
60513	1/4	5/16-24	.50	1/4-20	2.45	2.70	.49	2.36	1.12	.81	1.75	9/16-18	.5	1.5	2

Hydraulically-locked Work Supports differ from clamps and vises in that they do not actually exert force upon the workpiece. Rather, they are used to support the part being machined, offering resistance to any clamping forces acting counter to the direction of travel of the piston.

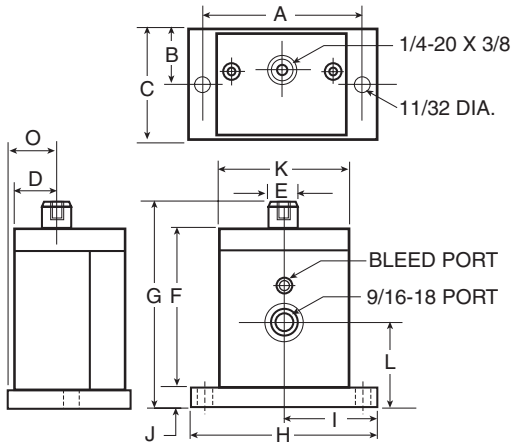
In a typical application, a large, thin casting is located on several tooling point pads for positioning. Work Supports will automatically adjust to support the delicate sections of the casting. When hydraulic pressure is applied, the floating pistons within the Work Support are locked in position and resist any downward movement exerted on the casting. After the casting is removed, the floating pistons return to their fully-raised position.

Specifications

Part Number	60513	60512
Operating Volume (cu. in.)	.04	.06
Support to Pressure Ratio	1.6:1	3.3:1
Minimum Operating Pressure (psi)	500	500
Maximum Operating Pressure (psi)	3000	3000
Maximum Support Capacity (lbs.)	5000	10000
Plunger Spring Force (lbs.) Start	2	14
Plunger Spring Force (lbs.) Finish	7	40
Weight (lbs.)	2.0	5.5

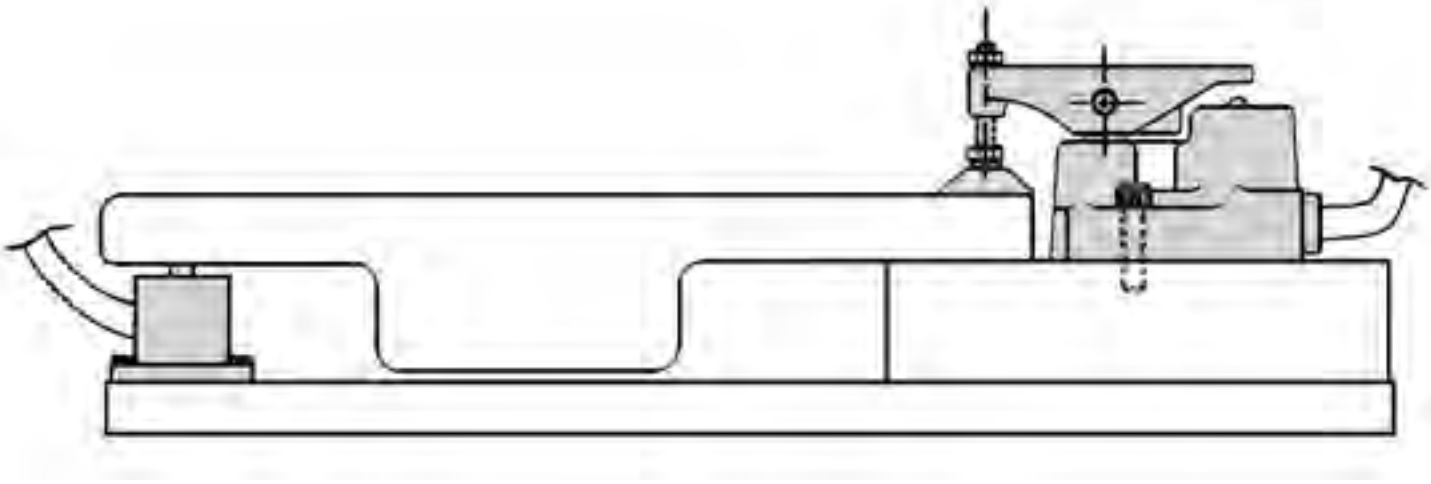


- Available in FixturePro™ Design Software

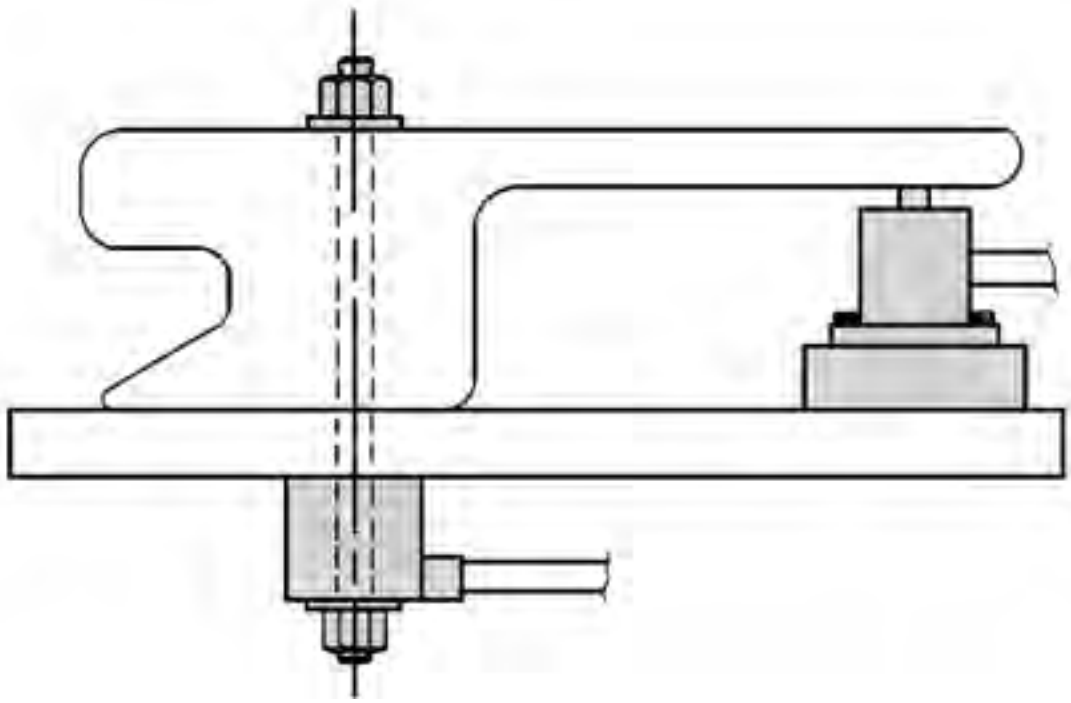


Part Number	A	B	C	D	E	F	G Min	G Max	H	I	J	K	L	O
60512	3 9/16	1 3/8	2 3/4	.990	5/8	3.69	4.15	4.65	4 3/16	2 3/32	3/8	3	1 7/8	1.07

Work Support
Applications



The workpiece is located and clamped on the right end by a Jergens Swing Clamp. The Work Support resists the machining forces applied to the other end of the casting. Variations between castings are compensated for by the floating support plunger in the Work Support.

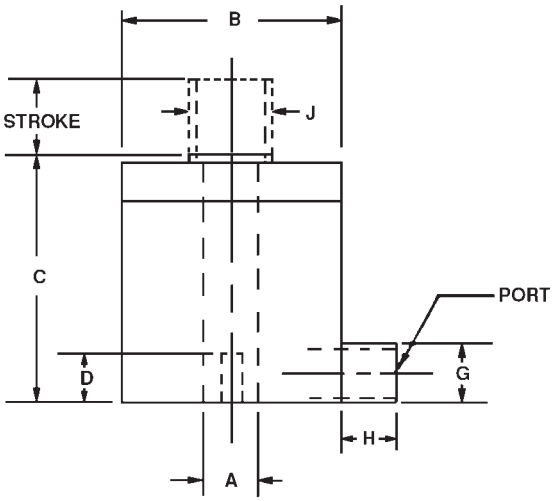


The top and bottom surfaces of the large casting must be machined to be flat, parallel, and at a fixed distance from each other. Jergens Work Supports eliminate deflection at the outer edge while compensating for variations between castings. A Jergens Hollow Rod Cylinder, stud and “C” washer are used to hold the casting.

Hollow Rod Cylinders



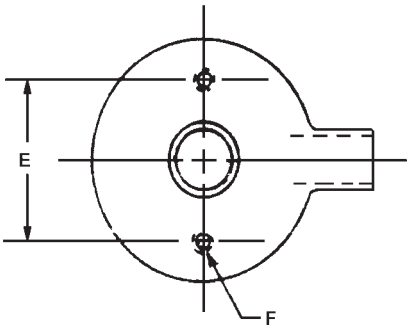
Hollow Rod Cylinders are ideal for converting existing fixtures to power clamping. Replaces clamps which use double cams, flange nuts, draw bars, or other mechanical devices. Generally, no special machining is required, just a longer stud.



Specifications

Specifications \ Part Number	60403 60404 60413 60414	60401 60402 60410 60411 60412	60405
Operating Stroke (in.)	.24	.31	.64
Operating Volume (cu. in.)	.3	.7	3.2
Effective Piston Area (sq. in.)	.96	1.9	5
Min. Oper. Pressure (psi)*	100	100	100
Max. Oper. Pressure (psi)	5000	5000	5000
Max Output Force (lbs.)	4800	9850	25000

* With Spring Installed



Hollow Rod Cylinders can either push or pull. Two styles are available, either Through Hole or Tapped Hole. In the Through Hole style, the piston rod is hollow to accept a bolt. The Tapped Hole cylinders accept a bolt threaded into the piston. Because of the piston design, the Tapped Hole style cannot gain stroke. Removing the return springs make the Hollow Rod Cylinders suitable for air operation.

- Available in FixturePro™ Design Software

Through Hole Cylinders

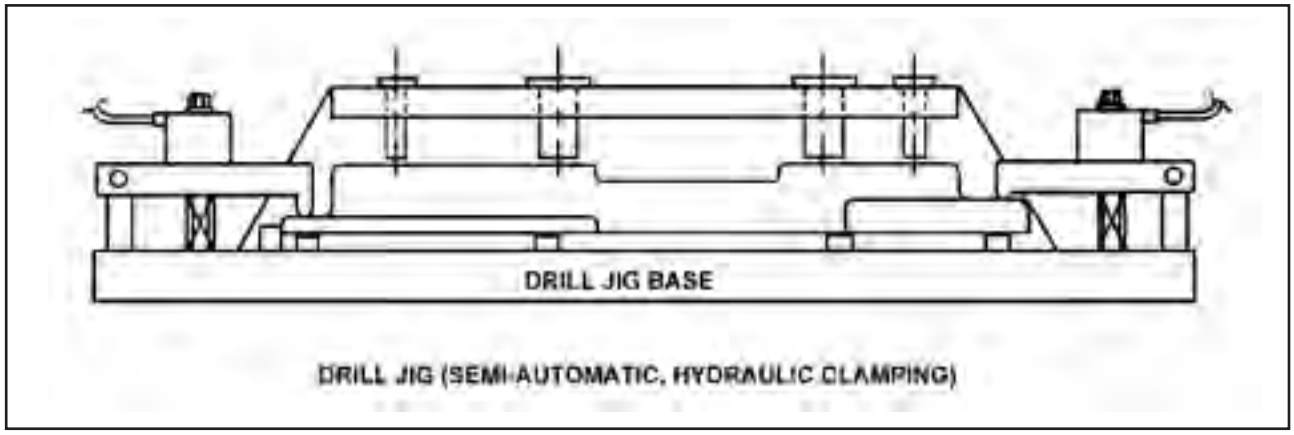
Part Number	A	B	C†	D	E	F	G	H	Rod Dia. J	Port Size	Wt. (lbs)
***60403**	13/32	1 15/16	1 7/8	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
***60404**	17/32	1 15/16	1 7/8	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60401	21/32	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	3/8	1 1/4	9/16-18	2.5
60402	25/32	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60405	1 1/64	4	3 9/16	5/8	3 1/2	1/4-28	No Boss		2 1/8	9/16-18	10.5

*Cannot increase stroke
† Measured over piston in the retracted position.

Tapped Hole Cylinders

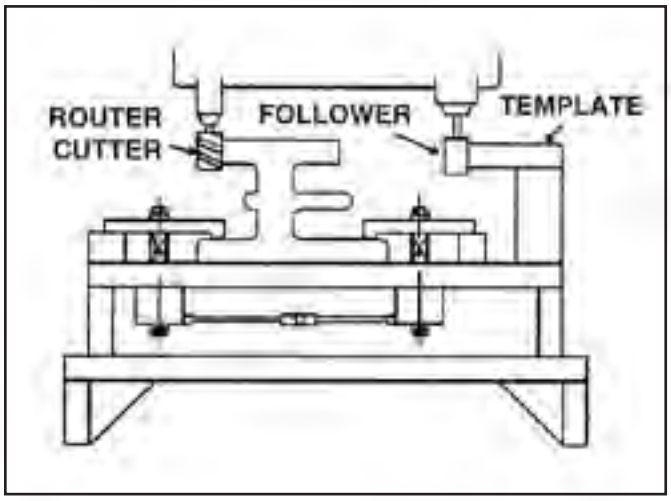
Part Number	A	B	C	Thd. Depth D	E	F	G	H	J	Port Size	Wt. (lbs)
60413	3/8-16	1 15/16	1 13/16	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60414	1/2-13	1 15/16	1 13/16	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60410	1/2-13	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60411	5/8-11	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60412	3/4-10	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5

Hollow Rod Cylinder
Applications



DRILL JIG (SEMI-AUTOMATIC, HYDRAULIC CLAMPING)

Typical, low cost conversion from manual clamping to Hollow Rod Cylinders can be accomplished by using the existing drill jig clamps and changing the stud to a longer length. Besides clamping faster than the manual method, the Hollow Rod Cylinders allow for uniform clamping forces on all strap clamps.



The Hollow Rod Cylinder is ideal for “close to the machine base” strap clamping. By mounting the clamps under the work table, a manual clamping set-up can be easily and economically converted to hydraulic clamping.

Threaded Cylinders

Pressure Points



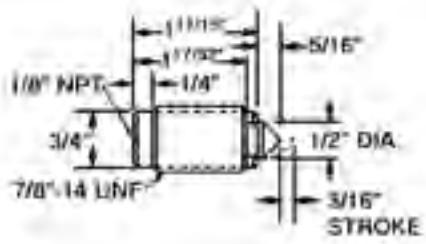


Jergens Pressure Points may be used with any power source and are designed to be used in restricted areas where space is at a minimum. Pressure Points can be used to eliminate part distortion during machining operations or to hold large diameter castings or rings in place while machining the upper surface. Pressure Points have hardened tool steel tips (50-60Rc). Jam nuts are included. Not suitable for air operation.

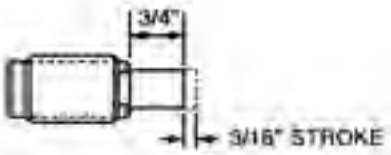
- Available in FixturePro™ Design Software

Specifications

Part Number	61512	61514
Operating Stroke (in.)	3/16	3/16
Operating Volume (cu. in.)	.037	.037
Effective Piston Area (sq. in.)	.20	.20
Minimum Operating Pressure (psi)	400	400
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	1000	1000
Weight (lbs.)	.5	.6



Part Number
61512



Part Number
61514

Miniature Cylinders

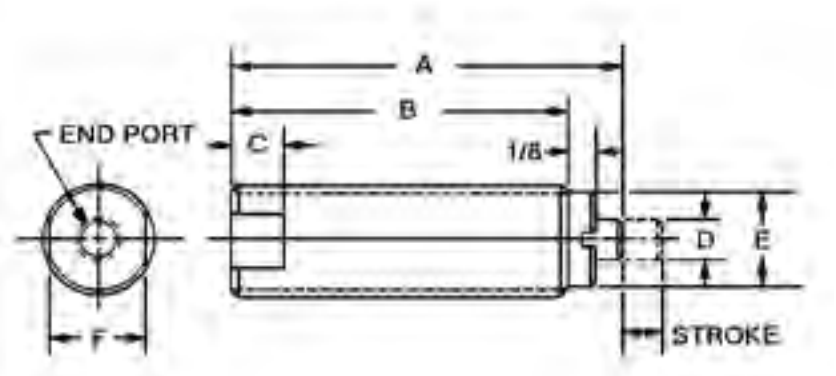


Small, fully-threaded bodies ensure easy mounting and simple length adjustments. Their small size provides high workholding forces in tight places. Threaded Cylinders have hardened piston rods, steel bodies, alloy springs and Teflon® back-up rings which ensure trouble-free operation and long life. Not suitable for air operation. For mounting, see brackets on page 3.24. Jam nuts are included.

- Available in FixturePro™ Design Software

Specifications

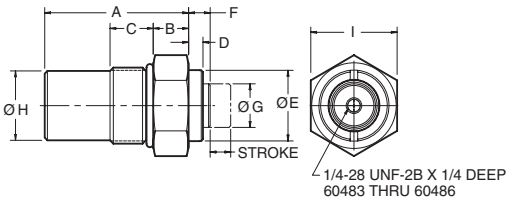
Part Number	60461	60462
Operating Stroke (in.)	3/16	1/2
Operating Volume (cu. in.)	.018	.049
Effective Piston Area (sq. in.)	.096	.196
Minimum Operating Pressure (psi)	200	300
Maximum Operating Pressure (psi)	10000	10000
Maximum Output Force (lbs.)	960	1960
Weight (lbs.)	.5	.7



Part Number	Stroke	Body Thread	A	B	C	D	E	F	End Port
60461	3/16	1/2-20	1 13/16	1 9/16	1/4	3/16	3/8	7/16	1/16-27 NPTF
60462	1/2	3/4-16	2 3/8	2	5/16	1/4	21/32	5/8	1/8-27 NPTF

Manifold Mount Cylinders



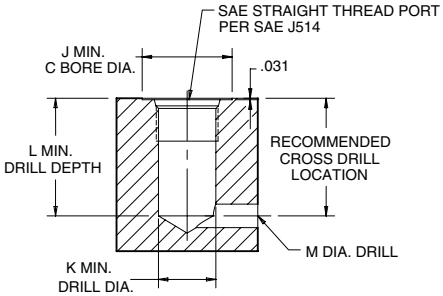


- Provides for clean installation
- Eliminates exposed fittings and plumbing
- Well suited for use in custom design fixtures

Specifications

Part Number	60481	60482	60483	60484	60485	60486
Operating Stroke (in.)	3/16	1/2	1/2	1	1/2	1
Operating Volume (cu. in.)	0.017	0.098	0.393	0.785	0.884	1.767
Effective Piston Area (sq. in.)	0.093	0.196	0.785	0.785	1.767	1.767
Minimum Operating Pressure (psi)	200	200	200	200	200	200
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Maximum Output Force (lbs.)	465	980	3925	3925	8835	8835
Weight (lbs.)	0.5	0.7	1	1.5	2	2.5

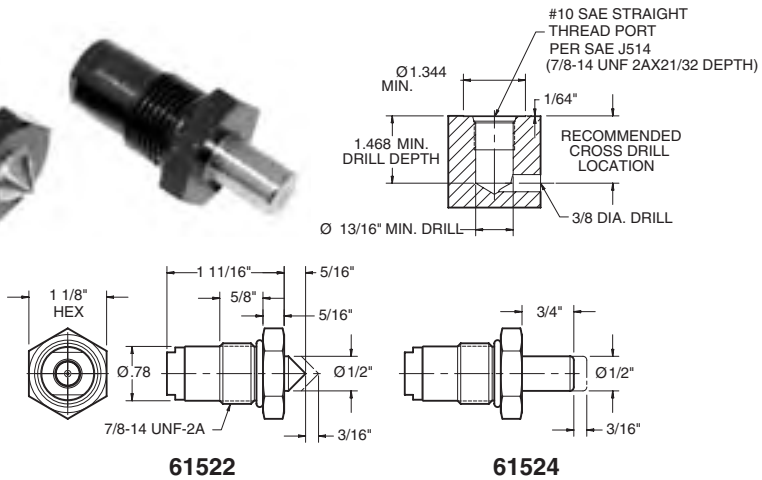
Part No.	Body Thread	Stroke	A	B	C	D	E Dia.	F	G Dia.	H Dia.	I Hex.
60481	9/16-18 UNF	3/16	1 13/32	.375	1/2	1/8	3/8	1/4	3/16	.48	3/4
60482	3/4-16 UNF-2A	1/2	1 23/32	.375	9/16	1/8	41/64	3/8	1/4	.66	7/8
60483	1 5/16-12 UN-2A	1/2	2 1/2	.615	3/4	1/4	1 7/32	5/16	3/4	1.19	1 1/2
60484	1 5/16-12 UN-2A	1"	3	.615	3/4	1/4	1 7/32	5/16	3/4	1.19	1 1/2
60485	1 7/8-12 UN-2A	1/2	2 1/2	.615	3/4	1/4	1 47/64	5/16	1 1/4	1.75	2 1/8
60486	1 7/8-12 UN-2A	1"	3	.615	3/4	1/4	1 47/64	5/16	1 1/4	1.75	2 1/8



Part No.	SAE No.	Thread Size	Thread Depth	J	K	L	M
60481	6	9/16-18 UNF	1/2	.970	1/2	1.09	1/4
60482	8	3/4-16 UNF-2A	9/16	1.19	11/16	1.41	5/16
60483	16	1 5/16-12 UN-2A	3/4	1.91	1 7/32	2.00	1/2
60484	15	1 5/16-12 UN-2A	3/4	1.91	1 7/32	2.50	1/2
60485	24	1 7/8-12 UN-2A	3/4	2.56	1 13/16	2.00	9/16
60486	24	1 7/8-12 UN-2A	3/4	2.56	1 13/16	2.50	9/16

Pressure Points





61522 61524

Specifications

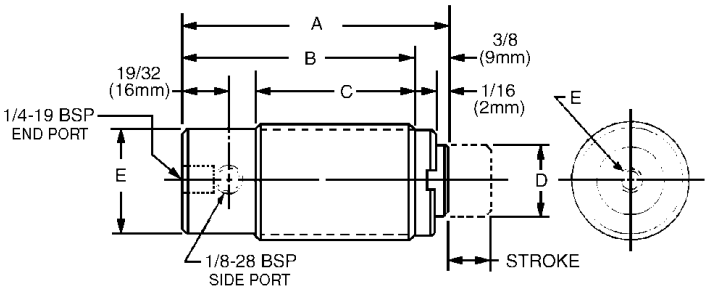
Part Number	61522	61524
Operating Stroke (in.)	3/16	3/16
Operating Volume (cu. in.)	0.049	0.049
Effective Piston Area (sq. in.)	0.261	0.261
Minimum Operating Pressure (psi)	400	400
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	1305	1305
Weight (lbs.)	0.5	0.5

Threaded Cylinders
Heavy-Duty



Full-threaded bodies ensure easy mounting and simple length adjustments. Their small size provides high work holding forces in tight places. Threaded Cylinders have hardened piston rods, steel bodies, alloy springs and Teflon® back-up rings which ensure trouble-free operation and long life. Not suitable for air operation. For mounting, see bracket and jam nuts on page 3.21.

- Compact Design
- Easy Installation
- Side and Rear Ports
- Tapped Piston



Specifications - Inch

Part Number	60463	60464	60465	60466
Operating Stroke (in.)	1/2	1	1/2	1
Operating Volume (cu. in.)	.392	.785	.883	1.767
Effective Piston Area (sq. in.)	.785	.785	1.767	1.767
Minimum Operating Pressure (psi)	200	200	200	200
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	3925	3925	8835	8835
Weight (lbs.)	1.0	1.5	2.0	2.5

Specifications - Metric

Part Number	63213	63214	63215	63216
Operating Stroke (mm)	13	25	13	25
Operating Volume (cu. Cm.)	6.4	12.8	14.5	29
Effective Piston Area (cm_)	5	5	29	29
Maximum Oper. Pressure (bars)	340	340	340	340
Minimum Oper. Pressure (bars)	14	14	14	14
Maximum Output Force (kg)	1780	1780	4007	4007
Weight (kg)	.45	.68	.90	1.13

Inch

Part Number	Stroke	Body Thread	A	B	C	D	E	F	Input Ports End	Input Ports Side
60463	1/2	1 5/16-16	3 1/4	2 7/8	2	3/4	1/4-28 x 1/4	1 7/32	7/16-20 SAE	1/8-NPT
60464	1	1 5/16-16	3 3/4	3 3/8	2 1/2	3/4	1/4-28 x 1/4	1 7/32	7/16-20 SAE	1/8-NPT
60465	1/2	1 7/8-16	3 1/4	2 7/8	2	1 1/4	1/4-28 x 1/4	1 25/32	7/16-20 SAE	1/8-NPT
60466	1	1 7/8-16	3 3/4	3 3/8	2 1/2	1 1/4	1/4-28 x 1/4	1 25/32	7/16-20 SAE	1/8-NPT

Cylinders are supplied with a plug installed in the side port.
To use side port, remove plug and install part number 61060 (7/16-20 pipe plug) to plug end port.

Metric

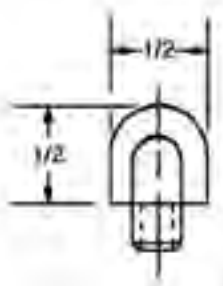
Part Number	Stroke	Body Thread	A	B	C	D	E	F	Input Ports End	Input Ports Side
63213	13	M36 x 1.5	82	73	51	19	M6 x 1.0 x 6	31	1/4 - 19 BSP	1/8 - 28 BSP
63214	25	M36 x 1.5	95	86	64	19	M6 x 1.0 x 6	31	1/4 - 19 BSP	1/8 - 28 BSP
63215	13	M48 x 1.5	82	73	51	32	M6 x 1.0 x 6	44	1/4 - 19 BSP	1/8 - 28 BSP
63216	25	M48 x 1.5	95	86	64	32	M6 x 1.0 x 6	44	1/4 - 19 BSP	1/8 - 28 BSP

Cylinders are supplied with a plug installed in the side port.

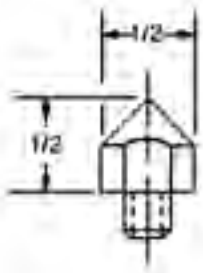
Threaded Cylinders
Piston Buttons



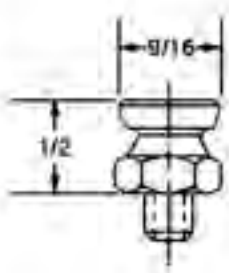
Hardened steel buttons for use on 60463 thru 60466 cylinders.



60471



60472

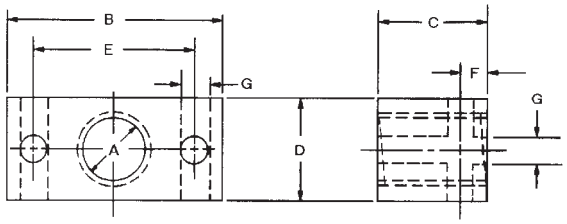


60473

Threaded Cylinders
Block Mountings



- Material: Low Carbon Steel
- Finish: Black Oxide



Inch

Part Number	A	B	C	D	E	F	G	Wt. (lbs)
60950	1/2-20	1 3/8	3/4	5/8	15/16	1/4	1/4	.125
60951	3/4-16	1 5/8	1 1/8	1	1 1/8	1/4	1/4	.375
60959	7/8-14	2	3/4	1 1/2	1 1/2	3/8	21/64	.40
60956	1 5/16-16	3	1 1/4	1 13/16	2 1/8	7/16	25/64	1.27
60957	1 9/16-16	3 1/4	1 1/2	2	2 7/16	7/16	25/64	1.95
60958	1 7/8-16	4	2	2 3/8	3	1/2	33/64	—

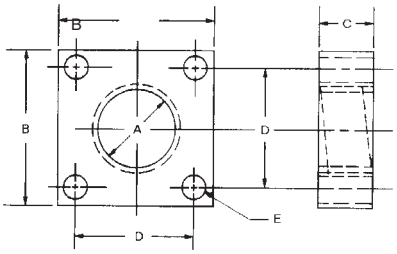
Metric

Part Number	A	B	C	D	E	F	G	Wt. (kg)
60997	M36 x 1.5 6H	82.6	38.1	50.8	62	12	10.8	.86
60998	M48 x 1.5 6H	101.6	38.1	60.3	76	12	13	1.13

Flange Mountings



- Material: Low Carbon Steel
- Finish: Black Oxide



Inch

Part Number	A	B	C	D	E	Wt. (lbs)
60952	1 5/16-16	1 5/8	1/2	1 1/4	17/64	.18
60955	1 9/16-16	2	1	1 1/2	17/64	.56
60954	1 7/8-16	2 1/4	1	1 3/4	21/64	.625

Metric

Part Number	A	B	C	D	E	Wt. (kg)
60995	M36 x 1.5 6H	50.8	25.4	38	6.7	.30
60994	M48 x 1.5 6H	63.5	25.4	50	8.8	.42

Jam Nuts



Part Number	60961	60962	60963	60964	60965	60966	60967
Thread	1/2-20	3/4-16	7/8-14	1-12	1 5/16-16	1 9/16-16	1 7/8-16
Thickness	5/16	3/8	5/16	35/64	25/64	25/64	7/16
Width Across Flats	3/4	1 1/8	1 5/16	1 5/8	1 7/8	2 1/4	3

Standard Cylinders
Single Acting

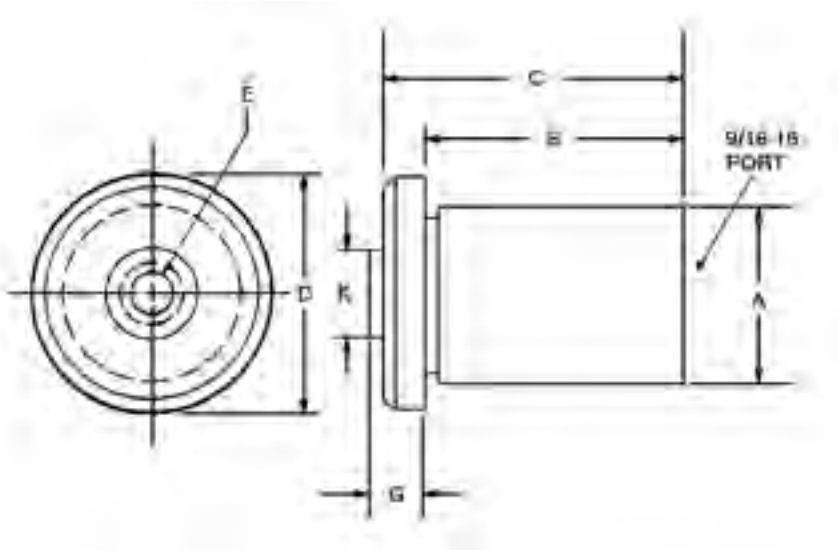


These single-acting, spring-return cylinders will operate on air or oil; all have a 1" stroke.

Single-acting cylinders are especially applicable to large circuits where cylinders are plumbed into the air side of the circuit and used to align parts in the fixture prior to hydraulic clamping. These applications are primarily pushing type operations where the cylinder return spring pulls only the piston rod.

- Available in FixturePro™ Design Software

NOTE: Not recommended for applications where coolant or chips are prevalent. Use double acting style (next page) for these applications



Specifications

Part Number	60301	60307	60303
Operating Stroke (in.)	1	1	1
Operating Volume (cu. in.)	.44	1.22	3.14
Effective Piston Area (sq. in.)	.44	1.22	3.14
Minimum Operating Pressure (psi)	32	25	25
Maximum Operating Pressure (psi)	3000	3000	3000
Maximum Output Force (lbs.)	1320	3660	9300
Weight (lbs.)	.5	1	3

Bore Tolerances: +.0005
-.0010

Dimensions

Part Number	A	B	C	D	Tap E	G	K
60301	1.000	2 3/8	2 5/8	1 15/64	1/4-20 x 1/2	7/16	3/8
60307	1.500	2 3/8	2 5/8	1 47/64	3/8-16 x 3/4	7/16	1/2
60303	2.500	2 3/8	2 5/8	2 47/64	3/8-16 x 3/4	7/16	3/4

Standard Cylinders
Double Acting

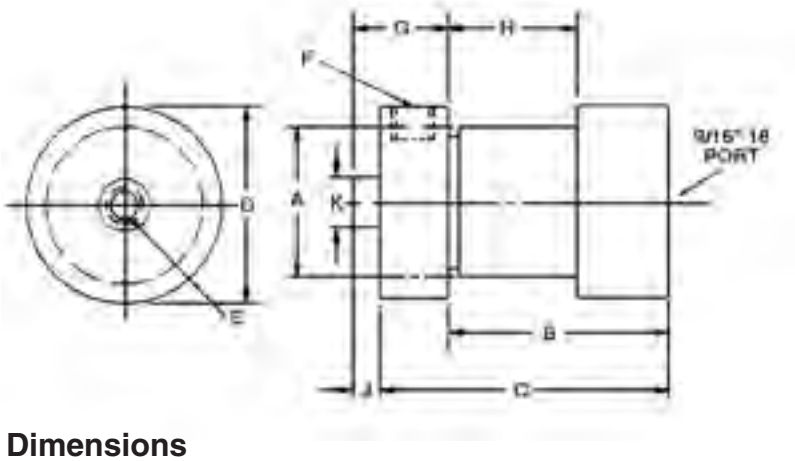


Double Acting Cylinders can be used for clamping, holding positioning, staking, punching...anywhere that a heavy duty cylinder is needed. If the cylinder is mounted in the fixture (as opposed to using mounting brackets), the fixture should be bored to between .0005 and .0010 over the "A" dimension. Doing so will prevent an out-of-round condition of the cylinder body which could damage the piston. They may be returned by air or by hydraulic pressure.

- Available in FixturePro™ Design Software

Specifications

Part Number		60345	60341	60350	60351	60360	60361
Operating Stroke (in.)		1	1	2	2	3	3
Operating Volume (cu. in.)		1.1	3.14	2.2	6.28	3.31	9.42
Effective Piston Area (sq. in.)	-Push	1.1	3.14	1.1	3.14	1.1	3.14
	-Pull	.912	2.699	.956	2.699	.956	2.699
Minimum Operating Pressure (psi)		20	20	20	20	20	20
Maximum Operating Pressure (psi)		3000	3000	3000	3000	3000	3000
Maximum Output Force (lbs.)		3300	9300	3300	9300	3300	9300
Weight (lbs.)		2.5	4.5	3.5	6.0	4.75	6.2



Dimensions

Part Number	A	B	C	D	Tap E	Return Port F	G	H	J	K
60345	1.500	2 7/16	3 1/8	2 15/32	3/8-16 x 3/4	7/16-20	31/32	1 9/32	1/4	1/2
60341	2.500	2 11/16	3 3/8	2 31/32	3/8-16 x 3/4	7/16-20	31/32	1 9/32	1/4	3/4
60350	1.500	3 1/2	4 1/2	2 15/32	1/4-20 x 1/2	9/16-18	1 7/32	2 11/32	1/4	7/16
60351	2.500	3 3/4	4 23/32	2 31/32	3/8-16 x 3/4	9/16-18	1 3/16	2 11/32	1/4	3/4
60360	1.500	4 1/2	5 1/2	2 15/32	1/4-20 x 1/2	9/16-18	1 7/32	3 11/32	1/4	7/16
60361	2.500	4 3/4	5 23/32	2 31/32	3/8-16 x 3/4	9/16-18	1 3/16	3 11/32	1/4	3/4

Standard Cylinders
Mounting Brackets





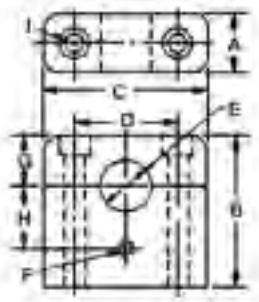
Mounting Brackets are designed to save you time and money when laying out your fixture.

All Mounting Brackets are made of low carbon steel, which is not heat-treated. This allows you to custom fit or weld the brackets into your fixture. The cylinder clamping area is concentric to the OD of the various cylinders to avoid distortion of the cylinder walls which may cause damage to the piston.

Spacers may be used to add height to the cylinders when using Jergens Mounting Brackets.

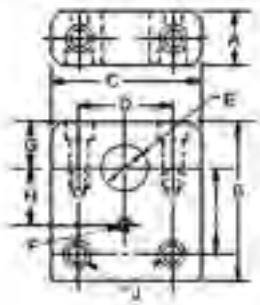
- Material: Low Carbon Steel
- Finish: Black Oxide
- Bore Tolerances: +.0005
  -.0010
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	Tap F	G	H	(2 Bolts Supplied) I	Wt. (lbs)
60901	1 1/4	3 3/4	2 3/8	1 1/2	1.00	1/2-13	3/4	2	3/8-16 x 4	2.75
60902	1 1/4	4	3 1/2	2 1/8	1.50	3/4-10	1	2	1/2-13 x 4 1/2	3.5
60903	1 1/4	4 1/2	4 3/8	3 1/4	2.50	3/4-10	1 1/2	2	5/8-11 x 5	4.75



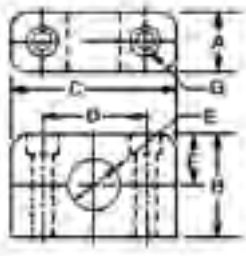


Part Number	A	B	C	D	E	Tap F	G	H	I	(2 Bolts Supplied) J	Wt. (lbs)
60904	1 1/4	3 3/4	2 3/8	1 1/2	1.00	1/2-13	3/4	2	2 9/16	3/8-16 x 1 1/2	2.7
60905	1 1/4	4	3 1/8	2 1/8	1.50	3/4-10	1	2	2 1/2	1/2-13 x 1 1/2	3.5
60906	1 1/4	4 1/2	4 3/8	3 1/4	2.50	3/4-10	1 1/2	2	2 7/16	5/8-11 x 1 1/2	4.7





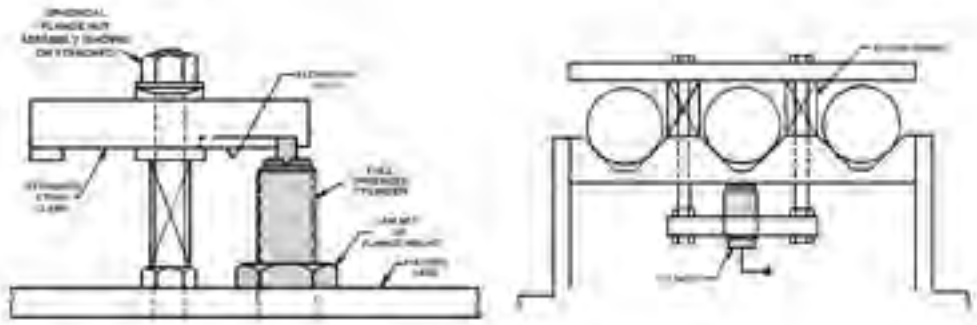
Part Number	A	B	C	D	E	F	(2 Bolts Supplied) G	Wt. (lbs)
60907	1 1/4	1 1/2	2 3/8	1 1/2	1.00	3/4	3/8-16 x 1 3/4	.95
60908	1 1/4	2	3 1/8	2 1/8	1.50	1	1/2-13 x 2 1/4	1.50
60909	1 1/4	3	4 3/8	3 1/4	2.50	1 1/2	5/8-11 x 3 1/4	2.75



Threaded Cylinder
Applications

By replacing step blocks or similar mechanical devices with a threaded cylinder, manual clamping is easily adaptable into a more productive hydraulic clamping set-up.

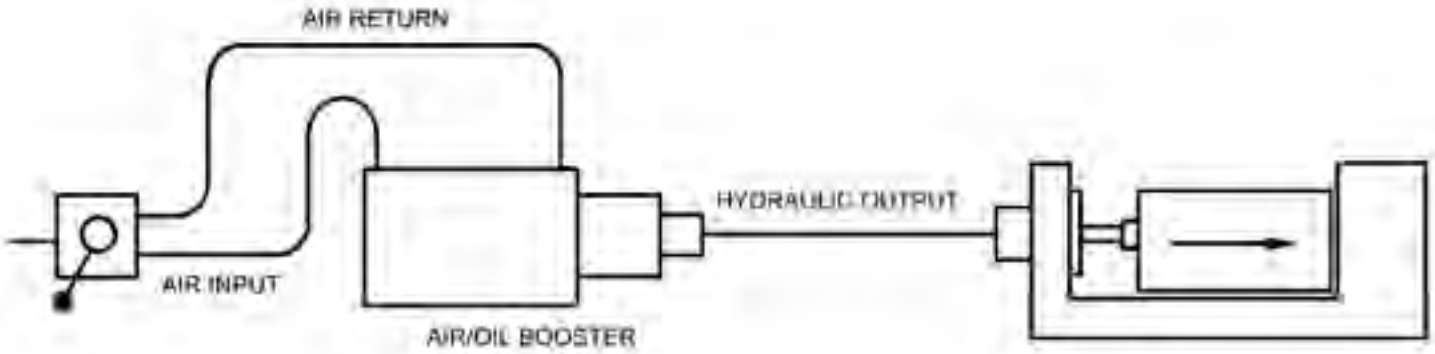
This principle of "building block" components can be combined with various Jergens cylinders, standard components and mounting blocks or strap clamps; thus allowing an almost infinite method of production clamping.



Standard Cylinder
Applications

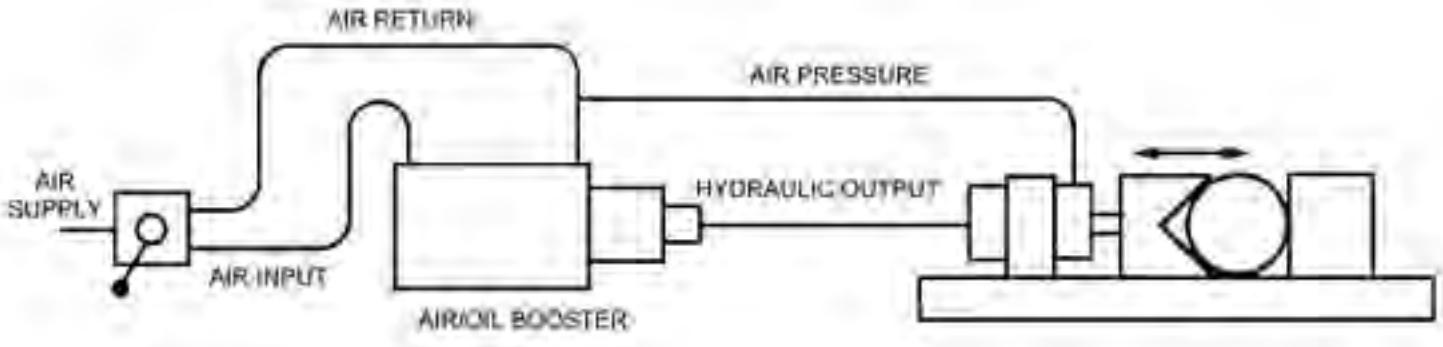
Holding Fixture

A Single Acting Cylinder is used to locate and clamp the workpiece in a channel fixture. The cylinder rod automatically returns when the booster pressure is released.



Vise Fixture

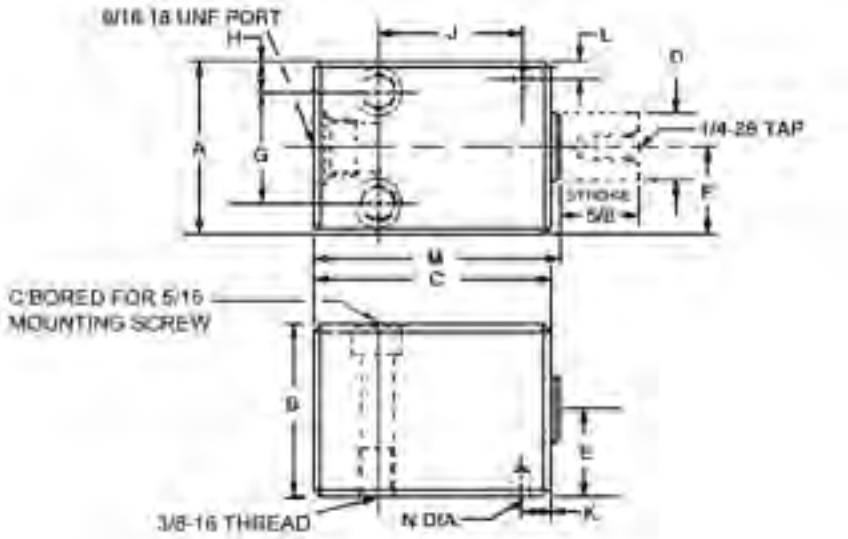
A Double Acting Cylinder is being used to operate a Vee Jaw in the above fixture. Hydraulic pressure is used to clamp and unclamp the jaw. Air pressure, used to return the Double Acting Cylinder, is connected to the air return line of the Booster. Jergens Double Acting Cylinders will operate with as little as 10 psi of air pressure or up to 3000 psi of hydraulic pressure.



Block Cylinders

Single Acting Horizontal





- Vertical and Horizontal Styles
- Simple Mounting
- Compact Design

Dimensions (Horizontal Style)

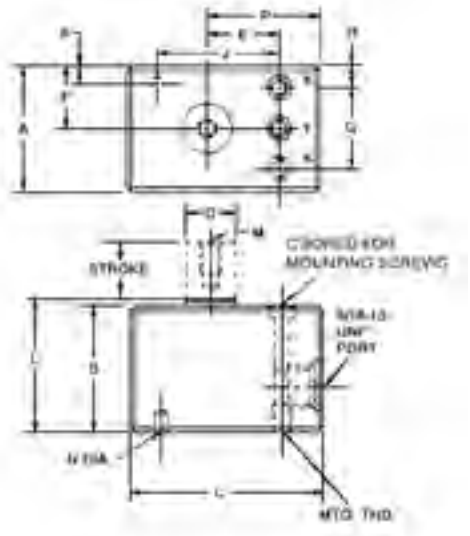
Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N
60372*	1 3/4	1 3/4	2 7/16	11/16	7/8	7/8	1	3/8	1 15/32	9/32	3/16	2 1/2	.194

Dimensions (Vertical Style)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Mtg. Screw Size	Mtg. Thread
60371*	1 3/4	1 3/4	2 1/2	11/16	1	7/8	1 1/8	5/16	1 11/16	1/4	1 13/16	1/4-28 UNF	.194	1 9/16	#10	1/4-20 UNC
60373	2 1/2	2 1/2	3 3/16	1 1/2	1 11/32	1 1/4	—	—	2 3/32	7/16	2 11/16	3/8-24 UNF	.257	1 15/16	5/16	3/8-16 UNC
60374	3 1/2	3	4	2	1 1/2	1 3/4	1 3/4	7/8	—	—	3 3/8	1/2-20 UNF	—	2 1/4	5/16	3/8-16 UNC

*Not recommended for applications where coolant or chips are prevalent.

Single Acting Vertical



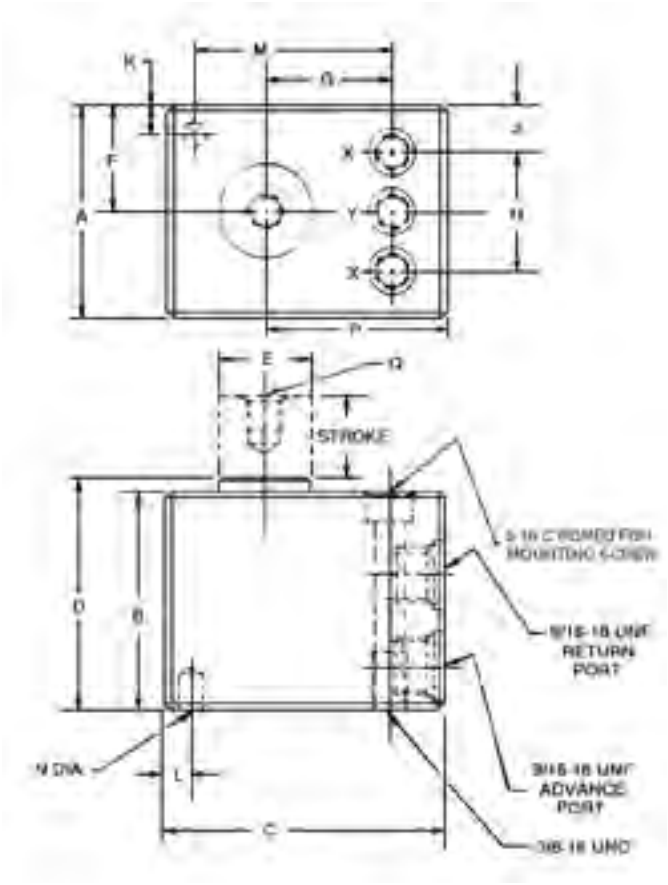
Specifications (Both Styles)

Part Number	60371	60372	60373	60374
Operating Stroke (in.)	5/8	5/8	1/2	1/2
Operating Volume (cu. in.)	.77	.77	1.1	1.96
Effective Piston -Push	1.22	1.22	1.77	3.14
Area (sq. in) -Pull	Spring Return	Spring Return	Spring Return	Spring Return
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	6100	6100	8850	15700
Weight (lbs.) Approx.	2	2	5	11
Mounting Location	X Position	As Shown	Y Position	X Position

"X" refers to double mounting hole style.
"Y" refers to single mounting hole style.

Block Cylinders
Heavy Duty Double Acting





- Simple Mounting
- Compact Design
- High Output Forces

Specifications

Part Number	60381	60382	60383	60384
Operating Stroke (in.)	1/2	1	1/2	1
Operating Volume (cu. in.)	.88	1.77	1.57	3.14
Effective Piston -Push	1.77	1.77	3.14	3.14
Area (sq. in) -Pull	.98	.98	1.37	1.37
Minimum Operating Pressure (psi)	20	20	20	20
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	8850	8850	15700	15700
Weight (lbs.) Approx.	4	4.8	10.5	12.1
Mounting Location	Y Position		X Position	

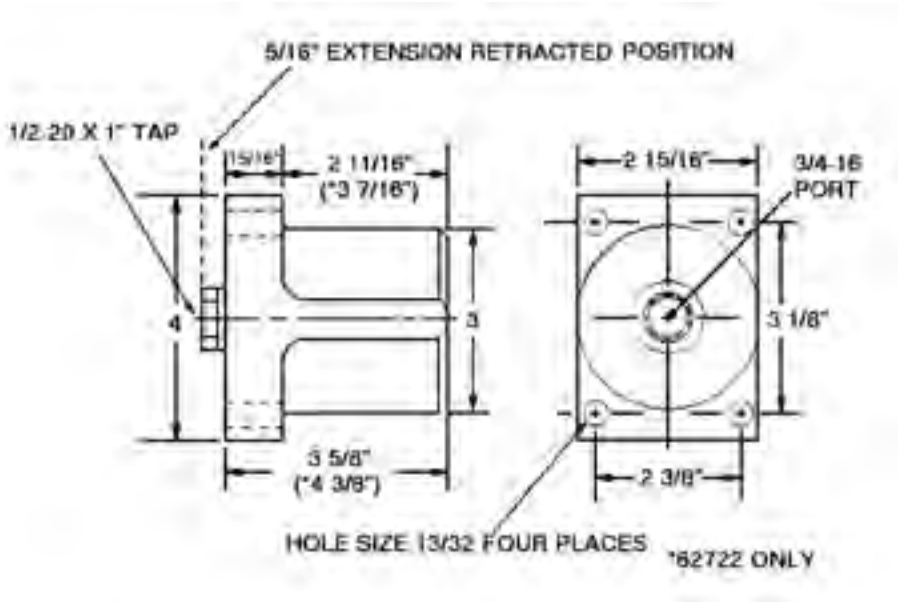
"X" refers to double mounting hole style.
"Y" refers to single mounting hole style.

Dimensions

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Stroke	Q
60381	2 1/4	2 5/16	3	2 7/16	1	1 1/8	1 11/32	—	—	5/16	5/16	2 3/32	.257	1 15/16	1/2	3/8-24 UNF-2B
60382	2 1/4	2 13/16	3	2 15/16	1	1 1/8	1 11/32	—	—	5/16	5/16	2 3/32	.257	1 15/16	1	3/8-24 UNF-2B
60383	3 1/4	3 1/4	3 3/4	3 3/8	1 1/2	1 5/8	1 1/2	1 3/4	3/4	—	—	—	—	2 1/4	1/2	1/2-20 UNF-2B
60384	3 1/4	3 3/4	3 3/4	3 7/8	1 1/2	1 5/8	1 1/2	1 3/4	3/4	—	—	—	—	2 1/4	1	1/2-20 UNF-2B

Flange Mount Cylinders





- Easy Mounting
- Heavy Duty
- High Output Forces
- Long Lasting
- Available in FixturePro™ Design Software

The Jergens Heavy Duty Flange Mount Cylinders mount through holes on the flange of the cylinder body. This feature eliminates the need for separate mounting brackets. The cylinders can provide high forces for clamping, lifting and pressing. Not recommended with flood coolant applications.

Specifications

Part Number	62721	62722
Operating Stroke (in.)	1/2	1
Operating Volume (cu. in.)	1.9	3.9
Effective Piston Area (sq. in.)	3.9	3.9
Minimum Operating Pressure (psi)	100	100
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	19880	19880
Weight (lbs.)	5.0	6.5

Intensifier Cylinders



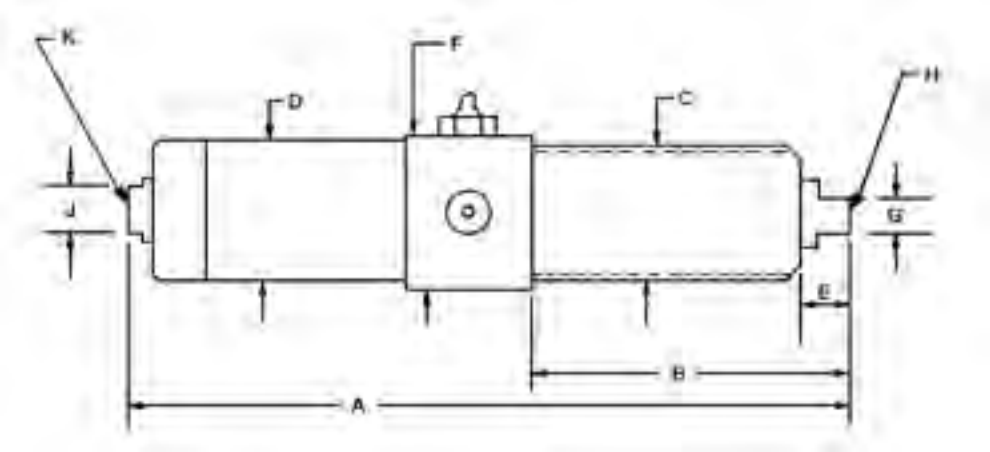
Intensifier Cylinders are combination air-hydraulic cylinders. An air powered cylinder is driven into a small oil reservoir which produces a nominal 8:1 or 30:1 power boost ratio, depending upon air pressure and the cylinder used. These miniature, self-contained power sources are ideal where fast action (100 operations per minute), a short stroke and high power are needed.

- 8:1 and 30:1 Boost Ratios
- Self-Contained
- Fast Acting
- Air Controlled
- Easy Recharge Without Disassembly
- Available in FixturePro™ Design Software

For Mounting Brackets see page 3.24.

Specifications

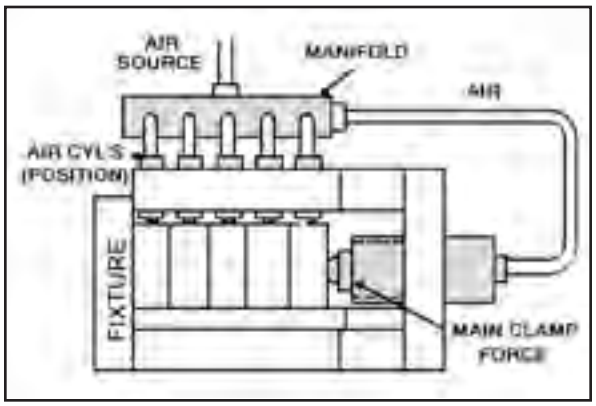
Part Number	60596	60598
Operating Stroke (in.)	1/4	1/4
Force (lbs.) at Inlet Air Pressure 125 psi Max.	950	3700
100 psi	700	2900
75 psi	450	2100
50 psi	250	1300
25 psi Min.	50	450
Weight (lbs.)	2.2	4.5
Ratio	8:1	30:1



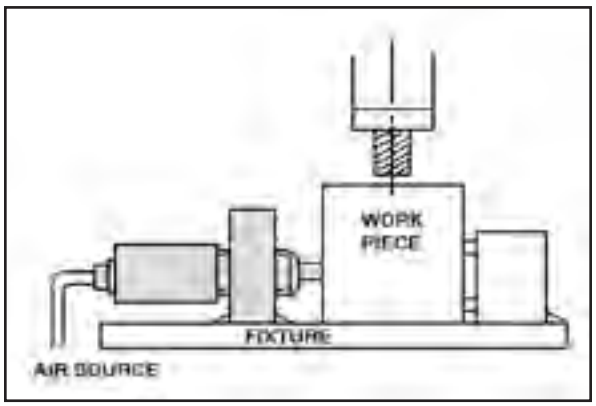
Dimensions

Part Number	A	B	Thread C	D	E	F	Across Flats G	Tap H	Across Flats J	Port K
60596	7 1/4	2 13/16	1 9/16-16	1 3/4	23/32	2	3/4	5/16-24 x 1/2	7/8	9/16-18
60598	9 5/16	3 15/16	1 7/8-16	2 1/2	23/32	2 1/2	3/4	5/16-24 x 1/2	7/8	9/16-18

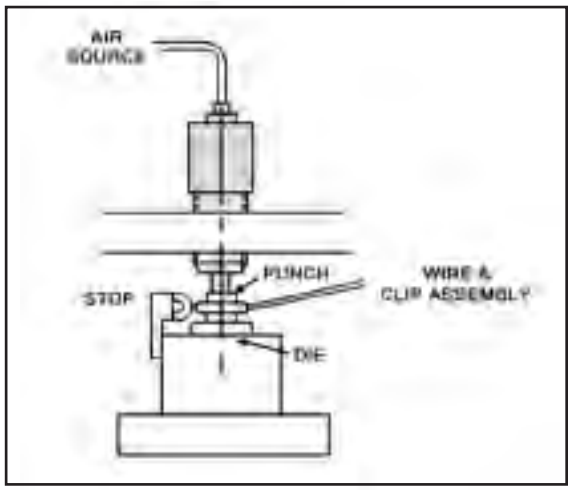
Intensifier Cylinder
Applications



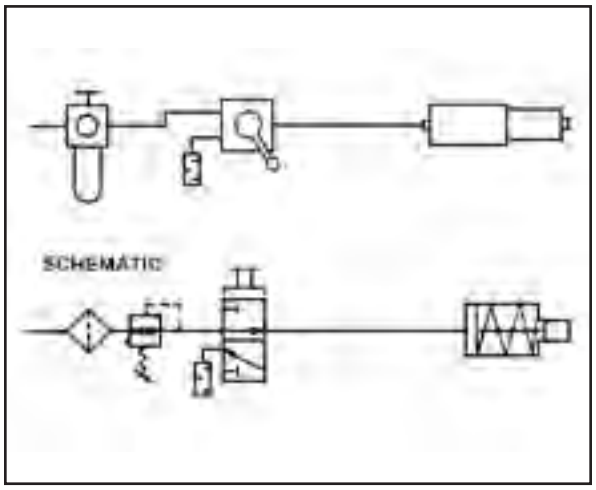
Positioning
A series of plates are gang loaded into the fixture. Air operation of the intensifier assures fast and positive positioning of the plates, after which the multiple hydraulic cylinders are used to clamp.



Clamping
Installed in a Jergens Mounting Bracket, the Intensifier Cylinder provides efficient, versatile, yet economical clamping.



Crimping
The intensifiers may be installed at any attitude. Mounted in a vertical attitude (as shown), up to 1 1/2 tons of force is available for crimping, punching, or notching.



Circuit Diagrams
A filter/regulator and a 3-way hand valve are all that is required to control an Intensifier Cylinder. Installation is as simple as an air cylinder but the resulting force is much greater.

How to Design Your Own Hydraulic System

1. Calculate the force used to hold the workpiece during machining.
   To convert the torque applied to a fastener into holding force use the following formula:

$$P = \frac{T}{KD}$$

Where: P = Holding Force (lbs.)
T = Torque (in. lbs.)
D = Nominal Thread Diameter (in.)
K = Friction Factor
(K Varies with material, finish, and lubrication, .19 to .25)

Example: 1/2-13 bolt tightened to 30 ft. lbs
(360 in. lbs.) provides 3600 lbs. of force.

$$P = \frac{360}{(.2 \times .5)} = 3600$$

2. Calculate the force required at each work unit.

$$\frac{\text{Total Force}}{\text{Number of work units}} = \text{Force per unit}$$

3. Select the style of work unit to be used at each location. Select units which can be easily mounted and will allow access for loading and unloading of the workpiece.

4. Compare the force required by each work unit with the maximum force available from the unit selected. If the required force is greater than the available force, substitute larger work units or increase the number of work units to be used.

5. Calculate the hydraulic pressure required to provide the force needed at each work unit. To determine pressure, divide the force required at the work unit by the effective piston area of the unit selected.

$$\frac{\text{Force}}{\text{Area}} = \text{Pressure}$$

   The unit requiring the highest pressure determines the requirement for the entire system.

6. Determine the total volume of oil required to operate all of the work units (Volume = Piston Area x Stroke).
   Operating volume requirements for work units are listed in the specifications chart for the item.

7. Select a power source which will provide the required pressure, using the available air pressure. To determine if a power source will provide the required pressure from available air pressure, multiply the available air pressure by the boost ratio of the power source.

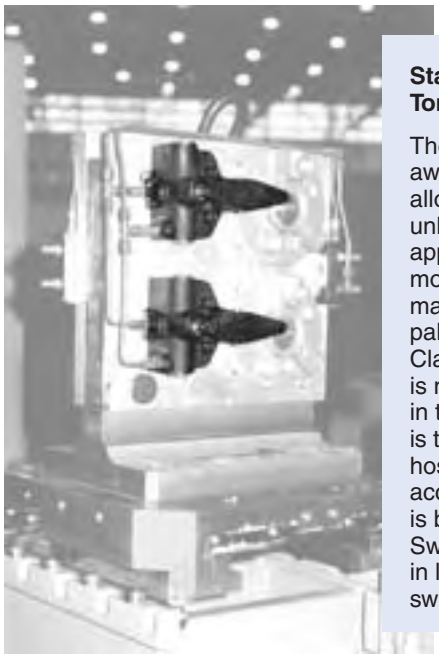
   Example: (90 psi air pressure) (15:1 boost ratio) = 1350 psi hydraulic pressure

   The power source must also provide the total volume of oil required by the system. When using a standard booster, the high pressure volume of the unit must exceed the system requirement.

8. If you need help, call Jergens Technical Sales at: 1-800-JERGENS (537-4367).

Staylock Clamps

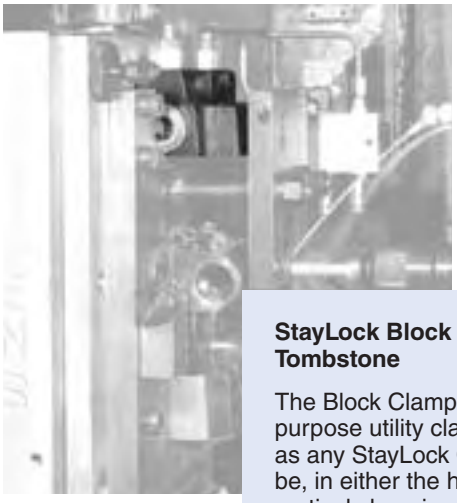
Stays Mechanically Locked– Even When Disconnected from Hydraulic Pressure



StayLock Swing Clamp on a Tombstone Fixture

The Swing Clamp rotates 80° away from the workpiece, allowing easy loading and unloading of the part. In this application, the tombstone is mounted on a double pallet machining center. When the pallet rotates, the StayLock Clamp remains clamped. There is no need for an accumulator in the hydraulic system. Nor is there a chance of hydraulic hoses getting tangled or accidentally cut while the part is being machined. StayLock Swing Clamps are available in left-hand or right-hand swing styles.

StayLock Clamps ...the Hydraulic clamp with the mechanical advantage! With conventional power clamping, when pressure is put to the clamp, it clamps... take the pressure away (on purpose or not), it unclamps. With the StayLock Clamp's patented internal locking mechanism, hydraulic pressure is needed to clamp...and to unclamp!

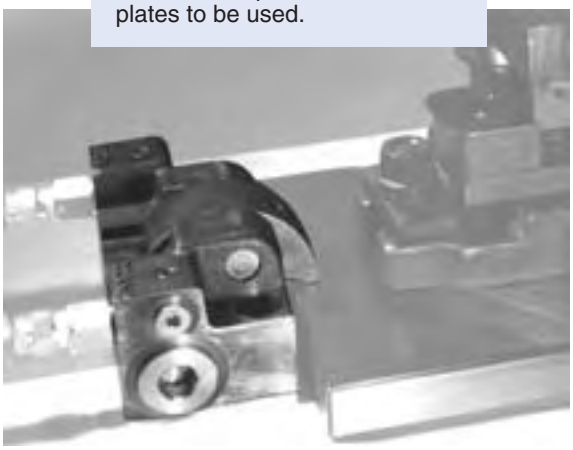


StayLock Block Clamp on a Tombstone

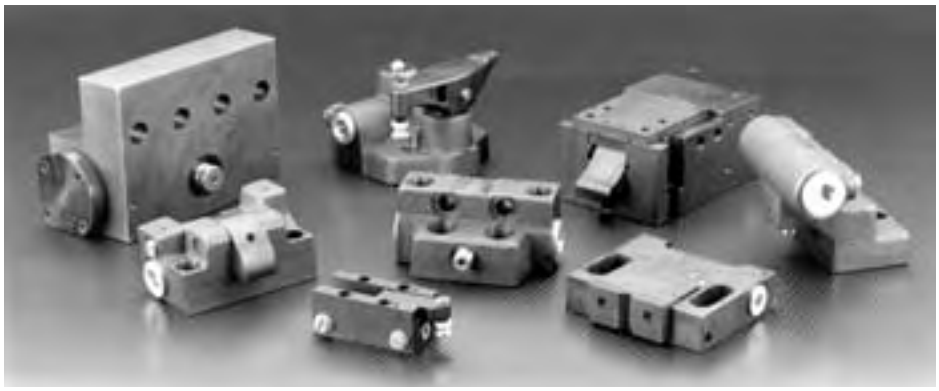
The Block Clamp is a multi-purpose utility clamp, utilized, as any StayLock Clamp can be, in either the horizontal or vertical clamping positions. In this application, the Block Clamp (at the top of the tombstone) is replacing step blocks and tedious manual clamping.

StayLock Rocker Clamp Holding a Die

The Rocker Clamp is ideal for quick change clamping on dies, molds, and fixture plates where a standard height subplate is employed. Because of the unique body design of the Rocker Clamp, it can easily be adapted with a T-slot nut mounted on the bottom. This enables the Rocker Clamp to slide in and out, making part removal easier, plus it allows for various widths of subplates or fixture plates to be used.



Staylock Clamps



Positive Mechanical Lock

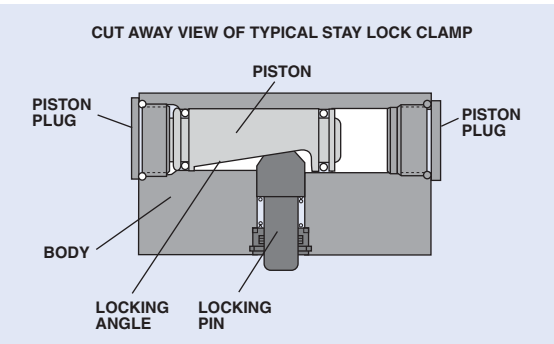
Jergens StayLock Clamps offer a breakthrough in clamping flexibility! These mechanically locked clamps are activated and released by hydraulic pressure. Once activated, the clamps automatically lock and will not release until hydraulic pressure is applied to the release port.

Once clamped, you can:
- disconnect your hydraulic power source
- move the fixture, with the part still clamped, to other machines
- not worry about your part unclamping due to hydraulic power failure, a cut line, or leaks in the hydraulic system

Patented positive mechanical lock minimizes:
- reclamping
- set-up costs
- parts accidentally becoming unclamped

Jergens StayLock Clamps can provide solutions to many clamping problems. They are designed for use on:
- palletized fixtures
- transfer machines
- machining centers
- any power clamping application
- quick change on molds and dies

Use the StayLock Clamps with Jergens Air-Operated Hydraulic Pumps (described on page 3.51-3.52). One Hydraulic Pump can service several machines because there is no need to maintain hydraulic pressure when clamping StayLock Clamps. Once StayLock Clamps are in a clamping position, the hydraulic hoses can be disconnected, and the part will remain clamped indefinitely. Once the machining cycle is completed, applying hydraulic pressure to the release port unclamps the part.



Most Commonly Asked Questions

Q. Does the StayLock Clamp lose pressure?

A. No, it does not. Because of a patented mechanical lock, a positive locking wedge is activated when pressure is applied to the clamp port. There is no need to maintain hydraulic pressure; therefore, the power source can be disconnected. There is no pressure to lose.

Q. How do I lock StayLock Clamps in place?

A. Applying hydraulic pressure to the clamp port of a StayLock Clamp drives two internal wedges together. The two wedges form a mechanical lock and will not retract until hydraulic pressure is applied to the release port.

Q. Can these clamps be used with air?

A. No. Air pressure does not apply enough force to lock or unlock the internal wedge mechanism.

Q. How much hydraulic pressure is needed to activate the clamps?

A. The minimum pressure required on most of the StayLock Clamps is 500 psi. The minimum and maximum pressure requirements are specified for each clamp on the following pages.

Q. What is needed to set up a hydraulic system using StayLock Clamps?

A. Typically, a system includes several clamps (depending on individual requirements); a power source; a four-way, three-position, zero-leakage control valve (see page 3.54); and hydraulic hose and fittings. There is no need for an accumulator in the system.

Q. Can an air/oil booster be used with StayLock Clamps?

A. No. Boosters typically are used with standard hydraulic clamps because pressure is needed to activate and maintain the clamp in the clamping position. With a Booster set-up, there is only one hydraulic line that provides the pressure needed. StayLock Clamps need pressure to clamp and unclamp; therefore, a Booster would not provide the needed pressure to the release port to unclamp the part.

Q. Can I get technical assistance from Jergens when designing a StayLock Clamping system?

A. Yes. Jergens will assist you by providing a CAD schematic drawing of your system, including all of the part numbers needed to order the system.

For assistance, call 1-800-JERGENS (537-4367).

Staylock Clamps

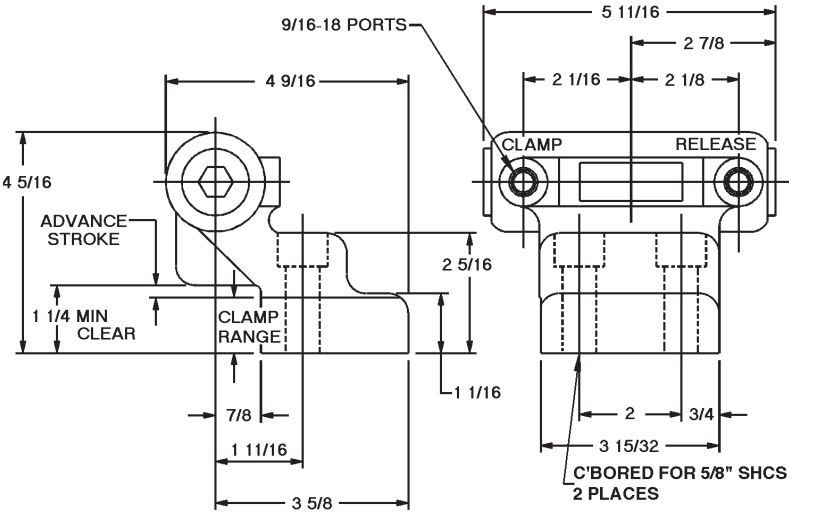
Die/Mold Clamps

Four models of Die/Mold Clamps are available. Part number 62801 provides 4000 lbs. of output pressure. It is only available in the T-Slot mounting style. The T-Slot mount allows the clamp to be mounted on a machine base via a T-Slot nut, thus allowing the clamp to slide to and from the workpiece. Part number 62802 provides 10,000 lbs. of clamping force. It employs standard mounting bolts for permanent mounting to the machine base, subplate, or fixture plate. Part number 62803 also provides 10,000 lbs. of clamping force. This clamp is provided with a Sensor Interlock which, when wired to a control panel, indicates whether the clamp is locked or not. Sensor Interlocks are available as an accessory for part numbers 62801 and 62802. Part number 62804 is similar to part number 62802, except it has a greater clamping range. It does not have mounting holes for the Sensor Interlock. Die/Mold Clamps are available with Viton® seals for high temperature applications. Ideal for:

- Injection molding machines
- Die casting machines
- Punch presses
- Machining centers



U.S. Patents:
No. 4,511,127
No. 4,471,293



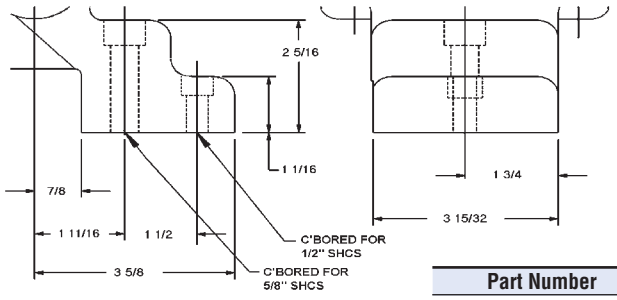
Part Number
62802

Part Number
62803 with Sensor Interlock

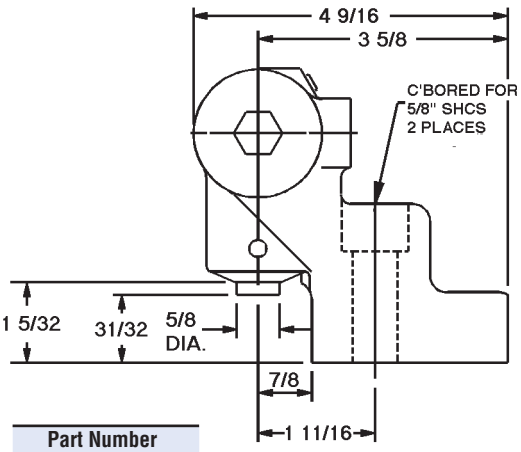
Specifications

Part Number	62801	62802	62803	62804
Operating Volume (cu. in.)	1	1	1	1
Min Operating Pressure (psi)	500	500	500	500
Max Operating Pressure (psi)	2000	5000	5000	5000
Force to Pressure Ratio	2:1	2:1	2:1	2:1
Clamping Range (in.)	1.03/.95	1.03/.95	1.03/.95	1.15/.97
Max Output Force (lbs)	4000	10000	10000	10000
Weight (lbs)	9.5	9.5	9.5	9.5

- Available in FixturePro™ Design Software



Part Number
62801 T-Slot Style

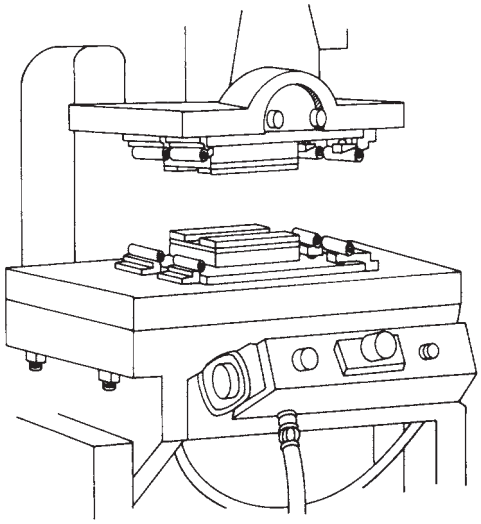


Part Number
62804

Staylock Clamps

Die/Mold StayLock® Clamp Applications

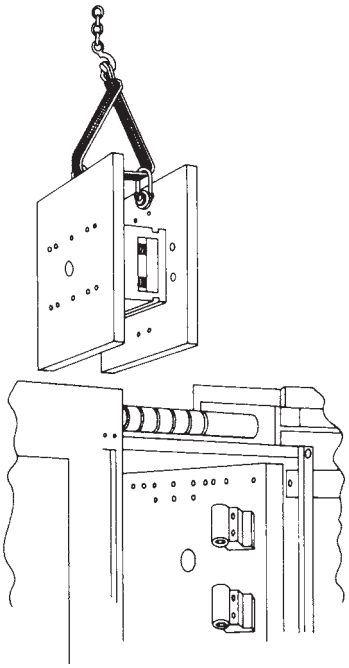
Punch Press



The Die/Mold Clamp is mounted (either permanently, or by using T-Slots) on the injection molding machine platen. The mold is mounted on subplates. By standardizing on subplates with the same height and width, several different molds can be used on one injection molding machine. The mold is lowered into the machine, the Die/Mold Clamps are activated, hydraulic connections are removed, and the job is run. A Sensor Interlock can be added to indicate to the operator that the Die/Mold Clamp is clamping. If molds are used that have a clamping slot, either a StayLock Retractable Clamp or a StayLock Rocker Clamp can be used.
Die/Mold Clamps are mounted on the Punch Press table either permanently or by using T-Slots. The top and bottom dies are slid into place, hydraulic connections are removed and the job is run.

At changeover time, the hydraulic quick disconnect fittings are reconnected, the die is removed and replaced with the next die, and the process is repeated. In some applications on punch presses, the Die/Mold Clamp may create a shut height problem. If this is the case, the StayLock Rocker Clamp is an excellent substitute.

Injection Molding Press



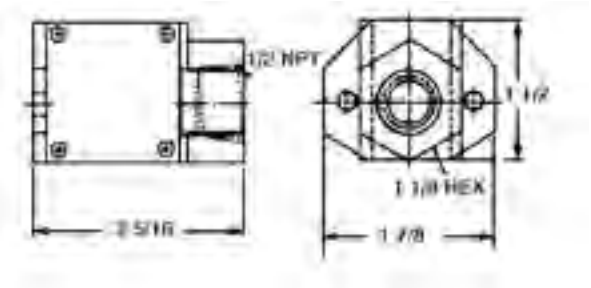
Sensor Interlock



- Available in FixturePro™ Design Software

The Sensor Interlock (62816) can be mounted on the Die/Mold Clamp and is used to indicate that the clamping piston is engaged or disengaged. Because of the minimal movement of the clamping piston, some applications may require more than a visual method of determining if the Die/Mold Clamp is in the clamping position. The Sensor Interlock is a normally open, 110 volt, 6 amp switch. It is supplied with a six foot long wire and mounting hardware to mount in the control panel of a machine. The switch contacts on the Sensor Interlock will only close when the clamping piston is within the clamping range of the Die/Mold Clamp. It is included with Part Number 62803.

Part Number
62816

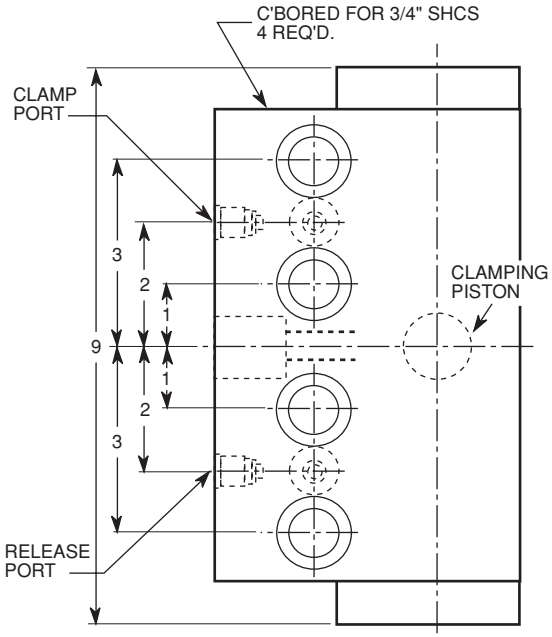


Staylock Clamps

Large Capacity Mold Clamp

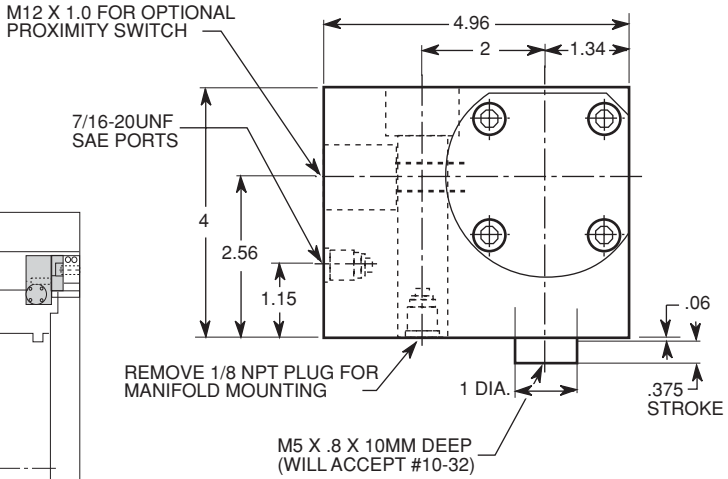


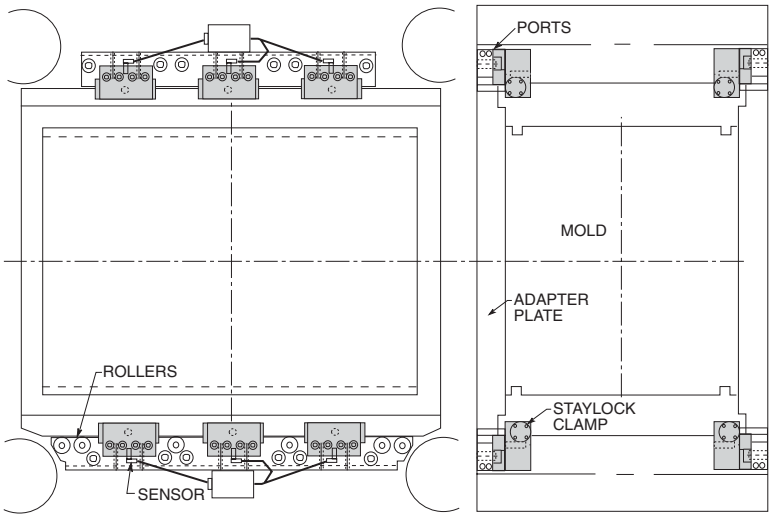
The Jergens Large Capacity Mold Clamp is used on molding machines and wherever heavy clamping forces are required. It has a clamping force of 28,000 lbs. The clamp can be mounted either individually or in series on a manifold.



Specifications

Part Number	62806
Operating Volume (cu. in.)	7
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	3500
Force to Pressure Ratio	8:1
Clamping Stroke	.38
Maximum Output Force (lbs.)	28,000
Weight (lbs.)	43





Typical StayLock Manifold Layout on Injection Molding Machine



Part Number
62817

Proximity Switch

The Proximity Switch indicates the clamp's piston position. A single switch is required for each Large Capacity Clamp. Stainless steel construction with 16' cord, 10-30 VDC.

Staylock Clamps

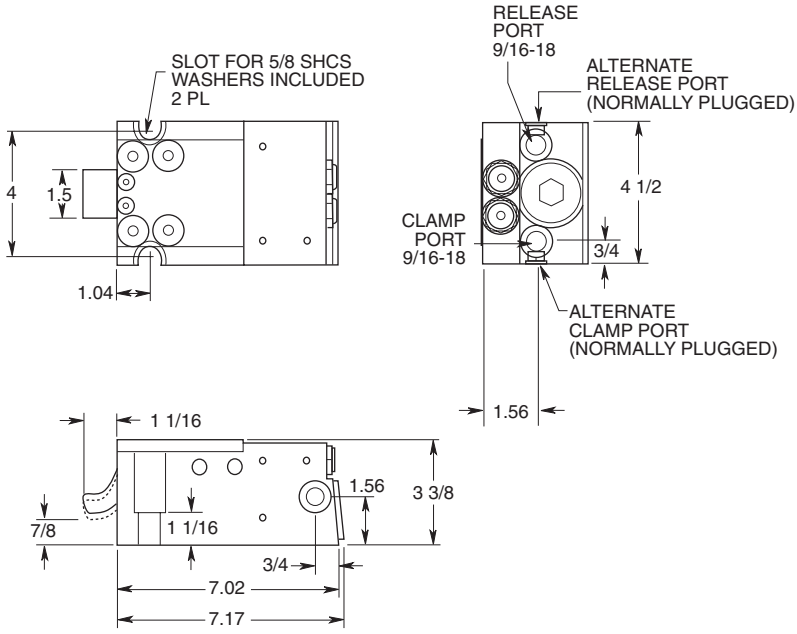
Retractable Clamps



U.S. Patents:
No. 4,511,127
No. 4,471,293

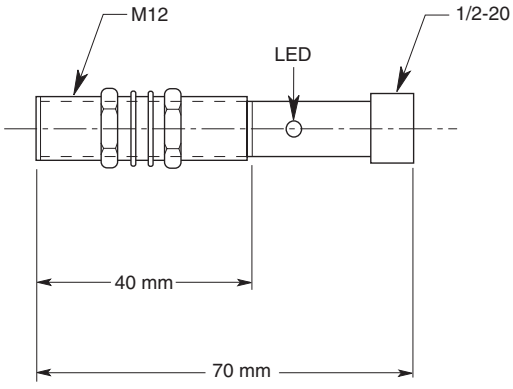
Jergens StayLock Retractable Clamps are designed to allow quick change of molds in injection molding machines and die casting machines. The locking arm, which retracts into the clamp body for easy loading and unloading of a mold, is adaptable to clamp many standard mold slots. The Retractable Clamp is double acting and includes alternate clamp and release ports for easier hydraulic plumbing set-up. A Proximity Switch, which indicates the Retractable Clamp is in the extended or retracted position, is also available (see below).

High temperature version available, contact Technical Sales for more information



Specifications

Part Number	62852
Operating Volume (in^3)	1.6
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	2500
Force to Pressure Ratio	2:1
Clamping Stroke	.13
Maximum Output Force (lbs.) @ 2500 (psi)	5000
Weight (lbs.)	23



Part Number
62857

Proximity Switch

The Proximity Switch senses the position of the clamping arm within the Retractable Clamp. Two Proximity Switches are required for each clamp. They have a stainless steel housing and are mounted in the Retractable Clamp. One Switch senses the arm extended; the other, the arm retracted. A sixteen foot cord is included with each Proximity Switch, 35-250 VAC.

Staylock Clamps

Rocker Clamps

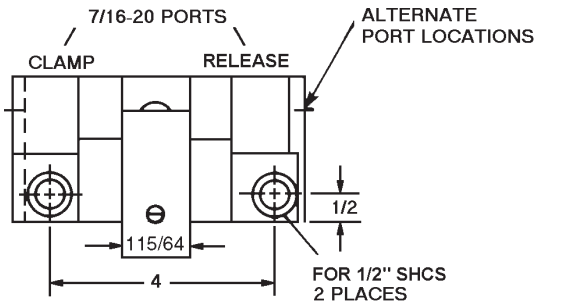


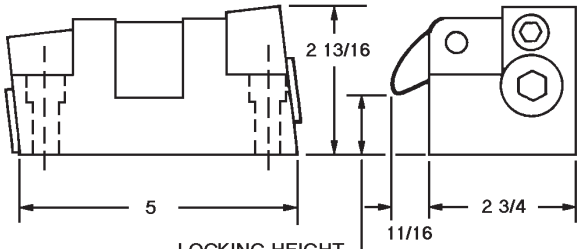
Part Number
62841



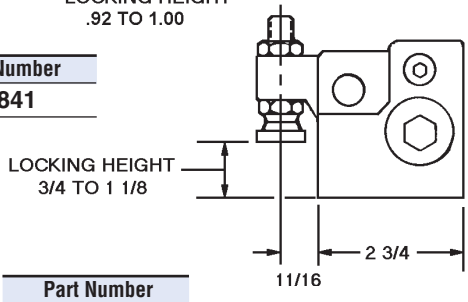
U.S. Patents:
No. 4,511,127
No. 4,471,293

Part Number
62842





Part Number
62841



Part Number
62842

Compact design and dual mounting capability make the Jergens StayLock Rocker Clamp versatile for many applications. The Rocker Clamps come in two styles. Part number 62841 is typically used with standard height subplates upon which the die, mold, or fixture plate is mounted. Part number 62842 has an adjustable spindle which adapts to the height of the workpiece. Both styles of Rocker Clamps have drilled and tapped holes on the bottom of the clamp for mounting T-Slot nuts for use on slotted tables. This method of mounting allows the operator to slide the clamp to and from the workpiece for easier part loading and unloading. Bolt down mounting holes are also provided. For mounting applications, contact the Jergens Technical Sales Department.

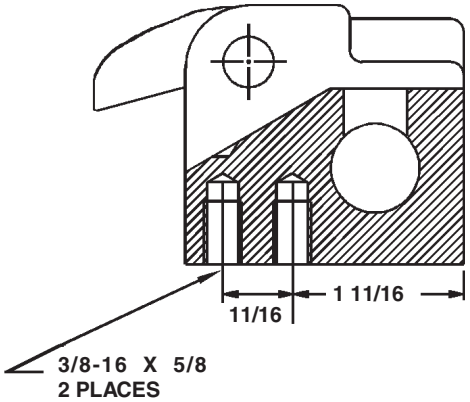
Ideal for:

- Holding dies on punch presses
- Molds on injection molding machines
- Dies on die casting machines
- Use on hydraulic fixtures
- Available in FixturePro™ Design Software

Specifications

Part Number	62841	62842
Operating Volume (cu. in.)	.67	.67
Minimum Operating Pressure (psi)	500	500
Maximum Operating Pressure (psi)	2,000	2,000
Force to Pressure Ratio	1.9:1	1.9:1
Clamping Range (in.)	.92 to 1.00	.10*
Maximum Output Force (lbs.) @2,000 psi	3,800	3,800
Weight (lbs.)	7.5	7.6

*After adjustment for height.



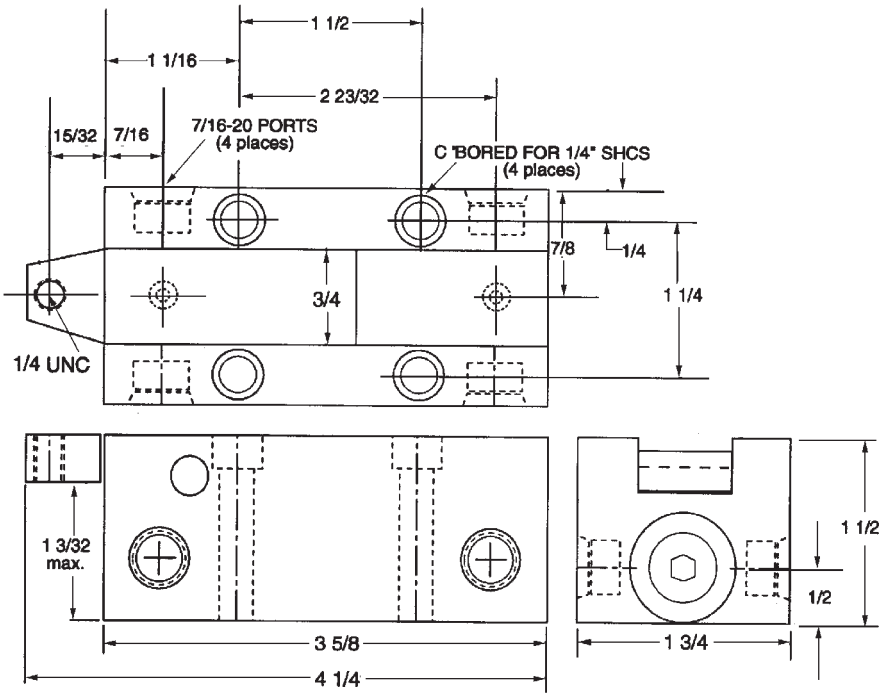
Mounting holes for T-Slot applications.

Staylock Clamps

Mini-Rocker Clamps



The StayLock Mini-Rocker Clamp is designed for small parts workholding. Like the other StayLock Clamps, the Mini-Rocker can be mounted at any angle. Clamping forces range from 200 lbs. to 700 lbs. The Mini-Rocker can be used as a single clamp; or because of its unique port arrangement, it can be manifold mounted.





Socket Toggle Screw

Part Number
33302

Set Screw/Jam Nut not included

See Page 6.16



Optional Toggle Pad
(Shown in picture)

Part Number
43502

See Page 6.17

Specifications

Part Number	62845*	62846**
Operating Volume (cu. in.)	.08	.08
Minimum Operating Pressure (psi)	500	500
Maximum Operating Pressure (psi)	3,500	3,500
Force to Pressure Ratio	.2:1	.2:1
Clamping Range	.09	.09
Clamping Force @ 3500 psi	700 lbs	700 lbs
Clamping Force @ 1000 psi	200 lbs	200 lbs
Weight (lbs.)	2.1	2.1

* Includes four plugs & two O-Rings, SAE style, for manifold mounting

** Includes two plugs

Staylock Clamps

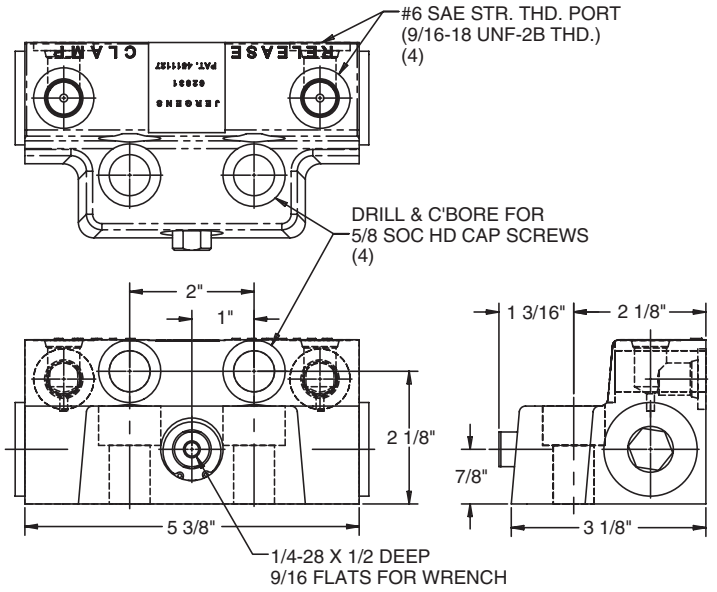
Block Clamps

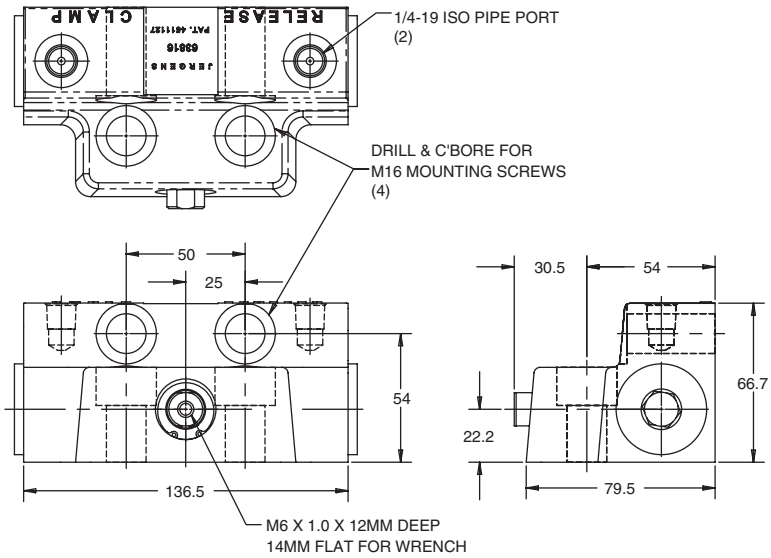


U.S. Patents:
No. 4,511,127
No. 4,471,293

Jergens StayLock Block Clamps are multi-purpose utility clamps designed for many versatile applications. Block Clamps may be mounted for either vertical or horizontal clamping. They may be used with strap clamps or similar workholding devices for maximum adaptability (see illustration below). The Block Clamp plunger has a 1/4 - 28 thread on the I.D. for use with various contact points.

• Available in FixturePro™ Design Software





Specifications — Inch

Part Number	62831
Operating Volume (cu. in.)	1.1
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	5,000
Force to Pressure Ratio	2:1
Clamping Stroke (in.)	.18
Maximum Output Force (lbs.) @ 5,000 psi	10,000
Weight (lbs.)	6.5

Specifications — Metric

Part Number	63816
Operating Volume (cu. cm)	18
Minimum Operating Pressure (kg/cm²)	14
Maximum Operating Pressure (kg/cm²)	350
Force to Pressure Ratio	12.8:1
Clamping Stroke (mm)	4.7
Maximum Output Force (kg) @ 351(kg/cm²)	4,500
Weight (kg)	2.93

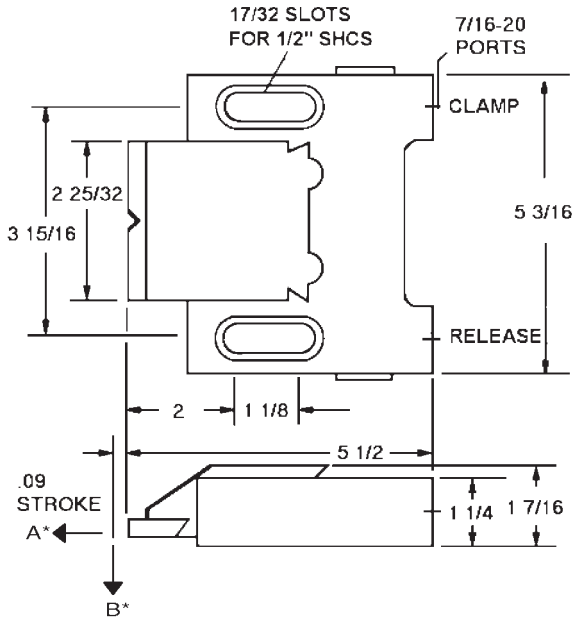
Staylock Clamps
Toe Clamps



Low Toe Style

Part Number
62811

U.S. Patents:
No. 4,511,127
No. 4,471,293



Specifications

Part Number		62811
Part Number		62812
Operating Volume (cu. in.)		.5
Minimum Operating Pressure (psi)		500
Maximum Operating Pressure (psi)		3,000
Hydraulic	Force in Pounds	
Pressure (psi)	A*	B*
1,500	1,200	800
3,000	2,500	1,800
Clamping Stroke		.09
Maximum Output Force (lbs.) @3,000 psi		2,500
Weight (lbs.)		6.7

- Two special washers which prevent damage by the cap screws are included with each toe clamp. To order washers separately, order Part Number 60636.
- Toe is moved back by spring.
- Available in FixturePro™ Design Software



High Toe Style

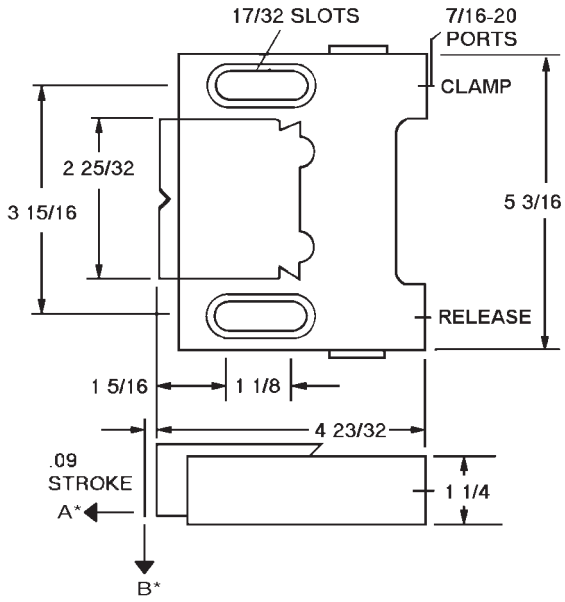
Part Number
62812

Jergens StayLock Toe Clamps are designed for edge gripping of parts when the clamp height must be kept at a minimum, such as in a milling operation. They are available in Low Toe (62811) or High Toe (62812) styles.

Toe Clamps provide two directional clamping forces: one pushes the work-piece against a positive stop, the other pushes it down against the table or fixture. A brass or steel insert is available on the low toe style Toe Clamp. The inserts must be ordered separately.

IMPORTANT: Jergens 62811 Toe Clamp is supplied without toe insert. Please order one of the inserts below.

Part Number	Insert
60633	Steel
60632	Brass



Staylock Clamps

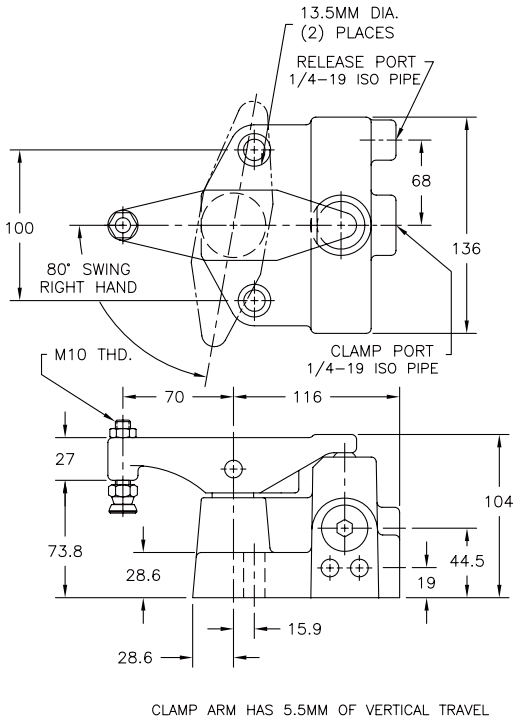
Swing Clamps (Metric)



U.S. Patents:
No. 4,511,127
No. 4,471,293

Jergens StayLock Swing Clamps are designed to be used when accessible loading and unloading of a workpiece is required. The clamping arm rotates 80° away from the workpiece. The Swing Clamp operates in any position and is sealed so it can be used with coolant applications.

Important: When using the High Volume Air-Powered Hydraulic Pumps (61761 and 61762), the Flow Limit Valve (shown below) must be used to limit the flow of hydraulic oil going to the clamp port of the Swing Clamp. This will extend the life of the clamp by minimizing the clamp arm from slamming into the clamping position.



CLAMP ARM HAS 5.5MM OF VERTICAL TRAVEL

Specifications

Part Number (Right Swing)	63801
Part Number (Left Swing)	63802
Operating Volume (cm^3)	20.5
Minimum Operating Pressure (bar)	6*/7
Maximum Operating Pressure (bar)	200
Force to Pressure Ratio	8.5:1
Clamping Stroke (mm)	5.5
Maximum Output Force (kN) @ 200 bar	18
Effective Piston Area (cm^2)	8.6
Weight (kg)	5.5

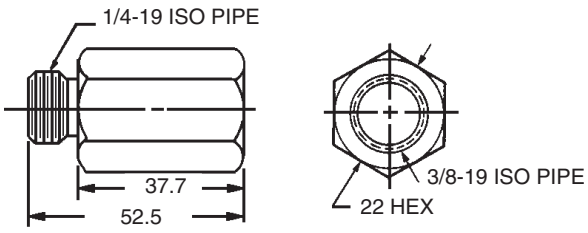
*5.4 bar to swing, 7 bar to clamp.

The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. It is recommended that the Flow Limit Valve be used with the High Volume Air-Powered Hydraulic Pump (61761 or 61762). It is not needed with the lower volume "Shoebox" Pumps (61755 or 61756).

Flow Limit Valves



Part Number
63603



• Available in FixturePro™ Design Software

Staylock Clamps

Swing Clamps



U.S. Patents:
No. 4,511,127
No. 4,471,293

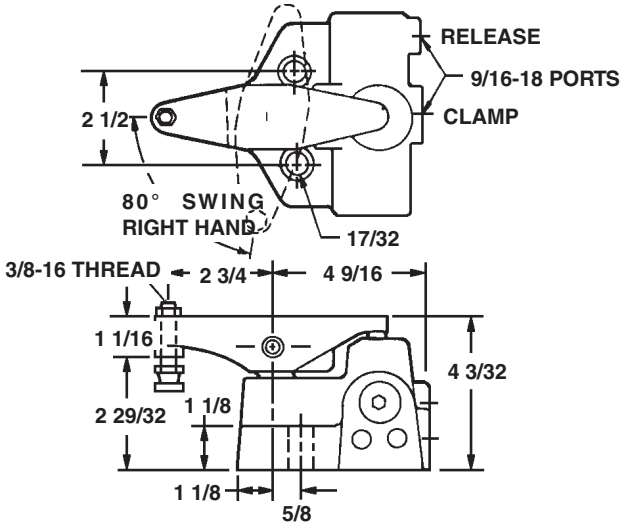
Specifications

Part Number (Right Swing)	62823
Part Number (Left Swing)	62824
Operating Volume (cu. in.)	1
Minimum Operating Pressure (psi)	80*/300
Maximum Operating Pressure (psi)	3,000
Force to Pressure Ratio	1.3:1
Clamping Stroke (in.)	.18
Maximum Output Force (lbs.) @ 3,000 psi	3,900
Weight (lbs.)	11

*80 psi to swing, 300 psi to clamp.

Jergens StayLock Swing Clamps are designed to be used when accessible loading and unloading of a workpiece is required. The clamping arm rotates 80° away from the workpiece. The Swing Clamp operates in any position and is sealed so it can be used with coolant applications.

Important: When using the High Volume Air-Powered Hydraulic Pumps (61761 and 61762), the Flow Limit Valve (shown below) must be used to limit the flow of hydraulic oil going to the clamp port of the Swing Clamp. This will extend the life of the clamp by minimizing the clamp arm from slamming into the clamping position.



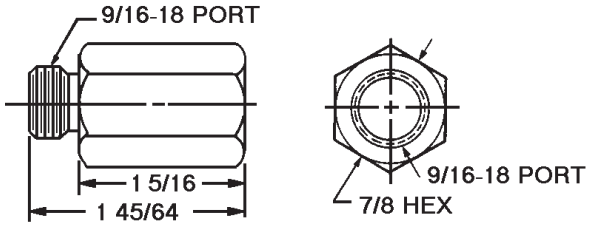
Clamp Arm Has 3/16" Of Vertical Travel

The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. It is recommended that the Flow Limit Valve be used with the High Volume Air-Powered Hydraulic Pump (61761 or 61762). It is not needed with the lower volume "Shoebox" Pumps (61755 or 61756).

Flow Limit Valves



Part Number
61648



• Available in FixturePro™ Design Software

Pre-Fill Boosters



Patent No. 3839866

- **Self Bleeding**
- **Easy View Reservoir**
- **15:1, 30:1, and 54:1 Boost Ratios**

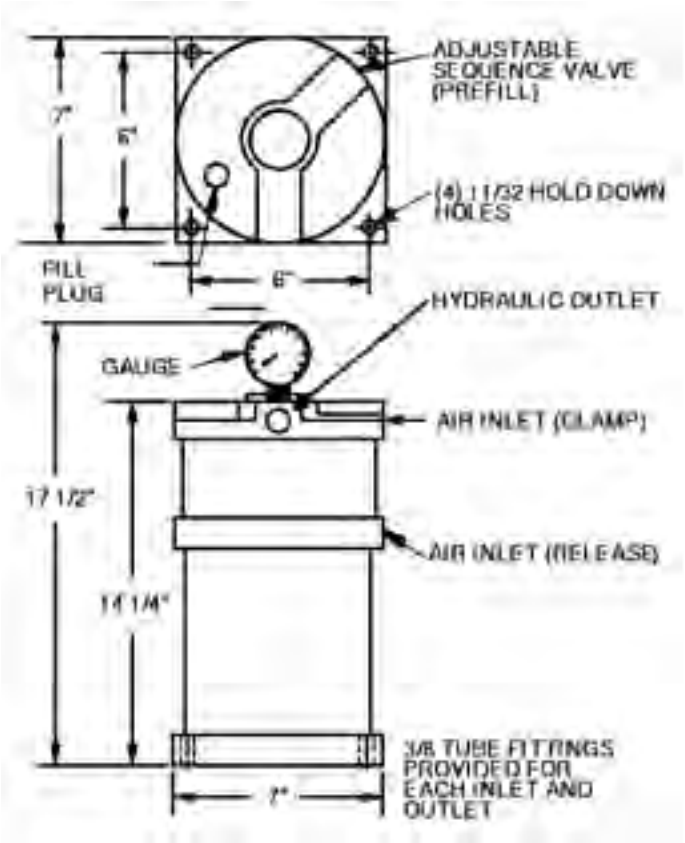
These units offer many more advantages than conventional boosters, while maintaining the same basic simplicity. The pre-fill booster has two automatic cycles. The first cycle pre-fills the work circuit using low pressure with a large reservoir to provide volume. The second cycle then automatically provides high pressure, as needed. These units also provide automatic bleeding of the work circuit. This self-bleeding feature negates the need to "bleed the lines" after it is set up.

The pre-fill booster is ideal for any general use production system requiring maximum efficiency with minimum effort! Pre-fill boosters must be used in the upright (vertical) position.

- Installation Kits Available. See Page 3.48.
- See page 3.45 for Rapid Exhaust and Rapid Advance Kits, Handles, and Mounting Bases.

Specifications

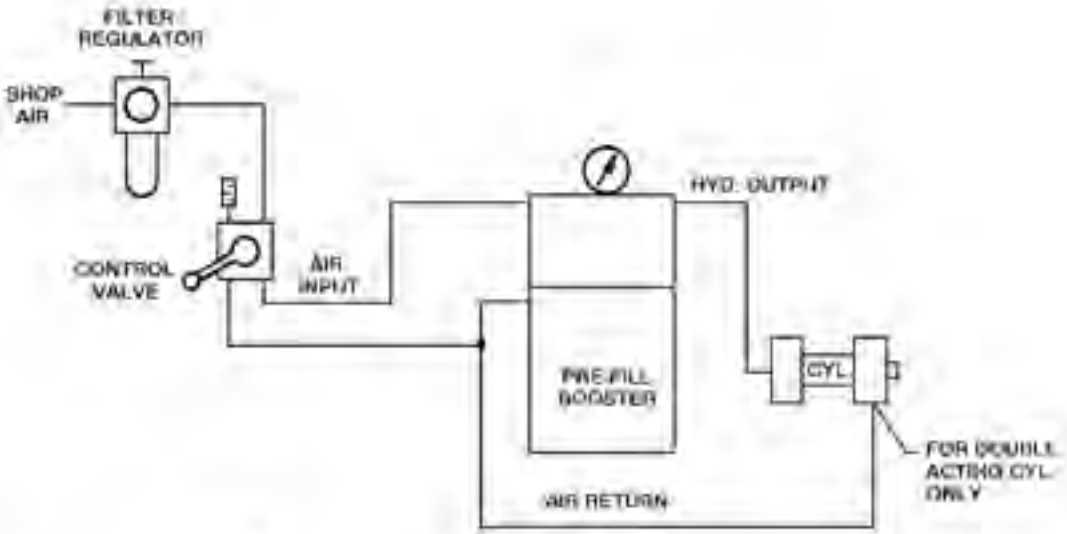
Part Number	61704	61705	61706
Reservoir Capacity (cu. in.)	50	50	55
High Pressure Volume (cu. in.)	7 1/2	3 3/4	2
Minimum Input (psi)	40	40	40
Maximum Input (psi)	125	125	75
Boost Ratio	15:1	30:1	55:1
Maximum Output (psi)	1875	3750	4100
Weight (lbs.)	28	28	28



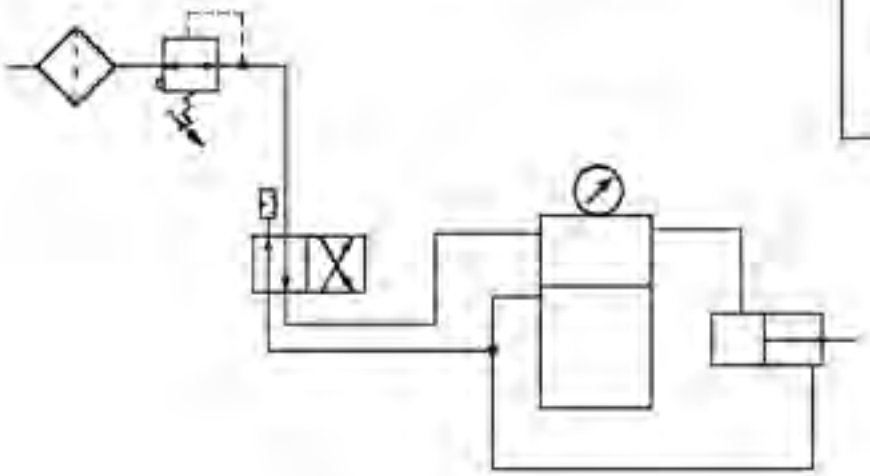
Boosters

Circuit Diagrams

Graphic



Schematic



Accessories

Rapid Exhaust and Advance Kits



Rapid Exhaust Part Number	Rapid Advance Part Number
62214	62215

These kits include everything needed to convert a standard Pre-Fill Booster to high speed operation. Fittings, pre-bent tubing, and the quick exhaust valve are included.

Valve Only
61641

Handle



Part Number
62621

Convert your Pre-Fill Booster to a portable power source. The 62621 handle is for use when the hydraulic gage is mounted on the top of the booster.

Standard Boosters



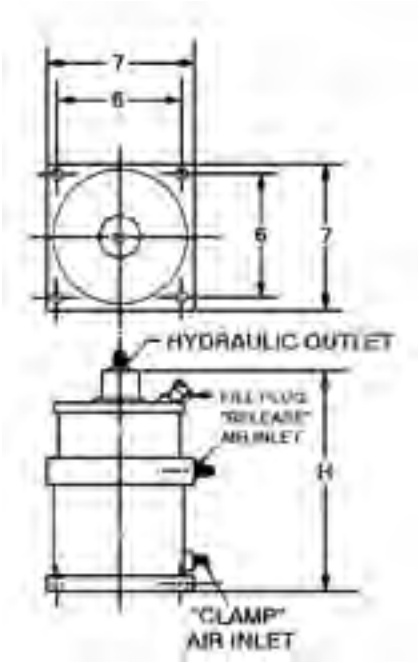
Standard Boosters are ideal for permanent fixtures, special machines or O.E.M. applications.

The volume of oil available to operate the work circuit depends upon the high pressure capacity of the booster. Work circuits using standard boosters require manual bleeding.

- Easy to view reservoir
- 15:1 and 30:1 boost ratios
- May be mounted vertically or horizontally

Specifications

Part Number	61709	61710	61711
Reservoir Capacity (cu. in.)	15	15	18
High Pressure Volume (cu. in.)	4	7 1/2	3 3/4
Minimum Input (psi)	20	20	20
Maximum Input (psi)	125	125	125
Boost Ratio	15:1	15:1	30:1
Maximum Output (psi)	1875	1875	3750
Weight (lbs.)	20	24	22
Height (H)	10 7/16	14 7/16	14 7/16



3/8" TUBE FITTING PROVIDED FOR EACH INLET AND OUTLET PORT.

Accessories

Mounting Bases



Part Number
60973

Base 60973 can be used to mount Jergens Boosters 61709 thru 61711 in a horizontal position.

Rapid Exhaust Kit



Part Number
62215

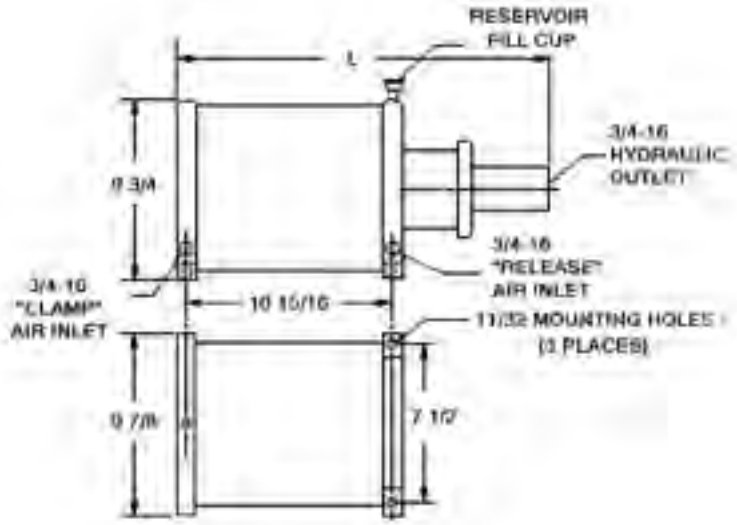
The Rapid Exhaust Kit includes a valve, muffler, and fittings needed to convert Booster numbers 61709 thru 61711 to high speed operation.

Valve Only
61641

Installation Kits See Page 3.48

High Pressure/Volume Boosters





- Available in 26:1, 37:1, and 64:1 boost ratios.
- High output pressure
- High pressure volume

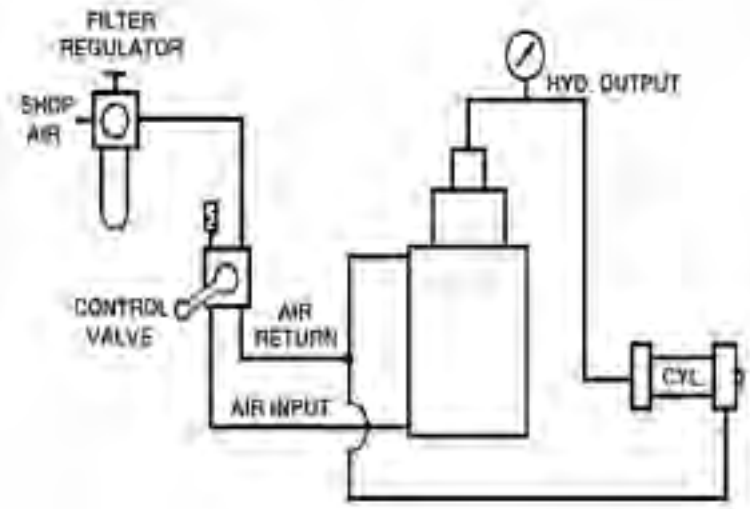
Unit must be used only in the **horizontal position**

Specifications

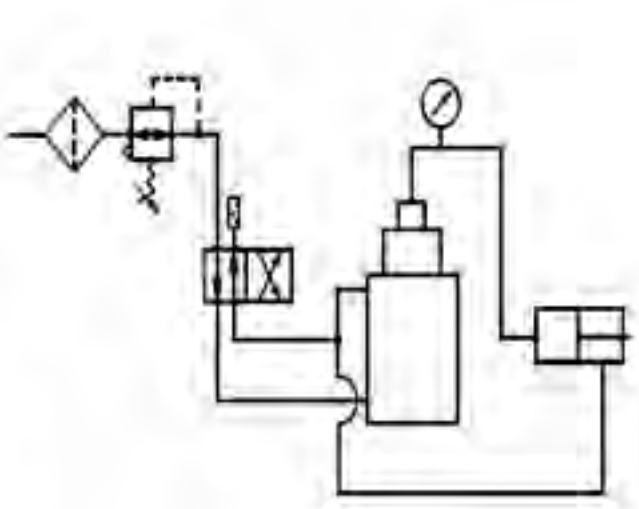
Part Number	61720	61721	61722
Reservoir Capacity (cu. in.)	17	17	17
High pressure Volume (cu. in.)	12.9	9.1	5.3
Minimum Input (psi)	10	10	10
Maximum Input (psi)	125	125	125
Boost Ratio	26:1	37:1	64:1
Maximum Output (psi)	3250	4625	8000
Length (L)	19 11/16	19 5/8	19 1/2
Weight (lbs.)	28	28	28

Circuit Diagrams

GRAPHIC



SCHEMATIC



Boosters Installation Kits

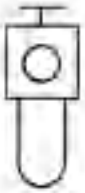
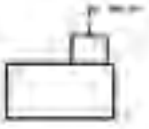
Jergens offers four kits to simplify the installation of your Jergens booster. The kits may be used with any Jergens booster.

62203 — This kit is recommended for most applications. The kit includes everything needed to connect your air line to the booster and everything needed to connect the booster to your fixture.

62204 — This kit should be used when the protection of a pilot check valve is not required, as in punching or staking applications.

62205 — This kit is the same as kit 62203 except the hand valve has been eliminated. Use this kit when the system will be activated by a foot valve, solenoid or pilot operated valve.

62206 — This kit should be used for punching or other applications where no check valve is required and the system will be activated by a foot valve.

							
Filter/ Regulator 61617 (1)	4-Way Hand Valve 61615 (2)	Muffler 62613 (3)	Air Hose (18 Ft.) 61108 (4)	Pilot Check Valve 61629 (5)	Hydraulic Hose (6 Ft.) 61205 (6)	Quick Disconnect Couplings 61915 61965 (7)	Fittings as Req'd. (8)
See Page 3.57	See Page 3.58	See Page 3.57	See Page 3.68	See Page 3.62	See Page 3.68	See Page 3.68	

Selection Data

Part Number	Items Included In Kit
62203	1, 2, 3, 4, 5, 6, 7, 8
62204	1, 2, 3, 4, 6, 7, 8
62205	1, 3, 4, 5, 6, 7, 8
62206	1, 3, 4, 6, 8

Jergens recommends the use of a gage kit with any standard booster.



Gage Kit

Part Number	PSI
60711	3000 psi
60712	6000 psi
60713	10000 psi

3 SECOND Clamping Kit



To simplify the installation of Jergens power clamps, Jergens offers its 3 SECOND Clamping Kit. The Kits contain everything required to convert your shop air pressure to hydraulic power for your clamping fixture.

61717 —This kit contains a 61711 booster, control valve, gage, hoses and fittings. This kit should be used for fixtures which will remain on a machine for long periods of time, such as a vise on a milling machine.

61719 —This kit contains a 61705 booster, control valve, filter-regulator, pilot check valve, quick disconnects and all hose and fittings required. This kit should be used on machines where the fixture changes frequently. The 61705 booster eliminates the need to bleed each fixture after it is connected. To change the fixture, simply switch the hydraulic hose from one fixture to the other using quick disconnect fittings.

Selection Data

Part Number	Included in Kit	
	Booster	Accessories*
61717	**61711**	2, 3, 4, 6, 8, 9
61719	**61705**	1, 2, 3, 4, 5, 6, 7, 8
61716	**61710**	2, 3, 4, 6, 8, 9
61718	**61704**	1, 2, 3, 4, 5, 6, 7, 8

*As shown on page 3.44.

Pre-Fill Power Pacs



Jergens Pre-Fill Power Pacs provide a complete portable power source. Everything required to power and control your hydraulic fixture is included. Connect your shop air to the filter/regulator, and your fixture to the hydraulic hose. The self bleeding feature and the hydraulic quick disconnects (provided) make these units the ideal power sources for job shops and production lines.

- Completely Assembled
- Self Contained
- Portable
- Self Bleeding
- Fast Set-Up

Selection Data

Part Number	Included In Power Pac	
	Booster	Accessories*
61714	**61704**	1, 2, 3, 5, 6, 7, 8
61715	**61705**	1, 2, 3, 5, 6, 7, 8

*As shown on page 3.44.

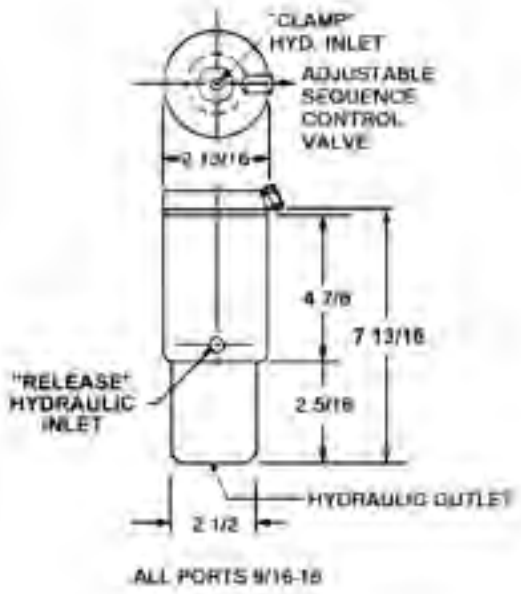
Hydraulic Intensifier



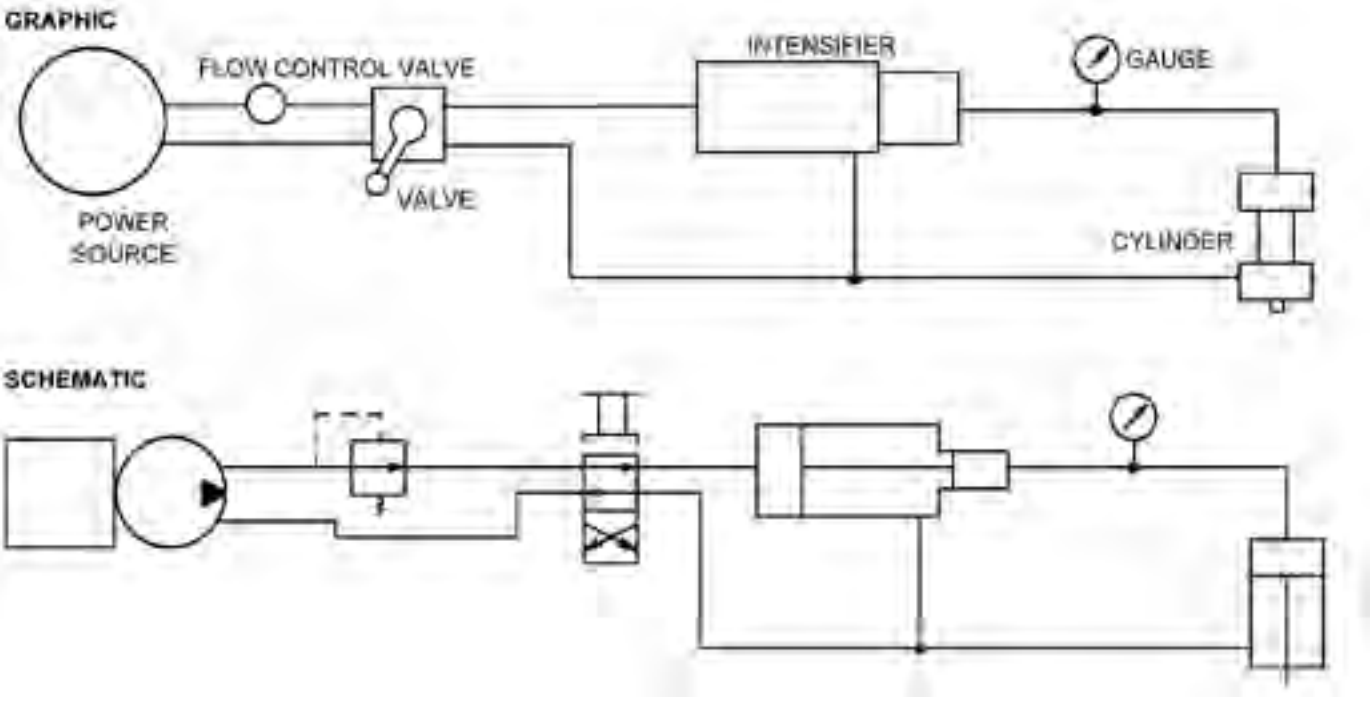
This unit is designed to be used on any machine tool with its own hydraulic system where higher pressures are needed. Jergens Intensifiers will pre-fill your circuit at approximately 200 psi maximum. Once the Intensifier sequences over to its high pressure mode, it will deliver one cubic inch of working oil at seven times the input pressure.

Specifications

Part Number	61701
High Pressure Volume (cu. in.)	1
Minimum Input (psi)	50
Maximum Input (psi)	710
Boost Ratio	7:1
Maximum Output (psi)	5000
Prefill (psi) Adjustments	50-200
Weight (lbs.)	4.4



Circuit Diagrams



Air-Powered Hydraulic Pumps

Shoebox™ Pumps



The "Shoebox" Pump is a low cost, compact unit used on smaller hydraulic circuits. Its small size offers the versatility of mounting on wheels (such as a workcart) and moving the pump from workstation to workstation. Like the High Volume Pump, this pump allows independent control of multiple workstations.

Jergens Air-Powered Hydraulic Pumps are used as a power source to activate Hydraulic Clamps. Shop air is introduced into the Filter/Regulator and converted to hydraulic pressure. These pumps are available in two styles: the High Volume Pump (61761 and 61762) with Boost Ratios of 20:1 and 50:1 and the standard, more compact "shoebox" pump (61755 and 61756) with Boost Ratios of 36:1 and 71:1. The Air-Powered Hydraulic Pumps are easy to use, energy efficient, versatile and affordable. They are completely self-contained and do not require any external reservoirs or motors.

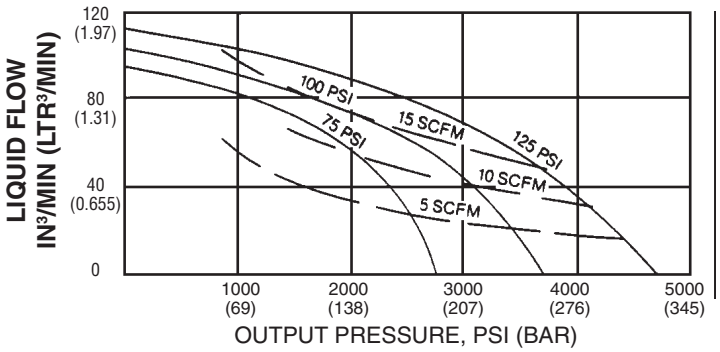
NOTE: See page 3.54 for Valve and Subplate options.

Specifications

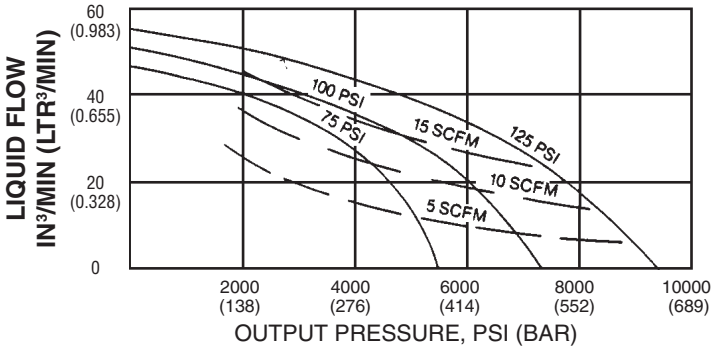
Part Number	61755	61756
Reservoir Capacity (cu.in.)	300	300
Minimum Input (psi)	25	25
Maximum Input (psi)	125	85
Boost Ratio	36:1	71:1
Maximum Output	4500	6000
Free Flow (psi) @100 psi (cu.in./min.)	100	50
Weight (lbs.)	24	24

A ten cubic inch accumulator (Part Number 62601) is available to increase the clamping speed if needed. Contact our Technical Sales Department for details.

61755 Performance Curve*



61756 Performance Curve*



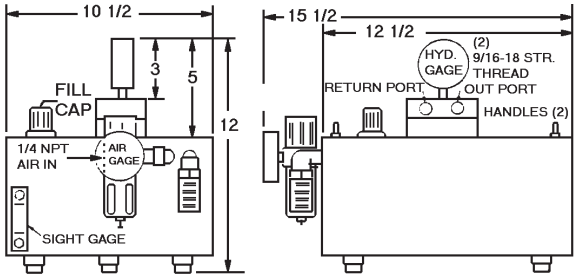
* Air Drive Pressure (SOLID Lines) / Air Drive Flow (DASHED Lines)

Pump Kits

The 61757 Pump Kit includes a 61755 Pump (36:1 Ratio), a 61642 Four-Way, Zero-Leakage Valve, a 61647 Subplate, and a 60703 gauge (6000 psi). The valve, subplate and gauge are supplied mounted on the pump.

The 61758 Pump Kit includes a 61756 Pump (71:1 Ratio), a 61642 Four-Way, Zero-Leakage Valve, a 61647 Subplate, and a 60706 gauge (10,000 psi). The valve, subplate and gauge are supplied mounted on the pump.

Part Number 61757 includes:		Part Number 61758 includes:	
61755	36:1 Pump	**61756**	71:1 Pump
61642	Four-way, zero-leakage valve	**61642**	Four-way, zero-leakage valve
61647	Subplate	**61647**	Subplate
60703	6000 psi gauge	**60706**	10,000 psi gauge



Air-Powered Hydraulic Pumps

Breadbox™ Pumps



High Volume Air-Powered Hydraulic Pump

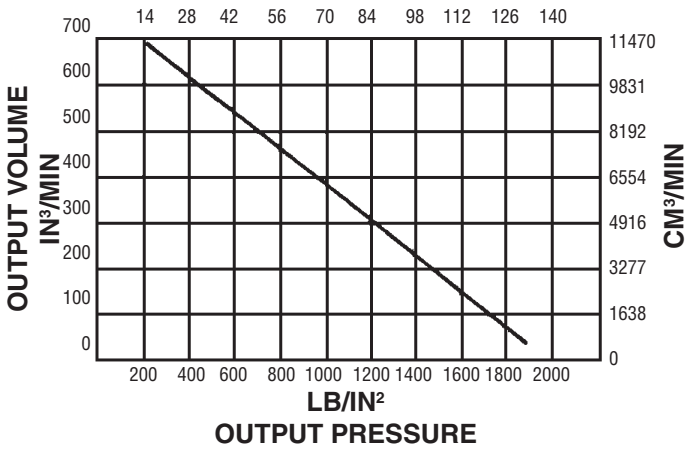
The Jergens High Volume Air-Powered Hydraulic Pump converts standard and accessible low pressure shop air to hydraulic pressure up to 5000 psi. These pumps offer large reservoir capacities and allow independent control of multiple work stations. They are designed to provide high volume output throughout the pump's entire pressure range.

Specifications

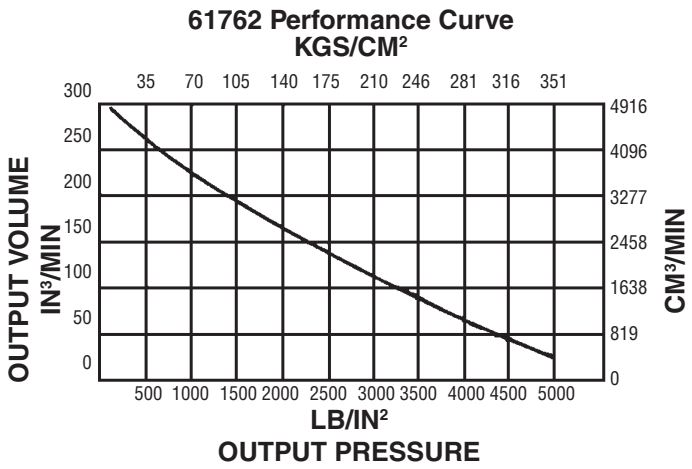
Part Number	61761	61762
Reservoir Capacity (cu.in.)	440	440
Minimum Input (psi)	40	40
Maximum Input (psi)	125	100
Boost Ratio	20:1	50:1
Maximum Output (psi)	2500	5000
Free Flow @ 100 psi (cu.in./min.)	700	300
Weight (lbs)	100	100

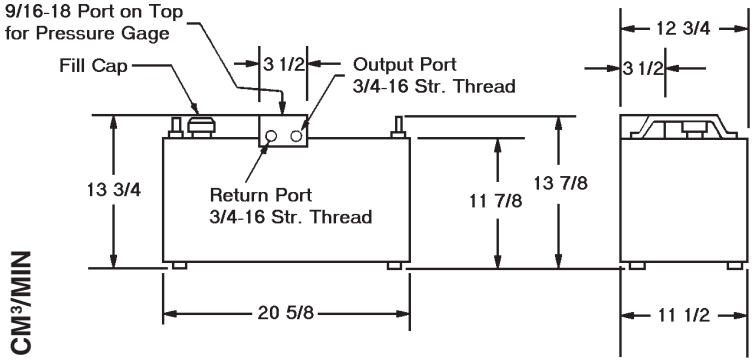
A ten cubic inch accumulator (Part Number 62601) is available to increase the clamping speed if needed. Contact our Technical Sales Department for details.

61761 Performance Curve

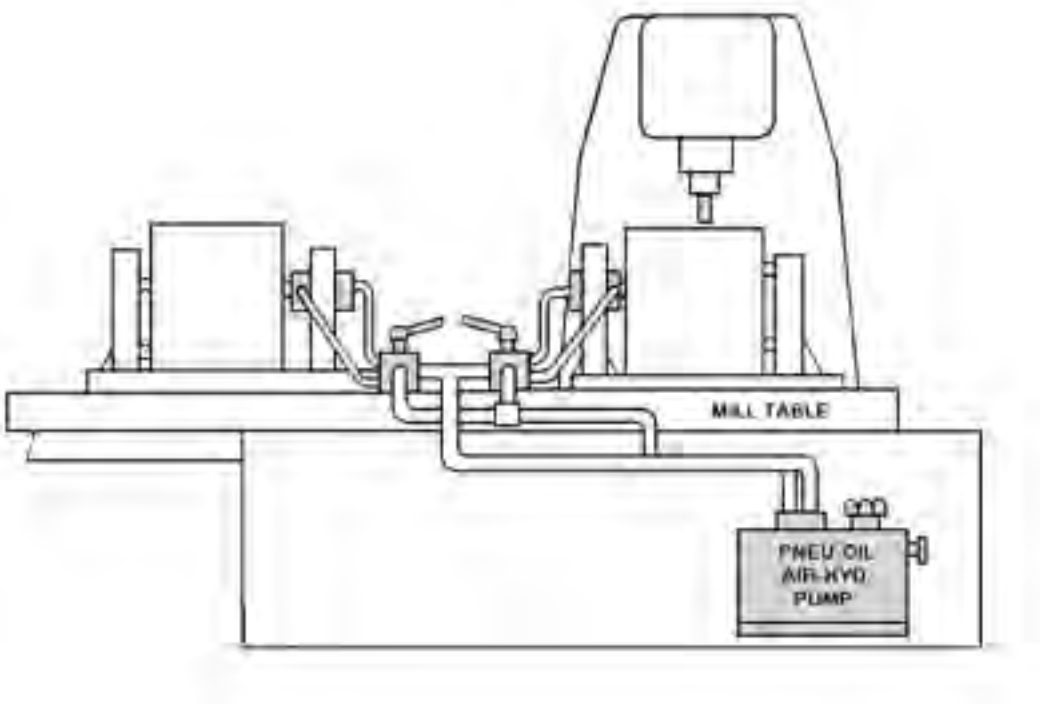


61762 Performance Curve



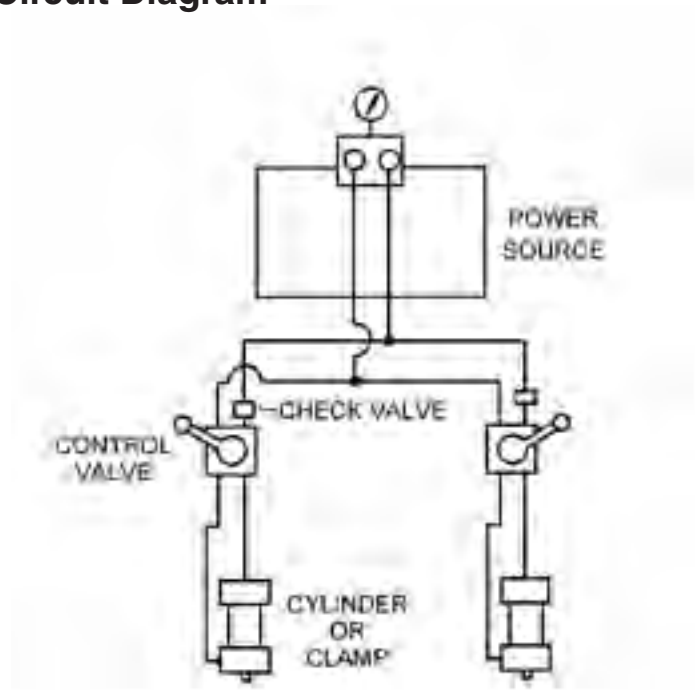


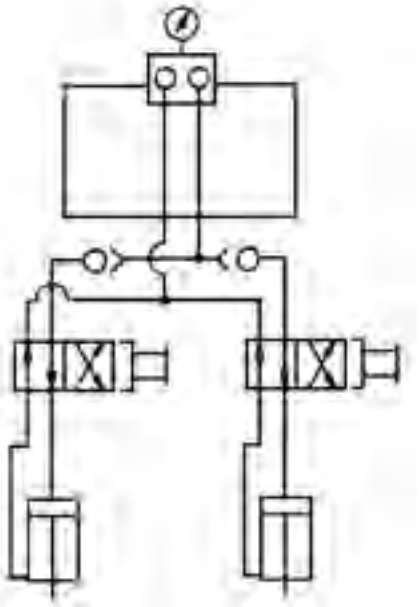
Typical Hydraulic Circuit
Application



Typical Installation — Two Station Milling Operation

Circuit Diagram





Valves and Subplates for Air Powered Hydraulic Pumps

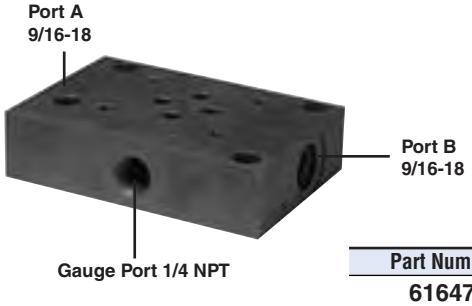
Zero-Leakage Valve



Part Number
61642

For inline applications, use the 61642 Valve mounted on a 61646 Subplate (Order Part Number 61643). This set-up is also recommended for use with High Volume Air-Powered Hydraulic Pumps (61761, 61762) in StayLock and standard applications. For D03 manifold mounting, directly on the pump, the 61647 Subplate and 61642 Valve are recommended. Because the Jergens Air-Powered Hydraulic Pump provides only the necessary hydraulic pressure to clamp and unclamp the StayLock Clamps, the Four-Way, Zero-Leakage Valve is recommended to prevent the unnecessary running of the pump, thus minimizing pump maintenance and wear.

Subplate for Shoebox Pump



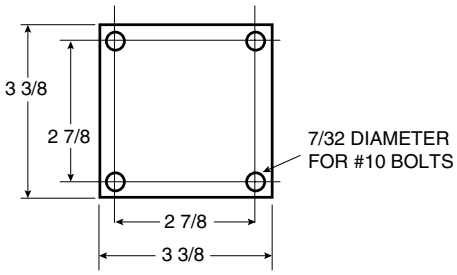
Part Number
61647

- For 61642 (D03 Pad)

Inline Subplate



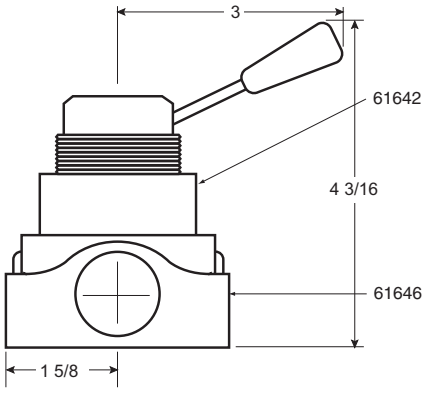
Part Number
61646



Valve and Inline Subplate Assembly



Part Number
61643



Manual Pumps

Lever Type



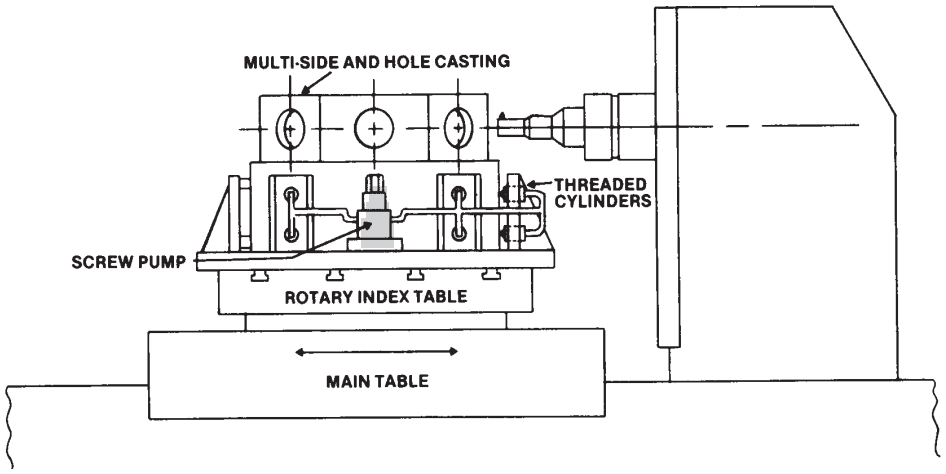
These units offer greater versatility than screw pumps. The pumps have a built-in reservoir check valve and control. Single and two stage models are available. Applications are the same as for the screw pump but allow for larger circuits. Circuits require manual bleeding.

Specifications

Pump Model No.	Usable Oil Cap (Cu. In.)	Max. Working Pressure (psi)	Pump Plunger Dia. (in.)	Pump Plunger Stroke (in.)	Pump Plunger Displace-Ment (cu. in.)	Pump Delivery (Cu. In./ Min.)	Low-Speed By-Pass Pressure (psi)	High-Speed By-Pass Pressure (psi)	Pipe Thread Conn. (in.)	Handle Length (in.)	Length (in.)	Width (in.)	Height (in.)	Weight (lbs)
61736	45	10000	1/2	1	.19	3.6	10500	-	3/8 NPTF	20	24 1/2	5 1/2	6 1/4	16
61737	143	10000	1/2	1	.19	3.6	10500	300	3/8 NPTF	20	23 5/16	7	7 3/8	29

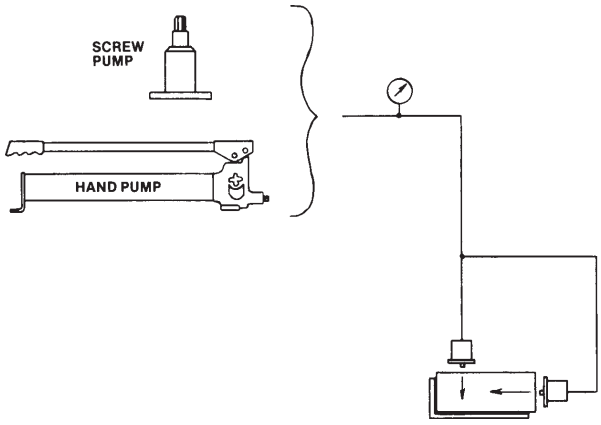
Manual Pumps

Application



Typical Manual Pump application on a boring mill. The clamping is a self-contained set-up for rotary indexing for large multi-side castings.

Circuit Diagram



Pallet Decoupler Valve



Part Number
62605

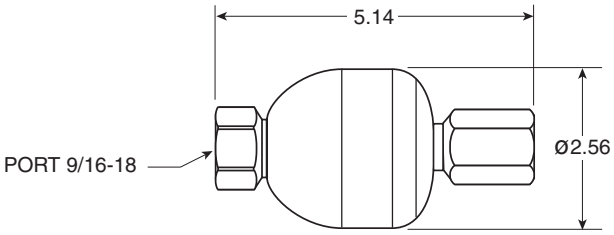
The Pallet Decoupler Valve allows hydraulically clamped tooling fixtures to maintain pressure when disconnected from their power source. The built-in pre-charged accumulator maintains pressure within a hydraulic system, compensating for slow leaks. The Pallet Decoupler Valve adds a level of security to fixtures that must be disconnected from a power source while being moved. Ideal for use with palletized fixtures and machining centers.

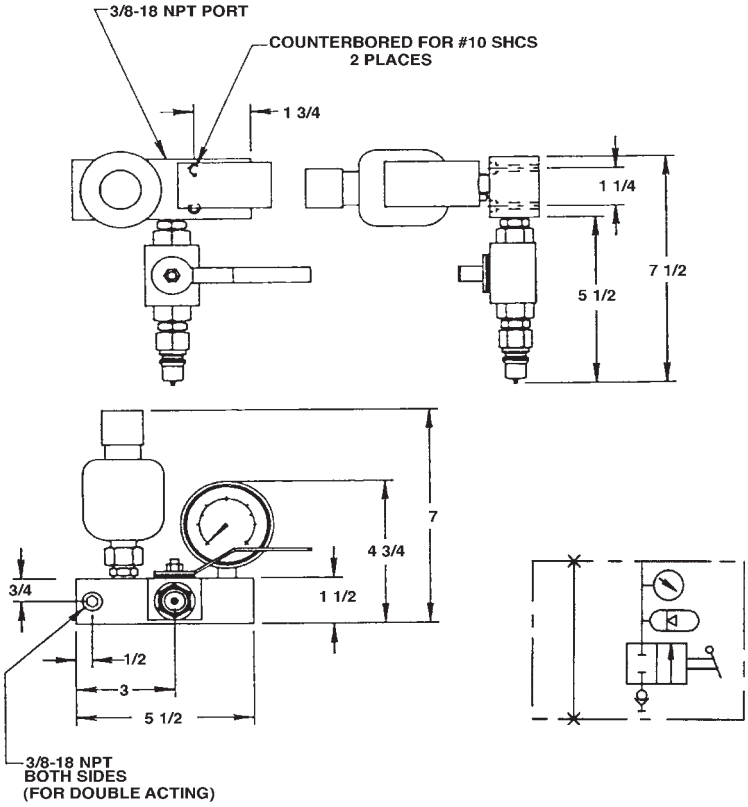
- Manifold
- Accumulator
- Hydraulic Connections
- Hydraulic Gauge
- Manual Ball Valve

Accumulator

Part Number	Max. Pressure	Pre-Charge Pressure	Volume	Weight (lbs)
62603	3600 psi	1500 psi	5 cu. in.	1.5

*Other Accumulators and pre-charge pressure are available upon request.



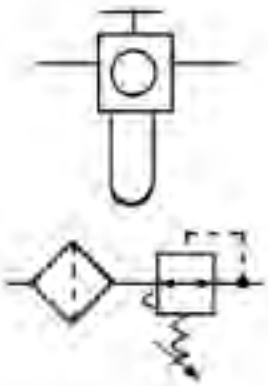


To order components separately

Ball Valve	Male Quick Disconnect	Coupler Sleeve	Hydraulic Gage
61639	**61965**	**61915**	**60703**

Air Circuit Controls

Filter/Regulators



The filter element removes the solid impurities and condensates before the compressed air enters the regulator. The regulator valve supplies a preset pressure regardless of main circuit pressure as long as pressure in the main circuit is higher than that in the secondary.

Specifications

Part Number	61616	61617
Port Size	1/4 NPT	3/8 NPT
SCFM Rating	53 SCFM	80 SCFM
Weight (lbs)	1.6	3.2

Gauges

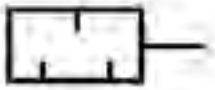


When sizing a pressure gauge, the maximum output of the system should be approximately 2/3 of the gauge capacity.

Specifications

	160 PSI		
Part Number	60701	60702	60705
Thread Size	1/8 NPT	1/4 NPT	1/4 NPT
Location	Back	Bottom	Back
Weight (lbs)	.16	.25	.25

Mufflers

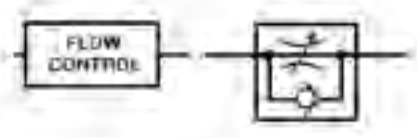


Used to reduce air flow noise. Installation is recommended at exhaust ports of Air Control Valves.

Specifications

Part Number	62612	62613
Thread Size	1/4 NPT	3/8 NPT
Weight (lbs)	.06	.22

Flow Control Valve



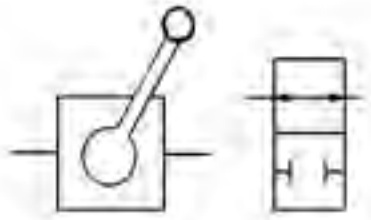
Manually adjusted control of input pressures. Allows the regulation of pressures into a work circuit. Reverse flow is unrestricted. Used for throttling or metering a circuit so that actuator speed meets work requirements.

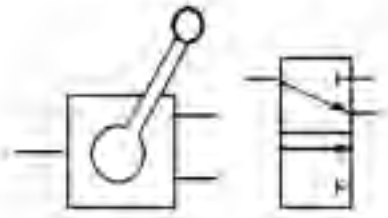
Specifications

Part Number	61603
Port Size	1/4 NPT
Weight (lbs)	.31

Air Circuit Controls

2-Way and 3-Way Valves



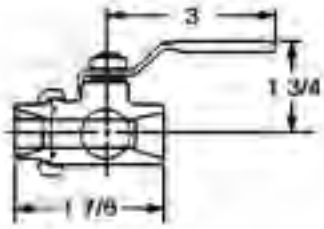


Specifications

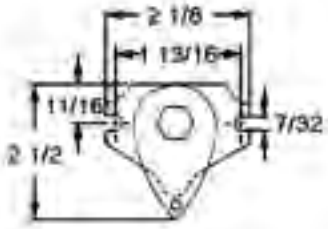
Part Number	61601	61634
Type	2-way	3-way
Port Size	3/8 NPT	1/8 NPT
Weight (lbs)	.81	.22

2-way valves are in-line ball valves. They are used as a shut-off valve in simple circuits.

3-way valves are similar to 2-way valves but have a third port which is generally used as a vent or exhaust.

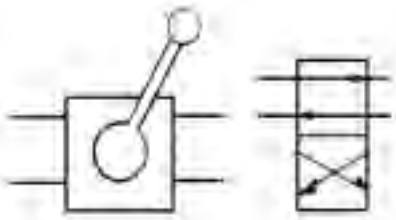


Part Number
61601



Part Number
61634

4-Way Valves

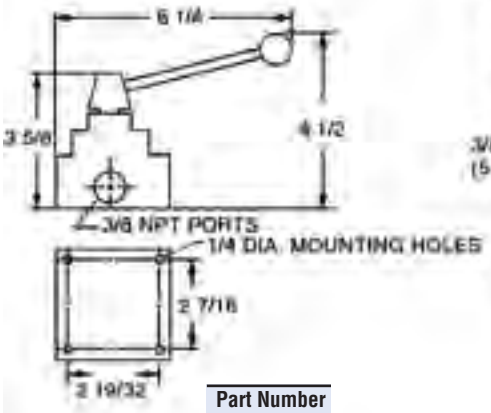


A variety of directional control valves are offered. Manual valves are normally two position, detented. Solenoid valves are 115V-60 Hz; other voltages are available.

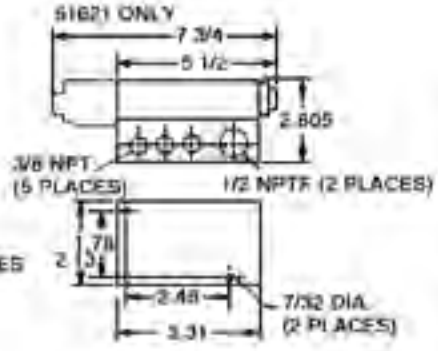
Specifications

Part Number	61615	61620	61621	61630	61631*
Actuator Type	Hand	Solenoid	Solenoid	Treadle	Pedal
Return Actuator	Hand	Spring	Solenoid	Treadle	Spring
Port Size	3/8 NPT	3/8 NPT	3/8 NPT	3/8 NPT	3/8 NPT
CV Rating	1.5	1.0	1.0	2.3	2.3
Weight (lbs)	2.75	5.0	5.5	4.0	3.5

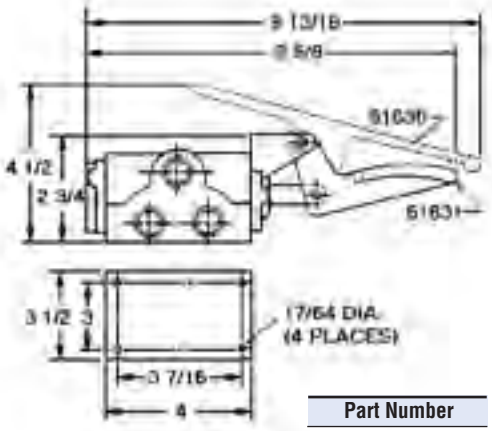
*Foot Guard for 61631 Valve; Part Number 61632



Part Number
61615



Part Number
61620 & 61621



Part Number
61630 & 61631

Air Circuit Controls
2-Hand No Tie Down

Requires the operator to use both hands when activating a work circuit. Two counterbored finger buttons are installed at a minimum center distance.

Specifications

Part Number	61304
Medium	Clean, dry compressed air only
Working Range	50 to 100 psi
TemperatureRange	-30^0 to 180^{0}F
Air Flow (with Modular Valves)	10 CFM at 100 psi
Exhaust	To atmosphere through holes in plate
Mounting	7/32 holes provided in subplate
Materials	Clear Acrylic, brass
Filtration	40 Micron required
Lubrication	Recommended

Hydraulic Circuit Controls
Gauges



Recommended as a visual pressurized monitoring gauge to be used on all pressuring systems.

When sizing a pressure gauge, the maximum output of the system should equal approximately 2/3 of the gauge capacity.

Gauges are filled with glycerine in order to dampen internal movement.

Gauge blocks facilitate the installation of pressure gauges on standard boosters.

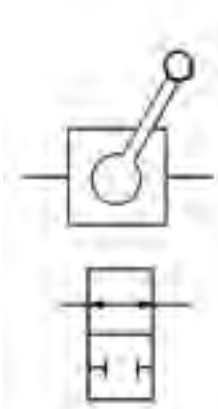
Selection Data

	Part Number		
	3000 Psi	6000 Psi	10000 Psi
Gauge Only	**60704**	**60703**	**60706**
Block Only	**61055**	**61055**	**61055**
Gauge Kit*	**60711**	**60712**	**60713**

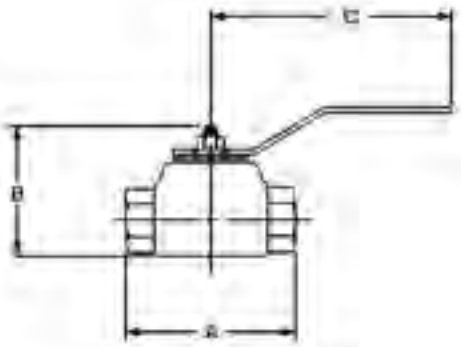
* Gauge, Block and Fittings included in kits. All Gauges 1/4" NPT, bottom ported.

Hydraulic Circuit Controls

2-Way Valves



2-way valves are in-line ball valves. They are used as a shut-off valve in simple circuits.



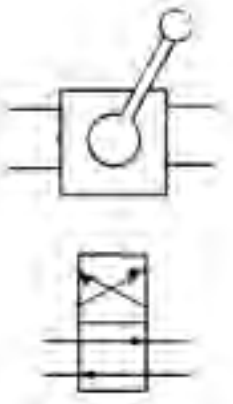
Specifications

Part Number	61610	61639
Port Size	1/4 NPT	3/8 NPT
Pressure Rating (psi)	3000	5000

Dimensions

Part Number	A	B	C
61610	2 11/16	2 5/8	5 1/4
61639	3	2	4 1/4

4-Way Valves

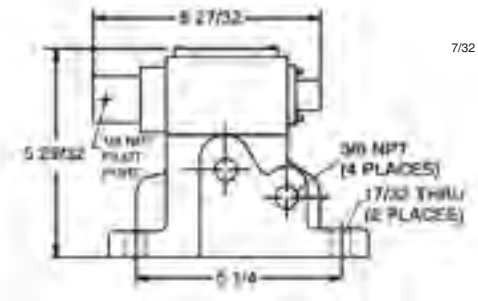


A variety of directional control valves are offered. Manual valves are normally two position, detented. Solenoid valves are 115V-60 Hz; other voltages are available.

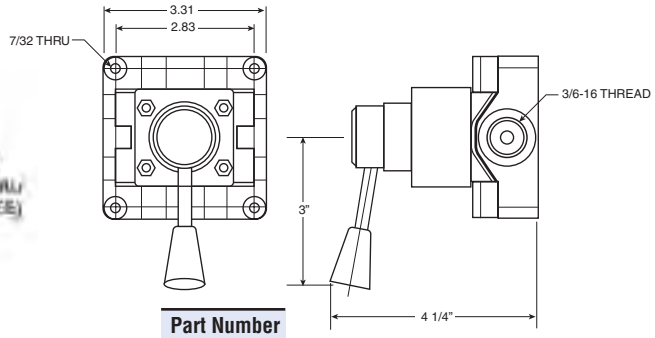
Specifications

Part Number	61643	61644	61636	61637	61638
Actuator Type	Hand	Solenoid (115 VAC)	Solenoid (115 VAC)	Solenoid (115 VAC)	Air
Return Actuator	Hand	Solenoid (115 VAC)	Spring	Solenoid (115 VAC)	Spring
Port Size	3/4-16	DO3 MT6	3/4-16	3/4-16	3/8 NPT
Flow Rating	5 GPM	3 GPM	5 GPM	5 GPM	12 GPM
Pressure Rating (psi)	5000	6000	5000	5000	5000
Weight (lbs)	3.75	3	6.75	7.3	17.5

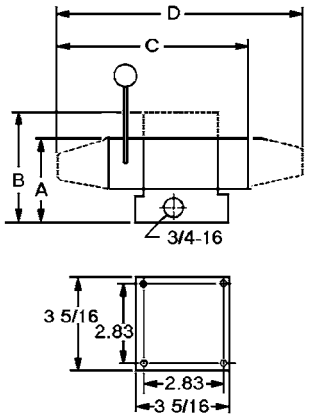
For 4-Way, Zero Leakage Valves, See Page 3.54



Part Number
61638



Part Number
61643



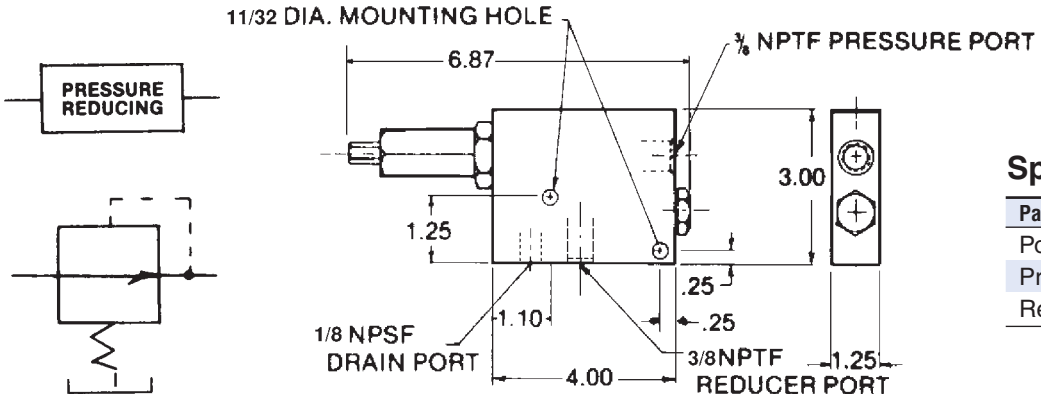
Dimensions

Part Number	A	B	C	D
61636	3 1/4	5 5/64	5 21/32	—
61637	3 1/4	5 5/64	—	8 3/8
61644	2 3/8	—	—	8 3/16

Hydraulic Circuit Controls

Pressure Reducing Valve

Allow individual cylinders or clamps to operate at different pressures from the same power source.



Specifications

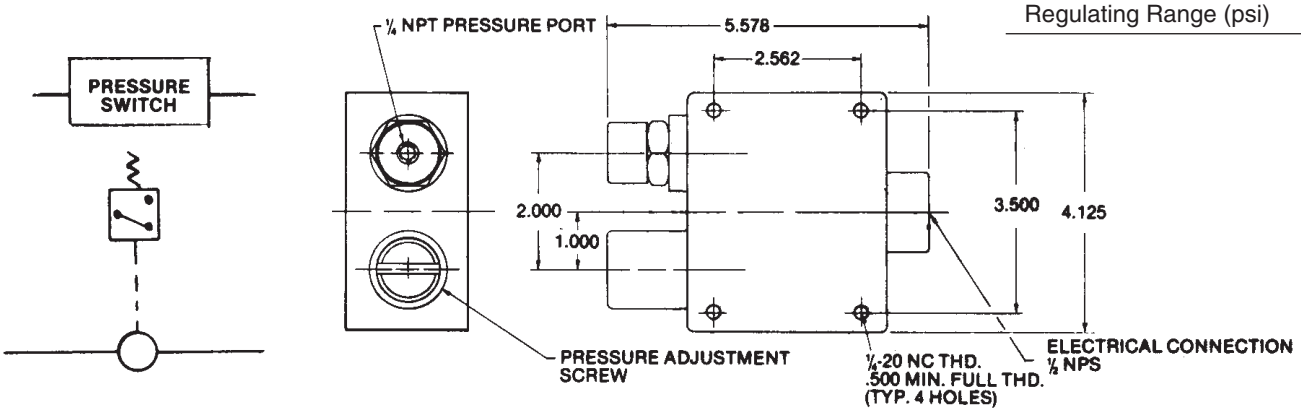
Part Number	61619
Port Size	3/8 NPT
Pressure Rating (psi)	5000
Regulating Range (psi)	500-4500

Pressure Switch

Senses pressure in a circuit and may be used to start or shut down a system. A pressure switch can be used to remove the cutting tool and turn off machine in the event of loss of clamping pressure.

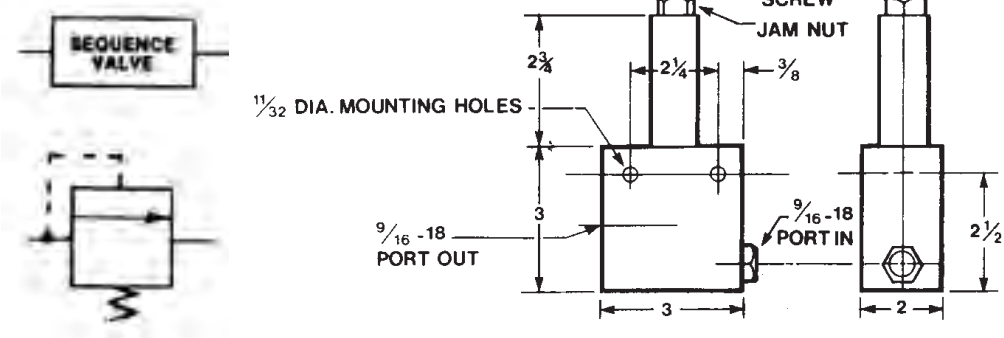
Specifications

Part Number	61633
Port Size	1/4 NPT
Pressure Rating (psi)	10000
Regulating Range (psi)	350-5000



Sequence Valve

With adjustable opening pressure, this valve may be used to control the sequence of work devices in a common circuit.



Specifications

Part Number	61640
Port Size	9/16-18
Pressure Rating (psi)	5000
Sequence Range* (psi)	500-3000

* Factory Adjusted to sequence at 1000 psi.

Hydraulic Circuit Controls

Pilot Operated Check Valve

Specifications

Part Number	61629
Hydraulic	
Ports	3/4-16
Pilot Port	7/16-20
Pressure	
Rating (psi)	5000

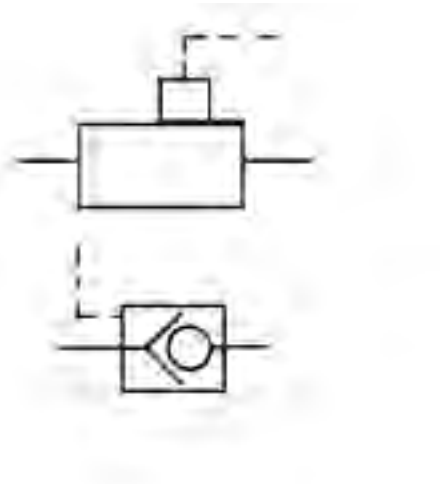
- Minimum operating pressure 500 psi
- 50:1 differential pressure
- Pilot not to exceed 125 psi

A two-way valve used to lock pressure in a working circuit. Automatic free return flow is provided via air pilot operation. Designed so that loss of shop air line pressure will have no effect on the hydraulic circuit in booster applications.

Specifications

	Part Number
Valve only	**61629**
Valve with Installation Kit	**62211***

* Includes hose, fittings and valves

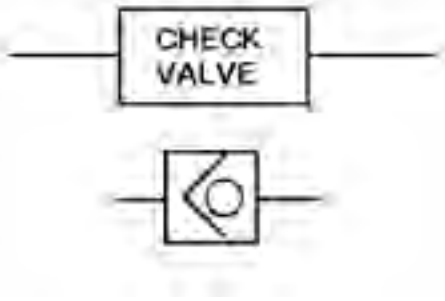


Check Valve

Specifications

Part Number	61607
Port Size	3/8 NPT
Pressure	
Rating (psi)	5000
Flow Rating	CV .83
Weight (lbs)	.63

Allows pressure flow in one direction only.



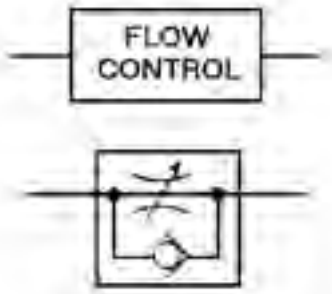
Flow Control Valve

Specifications

Part Number	61609
Port Size	3/8 NPT
Pressure	
Rating (psi)	5000
Flow Rating	CV .78
Weight (lbs)	.63

- Recommended for use with Jergens Swing Clamps

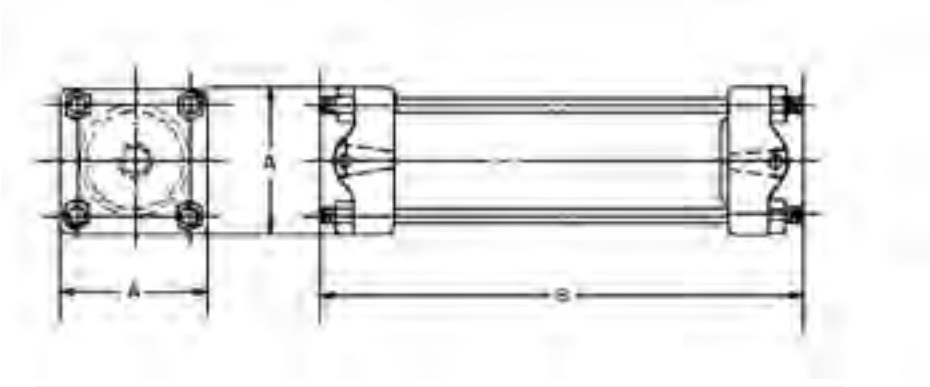
Used to control the flow of pressure in a system, to slow the movement of individual cylinders, or decrease shock.



Oil Reservoirs



Can be used with air pressure on top of oil to do work in your system, such as returning double acting cylinders with hydraulic pressure. The acrylic reservoir allows easy monitoring of oil level. Special baffle plates in the top of the reservoir distribute incoming air pressure evenly against the top surface of the oil.



Part Number	A	B	Capacity (Cu. In.)	Side Ports	End Ports	Wt (lbs)
61750	2 7/8	9 1/2	18	9/16-18	9/16-18	3.0
61751	4 13/16	8 1/2	55	NONE	9/16-18	6.8

• Maximum air operating pressure rating 125 PSI.

Hydraulic Fluids

Hydraulic Oil
Jergens Hydraulic Oil is specially formulated to minimize foaming and to protect metal parts from rust. It is an aircraft type oil with high wetting out and film strength characteristics.

Its viscosity is 170/190 at 100˚F and it maintains functional characteristics down to 25˚F below zero.

One Quart.....**60801**
One Gallon **60802**
Five Gallon **60803**
55 Gallon Drum **60804**

Food Grade Hydraulic Oil
Jergens Food Grade Hydraulic Oil is a blend of food grade lubricants designed for use as a hydraulic media in food packaging and other similar equipment. It is composed of 100% chemically produced synthetic lubricants and contains no petroleum hydrocarbons.

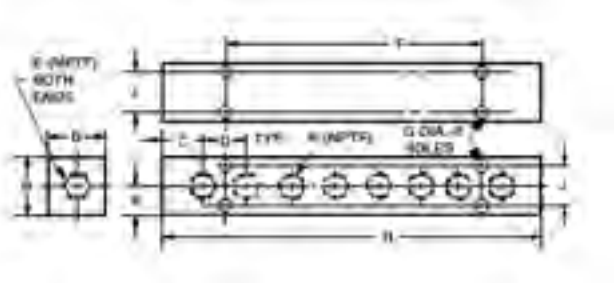
Its viscosity is 140 SUS at 100˚F and 725 SUS at 35˚F.

One Quart.....**60813**
One Gallon **60812**
55 Gallon Drum **60811**

Manifold

Strip





Dimensions

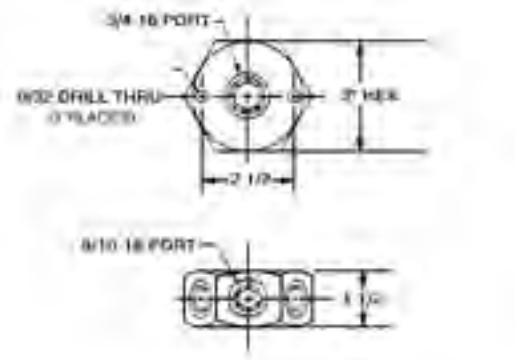
Part Number	Number Of Side Ports	Ports A	B	C	D	End Ports E	F	G	H	J	K	Wt. (lbs)
61801	4	1/4	1 1/2	5/8	7/8	3/8	1 3/4	13/64	3 7/8	1 1/64	3/4	.75
61802	8	1/4	1 1/2	5/8	7/8	3/8	5 1/4	13/64	7 3/8	1 1/64	3/4	1.50

NOTE: Maximum operating pressure is 3000 PSI for all aluminum manifolds.

Hex



- Material: Aluminum
- Finish: Black Oxide



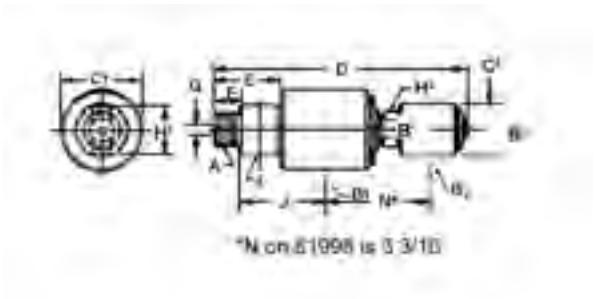
The six port hex manifold, with SAE straight thread ports, can be mounted in the center of several work units or used with a **61031** union (see page 3.67) to mount the manifold directly to the output port of your Jergens Booster.

Part Number
61805

Rotary Coupler

Single and Dual Passage





Specifications

Maximum Air Pressure (psi)	150
Maximum Vacuum (Hg.)	28"
Maximum Hydraulic Pressure (psi)	3000
Maximum Temperature	250°F
Maximum Speed (rpm)	250

Dimensions

Part Number	Rotor Thread A	Tap B1	Tap B2	C1	C2	D	E	F	Rotor Port G	Hex H1	Hex H2	Tap I	Lockup J	Wt. (lbs)
61997	3/8 NPT	1/4 NPT	—	1 1/2	—	3 1/4	1 1/8	5/8	5/16	7/8	—	—	1 25/32	.5
61998	3/4 NPT	1/2 NPT	1/4 NPT	2 3/4	1 1/2	7 11/16	1 15/16	7/8	1/4	1 3/8	7/8	1/4 NPT	2 7/8	3.0

Installation Tips for Plumbing Hydraulic Systems

Hose

The use of hydraulic hose is only recommended when the need for flexibility exists. Generally, the only hydraulic hose in an application is that used to connect the power source to the fixture.

All hydraulic hoses expand under pressure. This uses costly energy as well as volume. Some hoses expand at a greater rate than others, even though size remains the same.

Generally speaking, an 8 foot length of hydraulic hose will expand at a rate absorbing one cubic inch of high pressure oil at 3000 p.s.i.

When applying hose, the following is recommended:

Do Not:
- Overextend bend radius of hose.
- Put unnecessary strain at fitting ends.
- Subject hose to abrasive conditions.
- Use hose that hasn't been identified.

Do:
- Use a minimum size of 3/8" I.D.
- Check with factory for alternate brands.
- Use firesleeve protective covering in applications where flame is present (like weld fixtures).
- Make sure power source has enough high pressure volume to compensate for hose expansion.

Tubing

Whenever possible use 3/8" diameter steel fluid line tubing for hydraulic lines. This is a low carbon, soft tube and readily available. Depending on the application, two types are recommended:

- 3/8" diameter x .049 wall thickness for pressures to 3000 p.s.i.
- 3/8" diameter x .065 wall thickness for pressures to 5000 p.s.i.

When rigid tubing is applied to air circuitry, use copper tube. This will reduce the corrosive effect of water most likely found in your air lines. Caution: Do not use copper in a high pressure hydraulic circuit!

Fittings

Pipe Thread Fittings

Upon installation, apply a good sealing compound on threads of fitting only. When Teflon tape is used, overlap threads 1-1/2 to two turns tightly in direction of thread. Be careful not to extend tape over end of fitting. Do not overtighten pipe threads as they may put unnecessary strain on pressure vessels.

Straight Thread Fittings (SAE J514)

These fittings require no sealing material as the built-in o-ring provides a positive seal. The threads are a Class 2 straight thread with no taper. Before installation, be sure to lubricate the o-ring. Tighten these fittings to approximately 50-150 ft./lbs.

The Tube Flare

Cut tube squarely and remove any burrs. Split flares may be caused by the tube being too hard, opening up of scratches and draw marks, or failure to deburr tube end.

Place nut, then sleeve onto tube with open end of nut and toe end of sleeve toward end of tube.

Flare to standard 37° angle (maximum diameter of flare is equal to maximum diameter of sleeve). A correct flare should extend beyond the inside diameter of toe on sleeve but not beyond outside diameter of toe on sleeve.

Never attempt to spring tube to force alignment using the fitting installed. This can damage the flare and wrinkle, kink or flatten the tube. This can be avoided by using the correct tools.

Fittings

37° Flare









Sleeves	Nuts	Caps	Plugs	Reducer
1/4 Tube **61001**	1/4 Tube **61002**	1/4 Tube **61056**	1/4 Tube **61058**	1/4 Tube Male 3/8 Tube Female **61063**
3/8 Tube **61015**	3/8 Tube **61016**	3/8 Tube **61057**	3/8 Tube **61059**	
1/2 Tube **61049**	1/2 Tube **61050**			

Swivel Nut Branch Tees	Union Tee
1/4 Tube **61051**	
3/8 Tube **61062**	3/8 Tube **61023**

Male Connectors



Pipe Thread	Straight Thread
1/8 NPT x 1/4 Tube **61007**	7/16-20 x 1/4 Tube **61009**
1/8 NPT x 3/8 Tube **61054**	9/16-18 x 1/4 Tube **61030**
1/4 NPT x 1/4 Tube **61008**	9/16-18 x 3/8 Tube **61021**
1/4 NPT x 3/8 Tube **61020**	3/4-16 x 3/8 Tube **61046**
3/8 NPT x 1/4 Tube **61028**	3/4-16 x 1/2 Tube **61047**
3/8 NPT x 3/8 Tube **61034**	
3/8 NPT x 1/2 Tube **61048**	

Male Elbows



Pipe Thread	Straight Thread
1/8 NPT x 1/4 Tube **61003**	7/16-20 x 1/4 Tube **61005**
1/4 NPT x 1/4 Tube **61004**	9/16-18 x 1/4 Tube **61029**
1/4 NPT x 3/8 Tube **61017**	9/16-18 x 3/8 Tube **61018**
3/8 NPT x 3/8 Tube **61064**	3/4-16 x 1/2 Tube **61044**
3/8 NPT x 1/2 Tube **61045**	

45° ELBOW
3/8 NPT x 3/8 Tube **61072**

Male Branch Tees



Pipe Thread	Straight Thread
1/8 NPT x 1/4 Tube **61014**	7/16-20 x 1/4 Tube **61040**
1/4 NPT x 3/8 Tube **61027**	9/16-18 x 3/8 Tube **61041**
3/8 NPT x 1/2 Tube **61043**	3/4-16 x 1/2 Tube **61042**

Male Run Tees
7/16-20 x 1/4 Tube **61032**
9/16-18 x 3/8 Tube **61061**

Flareless Fittings



These fittings are the most common types needed to plumb Pressure Points and Screw Pumps. Use 1/8" Heavy Duty High Pressure, Fluid Line Steel Tube.

Ferrule 1/8 Tube	Nut 1/8 Tube	Male Connector 1/8 NPT x 1/8 Tube	Male Elbow 1/8 Tube	Union Tee 1/8 Tube
60201	**60202**	**60204**	**60205**	**60207**

Fittings

Elbows & Tees




Elbows	Tees
1/8 NPT Female **61095**	1/8 NPT Female **61087**
1/8 NPT Street **61070**	
1/4 NPT Female **61096**	1/4 NPT Female **61088**
1/4 NPT Street **61071**	
3/8 NPT Female **61097**	3/8 NPT Female **61089**
3/8 NPT Male **61066**	
1/2 NPT Female **61098**	1/2 NPT Female **61090**
3/4-16 Male 3/8 NPT Female **61065**	

Nipples & Plugs




Nipples	Plugs
1/8 NPT **61083**	1/8 NPT **61091**
1/4 NPT **61084**	1/4 NPT **61092**
3/8 NPT **61085**	3/8 NPT **61093**
1/2 NPT **61086**	1/2 NPT **61094**
1/8 NPT x 3/8 NPT **61052**	7/16-20 **61060**
1/4 NPT x 3/8 NPT **61053**	9/16-18 **61068**
9/16-18 Union **60210**	3/4-16 **61069**
3/4-16 Union **61031**	

Reducers/Expanders




Pipe Thread	Straight Thread
1/4 NPT Male 1/8 NPT Female **61074**	9/16-18 Male 7/16-20 Female **61033**
3/8 NPT Male 1/4 NPT Female **61025**	7/16-20 Male 9/16-18 Female **61080**
1/2 NPT Male 3/8 NPT Female **61038**	3/4-16 Male 9/16-18 Female **61037**
3/4 NPT Male 3/8 NPT Female **61067**	
3/4 NPT Male 1/2 NPT Female **61039**	

Adapters



Pipe Thread	Mixed Thread		Metric
1/16 NPT Male 1/4 NPT Female **61075**	1/4 Male NPT 1/4 Female BSP **60221**	3/8 Tube Male 1/4 NPT Female **60217**	7/16-20 Male 1/8 ISO Female **61077**
1/8 NPT Male 1/4 NPT Female **61076**	7/16-20 Male 1/4 NPT Female **61082**	3/8 Male NPT 3/8 Female BSP **60222**	9/16-18 Male 1/4 ISO Female **61078**
	9/16-18 Male 1/4 NPT Female **61081**	3/4-16 Male 1/4 NPT Female **61035**	3/4-16 Male 3/8 ISO Female **61079**
	9/16-18 Male 3/8 Tube Female **60211**	3/4-16 Male 3/8 NPT Female **61036**	

Quick Disconnect Couplers

Hydraulic Coupler

Sleeve	Nipple
3/8 NPT Female **61915**	3/8 NPT Female **61965**
1/4 NPT Female **61916**	1/4 NPT Male **61966**

Hydraulic couplers have dual checks.

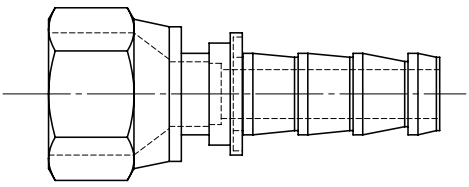
Air Couplers

Sleeve	Nipple
1/8 NPT Female **61904**	1/8 NPT Male **61950**
1/4 NPT Female **61905**	1/4 NPT Male **61951**
	1/4 NPT Female **61954**

Air couplers have checks on sleeves only.

Flexible Hose

Low pressure air hose is sold by the foot in bulk lengths. Order the total footage and number of push-on fittings required by using the number to the right.



Low Pressure Air Hose

Hose I.D.	1/4	3/8	1/2
Hose Part Number	**61106**	**61108**	**61110**
Fitting Part Number	**61107**	**61109**	**61111**
Thread Size	7/16-20	9/16-18	3/4-16

Hydraulic Hose



High pressure hose is supplied assembled and to lengths indicated. Lengths are measured from end of coupling to end of coupling. Hose is 3/8" ID and available in 4000 psi or 7000 psi rating. 3/8" female tubing fittings on each end.

High Pressure Hydraulic Hose

Length	12"	18"	24"	36"	72"
Part Number 4000 psi	**61201**	**61202**	**61203**	**61204**	**61205**
Part Number 7000 psi	**61211**	**61212**	**61213**	**61214**	**61215**

*Also available in 5000 psi.

Hydraulic Hose (Build Your Own)

Length	25'	Hose Ends	Hose Ends
Part Number	**61221**	**61226**	**61227**
2750 psi	1/4 Hose	1/4 Npt Male	1/4 37° JIC Swivel Female

Steel Tubing

Whenever possible, 3/8" diameter steel tubing should be used for hydraulic lines. Jergens tubing is low carbon soft tube with .065 wall thickness. The tubing is rated at 5000 psi.

Steel Tubing

Part Number	Description
60209	3/8 DIA. X 5 FT.

Maintenance and Test Kits

Part Number	Kit Number	Part Number	Kit Number	Part Number	Kit Number	Part Number	Kit Number	Part Number	Kit Number
60302	62102	60414	62195		62162 (3)	61709	62109	62824	62184
60303	62103	60461	62125	60651	62105 (2)	61710	62109	62831	62187
60307	62102	60462	62126		62162 (3)	61711	62110	62841	62185
60340	62104	60463	62127	60660	62360	61714	62107	62842	62185
60341	62105	60464	62128	60661	62360	61715	62108	62845	62303
60345	62189	60465	62129	60662	62362	61720	62173	62846	62303
60350	62120	60466	62130	60663	62362	61721	62174	62852	62199
60351	62121	60511	62139	60664	62364	61722	62175	63101	62101
60360	62120	60512	62140	60665	62364	61736	62159	63103	62103
60361	62121	60513	62194	60670	62360	61737	62160	63107	62102
60371	62167	60554	62151	60671	62360	61755	62197	63113	62105
60372	62167	60555	62151	60672	62362	61756	62198	63117	62104
60373	62168	60593	62145 (1)	60673	62362	61761	62144	63123	62106
60374	62169	60594	62146 (1)	60674	62364	61762	62144	63201	62134
60381	62170	60595	62147 (1)	60675	62364	61997	62165	63202	62134
60382	62170	60596	62177	60680	62190	61998	62166	63212	62126
60383	62171	60597	62178	60681	62196	62721	62161	63213	62127
60384	62171	60598	62179	60685	62131	62722	62161	63214	62128
60401	62106	60601	62102 (2)	61501	62133	62801*	62172	63215	62129
60402	62106		62162 (3)	61612	62134	62802*	62172	63216	62130
60403	62195	60602	62103 (2)	61514	62134	62803*	62172	63302	62140
60404	62195		62162 (3)	61623	62163	62804*	62172	63303	62194
60405	62124	60621	62154	61629	62123	62805	62301	63801	62184
60410	62106	60622	62155	61640	62164	62806	62302	63802	62184
60411	62106	60631	62156	61701	62132	62811	62183		
60412	62106	60650	62104 (4)	61704	62107	62812	62183		
60413	62195		62189 (5)	61705	62108	62823	62184		

(1) Special tools required: use 62148 tool for 60556, use 62149 tool for 60597 or 60598.
(2) Cylinder Kit (3) Mechanical Kit (4) Kit for cylinder with 3/8" piston (5) Kit for cylinder with 1/2" piston
(*) Tool kit 62176 required for 62801, 62802, 62803, 62804

Technical Assistance



Jergens maintains a qualified staff whose primary responsibility is to provide technical assistance to our distributors and customers.

Your direct connection number for dimensional questions, circuit assistance and troubleshooting is:

1-800-JERGENS

OR

E-mail: info@jergensinc.com

THE Jergens DIFFERENCE

Swing Cylinders



OURS



Squared Tracks and Pin Engagement
Internal piston is driven by a pin designed for close tolerance with squared track. Larger load-bearing surface results in a more durable assembly.

THEIRS



V-grooves and Ball-bearing Engagement
Internal piston is driven by a ball bearing that rolls in a rounded track on only two points. Less surface contact leads to more wear and reduced product life.

JERGENS CLAMPING SWING CYLINDERS	VS.	OTHER CLAMPING SWING CYLINDERS
Precision machined for close tolerance between piston groove and pin. Better fit results in smoother motion and a more durable swing cylinder assembly.		Less surface area between bearing and track combined with severe conditions within the clamp body result in deforming of the bearing and assembly breakdown.
Free-floating pin design matches the shape of the groove. More contact area and less wear "keeps the pin in the pocket."		Ball bearings can "pop out" of the track—a common failure of traditional swing clamps—causing the piston to seize.
Heavy-duty, low-friction rod seal features "double-lip" sealing—virtually leak-free even under severe operating conditions. Plus, lubricant is retained in the cavity formed by secondary lip—increases performance and quiets operation.		Seals may be more prone to wear and "dry run." Failure of traditional seals is the primary failure of swing cylinder clamps.
High-pressure, low-friction, bi-directional piston seal is easier to turn and reduces leaks.		Breakdown of traditional seals is the primary failure of swing cylinder clamps. Galled seals cause contaminants, accelerating breakdown and increasing downtime.

Jergens

The Standard Components with the Highest Standards™

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Tooling Components



Locating Components 4

Spring Loaded Devices 5

Workholding Components 6

Toggle Clamps 7

Handwheels, Knobs, Handles 8



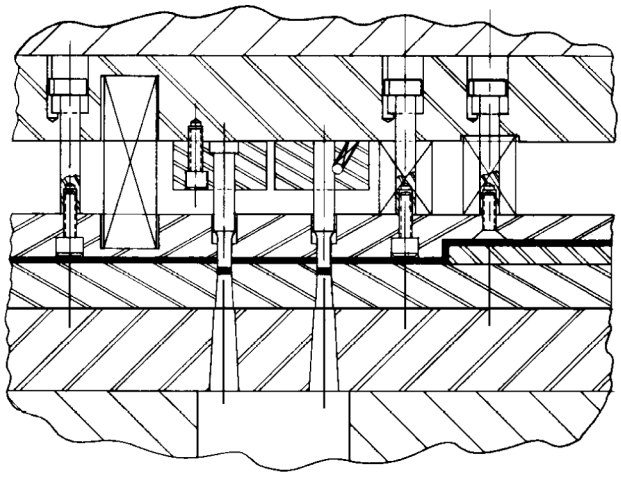
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Kwik-Strip® Stripper Bolts

A New Perspective on Stripper Plates

Today's more complex dies require more time to service. The advantage of time saving devices such as ball and roll lock punches is minimized unless the stripper plate can be removed first.

The patented Jergens Kwik-Strip Stripper Bolts provide an inexpensive, simple method of stripper plate removal. The stripper can be removed with the die still mounted in the press!



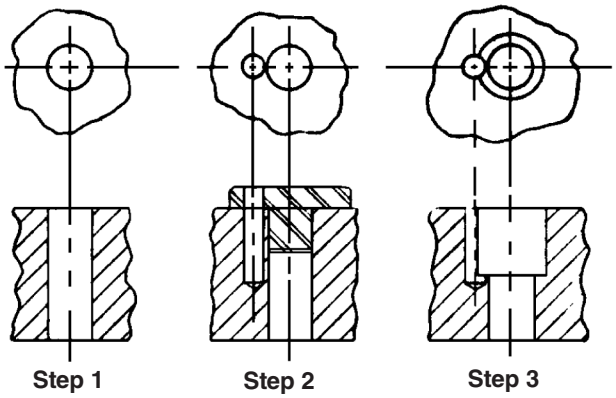
Installation

Step 1: Drill a through hole 1/32" larger than the nominal body diameter of the bolt to be used.

Step 2: Using a Jergens Drill Jig, drill the auxiliary 1/4" hole. The 1/4" hole may be located radially at any position on the periphery of the body hole. Drill the 1/4" hole slightly deeper than the proposed counterbore.

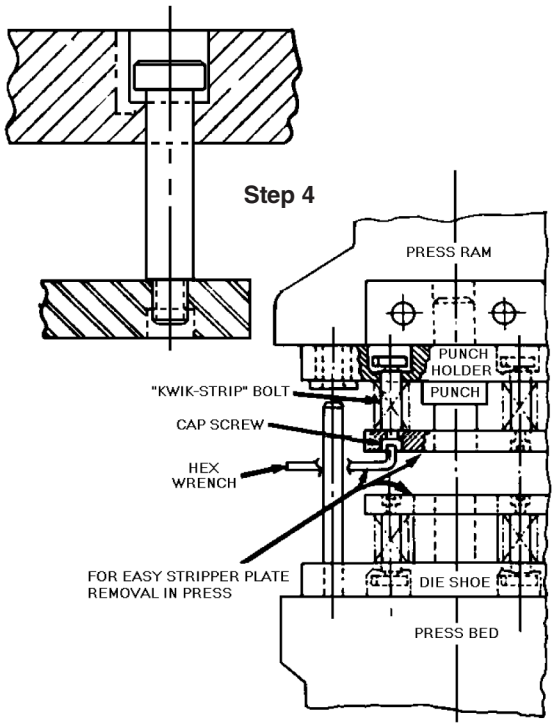
Step 3: Using a standard counterboring tool, counterbore to required depth. See counterbore selection chart for proper size.

Step 4: Drill and counterbore the stripper plate for a socket head cap screw.



Installation in Existing Dies

To convert an existing die for use with Jergens Kwik-Strip Stripper Bolts, simply mill a 1/4" slot down the side of the stripper counterbore, then drill and counterbore the stripper plate. If the same size thread must be maintained, the through hole and counterbore in the punch holder will have to be increased.



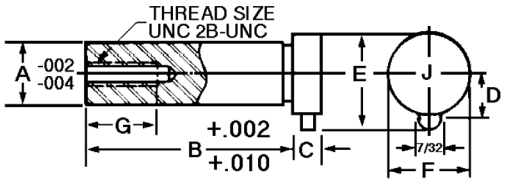
Disassembly in the Press

Block the stripper plate in position, remove the cap screws using a hex wrench, then carefully remove stripper plate. Replace stripper plate after completion of required service.

Kwik-Strip® Stripper Bolts



- Material: Alloy Steel
- Heat Treat: Rc 32-36
- Available in FixturePro™ Design Software



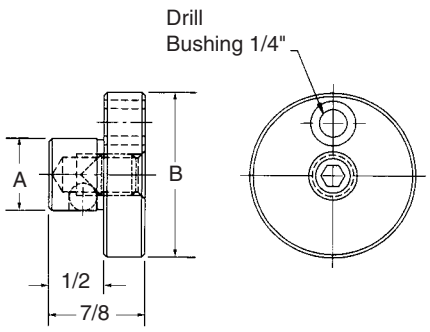
Selection of Sizes

Size selections should be based upon thread size. For example, if your application calls for a 1/2" stripper bolt (with a 3/8" thread) use a 5/8" Kwik-Strip bolt (with a 3/8" thread). Kwik-Strip bolts may be shortened by 1/4" and still have sufficient thread depth for the cap screw.

Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs)
46601	1/2	2	5/16	.409	57/64	3/4	1	5/16-18	.14
46602	1/2	2 1/2	5/16	.409	57/64	3/4	1	5/16-18	.17
46603	1/2	3	5/16	.409	57/64	3/4	1	5/16-18	.20
46604	1/2	3 1/2	5/16	.409	57/64	3/4	1	5/16-18	.23
46605	1/2	4	5/16	.409	57/64	3/4	1	5/16-18	.26
46606	1/2	4 1/2	5/16	.409	57/64	3/4	1	5/16-18	.29
46607	1/2	5	5/16	.409	57/64	3/4	1	5/16-18	.32
46608	5/8	2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.18
46609	5/8	2 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.23
46610	5/8	3	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.27
46611	5/8	3 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.32
46612	5/8	4	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.36
46613	5/8	4 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.41
46614	5/8	5	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.45
46615	3/4	2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.26
46616	3/4	2 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.33
46617	3/4	3	1/2	.534	1 9/64	1	1 1/4	1/2-13	.39
46618	3/4	3 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.46
46619	3/4	4	1/2	.534	1 9/64	1	1 1/4	1/2-13	.52
46620	3/4	4 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.59
46621	3/4	5	1/2	.534	1 9/64	1	1 1/4	1/2-13	.65

Drill Jigs

Position in drilled hole, rotate set screw to lock, then proceed to drill 1/4" hole to desired depth.



Part Number	Bolt Size*	A	B	Wt. (lbs)
46641	1/2	.528	1 1/2	.20
46642	5/8	.653	1 1/2	.22
46643	3/4	.778	1 5/8	.24

1/4" Drill bushing is included.

Counterbore Tools

Counterbores for installing Jergens Kwik-Strip Stripper Bolts.

Part Number	Counterbore	Bolt Size*
46647	31/32	5/8
46648	1 1/32	3/4

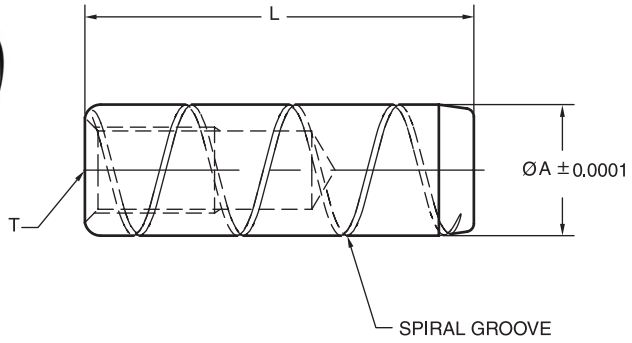
*Refers to "A" Dimension on stripper bolts.

Alloy Steel Pull Dowel Pins

Jergens Offers 3 Styles of Precision Ground Pull Dowels

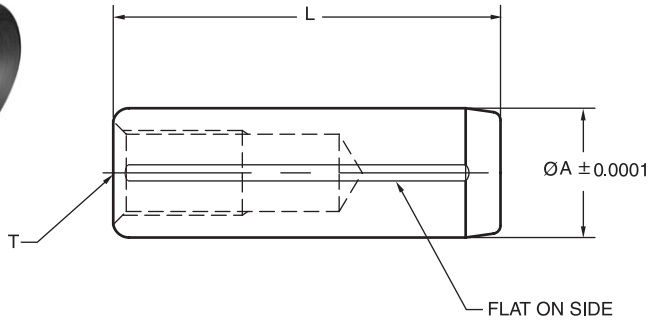


Spiral Groove
(Grooves Help to Relieve Trapped Air)



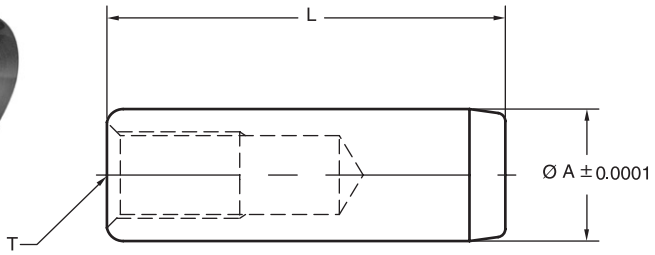


Flat Vent
(Ground Flat Helps to Relieve Trapped Air)





Standard Round
(Non-Vented)



Features, Applications & Benefits

- Internally threaded hole allows removal of pull dowels with a standard screw.
- Standard Round Pull Dowels are typically used in applications featuring a through hole.
- Spiral Groove Pull Dowels feature a groove cut to allow trapped air to be released.
- Flat Vent Pull Dowels feature a ground flat on one side to release trapped air.
- Spiral Groove and Flat Vent Pull Dowels are typically used in blind hole applications.
- All of Jergens Precision Ground Pull Dowels are constructed of heat treated alloy steel.

Precision Ground Pull Dowels

Spiral Groove	Flat Vent	Standard Round	Nominal	Actual	Length	Internal Thread
31800	**31400**	**31600**	1/4	.2502	1/2	8 - 32
31801	**31401**	**31601**	1/4	.2502	3/4	8 - 32
31802	**31402**	**31602**	1/4	.2502	1	8 - 32
31803	**31403**	**31603**	1/4	.2502	1-1/4	8 - 32
31804	**31404**	**31604**	1/4	.2502	1-1/2	8 - 32
31805	**31405**	**31605**	1/4	.2502	1-3/4	8 - 32
31806	**31406**	**31606**	1/4	.2502	2	8 - 32
31807	**31407**	**31654**	1/4	.2502	2-1/4	8 - 32
31808	**31408**	**31607**	1/4	.2502	2-1/2	8 - 32
31809	**31409**	**31608**	5/16	.3127	3/4	10 - 32
31810	**31410**	**31609**	5/16	.3127	1	10 - 32
31811	**31411**	**31610**	5/16	.3127	1-1/4	10 - 32
31812	**31412**	**31611**	5/16	.3127	1-1/2	10 - 32
31813	**31413**	**31612**	5/16	.3127	2	10 - 32
31814	**31414**	**31613**	5/16	.3127	2-1/4	10 - 32
31815	**31415**	**31614**	5/16	.3127	2-1/2	10 - 32
31816	**31416**	**31615**	3/8	.3752	3/4	10 - 32
31817	**31417**	**31616**	3/8	.3752	1	10 - 32
31818	**31418**	**31617**	3/8	.3752	1-1/4	10 - 32
31819	**31419**	**31618**	3/8	.3752	1-1/2	10 - 32
31820	**31420**	**31619**	3/8	.3752	1-3/4	10 - 32
31821	**31421**	**31620**	3/8	.3752	2	10 - 32
31822	**31422**	**31621**	3/8	.3752	2-1/4	10 - 32
31823	**31423**	**31622**	3/8	.3752	2-1/2	10 - 32
31824	**31424**	**31623**	3/8	.3752	3	10 - 32
31825	**31425**	**31624**	7/16	.4377	1	1/4 - 20
31826	**31426**	**31625**	7/16	.4377	1-1/2	1/4 - 20
31827	**31427**	**31626**	7/16	.4377	2	1/4 - 20
31828	**31428**	**31627**	1/2	.5002	3/4	1/4 - 20
31829	**31429**	**31628**	1/2	.5002	1	1/4 - 20
31830	**31430**	**31629**	1/2	.5002	1-1/4	1/4 - 20
31831	**31431**	**31630**	1/2	.5002	1-1/2	1/4 - 20
31832	**31432**	**31631**	1/2	.5002	1-3/4	1/4 - 20
31833	**31433**	**31632**	1/2	.5002	2	1/4 - 20
31834	**31434**	**31633**	1/2	.5002	2-1/4	1/4 - 20
31835	**31435**	**31634**	1/2	.5002	2-1/2	1/4 - 20
31836	**31436**	**31635**	1/2	.5002	3	1/4 - 20
31837	**31437**	**31636**	1/2	.5002	3-1/2	1/4 - 20
31838	**31438**	**31637**	1/2	.5002	4	1/4 - 20
31839	**31439**	**31638**	5/8	.6252	1-1/4	1/4 - 20
31840	**31440**	**31639**	5/8	.6252	1-1/2	1/4 - 20
31841	**31441**	**31640**	5/8	.6252	2	1/4 - 20
31842	**31442**	**31641**	5/8	.6252	2-1/4	1/4 - 20
31843	**31443**	**31642**	5/8	.6252	2-1/2	1/4 - 20
31844	**31444**	**31643**	5/8	.6252	3	1/4 - 20
31845	**31445**	**31644**	5/8	.6252	4	1/4 - 20
31846	**31446**	**31645**	3/4	.7502	1-1/2	5/16 - 18
31847	**31456**	**31655**	3/4	.7502	1-3/4	5/16 - 18
31848	**31447**	**31646**	3/4	.7502	2	5/16 - 18
31849	**31448**	**31647**	3/4	.7502	2-1/2	5/16 - 18
31850	**31449**	**31648**	3/4	.7502	3	5/16 - 18
31851	**31450**	**31649**	3/4	.7502	4	5/16 - 18
31856*	**31451**	**31656**	1	1.0002	1-3/4	5/16 - 18
31852*	**31452**	**31650**	1	1.0002	2	5/16 - 18
31853*	**31453**	**31651**	1	1.0002	2-1/2	5/16 - 18
31854*	**31454**	**31652**	1	1.0002	3	5/16 - 18
31855*	**31455**	**31653**	1	1.0002	4	5/16 - 18

*3/8-16 Internal Thread

Technical Data

Material:
Alloy Steel

Length Tolerance:
± .010"

Core Hardness:
47 - 58 Rockwell C

Diameter Tolerance:
± .0001"

Surface Hardness:
60 - 64 Rockwell C

Recommended Hole Size:
.0005" under Nom. Dia.

Surface Finish:
8 Micro-Inch

Specification:
ASME B18.8.2

Spiral Groove



Flat Vent



Standard Round

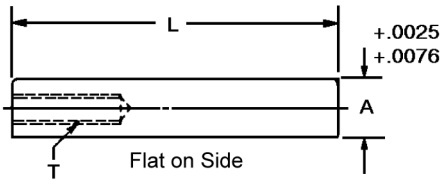


Pull Dowels
Metric



- Material: Low Carbon Steel
- Heat Treat: Case Hardened
- Available in FixturePro™ Design Software

Flat ground on the side for air release in blind holes.

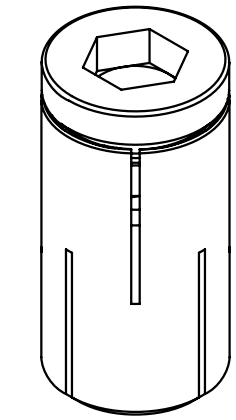


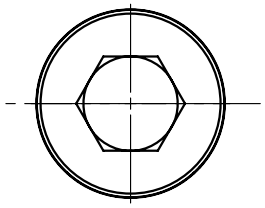
Part Number	A	L	T
31751	8	20	M5 x 1.0
31753	8	30	M5 x 1.0
31755	8	40	M5 x 1.0
31759	10	20	M6 x 1.0
31761	10	30	M6 x 1.0
31763	10	40	M6 x 1.0
31765	10	50	M6 x 1.0
31767	10	70	M6 x 1.0
31769	12	20	M6 x 1.0
31771	12	30	M6 x 1.0
31773	12	40	M6 x 1.0

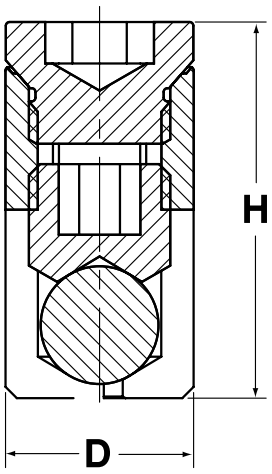
Part Number	A	L	T
31775	12	50	M6 x 1.0
31776	12	60	M6 x 1.0
31777	12	70	M6 x 1.0
31780	16	40	M8 x 1.25
31782	16	50	M8 x 1.25
31783	16	60	M8 x 1.25
31784	16	70	M8 x 1.25
31787	20	50	M10 x 1.6
31788	20	60	M10 x 1.6
31789	20	70	M10 x 1.6

Button head screw not included.

Precision Expanding Dowels







- Material: Steel, hardened to 50-55 Rockwell C
- Self-Centering and Repeatable to within +/- .0005”
- Top and bottom half of dowel expand seperately
- Patented

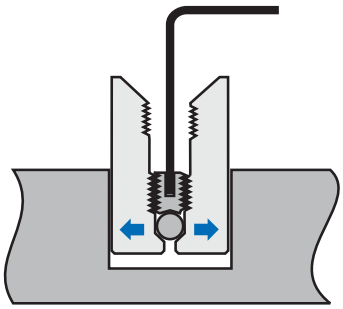
Standard

Part Number	Diameter	Height	Hex Key Size (in)	
			Top	Bottom
29401	1/4	1/2	3/32	5/64
29402	3/8	3/4	5/32	1/8
29403	1/2	1	3/16	5/32
29404	5/8	1 - 1/4	7/32	3/16
29405	3/4	1 - 1/2	5/16	1/4
29406	1	2	1/2	3/8

Metric

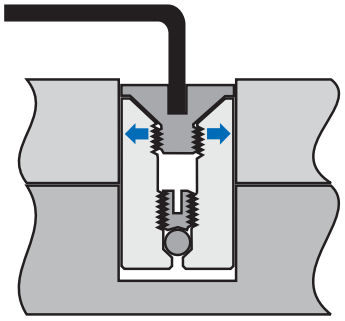
Part Number	Diameter	Height	Hex Key Size (mm)	
			Top	Bottom
29451	10	20	4	3
29452	12	24	5	4
29453	14	28	5	4
29454	16	32	6	5
29455	20	40	8	6

Installation Instructions



Step 1

Remove the top screw, insert the dowel into the locating hole of the first part, and expand the bottom half with a hex wrench.



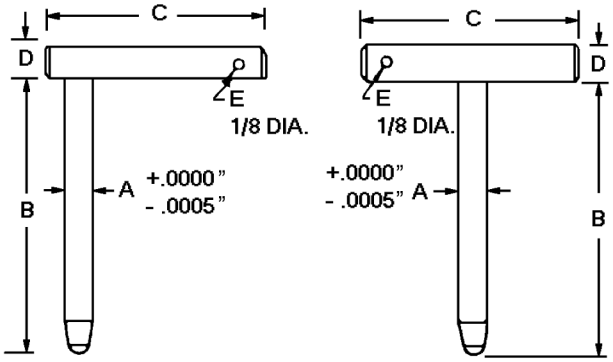
Step 2

Replace the top screw, slide the locating hole of the second part over the dowel and expand top half with a hex wrench.

L-Pins and T-Pins



- Material: Heat Treated Steel
- Finish: Black Oxide
- Available in FixturePro™ Design Software



Jergens L-Pins and T-Pins are precision ground locating devices for aligning workpieces in jigs or fixtures. Each pin has a 1/8" diameter hole in the handle for attaching the nylon covered lanyard shown on page 4.9.

Part Number					
L-pin	T-pin	A	B	C	D
24001	**24201**	.125	2 1/2	1 1/2	1/4
24002	**24202**	.1875	3	2 1/2	5/16
24003	**24203**	.1875	6	2 1/2	5/16
24004	**24204**	.191	3	2 1/2	5/16
24005	**24205**	.191	6	2 1/2	5/16
24026	**24226**	.250	2	2 1/2	3/8
24007	**24207**	.250	3	2 1/2	3/8
24008	**24208**	.250	4	2 1/2	3/8
24009	**24209**	.250	6	2 1/2	3/8
24010	**24210**	.257	3	2 1/2	3/8
24030	**24230**	.3125	2	2 1/2	7/16
24011	**24211**	.3125	3 1/2	3	7/16
24012	**24212**	.3125	6	3	7/16
24013	**24213**	.375	4	3 1/2	1/2
24014	**24214**	.375	6	3 1/2	1/2
24015	**24215**	.4375	4	3 1/2	9/16
24016	**24216**	.4375	6	3 1/2	9/16
24017	**24217**	.500	4	3 1/2	5/8
24018	**24218**	.500	6	3 1/2	5/8
24019	**24219**	.5625	4	3 1/2	5/8
24020	**24220**	.5625	6	3 1/2	5/8
24021	**24221**	.625	6	3 1/2	7/8
24022	**24222**	.750	6	3 1/2	7/8

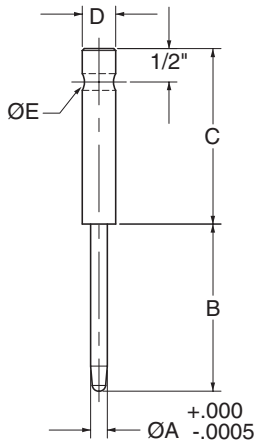
Metric

Part Number					
L-pin	T-pin	A	B	C	D
24051	**24251**	4	88	64	8
24052	**24252**	5	76	64	8
24054	**24254**	6	152	64	8
24055	**24255**	6	76	64	10
24056	**24256**	6	152	64	10
24057	**24257**	8	88	76	11
24058	**24258**	8	152	76	11
24059	**24259**	10	76	64	13
24060	**24260**	10	152	88	13
24061	**24261**	12	102	88	16
24062	**24262**	12	152	88	16
24063	**24263**	16	152	88	22
24064	**24264**	16	204	88	22
24065	**24265**	20	152	88	22
24066	**24266**	20	204	88	22

Jig Pins



Straight Handle Jig Pin



Jig Pins are precision ground locating devices. The straight handle style comes with a hole for easy attachment of a lanyard. The T-handle style can be converted to an L-handle style by tapping the roll pin with a hammer.

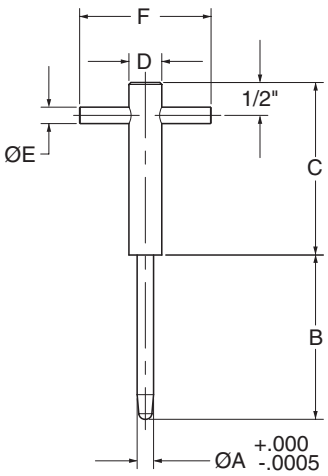
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rc 58-62 (pin only)

Straight Handle Jig Pin

Part Number	A	B	C	D	E
24101	.2500	2 1/2	2 5/8	1/2	1/4
24102	.3125	2 1/2	2 5/8	9/16	1/4
24103	.3750	4	2 5/8	5/8	1/4
24104	.5000	3	2 5/8	3/4	5/16



T-Handle Jig Pins



T- Handle Jig Pin

Part Number	A	B	C	D	E	F
24111	.2500	2 1/2	2 5/8	1/2	1/4	2
24112	.3125	2 1/2	2 5/8	9/16	1/4	3
24113	.3750	4	2 5/8	5/8	1/4	3
24114	.5000	3	2 5/8	3/4	5/16	3

Lanyards

- To attach lanyard to L or T Pins order Split Ring **890000**
- To permanently attach Lanyard to L or T Pins add -C to Lanyard part number.
- For Lanyard &Tab drawings see page 9.22

Ordering Lanyards When Supplied Separately Without Pins

Lanyards with Tabs

Length		Round Tab	Oval Tab
		Stainless Steel	Aluminum
inch	mm		
4	102	**890054***	**890104***
6	152	**890056***	**890106***
8	203	**890058***	**890108***
10	254	**890060***	**890110***
12	305	**890062***	**890112***
16	406	**890066***	**890116***
20	508	**890070***	**890120***
24	610	**890074***	**890124***

Substitute the asterisk (*) with the proper hole size letter from Table 1.

Table 1 Tab Hole Size

Tab Mounting Hole Diameter		
Inch	mm	Size Letter
0.131	3.3	P
0.196	4.9	Q
0.257	6.5	R
0.283†	7.1†	S
0.320†	8.1†	T
0.379†	9.6†	U
0.406†	10.3†	V
0.468†	11.8†	W
0.515†	13.1†	Y

(†) These sizes only available in stainless steel round tabs

Lanyards without Tabs

Length		2 Loops	1 Loops (Pin)
inch	mm		
4	102	**890204**	**890254**
6	152	**890206**	**890256**
8	203	**890208**	**890258**
10	254	**890210**	**890260**
12	305	**890212**	**890262**
16	406	**890216**	**890266**
20	508	**890220**	**890270**
24	610	**890224**	**890274**

Lanyard Loop/Eyelet

For Screw Size	
#10	M5
890304	**890404**
890306	**890406**
890308	**890408**
890310	**890410**
890312	**890412**
890316	**890416**
890320	**890420**
890324	**890424**

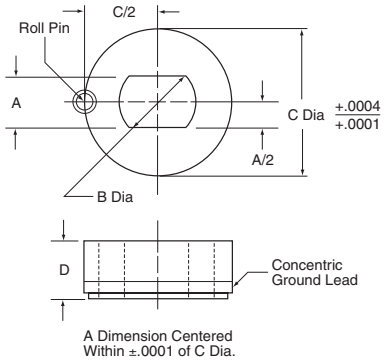
Slotted Locator Bushing



- Use with L Pins to align two holes without binding.
- Available for 3/16" through 1" diameter pins (6mm-25mm in metric sizes).
- Tool Steel, heat treated to Rc 58-62
- Supplied with Roll Pin: Locate within ±.002" of slot centerline.

Press Fit

Part Number	Pin Dia	A	Dia B	Dia C	D
24301	3/16	.1876/.1882	0.312	0.75	0.400
24302	1/4	.2501/.2507	0.375	0.75	0.400
24303	1/4	.2501/.2507	0.375	1	0.400
24304	5/16	.3126/.3132	0.437	1	0.400
24305	3/8	.3751/.3757	0.5	1	0.400
24306	1/2	5001/.5007	0.625	1	0.400
24307	1/2	5001/.5007	0.625	1	0.900
24308	5/8	.6251/.6257	.075	1.25	0.900
24309	3/4	.7501/.7510	0.812	1.5	1.0000
24310	7/8	.8751/8760	1	1.5	1.0000
24311	1	1.0001/1.0010	1.062	1.5	1.0000



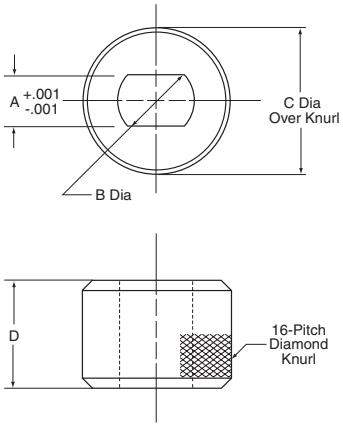
Press Fit Metric

Part Number	Pin Dia	A	Dia B	Dia C	D
24351	6mm	6.00/6.03	9.0	20.000	9.0
24352	8mm	8.00/8.03	11.0	24.000	9.0
24353	10mm	10.00/10.03	13.0	24.000	9.0
24354	12mm	12.00/12.03	15.0	24.000	14.0
24355	16mm	16.00/16.03	18.0	30.000	12.0
24356	20mm	20.00/20.03	22.0	35.999	19.0
24357	25mm	25.00/25.03	27.0	40.000	19.0

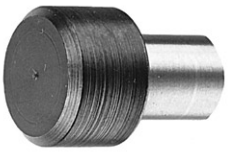


Knurled

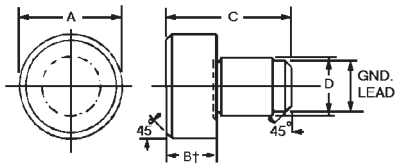
Part Number	Pin Dia	A	Dia B	Dia C	D
24331	3/16	0.188	0.312	0.565	.50
24332	1/4	0.25	0.375	0.64	.50
24333	5/16	0.313	0.437	0.765	.50
24334	3/8	0.375	0.5	0.89	.50



Rest Buttons
Ground and Unground



- Material:
  Ground, Low Carbon Steel
  Unground, 52100
- Finish: Black Oxide
- Heat Treat:
  Ground, Case Hardened
  75-77 R30N
  Unground, 58-62 Rc
- Available in FixturePro™ Design Software



†"B" dimension for ground style is +.0005/-.000, unground +.010/+.015

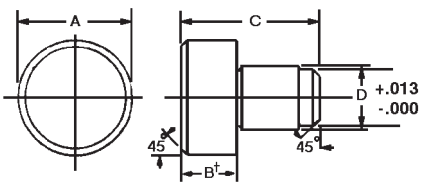
The Closest Tolerances in the Industry...

Jergens is proud of the close tolerances held on the "B" dimension of our Ground Rest Buttons. When it becomes necessary through constant wear to replace rest buttons, they can be replaced with the assurance of being within .0005 (.013mm) of the original location. Where replacement is not going to be a problem, we recommend the use of the Unground Buttons, which have a +.010 (.25mm) grinding stock to be ground after the fixture is assembled.

Part Number "B" Ground†	Part Number "B" Unground†	A	B	C	D	Wt. (lbs) 10 Pcs.
	45719	1/4	1/4	15/32	.1885-.188	.05
34701*	45721	3/8	1/4	15/32	.1885-.188	.08
34702*	45722	3/8	3/8	19/32	.1885-.188	.16
34703*	45723	3/8	1/2	23/32	.1885-.188	.16
34704*	45724	1/2	1/4	23/32	.251-.2505	.16
34705*	45725	1/2	3/8	27/32	.251-.2505	.21
34706*	45726	1/2	1/2	31/32	.251-.2505	.31
34707*	45727	5/8	1/4	23/32	.376-.3755	.31
34708*	45728	5/8	3/8	27/32	.376-.3755	.47
	45729	5/8	7/16	29/32	.376-.3755	.50
34709*	45730	5/8	1/2	31/32	.376-.3755	.55
34710*	45731	5/8	5/8	1 3/32	.376-.3755	.62
34711	45732	5/8	3/4	1 7/32	.376-.3755	.78
	45733	7/8	3/8	31/32	.501-.5005	.68
34712	45734	7/8	7/16	1 1/32	.501-.5005	.78
	45735	7/8	1/2	1 3/32	.501-.5005	.94
34713*	45736	7/8	5/8	1 7/32	.501-.5005	1.10
34714	45737	7/8	3/4	1 11/32	.501-.5005	1.25
	45738	1	3/8	1 3/32	.626-.6255	1.20
34715	45739	1	7/16	1 5/32	.626-.6255	1.45
34716*	45740	1	1/2	1 7/32	.626-.6255	1.65
	45741	1	5/8	1 11/32	.626-.6255	2.00
	45742	1	3/4	1 15/32	.626-.6255	2.50
	45743	1 1/4	3/8	1 7/32	.751-.7505	1.80
	45744	1 1/4	7/16	1 9/32	.751-.7505	2.10
	45745	1 1/4	1/2	1 11/32	.751-.7505	2.50
34717*	45746	1 1/4	5/8	1 15/32	.751-.7505	3.10
34718	45747	1 1/2	3/4	1 31/32	1.001-1.0005	6.90

*Conforms to TCMA

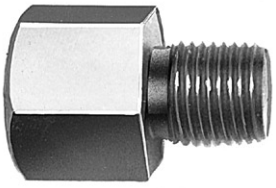
Rest Buttons
Metric
Ground and Unground

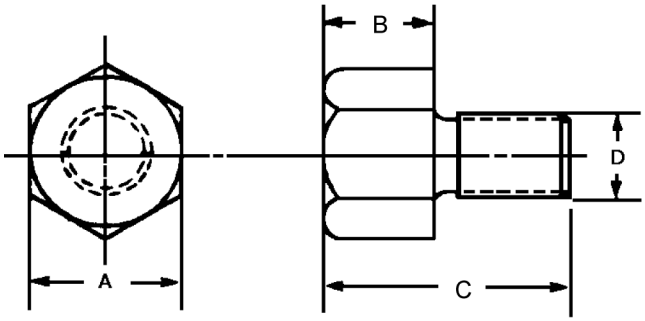


"B" Ground† Part Number	"B" Unground† Part Number	A	B	C	D
34751	45771	10	6	12	5
34754	45774	13	6	18	6
34757	45777	16	6	18	10
34758	45778	16	10	22	10
34759	45780	16	12	25	10
34763	45786	22	16	31	12
34766	45790	25	12	30	16

†"B" Dimension for ground style is +.013/-.000mm, ungrounded style is +.25/+.38mm.

Threaded Rest Buttons





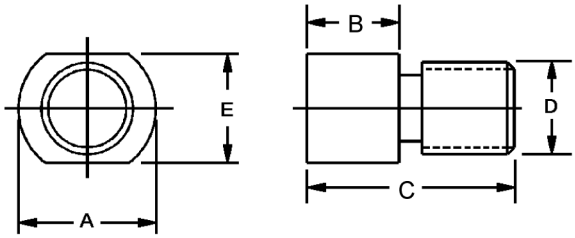
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Thread: 2A-UNF
- Available in FixturePro™ Design Software

Thread into job instead of press fit. "B" dimension left with .010-.015 for finishing after assembly. For cutter setting blocks on milling fixtures, grind to your own specifications. Case hardened to approximately .030 deep.

Part Number	A	B	C	D	Thread Pitch	wt/lbs 10 pcs.
21501	3/8	1/4	9/16	1/4-28	fine	.16
21521	3/8	1/4	9/16	1/4-20	coarse	.16
21502	3/8	3/8	11/16	1/4-28	fine	.16
21522	3/8	3/8	11/16	1/4-20	coarse	.16
21503	3/8	1/2	13/16	1/4-28	fine	.16
21523	3/8	1/2	13/16	1/4-20	coarse	.16
21504	1/2	1/4	11/16	3/8-24	fine	.24
21524	1/2	1/4	11/16	3/8-16	coarse	.24
21505	1/2	3/8	13/16	3/8-24	fine	.31
21525	1/2	3/8	13/16	3/8-16	coarse	.31
21506	1/2	1/2	15/16	3/8-24	fine	.47
21526	1/2	1/2	15/16	3/8-16	coarse	.47
21507	1/2	3/4	1 3/16	3/8-24	fine	.47
21527	1/2	3/4	1 3/16	3/8-16	coarse	.47
21508	3/4	3/8	15/16	1/2-20	fine	.78
21528	3/4	3/8	15/16	1/2-13	coarse	.78
21509	3/4	1/2	1 1/16	1/2-20	fine	.94
21529	3/4	1/2	1 1/16	1/2-13	coarse	.94
21510	3/4	1	1 9/16	1/2-20	fine	1.56
21530	3/4	1	1 9/16	1/2-13	coarse	1.56
21511	1	1/2	1 3/16	5/8-18	fine	1.72
21531	1	1/2	1 3/16	5/8-11	coarse	1.72
21512	1	1 1/2	2 3/16	5/8-18	fine	4.10
21532	1	1 1/2	2 3/16	5/8-11	coarse	4.10

Threaded Rest Buttons
Metric



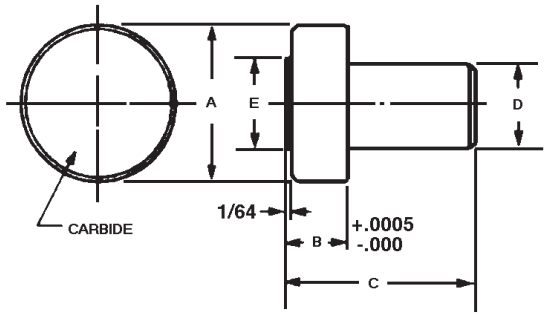


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Thread: Class 6g

Part Number	Dia. A	B	C†	D	Across Flats E
21551	10	6	14	M6x1.0	8
21554	13	6	17	M10x1.5	10
21558	16	10	25	M12x1.75	14
21561	25	12	30	M16x2.9	20

† +.25/+.38 mm Grinding Stock

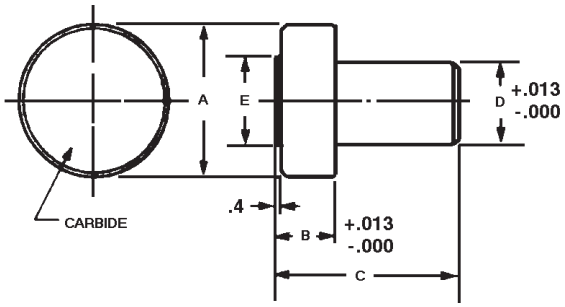
Carbide Insert Rest Buttons



- Material: Body, Low Carbon Steel
  Insert, Carbide
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
34901	1/2	.250	23/32	.2505/.2510	3/8	.25
34902	5/8	.250	23/32	.3755/.3760	3/8	.42
34903	5/8	.375	27/32	.3755/.3760	3/8	.58
34904	3/4	.4375	1 1/32	.5005/.5010	1/2	.92
34905	1	.4375	1 5/32	.6255/.6260	3/4	1.80

Metric Carbide Insert Rest Buttons

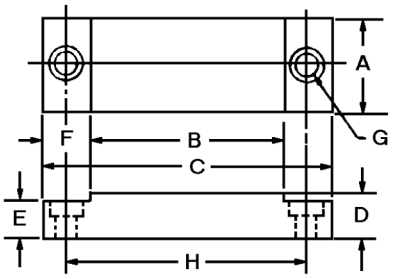


- Material: Body, Low Carbon Steel
  Insert, Carbide

Part Number	A	B	C	D	E
34951	13	6	18	6	10
34953	16	10	22	10	10
34955	25	12	30	16	19

Rest Pad





Jergens Feature:

By holding close tolerances on the "D" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013)

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Available in FixturePro™ Design Software

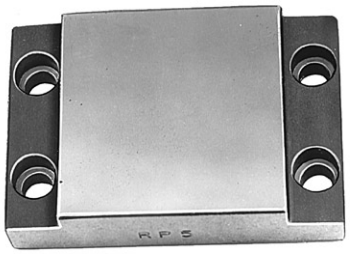
Rest Pads are designed to be used when you need a larger hardened wearing surface for heavy duty applications. Rest Pads can also be used as hardened work rests or as wear plates on your jigs and fixtures.

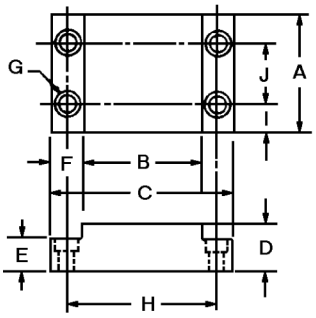
Part Number	A	B	C	+.0005 -.000 D	E	F	G	H	Wt. (lbs)
35901	1	1	2	.475	3/8	1/2	#10	1 1/2	.22
35902	1 1/2	1 1/2	2 1/2	.600	1/2	1/2	1/4	2	.58
35904	1	2	3 1/2	.720	5/8	3/4	5/16	2 3/4	.63
35905	1	3	4 1/2	.720	5/8	3/4	5/16	3 3/4	.84
35906	1	4	5 1/2	.720	5/8	3/4	5/16	4 3/4	1.06

Metric

Part Number	A	B	C	+.013 -.000 D	E	F	G	H
35951	25	25	50	12	10	13	M5	38
35952	25	38	64	15	13	13	M6	50
35954	25	50	89	18	16	19	M8	70

Rest Pad





Rest Pads are designed to be used when you need a larger hardened wearing surface for heavy duty applications. Rest Pads can also be used as hardened work rests or as wear plates on your jigs and fixtures.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Available in FixturePro™ Design Software

Part Number	A	B	C	+.0005 -.000 D	E	F	G	H	I	J	Wt. (lbs)
35903	2	2	3	.725	1/2	1/2	1/4	2 1/2	1/2	1	1.06

Metric

Part Number	A	B	C	+.013 -.000 D	E	F	G	H	I	J
35953	50	50	75	18	12	13	M6	64	13	25

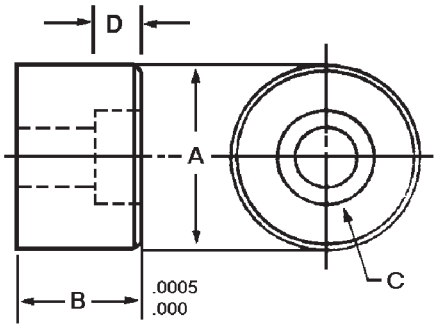
Jig Feet



- Material: Low Carbon Steel
- Finish: Black Oxide
- Cap Screw included
- Heat Treat: Case Hardened 75-77 R30N
- Available in FixturePro™ Design Software

Jergens Feature:

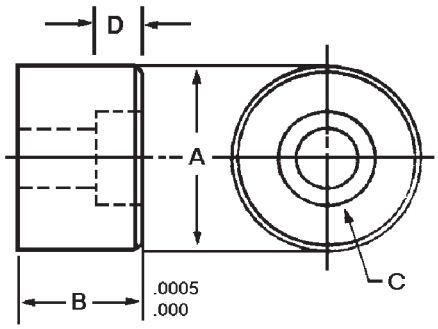
By holding close tolerances on the "B" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013)



Part Number	A	+.0005 -.000 B	Socket Head Capscrew C	D	Wt. (lbs) 10 Pcs.
25701*	5/8	3/8	1/4-20 x 3/8	9/32	.31
25702*	5/8	1/2	1/4-20 x 1/2	9/32	.31
25703*	5/8	5/8	1/4-20 x 5/8	9/32	.47
25704*	5/8	3/4	1/4-20 x 3/4	9/32	.55
25705	5/8	7/8	1/4-20 x 7/8	9/32	.62
25706	5/8	1	1/4-20 x 1	9/32	.78
25707*	7/8	1/2	5/16-18 x 1/2	11/32	.78
25708*	7/8	5/8	5/16-18 x 5/8	11/32	.94
25709*	7/8	3/4	5/16-18 x 3/4	11/32	1.03
25710	7/8	7/8	5/16-18 x 7/8	11/32	1.12
25711*	7/8	1	5/16-18 x 1	11/32	1.15
25712	7/8	1 1/8	5/16-18 x 1 1/4	11/32	1.17
25713	7/8	3/4	3/8-16 x 3/4	13/32	1.11
25714*	1 1/4	3/4	3/8-16 x 3/4	13/32	2.50
25715	1 1/4	7/8	3/8-16 x 7/8	13/32	2.70
25716*	1 1/4	1	3/8-16 x 1	13/32	3.30
25717*	1 1/4	1 1/2	3/8-16 x 1 1/2	13/32	5.00
25718	1 1/4	2	3/8-16 x 2	13/32	6.60
25719	1 5/8	1 1/4	1/2-13 x 1 1/2	17/32	7.00
25720	1 5/8	1 3/4	1/2-13 x 1 3/4	17/32	9.80
25721	1 5/8	2 1/4	1/2-13 x 2 1/2	17/32	13.75

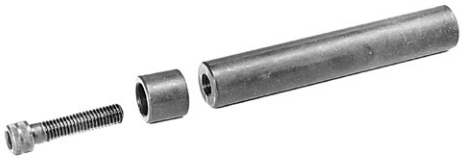
*Conforms to TCMA

Metric Jig Feet



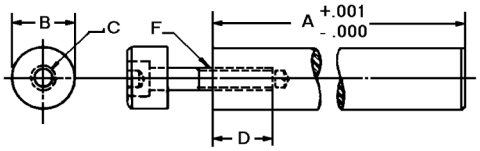
Part Number	A	+.013 -.000 B	Socket Head Capscrew C	D
25751	16	10	M6 x 10	7
25752	16	12	M6 x 12	7
25754	16	20	M6 x 20	7
25757	22	12	M8 x 12	9
25759	22	20	M8 x 20	9
25761	22	24	M8 x 25	9
25766	32	24	M10 x 25	11

Jig Legs



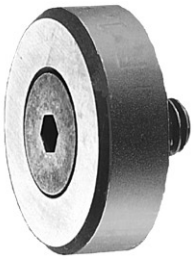
The Jergens Jig Legs are ideal for cutting costs in simple jig plates. They assure lasting accuracy in your jig plate with a larger bearing surface at the top the the leg. The large diameter rest button provides more bearing surface for spot facing or counterboring on the bottom side. Both legs and rest buttons are hardened for long life.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Cap Screw Included
- Available in FixturePro™ Design Software



Part Number	A	B	C	D	Cap Screw F	Wt. (lbs)
25301	1	5/8	1/4-20	5/8	1/4-20 x 1	.13
25302	2	5/8	1/4-20	5/8	1/4-20 x 1	.20
25303	3	5/8	1/4-20	7/8	1/4-20 x 1	.28
25304	4	7/8	3/8-16	7/8	3/8-16 x 1 3/4	.81
25305	5	7/8	3/8-16	7/8	3/8-16 x 1 3/4	1.00
25306	6	7/8	3/8-16	7/8	3/8-16 x 1 3/4	1.10

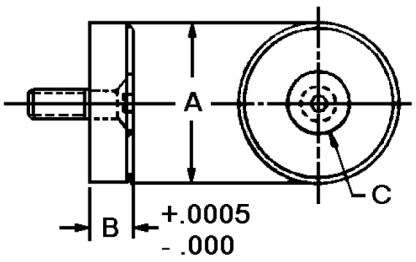
Flat Feet



- Material: Low Carbon Steel
- Heat Treat: Case Hardened 75-77 R30N
- Cap Screw Included
- Available in FixturePro™ Design Software

Jergens Feature:

By holding close tolerances on the "B" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013mm)

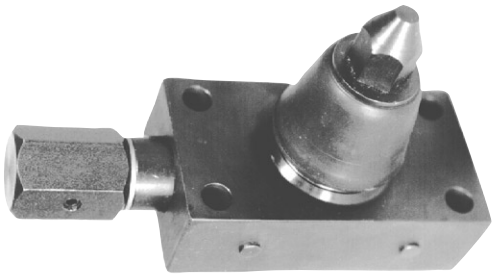


Part Number	A	+.0005 -.000 B	Flat Head Screw C	Wt. (lbs) 10 Pcs
19301	1/2	1/8	8-32 x 3/8	.06
19302	1/2	1/4	8-32 x 1/2	.16
19303	5/8	1/4	10-32 x 5/8	.21
19304	7/8	3/8	1/4-20 x 3/4	.62
19305	1 1/4	3/8	5/16-18 x 3/4	1.25
19306	1 5/8	3/8	3/8-16 x 3/4	2.20

Metric

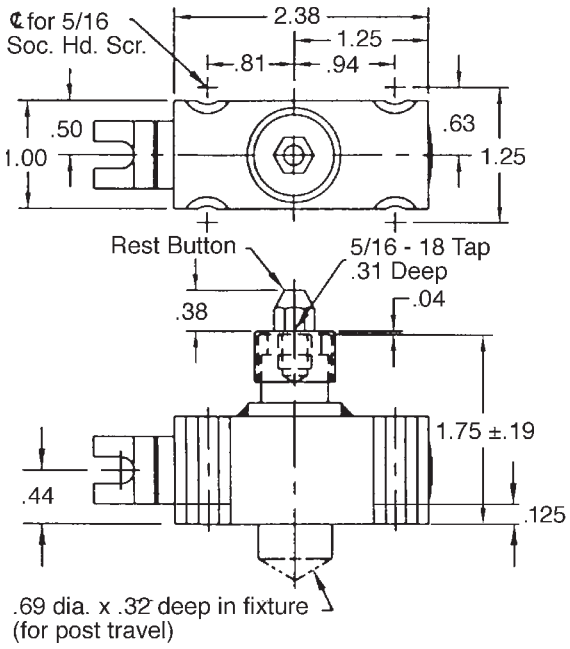
Part Number	A	+.013 -.000 B	Flat Head Screw C	Wt. (Kg) 10 Pcs
19351	13	3	M4 x 10	.03
19352	13	6	M4 x 12	.09
19353	16	6	M5 x 16	.11
19354	22	10	M6 x 20	.33
19355	31	10	M8 x 20	.47

Work Support Jacks



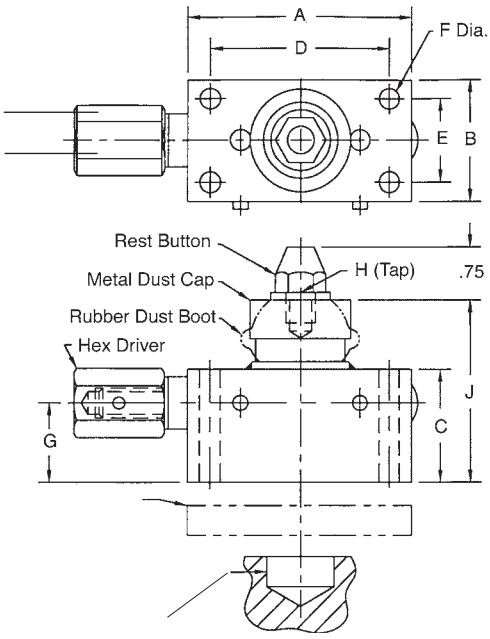
The Jergens Spring Loaded Work Jacks provide consistent support and rigidity to odd shaped workpieces. They are designed to prevent workpiece deflection under forces created during machining operations. Precision mated locking jaws grip the jackpost from both sides creating a vise-like action.

- Load capacities 300-4500 lbs.
- Rugged design
- Quality construction
- Dual jaw locking action
- Rubber boot or dust cap models available



25201

Riser Optional on Part Number 25207 & 25208	
1/4"	**25211**
1/2"	**25212**
3/4"	**25213**

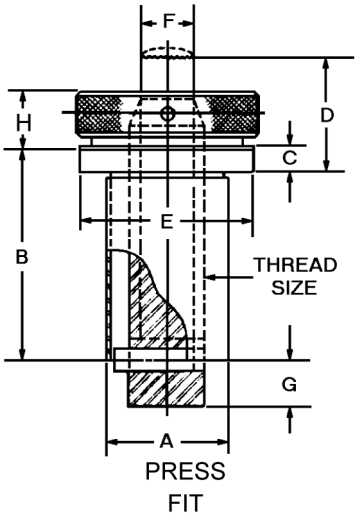


If risers are not used, hole must be provided in fixture base:
1.12" dia. x .50" deep for Part No.'s 25207 & 25208

Part Number	Load Rating	Type Of Dust Protector	Type Of Driver	A	B	C	D	E	Dia. F	G	Tap H	Jackpost J	
												Mean Ht.	Travel
25201	300 lbs at 10 ft-lbs Torque	Cap	Slotted, See Detailed View for Dimensions									1.75	±.19
25203	1400 lbs	Cap	.750 Hex	3.75	2.00	2.00	3.00	1.38	11/32	1.13	3/8-16 .44 Deep	3.31	±.25
25207	2500 lbs	Cap	.750 Hex	3.75	2.00	1.12	3.00	1.38	11/32	.56	3/8-16 .44 Deep	2.38	±.25
25205	4500 lbs	Cap	.937 Hex	4.54	2.50	2.50	3.50	1.88	13/32	1.63	1/2-13 .59 deep	4.13	±.38

Fixture Jacks





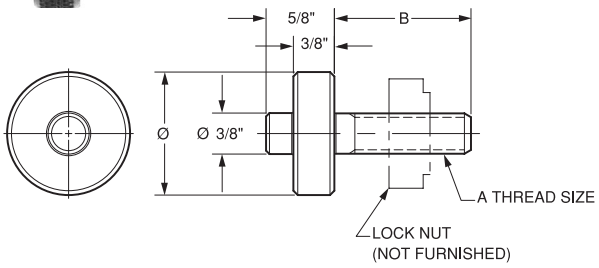
Designed as a positive locking jack for irregular clamping to achieve various heights requiring a positive pressure stop. Adjustable to fit height irregularities of milling operations. Available in either a smooth radius head or a hardened tool steel serrated gripping surface. Elevates vertically, no rotation. Outer diameter of bushing ground for press-fit.

- Material: Bushing, Low Carbon Steel
  Radius Stem, Low Carbon Steel
  Serrated Stem, 4140
- Finish: Bushing, Black Oxide
  Radius Stem, Black Oxide
  Serrated Stem, Black Oxide
- Heat Treat: Bushing, Case Hardened
  74-77 R30N
  Radius Stem, Case Hardened Serrated Stem, Rc 45-48
- Available in FixturePro™ Design Software

Part Number Radius	Part Number Serrated	Press Fit A	B	C	D		E	F	G	H	Thread Size	Wt. (lbs)
					Min.	Max.						
24901	**25101**	5/8	1 3/16	3/16	9/16	1 1/2	1	1/4	5/32	3/8	3/8-16	.19
24902	**25102**	1	1 5/8	3/16	7/8	2 7/16	1 5/16	15/32	7/16	7/16	5/8-11	.55
24903	**25103**	1 1/2	2 3/4	3/16	7/8	3 1/2	1 3/4	13/16	1/2	9/16	1-8	1.90

Adjustable Jack Screws



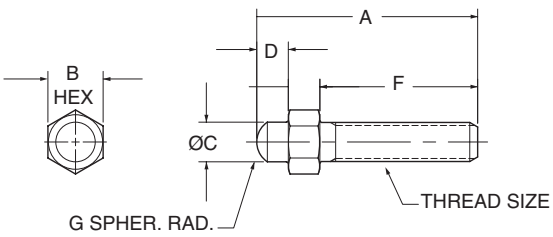


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Screw/Stem Case Hardened 87-92 R15N

Part Number	A	B	C	Wt. (lbs)	Lock Nut (Not Included)
25001	3/8-16	1-1/4	1-1/8	0.15	28101
25003	3/8-16	2	1-1/8	0.18	28101
25005	1/2-13	1-5/8	1-1/8	0.20	28102
25007	1/2-13	2-1/2	1-1/8	0.25	28102
25009	5/8-11	2	1-3/8	0.34	28103
25011	5/8-11	3	1-3/8	0.43	28103

Adjustable Locating Buttons

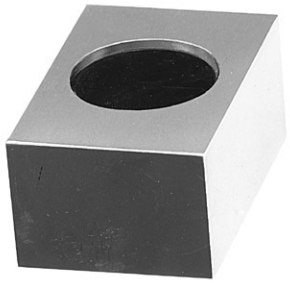


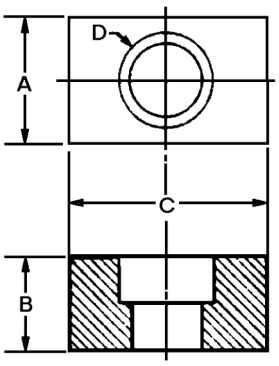


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 87-92 R15N

Part Number	Thread Size	A	B	C	D	E	F	G
21401	10-32	1	1/4	3/16	1/8	1/8	3/4	1/8
21402	1/4-28	1 1/2	3/8	1/4	3/16	3/16	1 1/8	3/16
21403	5/16-24	1 3/4	7/16	5/16	1/4	1/4	1 1/4	3/16
21404	3/8-24	2	1/2	3/8	1/4	1/4	1 1/2	1/4
21405	1/2-20	2 1/2	5/8	1/2	5/16	5/16	1 7/8	5/16
21406	5/8-18	3	3/4	5/8	3/8	3/8	1 1/4	3/8
21407	3/4-16	3 1/2	7/8	3/4	7/16	7/16	2 5/8	7/16

Standard Fixture Keys





- Material: C-1018
- Finish: Black Oxide
- Heat Treat: Case Hardened 74-77 R30N
- Available in FixturePro™ Design Software

Part Number	–.0005 –.0010 A	B	C	Socket Head Screw D	Wt. (lbs) 10 Pcs.
19701*	.5000	1/2	3/4	1/4	.14
19702*	.5625	1/2	3/4	1/4	.65
19703*	.6250	1/2	3/4	5/16	.68
19704*	.6875	1/2	1	5/16	.98
19705	.7500	1/2	1 1/4	5/16	1.10
19706	.8125	1/2	1 1/4	5/16	1.25

*Conforms to TCMA

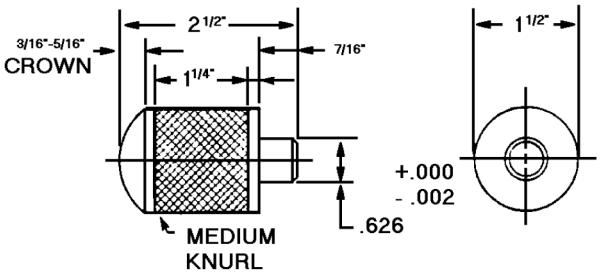
Metric

Part Number	–.0013 –.0026 A	B	C	Socket Head Screw D
19751	12	13	19	M5
19752	14	14	22	M6
19753	16	13	22	M6
19754	18	14	22	M6
19755	20	13	22	M6
19756	22	13	32	M6

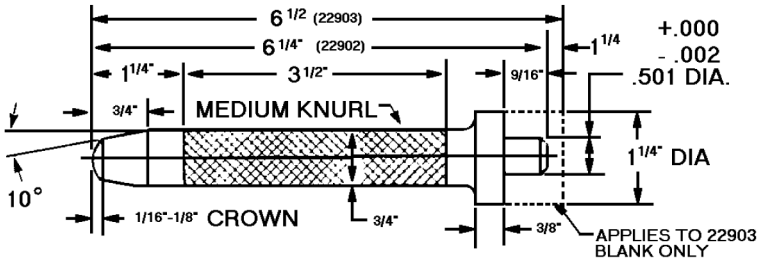
Drift Handles



- Material: AISI-S7
- Finish: Black Oxide
- Heat Treat: Rc 44-48
- Available in FixturePro™ Design Software



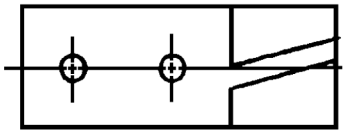
Part Number	Wt. (lbs)
22901	1.0



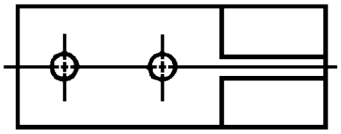
Part Number	Wt. (lbs)
22902	1.1
22903	1.2

Compare The Jergens Sine Fixture Key Method To The Standard Method

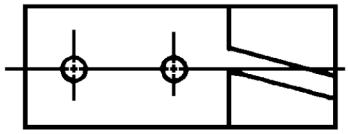
Construct a fixture to mill slots in castings A, B, and C. The locator pins to be common.



A



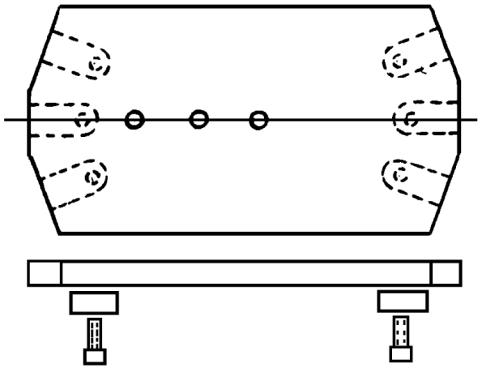
B



C

Present Method

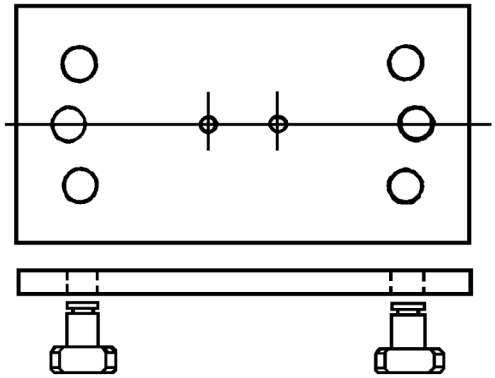
A total of 11.2 hours was required to complete this fixture base with finished edge, milled fixture key slots, bored locator pin holes and drilled and tapped set screw holes.



PRESENT METHOD	TIME
1. Finish one edge.	.5 hours
2. Locate on jig bore and bore locating point and two locator pin holes	1.75 hours
3. Relocate, position and mill two fixture key slots.	1.75 hours
4. Relocate and, by use of sine bar or other positioning device, establish and mill two fixture key slots.	2.35 hours
5. For opposite slots-same as above	2.35 hours
6. Drill and tap six holes for holding fixture keys in slots.	1.5 hours
7. Set up and perform inspection-if inaccurate, reroute for reworking.	1.0 hours
TOTAL TIME REQUIRED	11.2 hours

Jergens Method

It took only 5 1/2 hours to complete this fixture with bored sine fixture key holes and bored locator pin holes



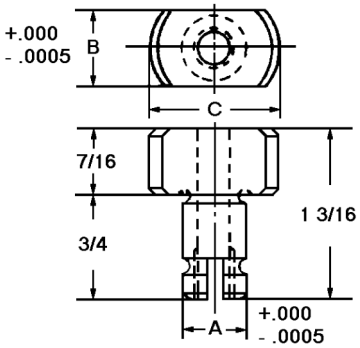
JERGENS METHOD	TIME
1. Eliminated.	
2. One set-up serves for establishing locator holes and sine fixture keys.	4.5 hours
3. Eliminated.	
4. Eliminated	
5. Eliminated.	
6. Eliminated.	
7. Inspect on original set-up.	1.0 hours
TOTAL TIME REQUIRED	5.5 hours

ON THIS PARTICULAR FIXTURE - SAVE OVER 50% OF SET-UP TIME!

Sine Fixture Keys



- Material: 4140
- Heat Treat: 26-30
- Available in FixturePro™ Design Software
- Reduce fixture costs
- Cut extra set-up time
- Completely interchangeable
- Fits many table slot sizes



Jergens Feature:

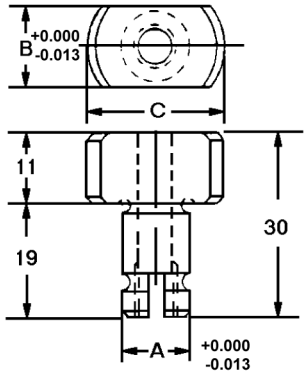
Full 360° contact for more accurate locating.

Sine Fixture Keys locate jigs and fixtures on machine tool tables and position the part in one operation. They eliminate the need to slot fixture bases, make step fixture keys, or drill and tap keys. Simply ream two holes, depending upon the shank size shown in the table below.

The unique expansion shaft allows the key to be locked in the fixture from either the top or the bottom using a standard hex wrench.

Part Number	Shank Size A	Slot Size B	C	Wt. (lbs)	Recommended Hole Diameter
39501	.625	.4995	1	.09	
39502	.625	.562	1	.11	
39503	.625	.6245	1	.11	
39504	.625	.687	1	.11	**.625 Shank Size:**
39505	.625	.7495	1 1/8	.13	0.6255 ± 0.0005
39506	.625	.812	1 1/8	.14	
39507	.625	.8745	1 1/8	.15	
39509	.750	.9995	1 3/8	.22	**.75 Shank Size:**
39510	.750	1.062	1 3/8	.23	0.7505 ± 0.0005

Metric Sine Fixture Keys



Part Number	Shank Size A	Slot Size B	C	Wt. (kg)	Recommended Hole Diameter
39551	16	12	25	.04	
39552	16	14	25	.05	
39553	16	16	25	.05	**16mm Shank Size:**
39554	16	18	29	.05	16.01 ± 0.01
39555	16	20	29	.06	
39556	16	22	29	.06	
39557	20	24	35	.07	**20mm Shank Size:**
39558	20	28	35	.10	20.01 ± 0.01
39559	20	32	40	.10	

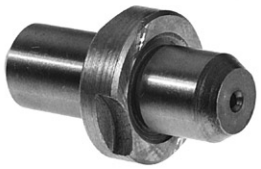
Metric Slot/Inch Shank

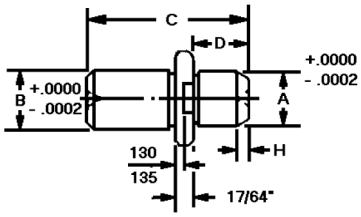
Used primarily for adapting existing fixtures with inch locating holes to metric table slots.

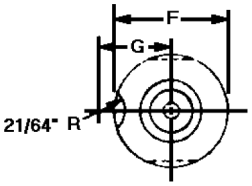
Part Number	Shank Size A	Slot Size (Mm) B	C	Wt. (lbs)	Recommended Hole Diameter
39561	.625	12	1	.09	
39562	.625	14	1	.09	
39563	.625	16	1	.11	
39564	.625	18	1 1/8	.11	0.6255 ± 0.0005
39565	.625	20	1 1/8	.14	
39566	.625	22	1 1/8	.15	

Locating Pins-Slip Fit

Round







- Material: Low Carbon Steel
- Heat Treat: Case Hardened 74-77 R30N
- Available in FixturePro™ Design Software

- Sizes range from1/8" to 1" head diameters
- Concentricity in both diameters is held within .0002
- For special applications we will grind the "A" dimension to your specifications
- Quick turnaround on specials
- May be used in bushing applications or press fit with Lock Screws.

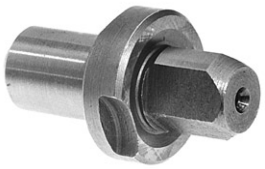
Part Number Round	A	B	C	D	F	G	H	Wt. (lbs) 10 Pcs.
29101*	.1245	5/16	1 3/16	7/16	5/8	33/64	1/32	.31
29102	.1401	5/16	1 3/16	7/16	5/8	33/64	1/32	.31
29103*	.1558	5/16	1 3/16	7/16	5/8	33/64	3/64	.31
29104	.1714	5/16	1 3/16	7/16	5/8	33/64	3/64	.31
29105*	.1870	5/16	1 3/16	7/16	5/8	33/64	1/16	.31
29106	.2026	5/16	1 3/16	7/16	5/8	33/64	1/16	.31
29107*	.2183	5/16	1 3/16	7/16	5/8	33/64	5/64	.31
29108	.2339	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29109*	.2495	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29110	.2651	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29111*	.2808	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29112	.2964	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29113*	.3120	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29114*	.3115	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29115	.3271	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29116*	.3428	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29117	.3584	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29118*	.3740	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29119	.3896	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29120*	.4053	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29121	.4209	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29122*	.4365	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29123	.4521	1/2	1 1/2	1/2	7/8	41/64	1/8	.95
29124*	.4678	1/2	1 1/2	1/2	7/8	41/64	1/8	.95
29125	.4834	1/2	1 1/2	1/2	7/8	41/64	1/8	1.00
29126*	.4990	1/2	1 1/2	1/2	7/8	41/64	1/8	1.00
29127*	.4980	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.0
29128*	.5293	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.0
29129*	.5605	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29130*	.5918	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29131*	.6230	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29132*	.6543	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29133*	.6855	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29134*	.7168	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29135*	.7480	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29136*	.7480	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29137*	.7793	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29138*	.8105	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29139*	.8418	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29140*	.8730	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29141*	.9043	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29142*	.9355	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29143*	.9668	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29144*	.9980	1	2 5/8	1	1 1/2	61/64	9/32	5.0

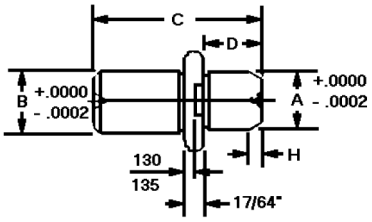
* Conforms to TCMA

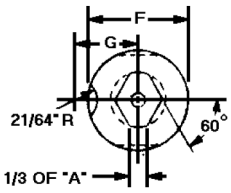
See page 4.24 for Liners and Lock Screws.

Locating Pins-Slip Fit

Relieved







- Material: Low Carbon Steel
- Heat Treat: Case Hardened 74-77 R30N
- Available in FixturePro™ Design Software

- Sizes range from 1/8" to 1" head diameters
- Concentricity in both diameters is held within .0002
- For special applications we will grind the "A" dimension to your specifications
- Quick turn-around on specials
- May be used in bushing applications or press fit with lock screws.

Part Number Relieved	A	B	C	D	F	G	H	Wt. (lbs) 10 Pcs.
29301*	.1245	5/16	1 3/16	7/16	5/8	33/64	1/32	.31
29302	.1401	5/16	1 3/16	7/16	5/8	33/64	1/32	.31
29303*	.1558	5/16	1 3/16	7/16	5/8	33/64	3/64	.31
29304	.1714	5/16	1 3/16	7/16	5/8	33/64	3/64	.31
29305*	.1870	5/16	1 3/16	7/16	5/8	33/64	1/16	.31
29306	.2026	5/16	1 3/16	7/16	5/8	33/64	1/16	.31
29307*	.2183	5/16	1 3/16	7/16	5/8	33/64	5/64	.31
29308	.2339	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29309*	.2495	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29310	.2651	5/16	1 3/16	7/16	5/8	33/64	3/32	.31
29311*	.2808	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29312	.2964	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29313*	.3120	5/16	1 3/16	7/16	5/8	33/64	3/32	.36
29314*	.3115	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29315	.3271	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29316*	.3428	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29317	.3584	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29318*	.3740	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29319	.3896	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29320*	.4053	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29321	.4209	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29322*	.4365	1/2	1 1/2	1/2	7/8	41/64	1/8	.90
29323	.4521	1/2	1 1/2	1/2	7/8	41/64	1/8	.95
29324*	.4678	1/2	1 1/2	1/2	7/8	41/64	1/8	.95
29325	.4834	1/2	1 1/2	1/2	7/8	41/64	1/8	1.00
29326*	.4990	1/2	1 1/2	1/2	7/8	41/64	1/8	1.00
29327*	.4980	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.0
29328*	.5293	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.0
29329*	.5605	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29330*	.5918	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29331*	.6230	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29332*	.6543	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29333*	.6855	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29334*	.7168	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29335*	.7480	3/4	1 15/16	11/16	1 1/8	49/64	3/16	2.5
29336*	.7480	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29337*	.7793	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29338*	.8105	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29339*	.8418	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29340*	.8730	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29341*	.9043	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29342*	.9355	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29343*	.9668	1	2 5/8	1	1 1/2	61/64	9/32	5.0
29344*	.9980	1	2 5/8	1	1 1/2	61/64	9/32	5.0

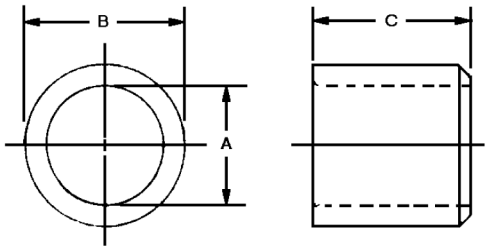
* Conforms to TCMA

See page 4.24 for Liners and Lock Screws.

Locating Pin Liners



• Material: 52100 Steel

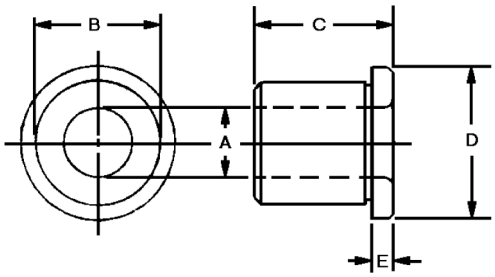


Part Number	A	B	C	Wt. (lbs) 10 Pcs.
28501	.3129 .3126	.5017 .5014	1/2	.16
28502	.5005 .5002	.7518 .7515	3/4	.47
28503	.7506 .7503	1.0018 1.0015	1	.94
28504	1.0007 1.0004	1.3772 1.3768	1 3/8	2.80

Locating Pin Shoulder Liners



• Material: 52100 Steel

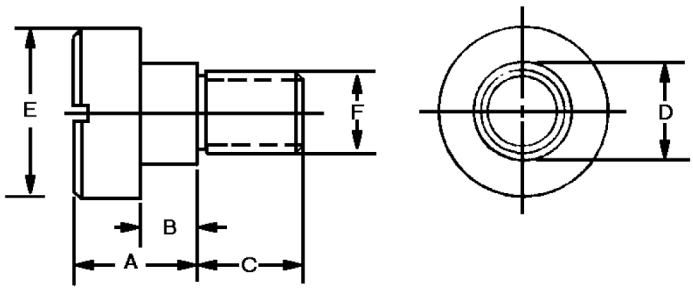


Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
40901	.3129 .3126	.5017 .5014	1/2	5/8	3/32	.16
40902	.5005 .5002	.7518 .7515	3/4	7/8	3/32	.47
40903	.7506 .7503	1.0018 1.0015	1	1 1/8	1/8	.94
40904	1.0007 1.0004	1.3772 1.3768	1 3/8	1 1/2	1/8	2.65

Locating Pin Lock Screws



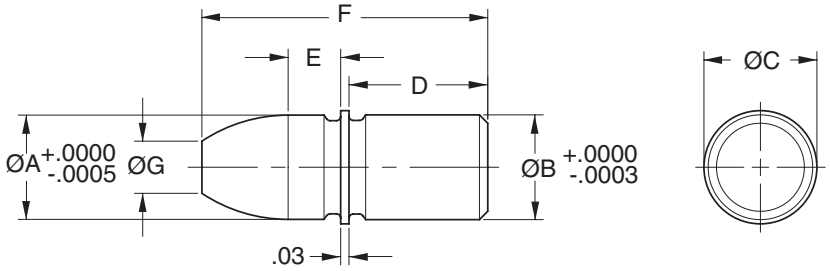
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2A-UNC



Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
10101	1/4	.135	3/8	3/8	5/8	5/16-18	.16

Bullet Nose Dowels



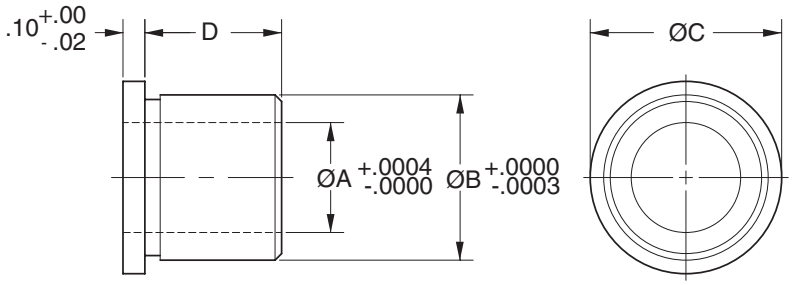


Bullet Nose Dowels are used for aligning two pieces of a fixture together.

- Pin and head centric within .0005 TIR
- Bushing ID and OD concentric within .0003 TIR
- Material: Low carbon steel
- Heat Treat: Case hardened 72-82 R30N
- Ground finish

Bullet-Nose Dowels

Part Number	A	B	C	D	E	F	G
29221	.2499	.2516	.280	1/2	.12	.90	1/8
29222	.3124	.3141	.344	1/2	.16	.94	5/32
29223	.3749	.3766	.407	1/2	.19	1.03	3/16
29224	.4999	.5017	.532	1/2	.19	1.09	1/4

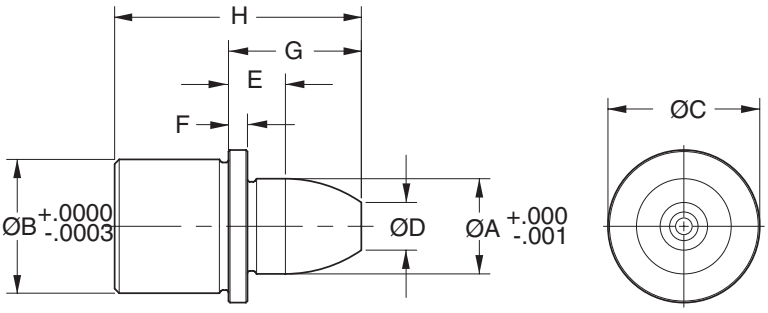


Bullet-Nose Dowel Liners (Bushings)

Part Number	A	B	C	D
40921	.2501	.5017	5/8	3/8
40922	.3126	.5017	5/8	3/8
40923	.3751	.6267	3/4	1/2
40924	.5001	.7518	7/8	5/8

Pilot Locating Pins





- Material: Low carbon steel
- Heat Treat: Case hardened 72-82 R30N
- Ground finish

Pilot Locating Pins

Part Number	A	B	C	D	E	F	G	H
29231	.249	.4078	9/16	5/32	9/32	3/32	15/32	27/32
29232	.312	.5017	5/8	3/16	9/32	3/32	15/32	27/32
29233	.624	.8768	1	5/16	3/8	1/8	7/8	1 5/8

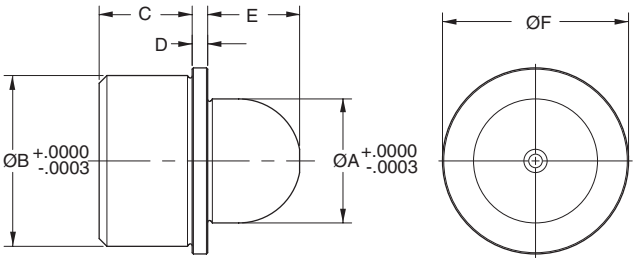
Bullet Nose Pins

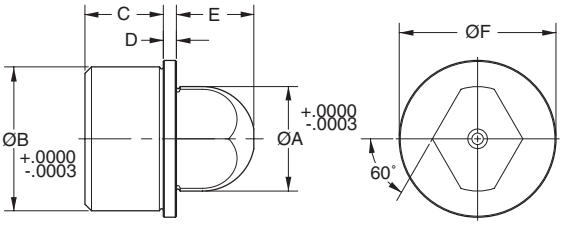


Bullet-Nose Pins – Round



Bullet-Nose Pins – Relieved





Bullet-Nose Pins – Round

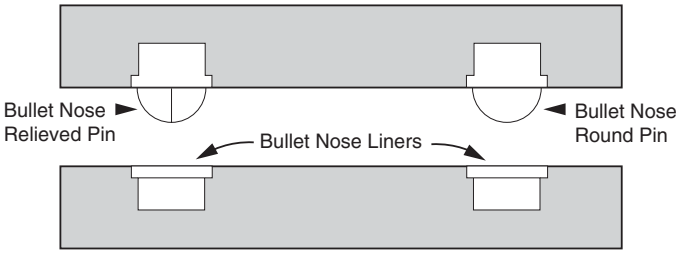
Part Number	A	B	C	D	E	F
29201	.2499	.4078	3/8	1/16	7/32	9/16
29202	.3124	.5017	3/8	1/16	9/32	5/8
29203	.3749	.6267	1/2	1/16	5/16	3/4
29204	.4998	.7518	1/2	1/16	13/32	7/8
29205	.7498	1.0018	3/4	1/8	9/16	1 1/8
29206	.9998	1.3771	3/4	1/8	3/4	1 1/2

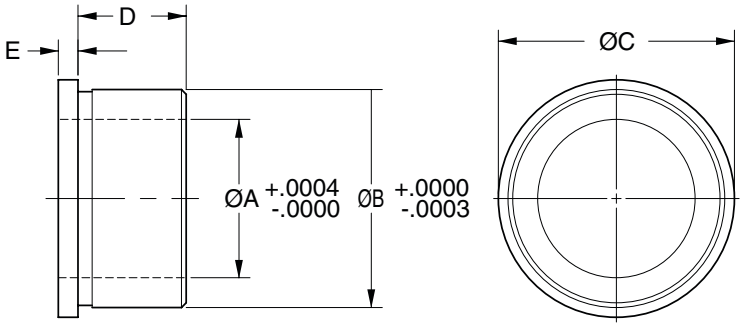
Bullet-Nose Pins – Relieved

Part Number	A	B	C	D	E	F
29211	.2499	.4078	3/8	1/16	7/32	9/16
29212	.3124	.5017	3/8	1/16	9/32	5/8
29213	.3749	.6267	1/2	1/16	5/16	3/4
29214	.4998	.7518	1/2	1/16	13/32	7/8
29215	.7498	1.0018	3/4	1/8	9/16	1 1/8
29216	.9998	1.3771	3/4	1/8	3/4	1 1/2

Bullet Nose Pins are used for aligning two pieces of a fixture together. The round and relieved style are used in conjunction with a matching bushing to locate radially on the round pin. The flats on the relieved pin prevents binding, yet allows a high degree of accuracy to be maintained.

- Material: Low carbon steel
- Heat Treat: Case hardened 72-82 R3ON
- Ground finish



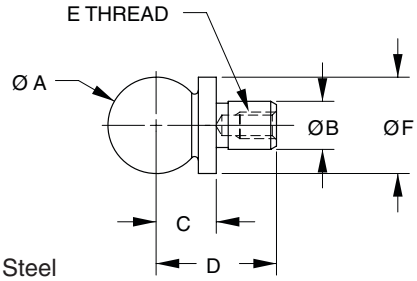


Bullet Nose Pins Liners (Bushings)

Part Number	A	B	C	D	E
40911	.2501	.4078	9/16	7/16	1/16
40912	.3126	.5017	5/8	7/16	1/16
40913	.3751	.6267	3/4	7/16	1/16
40914	.5001	.7518	7/8	1/2	1/16
40915	.7502	1.0018	1 1/8	1/2	1/8
40916	1.0002	1.3771	1 1/2	1 11/16	1/8

Premium Short Shank Inspection Balls



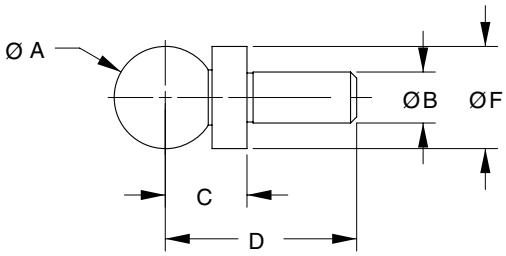


- Material: 8620 Steel
- Case Hardened
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0001 T.I.R.
- One-piece construction

Part Number	+0.0000-0.0002 A	+0.0000/-0.0002 B	+/-0.0002 C	D	Thread E	Dia. F	Weight (lbs) 10 Pcs.
29060	0.2500	0.1247	0.2000	0.58		1/4	.1
29061	0.3750	0.1872	0.3000	0.75		3/8	.1
29062	0.3750	0.3125	0.3000	0.74	8-32	1/2	.3
29063	0.5000	0.2497	0.3125	0.63	6-32	1/2	.3
29064	0.5000	0.2497	0.4000	0.93	6-32	1/2	.3
29065	0.5000	0.2497	0.5000	0.88	6-32	1/2	.3
29066	0.5000	0.3750	0.3750	1.31	10-24	5/8	.6
29067	0.6250	0.3122	0.4500	1.08	8-32	5/8	.6
29068	0.6250	0.3750	0.4500	1.42	10-24	5/8	.7
29069	0.6875	0.3750	0.5000	1.47	10-24	3/4	.9
29070	0.7500	0.3750	0.5625	1.53	10-24	3/4	1.3
29071	1.0000	0.5000	0.7000	1.64	10-24	1	2.5

Precision Slip Fit

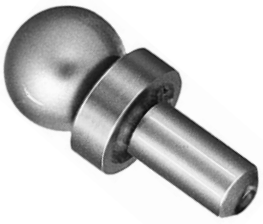




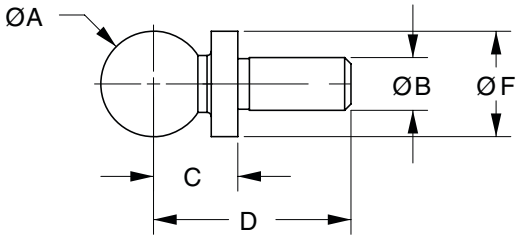
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0002 T.I.R.
- Hardened and ground steel (440 Stainless)
- Two-piece construction

Part Number	+/-0.0005 A	+0.0000/-0.0002 B	+/-0.0002 C	D	Dia F	Weight (lbs) 10 Pcs.
29075	0.2500	0.1247	0.2000	9/16	1/4	.1
29076	0.3750	0.1872	0.3000	3/4	3/8	.1
29077	0.5000	0.2497	0.4000	15/16	1/2	.3
29078	0.6250	0.3122	0.4500	1 1/16	5/8	.6
29079	0.7500	0.3747	0.5000	1 1/4	3/4	1.0
29080	0.8750	0.4372	0.6000	1 7/16	3/4	.7
29081	1.0000	0.4997	0.7000	1 5/8	1	2.4

Shoulder Press Fit



- One Piece Construction
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened Rc58-62



Slip Fit

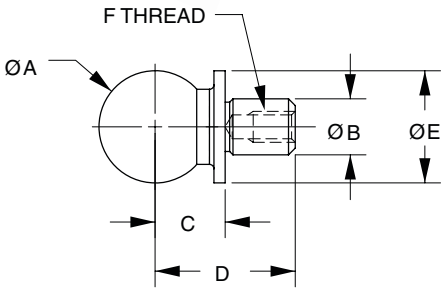
Part Number	± 0.0002 A	+ 0.0000 - 0.0004 B	± 0.0002 C	D	Dia F	Weight (lbs) 10 Pcs.
29041	.2500	.1250	.2000	9/16	1/4	.1
29042	.3750	.1875	.3000	3/4	3/8	.1
29043	.5000	.2500	.4000	15/16	1/2	.3
29044	.5000	.2500	.5000	1 3/8	1/2	.4
29045	.7500	.3750	.5000	1 1/4	3/4	1.0

Press Fit

Part Number	- 0.0002 Dia A	+ 0.0003/-0.0000 B	+0.0002 C	D	Dia F	Wt. (lbs) 10 Pcs.
29085	0.2500	.1253	.2000	9/16	1/4	.1
29086	0.3750	.1878	.3000	3/4	3/8	.1
29087	0.5000	.2503	.4000	15/16	1/2	.3
29088	0.5000	.2503	.5000	1 3/8	1/2	.4
29089	0.7500	.3753	.5000	1 1/4	3/4	1.0

Construction Balls-Tapped, One-Piece Construction





- Heavy-Duty, Resists Lateral Forces
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened Rc58-62

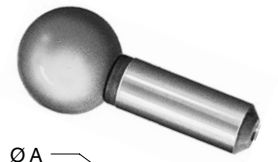
Inch

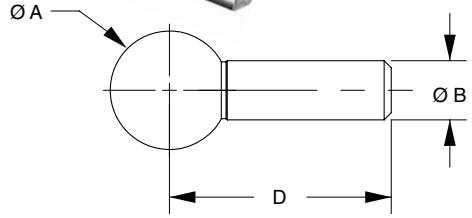
Part Number	± 0.0002 A	+ 0.0000 - 0.0004 B	± 0.0002 C	D	Dia. E	F	Weight (lbs) 10 Pcs
29051	0.5000	0.2500	.3125	5/8	.490	6-32 x 1/4	.3
29052	0.5000	0.2500	.3125	5/8	.490	Not Tapped	.3

Metric

Part Number	± 0.005mm A	+0.000/- 0.010mm B	± 0.005mm C	D	Dia. E	F	Weight (kgs) 10 Pcs
29090	6mm	3mm	6mm	16mm	6mm	Not Tapped	.05
29091	10mm	5mm	10mm	20mm	10mm	Not Tapped	.15
29092	12mm	6mm	12mm	22mm	12mm	Not Tapped	.15

Tooling Balls - Standard Tolerance, One-Piece Construction



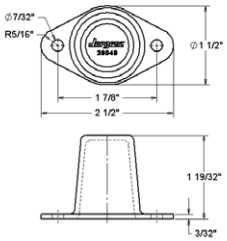


- One Piece Construction
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened Rc58-62

Part Number	± 0.0002 A	+ 0.0000 - 0.0004 B	D	Weight (lbs) 10 Pcs
29031	.2500	.1250	9/16	.1
29032	.3750	.1875	3/4	.1
29033	.5000	.2500	15/16	.3
29034	.5000	.2500	1 1/2	.3
29035	.5000	.3750	1 1/2	.8

Tooling/Inspection Ball Covers





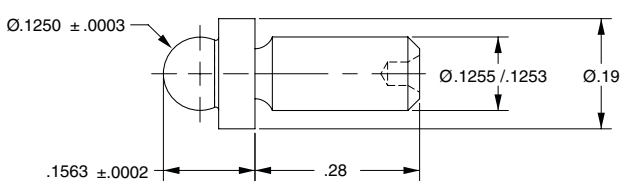
- Mounts directly to the fixture with two number 10 (M4) screws.
- Fits most tooling balls up to 3/4".

Part Number	Mounting Hole-Center to Center +/- .005	Mounting Hole Diameter	Overall Height
29049	1.875	7/32	1.590

Carbide

Part Number
29099





- Two-piece construction
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0002 T.I.R.
- Hardened and ground
- Material: Ball - Carbide
  Shank - 440 Stainless
- Weight per 10 pcs. 0.1 lbs.

Tooling Balls

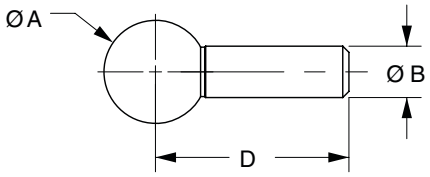


NOTE: The weld between the ball and the shank is made so that the ball will drop off if subjected to unusually heavy lateral forces. This prevents setup and inspection errors that might occur because of accidental bending of the shank.

Fixture Balls (plain shank)

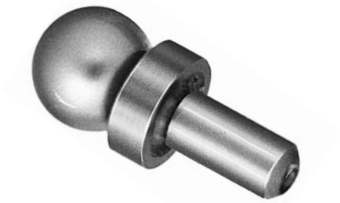
These Tooling balls are assembled by a welding technique that retains the initial high precision and fine finish of the balls.

- Material: Type 440-C Stainless Steel hardened to Rc 58-62
- Eccentricity, ball to shank, 0.0002 T.I.R. maximum
- Two Piece Welded Construction



Part Number	A ±0.0001	B +0.0000 -0.0003	C ±0.005
29001	0.2500	0.1247	0.560
29002	0.3750	0.1872	0.750
29003	0.5000	0.2497	0.940
29004	0.6250	0.3122	1.060
29005	0.7500	0.3747	1.250
29006	0.8750	0.4372	1.440
29007	1.0000	0.4997	1.620

*Metric available if requested

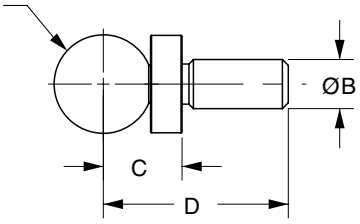


Checking Balls (with reference shoulders)

High precision stainless steel checking balls are made to closer tolerances and avoid excessive side forces. The accurately located shoulder provides for positive positioning, re-positioning, or replacement.

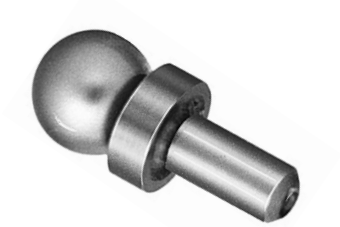
- Material: Type 440-C Stainless Steel hardened to Rc 58-62
- Eccentricity, ball to shank, 0.0002 T.I.R. maximum
- Two Piece Welded Construction

A DIM
1/8 thru 5/8 ±.00002
3/4 thru 1" ±.00005



Part Number	A	B +0.0000 -0.0002	C ±0.0002	D -0.005
***29010**	0.1250	0.1255	0.0938	0.375
29011	0.2500	0.1247	0.2000	0.560
29012	0.3750	0.1872	0.3000	0.750
29013	0.5000	0.2497	0.4000	0.940
29014	0.6250	0.3122	0.4500	1.060
29015	0.7500	0.3747	0.5000	1.250
29016	0.8750	0.4372	0.6000	1.440
29017	1.0000	0.4997	0.7000	1.620

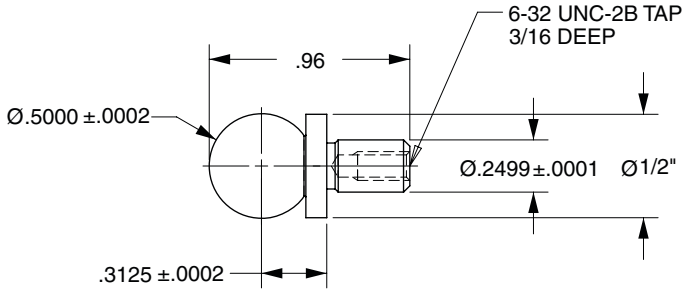
*29010 is supplied with tungsten carbide ball only, with Rockwell hardness 91.5 - 92.5
**Metric available if requested



Checking Balls (with reference shoulder and tapped shank)

This Checking Ball can be pulled into a hole or bushing from below without applying pressure on the ball (accomplished by using a cap screw in the tapped hole in the shank).

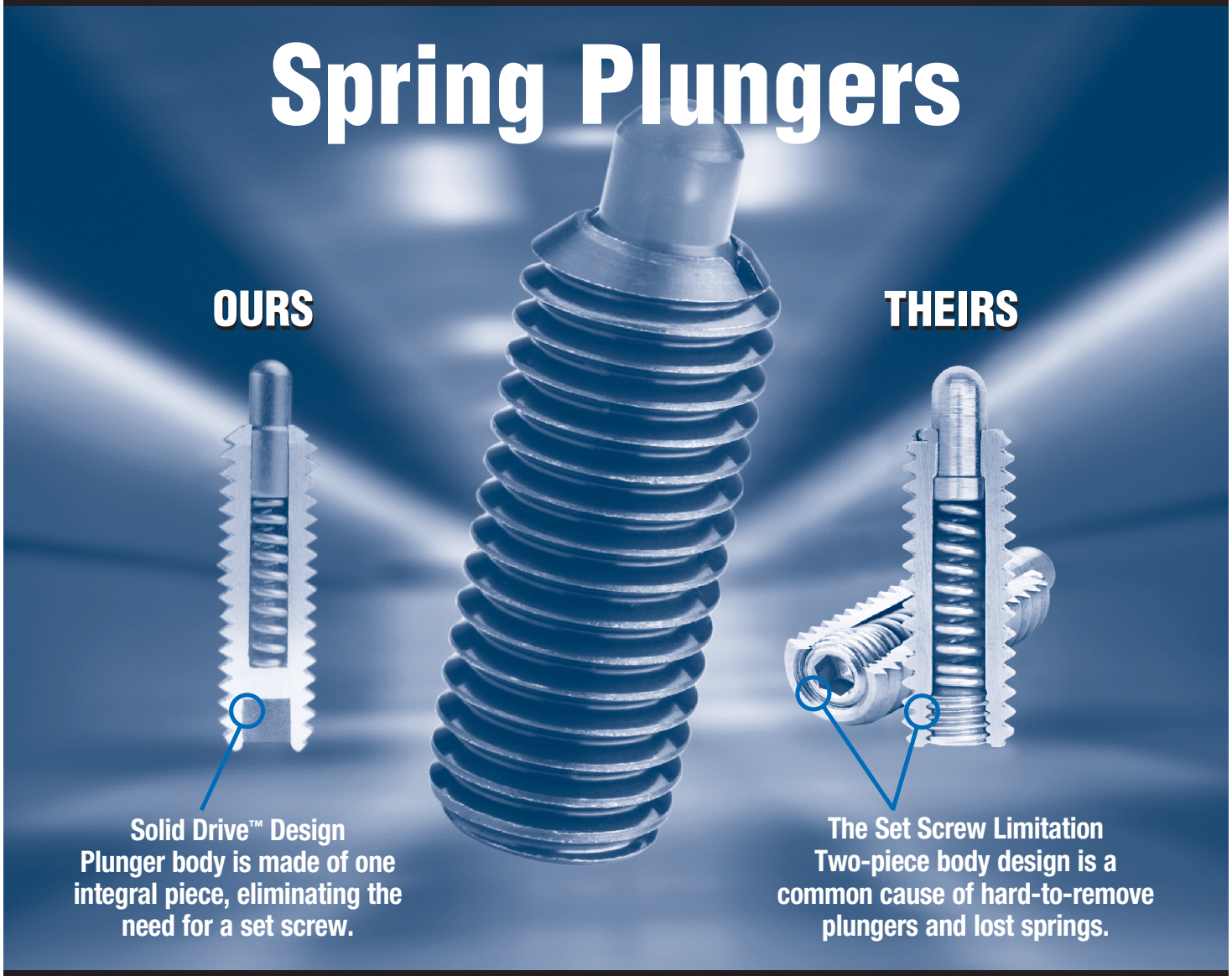
- Material: Type 440-C Stainless Steel hardened to Rc 58-62
- Eccentricity, ball to shank, 0.0002 TIR max.
- Two Piece Welded Construction



Part Number
29021

THE Jergens DIFFERENCE

Spring Plungers



JERGENS SPRING PLUNGERS	VS.	OTHER MANUFACTURERS' SPRING PLUNGERS
Solid Drive™ Design allows the entire plunger to move, preventing lost parts and improving plunger adjustments.		Set screw, instead of the plunger, can back out during removal, leaving the plunger body in the tapped hole.
Engineered with a smooth continuous radius tip to improve the point of contact.		Two-step, turn-and-grind manufacturing leaves ridges on tips that can gouge finished parts.
Solid tool steel, hardened throughout.		Mild steel is merely case hardened.
Close tolerance between tip and body provides better fit between parts for smoother motion and precise fit.		Sloppy alignment restricts tip movement and will allow dirt to enter and shorten the life of the plunger.

Jergens

The Standard Components with the Highest Standards™

15700 Waterloo Road • Cleveland, OH 44110 • 800.537.4367 • www.jergensinc.com



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Jergens Spring & Ball Plungers Last Longer

...And Here's Why!

Spring Plungers

Spring Plunger tips are manufactured using case hardened steel. This means they have a protective shell, about .10" deep.

Jergens Spring and Ball Plungers have accurate end forces, are easy to install, and are competitively priced. They are manufactured in the U.S.A. in a ISO 9001 certified quality system.

And if these aren't enough reasons to specify Jergens Spring and Ball Plungers, here are a few more:

Better Point of Contact

The Jergens plungers are turned and the tips generated in one smooth continuing process. This results in a constant radius tip, perfectly tangent to the point where the tip joins the shaft. Conventional two step, turn and grind operations, can leave ridges on the shaft at the tip junction and can also produce out-of-round tips. These, in turn, can gouge or score finely finished parts or can cause detent cams to hang up or stick.

Extra Length Springs for Longer Life

The longer the spring, the longer its life. Jergens goes to extra lengths to minimize the thickness of the base flanges on all of its plungers. That allows us to use longer springs with less chance for fatigue and breakage.

Improved Plunger to Body Alignment

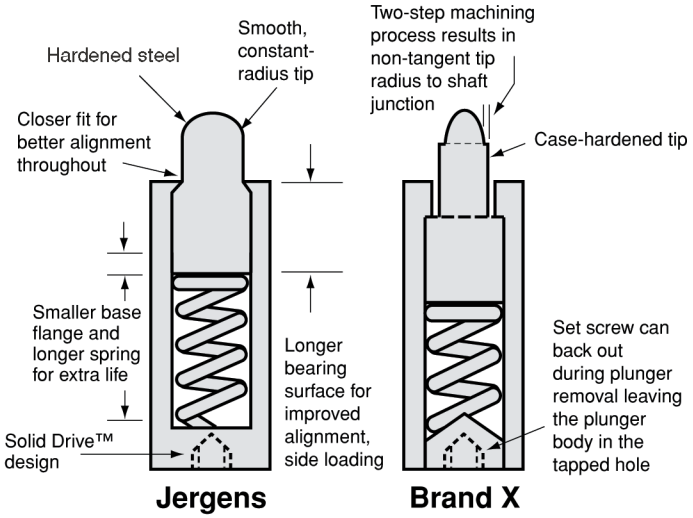
The long base flange allows for a larger bearing surface. This means improved plunger-to-body alignment, truer travel, and much improved side load characteristics.

Tighter Fit Resists Contamination

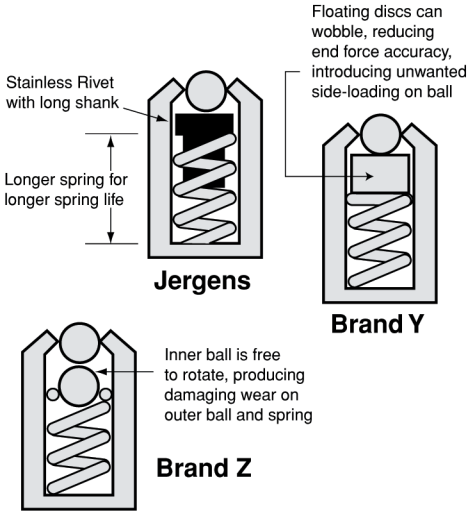
Closer machining tolerances, minimum plunger-to-body clearance, and smoother plunger finish make Jergens plungers fit more snugly in the plunger bore. This improves plunger alignment and provides extra resistance to contaminant entry. The results: dirt and grit cannot get to the bearing surfaces to shorten the life of the plunger.

Better Plunger Adjustment

The Solid Drive® design assures that during removal or adjustment of the plunger, the whole plunger is moving, not just the set screw. This means no lost parts or springs falling out of the plunger.



Ball Plungers



Positive Control of Spring Pressure

Accurate spring alignment is maintained by using a stainless rivet with a long shank on larger sizes of Jergens Ball Plungers. This precisely positions the spring for more accurate ball travel and provides positive control of spring pressure. Conventional floating discs are easily misaligned, while the rotation of the inner ball on dual-ball plungers results in less wearability on both the spring and the ball.

Longer Spring Life

By minimizing the lining pin head thickness, Jergens is able to use the longest possible springs. This, of course, means less fatigue and longer spring life.

Uniform Ball Projection

The distance by which the ball projects from the body of the plunger must be uniform from plunger to plunger. This uniformity is maintained by precisely controlling the crimping pressure applied to the neck of the plunger. Accurate machine controls plus rigid inspection procedures keep variances in ball projection to within ±.005".

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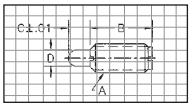
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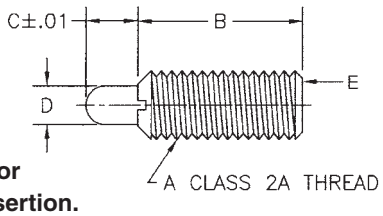
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Spring Plungers
Inch



SOLID DRIVE®

- Single unit construction
- No set screw to separate from plunger body
- Better reliability
- Steel tips are case hardened steel
- Close tolerance between tip and body



Hex drive in rear for spring plunger insertion.

Specials available, see page 5.12 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Steel or Stainless Steel
- Thread: 2A-UNC
- Available in FixturePro™ Design Software
- Conforms to TCMA dimensional standards

Plunger tips are color coded to indicate light or heavy force:
Silver = Steel Tip, Light Force
Black = Steel Tip, Heavy Force

Unlike conventional spring plungers, the body of a Jergens SOLID DRIVE Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. SOLID DRIVE Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting SOLID DRIVE, you can be sure the plunger body is turning and not a set screw.

Inch - Steel & Stainless Steel Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D	Hex Size E
27336	**27321**	6-32	0.5	1.5	17/32	1/16	0.046	3/64
26936	**26921**	6-32	1.5	4.5	17/32	1/16	0.046	3/64
27337	**27322**	8-32	0.7	2.3	5/8	3/32	0.070	5/64
26937	**26922**	8-32	2.7	7.3	5/8	3/32	0.070	5/64
27338	**27323**	10-32	1.3	2.7	3/4	1/8	0.093	3/32
26938	**26923**	10-32	2.9	11.1	3/4	1/8	0.093	3/32
27339	**27324**	1/4-20	1.0	4.0	1	3/16	0.119	1/8
26939	**26924**	1/4-20	3.0	13.0	1	3/16	0.119	1/8
27340	**27325**	1/4-28	1.0	4.0	1	3/16	0.119	1/8
26940	**26925**	1/4-28	3.0	13.0	1	3/16	0.119	1/8
27341	**27326**	5/16-18	1.5	4.5	1	3/16	0.135	5/32
26941	**26926**	5/16-18	3.0	15.0	1	3/16	0.135	5/32
27342	**27327**	3/8-16	2.8	7.2	1 1/8	3/16	0.186	3/16
26942	**26927**	3/8-16	5.5	14.5	1 1/8	3/16	0.186	3/16
27343	**27328**	1/2-13	2.7	9.3	1 1/4	1/4	0.248	1/4
26943	**26928**	1/2-13	6.6	17.4	1 1/4	1/4	0.248	1/4
27344	**27329**	5/8-11	3.5	10.5	1 1/2	5/16	0.310	5/16
26944	**26929**	5/8-11	10.5	25.5	1 1/2	5/16	0.310	5/16
27345	**27330**	3/4-10	5.5	14.5	1 3/4	5/16	0.374	3/8
26945	**26930**	3/4-10	6.7	37.3	1 3/4	5/16	0.374	3/8
–	**27311***	1-8	10.0	25.0	2 13/32	1/2	0.499	3/8
–	**26911***	1-8	16.0	68.0	2 13/32	1/2	0.499	3/8

Without Locking Element

SS Part Number	Steel Part Number
27031	**27221**
27011	**26821**
27032	**27222**
27012	**26822**
27033	**27223**
27013	**26823**
27034	**27224**
27014	**26824**
27035	**27225**
27015	**26825**
27036	**27226**
27016	**26826**
27037	**27227**
27017	**26827**
27038	**27228**
27018	**26828**
27039	**27229**
27019	**26829**
27040	**27230**
27020	**26830**
–	**27211***
–	**26811***

* Not available in DRIVE construction.

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Inch

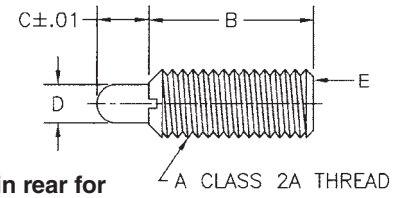


SOLID DRIVE®

- Single unit construction
- No set screw to separate from plunger body
- No need for "easy-out" tools
- Better reliability
- Steel tips are case hardened steel
- Close tolerance between tip and body

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Delrin
- Thread: 2A-UNC
- Available in FixturePro™ Design Software
- Conforms to TCMA dimensional standards

Plunger tips are color coded to indicate light or heavy force:
White = Delrin Tip, Light Force
Blue = Delrin Tip, Heavy Force



Hex drive in rear for spring plunger insertion.

Unlike conventional spring plungers, the body of a Jergens SOLID DRIVE Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. SOLID DRIVE Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting SOLID DRIVE, you can be sure the plunger body is turning and not a set screw.

Specials available, see page 5.12 for Plunger Quote Request worksheet.

Inch - Delrin Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D	Hex Size E
30936	**30921**	6-32	0.5	1.5	17/32	1/16	0.046	3/64
30536	**30521**	6-32	1.5	4.5	17/32	1/16	0.046	3/64
30937	**30922**	8-32	0.7	2.3	5/8	3/32	0.070	5/64
30537	**30522**	8-32	2.7	7.3	5/8	3/32	0.070	5/64
30938	**30923**	10-32	1.3	2.7	3/4	1/8	0.093	3/32
30538	**30523**	10-32	2.9	11.1	3/4	1/8	0.093	3/32
30939	**30924**	1/4-20	1.0	4.0	1	3/16	0.119	1/8
30539	**30524**	1/4-20	3.0	13.0	1	3/16	0.119	1/8
30940	**30925**	1/4-28	1.0	4.0	1	3/16	0.119	1/8
30540	**30525**	1/4-28	3.0	13.0	1	3/16	0.119	1/8
30941	**30926**	5/16-18	1.5	4.5	1	3/16	0.135	5/32
30541	**30526**	5/16-18	3.0	15.0	1	3/16	0.135	5/32
30942	**30927**	3/8-16	2.8	7.2	1 1/8	3/16	0.186	3/16
30542	**30527**	3/8-16	5.5	14.5	1 1/8	3/16	0.186	3/16
30943	**30928**	1/2-13	2.7	9.3	1 1/4	1/4	0.248	1/4
30543	**30528**	1/2-13	6.6	17.4	1 1/4	1/4	0.248	1/4
30944	**30929**	5/8-11	3.5	10.5	1 1/2	5/16	0.310	5/16
30544	**30529**	5/8-11	10.5	25.5	1 1/2	5/16	0.310	5/16
30945	–	3/4-10	5.5	14.5	1 /34	5/16	0.374	3/8
30545	–	3/4-10	6.7	37.3	1 3/4	5/16	0.374	3/8

Without Locking Element

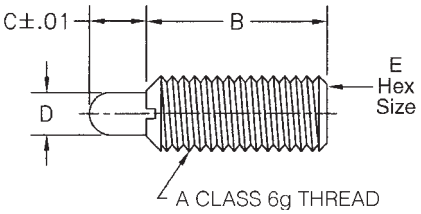
SS Part Number	Steel Part Number
30510	**30821**
30500	**30421**
30511	**30822**
30501	**30422**
30512	**30823**
30502	**30423**
30513	**30824**
30503	**30424**
30514	**30825**
30504	**30425**
30515	**30826**
30505	**30426**
30516	**30827**
30506	**30427**
30517	**30828**
30507	**30428**
30518	**30829**
30508	**30429**
30519	–
30509	–

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Metric



SOLID DRIVE®



The hex drive in the rear of the spring plunger is for plunger insertion.

Specials available, see page 5.12 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Steel or Stainless Steel
- Thread: 2A-UNC
- Available in FixturePro™ Design Software
- Conforms to TCMA dimensional standards

Unlike conventional spring plungers, the body of a Jergens SOLID DRIVE Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. SOLID DRIVE Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting SOLID DRIVE, you can be sure the plunger body is turning and not a set screw.

Metric - Steel & Stainless Steel Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D	Hex Size E
30890	**27250**	M4 x 0.7	0.32	1.04	16	2.5	1.78	2.0
30490	**26850**	M4 x 0.7	1.22	3.29	16	2.5	1.78	2.0
30891	**27251**	M5 x 0.8	0.59	1.22	19	3.0	2.36	2.5
30491	**26851**	M5 x 0.8	1.31	5.00	19	3.0	2.36	2.5
30892	**27252**	M6 x 1.0	0.45	1.80	25	5.0	3.02	3.0
30492	**26852**	M6 x 1.0	1.35	5.85	25	5.0	3.02	3.0
30893	**27253**	M8 x1.25	0.68	2.03	25	5.0	3.43	4.0
30493	**26853**	M8 x1.25	1.35	6.75	25	5.0	3.43	4.0
30894	**27254**	M10 x 1.5	1.26	3.26	29	5.0	4.72	5.0
30494	**26854**	M10 x 1.5	2.48	6.53	29	5.0	4.72	5.0
30895	**27255**	M12 x 1.75	1.22	4.21	32	6.0	6.30	6.0
30495	**26855**	M12 x 1.75	2.97	7.83	32	6.0	6.30	6.0
30897	**27257**	M16 x 2.0	1.58	4.76	38	8.0	7.87	8.0
30497	**26857**	M16 x 2.0	4.73	11.48	38	8.0	7.87	8.0
30898	**27258**	M20 x 2.5	2.50	6.58	44	8.0	9.50	10.0
30498	**26858**	M20 x 2.5	3.05	16.95	44	8.0	9.50	10.0

Without Locking Element

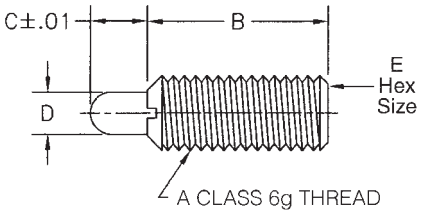
SS Part Number	Steel Part Number
30880	**27270**
30480	**26870**
30881	**27271**
30481	**26871**
30882	**27272**
30482	**26872**
30883	**27273**
30483	**26873**
30884	**27274**
30484	**26874**
30885	**27275**
30485	**26875**
30887	**27277**
30487	**26877**
30888	**27278**
30488	**26878**

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Metric - Delrin Tip







The hex drive in the rear of the spring plunger is for plunger insertion.

Specials available, see page 5.12 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Delrin
- Thread: 2A-UNC
- Available in FixturePro™ Design Software
- Conforms to TCMA dimensional standards

Unlike conventional spring plungers, the body of a Jergens SOLID DRIVE Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. SOLID DRIVE Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting SOLID DRIVE, you can be sure the plunger body is turning and not a set screw.

Metric - Delrin Tip With Locking Element

Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D	Hex Size E
30850	M4 x 0.7	0.32	1.04	16	2.5	1.78	2.0
30450	M4 x 0.7	1.22	3.29	16	2.5	1.78	2.0
30851	M5 x 0.8	0.59	1.22	19	3.0	2.36	2.5
30451	M5 x 0.8	1.31	5.00	19	3.0	2.36	2.5
30852	M6 x 1.0	0.45	1.80	25	5.0	3.02	3.0
30452	M6 x 1.0	1.35	5.85	25	5.0	3.02	3.0
30853	M8 x1.25	0.68	2.03	25	5.0	3.43	4.0
30453	M8 x1.25	1.35	6.75	25	5.0	3.43	4.0
30854	M10 x 1.5	1.26	3.26	29	5.0	4.72	5.0
30454	M10 x 1.5	2.48	6.53	29	5.0	4.72	5.0
30855	M12 x 1.75	1.22	4.21	32	6.0	6.30	6.0
30455	M12 x 1.75	2.97	7.83	32	6.0	6.30	6.0
30857	M16 x 2.0	1.58	4.76	38	8.0	7.87	8.0
30457	M16 x 2.0	4.73	11.48	38	8.0	7.87	8.0
30858	M20 x 2.5	2.50	6.58	44	8.0	9.50	10.0
30458	M20 x 2.5	3.05	16.95	44	8.0	9.50	10.0

Without Locking Element

Steel Part Number
30870
30470
30871
30471
30872
30472
30873
30473
30874
30474
30875
30475
30877
30477
30878
30478

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Shortie Spring Plungers

Inch



- Material: Body – Low Carbon Steel, Black Oxide
  Tip – Delrin or Steel
- Thread: 2A-UNC
- Available in FixturePro™ Design Software
- Conforms to TCMA dimensional standards
- Thread: 2A-UNC
- Available in metric sizes. See page 5.9.
- Available in FixturePro™ Design Software

Jergens Feature:

Jergens Shortie Spring Plungers are made to the same quality standards as the Solid Drive®
*Made with full standard spring plunger stroke in a short body. A screwdriver slot is substituted for the hex drive due to the smaller size.

Inch - Shortie Spring Plunger With Locking Element

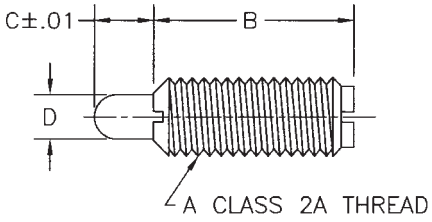
Steel Tip	Delrin Tip	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
27101	**30701**	6-32	0.5	1.5	3/8	1/16	0.046
26701	**30301**	6-32	0.5	3.5	3/8	1/16	0.046
27102	**30702**	8-32	0.5	2.0	1/2	3/32	0.070
26702	**30302**	8-32	0.5	4.0	1/2	3/32	0.070
27103*	**30703***	10-32	0.3	3.0	9/16	1/8	0.093
26703*	**30303***	10-32	0.5	5.0	9/16	1/8	0.093
27104	**30704**	1/4-20	0.3	3.5	5/8	3/16	0.119
26704	**30304**	1/4-20	0.5	6.0	5/8	3/16	0.119
27105	**30705**	5/16-18	0.5	4.5	5/8	3/16	0.135
26705	**30305**	5/16-18	0.5	10.0	5/8	3/16	0.135
27106	**30706**	3/8-16	1.5	7.5	11/16	3/16	0.186
26706	**30306**	3/8-16	1.0	12.0	11/16	3/16	0.186
27107	**30707**	1/2-13	1.7	8.5	13/16	1/4	0.248
26707	**30307**	1/2-13	2.5	15.0	13/16	1/4	0.248
27108	**30708**	5/8-11	2.0	10.5	1 1/8	5/16	0.310
26708	**30308**	5/8-11	3.5	26.0	1 1/8	5/16	0.310

*Thread: UNF

Without Locking Element

Steel Tip	Delrin Tip
27001	**30601**
26601	**30201**
27002	**30602**
26602	**30202**
27003*	**30603***
26603*	**30203***
27004	**30604**
26604	**30204**
27005	**30605**
26605	**30205**
27006	**30606**
26606	**30206**
27007	**30607**
26607	**30207**
27008	**30608**
26608	**30208**

Shortie Spring Plungers Stainless Steel (Short Travel)



The slot in the rear of the Shortie Spring Plunger is for insertion.

- Material:
  Body, 303 Stainless
  Spring, 303 Stainless
  Nose, Stainless or Delrin
- Thread: 2A-UNC

Inch - Stainless Steel With Locking Element

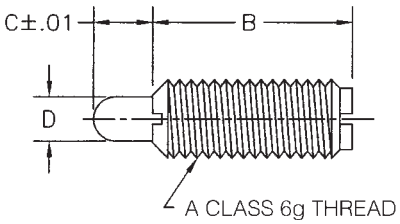
Part Number		Thread Size A	Force, lbs.		B	C	D
Stainless Tip	Delrin Tip		Initial	Final			
27601	**27621**	8-32	.5	1.5	7/16	.052	.070
27602	**27622**	8-32	1.5	4.75	7/16	.052	.070
27603*	**27623***	8-36	.5	1.5	7/16	.052	.070
27604*	**27624***	8-36	1.5	4.75	7/16	.052	.070
27605	**27625**	10-32	.75	2.5	15/32	.065	.093
27606	**27626**	10-32	1.75	6.25	15/32	.065	.093
27607	**27627**	1/4-20	1.0	3.5	17/32	.078	.119
27608	**27628**	1/4-20	3.0	10.5	17/32	.078	.119
27609	**27629**	5/16-18	1.0	4.0	9/16	.084	.135
27610	**27630**	5/16-18	3.75	15.5	9/16	.084	.135
27611	**27631**	3/8-16	1.5	5.0	5/8	.110	.186
27612	**27632**	3/8-16	4.5	18.5	5/8	.110	.186
27613	**27633**	1/2-13	1.75	5.5	3/4	.151	.248
27614	**27634**	1/2-13	5.0	28.0	3/4	.151	.248

*Thread: UNF

Specials available, see page 5.12 for Plunger Quote Request worksheet.

Shortie Spring Plungers
Metric





Specials available, see page 5.12 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Delrin or Steel
- Thread: Class 6g
- Available in FixturePro™ Design Software

Plunger Tips are color coded to indicate light or heavy force.
White = Light Force
Blue = Heavy Force

Jergens Feature:

Jergens Shortie Spring Plungers are made to the same quality standards as the Solid Drive® *Made with full standard spring plunger stroke in a short body. A screwdriver slot is substituted for the hex drive due to the smaller size.

*Carbon Steel body only

Metric - Shortie Spring Plungers With Locking Elements

Steel Tip	Delrin Tip	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D
27170	**30770**	M4 x 0.7	0.23	0.91	13.0	2.5	1.78
26770	**30370**	M4 x 0.7	0.23	1.81	13.0	2.5	1.78
27171	**30771**	M5 x 0.8	0.14	1.36	14.5	3.0	2.36
26771	**30371**	M5 x 0.8	0.23	2.27	14.5	3.0	2.36
27172	**30772**	M6 x 1.0	0.14	1.59	16.0	4.0	3.02
26772	**30372**	M6 x 1.0	0.23	2.72	16.0	4.0	3.02
27173	**30773**	M8 x 1.25	0.23	2.04	16.0	5.0	3.43
26773	**30373**	M8 x 1.25	0.23	4.54	16.0	5.0	3.43
27174	**30774**	M10 x 1.5	0.68	3.4	17.5	5.5	4.72
26774	**30374**	M10 x 1.5	0.46	5.44	17.5	5.5	4.72
27175	**30775**	M12 x 1.75	0.77	3.86	20.5	6.5	6.30
26775	**30375**	M12 x 1.75	1.13	6.80	20.5	6.5	6.30
27177	**30777**	M16 x 2.0	0.91	4.76	28.5	8.0	7.87
26777	**30377**	M16 x 2.0	1.59	11.79	28.5	8.0	7.87

Plunger Wrenches



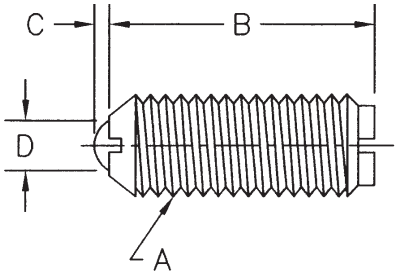
IMPORTANT: It is not recommended that a screwdriver be used to insert ball or spring plungers from the ball or plunger end. The tip of the screwdriver will force the ball or tip of the plunger below the surface of the end of the plunger. This may compress the spring to a solid, causing possible damage to the spring plunger. It is recommended that a Jergens Plunger Wrench be used or that a slot be ground in the end of a screwdriver to clear the height of the ball or tip for each size ball or plunger used.

Part Number	Thread Size of Plungers	
	Inch	Metric
27501	6-32	–
27502	8-32	M4
27503	10-32	M5
27504	1/4-20	M6
27505	5/16-18	M8
27506	3/8-16	M10
27507	1/2-13	M12
27508	5/8-11	M16
27509	3/4-10	M20
27510	1-8	M25

Ball Plungers

Inch





- Body Material: Low Carbon Steel, or 303 Stainless Steel
- Ball Material: Stainless, 440
- Spring Material: Stainless, 17-7 PH
- Finish: Black Oxide on Body
- Thread: 2A-UNC
- Dimensionally comforms to TCMA standards
- Available in FixturePro™ Design Software

Inch - With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
11101*	**10926***	4-48	0.12	0.50	3/16	0.020	0.062
11102	**10927**	5-40	0.25	0.75	1/4	0.020	0.062
11103*	**10928***	6-40	0.50	1.00	5/16	0.023	0.078
11104*	**10929***	8-36	0.50	1.25	11/32	0.025	0.093
11105*	**10901***	10-32	0.50	1.50	33/64	0.025	0.093
11106*	**10902***	10-32	1.50	3.00	33/64	0.025	0.093
11107*	**10903***	10-32	2.00	5.00	33/64	0.025	0.093
11108	**10904**	1/4-20	2.00	4.00	17/32	0.035	0.125
11109	**10905**	1/4-20	3.00	7.00	17/32	0.035	0.125
11110	**10906**	1/4-20	4.00	12.00	17/32	0.035	0.125
11111	**10907**	5/16-18	2.00	4.50	37/64	0.040	0.156
11112	**10908**	5/16-18	4.00	9.00	37/64	0.040	0.156
11113	**10909**	5/16-18	6.00	17.00	37/64	0.040	0.156
11114	**10910**	3/8-16	2.50	5.00	5/8	0.048	0.187
11115	**10911**	3/8-16	5.00	10.00	5/8	0.048	0.187
11116	**10912**	3/8-16	6.00	21.00	5/8	0.048	0.187
11117	**10913**	1/2-13	3.00	6.00	3/4	0.072	0.281
11118	**10914**	1/2-13	6.00	12.00	3/4	0.072	0.281
11119	**10915**	1/2-13	6.00	30.00	3/4	0.072	0.281
11120	**10916**	5/8-11	4.50	9.00	1	0.096	0.375
11121	**10917**	5/8-11	9.00	18.00	1	0.096	0.375
11122	**10918**	5/8-11	7.00	50.00	1	0.096	0.375

*Thread: UNF

Without Locking Element

SS Part Number	Steel Part Number
11001*	**10826***
11002	**10827**
11003*	**10828***
11004*	**10829***
11005*	**10801***
11006*	**10802***
11007*	**10803***
11008	**10804**
11009	**10805**
11010	**10806**
11011	**10807**
11012	**10808**
11013	**10809**
11014	**10810**
11015	**10811**
11016	**10812**
11017	**10813**
11018	**10814**
11019	**10815**
11020	**10816**
11021	**10817**
11022	**10818**

NOTE: For easy insertion of Ball Plungers with locking elements, the tapped hole should be countersunk at least .030-.045 (0.76-1.14mm) larger than the major diameter of the plunger.

Inch - Fine Thread (UNF) With Locking Element

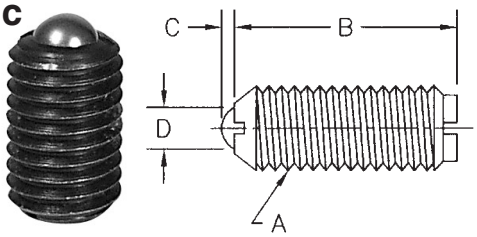
SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
11201	**10701**	10-24	0.5	1.5	33/64	0.025	0.09
11211	**10711**	10-24	1.5	3.0	33/64	0.025	0.093
11202	**10702**	10-24	2.0	5.0	33/64	0.025	0.093
11203	**10703**	1/4-28	2.0	4.0	17/32	0.035	0.125
11212	**10712**	1/4-28	3.0	7.0	17/32	0.035	0.125
11204	**10704**	1/4-28	4.0	12.0	17/32	0.035	0.125
11205	**10705**	5/16-24	2.0	4.5	37/64	0.040	0.156
11213	**10713**	5/16-24	4.0	9.0	37/64	0.040	0.156
11206	**10706**	5/16-24	6.0	17.0	37/64	0.040	0.156
11207	**10707**	3/8-24	2.5	5.0	5/8	0.048	0.187
11214	**10714**	3/8-24	5.0	10.0	5/8	0.048	0.187
11208	**10708**	3/8-24	6.0	21.0	5/8	0.048	0.187
11209	**10709**	1/2-20	3.0	6.0	3/4	0.072	0.281
11215	**10715**	1/2-20	6.0	12.0	3/4	0.072	0.281
11210	**10710**	1/2-20	6.0	30.0	3/4	0.072	0.281

Without Locking Element

SS Part Number	Steel Part Number
11221	**10721**
11231	**10731**
11222	**10722**
11223	**10723**
11232	**10732**
11224	**10724**
11225	**10725**
11233	**10733**
11226	**10726**
11227	**10727**
11234	**10734**
11228	**10728**
11229	**10729**
11235	**10735**
11230	**10730**

Ball Plungers

Metric



- Body Materials: Low Carbon Steel, Black Oxide or 303 Stainless Steel
- Ball: Stainless, 440
- Spring: Stainless, 17-7 PH
- Thread: Class 6g
- Available in FixturePro™ Design Software

NOTE: For easy insertion of Ball Plungers with locking elements, the tapped hole should be countersunk at least .030-.045 (0.76-1.14mm) larger than the major diameter of the plunger.

Metric - Steel & SS Tip With Locking Element

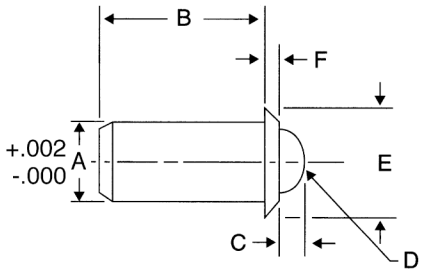
SS Part Number	Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D
11051	**10971**	M4 x 0.7	0.23	0.56	9.00	0.60	2.38
11052	**10972**	M5 x 0.8	0.23	0.68	13.00	0.60	2.38
11053	**10973**	M5 x 0.8	0.68	1.35	13.00	0.60	2.38
11054	**10974**	M5 x 0.8	0.90	2.25	13.00	0.60	2.38
11055	**10975**	M6 x 1.0	0.90	1.80	13.50	0.90	3.18
11056	**10976**	M6 x 1.0	1.35	3.15	13.50	0.90	3.18
11057	**10977**	M6 x 1.0	1.80	5.40	13.50	0.90	3.18
11058	**10978**	M8 x1.25	0.90	2.03	15.00	1.00	3.97
11059	**10979**	M8 x1.25	1.80	4.05	15.00	1.00	3.97
11060	**10980**	M8 x1.25	2.70	7.65	15.00	1.00	3.97
11061	**10981**	M10 x 1.5	1.13	2.25	16.00	1.20	4.76
11062	**10982**	M10 x 1.5	2.25	4.50	16.00	1.20	4.76
11063	**10983**	M10 x 1.5	2.70	9.45	16.00	1.20	4.76
11064	**10984**	M12 x 1.75	1.35	2.70	19.00	2.00	7.14
11065	**10985**	M12 x 1.75	2.70	5.40	19.00	2.00	7.14
11066	**10986**	M12 x 1.75	2.70	13.50	19.00	2.00	7.14
11067	**10987**	M16 x 2.0	2.00	4.00	25.40	2.40	9.50
11068	**10988**	M16 x 2.0	4.00	8.10	25.40	2.40	9.50
11069	**10989**	M16 x 2.0	3.10	22.70	25.40	2.40	9.50

Without Locking Element

SS Part Number	Steel Part Number
10951	**10871**
10952	**10872**
10953	**10873**
10954	**10874**
10955	**10875**
10956	**10876**
10957	**10877**
10958	**10878**
10959	**10879**
10960	**10880**
10961	**10881**
10962	**10882**
10963	**10883**
10964	**10884**
10965	**10885**
10966	**10886**
10967	**10887**
10968	**10888**
10969	**10889**

Press Fit Plungers





- Body Material: Low Carbon Steel
- Ball Material: Stainless, 400
- Spring Material: 17-7 PH
- Finish: Black Oxide on Body

Heavy Force

Part Number	Stainless Steel Part Number	Force (lbs) Initial	Force (lbs) Final	A	B	C	Ball Dia. D	E	F
10832	**11032**	2	5	.188	.405	.058	.156	.250	.035
10834	**11034**	3	7	.250	.481	.070	.187	.312	.044
10836	**11036**	5	14	.375	.785	.110	.312	.500	.078
10838	**11038**	8	18	.500	1.130	.161	.437	.688	.088

Light Force

Part Number	Stainless Steel Part Number	Force (lbs) Initial	Force (lbs) Final	A	B	C	Ball Dia. D	E	F
10831	**11031**	1	2.5	.188	.405	.058	.156	.250	.035
10833	**11033**	1.5	3.5	.250	.481	.070	.187	.312	.044
10835	**11035**	2.5	7	.375	.785	.110	.312	.500	.078
10837	**11037**	4	9	.500	1.130	.161	.437	.688	.088

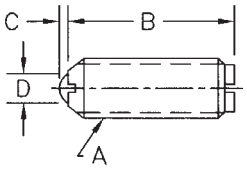
Jergens
www.jergensinc.com

Special Spring and Ball Plungers

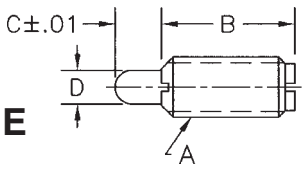
If you don't see the exact spring or ball plunger to meet your application requirements, photocopy the form below, indicate your requirements, and mail to your Jergens Distributor.

PLUNGER QUOTATION REQUEST WORKSHEET

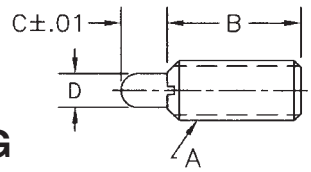
BALL



SHORTIE



SPRING



A dim. (See note below) _____ **C** dim. _____
B dim. _____ **D** dim. _____

Application (describe): _____

Type of Plunger: ☐ Solid Drive® ☐ Spring ☐ "Shortie" ☐ Ball ☐ Other (see sketch)

Thread or O.D. _____ (Class 2A Threads unless Otherwise Specified)

Length of Plunger Travel: _____

Initial Force Required: _____ Final Force Required: _____

Plastic Locking Patch: ☐ Required ☐ Not Required Tip/Ball Material: _____

Tip/Ball Finish: _____ Body Material: _____

Body Finish: _____ Spring Material: _____

Temperature Range: _____

Type of Environment (describe—corrosives, chemicals, contaminants, etc.): _____

_____

Other Specifications: _____

_____

Quantity Needed: _____ Delivery By: _____

NAME: _____ TITLE: _____

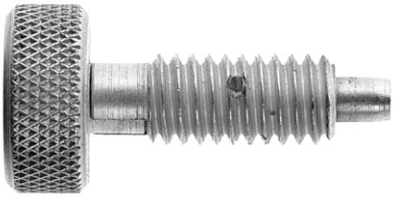
COMPANY: _____ ADDRESS: _____

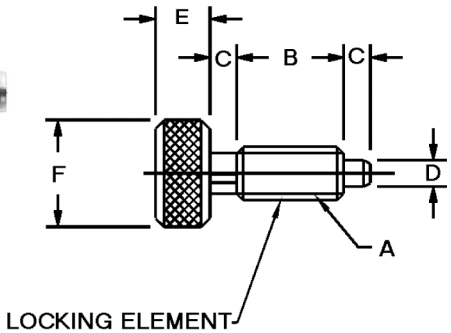
CITY: _____ STATE: _____ ZIP: _____

TELEPHONE: _____ FAX: _____

Retractable Plungers

Hand Retractable Locking Style





- Improved design allows plunger pin to be locked in fully retracted position
- Used in machining applications as positioners, loading pins or indexing devices
- Plunger pin has slight taper on end to assure easy alignment
- Zinc Plated Carbon Steel, 303 Stainless Steel
- Phenolic Nose Prevents Marring of Soft Material
- Supplied with locking element

Inch - Hand Retractable Locking Style Plungers

Steel Part Number	Steel Phenolic Nose Part Number	Stainless Steel Part Number	Stainless Steel Phenolic Nose Part Number	A	End Force (lbs)		B	C	+.001 -.002 D	E	F	Net Wt. (lbs) 10 Pcs.
					Start	Full						
27426	**27523**	**27826**	**27527**	1/4-20	0.5	2.5	1/2	1/8	.124	1/4	1/2	.3
27421	**27515**	**27821**	**27519**	1/4-20	1.0	5.0	1/2	1/8	.124	1/4	1/2	.3
27427	**27524**	**27827**	**27528**	5/16-18	0.75	3.0	5/8	3/16	.155	9/32	5/8	.5
27422	**27516**	**27822**	**27520**	5/16-18	1.5	6.0	5/8	3/16	.155	9/32	5/8	.5
27428	**27525**	**27828**	**27529**	3/8-16	0.75	4.0	3/4	7/32	.186	5/16	3/4	.7
27423	**27517**	**27823**	**27521**	3/8-16	1.5	8.0	3/4	7/32	.186	5/16	3/4	.7
27429	**27526**	**27829**	**27530**	1/2-13	1.25	5.0	7/8	1/4	.249	3/8	1"	1.3
27424	**27518**	**27824**	**27522**	1/2-13	2.5	10.0	7/8	1/4	.249	3/8	1"	1.3

Metric - Hand Retractable Locking Style Plungers

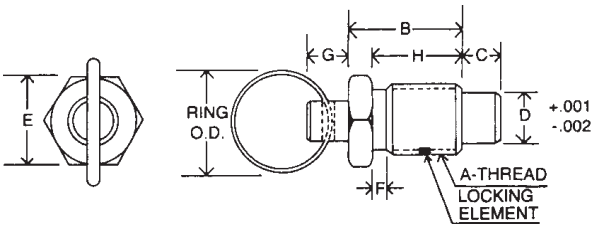
Steel Part Number	Class 6g ISO A	End Force (kg)		B	C	+.025 -.050 D	E	F	Net Wt. (kg) 10 Pcs.
		Start	Full						
27555	M6x1.0	0.225	1.135	12.50	3.17	3	6.3	12.7	.16
27551	M6x1.0	0.4	2.27	12.50	3.17	3	6.3	12.7	.16
27556	M8x1.25	0.34	1.36	16.00	4.75	4	7.0	15.8	.27
27552	M8x1.25	0.68	2.72	16.00	4.75	4	7.0	15.8	.27
27557	M10x1.5	0.34	1.815	19.00	5.50	5	7.9	19.0	.38
27553	M10x1.5	0.68	3.63	19.00	5.50	5	7.9	19.0	.38
27558	M12x1.75	0.565	2.27	22.00	6.35	6	9.4	25.4	.7
27554	M12x1.75	1.13	4.54	22.00	6.35	6	9.4	25.4	.7

Retractable Plungers

Pull Ring Style



- For use in application with limited space
- Slight taper on end of plunger for easy alignment

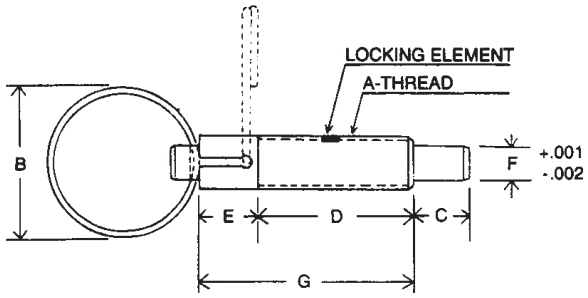


Pull Ring - Short - Non-Locking Plungers

Steel Part Number	Steel Phenolic Nose Part Number	Stainless Steel Part Number	Stainless Steel Phenolic Nose Part Number	A	Force, (lbs) Initial	Force, (lbs) Final	B	C	+.001 -.002 D	E	F	G	H	O.D	Net Wt. (lbs) 10 Pcs.
27441	**27804**	**27800**	**27808**	1/4-20	0.50	2.0	7/16	3/16	.156	1/4	1/32	5/32	9/32	3/4	.1
27442	**27805**	**27801**	**27809**	3/8-16	0.75	3.0	5/8	9/32	.250	3/8	1/8	3/16	7/16	3/4	.2
27443	**27806**	**27802**	**27810**	1/2-13	1.00	4.0	13/16	3/8	.312	1/2	5/32	1/4	9/16	1	.43
27444	**27807**	**27803**	**27811**	5/8-11	1.25	5.0	1	7/16	.375	5/8	5/32	5/16	11/16	1	.8



- For use in application with limited space
- Slight taper on end of plunger for easy alignment
- Turn ring to lock and extend plunger



Pull Ring - Standard Length - Locking Plungers

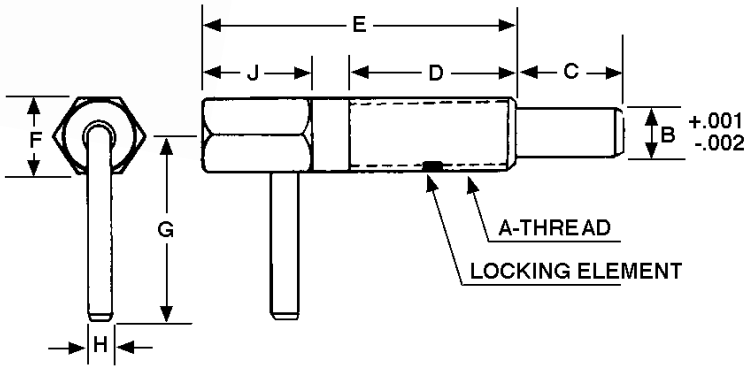
Steel Part Number	Steel Phenolic Nose Part Number	Stainless Steel Part Number	Stainless Steel Phenolic Nose Part Number	A	Force, (lbs) Initial	Force, (lbs) Final	B	C	+.001 -.002 D	E	F	G	Net Wt. (lbs) 10 Pcs.
27446	**27815**	**27812**	**27818**	1/4-20	1.0	2.5	1	1/4	13/16	5/16	.156	1-1/8	.15
27447	**27816**	**27813**	**27819**	3/8-16	2.0	4.0	1-1/4	3/8	1-1/4	7/16	.233	1-11/16	.43
27448	**27817**	**27814**	**27820**	1/2-13	2.5	5.0	1-3/8	1/2	1-7/16	9/16	.312	2	.9

Retractable Plungers

L Handle Hand Retractable Locking Style



- Hand retractable for easy removal or insertion
- Turn handle to unlock and extend plunger
- Slight taper on end of plunger for easy alignment
- Locking element standard on all sizes



Locking Plungers - Long Reach - Standard Length

Steel Part Number	Steel Phenolic Nose Part Number	Stainless Steel Part Number	Stainless Steel Phenolic Nose Part Number	A	Force (lbs)		+.001 -.002 B	C	D	E	F	G	H	J	Net Wt. (lbs) 10 Pcs.
					Initial	Final									
27436	**27851**	**27836**	**27855**	1/4-20	.50	2.5	.156	3/8	5/8	1-1/4	1/4	5/8	3/32	1/2	.15
27437	**27852**	**27837**	**27856**	3/8-16	.75	3.75	.250	9/16	1-1/16	2	3/8	15/16	9/64	11/16	.53
27438	**27853**	**27838**	**27857**	1/2-13	1.0	5.0	.312	3/4	1-1/8	2-1/8	1/2	1-1/4	3/16	3/4	1.03
27439	**27854**	**27839**	**27858**	5/8-11	1.0	5.0	.375	1	1-3/4	3	5/8	1-5/16	3/16	1-1/16	2.23

Locking Plungers - Long Reach - Short Length

Steel Part Number	Steel Phenolic Nose Part Number	Stainless Steel Part Number	Stainless Steel Phenolic Nose Part Number	A	Force (lbs)		+.001 -.002 B	C	D	E	F	G	H	J	Net Wt. (lbs) 10 Pcs.
					Initial	Final									
27416	**27859**	**27867**	**27863**	1/4-20	.125	.50	.156	3/16	7/16	3/4	1/4	9/16	3/32	1/4	.1
27417	**27860**	**27868**	**27864**	3/8-16	.25	1.25	.250	5/16	5/8	1-1/8	3/8	3/4	9/64	3/8	.3
27418	**27861**	**27869**	**27865**	1/2-13	.50	2.0	.312	13/32	7/8	1-1/2	1/2	1	3/16	1/2	.7
27419	**27862**	**27870**	**27866**	5/8-11	.75	2.5	.375	1/2	1-1/8	1-7/8	5/8	1-3/16	3/16	5/8	1.35

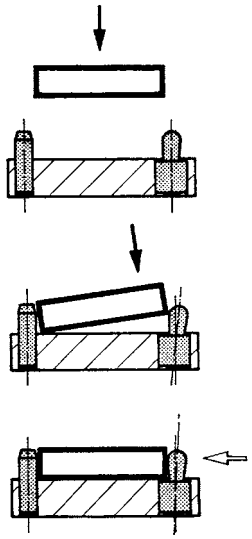
Spring Locating Pins

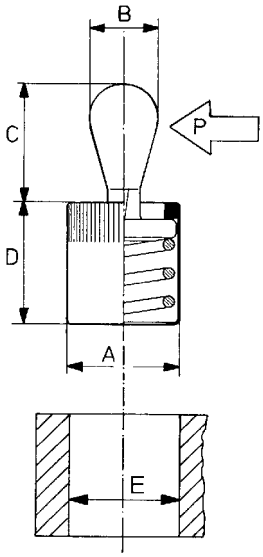




The Jergens Spring Locating Pins are designed for fixturing small parts in tight or compact space. Ideal for positioning and chucking flat parts and round parts and for profile clamping.

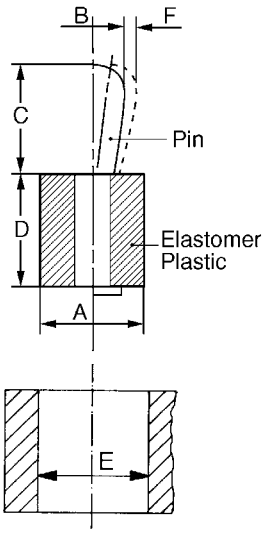
- Material: Body, aluminum
  Pin, steel, plastic, or stainless steel
- Finish: Steel Pin, case hardened, zinc coated
  Plastic Pin, delrin
  Spring, steel
- Economical
- Easy to handle and mount
- Ideal for positioning flat or round pieces
- Maintains constant pressure on parts
- Minimizes fixturing space





Spring Locating Pins with Seal

Part Number		Diameter				+.001 -.000	Force P		Installation
Steel Pin	Plastic Pin	A	B	C	D	E	(lbs)	X	Tool
36201	**36221**	.250	.118	.158	.276	.250	2.2	.035	**36295**
36202	**36222**	.250	.118	.158	.276	.250	4.5	.035	**36295**
36203	–	.250	.118	.158	.276	.250	9.0	.035	**36295**
36204	**36223**	.438	.197	.236	.472	.438	4.5	.063	**36296**
36205	**36224**	.438	.197	.236	.472	.438	11.2	.063	**36296**
36206	–	.438	.197	.236	.472	.438	21.5	.063	**36296**
36207	**36225**	.438	.236	.394	.472	.438	9.0	.071	**36297**
36208	**36226**	.438	.236	.394	.472	.438	17.0	.071	**36297**
36209	–	.438	.236	.394	.472	.438	34.0	.071	**36297**
36210	**36227**	.500	.315	.512	.551	.500	11.2	.102	**36298**
36211	**36228**	.500	.315	.512	.551	.500	22.5	.102	**36298**
36212	–	.500	.315	.512	.551	.500	45.0	.102	**36298**
36213	**36229**	.625	.394	.625	.709	.625	22.5	.126	**36299**
36214	**36230**	.625	.394	.625	.709	.625	45.0	.126	**36299**
36215	–	.625	.394	.625	.709	.625	67.5	.126	**36299**



Spring Locating Pins with *Elastomer base

Part Number			Diameter				+.001 -.000	Force P		Installation
Steel Pin	Plastic Pin	Stainless Steel Pin	A	B	C	D	E	(lbs)	X	Tool
36231	**36251**	**36271**	.250	.118	.146	.295	.250	2.2	.039	**36295**
36232	**36252**	**36272**	.250	.118	.146	.295	.250	4.4	.039	**36295**
36233	**36253**	**36273**	.438	.197	.287	.354	.438	6.7	.063	**36296**
36234	**36254**	**36274**	.438	.197	.287	.354	.438	13.5	.063	**36296**
36235	**36255**	**36275**	.438	.197	.287	.354	.438	20.0	.063	**36296**
36236	**36256**	**36276**	.438	.236	.406	.354	.438	4.4	.075	**36297**
36237	**36257**	**36277**	.438	.236	.406	.354	.438	6.7	.075	**36297**
36238	**36258**	**36278**	.438	.236	.406	.354	.438	13.5	.075	**36297**
36239	—	**36279**	.438	.236	.406	.354	.438	20.0	.075	**36297**
36240	**36259**	**36280**	.500	.315	.520	.512	.500	11.1	.106	**36298**
36241	**36260**	**36281**	.500	.315	.520	.512	.500	22.2	.106	**36298**
36242	**36261**	**36282**	.625	.394	.654	.625	.625	17.5	.134	**36299**
36243	**36262**	**36283**	.625	.394	.654	.625	.625	35.0	.134	**36299**

*Uses elastomer plastic spring

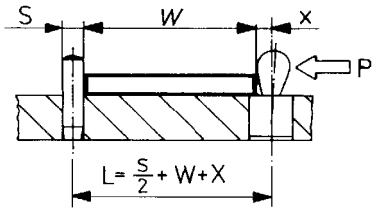
Spring Locating Pins

Installation Data

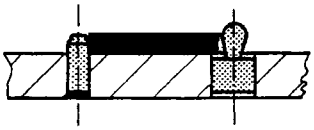
To determine mounting hole locations, use the following formula:

$$L = \frac{S}{2} + W + X$$

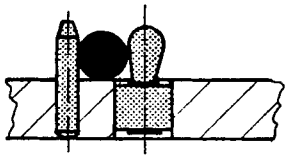
L = Location
S = Diameter of Locating Pin
W = Width of Workpiece
X = See Chart



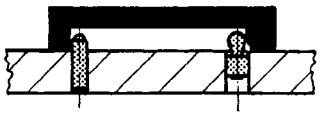
Application Ideas



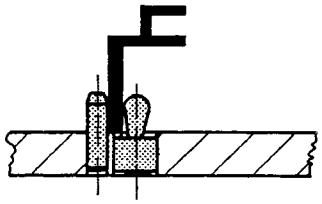
Position and hold flat parts.



Position and hold round parts.



Position and hold from the inside to the outside.



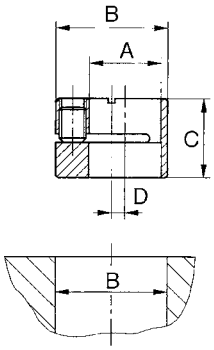
Position and hold various profiles of parts.

Eccentric Liners



Part Number	A	B	C	D
36291	.250	.500	.390	.079
36292	.438	.687	.469	.079
36293	.500	.750	.547	.079
36294	.625	1.000	.705	.118

Eccentric Liners allow for adjustment of spring pin tension due to part material variations, different tolerance requirements, or force adjustment.

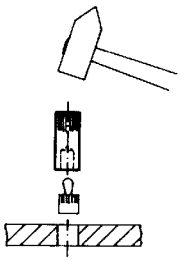


Installation Tools



Locating Spring Pin Installation Tools are designed to make installation easier.

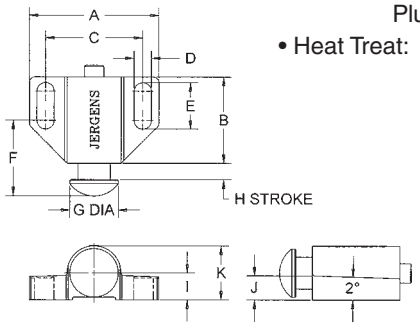
Refer to the charts on page 5.16 to determine which tool to use.



Spring Stops

Button Type





- Material: Body, Zinc Aluminum Alloy ZA-12
  Plunger, Low Carbon Steel
- Heat Treat: Plunger Case Hardened
  74-77 R30N

Jergens Features:

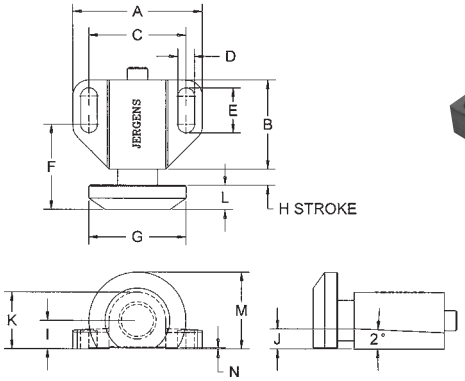
Set screw allows for adjustable plunger travel.

Angled mounting slot provides a more secure hold.

End Force (Half-Depressed)
36101, 36104, 36107 – 10 lbs./6.8 kg
36102, 36105, 36111 – 14 lbs./13.6 kg
36103, 36106, 36109 – 32 lbs./18.14 kg

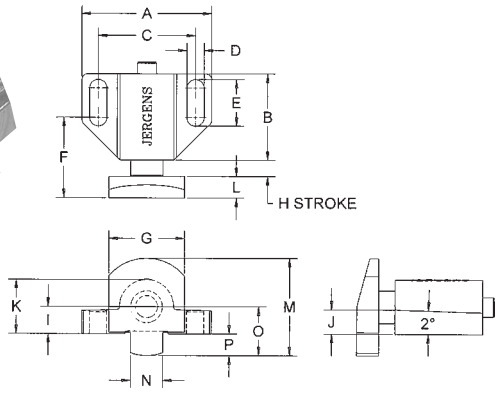
Flat Button Type





Tang Type





Jergens Spring Stops Dimension Tables

	Part. No.	A	B	C	D	E	F	G	Stroke H	I	J	K	L	M	N	O	P	Wt. (lbs) 10 Pcs.
Button	36101	15/16	11/16	21/32	0.14	0.35	21/32	3/8	1/8	7/32	7/32	13/32	–	–	–	–	–	0.2
	36102	1 1/2	1	1 1/8	0.2	0.54	29/32	9/16	3/16	5/16	9/32	5/8	–	–	–	–	–	0.9
	36103	2	1 3/8	1 1/2	0.257	0.69	1 5/16	13/16	1/4	7/16	5/16	7/8	–	–	–	–	–	1.85
Tang	36104	15/16	11/16	21/32	0.14	0.35	21/32	5/8	1/8	7/32	7/32	13/32	3/16	7/8	1/4	7/16	15/64	0.2
	36105	1 1/2	1	1 1/8	0.2	0.54	29/32	7/8	3/16	5/16	9/32	5/8	1/4	1 1/8	3/8	9/16	17/64	0.9
	36106	2	1 3/8	1 1/2	0.257	0.69	1 5/16	1 1/4	1/4	7/16	5/16	7/8	3/8	1 1/2	1/2	3/4	21/64	1.85
Flat	36107	15/16	11/16	21/32	0.14	0.35	21/32	3/4	1/8	7/32	7/32	13/32	3/16	7/8	1/64	–	–	0.2
	36111	1 1/2	1	1 1/8	0.2	0.54	29/32	1 1/8	3/16	5/16	9/32	5/8	1/4	1 1/8	1/64	–	–	0.9
	36109	2	1 3/8	1 1/2	0.257	0.69	1 5/16	1 1/2	1/4	7/16	5/16	7/8	3/8	1 1/2	1/64	–	–	1.85

Metric Dimensions (mm)

	Part. No.	A	B	C	D	E	F	G	Stroke H	I	J	K	L	M	N	O	P	Wt. (kg) 10 Pcs.
Button	36101	23.8	17.5	16.7	3.6	8.9	15.1	9.5	3.2	5.6	5.6	10.3	–	–	–	–	–	0.09
	36102	38.1	25.4	28.6	5.1	13.7	21.4	14.3	4.8	7.9	7.1	15.9	–	–	–	–	–	0.41
	36103	50.8	34.9	38.1	6.5	17.5	31	20.6	6.4	11.1	7.9	22.2	–	–	–	–	–	0.84
Tang	36104	23.8	17.5	16.7	3.6	8.9	15.1	15.9	3.2	5.6	5.6	10.3	4.8	22.2	6.4	11.1	6	0.09
	36105	38.1	25.4	28.6	5.1	13.7	21.4	22.2	4.8	7.9	7.1	15.9	6.4	28.6	9.5	14.3	6.7	0.41
	36106	50.8	34.9	38.1	6.5	17.5	31	31.8	6.4	11.1	7.9	22.2	9.5	38.1	12.7	19.1	8.3	0.84
Flat	36107	23.8	17.5	16.7	3.6	8.9	15.1	19.1	3.2	5.6	5.6	10.3	4.8	22.2	0.4	–	–	0.09
	36111	38.1	25.4	28.6	5.1	13.7	21.4	22.2	4.8	7.9	7.1	15.9	6.4	28.6	0.4	–	–	0.41
	36109	50.8	34.9	38.1	6.5	17.5	31	38.1	6.4	11.1	7.9	22.2	9.5	38.1	0.4	–	–	0.84



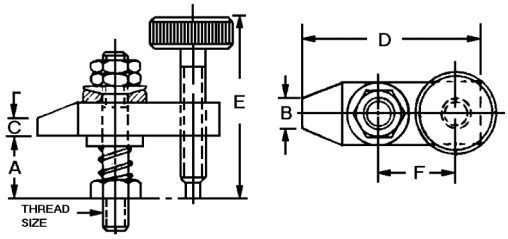
Adjustable Clamp Heels 6.45
Adjustable Clamp Rests 6.44
Adjustable Step Blocks 6.55
Assemblies, Spherical Flange 6.30
Bolts, Dovetail 6.28
Bolts, Swing 6.11
Bolts, T 6.28
Bolts, T-Slot 6.27
Bolts, T-Strap 6.23
Clamp Assemblies, Double Cam 6.4
Clamp Assemblies, Flange Nut 6.3
Clamp Assembly, Heel Pad 6.2
Clamp Assemblies, Hook 6.9
Clamp Assemblies, Knob 6.5
Clamp Assemblies, Miniature Flat 6.2
Clamp Assemblies, Miniature Radius ... 6.2
Clamp Assemblies, Radius End Flange Nut 6.3
Clamp Assemblies, Radius Swing 6.3
Clamp Assemblies 6.2-6.5, 6.8-6.9
Clamp Rests 6.6
Clamping Kits 6.57
Clevis Pins 6.22
Collars, Steel Shaft 6.23
Double Cams 6.7
Finger Handles 6.6
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Clamp Assemblies

Miniature Flat



Fast-acting clamp for light-duty holding. Includes strap, knurled thumb screw, spherical washer, stud, plain flat washer, three hex jam nuts and spring. Features free swinging adjustments for positioning the assembly without interference.

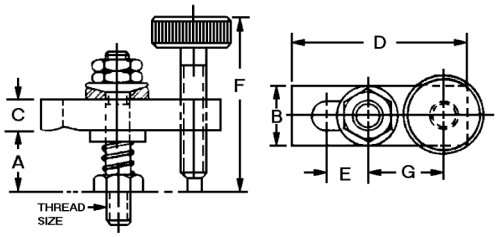


Part Number	A	B	C	D	E	F	Thread Size	Wt. (lbs)
12901	5/8	1/4	1/8	1 1/2	1 9/16	11/16	10-24	.19
12902	5/8	1/4	1/8	2	1 9/16	15/16	1/4-20	.22
12903	9/16	1/4	1/8	2 1/2	1 9/16	1 3/16	1/4-20	.25

Miniature Radius



A light-duty clamp assembly for clamping close to the edge. Complete with radius strap, double jam nuts with spherical washers, finger tip, quick-action knurled thumb screw heel rest, stud, spring and washer. The latter allows free swinging and lateral adjustments for easier set-ups.

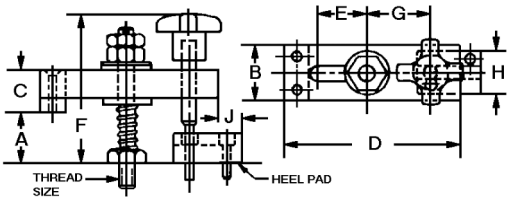


Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs)
13101	1/2	1/2	1/4	1 1/2	7/16	1 9/16	9/16	10-24	.20
13102	1/2	1/2	1/4	1 3/4	9/16	1 9/16	11/16	10-24	.22
13103	1/2	1/2	1/4	2	11/16	1 9/16	13/16	10-24	.24

Heel Pad



In one movement this clamp assembly can be moved into place and tightened; recommended where hand pressure clamping is suitable for the application.

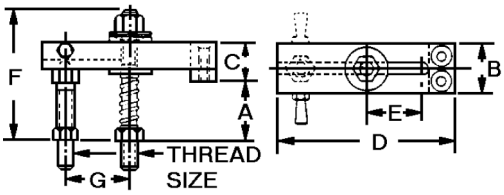


Part Number	A	B	C	D	E	F	G	H	Heel Pad	J	Thread Size	Wt. (lbs)
13301	5/8	5/8	1/2	2	5/8	1 15/16	25/32	3/4	13701	1/2	1/4-20	.38
13312	9/16	7/8	11/16	2 1/2	3/4	2 9/16	15/16	1	13703	5/8	5/16-18	.69
13306	13/16	1 1/4	7/8	3 1/2	1	2 7/8	1 7/16	1	13703	1/2	3/8-16	1.38
13308	13/16	1 1/4	7/8	4 1/2	1 5/8	2 7/8	1 13/16	1	13703	1/2	3/8-16	1.68
13313	1 1/4	1 1/2	1	4 1/2	1 1/4	3 7/8	1 15/16	1 1/2	13705	1 1/8	1/2-13	2.20

Clamp Assemblies

Flange Nut





Use where great clamping pressures are needed and vibration is a problem.

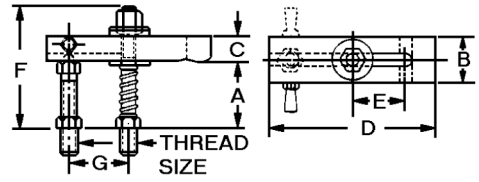
Heavy-duty clamping with spherical flange nut and spherical washer for greater flexibility. Extra long, true milled slot allows more clearance for placing and removing work. Brass and plastic pads are available, see page 6.7.

Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
12701†	3/4	5/8	1/2	2	5/8	1 5/8	7/8	1/4-20	.27
12703	1 1/2	1 1/4	7/8	3 1/2	1 1/8	2 15/16	1 7/16	3/8-16	1.12
12705	1 1/2	1 1/4	7/8	4 1/2	1 5/8	2 15/16	1 15/16	3/8-16	1.38
12707	1 1/8	1 1/2	1 1/8	4 1/2	1 1/4	3	2 1/8	1/2-13	2.12
12710	1 1/8	1 1/2	1 1/8	6	2	3	2 7/8	1/2-13	2.62
12711	2 5/8	1 3/4	1 3/8	5	1 1/2	5 1/16	2 1/8	5/8-11	3.50
12713	2 5/8	1 3/4	1 3/8	7	2 1/2	5 1/16	3 1/8	5/8-11	4.12
12714	1 3/4	1 3/4	1 1/2	5	1 1/2	4 3/8	2 1/8	3/4-10	4.12
12716	1 3/4	1 3/4	1 1/2	7	2 1/2	4 3/8	3 1/8	3/4-10	4.87

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Radius End Flange Nut





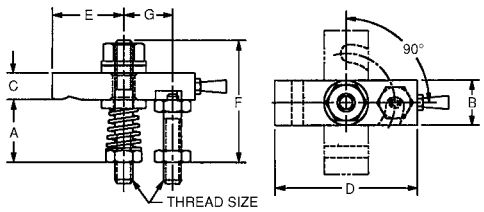
Heavy-duty clamping of plain surfaces with spherical flange nut and spherical washer for angular flexibility. Long, true milled slot allows greater clearance for placing and removing work. Spring-loaded stud for quick release.

Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
14103†	7/8	5/8	3/8	2	5/8	1 5/8	7/8	1/4-20	.25
14104†	7/8	5/8	3/8	2 1/2	1	1 5/8	7/8	1/4-20	.28
14117†	1 1/8	7/8	1/2	2 1/2	3/4	2 1/4	15/16	5/16-18	.75
14118†	1 1/8	7/8	1/2	3 1/2	1 1/4	2 1/4	15/16	5/16-18	.85
14105	1 3/4	1 1/4	5/8	3 1/2	1 1/8	2 15/16	1 7/16	3/8-16	1.10
14119	1 3/4	1 1/4	5/8	4 1/2	1 5/8	2 15/16	1 7/16	3/8-16	1.20
14108	1 1/2	1 1/2	3/4	4 1/2	1 1/4	3	1 7/8	1/2-13	2.00
14110	1 1/2	1 1/2	3/4	6	1 1/2	3	1 7/8	1/2-13	2.44
14111	3 1/8	1 3/4	7/8	5	1 1/2	5 1/16	2	5/8-11	3.25
14113	3 1/8	1 3/4	7/8	7	2 1/2	5 1/16	2	5/8-11	3.88
14114	2 1/4	1 3/4	1	5	1 1/2	4 3/8	2 1/8	3/4-10	3.88
14116	2 1/4	1 3/4	1	7	2 1/2	4 3/8	2 1/8	3/4-10	4.85

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Radius Swing Clamp





Features fast-action, light-duty holding of plain surface work where quick movements are required in a restricted space. Radial milled slots allows for 90° swing. Ideally suited for placing and removing workpiece.

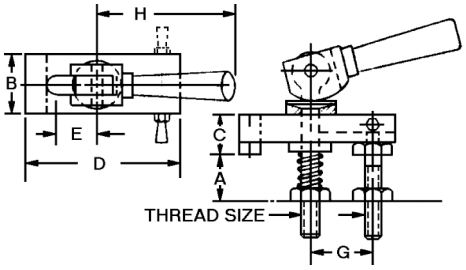
Part Number	Thread Size	A	B	C	D	E	F	G	Wt. (lbs)
14123*	1/4-20	7/8	5/8	3/8	2	1	1 5/8	11/16	.25
14125	3/8-16	1 3/4	1 1/4	5/8	3 1/2	1 1/2	2 15/16	1 1/4	1.10
14128	1/2-13	1 1/2	1 1/2	3/4	4 1/2	1 13/16	3	1 15/16	2.00
14131	5/8-11	3 1/8	1 3/4	7/8	5	2 1/16	5 1/16	2 3/16	3.25
14134	3/4-10	2 1/4	1 3/4	1	5	2 1/16	4 3/8	2 3/16	3.88

*Does not include finger handle. See page 6.6.

Clamp Assemblies

Double Cam





Features fast-action, light-duty holding of plain surface work where quick movements are required in a restricted space. Long end slot for lateral adjustment. Spring-loaded stud member under sturdy double-cam lever. Plastic and brass pads available for protecting workpiece, see page 6.7.

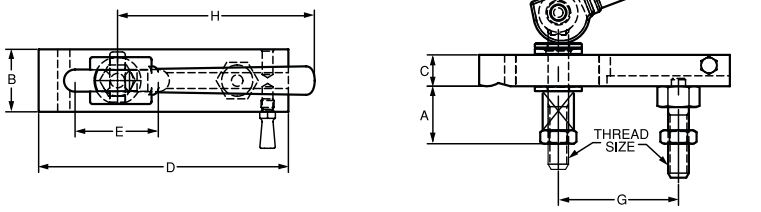
Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
12501†	5/8	5/8	1/2	2	5/8	7/8	2 1/2	1/4-20	.40
12502	1 5/16	1 1/4	7/8	3 1/2	1 1/8	1 7/16	3 7/16	3/8-16	1.50
12503	1	1 1/2	1 1/8	4 1/2	1 1/4	1 7/8	5	1/2-13	3.00
12504	2 1/8	1 3/4	1 3/8	5	1 1/2	1 15/16	5 1/16	5/8-11	4.70

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Double Cam Clamp Assemblies W/Radius Nose Strap



Same fast-action as Standard Double Cam Clamp but with a radius strap.



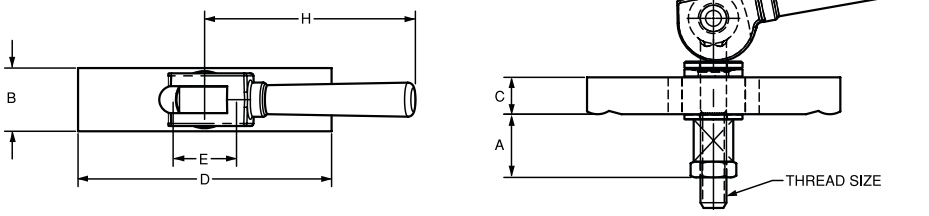
Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
12511†	3/4	5/8	3/8	2	5/8	7/8	2 1/2	1/4-20	0.35
12512†	3/4	5/8	3/8	2 1/2	1	7/8	2 1/2	1/4-20	0.40
12513†	1 1/8	7/8	1/2	2 1/2	3/4	1 1/4	3 7/16	5/16-18	1.25
12514†	1 1/8	7/8	1/2	3 1/2	1 1/4	1 1/4	3 7/16	5/16-18	1.40
12515	1 1/2	1 1/4	5/8	3 1/2	1 1/8	1 7/16	3 7/16	3/8-16	1.50
12516	1 1/2	1 1/4	5/8	4 1/2	1 5/8	1 7/16	3 7/16	3/8-16	1.80
12517	1 3/8	1 1/2	3/4	4 1/2	1 1/4	1 7/8	5	1/2-13	3.00
12518	1 3/8	1 1/2	3/4	6	2	1 7/8	5	1/2-13	3.40
12519	1 5/8	1 3/4	7/8	5	1 1/2	1 15/16	5 1/16	5/8-11	4.70

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Double Cam Clamp Assemblies W/Double End Radius Nose Strap



Double Cam Clamp featuring a radius at both ends of the strap.

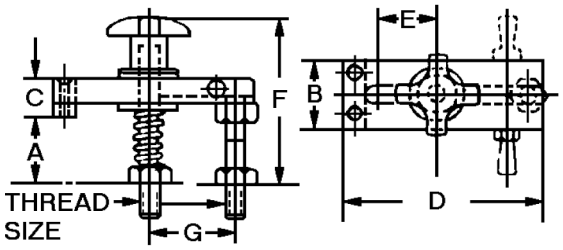


Part Number	A	B	C	D	E	H	Thread Size	Wt. (lbs)
12523	1 3/8	1 1/2	3/4	4	1 1/4	5	1/2-13	2.50
12524	1 3/8	1 1/2	3/4	5	1 1/4	5	1/2-13	3.00
12526	1 5/8	1 5/8	7/8	6	1 1/2	5 1/16	5/8-11	5.30

Clamp Assemblies

Knob





Designed for light-duty clamping, the hand knob eliminates wrenching for faster work changes. Spherical washer allows for clamping irregular surfaces.

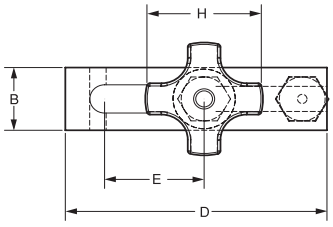
- Interchangeable pad option
- Steel pad standard, brass and plastic pads are available, see page 6.7
- Pads machinable to part configuration

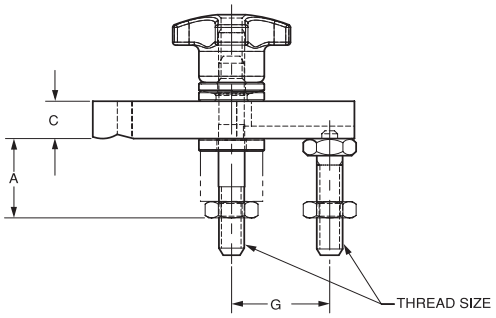
Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
13501†	3/4	5/8	1/2	2	5/8	2 5/16	1	1/4-20	.35
13503	1 1/2	1 1/4	7/8	3 1/2	1 1/8	3 19/32	1 7/16	3/8-16	1.22

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Knob Clamp Assemblies w/Radius Nose Strap







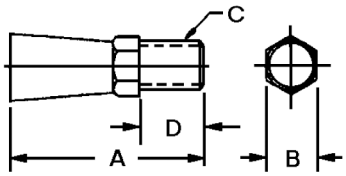
Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
13512†	7/8	5/8	3/8	2 1/2	1	2 1/4	7/8	1/4-20	.32
13515	1 3/4	1 1/4	5/8	3 1/2	1 1/8	3 1/2	1 7/16	3/8-16	1.10
13516	1 3/4	1 1/4	5/8	4 1/2	1 5/8	3 1/2	1 7/16	3/8-16	1.30

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 6.6.

Clamp Assemblies Components

Finger Handles



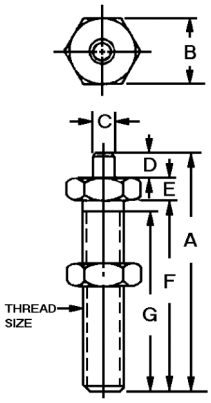


Part Number	A	B	C	D	Wt. (lbs) 10 Pcs.
19501	3/4	1/4	10-32	1/4	.08
19502	1 3/16	3/8	5/16-18	5/16	.31

- Material: Low Carbon Steel
- Finish: Black Oxide

Clamp Rests

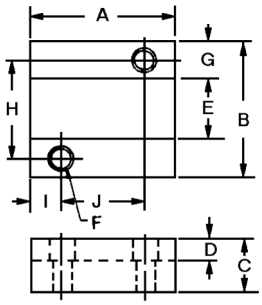




- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2A-UNC

Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs) 10 Pcs.
21301	3/4	3/8	5/32	5/64	11/64	1/2	13/32	10-24	.19
21302	1 1/4	7/16	5/32	5/64	11/64	1	29/32	1/4-20	.22
21307	1 7/8	1/2	7/32	3/16	7/32	1 15/32	1 5/16	5/16-18	.60
21308	3 1/4	1/2	7/32	3/16	7/32	2 27/32	2 11/16	5/16-18	1.25
21303	2 1/2	9/16	11/32	5/32	11/32	2	1 13/16	3/8-16	.70
21313	3 7/8	9/16	11/32	5/32	11/32	3 3/8	3 3/16	3/8-16	2.80
21304	2 3/8	7/8	11/32	3/16	1/2	1 11/16	1 1/2	1/2-13	1.88
21314	3 7/8	7/8	11/32	3/16	1/2	3 3/16	3	1/2-13	3.50
21315	2 5/8	7/8	11/32	3/16	1/2	1 15/16	1 11/16	5/8-11	2.25
21305	3 27/32	7/8	11/32	3/16	1/2	3 5/32	2 15/16	5/8-11	3.60
21316	2 3/4	7/8	11/32	3/16	1/2	2 1/16	1 7/8	3/4-10	2.75
21306	3 1/2	7/8	11/32	3/16	1/2	2 13/16	2 3/8	3/4-10	4.70

Clamp Assembly Guide Blocks



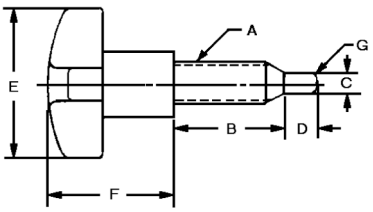
Part Number	A	B	C	D	E	Soc. Hd. Cap F	G	H	I	J	Wt. (lbs) 10 Pcs.
13701	7/8	3/4	5/16	1/8	7/32	5-40	1/8	1/2	3/16	1/2	.06
13703	1 1/8	1	1/2	3/16	9/32	8-32	3/16	5/8	1/4	5/8	.12
13705	1 5/8	1 1/2	5/8	1/4	13/32	1/4-20	1/4	1	3/8	7/8	.38

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 74-77 R30N
- Mounting Screws Supplied with Heel.

Hand Knob Screws



- Material: Stem, Stressproof®
  Head, Cast Iron
- Finish: Stem, Black Oxide
  Head, Zinc Plate
- Thread: 2A-UNC

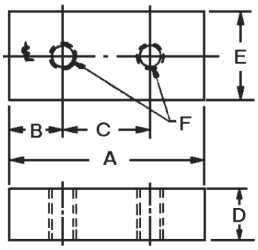


Part Number	A	B	C	D	E	F	Radius G	Wt. (lbs) 10 Pcs.
13901	1/4-20	3/4	11/64	1/4	1 1/8	7/8	1/8	.78
13902	5/16-18	1 1/16	7/32	5/16	1 1/2	1	1/4	1.57
13903	3/8-16	1 3/16	1/4	5/16	2	1 1/8	1/4	1.87
13904	1/2-13	1 5/8	3/8	3/8	2 1/2	1 1/2	3/8	4.00
13905	5/8-11	1 3/4	15/32	3/8	3	2	3/8	12.50

Designed for applications where thumb screws are too light, and a heavier, larger unit is needed. Cast iron knob, dog point end.

Strap Pads-Steel, Plastic & Brass





- Material: Steel, Low Carbon Steel
  Plastic, Paper Filled Bakelite
  Brass
- Finish: Steel Pad Only, Black Oxide
- Heat Treat: Steel Pad Only,
  Case Hardened 74-77 R30N

Plastic Pads
Resistant to oil and cutting fluids, allows high clamping pressures, yet protects the soft materials from being scratched or marred.

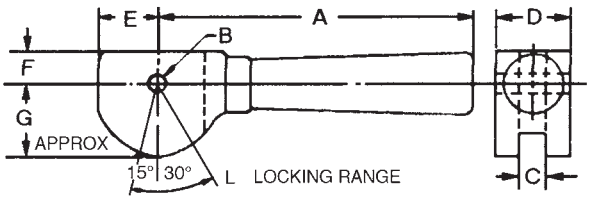
Steel Pads		Plastic Pads		Brass Pads							
Part Number	Wt. (lbs) 10 Pcs.	Part Number	Wt. (lbs) 10 Pcs.	Part Number	Wt. (lbs) 10 Pcs.	A	B	C	D	E	F
17101	.05	**17102**	.02	**17103**	.06	5/8	9/64	11/32	1/8	1/4	5-40
17104	.16	**17105**	.03	**17106**	.18	7/8	3/16	1/2	3/16	3/8	8-32
17107	.40	**17108**	.08	**17109**	.43	1 1/4	5/16	5/8	1/4	1/2	10-24
17110	.90	**17111**	.16	**17112**	.93	1 1/2	3/8	3/4	3/8	5/8	1/4-20
17113	1.50	—	—	—	—	1 3/4	1/2	3/4	1/2	3/4	1/4-20

Double Cams



Slip standard pipe over handle for more leverage. Snug fit at handle collar and end.

- Finish: Black Oxide
- Material: C1020
- Heat Treat: Case Hardened 74-77 R30N

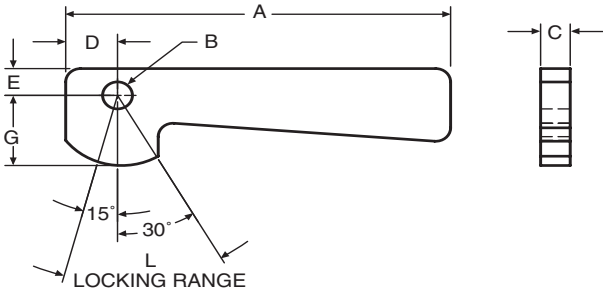


Forged, heat-treated for abrasion-resistance and longer life. Designed for quick change clamping which requires greater holding pressures than are available with single cams. Mean clamping point pressure angle is from 3 1/2˚ to 4˚, which makes for stronger workholding.

Part Number	A	B	C	D	E	F	G	L	Wt. (lbs)
18101	2 1/2	3/16	17/64	5/8	3/8	1/4	.437	.015	.14
18102	3 7/16	5/16	25/64	7/8	19/32	23/64	.679	.019	.34
18103	5	3/8	33/64	1 1/8	5/8	15/32	.755	.031	.83
18104	5 1/16	5/8	41/64	1 1/4	7/8	5/8	1.040	.043	1.00

Single Cams





- Finish: Black Oxide
- Material: 1018
- Heat Treat: Case Hardened Rc 58-62

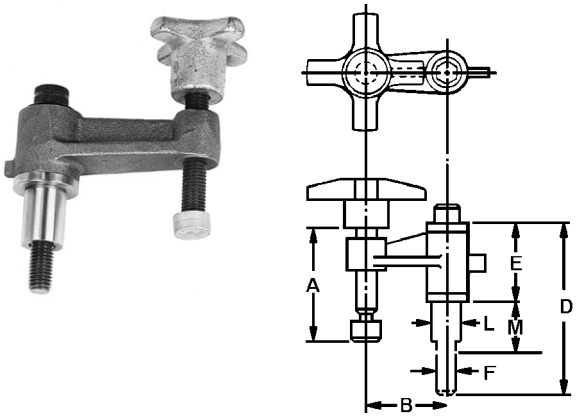
Part Number	A	B	C	D	E	G	L	Wt. (lbs)
12101	2 3/8	5/32	3/16	3/8	3/16	17/32	.015	0.62
12102	3 1/4	1/4	1/4	7/16	1/4	21/32	.022	1.40
12103	4 1/2	5/16	3/8	3/4	3/8	29/32	.031	4.00
12104	5	3/8	1/2	7/8	7/16	1 5/64	.031	6.90

Revolving Clamp Assemblies

Quick hold-down of workpiece with hand tightening, then loosen and revolve out of the way. Saves time for moderate-duty clamping.

Malleable cast iron body. Case-hardened swivel pad uses "tru-center" feature to maintain even, in-line pressure on work-piece.

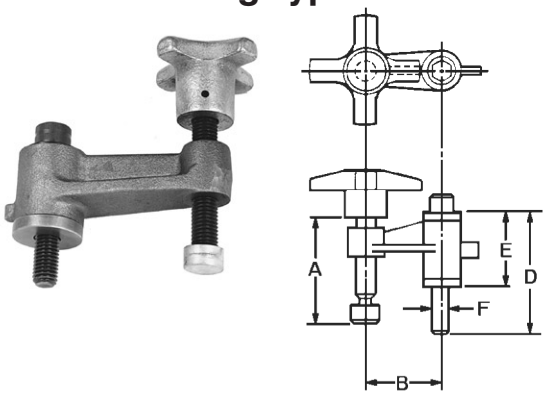
Long Bushing Type



- Body Material: Malleable ASTM A47, GR32510
- Finish: Black Oxide
- Bushings: Hardened & Ground Rc 56-60

Part Number	A	B	D	E	F	L	M	Wt. (lbs)
35119	2	1 1/2	3	1 1/2	5/16-18	.5610/ .5595	5/8	0.8
35103	2	1 1/2	3 1/4	1 1/2	3/8-16	.6235/ .6220	3/4	0.8
35116	3 3/8	3	5	2 1/4	1/2-13	.8735/ .8720	1 1/4	4.5
35106	3 3/4	3	5	2 1/4	5/8-11	1.1235/ 1.1220	1 1/2	4.8
35109	3 3/4	4	5	2 1/4	5/8-11	1.1235/ 1.1220	1 1/2	5.0

Short Bushing Type



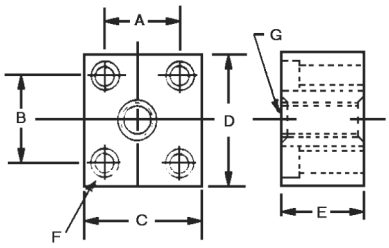
- Body Material: Malleable ASTM A47, GR32510
- Finish: Black Oxide
- Bushings: Hardened & Ground Rc 56-60

Part Number		A	B	D	E	F	Wt. (lbs)	Base Part Number
Clamp Only	Clamp w/ Base							
35117	**35118**	2	1 1/2	2	1 1/2	5/16-18	0.7	**35113**
35101	**35102**	2	1 1/2	3 1/4	1 1/2	3/8-16	0.7	**35110**
35114	**35115**	3 3/8	3	5	2 1/4	1/2-13	4.3	**35112**
35104	**35105**	3 3/4	3	3	2 1/4	5/8-11	4.5	**35111**
35107	**35108**	3 3/4	4	5	2 1/4	5/8-11	4.8	**35111**

Revolving Clamp Base

(for use with Short Bushing Type only)



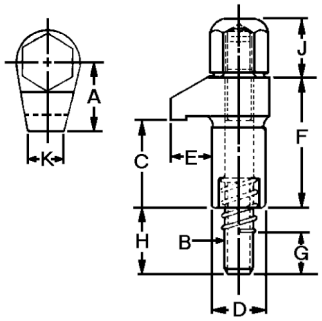


- Stop pin supplied with each base.

Part Number	A	B	C	D	E	F	Mtg. Bold Size G	Wt (lbs)
35113	3/4	1	1 7/16	1 1/2	1	#10	5/16-18	0.5
35110	7/8	1	1 7/16	1 1/2	1	#10	3/8-16	0.6
35112	1 1/8	1 3/8	2 1/4	2 1/4	1 1/4	1/4	1/2-13	1.2
35111	1 1/4	1 1/2	2 1/4	2 1/4	1 1/4	3/8	5/8-11	1.7

Hook Clamp Assemblies





Moderate to heavy-duty holding power in close quarters. When released, the hook clamp swings quickly and easily out of the way for fast maneuvering of work. Spring-loaded shank for speedy clamp release.

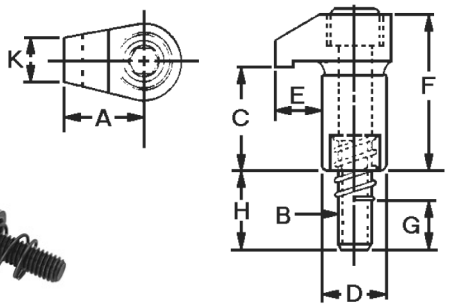
- Material: Cast Steel Body, 4140
- Finish: Black Oxide
- Heat Treat: Rc 44-48
- Stud: Furnished

Part Number	A	Stud Size B	C	D	E	F	G	H	J	K	Wt. (lbs)	Max. Torque (Ft/lbs)
41901	11/16	5/16-18 x 2 1/2	7/8	.624/.625	3/8	1 3/8	5/16	3/4	5/8	3/8	.21	25
41908	1	3/8-16 x 4	1 5/8	.874/.875	9/16	2 1/4	3/4	1 1/4	3/4	5/8	.59	40
41902*	1	1/2-13 x 4	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/8	15/16	5/8	.64	100
41903	1 7/16	5/8-11 x 5	1 13/16	1.124/1.125	7/8	2 3/4	7/8	1 3/8	1 3/16	3/4	1.38	180

*Conforms to TCMA

Hook Clamp Assemblies





Alternative to the above assembly, features flush-mounted socket screw instead of acorn nut. Designed for limited space applications and moderate holding power.

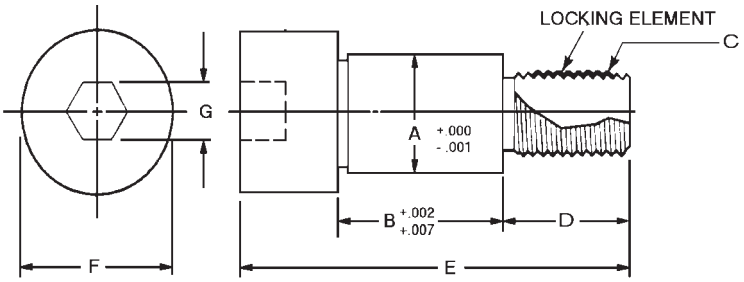
- Material: Cast Steel Body, 4140
- Finish: Black Oxide
- Heat Treat: Rc 44-48
- Screw: Furnished

Part Number	A	Cap Screw B	C	D	E	F	G	H	K	Wt. (lbs)	Max. Torque (Ft/lbs)
41904	11/16	5/16-18 x 1 3/4	7/8	.624/.625	3/8	1 3/8	1/4	5/8	3/8	.14	25
41905*	1	3/8-16 x 3	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/16	5/8	.44	40
41907	1	1/2-13 x 3	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/8	5/8	.47	100
41906	1 7/16	5/8-11 x 3 1/2	1 13/16	1.124/1.125	7/8	2 3/4	13/16	1 9/16	3/4	1.00	180

*Conforms to TCMA

Socket Shoulder Screws
Nylon Locking





Socket Shoulder Screws are held to much closer tolerances than on standard Stripper Bolts. **The "B" dimension is always a plus to eliminate the binding on movable plates. The "A" dimension is held closer for bearing-type locating**. You'll get more positive holding power and greater turning leverage. Ideal for all sliding mechanisms. Nylon locking element is incorporated in all Jergens Shoulder Screws.

- Material: 4140
- Heat Treat: Rc 38-42
- Thread: 2A-UNC

Diameter A	B	Part Number	Thread Size C	D	E	F	Hex Size G	Wt. (lbs) 10 Pcs.
.249	1/4	**41701***	10-24	3/8	13/16	3/8	1/8	.09
.249	3/8	**41702***	10-24	3/8	15/16	3/8	1/8	.12
.249	1/2	**41703***	10-24	3/8	1 1/16	3/8	1/8	.13
.249	5/8	**41704***	10-24	3/8	1 3/16	3/8	1/8	.15
.249	3/4	**41705***	10-24	3/8	1 5/16	3/8	1/8	.16
.249	7/8	**41706***	10-24	3/8	1 7/16	3/8	1/8	.19
.374	1/4	**41707***	5/16-18	1/2	1	9/16	3/16	.30
.374	3/8	**41708***	5/16-18	1/2	1 1/8	9/16	3/16	.32
.374	1/2	**41709***	5/16-18	1/2	1 1/4	9/16	3/16	.38
.374	5/8	**41710***	5/16-18	1/2	1 3/8	9/16	3/16	.41
.374	3/4	**41711***	5/16-18	1/2	1 1/2	9/16	3/16	.45
.374	7/8	**41712***	5/16-18	1/2	1 5/8	9/16	3/16	.48
.499	3/8	**41713***	3/8-16	5/8	1 5/16	3/4	1/4	.68
.499	1/2	**41714***	3/8-16	5/8	1 7/16	3/4	1/4	.73
.499	5/8	**41715***	3/8-16	5/8	1 9/16	3/4	1/4	.78
.499	3/4	**41716***	3/8-16	5/8	1 11/16	3/4	1/4	.86
.499	7/8	**41717***	3/8-16	5/8	1 13/16	3/4	1/4	.93
.624	1/2	**41718***	1/2-13	3/4	1 5/8	7/8	5/16	1.22
.624	5/8	**41719***	1/2-13	3/4	1 3/4	7/8	5/16	1.36
.624	3/4	**41720***	1/2-13	3/4	1 7/8	7/8	5/16	1.41
.624	7/8	**41721***	1/2-13	3/4	2	7/8	5/16	1.56
.624	1	**41722***	1/2-13	3/4	2 1/8	7/8	5/16	1.85
.749	5/8	**41723***	5/8-11	7/8	2	1	3/8	2.25
.749	3/4	**41724***	5/8-11	7/8	2 1/8	1	3/8	2.47
.749	7/8	**41725***	5/8-11	7/8	2 1/4	1	3/8	2.60
.749	1	**41726***	5/8-11	7/8	2 3/8	1	3/8	2.75
.749	1 1/4	**41727***	5/8-11	7/8	2 5/8	1	3/8	2.90
.999	1	**41728**	3/4-10	1	2 5/8	1 3/8	1/2	5.47
.999	1 1/2	**41729**	3/4-10	1	3 1/8	1 3/8	1/2	6.56
.999	2	**41730**	3/4-10	1	3 5/8	1 3/8	1/2	7.66

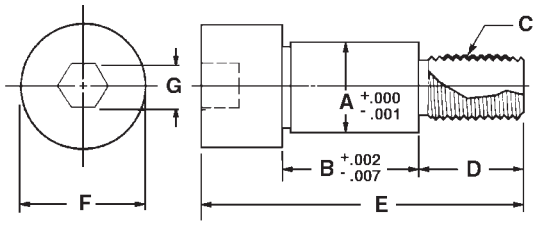
*Conforms to TCMA

Socket Head Shoulder Screws

Stainless Steel



• Material: 303 Stainless



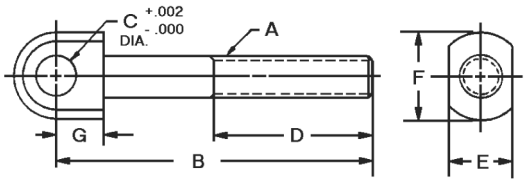
Socket Shoulder Screws are held to much closer tolerances than on standard Stripper Bolts. **The "B" dimension is always a plus to eliminate the binding on movable plates. The "A" dimension is held closer for bearing-type locating**. You'll get more positive holding power and greater turning leverage. Ideal for all sliding mechanisms. Nylon locking element is incorporated in all Jergens Shoulder Screws.

Part Number	Diam. A	B	C	D	E	F	Hex Size G	Wt. (lbs) 10 Pcs.
41801	1/4	1/4	10-24	3/8	13/16	3/8	1/8	.09
41802	1/4	3/8	10-24	3/8	15/16	3/8	1/8	.12
41803	1/4	1/2	10-24	3/8	1 1/16	3/8	1/8	.13
41804	1/4	5/8	10-24	3/8	1 3/16	3/8	1/8	.15
41805	1/4	3/4	10-24	3/8	1 5/16	3/8	1/8	.16
41806	1/4	1	10-24	3/8	1 9/16	3/8	1/8	.19
41807	3/8	1/4	5/16-18	1/2	1	9/16	3/16	.30
41808	3/8	3/8	5/16-18	1/2	1 1/8	9/16	3/16	.32
41809	3/8	1/2	5/16-18	1/2	1 1/4	9/16	3/16	.38
41810	3/8	5/8	5/16-18	1/2	1 3/8	9/16	3/16	.41
41811	3/8	3/4	5/16-18	1/2	1 1/2	9/16	3/16	.45
41812	3/8	1	5/16-18	1/2	1 3/4	9/16	3/16	.48
41813	1/2	3/8	3/8-16	5/8	1 5/16	3/4	1/4	.68
41814	1/2	1/2	3/8-16	5/8	1 7/16	3/4	1/4	.73
41815	1/2	5/8	3/8-16	5/8	1 9/16	3/4	1/4	.78
41816	1/2	3/4	3/8-16	5/8	1 11/16	3/4	1/4	.86
41817	1/2	1	3/8-16	5/8	1 15/16	3/4	1/4	.93
41818	5/8	1/2	1/2-13	3/4	1 5/8	7/8	5/16	1.22
41819	5/8	5/8	1/2-13	3/4	1 3/4	7/8	5/16	1.36
41820	5/8	3/4	1/2-13	3/4	1 7/8	7/8	5/16	1.41
41822	5/8	1	1/2-13	3/4	2 1/8	7/8	5/16	1.85

Swing Bolts (Latch Bolt)



• Material: 4140
• Finish: Black Oxide
• Heat Treat: Rc 36-40
• Thread: Class 2A-UNC



Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
29501*	3/8-16	2 1/2	3/8	1 3/8	1/2	3/4	3/8	.93
29502	3/8-16	3 1/4	3/8	1 3/4	1/2	3/4	3/8	1.25
29513	1/2-13	2 5/8	3/8	1 1/2	5/8	1	7/16	1.95
29504*	1/2-13	3 1/8	1/2	1 3/4	5/8	1	7/16	2.04
29505	1/2-13	4 1/8	1/2	2 1/4	5/8	1	7/16	2.64
29516	5/8-11	3 3/4	1/2	2	3/4	1 1/8	1/2	3.64
29507	5/8-11	3 1/2	5/8	1 3/4	3/4	1 1/8	1/2	3.67
29508	5/8-11	4 3/4	5/8	2 1/2	3/4	1 1/8	1/2	4.75
29509	3/4-10	4 3/8	3/4	2 1/2	7/8	1 3/8	11/16	6.10
29510	3/4-10	6 1/2	3/4	3 1/4	7/8	1 3/8	11/16	8.85

*Conforms to TCMA.

Not to be used for lifting.

Swing Bolts (Latch Bolt)

Stainless Steel

• Material: 303 Stainless
• Thread: Class 2A-UNC

Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
29601	3/8-16	2 1/2	3/8	1 3/8	1/2	3/4	1/2	1.1
29602	3/8-16	3 1/2	3/8	2	1/2	3/4	1/2	1.4
29603	1/2-13	3 1/8	1/2	1 5/8	5/8	1	5/8	2.6
29604	1/2-13	4-1/8	1/2	2 1/2	5/8	1	5/8	3.0
29605	5/8-11	3 1/2	5/8	1 5/8	3/4	1 1/4	3/4	4.6
29606	5/8-11	4 3/4	5/8	2 1/2	3/4	1 1/4	3/4	5.5

*B dimension indicates minimum length.

Not to be used for lifting.

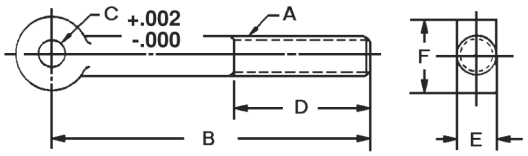
Rod Ends
Threaded



- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: 32-36 Rc
- Thread: Class 2A-UNC

* 150,000 PSI Tensile

Rod Ends are forged and finished for applications not requiring flat contact with the head. All holes are reamed. Rod Ends can be used with spherical flange assemblies, flange nuts and clamp assemblies.



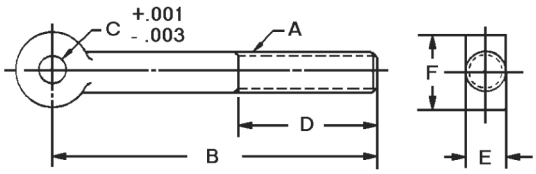
Part Number	Thread A	B	C	D Minimum	E	F	Wt. (lbs)
35301*	1/4-20	2	3/16	3/4	1/4	1/2	.04
35302	1/4-20	2	1/4	3/4	1/4	1/2	.03
35318*	5/16-18	3	1/4	1 1/2	5/16	5/8	.08
35319*	5/16-18	3	5/16	1 1/2	5/16	5/8	.08
35303*	3/8-16	3	5/16	1 1/2	3/8	3/4	.11
35320	3/8-16	4	5/16	1 3/4	3/8	3/4	.11
35304	3/8-16	2 3/16	3/8	1 1/4	3/8	3/4	.08
35305*	3/8-16	3	3/8	1 1/2	3/8	3/4	.11
35306*	3/8-16	5	3/8	2 1/2	3/8	3/4	.12
35307*	1/2-13	3 3/4	3/8	1 1/2	1/2	1	.25
35308	1/2-13	2 11/16	1/2	1 1/2	1/2	1	.19
35309	1/2-13	3 3/4	1/2	1 1/2	1/2	1	.24
35310	1/2-13	5	1/2	1 1/2	1/2	1	.31
35311	5/8-11	3 11/16	5/8	2	5/8	1 1/4	.40
35312*	5/8-11	4 1/2	5/8	2	5/8	1 1/4	.46
35314*	5/8-11	6	5/8	2 1/2	5/8	1 1/4	.60
35315*	3/4-10	4 1/2	3/4	2	3/4	1 1/2	.73
35321*	3/4-10	6	3/4	2 1/2	3/4	1 1/2	1.00
35317	1-8	8	1	3	1	2	2.25

*Conforms to TCMA. **Not to be used for lifting**.

Rod Ends
Stainless Steel



- Material: 303 Stainless
- Thread Class 2A-UNC



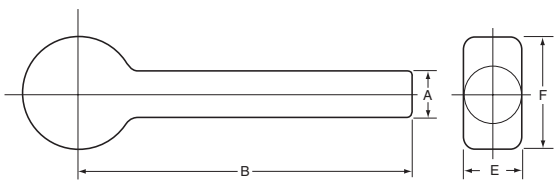
Part Number	Ref. A	B	Ref. C	D	E	F
35721	1/4-20	2 1/8	3/16	7/8	1/4	1/2
35722	1/4-20	2 1/8	1/4	7/8	1/4	1/2
35723	5/16-18	3 1/2	1/4	1 1/2	5/16	5/8
35724	5/16-18	3 1/2	5/16	1 1/2	5/16	5/8
35725	3/8-16	3 1/2	3/8	1 1/2	3/8	3/4
35726	3/8-16	5	3/8	2 1/2	3/8	3/4
35727	1/2-13	3 3/4	1/2	1 1/2	1/2	1
35728	1/2-13	5	1/2	2	1/2	1
35729	5/8-11	4 1/2	5/8	2	5/8	1 1/4
35730	5/8-11	6	5/8	3	5/8	1 1/4
35731	3/4-10	4 1/2	3/4	2	3/4	1 1/2
35732	3/4-10	6	3/4	2 1/2	3/4	1 1/2

Not to be used for lifting.

Rod Ends
Blank Forging

- Material: Standard, Alloy Steel Forging
  Stainless, 18-8 Forging

* Not Heat Treated



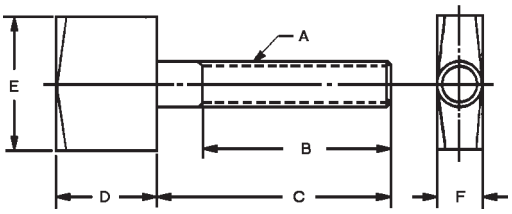
Part Number		A	B*	E	Ref. F	Wt. (lbs)
Standard	Stainless Steel					
35511	**35701**	1/4	2	1/4	1/2	.04
35512	**35702**	3/8	5	3/8	3/4	.13
35513	**35703**	1/2	6	1/2	1	.44
35514	**35704**	5/8	6	5/8	1 1/4	.70
35515		3/4	6	3/4	1 1/2	1.8
35516		1	8	1	2	2.5

*B dimension indicates minimum length. **Not to be used for lifting**.

Blank Rod Ends can be machined to your specifications; please send prints for quotation. Maximum thread length 1/2" from head.

Quarter Turn Screws





The diamond on all four corners of the Jergens Quarter Turn and Half Turn Screws, makes the opening and closing of jig lids easier. Ideally suited for clamping lids, covers and swing-away type bushing arms. Quarter Turn and Half Turn Screws may be machined for finishing requirements.

Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
34501*	10-32	7/8	1	1/2	1/2	3/16	.31
34502*	1/4-20	1	1 1/4	5/8	3/4	1/4	.47
34503	1/4-20	1 1/2	1 3/4	5/8	3/4	1/4	.48
34504*	5/16-18	1 1/4	1 1/2	3/4	1	5/16	.90
34505	5/16-18	1 3/4	2	3/4	1	5/16	1.10
34506*	3/8-16	1 1/4	1 1/2	1	1	3/8	1.25
34507	3/8-16	1 3/4	2	1	1	3/8	1.45
34508*	1/2-13	1 1/2	1 3/4	1	1 1/4	1/2	2.35
34509	1/2-13	2	2 1/4	1	1 1/4	1/2	2.65

*Conforms to TCMA

- Material: Stem, Low Carbon Steel
  Head, Low Carbon Steel
- Finish: Black Oxide
- Thread: 2A-UNC (inch); Class 6g (Metric)
  2A-UNF (10-32)

Metric

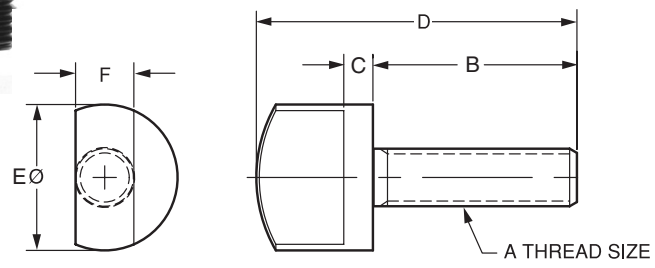
Part Number	A	B	C	D	E	F	Wt. (kg) 10 Pcs.
34571	M5 x 0.8	22	25	13	13	5	.14
34573	M6 x 1.0	25	32	16	19	6	.21
34575	M8 x 1.25	32	38	19	25	8	.41
34577	M10 x 1.5	32	38	25	25	10	.57
34579	M12 x 1.75	38	44	25	32	13	1.06

Half Turn Screws



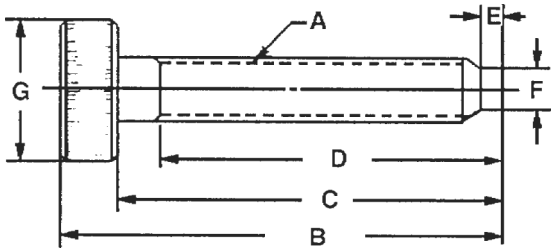
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2A-UNF (10-32)
  2A-UNC (other sizes)

Part Number	Thread A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
34521	10-32	1	3/16	1-11/16	3/4	3/16	.3
34522	1/4-20	1-1/4	3/16	2	3/4	1/4	.3
34523	5/16-18	1-1/4	3/16	2-1/16	1	5/16	.3
34524	3/8-16	1-3/4	1/4	1-11/16	1-1/16	3/8	.3
34525	1/2-13	1-3/4	1/4	2-3/4	1-1/4	1/2	.3



Screws
Thumb Screws





- Materials: 1215 Steel with black oxide finish, 303 Stainless
- Thread: 2A-UNC
  2A-UNF (10-32)

The half-dog point protects the threads in case of peening.

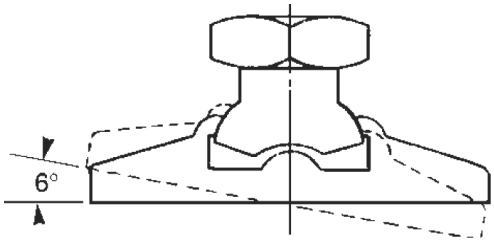
Part No. Steel	Part No. Stainless	A	B	C	D	E	F	G	Wt. (lbs)
43901	-	10-24	1 9/16	1 1/4	1 1/16	3/64	1/8	3/4	.44
43902	-	10-24	1 5/16	1 5/8	1 7/16	3/64	1/8	3/4	.47
43903*	-	10-24	2 5/16	2	1 13/16	3/64	1/8	3/4	.48
-	**44001**	10-32	1 3/16	1	3/4	7/32	3/16	3/4	.45
-	**44002**	10-32	1 7/16	1 1/4	1	7/32	3/16	3/4	.45
-	**44004**	1/4-20	1 5/16	1	25/32	3/32	11/64	1	.75
43904*	**44005***	1/4-20	1 13/16	1 1/2	1 1/4	1/16	5/32	1	.78
43905*	**44006**	1/4-20	2 5/16	2	1 3/4	1/16	5/32	1	.86
43906*	-	1/4-20	2 13/16	2 1/2	2 1/4	1/16	5/32	1	.91
43907	**44008**	5/16-18	2 1/8	1 3/4	1 7/16	5/64	13/64	1 1/8	1.30
43908	**44009**	5/16-18	2 5/8	2 1/4	1 15/16	5/64	13/64	1 1/8	1.36
43909	**44010**	5/16-18	3 1/8	2 3/4	2 7/16	5/64	13/64	1 1/8	1.50
43910*	**44011**	3/8-16	2 7/16	2	1 5/8	3/32	1/4	1 1/4	1.93
43911*	**44012***	3/8-16	2 15/16	2 1/2	2 1/8	3/32	1/4	1 1/4	2.00
43912*	**44013***	3/8-16	3 7/16	3	2 5/8	3/32	1/4	1 1/4	2.20
43913	-	1/2-13	2 15/16	2 1/2	2 1/8	1/8	11/32	1 1/4	2.55
-	**44014**	1/2-13	3	2 1/2	2	1/4	3/8	1 1/4	2.55
43914*	-	1/2-13	3 7/16	3	2 5/8	1/8	11/32	1 1/4	2.80
-	**44015**	1/2-13	3 1/2	3	2 1/2	1/4	3/8	1 1/4	3.00
43915*	-	1/2-13	3 15/16	3 1/2	3 1/8	1/8	11/32	1 1/4	3.10
-	**44016**	1/2-13	4	3 1/2	3	1/4	3/8	1 1/4	3.10

* Conforms to TCMA

Metric

Part Number	A	B	C	D	E	F	G	Wt. (Kg)
43971	M5x0.8	30	25	20	1.2	3	20	0.20
43972	M5x0.8	45	40	35	1.2	3	20	0.21
43973	M5x0.8	55	50	45	1.2	3	20	0.22
43974	M 6 x 1.0	50	40	35	1.5	4	25	0.35
43975	M 6 x 1.0	60	50	45	1.5	4	25	0.39
43976	M 6 x 1.0	75	65	55	1.5	4	25	0.41
43977	M8 x 1.25	50	40	35	2.4	5	30	0.59
43978	M8 x 1.25	60	50	45	2.4	5	30	0.62
43979	M8 x 1.25	75	65	60	2.4	5	30	0.68
43980	M10 x 1.5	60	50	45	2.4	6	30	0.88
43981	M10 x 1.5	75	65	60	2.4	6	30	0.91
43982	M10 x 1.5	85	75	70	2.4	6	30	1.00
43983	M 12 x 1.75	90	75	70	3	11	30	1.27
43984	M 12 x 1.75	105	90	85	3	11	30	1.41
43985	M 12 x 1.75	80	65	55	3	11	30	1.25

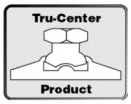
Tru-Center™ Toggle Products



The Jergens patented "Tru-Center" products are the only pad type on the market to provide true center line clamping. The cut-away drawing illustrates how this works. The center line of the pad and the center line of the nut always intersect at the point of contact between the pad and the workpiece.

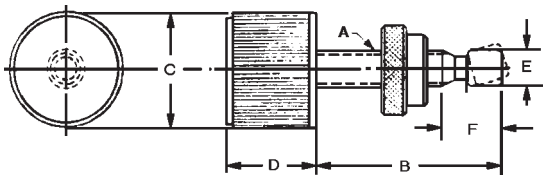
Adjustable Torque Toggle Screws





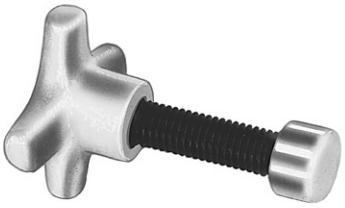
Perfect for delicate and fine clamping. Once the end holding force is reached, the head breaks free. Larger radius, straight knurled head for easy turning.

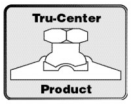
- Material: Stem, Stressproof®
  Pad, 4140
- Finish: Stem, Black Oxide
  Head, Chrome Plate
- Thread: 2A-UNC
- Pad: Angular movement either side of center (total 16°)



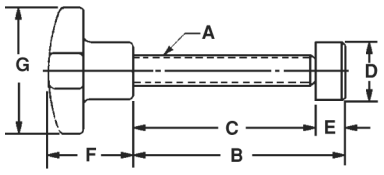
Part Number	A	B	C	D	E	F	End Force (lbs)	Wt. (lbs) 10 Pcs.
31101	10-24	1 1/4	1	23/32	.140	3/16	0-50	1.7
31102	1/4-20	1 1/2	1	23/32	.185	15/64	0-50	1.7
31103	1/4-20	2 1/2	1	23/32	.185	15/64	0-50	1.8
31104	5/16-18	1 3/4	1	23/32	.240	9/32	0-50	1.9
31105	5/16-18	2 3/4	1	23/32	.240	9/32	0-50	2.1
31106	3/8-16	2	1 1/4	25/32	.294	11/32	0-60	3.0
31107	1/2-13	3	1 1/4	25/32	.400	7/16	0-60	4.2

Hand Knob Toggle Screws





For clamping of irregular surfaces while the swivel shoe prevents marring of polished surfaces. Shoe is hardened for longer life. The cast iron hand knob is included for hand tightening. To remove pad for installation, pull and turn counter-clockwise.



- Material: Stem, Stressproof®
  Pad, 4140
  Head, Cast Iron
- Finish: Stem, Black Oxide
  Pad, Zinc Plate
  Head, Cadnium Plate
- Thread: 2A-UNC
- Pad: Angular movement either side of center (total 16°)

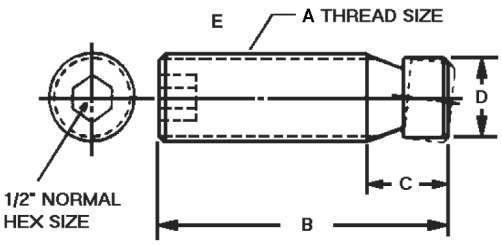
Part Number	A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
36301	3/8-16	2	1 21/32	11/16	3/8	1 1/8	2	.21
36302	3/8-16	2 3/4	2 13/32	11/16	3/8	1 1/8	2	.24
36303	3/8-16	3 5/8	3 9/32	11/16	3/8	1 1/8	2	.25
36304	1/2-13	2 1/8	1 21/32	13/16	15/32	1 1/2	2 1/2	.44
36305	1/2-13	2 3/4	2 9/32	13/16	15/32	1 1/2	2 1/2	.48
36306	1/2-13	3 3/8	2 29/32	13/16	15/32	1 1/2	2 1/2	.52
36307	1/2-13	4	3 17/32	13/16	15/32	1 1/2	2 1/2	.55
36308	5/8-11	3	2 17/32	15/16	1/2	2	3	1.38
36309	5/8-11	3 3/4	3 9/32	15/16	1/2	2	3	1.50
36310	3/4-10	4 7/8	4 11/32	1 1/8	19/32	2	3	1.56

Tru-Center™ Toggle Products

Socket Toggle Screws



- Material: 4140
- Finish: Black Oxide
- Heat Treat: 38-42 Rc
- Screws may be inserted without removing pads.



Part Number	Thread Size A	B	C	D	E Hex Size	Wt. (lbs) 10 Pcs.
33301*	1/4-20	1/2	15/64	.185	1/8	.03
33302*	1/4-20	1	15/64	.185	1/8	.09
33303*	5/16-18	3/4	9/32	.240	5/32	.09
33304*	5/16-18	1 1/2	9/32	.240	5/32	.24
33305*	3/8-16	1	11/32	.294	3/16	.20
33306*	3/8-16	2	11/32	.294	3/16	.45
33307*	1/2-13	1	7/16	.400	1/4	.30
33308*	1/2-13	2	7/16	.400	1/4	.78
33310*	5/8-11	2	17/32	.507	5/16	1.25

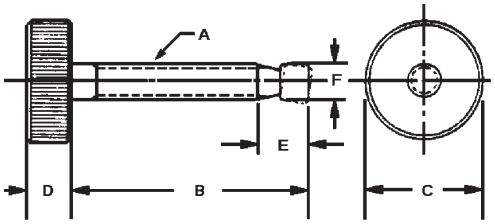
*Conforms to TCMA

Toggle Thumb Screws



Same as our standard Thumb Screw only with the addition of our patented swivel pad on the end.

- Material: Stem and Head 1215, Pad, 4140
- Finish: Black Oxide
- Thread: 2A-UNC



Part Number	Thread Size A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
33501	10-24	1	3/4	5/16	3/16	.140	.31
33502	10-24	1 1/2	3/4	5/16	3/16	.140	.47
33503*	1/4-20	1 1/2	1	5/16	15/64	.185	.78
33504*	1/4-20	2	1	5/16	15/64	.185	.94
33505*	5/16-18	1 1/2	1 1/8	3/8	9/32	.240	1.05
33506*	5/16-18	2	1 1/8	3/8	9/32	.240	1.25
33507*	5/16-18	2 1/2	1 1/8	3/8	9/32	.240	1.40
33508*	3/8-16	1 1/2	1 1/4	7/16	11/32	.294	1.70
33509*	3/8-16	2	1 1/4	7/16	11/32	.294	1.88
33510*	3/8-16	2 1/2	1 1/4	7/16	11/32	.294	2.04
33511*	3/8-16	3	1 1/4	7/16	11/32	.294	2.20

*Conforms to TCMA

Plastic Pad Covers



- Material: Nylon

Where soft material with fine finished surfaces must be clamped with relatively high pressures, we recommend the use of the Jergens Plastic Pad Covers. Resistant to oils and cutting compounds, they snap over the swivel end of our Hand KnobToggle Screws, Socket Toggle Screws, Toggle Thumb Screws, Toggle Pads and adjustable Torque Thumb Screws.

Part Number	To Fit Over O.D. of Pad	O.D. of Plastic Pad
32901	.140	.250
32902	.185	.250
32903	.240	.312
32904	.294	.375
32905	.400	.500

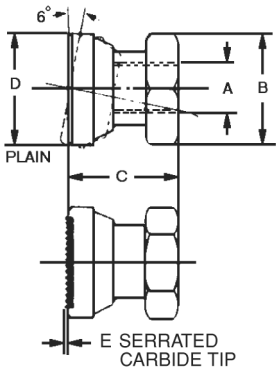
Part Number	To Fit Over O.D. of Pad	O.D. of Plastic Pad
32907	9/16	.625
32908	5/8	.750
32909	11/16	.812
32910	13/16	.937
32911	15/16	1.062

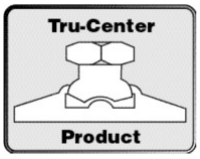
Plastic Pad Covers snap over outside diameter of Jergens swivel pads.

Tru-Center™ Toggle Products

Toggle Pads







Carbide Tipped Toggle Pads provide multiple point contact to compensate for surfaces that are rough or out-of-round. Points will embed themselves in the workpiece, which assures positive gripping. It eliminates possible radial load on the workpiece.

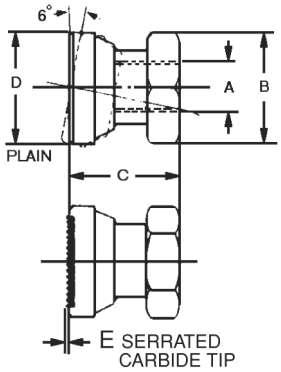
- Material: 4140 or Carbide Insert Tip
- Finish: Black Oxide
- Heat Treat: Plain Pad Rc 36-40
- Thread: 2B-UNC

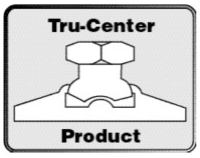
Part Number		Thread Size	Across Flats	Plain	Serrated			Wt. (lbs)
Plain	Serrated	A	B	C	C	D	E	10 Pcs.
43502	**43702**	1/4-20	1/2	1/2	9/16	9/16	.055	.20
43503	**43703**	5/16-18	9/16	11/16	3/4	5/8	.055	.28
43504	**43704**	3/8-16	5/8	25/32	3/4	11/16	.055	.41
43505	**43705**	1/2-13	3/4	7/8	15/16	13/16	.055	.62
43506	**43706**	5/8-11	7/8	1	1 1/32	15/16	.086	.94
43507*	**43707**	3/4-10	1 1/16	1 5/32	1 1/4	1 1/8	.086	1.60

*Plastic Pad is not available for this item.

Toggle Pads
Metric







- Material: 4140 or Carbide Insert Tip
- Finish: Black Oxide
- Heat Treat: Plain Pad Rc36-40
- Thread class: 6h

Part Number		Thread Size	Across Flats	Plain	Serrated			Wt. (kg)
Plain	Serrated	A	B	C	C	D	E	10 Pcs.
43552	**43752**	M6 x 1.0	12	13	14.4	14	1.4	.09
43553	**43753**	M8 x 1.25	14	17	18.4	16	1.4	.13
43554	**43754**	M10 x 1.5	16	18	20.4	18	1.4	.19
43555	**43755**	M12 x 1.75	22	22	23.4	21	1.4	.28
43556	**43756**	M16 x 2.0	26	25	26.4	24	2.2	.43
43557	**43757**	M20 x 2.5	30	29	31.2	28	2.2	.73

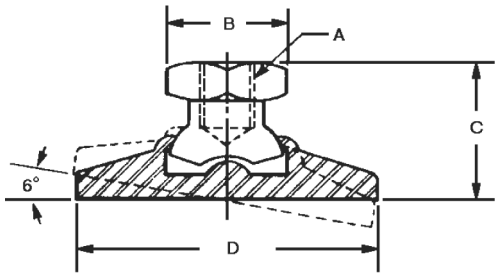
Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

Leveling Pads

Provides a greater surface area where heavy loads are to be applied or where heavy pressures must be exerted on flexible or softer materials. Pad face swivels and aligns with no damage to the uneven surfaces.

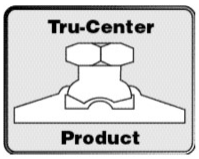
Tapped





SWIVELS 6° EACH SIDE OF CENTER

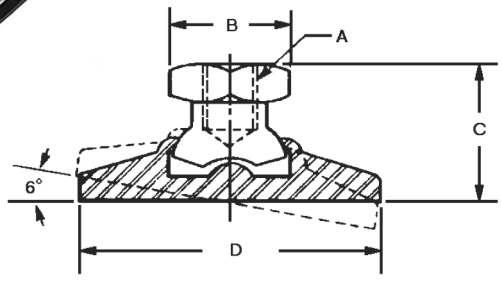
- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc 36-40
- Thread: UNC-2B



Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (lbs)	Wt. (lbs)
32501	3/8-16	5/8	3/4	1 1/4	2300	.10
32502	1/2-13	3/4	1	1 7/8	4200	.22
32503	5/8-11	7/8	1 1/8	2 1/4	6600	.42
32504	3/4-10	1 1/16	1 7/16	3	10,000	.84

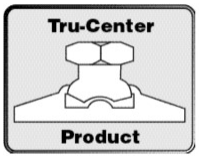
Metric Tapped





SWIVELS 6° EACH SIDE OF CENTER

- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc36-40
- Thread class: 6h



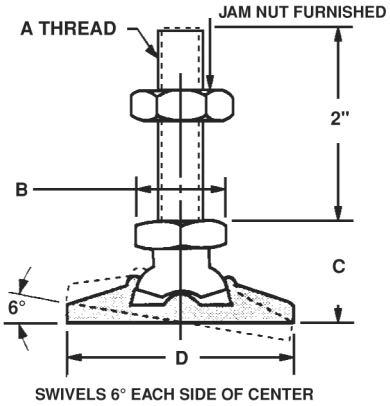
Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (kg)	Wt. (kg)
32551	M10 x 1.5	16	21	32	1000	.05
32552	M12 x 1.75	22	27	48	1900	.10
32553	M16 x 2.0	26	31	57	2900	.19
32554	M20 x 2.5	30	39	76	4500	.38

Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

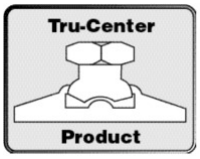
Leveling Pads

Threaded





- Material: 4140
- Finish: Zinc Plated Pad
- Heat Treat: Rc 36-40
- Thread: UNC-2A

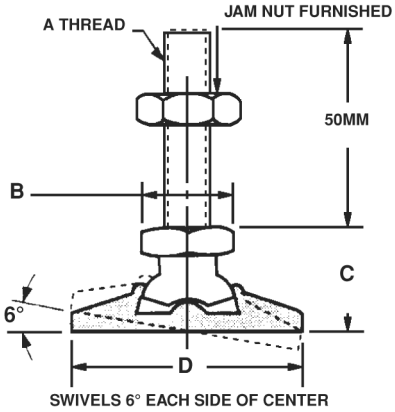


Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (lbs)	Wt. (lbs)
32521	3/8-16	5/8	3/4	1 1/4	2300	.16
32522	1/2-13	3/4	1	1 7/8	4200	.37
32523	5/8-11	7/8	1 1/8	2 1/4	6600	.58
32524	3/4-10	1 1/16	1 7/16	3	10,000	1.22

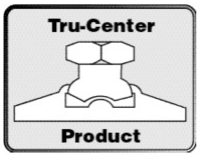
Jam nut is furnished.

Metric Threaded





- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc36-40
- Thread class: 6g



Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (kg)	Wt. (kg)
32571	M10 x 1.5	16	21	32	1000	.07
32572	M12 x 1.75	22	27	48	1900	.17
32573	M16 x 2.0	26	31	57	2900	.26
32574	M20 x 2.5	30	39	76	4500	.55

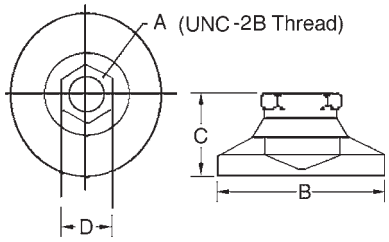
Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

Leveling Mounts

- Material: 1214 Steel
- Non-Skid Material: Neoprene
- Case hardened, file hard
- Swivels 10° in all directions
- Available with non-skid on base
- Available in stainless steel, or with a delrin pad, and in larger sizes upon request.

Tapped



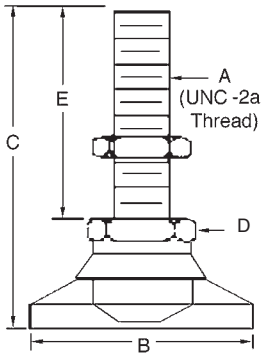


Part Number					Across Flats	Maximum Load (lbs)	
Standard	Non-skid	A	B	C*	D	Standard	Non-skid
32601	**32651**	10-32	3/4	17/32	3/8	700	550
32602	**32652**	1/4-20	1	45/64	1/2	1000	825
32606	**32656**	3/8-16	1 1/4	7/8	5/8	3750	2820
32608	**32658**	1/2-13	1 7/8	1 1/8	3/4	5000	3750
32610	**32660**	5/8-11	2 1/2	1 1/4	7/8	6000	5000
32612	**32662**	3/4-10	3	1 1/2	1 1/16	7400	6000
32616	**32666**	1-8	4	1 7/8	1 3/8	21000	16500

*Add 1/8" to C Dimension for non-skid style.

Threaded



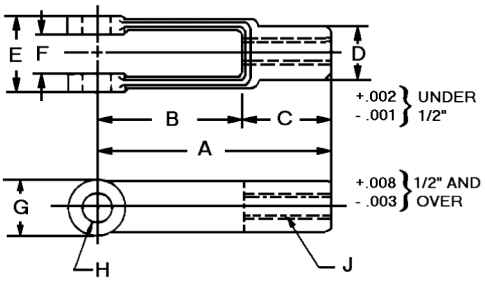


Part Number					Across Flats		Maximum Load (lbs)	
Standard	Non-skid	A	B	C*	D	E	Standard	Non-skid
32621	**32671**	10-32	3/4	1 17/32	3/8	1	700	550
32623	**32673**	1/4-20	1	1 61/64	1/2	1 1/4	1000	825
32626	**32676**	3/8-16	1 1/4	2 7/8	5/8	2	3750	2850
32629	**32679**	1/2-13	1 7/8	3 1/8	3/4	2	5000	3750
32632	**32682**	5/8-11	2 1/2	3 1/4	7/8	2	6000	4350
32635	**32685**	3/4-10	3	3 1/2	1 1/16	2	7400	5500
32640	**32690**	1-8	4	5 3/8	1 3/8	3 1/2	20000	16500

*Add 1/8" to C Dimension for non-skid style.

Yokes
Tapped





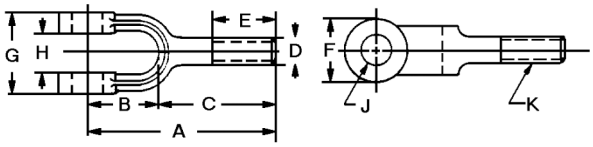
- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2B

Jergens offers these yokes for attaching to threaded linkage at stem end. The forged holes are reamed and faced-off parallel inside and outside the yoke ends.

Part Number Coarse Pitch	UNC J	Part Number Fine Pitch	UNF J	A	B	C	D	E	F	G	H	Wt. (lbs) 10 Pcs.
		45501	10-32	1 9/16	1	9/16	5/16	7/16	3/16	3/8	3/16	.21
45302	1/4-20	**45502**	1/4-28	2	1 1/4	3/4	7/16	5/8	9/32	1/2	1/4	.62
45303	5/16-18	**45503**	5/16-24	2 1/4	1 7/16	13/16	1/2	3/4	11/32	19/32	5/16	.94
45304	3/8-16	**45504**	3/8-24	2 1/2	1 5/8	7/8	5/8	7/8	7/16	11/16	3/8	1.45
45305	7/16-14	**45505**	7/16-20	2 7/8	1 7/8	1	23/32	1	1/2	13/16	7/16	2.35
45306	1/2-13	**45506**	1/2-20	3	1 7/8	1 1/8	13/16	1 1/8	9/16	15/16	1/2	3.10
45307	1/2-13	**45507**	1/2-20	4 3/16	3 1/16	1 1/8	13/16	1 1/8	9/16	15/16	1/2	4.35
45308	5/8-11	**45508**	5/8-18	4 15/16	3 11/16	1 1/4	1 1/16	1 3/8	11/16	1 3/16	5/8	8.10
45309	3/4-10	**45509**	3/4-16	4	2 3/4	1 1/4	1 1/8	1 1/2	11/16	1 3/8	5/8	7.50
45310	3/4-10	—	—	6 1/16	4 9/16	1 1/2	1 1/4	1 5/8	13/16	1 7/16	3/4	15.00
45312	1-8	—	—	8	6	2	1 5/8	2 1/8	1 1/16	1 15/16	1	32.50

Yokes
Threaded





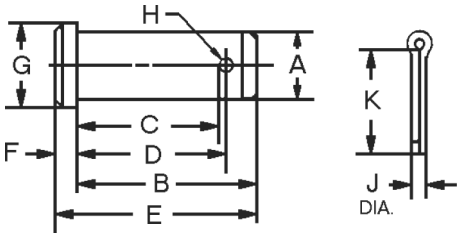
- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2A-UNC

This style yoke is similar to the above except the stem is threaded for attaching to tapped linkage.

Part Number	K	A	B	C	D	E	F	G	H	J	Wt. (lbs) 10 Pcs.
45902	1/4-20	1 3/4	5/8	1 1/8	1/4	3/4	1/2	5/8	9/32	1/4	.47
45903	5/16-18	2	3/4	1 1/4	5/16	3/4	19/32	3/4	11/32	5/16	.85
45904	3/8-16	2 1/8	27/32	1 9/32	3/8	3/4	11/16	7/8	7/16	3/8	1.10
45906	1/2-13	2 1/2	1 1/8	1 3/8	1/2	3/4	15/16	1 1/8	9/16	1/2	2.35
45907	5/8-11	2 7/8	1 7/16	1 7/16	5/8	3/4	1 3/16	1 3/8	11/16	5/8	4.20
45908	3/4-10	3 5/8	1 11/16	1 15/16	3/4	1 1/4	1 7/16	1 5/8	13/16	3/4	7.35
45910	1-8	4 1/2	2 1/2	2	1	1 1/8	1 15/16	2 1/8	1 1/16	1	17.50

Clevis Pins



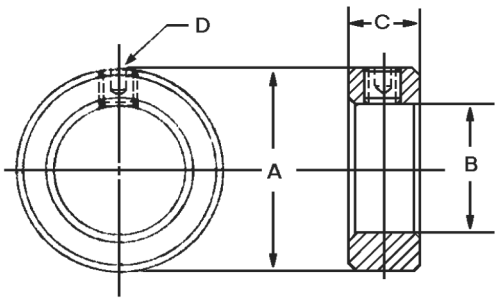


- Material: Low Carbon Steel
- All Clevis Pins supplied with cotter pins.

Part Number	A	B	C	D	E	F	G	H	J	K	Wt. (lbs) 10 Pcs.
32701	3/16	37/64	29/64	31/64	41/64	1/16	5/16	5/64	1/16	1/2	.08
32702	1/4	49/64	41/64	43/64	55/64	3/32	3/8	5/64	1/16	1/2	.15
32703	5/16	15/16	49/64	13/16	1 1/32	3/32	7/16	7/64	3/32	1/2	.30
32704	3/8	1 1/16	57/64	15/16	1 3/16	1/8	1/2	7/64	3/32	5/8	.45
32705	7/16	1 3/16	1 1/64	1 1/16	1 11/32	5/32	9/16	7/64	3/32	5/8	.60
32706	1/2	1 23/64	1 9/64	1 13/64	1 33/64	5/32	5/8	9/64	1/8	1	1.00
32707	5/8	1 39/64	1 25/64	1 29/64	1 13/16	13/64	13/16	9/64	1/8	1	1.18
32708	5/8	1 3/4	1 33/64	1 19/32	1 63/64	13/64	13/16	9/64	1/8	1	1.82
32709	3/4	1 29/32	1 41/64	1 23/32	2 5/32	1/4	15/16	11/64	5/32	1 1/2	3.00
32711	1	2 13/32	2 9/64	2 7/32	2 3/4	11/32	1 3/16	11/64	5/32	1 1/2	7.00

Steel Shaft Collars



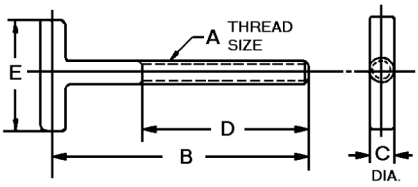


- Material: Low Carbon Steel
- Finish: Zinc Plate
- Set Screws Furnished
- Tolerances on I.D. +.005
  -.000

Part Number	A	B	C	D	Wt. (lbs) 10 Pcs.
40101	1/2	1/4	5/16	10-32	0.21
40102	5/8	5/16	5/16	10-32	0.21
40103	3/4	3/8	3/8	1/4-20	0.4
40104	1	1/2	7/16	1/4-20	0.6
40105	1 1/8	5/8	1/2	5/16-18	0.94
40106	1 1/4	3/4	9/16	5/16-18	1
40107	1 1/2	7/8	9/16	5/16-18	1.13
40108	1 5/8	1	5/8	5/16-18	1.5
40109	1 3/4	1 1/8	5/8	5/16-18	2
40110	2	1 1/4	11/16	3/8-16	3.5
40111	2 1/8	1 3/8	11/16	3/8-16	4
40112	2 1/4	1 1/2	3/4	3/8-16	4.3
40113	2 3/4	1 3/4	7/8	1/2-13	10.9
40114	3	2	7/8	1/2-13	9.5

Tee Strap Bolts



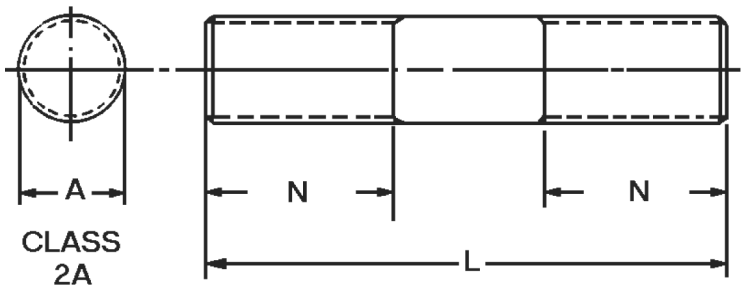


- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2A-UNC

Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
43101	1/4-20	2 1/2	1/4	1 1/2	1 1/4	.09
43102	3/8-16	5	3/8	4	1 3/4	.19
43103	1/2-13	6	1/2	5	3	.44

Alloy Steel Studs





- Material: Stressproof® (125,000 psi Min.) Tensile (100,000 psi Min.)Yield
- Finish: Black Oxide
- Available in metric sizes. See the next page.

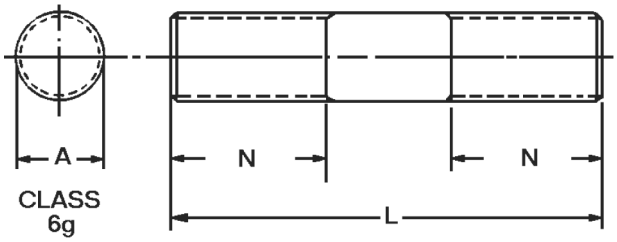
Longer or special studs are available upon request. Please send your print or sketch to our Customer Service Department.

Thread A	L	Part Number	N	Wt. (lbs) 10 Pcs
1/4-20	1 1/2	**37720**	7/16	.21
1/4-20	2	**37721**	11/16	.28
1/4-20	2 1/2	**37722**	15/16	.35
1/4-20	3	**37723**	1	.42
1/4-20	3 1/2	**37724**	1	.49
1/4-20	4	**37725**	1	.56
5/16-18	1 1/2	**37920**	7/16	.33
5/16-18	2	**37921**	11/16	.44
5/16-18	2 1/2	**37922**	15/16	.55
5/16-18	3	**37923**	1 1/8	.66
5/16-18	3 1/2	**37924**	1 1/8	.77
5/16-18	4	**37925**	1 1/8	.88
3/8-16	1 1/2	**38120**	3/8	.54
3/8-16	2	**38121**	5/8	.62
3/8-16	2 1/2	**38122**	7/8	.77
3/8-16	3	**38123**	1 1/8	.93
3/8-16	3 1/2	**38124**	1 1/4	1.10
3/8-16	4	**38125**	1 1/4	1.24
3/8-16	4 1/2	**38126**	1 1/4	1.39
3/8-16	5	**38127**	1 1/4	1.55
3/8-16	5 1/2	**38128**	1 1/4	1.71
3/8-16	6	**38129**	1 1/4	1.86
3/8-16	7	**38131**	1 1/4	2.27
3/8-16	8	**38133**	1 1/4	2.48
1/2-13	2	**38321**	5/8	1.10
1/2-13	2 1/2	**38322**	7/8	1.37
1/2-13	3	**38323**	1 1/8	1.65
1/2-13	3 1/2	**38324**	1 3/8	1.92
1/2-13	4	**38325**	1 1/2	2.20
1/2-13	4 1/2	**38326**	1 1/2	2.47
1/2-13	5	**38327**	1 1/2	2.75
1/2-13	5 1/2	**38328**	1 1/2	3.02
1/2-13	6	**38329**	1 1/2	3.30
1/2-13	7	**38331**	1 1/2	3.85
1/2-13	8	**38333**	1 1/2	4.40
1/2-13	9	**38334**	1 1/2	4.95
1/2-13	10	**38335**	1 1/2	5.50
1/2-13	12	**38336**	1 1/2	6.60

Thread A	L	Part Number	N	Wt. (lbs) 10 Pcs.
5/8-11	2 1/2	**38520**	13/16	2.12
5/8-11	3	**38521**	1 1/16	2.55
5/8-11	3 1/2	**38522**	1 5/16	2.97
5/8-11	4	**38523**	1 9/16	3.40
5/8-11	4 1/2	**38524**	1 3/4	3.82
5/8-11	5	**38525**	1 3/4	3.25
5/8-11	5 1/2	**38526**	1 3/4	4.68
5/8-11	6	**38527**	1 3/4	5.10
5/8-11	7	**38529**	1 3/4	5.90
5/8-11	8	**38531**	1 3/4	6.80
5/8-11	9	**38532**	1 3/4	7.60
5/8-11	10	**38533**	1 3/4	8.50
5/8-11	12	**38534**	1 3/4	10.20
3/4-10	3	**38721**	15/16	3.75
3/4-10	3 1/2	**38722**	1 3/16	4.35
3/4-10	4	**38723**	1 7/16	5.00
3/4-10	4 1/2	**38724**	1 11/16	5.60
3/4-10	5	**38725**	1 15/16	6.20
3/4-10	5 1/2	**38726**	2	6.90
3/4-10	6	**38727**	2	7.50
3/4-10	7	**38729**	2	8.75
3/4-10	8	**38731**	2	10.00
3/4-10	10	**38733**	2	12.50
3/4-10	12	**38734**	2	15.00
7/8-9	4	**38922**	1 13/32	6.80
7/8-9	5	**38923**	1 29/32	8.50
7/8-9	6	**38924**	2 1/4	10.20
7/8-9	8	**38925**	2 1/4	13.60
7/8-9	10	**38926**	2 1/4	17.00
7/8-9	12	**38927**	2 1/4	20.40
1-8	4	**39122**	1 3/8	8.80
1-8	5	**39123**	1 7/8	11.00
1-8	6	**39124**	2 3/8	13.20
1-8	8	**39125**	2 1/2	17.60
1-8	10	**39126**	2 1/2	22.00
1-8	12	**39127**	2 1/2	26.40

Studs
Metric





- Material: Stressproof®
  862 Tensile (MPa)
  689 Yield (MPa)
- Finish: Black Oxide
- Longer or special studs are available on request

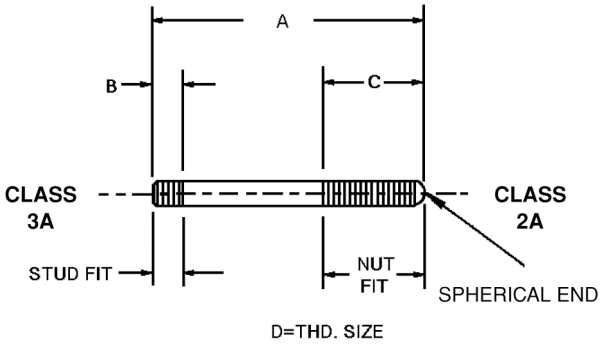
Thread A	L	Part Number	N	Wt. kg
M6 x 1.0	50	**37771**	18	.04
M6 x 1.0	66	**37772**	25	.06
M6 x 1.0	81	**37773**	28	.06
M6 x 1.0	96	**37774**	28	.09
M8 x 1.25	50	**37971**	18	.09
M8 x 1.25	66	**37972**	25	.11
M8 x 1.25	81	**37973**	32	.13
M8 x 1.25	96	**37974**	32	.15
M8 x 1.25	111	**37975**	32	.18
M10 x 1.5	50	**38171**	16	.13
M10 x 1.5	66	**38172**	23	.18
M10 x 1.5	80	**38173**	30	.20
M10 x 1.5	95	**38174**	35	.24
M10 x 1.5	110	**38175**	35	.29
M10 x 1.5	125	**38176**	39	.31
M10 x 1.5	140	**38177**	39	.35
M10 x 1.5	155	**38178**	39	.40
M12 x 1.75	50	**38371**	16	.18
M12 x 1.75	66	**38372**	23	.24
M12 x 1.75	81	**38373**	31	.29
M12 x 1.75	95	**38374**	40	.33
M12 x 1.75	111	**38375**	40	.40
M12 x 1.75	125	**38376**	40	.46
M12 x 1.75	141	**38377**	40	.53
M12 x 1.75	156	**38378**	40	.55
M16 x 2.0	80	**38571**	29	.51
M16 x 2.0	95	**38572**	36	.59
M16 x 2.0	110	**38573**	44	.70
M16 x 2.0	125	**38574**	47	.81
M16 x 2.0	150	**38575**	47	1.00
M16 x 2.0	175	**38576**	47	1.17
M16 x 2.0	200	**38577**	47	1.36
M20 x 2.5	81	**38771**	30	.84
M20 x 2.5	96	**38772**	37	1.0
M20 x 2.5	111	**38773**	45	1.14
M20 x 2.5	126	**38774**	52	1.25
M20 x 2.5	151	**38775**	48	1.54
M20 x 2.5	176	**38776**	56	1.85
M20 x 2.5	201	**38777**	56	2.16

All Dimensions in Millimeters.

Fixture Studs
Stainless Steel



• Material: 303 Stainless

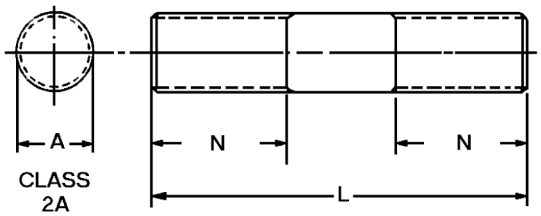


Part Number	A	Stud Fit B	Nut Fit C	Thread
37601	1	7/32	1/2	10-32
37602	1 1/2	7/32	3/4	10-32
37603	2	7/32	3/4	10-32
37802	1 1/2	9/32	5/8	1/4-20
37804	2	9/32	3/4	1/4-20
37806	2 1/2	9/32	3/4	1/4-20
37808	3	9/32	1	1/4-20
38002	1 1/2	11/32	5/8	5/16-18
38004	2	11/32	1	5/16-18
38006	2 1/2	11/32	1 1/4	5/16-18
38008	3	11/32	1 3/8	5/16-18
38009	3 1/2	11/32	1 1/2	5/16-18
38010	4	11/32	1 1/2	5/16-18
38201	1 5/8	11/32	3/4	3/8-16
38202	2	11/32	1	3/8-16
38204	2 1/2	11/32	1 1/4	3/8-16
38206	3	11/32	1 3/8	3/8-16
38207	3 1/2	11/32	1 1/2	3/8-16
38208	4	11/32	1 1/2	3/8-16

Set-Up Studs
Stainless Steel



• Material: 303 Stainless



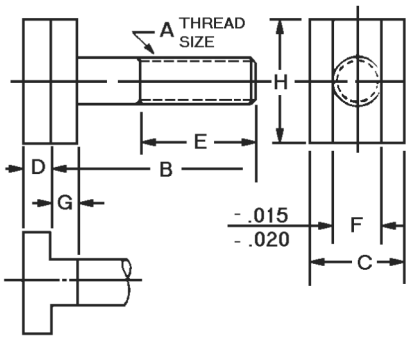
Part Number	Thread A	L	N
38421	1/2-13	2	3/4
38422	1/2-13	2 1/2	1 1/8
38423	1/2-13	3	1 3/8
38424	1/2-13	3 1/2	1 1/2
38425	1/2-13	4	1 1/2
38426	1/2-13	4 1/2	1 1/2
38427	1/2-13	5	1 1/2
38428	1/2-13	5 1/2	1 1/2
38429	1/2-13	6	1 1/2
38431	1/2-13	7	1 1/2
38433	1/2-13	8	1 1/2
38434	1/2-13	9	1 1/2
38435	1/2-13	10	1 1/2
38436	1/2-13	12	1 1/2

Part Number	Thread A	L	N
38620	5/8-11	2 1/2	1 1/8
38621	5/8-11	3	1 3/8
38622	5/8-11	3 1/2	1 3/4
38623	5/8-11	4	1 3/4
38624	5/8-11	4 1/2	1 3/4
38625	5/8-11	5	1 3/4
38626	5/8-11	5 1/2	1 3/4
38627	5/8-11	6	1 3/4
38629	5/8-11	7	1 3/4
38631	5/8-11	8	1 3/4
38632	5/8-11	9	1 3/4
38633	5/8-11	10	1 3/4
38634	5/8-11	12	1 3/4

Part Number	Thread A	L	N
38821	3/4-10	3	1 3/8
38822	3/4-10	3 1/2	1 1/2
38823	3/4-10	4	1 3/4
38824	3/4-10	4 1/2	2
38825	3/4-10	5	2
38826	3/4-10	5 1/2	2
38827	3/4-10	6	2
38829	3/4-10	7	2
38831	3/4-10	8	2
38833	3/4-10	10	2
38834	3/4-10	12	2

T-Slot Bolts





Jergens Feature:

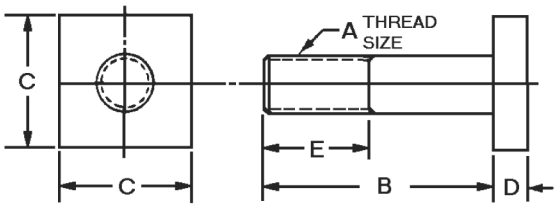
Protect your expensive machine table slots with Jergens T-Slot Bolts. The completely finished machined head provides at least 50% more bearing surface under your table slot. T-Slot Bolts outlast T-Bolts in wearability in most applications.

- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC
- Available in lengths up to 24"

Part Number	Thread Size A	B	C	D	E	F	G	H	Wt. (lbs)
44101	1/2-13	2	7/8	5/16	1	1/2	9/32	1 1/4	.22
44102	1/2-13	2 1/2	7/8	5/16	1 1/4	1/2	9/32	1 1/4	.25
44103	1/2-13	3	7/8	5/16	1 1/2	1/2	9/32	1 1/4	.27
44104	1/2-13	3 1/2	7/8	5/16	1 1/2	1/2	9/32	1 1/4	.30
44105	1/2-13	4	7/8	5/16	1 1/2	1/2	9/32	1 1/4	.33
44106	1/2-13	5	7/8	5/16	2	1/2	9/32	1 1/4	.37
44107	1/2-13	6	7/8	5/16	2	1/2	9/32	1 1/4	.44
44108	1/2-13	8	7/8	5/16	2	1/2	9/32	1 1/4	.53
44301	5/8-11	2	1 1/8	3/8	1 1/4	5/8	3/8	1 1/2	.39
44302	5/8-11	2 1/2	1 1/8	3/8	1 1/4	5/8	3/8	1 1/2	.41
44303	5/8-11	3	1 1/8	3/8	1 1/2	5/8	3/8	1 1/2	.44
44304	5/8-11	3 1/2	1 1/8	3/8	1 1/2	5/8	3/8	1 1/2	.50
44305	5/8-11	4	1 1/8	3/8	1 1/2	5/8	3/8	1 1/2	.55
44306	5/8-11	5	1 1/8	3/8	1 1/2	5/8	3/8	1 1/2	.62
44307	5/8-11	6	1 1/8	3/8	1 1/2	5/8	3/8	1 1/2	.72
44308	5/8-11	8	1 1/8	3/8	3	5/8	3/8	1 1/2	.85
44309	5/8-11	10	1 1/8	3/8	3	5/8	3/8	1 1/2	1.00
44310	5/8-11	12	1 1/8	3/8	3	5/8	3/8	1 1/2	1.25
44502	3/4-10	2 1/2	1 5/16	7/16	1 1/4	3/4	7/16	1 3/4	.64
44503	3/4-10	3	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	.70
44504	3/4-10	3 1/2	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	.77
44505	3/4-10	4	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	.85
44506	3/4-10	5	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	.95
44507	3/4-10	6	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	1.05
44508	3/4-10	8	1 5/16	7/16	3	3/4	7/16	1 3/4	1.25
44509	3/4-10	10	1 5/16	7/16	3	3/4	7/16	1 3/4	1.45
44510	3/4-10	12	1 5/16	7/16	3	3/4	7/16	1 3/4	1.75
44701	1-8	3 1/2	1 11/16	1/2	2	1	1/2	2 1/4	1.25
44702	1-8	4	1 11/16	1/2	2	1	1/2	2 1/4	1.50
44703	1-8	4 1/2	1 11/16	1/2	2 1/2	1	1/2	2 1/4	1.62
44704	1-8	5	1 11/16	1/2	2 1/2	1	1/2	2 1/4	1.75
44705	1-8	6	1 11/16	1/2	2 1/2	1	1/2	2 1/4	2.00
44706	1-8	8	1 11/16	1/2	3	1	1/2	2 1/4	2.40
44707	1-8	10	1 11/16	1/2	3	1	1/2	2 1/4	2.75
44708	1-8	12	1 11/16	1/2	3	1	1/2	2 1/4	3.10

T-Bolts





- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC
- Available in lengths up to 24"

Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
42101	3/8-16	1 1/2	11/16	1/4	3/4	.07
42102	3/8-16	2	11/16	1/4	1 1/4	.08
42103	3/8-16	2 1/2	11/16	1/4	1 1/4	.09
42104	3/8-16	3	11/16	1/4	1 1/2	.11
42105	3/8-16	3 1/2	11/16	1/4	1 1/2	.12
42106	3/8-16	4	11/16	1/4	1 1/2	.14
42301	1/2-13	1 1/2	7/8	1/4	3/4	.12
42302	1/2-13	2	7/8	1/4	1 1/4	.14
42303	1/2-13	2 1/2	7/8	1/4	1 1/4	.17
42304	1/2-13	3	7/8	1/4	1 1/2	.20
42305	1/2-13	3 1/2	7/8	1/4	1 1/2	.22
42306	1/2-13	4	7/8	1/4	2	.25
42307	1/2-13	4 1/2	7/8	1/4	2	.27
42308	1/2-13	5	7/8	1/4	2	.30
42309	1/2-13	5 1/2	7/8	1/4	2	.33
42310	1/2-13	6	7/8	1/4	2	.36
42502	5/8-11	2	1 1/8	3/8	1 1/4	.28
42503	5/8-11	2 1/2	1 1/8	3/8	1 1/4	.33
42504	5/8-11	3	1 1/8	3/8	1 1/2	.37
42505	5/8-11	3 1/2	1 1/8	3/8	1 1/2	.41
42506	5/8-11	4	1 1/8	3/8	1 1/2	.44
42507	5/8-11	5	1 1/8	3/8	1 1/2	.53
42508	5/8-11	6	1 1/8	3/8	1 1/2	.61
42509	5/8-11	8	1 1/8	3/8	3	.78
42510	5/8-11	10	1 1/8	3/8	3	.97
42511	5/8-11	12	1 1/8	3/8	3	1.13

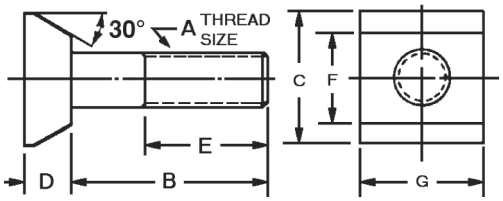
Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
42701	3/4-10	2 1/2	1 1/4	1/2	1 1/4	.48
42702	3/4-10	3	1 1/4	1/2	1 1/2	.55
42703	3/4-10	3 1/2	1 1/4	1/2	1 1/2	.61
42704	3/4-10	4	1 1/4	1/2	1 1/2	.66
42705	3/4-10	5	1 1/4	1/2	1 1/2	.78
42706	3/4-10	6	1 1/4	1/2	1 1/2	.90
42707	3/4-10	8	1 1/4	1/2	3	1.17
42708	3/4-10	10	1 1/4	1/2	3	1.38
42709	3/4-10	12	1 1/4	1/2	3	1.62
42901	1-8	4	1 11/16	11/16	2 1/2	1.25
42902	1-8	5	1 11/16	11/16	2 1/2	1.50
42903	1-8	6	1 11/16	11/16	2 1/2	1.75
42911	1-8	7	1 11/16	11/16	2 1/2	1.88
42904	1-8	8	1 11/16	11/16	3	2.00
42912	1-8	9	1 11/16	11/16	3	2.25
42905	1-8	10	1 11/16	11/16	3	2.50
42906	1-8	12	1 11/16	11/16	3	3.00
42907	1-8	14	1 11/16	11/16	3	3.50
43003	1 1/4-7	8	1 7/8	7/8	5	3.65
43004	1 1/4-7	9	1 7/8	7/8	5	4.00
43005	1 1/4-7	10	1 7/8	7/8	5	4.35
43006	1 1/4-7	12	1 7/8	7/8	5	5.05
43007	1 1/4-7	14	1 7/8	7/8	5	5.75
43008	1 1/4-7	16	1 7/8	7/8	5	6.45
43009	1 1/4-7	18	1 7/8	7/8	5	7.15
43011	1 1/4-7	22	1 7/8	7/8	5	8.20
43012	1 1/4-7	24	1 7/8	7/8	5	9.25

Dovetail Bolts



Dovetail Bolts can be used for clamping guide members on the front of press brakes.

- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC



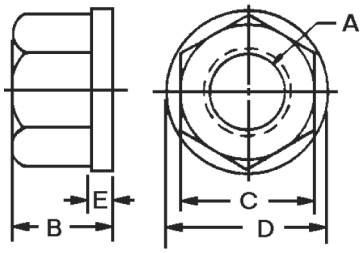
Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
17901	5/8-11	1 1/4	1 1/16	3/8	3/4	3/4	1 1/8	2.00
17902	5/8-11	2	1 1/16	3/8	1 1/8	3/4	1 1/8	2.30
17903	5/8-11	2 3/4	1 1/16	3/8	1 1/2	3/4	1 1/8	3.10
17904	5/8-11	3 3/4	1 1/16	3/8	1 1/2	3/4	1 1/8	5.15
17905	5/8-11	4 1/2	1 1/16	3/8	3/4	3/4	1 1/8	6.10

Flange Nuts



Where heavy clamping pressures and vibrations could cause trouble, the wide face surface of the flange nut holds through with greater friction.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC



Carbon Steel

Coarse Pitch		Fine Pitch						
Part Number	A	Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
19901	10-24	-	-	5/16	3/8	1/2	7/64	0.15
19902*	1/4-20	**20101**	1/4-28	5/16	1/2	5/8	7/64	0.15
19903*	5/16-18	**20102**	5/16-24	3/8	9/16	3/4	7/64	0.19
19904*	3/8-16	**20103**	3/8-24	1/2	11/16	7/8	1/8	0.51
19905*	7/16-14	**20104**	7/16-20	9/16	3/4	15/16	1/8	0.62
19906*	1/2-13	**20105**	1/2-20	11/16	7/8	1 1/8	5/32	1.10
19907*	5/8-11	**20106**	5/8-18	13/16	1 1/16	1 3/8	3/16	1.75
19908*	3/4-10	**20107**	3/4-16	1	1 1/4	1 5/8	1/4	3.20
19909*	7/8-9	**20108**	7/8-14	1 1/8	1 7/16	1 3/4	1/4	4.20
19910*	1-8	**20109**	1-14	1 1/4	1 5/8	2	1/4	6.00
19911	1 1/8-7	**20110**	1 1/8-12	1 3/8	1 13/16	2 1/4	1/4	8.00
19912	1 1/4-7	**20111**	1 1/4-12	1 3/8	1 13/16	2 1/4	1/4	7.60
19913	1 1/2-6	**20112**	1 1/2-12	1 1/2	2 3/16	2 3/4	1/4	11.90

*Conforms to TCMA

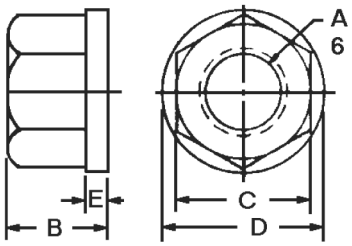
- Material: 303 Stainless Steel

Stainless Steel

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
20002	1/4-20	5/16	1/2	5/8	3/32	.15
20003	5/16-18	3/8	9/16	3/4	3/32	.19
20004	3/8-16	1/2	11/16	7/8	1/8	.51
20006	1/2-13	11/16	7/8	1 1/8	5/32	1.10
20007	5/8-11	13/16	1 1/16	1 3/8	3/16	1.75
20008	3/4-10	1	1 1/4	1 5/8	1/4	3.20

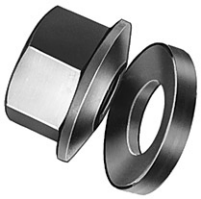
Flange Nuts
Metric

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: Class 6h

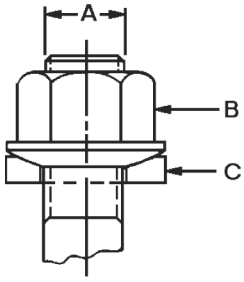


Part Number	Thread A	B	C	D	E	Wt. (kg) 10 pcs.
19952	M6 x 1.0	8	10	16	2	.07
19953	M8 x 1.25	10	13	19	2	.09
19954	M10 x 1.5	13	17	22	3	.23
19955	M12 x 1.75	17	19	25	5	.50
19957	M16 x 2.0	21	24	32	5	.79
19959	M20 x 2.5	25	30	38	6	1.45

Spherical Flange Assemblies



Same advantages as Spherical Washers but with the addition of a nut to replace the top section of the washers. Convex bottom of nut nests into the concave bottom section for full floating action.

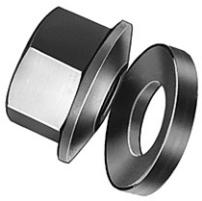


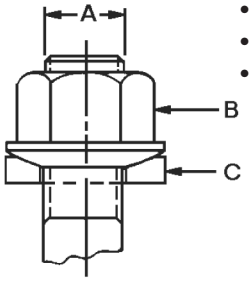
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

Part Number	A	Nut P/N B	Washer P/N C	Wt. (lbs) 10 Pcs.
39301	10-24	**39701**	**41301**	.12
39302	1/4-20	**39702**	**41302**	.16
39303	5/16-18	**39703**	**41303**	.31
39304	3/8-16	**39704**	**41304**	.65
39305	1/2-13	**39705**	**41305**	1.45
39306	5/8-11	**39706**	**41306**	2.44
39307	3/4-10	**39707**	**41307**	4.10
39308	7/8-9	**39708**	**41308**	6.00
39309	1-8	**39709**	**41309**	8.10
39311	1 1/4-7	**39711**	**41311**	13.40
39312	1 1/2-6	**39712**	**41312**	15.70

Spherical Flange Assemblies

Metric

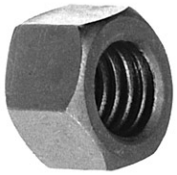


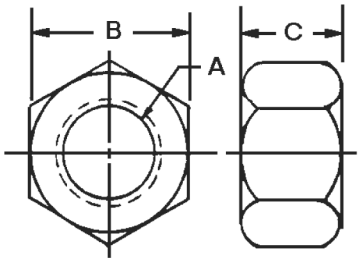


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

Part Number	A	Across Flats B	Washer P/N C	Wt. (kg) 10 pcs.
39352	M6 x 1.0	10	**41302**	.07
39353	M8 x 1.25	13	**41303**	.14
39354	M10 x 1.5	17	**41304**	.30
39355	M12 x 1.75	19	**41305**	.66
39356	M16 x 2.0	24	**41306**	1.10
39357	M20 x 2.5	30	**41357**	1.80

Heavy Duty Hex Nuts



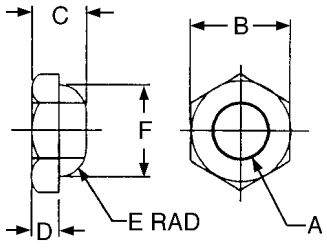


- Finish: Black Oxide
- Grade 8, Hardness HRC of 28-38

Part Number	A	B	C	Wt. (lbs) 100 Pcs.
20711	1/4-20	7/16	7/32	.74
20712	5/16-18	1/2	17/64	1.10
20713	3/8-16	9/16	21/64	1.60
20714	1/2-13	3/4	7/16	3.75
20716	5/8-11	15/16	35/64	7.33
20717	3/4-10	1 1/8	41/64	11.90
20718	7/8-9	1 5/16	3/4	19.00
20719	1-8	1 1/2	55/64	28.30

Stainless Steel Hex Head Equalizing Nuts





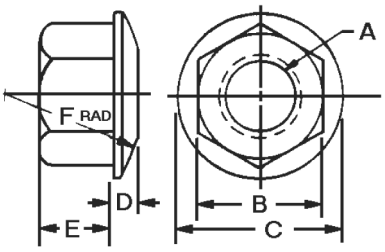
- Material: 303 Stainless

Part Number	A	B	C	D	E	F
12311	10-32	7/16	5/16	5/32	1/8	3/8
12312	1/4-20	1/2	5/16	5/32	1/8	7/16
12313	5/16-18	9/16	5/16	5/32	1/8	1/2
12314	3/8-16	11/16	3/8	3/16	3/16	5/8

Spherical Flange Nuts



- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC, Class 6h



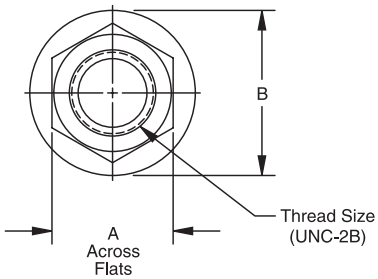
Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
39701	10-24	3/8	1/2	3/32	1/4	3/4	.10
39702*	1/4-20	1/2	5/8	3/32	1/4	1	.12
39703*	5/16-18	9/16	3/4	1/8	9/32	1	.21
39704*	3/8-16	11/16	7/8	1/8	13/32	1 1/2	.50
39705*	1/2-13	7/8	1 1/8	3/16	1/2	2	1.00
39706*	5/8-11	1 1/16	1 3/8	7/32	5/8	2 1/4	1.82
39707*	3/4-10	1 1/4	1 5/8	1/4	3/4	2 1/2	3.10
39708*	7/8-9	1 7/16	1 3/4	1/4	7/8	2 1/2	4.35
39709*	1-8	1 5/8	2	1/4	1	3 1/2	5.90
39711	1 1/4-7	1 13/16	2 1/4	5/16	1 1/16	4	7.20
39712	1 1/2-6	2 3/16	2 3/4	5/16	1 3/16	4 1/2	11.60

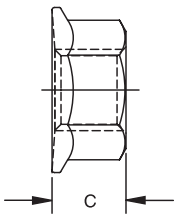
*Conforms to TCMA.

Part Number	A	B	C	D	E	F	Wt. (kg) 10 pcs.
39752	M6 x1.0	10	16	2	6	25	.05
39753	M8 x 1.25	13	19	3	7	25	.10
39754	M10 x 1.5	17	22	4	10	38	.23
39755	M12 x 1.75	19	25	5	13	51	.50
39756	M16 x 2.0	24	32	6	16	57	.83
39757	M20 x 2.5	30	38	6	19	64	1.41

Spinner-Grip™ Flange Lock Nuts







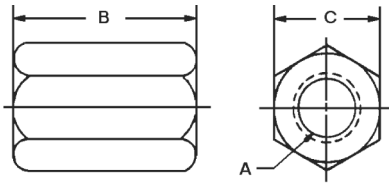
- Free spinning installation eliminates the need to wrench the nut down the fastener.
- Locks to the part, not to the threads.
- Grade 8 strength and quality, and will work with any grade fastener.
- Hardness of 28 - 38 HRC: more effective at maintaining clamp load under vibration.
- Greater temperature range than nylon insert locknuts, and will not be effected by humidity.
- Flat washers are not needed, unless in a slotted application.
- Spinner grips are not limited to 5 reuses, unlike most prevailing torque lock nuts.
- Jergens maintains inventory of Zinc plated product, as well as plain finished (un-plated) product so you can specify your plating of choice. (Please allow 2 - 3 weeks lead time for plating.)

Part Number			Thread Size	A	B	C
Plain Finish	Zinc Plated	Stainless Steel				
19800	**19820**	**19880**	1/4-20	7/16	19/32	1/4
19801	**19821**	**19881**	5/16-18	1/2	11/16	9/32
19802	**19822**	**19882**	3/8-16	9/16	3/4	11/32
19803	**19823**	**19883**	7/16-14	11/16	15/16	3/8
19804	**19824**	**19884**	1/2-13	3/4	1	7/16
19805	**19825**	**19885**	5/8-11	15/16	1 1/4	9/16
19806	**19826**	**19886**	3/4-10	1 1/4	1 1/2	11/16
Metric						
19807	**19827**	**19887**	M6-1.00	10	15.1	6.0
19808	**19828**	**19888**	M8-1.25	13	19.0	8.8
19809	**19829**	**19889**	M10-1.50	15	24.1	10.0
19810	**19830**	**19890**	M12-1.75	19	25.5	11.6
19811	**19831**	**19891**	M16-2.00	24	38.0	17.2

Note: Additional charges apply to plated product. Charges vary by plating type.

Coupling Nuts





- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	Wt. (lbs) 10 Pcs.
18711*	3/8-16	1	11/16	.94
18712*	1/2-13	1 1/4	7/8	2.00
18713*	5/8-11	1 5/8	1 1/16	3.40
18714*	3/4-10	1 7/8	1 1/4	5.65
18715	7/8-9	2 1/4	1 7/16	8.60
18716	1-8	2 1/2	1 5/8	12.50

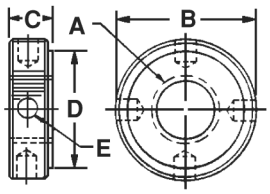
*Conforms to TCMA.

Metric

Part Number	A	B	C	Wt. (kg) 10 Pcs.
18761	M10	25	16	.05
18762	M12	32	19	.81
18763	M16	41	24	1.55
18764	M20	51	27	2.6

Knurled Lock Nuts





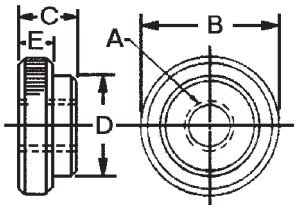
Most convenient for quick thread locking on your jig and fixture work. Straight knurled radius provides sure, non-slip finger grip in oily conditions. Faces are square with threads which assures a large locking surface.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
28101	3/8-16	1	3/8	3/4	.188	.62
28102	1/2-13	1 1/4	7/16	1	.257	1.10
28103	5/8-11	1 3/8	7/16	1 1/8	.257	1.10
28104	3/4-10	1 3/4	9/16	1 1/2	.316	2.50
28105	1-8	2	9/16	1 3/4	.316	3.10

Check Nuts





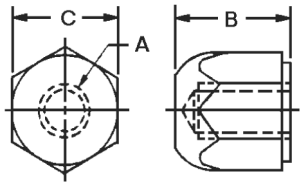
Multi-use Locknut for hand tightening applications

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
16901	10-24	3/4	7/32	1/2	5/32	.15
16902	1/4-20	3/4	7/32	1/2	5/32	.15
16903	5/16-18	3/4	5/16	1/2	1/4	.21
16904	3/8-16	3/4	5/16	1/2	1/4	.21
16905	1/2-13	1	3/8	3/4	1/4	.47

Acorn Nuts



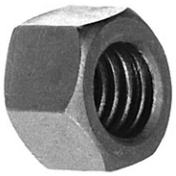


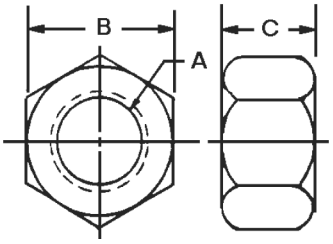
Acorn nuts are used to cover threaded ends to protect them from dirt, grit or damage to the thread.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	Wt. (lbs) 10 Pcs.
10501	5/16-18	5/8	5/8	.44
10502	3/8-16	3/4	3/4	.78
10503	1/2-13	15/16	7/8	1.25
10504	5/8-11	1 3/16	1 1/16	2.35

Stainless Steel Nuts



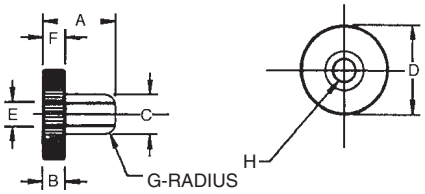


- Material: 300 Series Stainless Steel

Part Number	A	B	C
12321	10-32	3/8	1/8
12322	1/4-20	7/16	3/16
12323	5/16-18	1/2	9/32
12324	3/8-16	9/16	11/32

Stainless Steel Knurled Equalizing Nuts





For use with stainless steel equalizing "C" washer. See page 6.37

Part Number	A	B	C	D	E	F	G	H
12301	3/4	3/16	3/8	3/4	13/64	1/4	1/8	10-32
12302	13/16	1/4	7/16	1	17/64	1/4	1/8	1/4-20

Kwik-Thread™ Nut

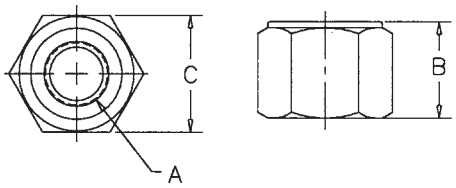


The Jergens Kwik-Thread™ Nut is a true quick change tool. It has three floating female thread segments and fits onto any standard male thread. The floating I.D. allows the Kwik-Thread Nut to quickly slide onto bolts to the workpiece being bolted down. It can then be torqued down like a standard nut.

- Material: Carbon steel housing; cap, thread, SS302 springs, alloy steel locking pins.
- Finish: Housing-black oxide, other parts plain
- Proof loads: Equal to grade 5 nuts, or grade 8.8 (metric)
- Ideal in difficult physical condition
- Slips quickly over damaged threads
- Available in three styles: Hex nut, flange nut, and threaded O.D. for use as a threaded insert
- Available in 1/2, 5/8, and 3/4 sizes
- Other sizes and materials including heat treated stainless steel available on special order, contact customer service

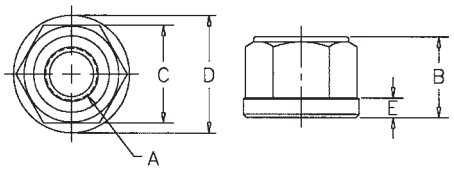
Hex Nuts

Part Number	Thread Size A	Height B	Across Flats C	Flange Dia. D	Flange Thk. E	External Thread F
20604	1/2-13	3/4	15/16	–	–	–
20605	5/8-11	1	1 1/4	–	–	–
20606	3/4-10	1 3/16	1 7/16	–	–	–



Flanged Nuts

20614	1/2-13	3/4	15/16	1 1/8	3/16	–
20615	5/8-11	1	1 1/4	1 1/2	3/16	–
20616	3/4-10	1 3/16	1 7/16	1 3/4	1/4	–

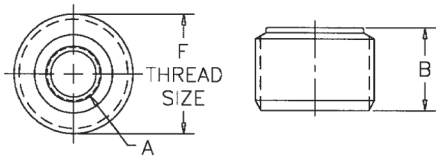


Metric Flange Nuts

20664	M12-1.75	19mm	24mm	28.5mm	4.8mm	–
20665	M16-20	25mm	32mm	38mm	4.8mm	–

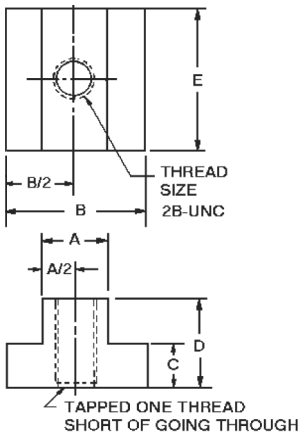
Insert Nuts

20624	1/2-13	3/4	–	–	–	1 1/8-12 UNF-2A
20625	5/8-11	1	–	–	–	1 3/8-12 UNF-2A
20626	3/4-10	1 3/16	–	–	–	1 5/8-12 UNF-2A



T-Slot Nuts





- Material: Low Carbon Steel, 303 Stainless
- Finish: Black Oxide
- Threads: 2B-UNC (Inch); Class 6h (Metric)
- Heat Treat: Case Hardened
- Available in metric sizes. See below.

Jergens Feature:

Jergens Table-Saver design provides a safety-stop feature to prevent turning stud into tableways.

Part Number	Thread	T-slot Width A	B	C	D	E	Wt. (lbs) 10 Pcs.
*43302**	3/8-16	7/16	11/16	7/32	1/2	7/8	0.50
*43303**	3/8-16	1/2	7/8	9/32	1/2	7/8	.070
43301	3/8-16	9/16	7/8	1/4	1/2	7/8	0.70
*43305**	1/2-13	9/16	7/8	11/32	5/8	1 1/8	1.20
*43306	1/2-13	5/8	1	11/32	5/8	1 1/8	1.50
*43304	1/2-13	11/16	1 1/8	7/16	3/4	1 1/4	2.10
*43308**	5/8-11	11/16	1 1/8	7/16	3/4	1 1/4	1.14
*43309	5/8-11	3/4	1 1/4	15/32	3/4	1 1/4	1.60
*43307	5/8-11	13/16	1 1/4	9/16	1	1 1/2	3.11
*43311**	3/4-10	13/16	1 1/4	9/16	1	1 1/2	3.60
43312	3/4-10	7/8	1 1/2	9/16	1	1 1/2	4.10
*43310	3/4-10	1 1/16	1 5/8	1 1/16	1 1/4	2	7.20
43313**	7/8-9	1	1 5/8	5/8	1 1/4	2	7.30
43314	7/8-9	1 1/16	1 3/4	5/8	1 1/4	2	8.00

*Conforms to TCMA.
**Not Hardened

Metric

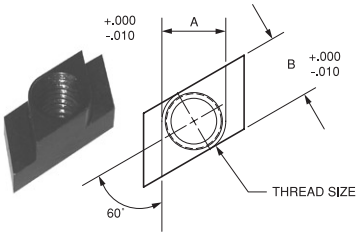
Part Number	Thread	T-slot Width A	B	C	D	E	Material
43372	M10x1.5	12	19	7	13	25	Steel
43373	M10x1.5	14	22	9	16	29	Steel
43374	M10x1.5	16	25	9	16	29	Steel
43375	M12x1.75	14	22	9	16	29	Steel
43376	M12x1.75	16	25	9	16	29	Steel
43377	M12x1.75	18	29	11	19	32	Steel
43378	M16x2.0	18	29	11	19	32	Steel
43379	M16x2.0	20	32	14	25	38	Steel
43380	M16x2.0	22	35	14	25	38	Steel
43381	M20x2.5	22	35	14	25	38	Steel
43382	M20x2.5	24	38	16	25	44	Steel
43383	M20x2.5	28	41	18	29	51	Steel

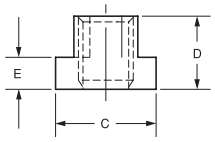
Stainless Steel

Part Number	Thread	T-slot Width A	B	C	D	E
43402	3/8-16	7/16	3/4	7/32	1/2	1
43403	3/8-16	1/2	7/8	1/4	5/8	7/8
43405	1/2-13	9/16	7/8	5/16	3/4	1 1/4
43406	1/2-13	5/8	1	3/8	3/4	1 1/4
43408	5/8-11	11/16	1 1/4	15/32	1	1 1/2
43409	5/8-11	3/4	1 1/4	17/32	1 1/4	1 1/2
43411	3/4-10	13/16	1 1/2	9/16	1	1 3/4
43410	3/4-10	1 1/16	1 5/8	9/16	1	1 3/4

Kwik-Turn T-Slot Nuts

- 1/4 turn design allows the Kwik-Turn to be installed from the top of the T-Slot, in order to avoid uninstallation of set-ups when additional nuts and studs are required
- Material: Low Carbon Steel,
- Finish: Black Oxide
- Threads: 2B-UNC (Inch)
- Heat Treat: Case Hardened





Part Number	Thread	T-Slot	A	B	C	D	E	Wt. (lbs) 10 pcs
43332**	3/8-16	7/16	.432	.432	11/16	1/2	7/32	0.27
43333	3/8-16	1/2	.495	.495	7/8	1/2	9/32	0.45
43334**	1/2-13	11/16	.683	.683	1-1/8	3/4	7/16	0.58
43335	1/2-13	9/16	.562	.562	7/8	5/8	11/32	0.79
43336	1/2-13	5/8	.620	.620	1	5/8	11/32	1.26
43338**	5/8-11	11/16	.683	.683	1-1/8	3/4	7/16	1.08
43339	5/8-11	3/4	.745	.745	1-1/4	3/4	15/32	1.44
43345	3/4-10	1	.995	.995	1-5/8	1	5/8	3.50

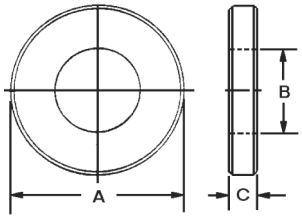
Jergens Feature:

Jergens Table-Saver design provides a safety-stop feature to prevent turning stud into tableways.

**Not Hardened

Flat Washers





- Material: Cold Rolled Low Carbon Steel, 303 Stainless
- Finish: Black Oxide
- Heat Treat: Carbon Nitride to 60
- Flat and parallel within .005

Part Number	A	B	C	Bolt Size	Wt. (lbs) 10 Pcs.
31901	1/2	13/64	3/32	3/16	.04
31902*	5/8	9/32	1/8	1/4	.05
31903*	3/4	11/32	1/8	5/16	.10
31904*	7/8	13/32	1/8	3/8	.21
31905*	1 1/8	17/32	1/8	1/2	.42
31906*	1 3/8	21/32	1/8	5/8	.63
31907*	1 5/8	25/32	5/32	3/4	1.10
31908*	1 3/4	29/32	5/32	7/8	1.20
31909*	2	1 1/32	3/16	1	1.70
31910	2 1/2	1 9/32	9/32	1 1/4	2.20

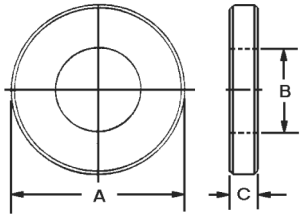
*Conforms to TCMA

Stainless Steel

Part Number	A	B	C	Bolt Size
32001	7/16	.196	5/64	3/16
32002	5/8	17/64	3/32	1/4
32003	11/16	11/32	1/8	5/16
32004	7/8	25/64	1/8	3/8
32005	1 1/8	17/32	1/8	1/2
32006	1 1/4	21/32	1/8	5/8
32007	1 1/2	25/32	5/32	3/4

Heavy Duty Flat Washers





Jergens Feature:

Made from high-carbon through- hardened steel which makes them up to 50% stronger than standard heavy duty washers. Also more fracture resistant under heavy loads.

- Material: High Carbon Steel
- Finish: Black Oxide
- Heat Treat: Rc 40-45 (Through Hardened)
- Flat & Parallel within .005 (.01mm)

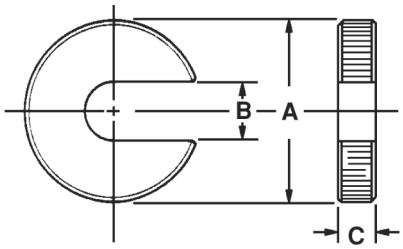
Part Number	A	B	C	Bolt Size	Wt. (lbs) 10 Pcs.
31967	5/8	9/32	3/16	1/4	0.72
31968	3/4	11/32	3/16	5/16	0.79
31969	7/8	13/32	3/16	3/8	0.87
31960	1 1/2	17/32	7/32	1/2	1.00
31961	1 1/2	21/32	7/32	5/8	0.88
31962	1 7/8	25/32	1/4	3/4	1.61
31963	2 1/8	29/32	1/4	7/8	2.31
31964	2 1/2	1 1/16	1/4	1	3.56
31965	2 1/2	1 5/16	1/4	1 1/4	3.98
31966	2 3/4	1 9/16	1/4	1 1/2	4.20

Metric Dimensions

Part Number	A	B	C	Bolt Size	Wt. (kg) 10 Pcs.
31961	38	17	5.5	16	0.40
31962	48	20	6.5	18	0.73
31963	54	23	6.5	20	1.05
31964	64	27	6.5	24	1.62

Washers
"C" Washers





The "C" Washers are ground parallel on both surfaces with a knurled O.D.

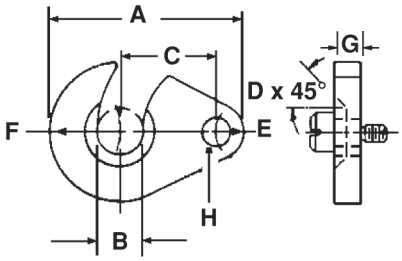
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Faces: Ground Parallel

Part Number	A	B	C	Wt. (lbs)
17701*	3/4	9/32	1/4	.02
17702*	1	9/32	1/4	.04
17703*	1 1/4	9/32	1/4	.07
17704*	1 1/4	13/32	3/8	.09
17705*	1 1/2	13/32	3/8	.14
17706*	1 3/4	13/32	3/8	.20
17707*	1 7/8	17/32	3/8	.17
17708*	2 1/4	17/32	3/8	.35
17709*	2 1/8	21/32	3/8	.32
17710	2 1/2	21/32	3/8	.53
17711*	2 1/2	25/32	7/16	.55

*Conforms to TCMA

Equalizing Swing "C" Washer
Stainless Steel

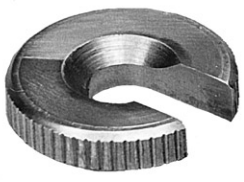


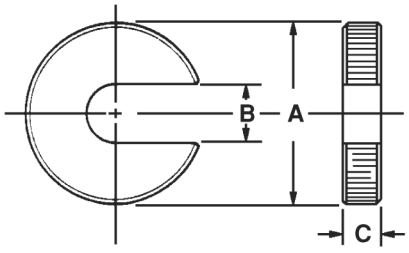


Part Number	A	B	C	D	Radius E	Radius F	+.0000 -.0015 G	+.0005 -.0000 H
12341	1 1/8	13/64	9/16	5/64	3/16	3/8	.1870	.1875
12342	1 1/4	17/64	5/8	3/32	3/16	7/16	.1870	.1875
12343	1 1/2	21/64	3/4	1/8	1/4	1/2	.2495	.250
12344	1 3/4	25/64	7/8	1/8	1/4	5/8	.2495	.250

- Material: 303 Stainless

Equalizing "C" Washers
Stainless Steel





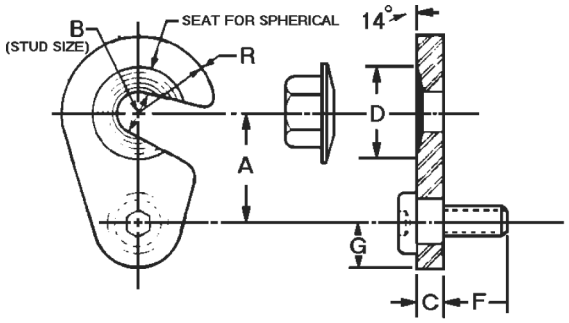
Part Number	A	B	C	Wt. lbs
12331	3/4	7/32	3/16	.02
12332	7/8	9/32	3/16	.04
12333	1	11/32	1/4	.04
12334	1 1/4	13/32	5/16	.04

- Material: 303 Stainless

Washers

Swing "C" Washer Assembly





The Swing "C" Washer has a concave center for self-locating around the stud, which prevents creeping while tightening, and allows acceptance of the mating spherical flange nuts. The Spherical Flange Nut assures that the washer cannot back out either during clamping or due to vibration during the operation. The shoulder screw has a nylon lock to prevent loosening of the screw during operation.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- **Flange Nut and Shoulder Screw Provided**

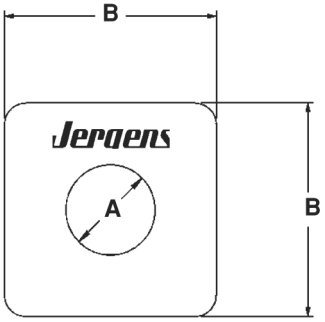
Part Number	A	Stud Size B	C	D	E	F	G	R	Part Number		Wt. (lbs)
									Shoulder Screw	Spherical Flange Nut	
37301*	1	3/8	1/4	13/16	5/16-18	1/2	3/8	3/4	**41707**	**39704**	.12
37302	1 1/4	1/2	3/8	1 1/8	5/16-18	1/2	1/2	1	**41708**	**39705**	.30
37303*	1 1/2	5/8	3/8	1 5/16	3/8-16	5/8	9/16	1 1/8	**41713**	**39706**	.39
37304*	1 3/4	3/4	1/2	1 9/16	3/8-16	5/8	5/8	1 1/4	**41714**	**39707**	.72

*Conforms to TCMA

Heavy Duty Square Washers



- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened



Part Number	±.010 A	±.010 B	Bolt Size	Thickness
31920	11/32	1 3/8	5/16	3/16
31921	13/32	1 3/8	3/8	3/16
31932	17/32	1 3/8	1/2	1/4
31933	17/32	2	1/2	1/4
31934	21/32	2	5/8	1/4
31935	13/16	2	3/4	1/4
31922	15/16	2	7/8	1/4
31936	13/16	2 1/2	3/4	1/4
31923	15/16	2 1/2	7/8	1/4
31937	1 1/16	2 1/2	1	1/4
31924	13/16	3	3/4	5/16
31925	15/16	3	7/8	5/16
31926	1 1/16	3	1	5/16
31927	1 1/16	3	1	3/8
31928	1 5/16	3	1 1/4	3/8
31929	1 9/16	3	1 1/2	3/8

Washers

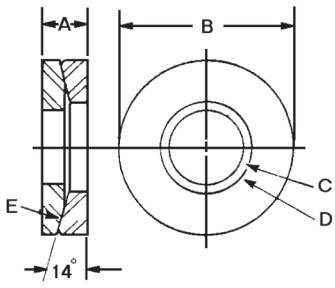
Self Aligning Washers (Two-Piece)

Upper



Lower

These washers are ideally suited for joining machine sections which are out of parallel. They adjust themselves for a positive, firm base. With radius "E" and the angular 14^0 combination, line contact is formed around the two mating washer surfaces, allowing the two washers the ability to seek misalignment in the companion clamping members. The heat treated I.D. of the bottom concave piece is larger than the I.D. of the top convex section for free action. It is precision ground and the sharp edges are removed.



Part Number	A	B	C	D	E	Bolt Size	Wt. (lbs)	Part Number Upper	Part Number Lower
41101	3/16	1/2	13/64	15/64	3/4	3/16	.01	**41501**	**41301**
41102	3/16	5/8	17/64	19/64	1	1/4	.01	**41502**	**41302**
41103	7/32	3/4	11/32	23/64	1	5/16	.01	**41503**	**41303**
41104	7/32	7/8	13/32	15/32	1 1/2	3/8	.03	**41504**	**41304**
41105	9/32	1 1/8	17/32	19/32	2	1/2	.08	**41505**	**41305**
41106	3/8	1 3/8	21/32	23/32	2 1/4	5/8	.13	**41506**	**41306**
41107	13/32	1 5/8	25/32	27/32	2 1/2	3/4	.20	**41507**	**41307**
41108	17/32	1 3/4	29/32	31/32	2 1/2	7/8	.33	**41508**	**41308**
41109	9/16	2	1 1/32	1 3/32	3 1/2	1	.41	**41509**	**41309**
41110	5/8	2 1/4	1 5/32	1 7/32	3 1/2	1 1/8	.77	**41510**	**41310**
41111	5/8	2 1/4	1 9/32	1 11/32	4	1 1/4	.62	**41511**	**41311**
41112	11/16	2 3/4	1 17/32	1 19/32	4 1/2	1 1/2	.85	**41512**	**41312**

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

Metric Two Piece Assemblies

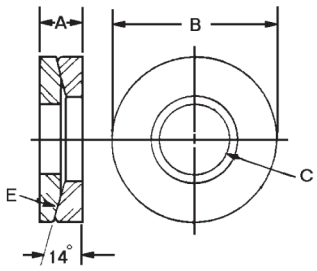
Part Number	A	B	C	D	E	Bolt Size	Wt. (kg)
41102	5	16	6.5	7.5	25	M6	.01
41103	5.5	19	8.5	9	25	M8	.01
41104	5.5	22	10.5	12	38	M10	.01
41105	7	28	13.5	15	51	M12	.03
41106	9.5	35	17	18	57	M16	.06
41157	10.5	41	21	21.5	63.5	M20	.09

Single Units

Part Number Upper	Part Number Lower
41502	**41302**
41503	**41303**
41504	**41304**
41505	**41305**
41506	**41306**
41557	**41357**

Self Aligning Washers (Two Piece) Stainless Steel





- Material: 303 Stainless

Part Number	A	B	C	E	Bolt Size	Wt. (lbs)
41202	3/16	5/8	9/32	3/4	1/4	.01
41203	1/4	3/4	11/32	1	5/16	.01
41204	1/4	7/8	13/32	1 1/4	3/8	.03
41205	5/16	1 1/8	17/32	1 1/2	1/2	.08
41206	5/16	1 3/8	21/32	1 3/4	5/8	.13
41207	3/8	1 5/8	25/32	2 1/4	3/4	.20

USAE™ Heavy Duty Flat Washers



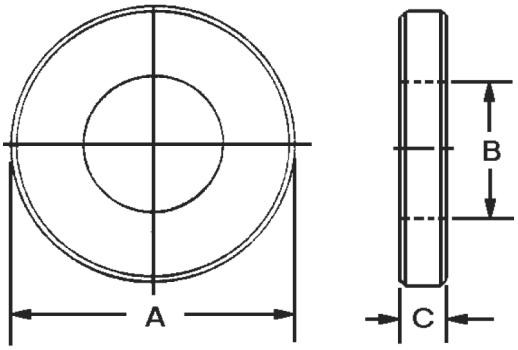
USS + SAE = USAE

What is a USAE™ Washer?

- It is a simple but effective idea that is long overdue.
- The Outside Diameter conforms to USS standards. This provides a washer that is up to 36% larger than standard hardened washers.

More Contact Area = More Holding Power

- The Inside Diameter conforms to SAE standards. The small ID provides a more precise fit on bolts, studs, etc.
- USAE Washers are also up to 37% thicker than standard hardened washers for greater strength.
- Washers are made from mild steel. They are case hardened to 60 HRc and have a black oxide finish.
- Bolt size is stamped on each washer for easy identification.



USAE™ Heavy Duty Flat Washers

Part No.	Bolt Size	A (OD)	B (ID)	C (Thickness)
FW00001	1/4	3/4	9/32	9/64
FW00002	5/16	7/8	11/32	9/64
FW00003	3/8	1	13/32	9/64
FW00004	1/2	1-3/8	17/32	5/32
FW00005	5/8	1-3/4	21/32	5/32
FW00006	3/4	2	13/16	1/4
FW00007	1	2-1/2	1-1/16	1/4

*Tolerances for all dimensions are +/- .010"

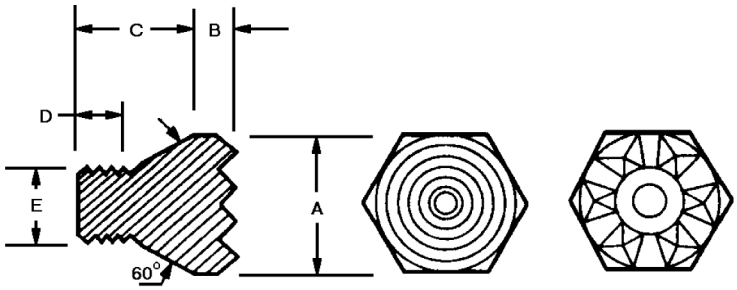
Replaceable Grippers
Tapered - Hardened Steel


Pointed


Fine Serrated

Jergens introduces a new concept in replaceable grippers. It is now easier to modify soft top jaws, strap clamps, or fixtures to hold irregularly shaped material. The grippers can be installed from one side, using a combination center drill, a tap, and a box wrench. There is no need to drill through holes from difficult to reach locations. Simply drill, tap, and install.

- Material: 8620
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Available in FixturePro™ Design Software



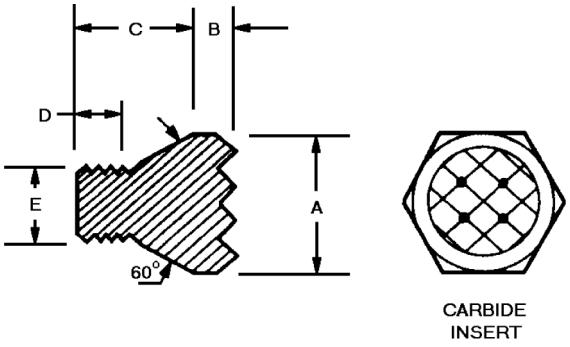
Hardened Steel Grippers

Part Number		Hex				Thread	Center	Drill To
Serrated	Pointed	A	B	C	D	E	Drill	Diameter
23801	**23811**	5/16	.093	.32	.19	8-32	No. 4	.310
23802	**23812**	1/2	.125	.46	.25	1/4-28	No. 6	.498
23803	**23813**	3/4	.187	.70	.38	3/8-16	No. 8	.745

Tapered - Carbide Tipped



- Material: Body 8620
  Insert, Carbide
- Finish: Zinc Plate
- Available in FixturePro™ Design Software



Carbide Tipped Grippers

Part Number	Hex A	B	C	D	Thread E	Center Drill	Drill To Diameter
23822	1/2	.125	.46	.25	1/4-28	No. 6	.498
23823	3/4	.187	.70	.38	3/8-16	No. 8	.745

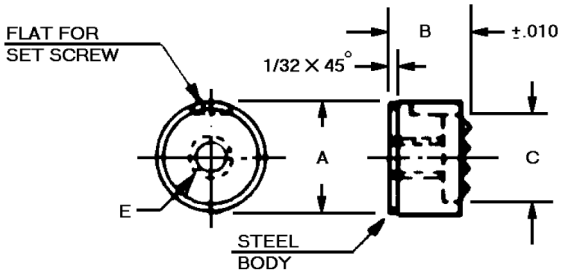
Replaceable Grippers



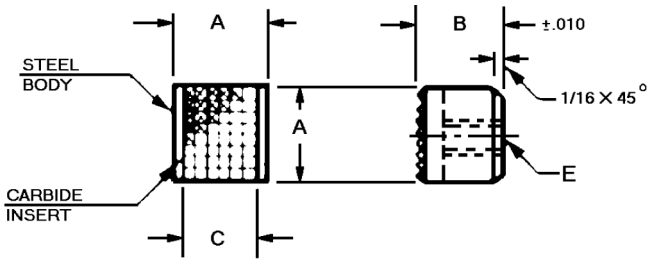
The Jergens Replaceable Grippers are available in Hardened High Speed Tool Steel or with Carbide Inserts. The points of the grippers embed themselves into the work piece giving greater holding power with less actual pressure. Jergens Grippers may be held in place using either a set screw on the flat of the gripper or the threaded hole in the back of the gripper.

Use Jergens Grippers to make hardened serrated jaws from Jergens soft top jaws or add the grippers to Jergens strap clamps for extra holding power. Use Jergens replaceable grippers anywhere that rough surfaces are being held in position for machining.

ROUND GRIPPERS



SQUARE GRIPPERS



- Material: Body, Low Carbon Steel
  Insert, Carbide
- Finish: Zinc Plate
- Serrations: .09" x 90°
- Available in FixturePro™ Design Software

Carbide Tipped Grippers

Part Number	Style	A	B	C	E	Wt. (lbs) 10 Pcs.
23708	Round	3/8	3/8	5/16	10-32 x 7/32	.15
23707	Round	1/2	3/8	3/8	10-32 x 7/32	.20
23702	Round	1/2	1/2	3/8	10-32 x 11/32	.22
23703	Round	1/2	21/32	3/8	10-32 x 7/16	.30
23704	Round	5/8	3/8	1/2	1/4-28 x 7/32	.36
23705	Round	3/4	3/8	5/8	1/4-28 x 7/32	.44
23706	Square	1/2	3/8	13/32	10-32 x 1/4	.30

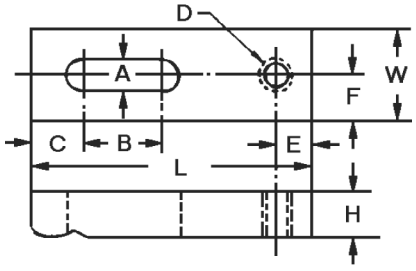
- Material: High Speed Tool Steel
- Finish: Black Oxide
- Heat Treat: Rc 60-62
- Serrations: .09" x 90°
- Available in FixturePro™ Design Software

Hardened Tool Steel Grippers

Part Number	Style	A	B	C	E	Wt. (lbs) 10 Pcs.
23710	Round	3/8	3/8	3/8	10-32 x 3/8	.15
23711	Round	1/2	3/8	1/2	10-32 x 3/8	.20
23712	Round	1/2	1/2	1/2	10-32 x 1/2	.22
23713	Round	1/2	21/32	1/2	10-32 x .651	.30
23714	Round	5/8	3/8	5/8	1/4-28 x 3/8	.36
23715	Round	3/4	3/8	3/4	1/4-28 x 3/8	.44
23716	Square	1/2	3/8	1/2	10-32 x 3/8	.30

Miniature Straps - Radius





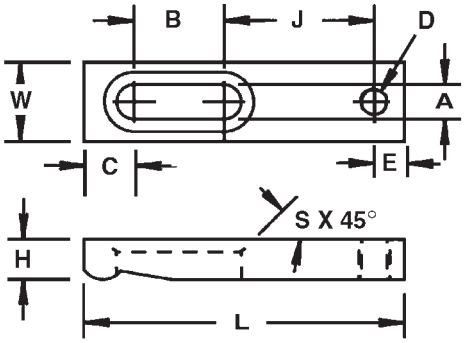
A light-duty strap with a specially designed radius end provides maximum pressure for extreme close-to-the-edge clamping. Features a tapped hole in the rear for knurled head thumb screw and a long slot for lateral adjustment.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	Thread Size D	E	F	W	H	L	Wt. (lbs) 10 Pcs.
29704	#10 or M5	7/32	7/16	5/16	10-24	3/16	1/4	1/2	1/4	1 1/2	.44
29705	#10 or M5	7/32	9/16	5/16	10-24	3/16	1/4	1/2	1/4	1 3/4	.44
29706	#10 or M5	7/32	11/16	5/16	10-24	3/16	1/4	1/2	1/4	2	.44

Tapped Radius Straps
Stainless Steel



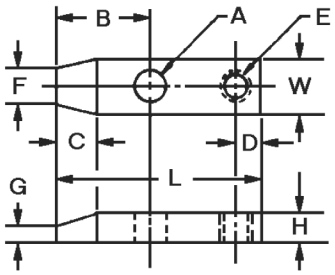


- Material: 303 Stainless

Part Number	Bolt Size	A	B	C	D	H	J	L	S	W
12211	#10 or M5	7/32	5/16	5/16	10-32	1/4	11/16	1 1/2	5/64	1/2
12212	#10 or M5	7/32	7/16	5/16	10-32	1/4	13/16	1 3/4	5/64	1/2
12213	1/4 or M6	9/32	1/2	3/8	1/4-20	5/16	7/8	2	3/32	5/8
12214	1/4 or M6	9/32	11/16	3/8	1/4-20	5/16	1 3/16	2 1/2	3/32	5/8
12215	5/16 or M8	11/32	1/2	7/16	5/16-18	3/8	1 3/16	2	1/8	3/4
12216	5/16 or M8	11/32	7/8	7/8	5/16-18	3/8	1 3/8	3	1/8	3/4
12217	3/8 or M10	13/32	3/4	9/16	3/8-16	1/2	1 5/16	3	1/8	7/8
12218	3/8 or M10	13/32	1 1/8	1/2	3/8-16	1/2	2	4	1/8	7/8

Miniature Straps - Flat





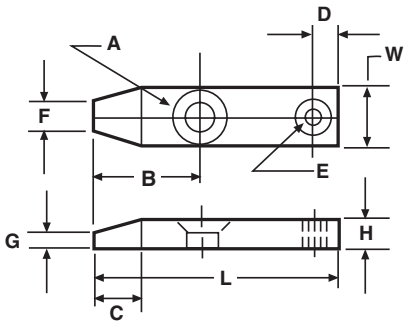
A “chisel nose”, flat strap for light-duty holding where clamping is restricted. Features a tapped hole in back for heel rest and a drilled hole for stud clearance.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

Part Number	A	B	C	D	Thread Size E	F	G	W	H	L	Wt. (lbs) 10 Pcs.
29701	7/32	5/8	3/8	3/16	10-24	1/4	1/8	1/2	1/4	1 1/2	.47
29702	9/32	7/8	3/8	3/16	10-24	1/4	1/8	1/2	1/4	2	.62
29703	9/32	1 1/8	3/8	3/16	10-24	1/4	1/8	1/2	5/16	2 1/2	.94

Taper Nose Straps
Stainless Steel



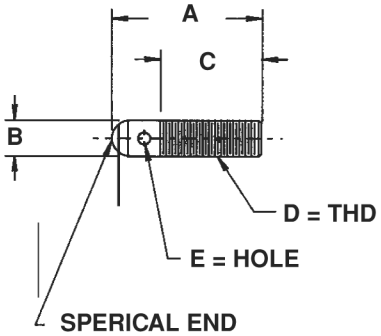


- Material: 303 Stainless

Part Number	A	B	C	D	E	F	G	H	W	L
12201	7/32	5/8	3/8	13/64	10-32	1/4	1/8	1/4	1/2	1 1/2
12202	9/32	7/8	3/8	3/16	1/4-20	1/4	1/8	1/4	1/2	2
12203	9/32	1 1/8	3/8	9/32	1/4-20	1/4	1/8	5/16	1/2	2 1/2

Adjustable Clamp Rests
Stainless Steel



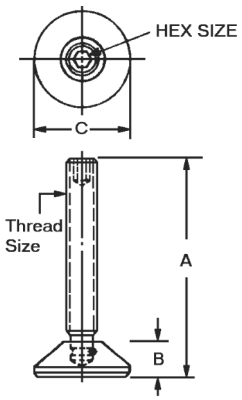


- Material: 303 Stainless

Part Number	A	B	C	D	E
12231	3/4	.190	1/2	10-32	1/16
12232	1 1/4	.190	1	10-32	1/16
12233	1	1/4	11/16	1/4-20	5/64
12234	1 1/2	1/4	1 3/16	1/4-20	5/64
12235	1 3/8	5/16	1 1/8	5/16-18	3/32
12236	1 7/8	5/16	1 5/8	5/16-18	3/32
12237	1 5/8	3/8	1 3/8	3/8-16	1/8
12238	2 1/8	3/8	1 7/8	3/8-16	1/8

Adjustable Clamp Heels





Part Number	Thread Size	A	B	C	Hex Key Size	Wt. (lbs)
47213	3/8-16	2	5/8	1 1/4	3/16	.20
47214	3/8-16	3	5/8	1 1/4	3/16	.30
47215	3/8-16	4	5/8	1 1/4	3/16	.40
47201	1/2-13	3	5/8	1 1/2	1/4	.40
47202	1/2-13	4	5/8	1 1/2	1/4	.50
47203	1/2-13	5	5/8	1 1/2	1/4	.60
47204	5/8-11	4	3/4	1 3/4	5/16	.70
47205	5/8-11	5	3/4	1 3/4	5/16	.80
47206	5/8-11	6	3/4	1 3/4	5/16	.90
47207	3/4-10	5	7/8	2	3/8	1.20
47208	3/4-10	6	7/8	2	3/8	1.35
47209	3/4-10	7	7/8	2	3/8	1.50
47210	1-8	4	1	2 1/2	9/16	1.90
47211	1-8	6	1	2 1/2	9/16	2.30

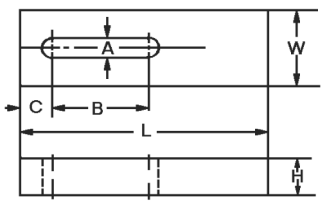
- Material: Stud, Stressproof®
  Pad, Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC (Inch); 6h (Metric)

Metric

Part Number	Thread Size	A	B	C	Hex Size	Wt. (kg)
47263	M10 x 1.5	50	16	32	5	.09
47264	M10 x 1.5	75	16	32	5	.11
47265	M10 x 1.5	100	16	32	5	.11
47251	M12 x 1.75	75	16	38	6	.11
47252	M12 x 1.75	100	16	38	6	.13
47253	M12 x 1.75	125	16	38	6	.15
47254	M16 x 2.0	100	19	44	8	.25
47255	M16 x 2.0	125	19	44	8	.29
47256	M16 x 2.0	150	19	44	8	.32
47257	M20 x 2.5	125	22	50	10	.44
47258	M20 x 2.5	150	22	50	10	.46
47259	M20 x 2.5	175	22	50	10	.55
47260	M24 x 3.0	100	25	64	14	.44
47261	M24 x 3.0	150	25	64	14	.50

Plain Straps



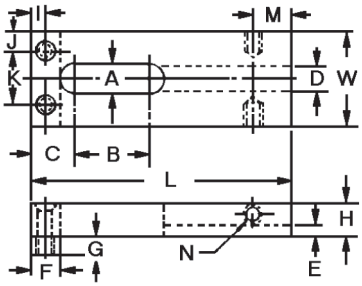


- Material: Low Carbon Steel, 2024 Aluminum

Part Number		Bolt				Width				Wt.
Steel	Aluminum	Size	A	B	C	Steel	Aluminum	H	L	(lbs)
33111	**33001**	1/4 or M6	9/32	5/8	3/8	5/8	3/4	3/8	2	.09
33113	—	5/16 or M8	11/32	3/4	9/16	7/8	—	1/2	2 1/2	.18
33114	**33004**	5/16 or M8	11/32	1 1/4	9/16	7/8	1	1/2	3 1/2	.25
33115	—	3/8 or M10	13/32	1 1/8	11/16	1 1/4	—	5/8	3 1/2	.61
33116	**33006**	3/8 or M10	13/32	1 5/8	11/16	1 1/4	1 1/2	5/8	4 1/2	.90
33117	—	1/2 or M12	17/32	1 1/4	7/8	1 1/2	—	3/4	4 1/2	1.12
33118	**33008**	1/2 or M12	17/32	2	7/8	1 1/2	2	3/4	6	1.60
33119	—	5/8 or M16	21/32	1 1/2	1 1/16	1 3/4	—	7/8	5	1.75
33120	—	5/8 or M16	21/32	2 1/2	1 1/16	1 3/4	—	7/8	7	2.60
33121	—	3/4 or M19	25/32	1 1/2	1 1/8	1 3/4	—	1	5	2.00
33122	—	3/4 or M19	25/32	2 1/2	1 1/8	1 3/4	—	1	7	2.90

Padded Straps





Jergens Feature:

The elongated slot allows for greater clamping force on the part. A steel pad is standard. Plastic or brass pads may be ordered separately for both inch and metric straps. See page 6.7.

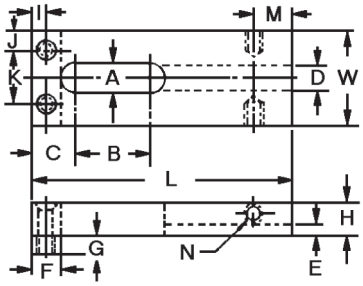
- Material: Low Carbon Steel
- Finish: Low Carbon Steel
- Heat Treat: Case Hardened
  Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	D	E	F	G	I	J	K	M	N	W	H	L	Wt. (lbs)
37101	1/4 or M6	9/32	5/8	3/8	1/4	1/8	1/4	1/8	9/64	9/64	11/32	—	—	5/8	3/8	2	.09
37103	3/8 or M10	13/32	1 1/8	11/16	3/8	3/16	1/2	1/4	1/4	5/16	5/8	1/2	5/16-18	1 1/4	5/8	3 1/2	.65
37105	3/8 or M10	13/32	1 5/8	11/16	3/8	3/16	1/2	1/4	1/4	5/16	5/8	1/2	5/16-18	1 1/4	5/8	4 1/2	.83
37107*	1/2 or M12	17/32	1 1/4	7/8	3/8	1/4	5/8	3/8	5/16	3/8	3/4	1/2	5/16-18	1 1/2	3/4	4 1/2	1.24
37110*	1/2 or M12	17/32	2	7/8	3/8	1/4	5/8	3/8	5/16	3/8	3/4	1/2	5/16-18	1 1/2	3/4	6	1.63
37111*	5/8 or M16	21/32	1 1/2	1 1/16	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	7/8	5	1.88
37113*	5/8 or M16	21/32	2 1/2	1 1/16	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	7/8	7	2.63
37114*	3/4 or M20	25/32	1 1/2	1 1/8	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	1	5	2.12
37116*	3/4 or M20	25/32	2 1/2	1 1/8	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	1	7	2.88

*Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Padded Straps
Metric





- Material: Low Carbon Steel
- Finish: Low Carbon Steel
- Heat Treat: Case Hardened
  Rockwell 30N Scale 59-69

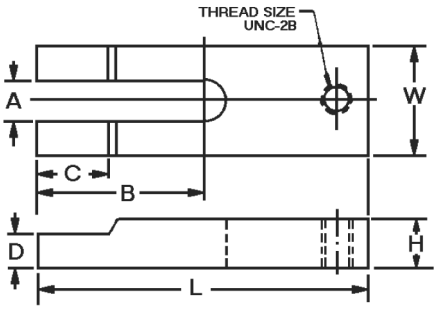
Metric

Part Number	Bolt Size	A	B	C	D	E	F	G	M	N	W	H	I	J	K	L	Wt (kg)
37151	M6	7	16	10	6	3	6	3	—	—	16	9	4	4	9	50	.04
37153	M8	10	28	17	10	5	13	6	13	M8	32	16	6	8	16	89	.29
37157	M10	13	32	22	10	6	16	10	13	M8	38	19	8	10	19	114	.38
37161	M16	17	38	27	10	6	19	13	19	M8	44	22	10	13	19	127	1.19
37164	M20	20	38	29	10	6	19	13	19	M8	44	25	10	13	19	127	1.31

Long Slot U-Straps



- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B (Inch); 6h (Metric)
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 6.45, and Clamp Assembly Heels on page 6.2.

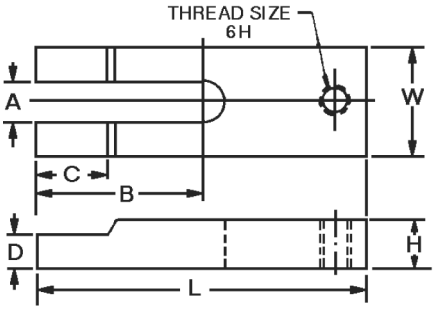


Part Number	Bolt Size	A	B	C	D	Thread Size	W	H	L	Wt. (lbs)
47021	1/2 or M12	17/32	2 1/2	—	—	1/2-13	1 1/2	3/4	4	1.18
47022	1/2 or M12	17/32	3 1/2	—	—	1/2-13	1 1/2	3/4	6	1.92
47023	5/8 or M16	21/32	2 7/16	5/8	3/4	5/8-11	1 3/4	7/8	4	1.52
47024	5/8 or M16	21/32	3 15/16	5/8	3/4	5/8-11	1 3/4	7/8	7	2.73
47025	3/4 or M20	25/32	3 1/2	5/8	3/4	3/4-10	2	1	6	2.96
47026	3/4 or M20	25/32	5	5/8	3/4	3/4-10	2	1 1/4	8	3.99
47027	1 or M24	1 1/16	5 1/2	5/8	3/4	1-8	2 1/2	1 1/2	10	8.12

Long Slot U-Straps
Metric



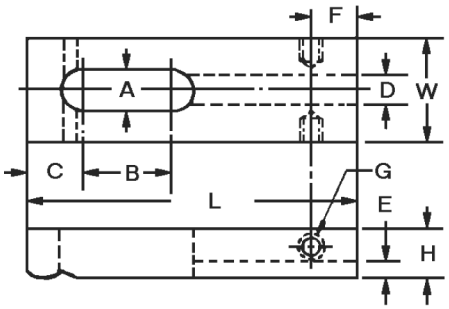
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B (Inch); 6h (Metric)
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 6.45, and Clamp Assembly Heels on page 6.2.



Part Number	Bolt Size	A	B	C	D	Thread Size	W	H	L	Wt (kg)
47071	M12	13	64	–	–	M12	38	19	100	.54
47072	M12	13	89	–	–	M12	38	19	150	.87
47073	M16	17	62	16	19	M16	44	22	100	.70
47074	M16	17	100	16	19	M16	44	22	175	1.24
47075	M20	20	89	16	19	M20	50	25	150	1.34
47076	M20	20	127	16	19	M20	50	32	200	1.81
47077	M24	27	140	16	19	M24	64	38	250	3.68

Radius Straps





Jergens Feature:

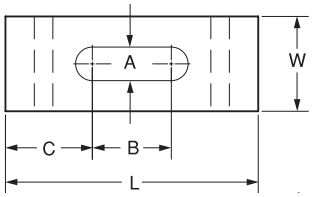
The elongated slot allows for greater clamping force on the part.

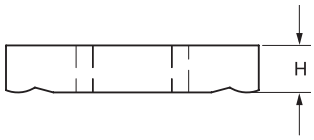
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	D	E	F	G	W	H	L	Wt. (lbs)
36703	1/4 or M6	9/32	5/8	3/8	1/4	1/8	-	-	5/8	3/8	2	0.09
36708	1/4 or M6	9/32	1	3/8	1/4	1/8	-	-	5/8	3/8	2-1/2	0.11
36717	5/16	11/32	3/4	9/16	1/4	1/4	-	-	7/8	1/2	2-1/2	0.20
36718	5/16	11/32	1-1/4	9/16	1/4	1/4	-	-	7/8	1/2	3-1/2	0.25
36704	3/8 or M10	13/32	1-1/8	11/16	3/8	3/16	1/2	5/16-18	1-1/4	5/8	3-1/2	0.61
36719	3/8 or M10	13/32	1-5/8	11/16	3/8	3/16	1/2	5/16-18	1-1/4	5/8	4-1/2	0.71
36705	1/2 or M12	17/32	1-1/4	7/8	3/8	1/4	1/2	5/16-18	1-1/2	3/4	4-1/2	1.12
36714	1/2 or M12	17/32	2	7/8	3/8	1/4	1/2	5/16-18	1-1/2	3/4	6	1.56
36706	5/8 or M16	21/32	1-1/2	1-1/16	3/8	1/4	3/4	5/16-18	1-3/4	7/8	5	1.75
36715	5/8 or M16	21/32	2-1/2	1-1/16	3/8	1/4	3/4	5/16-18	1-3/4	7/8	7	2.44
36707	3/4	25/32	1-1/2	1-1/8	3/8	1/4	3/4	5/16-18	1-3/4	1	5	2.00
36716	3/4	25/32	2-1/2	1-1/8	3/8	1/4	3/4	5/16-18	1-3/4	1	7	2.70

Double End Radius Strap

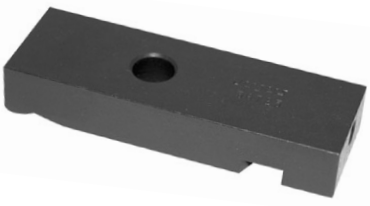


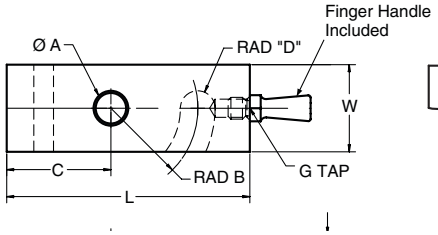


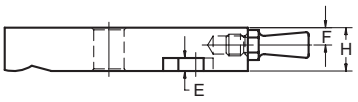


Part Number	Bolt Size	A	B	C	H	W	L	Wt (lbs)
36728	1/2 or M12	17/32	1-1/4	1-3/8	3/4	1-1/2	4	0.80
36729	1/2 or M12	17/32	1-1/2	1-3/4	3/4	1-1/2	5	1.25
36730	5/8 or M16	21/32	1-1/2	2-1/4	7/8	1-3/4	6	2.20

Swing Style Radius Nose Straps



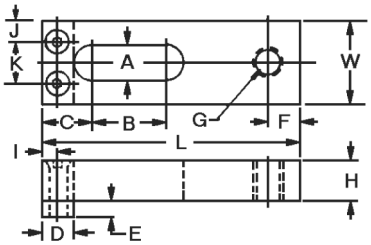




Part Number	Bolt Size	A	B	C	D	E	F	G	W	H	L	Wt (lbs)
36723	1/4	5/16	11/16	1	1/8	1/8	n/a	n/a	5/8	3/8	2	0.09
36724	3/8	7/16	1-1/4	1-1/2	1/4	3/16	1/4	5/16-18	1-1/4	5/8	3-1/2	0.61
36725	1/2	9/16	1-7/8	1-3/16	1/4	1/4	1/4	5/16-18	1-1/2	3/4	4-1/2	1.12
36726	5/8	11/16	2-3/16	2-1/16	1/4	1/4	1/4	5/16-18	1-3/4	7/8	5	1.75
36727	3/4	13/16	2-3/16	2-1/16	1/4	1/4	1/4	5/16-18	1-3/4	1	5	2.00

Tapped Straps





Jergens Feature:

The elongated slot allows for greater clamping force on the part. A steel pad is standard. Plastic or brass pads may be ordered separately, see page 6.7.

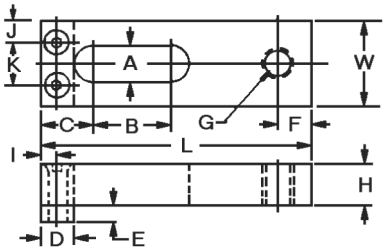
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Tapped for use with adjustable clamp heel found on page 6.45

Part Number	Bolt Size	A	B	C	D	E	F	Thread Size G	I	J	K	W	H	L	Wt. (lbs)
36911	1/4 or M6	9/32	5/8	3/8	1/4	1/8	7/32	1/4-20	9/64	9/64	11/32	5/8	3/8	2	.10
36913	5/16 or M8	11/32	3/4	9/16	3/8	3/16	1/4	5/16-18	3/16	3/16	1/2	7/8	1/2	2 1/2	.20
36914	5/16 or M8	11/32	1 1/4	9/16	3/8	3/16	1/4	5/16-18	3/16	3/16	1/2	7/8	1/2	3 1/2	.27
36915	3/8 or M10	13/32	1 1/8	11/16	1/2	1/4	3/8	3/8-16	1/4	5/16	5/8	1 1/4	5/8	3 1/2	.69
36916	3/8 or M10	13/32	1 5/8	11/16	1/2	1/4	3/8	3/8-16	1/4	5/16	5/8	1 1/4	5/8	4 1/2	.88
36917*	1/2 or M12	17/32	1 1/4	7/8	5/8	3/8	7/16	1/2-13	1/4	3/8	3/4	1 1/2	3/4	4 1/2	.70
36918*	1/2 or M12	17/32	2	7/8	5/8	3/8	7/16	1/2-13	1/4	3/8	3/4	1 1/2	3/4	6	.90

* Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Tapped Straps
Metric





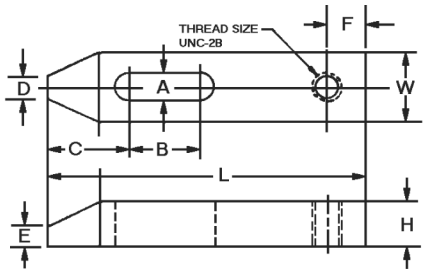
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 6h
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Tapped for use with adjustable clamp heel found on page 6.45

Part Number	Bolt Size	A	B	C	D	E	F	Thread Size 6h G	I	J	K	W	H	L	Wt. (Kg)
36961	M6	7	16	9	6	3	5	M6	4	4	9	16	9	50	.05
36963	M8	9	19	14	9	5	6	M8	5	5	12	22	13	63	.11
36965	M10	10	28	17	13	6	9	M10	6	8	16	32	16	88	.37
36967	M12	13	31	22	16	9	11	M12	6	9	19	38	19	113	.47

* Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Taper Nose Straps





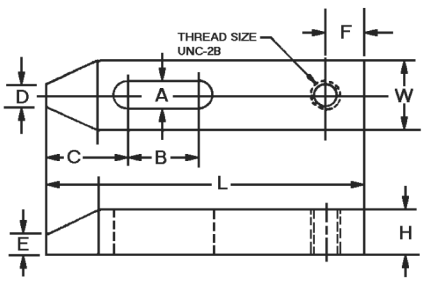
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 6.45

Part Number	Bolt Size	A	B	C	D	E	F	Thread Size	W	H	L	Wt. (lbs)
47119	3/8 or M10	13/32	1/2	13/16	3/8	3/16	7/16	3/8-16	1	1/2	3	.55
47120	3/8 or M10	13/32	1	15/16	3/8	3/16	7/16	3/8-16	1 1/4	5/8	4	.75
47123	3/8 or M10	13/32	1 1/2	15/16	3/8	3/16	7/16	3/8-16	1 1/4	5/8	5	.90
47124	1/2 or M12	17/32	1/2	1 1/16	1/2	1/4	7/16	1/2-13	1 1/4	5/8	3 1/2	.80
47125	1/2 or M12	17/32	1 1/4	1 3/16	1/2	1/4	7/16	1/2-13	1 1/4	3/4	4 1/2	1.10
47126	1/2 or M12	17/32	2	1 5/16	1/2	1/4	7/16	1/2-13	1 1/4	7/8	6	1.60
47127	5/8 or M16	21/32	1/2	1 3/16	5/8	1/4	1/2	5/8-11	1 1/4	5/8	4	1.80
47128	5/8 or M16	21/32	1 1/4	1 3/16	5/8	3/8	1/2	5/8-11	1 1/2	3/4	5	2.20
47129	5/8 or M16	21/32	2	1 5/16	5/8	3/8	1/2	5/8-11	1 1/2	7/8	7	3.10
47130	3/4 or M20	25/32	3/4	1 5/16	5/8	3/8	9/16	3/4-10	1 1/2	3/4	5	2.85
47131	3/4 or M20	25/32	1 1/2	1 1/2	5/8	3/8	9/16	3/4-10	1 1/2	1	6	3.40
47132	3/4 or M20	25/32	2 1/4	1 5/8	5/8	3/8	9/16	3/4-10	1 3/4	1 1/8	8	4.70
47134	1 or M24	1 1/16	2	2 5/8	7/8	5/8	11/16	1-8	2	1 1/2	10	9.55

Metric Taper Nose Straps



- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 6h
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 6.45

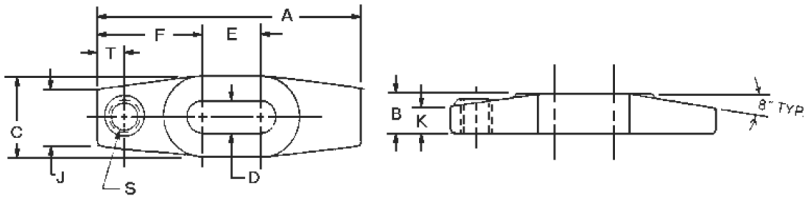


Part Number	Bolt Size	A	B	C	D	E	F	Thread Size	W	H	L	Wt. (Kg)
47169	M10	11	13	21	10	5	11	M10 x 1.5	25	13	75	.30
47175	M12	13	33	30	13	10	11	M12 x 1.75	32	19	114	.60
47179	M16	17	50	33	16	10	13	M16 x 2.0	38	22	175	1.70
47182	M20	21	57	41	16	10	14	M20 x 2.5	44	29	200	2.53
47184	M24	26	50	67	22	16	17	M24 x 3.0	50	38	250	5.15

Forged Strap Clamps

Heel Clamp





• Material: C-1030 or C-1035

Standard & Tapped Heel Clamps

Part Number		Bolt											Wt.
Standard	Tapped	Size	A	B	C	D	E	F	J	K	S*	T	(lbs)
37201	**37202**	5/8 or M16	4	3/4	1 5/8	11/16	11/16	1 21/32	1 3/16	1/2	1/2-13	1/2	1.00
37203	**37204**	5/8 or M16	6	7/8	1 3/4	11/16	1 3/8	2 5/16	1 1/4	9/16	5/8-11	5/8	1.75
37205	**37206**	3/4 or M20	8	1 1/8	2 1/8	13/16	2	3	1 1/2	3/4	3/4-10	3/4	3.75
37207	**37208**	7/8 or M20	10	1 3/8	2 1/2	15/16	2 3/4	3 5/8	1 3/4	15/16	7/8-9	7/8	7.00

*Applicable to Tapped Clamp Only

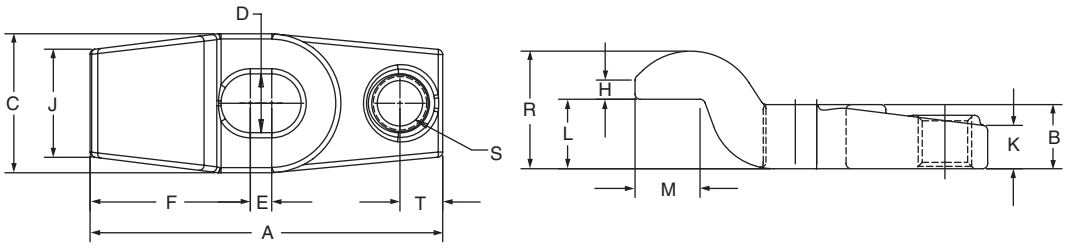
Metric Standard & Tapped Heel Clamps

Part Number		Bolt											Wt.
Standard	Tapped	Size	A	B	C	D	E	F	J	K	S*	T	(Kg)
37201	**37252**	M16	100	19	41	17	17	42	30	13	M12 x 1.75	13	.53
37203	**37254**	M16	150	22	44	17	35	59	32	14	M16 x 2.0	16	.94
37205	**37256**	M20	200	29	54	21	50	75	38	19	M20 x 2.5	19	2.0
37207	**37258**	M20	250	35	63	24	70	92	44	24	M24 x 3.0	22	3.8

*Applicable to Tapped Clamp Only

Gooseneck Clamp





Standard & Tapped Gooseneck Clamps

Part Number		Bolt															Wt.
Standard	Tapped	Size	A	B	C	D	E	F	H	J	K	L	M	R	S*	T	(lbs)
37211	**37212**	5/8	4	3/4	1 5/8	11/16	1/4	1 7/8	3/8	1 3/16	1/2	13/16	3/4	1 7/16	5/8-11	1/2	1.00
37213	**37214**	5/8	6	7/8	1 3/4	11/16	1	2 1/2	7/16	1 1/4	9/16	15/16	1 1/8	1 9/16	5/8-11	5/8	2.00
37215	**37216**	3/4	8	1 1/8	2 1/8	13/16	1 5/8	3 3/16	9/16	1 1/2	3/4	1 1/8	1 1/4	2 1/16	5/8-11	1	4.25

*Applicable to Tapped Clamp Only

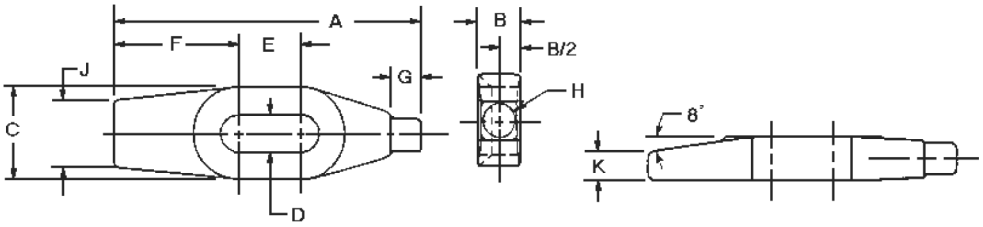
Part Number		Bolt															Wt.
Standard	Tapped	Size	A	B	C	D	E	F	H	J	K	L	M	R	S*	T	(Kg)
37211	**37262**	M16	100	19	41	17	6	48	10	30	13	20	19	37	M16 x 2.013		.53
37213	**37264**	M16	150	22	44	17	25	63	11	32	14	24	28	40	M16 x 2.016		1.4
37215	**37266**	M20	200	29	54	21	41	81	14	38	19	28	32	52	M16 x 2.025		2.3

*Applicable to Tapped Clamp Only

Forged Strap Clamps

Finger Clamp





• Material: C-1030 or C-1035

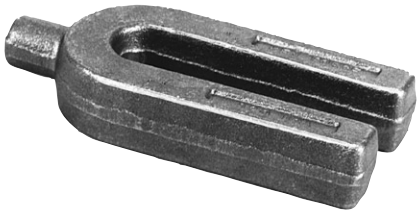
Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	K	Wt. (lbs)
37221	5/8 or M16	4	3/4	1 5/8	11/16	11/16	1 21/32	1/2	1/2	1 3/16	7/16	.75
37223	5/8 or M16	6	7/8	1 3/4	11/16	1 1/4	2 3/8	5/8	5/8	1 1/4	1/2	1.50
37225	3/4 or M20	8	1 1/8	2 1/8	13/16	1 3/4	3 1/8	3/4	3/4	1 1/2	5/8	3.00

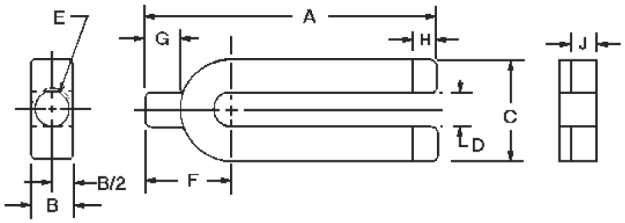
Metric

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	K	Wt. (Kg)
37221	M16	100	19	41	17	17	42	13	13	30	11	.40
37223	M16	150	22	44	17	32	59	16	16	32	13	.81
37225	M20	200	29	54	21	44	79	19	19	38	16	1.6

Forged Strap Clamps

"U" Clamp





• Material: C-1030 or C-1035

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	Wt. (lbs)
37231	5/8 or M16	4	3/4	1 3/4	11/16	9/16	1 7/16	9/16	1/2	1/2	1.00
37232	5/8 or M16	6	7/8	2	11/16	11/16	1 11/16	11/16	5/8	9/16	2.00
37233	3/4 or M20	8	1 1/8	2 3/8	13/16	13/16	2	13/16	3/4	11/16	4.00
37234	7/8 or M24	10	1 1/4	2 3/4	15/16	15/16	2 5/16	15/16	7/8	3/4	6.50
37235	1 or M24	12	1 3/8	3 1/4	1 1/16	1 1/16	2 11/16	1 1/16	1	13/16	9.00

Metric

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	Wt. (Kg)
37231	M16	100	19	44	17	14	37	14	13	13	.53
37232	M16	150	22	50	17	17	43	17	16	14	1.1
37233	M20	200	29	59	21	21	50	21	19	17	2.2
37234	M24	250	32	70	24	24	59	24	22	19	3.5
37235	M24	300	35	83	27	27	68	27	25	21	4.9

Forged Adjustable Clamps



Forged Adjustable Clamps automatically compensate for clamping height changes within their clamping ranges (see chart for ranges). The swivel bushing is permanently mounted in the clamp which alleviates lost or missing parts. The standard brass heel plate protects the machine table.



Forged Adjustable Clamp holding one side of a hydraulic vise on a milling machine table.

- Material: 1137 Forged Steel, Heat Treated
- Finish: Black Oxide
- One Piece Construction
- Versatile Clamping Height
- Made in U.S.A.

Features high quality forging providing superior clamping strength.

Part Number	Bolt Size	Clamping Range	W	T	L	X	Maximum Torque (ft-lbs)	Max Holding* Force (lbs)	Wt. (lbs)
19101	1/2	0-2	1 3/4	1 1/2	4 1/4	2 1/2	90	6800	1.1
19102	5/8	0-2 3/8	2	1 5/8	5	3	180	10600	1.7
19103	3/4	0-2 3/4	2 1/2	1 3/4	6 1/4	3 3/4	300	16000	3.0
19104	7/8	0-3 1/2	3	2 3/8	7	4 1/4	500	21800	5.3
19104	1	0-3 1/2	3	2 3/8	7	4 1/4	760	28600	5.3

Metric

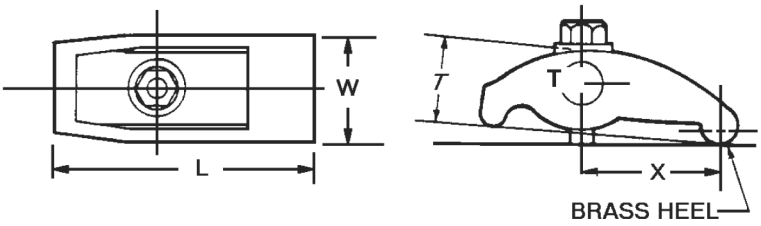
Part Number	Bolt Size	Clamping Range	W	T	L	X	Maximum Torque (N.m)	Max Holding* Force (Kgf)	Wt. (Kg)
19101	M12	0-50	44	38	108	63	100	2800	0.60
19102	M16	0-60	50	41	125	75	260	5250	0.92
19103	M20	0-70	63	44	159	95	500	8250	1.60
19104	M24	0-89	75	60	175	108	870	11850	2.90

**** Note:*** **Holding forces are based on using Jergens heat treated alloy steel T-slot bolts, Studs, T-nuts and Flange nuts in order at the recommended torque.**



Accessories Available

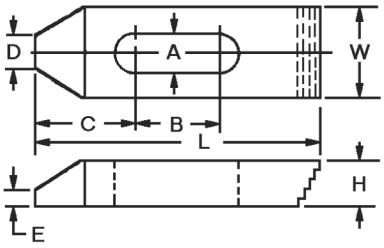
T-Slot Bolts	Flange Nuts	T-Slot Nuts	Studs	Washers
Page 6.27	Page 6.29	Page 6.35	Page 6.24	Page 6.36



Steel Heel Straps

Coarse Pitch



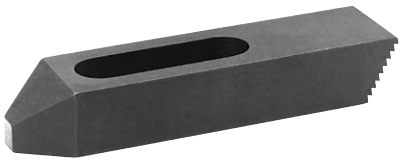


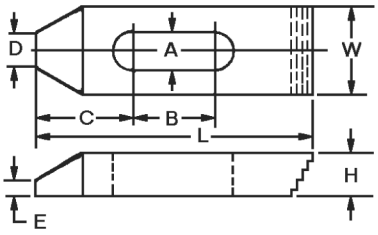
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N 50-54

The step teeth of the Coarse Pitch Steel Heel Straps match the Jergens Aluminum Step Blocks. These straps facilitate easier height adjustments on set-ups.

Part Number	Bolt Size	A	B	C	D	E	H	L	W	Wt. (lbs)
46814	1/2 or M12	17/32	1/2	1 1/16	1/2	1/4	5/8	2 1/2	1 1/4	.46
46815	1/2 or M12	17/32	1 1/4	1 3/16	1/2	1/4	3/4	4	1 1/4	.65
46816	1/2 or M12	17/32	2	1 5/16	1/2	1/4	7/8	6	1 1/4	.95
46817	5/8 or M16	21/32	1/2	1 3/16	5/8	1/4	5/8	3	1 1/4	.66
46818	5/8 or M16	21/32	1 1/4	1 3/16	5/8	3/8	3/4	5	1 1/2	.93
46819	5/8 or M16	21/32	2	1 5/16	5/8	3/8	7/8	7	1 1/2	1.36
46820	3/4 or M20	25/32	3/4	1 5/16	5/8	3/8	3/4	4	1 1/2	1.39
46821	3/4 or M20	25/32	1 1/2	1 1/2	5/8	3/8	1	6	1 1/2	1.94
46822	3/4 or M20	25/32	2 1/4	1 5/8	5/8	3/8	1 1/8	8	1 3/4	2.48

Fine Pitch





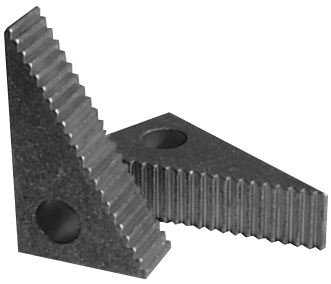
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N 50-54

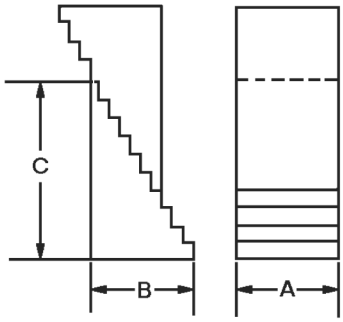
The step teeth of the Fine Pitch Steel Heel Straps match the Jergens Steel Step Blocks. These straps facilitate easier height adjustment on set-ups.

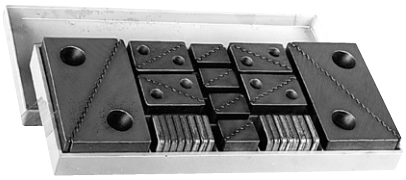
Part Number	Bolt Size	A	B	C	D	E	H	L	W	Wt. (lbs)
46834	1/2 or M12	9/16	1/2	1 1/16	1/2	1/4	1/2	2 1/2	1 1/8	.46
46835	1/2 or M12	9/16	1 1/4	1 3/16	1/2	1/4	3/4	4	1 1/4	.65
46836	1/2 or M12	9/16	2	1 5/16	1/2	1/4	7/8	6	1 1/4	.95
46837	5/8 or M16	11/16	1/2	1 3/16	5/8	1/4	5/8	2 1/2	1 1/4	.66
46838	5/8 or M16	11/16	1 1/4	1 3/16	5/8	3/8	3/4	4	1 1/2	.93
46839	5/8 or M16	11/16	2	1 5/16	5/8	3/8	7/8	6	1 1/2	1.36
46840	3/4 or M20	13/16	3/4	1 5/16	5/8	3/8	3/4	4	1 1/2	1.39
46841	3/4 or M20	13/16	1 1/2	1 1/2	5/8	3/8	1	6	1 5/8	1.94
46842	3/4 or M20	13/16	2 1/4	1 5/8	5/8	3/8	1 1/8	8	1 3/4	2.48

Adjustable Step Blocks

Aluminum — Coarse Pitch







1" & 2" Wide Adjustable Step Block Kits

Step blocks are made of aluminum to prevent damage to machine table surfaces.

Tooth design has no sharp edges which helps to prevent burrs and chip build-up in the steps. Blocks are completely interchangeable with each other, and with the Jergens Coarse Pitch Step Straps.

Standard (1" Width) Kit
21701

Included in Kit:

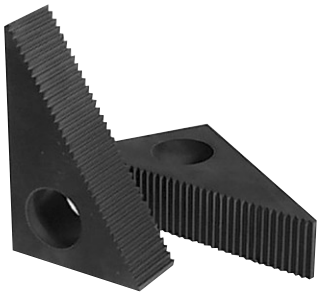
Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (lbs)
8	**21705**	1	5/8	1 1/16	11/64	.03
8	**21702**	1	1	1 3/4	11/64	.09
4	**21703**	1	2 3/16	3 3/4	11/64	.39
16	**21706**	Protective Pad			11/64	.02

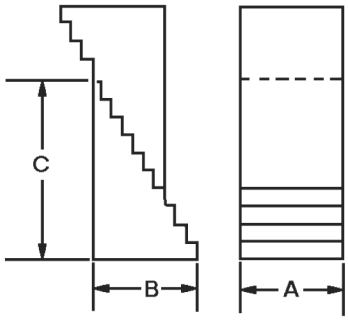
Heavy Duty (2" Width) Kit
21711

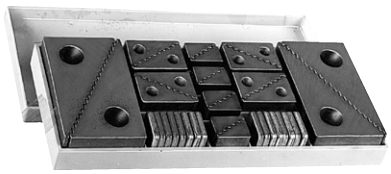
Included in Kit:

Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (lbs)
8	**21712**	2	5/8	1 1/16	11/64	.06
8	**21713**	2	1	1 3/4	11/64	.18
4	**21714**	2	2 3/16	3 3/4	11/64	.78
16	**21715**	Protective Pad			11/64	.04

Steel — Fine Pitch







Adjustable Step Block Kit

Blocks are completely interchangeable with each other, and with the Jergens Fine Pitch Step Straps.

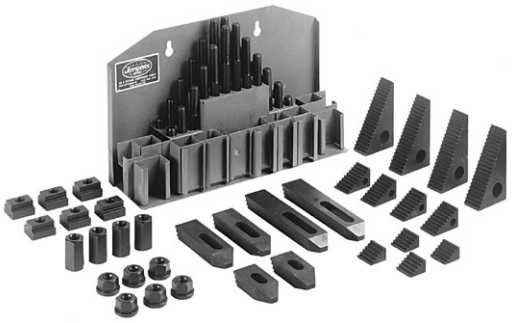
Adjustable Step Block Kit
21821

Included in Kit:

Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (oz)
8	**21831**	1	5/8	1 1/8	3/32	2
8	**21832**	1	1 1/16	1 3/4	3/32	4
4	**21833**	1	2 3/8	3 7/8	3/32	14
16	**21706**	Protective Aluminum Pad				

Step Blocks sold individually.

60-Piece Set-Up Kits
Aluminum Step Blocks



Kit with Metal Holder



Kit with Wood Holder

Each 60-Piece Set-Up Kit is supplied with either a non-marring wooden base or a heavy duty steel holder. Tooth design has no sharp edges, which helps to prevent burrs and chips from building up on the steps. The aluminum blocks will not mar precision machine tables.

Each Set-Up-Kit Includes:

- Six Table Saver T-Nuts
- Six Flange Nuts
- Six Step Heel Straps
- Four Coupling Nuts
- Twenty-four Studs: Four each of 3", 4", 5", 6" 7", 8" lengths
- Twelve Course Pitch Aluminum Step Blocks
- One T-Slot Cleaner
- One Wood or Metal Holder

Part Number		Stud T-Slot Width	Thread Size	Strap Lengths	Wt (lbs)
Metal Holder	Wood Holder				
45105	**45125**	9/16	1/2-13	2 1/2, 4, 6	20
45106	**45126**	5/8	1/2-13	2 1/2, 4, 6	20
45104	**45124**	11/16	1/2-13	2 1/2, 4, 6	20
45108	**45128**	11/16	5/8-11	3, 5, 7	30
45109	**45129**	3/4	5/8-11	3, 5, 7	30
45107	**45127**	13/16	5/8-11	3, 5, 7	30
—	**45131**	13/16	3/4-10	4, 6, 8	40
—	**45132**	7/8	3/4-10	4, 6, 8	40
—	**45130**	1 1/16	3/4-10	4, 6, 8	40

Metal kit holders are also sold seperately.
Same holder used for both kits.

1/2" Metal Holder	5/8" Metal Holder
45116	**45117**

60-Piece Set-Up Kits
Steel Step Blocks

Each 60-Piece Set-Up Kit is supplied with either a non-marring wooden base or a heavy duty steel holder. The fine pitch steel blocks are compatible with other standard step blocks and straps.

NOTE: The fine pitch blocks are not compatible with the Jergens course pitch aluminum blocks.

Each Set-Up Kit Includes:

- Six Table Saver T-Nuts
- Six Flange Nuts
- Six Step Heel Straps
- Four Coupling Nuts
- Twenty-four Studs: Four each 3", 4", 5", 6", 7", 8" lengths
- Twelve Fine Pitch Steel Step Blocks
- One Wood or Metal Holder

Part Number		Stud T-Slot Width	Thread Size	Strap Lengths	Wt. (lbs)
Metal Holder	Wood Holder				
45205	**45225**	9/16	1/2-13	2 1/2, 4, 6	20
45206	**45226**	5/8	1/2-13	2 1/2, 4, 6	20
45204	**45224**	11/16	1/2-13	2 1/2, 4, 6	20
45208	**45228**	11/16	5/8-11	2 1/2, 4, 6	30
45209	**45229**	3/4	5/8-11	2 1/2, 4, 6	30
45207	**45227**	13/16	5/8-11	2 1/2, 4, 6	30

40-Piece Clamping Kit



Contains the same quality components as the larger kits but without the step blocks and step heel straps. This Clamping Kit includes taper nose straps, T-nuts, coupling nuts, flange nuts, clamping heels and studs.

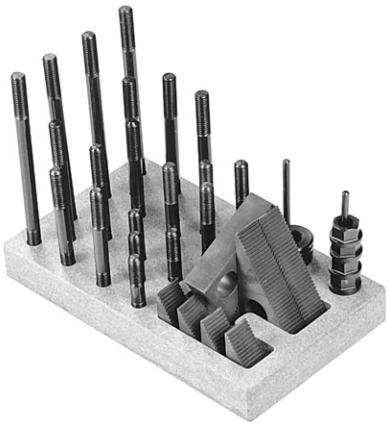
Each Clamping Kit Includes:

- Four Table Saver T-Nuts
- Twenty Studs:
  Four Each 4", 5", 6", 7", 8" lengths
- Four Adjustable Clamp Heels
- Four Flange Nuts
- Four Coupling Nuts
- Four Taper Nose Straps
- One T-Slot Cleaner
- One Wooden Holder

Part Number	T-Slot Width	Stud Thread Size	Strap Clamp	Adjustable Clamp Heel	Wt. (lbs)
45022	7/16*	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45023	1/2	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45021	9/16	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45025	9/16*	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45026	5/8	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45024	11/16	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45028	11/16*	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45029	3/4	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45027	13/16	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45031	13/16*	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40
45032	7/8	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40
45030	1 1/16	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40

*T-Nuts not hardened due to thin wall

Die Set-Up Kits



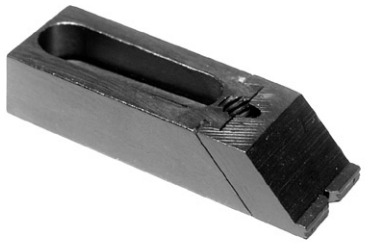
These Die Set-Up Kits can be used with any of the Jergens heavy duty straps; however, the kits are best suited **for use with forged strap clamps** found on page 6.51 thru 6.53.

Each Kit includes:

- Four Flange Nuts
- Four Heavy Duty Washers
- Twelve Steel Step Blocks
- Twenty Studs
- One Wooden Holder

Thread Size	Part Number	Stud Lengths
1/2-13	**44921**	3, 4, 5, 6, 8
5/8-11	**44922**	3, 4, 5, 6, 8
3/4-10	**44923**	4, 5, 6, 8, 10

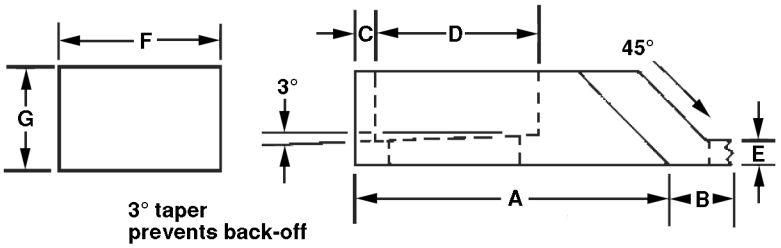
Toe Clamps
Small



- Steel or brass toe and special washer are included with each clamp
- Slotted for 5/16 or M8 Cap Screws
- Case hardened for maximun wear
- Black Oxide finish

Jergens Feature:
3° Taper Prevents Back-off

Toe Clamps are powerful, low profile clamps that grip on the side of the workpiece leaving the top surface open. This minimizes interference with cutting tools or measuring instruments. Ideal for use on mills, planers, jig borers, drill presses, and faceplates.



Part Number	Toe Material	Toe Style	A	B	C	D	E	F	G	Wt. (lbs)	Toe Only
46921	STEEL	STANDARD	1 1/2	1/2	1/16	3/4	1/8	1	5/8	.24	**46952**
46961	BRASS	STANDARD	1 1/2	1/2	1/16	3/4	1/8	1	5/8	.24	**46946**
46971	STEEL	HIGH GRIP	1 1/2	1/2	1/16	3/4	5/8	1	5/8	.26	**46948**
46981	BRASS	HIGH GRIP	1 1/2	1/2	1/16	3/4	5/8	1	5/8	.26	**46950**
46922	STEEL	STANDARD	2	1/2	1/16	1 1/4	1/8	1	5/8	.30	**46952**
46962	BRASS	STANDARD	2	1/2	1/16	1 1/4	1/8	1	5/8	.30	**46946**
46972	STEEL	HIGH GRIP	2	1/2	1/16	1 1/4	5/8	1	5/8	.32	**46948**
46982	BRASS	HIGH GRIP	2	1/2	1/16	1 1/4	5/8	1	5/8	.32	**46950**
46923	STEEL	STANDARD	2 1/2	1/2	1/16	1 3/4	1/8	1	5/8	.35	**46952**
46963	BRASS	STANDARD	2 1/2	1/2	1/16	1 3/4	1/8	1	5/8	.35	**46946**
46973	STEEL	HIGH GRIP	2 1/2	1/2	1/16	1 3/4	5/8	1	5/8	.37	**46948**
46983	BRASS	HIGH GRIP	2 1/2	1/2	1/16	1 3/4	5/8	1	5/8	.37	**46950**

* Replacement Parts available, contact customer service.

Small Toe Clamp Kits



Each Clamp Kit Includes:
- Six Toe Clamps:Two of each length (1 1/2", 2", 2 1/2")
- Six Low Grip Steel Toes
- Six Toe Clamp Nuts
- Six Protective Washers
- One T-Wrench
- One Wooden Holder

Part Number	Table Slot	Toe Clamps	Toe Clamp Nuts	Washers	lbs Per Kit
44901	3/8	**46921, 46922, 46923**	**46931**	**46942**	3
44902	7/16	**46921, 46922, 46923**	**46932**	**46942**	3
44903	1/2	**46921, 46922, 46923**	**46933**	**46942**	3
44904	9/16	**46921, 46922, 46923**	**46934**	**46942**	3
44905	5/8	**46921, 46922, 46923**	**46935**	**46942**	3

Slotted for 5/16" or M8 Socket Head Cap Screws

* Replacement Parts available, contact customer service.

Toe Clamps

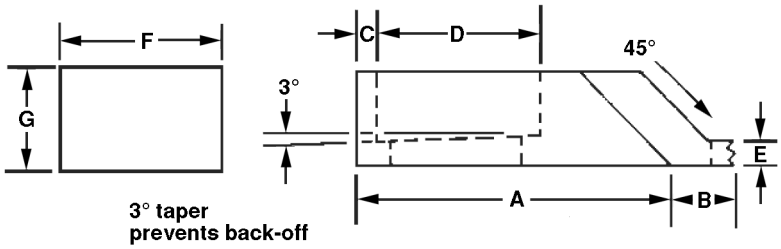


Jergens Feature:

3° Taper Prevents Back-off

Toe Clamps are powerful, low profile clamps that grip on the side of the workpiece leaving the top surface open. This minimizes interference with cutting tools or measuring instruments. Ideal for use on mills, planers, jig borers, drill presses, and faceplates.

- Steel or brass toe and special washer are included with each clamp.
- Slotted for 1/2" or M12 Cap Screws
- Low Carbon Steel hardened for maximum wear
- Black Oxide finish



Part Number	Toe Material	Toe Style	A	B	C	D	E	F	G	Wt. (lbs)	Toe Only
46926	STEEL	STANDARD	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	1.0	**46953**
46966	BRASS	STANDARD	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	1.0	**46947**
46976	STEEL	HIGH GRIP	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	1.3	**46949**
46986	BRASS	HIGH GRIP	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	1.3	**46951**
46927	STEEL	STANDARD	4 11/16	13/16	1/2	2 3/4	1/4	1 1/2	7/8	1.4	**46953**
46967	BRASS	STANDARD	4 11/16	13/16	1/2	2 3/4	1/4	1 1/2	7/8	1.4	**46947**
46977	STEEL	HIGH GRIP	4 11/16	13/16	1/2	2 3/4	7/8	1 1/2	7/8	1.7	**46949**
46987	BRASS	HIGH GRIP	4 11/16	13/16	1/2	2 3/4	7/8	1 1/2	7/8	1.7	**46951**
46928	STEEL	STANDARD	6 5/8	13/16	1	3 3/4	1/4	1 1/2	7/8	2.0	**46953**
46968	BRASS	STANDARD	6 5/8	13/16	1	3 3/4	1/4	1 1/2	7/8	2.0	**46947**
46978	STEEL	HIGH GRIP	6 5/8	13/16	1	3 3/4	7/8	1 1/2	7/8	2.3	**46949**
46988	BRASS	HIGH GRIP	6 5/8	13/16	1	3 3/4	7/8	1 1/2	7/8	2.3	**46951**

* 5/8 or M16 Cap Screw Slot and replacement parts available, contact customer service.

Large Toe Clamp Kits



Each Clamp Kit Contains:

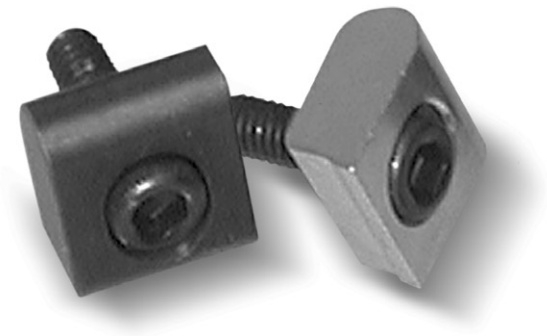
- Six Toe Clamps: Two of each length (3 1/4", 4 11/16", 6 5/8")
- Four Low Grip Steel Toes
- Six Toe Clamp Nuts
- Six Protective Washers
- One T-Wrench
- One Wooden Holder

Part Number	Table Slot	Toe Clamps	Toe Clamp Nuts	Washers	lbs Per Kit
44906	9/16	**46926, 46927, 46928**	**46936**	**46943**	11
44907	5/8	**46926, 46927, 46928**	**46937**	**46943**	12
44909	11/16	**46926, 46927, 46928**	**46938**	**46943**	12
44910	13/16	**46926, 46927, 46928**	**46939**	**46943**	13
44911	7/8	**46926, 46927, 46928**	**46940**	**46943**	14
44912	1	**46926, 46927, 46928**	**46941**	**46943**	15

Slotted for 1/2" or M12 Socket Head Cap Screws

* 5/8 or M16 Cap Screw Slotted Kits and replacement parts available, contact customer service.

Lo-Profile Micro™ Clamps



Problem: **You require a clamping device which can grip low on a work piece, has exceptional horizontal *and* vertical holding force, and can be mounted below the fixture plate surface.**

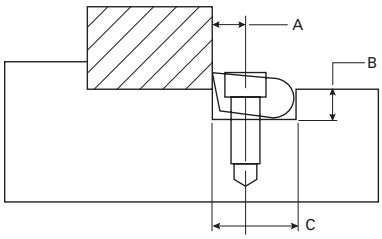
Solution: **Jergens new Lo-Profile Micro clamps are the answer!**

Material:
- Available in tool steel or brass
- Extraordinary horizontal and vertical force
- Extremely low profile
- Very small foot print
- High resistance to pull-out
- Choose among three sizes with inch or metric screws
- Knife and blunt edge styles

Lo-Profile Micro™ Clamps

Part Number	Type	A	B	C	Screw Size	Max.* Holding Force (lbs)	Travel (in)	Torque (in lbs)	Clamps Per Package
13201	Tool Steel, Knife Edge	.150	.140	.375	4-40	650	.0075	16	8
13202	Tool Steel, Blunt Edge	.150	.140	.375	4-40	650	.0075	16	8
13203	Brass, Blunt Edge	.150	.140	.375	4-40	200	.0075	5	8
13211	Tool Steel, Knife Edge	.200	.187	.500	8-32	1500	.016	50	8
13212	Tool Steel, Blunt Edge	.200	.187	.500	8-32	1500	.016	50	8
13213	Brass, Blunt Edge	.200	.187	.500	8-32	400	.016	25	8
13221	Tool Steel, Knife Edge	.300	.280	.750	1/4-20	3600	.024	200	6
13222	Tool Steel, Blunt Edge	.300	.280	.750	1/4-20	3600	.024	200	6
13223	Brass, Blunt Edge	.300	.280	.750	1/4-20	950	.024	50	6

* Combination horizontal and vertical force.

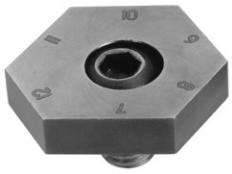


Metric Lo-Profile Micro™ Clamps

Part Number	Type	A	B	C	Screw Size	Max.* Holding Force (N)	Travel (mm)	Torque (N•m)	Clamps Per Packages
13251	Tool Steel, Knife Edge	3.81	3.55	9.52	M2.5 x .45	2,800	.190	1.8	8
13252	Tool Steel, Blunt Edge	3.81	3.55	9.52	M2.5 x .45	2,800	.190	1.8	8
13253	Brass, Blunt Edge	3.81	3.55	9.52	M2.5 x .45	875	.190	0.6	8
13261	Tool Steel, Knife Edge	5.08	4.75	12.70	M4 x .70	6,600	.406	5.6	8
13262	Tool Steel, Blunt Edge	5.08	4.75	12.70	M4 x .70	6,600	.406	5.6	8
13263	Brass, Blunt Edge	5.08	4.75	12.70	M4 x .70	1,750	.406	2.8	8
13271	Tool Steel, Knife Edge	7.62	7.11	19.05	M6 x 1.0	16,000	.610	22.5	6
13272	Tool Steel, Blunt Edge	7.62	7.11	19.05	M6 x 1.0	16,000	.610	22.5	6
13273	Brass, Blunt Edge	7.62	7.11	19.05	M6 x 1.0	4,200	.610	5.6	6

* Combination horizontal and vertical force.

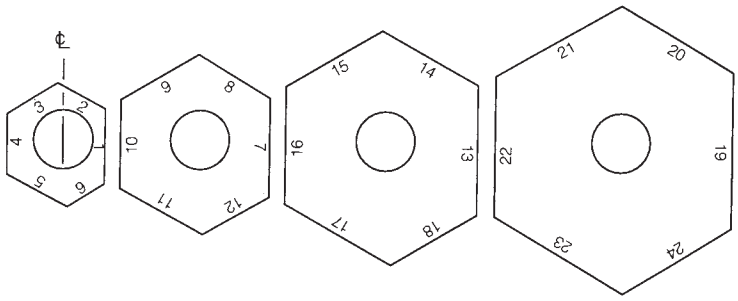
Adjustable Micro™ Clamps



Measured from the centerline, each face of these low profile clamps increases 1mm (.0394) from the smallest to the largest face.

Adjustable Micro Clamps decrease design and set-up times for modular fixtures, work cubes, and standard fixtures. Without changing hole locations, clamping range from 12mm to 35mm can be achieved.

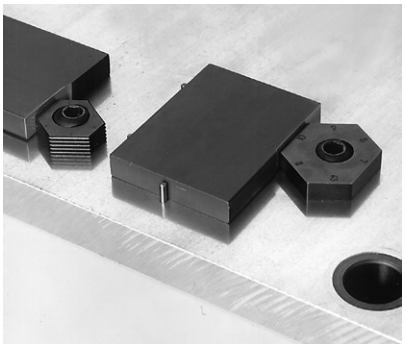
The clamps are available with either smooth or serrated faces which make them ideal for clamping machined parts, castings, and rough cut stock. The clamps work with a cam action, always following the contour of the workpiece for maximum surface contact.

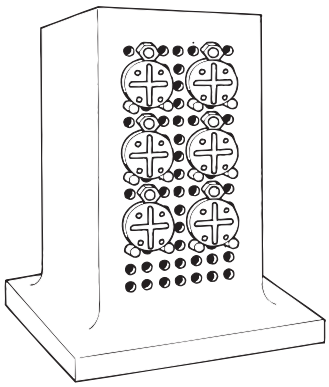


- Cam action
- Low profile
- Available in four sizes
- Heat treated and plated
- Serrated or smooth edges
- Adjustable clamps and stops
- Includes Cam Screw

Face #	Distance From Center Line	Face #	Distance From Center Line	Face #	Distance From Center Line	Face #	Distance From Center Line
1	12mm (.4724)	7	18mm (.7086)	13	24mm (.9449)	19	30mm (1.1811)
2	13mm (.5118)	8	19mm (.7480)	14	25mm (.9842)	20	31mm (1.2205)
3	14mm (.5512)	9	20mm (.7874)	15	26mm (1.0236)	21	32mm (1.2598)
4	15mm (.5906)	10	21mm (.8268)	16	27mm (1.0630)	22	33mm (1.2992)
5	16mm (.6299)	11	22mm (.8661)	17	28mm (1.1024)	23	34mm (1.3386)
6	17mm (.6693)	12	23mm (.9055)	18	29mm (1.1417)	24	35mm (1.3780)

Locking Screw is 1/2-13 for inch sizes and 12M for metric sizes; total distance of movement is .100".



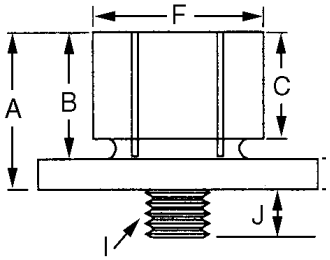


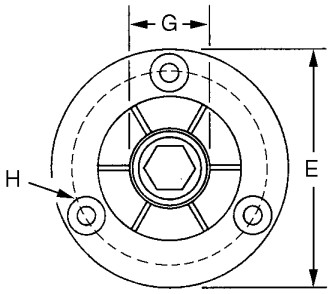
Inch Part Number	Metric Part Number	Description
68601	**68651**	1-6 smooth
68602	**68652**	7-12 smooth
68603	**68653**	13-18 smooth
68604	**68654**	19-24 smooth
68611	**68661**	1-6 serrated
68612	**68662**	7-12 serrated
68613	**68663**	13-18 serrated
68614	**68664**	19-24 serrated

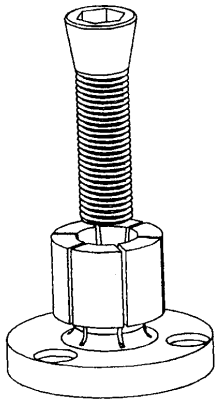
All clamps include a cam screw.
Clamps are 10mm (.394) thick.

ID Expansion Clamp





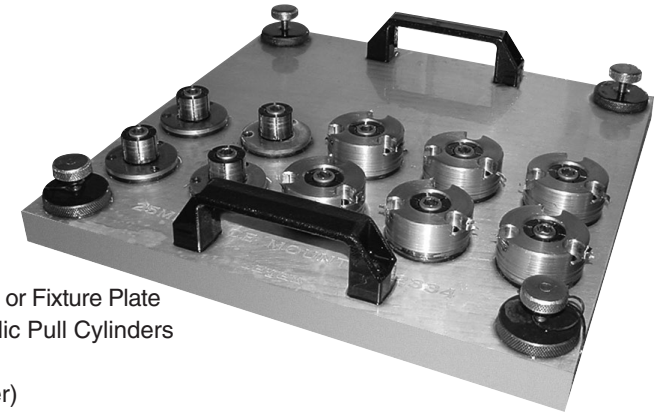




The ID expansion clamp is the ideal way to hold parts on an inside diameter for multiple machining on a vertical or horizontal machining center.

The larger diameter of the clamp is held to a close tolerance for precision locating in a machined pocket on work cubes and fixture plates.

The customer machines the mild steel clamp to match the bore of the part ensuring proper fit. Often times the clamps can be remachined for different size jobs.



- Body Material: Mild Steel
- Low Profile
- Ideal for Secondary Operations on Lathe Parts
- Easily Machined to Size on Lathe or Mill
- Excellent for Palletized Setups
- Allows More Parts Per Workcube or Fixture Plate
- Tighten with Hex Key or Hydraulic Pull Cylinders (Drill clearance hole for longer bolt into hydraulic cylinder)
- Instructions included with each clamp

Part Number	A	B	C	D	+.000 -.002 E	F	G+	H*	I	J	Wt. (lbs)
68401	.42	.30	.24	.12	.787	.29	.16	2-56 on .540 BHC	2-56	.16	.03
68402	.86	.63	.59	.23	1.170	.49	.28	6-32 on .825 BHC	8-32	.30	.11
68403	.98	.75	.59	.23	1.240	.56	.48	6-32 on .910 BHC	1/4-20	.50	.14
68404	.98	.75	.59	.23	1.476	.79	.53	6-32 on 1.140 BHC	5/16-18	.56	.22
68405	1.13	.88	.69	.25	1.968	1.06	.71	8-32 on 1.550 BHC	3/8-16	.71	.45
68406	1.25	1.0	.81	.25	2.205	1.39	.90	8-32 on 1.790 BHC	1/2-13	.71	.67
68407	1.56	1.25	1.06	.31	2.736	1.65	1.15	10-32 on 2.200 BHC	5/8-11	.79	1.34
68408	1.56	1.25	1.06	.31	2.972	2.03	1.15	10-32 on 2.515 BHC	5/8-11	.79	1.78
68409	1.79	1.48	1.27	.31	4.232	3.06	1.15	1/4-20 on 3.646 BHC	5/8-11	.79	4.05
68410	1.79	1.48	1.27	.31	5.232	4.06	1.15	1/4-20 on 4.648 BHC	5/8-11	.79	6.65

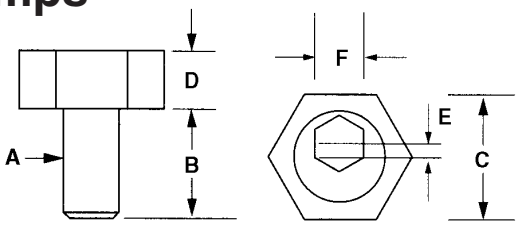
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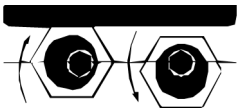
Part Number	A	B	C	D	+0.00 -0.05 E	F	G+	H*	I	J	Wt. (kg)
68829	10.7	7.6	6.1	3.0	20.0	7.4	4.1	M2 on 13.7 BHC	M2	4.1	.24
68830	21.8	16.0	15.0	5.9	29.72	12.4	8.0	M3 on 20.95 BHC	M4	7.2	.24
68831	24.9	19.0	15.0	5.9	31.5	14.2	12.2	M3 on 23.1 BHC	M6	11.2	.31
68832	24.9	19.0	15.0	5.9	37.5	20.0	13.5	M3 on 29.0 BHC	M8	13.2	.48
68833	28.6	22.2	17.5	6.4	50.0	27.0	18.0	M4 on 39.4 BHC	M10	16.3	.92
68834	31.8	25.4	20.6	6.4	56.0	35.3	23.0	M4 on 45.5 BHC	M12	20.3	1.45
68835	39.6	31.8	27.0	7.9	69.5	42.0	29.3	M5 on 55.9 BHC	M16	21.4	3.92
68836	39.6	31.8	27.0	7.9	75.5	51.5	29.3	M5 on 63.9 BHC	M16	21.4	3.63
68837	45.5	37.6	32.3	7.9	107.5	77.7	29.3	M6 on 92.6 BHC	M16	19.3	8.91

* (3) Mounting Screws Included
+ Minimum diameter the “F” dimension can be machined too.

Micro™ Clamps







Jergens Micro Clamps feature both high hold down forces and low profiles, which makes them ideal for building fixtures on Ball Lock fixturing plates. Two simple components make them work: a hardened steel socket cap screw with an offset head and a hexagonal washer. A half turn tightens or loosens the workpiece.

- Low profile makes computer programming easier
- Cam action provides fast, strong clamping
- Small size allows more parts per load
- Requires only a tapped hole in your fixture
- Available in stainless steel
- Note clockwise rotation recomended workpiece stop should be on the right of the Clamp.

Part Number Steel	Part Number Stainless	A	B	C	D	Total Distance of Measurement E	Key Size F	G*	Maximum Holding Force (lbs)
68501	–	8-32	.350	.312	.110	.030	5/64	.150	205
68502	–	10-32	.340	.500	.160	.040	3/32	.250	350
68503	**68513**	1/4-20	.470	.625	.190	.040	1/8	.308	800
68505		5/16-24	.460	.812	.190	.040	3/16	.400	750
68506	**68515**	5/16-18	.460	.812	.190	.040	3/16	.400	750
68507	–	3/8-16	.710	.812	.250	.050	3/16	.400	2,000
68509	–	1/2-13	.900	1.000	.375	.100	5/16	.500	4,000
68511	–	5/8-11	1.125	1.187	.500	.100	3/8	.590	6,000

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

Metric

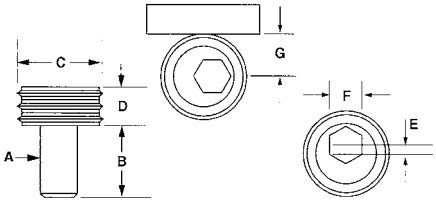
Part Number Steel	Part Number Stainless	A	B	C	D	Total Distance of Measurement E	Key Size F	G*	Maximum Holding Force (N)
68571	–	M4x0.7	9.6	7.93	2.8	.76	3	3.8	910
68572	**68551**	M6x1.0	11.2	15.86	4.75	1.01	4	7.8	3,558
68573	**68553**	M8x1.25	15.0	20.61	4.75	1.01	5	10.15	3,355
68574	–	M10x1.5	19.0	20.61	6.35	1.52	7	10.15	8,895
68575	–	M12x1.75	22.8	25.38	9.52	2.03	8	12.7	17,790
68576	–	M16x2.0	28.5	30.13	12.69	2.54	12	15.0	26,680

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

Replacement Screws available, contact customer service for more information.

Knife Edge Clamps





Knife edge clamps can be used for clamping rough cut stock, castings, or any material that requires a hardened clamping element. Hardened steel, brass-plated.

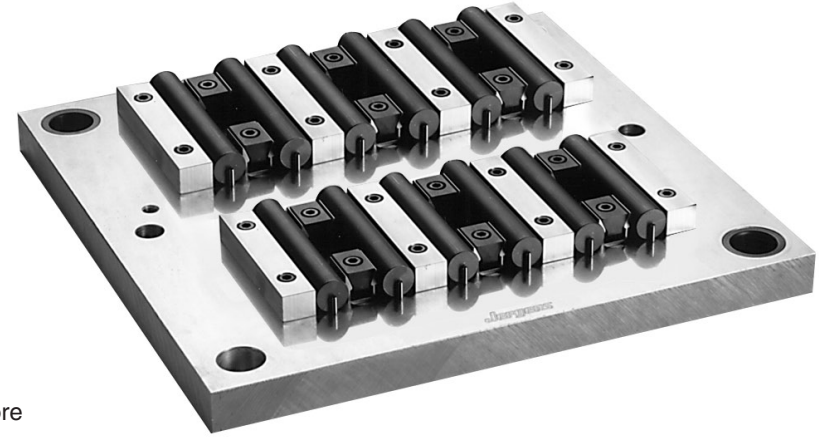
Replacement Screws available, contact customer service for more information.

Part Number	A	B	C	D	E	F	G*	Torque (ft. lbs)	Max. Holding Force (lbs)
68547	3/8-16	0.710	0.812	0.250	0.050	3/16	0.400	16.6	2,000
68548	1/2-13	0.900	1.000	0.375	0.100	5/16	0.500	52.0	4,000
68549	5/8-11	1.125	1.187	0.500	0.100	3/8	0.590	80.0	6,000
Metric								**(Nm)**	**(N)**
68840	M10	19.0	1.52	20.60	6.35	7M	10.15	28	8,895
68841	M12	22.8	2.03	25.40	9.52	8M	12.70	88	17,790
68842	M16	28.5	2.54	30.15	12.70	12M	15.00	135	26,680

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

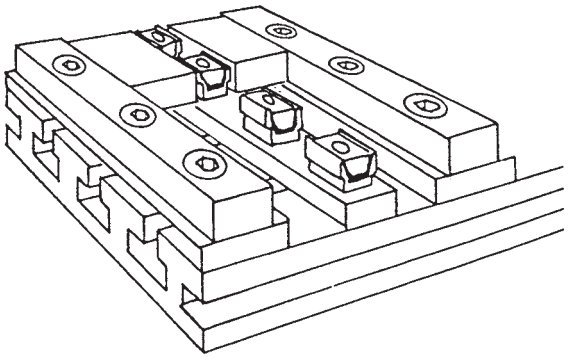
Expanding Micro™ Clamps

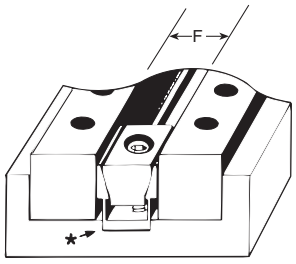


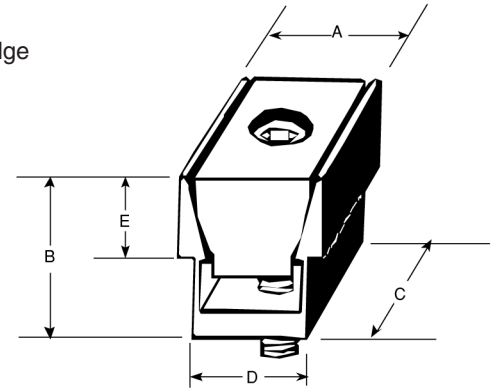


Jergens Expanding Micro Clamps allow you to fixture more parts on your fixture plates. The unique expanding design can hold two parts at once when used with a positive stop.

- Minimizes tool changes
- Holds two parts with equilateral clamping action
- Ideal for clamping flat or round work pieces
- Reduces wasted space
- Aluminum Housing, Steel Wedge







*A shallow slot, a little wider than D dimension, will insure clamp remains in line with workpiece.

Part Number	A	B	C	D*	E	F†	Thread Size	Maximum Spread	Maximum Holding Force (lbs)	Key Size
68706	.240	.250	.320	.210	.100	.250	2-56	.265	200	5/64
68707	.360	.380	.470	.310	.185	.375	4-40	.395	310	3/32
68701	.485	.500	.625	.410	.220	.500	8-32	.540	500	9/64
68702	.735	.750	.940	.632	.375	.750	1/4-20	.800	1500	3/16
68703	.980	1.00	1.250	.820	.500	1.000	5/16-18	1.060	2000	1/4
68704	1.470	1.50	1.875	1.215	.750	1.500	1/2-13	1.590	3500	3/8
68705	1.960	2.00	2.500	1.625	1.000	2.000	5/8-11	2.100	6000	1/2

Metric

Part Number	A	B	C	D*	E	F†	Thread Size	Maximum Spread	Maximum Holding Force (N)	Key Size
68716	6.1	6.9	8.1	5.3	3.6	6.4	M2	6.7	880	1.5
68717	9.1	9.7	11.9	7.9	4.7	9.5	M2.5	10	1,350	2
68711	12.3	14.5	15.9	10.4	5.6	12.7	M4	13.2	2,224	3
68712	18.6	19.0	23.8	16.1	9.5	19.0	M6	20.3	6,670	5
68713	24.8	25.9	31.7	20.8	12.7	25.4	M8	26.9	8,895	6
68714	37.3	38.6	47.6	30.8	19.0	38.1	M12	39.9	15,565	10
68715	49.7	51.5	63.5	41.2	25.4	50.8	M16	53.0	26,690	14

†F is the distance needed between workpieces for clamp clearance. Drill and tap mounting hole on the center of F dimension.

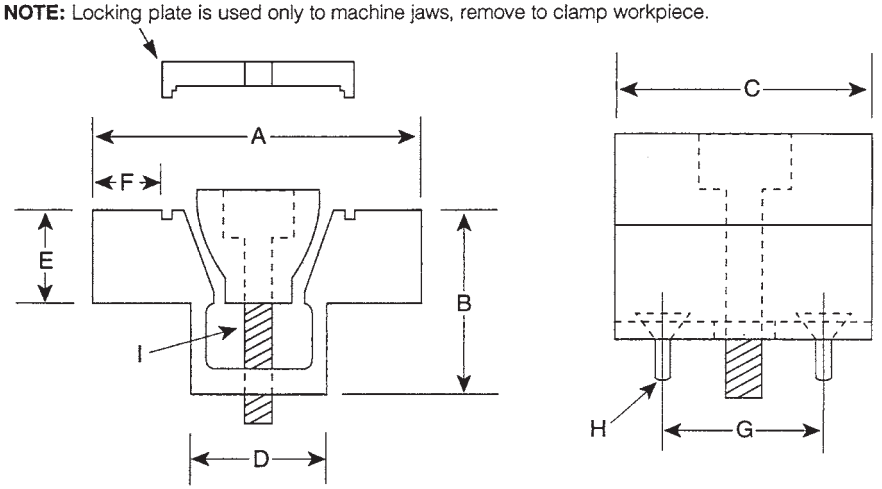
Machinable Expanding Micro™ Clamp



The compact Machinable Expanding Micro™ Clamp is available with extra material on the clamping jaw so it can be machined to conform to the shape of your workpiece - enabling you to fixture unusual applications easily. The specially designed steel wedge spreads the clamping force uniformly on both sides of the aluminum channel. Clamps may be ordered with a unique locking plate to make the clamp rigid while machining the jaw to your specifications, without vibration.

- Material: Channel 7075-76 Alumnium
- Mounting Screws Included
- Compact Design
- Allows more parts to be mounted on Fixture

NOTE: Locking plate is used only to machine jaws, remove to clamp workpiece.



Part No. With Locking Plate	Part No. Without Locking Plate	A*	B	C	D	E	F†	G	Mounting Screw **H	I
68770	**68771**	1.125	0.50	0.62	0.420	0.18	0.18	0.400	2-56	8-32
68772	**68773**	1.500	0.75	0.94	0.632	0.37	0.26	0.624	6-32	1/4-20
68774	**68775**	2.000	1.00	1.25	0.820	0.50	0.39	0.812	6-32	5/16-18
68776	**68777**	3.000	1.50	1.87	1.215	0.75	0.62	1.200	10-32	1/2-13
68778	**68779**	4.000	2.00	2.50	1.625	1.00	0.80	1.625	1/4-20	5/8-11

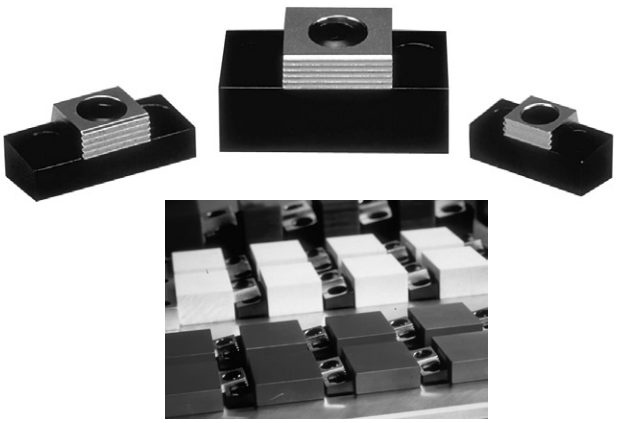
* The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the center of “A” dimension.
† The amount of machinable stock on jaws.
** Mounting Screws Included

Metric

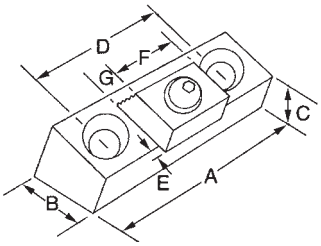
Part No. With Locking Plate	Part No. Without Locking Plate	A*	B	C	D	E	F†	G	Mounting Screw **H	I
68870	**68871**	28.6	12.7	15.7	10.67	6.3	4.6	10.16	M2	M4
68872	**68873**	38.1	19.1	23.9	16.05	9.4	6.6	15.87	M4	M6
68874	**68875**	50.8	25.4	31.8	20.83	12.7	9.9	20.62	M4	M8
68876	**68877**	76.2	38.1	47.5	30.86	19.1	15.7	30.48	M5	M12
68878	**68879**	101.6	50.8	63.5	41.28	25.4	20.3	41.28	M6	M16

* The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the center of “A” dimension.
† The amount of machinable stock on jaws.
** Mounting Screws Included

Micro™ Toe Clamps



This cam action fixture clamp provides positive down force while using very little space on the fixture. Workpieces can be clamped in series by using the back surface of a clamp to locate the next workpiece. The hardened steel clamping element has both a smooth surface for machined workpieces and a serrated clamping surface for rougher work. The height of the clamp can be adjusted by milling the slot deeper in the fixture plate.



Part Number	A	B	C	D	E†	F	G	Cam Screw	Distance of Movement	Mounting Screws
68731	1.70	.75	.50	1.00	.090	.75	.25	68527	.050	5/16 - 18 x 3/4 LH
68732	2.12	1.00	.45	1.32	.110	1.00	.38	68529	.100	3/8 - 16 x 3/4 LH
68733	2.95	1.50	.99	2.00	.130	1.50	.50	68531	.100	1/2 - 13 x 1 1/4 SHCS

† "E" is the distance needed between the front of the clamp base and the workpiece.

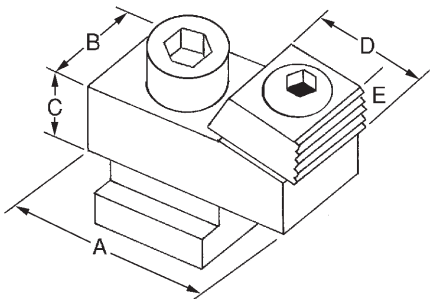
Metric

Part Number	A	B	C	D	E†	F	G	Cam Screw	Distance of Movement	Mounting Screws
68781	43.2	19.0	12.7	25.4	2.3	19.0	6.4	M10	1.6	M8
68782	54.0	25.4	11.4	33.5	2.8	25.4	9.7	M12	2.0	M10
68783	75.0	38.1	25.2	50.8	3.3	38.1	12.7	M16	2.5	M12

† "E" is the distance needed between the front of the clamp base and the workpiece.

Micro™ T-Slot Toe Clamps





This clamp is like the Micro Toe Clamp, only it is designed to be used in the T-slots of machine tables. It provides positive down force while maintaining a low profile. The hardened steel clamping element has both a smooth surface for machined work pieces and a serrated clamping surface for rougher work.

A	B	C	D	E
1.94	1.12	.62	1.00	.38

Metric

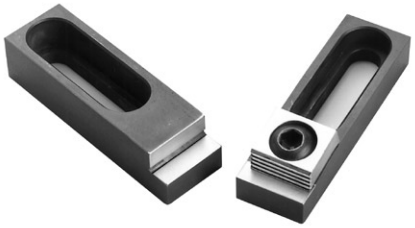
A	B	C	D	E
50	28.5	15.7	25.4	9.6

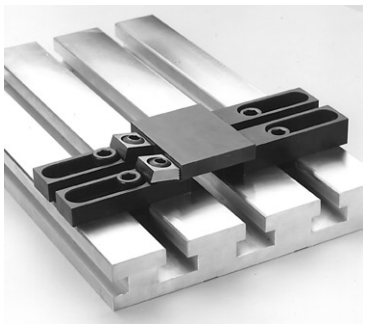
Part Number	T-Slot Size
68741	9/16
68742	5/8
68743	11/16
68744	3/4

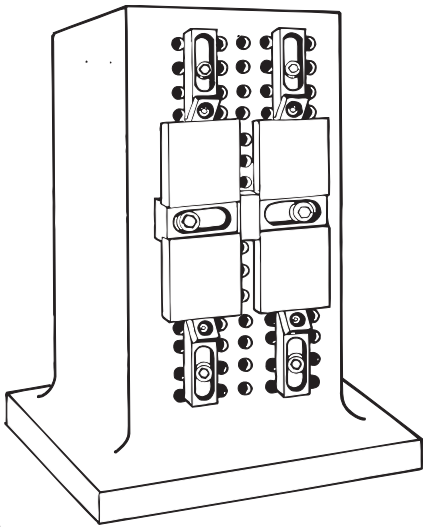
Metric

Part Number	T-Slot Size
68791	14
68792	16
68793	18
68794	No T-Nut

Micro™ Edge Clamps

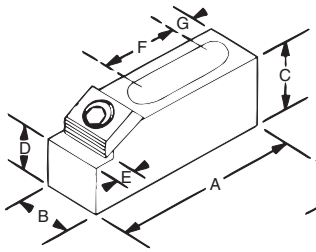




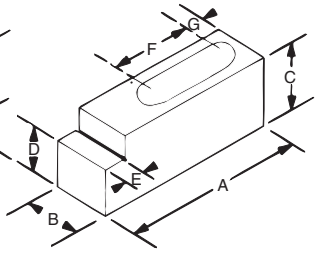


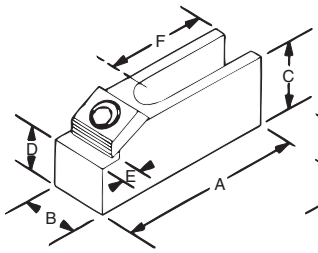
The Micro Edge Clamp offers increased versatility through its unique elevated clamping abilities.

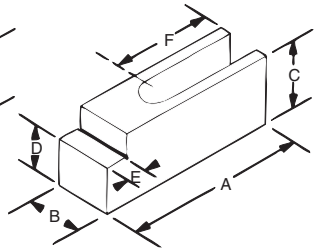
- Workpiece is elevated for through milling and drilling
- Cam action provides positive holddown force
- Provides flexible set-ups for hard to hold parts
- Works in plates, both with tapped hole layouts or T-slot configurations
- Can be mounted vertically or horizontally
- Built-in stops locate workpiece for repeat positioning
- Larger sizes are ideal for mold shop applications
- Tapered mounting slot prevents movement when clamping pressure is applied
- Hardened steel clamping element, low carbon steel body



Closed slot style







Open slot style

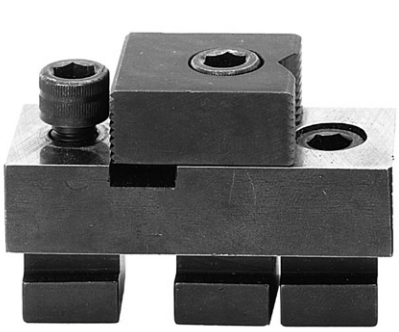
Inch

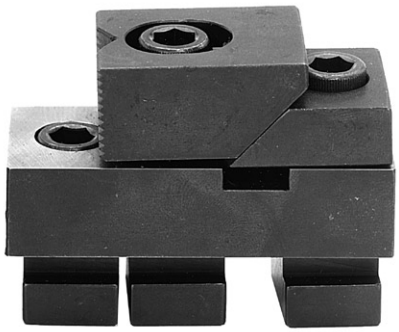
Part Number	Item	A	B	C	+.0000 -.0005 D	E	F	G	Cam Screw Part Number	Mounting Screw	Slot
68721	Clamp	2.50	.75	.62	.4600	.31	.83	.53	68527	5/16	Closed
68722	Stop	2.50	.75	.75	.4600	.31	1.11	.53	N/A	5/16	Closed
68723	Clamp	3.75	1.12	.62	.4800	.37	1.68	.50	68529	1/2	Closed
68724	Stop	3.75	1.12	.87	.4800	.37	1.68	.50	N/A	1/2	Closed
68725	Clamp	4.21	1.50	1.62	1.3780	.37	1.82	N/A	68535	5/8	Open
68726	Stop	4.21	1.50	2.00	1.3780	.37	1.82	N/A	N/A	5/8	Open

Metric

Part Number	Item	A	B	C	+.0000 -.0130 D	E	F	G	Cam Screw Part Number	Mounting Screw	Slot
68821	Clamp	63.5	19.1	15.8	11.68	8.0	21.1	13.5	68532	M8	Closed
68822	Stop	63.5	19.1	19.1	11.68	8.0	28.2	13.5	NA	M8	Closed
68823	Clamp	95.3	28.5	15.8	12.19	9.4	42.7	12.7	68534	M12	Closed
68824	Stop	95.3	28.5	22.1	12.19	9.4	42.7	12.7	NA	M12	Closed
68825	Clamp	107.0	38.1	41.2	35.00	9.4	46.2	NA	68535	M16	Open
68826	Stop	107.0	38.1	50.8	35.00	9.4	46.2	NA	NA	M16	Open

Modular Mini Vise





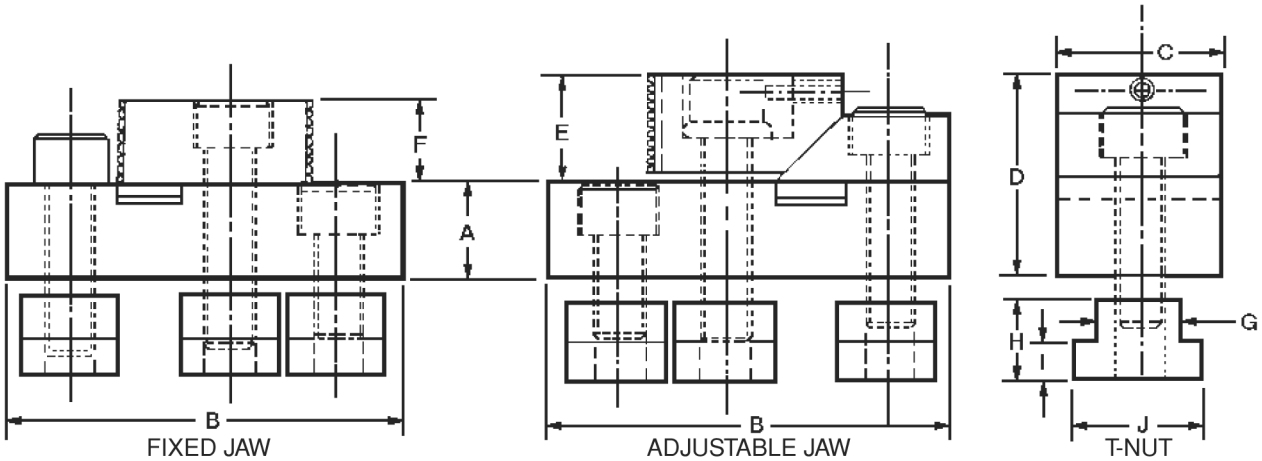
- Material: C-1018
- Finish: Black Oxide
  Case Hardened 58-62 Rc

Description	Part Number
Fixed Jaw Clamp	**46711**
Adj. Jaw Clamp	**46721**
T-Slot Nut	**46731**

The Jergens Modular Mini Vise provides accurate location and positive holding. The bases are hardened and ground to the same height as Jergens Rest Pads for accurate location. The jaws are serrated and hardened to provide positive holding. These versatile clamps may be used as shown, or the jaws may be reversed to allow the workpiece to rest on the machine table or fixture base. The clamps can be made part of a dedicated fixture by removing the T-nuts and fastening the 3/8-16" cap screws directly to the fixture.

To use the Jergens Modular Mini Vise: position the fixed jaw clamp and tighten all three cap screws to secure the clamp. Position the adjustable clamp and tighten the outside capscrews. Insert the workpiece and tighten the center cap screw. The adjustable jaw will force the workpiece down against the base and over against the fixed jaw clamp.

The 46711 clamp has a fixed jaw for locating.
The 46721 clamp has an adjustable jaw for clamping.
Each clamp is supplied with three 3/8-16" cap screws and three 46731 T-nuts.



FIXED JAW **46711**

ADJUSTABLE JAW **46721**

T-NUT **46731**

+.0000 -.0005 A	B	C	Maximum Height D	E	F	Table Slot G	H	I	J
.7205	3	1 1/4	1-9/16	3/4	5/8	5/8	5/8	11/32	1

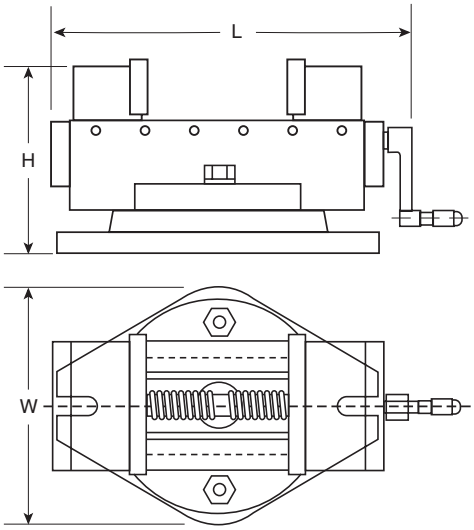
Precision Self Centering Vises with Swivel Base

Cast Iron Shop Vises



Characteristics

Made of close grained high tensile cast iron. Jaws ground and Hardened 55±3 HRC. Swivel base provided with positive locking and adjustable through 360°. Automatically adjusts work piece to its center. Opposite threads for quick and accurate centering.



Technical Data

Part No.	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110080	2	50	2	50	1	25	6 3/4	171	3 3/4	95	3 1/8	80	3.25
110081	4	100	4	100	1 5/8	42	10	254	6 1/2	165	5 1/2	140	16.00
110082	5	125	5	125	2	50	11 1/2	292	7 3/4	195	6	150	22.00
110083	6	150	6	150	2	50	14 1/2	367	8	200	6 3/8	162	32.00

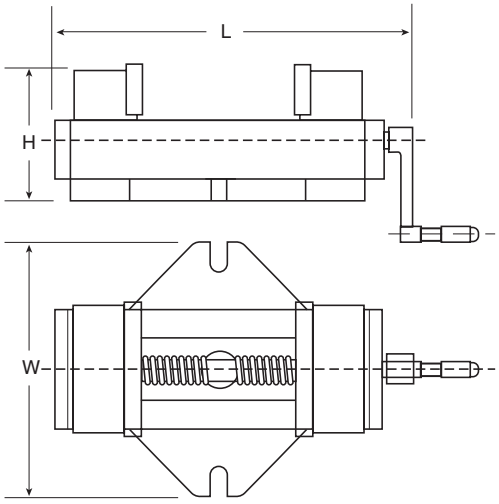
Precision Self Centering Vises (Low Profile)

Cast Iron Shop Vises



Characteristics

Made of close grained high tensile cast iron. Jaws ground and Hardened 55±3 HRC. Automatically adjusts workpiece to its center. Opposite threads for quick and accurate centering. This is a low profile vise.



Technical Data

Part No.	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110085	3	75	5	127	1 3/8	35	12	304	6	150	3	75	6.75
110086	4	100	4	100	1 3/4	44	10 1/2	266	8 1/2	215	4 1/4	107	13.00

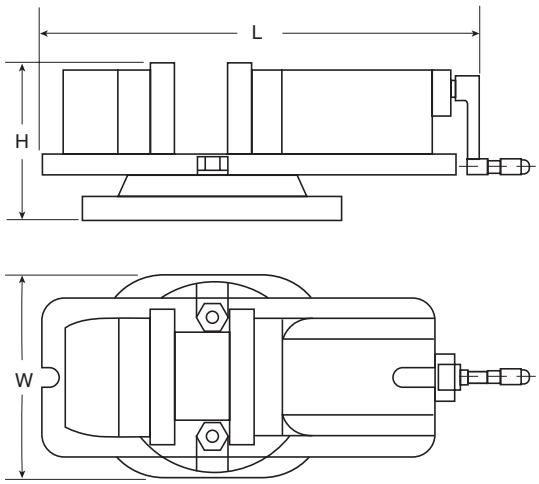
Milling Machine Vises with Swivel Base (Heavy Duty)

Cast Iron Shop Vises



Characteristics

Manufactured from close grained high tensile cast iron. Swivel is full 360°. This is very useful for heavy duty milling jobs. Vise is low height for maximum clearances. Jaws are fully ground and precision with parallelism of 0.0012 (30 microns) the hardness of jaws is 55±33 HRC.



Technical Data

Part No.	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110230	4	100	4	100	1 3/4	45	15	381	8	200	5	125	19.00
110231	6	150	6	150	2 3/16	55	19	482	10 1/2	267	5 3/4	146	39.00
110232	8	200	8	200	2 3/8	60	24	609	12	304	6 1/4	159	63.00

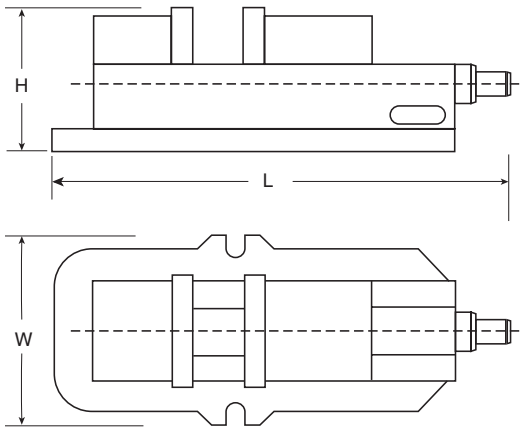
Machine Vises

Cast Iron Shop Vises



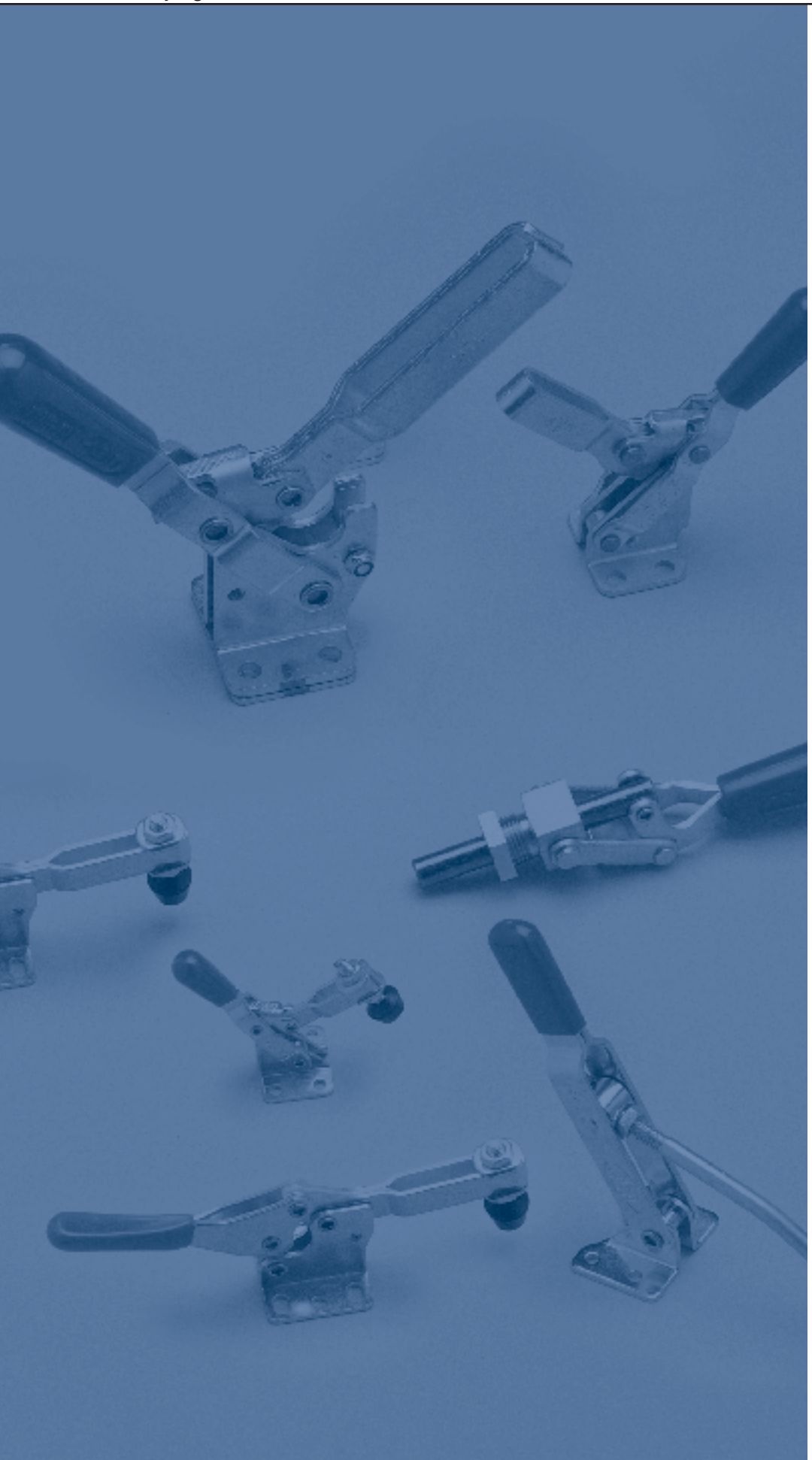
Characteristics

Manufactured from graded cast iron and precision ground. These vises have a needle bearing thrust collar. Vise jaws are in pairs and replaceable.



Technical Data

Part No.	Jaw Width		Jaw Opening		Jaw Depth		Length		Width		Height		Net Weight
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Kgs.
110250	6	150	7 1/2	188	1 1/2	38	20	507	9	225	6 3/4	170	36.00
110255	8	200	10	250	2	50	21	533	11 1/2	292	7	175	68.00



Adjustable Spindle Assemblies.....7.19
Conversion Chart.....7.45
Flush Mount.....7.11
Hold Down Horizontal.....7.8-7.10
Hold Down Vertical 7.2-7.7
Pull Action.....7.11-7.12
Squeeze Action 7.18
Straight Line 7.15-7.17

Heavy Duty Clamps

Heavy Duty Cam Push Clamps
(HDC Series).....7.41-7.42
Heavy Duty Cam Swing Clamps
(HDC Series).....7.39-7.40
Heavy Duty Magna Force Cam Clamps
(HDC Series).....7.37-7.42
Heavy Duty Push-Pull Clamps
(HDP Series).....7.31-7.35
Heavy Duty Vertical Clamps
(HDV Series).....7.20-7.28
Horizontal Latch Clamps
(HDL Series) 7.36
Vertical Cam Clamps
(JCV Series).....7.29-7.30

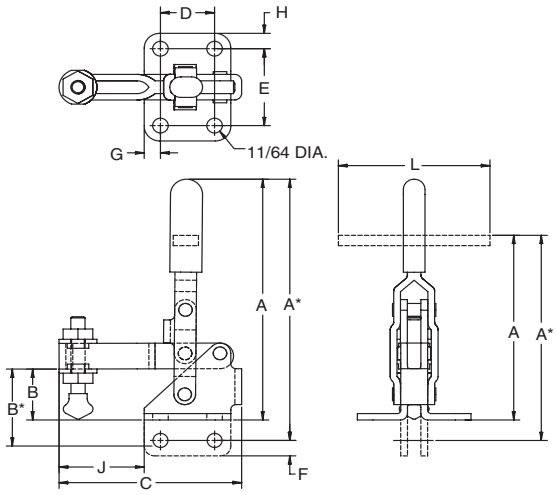
Hold Down Vertical



70310

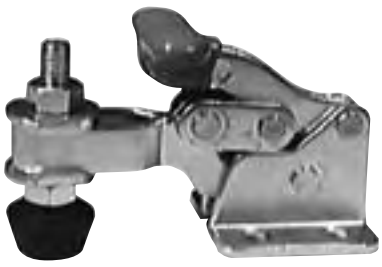
This light duty U-Bar clamp accepts all 8-32 diameter spindles. It is supplied with a 70963 vinyl coated spindle assembly and washers. The vertical handle type is supplied with a blue vinyl handle.

- Holding capacity: 100 lbs. max.
- Weight: 2.5 oz.
- Handle moves 62˚, bar 116˚
- U-Bar: 5/16" height, 3/16" inside width
- Horizontal spindle adjustment: 11/16"
- Spindle Thread: 8-32



Part Number	S.S. Part No.	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70310	**71012**	2 7/8	5/8	2 1/8	5/8	15/16	—	3/16	3/16	1	Vertical	U-Bar	Flange
70315	**71013**	3 1/16	7/8	2 1/8	5/8	—	3/16	3/16	3/16	1	Vertical	U-Bar	Straight
70320	—	2 1/4	5/8	2 1/8	5/8	15/16	—	3/16	3/16	1	Tee	U-Bar	Flange
71014	—	2 11/16	7/8	2 1/8	5/8	—	3/16	3/16	3/16	1	Tee	U-Bar	Straight

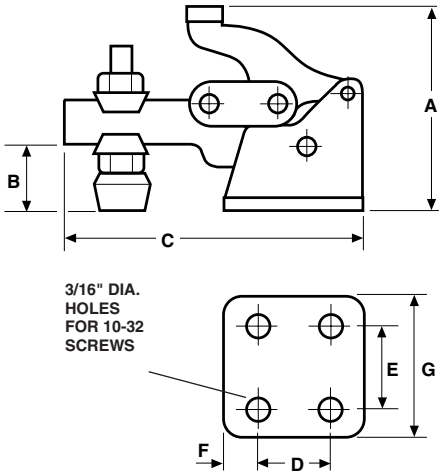
*Straight base type dimension
Note: Width of tee handle is 1 5/8"
• U-Bar models include 2 flange washers



70280

This small compact clamp is equipped with a blue vinyl T-shaped grip handle; ideal for moderate to light duty clamping.
It is supplied with a 70917 vinyl coated spindle assembly with washer.

- Holding capacity: 150 lbs.
- Weight: 2 oz.
- Handle moves 175˚, bar 92˚
- U-Bar: 5/16" height, 7/32" inside width
- Horizontal spindle adjustment: 5/8"
- Spindle Thread: 10-32
- Spindle Number: 70917



Part Number	S.S. Part No.	A	B	C	D	E	F	G
70280	**71015**	1 13/32	17/32	2 1/4	17/32	5/8	1/4	1 1/32

Note: Width of tee handle is 1 1/16"

For accessories see pages 7.19. For interchangeability with other toggle clamps, see page 7.42

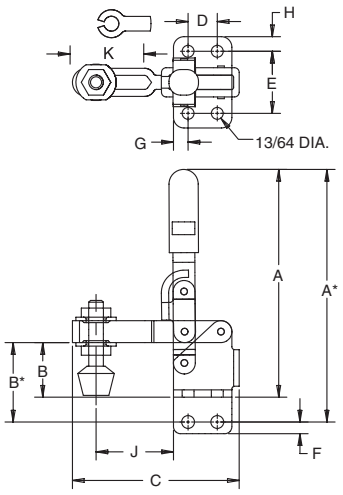
Hold Down Vertical



70330

This clamp has a narrow bar with a stationary spindle that accepts all 1/4-20 diameter spindles. Each clamp is supplied with a 70926 neoprene tipped spindle assembly. The vertical handle type is supplied with a blue vinyl handle.

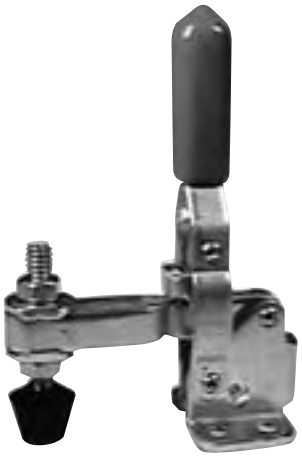
- Holding capacity: 200 lbs. max.
- Weight: 6 oz.
- Handle moves 60˚, bar 117˚
- Solid Bar: 3/8" height, 7/32" wide
- Spindle Thread: 1/4-20



Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70330	3 3/4	15/16	2 9/16	1/2	1 1/16	—	1/4	1/4	1 1/16	Vertical	Solid	Flange
70335	3 15/16	1 1/8	2 9/16	1/2	—	1/4	1/4	1/4	1 1/16	Vertical	Solid	Straight
70340	2 13/16	15/16	2 9/16	1/2	1 1/16	—	1/4	1/4	1 1/16	Tee	Solid	Flange
71016	2 13/16	1 1/8	2 9/16	1/2	—	1/4	1/4	1/4	1 1/16	Tee	Solid	Straight

*Straight base type dimension
Note: Width of tee handle is 2 9/16"

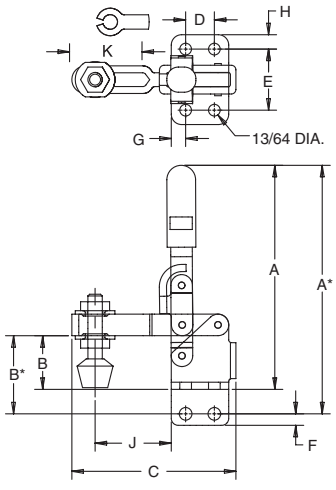
- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers



70342

This vertical clamp is equipped with a 1/4-20 spindle which has a tip, washers, and locknut for easy clamping. A blue vinyl handle is included. Each clamp is supplied with a 70926 vinyl coated spindle assembly with washer.

- Holding capacity: 250 lbs.
- Weight: 6 oz.
- Handle moves 64˚, bar 104˚
- U-Bar: 3/8" height, 1/4" inside width
- Horizontal spindle adjustment: 1 1/8"
- Spindle Thread: 1/4-20
- Spindle Number: 70926



Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70342	4	15/16	3	1/2	1 1/16	—	1/4	1/4	1 3/4	Vertical	U-Bar	Flange
71017	4	1 1/8	3	1/2	—	9/32	1/4	1/4	1 3/4	Vertical	U-Bar	Straight
71018	2 13/16	1 1/8	3	1/2	—	9/32	1/4	1/4	1 3/4	Tee	U-Bar	Straight
71019	2 13/16	15/16	3	1/2	1 1/16	—	1/4	1/4	1 3/4	Tee	U-Bar	Flange

*Straight base type dimension
Note: Width of tee handle is 2 9/16"
- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers

For accessories see pages 7.19
For interchangeability with other toggle clamps, see page 7.42

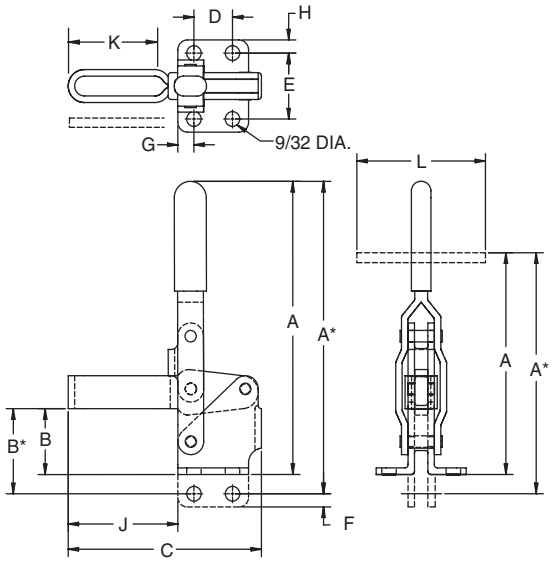
Hold Down Vertical



70350

This popular style of clamp includes solid bar and U-Bar construction. Each clamp accepts all 5/16-18 diameter spindles. Each clamp is supplied with a 70947 neoprene tipped spindle assembly. The vertical handle type is supplied with a blue vinyl handle.

- Holding capacity: 500 lbs. max.
- Weight: 11 oz.
- Handle moves 60˚, bar 100˚
- Solid Bar: 5/8" height, 1/4" wide
- U-Bar: 5/8" height, 21/64" inside width
- Horizontal spindle adjustment: 1 1/2"
- Spindle Thread: 5/16-18



Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70350	5 5/8	1 1/4	4	3/4	1.25	-	5/16	1/4	2.25	Vertical	Solid	Flange
70355	5 15/16	1 9/16	4	3/4	-	1/4	5/16	-	2.25	Vertical	Solid	Straight
70360	4 1/16	1 1/4	4	3/4	1.25	-	5/16	1/4	2.25	Tee	Solid	Flange
70365	5 5/8	1 1/4	5 1/4	3/4	1.25	-	5/16	1/4	3.4375	Vertical	Solid	Flange
71020	4 1/16	1 9/16	3 3/4	3/4	-	1/4	5/16	1/4	2 1/4	Tee	Solid	Straight
71021	5 5/8	1 9/16	4 1/8	3/4	-	1/4	5/16	1/4	3 7/16	Vertical	Solid	Straight
71022	4 1/16	1 9/16	4 1/8	3/4	-	1/4	5/16	1/4	3 7/16	Tee	Solid	Straight
71023	4 1/16	1 1/4	4 1/8	3/4	1.25	1/4	5/16	1/4	3 7/16	Tee	Solid	Flange
70380	5 5/8	1 1/4	4	3/4	1.25	-	5/16	1/4	2.25	Vertical	U-Bar	Flange
70385	6 5/16	1 9/16	4	3/4	-	1/4	5/16	-	2.25	Vertical	U-Bar	Straight
70390	4 1/16	1 1/4	4	3/4	1.25	-	5/16	1/4	2.25	Tee	U-Bar	Flange
70395	5 5/8	1 1/4	5 1/2	3/4	1.25	-	5/16	1/4	3.75	Vertical	U-Bar	Flange
71024	4 5/8	1 9/16	3 3/4	3/4	-	1/8	5/16	1/4	2 1/4	Tee	U-Bar	Straight
71025	6 5/16	1 9/16	4 7/16	3/4	-	1/8	5/16	1/4	3 3/4	Vertical	U-Bar	Straight
71026	4 5/8	1 9/16	4 7/16	3/4	-	1/8	5/16	1/4	3 3/4	Tee	U-Bar	Straight
71027	4 1/16	1 1/4	4 7/16	3/4	1.25	-	5/16	1/4	3 3/4	Tee	U-Bar	Flange

*Straight base type dimension. Note: Width of tee handle is 3 5/8".
- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers

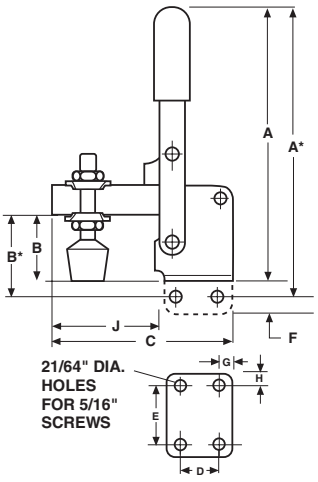
For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Hold Down Vertical


70440

This large capacity clamp is available in solid bar and U-Bar construction. It accepts all 3/8-16 diameter spindles. The solid bar clamp is supplied with a 70910 bolt retainer and 70915 neoprene tipped spindle assembly. The U-Bar style is supplied with 2 flanged washers and the 70915 spindle assembly. The vertical handle type is supplied with a blue vinyl handle.

- Holding capacity: 750 lbs. max.
- Weight: 1 lb., 5 oz.
- Handle moves 58˚, bar 106˚
- Solid Bar: 3/4" height, 5/16" wide
- U-Bar: 3/4" height, 7/16" inside width
- Horizontal spindle adjustment: 2 9/16"
- Spindle Thread: 3/8-16



Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70420	7 3/4	1 11/16	5 1/2	1 1/4	1 25/32	—	21/64	3/8	3 19/32	Vertical	Solid	Flange
70425	8 1/4	2 3/16	5 1/2	1 1/4	—	3/8	21/64	—	3 19/32	Vertical	Solid	Straight
70430	5 1/4	1 11/16	5 1/2	1 1/4	1 25/32	—	21/64	3/8	3 19/32	Tee	Solid	Flange
71028	6 1/8	2 3/16	5 1/2	1 1/4	—	3/8	21/64	—	3 19/32	Tee	Solid	Straight
70440	7 3/4	1 11/16	5 1/2	1 1/4	1 25/32	—	21/64	3/8	3 17/32	Vertical	U-Bar	Flange
70445	8 1/4	2 3/16	5 1/2	1 1/4	—	3/8	21/64	—	3 17/32	Vertical	U-Bar	Straight
70450	5 1/4	1 11/16	5 1/2	1 1/4	1 25/32	—	21/64	3/8	3 17/32	Tee	U-Bar	Flange
71029	6 1/8	2 3/16	5 1/2	1 1/4	—	3/8	21/64	—	3 17/32	Tee	U-Bar	Straight

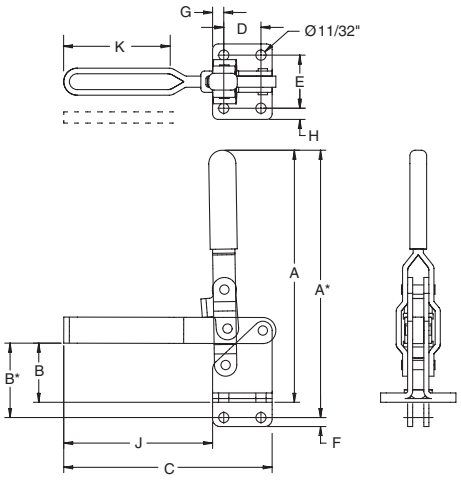
*Straight base type dimension. Note: Width of tee handle is 5".

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42


70470

This heavy duty clamp is available with solid bar and U-Bar construction. It accepts all 1/2-13 diameter spindles. The solid bar model is supplied with a 70901 bolt retainer. The U-Bar model is supplied with 2-70902 flanged washers. **Spindle assembly 70903 must be ordered separately for both models**.

- Holding capacity: 1000 lbs. max.
- Weight: 2 lbs., 7 oz.
- Handle moves 67˚, bar 120˚
- Solid Bar: 7/8" height, 3/8" wide
- U-Bar: 7/8" height, 17/32" inside width
- Horizontal spindle adjustment: 3 1/8"
- Spindle Thread: 1/2-13



Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70460	9	2	7	1 1/4	1 25/32	—	3/8	3/8	5	Vertical	Solid	Flange
71030	9 1/2	2 1/4	7	1 1/4	—	3/8	3/8	—	5	Vertical	Solid	Straight
70470	9	2	7	1 1/4	1 25/32	—	3/8	3/8	5	Vertical	U-Bar	Flange
71031	9 1/2	2 1/4	7	1 1/4	—	3/8	3/8	—	5	Vertical	U-Bar	Straight

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

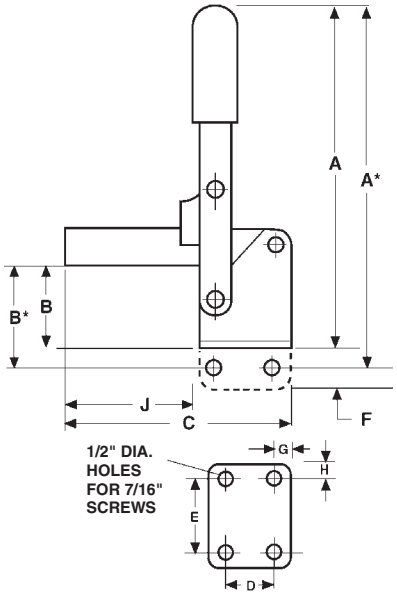
Hold Down Vertical



70480

This is the largest capacity vertical style clamp. It's available in solid bar or U-Bar construction and accepts all 5/8-11 diameter spindles. The solid bar is supplied with a 70940 bolt retainer. The U-Bar is supplied with 2-70941 flanged washers. **Spindle assembly 70942 must be ordered separately**. Each model is supplied with a blue vinyl handle.

- Holding capacity: 1200 lbs. max.
- Weight: 5 lbs., 2 oz.
- Handle moves 70˚, bar 140˚
- Solid Bar: 1 1/4" height, 3/8" wide
- U-Bar: 1 1/4" height, 21/32" inside width
- Horizontal spindle adjustment: 4"
- Spindle Thread: 5/8-11

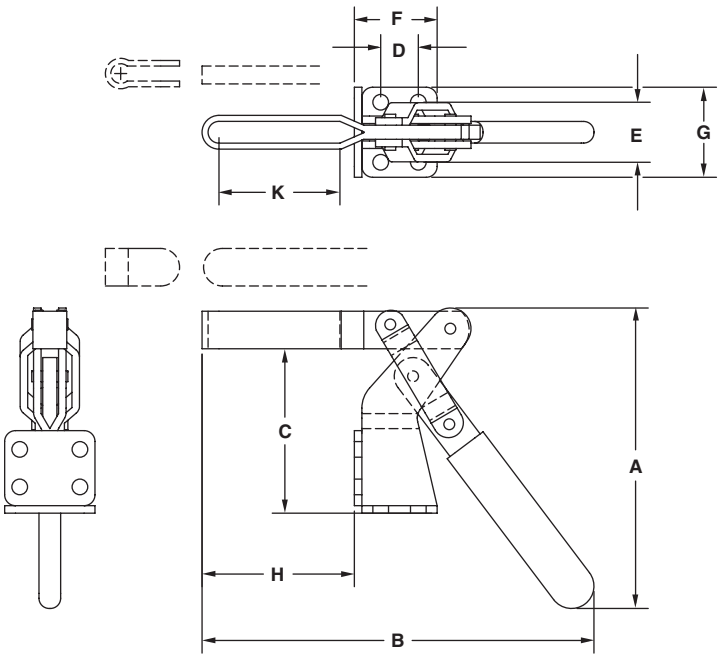


Part Number	A	B	C	D	E	F	G	H	J	Handle Type	Bar Type	Base Type
70480	12 1/8	3 1/4	9	2	2 3/4	—	1/2	1/2	5 7/8	Vertical	Solid	Flange
71032	13 3/8	4	9	2	—	1 1/4	1/2	—	5 7/8	Vertical	Solid	Straight
70490	12 1/8	3 1/4	9	2	2 3/4	—	1/2	1/2	5 7/8	Vertical	U-Bar	Flange
71033	13 3/8	4	9	2	—	1 1/4	1/2	—	5 7/8	Vertical	Solid	Straight

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Hold Down Vertical





This clamp is available with a solid or U-Bar model.
It features both a horizontal and vertical mounting surface.
A neoprene tipped spindle assembly is included with both models. A bolt retainer is furnished with the solid bar model.

- Holding capacity: 220 lbs. max.
- U-Bar: 5/8" height, 11/32" inside width
- Spindle Thread: 5/16-18

Part Number	A	B	C	D	E	F	G	H	K	Bar Type	Wt (oz.)
70285	5 1/2	6 1/16	2 3/4	5/8	1	1 3/8	1 1/2	2 1/2	2	U-Bar	15
71037	5 1/2	6 7/16	2 3/4	5/8	1	1 3/8	1 1/2	2 1/2	—	Solid	16

- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

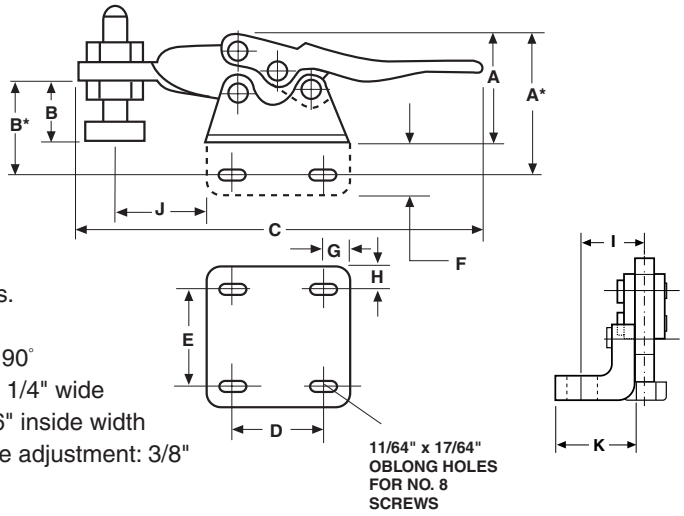
Hold Down Horizontal



70210

The small size of this clamp is ideal for jobs requiring minimal hold down force. Available in solid or U-Bar construction. All models are supplied with 70962 nylon spindle assemblies and blue vinyl handles.

- Holding capacity: 60 lbs.
- Weight: 1 oz.
- Handle moves 80˚, bar 90˚
- Solid Bar: 3/32" height, 1/4" wide
- U-Bar: 1/4" height, 3/16" inside width
- U-Bar horizontal spindle adjustment: 3/8"
- Spindle Thread: 8-32



Part Number	S.S. Part No.	A	B	C	D	E	F	G	H	J	I	K	Bar Type	Base Type
70210	—	3/4	13/32	2 3/4	5/8	5/8	—	5/32	5/32	11/16	—	—	Solid	Flange
70211	—	3/4	13/32	2 3/4	5/8	—	—	5/32	5/32	21/32	3/8	1/2	Solid	1/2 Flange-Left
71001	—	3/4	13/32	2 3/4	5/8	—	—	5/32	5/32	21/32	3/8	1/2	Solid	1/2 Flange-Right
70215	—	15/16	19/32	2 3/4	5/8	—	11/32	5/32	5/32	11/16	—	—	Solid	Straight
70230	**71002**	3/4	5/16	2 21/32	5/8	5/8	—	5/32	5/32	11/16	—	—	U-Bar	Flange
70231	—	3/4	5/16	2 3/4	5/8	—	—	5/32	5/32	21/32	3/8	1/2	U-Bar	1/2 Flange-Left
71003	—	3/4	5/16	2 3/4	5/8	—	—	5/32	5/32	21/32	3/8	1/2	U-Bar	1/2 Flange-Right
70235	—	15/16	1/2	2 21/32	5/8	—	11/32	5/32	5/32	11/16	—	—	U-Bar	Straight

*Straight base type dimension
Note: J dimension goes all the way to end of the U-Bar models

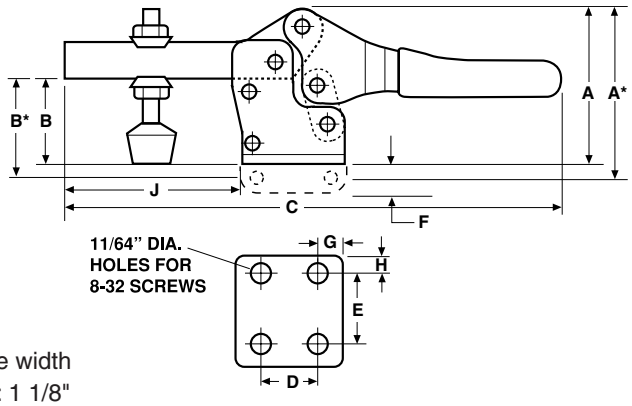
- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers



70260

This light duty clamp is designed with a large clearance area between the bar and handle when the clamps are in the full open position. A blue vinyl handle is included. Includes vinyl coated spindle assembly.

- Holding capacity: 150 lbs.
- Weight: 3 oz.
- Handle moves 60˚, bar 90˚
- U-Bar: 3/8" height, 7/32" inside width
- Horizontal spindle adjustment: 1 1/8"
- Spindle Thread: 10-32



Part Number	S.S. Part No.	A	B	C	D	E	F	G	H	J	Base Type
70260	**71004**	1 13/32	3/4	4 3/8	17/32	11/16	—	5/32	1/8	1 5/8	Flange
71005	—	1 3/4	13/16	4 3/8	17/32	—	3/8	5/32	1/8	1 5/8	Straight

*Straight base type dimension
Note: J dimension goes all the way to end of the U-Bar models

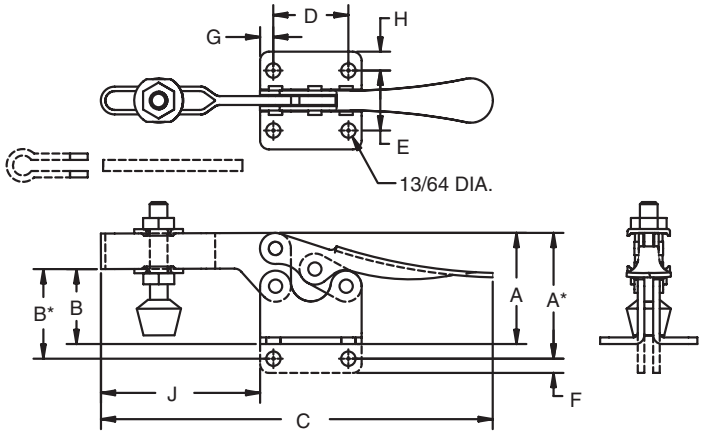
For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Hold Down Horizontal



70240

This medium duty clamp is ideal for limited space applications. It is supplied with a 70926 neoprene tipped spindle assembly.



- Holding capacity: 200 lbs.
- Weight: 5 oz.
- Handle moves 60˚, bar 90˚
- U-Bar: 1/2" height, 17/64" inside width
- Horizontal spindle adjustment: 1 1/4"
- Spindle Thread: 1/4-20

Part Number	S.S. Part No.	A	B	C	D	E	F	G	H	J	Bar Type	Base Type
70240	**71006**	1 1/2	1	5 7/16	1 1/16	7/8	—	3/16	17/64	2 1/4	U-Bar	Flange
70245	**71007**	1 45/64	1 1/4	5 7/16	1 1/16	—	15/32	3/16	17/64	2 1/4	U-Bar	Straight
71008	—	1 1/2	1	5 7/16	1 1/16	7/8	—	3/16	17/64	2 1/4	Soild	Flange
71009	—	1 45/64	1 1/4	5 7/16	1 1/16	—	15/32	3/16	17/64	2 1/4	Solid	Straight

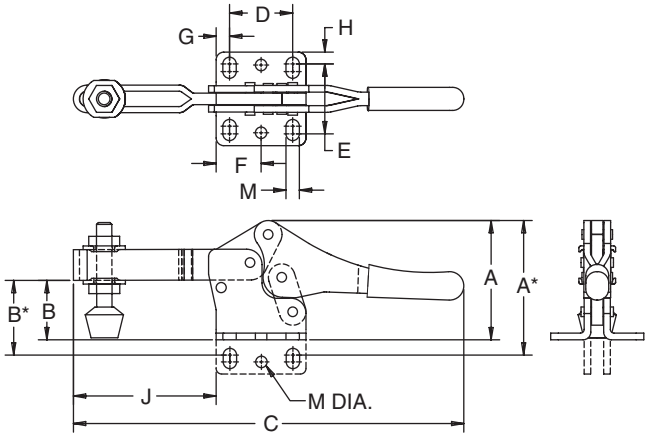
*Straight base type dimension

- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers



70262

These medium and large capacity clamps have a large clearance area between the bar and the handle when the clamps are in the fully open position. A blue vinyl handle is included.



- For 70262
- Holding capacity: 200 lbs.
- Weight: 7 oz.
- Handle moves 76˚, bar 92˚
- U-Bar: 1/2" height, 1/4" inside width
- Horizontal spindle adjustment: 1 21/32"
- Spindle Number: 70926

- For 70264
- Holding capacity: 500 lbs.
- Weight: 16 oz.
- Handle moves 62˚, bar 92˚
- U-Bar: 9/16" height, 11/32" inside width
- Horizontal spindle adjustment: 1 13/32"
- Spindle Number: 70947

Part Number	A	B	C	D	E	F	G	H	J	K	M	Base Type
70262	2	15/16	6 15/32	1 1/32	1 3/32	23/32	7/32	3/32	2 3/8	1/4-20	7/32	Flange
70264	2 7/16	1 11/32	7 13/32	1 1/32	1 7/32	13/16	9/32	3/32	2 9/16	5/16-18	1/4	Flange
71010	2 9/16	1 3/16	6 15/32	1 1/32	—	23/32	7/32	3/32	2 3/8	1/4-20	7/32	Straight
71011	2 7/8	1 1/2	7 13/32	1 1/32	—	13/16	9/32	3/32	2 9/16	5/16-18	1/4	Straight

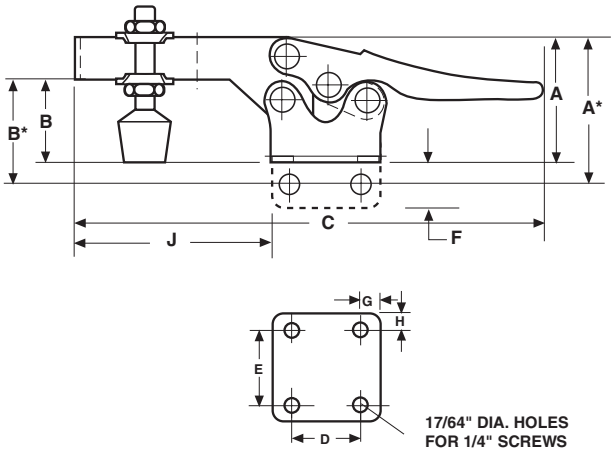
- Solid arm models include a bolt retainer
- U-Bar models include 2 flange washers

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Hold Down Horizontal



70250



Similar to model 70240, except larger in overall size and capacity. Supplied with a 70947 neoprene tipped spindle assembly.

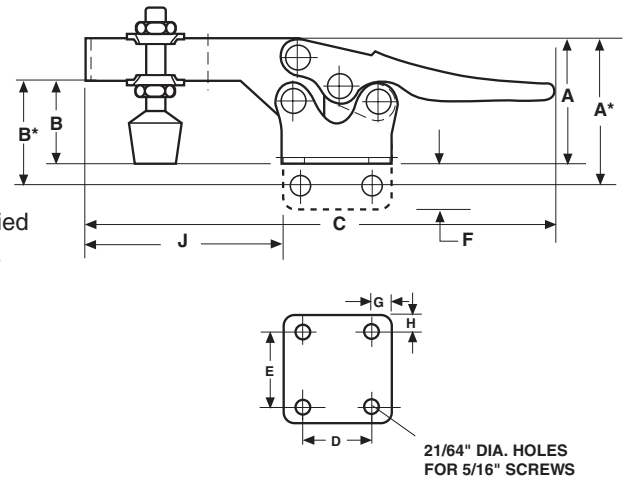
- Holding capacity: 500 lbs. max.
- Weight: 9 oz.
- Handle moves 65˚, bar 90˚
- U-Bar: 1/2" height, 21/64" inside width
- Horizontal spindle adjustment: 1 3/8"
- Spindle Thread: 5/16-18

Part Number	A	B	C	D	E	F	G	H	J	Bar Type	Base Type
70250	1 7/8	1 3/8	6 5/8	1	7/8	—	1/4	1/4	2 3/4	U-Bar	Flange
70255	2 1/8	1 5/8	6 5/8	1	—	1/2	1/4	1/4	2 3/4	U-Bar	Straight

*Straight base type dimension • U-Bar models include 2 flange washers



70270



This horizontal clamp is available with U-Bar construction in a flanged or straight base. Supplied with a 70915 neoprene tipped spindle assembly. Both models supplied with a blue vinyl handle.

- Holding capacity: 750 lbs. max.
- Weight: 1 lb., 8 oz.
- Handle moves 55˚, bar 90˚
- U-Bar: 3/4" height, 7/16" inside width
- Horizontal spindle adjustment: 2 1/4"
- Spindle Thread: 3/8-16

Part Number	A	B	C	D	E	F	G	H	J	Bar Type	Base Type
70270	2 1/2	1 3/4	10 1/4	1 5/8	1 5/8	—	5/16	5/16	4 1/8	U-Bar	Flange
70275	3 1/16	2 3/8	10 1/4	1 5/8	—	7/8	5/16	5/16	4 1/8	U-Bar	Straight

*Straight base type dimension • U-Bar models include 2 flange washers

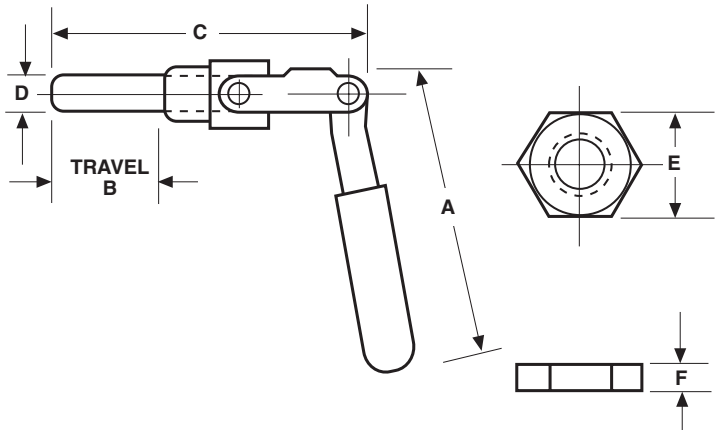
For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Flush Mount



70120

This clamp can be flush mounted using the hex locknut or it can be mounted directly into tapped hole. Either mounting allows 360° clamp rotation. The clamp locks in forward or reverse position. It is furnished with the hex locknut and a blue vinyl handle.

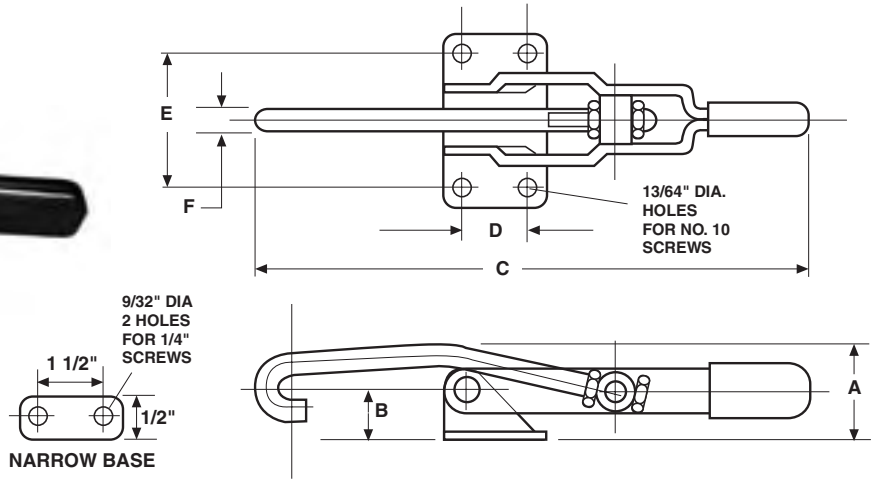


Part Number	A	Travel B	C	D	E	F	Thread	Holding Capacity (lbs)	Wt. (oz.)	Plunger Tapped
70118	2 7/8	3/4	2 7/16	3/8	15/16	1/4	5/8-18	200	3.5	1/4-20 x 19/32
70120	4	1 1/2	4 3/4	7/16	1	1/4	3/4-16 x 5/8	300	9	5/16-18 x 1
70140	5 1/4	2 5/8	6 11/16	5/8	1 1/2	1/4	1-14 x 7/8	700	27	3/8-16 x 1 1/4

Pull Action



70570



The adjustable hook is ideal for latching, locking or fastening doors, fixtures, pressure vessels, covers, and hatches on storage tanks. The hook bar has a 4" pull and is threaded for convenient adjustment. This clamp is furnished with a blue vinyl handle.

Note: Longer Hook Lengths Available Upon Request

Part Number	A	B	C	D	E	F	Drawing Movement	Holding Capacity (lbs)	Wt. (oz.)
70570	1 7/16	3/4	8 5/16	3/4	1 3/8	5/16	4	375	10
70580	1 7/16	3/4	8 5/16	1 1/2	—	5/16	4	375	10
71039	2 5/8	1 13/16	13 1/4	1 1/8	2 3/8	1/2	6 1/8	990	16

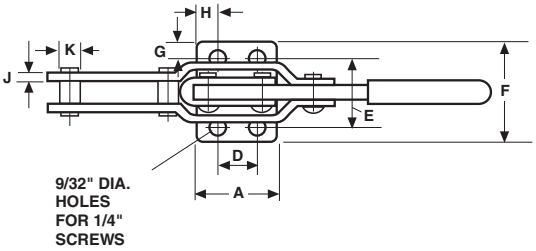
Note: 70580 is a narrow base 1/2" wide

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

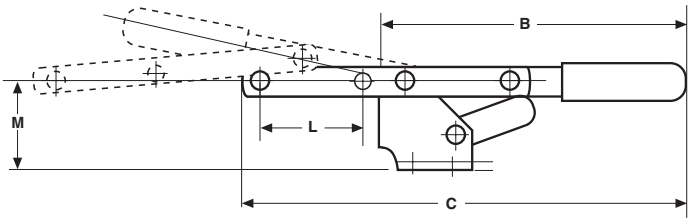
Pull Action



70550



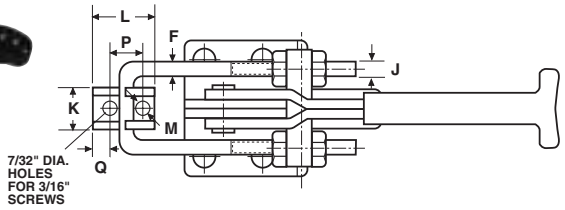
Ideal for locking and fastening on fixtures. Adjustable stop permits positioning of handle to limit travel once the clamp is installed. 4" drawing movement valuable for a wide range of applications.



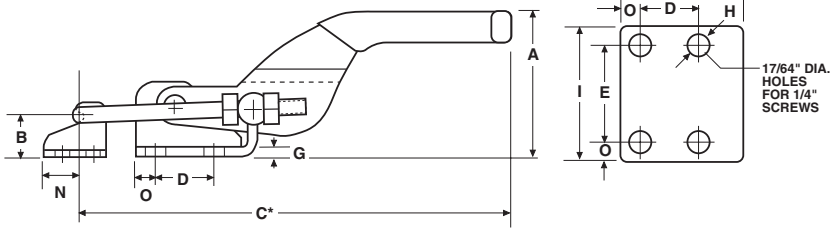
Part Number	A	B	C	D	E	F	G	H	J	K	L	M	Holding Capacity (lbs)	Wt. (oz.)
70550	1 3/8	5 11/16	8 5/16	3/4	1 1/4	1 3/4	1/4	5/16	1/8	3/8	1 7/8	1 5/8	375	12
70555	1 7/8	4 5/8	9 5/8	1 1/4	1 25/32	2 1/2	3/8	11/32	1/8	3/8	1 7/8	2 1/16	1,200	18



70560



The Jergens Latch Clamp is ideal for closure/release applications on covers, lids, doors, guards, and containers. The clamp's unique versatility is attributed to its adjustable U-Bar design. The clamp is supplied with a T-Handle vinyl grip and Latch Plate.



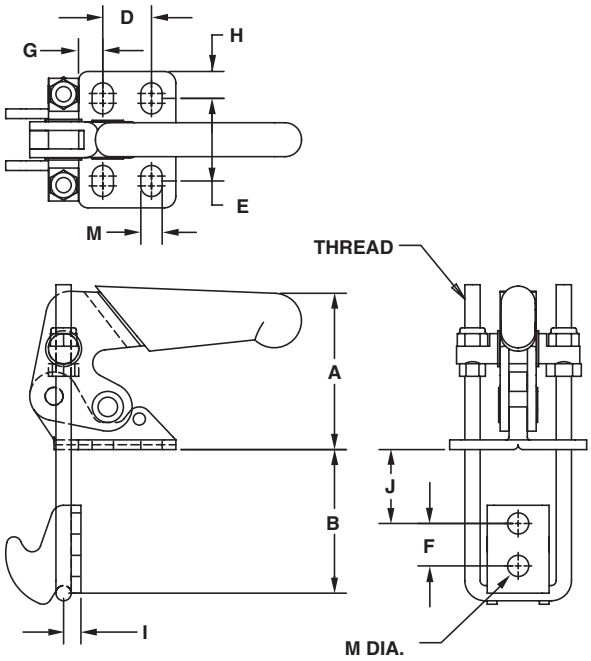
Part Number	S.S. Part No.	A	B	C*	D	E	F	G	H (Dia.)	I	J	K	L	M (Dia.)	N	O	P	Q	R	Holding Capacity (lbs)	Wt (oz.)
70558	**71040**	1 5/32	15/32	3 15/32	5/8	3/4	3/16	1/16	3/16	1 3/32	M4 x .7	17/32	25/32	3/16	7/16	7/32	13/32	1/4	1 1/32	360	2.5
70560	—	1 3/4	21/32	5 5/8	3/4	1 1/4	3/16	1/8	17/64	1 3/4	10-32	11/16	1 1/64	7/32	1/2	1/4	9/16	7/32	1 9/16	700	7
70562	—	2 3/4	15/16	6 3/4	1 5/8	1 1/2	5/16	5/32	11/32	2 1/8	M8 x 1.25	1 3/16	1 1/2	11/32	3/4	3/8	3/4	3/8	2 3/8	2000	21

*Adjusts 1/2"

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Vertical Pull Action





This clamp is for vertical locking applications, where it is preferable to mount the clamp on a lid. The U-bolt allows for easy adjustment and provide a positive connection with the latch plate (included).

• Handle moves 145°

Part Number	A	U-Bolt Range B	C	D	E	F	G	H	I	U-Bolt Range J	M
71041	1 5/8	1-1 7/8	15/16	1/2	7/8	7/16	1/4	1/4	3/16	3/16-1 3/32	7/32
71042	2 7/16	1 5/16-2 13/32	1 7/32	3/4	1 1/8	9/16	5/16	3/8	1/4	9/32-1 3/8	1/4
70565	3 7/32	1 25/32-3 3/16	1 21/32	1/4	19/32	3/4	3/8	1/2	5/16	11/32-1 25/32	11/32

Part Number	Thread Size	Holding Capacity (lbs)	Wt. (oz.)
71041	M4 x 0.7	305	4
71042	M6 x 1.0	550	11
70565	M8 x 1.25	990	25

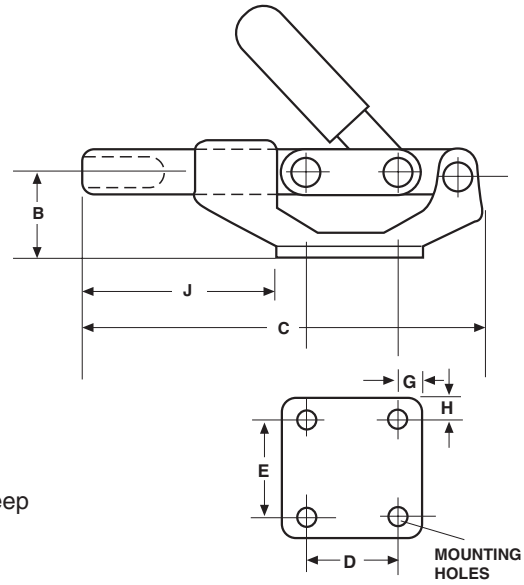
For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Straight Line



70810

This straight-line extra heavy duty clamp is constructed of malleable iron castings and cold rolled steel. The pivot joints are stainless steel. The mounting base is precision machined for flatness. A blue vinyl handle is included.



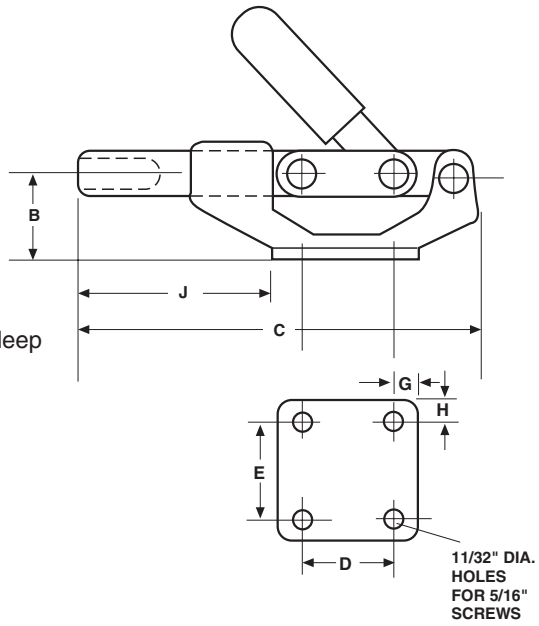
- Holding capacity: 500 lbs.
- Weight: 14 oz.
- Plunger travel: 1 3/16"
- Plunger tapped: 5/16-18 X 1 1/8" deep

Part Number	B	C	D	E	G	H	J	Mounting Holes
70810	1	4 3/4	1 3/8	1 5/8	5/16	5/16	2 1/4	9/32
70815	1	4 3/4	1 7/16	1 5/16	5/16	5/16	2 1/4	7/32



70830

Same construction as 70810 with larger capacity. The base has 11/32" diameter holes for 5/16" screws. A blue vinyl handle is included.



- Holding capacity: 850 lbs.
- Weight: 1 lb., 4 oz.
- Plunger travel: 1 5/8"
- Plunger tapped: 3/8-16 X 1 1/8" deep

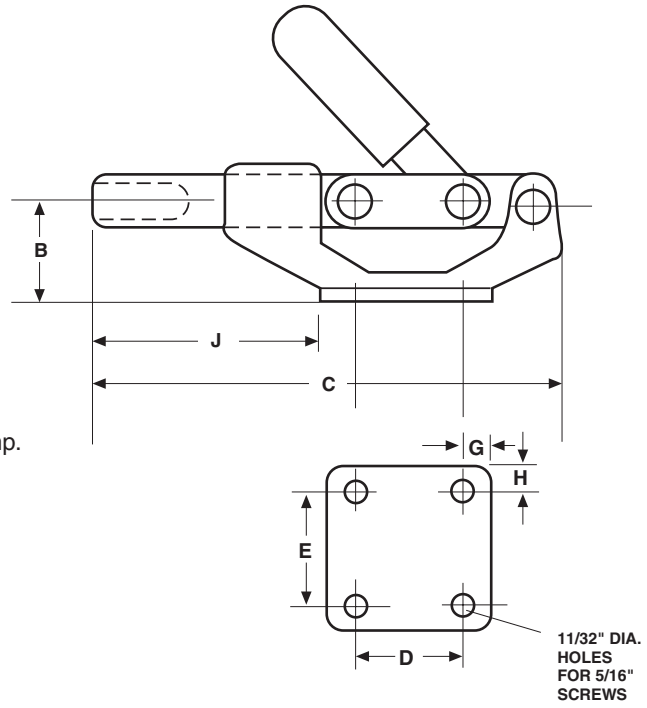
Part Number	B	C	D	E	G	H	J
70830	1 1/4	6 1/4	1 5/8	1 5/8	5/16	5/16	3

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Straight Line



70850



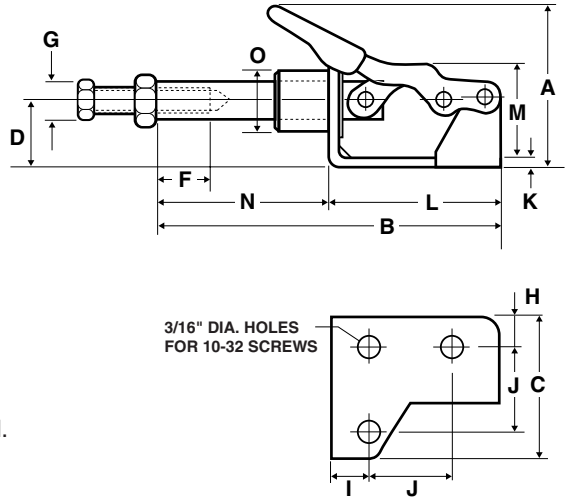
Same construction as 70810 with three times the holding capacity. Our most powerful straight line action toggle clamp. A blue vinyl handle is included.

- Holding capacity: 1500 lbs.
- Weight: 3 lb.
- Plunger travel: 2 11/32"
- Plunger tapped: 1/2-13 X 1 1/2" deep

Part Number	B	C	D	E	G	H	J
70850	1 3/4	9 1/2	2	2	3/8	3/8	4 5/8



70818



This light duty clamp is equipped with an 8-32 tapped plunger. A blue vinyl handle is included.

- Holding capacity: 90 lbs.
- Weight: 1.5 oz.
- Plunger travel: 5/8"
- Plunger tapped: 8-32 X 15/32" deep

Part Number	A	B	C	D	F	G	H	I	J	K	L	M	N	O
70818	1 7/32	2 21/32	1 1/16	1/2	15/32	1/4	7/32	5/16	5/8	3/32	1 11/32	13/16	1 9/32	7/16

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

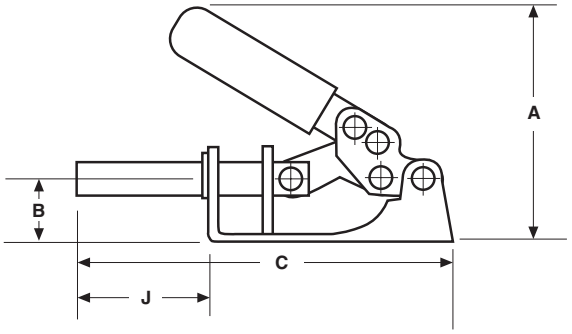
Straight Line

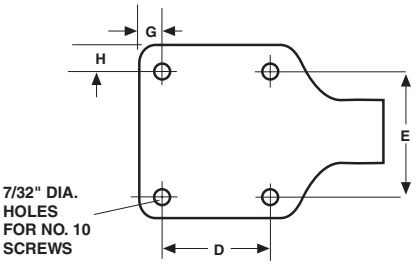


70820

This popular plunger style clamp can be used for push and pull clamping. The rivet in the handle can be removed allowing the clamp to be set in either the push or pull position. A blue vinyl handle is included.

- Holding capacity: 300 lbs.
- Weight: 10 oz.
- Plunger travel: 1 1/4"
- Plunger tapped: 5/16-18 X 1" deep





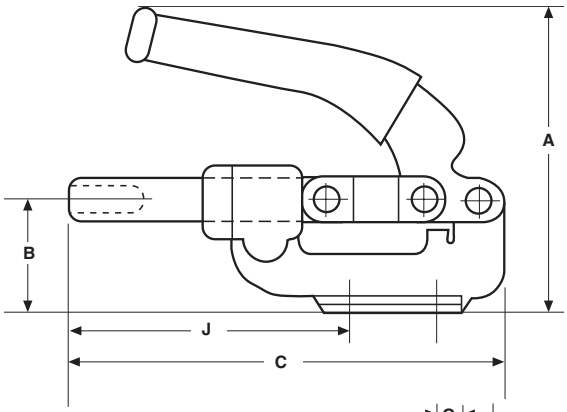
Part Number	A	B	C	D	E	G	H	J
70820	3 5/16	31/32	5 7/16	1 3/8	1 5/8	9/32	9/32	1 15/16

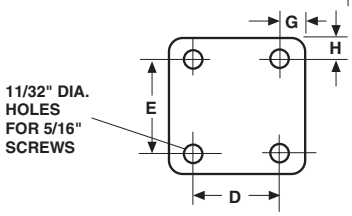


70840

The heavy duty construction of the clamp is ideal for hard to hold applications. The plunger locks in both push and pull positions with maximum pressure. A blue vinyl handle is included.

- Holding capacity: 800 lbs.
- Weight: 1 lb., 12 oz.
- Plunger travel: 1 5/8"
- Plunger tapped: 3/8-16 X 1" deep



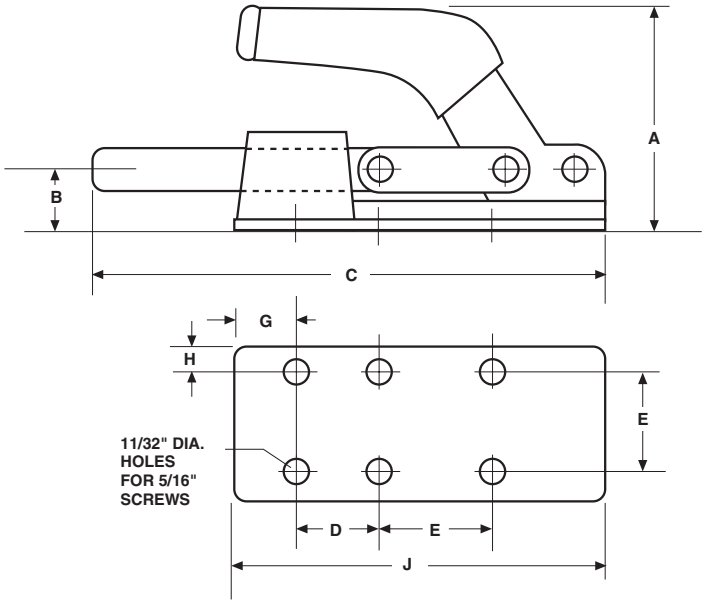


Part Number	A	B	C	D	E	G	H	J	Base Type
70840	4 9/16	1 3/4	6 3/4	1 5/8	1 5/8	5/16	5/16	4 3/16	Flange

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Straight Line





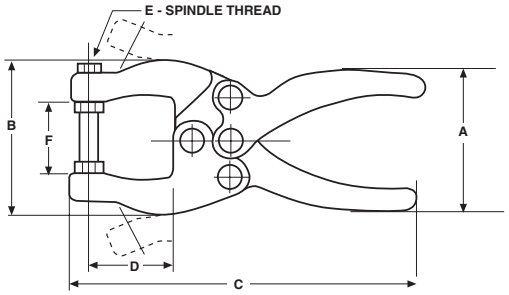
The forged steel construction enables this powerful plunger-style clamp to perform on rugged, heavy duty applications. Handle locks in both push and pull positions. A blue vinyl handle is included.

- Holding capacity: 2500 lbs.
- Weight: 2 lbs., 2 oz.
- Plunger travel: 2"
- Plunger tapped: 3/8-16 X 1 1/4" deep

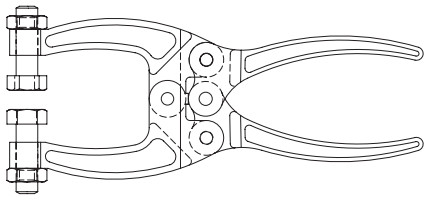
Part Number	A	B	C	D	E	G	H	J	Base Type
70860	2 7/8	13/16	7 1/16	1 3/8	1 5/8	1/2	5/16	5 1/16	Flange

For accessories see pages 7.19 For interchangeability with other toggle clamps, see page 7.42

Squeeze Action — Forged Jaws



These forged steel, squeeze action, plier clamps can be used in a wide range of applications. Ideal for clamping, fixturing, holding, processing, or positioning. All models are supplied with spindle assemblies.



2 Spindle Version

Part Number	2 Spindle Part Number	A	B	C	D	E	F	Holding Capacity (lbs.)	Spindle Type	Trigger Release	Wt. (oz.)
70710	**71049**	1 15/16	2 1/16	4 1/2	1 1/8	1/4-20	1	200	Standard	No	5
70720	**71050**	1 7/8	2 13/16	6	1 3/4	5/16-18	1 1/4	350	Standard	No	8
70730	—	2 11/16	2 7/8	8 1/16	2 9/32	5/16-18	1/2	700	Standard	Yes	16
70740	**70745**	2 11/16	4 1/4	8 1/2	2 3/4	3/8-16	1 3/4	700	Standard	Yes	19
70750	—	2 11/16	4 3/4	8 1/2	2 3/4	3/8-16	3	700	Standard	Yes	22

Note: F dimension will be less if spindle and locknut are used.



70710
Supplied with 70927 Spindle Assembly

71049 Supplied with 2 Spindle Assemblies (Not Shown)



70720
Supplied with 70946 Spindle Assembly

71050 Supplied with 2 Spindle Assemblies (Not Shown)



70730
Supplied with 70945 Spindle Assembly



70740
Supplied with 70913 Spindle Assembly

70745 (not shown)
Supplied with (2) 70912 Spindle Assembly



70750
Supplied with 70913 and 70914 Spindle Assemblies

Adjustable Spindle Assemblies

Hex Head Adjustable Spindle Assemblies



Vinyl Coated Hex Head Adjustable Spindle Assemblies



Neoprene Cap-Flat Tipped Adjustable Spindle Assemblies



Swivel Foot Adjustable Spindle Assemblies



Part Number	Description
70962	8-32 x 27/32 Nylon Hex Head
70916	8-32 x 3/4 Hex Head*
70945	5/16-18 x 1 1/8 Hex Head
70946	5/16-18 x 1 3/4 Hex Head
70912	3/8-16 x 1 1/4 Hex Head
70913	3/8-16 x 3 Hex Head
70903	1/2-13 x 3 Hex Head
70942	5/8-11 x 4 1/2 Hex Head
70963	8-32 x 1 1/4 Vinyl Coated Hex Head
70927	1/4-20 x 1 1/2 Vinyl Coated Hex Head
70926	1/4-20 x 1 3/4 Neoprene Cap Flat Tipped
70918	1/4-20 x 1 15/16 Neoprene Cap Flat Tipped
70947	5/16-18 x 2 1/4 Neoprene Cap Flat Tipped
70949	5/16-18 x 3 Neoprene Cap Flat Tipped
70915	3/8-16 x 3 1/4 Neoprene Cap Flat Tipped
70917	10-32 x 1 3/8 Neoprene Cap Flat Tipped
70948	5/16-18 x 2 3/4 Swivel Foot
70914	3/8-16 x 3 Swivel Foot

***Nuts not included**

Flanged Washers for U-Bar Clamps Only

Flanged Washers for U-Bar Clamps



Part Number	Description
70960	#8 For Vertical Handle Models
70925	1/4
70944	5/16
70911	3/8
70902	1/2
70941	5/8

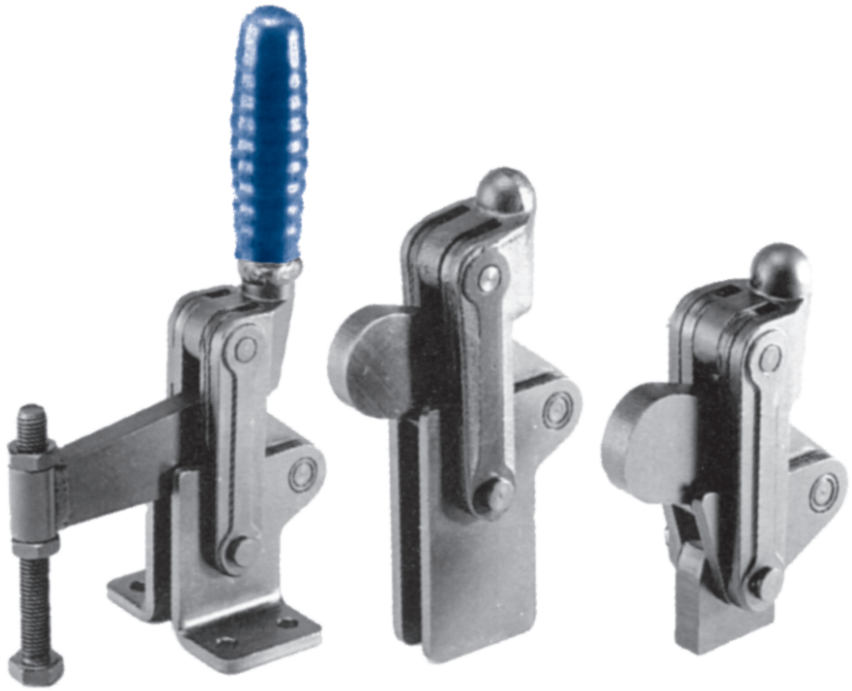
Bolt Retainer

Bolt Retainers For Solid Bar Clamps



Part Number	Description
70943	5/16
70910	3/8
70901	1/2
70940	5/8

HDV Series Heavy Duty Vertical Clamps



Features:

All **HDV** series clamps are designed to be adaptable and durable, and to withstand abuse in heavy duty applications.

The **HDV** series have a phosphated corrosion resistant finish.

Models HDV660WW, HDV1500WW, HDV2600WW and HDV5200WW comprise a basic toggle mechanism onto which can be welded at the desired angle the clamping arm and handle which can be specified as accessories. These models feature a swivel base which is welded at the desired angle to the mechanism, and then welded either directly to a fixture, or alternatively to a base which is offered as an accessory for bolt mounting.

Models HDV660SW, HDV1500SW, HDV2600SW and HDV5200SW share all the features of the above models, but with a straight base which can be directly bolt mounted or welded to a fixture, or alternatively to the accessory base for bolt mounting.

Models HDV660SW, HDV1500SS, HDV2600SS and HDV5200SS are similar to the type 'T' models, but with a handle with a PVC grip fitted vertically, and a longer stub clamping arm which can be modified and the spindle retainer supplied welded in the desired position.

Models HDV660SW, HDV1500FA, HDV2600FA and HDV5200FA feature a flanged base with holes for bolt mounting, a handle with PVC grip fitted vertically, and a fixed spindle or setscrew position which does not require welding.

Specifications:

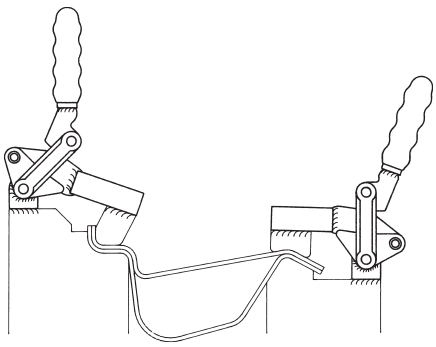
The main components are of steel, the forked lower handles being precision alloy steel castings, and all axles of hardened steel running in either hardened bushes or directly in the close-toleranced holes of hardened parts. The clamps are finished chemi-black.

Installation:

When welding the swivel base of the 'Stub Nose' models to the clamp mechanism ensure that the full length of the adjoining surfaces are welded. Ensure that welding spatter does not enter the slots which form the forward stop of the mechanism.

The handle pivot bolt may be adjusted if required to remove excess free play from the mechanism.

Frequent lubrication will extend the life of the clamp.



Hold Down Vertical



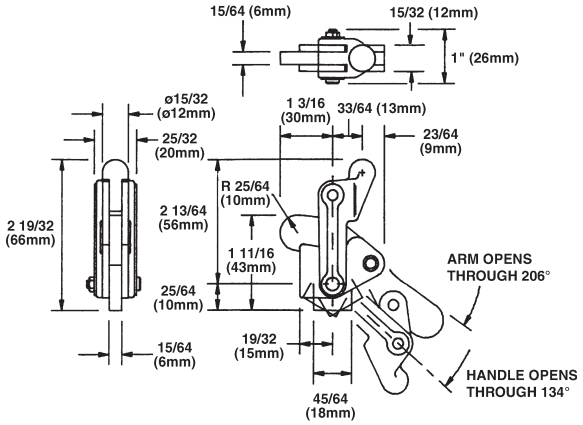
Part Number
72120

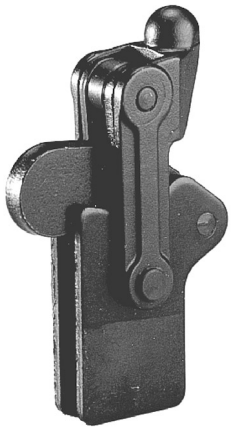
Model HDV660/WW

Arm: Stub nose for welded extension
Base: Swivel for welding in the desired position
Nominal Holding Force: 660 lbs.
Weight: 6 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.23 for accessories and handles.





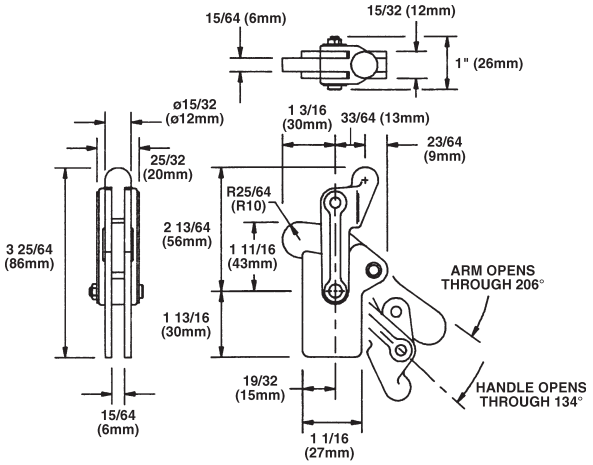
Part Number
72101

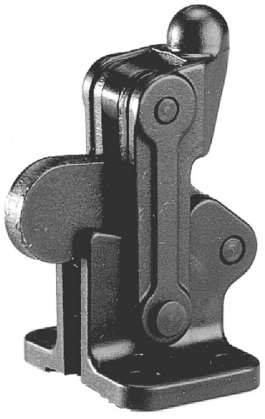
Model HDV660/SW

Arm: Stub nose for welded extension
Base: Straight
Nominal Holding Force: 660 lbs.
Weight: 6 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.23 for accessories and handles.



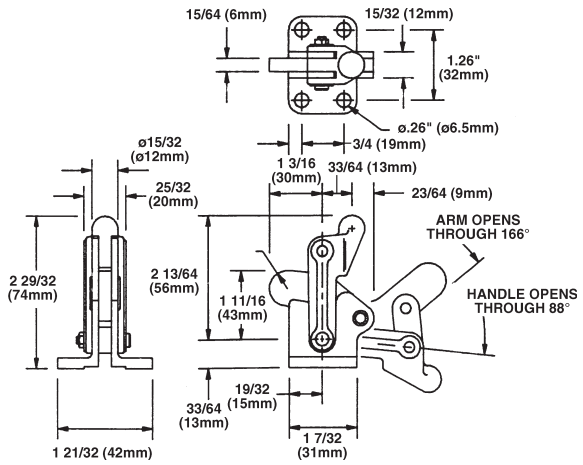


Part Number
72102

Model HDV660/FW

Arm: Stub nose for welded extension
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 7 oz.

See page 7.23 for accessories and handles.



Hold Down Vertical

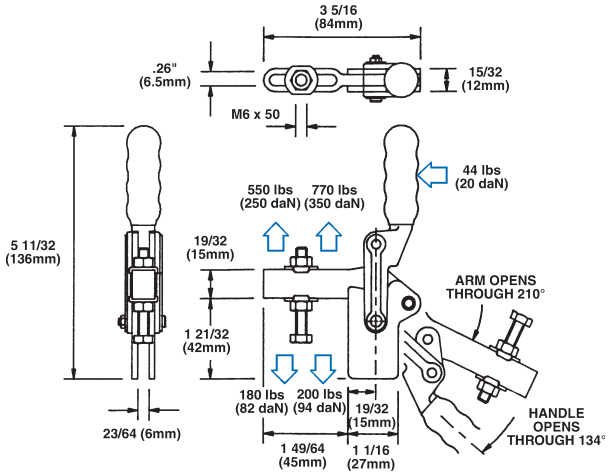


Part Number
72103

Model HDV660/SA

Arm: The spindle is adjustable along the arm
Base: Straight
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 7.23 for accessories and handles.



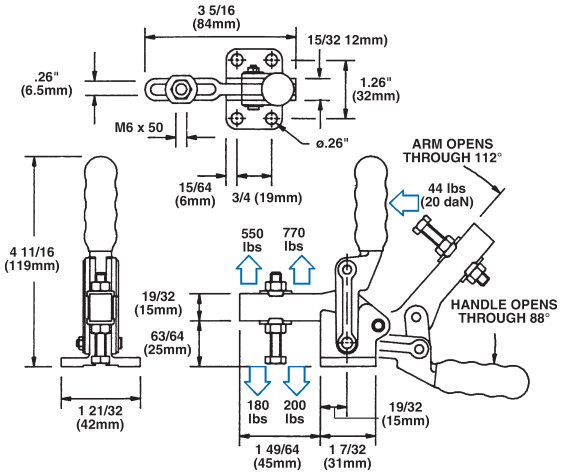


Part Number
72104

Model HDV660/FA

Arm: The spindle is adjustable along the arm
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 7.23 for accessories and handles.



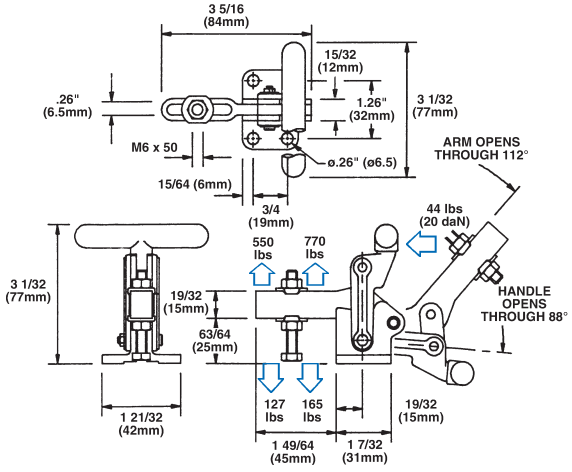


Part Number
72105

Model HDV660/FA2

Arm: The spindle is adjustable along the arm
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 7.23 for accessories and handles.



Hold Down Vertical



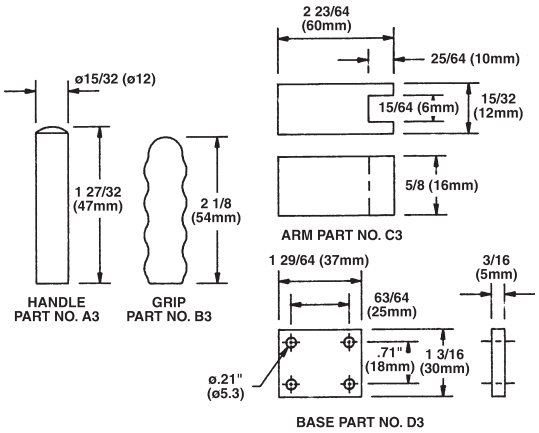
HDV660 Series Accessories

Part No. 72130
Handle: For welding at the desired angle
to HDV660/WW & HDV660/SW
Weight: 2 oz.

Part No. 72131
Grip: To fit Part No. 72130 handle
Weight: 0.5 oz.

Part No. 72132
Arm: For extending the stub arms
of HDV660/WW & HDV660/SW
Weight: 3 oz.

Part No. 72133
Base: For bolt mounting
HDV660/WW & HDV660/SW
Weight: 2 oz.





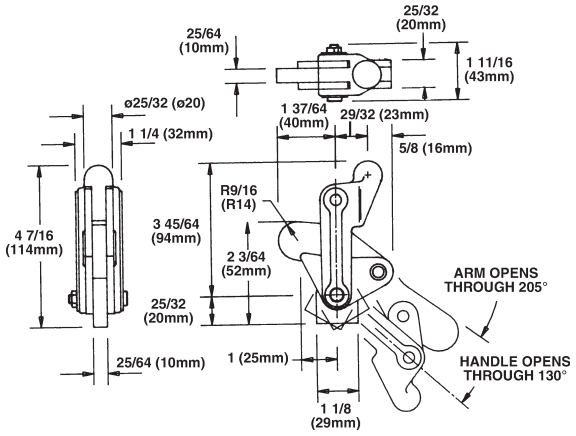
Model HDV1500/WW

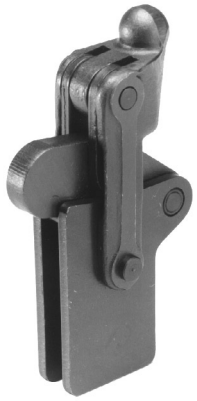
Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 1,543 lbs.
Weight: 1lb 7 oz.

See "Features and Installation Information" on page 7.20 for installation instructions

See page 7.24 for accessories and handles.

Part Number
72121





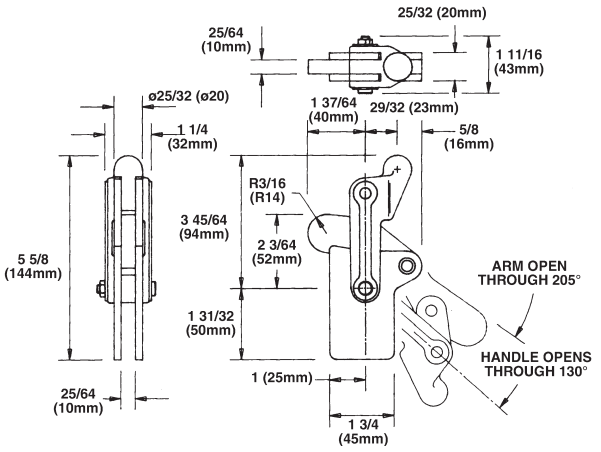
Model HDV1500/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 1,543 lbs.
Weight: 1lb 9 oz.

See "Features and Installation Information" on page 7.20 for installation instructions

See page 7.24 for accessories and handles.

Part Number
72106



Hold Down Vertical

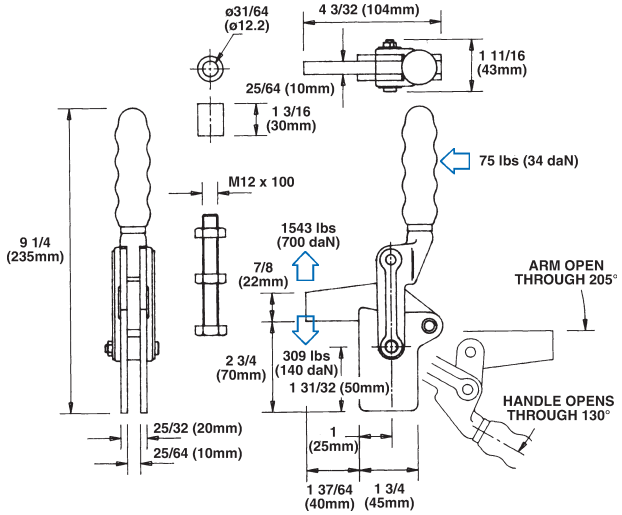


Part Number
72107

Model HDV1500/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 1,543 lbs.
Weight: 2 lbs 5 oz.
Supplied complete with: Spindle retainer, Setscrew & nuts

See below for accessories and handles.



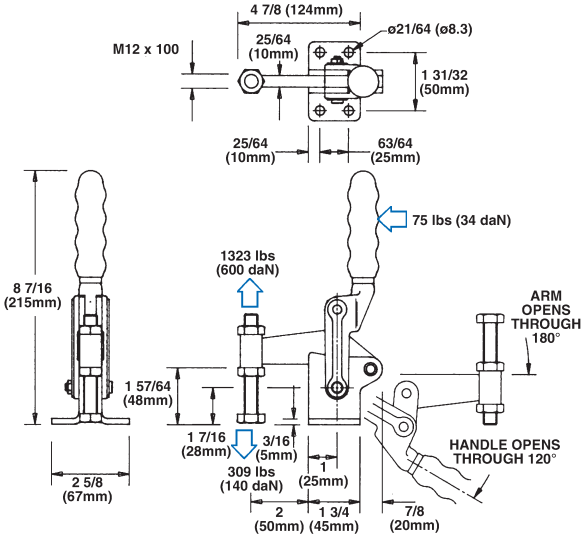


Part Number
72108

Model HDV1500/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 1,543 lbs.
Weight: 2 lbs 9 oz.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.



HDV1500 Series Accessories

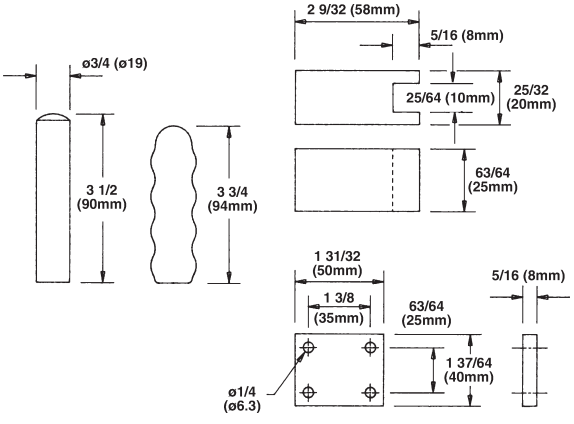


Part No. 72140
Handle: For welding at the desired angle to HDV1500/WW & HDV1500/SW
Weight: 5.3 oz.

Part No. 72141
Grip: To fit Part No. 72140 handle
Weight: 0.3 oz.

Part No. 72142
Arm: For extending the stub arms of HDV1500/WW & HDV1500/SW
Weight: 5.5 oz.

Part No. 72143
Base: For bolt mounting VHDV1500/WW & HDV1500/SW
Weight: 3 oz.



Hold Down Vertical



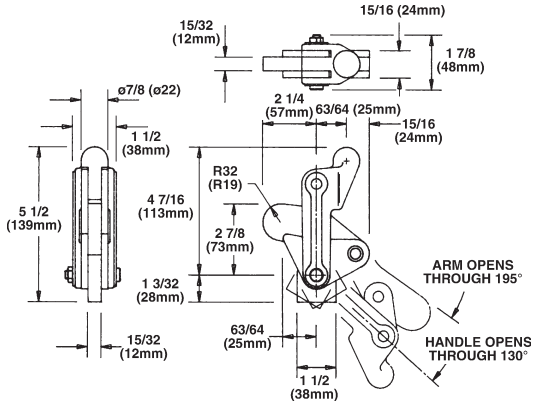
Part Number
72122

Model HDV2600/WW

Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 2,646 lbs.
Weight: 2 lbs 10 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.26 for accessories and handles.





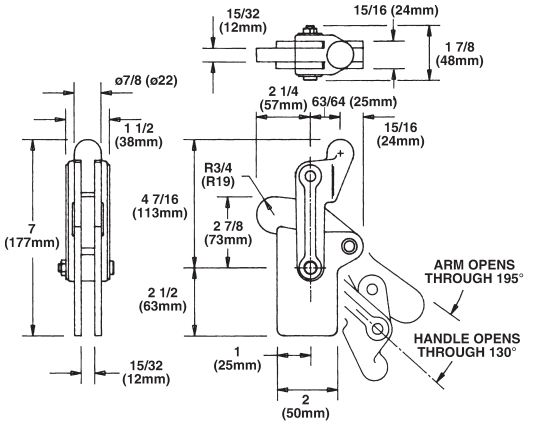
Part Number
72109

Model HDV2600/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 2,646 lbs.
Weight: 3 lbs 2 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.26 for accessories and handles.



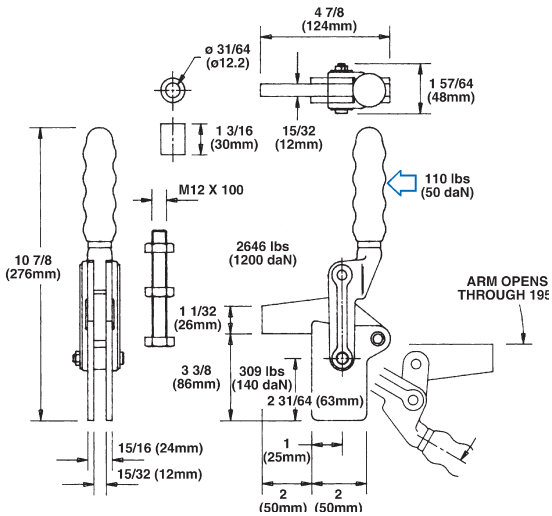


Part Number
72110

Model HDV2600/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 2,646 lbs.
Weight: 4 lbs.
Supplied complete with: Spindle retainer, Setscrew & nuts

See page 7.26 for accessories and handles.



Hold Down Vertical

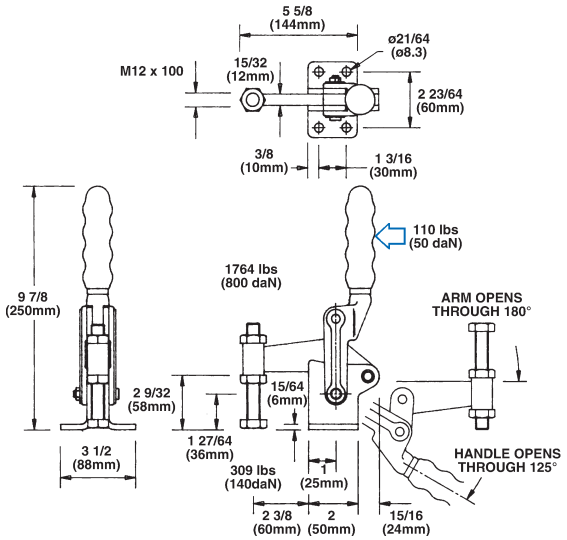


Part Number
72111

Model HDV2600/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 2,646 lbs.
Weight: 4 lbs 4 oz.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.





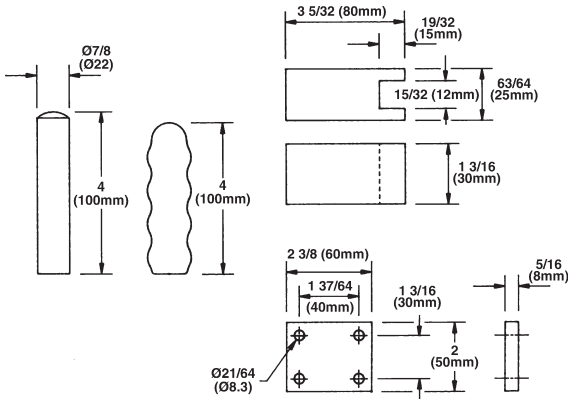
HDV2600 Series Accessories

Part No. 72150
Handle: For welding at the desired angle to HDV2600/WW & HDV2600/SW
Weight: 8 oz.

Part No. 72151
Grip: To fit Part No. 72150 handle
Weight: 0.3 oz.

Part No. 72152
Arm: For extending the stub arms of HDV2600/WW & HDV2600/SW
Weight: 11 oz.

Part No. 72153
Base: For bolt mounting HDV2600/WW & HDV2600/SW
Weight: 4 oz.



Hold Down Vertical



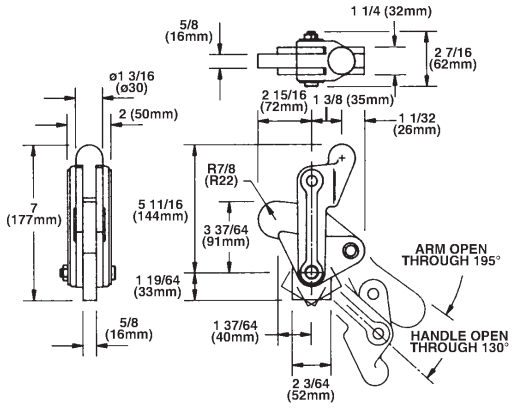
Part Number
72123

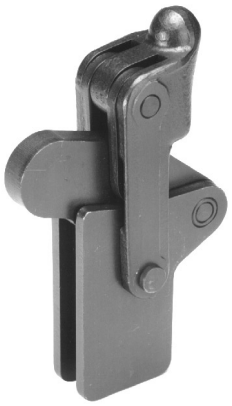
Model HDV5200/WW

Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 5,291 lbs.
Weight: 6 lbs 4 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.28 for accessories and handles.





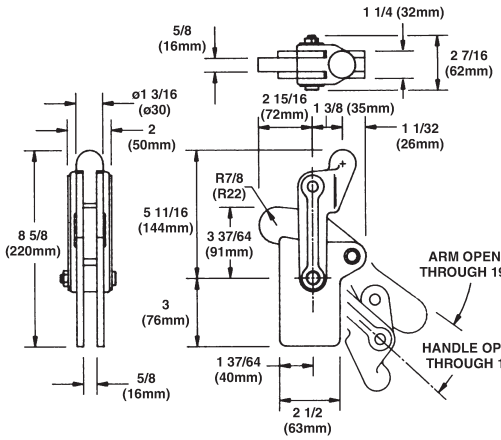
Part Number
72112

Model HDV5200/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 5,291 lbs.
Weight: 7 lbs 1 oz.

See "Features and Installation Information" on page 7.20 for Installation Instructions.

See page 7.28 for accessories and handles.



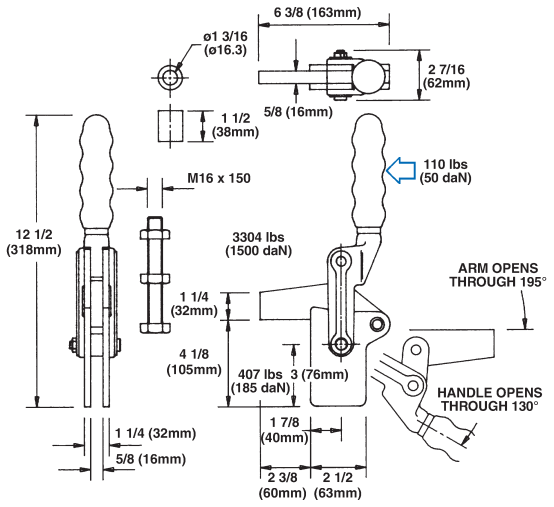


Part Number
72113

Model HDV5200/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 5,286 lbs.
Weight: 8 lbs 3 oz.
Supplied complete with: Spindle retainer, Setscrew & nuts

See page 7.28 for accessories and handles.



Hold Down Vertical

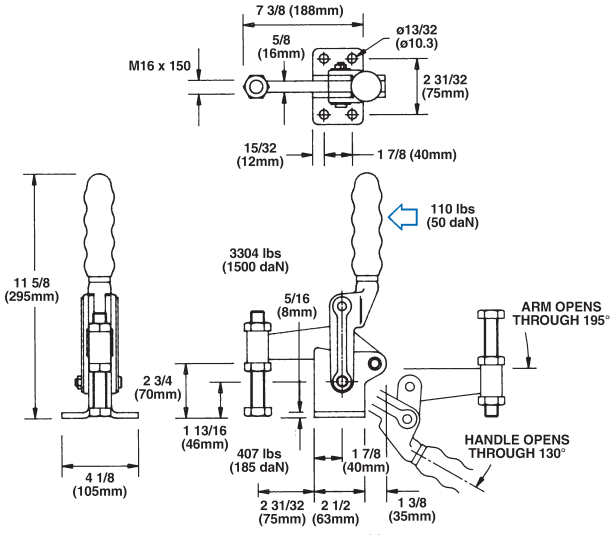


Part Number
72114

Model HDV5200/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 5,286 lbs
Weight: 9 lbs.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.



HDV5200 Series Accessories

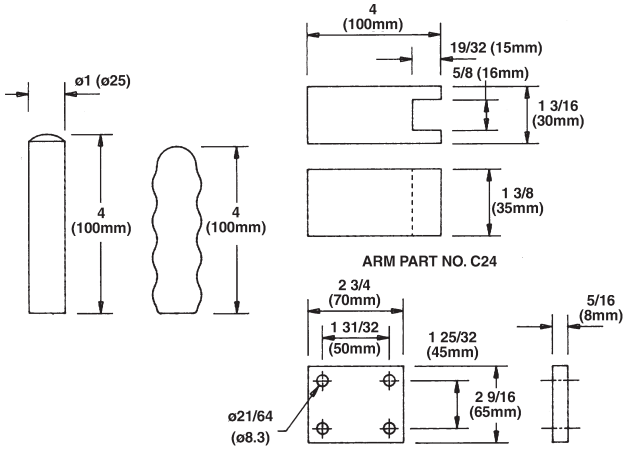
Part No. 72170
Handle: For welding at the desired angle to HDV5200/WW & HDV5200/SW
Weight: 10.3 oz.

Part No. 72171
Grip: To fit Part No. 72170 handle
Weight: 4 oz.



Part No. 72172
Arm: For extending the stub arms of HDV5200/WW & HDV5200/SW
Weight: 1 lb 8 oz.

Part No. 72173
Base: For bolt mounting HDV5200/WW & HDV5200/SW
Weight: 7 oz.



Vertical Cam Clamps



Features:

Cam clamps are similar to vertical clamps but the clamping force is generated not by a toggle linkage, but by the action of a roller on a cam.

The cam action allows components of differing thickness to be clamped without readjustment of the clamping spindle.

Model JCV155/FF can clamp parts with thickness varying by up to 1/16", and models JCV550/FF and JCV770/FF thickness varying by up to 5/64".

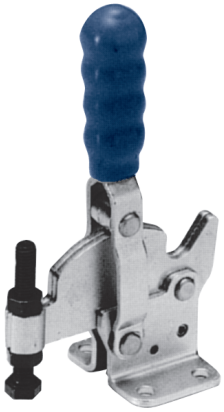
A comfortable, cushioned PVC handle grip is fitted to all three models of cam clamp.

Specifications:

The main components are of zinc plated and passivated steel, the cam and its roller being case hardened to resist wear.

Rivets are of stainless steel, which burnishes and work-hardens with use, the rivets of models JCV550/FF and JCV770/FF rotating in hardened bushes. The setscrews are made of steel.

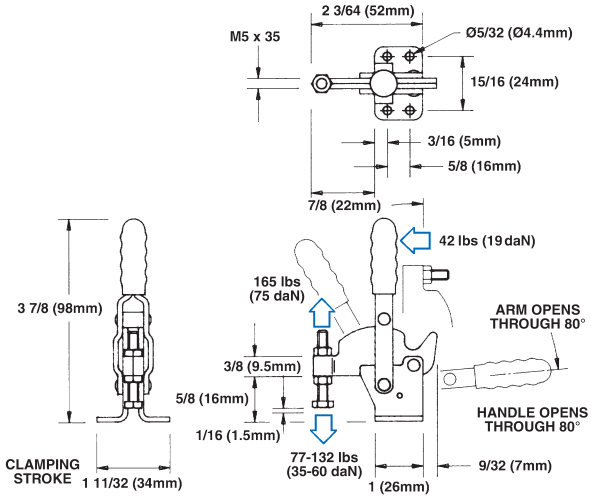
Vertical Cam Clamps



Part Number
72160

Model JCV/155/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 165 lbs.
Weight: 1.3 oz.
Supplied complete with: Setscrew & nuts

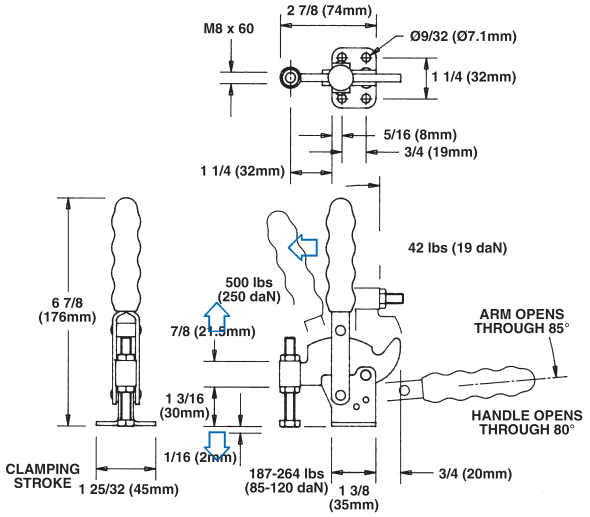


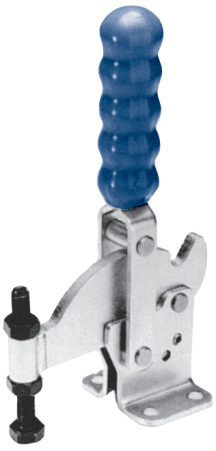


Part Number
72161

Model JCV550/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 550 lbs.
Weight: 9 oz.
Supplied complete with: Setscrew & nuts

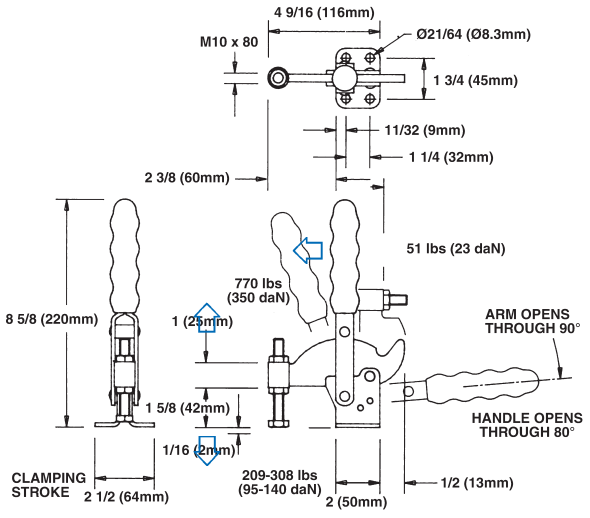




Part Number
72162

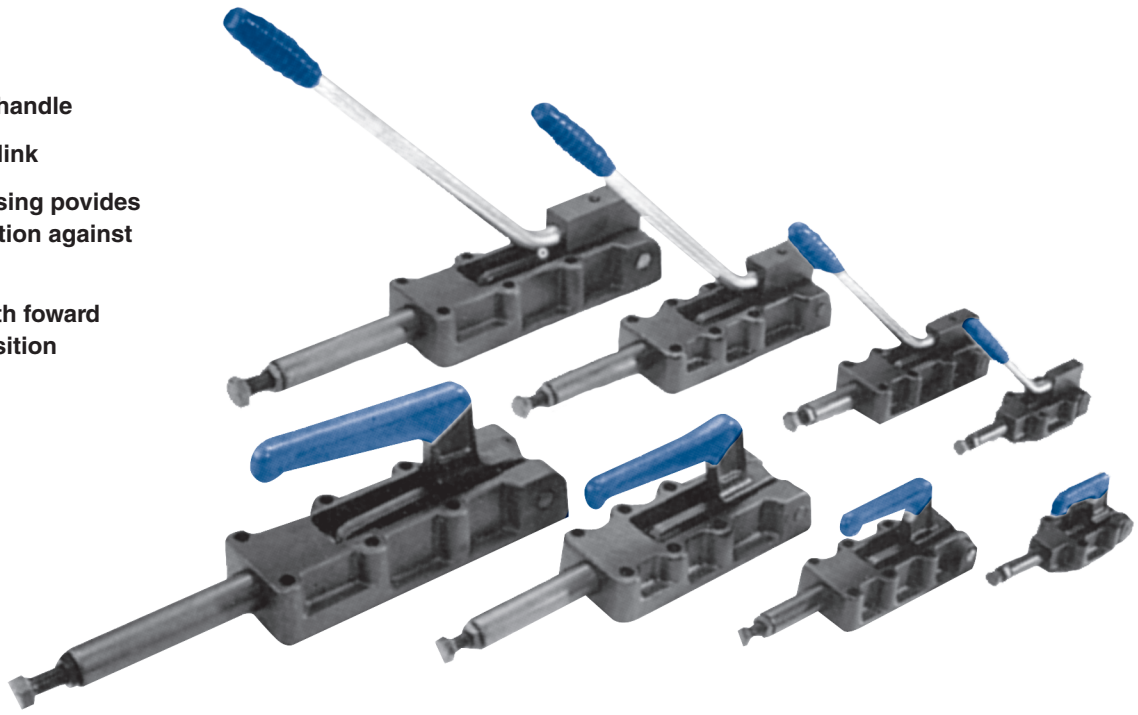
Model JCV770/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 770 lbs.
Weight: 1 lb 6 oz.
Supplied complete with: Setscrew & nuts



Heavy-Duty & Long-Handled Push-Pull Clamps

- **Low profile handle**
- **Heavy duty link**
- **Ribbed housing povides extra protection against side impact**
- **Locks in both foward and rear position**



Features:

These clamps are of exceptionally robust construction featuring cast and machined handles and bases. The clamps are designed with a low plunger height and with the mechanism guarded within the base to avoid finger traps.

Models HDP1300, HDP2600, HDP5500, and HDP11000 have handles of normal length for clamping. The long handled 'L' versions (HDP1300/L, HDP5500/L, and HDP11000/L) have their handles either to the front or rear of the clamp according to the application and produce high forces which make them suitable for clamping or for light work such as swaging, rivetting, press fitting components, etc. All models are fitted with a comfortable, cushioned PVC handle grip.

Specifications:

The bases of all models, and the handles of models HDP1300, HDP2600, HDP5500, and HDP11000 are machined cast iron.

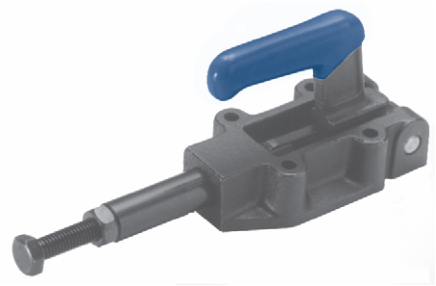
The handles of the 'L' versions are of steel bar and mount in housings which are either machined steel castings or machined from steel bar.

The plungers are of steel, and their precision ground diameter runs in a close-toleranced hole in the base casting.

All axles are of hardened steel and run in either the cast iron of the handle, or in the close-toleranced holes of hardened parts.

All models are supplied with a steel setscrew.

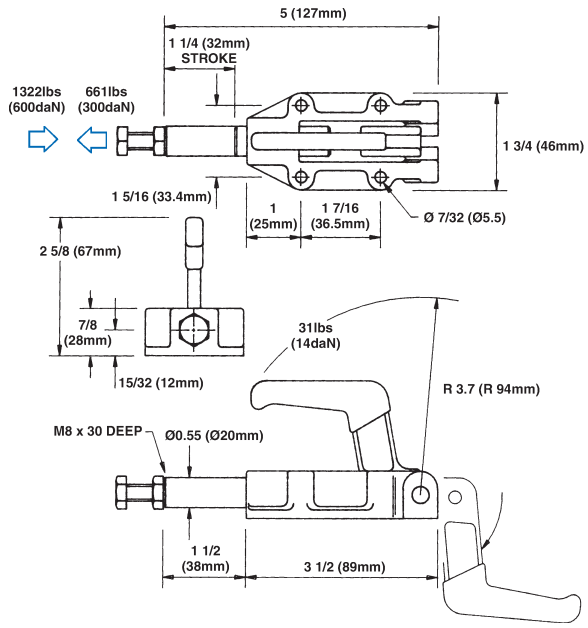
Heavy-Duty & Long-Handled Push-Pull Clamps

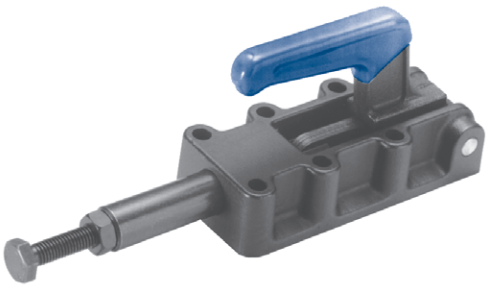


Part Number
72201

Model HDP1300

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 1,322 lbs.
Weight: 1 lb
Supplied complete with:
Setscrew & nut

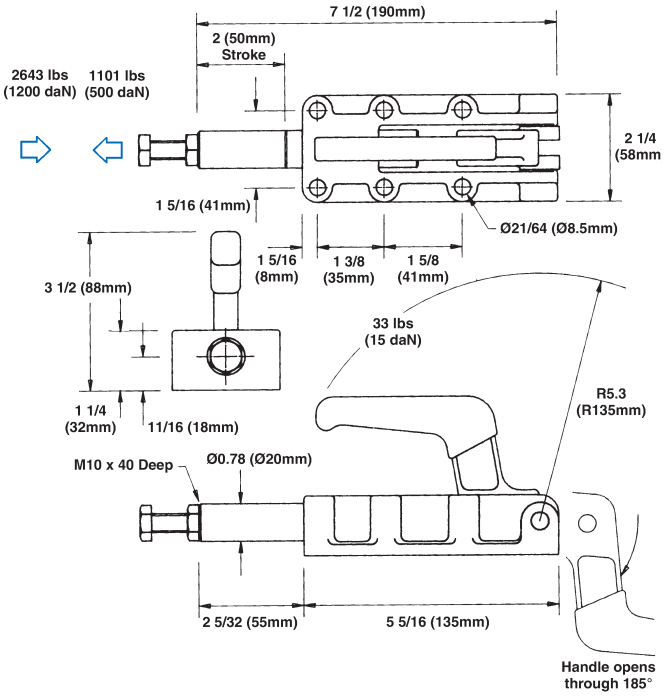




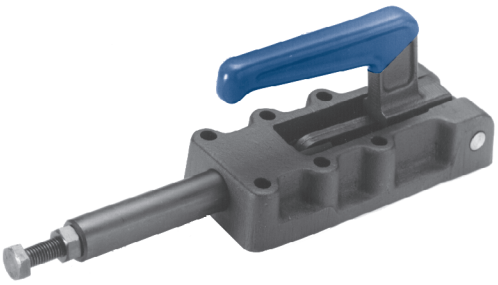
Part Number
72202

Model HDP2600

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 2,643 lbs.
Weight: 3 lbs
Supplied complete with:
Setscrew & nut



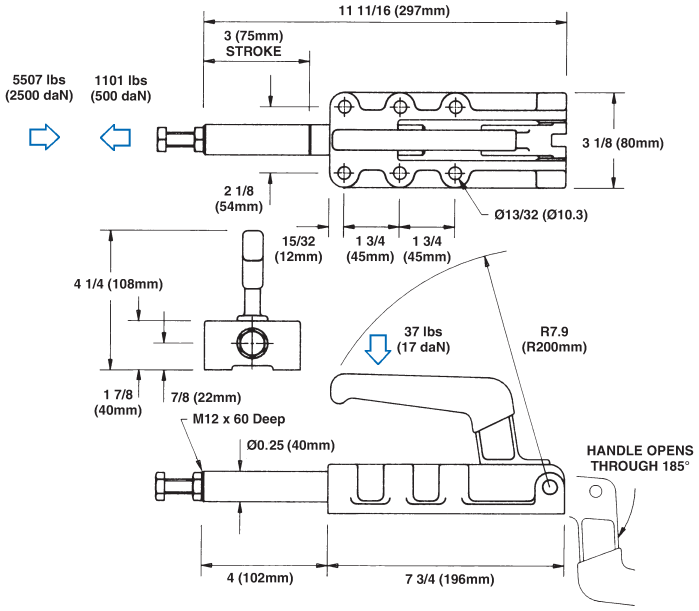
Heavy-Duty & Long-Handled Push-Pull Clamps

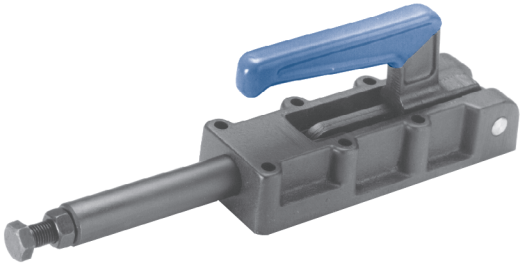


Part Number
72203

Model HDP5500

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 5,507 lbs
Weight: 8 lbs
Supplied complete with: Setscrew & nut

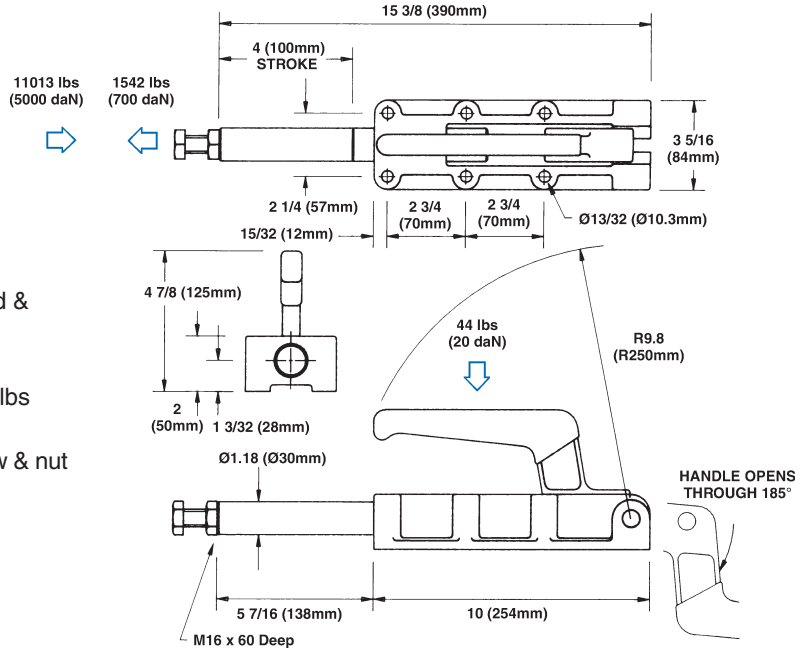




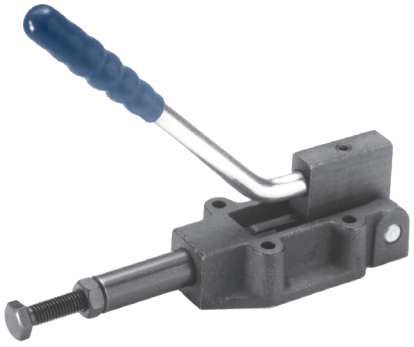
Part Number
72204

Model HDP11000

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 11,013 lbs
Weight: 13 lbs 6 oz.
Supplied complete with: Setscrew & nut



Heavy-Duty & Long-Handled Push-Pull Clamps



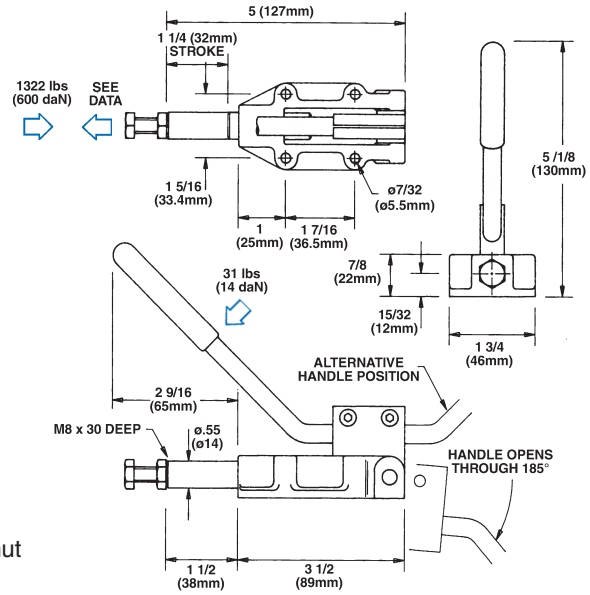
Part Number
72205

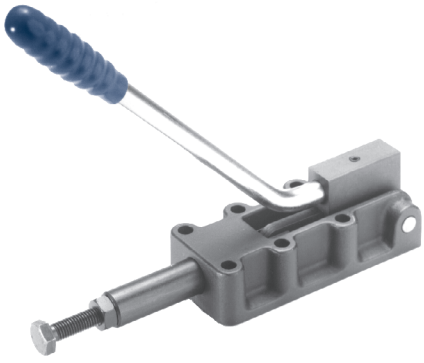
Model HDP1300/L

With 31 lbs handle force the output force is: lbs

Fully retracted		1,035
0.197 extended		242
0.394	,,	154
0.591	,,	165
0.787	,,	176
1.00	,,	187
1.180	,,	322
1.219	,,	419
Fully extended		1,277

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 1,322 lbs
Weight: 1 lb 2 oz.
Supplied complete with: Setscrew & nut





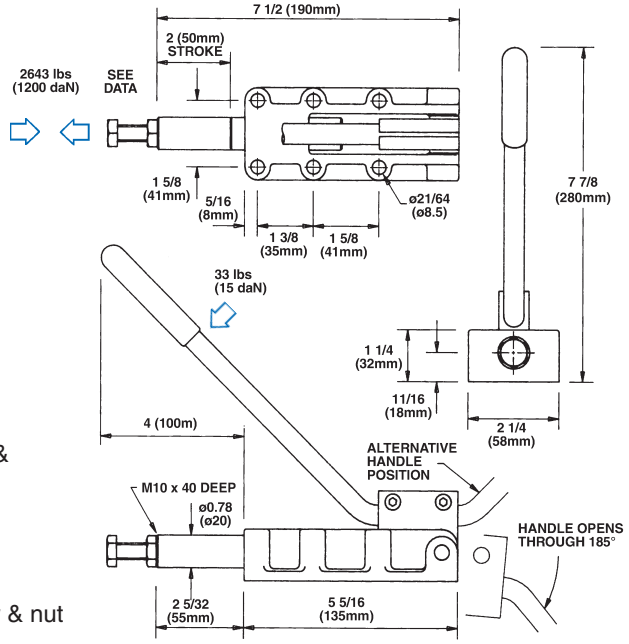
Part Number
72206

Model HDP2600/L

With 33 lbs handle force the output force is: lbs

Fully retracted		1,553
0.197 extended		368
0.394	,,	198
0.591	,,	161
0.787	,,	154
1.00	,,	159
1.180	,,	187
1.377	,,	220
1.573	,,	242
1.769	,,	330
1.887	,,	485
1.926	,,	639
Fully extended		2,048

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 2,643 lbs
Weight: 3 lbs 6 oz.
Supplied complete with: Setscrew & nut



Heavy-Duty & Long-Handled Push-Pull Clamps

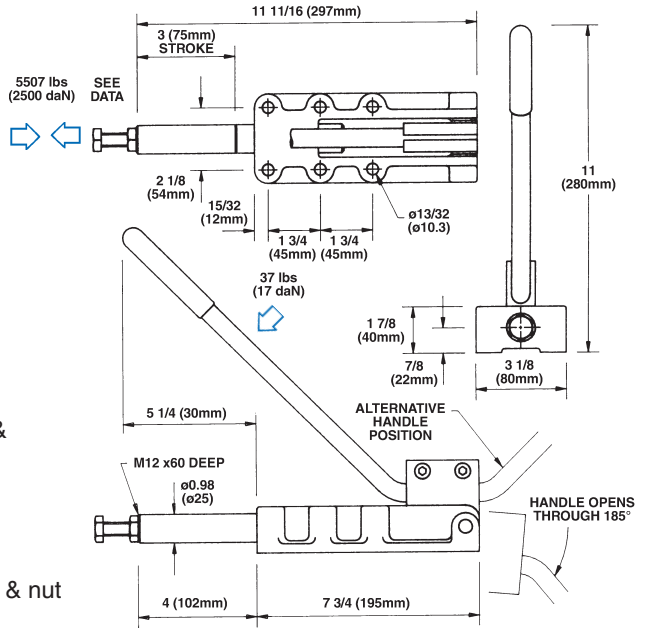


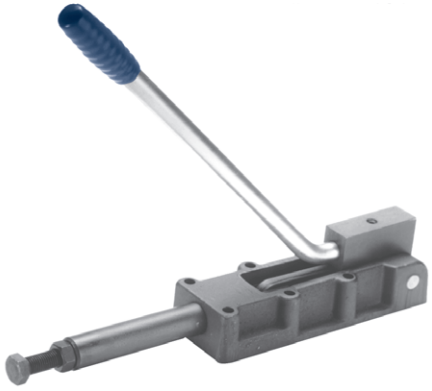
Part Number
72207

Model HDP5500/L

With 37 lbs handle force the output force is:	lbs
Fully retracted	2,203
0.394 extended	220
0.787 ,,	159
1.180 ,,	132
1.573 ,,	154
1.970 ,,	194
2.364 ,,	260
2.758 ,,	419
2.836 ,,	507
2.915 ,,	778
Fully extended	2,423

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 5,507 lbs.
Weight: 9 lbs 1 oz.
Supplied complete with: Setscrew & nut



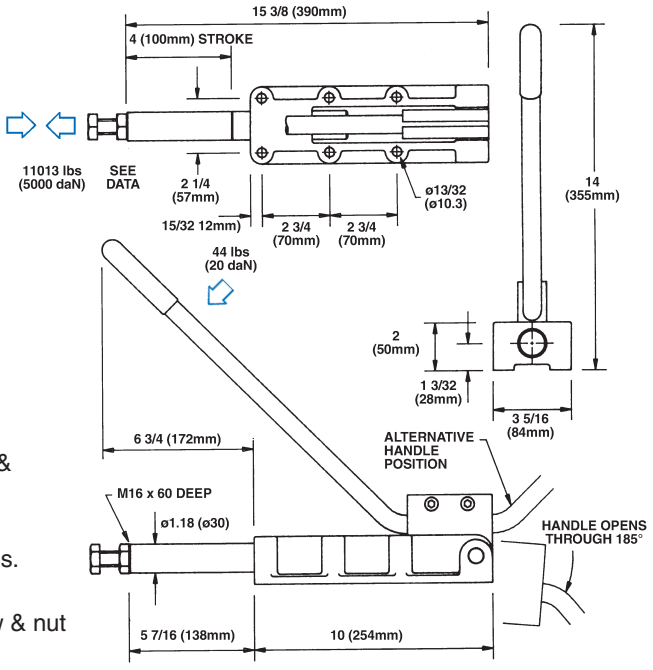


Part Number
72208

Model HDP11000/L

With 44 lbs handle force the output force is:	lbs
Fully retracted	2,423
0.394 extended	397
0.787 ,,	242
1.180 ,,	165
1.573 ,,	176
1.970 ,,	181
2.364 ,,	220
2.758 ,,	220
3.152 ,,	286
3.546 ,,	419
3.743 ,,	551
3.821 ,,	683
3.900 ,,	991
Fully extended	2,665

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 11,013 lbs.
Weight: 15 lbs 6 oz.
Supplied complete with: Setscrew & nut



Horizontal Latch Clamps



Features:

Latch clamps are available in two sizes. Bracket holes will not elongate over time. They have a small footprint for space constrained applications.

All latch clamps are fitted with PVC handle grips.

Specifications:

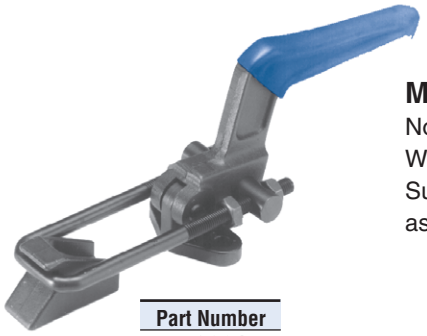
The HDL Series clamps have precision cast steel bases and latch brackets with cast iron handles. The finish is black oxide.

Installation:

It is important that the clamp and latch bracket are in alignment when viewed from both the top and the side to ensure that the clamp locks over center correctly.

The 'U' bolt should be adjusted to ensure an equal pull on either side.

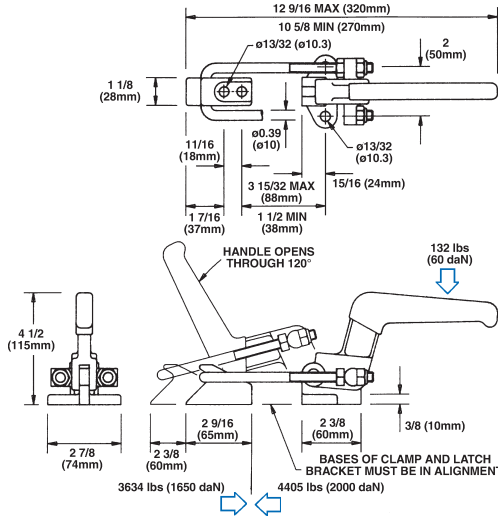
Horizontal Latch Clamps

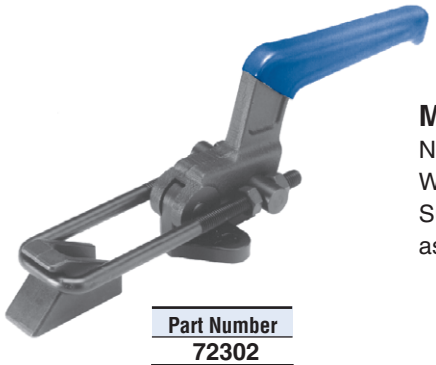


Part Number
72301

Model HDL4400

Nominal Holding Force: 4,405 lbs
Weight: 3 lbs 1 oz.
Supplied complete with: Latch Bracket as shown

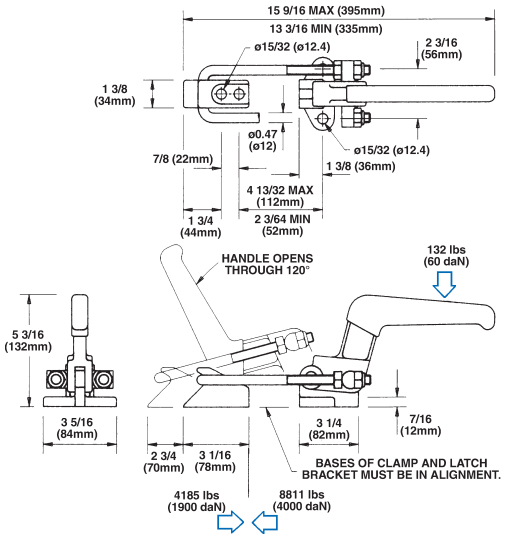




Part Number
72302

Model HDL8800

Nominal Holding Force: 8,811 lbs
Weight: 5 lbs 9 ozs.
Supplied complete with: Latch Bracket as shown



Magna Force Heavy Duty Cam Clamps



- Unique, patented range of cam clamps
- Rugged build quality, ideal for machine shops
- Clamping forces from 660 lbs to 11,000 lbs
- Significant cost benefits over strap clamps in repetitive machining
- A fraction of the cost of hydraulic workholding

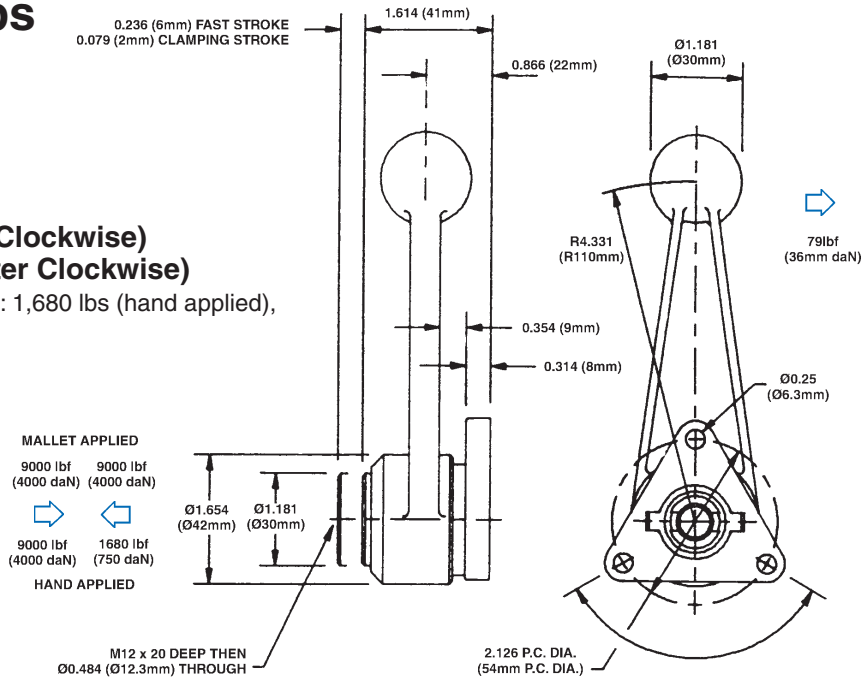
Heavy Duty Cam Clamps



Part Number
72401
72402

Model HDC8800R (Clockwise)
HDC8800RB (Counter Clockwise)

Operating clamping force: 1,680 lbs (hand applied), 9,000 lbs (mallet applied)
Weight: 1.21 lbs

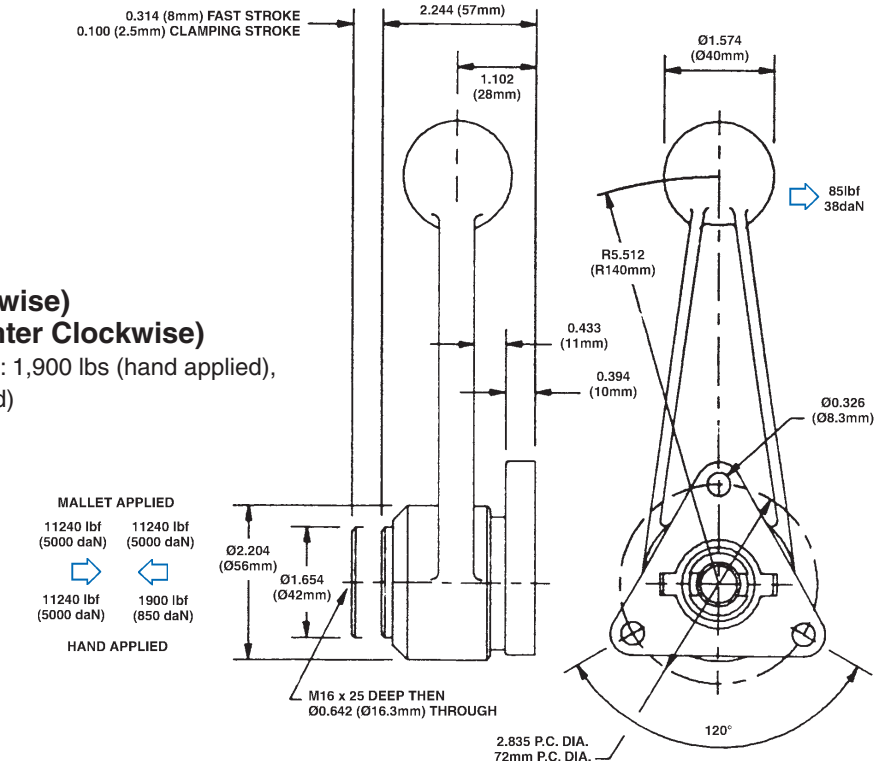




Part Number
72403
72404

Model
HDC11000R (Clockwise)
HDC11000RB (Counter Clockwise)

Operating clamping force: 1,900 lbs (hand applied), 11,240 lbs (mallet applied)
Weight: 2.9 lbs



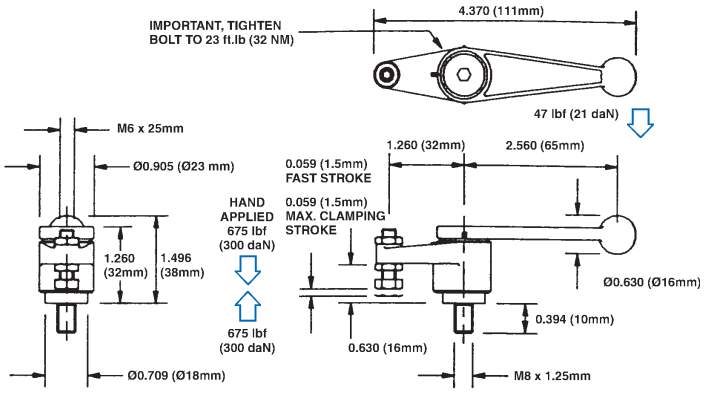
Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72401	81 lbs	1686 lbs	8992 lbs	0.236	0.079
72402	81 lbs	1686 lbs	8992 lbs	0.236	0.079
72403	85 lbs	1910 lbs	11240 lbs	0.315	0.100
72404	85 lbs	1910 lbs	11240 lbs	0.315	0.100

Heavy Duty Cam Swing Clamps



Part Number
72405
72406

Model
HDC675S (Clockwise)
HDC675SB (Counter Clockwise)
Operating clamping force: 675 lbs (hand applied)
Weight: 0.4 lbs
Supplied complete with: Set screw & nuts



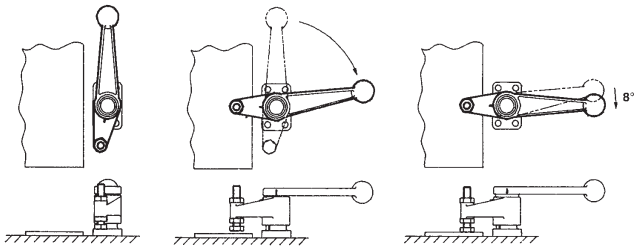
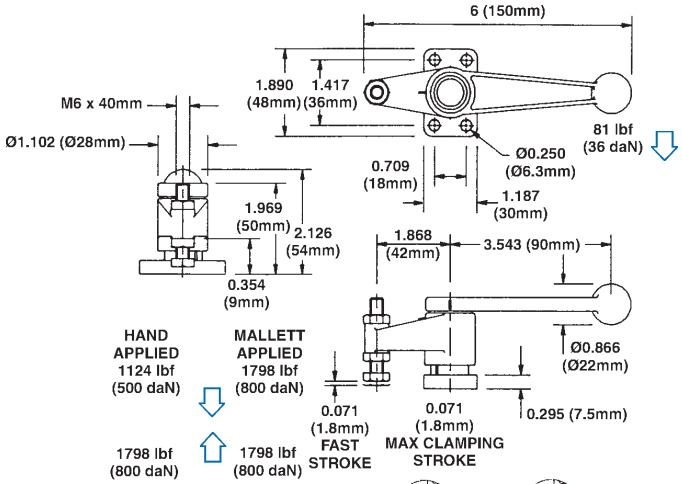


Fig. 1 Fig. 2 Fig. 3



Part Number
72407
72408

Model
HDC1800S (Clockwise)
HDC1800SB (Counter Clockwise)
Operating clamping force: 1,120 lbs (hand applied), 1,800 lbs (mallet applied)
Weight: 0.9 lbs
Supplied complete with: Set screw & nuts



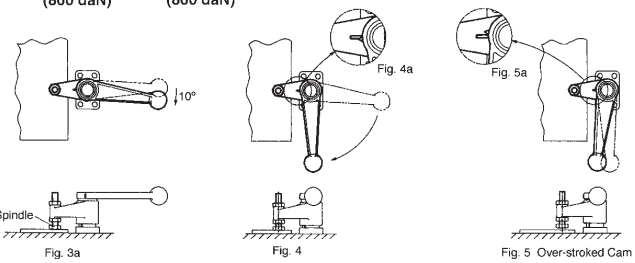


Fig. 3a Fig. 4 Fig. 5 Over-stroked Cam

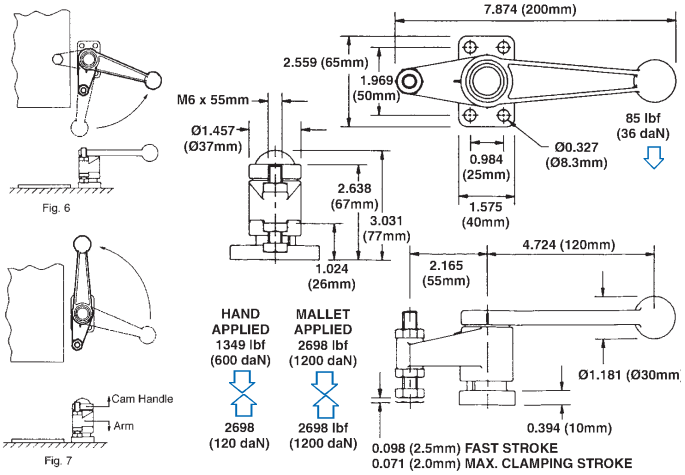
Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72405	47 lbs	674 lbs	N/A	0.059	0.059
72406	47 lbs	674 lbs	N/A	0.059	0.059
72407	81 lbs	1124 lbs	1800 lbs	0.070	0.070
72408	81 lbs	1124 lbs	1800 lbs	0.070	0.070

Heavy Duty Cam Swing Clamps



Part Number
72409
72410

Model
HDC2600S (Clockwise)
HDC2600SB (Counter Clockwise)
Operating clamping force:
1,350 lbs (hand applied),
2,700 lbs (mallet applied)
Weight: 2 lbs
Supplied complete with: Setscrew & nuts

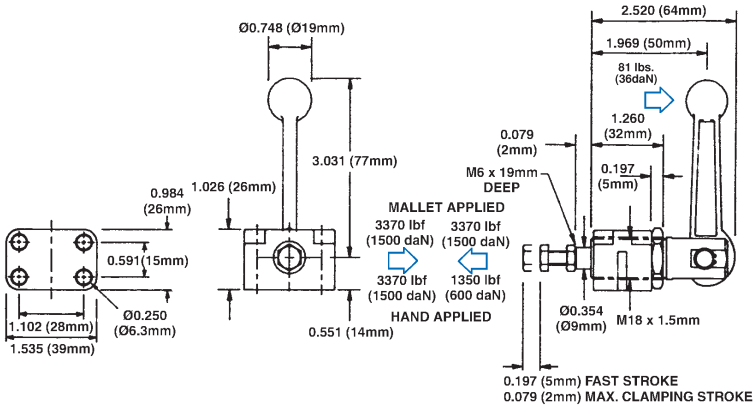


Heavy Duty Cam Push



Part Number
72411

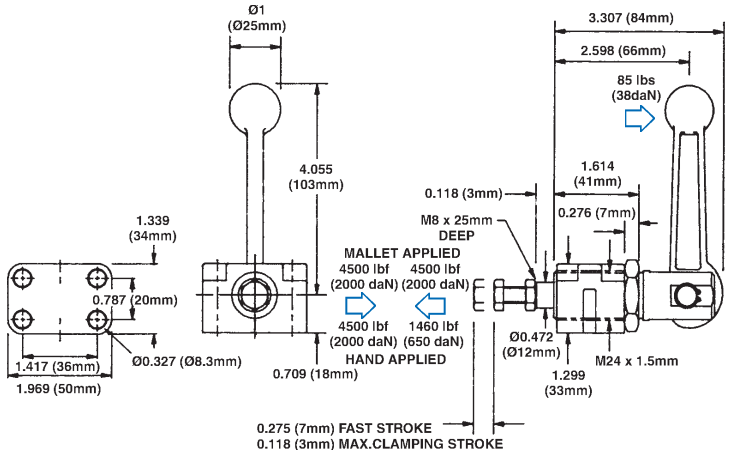
Model HDC3300P
Operating clamping force:
3,370 lbs (mallet applied),
1,350 lbs (hand applied)
Weight: 0.6 lbs
Supplied complete with:
Set screw & nuts, Mounting base and locknuts





Part Number
72412

Model HDC4400P
Operating clamping force:
4500 lbs (mallet applied),
1,460 lbs (hand applied)
Weight: 1.3 lbs
Supplied complete with:
Set screw & nuts
CMB24 Mounting base & locknuts



Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72409	85 lbs	1350 lbs	2700 lbs	0.098	0.079
72410	85 lbs	1350 lbs	2700 lbs	0.098	0.079
72411	81 lbs	1350 lbs	3370 lbs	0.205	0.087
72412	85 lbs	1460 lbs	4500 lbs	0.276	0.118

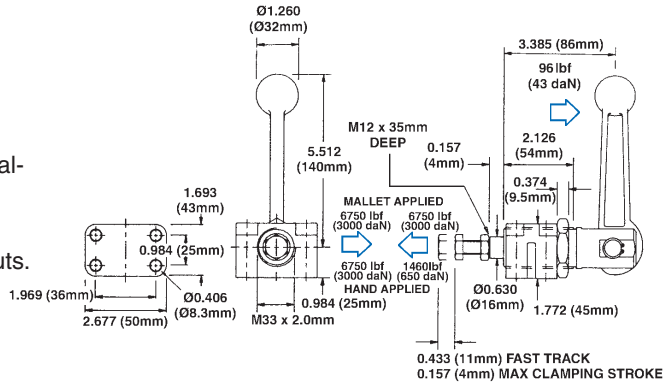
Heavy Duty Cam Push Clamps



Part Number
72413

Model HDC6750P

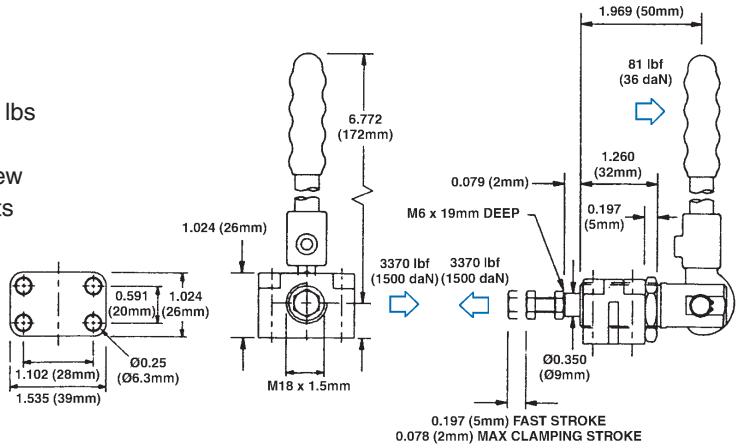
Operating clamping force: 6,750 lbs (mallet applied), 1,460 lbs (hand applied)
Weight: 3.4 lbs
Supplied complete with: Set screw & nuts. Mounting base & locknuts



Part Number
72414

Model HDC3300PL

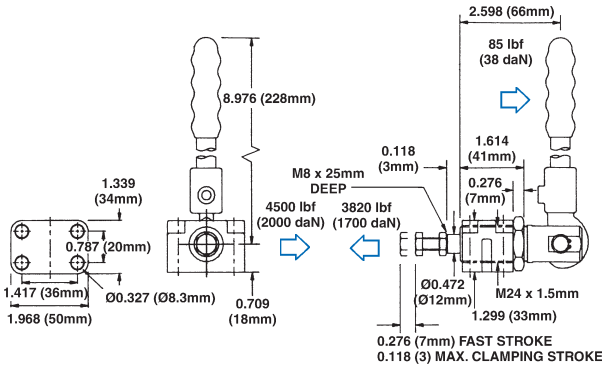
Operating clamping force: 3,370 lbs
Weight: 0.8 lbs
Supplied complete with: Set screw & nuts, Mounting base & locknuts



Part Number
72415

Model HDC4400PL

Operating clamping force: 3,820 lbs
Weight: 1.7 lbs
Supplied complete with: Set screw & nuts
Mounting base & locknuts,
Nominal holding force: 4,500 lbs



Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72413	97 lbs	1460 lbs	6750 lbs	0.433	0.157
72414	81 lbs	3370 lbs	N/A	0.205	0.087
72415	85 lbs	3820 lbs	N/A	0.276	0.118

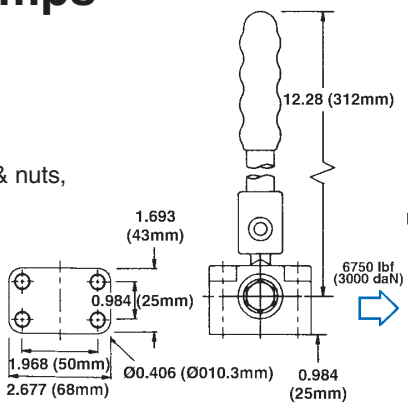
Heavy Duty Cam Push Clamps

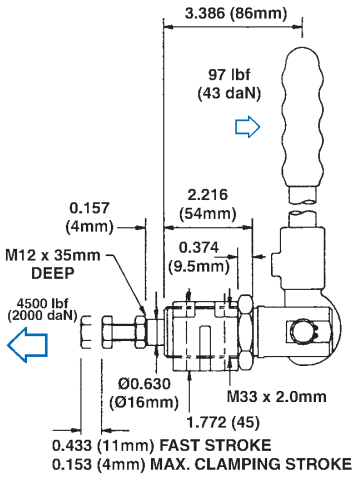


Model HDC6750PL

Operating clamping force: 4,500 lbs
Weight: 4.4 lbs
Supplied complete with: Set screw & nuts,
Mounting base & locknuts
Nominal holding force: 6,740 lbs

Part Number
72416





Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72416	97 lbs	4,500 lbs	N/A	0.433	0.157

Conversion Chart Part Numbers

Jergens	Carr Lane	Jergens	Carr Lane	Jergens	Carr Lane	Jergens	Carr Lane
70118	CL-150-TPC	**70380**	CL-450-VTC	**71019**	-	**72109**	
70120	CL-250-TPC	**70385**	CL-451-VTC	**71020**	-	**72110**	
70140	CL-350-TPC	**70390**	CL-452-VTC	**71021**	-	**72111**	
70210	CL-150-HTC	**70395**	CL-453-VTC	**71022**	-	**72112**	
70211	CL-153-HTC	**70420**	CL-550-VTC	**71023**	-	**72113**	
70215	CL-151-HTC	**70425**	CL-551-VTC	**71024**	-	**70745**	CL-254-PL-2
70230	CL-250-HTC	**70430**	CL-552-VTC	**71025**	-	**70750**	CL-454-PL
70231	CL-253-HTC	**70440**	CL-650-VTC	**71026**	-	**70810**	CL-100-PC
70235	CL-251-HTC	**70445**	CL-651-VTC	**71027**	-	**70815**	-
70240	CL-350-HTC	**70450**	CL-652-VTC	**71028**	-	**70818**	CL-50-SPC
70245	CL-351-HTC	**70460**	CL-750-VTC	**71029**	-	**70820**	CL-150-SPC
70250	CL-450-HTC	**70470**	CL-850-VTC	**71030**	CL-751-VTC	**70830**	CL-200-PC
70255	CL-451-HTC	**70480**	CL-950-VTC	**71031**	CL-851-VTC	**70840**	CL-250-SPC
70260	CL-260-HTC	**70490**	CL-1050-VTC	**71032**	-	**70850**	CL-300-PC
70262	-	**70550**	CL-150-PA	**71033**	-	**71042**	CL-210-PA
70264	-	**70555**	CL-170-PA	**71034**		**70860**	CL-350-SPC
70270	CL-550-HTC	**70558**	CL-100-PA	**71035**		**71001**	CL-152-HTC
70275	CL-551-HTC	**70560**	CL-200-PA	**71037**	CL-375-HTC	**71002**	CL-250-HTC-S
70280	CL-200-VTC	**70562**	CL-300-PA	**71039**	CL-350-PA	**71003**	CL-252-HTC
70285	CL-475-HTC	**70565**	CL-310-PA	**71040**	CL-100-PA-S	**71004**	CL-260-HTC-S
70310	CL-150-VTC	**70570**	CL-250-PA	**71041**	CL-110-PA	**71005**	-
70315	CL-151-VTC	**70575**	CL-352-PL-S	**71049**	CL-50-PL-2	**71006**	CL-350-HTC-S
70320	CL-152-VTC	**70580**	CL-251-PA	**71050**	-	**71007**	-
70330	CL-250-VTC	**70710**	CL-50-PL	**72101**		**71008**	CL-300-HTC
70335	CL-251-VTC	**70720**	CL-150-PL	**72102**		**71009**	-
70340	CL-252-VTC	**70730**	-	**72103**		**71010**	-
70342	CL-253-VTC	**70740**	CL-254-PL	**72104**		**71011**	-
70350	CL-350-VTC	**71015**	CL-200-VTC-S	**72105**		**71012**	CL-151-VTC-S
70355	CL-351-VTC	**71016**	-	**72106**		**71013**	-
70360	CL-352-VTC	**71017**	-	**72107**		**71014**	-
70365	CL-353-VTC	**71018**	-	**72108**			

Conversion Chart Part Numbers

Jergens	De-Sta-Co	Jergens	De-Sta-Co	Jergens	De-Sta-Co	Jergens	De-Sta-Co
70118	602	**70450**	210-TU	**71014**	201-TB	**72113**	
70120	604	**70460**	247-S	**71015**	305-USS	**72114**	
70140	624	**70470**	247-U	**71016**	202-TB	**72120**	
70210	205-S	**70480**	267	**71017**	202-UB	**72121**	
70211	205-SL	**70490**	267-U	**71018**	202-TUB	**72122**	
70215	205-SB	**70550**	301	**71019**	202-TU	**72123**	
70230	205-U	**70555**	311	**71020**	207-TSB	**72160**	
70231	205-UL	**70558**	323	**71021**	207-LB	**72161**	
70235	205-UB	**70560**	331	**71022**	207-TLB	**72162**	
70240	215-U	**70562**	341	**71023**	207-TL	**72201**	
70245	215-UB	**70565**	344	**71024**	207-TUB	**72202**	
70250	225-U	**70570**	351	**71025**	207-ULB	**72203**	
70255	225-UB	**70575**	325	**71026**	207-TULB	**72204**	
70260	123-U	**70580**	351-B	**71027**	207-TUL	**72205**	
70262	217-U	**70710**	424	**71028**	210-TSB	**72206**	
70264	227-U	**70720**	441	**71029**	210-TUB	**72207**	
70270	235-U	**70730**	-	**71030**	247-SB	**72208**	
70275	-	**70740**	462	**71031**	247-UB	**72301**	
70280	305-U	**70745**	462-2	**71032**	268	**72302**	
70285	317-U	**70750**	463	**71033**	268-U	**72310**	
70310	201	**70810**	-	**71034**		**72311**	
70315	201-B	**70815**	603	**71035**		**72314**	
70320	201-T	**70818**	601	**71037**	317-S	**72401**	
70330	202	**70820**	605	**71039**	381	**72402**	
70335	202-B	**70830**	608	**71040**	323-MSS	**72403**	
70340	202-T	**70840**	610	**71041**	324	**72404**	
70342	202-U	**70850**	-	**71042**	334	**72405**	
70350	207-S	**70860**	630	**71049**	424-2	**72406**	
70355	207-SB	**71001**	205-SR	**71050**	441-2	**72407**	
70360	207-TS	**71002**	205-USS	**72101**		**72408**	
70365	207-L	**71003**	205-UR	**72102**		**72409**	
70380	207-U	**71004**	213-USS	**72103**		**72410**	
70385	207-UB	**71005**	213-UB	**72104**		**72411**	
70390	207-TU	**71006**	215-USS	**72105**		**72412**	
70395	207-UL	**71007**	215-UBSS	**72106**		**72413**	
70420	210-S	**71008**	215-S	**72107**		**72414**	
70425	210-SB	**71009**	215-SB	**72108**		**72415**	
70430	210-TS	**71010**	217-UB	**72109**		**72416**	
70440	210-U	**71011**	227-UB	**72110**		**72501**	
70445	210-UB	**71012**	201-SS	**72111**		**72502**	
		71013	201-BSS	**72112**		**72503**	

Conversion Chart Part Numbers

Jergens	Good Hand	Jergens	Good Hand	Jergens	Good Hand	Jergens	Good Hand
70118	36202	**70460**	10249	**71015**	13005-SS	**72114**	
70120	36204	**70470**	10247	**71016**	12075	**72120**	
70140	36224	**70480**	101JS	**71017**	-	**72121**	
70210	201-A	**70490**	101-J	**71018**	-	**72122**	
70211	201-AL	**70550**	43101	**71019**	-	**72123**	
70215	201-AI	**70555**	-	**71020**	12146	**72160**	
70230	201	**70558**	40323	**71021**	12147	**72161**	
70231	201-L	**70560**	431	**71022**	12148	**72162**	
70235	201-I	**70562**	40341	**71023**	12143	**72201**	
70240	201-B	**70565**	40344	**71024**	12136	**72202**	
70245	201-BI	**70570**	451	**71025**	12137	**72203**	
70250	225-D	**70575**	80325	**71026**	12138	**72204**	
70255	225-DI	**70580**	452	**71027**	12133	**72205**	
70260	20752-B	**70710**	50350	**71028**	12300	**72206**	
70262	21502-B	**70720**	50360	**71029**	12290	**72207**	
70264	22502-B	**70730**	-	**71030**	10250	**72208**	
70270	20235	**70740**	50380	**71031**	10248	**72301**	
70275	-	**70745**	-	**71032**	-	**72302**	
70280	13005	**70750**	50450	**71033**	-	**72310**	
70285	20820	**70810**	304-C	**71034**		**72311**	
70310	101-A	**70815**	36003	**71035**		**72314**	
70315	101-AI	**70818**	301-A	**71037**	-	**72401**	
70320	101-AT	**70820**	302-F	**71039**	43810	**72402**	
70330	12050	**70830**	304-E	**71040**	40323-SS	**72403**	
70335	12055	**70840**	36010	**71041**	40324	**72404**	
70340	12070	**70850**	304-H	**71042**	40334	**72405**	
70342	12050-U	**70860**	36330	**71049**	-	**72406**	
70350	12140	**71001**	201-AR	**71050**	-	**72407**	
70355	12145	**71002**	201-SS	**72101**		**72408**	
70360	12141	**71003**	201-R	**72102**		**72409**	
70365	12142	**71004**	-	**72103**		**72410**	
70380	12130	**71005**	-	**72104**		**72411**	
70385	12135	**71006**	201-BSS	**72105**		**72412**	
70390	12131	**71007**	-	**72106**		**72413**	
70395	12132	**71008**	201-BS	**72107**		**72414**	
70420	12275	**71009**	201-BSI	**72108**		**72415**	
70425	12280	**71010**	-	**72109**		**72416**	
70430	12295	**71011**	-	**72110**		**72501**	
70440	12265	**71012**	101-ASS	**72111**		**72502**	
70445	12270	**71013**	-	**72112**		**72503**	
70450	12285	**71014**	101-AIT	**72113**			



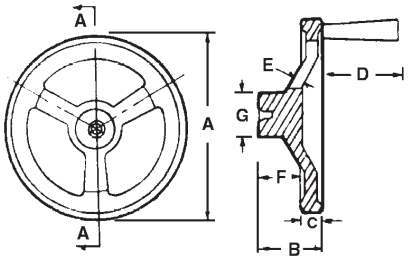
HANDWHEELS

Aluminum Angular Solid Handwheel 8.2
Aluminum Angular Spoked Handwheel... 8.2
Aluminum Finger Wheel 8.10
Cast Angular Spoked Handwheel 8.3
Cast Iron Angular Spoked Handwheel 8.2
Nylon Angular Three Spoked Handwheel 8.9
Plastic Angular Solid Handwheel..... 8.9
Plastic Three Spoked Handwheel..... 8.5
Plastic Three Spoked Handwheel With Revolving Handle 8.6
Plastic Two Spoked Handwheel..... 8.4
Plastic Two Spoked Handwheel With Revolving Handles 8.4
Plastic Two Spoked Handwheel With Revolving Fold Away Handle 8.5
Plastic Solid Handwheel 8.8
Plastic Solid Handwheel With Finger Grips and Revolving Fold Away Handle 8.9
Plastic Solid Handwheel With Revolving, Fold Away Handle..... 8.7
Plastic Solid Handwheel With Revolving Handle 8.6
Plastic Solid Handwheel With Revolving, Spring Loaded, Spoked Handwheel 8.6

Aluminum Angular Spoked Handwheel



- Diameters from 4" to 23" and 100mm to 575mm
- Lightweight, 319 Aluminum Alloy
- Rims machined to run concentric with center drill
- Available with or without handle
- Special bores and keyways quoted upon request
- Available in FixturePro™ Design Software



Handwheels With Handle

Part Number	A	B	C	D	E	F	G	Number Of Spokes	Part Number	
									Handwheel Only	Handle Only
22308	4	1 1/2	5/8	1 5/8	1/4	1	1 3/16	2	**22108***	**21902**
22301	6	2	3/4	2 9/16	5/16	1 7/16	1 1/2	3	**22101***	**21904**
22302	8	2 1/2	7/8	2 15/16	3/8	1 7/8	2	3	**22102***	**21905**
22303	10	3	7/8	3 5/16	7/16	2 1/8	2 3/8	3	**22103***	**21906**
22304	12	3 3/8	7/8	3 5/16	7/16	2 3/16	2 1/2	3	**22104***	**21906**
22305	14	3 13/16	1	3 5/16	7/16	2 17/32	2 3/4	5	**22105***	**21906**
22306	18	4 7/8	1 1/4	3 5/16	7/16	3 1/16	4 1/8	5	**22106***	**21906**
22307	23	7 1/8	1 1/4	3 5/16	7/16	4 3/8	4 1/2	6	**22107***	**21906**

*Not tapped for handle

Metric Handwheels With Handle

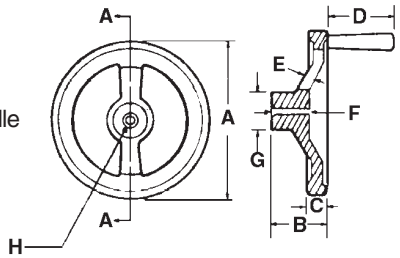
Part Number	A	B	C	D	E	F	G	Number Of Spokes	Part Number	
									Handwheel Only	Handle Only
22358	100	38	16	41	6	25	30	2	**22108***	**21952**
22351	150	50	19	64	8	36	38	3	**22101***	**21954**
22352	200	63	22	73	9	47	50	3	**22102***	**21955**
22353	250	75	22	83	11	53	59	3	**22103***	**21956**
22354	300	84	22	83	11	55	63	3	**22104***	**21956**
22355	350	95	25	83	11	63	69	5	**22105***	**21956**
22356	450	122	31	83	11	77	103	5	**22106***	**21956**
22357	575	178	31	83	11	110	113	6	**22107***	**21956**

*Not tapped for handle

Cast Iron Angular Spoked Handwheel



- Fine Grain Cast Iron
- Rims machined to run concentric with center hole
- All cast iron wheels have two spokes and finger grips. Available with or without handle
- Available with Black Epoxy finish and a plain finished handle with polished rim
- Other colors of Epoxy Finish available upon request
- Available in FixturePro™ Design Software



Handwheels With Handle

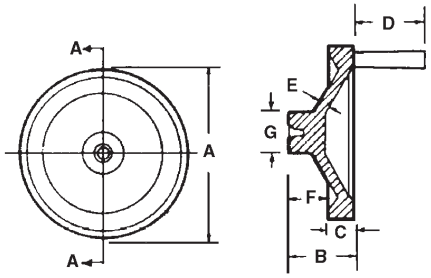
Part Number (Polished)	Part Number (Black)	A	B	C	D	E	F	G	H	Polished Part Number		Black Part Number	
										Handwheel Only	Handle Only	Handwheel Only	Handle Only
22401	**22411**	4	1 1/2	5/8	1 5/8	1/4	1	1 3/16	3/8	**22201***	**21902**	**22211***	**21912**
22402	**22412**	6	2	3/4	2 9/16	3/8	1 7/16	1 9/16	1/2	**22202***	**21904**	**22212***	**21914**
22403	**22413**	8	2 1/4	7/8	2 15/16	7/16	1 1/2	1 25/32	5/8	**22203***	**21905**	**22213***	**21915**
22404	**22414**	10	3	1	3 5/16	1/2	2 1/4	2 1/4	5/8	**22204***	**21906**	**22214***	**21916**

*Not drilled and tapped for handle

Aluminum Angular Solid Handwheel



- Diameters from 3" to 12" and 75mm to 300mm
- Lightweight, 319 Aluminum Alloy
- Rims machined to run concentric with center drill
- Available with or without handle
- Special bores and keyways quoted upon request
- Available in FixturePro™ Design Software



Handwheels With Handle

Part Number	A	B	C	D	E	F	G
22702	3	1 11/16	5/8	1 5/8	1/4	1 7/32	1 1/4
22703	4	1 7/8	5/8	1 5/8	3/16	1 7/16	1 1/2
22704	5	2	11/16	2 1/16	3/16	1 1/4	1 1/2
22705†	6	2	3/4	2 9/16	3/16	1 3/8	1 1/2
22706†	8	2 1/2	7/8	2 15/16	3/16	1 3/4	2
22707†	10	3 1/4	1	3 5/16	3/16	2 7/32	2 5/16
22708†	12	3 1/2	1	3 5/16	1/4	2 1/4	2 1/2

†Finger grips formed behind solid wheel rim

Part Number	
Handwheel Only	Handle Only
22502*	**21902**
22503*	**21902**
22504*	**21903**
22505*†	**21904**
22506*†	**21905**
22507*†	**21906**
22508*†	**21906**

*Not tapped for handle

Metric Handwheels With Handle

Part Number	A	Ref. B	C	D	E	F	G
22752	75	42	16	41	6	30	31
22753	100	47	16	41	5	36	38
22754	125	50	17	52	5	31	38
22755	150	50	19	64	5	34	38
22756	200	63	22	73	5	44	50
22757	250	81	25	83	5	55	58
22758	300	88	25	83	6	56	63

Part Number	
Handwheel Only	Handle Only
22502*	**21952**
22503*	**21952**
22504*	**21953**
22505*	**21954**
22506*	**21955**
22507*	**21956**
22508*	**21956**

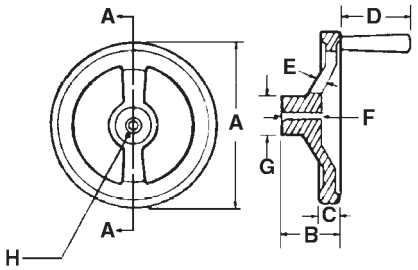
*Not tapped for handle

Cast Iron Angular Spoked Handwheel

Metric



- Fine Grain Cast Iron
- Rims machined to run concentric with center hole
- All cast iron wheels have two spokes and finger grips
- Available with or without handle
- Available with Black Epoxy finish and a plain finished handle with polished rim upon request
- Other colors of Epoxy Finish available upon request



Metric Polished Handwheels With Handle

Part Number	A	B	C	D	E	F	G	H
22451	100	38	16	41	6	25	30	10
22452	150	50	19	64	9	36	39	12
22453	200	57	22	73	11	38	45	16
22454	250	75	25	83	13	57	57	16

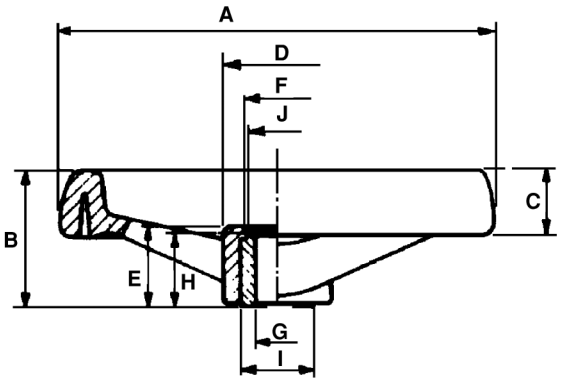
Part Number	
Handwheel Only	Handle Only
22251*	**21952**
22252*	**21954**
22253*	**21955**
22254*	**21956**

*Not tapped for handle

Plastic Two Spoked Handwheel
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



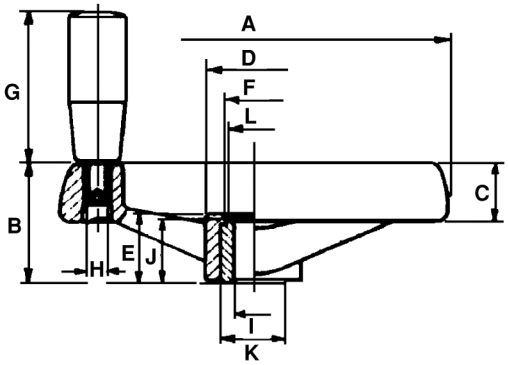
Handwheels Only

Part Number	A	B	C	D	E	F	Fractional G	H	I	J
22601	3.15	1.38	0.71	0.91	0.75	0.67	5/16	0.67	0.71	0.62
22602	3.90	1.46	0.79	0.98	0.75	0.67	3/8	0.67	0.71	0.63
22603	4.88	1.73	0.87	1.22	0.98	0.83	3/8	0.87	0.87	0.79
22604	6.30	2.01	0.98	1.57	1.14	0.98	1/2	1.06	1.02	0.94
22605	7.87	2.40	1.10	1.97	1.42	1.22	5/8	1.34	1.18	1.10
22606	8.84	2.76	1.26	2.32	1.57	1.34	5/8	1.50	1.32	1.30
22607	11.73	3.07	1.42	2.60	1.81	1.65	3/4	1.69	1.57	1.46
22608	14.67	3.23	1.50	2.72	1.81	1.65	3/4	1.69	1.57	1.46

Plastic Two Spoked Handwheel With Revolving Handles
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Handwheels With Revolving Handle

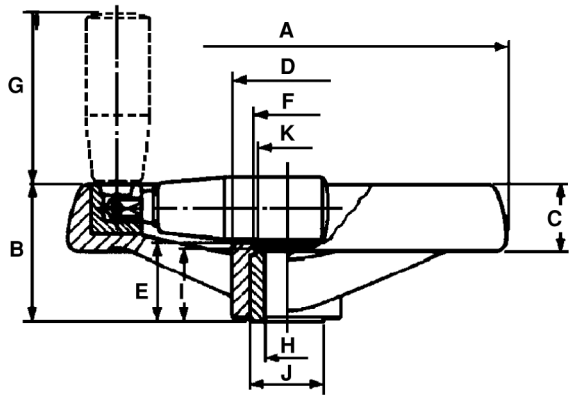
Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22611	3.15	1.38	0.71	0.91	0.75	0.67	1.57	M6	0.312	0.67	0.71	0.63
22612	3.90	1.46	0.79	0.98	0.75	0.67	2.20	M6	0.375	0.67	0.71	0.63
22613	4.88	1.73	0.87	1.22	0.98	0.83	2.56	M8	0.375	0.87	0.87	0.79
22614	6.30	2.01	0.98	1.57	1.14	0.98	2.56	M8	0.500	1.06	1.02	0.94
22615	7.87	2.40	1.10	1.97	1.42	1.22	3.15	M8	0.625	1.34	1.18	1.10
22616	8.84	2.76	1.26	2.32	1.57	1.34	3.54	M10	0.625	1.50	1.38	1.30
22617	11.73	3.07	1.42	2.60	1.81	1.65	3.54	M10	0.750	1.69	1.57	1.46
22618	14.67	3.23	1.50	2.72	1.81	1.65	3.54	M10	0.750	1.69	1.57	1.46

Plastic Two Spoked Handwheel With Revolving Fold Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



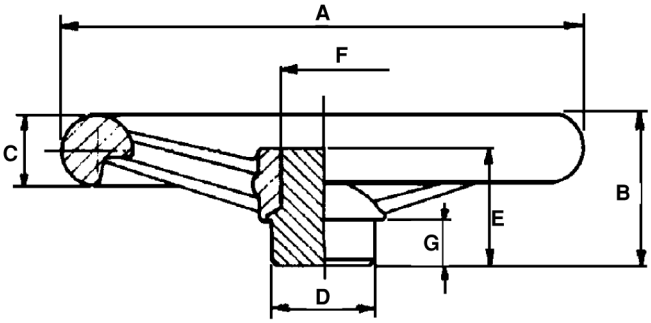
Part Number	A	B	C	D	E	F	G	H	I	J	K
22621	3.15	1.38	.71	.91	.75	.67	1.96	.312	.67	.71	.62
22622	3.90	1.46	.79	.98	.75	.67	2.20	.375	.67	.71	.63
22623	4.88	1.73	.87	1.22	.98	.83	2.56	.375	.87	.87	.79
22624	6.30	2.01	.98	1.57	1.14	.98	2.56	.500	1.06	1.02	.94
22625	7.87	2.40	1.10	1.97	1.42	1.22	3.15	.625	1.34	1.18	1.10
22626	8.84	2.76	1.26	2.32	1.57	1.34	3.54	.625	1.50	1.38	1.30

Plastic Three Spoked Handwheel

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



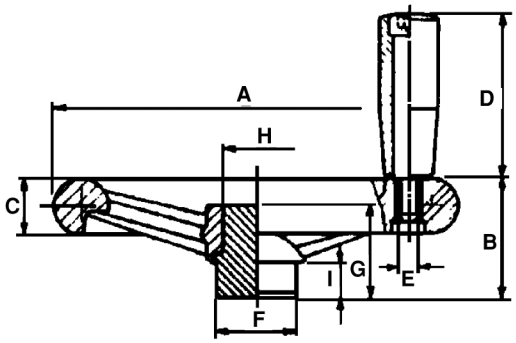
Part Number	A	B	C	D	E	F	G
22631	3.86	1.57	.55	.94	1.42	.79	.47
22632	4.88	1.77	.71	.94	1.42	.79	.47
22633	6.18	1.97	.87	1.26	1.50	.94	.59
22634	7.09	2.20	.94	1.57	1.69	1.22	.59
22635	7.80	2.20	.94	1.57	1.69	1.22	.59
22636	8.72	2.60	1.18	1.93	1.73	1.50	.59
22637	11.34	3.07	1.26	2.28	2.20	1.85	.71
22638	14.76	4.25	1.57	2.28	3.03	2.28	1.02

Plastic Three Spoked Handwheel With Revolving Handle

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



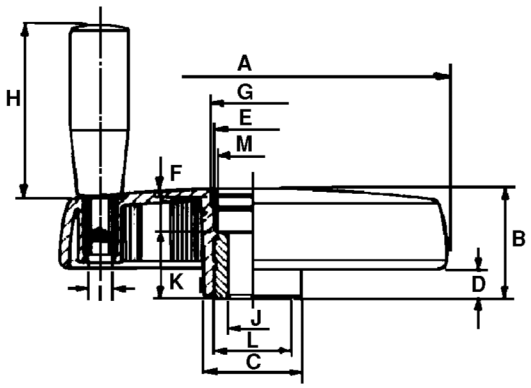
Part Number	A	B	C	D	E	F	G	H	I
22641	3.86	1.57	.55	1.57	M6	.94	1.42	.79	.47
22642	4.88	1.77	.71	1.97	M8	.94	1.42	.79	.47
22643	6.18	1.97	.87	2.56	M8	1.26	1.50	.94	.59
22644	7.09	2.20	.94	3.15	M10	1.57	1.69	1.22	.59
22645	7.80	2.20	.94	3.15	M10	1.57	1.69	1.22	.59
22646	8.72	2.60	1.18	3.54	M10	1.93	1.73	1.50	.59
22647	11.34	3.07	1.26	3.94	M12	2.28	2.20	1.85	.71
22648	14.76	4.25	1.57	3.94	M14	2.28	3.03	2.28	1.02

Plastic Solid Handwheel With Revolving Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M
22801	3.27	1.14	.98	.35	.75	.31	.82	1.57	M6	.312	.67	.71	.63
22802	4.02	1.34	1.18	.39	.98	.35	1.06	1.97	M6	.375	.87	.87	.79
22803	4.92	1.54	1.38	.43	1.10	.31	1.22	2.20	M6	.375	1.06	1.02	.94
22804	5.91	1.73	1.50	.47	1.18	.39	1.34	2.56	M8	.500	1.18	1.02	.94
22805	6.93	1.93	1.73	.51	1.38	.63	1.54	3.15	M10	.500	1.10	1.38	1.30
22806	7.87	2.09	1.97	.55	1.57	.51	1.73	3.54	M10	.625	1.42	1.57	1.50
22807	8.84	2.36	2.24	.66	1.88	.75	1.97	3.54	M10	.625	1.42	1.57	1.50

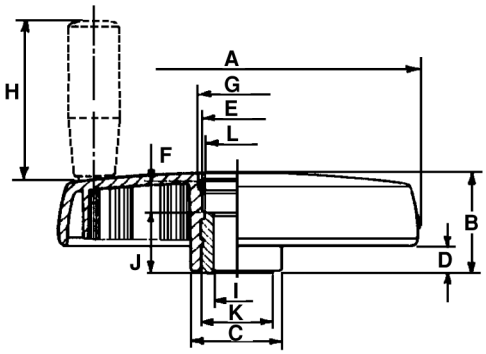
Plastic Solid Handwheel With Revolving, Fold Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

This type of handwheel with fold-away handle has been designed for applications where limited space or safety reasons demand that the handle be folded back flat after manual use.



Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22811	3.27	1.50	0.98	0.73	0.53	0.14	0.65	1.77	0.312	0.67	0.71	0.63
22812	4.02	1.34	1.18	0.39	0.98	0.35	1.06	1.97	0.375	0.87	0.87	0.79
22813	4.92	1.54	1.38	0.43	1.10	0.31	1.22	2.20	0.375	1.06	1.02	0.94
22814	5.91	1.73	1.50	0.47	1.18	0.39	1.34	2.56	0.50	1.18	1.02	0.94
22815	6.93	1.93	1.73	0.51	1.38	0.63	1.54	3.15	0.50	1.10	1.38	1.30
22816	7.87	2.09	1.97	0.55	1.57	0.51	1.73	3.54	0.625	1.42	1.57	1.50
22817	8.84	2.36	2.24	0.66	1.88	0.74	1.97	3.54	0.625	1.42	1.57	1.50

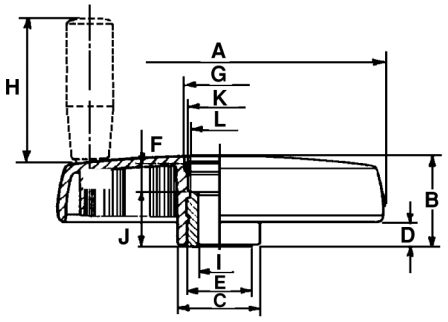
Plastic Solid Handwheel With Revolving, Spring Loaded, Fold Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

This handwheel has a special spring loaded handle which automatically folds down into the cavity of the handwheel when the operator releases it. The handle disengages only when the axial pressure exerted by the operator ceases.

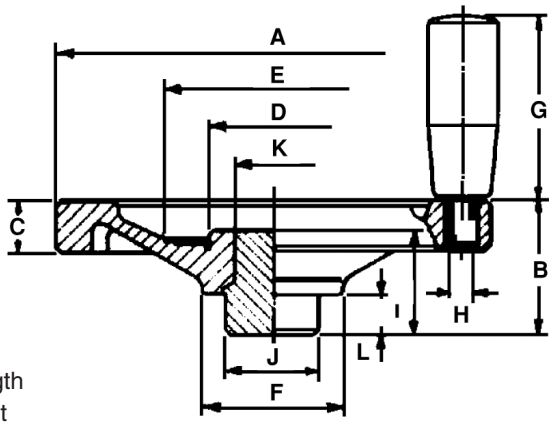


Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22825	6.93	1.93	1.73	.51	1.38	.63	1.54	3.15	.500	1.10	1.38	1.30
22826	7.87	2.09	1.97	.55	1.57	.51	1.75	3.54	.625	1.42	1.57	1.50
22827	8.84	2.36	2.24	.66	1.88	.74	1.96	3.54	.625	1.42	1.57	1.50

Plastic Solid Handwheel

ELESA Original Design





- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22831	3.15	1.22	0.55	1.10	1.69	1.18	-	-	1.10	0.79	0.63	0.39
22841*	3.15	1.22	0.55	1.10	1.69	1.18	1.57	M6	1.10	0.79	0.63	0.39
22832	3.94	1.57	0.59	1.38	2.13	1.54	-	-	1.42	0.94	0.79	0.47
22842*	3.94	1.57	0.59	1.38	2.13	1.54	1.97	M6	1.42	0.94	0.79	0.47
22833	4.92	1.73	0.59	1.73	2.76	1.81	-	-	1.5	1.26	0.94	0.59
22843*	4.92	1.73	0.59	1.73	2.76	1.81	2.56	M8	1.5	1.26	0.94	0.59
22834	5.91	1.89	0.71	1.73	2.76	1.89	-	-	1.5	1.26	0.94	0.59
22844*	5.91	1.89	0.71	1.73	2.76	1.89	2.56	M8	1.5	1.26	0.94	0.59
22835	6.89	2.09	0.75	2.17	3.54	2.2	-	-	1.69	1.57	1.22	0.59
22845*	6.89	2.09	0.75	2.17	3.54	2.2	3.15	M10	1.69	1.57	1.22	0.59
22836	7.87	2.24	0.83	2.17	3.54	2.36	-	-	1.69	1.57	1.22	0.59
22846*	7.87	2.24	0.83	2.17	3.54	2.36	3.54	M10	1.69	1.57	1.22	0.59
22837	8.8	2.56	0.98	2.6	4.33	2.76	-	-	1.73	1.93	1.5	0.59
22847*	8.8	2.56	0.98	2.6	4.33	2.76	3.54	M10	1.73	1.93	1.5	0.59
22838	11.85	2.95	0.98	3.7	5.83	3.23	-	-	2.2	2.28	2.28	0.71
22848*	11.85	2.95	0.98	3.7	5.83	3.23	3.54	M10	2.2	2.28	2.28	0.71

* With Revolving Handle

Jergens offers 3D models

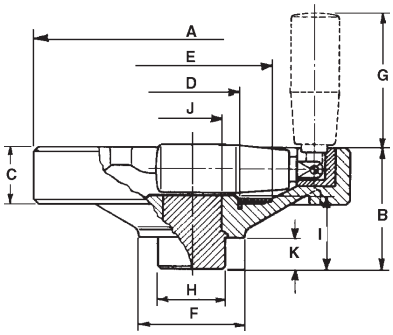
for all handles, knobs and handwheels at www.jergensinc.com

Plastic Solid Handwheel With Finger Grips and Revolving Fold Away Handle

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and otherChemical Agents

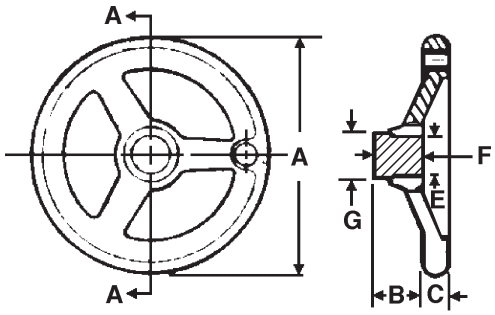


Part Number	A	B	C	D	E	F	G	H	I	J	K
22852	3.94	2.04	1.02	1.37	2.12	1.53	2.20	.94	1.29	.78	.47
22853	4.92	2.36	1.18	1.73	2.76	1.81	2.56	1.26	1.50	.94	.59
22854	5.91	2.48	1.26	1.73	2.76	1.89	2.56	1.26	1.50	.94	.59
22855	7.01	2.56	1.26	2.17	3.54	2.20	3.54	1.57	1.69	1.22	.59
22856	7.91	2.76	1.34	2.17	3.54	2.36	3.54	1.57	1.69	1.22	.59
22857	8.80	3.03	1.42	2.60	4.33	2.76	3.54	1.93	1.73	1.50	.59

Nylon Angular Three Spoked Handwheel



- Material: Wheel, 6-6 Nylon
  Hub, Cast Iron
- Finish: Wheel, Black
  Hub, Black Oxide
- Threaded Brass Inserts have serrated O.D. for rigid union with Handwheel.
- All Wheels have three spokes
- Available in FixturePro™ Design Software

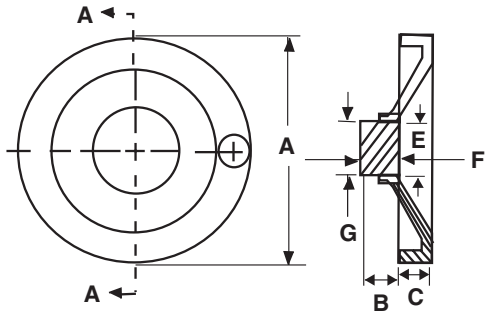


Part Number	A	B	C	E	F	G	Thread Size
34051	4	1 3/32	9/16	15/16	15/16	1 1/16	M8 x 1.25
34054	6	1 13/32	23/32	1 3/16	1 3/8	1 3/8	M10 x 1.50
34055	8	1 13/32	7/8	1 3/8	1 29/32	1 17/32	M10 x 1.50

Plastic Angular Solid Handwheel

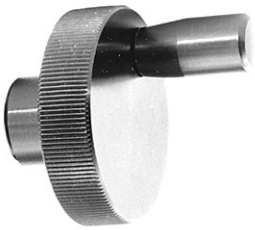


- Material: Wheel, Acetal Co-Polymer
  Hub, Cast Iron
- Finish: Wheel, Black
  Hub, Black Oxide
- Threaded Brass Inserts have serrated O.D. for rigid union with Handwheel.
- Aluminum Center Plate can be imprinted with your company name, instructions, etc.
- Available in FixturePro™ Design Software

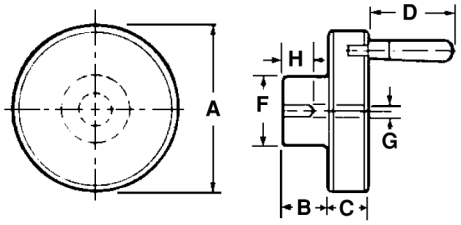


Part Number	A	B	C	E	F	G	Thread Size
34061	5	1 1/8	5/8	1	1 1/8	1 1/8	M8 x 1.25
34062	6	1 11/32	23/32	1 3/16	1 11/32	1 11/32	M10 x 1.50
34063	8	1 29/32	25/32	1 3/8	1 29/32	1 17/32	M10 x 1.50

Aluminum Finger Wheel



- Material: 2024 Aluminum
- Finish: Black Anodize
- Knurled O.D. for better gripping
- Revolving handle and reamed hole are included
- Available in FixturePro™ Design Software



Finger Wheel With Handle

Part Number	A	B	C	D	F	G	H	Part Number	
								Wheel Only	Handle Only
22721	2	9/16	9/16	1 1/8	13/16	3/8	7/8	**22521**	**21911**

Metric Finger Wheel With Handle

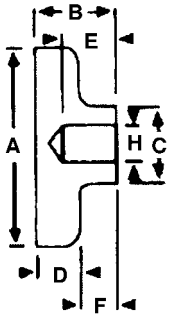
Part Number	A	B	C	D	F	G	H	Part Number	
								Wheel Only	Handle Only
22771	50	14	14	28	20	10	22	**22571***	**21951**

*Not tapped for handle

Aluminum Finger Wheel

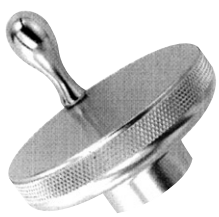
- Material: 2024 Aluminum
- Finish: Clear anodized polished to a high luster
- Outer rim is knurled

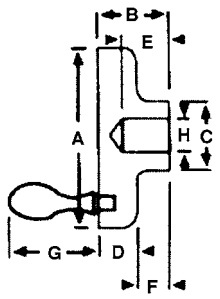




Finger Wheels

Part Number	A	B	C	D	E	F	H
21280	1	13/16	1/2	3/8	–	7/16	Blank
21281	2	1 1/8	13/16	9/16	–	9/16	Blank
21282	3	1 1/4	1 1/4	11/16	–	9/16	Blank
21285	1	13/16	1/2	3/8	5/8	7/16	1/4
21286	2	1 1/8	13/16	9/16	7/8	9/16	3/8
21287	3	1 1/4	1 1/4	11/16	7/8	9/16	5/8





Finger Wheels With Handle

Part Number	A	B	C	D	E	F	G	H
21291	2	1 1/8	13/16	9/16	–	9/16	1 9/32	Blank
21292	3	1 1/4	1 1/4	9/16	–	9/16	1 15/16	Blank
21296	2	1 1/8	13/16	9/16	7/8	9/16	1 9/32	3/8
21297	3	1 1/4	1 1/4	9/16	7/8	9/16	1 15/16	5/8

Note: Also available in Stainless Steel

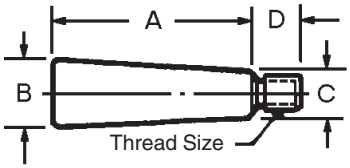


HANDLES, LEVERS & CRANKS

Adjustable Handle 8.27
Adjustable Handle With Stud 8.27
Aluminum Balanced Crank Handle..... 8.20
Aluminum Revolving and Solid Handle .. 8.12
Aluminum Tubular Handle..... 8.34
Aluminum & Malleable Clamping Levers..... 8.23
Aluminum & Malleable Offset Handle..... 8.22
Aluminum & Malleable Speed Handle..... 8.19
Back Mounted Bridge Handle..... 8.32
Balanced Crank Handle 8.20
Control Lever 8.31
Double Handle Locking Lever..... 8.23
Ergonomic Style Steel Handles 8.13
Fold Away Handle..... 8.17
Forged Crank Handle 8.21
Front Mounted Bridge Handle 8.32
Handle With Steel Shank..... 8.14
Machine Guard Handles..... 8.31
Metal Adjustable Handles..... 8.24-8.26
Plastic Adjustable Handle With Stainless Steel Stud 8.29
Plastic Button Head Tapped Adjustable Handle..... 8.30
Plastic Button Head Adjustable Handle With Stud..... 8.30
Plastic Button Head Adjustable Tapped Handle With Stainless Insert..... 8.29
Plastic Crank With Revolving Fold Away Handle 8.18
Plastic Crank With Revolving Handle..... 8.18
Plastic Folding Handle..... 8.12
Plastic Fixed Handle..... 8.12
Plastic Handle 8.33
Plastic Heavy Duty Tapered Handle ... 8.16
Plastic Light Duty Tapered Handle 8.16
Plastic Pull/Lift Handle..... 8.34
Plastic Revolving Fold Away Handle .. 8.17
Plastic Revolving Heavy Duty Handle With Steel Shank..... 8.14
Plastic Revolving Handle With Steel Through Shank..... 8.14
Plastic Revolving Handle With Steel Shank..... 8.15
Single Handle Locking Lever 8.22
Steel Clamp Lever 8.21
Steel Solid and Revolving Balanced Crank Handle..... 8.20

Aluminum Revolving and Solid Handle





- Material: Handle, 2024 Aluminum
  Stem, Low Carbon Steel
- Finish: Revolving Handle, Clear or Black Anodize
  Stem for Revolving Handle, Zinc Plate
  Solid Handle, Plain
- Available in FixturePro™ Design Software

Aluminum Revolving Handles

Part Number							
Clear	Black	A	B	C	D	Thread Size	Wt. (lbs)
21901	**21911**	1 1/8	7/16	3/8	3/8	10-24	.02
21902	**21912**	1 9/16	5/8	1/2	7/16	1/4-20	.03
21903	**21913**	2	7/8	9/16	1/2	5/16-18	.08
21904	**21914**	2 1/2	1	3/4	1/2	3/8-16	.19
21905	**21915**	2 7/8	1 1/8	15/16	1/2	1/2-13	.23
21906	**21916**	3 1/4	1 1/4	15/16	1/2	1/2-13	.39

Solid Handles

Part Number	Wt. (lbs)
—	
10301	.03
10302	.10
10303	.15
—	
10304	.31

Metric

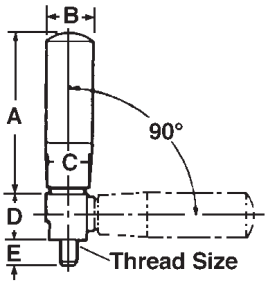
Clear	Black					
Part Number*		A	B	C	D	Thread Size
21951	**21961**	28	11	9	9	M5
21952	**21962**	39	16	13	11	M6
21953	**21963**	50	22	14	13	M8
21954	**21964**	63	25	19	13	M10
21955	**21965**	72	28	23	13	M12
21956	**21966**	82	31	23	13	M12

*Dimensions in millimeters

- Material: Handles: 2024 Aluminum
  Stem: Low Carbon Steel
- Finish: Clear or Black Anodize
  Stem: Zinc Plate
- Thread: Class 6g

Plastic Folding Handle



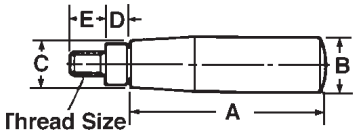


- Material: Handle, 6-6 Nylon Stem, Steel
- Finish: Handle, Black Stem, Chrome Plated
- Folds out of the way
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	Thread Size
34070	2 1/4	25/32	25/32	7/8	1/2	M8 x 1.25
34071	3	25/32	25/32	7/8	9/16	M10 x 1.50

Plastic Fixed Handle

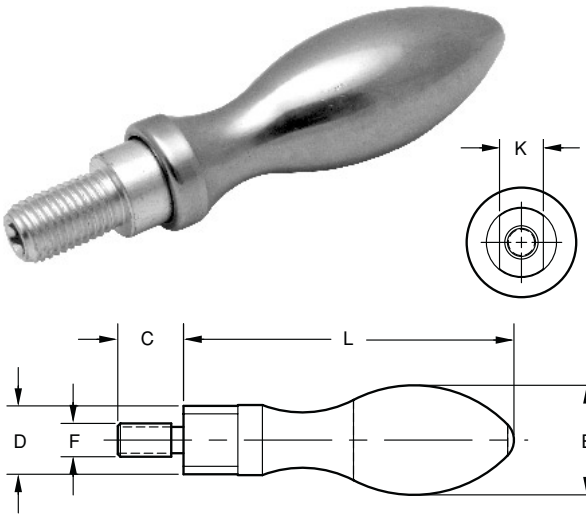




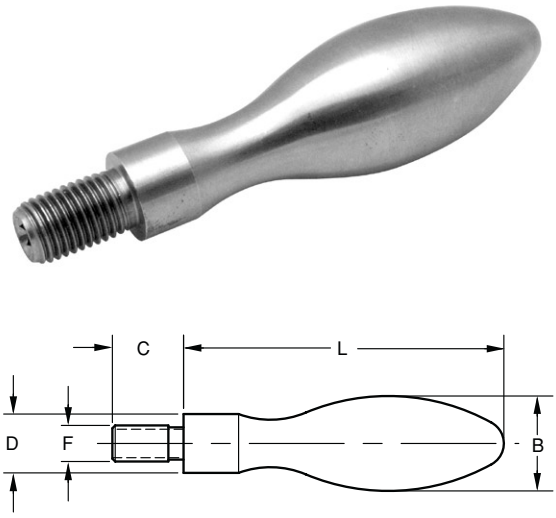
- Material: Handle, 6-6 Nylon Stem, Steel
- Finish: Handle, Black Stem, Chrome Plated
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	Thread Size
34075	2 9/32	5/8	9/16	5/16	1/2	M8 x 1.25
34076	2 15/32	7/8	11/16	23/32	9/16	M10 x 1.50

Ergonomic Style Steel Handles

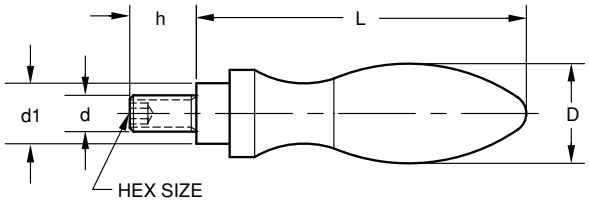


Revolving Handle

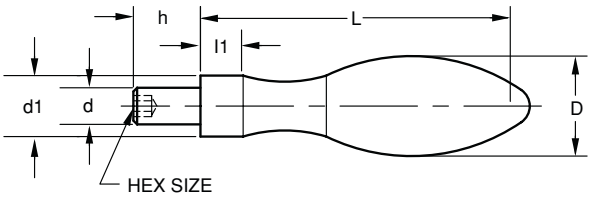


Fixed Handle

Part Number	Style	F (Thread)	B	C	D	L	K
22000	Revolving	10 - 24	1/2	3/8	0.32	1-7/8	1/4
22001	Revolving	1/4 - 20	5/8	1/2	0.40	2-1/4	5/16
22002	Revolving	5/16 - 18	13/16	9/16	0.51	2-13/16	3/8
22003	Revolving	3/8 - 16	1	11/16	0.63	3-3/8	7/16
22011	Fixed	10 - 24	1/2	3/8	0.32	1-11/16	–
22012	Fixed	1/4 - 20	5/8	1/2	0.40	2	–
22013	Fixed	5/16 - 18	13/16	9/16	0.51	2-5/8	–
22014	Fixed	3/8 - 16	1	11/16	0.63	3-3/16	–



Metric Revolving Style



Metric Fixed Style

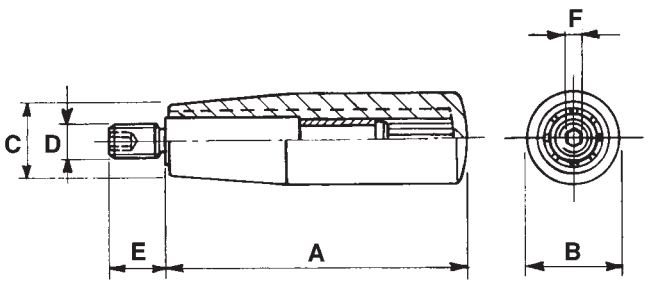
Metric

*Part Number	Style	d (Thread)	L	D	d1	h	l1
22050	Revolving	M6	54.5	16	10	11	5.5
22051	Revolving	M8	67	20	13	13	6
22052	Revolving	M10	83	25	16	14	8
22053	Revolving	M12	105.5	32	20	21	10.5
22054	Revolving	M16	117	36	22	26	11
22055	Fixed	M6	54	16	10	11	7
22056	Fixed	M8	64	20	13	13	8
22057	Fixed	M10	80	25	16	14	10
22058	Fixed	M12	100	32	20	21	13
22059	Fixed	M16	112	36	22	26	14

*Dimensions in millimeters

Plastic Revolving Heavy Duty Handle With Steel Shank
ELESA Original Design





- Material: Black Duroplast
- Finish: Black Bright
- Shank: Zinc Plated Steel or Stainless Steel 303
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

With Steel Shank

Part Number	A	B	C	D*	E	F
33621	1.57	.71	.59	M6	.51	.12
33622	1.97	.83	.67	M6	.51	.12
33624	2.56	.91	.75	M8	.59	.16
33625	3.15	1.02	.83	M10	.67	.20
33626	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

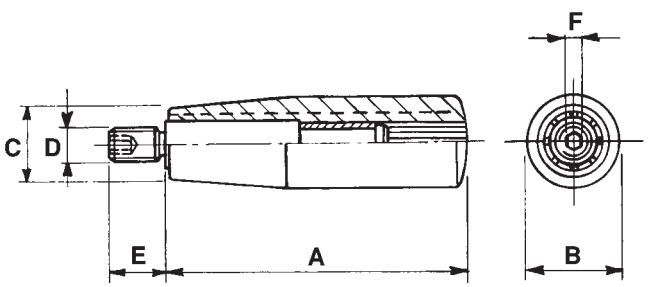
With Stainless Steel Shank

Part Number	A	B	C	D*	E	F
34101	1.57	.71	.59	M6	.51	.12
34102	1.97	.83	.67	M6	.51	.12
34103	2.56	.91	.75	M8	.59	.16
34104	3.15	1.02	.83	M10	.67	.20
34105	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

Plastic Revolving Handle With Steel Through Shank
ELESA Original Design



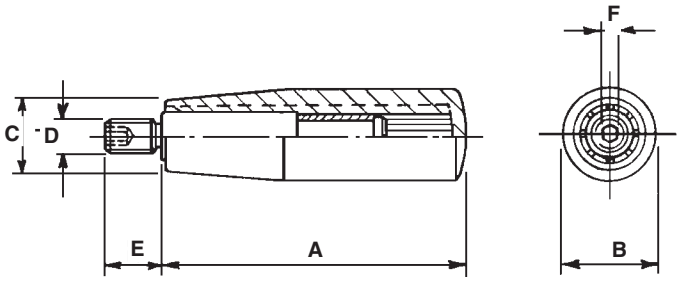


- Material: Black Duroplast
- Finish: Black Bright
- Shank: Matte Chrome Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F
33601	1.57	.71	.59	1/4-20	.51	5/32
33602	1.97	.83	.67	5/16-18	.59	3/16
33604	2.56	.91	.75	5/16-18	.67	1/4
33605	3.15	1.02	.83	3/8-16	.71	1/4
33606	3.54	1.10	.87	3/8-16	.71	5/16

Plastic Revolving Handle With Steel Shank
ELESA Original Design



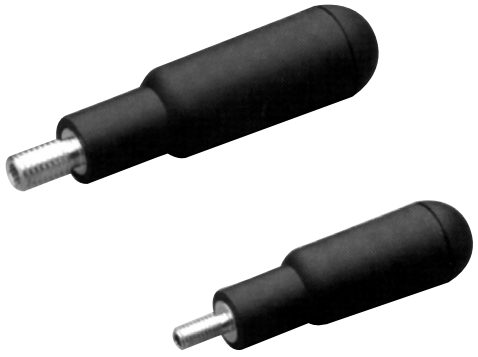


- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Shank: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D*	E	F
33611	1.57	.71	.59	M6	.51	.12
33612	1.97	.83	.67	M6	.51	.12
33613	2.20	.87	.71	M6	.51	.12
33614	2.56	.91	.75	M8	.59	.16
33615	3.15	1.02	.83	M8	.59	.16
33616	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

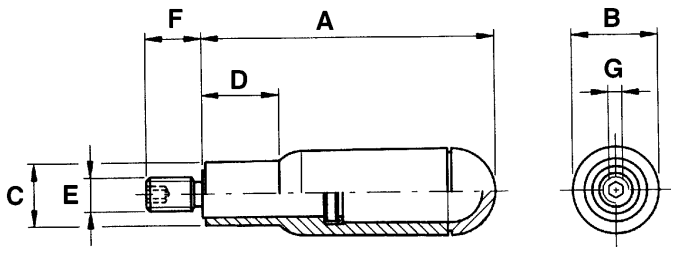
Revolving Handle
ELESA Orginal Design



- Material: High Impact Strength Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

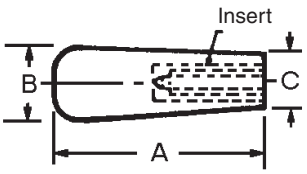
Part Number	A	B	C	D	E*	F	G
34471	2.56	.81	.59	.73	M6	.51	.12
34472	2.87	.87	.63	.75	M8	.59	.16
34473	3.39	.96	.69	.94	M8	.59	.16
34474	3.39	.96	.69	.94	M10	.67	.20
34475	3.74	1.04	.71	.98	M10	.67	.20

*Dimension in millimeters



Plastic Heavy Duty Tapered Handle





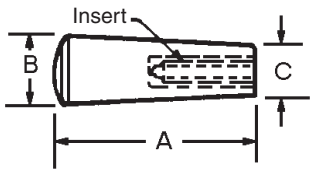
- Use as grasp handles on portable tools or as machine shift levers
- Inserts: Brass
- Available in FixturePro™ Design Software

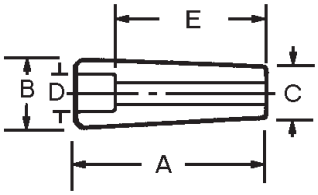
With Tapped Holes

Part Number	A	B	C	Insert Thread and Depth
32105	4 1/2	1 3/8	1	3/8-16 x 5/8
32106	4 1/2	1 3/8	1	3/8-24 x 5/8
32101	4 1/2	1 3/8	1	3/8-16 x 2
32107	4 1/2	1 3/8	1	1/2-13 x 5/8
32108	4 1/2	1 3/8	1	1/2-20 x 5/8
32103	4 1/2	1 3/8	1	1/2-13 x 1 1/4
32104	4 1/2	1 3/8	1	5/8-18 x 3/4

Plastic Light Duty Tapered Handle







- Use as grasp handles on small tools, utensils, and gauges
- Inserts: Brass
- Through hole style for use with a socket head cap screw
- Available in FixturePro™ Design Software

With Tapped Holes

Part Number	A	B	C	Insert Thread and Depth
32111	2 5/8	1	5/8	1/4-20 x 7/16
32112	2 5/8	1	5/8	5/16-18 x 7/16
32117	2 5/8	1	5/8	3/8-16 x 1/2
32118	3 7/8	1 1/8	3/4	1/4-20 x 1/2
32119	3 7/8	1 1/8	3/4	5/16-18 x 7/16
32109	3 7/8	1 1/8	3/4	3/8-16 x 5/8
32102	3 7/8	1 1/8	3/4	3/8-16 x 2
32110*	3 7/8	1 1/8	3/4	.500/.510 x 2

* Cored Hole

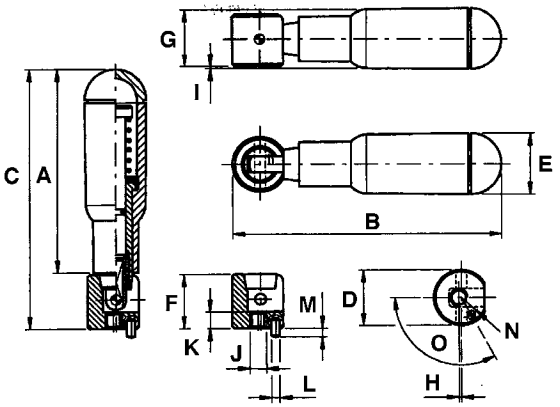
With Through Hole

Part Number	A	B	C	D	E	Through Hole Size
32113	2 9/16	1	5/8	1/2	5/8	.251/.256
32114	3 11/16	1 1/8	3/4	3/4	2 5/8	.380/.385

Fold Away Handle
ELESA Orginal Design



- Material: High Impact Strength Technopolymer
- Finish: Gray/Black Matte
- Base: Sintered and Oxidized
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

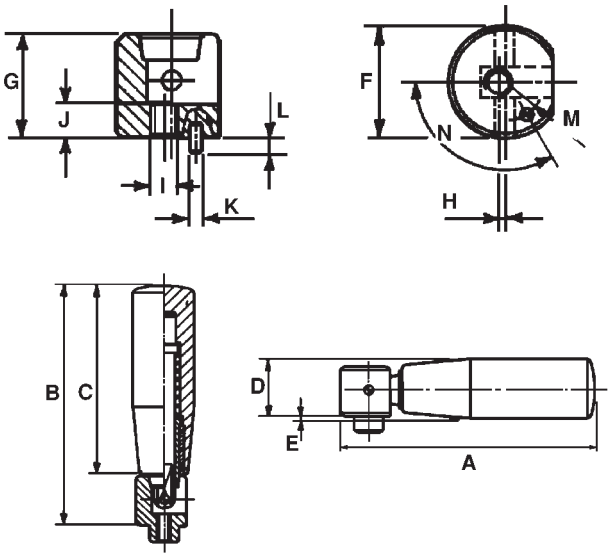


Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
34481	2.56	3.27	3.17	.63	.81	.59	.75	.04	.06	M4	.20	.12	.12	.22	90°
34482	2.87	3.58	3.48	.63	.87	.59	.77	.04	.10	M4	.20	.12	.12	.22	90°
34483	2.87	3.82	3.66	.79	.87	.77	.85	.02	.02	M6	.24	.12	.12	.22	120°
34484	3.39	4.33	4.17	.79	.96	.77	.91	.02	.06	M6	.24	.12	.12	.28	120°
34485	3.74	4.69	4.53	.79	1.04	.77	.94	.02	.10	M6	.24	.12	.12	.28	120°

Plastic Revolving Fold Away Handle
ELESA Original Design



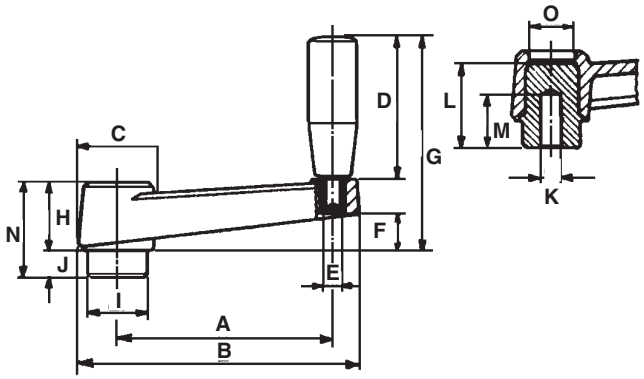
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Black Oxide Steel Double Guide
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N
33631	2.91	2.80	2.20	.75	.10	.63	.59	.04	M4	.20	.12	.12	.22	90°
33632	3.27	3.15	2.56	.79	.12	.63	.59	.04	M4	.20	.12	.12	.22	90°
33633	3.50	3.35	2.56	.87	.04	.79	.77	.02	M6	.24	.12	.12	.28	120°
33634	4.09	3.94	3.15	.94	.10	.79	.77	.02	M6	.24	.12	.12	.28	120°
33635	4.49	4.33	3.54	.94	.12	.79	.77	.02	M6	.24	.12	.12	.28	120°
33636	4.65	4.45	3.54	1.06	.04	1.02	.91	.06	M6	.28	.12	.12	.37	90°

Plastic Crank With Revolving Handle
ELESA Original Design





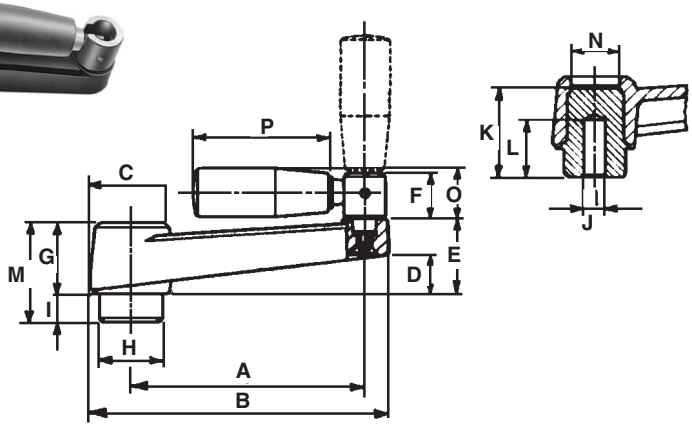
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Ribbed Structure for heavy duty applications
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available in Ergostyle®. See Ergostyle Section.
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E*	F	G	H	I	J	K	L	M	N	O
33651	2.52	3.39	1.06	1.57	M6	.39	2.48	.91	.71	.39	.236	1.14	.71	1.30	.63
33652	3.15	4.13	1.18	1.97	M6	.51	2.99	1.02	.87	.39	.236	1.26	1.02	1.42	.67
33653	3.94	5.04	1.34	2.56	M8	.59	3.78	1.18	.94	.39	.315	1.46	1.10	1.57	.83
33654	5.11	6.37	1.57	3.15	M8	.79	4.52	1.37	1.10	.55	.394	1.73	1.18	1.93	.98
33655	6.30	7.80	1.77	3.54	M10	.91	5.12	1.57	1.34	.59	.394	1.93	1.18	2.17	1.06
33656	8.35	8.92	1.97	3.54	M10	1.02	5.35	1.77	1.57	.59	.472	2.09	1.18	2.36	1.22

*Dimension in millimeters

Plastic Crank With Revolving Fold Away Handle
ELESA Original Design



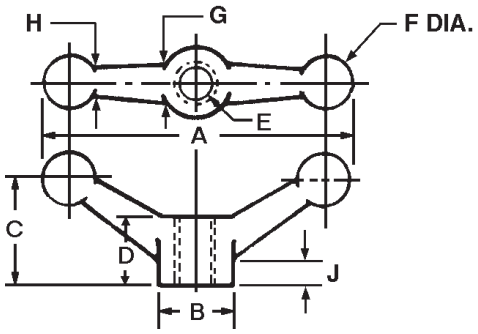


- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Ribbed Structure for heavy duty applications
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
33662	3.15	4.13	1.18	.51	1.06	.59	1.02	.87	.39	.236	1.26	1.02	1.42	.67	.74	2.20
33663	3.94	5.04	1.34	.59	1.22	.79	1.18	.94	.39	.315	1.46	1.10	1.57	.83	.86	2.56
33664	5.11	6.37	1.57	.78	1.37	.79	1.37	1.10	.55	.394	1.73	1.18	1.93	.98	.86	2.56
33665	6.30	7.80	1.77	.91	1.57	.79	1.57	1.34	.59	.394	1.93	1.18	2.17	1.06	.94	3.15
33666	8.35	8.92	1.97	1.02	1.81	.91	1.77	1.57	.59	.472	2.09	1.18	2.36	1.22	1.06	3.54

Aluminum & Malleable Speed Handle





- Material: 319 Aluminum
  Malleable ASTM A47, GR32510
- Finish: Mill
- Thread: 2B-UNC or class 6h
- Can be used with rod ends for clamping tank covers, locking lids or any fast spin locking application
- With or without tapped or blank hole
- Three head widths
- Available in FixturePro™ Design Software
- "D" dimension is based on machined castings. It may be slightly greater on blanks.

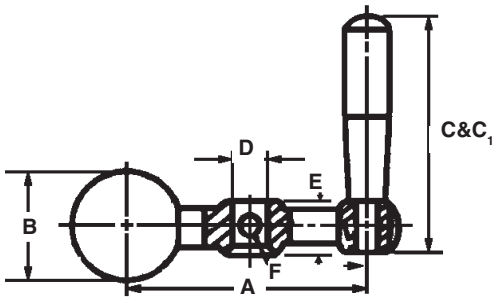
Part Number							Dia			
Aluminum	Malleable	A	B	C	D	E	F	G	H	J
39901	**40301**	4 1/2	1 1/8	1 1/2	1	Blank	11/16	3/4	7/16	1/2
39902	**40302**	4 1/2	1 1/8	1 1/2	1	3/8-16	11/16	3/4	7/16	1/2
39903	**40303**	4 1/2	1 1/8	1 1/2	1	1/2-13	11/16	3/4	7/16	1/2
39904	**40304**	6	1 1/2	2 1/8	1 1/2	Blank	.94	7/8	5/8	3/4
39905	**40305**	6	1 1/2	2 1/8	1 1/2	1/2-13	.94	7/8	5/8	3/4
39906	**40306**	6	1 1/2	2 1/8	1 1/2	5/8-11	.94	7/8	5/8	3/4
39907	**40307**	8 3/4	2	3	2	Blank	1 3/16	1.02	7/8	.94
—	**40308**	8 3/4	2	3	2	3/4-10	1 3/16	1.02	7/8	.94

Part Number							Dia			
Aluminum	Malleable	A	B	C	D	E*	F	G	H	J
39901	**40301**	113	28	38	25	Blank	17	19	11	13
39952	**40352**	113	28	38	25	M10	17	19	11	13
39953	**40353**	113	28	38	25	M12	17	19	11	13
39954	**40304**	150	38	53	38	Blank	24	22	16	19
39955	**40355**	150	38	53	38	M12	24	22	16	19
39956	**40356**	150	38	53	38	M16	24	22	16	19
39907	**40307**	219	50	75	50	Blank	30	26	22	24
—	**40358**	222	50	75	50	M20	30	26	22	24

*Dimension in millimeters

Steel Solid and Revolving Balanced Crank Handle





SOLID HANDLE DOES NOT REVOLVE

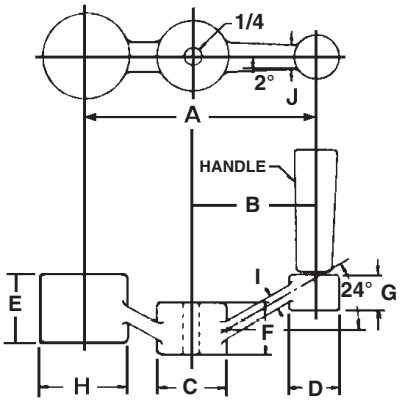
- Material: Steel
- Finish: Bright Chrome
- Available in FixturePro™ Design Software
- Revolving Handle is a replacement set for Bridgeport Style Mills

Part Number						Reamed		Center Hole*
Solid	Revolving	A	B	C	C_1†	D	E	F
11401	–	2	13/16	2	–	5/16	7/16	1/8
11402	**11412**	2 1/2	1	2 1/2	2 3/4	5/16	9/16	1/8
11403	**11413**	3 1/8	1 1/4	3 1/4	3 1/2	3/8	11/16	5/32
11404	**11414**	4	1 1/4	3 1/4	3 1/2	3/8	11/16	5/32
11405	**11415**	5	1 1/2	4	4 3/16	1/2	7/8	3/16
11406	–	6 1/8	1 1/2	4	–	1/2	7/8	3/16

* Center Hole is cross drilled on one side.
† Dimension for Revolving Style

Aluminum Balanced Crank Handle





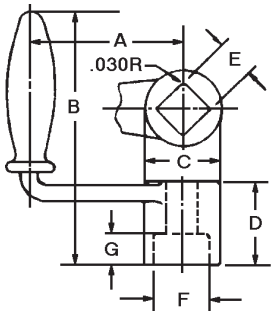
Jergens Aluminum Balanced Crank Handles are good replacements for heavier steel handles. The light-weight characteristics make table positioning easier as no fall-off occurs after position has been established. Light-weight Aluminum Balanced Crank Handles are ideal for applications such as optical jig boring equipment and inspection instruments.

- Material: 319 Aluminum Alloy
- Finish: Grey Enamel
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	F	G	H	I	J	Handle	Wt. (lbs)
11301	2 5/16	1 1/4	3/4	1/2	11/16	1/2	7/16	7/8	3/16	5/16	21902	.14
11302	3 1/16	1 11/16	1	5/8	7/8	5/8	1/2	1 1/4	1/4	3/8	21903	.30
11303	3 15/16	2 1/8	1 1/8	3/4	1 3/16	3/4	5/8	1 3/8	5/16	7/16	21904	.54
11304	4 11/16	2 9/16	1 3/8	7/8	1 5/16	1	3/4	1 5/8	5/16	1/2	21905	.75
11305	5 11/16	3 1/16	1 3/8	7/8	1 1/2	1	1	1 3/4	3/8	9/16	21905	.90

Forged Crank Handle





- Material: C-1021 Forging
- Finish: Mill
- Available in FixturePro™ Design Software

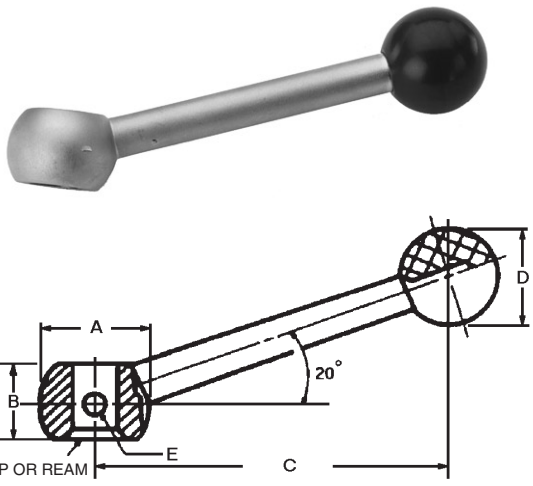
Blank Crank Handles

Part Number	A	B	C	D	Wt. (lbs)
20501	2 1/2	3 3/4	1	1/4	.60
20503	3	4 1/4	1 1/4	1 1/2	.97
20504	3 1/2	4 3/16	1 1/16	1 5/16	.90
20505	4	4 1/2	1 1/4	1 3/8	1.14
20506	5	4 15/16	1 1/4	1 13/16	1.62
20507	6	5 1/16	1 1/4	1 15/16	1.62
20508	7	5 7/16	1 3/8	2 1/16	1.95
20509	8	6 1/16	1 9/16	2 7/16	3.00
20510	9 1/8	6 1/4	1 1/2	2 1/2	3.25
20511	10	7	1 3/4	3	4.37

Finished Crank Handles

Part Number	E	F	G	Wt. (lbs)
20301	1/2 Sq.	3/4	3/16	.50
20303	9/16 Sq.	3/4	1/4	.82
20304	1/2 Sq.	11/16	1/4	.74
20305	9/16 Sq.	3/4	5/16	.97
20306	5/8 Sq.	7/8	3/8	1.37
20307	11/16 Sq.	15/16	3/8	1.25
20308	3/4 Sq.	1 1/16	1/2	1.67
20309	7/8 Sq.	1 1/4	1/2	2.44
20310	7/8 Sq.	1 1/4	1/2	2.60
20311	1 Sq.	1 3/8	9/16	3.62

Steel Clamp Lever



- Material: Lever, Low Carbon Steel
  Ball, Plastic
- Finish: Lever, Satin Chrome Plate
  Ball, Black

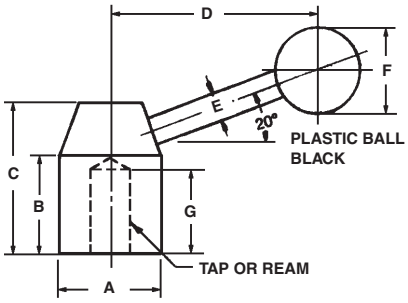
Part Number	Hub Style	A	B	C	D	E
16601	1/4 Ream	5/8	7/16	2 1/4	3/4	1/8
16602	5/16-18 Tap	5/8	7/16	2 1/4	3/4	—
16603	5/16 Ream	25/32	9/16	2 3/4	13/16	1/8
16604	3/8-16 Tap	25/32	9/16	2 3/4	13/16	—
16605	3/8 Ream	1	3/4	3 1/2	15/16	5/32
16606	1/2-13 Tap	1	3/4	3 1/2	15/16	—
16607	1/2 Ream	1 1/4	7/8	4 3/8	1 1/4	3/16
16608	5/8-11 Tap	1 1/4	7/8	4 3/8	1 1/4	—
16609	5/8 Ream	1 9/16	1 1/8	5 1/2	1 1/2	1/4
16610	3/4-10 Tap	1 9/16	1 1/8	5 1/2	1 1/2	—

Single Handle Locking Lever



A fast and efficient means of clamping and locking on jigs, fixtures, machine tools and special applications where high clamping force is necessary.

- Material: Low Carbon Steel
- Finish: Zinc Plate
- Thread: Class 2B-UNC
- Handles: Copper Brazed into the hubs
- Ream: + .001
  - .000
- Available in FixturePro™ Design Software



Part Number	A	B	C	D	E	F	G	Hub Style
28901	1	1	1 1/2	2	1/4	1	-	Blank
28902	1	1	1 1/2	2	1/4	1	11/16	3/8-16 Tap
28903	1	1	1 1/2	2	1/4	1	13/16	3/8 Ream
28904	1 1/4	1 1/8	1 11/16	3	3/8	1	-	Blank
28905	1 1/4	1 1/8	1 11/16	3	3/8	1	3/4	1/2-13 Tap
28906	1 1/4	1 1/8	1 11/16	3	3/8	1	7/8	1/2 Ream
28907	1 1/2	1 1/4	2	4	1/2	1 3/8	-	Blank
28908	1 1/2	1 1/4	2	4	1/2	1 3/8	15/16	5/8-11 Tap
28909	1 1/2	1 1/4	2	4	1/2	1 3/8	1 1/16	5/8 Ream

Metric

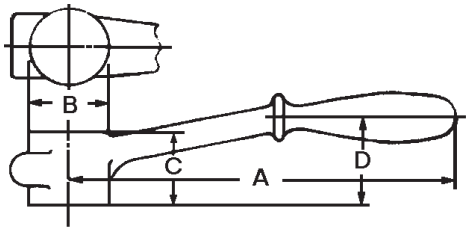
Part Number*	A	B	C	D	E	F	G	Hub Style
28901	25	25	38	50	6	25	-	Blank
28952	25	25	38	50	6	25	17	M8 Tap
28953	25	25	38	50	6	25	20	8mm Ream
28904	31	28	42	75	9	25	-	Blank
28955	31	28	42	75	9	25	19	M12 Tap
28956	31	28	42	75	9	25	22	12mm Ream
28907	38	31	50	100	13	34	-	Blank
28958	38	31	50	100	13	34	23	M16 Tap
28959	38	31	50	100	13	34	27	16mm Ream

*Dimensions in millimeters

Aluminum & Malleable Offset Handle



- Material: 319 Aluminum Alloy
  Malleable ASTM A47, GR32510
- Finish: Mill
- Available in FixturePro™ Design Software



Aluminum

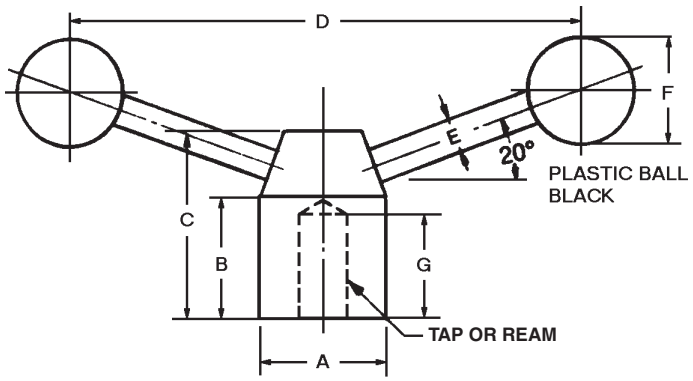
Part Number	A	B	C	D	Wt. (lbs)
29901	4 1/2	1	3/4	1	.15
29902	6	1 1/2	1 1/4	1 3/4	.44
29903	11	1 5/8	1 3/8	1 15/16	.78

Malleable

Part Number	Wt. (lbs)
30101	.45
30102	1.24
30103	2.25

Double Handle Locking Lever





- Material: Low Carbon Steel
- Finish: Zinc Plate
- Thread: Class 2B-UNC or Class 6h
- Handles: Copper brazed into the hubs
- Ream: + .001
  - .000
- Metric Ream:
  + .025
  - .000
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	F	G	Hub Style
28910	1	1	1 1/2	4	1/4	1	-	Blank
28911	1	1	1 1/2	4	1/4	1	11/16	3/8-16 Tap
28912	1 1/4	1 1/8	1 11/16	6	3/8	1	-	Blank
28913	1 1/4	1 1/8	1 11/16	6	3/8	1	3/4	1/2-13 Tap
28914	1 1/2	1 1/4	2	8	1/2	1 3/8	-	Blank
28915	1 1/2	1 1/4	2	8	1/2	1 3/8	15/16	5/8-11 Tap
28916	1 1/2	1 1/4	2	8	1/2	1 3/8	1 1/16	5/8 Ream

Locking levers with double handles are used where it is advantageous to clamp and lock quickly with high clamping force.

Metric

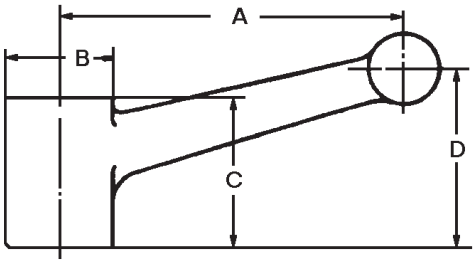
Part Number*	A	B	C	D	E	F	G	Hub Style
28910	25	25	38	100	6	25	-	Blank
28961	25	25	38	100	6	25	17	M8 Tap
28912	31	28	42	150	9	25	-	Blank
28963	31	28	42	150	9	25	19	M12 Tap
28914	38	31	50	200	13	34	-	Blank
28965	38	31	50	200	13	34	23	M16 Tap
28966	38	31	50	200	13	34	27	16mm Ream

*Dimensions in millimeters

Aluminum & Malleable Clamping Levers



- Material: 319 Aluminum Alloy
  Malleable ASTM A47, GR32510
- Finish: Mill
- Available In FixturePro™ Design Software



Aluminum

Part Number	A	B	C	D	Wt. (lbs)
16501	2	1	1	1 1/8	.10
16502	4	1 1/2	2	2 3/8	.53
16503	5 9/64	2	2 1/4	2 3/4	1.00

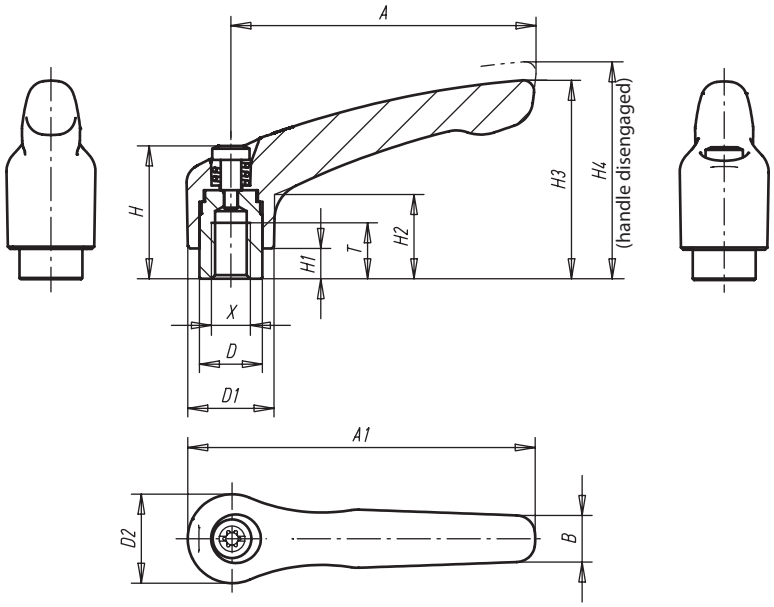
Malleable

Number	Wt. (lbs)
16701	.30
16702	1.50
16703	2.80

Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.



Tapped Holes:
- Material: Handle, Die Cast Zinc
- Finish: Handle, Plastic Coated Steel Parts, Black Oxide
- Color: Black Satin Finish

Stainless Steel Tapped Holes:
- Material: Handle, Die Cast Zinc Steel Parts, 303 Stainless Steel
- Finish: Handle, Plastic Coated Steel Parts, Bright
- Color: Black Satin Finish

With Tapped Holes

Tapped Part Number	Stainless Tapped Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M
40501	-	8-32	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
-	**40602**	10-24	0.35	0.39	0.51	0.57	0.94	0.15	0.59	1.16	1.31	1.57	1.85	0.29
40502	-	10-24	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
-	**40603**	1/4-20	0.35	0.39	0.51	0.57	0.94	0.15	0.59	1.16	1.31	1.57	1.85	0.29
40503	-	1/4-20	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
40504	**40604**	1/4-20	0.47	0.53	0.70	0.76	1.14	0.25	0.68	1.61	1.77	2.55	2.95	0.37
40505	**40605**	5/16-18	0.47	0.53	0.70	0.76	1.14	0.25	0.68	1.61	1.77	2.55	2.95	0.37
-	**40606**	5/16-18	0.55	0.62	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.45
40506	-	5/16-18	0.55	0.70	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.43
-	**40607**	3/8-16	0.55	0.62	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.45
40507	-	3/8-16	0.55	0.70	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.74	3.60	0.43
-	**40608**	3/8-16	0.66	0.74	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.28	0.53
40508	-	3/8-16	0.66	0.70	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.25	0.51
-	**40609**	1/2-13	0.66	0.74	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.28	0.53
40509	-	1/2-13	0.66	0.70	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.25	0.51
40510	**40610**	1/2-13	0.90	0.90	1.18	1.27	2.00	0.47	1.29	2.85	3.05	4.32	4.97	0.61
40511	**40611**	5/8-11	0.90	0.90	1.18	1.27	2.00	0.47	1.29	2.85	3.05	4.32	4.97	0.61

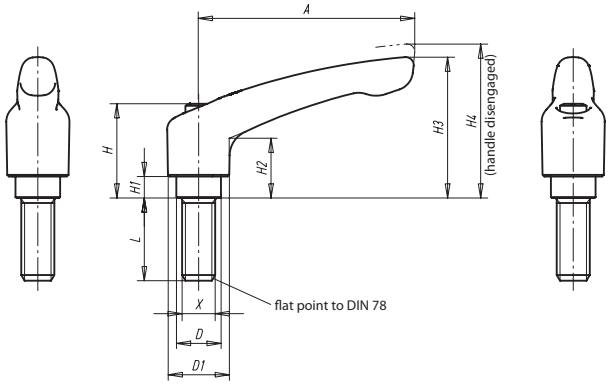
Jergens offers 3D models

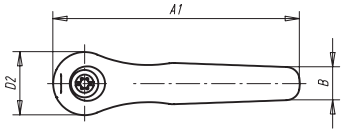
for all handles, knobs and handwheels at www.jergensinc.com

Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.





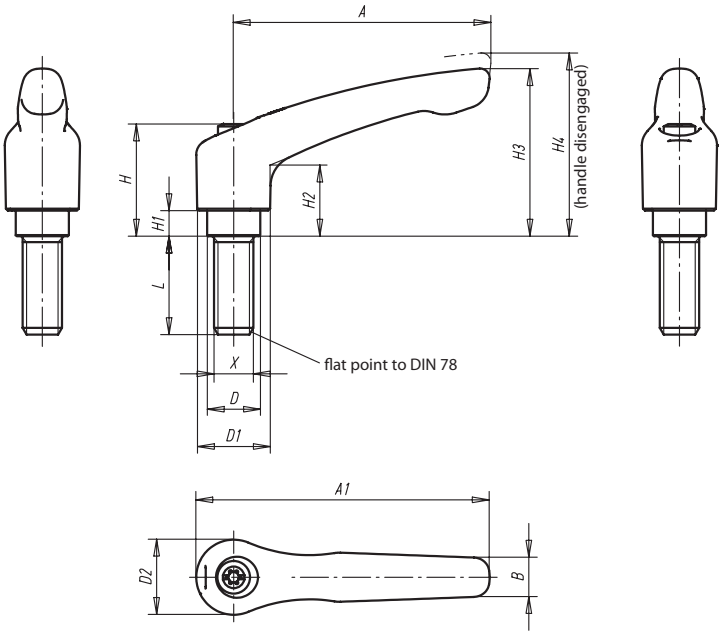
- Material: Handle, Die Cast Zinc
- Finish: Handle, Plastic Coated
  Steel Parts, Black Oxide
- Color: Black Satin Finish

Part Number	Thread Size A	Thread Length N	P	B	C	D	E	F	G	H	I	J	K	L	M
40521	10-24	.59	.15	.35	.39	.51	.57	.94	.16	.59	1.16	1.31	1.57	1.85	.29
40522	10-24	.98	.15	.35	.39	.51	.57	.94	.16	.59	1.16	1.31	1.57	1.85	.29
40523	1/4-20	.78	.15	.35	.39	.51	.57	.94	.16	.59	1.16	1.31	1.57	1.85	.29
40524	1/4-20	.98	.15	.35	.39	.51	.57	.94	.16	.59	1.16	1.31	1.57	1.85	.29
40525	1/4-20	1.57	.15	.35	.39	.51	.57	.94	.16	.59	1.16	1.31	1.57	1.85	.29
40526	1/4-20	.78	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40527	1/4-20	.98	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40528	1/4-20	1.57	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40529	5/16-18	.78	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40530	5/16-18	.98	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40531	5/16-18	1.57	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40532	3/8-16	.98	.39	.55	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.43
40533	3/8-16	1.57	.39	.55	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.43
40534	3/8-16	1.96	.39	.55	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.43
40535	3/8-16	.98	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40536	3/8-16	1.57	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40537	3/8-16	1.96	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40538	1/2-13	.98	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40539	1/2-13	1.57	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40540	1/2-13	1.96	.39	.66	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.25	.51
40541	1/2-13	.98	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40542	1/2-13	1.57	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40543	1/2-13	1.96	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40544	5/8-11	1.37	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40545	5/8-11	1.77	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40546	5/8-11	2.16	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61

Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.



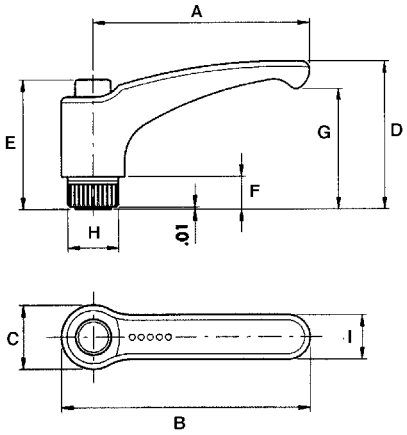
- Material: Handle, Die Cast Zinc
  Steel Parts, 303 Stainless Steel
- Finish: Handle, Plastic Coated
  Steel Parts, Bright
- Color: Black Satin Finish

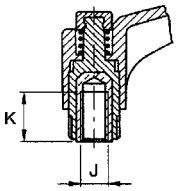
With Stainless Steel Stud

Part Number	Thread Size A	Thread Length N	P	B	C	D	E	F	G	H	I	J	K	L	M
40621	10-24	.59	.15	.35	.39	.51	.57	.94	.15	.59	1.16	1.31	1.57	1.85	.29
40623	1/4-20	.78	.15	.35	.39	.51	.57	.94	.15	.59	1.16	1.31	1.57	1.85	.29
40625	1/4-20	1.57	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40630	5/16-18	.78	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40631	5/16-18	1.57	.25	.47	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40632	3/8-16	.98	.39	.55	.62	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.45
40634	3/8-16	1.96	.39	.55	.62	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.45
40641	1/2-13	.98	.39	.66	.74	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.28	.53
40643	1/2-13	1.96	.39	.66	.74	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.28	.53
40644	5/8-11	1.57	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40646	5/8-11	2.36	.47	.90	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61

Adjustable Handle
ELESA Orginal Design







- Material: Glass Fibre Reinforced Technopolymer
- Finish: Body - Gray/Black Matte
  Push Button - Orange
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional button colors available upon request (Black, Grey, Yellow, Blue & Red)

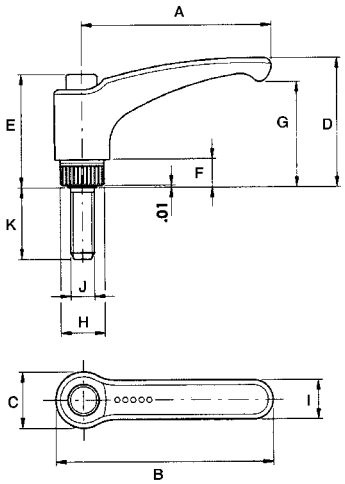
With Brass Insert

Brass Insert	Stainless Insert	A	B	C	D	E	F	G	H	I	J	K
34401	-	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	10-24	.39
34402	**34412**	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	.39
34403	-	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	1/4-20	.47
34404	**34414**	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	.51
34406	-	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	.67
34407	**34416**	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	1/2-13	.67
34408	-	3.74	4.29	1.04	2.54	2.15	.51	2.09	.85	.71	3/8-16	.79
34409	-	3.74	4.29	1.04	2.54	2.15	.51	2.09	.85	.71	1/2-13	.79

Adjustable Handle With Stud
ELESA Orginal Design



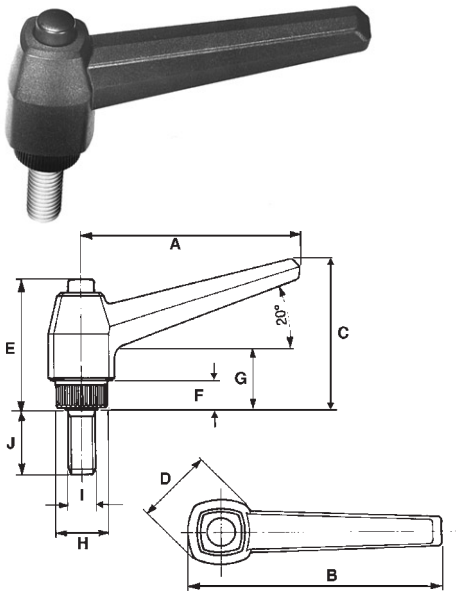
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Body - Gray/Black Matte
  Push Button - Orange
- Stud: Zinc Plated Steel With Chamfered End.
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional button colors available upon request (Black, Grey, Yellow, Blue & Red)



Part Number	A	B	C	D	E	F	G	H	I	J	K
34421	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	10-24	.75
34422	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	.75
34423	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	1
34424	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	75
34425	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	1
34426	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	1.2
34427	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1
34428	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1.2
34429	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1.5

Plastic Button Head Adjustable Handle With Stud

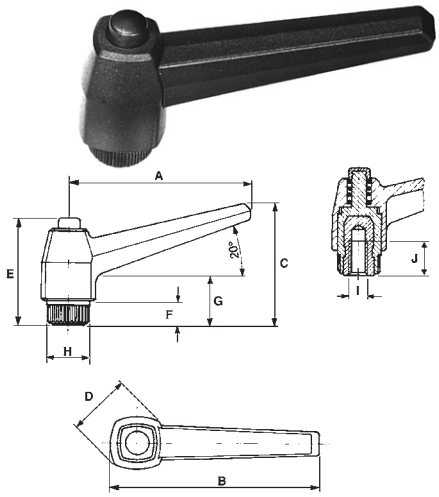
ELESA Original Design



- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Available with a Zinc Plated Steel Stud with a chamfered flat end or with a Brass Insert with a tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available In Ergostyle®. See Ergostyle Section.
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	F	G	H	I	J
34311	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	10-24	0.750
34312	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.500
34313	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.750
34314	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	1.00
34315	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	1.50
34321	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	0.750
34322	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	1.00
34323	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	1.50
34324	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.500
34325	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.750
34326	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.00
34327	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.25
34328	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.50
34329	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	2.00
34331	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	0.750
34332	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.00
34333	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.25
34334	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.50
34335	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	2.00
34337	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	1.25
34338	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	1.50
34339	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	2.00
34341	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	1.25
34342	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	1.50
34343	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	2.00

Plastic Button Head Tapped Adjustable Handle

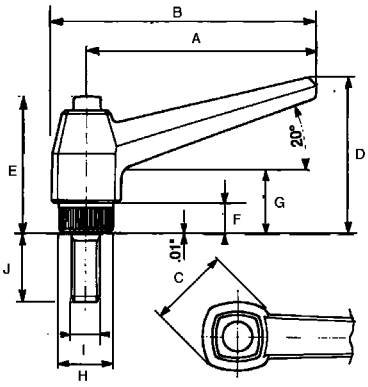


Part Number	A	B	C	D	E	F	G	H	I	J
34301	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	10-24	0.39
34302	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.39
34303	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	0.47
34304	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.51
34305	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	5/16-18	0.71
34306	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	3/8-16	0.67
34307	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	1/2-13	0.67
34308	3.94	4.48	2.55	1.30	2.12	0.47	0.98	0.98	3/8-16	0.79
34309	3.94	4.48	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	0.79

Plastic Adjustable Handle With Stainless Steel Stud

ELESA Original Design





- Material: Lever Body, Glass-Fibre Reinforced Technopolymer
- Finish: Lever Body, Black Matte
- Stainless Steel Stud with chamfered flat end
- Retaining Pin, Glass-Fibre Reinforced Technopolymer integrally molded with the Locking Element
- Push Button, Black Matte Technopolymer
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J
34145	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	0.750
34146	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	1.000
34147	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	1.250

Metric

Part Number*	A	B	C	D	E	F	G	H	I	J
34156	42	50	32	18	29	6	14	12	M6	16
34157	63	73	43	23	37	8	17	15	M8	20
34158	80	92	51	28	47	10	22	19	M10	20
34159	80	92	54	28	47	10	22	19	M12	30

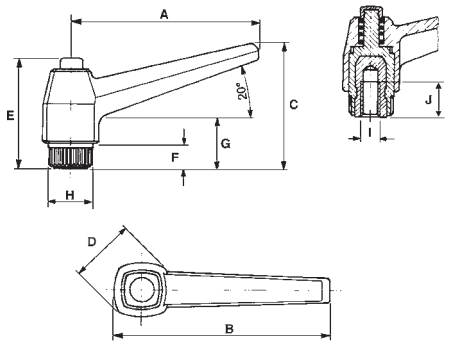
*Dimensions in millimeters

Plastic Button Head Adjustable Tapped Handle With Stainless Steel Insert

Metric

ELESA Original Design





- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Insert: 303 Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

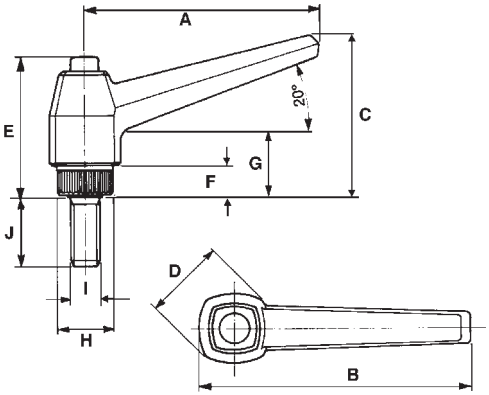
Part Number*	A	B	C	D	E	F	G	H	I	J
34151	42	50	32	18	29	6	14	12	M6	10
34152	63	73	43	23	37	8	17	15	M8	13
34153	80	92	54	28	47	10	22	19	M10	17

*Dimensions in millimeters

Plastic Button Head Adjustable Handle With Stud

Metric
ELESA Original Design





For adjustable clamping or tightening controls when the operating angle is limited. To adjust during the locking operation, lift the lever in order to disengage the teeth from the locking element and change lever position. The return spring automatically engages the teeth again.

- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

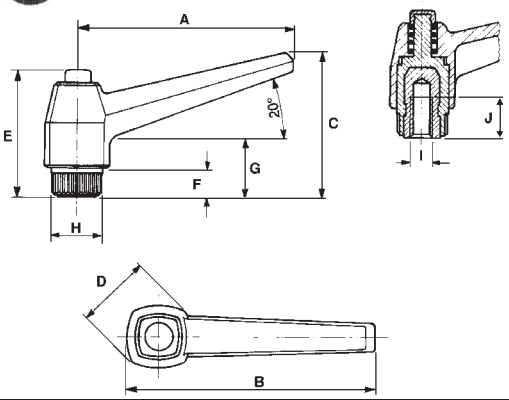
Part Number*	A	B	C	D	E	F	G	H	I	J
34362	42	50	32	18	29	6	14	12	M6	16
34363	42	50	32	18	29	6	14	12	M6	20
34364	42	50	32	18	29	6	14	12	M6	30
34374	63	73	43	23	37	8	17	15	M8	16
34375	63	73	43	23	37	8	17	15	M8	20
34377	63	73	43	23	37	8	17	15	M8	30
34378	63	73	43	23	37	8	17	15	M8	40
34379	63	73	43	23	37	8	17	15	M8	50
34381	80	92	54	28	47	10	22	19	M10	20
34383	80	92	54	28	47	10	22	19	M10	30
34385	80	92	54	28	47	10	22	19	M10	50
34387	80	92	54	28	47	10	22	19	M12	30
34388	80	92	54	28	47	10	22	19	M12	40
34391	100	114	65	33	54	12	25	25	M12	30
34393	100	114	65	33	54	12	25	25	M12	50

*Dimensions in millimeters

Plastic Button Head Tapped Adjustable Handle

Metric
ELESA Original Design





- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Insert: Brass
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

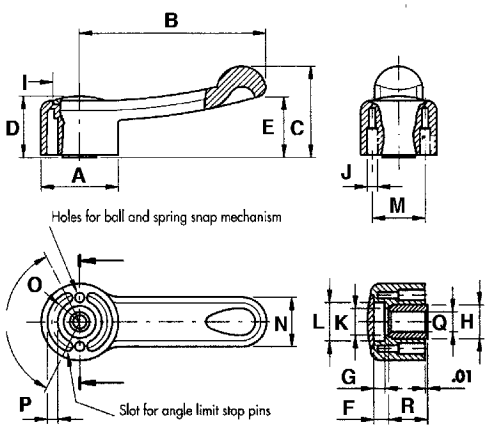
Part Number*	A	B	C	D	E	F	G	H	I	J
34352	42	50	32	18	29	6	14	12	M6	10
34354	63	73	43	23	37	8	17	15	M8	13
34355	80	92	54	28	47	10	22	19	M8	20
34356	80	92	54	28	47	10	22	19	M10	18
34357	80	92	54	28	47	10	22	19	M12	17
34359	100	114	65	33	54	12	25	25	M12	20

*Dimensions in millimeters

Control Lever
ELESA Orginal Design



- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Removable Boss Caps
- Adaptable For Click Positioning Applications
- Slot Provided For Angle Limit Stop Pins
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)



Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
34460	1.46	3.35	1.56	1.04	1.02	.30	.20	.71	1.02	.20	.53	.79	1.02	.91	.54	.17	.315	.69
34461	1.81	4.33	2.13	1.38	1.42	.39	.31	.87	1.24	.24	.67	1.00	1.26	1.14	.69	.26	.472	.87

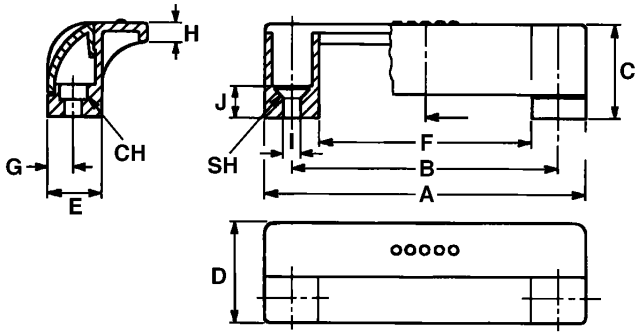
Machine Guard Handles
ELESA Original Design



Closed Style



Open Style



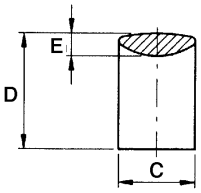
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Handle Shank, Matte Reinforced Polyamide Technopolymer
- Safety Cover Caps, Technopolymer Orange
- Cylindrical Socket Head (CH) or Countersunk Head (SH) Self-Tapping Screws (use 1/4-20 screws)
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)

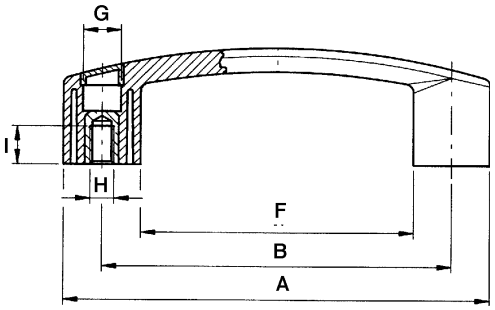
Part Number	Mounting Style	A	B	C	D	E	F	G	H	I	J
34240	CH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34241	SH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34242*	CH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34243*	SH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43

* Open Style

Back Mounted Bridge Handle
ELESA Orginal Design





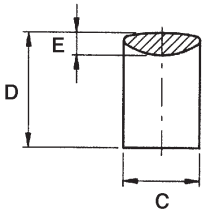


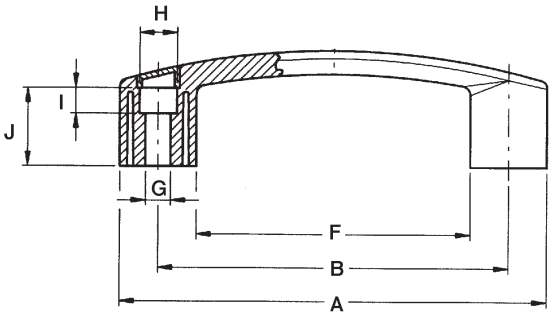
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Inserts: Tapped with Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Orange, Blue & Red)

Part Number	A	B	C	D	E	F	G	H	I
33875	4.57	3.68	0.87	1.38	0.29	2.83	0.51	1/4-20	0.47
34469	5.67	4.61	1.02	1.54	0.33	3.62	0.53	5/16-18	0.51
33876	7.01	5.91	1.10	1.77	0.37	4.80	0.53	5/16-18	0.51

Front Mounted Bridge Handle
ELESA Orginal Design







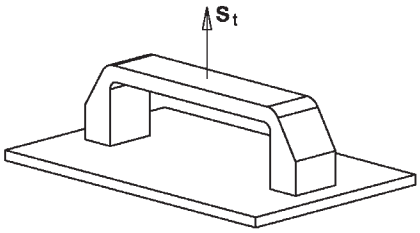
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Mounted by Two Through Holes in Front
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Orange, Blue & Red)

Part Number	A	B	C	D	E	F	G	H	I	J
34467	4.57	3.68	0.87	1.38	0.29	2.83	0.25	0.41	0.25	0.92
34468	5.67	4.61	1.02	1.54	0.31	3.62	0.33	0.53	0.33	1.04
34479	7.01	5.91	1.10	1.77	0.37	4.8	0.33	0.53	0.55	1.26

Plastic Handle
ELESA Original Design

- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



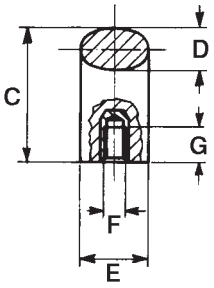


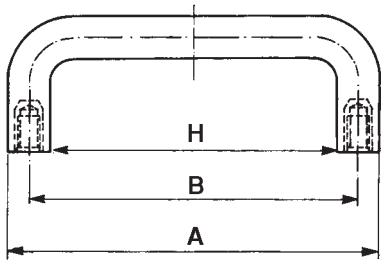
Part Number	A	B	C	D	E	F	G	St lbs
33791	3.94	3.39	1.73	0.55	0.91	1/4-20	0.47	538
33792	5.28	4.61	1.93	0.59	0.98	5/16-18	0.51	594
33793	7.72	7.05	2.24	0.63	1.06	5/16-18	0.51	450

Metric

Part Number*	A	B	C	D	E	F	G	H	St N
33706	100	86	44	14	23	M6	12	73	2400
33705	134	117	49	15	25	M8	13	103	2650
33707	196	179	57	16	27	M8	13	105	2000

*Dimensions in millimeters





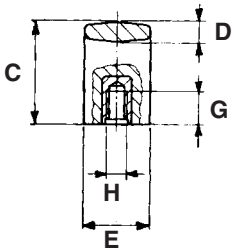
Plastic Handle
Metric
ELESA Original Design

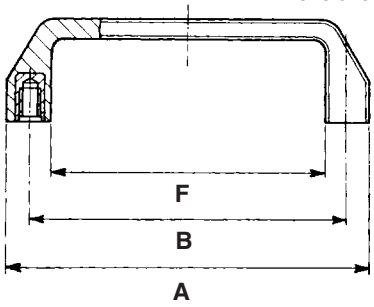
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

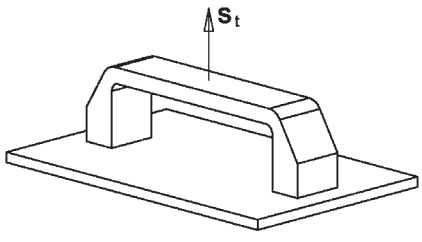


Part Number*	A	B	C	D	E	F	G	H	St N
33708	134	117	38	7.5	25	102	12	M6	2000
33709	134	117	38	7.5	25	102	12	M8	2000

*Dimensions in millimeters



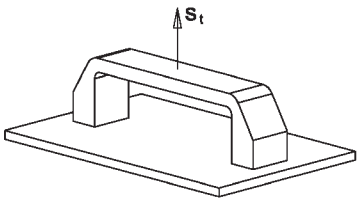


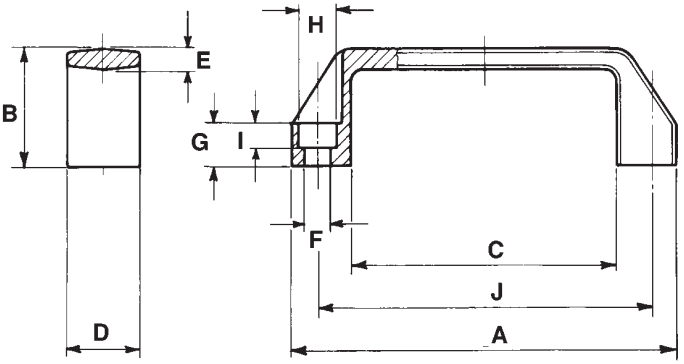


Plastic Pull/Lift Handle

ELESA Original Design







- Material: Glass-Fibre Reinforced Polyamide Technopolymer
- Finish: Black Matte
- Maximum Working Temp. 230˚F
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

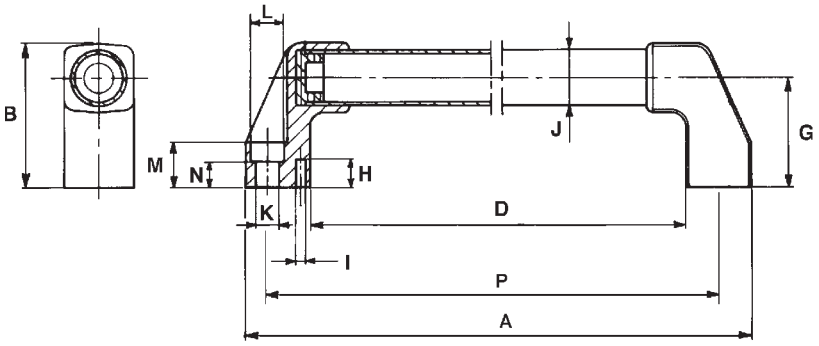
Part Number	A	B	C	D	E	F	G	H	I	J	St*
33701	4.21	1.42	2.91	0.83	0.24	0.26	0.51	0.41	0.28	3.68	560
33702	5.28	1.61	3.74	1.02	0.28	0.34	0.59	0.53	0.33	4.61	560
33703	5.90	1.77	4.25	1.06	0.28	0.34	0.63	0.53	0.33	5.20	560
33704	7.76	1.97	6.02	1.10	0.31	0.34	0.67	0.53	0.33	7.05	605
33710	10.31	2.13	7.95	1.22	0.35	0.41	0.79	0.65	0.41	8.25	784

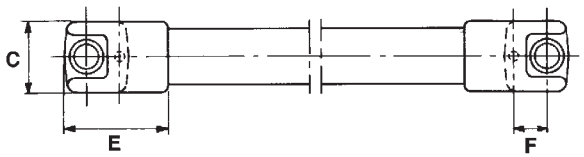
* Denotes Stength Table

Aluminum Tubular Handle

Elesa Original Design

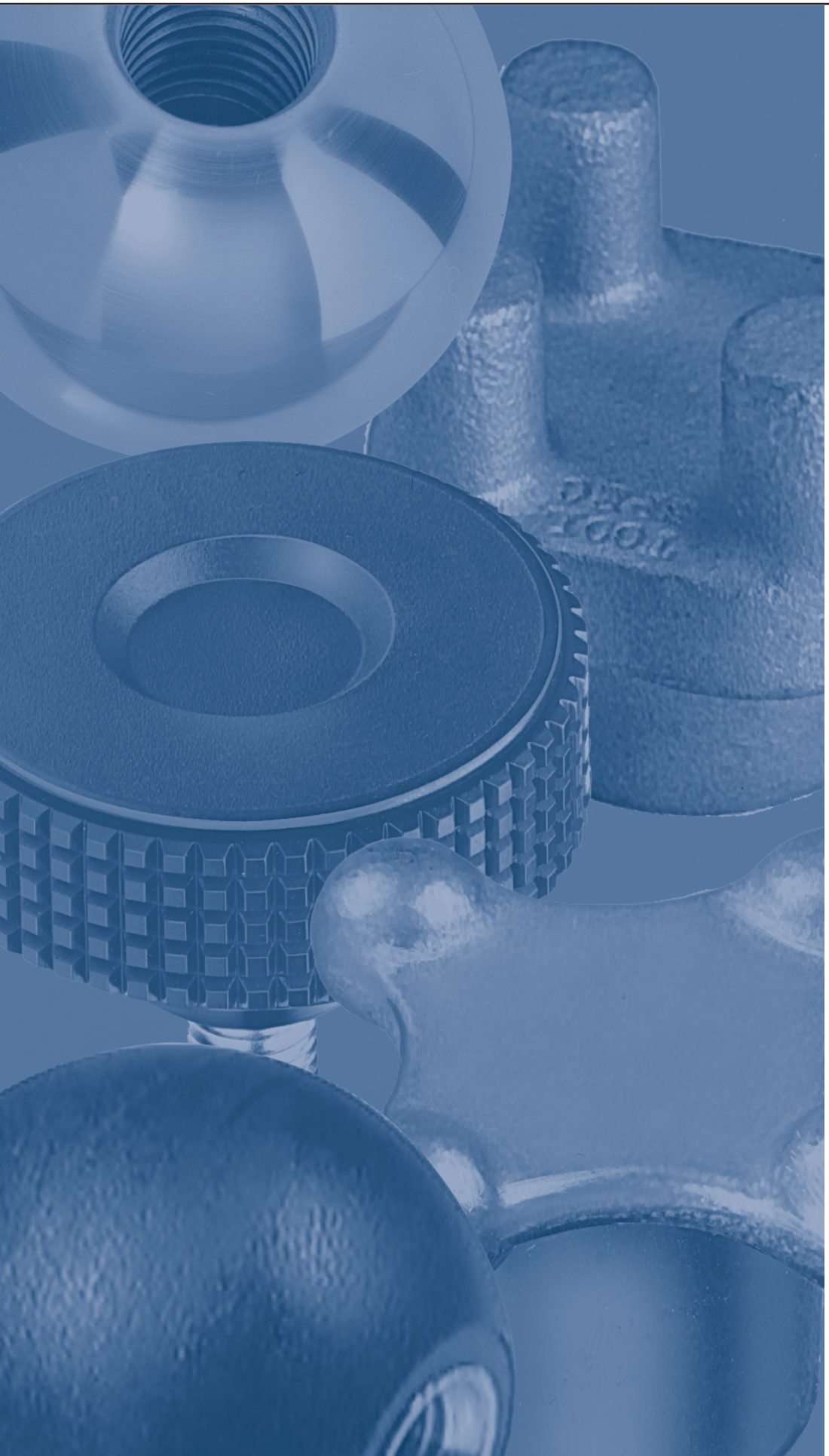






- Material: Tube, Aluminum Handle Shanks, Reinforced Polyamide Technopolymer
- Finish: Tube, Polyurethane coat on an epoxy base Color, Metalflake Graphite
- Handle Shank connection is axially knurled to the tube to prevent tube rotation
- Reference pins for safer positioning of the shanks
- Resistant to wear, scratches, and chemical agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
33725	12.76	3.07	1.50	10.00	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	12
33727	16.69	3.07	1.50	13.94	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	16
33728	20.63	3.07	1.50	17.87	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	20
33730	28.50	3.07	1.50	25.75	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	28

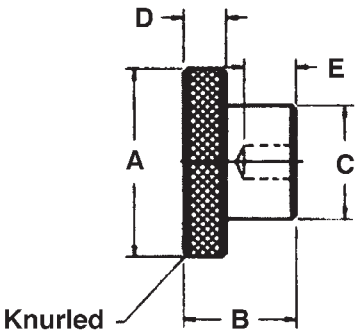


KNOBS

Aluminum Hand Knob....8.39-8.40
Aluminum Hand Knob With Stud....8.39
Aluminum Palmgrip Knob....8.41
Brass Ball....8.43
Cast Iron Hand Knob....8.38
Knurled Knob....8.56
Knurled Knob With Stud....8.56
Knurled Steel Knob....8.41
Plain Steel Ball....8.43
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Plastic Fluted Grip Knob....8.55
Plastic Fluted Grip Knob With Stud....8.55
Plastic Fluted Knob....8.49
Plastic Four Prong Knob....8.47
Plastic Four Prong Knob With Extended Prong....8.47
Plastic Knurled Torque Knob....8.48
Plastic Knurled Torque Knob With Stud....8.48
Plastic Knurled Knob....8.50
Plastic Knurled Knob With Stud....8.50
Plastic Knurled Grip Knob....8.57
Plastic Latch Type Lobe Knob....8.57
Plastic Lift Knob....8.59
Plastic Lobe Knob....8.51-8.53
Plastic Lobe Knob With Stud....8.54
Plastic Lobe Knob With Stainless Steel Stud....8.54
Plastic Oval Tapered Knob....8.60
Plastic Push/Pull Knob....8.62
Plastic Tapered Knob....8.59
Plastic T-Handle....8.58
Plastic Three Prong Knob....8.63
Plastic Three Spoked Knob....8.63
Plastic Wing Knob....8.45
Plastic Wing Knob With Stud....8.45
Polished Steel Ball....8.43
Quest Knobs and Handles....8.64-8.71
Quick Lock Hand Knob....8.37
Soft Touch Ball....8.44
Soft Touch Oval Tapered Knob....8.60
Soft Touch Tapered Knob....8.61
Speed Bar Knob....8.42
Steel Knurled Control Knob....8.36
Steel Knurled Control Knob With Stud....8.37
Thermoplastic Fluted Knob....8.49
Wing Nut....8.46
Wing Nut With Stud....8.46

Steel Knurled Control Knob





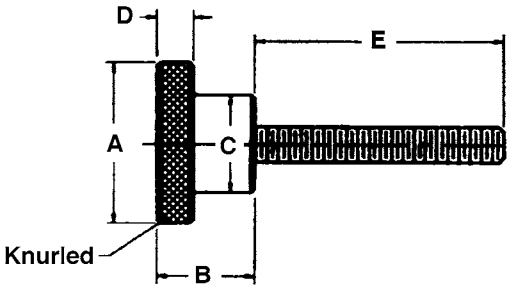
- Material: 1214 Steel
- Finish: Black Oxide
- Knurled Head

Part Number	A	B	C	D	E	Hole Diameter
21200	3/4	5/8	1/2	1/4	3/8	3/16 Ream
21201	3/4	5/8	1/2	1/4	3/8	10-24 Tap
21202	3/4	5/8	1/2	1/4	3/8	10-24 Thru Hole
21203	3/4	5/8	1/2	1/4	3/8	1/4 Ream
21204	3/4	5/8	1/2	1/4	3/8	1/4-20 Tap
21205	3/4	5/8	1/2	1/4	3/8	1/4-20 Thru Hole
21206	1	3/4	5/8	1/4	1/2	1/4 Ream
21207	1	3/4	5/8	1/4	1/2	1/4-20 Tap
21208	1	3/4	5/8	1/4	1/2	1/4-20 Thru Hole
21209	1	3/4	5/8	1/4	1/2	5/16 Ream
21210	1	3/4	5/8	1/4	1/2	5/16-18 Tap
21211	1	3/4	5/8	1/4	1/2	5/16-18 Thru Hole
21212	1 1/2	1	3/4	5/16	5/8	5/16 Ream
21213	1 1/2	1	3/4	5/16	5/8	5/16-18 Tap
21214	1 1/2	1	3/4	5/16	5/8	5/16-18 Thru Hole
21215	1 1/2	1	3/4	5/16	5/8	3/8 Ream
21216	1 1/2	1	3/4	5/16	5/8	3/8-16 Tap
21217	1 1/2	1	3/4	5/16	5/8	3/8-16 Thru Hole
21218	2	1 1/8	1	3/8	5/8	3/8 Ream
21219	2	1 1/8	1	3/8	5/8	3/8-16 Tap
21220	2	1 1/8	1	3/8	5/8	3/8-16 Thru Hole
21221	2	1 1/8	1	3/8	5/8	1/2 Ream
21222	2	1 1/8	1	3/8	5/8	1/2-13 Tap
21223	2	1 1/8	1	3/8	5/8	1/2-13 Thru Hole
21224	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2 Ream
21225	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2-13 Tap
21226	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2-13 Thru Hole
21227	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8 Ream
21228	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8-11 Tap
21229	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8-11 Thru Hole
21230	3	1 3/4	1 3/4	5/8	1	5/8 Ream
21231	3	1 3/4	1 3/4	5/8	1	5/8-11 Tap
21232	3	1 3/4	1 3/4	5/8	1	5/8-11 Thru Hole
21233	3	1 3/4	1 3/4	5/8	1	3/4 Ream
21234	3	1 3/4	1 3/4	5/8	1	3/4-10 Tap
21235	3	1 3/4	1 3/4	5/8	1	3/4-10 Thru Hole

Note: Also available in Metric and Stainless Steel

Steel Knurled Control Knob With Stud



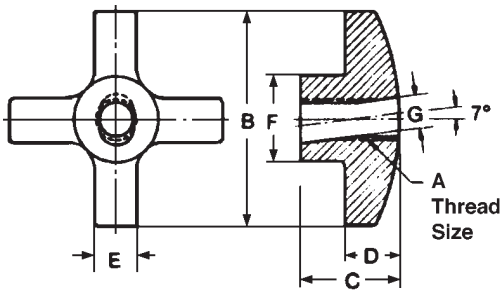


- Material: 1214 Steel
- Finish: Black Oxide
- Knurled Head

Part Number	A	B	C	D	E	Stud Thread
21240	3/4	5/8	1/2	1/4	1/2	10-24
21241	3/4	5/8	1/2	1/4	1	10-24
21242	3/4	5/8	1/2	1/4	3/4	1/4-20
21243	3/4	5/8	1/2	1/4	1 1/4	1/4-20
21244	1	3/4	5/8	1/4	1 3/4	1/4-20
21245	1	3/4	5/8	1/4	1 3/4	5/16-18
21246	1	3/4	5/8	1/4	3	5/16-18
21247	1 1/2	1	3/4	5/16	1 3/4	5/16-18
21248	1 1/2	1	3/4	5/16	3	5/16-18
21249	1 1/2	1	3/4	5/16	1 3/4	3/8-16
21250	1 1/2	1	3/4	5/16	3	3/8-16
21251	2	1 1/8	1	3/8	1 3/4	3/8-16
21252	2	1 1/8	1	3/8	3	1/2-13
21253	2	1 1/8	1	3/8	1 3/4	1/2-13
21254	2 1/2	1 1/2	1 1/2	9/16	1 3/4	1/2-13
21255	2 1/2	1 1/2	1 1/2	9/16	3	1/2-13
21256	2 1/2	1 1/2	1 1/2	9/16	1 3/4	5/8-11

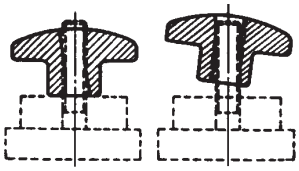
Quick Lock Hand Knob





Used to save time where a knob must be completely removed from the stud. After approximately one-quarter turn of the hand knob, it can be tilted on an angle and removed from the stud. Recommended for light duty applications.

- Material: 40 Grey Iron
- Finish: Zinc Plate
- Thread: Class 2B-UNC
- Available in FixturePro™ Design Software

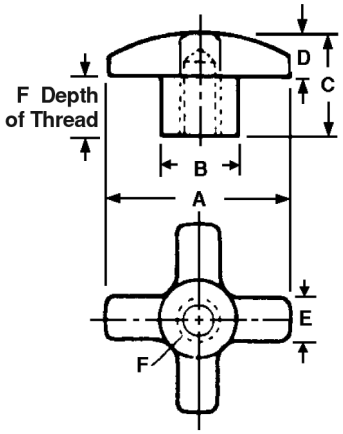


Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs)
33901	1/4-20	1 1/8	11/16	5/16	5/16	9/16	17/64	.06
33902	3/8-16	2 3/16	1	1/2	1/2	7/8	25/64	.27
33903	1/2-13	3	1 1/4	5/8	5/8	1 7/16	33/64	.72
33904	5/8-11	3	1 1/4	5/8	5/8	1 7/16	41/64	.69

Cast Iron Hand Knob



- Material: #30 Grey Iron
- Finish: Zinc Plate
- Thread: 2B-UNC
- Ream: +.002
  -.000
- Hub: Available Blank, Reamed or Tapped
- Available in FixturePro™ Design Software



Part Number	A	B	C	D	E	Hub Style	Depth of Thread F	Wt. (lbs) 10 Pcs.
16305*	1 1/8	5/8	3/4	5/16	5/16	Blank	–	.78
16331*	1 1/8	5/8	11/16	5/16	5/16	1/4 Ream	1/2	.63
16330	1 1/8	5/8	11/16	5/16	5/16	5/16 Ream	1/2	.63
16306*	1 1/8	5/8	11/16	5/16	5/16	1/4-20 Tap	1/2	.63
16307	1 1/8	5/8	11/16	5/16	5/16	5/16-18 Tap	1/2	.63
16308*	1 1/2	11/16	15/16	7/16	3/8	Blank	–	1.56
16309*	1 1/2	11/16	7/8	7/16	3/8	5/16 Ream	9/16	1.30
16310	1 1/2	11/16	7/8	7/16	3/8	3/8 Ream	9/16	1.30
16311*	1 1/2	11/16	7/8	7/16	3/8	5/16-18 Tap	9/16	1.30
16312	1 1/2	11/16	7/8	7/16	3/8	3/8-16 Tap	9/16	1.30
16313*	2	3/4	1 3/16	1/2	1/2	Blank	–	3.00
16314*	2	3/4	1 1/8	1/2	1/2	3/8 Ream	11/16	2.75
16315	2	3/4	1 1/8	1/2	1/2	1/2 Ream	11/16	2.70
16316*	2	3/4	1 1/8	1/2	1/2	3/8-16 Tap	11/16	2.75
16317	2	3/4	1 1/8	1/2	1/2	1/2-13 Tap	11/16	2.70
16318*	2 1/2	1 1/8	1 9/16	5/8	5/8	Blank	–	7.00
16319*	2 1/2	1 1/8	1 1/2	5/8	5/8	1/2 Ream	1	6.00
16320*	2 1/2	1 1/8	1 1/2	5/8	5/8	5/8 Ream	1	5.80
16321*	2 1/2	1 1/8	1 1/2	5/8	5/8	1/2-13 Tap	1	6.00
16322*	2 1/2	1 1/8	1 1/2	5/8	5/8	5/8-11 Tap	1	5.80
16323*	3	1 1/4	1 13/16	9/16	5/8	Blank	–	11.25
16324*	3	1 1/4	1 3/4	9/16	5/8	5/8 Ream	1 1/8	10.00
16325*	3	1 1/4	1 3/4	9/16	5/8	3/4 Ream	1 1/8	8.20
16326	3	1 1/4	1 3/4	9/16	5/8	1/2-13 Tap	1 1/8	10.70
16327*	3	1 1/4	1 3/4	9/16	5/8	5/8-11 Tap	1 1/8	10.25
16328*	3	1 1/4	1 3/4	9/16	5/8	3/4-10 Tap	1 1/8	8.50

*TCMA Standard

Cast Iron Hand Knob
Metric

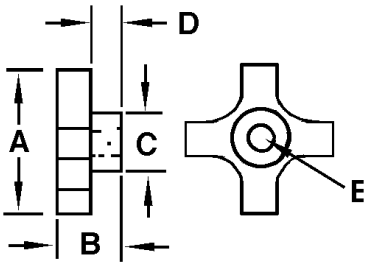
- Material: #30 Grey Iron
- Finish: Zinc Plate
- Thread: Class 6h
- Ream: -.000
  +.05
- Blank Knobs are Zinc Plated
- Available in FixturePro™ Design Software

*Part Number	A	B	C	D	E	Hub Style	Depth of Thread F
16305	28	16	19	8	8	Blank	–
16354	28	16	17	8	8	6mm Ream	12
16355	28	16	17	8	8	M6 x 1.0 Tap	12
16308	38	17	23	11	9	Blank	–
16359	38	17	22	11	9	8mm Ream	14
16361	38	17	22	11	9	M8 x 1.25 Tap	14
16313	50	19	30	13	13	Blank	–
16364	50	19	28	13	13	10mm Ream	17
16366	50	19	28	13	13	M10 x 1.5 Tap	17
16318	63	29	39	16	16	Blank	–
16369	63	29	38	16	16	12mm Ream	25
16370	63	29	38	16	16	16mm Ream	25
16371	63	29	38	16	16	M12 x 1.75 Tap	25
16372	63	29	38	16	16	M16 x 2.0 Tap	25
16323	75	32	45	14	16	Blank	–
16374	75	32	44	14	16	16mm Ream	28
16375	75	32	44	14	16	20mm Ream	28
16377	75	32	44	14	16	M16 x 2.0 Tap	28
16378	75	32	44	14	16	M20 x 2.5 Tap	28

*Dimensions in millimeters

Aluminum Hand Knob





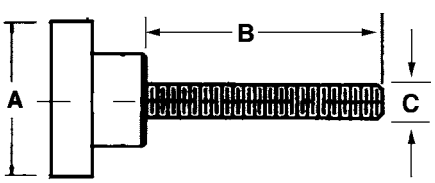
- Material: Aluminum
- Also available in black, red, blue, clear and gold anodized

Part Number	A	B	C	D	E
21000	1	7/8	1/2	1/2	Blank
21001	1	7/8	1/2	1/2	1/4-20 Tap
21002	1	7/8	1/2	1/2	1/4-20 Thru Hole
21003	1	7/8	1/2	1/2	1/4 Ream
21004	1 1/2	7/8	5/8	3/8	Blank
21005	1 1/2	7/8	5/8	3/8	5/16-18 Tap
21006	1 1/2	7/8	5/8	3/8	5/16-18 Thru Hole
21007	1 1/2	7/8	5/8	3/8	5/16 Ream
21008	2	1	13/16	1/2	Blank
21009	2	1	13/16	1/2	3/8-16 Tap
21010	2	1	13/16	1/2	3/8-16 Thru Hole
21011	2	1	13/16	1/2	3/8 Ream
21012	2 1/2	1 1/8	1	9/16	Blank
21013	2 1/2	1 1/8	1	9/16	1/2-13 Tap
21014	2 1/2	1 1/8	1	9/16	1/2-13 Thru Hole
21015	2 1/2	1 1/8	1	9/16	1/2 Ream

Note: Also available in metric sizes.

Aluminum Hand Knob With Stud





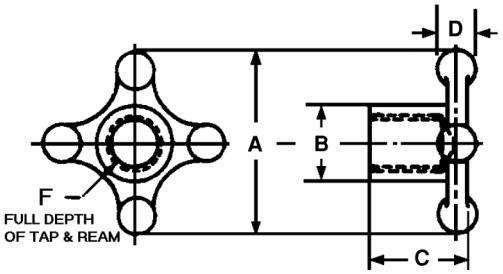
- Material: Aluminum
- Also available in black, red, blue, clear and gold anodized

Part Number	A	B	C
21020	1 1/2	1 3/4	1/4-20
21021	1 1/2	3	1/4-20
21022	2	1 3/4	5/16-18
21023	2	3	5/16-18
21024	2 1/2	1 3/4	3/8-16
21025	2 1/2	3	3/8-16
21026	2 1/2	1 3/4	1/2-13
21027	2 1/2	3	1/2-13

Note: Also available in metric sizes.

Aluminum Hand Knob



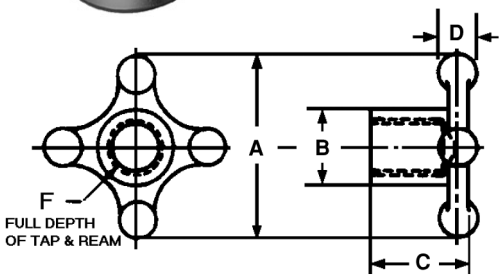


Part Number	A	B	C	D	Hub Style	F	Wt. (lbs) 10 Pcs.
21101	1 1/4	9/16	3/4	5/16	Blank	–	.21
21102	1 1/4	9/16	3/4	5/16	1/4 Ream	1/2	.16
21104	1 1/4	9/16	3/4	5/16	1/4-20 Tap	1/2	.16
21105	1 1/4	9/16	3/4	5/16	5/16-18 Tap	1/2	.16
21106	1 1/2	11/16	7/8	3/8	Blank	–	.47
21108	1 1/2	11/16	7/8	3/8	3/8 Ream	5/8	.31
21109	1 1/2	11/16	7/8	3/8	5/16-18 Tap	5/8	.31
21110	1 1/2	11/16	7/8	3/8	3/8-16 Tap	5/8	.31
21111	2 1/8	7/8	1 1/4	1/2	Blank	–	1.10
21112	2 1/8	7/8	1 1/4	1/2	3/8 Ream	7/8	1.00
21113	2 1/8	7/8	1 1/4	1/2	1/2 Ream	7/8	1.00
21114	2 1/8	7/8	1 1/4	1/2	3/8-16 Tap	7/8	1.00
21115	2 1/8	7/8	1 1/4	1/2	1/2-13 Tap	7/8	1.00
21116	3	1 3/8	1 3/4	11/16	Blank	–	3.80
21118	3	1 3/8	1 3/4	11/16	5/8 Ream	1 1/4	3.30
21119	3	1 3/8	1 3/4	11/16	3/4 Ream	1 1/4	3.10
21120	3	1 3/8	1 3/4	11/16	1/2-13 Tap	1 1/4	3.40
21121	3	1 3/8	1 3/4	11/16	5/8-11 Tap	1 1/4	3.30
21122	3	1 3/8	1 3/4	11/16	3/4-10 Tap	1 1/4	3.10

- Material: 319 Aluminum Alloy
- Thread: 2B-UNC
- Ream: +.002
  -.000
- Available in FixturePro™ Design Software

Aluminum Hand Knob
Metric





*Part Number	A	B	C	D	Hub Style	F
21101	31	14	19	8	Blank	–
21152	31	14	19	8	6mm Ream	13
21154	31	14	19	8	M6 Tap	13
21155	31	14	19	8	M8 Tap	13
21106	38	17	22	9	Blank	–
21158	38	17	22	9	10mm Ream	16
21159	38	17	22	9	M8 Tap	16
21160	38	17	22	9	M10 Tap	16
21111	53	22	32	12	Blank	–
21162	53	22	32	12	10mm Ream	22
21163	53	22	32	12	12mm Ream	22
21164	53	22	32	12	M10 Tap	22
21165	53	22	32	12	M12 Tap	22
21116	75	34	44	17	Blank	–
21168	75	34	44	17	16mm Ream	32
21169	75	34	44	17	20mm Ream	32
21170	75	34	44	17	M12 Tap	32
21171	75	34	44	17	M16 Tap	32
21172	75	34	44	17	M20 Tap	32

*Dimensions in millimeters

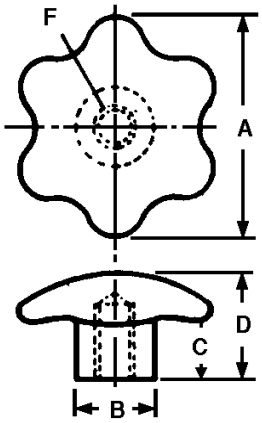
- Material: 319 Aluminum Alloy
- Thread: Class 6h
- Ream: +.05
  -.000

Aluminum Palmgrip Knob



Full Depth of Tap and Ream

- Material: 319 Aluminum Alloy
- Finish: Tumble
- Thread: 2B-UNC or Class 6h
- Ream: +.002 -.000
- Metric Ream: +.05 -.000
- Available in FixturePro™ Design Software



Inch

Part Number	A	B	C	D	F	Hub Style
20901	1 1/2	27/32	7/8	3/8	–	Blank
20902	1 1/2	27/32	7/8	1 5/16	3/4	1/4 Ream
20903	1 1/2	27/32	7/8	1 5/16	3/4	1/4-20 Tap
20904	2	1	7/8	1 19/32	–	Blank
20905	2	1	7/8	1 1/2	3/4	3/8 Ream
20906	2	1	7/8	1 1/2	3/4	3/8-16 Tap
20907	2 3/4	1 3/16	1 1/8	1 31/32	–	Blank
20908	2 3/4	1 3/16	1 1/8	1 7/8	1 1/4	1/2 Ream
20909	2 3/4	1 3/16	1 1/8	1 7/8	1 1/4	1/2-13 Tap
20910	3 1/2	1 1/4	1	1 13/16	–	Blank
20911	3 1/2	1 1/4	1	1 3/4	1 1/4	1/2 Ream
20912	3 1/2	1 1/4	1	1 3/4	1 1/4	1/2-13 Tap

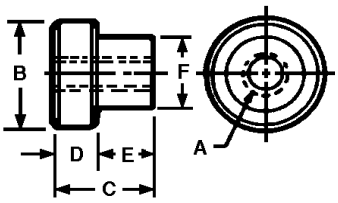
Metric

*Part Number	A	B	C	D	F	Hub Style
20901	38	19	22	34	–	Blank
20952	38	19	22	33	19	6mm Ream
20953	38	19	22	33	19	M6 Tap
20904	50	25	22	40	–	Blank
20955	50	25	22	38	19	10mm Ream
20956	50	25	22	38	19	M10 Tap
20907	69	30	29	49	–	Blank
20958	69	30	29	47	31	12mm Ream
20959	69	30	29	47	31	M12 Tap
20910	88	31	25	45	–	Blank
20961	88	31	25	44	31	12mm Ream
20962	88	31	25	44	31	M12 Tap

*Dimensions in millimeters

Knurled Steel Knob





- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC or Class 6h
- Available in FixturePro™ Design Software

Inch

Part Number	A	B	C	D	E	F
27901	10-24	3/4	5/8	1/4	3/8	7/16
27902	1/4-20	1	3/4	1/4	1/2	5/8
27903	3/8-16	1 1/4	1 1/8	1/2	5/8	3/4
27904	1/2-13	1 1/2	1 1/4	1/2	3/4	1
27905	5/8-11	2	1 3/4	5/8	1 1/8	1 1/4
27906	3/4-10	2 1/2	2 1/4	5/8	1 5/8	1 1/2

Metric

*Part Number	A	B	C	D	E	F
27951	M5 x 0.8	19	16	6	9	11
27952	M6 x 1.0	25	19	6	13	16
27953	M10 x 1.5	31	28	13	16	19
27954	M12 x 1.75	38	31	13	19	25
27955	M16 x 2.0	50	44	16	28	31
27956	M20 x 2.5	63	57	16	41	38

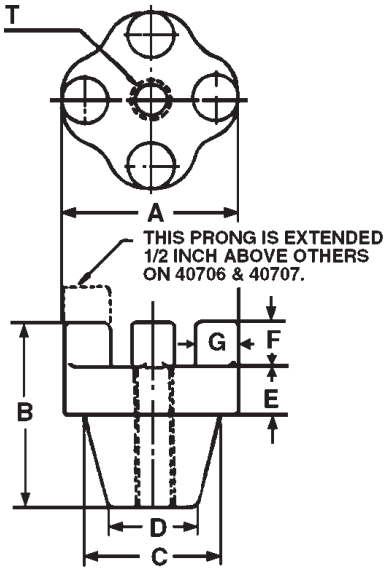
*Dimensions in millimeters

Speed Bar Knob



Speed Bar Knobs offer the ultimate in strength to hold down covers and clamp heavy work pieces. Insert bar between four vertical prongs for maximum leverage and holding force. One extra long prong is available on part numbers **40706** and **40707** for use with a crank handle.

- Material: Malleable ASTM 32510
- Finish: Mill
- Thread: 2B-UNC or Metric Class 6h
- Available in FixturePro™ Design Software



Inch

Part Number	A	B	C	D	E	F	G	T	Wt. (lbs)
40701	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	Blank	0.80
40711	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	3/8-16	0.76
40702	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	1/2-13	0.72
40712	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	5/8-11	0.68
40703	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	Blank	1.56
40713	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	1/2-13	1.48
40704	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	5/8-11	1.44
40705	2 1/2	2 3/8	1 3/8	1 1/2	9/16	7/8	5/8	3/4-10	1.44
40706	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	Blank	2.50
40715	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	7/8-09	2.38
40707	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	1-8	2.25

Metric

**Part Number	A	B	C	D	E	F	G	T
40701	50	53	31	28	12	19	12	Blank
40752	50	53	31	28	12	19	12	M12
40703	63	59	44	38	14	22	16	Blank
40754	63	59	44	38	14	22	16	M16
40755	63	59	44	38	14	22	16	M20
40706*	88	59	59	53	12	22	16	Blank
40757*	88	59	59	53	12	22	16	M24

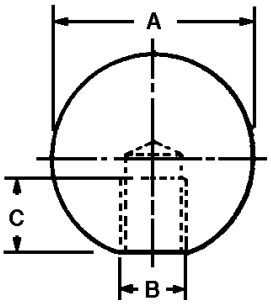
*Note: One extra long prong is available on part numbers 40706 and 40757 for use with a crank handle.

**Dimensions in millimeters

Plain Steel Ball



- Material: Carbon Steel
- Finish: Black Oxide
- Available Tapped or Blank
- Available in FixturePro™ Design Software

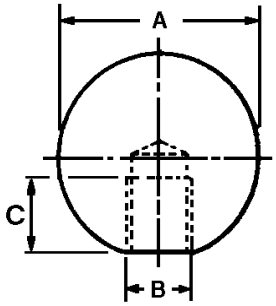


Part Number	A	B	C
36511	1 1/2	Blank	–
36512	1 1/2	3/8-16	5/8
36513	2	Blank	–
36514	2	1/2-13	3/4
36515	2	5/8-11	7/8

Polished Steel Ball



- Material: Steel
- Finish: Polished

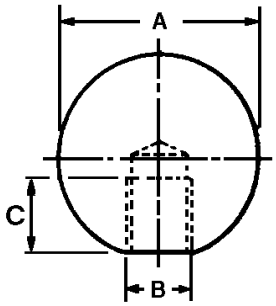


Part Number	A	B	C
36520	3/4	10-32	3/8
36521	1	10-32	3/8
36522	1	1/4-20	1/2
36523	1	5/16-18	1/2
36524	1	3/8-16	1/2
36525	1 3/8	1/4-20	5/8
36526	1 3/8	5/16-18	5/8
36527	1 3/8	3/8-16	5/8
36528	1 3/8	1/2-13	5/8
36529	1 7/8	3/8-16	3/4
36530	1 7/8	1/2-13	3/4
36531	1 7/8	5/8-11	3/4

Brass Ball



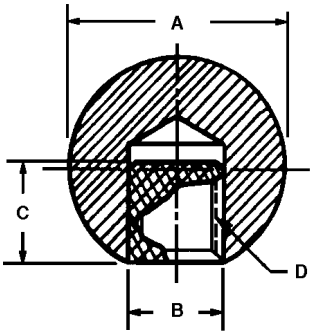
- Material: Brass
- Finish: Polished
- Water Resistant



Part Number	A	B	C
36540	3/4	10-32	3/8
36541	1	10-32	3/8
36542	1	1/4-20	1/2
36543	1	5/16-18	1/2
36544	1	3/8-16	1/2
36545	1 3/8	1/4-20	5/8
36546	1 3/8	5/16-18	5/8
36547	1 3/8	3/8-16	5/8
36548	1 3/8	1/2-13	5/8
36549	1 7/8	3/8-16	3/4
36550	1 7/8	1/2-13	3/4
36551	1 7/8	5/8-11	3/4

Plastic Ball



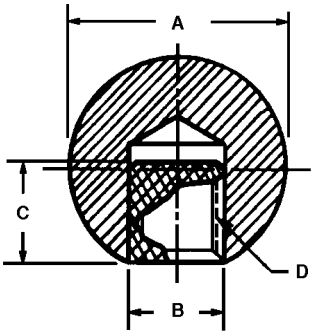


- Material: Plastic, Red or Black
- Insert: Brass
- Finish: Tumble, Sand, & Buff
- Available in FixturePro™ Design Software

Black Part Number	Red Part Number	A	B	C	Brass Insert D
31301		3/4	1/4	5/16	10-32
31316		3/4	1/4	5/16	1/4-20
31317		1	1/2	1/2	10-32
31302	**31502**	1	1/2	7/16	1/4-20
31308		1	1/2	7/16	5/16-18
31303	**31503**	1	1/2	1/2	3/8-16
31318		1 3/8	5/8	5/8	1/4-20
31309		1 3/8	5/8	7/16	5/16-18
31304	**31504**	1 3/8	5/8	1/2	3/8-16
31310		1 3/8	5/8	1/2	3/8-24
31305	**31505**	1 3/8	5/8	5/8	1/2-13
31311		1 3/8	5/8	5/8	1/2-20
31319		1 5/8	11/16	5/8	5/16-18
31314		1 5/8	11/16	1/2	3/8-16
31315		1 5/8	11/16	5/8	1/2-13
31320		1 7/8	3/4	7/16	5/16-18
31312		1 7/8	3/4	1/2	3/8-16
31306	**31506**	1 7/8	3/4	5/8	1/2-13
31313		1 7/8	3/4	5/8	1/2-20
31307	**31507**	1 7/8	3/4	3/4	5/8-18

Soft Touch Ball





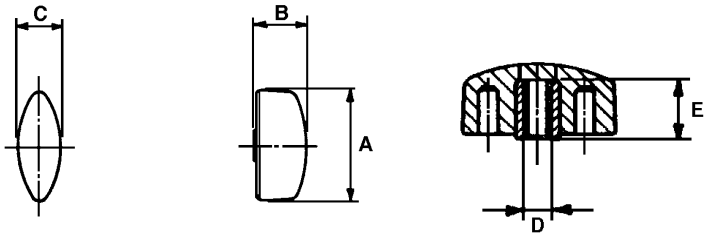
This Ball Knob has a soft touch material which enables the operator to get a better grip on the knob for many different types of operations.

- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Also available in red, blue, yellow, and green (250 piece minimum)

Part Number	A	B	C	Insert D
31330	1 1/2	1 15/64	5/8	1/4-20 x 5/8
31331	1 1/2	1 15/64	5/8	5/16-18 x 5/8
31332	1 1/2	1 15/64	5/8	3/8-16 x 5/8
31333	1 1/2	1 15/64	5/8	1/2-13 x 5/8

Plastic Wing Knob
ELESA Original Design
Metric





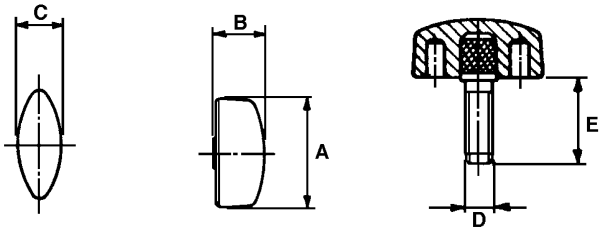
- Material: Glass-Fibre Reinforced Black Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number*	A	B	C	D	E
33776	26	13	11	M5	5
33777	32	15	13	M6	8
33778	40	17	15.5	M8	8

*Dimensions in millimeters

Plastic Wing Knob With Stud
ELESA Original Design





- Material: Glass-Fibre Reinforced Black Technopolymer
- Finish: Black Matte
- Zinc-Plated Steel Stud with chamfered flat end
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Inch

Part Number	A	B	C	D	E
33765	1.02	.51	.43	10-32	.500
33766	1.02	.51	.43	10-32	.750
33767	1.26	.59	.51	1/4-20	.500
33768	1.26	.59	.51	1/4-20	.750
33769	1.26	.59	.51	1/4-20	1.000
33770	1.57	.67	.61	5/16-18	.750
33771	1.57	.67	.61	5/16-18	1.000

Metric

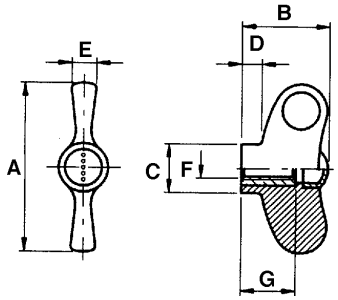
Part Number*	A	B	C	D	E
33781	26	13	11	M5	16
33782	32	15	13	M6	16
33783	32	15	13	M8	16
33784	40	17	15.5	M8	25
33785	40	17	15.5	M10	30

*Dimensions in millimeters

Wing Nut
ELESA Orginal Design



- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Insert: Brass With Tapped Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)

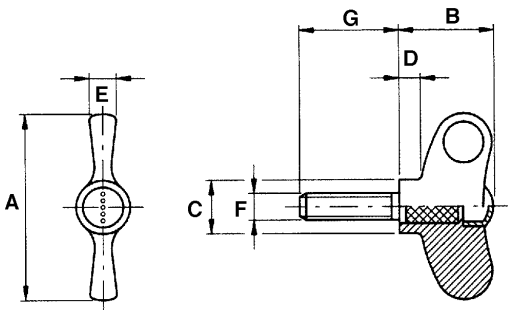


Part Number	A	B	C	D	E	F	G
34450	2.17	1.1	0.63	0.26	0.31	1/4-20	0.71
34451	2.17	1.1	0.63	0.26	0.31	5/16-18	0.71
34452	2.76	1.42	0.79	0.31	0.39	5/16-18	0.79
34453	2.76	1.42	0.79	0.31	0.39	3/8-16	0.79

Wing Nut With Stud
ELESA Orginal Design



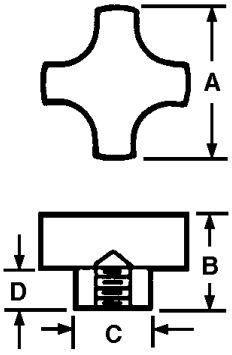
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Threaded Steel With Chamfered End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)



Part Number	A	B	C	D	E	F	G
34455	2.17	1.10	.63	.26	.31	5/16-18	1.00
34456	2.17	1.10	.63	.26	.31	5/16-18	1.50
34457	2.76	1.42	.79	.31	.39	3/8-16	1.00
34458	2.76	1.42	.79	.31	.39	3/8-16	1.50

Plastic Four Prong Knob





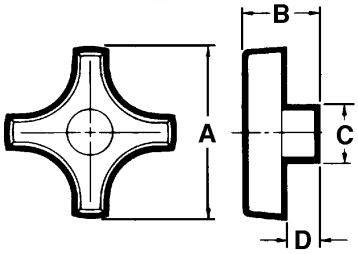
- Material: Plastic
- Finish: Tumble
- Insert: Brass
- Excellent gripping action for turning and tightening uses: adjusting devices, tripods, lawn mower height adjustments, valve controls, etc.
- Available in FixturePro™ Design Software

Part Number	Insert Thread and Depth	A	B	C	D
32201	1/4-20 x 7/16	1 1/4	7/8	5/8	3/8
32270	5/16-18 x 7/16	1 1/4	7/8	5/8	3/8
32202*	1/4-20 x 1/2	1 1/4	7/8	5/8	3/8
32271	1/4-20 x 7/16	1 3/4	1	13/16	1/2
32203	5/16-18 x 7/16	1 3/4	1	13/16	1/2
32204*	5/16-18 x 5/8	1 3/4	1	13/16	1/2
32272*	1/4-20 x 5/8	1 3/4	1	13/16	1/2
32205	3/8-16 x 1/2	1 3/4	1	13/16	1/2
32206*	3/8-16 x 5/8	1 3/4	1	13/16	1/2
32207	3/8-16 x 1/2	2 1/4	1 1/8	1	9/16
32273	5/16-18 x 1/2	2 1/4	1 1/8	1	9/16
32208*	3/8-16 x 5/8	2 1/4	1 1/8	1	9/16
32274*	5/16-18 x 5/8	2 1/4	1 1/8	1	9/16
32209	1/2-13 x 5/8	2 1/4	1 1/8	1	9/16
32210*	1/2-13 x 5/8	2 1/4	1 1/8	1	9/16

*Indicates knobs with through clearance hole.

Plastic Four Prong Knob With Extended Prong





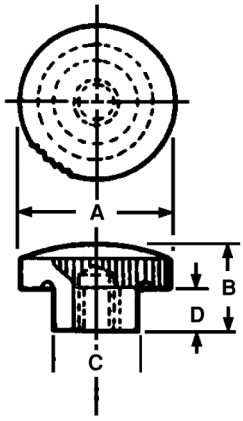
- Material: Polypropylene
- Finish: Tumble
- Insert: Brass

Part Number	A	B	C	D	Insert
32260	3	1 1/4	7/8	5/8	1/4-20
32261*	3	1 1/4	7/8	5/8	1/4-20
32262	3	1 1/4	7/8	5/8	5/16-18
32263*	3	1 1/4	7/8	5/8	5/16-18
32264	3	1 1/4	7/8	5/8	3/8-16
32265*	3	1 1/4	7/8	5/8	3/8-16

* Through Hole Style

Plastic Knurled Torque Knob





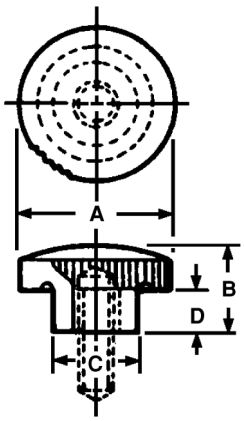
- Material: Plastic
- Finish: Tumble
- Knurled edge for non-slip grip
- Insert Threads: Brass
- Available in FixturePro™ Design Software

Part Number	Insert Thread and Depth	A	B	C	D
32324	8-32 x 5/16	3/4	9/16	5/8	–
32325	10-32 x 5/16	3/4	9/16	5/8	–
32328	1/4-20 x 3/8	3/4	9/16	5/8	–
32301	10-32 x 5/16	1	21/32	5/8	5/16
32303	1/4-20 x 3/8	1	21/32	5/8	5/16
32305	1/4-20 x 7/16	1 3/8	25/32	3/4	3/8
32308	5/16-18 x 7/16	1 3/8	25/32	3/4	3/8
32310	3/8-16 x 3/8	1 3/8	25/32	3/4	3/8
32311	5/16-18 x 7/16	1 7/8	1	1	1/2
32312	3/8-16 x 1/2	1 7/8	1	1	1/2
32315	Bushing*	1 7/8	1	1	1/2

*.377 I.D. x 1/2" O.D. x 1/2" long plain hole brass bushing, drilled and tapped for one #10-32 set screw.

Plastic Knurled Torque Knob With Stud





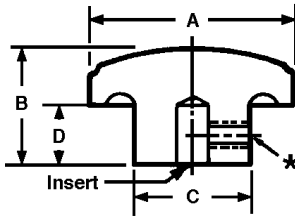
- Material: Plastic
- Finish: Tumble
- Knurled edge for non-slip grip
- Stud Threads: Zinc Plated Steel
- Available in FixturePro™ Design Software

Part Number	Stud Thread and Length	A	B	C	D
32326	10-32 x 1/2	3/4	9/16	5/8	—
32327	10-32 x 1	3/4	9/16	5/8	–
32329	1/4-20 x 1/2	3/4	9/16	5/8	–
32330	1/4-20 x 1	3/4	9/16	5/8	–
32302	10-32 x 1	1	21/32	5/8	5/16
32304	1/4-20 x 1	1	21/32	5/8	5/16
32334	5/16-18 x 1	1	21/32	5/8	5/16
32306	1/4-20 x 1	1 3/8	25/32	3/4	3/8
32307	1/4-20 x 2	1 3/8	25/32	3/4	3/8
32331	5/16-18 x 1	1 3/8	25/32	3/4	3/8
32309	5/16-18 x 2	1 3/8	25/32	3/4	3/8
32332	3/8-16 x 1	1 3/8	25/32	3/4	3/8
32333	5/16-18 x 1	1 7/8	1	1	1/2
32313	3/8-16 x 1	1 7/8	1	1	1/2

Plastic Fluted Knob



- Material: Plastic
- Finish: Tumble
- Insert Threads: Brass
- Bushing: Brass
- Stud Threads: Zinc Plated Steel
- For heavy torque applications, clamping devices, adjusting rods
- Available in FixturePro™ Design Software

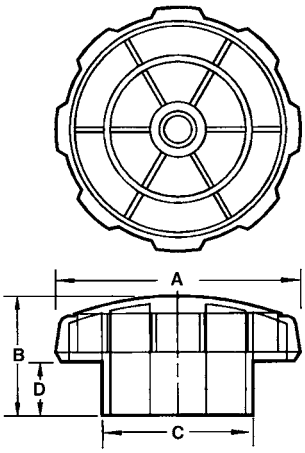


Part Number	Insert Thread and Depth	Stud Thread and Length	A	B	C	D
32320	1/4-20 x 7/16	–	1 3/8	27/32	27/32	25/64
32340	–	1/4-20 x 1	1 3/8	27/32	27/32	25/64
32321	5/16-18 x 7/16	–	1 3/8	27/32	27/32	25/64
32341	–	5/16-18 x 1	1 3/8	27/32	27/32	25/64
32342	–	3/8-16 x 1	1 3/8	27/32	27/32	25/64
32343	–	1/4-20 x 1	1 3/4	1 1/16	1 1/16	1/2
32322	5/16-18 x 7/16	–	1 3/4	1 1/16	1 1/16	1/2
32344	–	5/16-18 x 1	1 3/4	1 1/16	1 1/16	1/2
32323	3/8-16 x 1/2	–	1 3/4	1 1/16	1 1/16	1/2
32345	–	3/8-16 x 1	1 3/4	1 1/16	1 1/16	1/2
32346	1/4-20 x 7/16	–	1 3/4	1 1/16	1 1/16	1/2
32316	3/8-16 x 1/2	–	2 3/8	1 5/16	1 1/4	5/8
32347	5/16-18 x 7/16	–	2 3/8	1 5/16	1 1/4	5/8
32317	–	3/8-16 x 1	2 3/8	1 5/16	1 1/4	5/8
32318	–	3/8-16 x 2	2 3/8	1 5/16	1 1/4	5/8
32348	–	5/16-18 x 1	2 3/8	1 5/16	1 1/4	5/8
32319	Bushing*	–	2 3/8	1 5/16	1 1/4	5/8

*.377 I.D. x 1/2" O.D. x 1/2" deep plain brass bushing, drilled and tapped for one #10-32 set screw.

Thermoplastic Fluted Knob



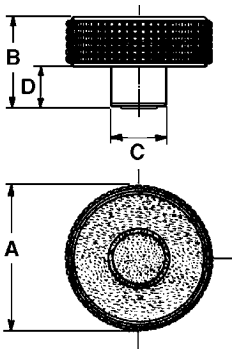


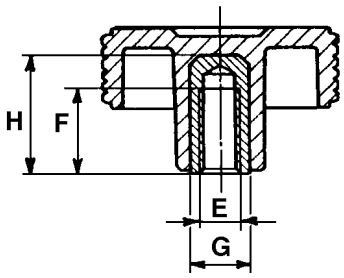
- Material: Thermoplastic
- Finish: Black Matte
- Insert: Brass
- Textured surface resists scratches, nicks, and fingerprints
- Also available in red, blue, yellow, and green
- A standard 1" stud is available, other lengths available upon request.

Part Number	A	B	C	D	Insert
32350	3 1/4	1 3/8	2	3/4	1/4-20 x 5/8
32351	3 1/4	1 3/8	2	3/4	5/16-18 x 3/4
32352	3 1/4	1 3/8	2	3/4	3/8-16 x 7/8

Plastic Knurled Knob
ELESA Original Design





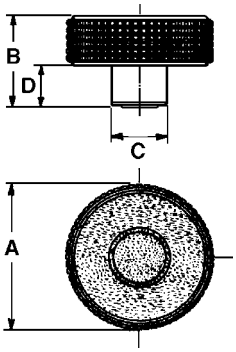


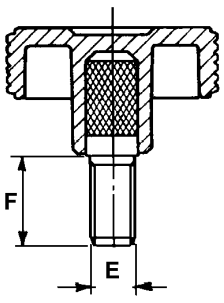
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Brass Insert with tapped or plain blind hole
- Knobs with plain blind hole complete with set screw
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	Set Screw	F	G	H
33801	1.22	.87	.59	.35	1/4-20	-	.47	-	-
33802	1.57	.94	.67	.43	1/4	10-32	.55	.47	.67
33803	1.57	.94	.67	.43	1/4-20	-	.47	-	-
33804	1.57	.94	.67	.43	5/16-18	-	.51	-	-
33805	1.97	1.18	.79	.53	3/8	10-32	.79	.63	.98
33806	1.97	1.18	.79	.53	5/16-18	-	.70	-	-
33807	1.97	1.18	.79	.53	3/8-16	-	.67	-	-
33808	2.36	1.38	.91	.59	3/8	1/4-20	.79	.63	1.18
33809	2.36	1.38	.91	.59	3/8-16	-	.79	-	-
33810	2.36	1.38	.91	.59	1/2-13	-	.79	-	-

Plastic Knurled Knob With Stud
ELESA Original Design





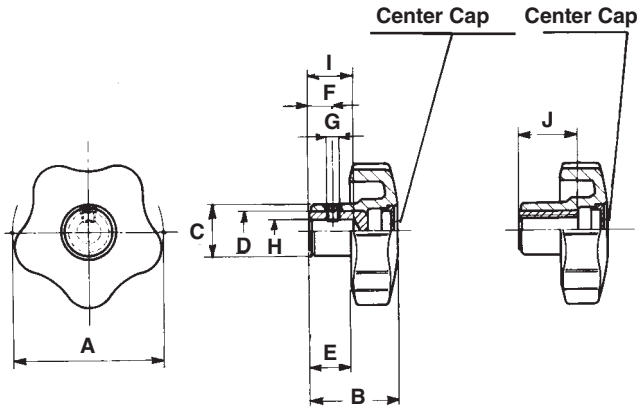


- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Zinc Plated Steel with chamfered flat end
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F
33811	1.22	.87	.59	.35	1/4-20	.500
33812	1.22	.87	.59	.35	1/4-20	.750
33813	1.57	.94	.67	.43	1/4-20	.750
33814	1.57	.94	.67	.43	1/4-20	1.00
33815	1.57	.94	.67	.43	5/16-18	.750
33816	1.57	.94	.67	.43	5/16-18	1.00
33817	1.97	1.18	.79	.53	3/8-16	1.00
33818	1.97	1.18	.79	.53	3/8-16	1.25
33819	2.36	1.38	.91	.59	3/8-16	1.00
33820	2.36	1.38	.91	059	3/8-16	1.25

Plastic Lobe Knob
ELESA Original Design



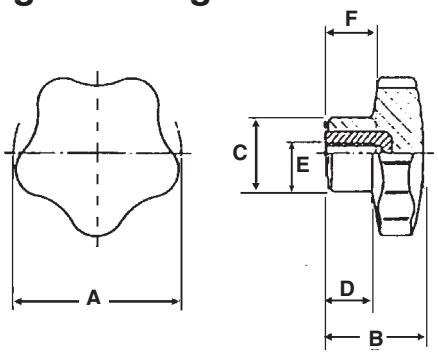


- Material: High Impact Strength Technopolymer
- Finish: Black
- Insert: Brass with tapped or plain blind hole
- Knobs with plain blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	Set Screw G	Mounting Holes (H) Plain	Mounting Holes (H) Tapped	I	J
33840	0.98	0.75	0.51	0.28	0.31	-	-	-	10-32	-	0.39
33841	1.26	0.91	0.59	-	0.39	-	-	-	1/4-20	-	0.47
33842	1.26	0.91	0.59	0.47	0.39	0.2	10-32	1/4	-	-	0.47
33843	1.57	1.06	0.67	-	0.47	-	-	-	1/4-20	-	0.71
33844	1.57	1.06	0.67	-	0.47	-	-	-	5/16-18	-	0.71
33845	1.57	1.06	0.67	0.47	0.47	0.24	10-32	1/4	-	0.55	-
33846	1.57	1.06	0.67	0.55	0.47	0.24	10-32	5/16	-	0.59	-
33847	1.97	1.26	0.75	-	0.55	-	-	-	5/16-18	-	0.79
33848	1.97	1.26	0.75	-	0.55	-	-	-	3/8-16	-	0.79
33849	1.97	1.26	0.75	0.55	0.55	0.28	10-32	5/16	-	0.63	-
33850	1.97	1.26	0.75	0.63	0.55	0.28	10-32	3/8	-	0.63	-
33851	2.48	1.46	0.87	-	0.63	-	-	-	3/8-16	-	1.02
33852	2.48	1.46	0.87	-	0.63	-	-	-	1/2-13	-	1.02
33853*	2.48	1.46	0.87	0.67	0.63	0.31	1/4-20	3/8	-	0.79	-
33854*	2.48	1.46	0.87	0.75	0.63	0.31	1/4-20	1/2	-	0.79	-
33855	2.91	1.71	1.02	0.75	0.87	0.31	1/4-20	1/2	-	0.79	-
33856	2.91	1.71	1.02	-	0.87	-	-	-	1/2-13	-	1.02

*Steel Insert

Plastic Lobe Knob
Metric
Elesa Original Design



- Material: Duroplast
- Finish: Black Matte
- Insert: Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

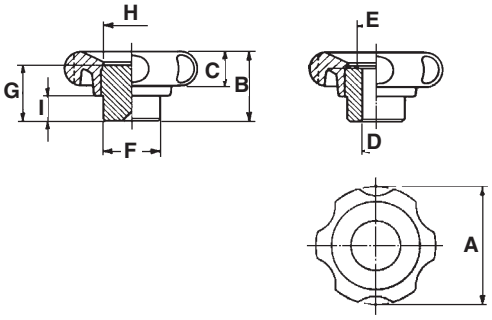
Part Number*	A	B	C	D	E	F
34121	32	23	19	11	M6	12
34122	40	27	21	12	M8	13
34123	50	33	25	14	M10	17
34124	60	37	27	17	M12	20

*Dimensions in millimeters

Plastic Lobe Knob

ELESA Original Design





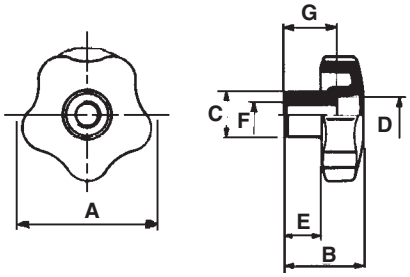
- Material: Black Duroplast
- Finish: Black Bright
- Metal Hub
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I
33751	2.01	1.14	.51	Blank	–	.79	.83	.71	.39
33752	2.01	1.14	.51	5/16	–	.79	.83	.71	.39
33753	2.01	1.14	.51	5/16-18	–	.79	.83	.71	.39
33754	2.72	1.30	.71	Blank	–	1.18	.98	1.10	.47
33755	2.72	1.30	.71	3/8	.71	1.18	.98	1.10	.47
33756	2.72	1.30	.71	3/8-16	.71	1.18	.98	1.10	.47
33757	3.23	1.57	.75	Blank	–	1.38	1.18	1.34	.59
33758	3.23	1.57	.75	1/2	.71	1.38	1.18	1.34	.59
33759	3.23	1.57	.75	1/2-13	.71	1.38	1.18	1.34	.59
33760	3.90	1.73	.79	Blank	–	1.42	1.34	1.34	.55
33761	3.90	1.73	.79	1/2	.84	1.42	1.34	1.34	.55
33762	3.90	1.73	.79	5/8-11	.84	1.42	1.34	1.34	.55
33763	5.07	1.85	.87	Blank	–	1.57	1.34	1.42	.51
33764	5.07	1.85	.87	1/2	–	1.57	1.34	1.46	.51

Plastic Lobe Knob

ELESA Original Design





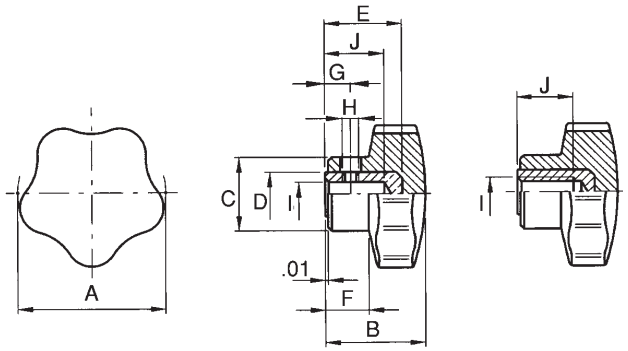
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped through hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G
33831	1.26	0.91	0.59	0.39	0.39	1/4-20	0.47
33832	1.57	1.06	0.67	0.47	0.47	5/16-18	0.71
33833	1.97	1.26	0.75	0.59	0.55	3/8-16	0.79
33834	2.48	1.46	0.87	0.75	0.63	3/8-16	1.02
33835	2.48	1.46	0.87	0.75	0.63	1/2-13	1.02
33836	2.91	1.17	1.02	0.67	0.87	1/2-13	1.02

Plastic Lobe Knob
ELESA Original Design





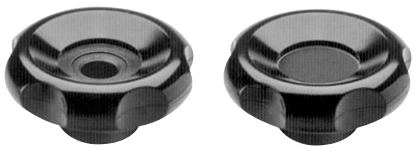


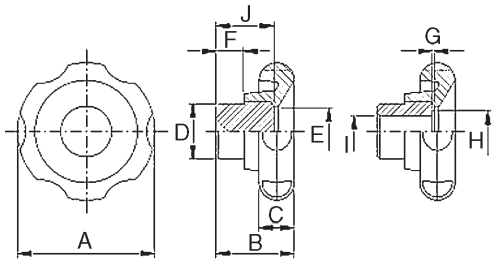
- Material: Phenolic based Duroplast
- Insert: Black oxide steel or Brass

Part Number	A	B	C	D	E	F	Set Screw G	Set Screw H	Mounting Hole (I) Plain	Mounting Hole (I) Tapped	J	Wt. lbs.
33884*	1.26	0.91	0.75	-	-	0.43	-	-	-	1/4-20	0.39	0.04
33885*	1.57	1.06	0.83	-	-	0.47	-	-	-	1/4-20	0.47	0.07
33886*	1.57	1.06	0.83	-	-	0.47	-	-	-	5/16-18	0.51	0.06
33887*	1.57	1.06	0.83	0.47	0.67	0.47	0.28	10-32	0.250	-	0.55	0.07
33888*	1.57	1.06	0.83	0.63	0.79	0.47	0.28	10-32	0.312	-	0.63	0.06
33889*	1.97	1.3	0.98	-	-	0.55	-	-	-	5/16-18	0.71	0.11
33890*	1.97	1.3	0.98	-	-	0.55	-	-	-	3/8-16	0.67	0.10
33891*	1.97	1.3	0.98	0.59	0.99	0.55	0.31	10-32	0.312	-	0.79	0.14
33892*	1.97	1.3	0.98	0.63	0.99	0.55	0.31	10-32	0.375	-	0.79	0.13
33893	2.36	1.46	1.06	-	-	0.67	-	-	-	3/8-16	0.67	0.16
33894	2.36	1.46	1.06	-	-	0.67	-	-	-	1/2-13	0.79	0.17
33895	2.36	1.46	1.06	0.67	1.02	0.67	0.35	1/4-20	0.375	-	0.79	0.21
33896	2.36	1.46	1.06	0.79	1.18	0.67	0.35	1/4-20	0.500	-	0.99	0.19
33897	2.75	1.73	1.18	-	-	0.79	-	-	-	1/2-13	0.79	0.26
33898	2.75	1.73	1.18	0.79	1.18	0.79	0.43	1/4-20	0.500	-	0.99	0.27
33899	3.34	2.16	1.37	-	-	1.18	-	-	-	5/8-11	0.86	0.38

***denotes brass insert.**

Plastic Lobe Knob
ELESA Original Design





- Materials: Glass reinforced polyamide based technopolymer
- Finish: Black glossy
- Black-oxide steel hub
- Lighter Design
- With plain or tapped hole

1. Not drilled
2. Plain through hole
3. Tapped through hole

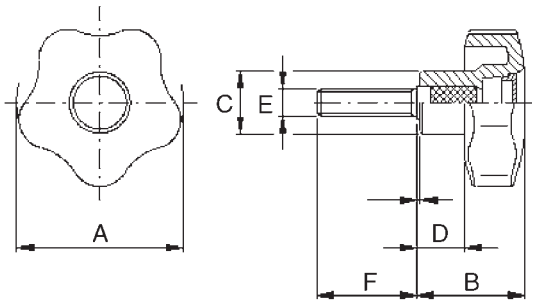
Part Number	A	B	C	D	E	F	G	H	Mounting Holes (I) Plain	Mounting Holes (I) Tapped	J	Wt. lbs.
34000[1]	1.97	1.14	0.51	0.79	0.71	0.39	-	-	-	-	0.83	0.16
34001[2]	1.97	1.14	0.51	0.79	0.71	0.39	-	-	0.312	-	0.83	0.14
34002[3]	1.97	1.14	0.51	0.79	0.71	0.39	-	-	-	5/16-18	0.83	0.15
34003[1]	2.40	1.18	0.53	0.98	0.94	0.43	-	-	-	-	0.91	0.28
34004[1]	2.76	1.30	0.71	1.18	1.14	0.47	-	-	-	-	0.98	0.42
34005[2]	2.76	1.30	0.71	1.18	1.14	0.47	0.03	0.71	0.375	-	0.98	0.37
34006[3]	2.76	1.30	0.71	1.18	1.14	0.47	0.03	0.71	-	3/8-16	0.98	0.39
34007[1]	3.15	1.57	0.75	1.38	1.34	0.59	-	-	-	-	1.18	0.66
34008[2]	3.15	1.57	0.75	1.38	1.34	0.59	0.03	0.71	0.500	-	1.18	0.61
34009[3]	3.15	1.57	0.75	1.38	1.34	0.59	0.03	0.71	-	1/2-13	1.18	0.62

Plastic Lobe Knob With Stud

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Zinc Plated Steel with Chamfered Flat End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



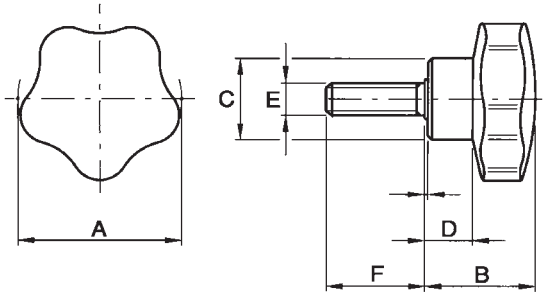
Part Number	A	B	C	D	E	F
33859	0.98	0.75	0.51	0.31	10-32	0.500
33860	0.98	0.75	0.51	0.31	10-32	0.750
33861	1.26	0.91	0.59	0.39	1/4-20	0.500
33862	1.26	0.91	0.59	0.39	1/4-20	0.750
33863	1.26	0.91	0.59	0.39	1/4-20	1.000
33864	1.57	1.06	0.67	0.47	1/4-20	0.500
33865	1.57	1.06	0.67	0.47	1/4-20	1.000
33866	1.57	1.06	0.67	0.47	5/16-18	0.750
33867	1.57	1.06	0.67	0.47	5/16-18	1.000
33868	1.97	1.26	0.75	0.55	5/16-18	1.000
33869	1.97	1.26	0.75	0.55	5/16-18	1.500
33870	1.97	1.26	0.75	0.55	3/8-16	1.000
33871	1.97	1.26	0.75	0.55	3/8-16	1.500
33872	2.48	1.46	0.87	0.63	3/8-16	1.250
33873	2.48	1.46	0.87	0.63	3/8-16	2.000
33874	2.48	1.46	0.87	0.63	1/2-13	1.500
33877	2.91	1.71	1.02	0.87	1/2-13	1.250
33878	2.91	1.71	1.02	0.87	1/2-13	2.000

Plastic Lobe Knob With Stainless Steel Stud

ELESA Original Design



- Material: Duroplast
- Finish: Black Matte
- Stud: Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



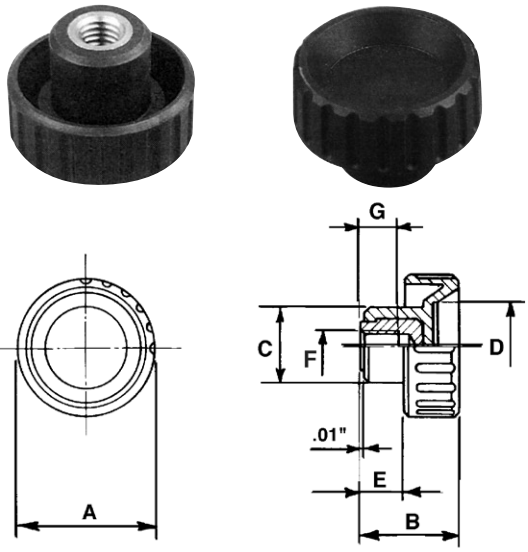
Part Number	A	B	C	D	E	F
34181	1.26	.91	.75	.43	1/4-20	.500
34182	1.26	.91	.75	.43	1/4-20	.750
34183	1.26	.91	.75	.43	1/4-20	1.00
34184	1.57	1.06	.83	.47	5/16-18	.750
34185	1.57	1.06	.83	.47	5/16-18	1.00
34186	1.57	1.06	.83	.47	5/16-18	1.25
34187	1.97	1.30	.98	.55	3/8-16	1.00
34188	1.97	1.30	.98	.55	3/8-16	1.25
34189	1.97	1.30	.98	.55	3/8-16	1.50
34190	1.97	1.30	.98	.55	3/8-16	2.00

Metric

Part Number*	A	B	C	D	E	F
34131	32	23	19	11	M6	16
34132	40	27	21	12	M8	20
34133	40	27	21	12	M8	30
34134	50	33	25	14	M10	20
34135	50	33	25	14	M10	40
34136	60	37	27	17	M12	30

*Dimensions in millimeters

Plastic Fluted Grip Knob
ELESA Original Design



- Material: High Strength Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

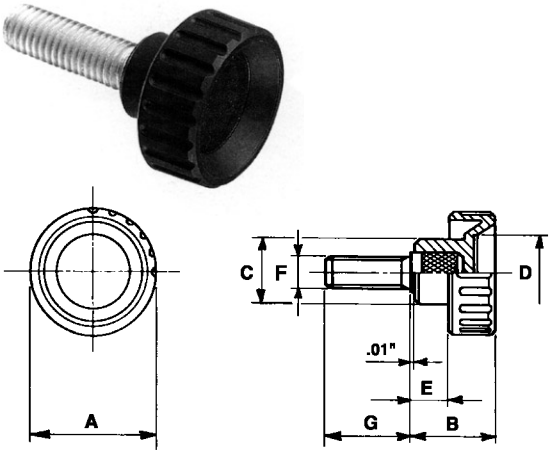
Part Number	A	B	C	D	E	F	G
34200	.79	.63	.47	.43	.24	8-32	.24
34201	.79	.63	.47	.43	.24	10-32	.24
34202	.98	.75	.63	.59	.31	10-32	.39
34203	.98	.75	.63	.59	.31	1/4-20	.31
34204	1.26	.87	.67	.83	.35	1/4-20	.39
34205	1.26	.87	.67	.83	.35	5/16-18	.39

Metric

Part Number*	A	B	C	D	E	F	G
34260	16	13	11	9	5	M4	6
34261	20	16	12	11	6	M5	6
34262	25	19	16	15	8	M6	8
34263	32	22	17	21	9	M8	10

*Dimensions in millimeters

Plastic Fluted Grip Knob With Stud
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Zinc-Plated Steel Stud With Chamfered Flat End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G
34210	0.63	0.51	0.43	0.35	0.2	8-32	0.375
34211	0.63	0.51	0.43	0.35	0.2	8-32	0.500
34212	0.79	0.63	0.47	0.43	0.24	8-32	0.500
34213	0.79	0.63	0.47	0.43	0.24	8-32	0.750
34214	0.79	0.63	0.47	0.43	0.24	10-32	0.500
34215	0.79	0.63	0.47	0.43	0.24	10-32	0.750
34216	0.98	0.75	0.63	0.59	0.31	1/4-20	0.500
34217	0.98	0.75	0.63	0.59	0.31	1/4-20	0.750
34218	0.98	0.75	0.63	0.59	0.31	1/4-20	1.000
34219	1.26	0.87	0.67	0.83	0.35	5/16-18	0.750
34220	1.26	0.87	0.67	0.83	0.35	5/16-18	1.000
34221	1.57	1.06	0.75	0.98	0.51	3/8-16	1.000
34222	1.97	1.12	0.87	1.22	0.53	3/8-16	1.000

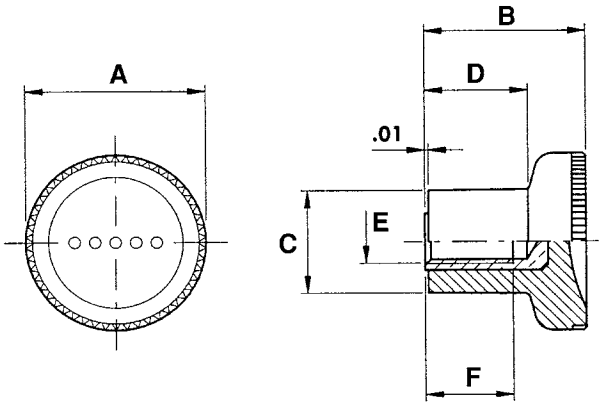
Metric

Part Number*	A	B	C	D	E	F	G
34250	16	13	11	9	5	M4	10
34251	16	13	11	9	5	M5	10
34252	20	16	12	11	6	M5	16
34253	20	16	12	11	6	M6	16
34254	25	19	16	15	8	M6	16
34255	25	19	16	15	8	M8	16
34256	32	22	17	21	9	M8	16
34257	32	22	17	21	9	M10	20

*Dimensions in millimeters

Knurled Knob
ELESA Orginal Design



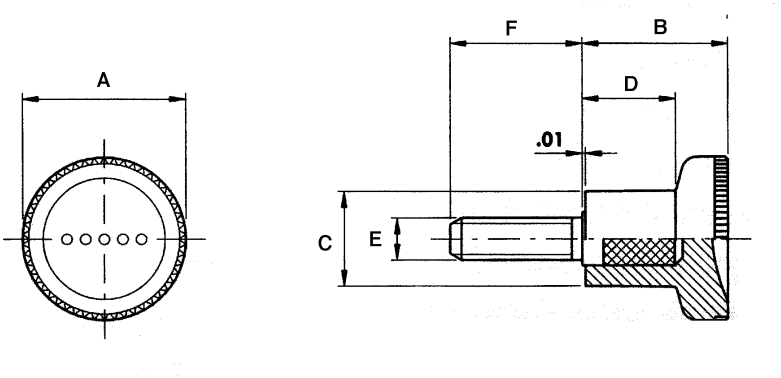


- Material: High Strength Technopolymer
- Finish: Gray/Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Concave surface makes gripping easier.

Part Number	A	B	C	D	E	F
34490	0.83	0.71	0.49	0.41	10-32	0.39
34491	0.98	0.89	0.57	0.55	1/4-20	0.47
34492	1.22	1.06	0.73	0.67	5/16-18	0.63

Knurled Knob With Stud
ELESA Orginal Design



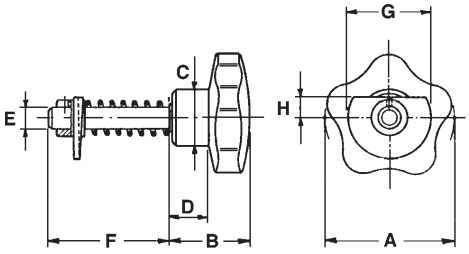


- Material: High Strength Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Threaded Steel With Chamfered End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Concave surface makes gripping easier.

Part Number	A	B	C	D	E	F
34493	.83	.71	.49	.41	10-32	.750
34494	.98	.89	.57	.55	1/4-20	.750
34495	1.22	1.06	.73	.67	5/16-18	.750

Plastic Latch Type Lobe Knob
ELESA Original Design



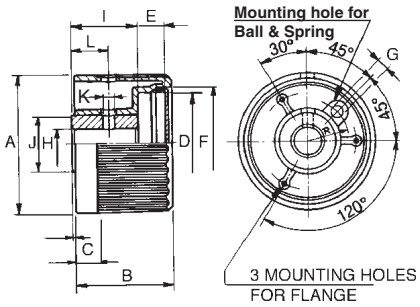


- Material: Black Duroplast
- Finish: Black Bright
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available in Stainless Steel with left or right swing style

Part Number	A	B	C	D	E	F	G	H	Swing Style
33881	1.97	1.30	.98	.55	.47	1.81	1.77	.47	Left
33882	2.36	1.46	1.06	.67	.47	1.81	1.77	.47	Right

Plastic Knurled Grip Knob
ELESA Original Design



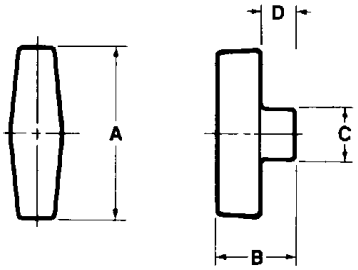


- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Bright
- Black Oxide Steel Insert
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L
33741	1.89	1.38	.31	1.26	.39	1.34	.13	.375	.87	.87	.16	.55
33742	2.05	1.54	.35	1.46	.51	1.54	.17	.500	.87	.87	.16	.55
33743	2.28	1.61	.39	1.65	.43	1.73	.20	.500	1.06	1.02	.20	.63
33744	2.48	1.73	.43	1.89	.39	1.97	.24	.500	1.18	1.02	.20	.63

Plastic T-Handle

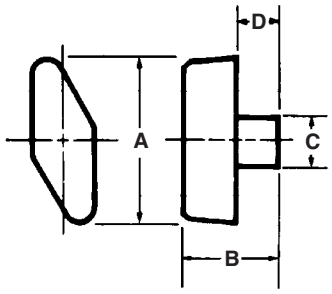




- Material: Polypropylene
- Finish: Tumble
- Insert: Metal
- Also Available With Stud
- Ideal For High Torque Applications
- Textured Grip

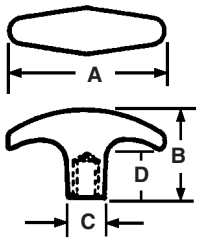
Part Number	A	B	C	D	Insert
32126	2 1/2	1 1/4	3/4	5/8	5/16-18 x 3/4





Part Number	A	B	C	D	Insert
32121	2	1 1/8	5/8	1/2	5/16-18 x 5/8



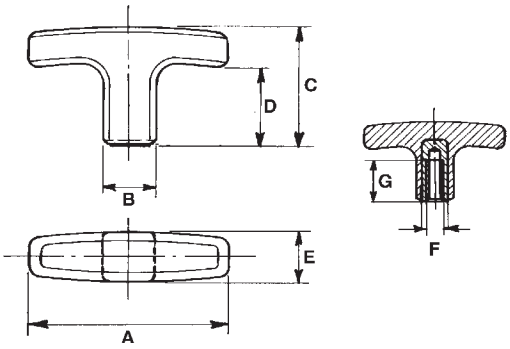


- Material: Plastic
- Finish: Tumble
- For heavy-duty clamping and push/pull applications; latch release with pull cables or rods; also for cabinet doors, access panel latches, etc.

Part Number	Insert Thread and Depth	A	B	C	D
32115	5/16-18 x 7/16	2 1/4	1 1/4	9/16	11/16
32116	1/4-20 x 7/16	2 1/4	1 1/4	9/16	11/16

Plastic T-Handle
ELESA Original Design





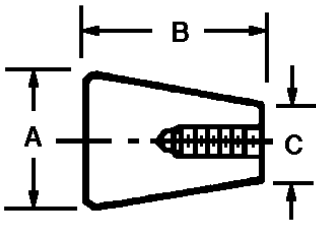
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	Ft.* lbs.
33711	1.57	0.51	1.18	0.79	0.51	1/4-20	0.63	560
33712	2.17	0.55	1.3	0.87	0.55	1/4-20	0.71	739
33713	2.64	0.63	1.46	0.98	0.63	5/16-18	0.79	1,008
33714	3.15	0.79	1.61	1.02	0.79	3/8-16	0.79	1,568
33715	3.66	0.83	1.77	1.12	0.83	1/2-13	0.79	1,795

*Max. Tensile strength / Pull Force

Plastic Tapered Knob





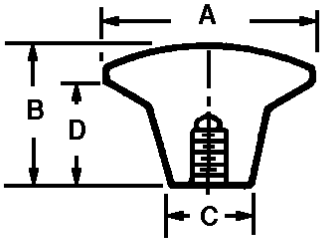
- Tapered shanks, enlarged heads provide good finger clearance and excellent grasp for pulling
- Popular Applications: push-pull rods, palm switch knobs, palm grasp knobs (for portable power tools), push buttons, drawer pulls, etc.

- Material: Plastic
- Finish: Tumble
- Insert: Brass
- Available in FixturePro™ Design Software

Part Number	A	B	C	Insert Thread and Depth
32213	1	1 1/4	1/2	1/4-20 x 7/16
32214	1	1 1/4	1/2	5/16-18 x 7/16

Plastic Lift Knob

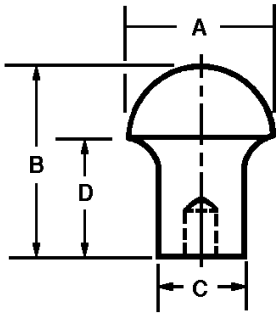




- Material: Plastic
- Finish: Tumble
- Insert: Brass
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	Insert Thread and Depth
32217	1 3/8	7/8	5/8	5/8	1/4-20 x 7/16





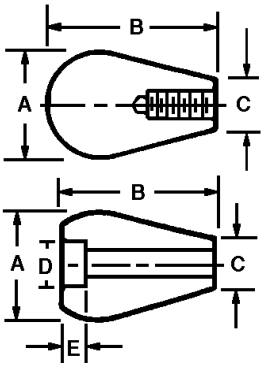
Part Number	A	B	C	D	Insert Thread and Depth
32215	1	1 3/16	9/16	11/16	10-32 x 5/16
32216	1	1 3/16	9/16	11/16	1/4-20 x 7/16

Jergens offers 3D models

for all handles, knobs and handwheels at www.jergensinc.com

Plastic Oval Tapered Knob





- Material: Polypropylene
- Finish: Tumble
- For shift levers, control levers, push/pull rods on machine tools, lawn and garden equipment, jigs and fixtures, and for finger tip levers or lid knobs.
- Available with either brass insert, tapped plastic thread, or untapped through hole.
- Sand and Buff Finish available upon request
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	E	Hole Diameter
32211*	1 3/16	1 7/8	9/16	–	–	5/16-18 x 3/4
32218**	1 3/16	1 7/8	9/16	–	–	1/4-20 x 7/16
32212	1 3/16	1 3/4	9/16	9/16	5/16	.380/.385 through hole (untapped)
32219	1 3/16	1 3/4	9/16	9/16	5/16	.313/.318 through hole (untapped)

*Tapped plastic threads

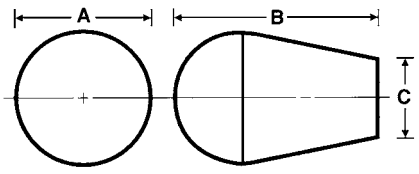
**Brass insert

Soft Touch Oval Tapered Knob



- Material: Soft Touch Plastic
- Finish: “Soft Feel” Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)

This Oval Tapered Knob has the original soft touch material that helps in gripping. It is designed with an enlarged head and tapered shaft for maximum push, pull, and turning.



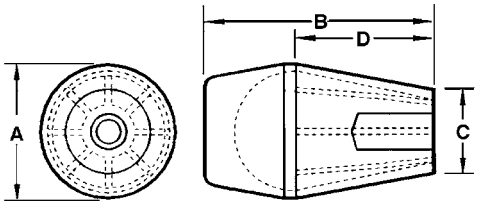
Part Number	A	B	C	Hole Diameter
32150	1 5/8	2 1/2	7/8	5/16-18 x 5/8
32151	1 5/8	2 1/2	7/8	5/16
32152	1 5/8	2 1/2	7/8	3/8-16 x 5/8
32153	1 5/8	2 1/2	7/8	3/8

Soft Touch Tapered Knob



- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)

This Oval Tapered Knob has the original soft touch material that helps in gripping. It is designed with an enlarged head and tapered shaft for maximum push, pull, and turning.

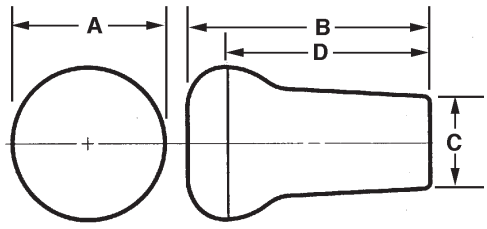


Part Number	A	B	C	D	Hole Diameter
32160	1 1/2	2 1/2	15/16	1 1/2	1/4-20 x 5/8
32161	1 1/2	2 1/2	15/16	1 1/2	5/16-18 x 3/4
32162	1 1/2	2 1/2	15/16	1 1/2	3/8-16 x 5/8

Soft Touch Tapered Knob



- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)
- A standard 1" stud is available, other lengths available upon request.

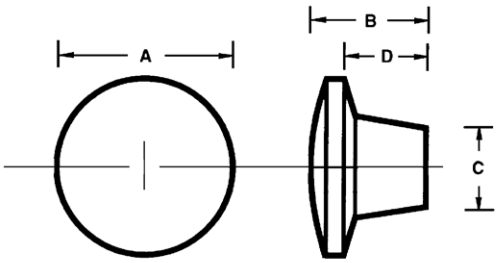


Part Number	A	B	C	D	Hole Diameter
32180	1 5/8	2 1/2	7/8	2 1/8	1/4-20 x 5/8
32181*	1 5/8	2 1/2	7/8	2 1/8	1/4 x 1
32182	1 5/8	2 1/2	7/8	2 1/8	5/16-18 x 5/8
32183*	1 5/8	2 1/2	7/8	2 1/8	5/16 x 1
32184*	1 5/8	2 1/2	7/8	2 1/8	3/8 x 1
32170	1 3/8	2 1/8	13/16	1 3/4	5/16-18 x 5/8
32171	1 3/8	2 1/8	13/16	1 3/4	3/8-16 x 5/8
32172*	1 3/8	2 1/8	13/16	1 3/4	3/8 x 1
32173	1 3/8	2 1/8	13/16	1 3/4	1/2-13 x 5/8
32174*	1 3/8	2 1/8	13/16	1 3/4	1/2 x 1

*Cored Hole

Plastic Push/Pull Knob



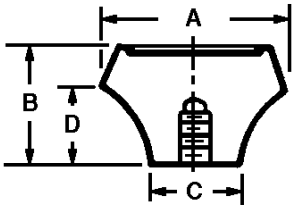


- Material: Thermoplastic
- Finish: Matte
- Insert: Brass
- Also available with stud

Part Number	A	B	C	D	Insert
32225	1 3/8	7/8	5/8	5/8	8-32
32226	1 3/8	7/8	5/8	5/8	10-32
32227	1 3/8	7/8	5/8	5/8	1/4-20
32228	1 3/8	7/8	5/8	5/8	5/16-18
32229	1 3/8	7/8	5/8	5/8	3/8-16

Plastic Push/Pull Knob





- Material: Plastic
- Finish: Tumbled
- Insert: Brass
- Available in FixturePro™ Design Software

Part Number	A	B	C	D	Insert Thread and Depth
32220	1	11/16	1/2	7/16	8-32 x 5/16
32221	1	11/16	1/2	7/16	10-32 x 5/16
32222	1	11/16	1/2	7/16	1/4-20 x 7/16
32223	1	15/16	9/16	11/16	10-32 x 7/16
32224	1	15/16	9/16	11/16	1/4-20 x 7/16

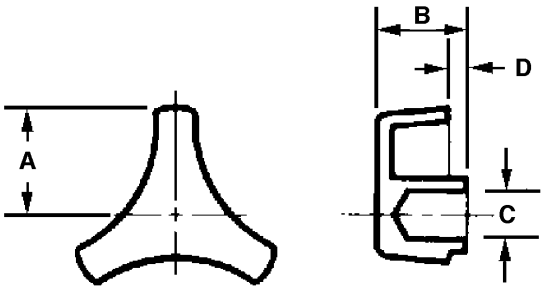
Jergens offers a full line of leveling mounts!

Check it out at www.jergensinc.com or call for assistance!



Plastic Three Prong Knob





- Material: Polypropylene
- Finish: Tumble
- Insert: Brass

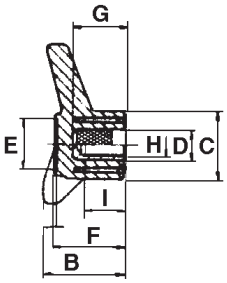
Part Number	A	B	C	D	Insert
32230	3/4	5/8	1/2	1/8	1/4-20 x 3/8
32231*	3/4	5/8	1/2	1/8	1/4-20 x 1/2
32232	3/4	5/8	1/2	1/8	5/16-18 x 3/8
32233*	3/4	5/8	1/2	1/8	5/16-18 x 1/2
32234	1	13/16	9/16	1/4	1/4-20 x 7/16
32235*	1	13/16	5/8	1/4	1/4-20 x 5/8
32236	1	13/16	9/16	1/4	5/16-18 x 7/16
32237*	1	13/16	5/8	1/4	5/16-18 x 5/8
32238	1	13/16	9/16	1/4	3/8-16 x 1/2
32239*	1	13/16	5/8	1/4	3/8-16 x 5/8
32240	1	1 1/16	9/16	1/2	1/4-20 x 7/16
32241*	1	1 1/16	5/8	1/2	1/4-20 x 7/8
32242	1	1 1/16	9/16	1/2	5/16-18 x 7/16
32243*	1	1 1/16	5/8	1/2	5/16-18 x 5/8
32244	1	1 1/16	9/16	1/2	3/8-16 x 1/2
32245*	1	1 1/16	5/8	1/2	3/8-16 x 5/8
32246	1 1/4	7/8	5/8	1/4	5/16-18 x 7/16
32247*	1 1/4	7/8	3/4	1/4	5/16-18 x 5/8
32248	1 1/4	7/8	5/8	1/4	3/8-16 x 1/2
32249*	1 1/4	7/8	3/4	1/4	3/8-16 x 5/8
32250	1 1/4	1 1/8	5/8	1/2	5/16-18 x 7/16
32251*	1 1/4	1 1/8	3/4	1/2	5/16-18 x 5/8
32252	1 1/4	1 1/8	5/8	1/2	3/8-16 x 1/2
32253*	1 1/4	1 1/8	3/4	1/2	3/8-16 x 5/8

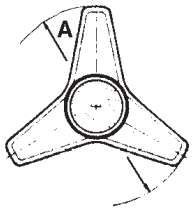
*Through Hole Style

Plastic Three Spoked Knob

ELESA Original Design







- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Brass Insert with tapped blind hole
- Insert: Brass or Steel with plain blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	Insert
33731	2.48	1.10	1.02	–	.70	.98	–	5/16-18	.62	Brass
33732	2.48	1.10	1.02	.59	.70	.98	.87	5/16	.62	Steel
33733	3.14	1.37	1.25	–	.82	1.18	–	3/8-16	.67	Brass
33734	3.14	1.37	1.25	.59	.82	1.18	.98	3/8	.79	Steel
33735	3.93	1.65	1.41	–	.98	1.41	–	1/2-13	.79	Brass
33736	3.93	1.65	1.41	.94	.98	1.41	1.29	1/2	.98	Steel

QUEST™ SERIES

Knobs & Handles



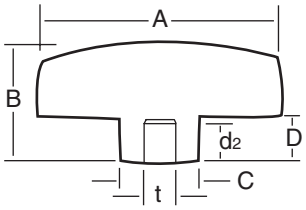
Q = Quality Products
U = Unique Designs
E = Economical Pricing
S = Solid Performance
T = Total Solutions

Jergens®

REGISTERED COMPANY ISO 9001:2000 Quality System Certified

Typhoon Knob

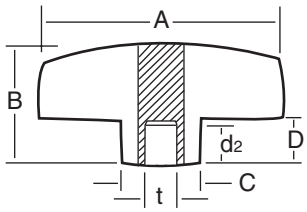




Typhoon Knob with brass blind insert

Part Number	Dimensions A	B	C	D	Thread t	Thread Depth d_2
QK00001	1.25	0.828	0.625	0.203	8-32	0.313
QK00002	1.25	0.828	0.625	0.203	10-32	0.313
QK00003	1.25	0.828	0.625	0.203	1/4-20	0.375
QK00004	1.25	0.828	0.625	0.203	5/16-18	0.500

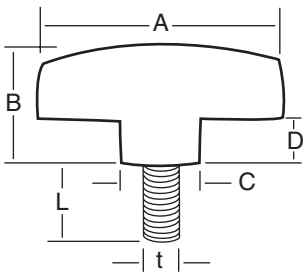




Typhoon Knob with brass thru hole insert

Part Number	Dimensions A	B	C	D	Thread t	Thread Depth d_2
QK00010	1.25	0.828	0.625	0.203	1/4-20	0.375
QK00011	1.25	0.828	0.625	0.203	5/16-18	0.500





Typhoon Knob with steel stud

Part Number	Dimensions A	B	C	D	Thread t	Stud Length L
QK00020	1.25	0.828	0.625	0.203	1/4-20	0.500
QK00021	1.25	0.828	0.625	0.203	5/16-18	0.750

Special sizes, colors, styles, and configurations are available upon request (minimum orders may be required.)

Please contact Jergens for all of your knob, handle, and hand wheel needs!

All items are RoHS compliant.

Features

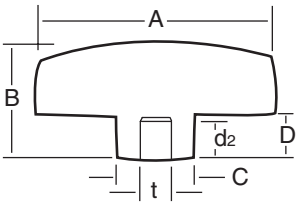
- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

2-Prong Knob

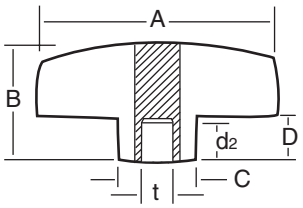
2-Prong Knob with brass blind insert

Part Number	Dimensions A	B	C	D	Thread t	Thread Depth d_2
QK00100	1.10	0.51	0.43	0.12	8-32	0.313
QK00101	1.10	0.51	0.43	0.12	10-24	0.313
QK00102	1.10	0.51	0.43	0.12	1/4-20	0.375
QK00130	1.57	0.79	0.59	0.31	1/4-20	0.375
QK00131	1.57	0.79	0.59	0.31	5/16-18	0.500
QK00160	1.97	0.94	0.59	0.35	10-32	0.313
QK00161	1.97	0.94	0.59	0.35	1/4-20	0.375
QK00162	1.97	0.94	0.59	0.35	5/16-18	0.500
QK00163	1.97	0.94	0.59	0.35	3/8-16	0.500
QK00190	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00191	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00192	2.36	1.18	0.75	0.47	3/8-16	0.500

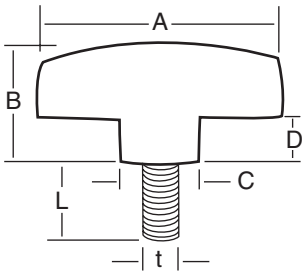












Features

- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

2-Prong Knob with brass thru hole insert

Part Number	Dimensions A	B	C	D	Thread t	Thread Depth d_2
QK00110	1.10	0.51	0.43	0.12	8-32	0.313
QK00111	1.10	0.51	0.43	0.12	10-24	0.313
QK00112	1.10	0.51	0.43	0.12	1/4-20	0.375
QK00140	1.57	0.79	0.59	0.31	1/4-20	0.375
QK00141	1.57	0.79	0.59	0.31	5/16-18	0.500
QK00170	1.97	0.94	0.59	0.35	10-32	0.313
QK00171	1.97	0.94	0.59	0.35	1/4-20	0.375
QK00172	1.97	0.94	0.59	0.35	5/16-18	0.500
QK00173	1.97	0.94	0.59	0.35	3/8-16	0.500
QK00200	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00201	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00202	2.36	1.18	0.75	0.47	3/8-16	0.500

2-Prong Knob with steel stud

Part Number	Dimensions A	B	C	D	Thread t	Stud Length L
QK00110	1.10	0.51	0.43	0.12	8-32	0.313
QK00111	1.10	0.51	0.43	0.12	10-24	0.313
QK00112	1.10	0.51	0.43	0.12	1/4-20	0.375
QK00120	1.10	0.51	0.43	0.12	10-24	0.500
QK00121	1.10	0.51	0.43	0.12	10-24	0.750
QK00122	1.10	0.51	0.43	0.12	1/4-20	0.500
QK00123	1.10	0.51	0.43	0.12	1/4-20	1.000
QK00124	1.10	0.51	0.43	0.12	1/4-20	1.250
QK00150	1.57	0.79	0.59	0.31	1/4-20	0.500
QK00151	1.57	0.79	0.59	0.31	1/4-20	1.000
QK00152	1.57	0.79	0.59	0.31	1/4-20	1.500
QK00153	1.57	0.79	0.59	0.31	5/16-18	0.500
QK00154	1.57	0.79	0.59	0.31	5/16-18	1.000
QK00155	1.57	0.79	0.59	0.31	5/16-18	1.250
QK00180	1.97	0.94	0.59	0.35	1/4-20	0.500
QK00181	1.97	0.94	0.59	0.35	1/4-20	1.000
QK00182	1.97	0.94	0.59	0.35	5/16-18	0.500
QK00183	1.97	0.94	0.59	0.35	5/16-18	1.000
QK00184	1.97	0.94	0.59	0.35	5/16-18	1.500
QK00185	1.97	0.94	0.59	0.35	3/8-16	1.500
QK00210	2.36	1.18	0.75	0.47	1/4-20	0.750
QK00211	2.36	1.18	0.75	0.47	1/4-20	1.500
QK00212	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00213	2.36	1.18	0.75	0.47	5/16-18	1.000
QK00214	2.36	1.18	0.75	0.47	5/16-18	1.500
QK00215	2.36	1.18	0.75	0.47	3/8-16	0.750
QK00216	2.36	1.18	0.75	0.47	3/8-16	1.000
QK00217	2.36	1.18	0.75	0.47	3/8-16	1.500

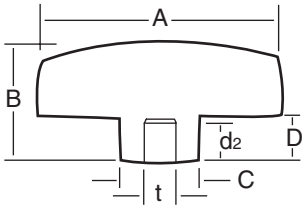
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All items are RoHS compliant.

Wing Knob

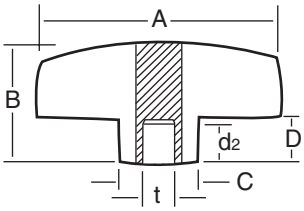




Wing Knob with brass blind insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00220	2.50	1.047	0.875	0.375	1/4-20	0.375
QK00221	2.50	1.047	0.875	0.375	5/16-18	0.500
QK00222	2.50	1.047	0.875	0.375	3/8-16	0.500

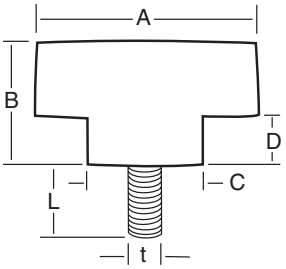




Wing Knob with brass thru hole insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00230	2.50	1.047	0.875	0.375	1/4-20	0.375
QK32130	2.50	1.047	0.875	0.375	5/16-18	0.500
QK32131	2.50	1.047	0.875	0.375	3/8-16	0.500





Wing Knob with steel stud

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00240	2.50	1.047	0.875	0.375	1/4-20	0.750
QK00241	2.50	1.047	0.875	0.375	1/4-20	1.500
QK00242	2.50	1.047	0.875	0.375	5/16-18	0.750
QK00243	2.50	1.047	0.875	0.375	5/16-18	1.500
QK00244	2.50	1.047	0.875	0.375	3/8-16	0.750
QK00245	2.50	1.047	0.875	0.375	3/8-16	1.500

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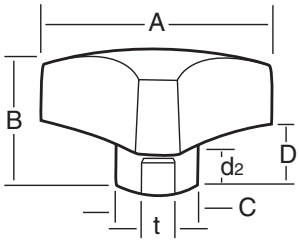
All items are RoHS compliant.

Features

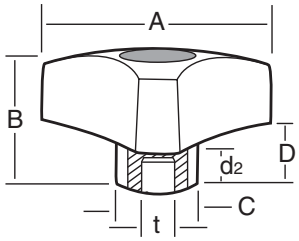
- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

3-Prong Knob

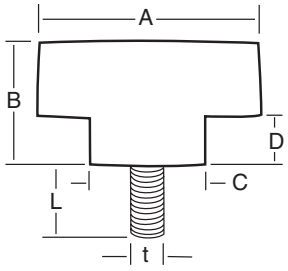












Features

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- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

3-Prong Knob with brass insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00300	1.10	0.67	0.43	0.24	10-24	0.313
QK00301	1.10	0.67	0.43	0.24	1/4-20	0.375
QK00330	1.57	0.79	0.61	0.31	1/4-20	0.375
QK00331	1.57	0.79	0.61	0.31	5/16-18	0.500
QK00360	1.97	0.94	0.61	0.35	1/4-20	0.375
QK00361	1.97	0.94	0.61	0.35	5/16-18	0.500
QK00390	2.36	1.18	0.75	0.47	10-32	0.313
QK00391	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00392	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00393	2.36	1.18	0.75	0.47	3/8-16	0.500
QK00394	2.36	1.18	0.75	0.47	1/2-13	0.750

3-Prong Knob with brass thru hole insert

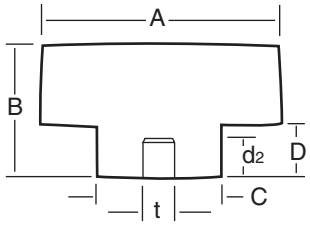
Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00310	1.10	0.67	0.43	0.24	10-24	0.313
QK00311	1.10	0.67	0.43	0.24	1/4-20	0.375
QK00340	1.57	0.79	0.61	0.31	1/4-20	0.375
QK00341	1.57	0.79	0.61	0.31	5/16-18	0.500
QK00370	1.97	0.94	0.61	0.35	1/4-20	0.375
QK00371	1.97	0.94	0.61	0.35	5/16-18	0.500
QK00400	2.36	1.18	0.75	0.47	10-32	0.313
QK00401	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00402	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00403	2.36	1.18	0.75	0.47	3/8-16	0.500
QK00404	2.36	1.18	0.75	0.47	1/2-13	0.750

3-Prong Knob with steel stud

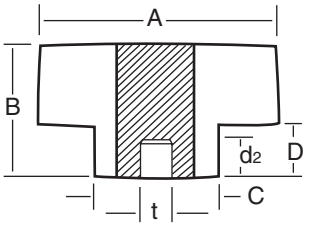
Part Number	Dimensions				Thread	Stud Length
	A	B	C	D	t	L
QK00320	1.10	0.67	0.43	0.24	10-24	0.500
QK00321	1.10	0.67	0.43	0.24	10-24	0.750
QK00322	1.10	0.67	0.43	0.24	10-24	1.000
QK00323	1.10	0.67	0.43	0.24	1/4-20	0.500
QK00324	1.10	0.67	0.43	0.24	1/4-20	1.000
QK00350	1.57	0.79	0.61	0.31	1/4-20	0.750
QK00351	1.57	0.79	0.61	0.31	1/4-20	1.500
QK00352	1.57	0.79	0.61	0.31	5/16-18	0.750
QK00353	1.57	0.79	0.61	0.31	5/16-18	1.000
QK00354	1.57	0.79	0.61	0.31	5/16-18	1.500
QK00380	1.97	0.94	0.61	0.35	1/4-20	0.500
QK00381	1.97	0.94	0.61	0.35	1/4-20	1.000
QK00382	1.97	0.94	0.61	0.35	5/16-18	0.750
QK00383	1.97	0.94	0.61	0.35	5/16-18	1.000
QK00384	1.97	0.94	0.61	0.35	5/16-18	1.500
QK00410	2.36	1.18	0.75	0.47	1/4-20	0.750
QK00411	2.36	1.18	0.75	0.47	1/4-20	1.500
QK00412	2.36	1.18	0.75	0.47	5/16-18	0.750
QK00413	2.36	1.18	0.75	0.47	5/16-18	1.500
QK00414	2.36	1.18	0.75	0.47	3/8-16	1.000
QK00415	2.36	1.18	0.75	0.47	3/8-16	2.000
QK00416	2.36	1.18	0.75	0.47	1/2-13	1.500

4-Prong Knob

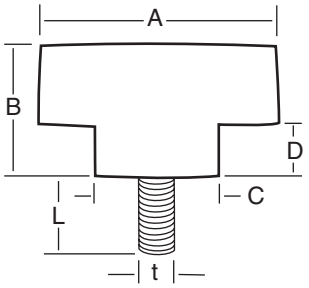












Features

- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

4-Prong Knob with brass insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00420	1.57	0.79	0.59	0.31	1/4-20	0.375
QK00421	1.57	0.79	0.59	0.31	5/16-18	0.500
QK00422	1.57	0.79	0.59	0.31	3/8-16	0.500
QK00450	1.97	0.94	0.6257	0.35	1/4-20	0.375
QK00451	1.97	0.94	0.6257	0.35	5/16-18	0.500
QK00452	1.97	0.94	0.6257	0.35	3/8-16	0.500
QK00480	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00481	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00482	2.36	1.18	0.75	0.47	3/8-16	0.500
QK00483	2.36	1.18	0.75	0.47	1/2-13	0.750

4-Prong Knob with brass thru hole insert

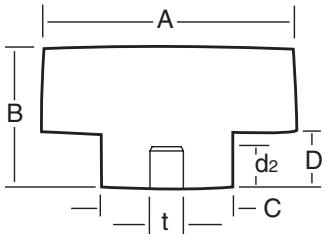
Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00430	1.57	0.79	0.59	0.31	1/4-20	0.375
QK00431	1.57	0.79	0.59	0.31	5/16-18	0.500
QK00460	1.97	0.94	0.6257	0.35	1/4-20	0.375
QK00461	1.97	0.94	0.6257	0.35	5/16-18	0.500
QK00462	1.97	0.94	0.6257	0.35	3/8-16	0.500
QK00490	2.36	1.18	0.75	0.47	1/4-20	0.375
QK00491	2.36	1.18	0.75	0.47	5/16-18	0.500
QK00492	2.36	1.18	0.75	0.47	3/8-16	0.500
QK00493	2.36	1.18	0.75	0.47	1/2-13	0.750

4-Prong Knob with steel stud

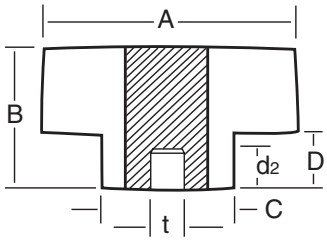
Part Number	Dimensions				Thread	Stud Length
	A	B	C	D	t	L
QK00440	1.57	0.79	0.59	0.31	1/4-20	0.750
QK00441	1.57	0.79	0.59	0.31	1/4-20	1.000
QK00442	1.57	0.79	0.59	0.31	1/4-20	1.500
QK00443	1.57	0.79	0.59	0.31	5/16-18	0.750
QK00444	1.57	0.79	0.59	0.31	5/16-18	1.500
QK00470	1.97	0.94	0.6257	0.35	1/4-20	1.000
QK00471	1.97	0.94	0.6257	0.35	1/4-20	1.500
QK00472	1.97	0.94	0.6257	0.35	5/16-18	1.000
QK00473	1.97	0.94	0.6257	0.35	5/16-18	1.500
QK00474	1.97	0.94	0.6257	0.35	3/8-16	1.500
QK00500	2.36	1.18	0.75	0.47	1/4-20	1.000
QK00501	2.36	1.18	0.75	0.47	1/4-20	1.500
QK00502	2.36	1.18	0.75	0.47	5/16-18	1.000
QK00503	2.36	1.18	0.75	0.47	5/16-18	1.500
QK00504	2.36	1.18	0.75	0.47	3/8-16	1.000
QK00505	2.36	1.18	0.75	0.47	3/8-16	1.500
QK00506	2.36	1.18	0.75	0.47	1/2-13	1.000

Scalloped Knob

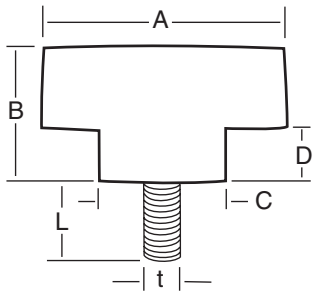












Special sizes, colors, styles, and configurations are available upon request (minimum orders may be required.)

Please contact Jergens for all of your knob, handle, and hand wheel needs!

All items are RoHS compliant.

Scalloped Knob with brass insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00510	1.10	0.67	0.43	0.236	8-32	0.313
QK00511	1.10	0.67	0.43	0.236	10-32	0.313
QK00540	1.50	0.78	0.59	0.31	1/4-20	0.375
QK00541	1.50	0.78	0.59	0.31	5/16-18	0.500
QK00570	2.00	0.94	0.59	0.35	5/16-18	0.500
QK00571	2.00	0.94	0.59	0.35	3/8-16	0.500
QK00600	2.36	1.18	0.75	0.472	3/8-16	0.500
QK00601	2.36	1.18	0.75	0.472	1/2-13	0.750

Scalloped Knob with brass thru hole insert

Part Number	Dimensions				Thread	Thread Depth
	A	B	C	D	t	d_2
QK00520	1.10	0.67	0.43	0.236	8-32	0.313
QK00521	1.10	0.67	0.43	0.236	10-32	0.313
QK00550	1.50	0.78	0.59	0.31	1/4-20	0.375
QK00551	1.50	0.78	0.59	0.31	5/16-18	0.500
QK00580	2.00	0.94	0.59	0.35	5/16-18	0.500
QK00581	2.00	0.94	0.59	0.35	3/8-16	0.500
QK00610	2.36	1.18	0.75	0.472	3/8-16	0.500
QK00611	2.36	1.18	0.75	0.472	1/2-13	0.750

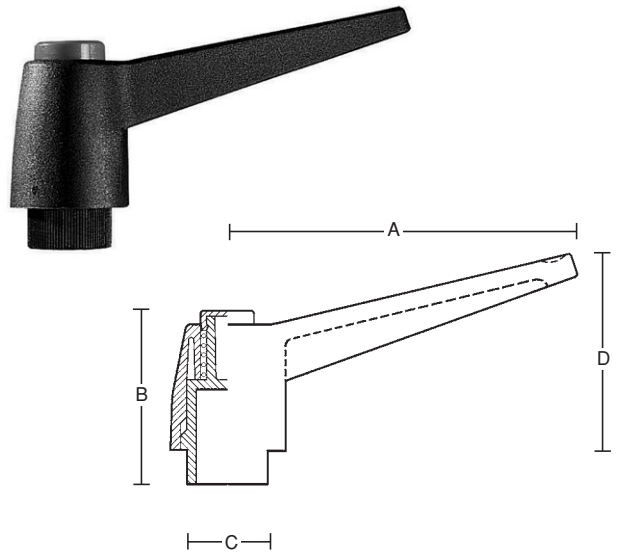
Scalloped Knob with steel stud

Part Number	Dimensions				Thread	Stud Length
	A	B	C	D	t	L
QK00530	1.10	0.67	0.43	0.236	10-24	0.500
QK00531	1.10	0.67	0.43	0.236	10-24	0.750
QK00532	1.10	0.67	0.43	0.236	1/4-20	0.750
QK00560	1.50	0.78	0.59	0.31	1/4-20	0.750
QK00561	1.50	0.78	0.59	0.31	1/4-20	1.000
QK00562	1.50	0.78	0.59	0.31	1/4-20	1.500
QK00590	2.00	0.94	0.59	0.354	5/16-18	1.000
QK00591	2.00	0.94	0.59	0.354	5/16-18	1.500
QK00620	2.36	1.18	0.75	0.472	5/16-18	1.000
QK00621	2.36	1.18	0.75	0.472	5/16-18	1.500
QK00622	2.36	1.18	0.75	0.472	3/8-16	1.000
QK00623	2.36	1.18	0.75	0.472	3/8-16	1.500

Features

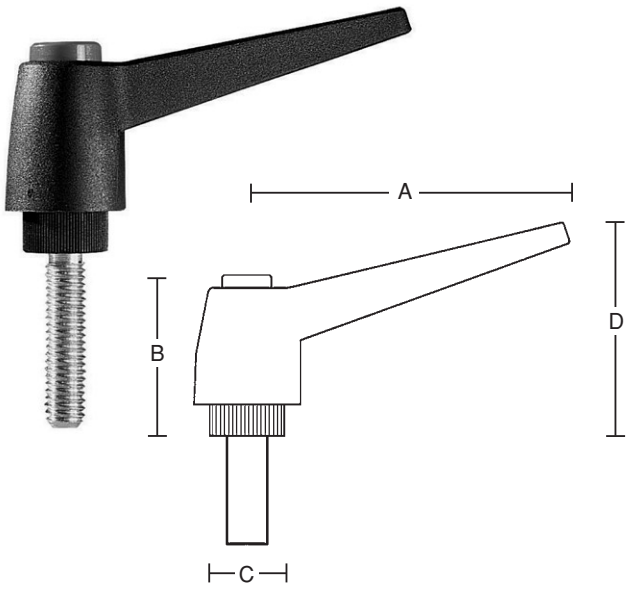
- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

Adjustable Ratchet



Adjustable Ratchet Lever with brass insert

Part Number	Dimensions					
	A	B	C	D	Thread	Thread Depth
AH00001	1.69	1.02	0.47	1.26	1/4-20	0.375
AH00020	2.56	1.46	0.59	1.81	1/4-20	0.375
AH00021	2.56	1.46	0.59	1.81	5/16-18	0.500
AH00040	3.27	1.81	0.75	2.24	3/8-16	0.500
AH00060	4.09	2.01	0.94	2.68	1/2-13	0.750



Adjustable Ratchet Lever with steel stud

Part Number	Dimensions					
	A	B	C	D	Thread	Stud Length
AH00010	1.69	1.02	0.47	1.26	1/4-20	0.750
AH00011	1.69	1.02	0.47	1.26	1/4-20	1.250
AH00030	2.56	1.46	0.59	1.81	5/16-18	0.750
AH00031	2.56	1.46	0.59	1.81	5/16-18	1.250
AH00032	2.56	1.46	0.59	1.81	5/16-18	1.500
AH00033	2.56	1.46	0.59	1.81	3/8-16	1.250
AH00034	2.56	1.46	0.59	1.81	3/8-16	1.500
AH00035	2.56	1.46	0.59	1.81	3/8-16	2.000
AH00050	3.27	1.81	0.75	2.24	3/8-16	1.250
AH00051	3.27	1.81	0.75	2.24	3/8-16	1.500
AH00070	4.09	2.01	0.94	2.68	1/2-13	1.250
AH00071	4.09	2.01	0.94	2.68	1/2-13	2.000
AH00072	4.09	2.01	0.94	2.68	1/2-13	2.500

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All items are RoHS compliant.

Features

- Made from highly impact resistant Thermoplastic material.
- Will resist many chemicals, such as:
  - Oils/Fuels
  - Greases/Fats
  - Diluted Alkaline
  - Esters
  - Alcohols
  - Aromatic Hydrocarbons
  - Ketones
- Resistant to environmental/weather conditions such as:
  - Ultra Violet (UV) Light
  - Rain/Snow
  - Temperatures ranging from -60°F to 285°F (-50°C to 140°C)

Materials

DUROPLAST: Phenolic based thermosetting materials which undergo irreversible polymerization during molding.

DUROPLAST does not soften upon contact with a heat source, therefore it is not damaged by the hot metal chips which could fall into contact with Jergens Knobs, Handles, and Handwheels. The good insulation properties of the Duroplast product mean that they are suitable for many electro-mechanical applications and are preferable to similar metal products.

TECHNOPOLYMERS: Thermoplastic materials having highly desirable mechanical properties such as acetal resins, polyamides, polypropylene, polycarbonates and polyesters.

REINFORCED PLASTICS WITH GLASS FIBERS:
Used for all items requiring high mechanical strength (three spoked handwheels, two and four arm type, crank handles, levers, balanced handles, etc.)

All plastic materials used are resistant to acids, solvents, petroleum products, grease and perspiration.

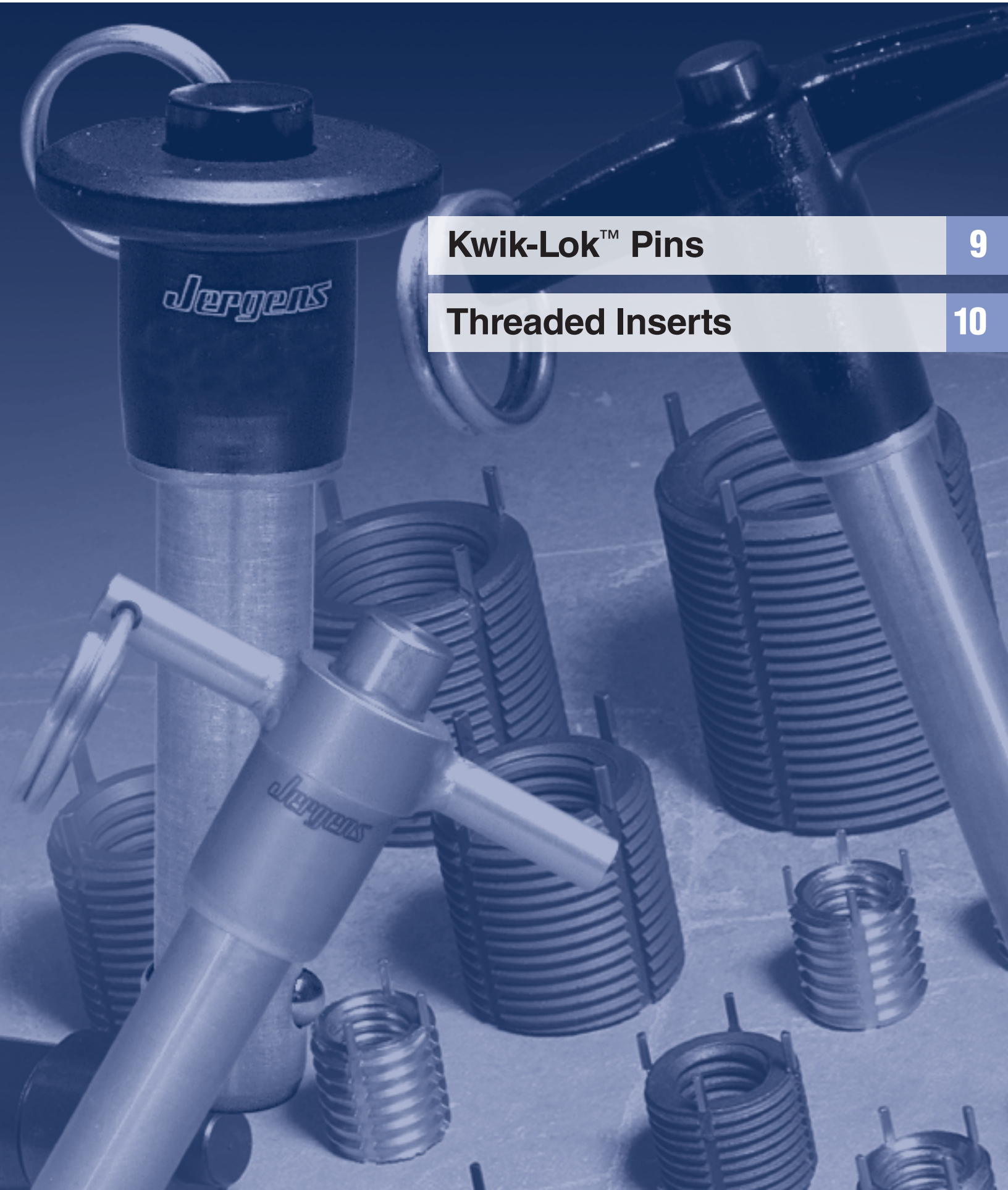
The surface hardness of these materials is the highest found in plastics. This affords the preservation of surfaces, which remain in perfect condition even when in prolonged contact with hot metal chips during machining or with hot abrasive granules from grinding wheels.

The high heat resistance of these technopolymer materials enable our Knobs, Handles, and Handwheels to be used at temperatures up to 300°F without appreciable impairment to their mechanical properties. Duroplast material is good up to 230°F.

Technical information on aluminum, cast iron, steel, zinc and other plastic products are shown on individuals pages.

Jergens
www.jergensinc.com

Specialty Fasteners



Kwik-Lok™ Pins 9

Threaded Inserts 10



Selection and Ordering.....9.2

T-Handle Pins
Aluminum Handle.....9.4-9.5
Stainless Handle.....9.12-9.13

L-Handle Pins
Aluminum Handle.....9.6-9.7
Stainless Handle.....9.12-9.13

Button Handle Pins
Aluminum Handle.....9.8-9.9
Stainless Handle.....9.14-9.15
Recessed Stainless.....9.3

Ring Handle Pins
Stainless Steel.....9.10-9.11

Kwik-Lok™ Lifting Pins
Stainless Steel.....9.16-9.17

Double Acting Pin
T, L & Ring.....9.18-9.19

Detent Pins.....9.20-9.21

Lanyards.....9.22-9.23

Application Information.....9.26

Special Pin Quotation.....9.21

Specifications and Materials.....9.24-9.25

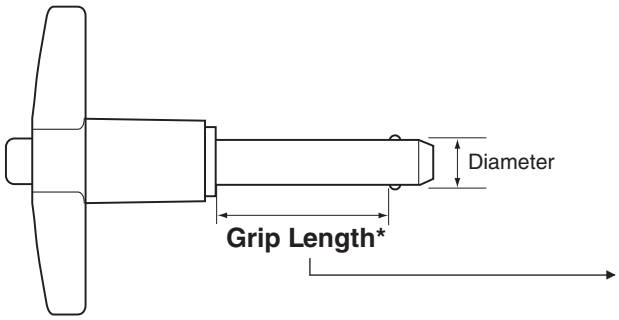
Kwik-Lok™ Pins – Selection and Ordering

1. Choose Handle Shape and Style:

	Material
T, L, or Button	Aluminum
Heavy Duty T, L, or Button	Stainless Steel
Ring Handle, Lifting Ring, or Recessed Button	Stainless Steel
Double Acting (Push/Pull) T or L	Stainless Steel

2. Select Pin Body Material

- 17-4-PH heat treated Stainless Steel for highest strength, corrosion and scratch resistance
- Alloy Steel heat treated and cadmium plating to military specifications



*Grip Length is measured to edge of locking ball
Standard Grip Lengths: 1/2"-6", 10-100 mm
Special Grip Lengths available on request

3. Specify Pin Diameter and Grip Length

Standard Kwik-Lok™ Pin Diameters			Double Shear Resistance (Minimum)			
			Stainless Steel (17-4 PH)		Alloy Steel (Cadmium Plated)	
Nominal	Min/Max (Inches)	Min/Max (mm)	lbs	kN	lbs	kN
3/16"	0.1870 / 0.1885	4.75 / 4.79	5150	23	4600	20
5 mm	0.1937 / 0.1953	4.92 / 4.96	5395	24	4721	21
6 mm	0.2331 / 0.2346	5.92 / 5.96	7868	35	6969	31
1/4"	0.2470 / 0.2485	6.27 / 6.31	9200	41	8200	36
5/16"	0.3095 / 0.3110	7.86 / 7.90	14400	64	12800	57
8 mm	0.3118 / 0.3134	7.92 / 7.96	14695	65	13062	58
3/8"	0.3720 / 0.3735	9.45 / 9.49	20700	92	18400	82
10 mm	0.3906 / 0.3921	9.92 / 9.96	22480	100	19782	88
7/16"	0.4345 / 0.4360	11.04 / 11.07	28500	127	25000	111
12 mm	0.4693 / 0.4709	11.92 / 11.96	32371	144	28774	128
1/2"	0.4970 / 0.4985	12.62 / 12.66	36900	164	32800	146
9/16"	0.5595 / 0.5610	14.21 / 14.25	46700	208	41600	185
5/8"	0.6220 / 0.6235	15.80 / 15.84	57800	257	51400	229
16 mm	0.6268 / 0.6283	15.92 / 15.96	57774	257	51479	229
3/4"	0.7470 / 0.7485	18.97 / 19.01	83200	370	74600	332
20 mm	0.7843 / 0.7858	19.92 / 19.96	90594	403	57998	258
7/8"	0.8720 / 0.8735	22.15 / 22.19	112500	500	100000	445
25 mm	0.9811 / 0.9827	24.92 / 24.96	141849	631	126113	561
1"	0.9970 / 0.9985	25.32 / 25.36	147200	655	131000	583

See Page 7.24 for recommended mounting hole diameters and minimum locking ball tensile strength for estimating pullout resistance.

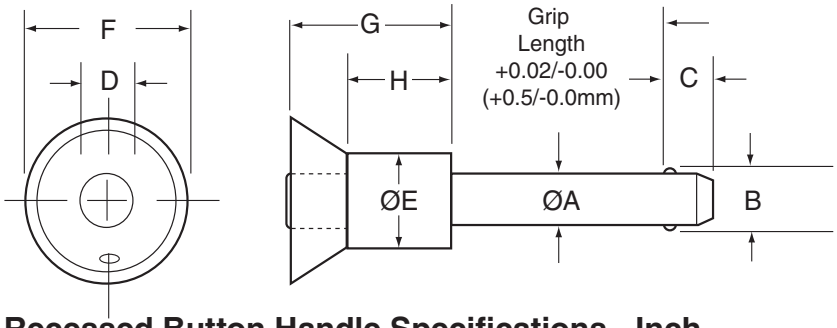
4. Locate Standard Part Numbers from Charts by Diameter and Grip Length.

5. Select Lanyards and Tabs on pages 9.22-9.23:

Specify Length of Cable (Stainless Steel) with Green Nylon Jacket (other colors available)
Choose Tab Style, Material and Mounting Hole Dimension
Specify if Lanyard is to be crimped to Pin without Split Ring

Recessed Button Handle Kwik-Lok™ Pin





- The Recessed Button Handle Kwik-Lok™ Pin design helps prevent accidental actuation of the pin.
- Handle is stainless steel and the button is stainless steel.
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Includes hole for easy attachment of optional lanyard or ring.

Recessed Button Handle Specifications - Inch

Nom Pin Dia	ØA Min	ØA Max	+/-0.005 B	+0.00/ -0.04 C	Button Dia. D	E	F	G	H
3/16 (#10)	.1870	.1885	.220	.260	1/4	15/32	13/16	1"	23/32
1/4	.2470	.2485	.289	.290	1/4	15/32	13/16	1"	23/32
5/16	.3095	.3110	.375	.330	1/4	15/32	13/16	1"	23/32
3/8	.3720	.3735	.440	.365	5/16	1/2	1 3/32	1 5/16	7/8
7/16	.4345	.4360	.509	.380	5/16	1/2	1 3/32	1 5/16	7/8
1/2	.4970	.4985	.594	.460	7/16	5/8	1 1/16	1 3/16	13/16

Recessed Button Handle Specifications - Metric

Nom Pin Dia	ØA Min	ØA Max	+/-0.25 B	+0.01/ -1.0 C	Button Dia. D	E	F	G	H
5	4.92	4.96	5.54	6	6.5	11.6	20	25	18
6	5.92	5.96	6.99	7	6.5	11.6	20	25	18
8	7.92	7.96	9.42	8	6.5	11.6	20	25	18
10	9.92	9.96	11.86	9	8.1	12.7	28	33	22
12	11.92	11.96	14.45	10	10.1	15.9	28	33	22

	Pin Dia	Grip Length (Inches) 0.5	0.75	1	1.25	1.5	1.75	2	2.5	3*	4*	5*	6
PART NUMBERS	3/16	803000	803001	803002	803003	803004	803005	803006	803008	803009	803011	803013	803015
	1/4	803016	803017	803018	803019	803020	803021	803022	803024	803025	803027	803029	803031
	5/16	803032	803033	803034	803035	803036	803037	803038	803040	803041	803043	803045	803047
	3/8	803048	803049	803050	803051	803052	803053	803054	803056	803057	803059	803061	803063
	7/16	803064	803065	803066	803067	803068	803069	803070	803072	803073	803075	803077	803079
	1/2	803080	803081	803082	803083	803084	803085	803086	803088	803089	803091	803093	803095

Contact customer service for other sizes.

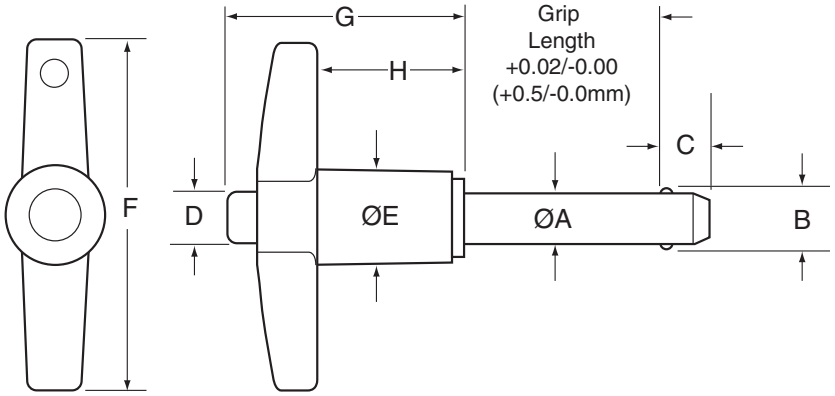
	Pin Dia	Grip Length (Metric) 10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	853000	853001	853002	853003	853004	853005	853006	853007	853008	853009	853010	853011
	6	853012	853013	853014	853015	853016	853017	853018	853019	853020	853021	853022	853023
	8	853024	853025	853026	853027	853028	853029	853030	853031	853032	853033	853034	853035
	10	853036	853037	853038	853039	853040	853041	853042	853043	853044	853045	853046	853047
	12	853048	853049	853050	853051	853052	853053	853054	853055	853056	853057	853058	853059

Contact customer service for other sizes.

T-Handle Kwik-Lok™ Pin MS17985



- The T-Handle Kwik-Lok™ Pin provides a firm, even grip for smooth comfortable operation.
- Handle is black cast aluminum and the button is blue anodized aluminum.
- Pin body available in:
  Heat Treated 17-4 PH Stainless Steel
  or Heat Treated Alloy Steel, Cadmium plated.
- Includes hole and split ring for easy attachment of optional lanyard.



T-Handle Specifications - Inch

Nom Pin Dia	ØA Min	ØA Max	+/-0.005 B	+0.00/ -0.04 C	D	E	F	G	H
3/16 (#10)	.1870	.1885	.220	.260	1/4	1/2	1 13/16	1 1/4	3/4
1/4	.2470	.2485	.289	.290	1/4	1/2	1 13/16	1 1/4	3/4
5/16	.3095	.3110	.375	.330	1/4	1/2	1 13/16	1 1/4	3/4
3/8	.3720	.3735	.440	.365	5/16	19/32	2	1 7/16	15/16
7/16	.4345	.4360	.509	.380	5/16	19/32	2	1 7/16	15/16
1/2	.4970	.4985	.594	.460	15/32	3/4	2	1 5/8	1
9/16	.5595	.5610	.666	.510	15/32	3/4	2 3/8	1 5/8	1
5/8	.6220	.6235	.750	.580	9/16	15/16	3 1/8	1 31/32	1 3/16
3/4	.7470	.7485	.887	.670	5/8	15/16	3 1/8	1 31/32	1 3/16
7/8	.8720	.8735	1.046	.760	3/4	1 1/4	3 1/2	2 1/4	1 11/32
1	.9970	.9985	1.209	.890	3/4	1 1/4	3 1/2	2 1/4	1 11/32

T-Handle Specifications - Metric

Nom Pin Dia	ØA Min	ØA Max	+/-0.25 B	+0.0/ -1.0 C	D	E	F	G	H
5	4.92	4.96	5.54	6	6.5	13.1	46.1	31.3	19.7
6	5.92	5.96	6.99	7	6.5	13.1	46.1	31.3	19.7
8	7.92	7.96	9.42	8	6.5	13.1	46.1	31.3	19.7
10	9.92	9.96	11.86	9	7.7	15.0	51.1	36.1	24.0
12	11.92	11.96	14.45	10	11.1	19.1	59.7	41.9	25.8
16	15.92	15.96	19.00	14	14.5	23.9	78.7	43.0	27.0
20	19.92	19.96	24.08	17	26.2	23.9	78.7	43.0	27.0
25	24.92	24.96	30.94	22	26.2	32.0	88.9	55.9	33.9

Dimensions in millimeters

T-Handle - Inch

	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	**Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated**												
	3/16	**801000**	**801001**	**801002**	**801003**	**801004**	**801005**	**801006**	**801008**	**801009**	**801011**	**801013**	**801015**
	1/4	**801016**	**801017**	**801018**	**801019**	**801020**	**801021**	**801022**	**801024**	**801025**	**801027**	**801029**	**801031**
	5/16	**801032**	**801033**	**801034**	**801035**	**801036**	**801037**	**801038**	**801040**	**801041**	**801043**	**801045**	**801047**
	3/8	**801048**	**801049**	**801050**	**801051**	**801052**	**801053**	**801054**	**801056**	**801057**	**801059**	**801061**	**801063**
	7/16	**801064**	**801065**	**801066**	**801067**	**801068**	**801069**	**801070**	**801072**	**801073**	**801075**	**801077**	**801079**
	1/2	**801080**	**801081**	**801082**	**801083**	**801084**	**801085**	**801086**	**801088**	**801089**	**801091**	**801093**	**801095**
	9/16	**801096**	**801097**	**801098**	**801099**	**801100**	**801101**	**801102**	**801104**	**801105**	**801107**	**801109**	**801111**
	5/8	**801112**	**801113**	**801114**	**801115**	**801116**	**801117**	**801118**	**801120**	**801121**	**801123**	**801125**	**801127**
	3/4	**801128**	**801129**	**801130**	**801131**	**801132**	**801133**	**801134**	**801136**	**801137**	**801139**	**801141**	**801143**
	7/8	**801144**	**801145**	**801146**	**801147**	**801148**	**801149**	**801150**	**801152**	**801153**	**801155**	**801157**	**801159**
	1	**801160**	**801161**	**801162**	**801163**	**801164**	**801165**	**801166**	**801168**	**801169**	**801171**	**801173**	**801175**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	3/16	800800	800801	800802	800803	800804	800805	800806	800808	800809	–	–	–
	1/4	800816	800817	800818	800819	800820	800821	800822	800824	800825	800827	800829	800831
	5/16	800832	800833	800834	800835	800836	800837	800838	800840	800841	800843	800845	800847
	3/8	800848	800849	800850	800851	800852	800853	800854	800856	800857	800859	800861	800863
	7/16	800864	800865	800866	800867	800868	800869	800870	800872	800873	800875	800877	800879
	1/2	800880	800881	800882	800883	800884	800885	800886	800888	800889	800891	800893	800895
	9/16	800896	800897	800898	800899	800900	800901	800902	800904	800905	800907	800909	800911
	5/8	800912	800913	800914	800915	800916	800917	800918	800920	800921	800923	800925	800927
	3/4	800928	800929	800930	800931	800932	800933	800934	800936	800937	800939	800941	800943
	7/8	800944	800945	800946	800947	800948	800949	800950	800952	800953	800955	800957	800959
	1	800960	800961	800962	800963	800964	800965	800966	800968	800969	800971	800973	800975

Contact customer service for other sizes. Includes attachment ring.

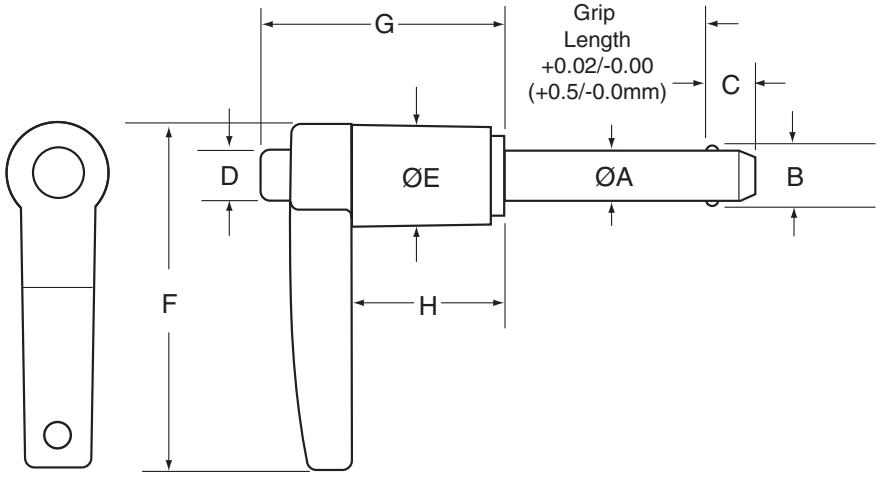
T-Handle - Metric

	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	**Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated**												
	5	**851000**	**851001**	**851002**	**851003**	**851004**	**851005**	**851006**	**851007**	**851008**	**851009**	**851010**	**851011**
	6	**851012**	**851013**	**851014**	**851015**	**851016**	**851017**	**851018**	**851019**	**851020**	**851021**	**851022**	**851023**
	8	**851024**	**851025**	**851026**	**851027**	**851028**	**851029**	**851030**	**851031**	**851032**	**851033**	**851034**	**851035**
	10	**851036**	**851037**	**851038**	**851039**	**851040**	**851041**	**851042**	**851043**	**851044**	**851045**	**851046**	**851047**
	12	**851048**	**851049**	**851050**	**851051**	**851052**	**851053**	**851054**	**851055**	**851056**	**851057**	**851058**	**851059**
	16	**851060**	**851061**	**851062**	**851063**	**851064**	**851065**	**851066**	**851067**	**851068**	**851069**	**851070**	**851071**
	20	**851072**	**851073**	**851074**	**851075**	**851076**	**851077**	**851078**	**851079**	**851080**	**851081**	**851082**	**851083**
	25	**851084**	**851085**	**851086**	**851087**	**851088**	**851089**	**851090**	**851091**	**851092**	**851093**	**851094**	**851095**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	5	850800	850801	850802	850803	850804	850805	850806	850807	850808	850809	850810	850811
	6	850812	850813	850814	850815	850816	850817	850818	850819	850820	850821	850822	850823
	8	850824	850825	850826	850827	850828	850829	850830	850831	850832	850833	850834	850835
	10	850836	850837	850838	850839	850840	850841	850842	850843	850844	850845	850846	850847
	12	850848	850849	850850	850851	850852	850853	850854	850855	850856	850857	850858	850859
	16	850860	850861	850862	850863	850864	850865	850866	850867	850868	850869	850870	850871
	20	850872	850873	850874	850875	850876	850877	850878	850879	850880	850881	850882	850883
	25	850884	850885	850886	850887	850888	850889	850890	850891	850892	850893	850894	850895

Contact customer service for other metric sizes. Includes attachment ring.

L-Handle Kwik-Lok™ Pin MS17986





- The L-Handle Kwik-Lok™ Pin provides a firm grip for applications where a T-Handle will not fit.
- Handle is black cast aluminum and the button is blue anodized aluminum.
- Pin body available in: Heat Treated 17-4 PH Stainless Steel or Heat Treated Alloy Steel, Cadmium plated.
- Includes hole and split ring for easy attachment of optional lanyard.

L-Handle Specifications - Inch

Nom Pin Dia	ØA Min	ØA Max	+/-0.005 B	+0.00/ -0.04 C	D	E	F	G	H
3/16 (#10)	.1870	.1885	.220	.260	1/4	1/2	1 3/4	1 1/4	3/4
1/4	.2470	.2485	.289	.290	1/4	1/2	1 3/4	1 1/4	3/4
5/16	.3095	.3110	.375	.330	1/4	1/2	1 3/4	1 1/4	3/4
3/8	.3720	.3735	.440	.365	5/16	19/32	2	1 7/16	15/16
7/16	.4345	.4360	.509	.380	5/16	19/32	2	1 7/16	15/16
1/2	.4970	.4985	.594	.460	15/32	3/4	2 1/4	1 5/8	1
9/16	.5595	.5610	.666	.510	15/32	3/4	2 1/4	1 5/8	1
5/8	.6220	.6235	.750	.580	9/16	15/16	2 1/2	1 31/32	1 3/16
3/4	.7470	.7485	.887	.670	5/8	15/16	2 1/2	1 31/32	1 3/16
7/8	.8720	.8735	1.046	.760	3/4	1 1/4	3 1/4	2 1/4	1 11/32
1	.9970	.9985	1.209	.890	3/4	1 1/4	3 1/4	2 1/4	1 11/32

L-Handle Specifications - Metric

Nom Pin Dia	ØA Min	ØA Max	+/-0.25 B	+0.0/ -1.0 C	D	E	F	G	H
5	4.92	4.96	5.54	6	6.5	13.1	44.9	31.3	19.7
6	5.92	5.96	6.99	7	6.5	13.1	44.9	31.3	19.7
8	7.92	7.96	9.42	8	6.5	13.1	44.9	31.3	19.7
10	9.92	9.96	11.86	9	7.7	15.1	50.8	36.1	24.0
12	11.92	11.96	14.45	10	11.1	19.1	57.2	41.9	25.8
16	15.92	15.96	19.00	14	14.5	23.9	63.0	43.0	27.0
20	19.92	19.96	24.08	17	26.2	23.9	63.0	43.0	27.0
25	24.92	24.96	30.94	22	26.2	32.4	82.6	55.9	33.9

Dimensions in millimeters

L-Handle - Inch

PART NUMBERS	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
	Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated												
	3/16	**801400**	**801401**	**801402**	**801403**	**801404**	**801405**	**801406**	**801408**	**801409**	**801411**	**801413**	**801415**
	1/4	**801416**	**801417**	**801418**	**801419**	**801420**	**801421**	**801422**	**801424**	**801425**	**801427**	**801429**	**801431**
	5/16	**801432**	**801433**	**801434**	**801435**	**801436**	**801437**	**801438**	**801440**	**801441**	**801443**	**801445**	**801447**
	3/8	**801448**	**801449**	**801450**	**801451**	**801452**	**801453**	**801454**	**801456**	**801457**	**801459**	**801461**	**801463**
	7/16	**801464**	**801465**	**801466**	**801467**	**801468**	**801469**	**801470**	**801472**	**801473**	**801475**	**801477**	**801479**
	1/2	**801480**	**801481**	**801482**	**801483**	**801484**	**801485**	**801486**	**801488**	**801489**	**801491**	**801493**	**801495**
	9/16	**801496**	**801497**	**801498**	**801499**	**801500**	**801501**	**801502**	**801504**	**801505**	**801507**	**801509**	**801511**
	5/8	**801512**	**801513**	**801514**	**801515**	**801516**	**801517**	**801518**	**801520**	**801521**	**801523**	**801525**	**801527**
	3/4	**801528**	**801529**	**801530**	**801531**	**801532**	**801533**	**801534**	**801536**	**801537**	**801539**	**801541**	**801543**
	7/8	**801544**	**801545**	**801546**	**801547**	**801548**	**801549**	**801550**	**801552**	**801553**	**801555**	**801557**	**801559**
	1	**801560**	**801561**	**801562**	**801563**	**801564**	**801565**	**801566**	**801568**	**801569**	**801571**	**801573**	**801575**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	3/16	801200	801201	801202	801203	801204	801205	801206	801208	801209	–	–	–
	1/4	801216	801217	801218	801219	801220	801221	801222	801224	801225	801227	801229	801231
	5/16	801232	801233	801234	801235	801236	801237	801238	801240	801241	801243	801245	801247
	3/8	801248	801249	801250	801251	801252	801253	801254	801256	801257	801259	801261	801263
	7/16	801264	801265	801266	801267	801268	801269	801270	801272	801273	801275	801277	801279
	1/2	801280	801281	801282	801283	801284	801285	801286	801288	801289	801291	801293	801295
	9/16	801296	801297	801298	801299	801300	801301	801302	801304	801305	801307	801309	801311
	5/8	801312	801313	801314	801315	801316	801317	801318	801320	801321	801323	801325	801327
	3/4	801328	801329	801330	801331	801332	801333	801334	801336	801337	801339	801341	801343
	7/8	801344	801345	801346	801347	801348	801349	801350	801352	801353	801355	801357	801359
	1	801360	801361	801362	801363	801364	801365	801366	801368	801369	801371	801373	801375

Contact customer service for other sizes. Includes attachment ring.

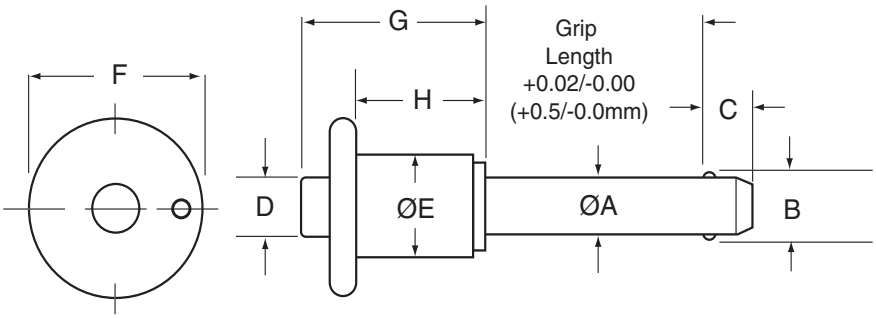
L-Handle - Metric

PART NUMBERS	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
	Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated												
	5	**851400**	**851401**	**851402**	**851403**	**851404**	**851405**	**851406**	**851407**	**851408**	**851409**	**851410**	**851411**
	6	**851412**	**851413**	**851414**	**851415**	**851416**	**851417**	**851418**	**851419**	**851420**	**851421**	**851422**	**851423**
	8	**851424**	**851425**	**851426**	**851427**	**851428**	**851429**	**851430**	**851431**	**851432**	**851433**	**851434**	**851435**
	10	**851436**	**851437**	**851438**	**851439**	**851440**	**851441**	**851442**	**851443**	**851444**	**851445**	**851446**	**851447**
	12	**851448**	**851449**	**851450**	**851451**	**851452**	**851453**	**851454**	**851455**	**851456**	**851457**	**851458**	**851459**
	16	**851460**	**851461**	**851462**	**851463**	**851464**	**851465**	**851466**	**851467**	**851468**	**851469**	**851470**	**851471**
	20	**851472**	**851473**	**851474**	**851475**	**851476**	**851477**	**851478**	**851479**	**851480**	**851481**	**851482**	**851483**
	25	**851484**	**851485**	**851486**	**851487**	**851488**	**851489**	**851490**	**851491**	**851492**	**851493**	**851494**	**851495**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	5	851200	851201	851202	851203	851204	851205	851206	851207	851208	851209	851210	851211
	6	851212	851213	851214	851215	851216	851217	851218	851219	851220	851221	851222	851223
	8	851224	851225	851226	851227	851228	851229	851230	851231	851232	851233	851234	851235
	10	851236	851237	851238	851239	851240	851241	851242	851243	851244	851245	851246	851247
	12	851248	851249	851250	851251	851252	851253	851254	851255	851256	851257	851258	851259
	16	851260	851261	851262	851263	851264	851265	851266	851267	851268	851269	851270	851271
	20	851272	851273	851274	851275	851276	851277	851278	851279	851280	851281	851282	851283
	25	851284	851285	851286	851287	851288	851289	851290	851291	851292	851293	851294	851295

Contact customer service for other metric sizes. Includes attachment ring.

Button Handle Kwik-Lok™ Pin MS17984





- The Button Handle Kwik-Lok™ Pin is ideal for applications that have limited space around the handle.
- Light weight black anodized aluminum handle with blue anodized aluminum button.
- Pin body available in:
  Heat Treated 17-4 PH Stainless Steel
  or Heat Treated Alloy Steel, Cadmium plated.
- Includes hole and split ring for easy attachment of optional lanyard.

Button Handle Specifications - Inch

Nom Pin Dia	ØA Min	ØA Max	+/-0.005 B	+0.00/ -0.04 C	D	E	F	G	H
3/16 (#10)	.1870	.1885	.220	.260	1/4	7/16	13/16	13/16	5/8
1/4	.2470	.2485	.289	.290	1/4	7/16	13/16	7/8	5/8
5/16	.3095	.3110	.375	.330	1/4	7/16	7/8	29/32	5/8
3/8	.3720	.3735	.440	.365	5/16	9/16	1 1/8	1 1/32	3/4
7/16	.4345	.4360	.509	.380	5/16	9/16	1 1/8	1 3/32	3/4
1/2	.4970	.4985	.594	.460	7/16	23/32	1 3/8	1 3/16	13/16
9/16	.5595	.5610	.666	.510	7/16	23/32	1 3/8	1 3/8	1
5/8	.6220	.6235	.750	.580	37/64	27/32	1 5/8	1 1/2	1 1/16
3/4	.7470	.7485	.887	.670	37/64	15/16	1 7/8	1 21/32	1 5/32
7/8	.8720	.8735	1.046	.760	3/4	1 1/8	2 3/16	1 31/32	1 1/2
1	.9970	.9985	1.219	.890	3/4	1 3/16	2 3/16	2 1/8	1 1/2

Button Handle Specifications - Metric

Nom Pin Dia	ØA Min	ØA Max	+/-0.25 B	+0.0/ -1.0 C	D	E	F	G	H
5	4.92	4.96	5.54	6	6.4	11.1	20.6	20.6	15.9
6	5.92	5.96	6.99	7	6.4	11.1	20.6	22.2	15.9
8	7.92	7.96	9.42	8	6.4	11.1	22.2	23.0	15.9
10	9.92	9.96	11.86	9	7.9	14.3	28.6	27.8	19.1
12	11.92	11.96	14.45	10	11.1	18.3	34.9	34.9	25.4
16	15.92	15.96	19.00	14	14.7	21.4	41.3	38.1	27.0
20	19.92	19.96	24.08	17	14.7	23.8	47.6	42.1	29.4
25	24.92	24.96	30.94	22	19.1	30.2	55.6	54.0	38.1

Dimensions in millimeters

Button Handle - Inch

	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	**Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated**												
	3/16	**800600**	**800601**	**800602**	**800603**	**800604**	**800605**	**800606**	**800608**	**800609**	**800611**	**800613**	**800615**
	1/4	**800616**	**800617**	**800618**	**800619**	**800620**	**800621**	**800622**	**800624**	**800625**	**800627**	**800629**	**800631**
	5/16	**800632**	**800633**	**800634**	**800635**	**800636**	**800637**	**800638**	**800640**	**800641**	**800643**	**800645**	**800647**
	3/8	**800648**	**800649**	**800650**	**800651**	**800652**	**800653**	**800654**	**800656**	**800657**	**800659**	**800661**	**800663**
	7/16	**800664**	**800665**	**800666**	**800667**	**800668**	**800669**	**800670**	**800672**	**800673**	**800675**	**800677**	**800679**
	1/2	**800680**	**800681**	**800682**	**800683**	**800684**	**800685**	**800686**	**800688**	**800689**	**800691**	**800693**	**800695**
	9/16	**800696**	**800697**	**800698**	**800699**	**800700**	**800701**	**800702**	**800704**	**800705**	**800707**	**800709**	**800711**
	5/8	**800712**	**800713**	**800714**	**800715**	**800716**	**800717**	**800718**	**800720**	**800721**	**800723**	**800725**	**800727**
	3/4	**800728**	**800729**	**800730**	**800731**	**800732**	**800733**	**800734**	**800736**	**800737**	**800739**	**800741**	**800743**
	7/8	**800744**	**800745**	**800746**	**800747**	**800748**	**800749**	**800750**	**800752**	**800753**	**800755**	**800757**	**800759**
	1	**800760**	**800761**	**800762**	**800763**	**800764**	**800765**	**800766**	**800768**	**800769**	**800771**	**800773**	**800775**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	3/16	800400	800401	800402	800403	800404	800405	800406	800408	800409	–	–	–
	1/4	800416	800417	800418	800419	800420	800421	800422	800424	800425	800427	800429	800431
	5/16	800432	800433	800434	800435	800436	800437	800438	800440	800441	800443	800445	800447
	3/8	800448	800449	800450	800451	800452	800453	800454	800456	800457	800459	800461	800463
	7/16	800464	800465	800466	800467	800468	800469	800470	800472	800473	800475	800477	800479
	1/2	800480	800481	800482	800483	800484	800485	800486	800488	800489	800491	800493	800495
	9/16	800496	800497	800498	800499	800500	800501	800502	800504	800505	800507	800509	800511
	5/8	800512	800513	800514	800515	800516	800517	800518	800520	800521	800523	800525	800527
	3/4	800528	800529	800530	800531	800532	800533	800534	800536	800537	800539	800541	800543
	7/8	800544	800545	800546	800547	800548	800549	800550	800552	800553	800555	800557	800559
	1	800560	800561	800562	800563	800564	800565	800566	800568	800569	800571	800573	800575

Contact customer service for other sizes. Includes attachment ring.

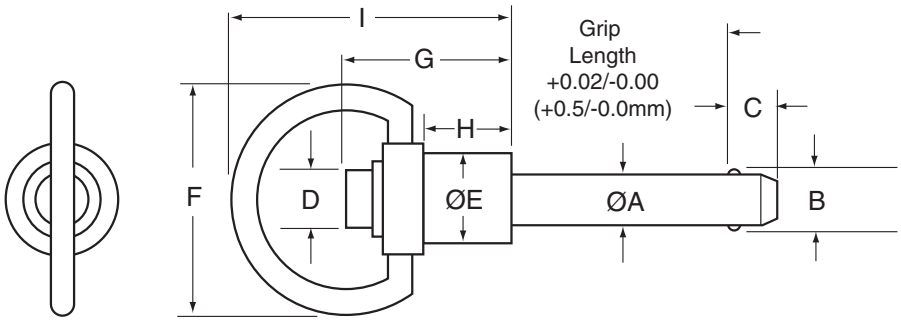
Button Handle - Metric

	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	**Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated**												
	5	**850600**	**850601**	**850602**	**850603**	**850604**	**850605**	**850606**	**850607**	**850608**	**850609**	**850610**	**850611**
	6	**850612**	**850613**	**850614**	**850615**	**850616**	**850617**	**850618**	**850619**	**850620**	**850621**	**850622**	**850623**
	8	**850624**	**850625**	**850626**	**850627**	**850628**	**850629**	**850630**	**850631**	**850632**	**850633**	**850634**	**850635**
	10	**850636**	**850637**	**850638**	**850639**	**850640**	**850641**	**850642**	**850643**	**850644**	**850645**	**850646**	**850647**
	12	**850648**	**850649**	**850650**	**850651**	**850652**	**850653**	**850654**	**850655**	**850656**	**850657**	**850658**	**850659**
	16	**850660**	**850661**	**850662**	**850663**	**850664**	**850665**	**850666**	**850667**	**850668**	**850669**	**850670**	**850671**
	20	**850672**	**850673**	**850674**	**850675**	**850676**	**850677**	**850678**	**850679**	**850680**	**850681**	**850682**	**850683**
	25	**850684**	**850685**	**850686**	**850687**	**850688**	**850689**	**850690**	**850691**	**850692**	**850693**	**850694**	**850695**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	5	850400	850401	850402	850403	850404	850405	850406	850407	850408	850409	850410	850411
	6	850412	850413	850414	850415	850416	850417	850418	850419	850420	850421	850422	850423
	8	850424	850425	850426	850427	850428	850429	850430	850431	850432	850433	850434	850435
	10	850436	850437	850438	850439	850440	850441	850442	850443	850444	850445	850446	850447
	12	850448	850449	850450	850451	850452	850453	850454	850455	850456	850457	850458	850459
	16	850460	850461	850462	850463	850464	850465	850466	850467	850468	850469	850470	850471
	20	850472	850473	850474	850475	850476	850477	850478	850479	850480	850481	850482	850483
	25	850484	850485	850486	850487	850488	850489	850490	850491	850492	850493	850494	850495

Contact customer service for other metric sizes. Includes attachment ring.

Ring-Handle Kwik-Lok™ Pin MS17987





- The Ring-Handle Kwik-Lok™ Pin is designed for applications which require small clearance area around the pin.
- Stainless steel handle for tough environment with blue anodized aluminum button (steel shanks), or stainless button (stainless steel shanks).
- Pin body available in: Heat Treated 17-4 PH Stainless Steel or Heat Treated Alloy Steel, Cadmium plated.
- Ring allows for easy attachment of optional lanyard.

Ring-Handle Specifications - Inch

Nom Pin Dia	ØA Min	ØA Max	+/-0.005 B	+0.00/ -0.04 C	D	E	F	G	H	I
3/16 (#10)	.1870	.1885	.220	.260	1/4	7/16	1 1/8	13/16	29/64	1 11/32
1/4	.2470	.2485	.289	.290	1/4	7/16	1 1/8	13/16	29/64	1 11/32
5/16	.3095	.3110	.375	.330	1/4	7/16	1 1/8	27/32	29/64	1 11/32
3/8	.3720	.3735	.440	.365	5/16	9/16	1 1/8	1	19/32	1 1/2
7/16	.4345	.4360	.509	.380	5/16	9/16	1 1/8	1	19/32	1 1/2
1/2	.4970	.4985	.594	.460	7/16	11/16	1 3/8	1 1/4	5/8	1 7/8
9/16	.5595	.5610	.666	.510	7/16	11/16	1 3/8	1 1/4	11/16	1 7/8
5/8	.6220	.6235	.750	.580	1/2	15/16	1 5/8	1 11/16	7/8	2 7/16
3/4	.7470	.7485	.887	.670	9/16	15/16	1 5/8	1 13/16	1 1/16	2 7/16
7/8	.8720	.8735	1.046	.760	3/4	1 3/16	1 3/4	2 3/16	1 13/32	2 29/32
1	.9970	.9985	1.219	.890	3/4	1 3/16	1 3/4	2 1/8	1 13/32	2 29/32

Ring-Handle Specifications - Metric

Nom Pin Dia	ØA Min	ØA Max	+/-0.25 B	+0.0/ -1.0 C	D	E	F	G	H	I
5	4.92	4.96	5.54	6	6.5	10.8	28.0	21.0	11.5	34.1
6	5.92	5.96	6.99	7	6.5	10.8	28.0	21.0	11.5	34.1
8	7.92	7.96	9.42	8	6.5	10.8	28.0	22.0	11.5	34.1
10	9.92	9.96	11.86	9	7.7	14.2	28.0	25.0	15.1	38.0
12	11.92	11.96	14.45	10	10.1	17.2	35.2	28.6	15.9	46.0
16	15.92	15.96	19.00	14	12.4	23.9	41.9	37.0	22.2	56.0
20	19.92	19.96	24.08	17	14.6	23.9	41.9	46.0	27.0	61.6
25	24.92	24.96	30.94	22	19.2	30.0	45.0	55.6	35.7	72.4

Dimensions in millimeters

Ring-Handle - Inch

PART NUMBERS	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
	Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated												
	3/16	**800200**	**800201**	**800202**	**800203**	**800204**	**800205**	**800206**	**800208**	**800209**	**800211**	**800213**	**800215**
	1/4	**800216**	**800217**	**800218**	**800219**	**800220**	**800221**	**800222**	**800224**	**800225**	**800227**	**800229**	**800231**
	5/16	**800232**	**800233**	**800234**	**800235**	**800236**	**800237**	**800238**	**800240**	**800241**	**800243**	**800245**	**800247**
	3/8	**800248**	**800249**	**800250**	**800251**	**800252**	**800253**	**800254**	**800256**	**800257**	**800259**	**800261**	**800263**
	7/16	**800264**	**800265**	**800266**	**800267**	**800268**	**800269**	**800270**	**800272**	**800273**	**800275**	**800277**	**800279**
	1/2	**800280**	**800281**	**800282**	**800283**	**800284**	**800285**	**800286**	**800288**	**800289**	**800291**	**800293**	**800295**
	9/16	**800296**	**800297**	**800298**	**800299**	**800300**	**800301**	**800302**	**800304**	**800305**	**800307**	**800309**	**800311**
	5/8	**800312**	**800313**	**800314**	**800315**	**800316**	**800317**	**800318**	**800320**	**800321**	**800323**	**800325**	**800327**
	3/4	**800328**	**800329**	**800330**	**800331**	**800332**	**800333**	**800334**	**800336**	**800337**	**800339**	**800341**	**800343**
	7/8	**800344**	**800345**	**800346**	**800347**	**800348**	**800349**	**800350**	**800352**	**800353**	**800355**	**800357**	**800359**
	1	**800360**	**800361**	**800362**	**800363**	**800364**	**800365**	**800366**	**800368**	**800369**	**800371**	**800373**	**800375**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	3/16	800000	800001	800002	800003	800004	800005	800006	800008	800009	–	–	–
	1/4	800016	800017	800018	800019	800020	800021	800022	800024	800025	800027	800029	800031
	5/16	800032	800033	800034	800035	800036	800037	800038	800040	800041	800043	800045	800047
	3/8	800048	800049	800050	800051	800052	800053	800054	800056	800057	800059	800061	800063
	7/16	800064	800065	800066	800067	800068	800069	800070	800072	800073	800075	800077	800079
	1/2	800080	800081	800082	800083	800084	800085	800086	800088	800089	800091	800093	800095
	9/16	800096	800097	800098	800099	800100	800101	800102	800104	800105	800107	800109	800111
	5/8	800112	800113	800114	800115	800116	800117	800118	800120	800121	800123	800125	800127
	3/4	800128	800129	800130	800131	800132	800133	800134	800136	800137	800139	800141	800143
	7/8	800144	800145	800146	800147	800148	800149	800150	800152	800153	800155	800157	800159
	1	800160	800161	800162	800163	800164	800165	800166	800168	800169	800171	800173	800175

Contact customer service for other sizes.

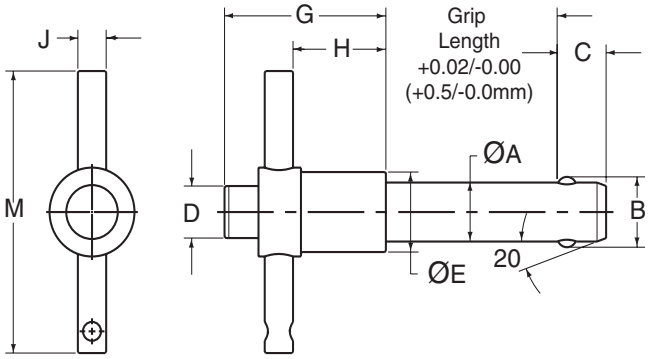
Ring-Handle - Metric

PART NUMBERS	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
	Stainless Steel - High Strength Stainless Steel, 17-4 PH heat treated												
	5	**850200**	**850201**	**850202**	**850203**	**850204**	**850205**	**850206**	**850207**	**850208**	**850209**	**850210**	**850211**
	6	**850212**	**850213**	**850214**	**850215**	**850216**	**850217**	**850218**	**850219**	**850220**	**850221**	**850222**	**850223**
	8	**850224**	**850225**	**850226**	**850227**	**850228**	**850229**	**850230**	**850231**	**850232**	**850233**	**850234**	**850235**
	10	**850236**	**850237**	**850238**	**850239**	**850240**	**850241**	**850242**	**850243**	**850244**	**850245**	**850246**	**850247**
	12	**850248**	**850249**	**850250**	**850251**	**850252**	**850253**	**850254**	**850255**	**850256**	**850257**	**850258**	**850259**
	16	**850260**	**850261**	**850262**	**850263**	**850264**	**850265**	**850266**	**850267**	**850268**	**850269**	**850270**	**850271**
	20	**850272**	**850273**	**850274**	**850275**	**850276**	**850277**	**850278**	**850279**	**850280**	**850281**	**850282**	**850283**
	25	**850284**	**850285**	**850286**	**850287**	**850288**	**850289**	**850290**	**850291**	**850292**	**850293**	**850294**	**850295**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	5	850000	850001	850002	850003	850004	850005	850006	850007	850008	850009	850010	850011
	6	850012	850013	850014	850015	850016	850017	850018	850019	850020	850021	850022	850023
	8	850024	850025	850026	850027	850028	850029	850030	850031	850032	850033	850034	850035
	10	850036	850037	850038	850039	850040	850041	850042	850043	850044	850045	850046	850047
	12	850048	850049	850050	850051	850052	850053	850054	850055	850056	850057	850058	850059
	16	850060	850061	850062	850063	850064	850065	850066	850067	850068	850069	850070	850071
	20	850072	850073	850074	850075	850076	850077	850078	850079	850080	850081	850082	850083
	25	850084	850085	850086	850087	850088	850089	850090	850091	850092	850093	850094	850095

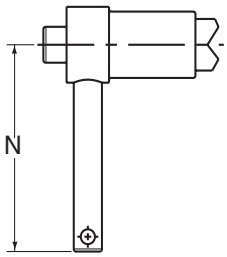
Contact customer service for other metric sizes.

Heavy Duty T&L Handle Pins





T-Handle Style



L-Handle Style

- Also known as Ground Handling Pins
- Heavy Duty welded handle provides additional impact resistance
- Includes split ring for easy attachment of optional lanyard.
- All stainless steel handle and button provide additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Meets or exceeds NASM 23460 specifications
- May be ordered with 4 locking balls for additional locking element tensile strength

Heavy Duty T&L Handle Specifications - Inch

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	±0.005 B	+0.00/ -0.04 C	D	E	G	H	J	M	N
3/16 (#10)	.1870	.1885	.220	.260	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
1/4	.2470	.2485	.289	.290	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
5/16	.3095	.3110	.375	.330	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
3/8	.3720	.3735	.440	.365	1/4	9/16	1 11/32	13/16	1/4	1 15/16	1 3/4
7/16	.4345	.4360	.509	.380	5/16	9/16	1 11/32	13/16	1/4	2 1/8	1 3/4
1/2	.4970	.4985	.594	.460	7/16	11/16	1 7/16	13/16	1/4	2 3/8	1 31/32
9/16	.5595	.5610	.666	.510	7/16	11/16	1 7/16	13/16	1/4	2 3/8	1 31/32
5/8	.6220	.6235	.750	.580	37/64	15/16	1 11/16	31/32	5/16	2 7/8	2 15/32
3/4	.7470	.7485	.887	.670	37/64	15/16	1 13/16	31/32	5/16	2 7/8	2 15/32
7/8	.8720	.8735	1.046	.760	3/4	1 3/16	2 1/8	1 1/4	3/8	3 1/4	2 13/16
1	.9970	.9985	1.219	.890	3/4	1 3/16	2 1/8	1 1/4	3/8	3 1/4	2 13/16

Heavy Duty T&L Handle Specifications - Metric

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	+/- 0.25 B	+0.0/- 1.0 C	D	E	G	H	J	M	N
5	4.92	4.96	5.54	6	6.35	11.11	31.75	20.64	4.76	49.21	44.45
6	5.92	5.96	6.99	7	6.35	11.11	31.75	20.64	4.76	49.21	44.45
8	7.92	7.96	9.42	8	6.35	11.11	31.75	20.64	4.76	49.21	44.45
10	9.92	9.96	11.86	9	6.35	14.29	34.13	20.64	6.35	49.21	44.45
12	11.92	11.96	14.45	10	11.11	17.46	36.51	20.64	6.35	60.33	50.01
16	15.92	15.96	19.00	14	14.68	23.81	42.86	24.61	7.94	73.03	62.71
20	19.92	19.96	24.08	17	14.68	23.81	46.04	24.61	7.94	73.03	62.71
25	24.92	24.96	30.94	22	19.05	30.16	53.98	31.75	9.53	82.55	71.44

Dimensions in millimeters

Heavy Duty T-Handle - Inch

	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	802600	802601	802602	802603	802604	802605	802606	802608	802609	802611	802613	802615
	1/4	802616	802617	802618	802619	802620	802621	802622	802624	802625	802627	802629	802631
	5/16	802632	802633	802634	802635	802636	802637	802638	802640	802641	802643	802645	802647
	3/8	802648	802649	802650	802651	802652	802653	802654	802656	802657	802659	802661	802663
	7/16	802664	802665	802666	802667	802668	802669	802670	802672	802673	802675	802677	802679
	1/2	802680	802681	802682	802683	802684	802685	802686	802688	802689	802691	802693	802695
	9/16	802696	802697	802698	802699	802700	802701	802702	802704	802705	802707	802709	802711
	5/8	802712	802713	802714	802715	802716	802717	802718	802720	802721	802723	802725	802727
	3/4	802728	802729	802730	802731	802732	802733	802734	802736	802737	802739	802741	802743
	7/8	802744	802745	802746	802747	802748	802749	802750	802752	802753	802755	802757	802759
	1	802760	802761	802762	802763	802764	802765	802766	802768	802769	802771	802773	802775

Heavy Duty L-Handle - Inch

NUMBERS	3/16	805600	805601	805602	805603	805604	805605	805606	805608	805609	805611	805613	805615
	1/4	805616	805617	805618	805619	805620	805621	805622	805624	805625	805627	805629	805631
	5/16	805632	805633	805634	805635	805636	805637	805638	805640	805641	805643	805645	805647
	3/8	805648	805649	805650	805651	805652	805653	805654	805656	805657	805659	805661	805663
	7/16	805664	805665	805666	805667	805668	805669	805670	805672	805673	805675	805677	805679
	1/2	805680	805681	805682	805683	805684	805685	805686	805688	805689	805691	805693	805695
	9/16	805696	805697	805698	805699	805700	805701	805702	805704	805705	805707	805709	805711
	5/8	805712	805713	805714	805715	805716	805717	805718	805720	805721	805723	805725	805727
	3/4	805728	805729	805730	805731	805732	805733	805734	805736	805737	805739	805741	805743
	7/8	805744	805745	805746	805747	805748	805749	805750	805752	805753	805755	805757	805759
	1	805760	805761	805762	805763	805764	805765	805766	805768	805769	805771	805773	805775

Contact customer service for other sizes. Includes attachment ring.

Heavy Duty T-Handle - Metric

	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	852600	852601	852602	852603	852604	852605	852606	852607	852608	852609	852610	852611
	6	852612	852613	852614	852615	852616	852617	852618	852619	852620	852621	852622	852623
	8	852624	852625	852626	852627	852628	852629	852630	852631	852632	852633	852634	852635
	10	852636	852637	852638	852639	852640	852641	852642	852643	852644	852645	852646	852647
	12	852648	852649	852650	852651	852652	852653	852654	852655	852656	852657	852658	852659
	16	852660	852661	852662	852663	852664	852665	852666	852667	852668	852669	852670	852671
	20	852672	852673	852674	852675	852676	852677	852678	852679	852680	852681	852682	852683
	25	852684	852685	852686	852687	852688	852689	852690	852691	852692	852693	852694	852695

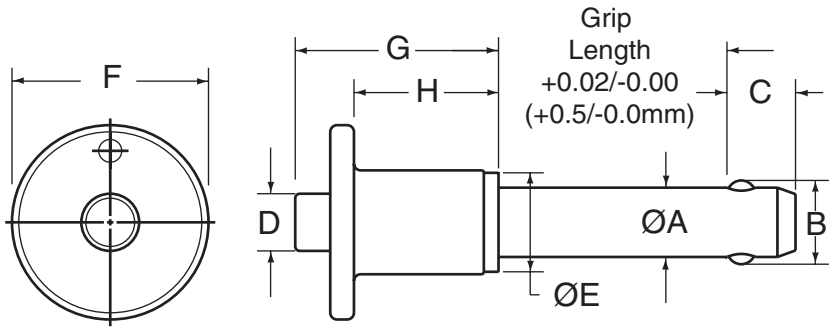
Heavy Duty L-Handle - Metric

NUMBERS	5	854200	854201	854202	854203	854204	854205	854206	854207	854208	854209	854210	854211
	6	854212	854213	854214	854215	854216	854217	854218	854219	854220	854221	854222	854223
	8	854224	854225	854226	854227	854228	854229	854230	854231	854232	854233	854234	854235
	10	854236	854237	854238	854239	854240	854241	854242	854243	854244	854245	854246	854247
	12	854248	854249	854250	854251	854252	854253	854254	854255	854256	854257	854258	854259
	16	854260	854261	854262	854263	854264	854265	854266	854267	854268	854269	854270	854271
	20	854272	854273	854274	854275	854276	854277	854278	854279	854280	854281	854282	854283
	25	854284	854285	854286	854287	854288	854289	854290	854291	854292	854293	854294	854295

Contact customer service for other metric sizes. Includes attachment ring.

Heavy Duty Button Handle Pin





Heavy Duty Button Handle

- Heavy Duty solid handle in 303 series stainless steel provides additional impact resistance
- Includes hole and split ring for easy attachment of optional lanyard.
- All stainless steel construction provides additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated
- Meets or exceeds NASM 23460 specifications
- May be ordered with 4 locking balls for additional locking element tensile strength

Heavy Duty Button Handle Specifications - Inch

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	+/-0.005 B	+0.00/ -0.04 C	D	E	F	G	H
3/16 (#10)	.1870	.1885	.220	.260	1/4	7/16	13/16	13/16	5/8
1/4	.2470	.2485	.289	.290	1/4	7/16	13/16	13/16	5/8
5/16	.3095	.3110	.375	.330	1/4	7/16	7/8	29/32	5/8
3/8	.3720	.3735	.440	.365	5/16	9/16	1 1/8	1 1/32	3/4
7/16	.4345	.4360	.509	.380	5/16	9/16	1 1/8	1 3/32	3/4
1/2	.4970	.4985	.594	.460	7/16	23/32	1 3/8	1 3/16	13/16
9/16	.5595	.5610	.666	.510	7/16	23/32	1 3/8	1 3/8	1
5/8	.6220	.6235	.750	.580	37/64	27/32	1 5/8	1 1/2	1 1/16
3/4	.7470	.7485	.887	.670	37/64	15/16	1 7/8	1 21/32	1 5/32
7/8	.8720	.8735	1.046	.760	3/4	1 1/8	2 3/16	1 31/32	1 1/2
1	.9970	.9985	1.219	.890	3/4	1 3/16	2 3/16	2 1/8	1 1/2

Heavy Duty Button Handle Specifications - Metric

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	+/- 0.25 B	+0.0/- 1.0 C	D	E	F	G	H
5	4.92	4.96	5.54	6	6.4	11.1	20.6	20.6	15.9
6	5.92	5.96	6.99	7	6.4	11.1	20.6	20.6	15.9
8	7.92	7.96	9.42	8	6.4	11.1	22.2	23.0	15.9
10	9.92	9.96	11.86	9	7.9	14.3	28.6	27.8	19.1
12	11.92	11.96	14.45	10	11.1	18.3	34.9	34.9	25.4
16	15.92	15.96	19.00	14	14.7	21.4	41.3	38.1	27.0
20	19.92	19.96	24.08	17	14.7	23.8	47.6	42.1	29.4
25	24.92	24.96	30.94	22	19.1	30.2	55.6	54.0	38.1

Dimensions in millimeters

PART NUMBERS

Heavy Duty Button Handle - Inch

Pin Dia	Grip Length (inches)											
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
3/16	806400	806401	806402	806403	806404	806405	806406	806408	806409	806411	806413	806415
1/4	806416	806417	806418	806419	806420	806421	806422	806424	806425	806427	806429	806431
5/16	806432	806433	806434	806435	806436	806437	806438	806440	806441	806443	806445	806447
3/8	806448	806449	806450	806451	806452	806453	806454	806456	806457	806459	806461	806463
7/16	806464	806465	806466	806467	806468	806469	806470	806472	806473	806475	806477	806479
1/2	806480	806481	806482	806483	806484	806485	806486	806488	806489	806491	806493	806495
9/16	806496	806497	806498	806499	806500	806501	806502	806504	806505	806507	806509	806511
5/8	806512	806513	806514	806515	806516	806517	806518	806520	806521	806523	806525	806527
3/4	806528	806529	806530	806531	806532	806533	806534	806536	806537	806539	806541	806543
7/8	806544	806545	806546	806547	806548	806549	806550	806552	806553	806555	806557	806559
1	806560	806561	806562	806563	806564	806565	806566	806568	806569	806571	806573	806575

PART NUMBERS

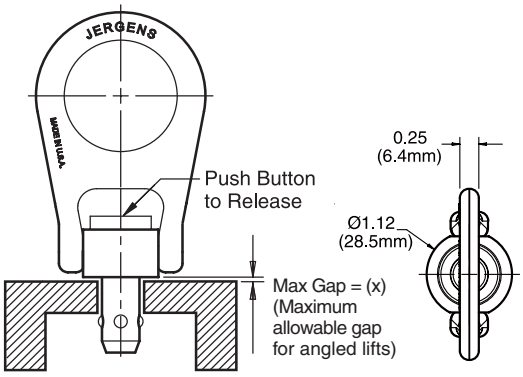
Heavy Duty Button Handle - Metric

Pin Dia	Grip Length (mm)											
	10	15	20	25	30	40	50	60	70	80	90	100
5	855400	855401	855402	855403	855404	855405	855406	855407	855408	855409	855410	855411
6	855412	855413	855414	855415	855416	855417	855418	855419	855420	855421	855422	855423
8	855424	855425	855426	855427	855428	855429	855430	855431	855432	855433	855434	855435
10	855436	855437	855438	855439	855440	855441	855442	855443	855444	855445	855446	855447
12	855448	855449	855450	855451	855452	855453	855454	855455	855456	855457	855458	855459
16	855460	855461	855462	855463	855464	855465	855466	855467	855468	855469	855470	855471
20	855472	855473	855474	855475	855476	855477	855478	855479	855480	855481	855482	855483
25	855484	855485	855486	855487	855488	855489	855490	855491	855492	855493	855494	855495

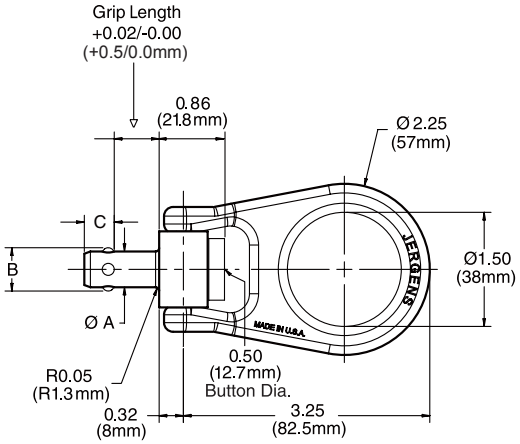
Contact customer service for other sizes. Includes attachment ring.

Kwik-Lok™ Lifting Pins





Typical Application



- All stainless steel construction and components
- 17-4 PH stainless steel forged, heat treated lifting ring with large opening
- Lifting ring with Load Spreader Bar
- 5 to 1 strength factor
- 360° Swivel
- 180° Pivot
- Also chosen for lashing applications

Lifting Pin Specifications - Inches

Nom Pin Dia	Max. Load Rating (lbs)*	ØA		+/-0.005 B	+0.00/ -0.04 C	Max. Gap (X) (in)	Required Hole Diameter (in)	
		Min	Max				Max	Min
1/4	400	.2470	.2485	.286	.290	0.06	0.2540	0.2500
5/16	700	.3095	.3110	.375	.330	0.06	0.3165	0.3125
3/8	1,000	.3720	.3735	.440	.365	0.06	0.3790	0.3750
1/2	1,250	.4970	.4985	.594	.460	0.06	0.5050	0.5000
5/8	1,400	.6220	.6235	.750	.580	0.06	0.6300	0.6250

Lifting Pin Specifications - Metric

Nom Pin Dia	Max. Load Rating (kN)*	ØA		+/-0.25 B	+0.0/ -1.0 C	Max. Gap (X) (mm)	Required Hole Diameter (mm)	
		Min	Max				Max	Min
10	4.4	9.92	9.96	12.00	9	1.5	10.1	10.0
12	5.5	11.92	11.96	14.27	10	1.5	12.1	12.0
16	6.2	15.92	15.96	19.00	14	1.5	16.1	16.0

*Dimensions in millimeters

LIFT ID AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

See page 11.4 for more information on Lift ID™

Important: Please review all operating instructions that are included in the packaging or online before use.

Note: If the required hole size cannot be achieved; Jergens recommends the use of our threaded receptacle (see page 9.17); Please Contact Customer Service with any questions.

Kwik-Lok™ Lifting Pin - Inches

Dia.	Grip Length							
	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1/4	**807216**	**807217**	**807218**	**807219**	**807220**	**807222**	**807224**	**807225**
5/16	**807232**	**807233**	**807234**	**807235**	**807236**	**807238**	**807240**	**807241**
3/8	**807248**	**807249**	**807250**	**807251**	**807252**	**807254**	**807256**	**807257**
1/2	**807280**	**807281**	**807282**	**807283**	**807284**	**807286**	**807288**	**807289**
5/8	**807312**	**807313**	**807314**	**807315**	**807316**	**807318**	**807320**	**807321**

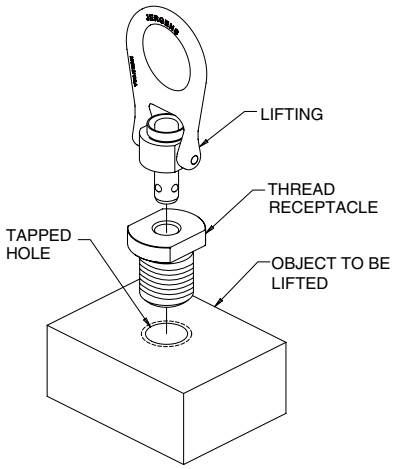
Kwik-Lok™ Lifting Pin - Metric

Dia.	Grip Length							
	15	20	25	30	35	40	50	75
10	**857237**	**857238**	**857239**	**857240**	**857299**	**857241**	**857242**	**857307**
12	**857249**	**857250**	**857251**	**857252**	**857300**	**857253**	**857254**	**857308**
16	**857261**	**857262**	**857263**	**857264**	**857301**	**857265**	**857266**	**857309**

*Lifting load ratings are based on tests with hardened tool steel plates or shoulder bushings. Load ratings may be reduced if oversized holes or parent material under 80,000 psi tensile are used.

Threaded Receptacles

High Strength Stainless Steel, 17-4 PH heat treated

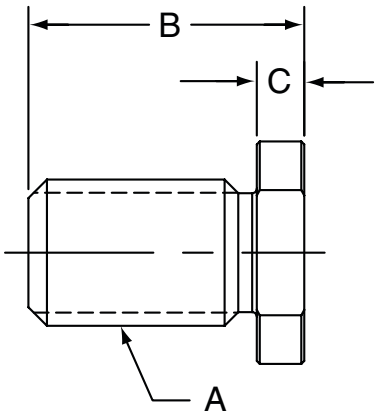


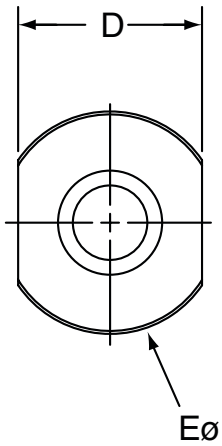
KLP Threaded Receptacles - Inch

For Kwik-Lok™ Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(ft-lbs)
1/4×0.5	807216	**845100**	1/2-13	0.930	0.16	.62	.75	7
5/16×0.5	807232	**845101**	3/4-10	1.100	0.28	.87	1.12	18
3/8×0.5	807248	**845102**	3/4-10	1.100	0.28	.87	1.12	25
1/2×0.5	807280	**845103**	1 1/8-7	1.625	0.37	1.25	1.62	47
5/8×0.5	807312	**845104**	1 1/8-7	1.625	0.37	1.25	1.62	53

KLP Threaded Receptacles - Metric

For Kwik-Lok™ Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(kg•m)
10×15	857237	**855100**	M20x2.5	29	7	26	34.8	3.6
12×15	857249	**855101**	M22x2.5	37	9	30	34.8	5.0
16×15	857261	**855102**	M27x3	41	10	32	41.2	6.9

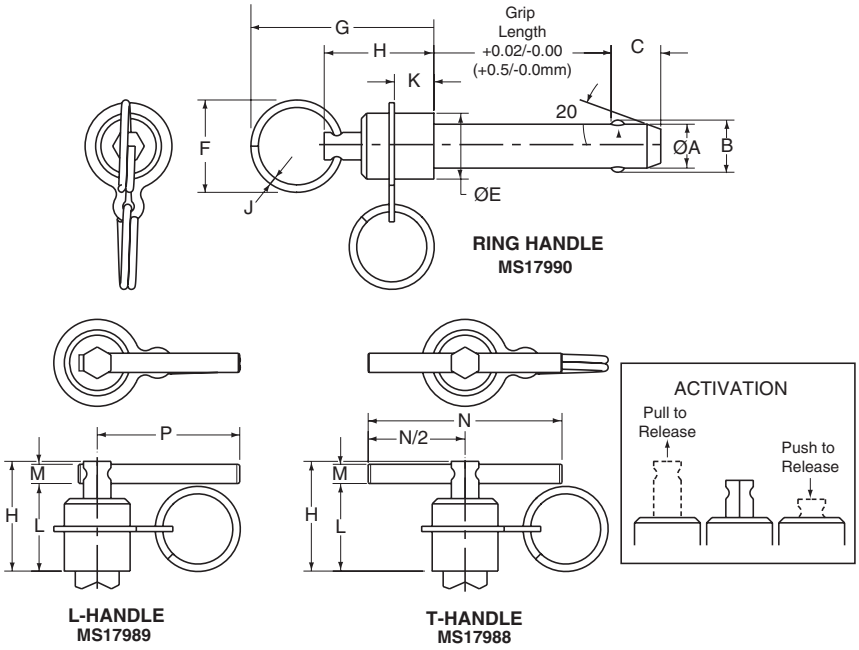




Double Acting T, L, Ring Handles
MS17988, MS17989, MS17990



Push/Pull Activation



- Double Acting Pins are activated by push or pull motion
- All stainless steel construction provides additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Ideal for quick insertion and removal
- Four ball options available upon request
- Includes split ring for easy attachment of optional lanyard.
- Meets or exceeds NASM 23460 specifications
- Drive Out feature available upon request

Double Acting Specifications - Inch

Nom Pin Dia	Pin Dia A		B	C	E		F		Max			K					
	Min	Max	+/-0.005	Max	Min	Max	Min	Max	G	H	J	Min	Max	L	M	N	P
3/16 (#10)	.1870	.1885	.220	.410	.360	.450	1.000	1.125	1.945	1.030	.080	.415	.480	.780	.105	1.500	1.300
1/4	.2470	.2485	.289	.410	.360	.450	1.000	1.125	1.945	1.030	.080	.415	.480	.78/0	.105	1.500	1.300
5/16	.3095	.3110	.375	.440	.390	.505	1.000	1.125	1.945	1.030	.080	.415	.480	.780	.105	1.500	1.300
3/8	.3720	.3735	.440	.510	.510	.630	1.000	1.125	2.025	1.090	.080	.445	.540	.830	.134	2.000	1.500
7/16	.4345	.4360	.509	.510	.510	.630	1.000	1.125	2.025	1.090	.080	.445	.540	.830	.134	2.000	1.500
1/2	.4970	.4985	.594	.590	.640	.755	1.000	1.125	2.200	1.270	.080	.445	.540	.880	.200	2.250	1.655
9/16	.5595	.5610	.666	.660	.640	.755	1.000	1.125	2.200	1.270	.080	.445	.540	.880	.200	2.250	1.655
5/8	.6220	.6235	.750	.750	.805	.870	1.312	1.500	2.690	1.465	.120	.510	.575	1.000	.231	2.500	1.810
3/4	.7470	.7485	.887	.790	.890	.960	1.312	1.500	2.690	1.465	.120	.530	.595	1.000	.231	2.500	1.810
7/8	.8720	.8735	1.046	.950	1.070	1.150	1.312	1.500	2.860	1.640	.120	.665	.730	1.180	.231	2.875	2.250
1	.9970	.9985	1.219	1.110	1.200	1.280	1.312	1.500	3.010	1.830	.120	.800	.865	1.320	.231	2.875	2.250

Double Acting Specifications - Metric

Nom Pin Dia	Pin Dia A		B	C	E		F		Max			K					
	Min	Max	+/-0.25	Max	Min	Max	Min	Max	G	H	J	Min	Max	L	M	N	P
5	4.92	4.96	5.54	10.41	9.14	11.43	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.67	44.45	33.02
6	5.92	5.96	6.99	10.41	9.14	11.43	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.67	44.45	33.02
8	7.92	7.96	9.42	11.68	9.91	12.83	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.67	44.45	33.02
10	9.92	9.96	11.86	13.21	12.95	16.00	25.40	28.58	51.44	27.69	2.03	11.30	13.72	21.08	3.40	50.80	38.10
12	11.92	11.96	14.45	13.72	12.95	16.00	25.40	28.58	51.44	27.69	2.03	11.30	13.72	21.08	3.40	50.80	38.10
16	15.92	15.96	19.00	19.18	20.45	22.10	33.32	38.10	68.33	37.21	3.04	12.95	14.61	25.40	5.87	63.50	45.97
20	19.92	19.96	24.08	20.57	22.61	24.38	33.32	38.10	68.33	37.21	3.04	13.46	15.11	25.40	5.87	63.50	45.97
25	24.92	24.96	30.94	28.83	30.48	32.51	33.32	38.10	76.45	46.48	3.04	20.32	21.97	33.53	5.87	73.03	57.15

Dimensions in millimeters

Pin Dia	Grip Length (inches) 0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
Double Acting Ring Handle - Inch - MS17990												
3/16	806200	806201	806202	806203	806204	806205	806206	806208	806209	806211	806213	806215
1/4	806216	806217	806218	806219	806220	806221	806222	806224	806225	806227	806229	806231
5/16	806232	806233	806234	806235	806236	806237	806238	806240	806241	806243	806245	806247
3/8	806248	806249	806250	806251	806252	806253	806254	806256	806257	806259	806261	806263
7/16	806264	806265	806266	806267	806268	806269	806270	806272	806273	806275	806277	806279
1/2	806280	806281	806282	806283	806284	806285	806286	806288	806289	806291	806293	806295
9/16	806296	806297	806298	806299	806300	806301	806302	806304	806305	806307	806309	806311
5/8	806312	806313	806314	806315	806316	806317	806318	806320	806321	806323	806325	806327
3/4	806328	806329	806330	806331	806332	806333	806334	806336	806337	806339	806341	806343
7/8	806344	806345	806346	806347	806348	806349	806350	806352	806353	806355	806357	806359
1	806360	806361	806362	806363	806364	806365	806366	806368	806369	806371	806373	806375
Double Acting T-Handle - Inch - MS17988												
3/16	803400	803401	803402	803403	803404	803405	803406	803408	803409	803411	803413	803415
1/4	803416	803417	803418	803419	803420	803421	803422	803424	803425	803427	803429	803431
5/16	803432	803433	803434	803435	803436	803437	803438	803440	803441	803443	803445	803447
3/8	803448	803449	803450	803451	803452	803453	803454	803456	803457	803459	803461	803463
7/16	803464	803465	803466	803467	803468	803469	803470	803472	803473	803475	803477	803479
1/2	803480	803481	803482	803483	803484	803485	803486	803488	803489	803491	803493	803495
9/16	803496	803497	803498	803499	803500	803501	803502	803504	803505	803507	803509	803511
5/8	803512	803513	803514	803515	803516	803517	803518	803520	803521	803523	803525	803527
3/4	803528	803529	803530	803531	803532	803533	803534	803536	803537	803539	803541	803543
7/8	803544	803545	803546	803547	803548	803549	803550	803552	803553	803555	803557	803559
1	803560	803561	803562	803563	803564	803565	803566	803568	803569	803571	803573	803575
Double Acting L-Handle - Inch - MS17989												
3/16	806000	806001	806002	806003	806004	806005	806006	806008	806009	806011	806013	806015
1/4	806016	806017	806018	806019	806020	806021	806022	806024	806025	806027	806029	806031
5/16	806032	806033	806034	806035	806036	806037	806038	806040	806041	806043	806045	806047
3/8	806048	806049	806050	806051	806052	806053	806054	806056	806057	806059	806061	806063
7/16	806064	806065	806066	806067	806068	806069	806070	806072	806073	806075	806077	806079
1/2	806080	806081	806082	806083	806084	806085	806086	806088	806089	806091	806093	806095
9/16	806096	806097	806098	806099	806100	806101	806102	806104	806105	806107	806109	806111
5/8	806112	806113	806114	806115	806116	806117	806118	806120	806121	806123	806125	806127
3/4	806128	806129	806130	806131	806132	806133	806134	806136	806137	806139	806141	806143
7/8	806144	806145	806146	806147	806148	806149	806150	806152	806153	806155	806157	806159
1	806160	806161	806162	806163	806164	806165	806166	806168	806169	806171	806173	806175

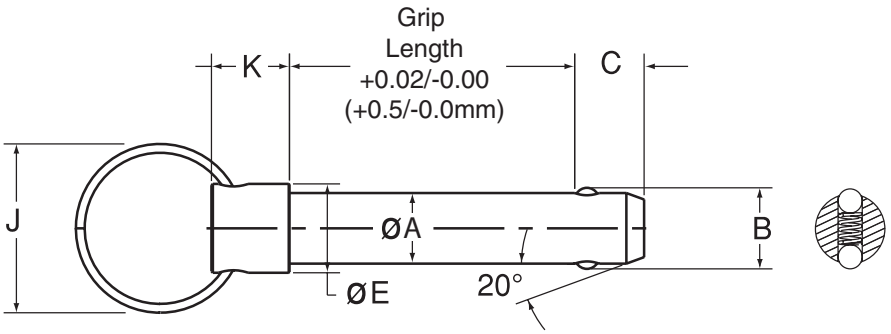
Contact customer service for other sizes.

Pin Dia	Grip Length (mm) 10	15	20	25	30	40	50	60	70	80	90	100
Double Acting Ring Handle - Metric												
5	855000	855001	855002	855003	855004	855005	855006	855007	855008	855009	855010	855011
6	855012	855013	855014	855015	855016	855017	855018	855019	855020	855021	855022	855023
8	855024	855025	855026	855027	855028	855029	855030	855031	855032	855033	855034	855035
10	855036	855037	855038	855039	855040	855041	855042	855043	855044	855045	855046	855047
12	855048	855049	855050	855051	855052	855053	855054	855055	855056	855057	855058	855059
16	855060	855061	855062	855063	855064	855065	855066	855067	855068	855069	855070	855071
20	855072	855073	855074	855075	855076	855077	855078	855079	855080	855081	855082	855083
25	855084	855085	855086	855087	855088	855089	855090	855091	855092	855093	855094	855095
Double Acting T-Handle - Metric												
5	853400	853401	853402	853403	853404	853405	853406	853407	853408	853409	853410	853411
6	853412	853413	853414	853415	853416	853417	853418	853419	853420	853421	853422	853423
8	853424	853425	853426	853427	853428	853429	853430	853431	853432	853433	853434	853435
10	853436	853437	853438	853439	853440	853441	853442	853443	853444	853445	853446	853447
12	853448	853449	853450	853451	853452	853453	853454	853455	853456	853457	853458	853459
16	853460	853461	853462	853463	853464	853465	853466	853467	853468	853469	853470	853471
20	853472	853473	853474	853475	853476	853477	853478	853479	853480	853481	853482	853483
25	853484	853485	853486	853487	853488	853489	853490	853491	853492	853493	853494	853495
Double Acting L-Handle - Metric												
5	854600	854601	854602	854603	854604	854605	854606	854607	854608	854609	854610	854611
6	854612	854613	854614	854615	854616	854617	854618	854619	854620	854621	854622	854623
8	854624	854625	854626	854627	854628	854629	854630	854631	854632	854633	854634	854635
10	854636	854637	854638	854639	854640	854641	854642	854643	854644	854645	854646	854647
12	854648	854649	854650	854651	854652	854653	854654	854655	854656	854657	854658	854659
16	854660	854661	854662	854663	854664	854665	854666	854667	854668	854669	854670	854671
20	854672	854673	854674	854675	854676	854677	854678	854679	854680	854681	854682	854683
25	854684	854685	854686	854687	854688	854689	854690	854691	854692	854693	854694	854695

Contact customer service for other metric sizes.

Heavy Duty Detent Pins
MIL-P-45952/1





The Heavy Duty Detent Kwik-Lok™ Pin is a high quality shoulder style alignment pin for applications that don't require the positive locking ball feature.

- Heavy duty spring and 2 spring loaded stainless steel locking balls provide high pull out force
- Available in 300 Series Stainless steel or heat treated alloy steel. Also in 17-4 PH heat treated stainless steel upon request
- Includes split ring for easy attachment of optional lanyard.

Heavy Duty Detent Specifications - Inch

Nom. Pin Dia	Dia. +0.000/ -0.003 A	Min. B	+0.00/ -0.06 C	Dia. +/–0.015 E	Dia. J	K	Double Shear Strength - (lbs)		Pull Out Force (lbs)	Recommended Hole Diameter	
							Alloy Steel Heat Treated	Stainless 300 Series		Max	Min
3/16 (#10)	.1885	.200	.250	.375	1.187	.50	4,700	2,530	2 to 7	0.1940	0.1900
1/4	.2480	.280	.344	.375	1.187	.50	8,500	4,500	2 to 7	0.2540	0.2500
5/16	.3105	.360	.359	.438	1.187	.50	13,400	7,100	2 to 7	0.3165	0.3125
3/8	.3730	.430	.390	.500	1.187	.50	19,600	10,300	6 to 14	0.3790	0.3750
7/16	.4355	.495	.469	.625	1.187	.55	26,700	14,050	6 to 14	0.4425	0.4375
1/2	.4980	.570	.516	.625	1.187	.55	34,900	18,400	10 to 22	0.5050	0.5000
9/16	.5605	.645	.593	.688	1.687	.55	44,300	23,300	15 to 30	0.5675	0.5625
5/8	.6230	.720	.672	.750	1.687	.55	54,900	28,900	15 to 30	0.6300	0.6250
3/4	.7480	.860	.750	.875	1.687	.55	79,300	41,800	15 to 30	0.7570	0.7500
7/8	.8730	1.030	.859	1.000	2.187	.55	108,000	57,000	20 to 35	0.8820	0.8750
1	.9980	1.160	.984	1.125	2.187	.55	141,500	74,600	20 to 40	1.0100	1.0000

Heavy Duty Detent Specifications - Metric

Nom. Pin Dia	Dia. +0.000/ -0.080 A	Min. B	+0.0/ -1.5 C	Dia. +/– 0.4 E	Dia. J	K	Double Shear Strength - (kN)		Pull Out Force N	Recommended Hole Diameter	
							Alloy Steel Heat Treated	Stainless 300 Series		Max	Min
5	4.95	5.23	6.35	9.53	30.15	12.7	23	12	9 to 31	5.1	5
6	5.95	6.88	8.74	9.53	30.15	12.7	33	17	9 to 31	6.1	6
8	7.95	9.35	9.12	11.13	30.15	12.7	60	32	9 to 31	8.1	8
10	9.95	11.58	9.91	12.70	30.15	12.7	96	50	26 to 62	10.1	10
12	11.95	13.84	13.11	15.88	30.15	14.2	138	73	44 to 97	12.1	12
16	15.95	18.54	17.07	19.05	42.85	14.2	248	130	66 to 133	16.1	16
20	19.95	22.91	19.05	22.23	42.85	14.2	388	204	89 to 155	20.15	20
25	24.95	29.18	24.99	28.58	55.55	14.2	609	321	89 to 178	25.15	25

Dimensions in millimeters

Heavy Duty Detent Pins - Inch

PART NUMBERS	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
	Stainless Steel - Stainless Steel, 300 series												
	3/16	**803800**	**803801**	**803802**	**803803**	**803804**	**803805**	**803806**	**803808**	**803809**	**803811**	**803813**	**803815**
	1/4	**803816**	**803817**	**803818**	**803819**	**803820**	**803821**	**803822**	**803824**	**803825**	**803827**	**803829**	**803831**
	5/16	**803832**	**803833**	**803834**	**803835**	**803836**	**803837**	**803838**	**803840**	**803841**	**803843**	**803845**	**803847**
	3/8	**803848**	**803849**	**803850**	**803851**	**803852**	**803853**	**803854**	**803856**	**803857**	**803859**	**803861**	**803863**
	7/16	**803864**	**803865**	**803866**	**803867**	**803868**	**803869**	**803870**	**803872**	**803873**	**803875**	**803877**	**803879**
	1/2	**803880**	**803881**	**803882**	**803883**	**803884**	**803885**	**803886**	**803888**	**803889**	**803891**	**803893**	**803895**
	9/16	**803896**	**803897**	**803898**	**803899**	**803900**	**803901**	**803902**	**803904**	**803905**	**803907**	**803909**	**803911**
	5/8	**803912**	**803913**	**803914**	**803915**	**803916**	**803917**	**803918**	**803920**	**803921**	**803923**	**803925**	**803927**
	3/4	**803928**	**803929**	**803930**	**803931**	**803932**	**803933**	**803934**	**803936**	**803937**	**803939**	**803941**	**803943**
	7/8	**803944**	**803945**	**803946**	**803947**	**803948**	**803949**	**803950**	**803952**	**803953**	**803955**	**803957**	**803959**
	1	**803960**	**803961**	**803962**	**803963**	**803964**	**803965**	**803966**	**803968**	**803969**	**803971**	**803973**	**803975**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	3/16	803600	803601	803602	803603	803604	803605	803606	803608	803609	803611	803613	803615
	1/4	803616	803617	803618	803619	803620	803621	803622	803624	803625	803627	803629	803631
	5/16	803632	803633	803634	803635	803636	803637	803638	803640	803641	803643	803645	803647
	3/8	803648	803649	803650	803651	803652	803653	803654	803656	803657	803659	803661	803663
	7/16	803664	803665	803666	803667	803668	803669	803670	803672	803673	803675	803677	803679
	1/2	803680	803681	803682	803683	803684	803685	803686	803688	803689	803691	803693	803695
	9/16	803696	803697	803698	803699	803700	803701	803702	803704	803705	803707	803709	803711
	5/8	803712	803713	803714	803715	803716	803717	803718	803720	803721	803723	803725	803727
	3/4	803728	803729	803730	803731	803732	803733	803734	803736	803737	803739	803741	803743
	7/8	803744	803745	803746	803747	803748	803749	803750	803752	803753	803755	803757	803759
	1	803760	803761	803762	803763	803764	803765	803766	803768	803769	803771	803773	803775

Contact customer service for other sizes.

Heavy Duty Detent Pins - Metric

PART NUMBERS	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
	Stainless Steel - Stainless Steel, 300 series												
	5	**853800**	**853801**	**853802**	**853803**	**853804**	**853805**	**853806**	**853807**	**853808**	**853809**	**853810**	**853811**
	6	**853812**	**853813**	**853814**	**853815**	**853816**	**853817**	**853818**	**853819**	**853820**	**853821**	**853822**	**853823**
	8	**853824**	**853825**	**853826**	**853827**	**853828**	**853829**	**853830**	**853831**	**853832**	**853833**	**853834**	**853835**
	10	**853836**	**853837**	**853838**	**853839**	**853840**	**853841**	**853842**	**853843**	**853844**	**853845**	**853846**	**853847**
	12	**853848**	**853849**	**853850**	**853851**	**853852**	**853853**	**853854**	**853855**	**853856**	**853857**	**853858**	**853859**
	16	**853860**	**853861**	**853862**	**853863**	**853864**	**853865**	**853866**	**853867**	**853868**	**853869**	**853870**	**853871**
	20	**853872**	**853873**	**853874**	**853875**	**853876**	**853877**	**853878**	**853879**	**853880**	**853881**	**853882**	**853883**
	25	**853884**	**853885**	**853886**	**853887**	**853888**	**853889**	**853890**	**853891**	**853892**	**853893**	**853894**	**853895**
	Alloy Steel - High Strength Alloy Steel, 4130 heat treated and cadmium plated, yellow trivalent chromium passivation												
	5	853600	853601	853602	853603	853604	853605	853606	853607	853608	853609	853610	853611
	6	853612	853613	853614	853615	853616	853617	853618	853619	853620	853621	853622	853623
	8	853624	853625	853626	853627	853628	853629	853630	853631	853632	853633	853634	853635
	10	853636	853637	853638	853639	853640	853641	853642	853643	853644	853645	853646	853647
	12	853648	853649	853650	853651	853652	853653	853654	853655	853656	853657	853658	853659
	16	853660	853661	853662	853663	853664	853665	853666	853667	853668	853669	853670	853671
	20	853672	853673	853674	853675	853676	853677	853678	853679	853680	853681	853682	853683
	25	853684	853685	853686	853687	853688	853689	853690	853691	853692	853693	853694	853695

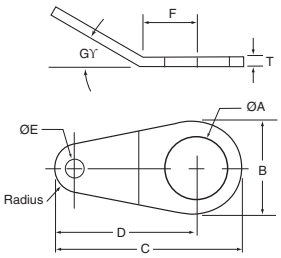
Contact customer service for other metric sizes.

Lanyard Specifications & Styles

Lanyard Specifications:

- 302/304 Stainless Steel cable, 1/16" (1.59 mm), with green nylon jacket, 1/8" (3.18 mm), meets Mil-DTL-83420
- Other cable diameters, other jacket colors (blue, black, clear) and special configuration styles by special order.

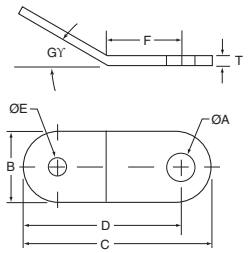
Stainless Steel Round Tab



Hold Down Side of Tab

9 standard Tab Hole Diameters (ØA)
0.131-0.515" (3.3-13.1mm)

Aluminum Oval Tab



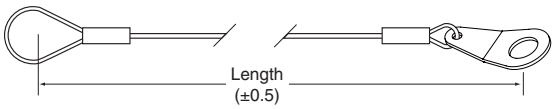
Hold Down Side of Tab

3 standard Tab Hole Diameters (ØA)
0.131", 0.196", 0.257"
(3.3mm, 4.9mm, 6.5mm)

Consult Table 1, Page 7.23 for Options.

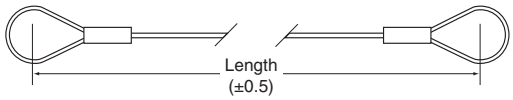
Standard (W/Tab)

(Fig. 1)



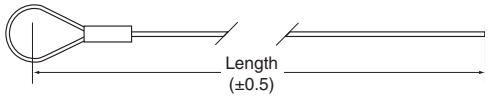
Standard (2 Loops)

(Fig. 2)



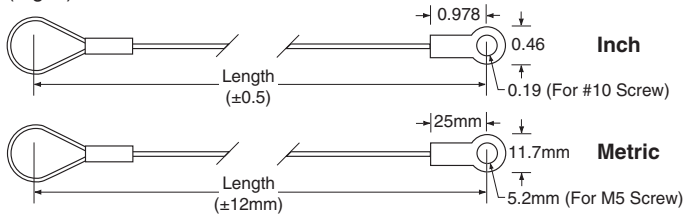
Standard (1 Loop)

(Fig. 3)



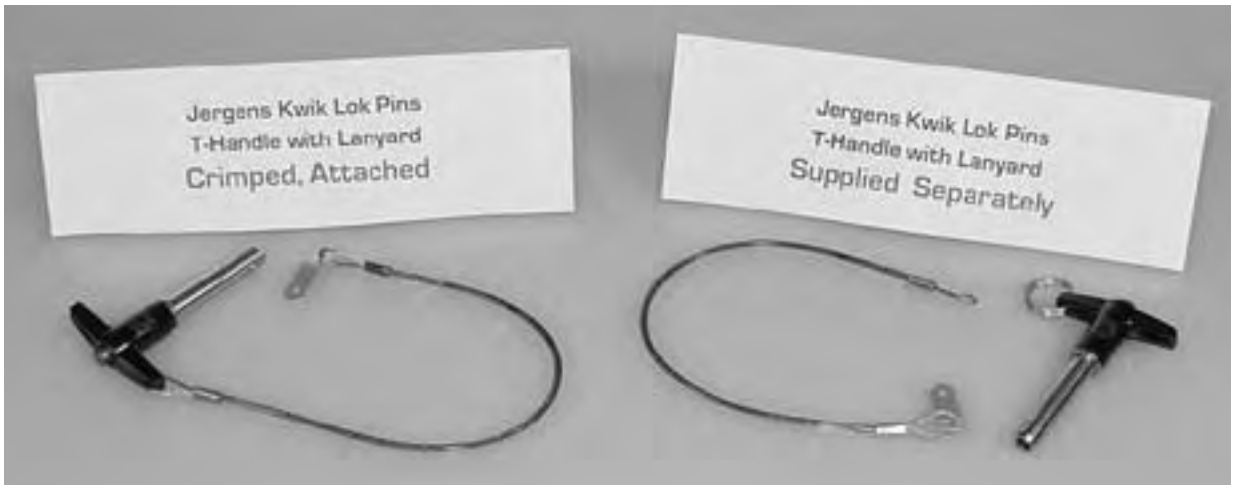
Loop/Eyelet, Stainless Steel

(Fig. 4)



Tab Dimensions - Inch

Tab Style	+/-0.005 ØA	+/-0.01 B	+/-0.02 C	+/-0.02 D	+/-0.005 ØE	+/-0.016 Radius	+/-0.01 F	+/- 5 deg. G	+/-0.01 T	Material
Round Tab	See Table 1	0.688	1.316	1.004	0.125	0.160	0.406	12	0.048	300 Series Stain. Steel
Oval Tab	See Table 1	0.375	1.130	0.945	0.125	–	0.500	12	0.060	Aluminum



Ordering Lanyards Attached to Pins

Lanyard with a Tab (Fig. 1)

Length		Round Tab	Oval Tab
inch	mm	Stainless Steel	Aluminum
4	102	(Pin#) A*	(Pin#) M*
6	152	B*	N*
8	203	C*	P*
10	254	D*	Q*
12	305	H*	R*
16	406	J*	S*
20	508	K*	T*
24	610	L*	U*

Substitute the asterisk (*) with the proper hole size letter from Table 1.

Table 1 Tab Hole Size

Tab Mounting Hole Diameter		
Inch	mm	Size Letter
0.131	3.3	P
0.196	4.9	Q
0.257	6.5	R
0.283†	7.1†	S
0.320†	8.1†	T
0.379†	9.6†	U
0.406†	10.3†	V
0.468†	11.8†	W
0.515†	13.1†	Y

(†) These sizes only available in stainless steel round tabs

Lanyard without a Tab

Length		2 Loops (Fig. 2)	1 Loops (Pin) (Fig. 3)
inch	mm		
4	102	(Pin#)EA	(Pin#)FA
6	152	EB	FB
8	203	EC	FC
10	254	ED	FD
12	305	EE	FE
16	406	EF	FF
20	508	EG	FG
24	610	EH	FH

Lanyard Loop/Eyelet (Fig. 4)

For Screw Size	
#10	M5
(Pin#)GA	(Pin#)HA
GB	HB
GC	HC
GD	HD
GE	HE
GF	HF
GG	HG
GH	HH

Part Numbering:

Lanyards with Tab, attached to Pins

To order Kwik-Lok™ pins with attached lanyard and tab (fig. 1), photo on page 9.22. Specify the six digit pin number followed by two letters from the tables above to define the lanyard length, type of lanyard and tab mounting hole diameter. The first letter designates the length of the lanyard and the type of Tab. The second letter (from table 1) designates the size of the hole in the tab for the mounting screw.

Example A: For an Aluminum T-Handle with stainless steel pin body 1/2" x 1.0", with an attached 8" Lanyard and Round Stainless Steel Tab with a mounting hole diameter of 0.257" (6.5 mm), the part number is 801082CR.

Lanyards with 2 loops, 1 loop, or loop/eyelet

To order Kwik-Lok™ pins with lanyard and 2 loops (fig. 2), 1 loop (fig. 3) or loop/eyelet (fig. 4), specify the six digit pin number followed by a two letter combination from above to define lanyard length, number of loops or loop/eyelet with mounting screw size.

Example B: For all Stainless Steel L Handle Pin, 1"x 6", with attached 24" (610 mm) lanyard and 2 Loops, the part number is 805775EH.

Example C: For all Stainless Steel Button Handle, pin 6 x 40 mm, with attached 10" (254 mm) lanyard and Loop/Eyelet for M5 screws, the part number is 855417HD.

Note: Split rings are not included when attaching lanyards, unless customer specified. In that case add an R as a third letter to the extension.

Ordering Lanyards When Supplied Separately Without Pins

Lanyards with Tabs (Fig. 1)

Length		Round Tab	Oval Tab
inch	mm	Stainless Steel	Aluminum
4	102	**890054***	**890104***
6	152	**890056***	**890106***
8	203	**890058***	**890108***
10	254	**890060***	**890110***
12	305	**890062***	**890112***
16	406	**890066***	**890116***
20	508	**890070***	**890120***
24	610	**890074***	**890124***

Substitute the asterisk (*) with the proper hole size letter from Table 1.

Table 1 Tab Hole Size

Tab Mounting Hole Diameter		
Inch	mm	Size Letter
0.131	3.3	P
0.196	4.9	Q
0.257	6.5	R
0.283†	7.1†	S
0.320†	8.1†	T
0.379†	9.6†	U
0.406†	10.3†	V
0.468†	11.8†	W
0.515†	13.1†	Y

(†) These sizes only available in stainless steel round tabs

Lanyards without Tabs

Length		2 Loops (Fig. 2)	1 Loops (Pin) (Fig. 3)
inch	mm		
4	102	**890204**	**890254**
6	152	**890206**	**890256**
8	203	**890208**	**890258**
10	254	**890210**	**890260**
12	305	**890212**	**890262**
16	406	**890216**	**890266**
20	508	**890220**	**890270**
24	610	**890224**	**890274**

Lanyard Loop/Eyelet (Fig. 4)

For Screw Size	
#10	M5
890304	**890404**
890306	**890406**
890308	**890408**
890310	**890410**
890312	**890412**
890316	**890416**
890320	**890420**
890324	**890424**

Part Numbering: Lanyards to be Supplied Separately

For lanyards with tabs, ordered separately without pins (photo page 9.22), specify the six digit pin number followed by the hole size letter from Table 1.

Example D: For a 24" (610 mm) lanyard with stainless steel round tab with a mounting hole diameter of 0.406" (10.3 mm), the part number is 890074V.

Kwik-Lok™ Pin Specifications

Kwik-Lok™ Pin Specifications - Inch

Pin Dia (in)	Double Shear Resistance Minimum (lbs)*		Locking Element Tensile Strength Min (lbs)†	Recommended Hole Diameter (in)	
	Stainless Steel 17-4 PH Heat Treated	Alloy Steel Heat Treated Cadmium Plated		Max	Min
3/16 (#10)	5,150	4,600	200	0.1940	0.1900
1/4	9,200	8,200	230	0.2540	0.2500
5/16	14,400	12,800	510	0.3165	0.3125
3/8	20,700	18,400	575	0.3790	0.3750
7/16	28,500	25,000	710	0.4425	0.4375
1/2	36,900	32,800	1,160	0.5050	0.5000
9/16	46,700	41,600	1,420	0.5675	0.5625
5/8	57,800	51,400	2,070	0.6300	0.6250
3/4	83,200	74,600	2,950	0.7570	0.7500
7/8	112,500	100,000	3,900	0.8820	0.8750
1	147,200	131,000	5,480	1.0100	1.0000

Kwik-Lok™ Pin Specifications - Metric

Pin Dia (mm)	Double Shear Resistance Minimum (kN)*		Locking Element Tensile Strength Min (N)†	Recommended Hole Diameter(mm)	
	Stainless Steel 17-4 PH Heat Treated	Alloy Steel Heat Treated Cadmium Plated		Max	Min
5	24	21	890	5.1	5
6	35	31	890	6.1	6
8	65	58	2,250	8.1	8
10	100	88	2,280	10.1	10
12	144	128	3,150	12.1	12
16	257	229	9,200	16.1	16
20	403	358	13,100	20.15	20
25	631	561	23,400	25.15	25

* Double shear values are the minimum requirements according to NAS functionality tests.

† Locking element tensile strength values are the minimum requirements of NAS functionality tests. Pins may be special ordered with 4 locking balls for additional locking element tensile strength.

Military Specifications(MS) & National Aerospace Standards(NASM)

Jergens is a Department of Defense approved supplier of Quick Release Pins, under CAGE code 94882.
Certificate of Conformance is available upon request at time of order.
DFARS compliant material can be quoted upon request.

NAS Number 1333-1346 and 1353-1366 are available.

MS Numbers 17984-90 now refer to NASM 17984-90.

MS 17984 C 4 15

- 15 → Grip Length in tenths of an inch
  Example: 15 = 1.5”
- 4 → Pin Diameter in sixteenth of an inch
  Example: 4 = ¼”
- C → Pin Material (Body Only)
  Example: C = Stainless Steel
  S = Carbon Steel
- 17984 → Handle Style or Type
  17984 = Button Handle – Single Acting
  17985 = T-Handle – Single Acting
  17986 = L-Handle – Single Acting
  17987 = Ring Handle – Single Acting
  17988 = T-Handle – Double Acting
  17989 = L-Handle – Double Acting
  17990 = Ring Handle – Double Acting
- MS → Military Standard

Special Military and Aerospace size and configurations are available. Please contact customer service 1-800-JERGENS (537-4367)

Material Specifications

Kwik-Lok™ Pin

Component Part	Material
Bodies (Shank)	CRES 17-4 PH Stainless Steel
	Alloy Steel 4130
Balls	CRES 440C Stainless Steel*
Buttons	CRES 303 Stainless Steel
	Aluminum Alloy 2024
Springs	CRES 302 Stainless Steel
Handles	
T & L Handles	Aluminum (380) Casting
Button Handles	Aluminum Alloy 2024
Ring Handles	CRES 303 Stainless Steel
Heavy Duty T & L	CRES 303 Stainless Steel
Heavy Duty Button Handle	CRES 303 Stainless Steel
Recessed Button Handle	CRES 300 Series Stainless Steel
Collar	CRES 303 or 304 Stainless Steel

Kwik-Lok™ Lifting Pin

Component Part	Material
Bodies (Shank)	CRES 17-4 PH Stainless Steel
Balls	CRES 440C Stainless Steel*
Buttons	CRES 303 Stainless Steel
Lift Ring	Forged 17-4 PH Stainless Steel
Springs	CRES 302 Stainless Steel

Detent Pins

Component Part	Material
Bodies (Shank)	CRES 303 Stainless Steel
	Alloy Steel 4130
Balls	CRES 440C Stainless Steel*
Springs	CRES 302 Stainless Steel
Head	CRES 303 Stainless Steel
	Alloy Steel 4130

* Locking Balls also available in 302 Stainless Steel by special order.
Actual locking element tensile strength is reduced by lower strength alloys.
Ordering special pins with 4 balls will increase locking element tensile strength above NAS functionality test requirements.

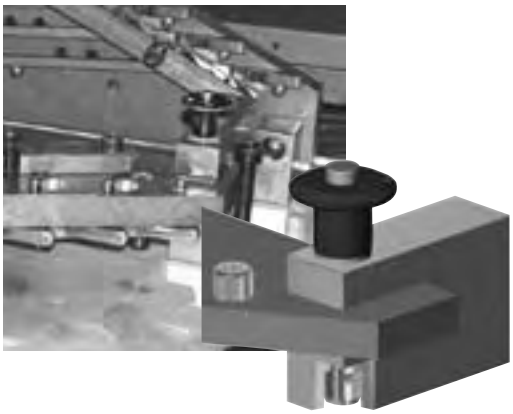
Heat Treatment:

- 17-4 PH Stainless Steel: Condition H-900, Rockwell C40 Min per MIL-H-6875
- 4130 Alloy Steel: Rockwell C36-40

Surface Treatment:

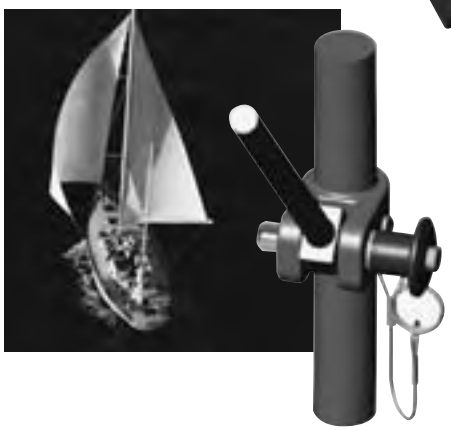
- CRES Parts: Passivate per AMS-QQ-P-35
- Alloy Steel Parts: Cadmium plate per QQ-P-416, Type II, Class 2
- Aluminum Alloy Parts: Anodize per MIL-A-8625 Type I or II per MIL-C-5541 Class 1A
- Aluminum Handles: Color Black

Jergens Kwik-Lok™ Pins are designed and manufactured to meet or exceed these standards.









Diverse Application Needs

Manufacturing:
Jigs and Fixturing
Packaging Machinery
Paper Mills/Machinery
Conveyor Systems
Material Handling Equipment
Textile Machinery
Forming and Fabricating Equipment
Plastic Injection Molding

Aviation/Military:
Tank Doors and Lids
(Various process industries)
Landing Gear
Drop Tanks
Ordinance
Cargo Nets
Aircraft Seating
Aerial Spraying Equipment
Gliders

General Industrial:
Scaffolding Equipment
Mining Equipment
Drilling Equipment
Lifting Equipment
(Hoists, Slings, Cables, etc.)
Trailer Beds

Medical Equipment:
Hospital Beds and Cots
Medical Equipment
Portable X-Ray Equipment
Wheelchairs

Recreational Industry:
Hot Air Balloons
Recreational Vehicles
Racing Cars
(hoods, transmissions,
steering wheels)
Weight Machines
Jet Skis
Hang Gliders
Mountain Climbing Equipment

Marine Industry
(Recreation/Commercial):
Anchors
Bimini Covers
Outriggers
Boat Trailers
Rudder/Tiller Attachments
Sailboat Rigging
Commercial Boat Rigging

Need a Special Size or Configuration?

See page 9.27 and contact Jergens for more information.

3D solid models available in SolidWorks® (.SLDPRT) and other formats, downloadable from www.jergensinc.com.

SolidWorks® is a registered trademark of SolidWorks Corporation.

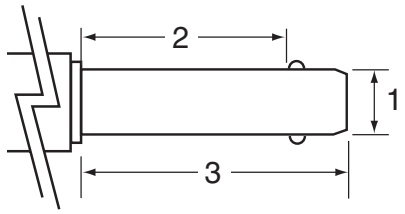
Kwik-Lok™ Pin Special Application Information



Special Kwik-Lok™ Pins

If you don't see the exact Kwik-Lok™ Pin to meet your application requirements, photocopy the form below, indicate your requirements, and send to Jergens.

Quotation Request Worksheet



1. Pin Diameter _____

2. Grip Length _____

3. Overall Length _____

***For special Shank/Lanyard configurations - Please provide drawing or sketch.**

Application (describe): _____

Handle Style: ☐ T ☐ L ☐ Ring ☐ Button ☐ Recessed Button ☐ Kwik-Lok™ Lifting Pins ☐ Special _____

Body Material: ☐ 17-4 PH heat treated Stainless Steel ☐ Alloy Steel, heat treated, cadmium plated

☐ Other(describe) _____

Number of Locking Elements: ☐ 2 balls(standard) ☐ 4 balls Attach Split Ring? _____ (yes/no)

*Lanyard Length: _____ (inch or mm) SS cable with nylon color _____ (Green,Black,Clear or other)

Attach Lanyard directly to Pin without split ring? _____ (yes/no) Attach to Split Ring? _____ (yes/no)

Tabs: ☐ Round (Stainless Steel) ☐ Oval(Aluminum) Mounting Hole Size _____ (inch or mm)

Loop/Eyelet (Stainless Steel) with Mounting Hole: ☐ 0.19" for #10 screw ☐ 5.2mm for M5 screw

Quantity Required: _____ (pieces) Request date: _____ Annual Requirements _____ (pieces)

NAME: _____ POSITION/TITLE: _____

COMPANY: _____ ADDRESS: _____

CITY: _____ STATE: _____ COUNTRY: _____ POSTAL CODE: _____

TELEPHONE: _____ FAX: _____ E-MAIL: _____

PRECISION PARTS FOR MILITARY APPLICATIONS






Jergens is an ISO 9001:2000 certified, government-approved manufacturer. We are your complete source for mil-spec Kwik-Lok™ pins, spring-loaded devices, threaded inserts, and threaded components and washers. We also offer workholding components, locating components, handles, knobs and handwheels, lifting products that include center-pull and side-pull styles of hoist rings, and toggle clamps.

Jergens can offer quick turnaround on special orders, low or no minimums, and engineering expertise that results in our ability to answer and help with technical questions. We offer the advantages of relationship and know-how.

- **MS, NAS, DFARS, and RoHS Compliant Parts Available**
- **Military Drawings Available in 3D Solid Models from the Web or Fixture Pro™ Plus CD**
- **Manufacturing #: 697830**
- **FSCMI Cage Code: 94882**

Jergens®



Bolster Plate Bushings 10.5
Installation and Removal Instructions 10.2
Internal Locking Thread Repair Insert 10.8-10.9
Keylocking, Extra Heavy Duty Industrial Style 10.6
Keylocking, Heavy Duty Industrial Style 10.4
Keylocking, Metric/Inch 10.5
Keylocking, Solid Industrial Style 10.7
Keylocking, Thinwall Industrial Style 10.3
Miniature Metric Mil Spec Inserts 10.10-10.11
Thread Repair Kits 10.12-10.15

Installation Information



1. Drill to allow full tap depth shown in chart. Note: Tap drill is oversized; see chart below. Countersink as shown in chart.



2. Tap to depth shown in chart.



3. Install insert .010" to .030" below surface.

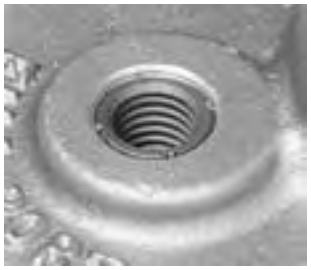


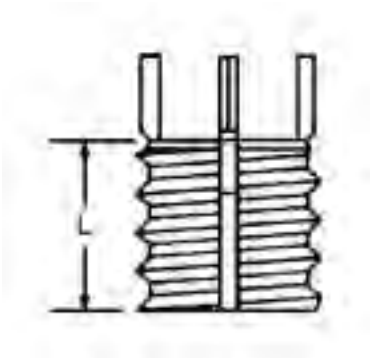
4. Drive keys down with proper installation tool.

Removal Information

Jergens Keylocking Inserts can be removed without damage to the parent material.

1. Drill the insert to the size and depth shown under removal data in the chart below.
2. Bend the keys down and break them off.
3. Remove the insert using an E-Z out or similar tool.





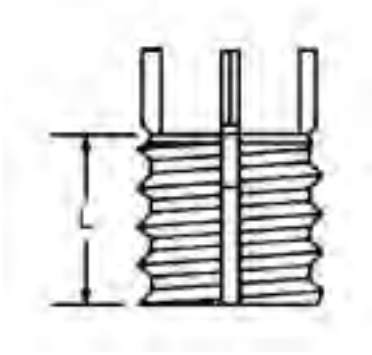
Installation Information
Preparation of External Threads
Prior to Installation (For Keylocking Inserts Only)

Insert		Installation Data			Removal Data	
External Thread Class 2A	Length L	Tap Drill Size	C'sink Dia. +.010 -.000	Minimum Tap Depth	Drill	
					Size	Depth
5/16-18	.31	I	.323	.37	7/32	1/8
3/8-16	.31/.37	Q	.385	.37/.43	9/32	1/8
7/16-14	.31/.37/.43	X	.447	.37/.43/.50	11/32	3/16
1/2-13	.37/.43/.50	29/64	.510	.44/.50/.56	13/32	3/16
9/16-12	.43/.50/.56	33/64	.572	.50/.56/.62	15/32	3/16
5/8-11	.50/.62	37/64	.635	.56/.68	17/32	3/16
3/4-16	.62/.81	45/64	.760	.68/.94	21/32	3/16
7/8-14	.68/.81/.87	53/64	.885	.75/.94/1.0	25/32	3/16
1-12	.87	15/16	1.020	1.0	27/32	5/16
1 1/8-12	1.12	1 1/16	1.145	1.31	31/32	5/16
1 1/4-12	1.12/1.25	1 3/16	1.270	1.31/1.44	1 3/32	5/16
1 3/8-12	1.25/1.37	1 5/16	1.395	1.44/1.56	1 7/32	5/16
1 1/2-12	1.37/1.62	1 7/16	1.520	1.56/1.84	1 11/32	5/16
1 5/8-12	1.81	1 9/16	1.640	2.06	1 15/32	5/16
1 7/8-12	2.00	1 13/16	1.890	2.28	1 23/32	5/16

Keylocking Inserts

Thinwall Industrial Style





- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303 Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010 Metric ±.25mm
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.

Inch Inserts - Thinwall

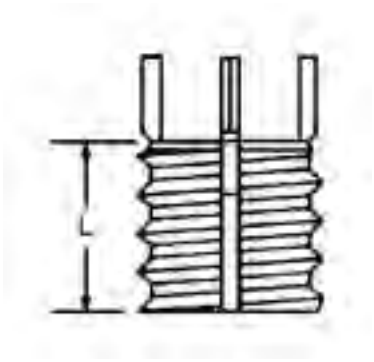
Internal Thread Class 2B	Part Number		External Thread	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
10-24	**25921**	**26321**	5/16-18	.31	**24721**
10-32	**26121**	**26521**	5/16-18	.31	**24721**
1/4-20	**25922**	**26322**	3/8-16	.37	**24722**
1/4-28	**26122**	**26522**	3/8-16	.37	**24722**
5/16-18	**25923**	**26323**	7/16-14	.43	**24723**
5/16-24	**26123**	**26523**	7/16-14	.43	**24723**
3/8-16	**25924**	**26324**	1/2-13	.50	**24724**
3/8-24	**26124**	**26524**	1/2-13	.50	**24724**
7/16-14	**25925**	**26325**	9/16-12	.56	**24725**
7/16-20	**26125**	**26525**	9/16-12	.56	**24725**
1/2-13	**25926**	**26326**	5/8-11	.62	**24726**
1/2-20	**26126**	**26526**	5/8-11	.62	**24726**

See chart on page 8.2 for installation information.

Metric Inserts - Thinwall

Part Number		Insert		Installation						Removal	
								Thread Tap		Drill	
Carbon Steel	Stainless Steel	Internal Thread Class 6H	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
25951	**26351**	M 5x0.8	M 8x1.25	8.0	**24751**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
25952	**26352**	M 6x1.0	M 10x1.25	10.0	**24752**	8.8	10.25	M 10x1.25	11.5	7.50	4.75
25953	**26353**	M 8x1.25	M 12x1.25	12.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
26153	**26553**	M 8x1.0	M 12x1.25	12.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
25955	**26355**	M 10x1.5	M 14x1.5	14.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
26155	**26555**	M 10x1.25	M 14x1.5	14.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
25956	**26356**	M 12x1.75	M 16x1.5	16.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75
26156	**26556**	M 12x1.25	M 16x1.5	16.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75

Keylocking Inserts
Heavy Duty Industrial Style



- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010
  Metric ±.25mm
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.

Inch Inserts - Heavy Duty

Internal Thread Class 2B	Part Number		External Thread	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
8-32	**25900**	**26300**	5/16-18	.31	**24719**
10-24	**25901**	**26301**	3/8-16	.31	**24701**
10-32	**26101**	**26501**	3/8-16	.31	**24701**
1/4-20	**25902**	**26302**	7/16-14	.37	**24702**
1/4-28	**26102**	**26502**	7/16-14	.37	**24702**
5/16-18	**25903**	**26303**	1/2-13	.43	**24703**
5/16-24	**26103**	**26503**	1/2-13	.43	**24703**
3/8-16	**25904**	**26304**	9/16-12	.50	**24704**
3/8-24	**26104**	**26504**	9/16-12	.50	**24704**
7/16-14	**25905**	**26305**	5/8-11	.62	**24705**
7/16-20	**26105**	**26505**	5/8-11	.62	**24705**
1/2-13	**25906**	**26306**	3/4-16	.62	**24706**
1/2-20	**26106**	**26506**	3/4-16	.62	**24706**
9/16-12	**25907**	**26307**	3/4-16	.81	**24707**
9/16-18	**26107**	**26507**	3/4-16	.81	**24707**
5/8-11	**25908**	**26308**	7/8-14	.87	**24708**
5/8-18	**26108**	**26508**	7/8-14	.87	**24708**
3/4-10	**25909**	**26309**	1 1/8-12	1.12	**24709**
3/4-16	**26109**	**26509**	1 1/8-12	1.12	**24709**
7/8-9	**25910**	**26310**	1 1/4-12	1.25	**24710**
7/8-14	**26110**	**26510**	1 1/4-12	1.25	**24710**
1-8	**25911**	**26311**	1 3/8-12	1.37	**24711**
1-12	**26111**	**26511**	1 3/8-12	1.37	**24711**
1-14	**26112**	—	1 3/8-12	1.37	**24711**
1 1/8-7	**25913**	—	1 1/2-12	1.62	**24713**
1 1/8-12	**26113**	—	1 1/2-12	1.62	**24713**
1 1/4-7	**25914**	—	1 5/8-12	1.81	**24714**
1 1/4-12	**26114**	—	1 5/8-12	1.81	**24714**
1 1/2-6	**25916**	—	1 7/8-12	2.00	**24716**
1 1/2-12	**26116**	—	1 7/8-12	2.00	**24716**

See chart on page 8.2 for installation information.

Metric Inserts - Heavy Duty

Part Number Carbon Steel	Part Number Stainless Steel	Insert			Installation					Removal	
		Internal Thread Class 6H	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Diameter +.25 -.00	Thread Tap		Drill	
								Size Class 6h	Min. Depth	Size	Depth
25963	**26363**	M 4x0.7	M 8x1.25	8.0	**24763**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
25964	**26364**	M 5x0.8	M 10x1.25	10.0	**24764**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
25965	**26365**	M 6x1.0	M 12x1.25	12.0	**24765**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
25966	**26366**	M 8x1.25	M 14x1.5	14.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
26166	**26566**	M 8x1.0	M 14x1.5	14.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
25967	**26367**	M 10x1.5	M 16x1.5	16.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
26167	**26567**	M 10x1.25	M 16x1.5	16.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
25969	**26369**	M 12x1.75	M 18x1.5	18.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
26169	**26569**	M 12x1.25	M 18x1.5	18.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
25970	**26370**	M 14x2.0	M 20x1.5	20.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
26170	**26570**	M 14x1.5	M 20x1.5	20.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
25971	**26371**	M 16x2.0	M 22x1.5	22.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26171	**26571**	M 16x1.5	M 22x1.5	22.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26172	**26572**	M 18x1.5	M 24x1.5	24.0	**24772**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
25973	**26373**	M 20x2.5	M 30x2.0	30.0	**24773**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26173	**26573**	M 20x1.5	M 30x2.0	30.0	**24773**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26174	**26574**	M 22x1.5	M 32x2.0	32.0	**24774**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
25975	**26375**	M 24x3.0	M 33x2.0	33.0	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35
26175	**26575**	M 24x2.0	M 33x2.0	33.0	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35

NOTE: Install insert .25mm to .76mm below surface and drive locking keys down. See C'sink Diameter column above.

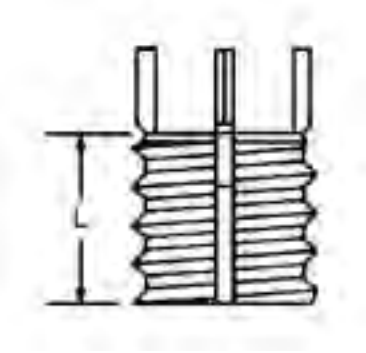
Keylocking Inserts

Metric/Inch Inserts



Create Metric Holes... With Inch Taps!

This unique product allows you to create a metric thread utilizing inch drills and taps. The insert O.D. is inch sized, the I.D. is metric.



Metric Internal/Inch External - Heavy Duty Industrial Style

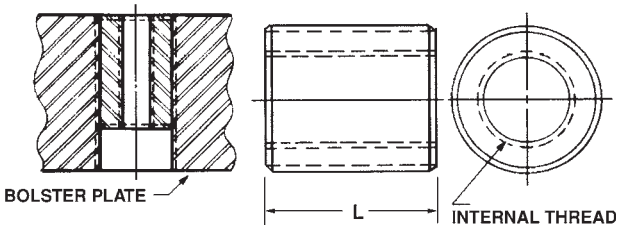
Part Number Carbon Steel	Insert			Installation					Removal	
	Internal Thread Class 6H	External Thread Class 2A	Length L	Installation Tool Part Number	Tap Drill Size	C'sink Diameter +.010 -.000	Thread Tap Size Class 2b	Thread Tap Min. Depth	Drill Size	Drill Depth
26243	M 6x1.0	3/8 - 16	.31	**24843**	Q	.38	3/8 - 16	.37	9/32	1/8
26244	M 8x1.25	1/2 - 13	.43	**24844**	29/64	.51	1/2 - 13	.50	13/32	3/16
26245	M 10x1.5	5/8 - 11	.50	**24845**	37/64	.63	5/8 - 11	.56	17/32	3/16
26247	M 12x1.75	3/4 - 16	.62	**24847**	45/64	.76	3/4 - 16	.68	21/32	3/16
26248	M 14x2.0	7/8 - 14	.81	**24848**	53/64	.88	7/8 - 14	.94	25/32	5/16
26249	M 16x2.0	1" - 12	.87	**24849**	15/16	1.02	1" - 12	1.00	27/32	5/16

All dimensions are in inches except for internal thread, which is metric.

Bolster Plate Bushings



- Material: Stressproof
- Finish: Black Oxide
- Internal Thread: 2B-UNC
- External Thread: 2A-UNF

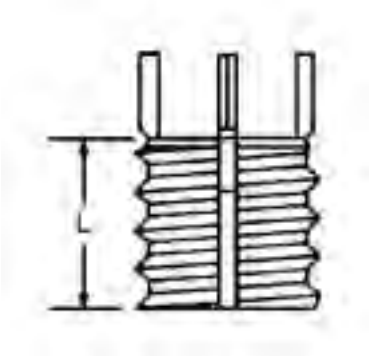


Repairs are made quickly, easily, and right on the machine. Re-tap bolster plate hole, insert the threaded bushing to match, use a locking type sealant to lock the bushing in place. The Bolster Plate Bushings can also be used as threaded bushings in cast iron machine bases where greater thread strength is necessary. Eliminates the problems of "pulled-out" cast iron threads, reduces the need for bulky threaded cast iron sections.

Part Number	Internal Thread	External Thread	L	Wt. (lbs) 10 Pcs.
11701	3/8-16	3/4-16	1 1/2	1.25
11702	1/2-13	1 -14	1 1/2	2.20
11703	5/8-11	1 -14	1 1/2	1.85
11704	3/4-10	1 1/4-12	1 1/2	3.00
11705	1 -8	1 1/2-12	2	5.15

Keylocking Inserts
Extra Heavy Duty
Industrial Style





The increased wall thickness and greater external thread area of these extra heavy duty threaded inserts offer greater pull-out strength, stability, and longer life. These inserts should be used in materials with lower ultimate shear strength to obtain maximum pull-out strength and holding power.

- Greater Thread Area
- Increased Shear Engagement
- Offers Holding Power Comparable to Standard Heavy Duty Inserts in High Shear Strength Material
- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: ±.010
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.

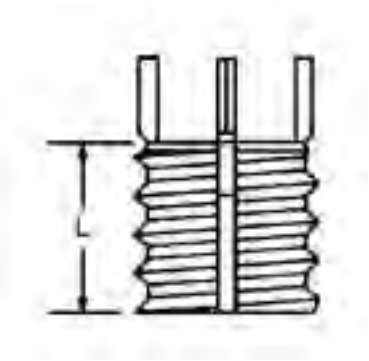
Internal Thread Class 2B	Part Number		External Thread Class 2A	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
6-32	**25931**	**26331**	5/16-18	.31	**24731**
8-32	**25932**	**26332**	3/8-16	.31	**24732**
10-24	**25933**	**26333**	7/16-14	.31	**24733**
10-32	**26133**	**26533**	7/16-14	.31	**24733**
1/4-20	**25934**	**26334**	1/2-13	.37	**24734**
1/4-28	**26134**	**26534**	1/2-13	.37	**24734**
5/16-18	**25935**	**26335**	9/16-12	.43	**24735**
5/16-24	**26135**	**26535**	9/16-12	.43	**24735**
3/8-16	**25936**	**26336**	5/8-11	.50	**24736**
3/8-24	**26136**	**26536**	5/8-11	.50	**24736**
7/16-14	**25937**	**26337**	3/4-16	.62	**24737**
7/16-20	**26137**	**26537**	3/4-16	.62	**24737**
1/2-13	**25938**	**26338**	7/8-14	.68	**24738**
1/2-20	**26138**	**26538**	7/8-14	.68	**24738**
9/16-12	**25939**	**26339**	7/8-14	.81	**24739**
9/16-18	**26139**	**26539**	7/8-14	.81	**24739**
5/8-11	**25940**	**26340**	1-12	.87	**24740**
5/8-18	**26140**	**26540**	1-12	.87	**24740**
3/4-10	**25941**	**26341**	1 1/4-12	1.12	**24741**
3/4-16	**26141**	**26541**	1 1/4-12	1.12	**24741**
7/8-9	**25942**	**26342**	1 3/8-12	1.25	**24742**
7/8-14	**26142**	**26542**	1 3/8-12	1.25	**24742**
1-8	**25943**	**26343**	1 1/2-12	1.37	**24743**
1-12	**26143**	**26543**	1 1/2-12	1.37	**24743**

See chart on page 8.2 for installation information.

Keylocking Inserts
Solid Industrial Style



- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010
  Metric ±.25mm
- Keys: Inserts with internal thread size of M7 or larger are furnished with four locking keys.



- Salvage expensive castings
- Relocate holes that have been drilled or tapped in the wrong location
- Fill holes that are too large
- No need to alter original bolt size

External Thread Class 2A	Part Number		Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel		
5/16-18	**26001**	**26401**	.31	**24801**
3/8-16	**26002**	**26402**	.31	**24802**
7/16-14	**26003**	**26403**	.37	**24803**
1/2-13	**26004**	**26404**	.43	**24804**
9/16-12	**26005**	**26405**	.50	**24805**
5/8-11	**26006**	**26406**	.62	**24806**
3/4-16	**26007**	**26407**	.68	**24807**
7/8-14	**26008**	**26408**	.87	**24808**
1-12	**26009**	**26409**	.87	**24809**
1 1/8-12	**26010**	**26410**	1.12	**24810**
1 1/4-12	**26011**	**26411**	1.25	**24811**
1 3/8-12	**26012**	**26412**	1.37	**24812**

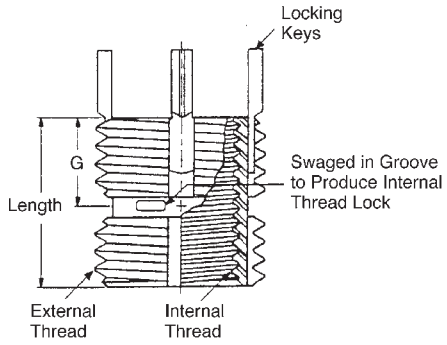
See chart on page 8.2 for installation information.

Metric Inserts - Solid

Part Number Carbon Steel	Insert		Installation					Removal	
						Thread Tap		Drill	
	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
26021	M 8x1.25	8.0	**24821**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
26022	M 10x1.25	10.0	**24822**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
26023	M 12x1.25	12.0	**24823**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
26024	M 14x1.5	14.0	**24824**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
26025	M 16x1.5	16.0	**24825**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
26026	M 18x1.5	18.0	**24826**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
26027	M 20x1.5	20.0	**24827**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
26028	M 22x1.5	22.0	**24828**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26029	M 24x1.5	24.0	**24829**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
26030	M 30x2.0	30.0	**24830**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26031	M 32x2.0	32.0	**24831**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
26032	M 33x2.0	33.0	**24832**	31.0	33.25	M 33x2.0	37.5	28.75	6.35

Internal Locking Thread Repair Inserts

Material: Inserts - 303 stainless steel or equivalent
Keys - 302 stainless steel or equivalent
Finish: Passivated
Tolerances: ± .010 inch unless specified otherwise.
Dimensions: All dimensions below are in inches.
Keys: Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.



Thinwall - Locking

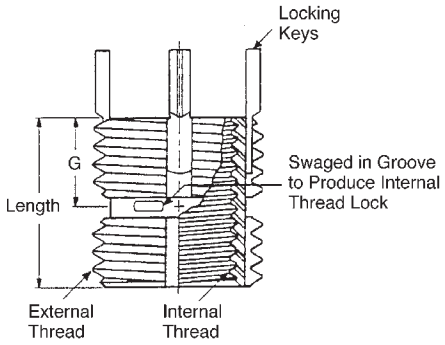
Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia +.010 -.000	Size Class 2B	Min. Depth	Size	Depth
24521	10 - 24	5/16 - 18	.31	.15	**24721**	"I"	.32	5/16 - 18	.37	7/32	1/8
24621	10 - 32										
24522	1/4 - 20	3/8 - 16	.37	.18	**24722**	"Q"	.38	3/8 - 16	.43	9/32	3/16
24622	1/4 - 28										
24523	5/16 - 18	7/16 - 14	.43	.21	**24723**	"X"	.44	7/16 - 14	.50	11/32	3/16
24623	5/16 - 24										
24524	3/8 - 16	1/2 - 13	.50	.25	**24724**	29/64	.51	1/2 - 13	.56	13/32	3/16
24624	3/8 - 24										
24525	7/16 - 14	9/16 - 12	.56	.28	**24725**	33/64	.57	9/16 - 12	.62	15/32	3/16
24625	7/16 - 20										
24526	1/2 - 13	5/8 - 11	.62	.31	**24726**	37/64	.63	5/8 - 11	.68	17/32	3/16
24626	1/2 - 20										

Heavy Duty - Locking

Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia +.010 -.000	Size Class 2B	Min. Depth	Size	Depth
24500	8 - 32	5/16 - 18	.31	.15	**24700**	"I"	.32	5/16 - 18	.37	7/32	1/8
24501	10 - 24	3/8 - 16	.31	.15	**24701**	"Q"	.38	3/8 - 16	.37	9/32	1/8
24601	10 - 32										
24502	1/4 - 20	7/16 - 14	.37	.18	**24702**	"X"	.44	7/16 - 14	.43	11/32	3/16
24602	1/4 - 28										
24503	5/16 - 18	1/2 - 13	.43	.21	**24703**	29/64	.51	1/2 - 13	.50	13/32	3/16
24603	5/16 - 24										
24504	3/8 - 16	9/16 - 12	.50	.25	**24704**	33/64	.57	9/16 - 12	.56	15/32	3/16
24604	3/8 - 24										
24505	7/16 - 14	5/8 - 11	.62	.31	**24705**	37/64	.63	5/8 - 11	.68	17/32	3/16
24605	7/16 - 20										
24506	1/2 - 13	3/4 - 16	.62	.31	**24706**	45/64	.76	3/4 - 16	.68	21/32	3/16
24606	1/2 - 20										
24507	9/16 - 12	3/4 - 16	.81	.40	**24707**	45/64	.76	3/4 - 16	.94	21/32	3/16
24607	9/16 - 18										
24508	5/8 - 11	7/8 - 14	.87	.43	**24708**	53/64	.88	7/8 -14	1.00	25/32	5/16
24608	5/8 - 18										
24509	3/4 - 10	1-1/8 - 12	1.12	.56	**24709**	1-1/16	1.14	1-1/8 - 12	1.31	31/32	5/16
24609	3/4 - 16										
24510	7/8 - 9	1-1/4 - 12	1.25	.62	**24710**	1-3/16	1.27	1-1/4 - 12	1.44	1-3/32	5/16
24610	7/8 - 14										
24511	1" - 8	1-3/8 - 12	1.37	.68	**24711**	1-5/16	1.39	1-3/8 - 12	1.56	1-7/32	5/16
24611	1" - 12										

Metric Internal Locking Thread Repair Inserts

Material: Inserts - 303 stainless steel or equivalent
Keys - 302 stainless steel or equivalent
Finish: Passivated
Tolerances: ±.25 mm unless specified otherwise.
Dimensions: All dimensions below are in millimeters
Keys: Inserts with an internal thread size of M7 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.



Thinwall - Metric - Locking

Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 6H	External Thread Class 6g	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
24551	M 5x0.8	M8x1.25	8.0	4.0	**24751**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
24552	M 6x1.0	M 10x1.25	10.0	5.0	**24752**	8.8	10.25	M 10x1.25	11.5	7.50	4.75
24553	M 8x1.25	M 12x1.25	12.0	6.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
24653	M 8x1.0										
24555	M 10x1.5	M 14x1.5	14.0	7.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
24655	M 10x1.25										
24556	M 12x1.75	M 16x1.5	16.0	8.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75
24656	M12x1.25										

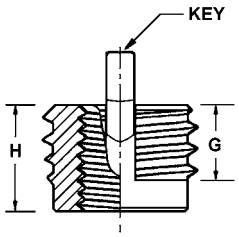
Heavy Duty - Metric - Locking

Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 6H	External Thread Class 6g	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
24563	M 4X0.7	M8x1.25	8.0	4.0	**24763**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
24564	M 5x0.8	M 10x1.25	10.0	5.0	**24764**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
24565	M 6x1.0	M 12x1.25	12.0	6.0	**24765**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
24566	M 8x1.25	M 14x1.5	14.0	7.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
24666	M 8x1.0										
24567	M 10x1.5	M 16x1.5	16.0	8.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
24667	M 10x1.25										
24569	M 12x1.75	M 18x1.5	18.0	9.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
24669	M 12x1.25										
24570	M 14x2.0	M 20x1.5	20.0	10.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
24670	M 14x1.5										
24571	M 16x2.0	M 22x1.5	22.0	11.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
24671	M 16x1.5										
24672	M 18x1.5	M 24X1.5	24.0	12.0	**24772**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
24573	M 20x2.5	M 30x2.0	30.0	15.0	**24773**	28.0	30.25	M30x2.0	34.5	25.75	6.35
24673	M 20x1.5										
24674	M 22x1.5	M 32x2.0	32.0	16.0	**24774**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
24575	M 24x3.0	M33x2.0	33.0	16.5	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35
24675	M 24x2.0										

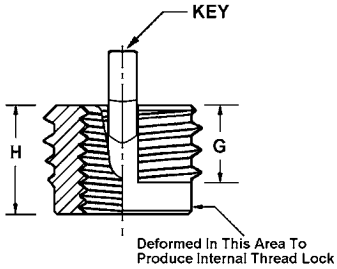
Miniature - Metric
303 CRES Keylocking Threaded Inserts

Material: Inserts - 303 CRES
Keys - 302 CRES
Finish: Passivated
Tolerances: ±.25 mm unless specified otherwise
Internal Threads: Per Fed Std H28/21, MJ Form
Dimensions: All dimensions below are in millimeters
Keys: Miniature Inserts are furnished with 2 locking keys
Material Identification Mark: None
Lubrication: Dry Film Lube on Self-Locking Inserts only

Non-Locking



Self-Locking

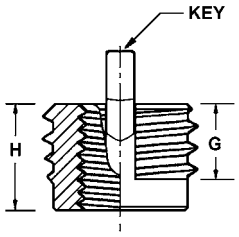


Part Number*			Insert			Installation					Removal	
									Thread Tap		Drill	
Non-Locking	Self-Locking	Internal Thread Class 4H6H	External Thread Class 4h	Thread Length G	Length H	Install Tool Part No*	Tap Drill Size +.080/ -.025	C'Sink Dia. +.25/-.00	Size Class 6H	Min. Depth	Size	Depth
26382	**27382**	M 2x0.4	M 4x0.7	2.20	3.00	**22682**	3.4	4.1	M 4x0.7	4.0	2.8	2.00
26383	**27383**	M 2.5x0.45	M 4.5x0.75	2.70	3.81	**22683**	3.9	4.6	M 4.5x0.75	5.0	3.0	2.00
26384	**27384**	M 3x0.5	M 5x0.8	3.10	4.25	**22684**	4.4	5.1	M 5x0.8	5.5	3.5	2.25
26386	**27386**	M 4x0.7	M 6x0.75	4.11	5.25	**22686**	5.5	6.1	M 6x0.75	6.5	4.6	2.50

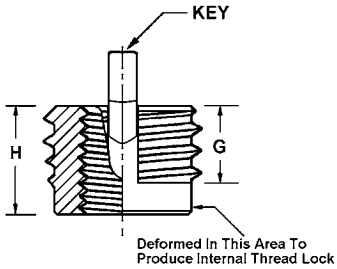
Miniature - Inch
303 CRES Keylocking Threaded Inserts

Material: Inserts - 303 CRES
Keys - 302 CRES
Finish: Passivated
Tolerances: ±.010 inch unless specified otherwise
Internal Threads: Per SAE AS8879
Dimensions: All dimensions below are in inches
Keys: Miniature Inserts are furnished with 2 locking keys
Material Identification Mark: None
Lubrication: Dry Film Lube on Self-Locking Inserts only

Non-Locking



Self-Locking



Part Number*			Insert			Installation					Removal	
									Thread Tap		Drill	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	G Thread Length	H Length	Install Tool Part No*	Tap Drill Size +.003/ -.001	C'Sink Dia. +.010/-.000	Size Class 2B	Min. Depth	Size	Depth
26283	**27283**	2 - 56	8 - 32	.090	.120	**22552**	.134	.166	8 - 32	.140	#33	1/16
26284	**27284**	4 - 40	10 - 32	.125	.170	**22554**	.161	.194	10 - 32	.160	#29	3/32
26285	**27285**	6 - 32	12 - 28	.125	.170	**22556**	.187	.220	12 - 28	.160	#21	3/32
26286	**27286**	8 - 32	1/4 - 28†	.175	.220	**22558**	.228	.255	1/4 - 28	.210	#8	1/8

† Modified Minor Diameter

High Strength Materials Available: These miniature inserts are also manufactured in high strength stainless steel (A-286 with heat treatment) and in alloy steel (4140 with heat treatment).

MS/NAS Style Insert

Jergens now offers Mil-Spec Keylocking Threaded Inserts



NEW

Thread Inserts
- Inch and metric sizes available
- Material: 303 CRES
  A286 CRES
  4140 Alloy Steel

Insert Style
Miniature & Lightweight MS 51830/NAS 1394
Heavy Duty MS 51831/NAS 1395
Extra Heavy Duty MS 51832

Please contact Jergens for cross reference and ordering information.
1-800-Jergens (537-4367)

Master Thread Repair Kits
Small Assortments



The Jergens Master Thread Repair Kits include several different kinds of inserts, installation tools and installation and removal instructions.

The Kits are available with inch or metric, carbon steel inserts or with stainless steel inserts.

Coarse Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 24	3/8 - 16	.31	5
1/4 - 20	7/16 - 14	.37	10
5/16 - 18	1/2 - 13	.43	10
3/8 - 16	9/16 - 12	.50	10
1/2 - 13	3/4 - 16	.62	10
5/8 - 11	7/8 - 14	.87	10
3/4 - 10	1-1/8 - 12	1.12	5
			Total Inserts Per Kit 60 pcs.

Carbon Steel Kit	Stainless Steel Kit
25949	**26349**

Fine Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread Class 2A	Length	Quantity of Inserts Per Kit
10 - 32	3/8 - 16	.31	5
1/4 - 28	7/16 - 14	.37	10
5/16 - 24	1/2 - 13	.43	10
3/8 - 24	9/16 - 12	.50	10
1/2 - 20	3/4 - 16	.62	10
5/8 - 18	7/8 - 14	.87	10
3/4 - 16	1-1/8 - 12	1.12	5
			Total Inserts Per Kit 60 pcs.

Carbon Steel Kit	Stainless Steel Kit
26149	**26549**

Metric, Thinwall Kits

Internal Thread Class 2B	External Thread Class 2A	Length (mm)	Quantity of Inserts Per Kit
M 5x0.8	M 8x1.25	8.0	8
M 6x1.0	M 10x1.25	10.0	8
M 8x1.25	M 12x1.25	12.0	6
M 8x1.0	M 12x1.25	12.0	6
M 10x1.5	M 14x1.5	14.0	4
M 10x1.25	M 14x1.5	14.0	4
M 12x1.75	M 16x1.5	16.0	3
M 12x1.25	M 16x1.5	16.0	3
			Total Inserts Per Kit 42 pcs.

Metric Carbon Steel Kit	Stainless Steel Kit
25999	**25998**

Master Thread Repair Kits
Large Assortments

Coarse Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
1/4 - 20	7/16 - 14	.37	20
5/16 - 18	1/2 - 13	.43	15
3/8 - 16	9/16 - 12	.50	10
7/16 - 14	5/8 - 11	.62	10
1/2 - 13	3/4 - 16	.62	6
9/16 - 12	3/4 - 16	.81	5
5/8 - 11	7/8 - 14	.87	3
3/4 - 10	1-1/8 - 12	1.12	3
7/8 - 9	1-1/4 - 12	1.25	3
1" - 8	1-3/8 - 12	1.37	2

Total Inserts Per Kit 77 pcs.

Carbon Steel Kit	Stainless Steel Kit
25945	26345

Fine Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
1/4 - 28	7/16 - 14	.37	10
5/16 - 24	1/2 - 13	.43	10
3/8 - 24	9/16 - 12	.50	10
7/16 - 20	5/8 - 11	.62	10
1/2 - 20	3/4 - 16	.62	6
9/16 - 18	3/4 - 16	.81	5
5/8 - 18	7/8 - 14	.87	3
3/4 - 16	1-1/8 - 12	1.12	3
7/8 - 14	1-1/4 - 12	1.25	3
1" - 12	1-3/8 - 12	1.37	2

Total Inserts Per Kit 77 pcs.

Carbon Steel Kit	Stainless Steel Kit
26145	26545

Metric, Thinwall Kits

Internal Thread Class 6H	External Thread Class 6g	Length (mm)	Quantity of Inserts Per Kit
M 6x1.0	M 10x1.25	10.0	20
M 8x1.25	M 12x1.25	12.0	15
M 8x1.0	M 12x1.25	12.0	15
M 10x1.5	M 14x1.5	14.0	10
M 10x1.25	M 14x1.5	14.0	10
M 12x1.75	M 16x1.5	16.0	6
M 12x1.25	M 16x1.5	16.0	6

Total Inserts Per Kit 82 pcs.

Metric Carbon Steel Kit	Stainless Steel Kit
25997	25996

Coarse Series, Thinwall Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 24	5/16 - 18	.31	20
1/4 - 20	3/8 - 16	.37	20
5/16 - 18	7/16 - 14	.43	15
3/8 - 16	1/2 - 13	.50	10
7/16 - 14	9/16 - 12	.56	10
1/2 - 13	5/8 - 11	.62	6

Total Inserts Per Kit 81 pcs.

Carbon Steel Kit	Stainless Steel Kit
25948	26348

Fine Series, Thinwall Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 32	5/16 - 18	.31	20
1/4 - 28	3/8 - 16	.37	20
5/16 - 24	7/16 - 14	.43	15
3/8 - 24	1/2 - 13	.50	10
7/16 - 20	9/16 - 12	.56	10
1/2 - 20	5/8 - 11	.62	6

Total Inserts Per Kit 81 pcs.

Carbon Steel Kit	Stainless Steel Kit
25947	26548

Inch Thread Repair Insert Kits



The Jergens Keylocking Inserts provide strong and durable threads in most types of material. They are easily installed using standard drills and taps.

The Jergens Thread Repair Insert

Kits include inserts, an installation tool, and installation and removal instructions.

The Kits are available with either inch, metric, or metric internal/inch external carbon steel inserts.

Each Kit is comprised of one size of insert in various quantities. For Thread Repair Kits that include several different sizes, see pages 8.10 - 8.11.

Inch Thread Kits - Heavy Duty

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75900	**76300**	8-32	5/16-18	9	**25900**	**26300**	**24700**
75901	**76301**	10-24	3/8-16	9	**25901**	**26301**	**24701**
76101	**76501**	10-32	3/8-16	9	**26101**	**26501**	**24701**
75902	**76302**	1/4-20	7/16-14	8	**25902**	**26302**	**24702**
76102	**76502**	1/4-28	7/16-14	8	**26102**	**26502**	**24702**
75903	**76303**	5/16-18	1/2-13	7	**25903**	**26303**	**24703**
76103	**76503**	5/16-24	1/2-13	7	**26103**	**26503**	**24703**
75904	**76304**	3/8-16	9/16-12	6	**25904**	**26304**	**24704**
76104	**76504**	3/8-24	9/16-12	6	**26104**	**26504**	**24704**
75905	**76305**	7/16-14	5/8-11	6	**25905**	**26305**	**24705**
76105	**76505**	7/16-20	5/8-11	6	**26105**	**26505**	**24705**
75906	**76306**	1/2-13	3/4-16	4	**25906**	**26306**	**24706**
76106	**76506**	1/2-20	3/4-16	4	**26106**	**26506**	**24706**
75907	**76307**	9/16-12	3/4-16	3	**25907**	**26307**	**24707**
76107	**76507**	9/16-18	3/4-16	3	**26107**	**26507**	**24707**
75908	**76308**	5/8-11	7/8-14	3	**25908**	**26308**	**24708**
76108	**76508**	5/8-18	7/8-14	3	**26108**	**26508**	**24708**
75909	**76309**	3/4-10	1 1/8-12	3	**25909**	**26309**	**24709**
76109	**76509**	3/4-16	1 1/8-12	3	**26109**	**26509**	**24709**
75910	**76310**	7/8-9	1 1/4-12	3	**25910**	**26310**	**24710**
76110	**76510**	7/8 -14	1 1/4-12	3	**26110**	**26510**	**24710**
75911	**76311**	1 - 8	1 3/8-12	2	**25911**	**26311**	**24711**
76111	**76511**	1 -12	1 3/8-12	2	**26111**	**26511**	**24711**
75913		1 1/8-7	1 1/2-12	2	**25913**		**24713**
76113		1 1/8-12	1 1/2-12	2	**26113**		**24713**
75914		1 1/4-7	1 5/8-12	2	**25914**		**24714**
76114		1 1/4-12	1 5/8-12	2	**26114**		**24714**
75916		1 1/2-6	1 7/8-12	2	**25916**		**24716**
76116		1 1/2-12	1 7/8-12	2	**26116**		**24716**

Inch Thread Kits - Thin Wall

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Carbon Steel Insert Part Number	Stainless Steel Insert Part Number	Installation Tool Part Number
75921	**76421**	10-24	5/16-18	9	**25921**	**26321**	**24721**
76121	**76521**	10-32	5/16-18	9	**26121**	**26521**	**24721**
75922	**76422**	1/4-20	3/8-16	8	**25922**	**26322**	**24722**
76122	**76522**	1/4-28	3/8-16	8	**26122**	**26522**	**24722**
75923	**76423**	5/16-18	7/16-14	7	**25923**	**26323**	**24723**
76123	**76523**	5/16-24	7/16-14	7	**26123**	**26523**	**24723**
75924	**76424**	3/8-16	1/2-13	6	**25924**	**26325**	**24724**
76124	**76524**	3/8-24	1/2-13	6	**26124**	**26524**	**24724**
75925	**76425**	7/16-14	9/16-12	6	**25925**	**26325**	**24725**
76125	**76525**	7/16-20	9/16-12	6	**26125**	**26525**	**24725**
75926	**76426**	1/2-13	5/8-11	4	**25926**	**26326**	**24726**
76126	**76526**	1/2-20	5/8-11	4	**26126**	**26526**	**24726**

Metric Thread Repair Insert Kits



The Jergens Keylocking Inserts provide strong and durable threads in most types of material. They are easily installed using standard drills and taps.

The Jergens Thread Repair Insert

Kits include inserts, an installation tool, and installation and removal instructions.

The Kits are available with either inch, metric, or metric internal/inch external carbon steel inserts.

Each Kit is comprised of one size of insert in various quantities. For Thread Repair Kits that include several different sizes, see pages 8.10 - 8.11.

Metric Thread Kits - Heavy Duty

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75963	**76463**	M4x0.7	M8x1.25	9	**25963**	**26363**	**24763**
75964	**76464**	M5x0.8	M10x1.25	8	**25964**	**26364**	**24764**
75965	**76465**	M6x1.0	M12x1.25	8	**25965**	**26365**	**24765**
75966	**76466**	M8x1.25	M14x1.5	6	**25966**	**26366**	**24766**
76166	**76566**	M8x1.0	M14x1.5	6	**26166**	**26566**	**24766**
75967	**76467**	M10x1.5	M16x1.5	4	**25967**	**26367**	**24767**
76167	**76567**	M10x1.25	M16x1.5	4	**26167**	**26567**	**24767**
75969	**76469**	M12x1.75	M18x1.5	3	**25969**	**26369**	**24769**
76169	**76569**	M12x1.25	M18x1.5	3	**26169**	**26569**	**24769**
75970	**76470**	M14x2.0	M20x1.5	4	**25970**	**26370**	**24770**
76170	**76570**	M14x1.5	M20x1.5	4	**26170**	**26570**	**24770**
75971	**76471**	M16x2.0	M22x1.5	3	**25971**	**26371**	**24771**
76171	**76571**	M16x1.5	M22x1.5	3	**26171**	**26571**	**24771**
76172	**76572**	M18x1.5	M24x1.5	2	**26172**	**26572**	**24772**
75973	**76473**	M20x2.5	M30x2.0	3	**25973**	**26373**	**24773**
76173	**76573**	M20x1.5	M30x2.0	3	**26173**	**26573**	**24773**
76174	**76574**	M22x1.5	M32x2.0	3	**26174**	**26574**	**24774**
75975	**76475**	M24x3.0	M33x2.0	3	**25975**	**26375**	**24775**
76175	**76575**	M24x2.0	M33x2.0	2	**26175**	**26575**	**24775**

Metric Thread - Thin Wall

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75951	**76451**	M5x0.8	M8x1.25	8	**25951**	**26351**	**24751**
75952	**76452**	M6x1.0	M10x1.25	8	**25952**	**26352**	**24752**
75953	**76453**	M8x1.25	M12x1.25	6	**25953**	**26353**	**24753**
76153	**76553**	M8x1.0	M12x1.25	6	**26153**	**26553**	**24753**
75955	**76455**	M10x1.5	M14x1.5	4	**25955**	**26355**	**24755**
76155	**76555**	M10x1.25	M14x1.5	4	**26155**	**26555**	**24755**
75956	**76456**	M12x1.75	M16x1.5	3	**25956**	**26356**	**24756**
76156	**76556**	M12x1.25	M16x1.5	3	**26156**	**26556**	**24756**

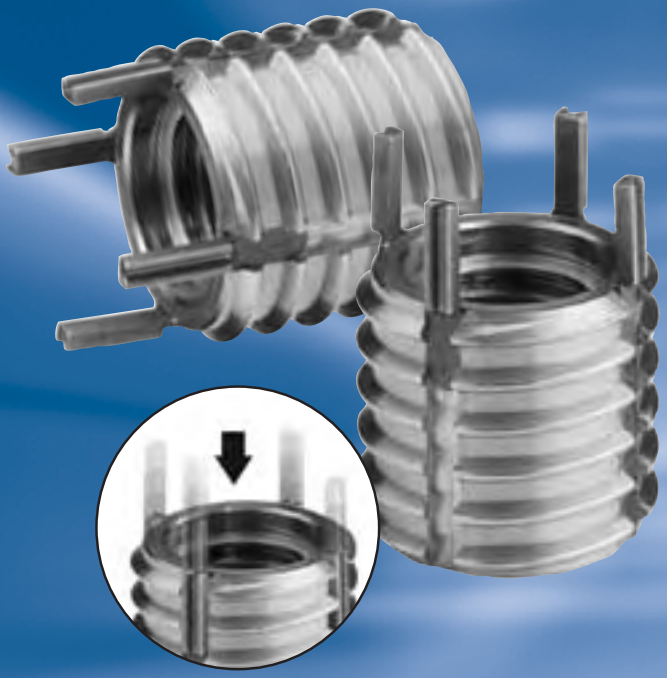
Carbon Steel Kits - Metric Internal/Inch External Threads - Heavy Duty

Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Tool Part Number
76243	M 6x1.0	3/8 - 16	8	**26243**	**24843**
76244	M 8x1.25	1/2 - 13	8	**26244**	**24844**
76245	M 10x1.5	5/8 - 11	6	**26245**	**24845**
76247	M 12x1.75	3/4 - 16	4	**26247**	**24847**
76248	M 14x2.0	7/8 - 14	3	**26248**	**24848**
76249	M 16x2.0	1" - 12	3	**26249**	**24849**

THE Jergens DIFFERENCE

Keylocking Inserts

OURS



Jergens keylocking inserts are easy to install with standard drills and taps.

THEIRS



Competitive thread repair devices require special drills, taps, and installation tools.

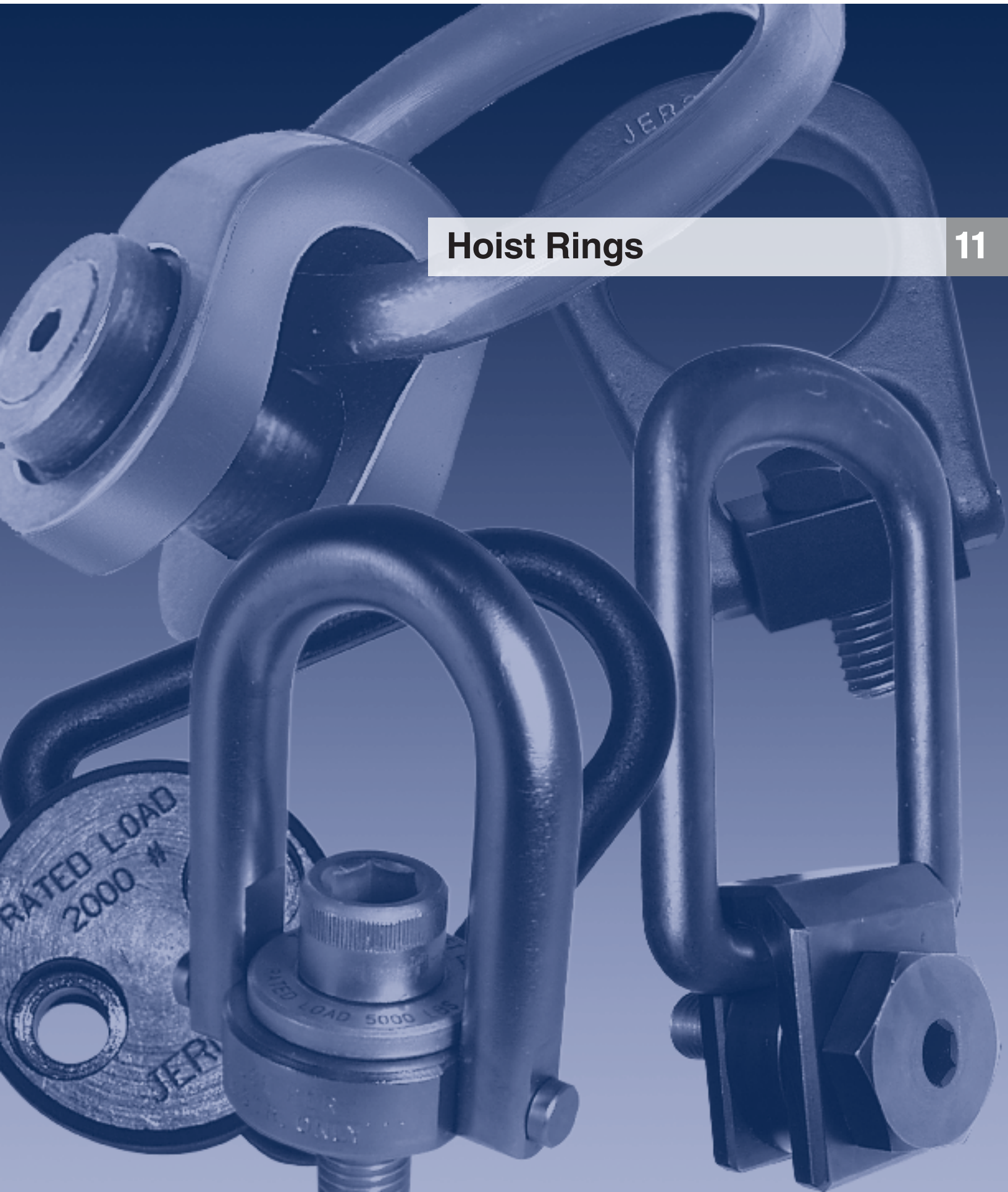
JERGENS KEYLOCKING INSERTS	VS.	THREAD REPAIR FROM OTHER MANUFACTURERS
Easy installation requires no special tools: uses standard drills and standard taps.		Installation requires special drills, taps, and installation tools.
"Keys" mechanically lock the insert into the base material.		Springs or locking patches do not mechanically lock the insert.
Rated among the highest in pullout strength of any thread repair device on the market.		Less pullout strength versus Jergens inserts.
Wide variety of styles, including thinwall, heavy duty, extra heavy duty, and solid inserts in both stainless steel and carbon steel materials.		Limited offerings may force you to settle on a device that doesn't meet all of your needs.

Jergens®

The Standard Components with the Highest Standards™

15700 Waterloo Road • Cleveland, OH 44110 • 800.537.4367 • www.jergensinc.com

Hoist Rings 11





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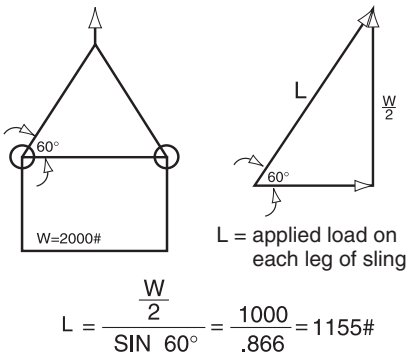
Engineer The Lift!!

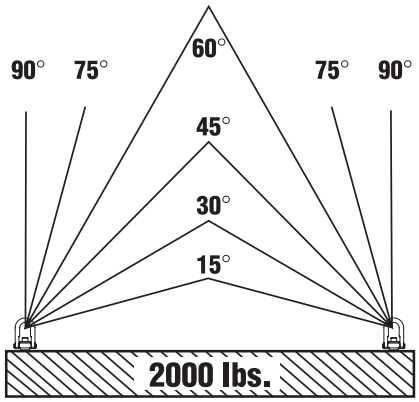
- **Jergens recommends the use of swiveling and pivoting hoist rings, rather than conventional eye bolts.**
- **Are you using the proper hoist ring for the application?**
- **Is the hoist ring free to swivel and pivot? Any movement restrictions?**
- **Are lifting hole(s) in the proper location?**
- **Do you have the correct hole size for the hardware - safe lift capacity?**
- **Are the holes tapped deep enough to assure full thread engagement? (See figure #3 on Installation Information; page 11.3.)**
- **Recommended hole depth:**
  Steel – 1-1/2 times the bolt diameter (min.)
  Aluminum – 2 times the bolt diameter (min.)
- **RULE OF THUMB, IF IN DOUBT – DON'T!!!**

Applied Load Changes With Sling Angle

Jergens swivelling hoist rings are designed and rated to be pulled at any angle at the rated load. However, the applied load on a multipoint lift will increase if the sling angle is less than 90°. So be sure to consider the sling angle when selecting lifting equipment. See illustration below.

Sample Calculation:





Sling Angle (Degrees)	Applied Load (Pounds)
90	1000
75	1040
60	1155
45	1410
30	2000
15	3860

DO'S

1. Observe working load limitations (be especially careful with eyebolts used for angle lifts – see sling angle chart).
2. Visually inspect hoist ring prior to use.
3. Fully tighten hoist ring to recommended torque. Full thread engagement is required (no space between swivel bushing and lift).
4. Assure proper thread depth - do not shim.
5. Make sure hoist rings have free travel - it must swivel and pivot without restrictions.
6. When installing in soft metal, such as aluminum, the minimum effective thread engagement should be two times the diameter of the thread (1-1/2 times bolt diameter – steel).

DON'TS

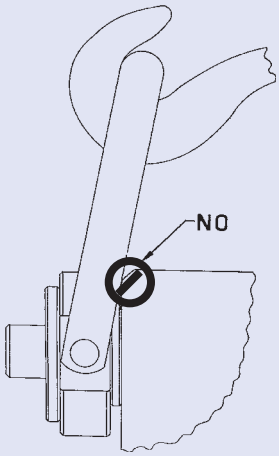
1. Never pull a Center Pull Style hoist ring from the side.
2. Never use an oversized hook in eyebolts or hoist rings (See figure #1 on Installation Information; page 11.3).
3. Never use excessive sling angle.
4. Never steam clean or degrease hoist rings (could cause rusting and binding).
5. Never apply shock loads.
6. Never allow the side of a hoist ring to make contact with the lift. (See figure #2 on Installation Information; page 11.3.)

Installation Information



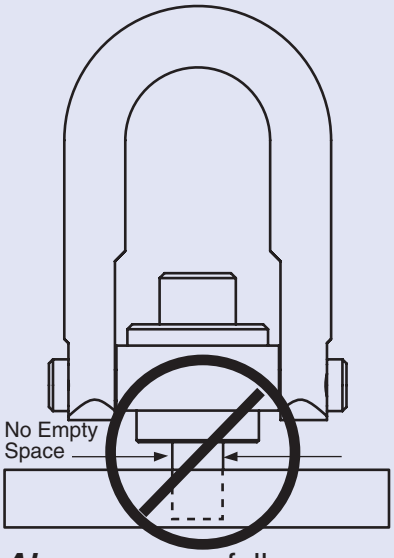
Never use a hook or other lifting device which will pry or tend to open the "U" shaped bar on Center-Pull Hoist Rings!

Fig. 1



After installation, check the hoist ring to be sure it swivels and pivots freely in all directions. **The side of the ring must not contact *anything*!**

Fig. 2



Always ensure full thread engagement when installing hoist rings!

Fig. 3

Select the proper Hoist Ring for the job. Do not attempt to apply more than the rated load capacity. *The load capacity is marked on the Hoist Ring.*

Drill and tap the workpiece so that the hoist ring bolt is installed perpendicular to the surface of the workpiece. Countersink the tapped hole to prevent "swelling" of the top thread when the hoist ring bolt is torqued. The workpiece surface must be flat, providing complete contact for the hoist ring bushing.

Do not use spacers between the hoist ring bushing and the workpiece surface.

When installing in soft metal, such as aluminum, the minimum effective thread engagement should be two times the diameter of the thread. When installing in steel, thread engagement should be 1-1/2 times the thread diameter.

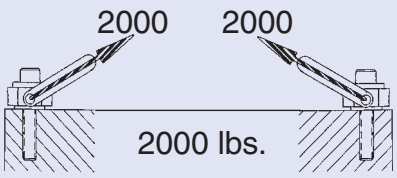
Always *tighten the bolt to the proper torque value***,** which is stamped on the Hoist Ring.

Loosening of the *bolt* may develop during use. *Re-tightening to the required torque must be done whenever the bolt loosens.* The proper tightening torque is stamped on the Hoist Ring.

When lifting, apply force gradually. **DO NOT APPLY SHOCK LOADS.**

For through-hole applications, be sure that nut/washer are the same quality grade as the Hoist Ring.

Periodic visual inspection and pull testing is recommended as damage can occur from improper usage.



Depending upon the sling angle, **the applied load may be more than the weight being lifted.** Two point lifting of a 2000 pound weight, with a sling angle of 30°, will result in an applied load of 2000 pounds to ***each*** hoist ring!

Fig. 4

Lift ID™ Automated Inspection and Compliance System



Kwik-Lok™ Lifting Pin

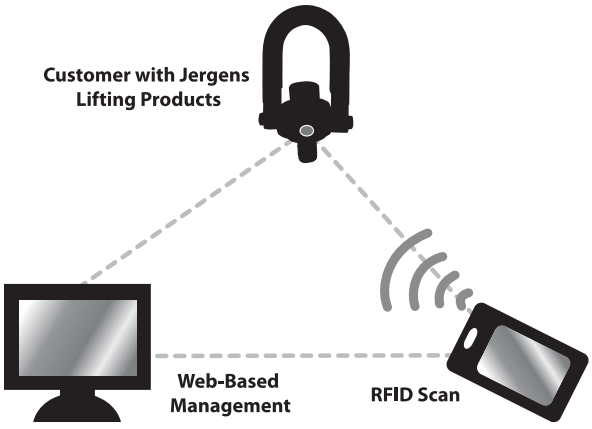
Exclusively from Jergens, **Lift ID**™ combines the power of RFID, the ease of mobile computers and the convenience of the Internet to automate the entire tracking and reporting process. This two part system combines rugged hardware and powerful software to simplify your workplace safety compliance program.

The embedded RFID tags on Jergens' lifting products provide a quick and efficient way to identify and track equipment in the field. The RFID tag is scanned and **Lift ID**™ Software accesses our secure website to track the manufacturing and test data for that particular hoist ring. Safety testing, repair histories, inspection certificates and more are immediately accessible from anywhere using web-based administration.

The rugged RFID tag is engineered for service even in the most demanding environments. **Lift ID™** is available with all Jergens lifting products, including **Kwik-Lok™** Lifting Pins.

Lift ID™ is available with all Jergens lifting products.

Simply add an "F" to the end of the part number when ordering. Example: 23414F



- Easy identification using RFID technology
- Perform one-click visual inspections
- Perform non-destructive testing (proof tests, magnetic particle)
- Generate electronic inspection certificates from the Web
- Allow your customers online access to see the audit trail and traceability
- Automatic product registration
- Use handheld client online and offline
- Access to the safety network
- Fully hosted solution with phone, Web and e-mail support packages

- ✓ **Compatible with N4 Systems' FieldID Inspection and Safety Compliance Suite**
- ✓ **Compliant with the ISO 15693 air interface standard**

LIFT ID™
AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

Forged Center Pull - Stainless Steel



Our new Forged Center Pull Hoist Ring integrates a solid center brace lift bail into our most popular style product. This design eliminates the possibility of spreading the lift ring in misapplications. Forged hoist rings are ideal for OEM and industrial use.

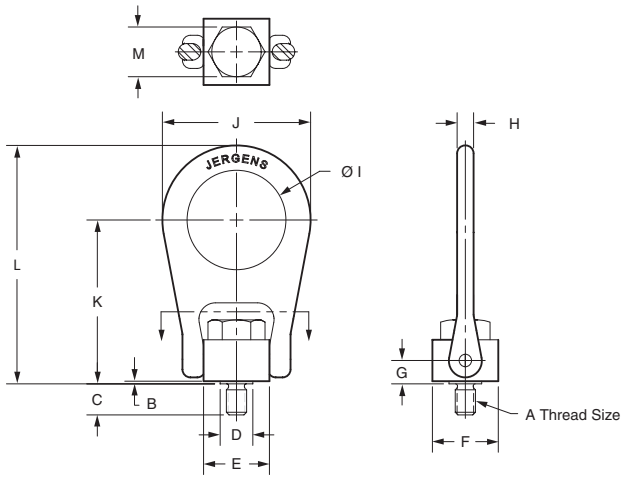
- Material: 17-4PH
- Full (over center) 360° swivel and 180° pivot action
- Capacities up to 5,000 lbs.
- Inch and metric
- 5:1 strength factor
- Same strength/load capacity as steel
- Maximum operating pressure 800°F Intermittent, 600°F continuous
- Made in U.S.A.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

U.S. Patent No. 6,652,012

LIFT ID AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED



Ring Bail

Inch

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (ft.lbs)	Weight (lbs)
23906-SS	800	5/16-18	3/64	15/32	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23907-SS	800	5/16-18	3/64	5/8	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23908-SS	1000	3/8-16	3/64	9/16	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23909-SS	1000	3/8-16	3/64	3/4	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23910-SS	2500	1/2-13	1/16	11/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23911-SS	2500	1/2-13	1/16	1	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23914-SS	4000	5/8-11	1/16	15/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23915-SS	4000	5/8-11	1/16	1 1/4	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23917-SS	5000	3/4-10	1/16	1 1/8	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
23918-SS	5000	3/4-10	1/16	1 1/2	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6

Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (N•m)	Weight (kg)
23956-SS	400	M8 X 1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	10	0.27
23958-SS	450	M10 X 1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	17	0.27
23962-SS	1050	M12 X 1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	37	1.64
23965-SS	1900	M16 X 2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	80	1.64
23968-SS	2150	M20 X 2.5	1.6	30	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	134	1.7

Forged Center Pull



Our new Forged Center Pull Hoist Ring integrates a solid center brace lift bail into our most popular style product. This design eliminates the possibility of spreading the lift ring in misapplications. Forged hoist rings are ideal for OEM and industrial use.

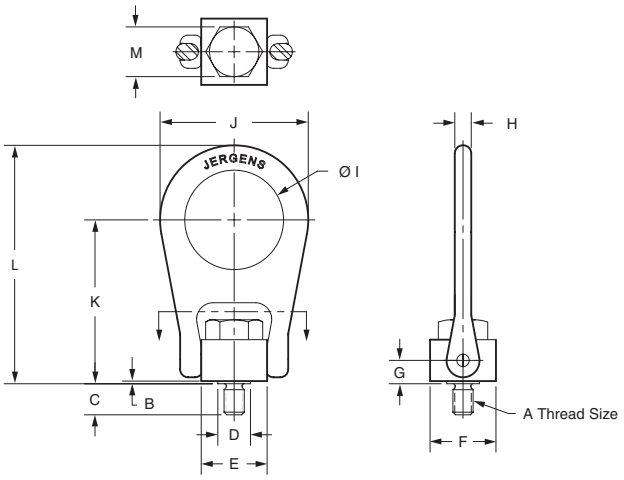
- Full (over center) 360° swivel and 180° pivot action
- Capacities up to 30,000 lbs.
- Inch and metric
- 5:1 strength factor-alloy steel
- Available in 17-4PH Stainless Steel (up to 5,000lbs/2,150kgs.) See page 11.5.
- Made in U.S.A.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

U.S. Patent No. 6,652,012

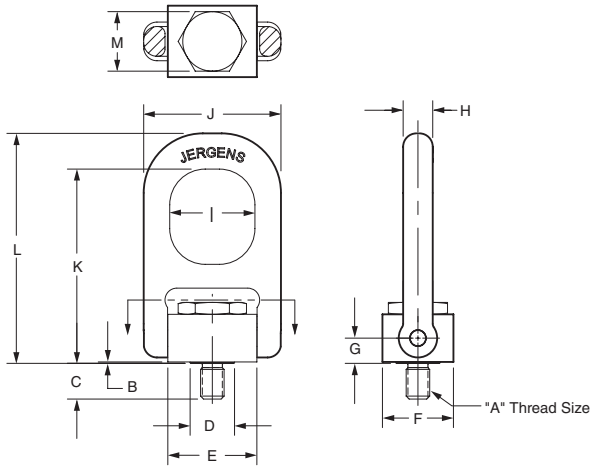
LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring
Add "F" to the end of the part
number **Example: 23414F**

CE CERTIFIED



Ring Bail



Large Bail

Inch

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (ft.lbs)	Weight (lbs)
23906	800	5/16-18	3/64	15/32	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23907	800	5/16-18	3/64	5/8	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23908	1000	3/8-16	3/64	9/16	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23909	1000	3/8-16	3/64	3/4	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23910	2500	1/2-13	1/16	11/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23911	2500	1/2-13	1/16	1	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23914	4000	5/8-11	1/16	15/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23915	4000	5/8-11	1/16	1 1/4	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23917	5000	3/4-10	1/16	1 1/8	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
23918	5000	3/4-10	1/16	1 1/2	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
23926	10000	1-8	1/16	1 1/2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	230	15.7
23927	10000	1-8	1/16	2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	230	15.9
23929	15000	1 1/4-7	1/16	1 7/8	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	470	16.0
23930	15000	1 1/4-7	1/16	2 1/2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	470	16.2
23933	24000	1 1/2-6	7/64	2 1/4	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	42.3
23934	24000	1 1/2-6	7/64	3	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	42.7
23935	30000	2-4 1/2	7/64	3	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	43.8
23936	30000	2-4 1/2	7/64	4	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	44.7

Ring Bail



Ring Bail
Part Numbers:
23906 thru **23918** (Inch)
23956 thru **23968** (Metric)

Large Bail



Large Bail
Part Numbers:
23926 thru **23936** (Inch)
23974 thru **23987** (Metric)

- **Replace Stationary Eyebolt**
- **Lifting Tooling Columns & Large Fixtures**
- **OEM Applications**
- **Lifting Die & Molds**

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

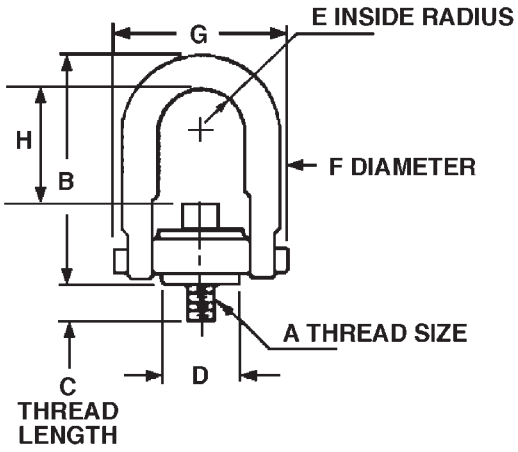
Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (N•m)	Weight (kg)
23956	400	M8 X 1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	10	0.27
23958	450	M10 X 1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	17	0.27
23962	1050	M12 X 1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	37	1.64
23965	1900	M16 X 2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	80	1.64
23968	2150	M20 X 2.5	1.6	30	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	134	1.7
23974	4200	M24 X 3.0	1.6	35.7	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	305	7.1
23975	4200	M24 X 3.0	1.6	47.6	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	305	7.2
23978	7000	M30 X 3.5	1.6	44.8	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	590	7.3
23979	7000	M30 X 3.5	1.6	60.0	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	590	7.4
23982	11000	M36 X 4.0	2.8	53.6	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	960	19.1
23983	11000	M36 X 4.0	2.8	71.4	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	960	19.3
23984	12500	M42 X 4.5	2.8	62.7	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	980	19.4
23985	12500	M42 X 4.5	2.8	83.3	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	980	19.6
23986	13500	M48 X 5.0	2.8	71.4	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	980	19.7
23987	13500	M48 X 5.0	2.8	95.3	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	28.7	980	20.0

Center-Pull Traditional Style



- Full 360° Swivel and 180° Pivot Action
- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Finish: Black Oxide (Except Washer)
- U-Bar, Bolt, Pins, Base, Washer and Bushing are Magnetic Particle Inspected
- Washer: Zinc Plated with Gold Colored (Inch), Clear/Blue (Metric) Conversion Coating
- Proof Tested to 200% of Rated Load Capacity
- Certificate of Proof Test provided (See sample on page 11.23)
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- **Available with Envirolox™ protective finish. See page 11.15 for more information.**



LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

Thread Size A	Load[1] Capacity (lbs)	Std. U-Bar Part Number	Std. U-Bar B	Long U-Bar Part Number	Long U-Bar B	Envirolox Part Number[3]	Thread Length C	D	E	F	G	Std. U-Bar H	Long U-Bar H	Torque[2] (ft. lbs)	Wt. (lbs)
1/4-20	550	**23404**	2.67	—	—	**23304**	1/2	.75	.43	.38	1.84	1 5/16	—	5	.3
5/16-18	800	**23405**	2.67	—	—	**23305**	1/4	.75	.43	.38	1.84	1 1/4	—	7	.3
5/16-18	800	**23406**	2.67	—	—	**23306**	9/16	.75	.43	.38	1.84	1 1/4	—	7	.3
3/8-16	1000	**23408**	2.67	—	—	**23308**	9/16	.75	.43	.38	1.84	1 1/4	—	12	.3
1/2-13	2500	**23410**	3.75	—	—	**23310**	1 1/16	1.20	.69	.50	2.56	1 25/32	—	28	1.0
1/2-13	2500	**23411**	4.78	**23511**	6.72	**23311**	3/4	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
1/2-13	2500	**23412**	4.78	**23512**	6.72	**23312**	1	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
1/2-13	2500	**23413**	4.78	**23513**	6.72	**23313**	1 1/4	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
5/8-11	4000	**23414**	4.78	**23514**	6.72	**23314**	1	1.50	.88	.75	3.52	2 1/4	4 3/16	60	2.7
5/8-11	4000	**23415**	4.78	**23515**	6.72	**23315**	1 1/4	1.50	.88	.75	3.52	2 1/4	4 3/16	60	2.7
5/8-11	4000	**23416**	4.78	**23516**	6.72	**23316**	3/4	1.50	.88	.75	3.52	2 1/4	2 1/4	60	2.7
3/4-10	5000	**23417**	4.78	**23517**	6.72	**23317**	1	1.50	.88	.75	3.52	2 1/8	4	100	3.0
3/4-10	5000	**23418**	4.78	**23518**	6.72	**23318**	1 1/2	1.50	.88	.75	3.52	2 1/8	4	100	3.0
3/4-10	7000	**23420**	6.52	**23520**	8.11	**23320**	1	2.31	1.40	1.00	5.14	2 15/16	4	100	7.0
3/4-10	7000	**23421**	6.52	**23521**	8.11	**23321**	1 1/2	2.31	1.40	1.00	5.14	2 15/16	4	100	7.0
7/8-9	8000	**23423**	6.52	**23523**	8.11	**23323**	1	2.31	1.40	1.00	5.14	2 13/16	4 3/8	160	7.0
7/8-9	8000	**23424**	6.52	**23524**	8.11	**23324**	1 1/4	2.31	1.40	1.00	5.14	2 13/16	4 3/8	160	7.0
1-8	10000	**23425**	6.52	**23525**	8.11	**23325**	1 1/4	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1-8	10000	**23426**	6.52	**23526**	8.11	**23326**	1 1/2	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1-8	10000	**23427**	6.52	**23527**	8.11	**23327**	2 1/4	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1 1/4-7	15000	**23429**	8.73	—	—	**23329**	1 7/8	3.19	1.75	1.25	6.50	4 1/4	—	470	14
1 1/4-8	15000	**23429-08**	8.73	—	—	—	1 7/8	3.19	1.75	1.25	6.50	4 1/4	—	470	14
1 1/2-6	24000	**23433**	12.47	—	—	**23333**	2 3/4	4.19	2.25	1.75	8.55	6 1/2	—	800	33
1 1/2-8	24000	**23433-08**	12.47	—	—	—	2 3/4	4.19	2.25	1.75	8.55	6 1/2	—	800	33
2-4 1/2	30000	**23435**	12.47	—	—	**23335**	3 1/8	4.19	2.25	1.75	8.55	6	—	1100	36
2-8	30000	**23435-08**	12.47	—	—	—	3 1/8	4.19	2.25	1.75	8.55	6	—	1100	36
2 1/2-4	50000	**23438**	16.50	—	—	**23338**	4	5.75	3	2..25	11.72	8 1/4	—	2100	89
2 1/2-8	50000	**23438-08**	16.50	—	—	—	4	5.75	3	2.25	11.72	8 1/4	—	2100	89

[1] Stated load capacity based on recommended thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.
[3] Available from stock as Standard Clevis.

Center-Pull Traditional Style

Metric

Thread Size A	Load[1] Capacity (kg)	Std. U-Bar Part Number	Std. U-Bar B	Long U-Bar Part Number	Long U-Bar B	Envirolox Part Number[3]	Thread Length C	D	E	F	G	Std. U-Bar H	Long U-Bar H	Torque[2] (kg•m)	Wt. (kg)
M6 x 1.0	200	**23455**	67.8	–	–	**23355**	12.0	19.0	10.9	9.7	46.7	34.0	–	0.6	0.17
M8 x 1.25	400	**23456**	67.8	–	–	**23356**	12.5	19.0	10.9	9.7	46.7	32.0	–	1.0	0.17
M10 x 1.50	450	**23458**	67.8	–	–	**23358**	17.5	19.0	10.9	9.7	46.7	30.0	–	1.7	0.17
M12 x 1.75	1050	**23462**	123.0	**23562**	170.7	**23362**	19.0	38.1	22.4	19.0	89.4	60.5	108	3.8	1.1
M16 x 2.0	1900	**23465**	123.0	**23565**	170.7	**23365**	29.0	38.1	22.4	19.0	89.4	56.5	106	8.2	1.1
M20 x 2.5	2150	**23468**	123.0	**23568**	170.7	**23368**	34.0	38.1	22.4	19.0	89.4	52.5	101	13.6	1.2
M20 x 2.5	3000	**23471**	163.0	**23571**	206.0	**23371**	32.0	58.7	35.6	25.4	130.6	73.0	101	13.6	3.0
M24 x 3.0	4200	**23474**	163.0	**23574**	206.0	**23374**	37.0	58.7	35.6	25.4	130.6	69.0	111	31.0	3.1
M30 x 3.5	7000	**23478**	221.7	–	–	**23378**	46.0	81.0	44.5	31.7	165.1	107.4	–	60.0	6.3
M30 x 3.5	7000	**23479**	221.7	–	–	**23379**	66.0	81.0	44.5	31.7	165.1	107.4	–	60.0	6.4
M36 x 4.0	11000	**23483**	316.7	–	–	**23383**	68.0	106.4	57.2	44.4	217.2	166.5	–	100.0	15.5
M42 x 4.5	12500	**23484**	316.7	–	–	**23384**	68.0	106.4	57.2	44.4	217.2	160.5	–	100.0	16.0
M48 x 5.0	13500	**23485**	316.7	–	–	**23385**	88.0	106.4	57.2	44.4	217.2	154.5	–	100.0	16.8
M64 x 6.0	22500	**23488**	419.1	–	–	**23388**	96.0	146.0	76.2	57.1	297.6	210.0	–	290.0	40.0

All dimensions are in millimeters. [1]Stated load capacity is based upon specific thread torques shown in chart.
[2] It is recommended that these torques be used when installing hoist rings. [3] Available from stock as Standard Clevis.

Bolt Replacement Kits - Inch threads

Black Oxide Hoist Rings			Envirolox Coated		Kit Wt. (lbs)
Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	Std. U-Bar Part No.	Bolt Kit Part No.	
23404		**23604**	**23304**	**23604-E**	
23405		**23605**	**23305**	**23605-E**	
23406		**23606**	**23306**	**23606-E**	.03
23408		**23608**	**23308**	**23608-E**	.05
23410		**23610**	**23310**	**23610-E**	.16
23411	**23511**	**23611**	**23311**	**23611-E**	.14
23412	**23512**	**23612**	**23312**	**23612-E**	.16
23413	**23513**	**23613**	**23313**	**23613-E**	.17
23414	**23514**	**23614**	**23314**	**23614-E**	.27
23415	**23515**	**23615**	**23315**	**23615-E**	.29
23416	**23516**	**23616**	**23316**	**23616-E**	
23417	**23517**	**23617**	**23317**	**23617-E**	.40
23418	**23518**	**23618**	**23318**	**23618-E**	.46
23420	**23520**	**23620**	**23320**	**23620-E**	.46
23421	**23521**	**23621**	**23321**	**23621-E**	.52
23423	**23523**	**23623**	**23323**	**23623-E**	.62
23424	**23524**	**23624**	**23324**	**23624-E**	.66
23425	**23525**	**23625**	**23325**	**23625-E**	.92
23426	**23526**	**23626**	**23326**	**23626-E**	.97
23427	**23527**	**23627**	**23327**	**23627-E**	1.13
23429		**23629**	**23329**	**23629-E**	2.90
23429-08		**23629-08**			2.90
23433		**23633**	**23333**	**23633-E**	3.50
23433-08		**23633-08**			3.50
23435		**23635**	**23335**	**23635-E**	7.30
23435-08		**23635-08**			7.30
23438		**23638**	**23338**	**23638-E**	15.66
23438-08		**23638-08**			15.96

Bolt Replacement Kits - Metric threads

Black Oxide Hoist Rings			Envirolox Coated		Kit Wt. (kg)
Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	Std. U-Bar Part No.	Bolt Kit Part No.	
		23655		**23655-E**	.02
23456		**23656**	**23356**	**23656-E**	.02
23458		**23658**	**23358**	**23658-E**	.03
23462	**23562**	**23662**	**23362**	**23662-E**	.06
23465	**23565**	**23665**	**23365**	**23665-E**	.12
23468	**23568**	**23668**	**23368**	**23668-E**	.21
23471	**23571**	**23671**	**23371**	**23671-E**	.23
23474	**23574**	**23674**	**23374**	**23674-E**	.40
23478		**23678**	**23378**	**23678-E**	.79
23479		**23679**	**23379**	**23679-E**	.91
23483		**23683**	**23383**	**23683-E**	1.52
23484		**23684**	**23384**	**23684-E**	2.75
23485		**23685**	**23385**	**23685-E**	3.27
23488		**23688**	**23388**	**23688-E**	7.12

Bolt Kits contain bolt and retaining ring.

• **See page 11.15 for Hoist Ring hold down clips.**

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

Side-Pull Traditional Style

Precision Cast Body



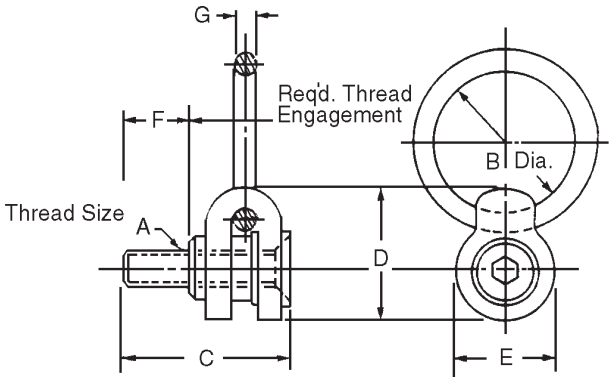
- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Clevis, Ring, Bushing and Cap Screw are magnetic particle inspected
- Clevis is x-rayed
- Finish: Black Oxide
- Bushing: Zinc Plated with conversion coating, yellow (inch), clear blue (metric)
- Proof Tested to 200% of Rated Load Capacity
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- **Available with Envirolox™ protective finish. See page 11.15 for more information.**

360° swivel plus pivot point moves around bolt to provide greater clearances in side lifting and when lifting rotating objects.

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED



Inch

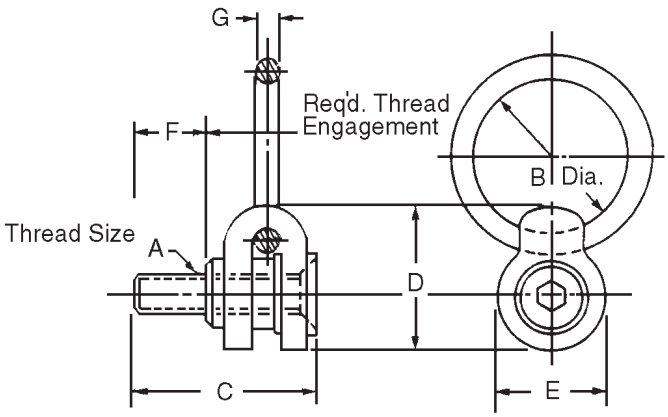
Part Number	Envirolox Part Number	Load[1] Capacity (lbs)	A	B	C	D	E	F	G	Torque[2] (ft. lbs)	Wt. (lbs)
47311	**47311-E**	650	5/16-18	2	2 1/8	2	1 1/2	5/8	3/8	3.5	.25
47312	**47312-E**	800	3/8-16	2	2 3/8	2	1 1/2	3/4	3/8	4.5	.25
47313	**47313-E**	1800	1/2-13	3	3 3/8	3 3/16	2 3/8	1	5/8	15.0	3.25
47314	**47314-E**	2500	5/8-11	3	3 5/8	3 3/16	2 3/8	1 1/4	5/8	25.0	3.25
47315	**47315-E**	4100	3/4-10	4	5	5	3 3/4	1 1/2	1	50.0	11.25
47316	**47316-E**	7100	1-8	4	5 3/8	5	3 3/4	2	1	90.0	11.50
47317	**47317-E**	14000	1 1/4-7	6	6 7/8	6 13/16	4 5/8	2	1 3/8	150.0	27.75
47317-08		14000	1 1/4-8	6	6 7/8	6 13/16	4 5/8	2	1 3/8	150.0	27.75
47318	**47318-E**	17200	1 1/2-6	6	7 7/8	6 13/16	4 5/8	2 1/2	1 3/8	250.0	31.50
47318-08		17200	1 1/2-8	6	7 7/8	6 13/16	4 5/8	2 1/2	1 3/8	250.0	31.50
47319	**47319-E**	29000	2-4 1/2	5 1/4 x 10 1/2	10	6 13/16	4 5/8	3 1/8	1 1/2	300.0	42.00
47319-08		29000	2-8	5 1/4 x 10 1/2	10	6 13/16	4 5/8	3 1/8	1 1/2	300.0	42.00

[1] Stated load capacity based on specific thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.

Side-Pull Traditional Style

Precision Cast Body





Metric

Part Number	Envirolox Part Number	Load[1] Capacity (kg)	A	B	C	D	E	F	G	Torque[2] (kg•M)	Wt. (kg)
47351	**47351-E**	325	M 8 x 1.25	50.8	61.0	50.8	38.1	16.0	9.5	.43	.12
47352	**47352-E**	500	M 10 x 1.50	50.8	63.0	50.8	38.1	20.0	9.5	.60	.12
47353	**47353-E**	725	M 12 x 1.75	76.2	85.0	81	60.3	24.0	15.9	2.00	1.5
47354	**47354-E**	1400	M 16 x 2.0	76.2	94.0	81	60.3	31.0	15.9	3.50	1.5
47355	**47355-E**	2290	M 20 x 2.5	101.6	133.0	125.4	95.3	40.0	25.4	7.00	5.1
47356	**47356-E**	3050	M 24 x 3.0	101.6	147.0	125.4	95.3	47.0	25.4	12.50	5.2
47357	**47357-E**	4850	M 30 x 3.5	152.0	173.8	173.0	117.5	49.0	31.7	34.6	12.6
47358	**47358-E**	7500	M 36 x 4.0	152.0	191.0	173.0	117.5	67.5	35.0	55.0	14

All dimensions are in millimeters.
[1]Stated load capacity based on specific thread torques as shown in charts.
[2]It is recommended that these torques be used when installing hoist rings.

Bolt Replacement Kits

Inch Thread

Hoist Ring Part No.	Bolt Kit Part No.	Envirolox Bolt Kit Part No.	Thread Size	Wt. (lbs)
47311	**47341**	**47341-E**	5/16-18	.05
47312	**47342**	**47342-E**	3/8-16	.06
47313	**47343**	**47343-E**	1/2-13	.17
47314	**47344**	**47344-E**	5/8-11	.28
47315	**47345**	**47345-E**	3/4-10	.59
47316	**47346**	**47346-E**	1-8	1.27
47317	**47347**	**47347-E**	1 1/4-7	2.50
47317-08	**47347-08**		1 1/4-8	2.50
47318	**47348**	**47348-E**	1 1/2-6	4.70
47318-08	**47348-08**		1 1/2-8	4.70
47319	**47349**	**47349-E**	2-4 1/2	9.50
47319-08	**47349-08**		2-8	9.50

Bolt Kits contain bolt and retaining ring.
Bolt Kits with -E are for use with Envirolox Hoist Rings.

• **See page 11.15 for Hoist Ring hold down clips.**

Metric Thread

Hoist Ring Part No.	Bolt Kit Part No.	Envirolox Bolt Kit Part No.	Thread Size	Wt. (kg)
47351	**47391**	**47391-E**	M 8	.02
47352	**47392**	**47392-E**	M 10	.03
47353	**47393**	**47393-E**	M 12	.07
47354	**47394**	**47394-E**	M 16	.14
47355	**47395**	**47395-E**	M 20	.32
47356	**47396**	**47396-E**	M 24	.53
47357	**47397**	**47397-E**	M 30	1.03
47358	**47398**	**47398-E**	M 36	2.0

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

SP 2000™ Side-Pull Style
Extended D Ring



Patent Nos. 6,068,310 and 409,895

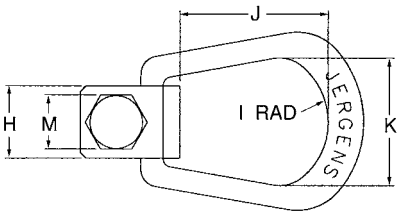
The Jergens SP2000 Side-Pull Style Hoist Ring is ideal for flipping fixtures, dies and molds. It swivels 360° and pivots around the center bolt providing the ring with greater clearances in side lifting applications and when lifting rotating objects. The hoist ring is low profile and has a unique bolt retention design. The oversized forged ring, and single piece forging, easily adapts to larger hoist hooks. Its relatively light weight makes it easier to handle than similar hoist rings and the installation is conveniently done with external wrenching (47531, 47532) or internal/external wrenching (all other sizes). All parts are made in the U.S.A.

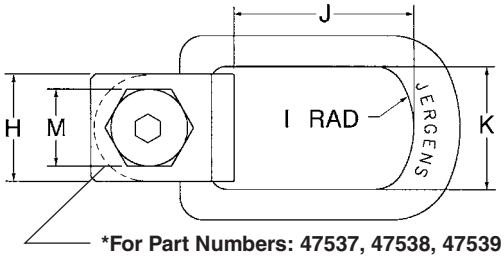
- Can Be Used for Top Lifting as well as side lifting applications
- Full Swivel & Pivot Action
- Rated at 5:1 strength factor at any angle
- Material: Heat Treated Alloy Steel
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity
- Available in Metric sizes. See page 11.13.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

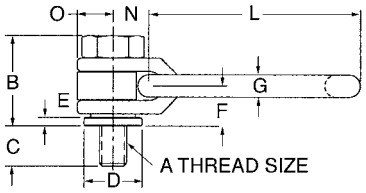
To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

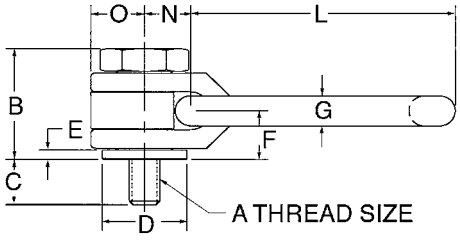




***For Part Numbers: 47537, 47538, 47539**



External Wrench Mounting
Part Numbers: 47531 & 47532



Internal/External Wrench Mounting
Part Numbers: 47533 thru 47539

Inch Threads (Includes Gold Aluminum Spacer)

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Torque (ft. lbs)	Hex Size	Wt. (lbs)
47531	650	5/16-18	1 9/32	15/32	13/16	1/8	9/16	5/16	1	1	2 1/16	1 3/4	3	3/4	1/2	1/2	4	—	.5
47532	800	3/8-16	1 9/32	5/8	13/16	1/8	9/16	5/16	1	1	2 1/16	1 3/4	3	3/4	1/2	1/2	5	—	.5
47533	1800	1/2-13	1 7/8	3/4	1 3/8	5/32	13/16	1/2	1 3/4	1 1/2	3 3/8	2	4 3/4	1 1/4	3/4	7/8	15	1/4	2
47534	2500	5/8-11	1 7/8	15/16	1 3/8	5/32	13/16	1/2	1 3/4	1 1/2	3 3/8	2	4 3/4	1 1/4	3/4	7/8	25	5/16	2
47535	4100	3/4-10	2 5/16	1 1/8	1 7/8	1/4	1 1/32	5/8	2 1/4	2	4	2 5/8	5 11/16	1 3/4	1	1 1/8	50	3/8	4
47536	7100	1-8	2 5/16	1 1/2	1 7/8	1/4	1 1/32	5/8	2 1/4	2	4	2 5/8	5 11/16	1 3/4	1	1 1/8	130	1/2	4.5
***47537**	14000	1 1/4-7	4 9/16	1 7/8	3 1/4	23/64	1 21/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	150	3/4	24.50
***47538**	17200	1 1/2-6	4 9/16	2 1/4	3 1/4	23/64	1 21/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	250	3/4	30
***47539**	29000	2-4 1/2	4 9/16	3	3 1/4	23/64	1 21/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	300	3/4	26.50

SP 2000™ Side-Pull
Metric - Extended D Ring



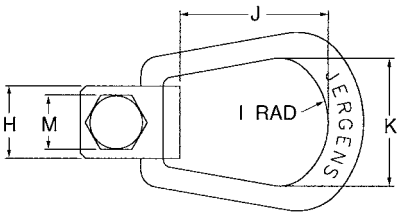
Patent Nos. 6,068,310
and 409,895

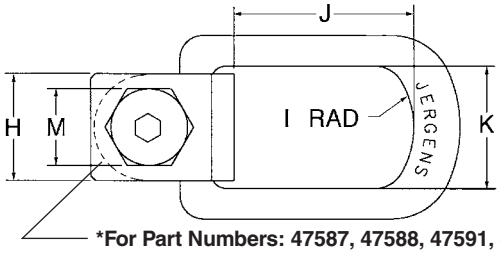


SIDE PULL APPLICATION

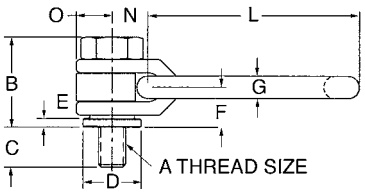


TOP PULL APPLICATION

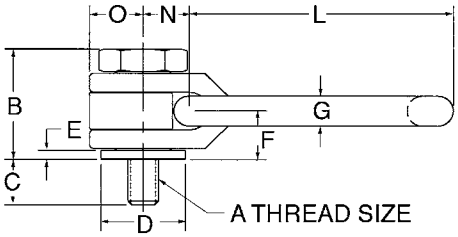




*For Part Numbers: 47587, 47588, 47591, 47589



External Wrench Mounting
Part Numbers: 47581 & 47582



Internal/External Wrench Mounting
Part Numbers: 47583 thru 47589, 47591

Metric Threads (Includes Blue Aluminum Spacer)

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Torque (N•m)	Hex Size	Wt. (kg)
47581	325	M8 x 1.25	33	16	21	3	14	8	25	25	52	44	76	19	13	13	5	—	.25
47582	500	M10 x 1.5	33	20	21	3	14	8	25	25	52	44	76	19	13	13	10	—	.25
47583	725	M12 x 1.75	48	24	35	4	21	13	44	38	86	51	120	32	19	22	20	6	1
47584	1400	M16 x 2	48	32	35	4	21	13	44	38	86	51	120	32	19	22	40	8	1
47585	2290	M20 x 2.5	59	40	48	6	26	16	57	51	102	67	145	44	25	29	70	10	2
47586	3050	M24 x 3	59	48	48	6	26	16	57	51	102	67	145	44	25	29	140	12	2
***47587**	4850	M30 x 3.5	117	60	83	9	42	27	95	76	196	111	265	76	49	48	350	19	24.50
***47588**	7500	M36 x 4	117	72	83	9	42	27	95	76	196	111	265	76	49	48	550	19	25
***47591**	8700	M42 x 4.5	117	84	83	9	42	27	95	76	196	111	265	76	49	48	800	19	27.50
***47589**	10000	M48 x 5	122	96	83	9	42	27	95	76	196	111	265	80	49	48	1200	27	26

All dimensions are in millimeters.

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring
Add "F" to the end of the part
number **Example: 23414F**

CE CERTIFIED

Side Swivel



U.S. Patent No. 6,443,514

Jergens new Side Swivel™ Lifting Ring is designed specifically for OEM type applications. It replaces potentially dangerous eyebolts on commercial, military, and industrial lifts requiring full swivel and pivoting action.

- 5:1 strength factor-forged ring
- Unique 3 piece design
- Made in U.S.A.
- Capacities up to 4100 lbs.
- Inch and metric
- OEM Pricing
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

Ideally suited for OEM applications

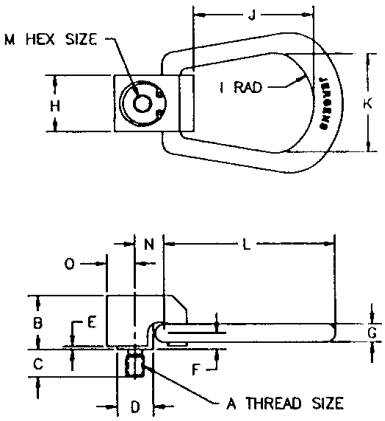


LIFT ID™
AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

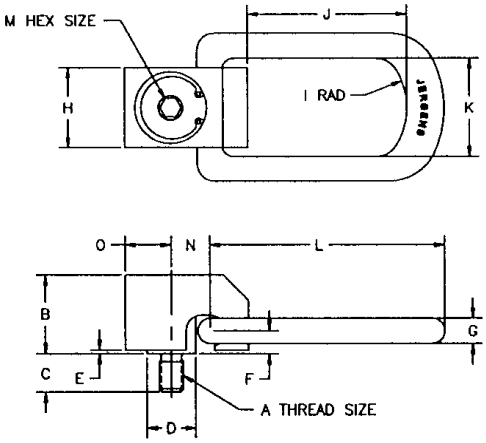
To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

Small Side Swivel*



Large Side Swivel



Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	N	O	Torque (ft.lbs)	Weight (lbs)
47800*	650	5/16-18	15/16	15/32	5/8	1/16	9/32	5/16	1	1	2 1/16	1 3/4	2 31/32	1/4	1/2	1/2	3.5	0.6
47801*	800	3/8-16	15/16	9/16	5/8	1/16	9/32	5/16	1	1	2 1/16	1 3/4	2 31/32	1/4	1/2	1/2	4.5	0.6
47802	1800	1/2-13	1 37/64	3/4	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	15	2.5
47803	2500	5/8-11	1 37/64	15/16	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	25	2.5
47804	4100	3/4-10	1 37/64	1 1/8	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	50	2.5

* Small Side Swivel

Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	N	O	Torque (N•m)	Weight (kg)
47850*	325	M8 x 1.25	23.8	15.8	15.8	1.6	7.2	7.9	25.4	25.4	52.4	44.5	75.4	6	12.7	12.7	4.2	.27
47851*	500	M10 x 1.5	23.8	19.8	15.8	1.6	7.2	7.9	25.4	25.4	52.4	44.5	75.4	6	12.7	12.7	6	.27
47852	725	M12 x 1.75	40.1	23.8	25.4	2.0	11.1	12.7	66.7	38.1	82.6	50.8	120.7	10	20	24	20	1.14
47853	1400	M16 x 2.0	40.1	31.8	25.4	2.0	11.1	12.7	66.7	38.1	82.6	50.8	120.7	10	20	24	40	1.14
47854	2290	M20 x 2.5	40.1	39.7	25.4	2.0	11.1	12.7	66.7	38.1	82.6	50.8	120.7	10	20	24	70	1.18

* Small Side Swivel

Envirolox™ Protective Finish



The Envirolox™ Protective Finish is a *proprietary nickle based coating that helps to prevent rusting and other environmental hazards from affecting Jergens Hoist Rings*. This coating does not contain cadmium or chromium, is *environmentally friendly,* and is proven to be *effective* in *extreme conditions*. It provides surface hardness, lubricity and more effective corrosion protection than paints. Envirolox Protective Finish is available on Jergens Center-Pull and Side-Pull Style Hoist Rings. It is not recommended for the Swivel Eyebolt or the SP 2000 products.

- Available on Center-Pull and Side-Pull Traditional Style Hoist Rings (See pages 11.8-11.9 and 11.10-11.11 for part numbers.)
- Available upon request for other selected Jergens lifting products.
- Protects against rusting
- Environmentally safe

Hoist Ring Hold Down Clips

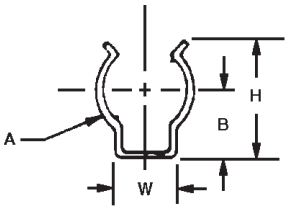
Two or more Hoist Ring Hold Down Clips should be used to prevent ring movement when the hoist ring is not in use. These simple spring steel clips prevent ring movement, provide an additional safety feature when used around machine tools and give a neat finished appearance.

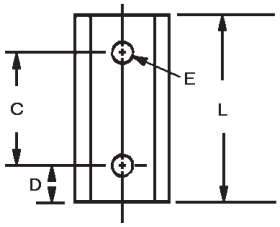
LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

- Material: Spring, Steel
- Finish: Cadmium or Zinc

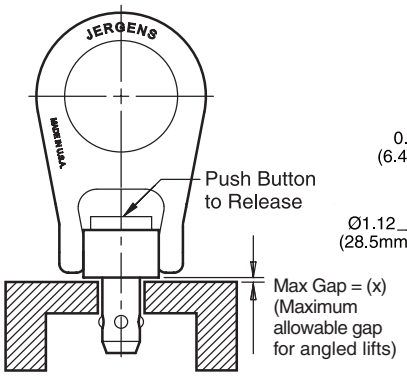




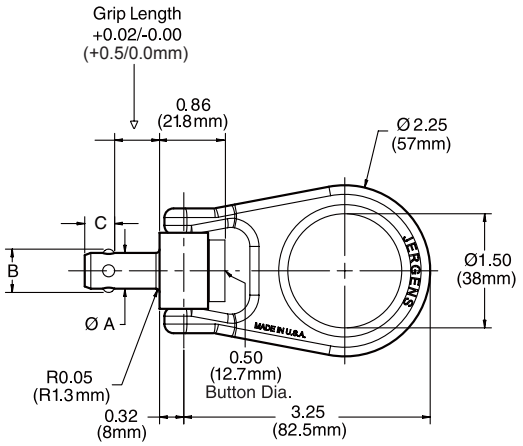
Clip Part Number	Diameter A	B	C	D	E	H	W	L
47331	3/8	.330	—	.250	.125	.575	.320	.500
47332	1/2	.388	.250	.125	.151	.712	.385	.500
47333	5/8	.450	.250	.125	.151	.832	.385	.500
47334	3/4	.513	.312	.156	.151	1.000	.385	.625
47335	1	.683	.312	.188	.188	1.133	.510	.687
47336	1 1/4	.750	.625	.187	.162	1.370	1.330	1.000
47337	1 3/8	.880	.312	.188	.188	1.439	.510	.688
47338	1 7/16	.850	.937	.312	.103	1.560	1.560	1.500
47339	1 3/4	1.070	.312	.188	.130	1.830	.780	.688

Kwik-Lok™ Lifting Pins





Typical Application



LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

CE CERTIFIED

- All stainless steel construction and components
- 17-4 PH stainless steel forged, heat treated lifting ring with large opening
- Lifting ring with Load Spreader Bar
- 5 to 1 strength factor
- 360° Swivel
- 180° Pivot
- Also chosen for lashing applications
- Contact factory for custom threads or dimensions

Lifting Pin Specifications - Inches

Nom Pin Dia	Max. Load Rating (lbs)*	ØA		+/-0.005 B	+0.00/ -0.04 C	Max. Gap (X) (in)	Required Hole Diameter (in)	
		Min	Max				Max	Min
1/4	400	.2470	.2485	.286	.290	0.06	0.2540	0.2500
5/16	700	.3095	.3110	.375	.330	0.06	0.3165	0.3125
3/8	1,000	.3720	.3735	.440	.365	0.06	0.3790	0.3750
1/2	1,250	.4970	.4985	.594	.460	0.06	0.5050	0.5000
5/8	1,400	.6220	.6235	.750	.580	0.06	0.6300	0.6250

Lifting Pin Specifications - Metric

Nom Pin Dia	Max. Load Rating (kN)*	ØA		+/-0.25 B	+0.0/ -1.0 C	Max. Gap (X) (mm)	Required Hole Diameter (mm)	
		Min	Max				Max	Min
10	4.4	9.92	9.96	12.00	9	1.5	10.1	10.0
12	5.5	11.92	11.96	14.27	10	1.5	12.1	12.0
16	6.2	15.92	15.96	19.00	14	1.5	16.1	16.0

*Dimensions in millimeters

Kwik-Lok™ Lifting Pin - Inches

Dia.	Grip Length							
	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1/4	**807216**	**807217**	**807218**	**807219**	**807220**	**807222**	**807224**	**807225**
5/16	**807232**	**807233**	**807234**	**807235**	**807236**	**807238**	**807240**	**807241**
3/8	**807248**	**807249**	**807250**	**807251**	**807252**	**807254**	**807256**	**807257**
1/2	**807280**	**807281**	**807282**	**807283**	**807284**	**807286**	**807288**	**807289**
5/8	**807312**	**807313**	**807314**	**807315**	**807316**	**807318**	**807320**	**807321**

Kwik-Lok™ Lifting Pin - Metric

Dia.	Grip Length							
	15	20	25	30	35	40	50	75
10	**857237**	**857238**	**857239**	**857240**	**857299**	**857241**	**857242**	**857307**
12	**857249**	**857250**	**857251**	**857252**	**857300**	**857253**	**857254**	**857308**
16	**857261**	**857262**	**857263**	**857264**	**857301**	**857265**	**857266**	**857309**

Important: Please review all operating instructions that are included in the packaging or online before use.

Note: If the required hole size cannot be achieved; Jergens recommends the use of our threaded receptacle (see page 11.17); Please Contact Customer Service with any questions.

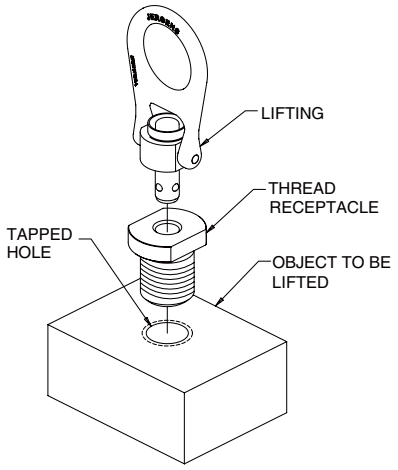
*Lifting load ratings are based on tests with hardened tool steel plates or shoulder bushings. Load ratings may be reduced if oversized holes or parent material under 80,000 psi tensile are used.

Kwik-Lok™ Lifting Pins Threaded Receptacles

High Strength Stainless Steel, 17-4 PH heat treated

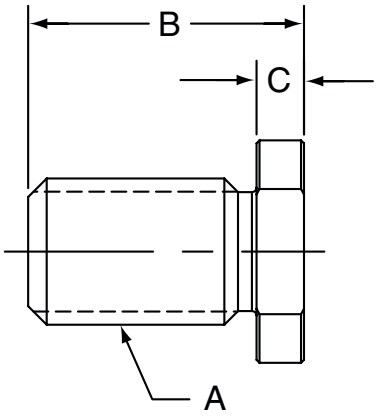
KLP Threaded Receptacles - Inch

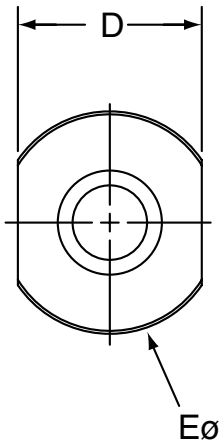
For Kwik-Lok Lifting Pin Size	For Kwik-Lok Lifting Pin Part Number	Use Receptacle Part Number	Thread Size A	Overall Length B	Head Height C	Head Flats D	Diameter E	Install Torque (ft-lbs)
1/4×0.5	807216	**845100**	1/2-13	0.930	0.16	.62	.75	7
5/16×0.5	807232	**845101**	3/4-10	1.100	0.28	.87	1.12	18
3/8×0.5	807248	**845102**	3/4-10	1.100	0.28	.87	1.12	25
1/2×0.5	807280	**845103**	1 1/8-7	1.625	0.37	1.25	1.62	47
5/8×0.5	807312	**845104**	1 1/8-7	1.625	0.37	1.25	1.62	53



KLP Threaded Receptacles - Metric

For Kwik-Lok Lifting Pin Size	For Kwik-Lok Lifting Pin Part Number	Use Receptacle Part Number	Thread Size A	Overall Length B	Head Height C	Head Flats D	Diameter E	Install Torque (kg•m)
10×15	857237	**855100**	M20x2.5	29	7	26	34.8	3.6
12×15	857249	**855101**	M22x2.5	37	9	30	34.8	5.0
16×15	857261	**855102**	M27x3	41	10	32	41.2	6.9





Swivel Eyebolt



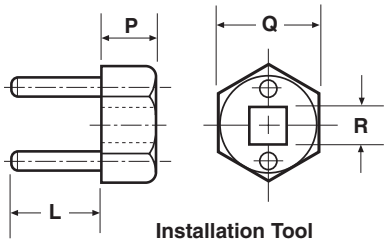
U.S. Patent Nos. 5,634,734
and 5,743,576
Foreign Patent Pending

The Jergens Swivel Eyebolt™ lifting product has a full swivel and pivoting action that allows for the flipping and turning of the part without unhooking. The patented tamper resistant design is ideal for permanent mounting on OEM applications or on molds, dies and fixtures.

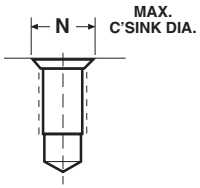
- Tamper Resistant Design
- Swivels 360°, Pivots 180°
- Eliminates Bending (of Eyebolt) Problem
- Forged, Oversized, One-Piece Lift Ring
- Rated at 5:1 Strength Factor
- Load Capacities to 4000 Lbs / 2000 Kg
- Economically Priced
- Material: Alloy Steel, or 316 Stainless Steel
- Finish: Black Oxide, or Passivated (SS)
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

LIFT ID AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring
Add "F" to the end of the part
number **Example: 23414F**



Installation Tool

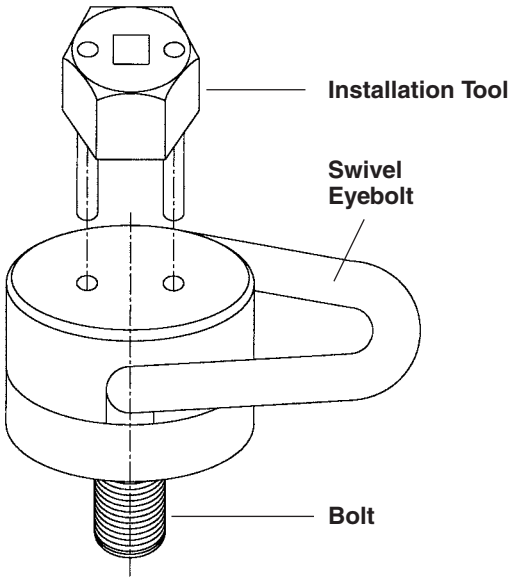


TO PREVENT BINDING, THE MOUNTING HOLE COUNTERSINK SHOULD NOT EXCEED 'N' DIMENSION.

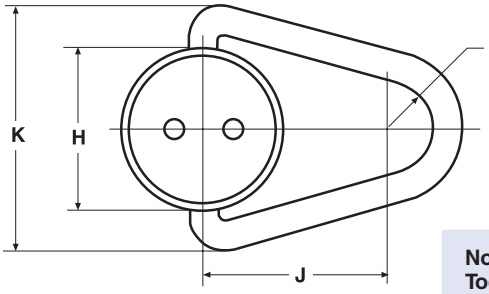
Installation Tool Information

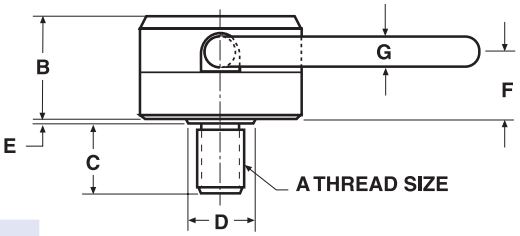
Installation Tool Part Number	Pin Length L	Head Thickness P	Hex Size Q	Square Drive R
47641	11/16	.55	15/16	1/4
47643	1 1/8	.65	1 1/4	3/8

Swivel Eyebolt Part Number	Installation Tool Part Number	Recommended Torque	Maximum Countersink Diameter N
47621	**47641**	7 ft. lbs.	1/2
47622	**47641**	20 ft. lbs.	5/8
47631	**47641**	7 ft. lbs.	1/2
47632	**47641**	20 ft. lbs.	5/8
47671	**47641**	10 N•m	13 mm
47672	**47641**	25 N•m	16 mm
47681	**47641**	10 N•m	13 mm
47682	**47641**	25 N•m	16 mm
47625	**47643**	35 ft. lbs.	3/4
47626	**47643**	55 ft. lbs.	7/8
47633	**47643**	35 ft. lbs.	3/4
47634	**47643**	55 ft. lbs.	7/8
47675	**47643**	50 N•m	19 mm
47676	**47643**	80 N•m	22 mm
47683	**47643**	50 N•m	19 mm
47684	**47643**	80 N•m	22 mm



Small Swivel Eyebolt





Jergens Swivel Eyebolt™

Note: Use Installation Tool Part Number 47641 for this style Swivel Eyebolt on page 11.18.

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

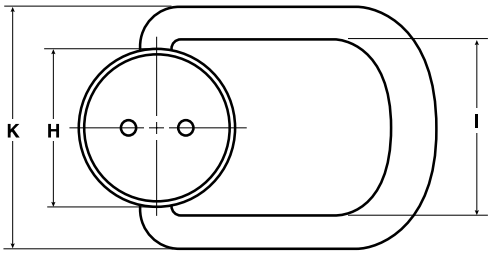
Swivel Eyebolt

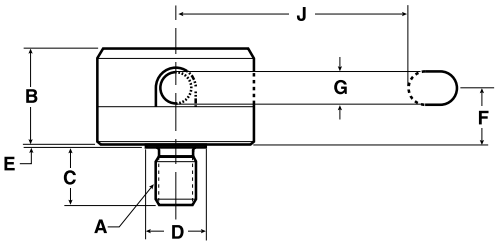
Part Number		Load Capacity (lbs)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47621	**47631**	1000	500	3/8 - 16	1 3/32	9/16	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8
47622	**47632**	2000	1000	1/2 - 13	1 3/32	3/4	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8

Metric Swivel Eyebolt

Part Number		Load Capacity (Kg)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47671	**47681**	500	250	M10 x 1.5	27.8	14.6	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7
47672	**47682**	700	350	M12 x 1.75	27.8	19.1	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7

Large Swivel Eyebolt





Note: Use Installation Tool Part Number 47643 for this style Swivel Eyebolt on page 11.18.

LIFT ID™ AUTOMATED INSPECTION AND COMPLIANCE SYSTEM

To add **Lift ID**™ to Hoist Ring Add "F" to the end of the part number **Example: 23414F**

Swivel Eyebolt

Part Number		Load Capacity (lbs)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47625	**47633**	3000	1500	5/8 - 11	1 33/64	15/16	7/8	1/32	57/64	1/2	2 1/2	2 3/4	3 1/2	3 13/16
47626	**47634**	4000	2000	3/4 - 10	1 33/64	1 1/8	1	1/32	57/64	1/2	2 1/2	2 3/4	3 1/2	3 13/16

Metric Swivel Eyebolt

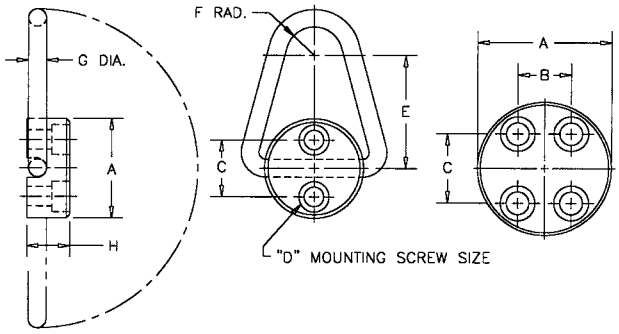
Part Number		Load Capacity (Kg)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47675	**47683**	1500	750	M16 x 2.0	38.5	23.8	22.2	.8	22.6	12.7	63.5	70	93	97
47676	**47684**	2000	1000	M20 x 2.5	38.5	30.2	25.4	.8	22.6	12.7	63.5	70	93	97

Pivoting Lift Ring



The Jergens Pivoting Lift Ring is a low profile lifting device that pivots 180°. It is one of the most economical lifting devices available and is ideal for applications that do not require a swivel action. This Lift Ring is easy to install and is available in five sizes. Load ratings range from 2,000 - 20,000 lbs. The product is manufactured from alloy steel, heat treated and magnafluxed.

- Base: Precision Machined Alloy Steel
- Ring: Alloy Steel forging, heat treated, magnafluxed and certified
- Finish: Black Oxide
- Rated at 6:1 Strength Factor
- 3D Solid Models available in multiple formats from **www.jergensinc.com**



Pivoting Lift Rings

Ring Part Number	Load Capacity (lbs)	A	B	C	Mounting Bolt Part Number	Thread & Length D	E	F	G	H
47411	2000	1 3/4	–	1	**47421**	5/16-18 x 1 1/4	2	1/2	5/16	3/4
47412	2500	2 1/4	–	1 1/8	**47422**	3/8-16 x 1 1/2	2 1/2	5/8	3/8	7/8
47413	5000	2 1/2	–	1 1/2	**47423**	1/2-13 x 1 3/4	3	3/4	1/2	1 1/8
47414*	12000	3 1/8	1 1/4	1 5/8	**47424**	1/2-13 x 2 1/2	4	7/8	3/4	1 3/8
47415*	20000	3 5/8	1 1/4	2 1/16	**47425**	5/8-11 x 2 1/2	5	1	1	1 7/8

* The larger load capacity rings have four mounting holes.
***Note**: Mounting Bolts must be ordered separately.

Metric Pivoting Lift Rings

Ring Part Number	Part Number with Pull Test & Metric Screws	Load Capacity (kg)	A	B	C	Mounting Bolt Part Number	Thread & Length D	E	F	G	H
47411	**47411-PTMS**	900	45	–	25.4	**47471**	M 8 x 1.25 x 35 mm	51	13	8	19
47412	**47412-PTMS**	1100	57	–	28.6	**47472**	M 10 x 1.5 x 40 mm	64	16	10	22
47413	**47413-PTMS**	2250	64	–	38.1	**47473**	M 12 x 1.75 x 45 mm	76	19	13	29
47414*	**47414-PTMS**	5400	80	31.8	41.3	**47474**	M 12 x 1.75 x 55 mm	102	22	19	35
47415*	**47415-PTMS**	9000	92	31.8	52.4	**47475**	M 16 x 2.0 x 65 mm	127	25.4	25.4	48

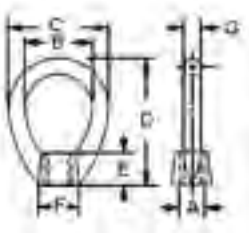
* The larger load capacity rings have four mounting holes.
***Note**: Mounting Bolts must be ordered separately.

CE CERTIFIED

Eye Nuts

Inch





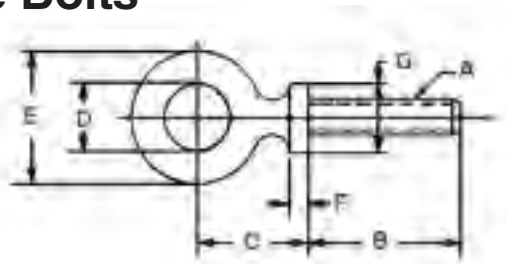
• Material: C-1030 Forge

Part Number	A	B	C	D	E	F	G	Wt (lbs)	Load Capacity (lbs)
18901	3/8-16	1 1/4	2	2 1/2	5/8	7/8	3/8	.22	2700
18902	1/2-13	1 1/4	2	2 1/2	5/8	7/8	3/8	.22	2700
18903	5/8-11	1 1/2	2 1/2	3	3/4	1 3/8	1/2	.50	5000
18904	3/4-10	1 1/2	2 1/2	3	3/4	1 3/8	1/2	.50	5000

Shoulder Eye Bolts

Inch

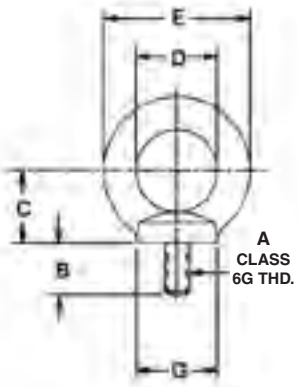




- Material: C-1030 Forge
- Finish: Mill
- Thread: 2A

For other than vertical loads, general practice is to use 60% of the working load capacity for a load 30˚ from vertical; 33% of vertical load for load 45˚ from vertical; and 20% of vertical load for load 90˚ from vertical.

NOTE: 2 1/2 threads runout on threaded portion.



Part Number	A	B	C (Ref.)	D	E	F (Ref.)	G	Wt (lbs)	Load Capacity (lbs)
18501	1/4-20	1	11/16	3/4	1 3/16	3/16	1/2	.05	500
18502	5/16-18	1 1/8	7/8	7/8	1 7/16	3/16	5/8	.10	900
18503	3/8-16	1 1/4	1 1/16	1	1 21/32	3/16	11/16	.16	1300
18504	1/2-13	1 1/2	1 5/16	1 3/16	2 1/16	1/4	7/8	.36	2400
18505	5/8-11	1 3/4	1 19/32	1 3/8	2 1/2	1/4	1 1/8	.65	4000
18506	3/4-10	2	1 23/32	1 1/2	2 13/16	5/16	1 1/4	1.00	5000
18507	7/8-9	2 1/4	2 3/16	1 11/16	3 1/4	3/8	1 7/16	1.70	7000
18508	1-8	2 1/2	2 13/32	1 13/16	3 9/16	13/32	1 9/16	2.36	9000
18509	1 1/8-7	2 3/4	2 23/32	2	4	15/32	1 11/16	3.41	12000
18510	1 1/4-7	3	2 15/16	2 3/16	4 7/16	1/2	1 7/8	4.68	15000
18511	1 1/2-6	3 1/2	3 7/16	2 1/2	5 3/16	9/16	2 3/16	7.77	21000
18512	1 3/4-5	3 3/4	3 31/32	2 7/8	6 1/16	5/8	2 1/2	11.35	28000
18513	2-4 1/2	4	4 1/2	3 1/4	6 7/8	3/4	2 7/8	16.70	38000

Metric - Short

Loads given ensure a strength factor of four against deformation of any kind and strength factor of five against fracture.

- Material: C-15 Annealed (AISI 1015)
- Finish: Mill
- Thread: 6g

Part Number	A	B	C (Ref.)	D	E	G	Wt. (kg)	Maximum permissible loads in lbs. For one bolt firmly tightened	Maximum permissible loads in lbs. For two bolts total
18551	M6 x 1	13.0	17.5	19.1	36.5	20.0	.023	150	100
18552	M8 x 1.25	13.0	22.2	22.2	36.5	20.0	.045	300	200
18554	M12 x 1.75	20.5	33.3	30.2	52.4	30.0	.163	700	500
18555	M16 x 2	27.0	40.5	34.9	63.5	35.0	.295	1500	1100



All Dimensions in Millimeters.

Metric - Standard

Part Number	A	B	C (Ref.)	D	E	F (Ref.)	G	Wt (lbs)	Load Capacity (kg)	Load Capacity (lbs)
18561	M6 x 1.0	25.4	20.6	19	30.0	3.9	13.5	.06	210	462
18562	M8 x 1.25	31.7	29.4	25	43.0	4.8	17.5	.17	500	1110
18563	M10 x 1.5	35.0	33.3	27	46.0	5.2	19.8	.24	740	1628
18564	M12 x 1.75	38.0	36.5	30	54.0	5.6	22.2	.36	1030	2266
18565	M16 x 2.0	44.5	43.6	35	65.0	6.3	27.0	.69	1600	3520
18566	M20 x 2.5	57.0	55.6	41	81.0	9.5	36.5	1.51	2860	6292
18567	M24 x 3.0	63.5	61.1	44	90.4	10.3	39.7	2.36	3850	8470
18568	M30 x 3.5	76.0	74.6	55	112.7	12.7	47.6	4.68	6400	14080
18569	M36 x 4.0	89.0	87.3	63	131.8	14.3	55.6	7.77	8970	19734
18570	M42 x 4.5	95.0	93.6	73	152.4	15.1	60.3	11.10	11960	26312
18571	M48 x 5.0	101.6	107.9	82	174.6	17.5	69.8	15.90	16400	36080

- Material: C-1030 Forge
- Finish: Mill
- Thread: 6g

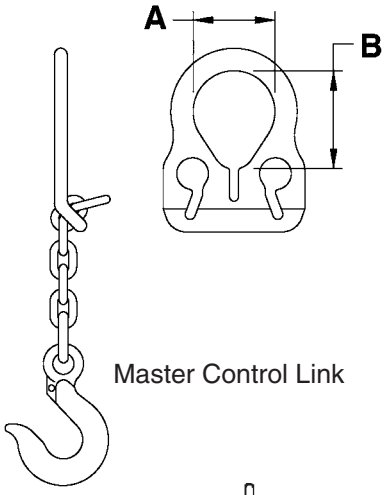
Adjustable Chain Sling



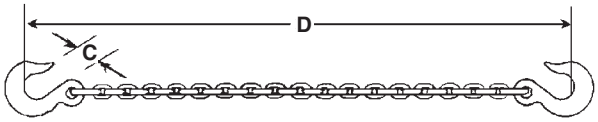
Patent No. 4,941,698

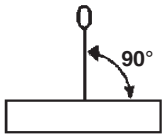
- Grade 80 Alloy Chain*
- Alloy Steel Master Control Link*
- Each assembly serialized for traceability
- Complies with OSHA - proof tested and certified
- Ideal for machine shop requirements
- Each hook is equipped with a latch

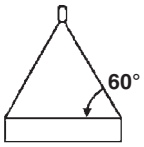
* These items are only available as an assembly and cannot be purchased separately.



Master Control Link







Part Number	Chain Size (in.)	Capacities		Dimensions				Weight (lbs)
		Single @ 90° (lbs)	Double @ 60° (lbs)	A (in.)	B (in.)	C (in.)	D (ft.)	
47701	7/32	2700	4700	2 3/16	2 11/16	15/16	6	4.2
47702	7/32	2100	4700	2 3/16	2 11/16	15/16	10	6.2
47703	9/32	4300	7400	2 7/8	3 3/16	1 1/16	6	7.5
47704	9/32	4300	7400	2 7/8	3 3/16	1 1/16	10	10.5
47705	3/8	8800	15200	3 3/4	4 1/8	1 9/16	10	18.5
47706	3/8	8800	15200	3 3/4	4 1/8	1 9/16	14	24.5
47707	1/2	12000	20800	4 3/8	4 3/8	2	10	42
47708	1/2	12000	20800	4 3/8	4 3/8	2	14	52



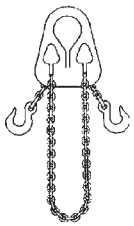
Latch



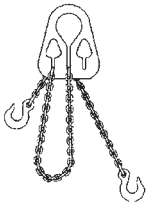
SINGLE



DOUBLE



BASKET



BASKET & SINGLE

WARNING:

- Failure to follow the care, use and inspection instructions could result in severe personal injury. Do not exceed rated capacities.
- Sling capacity rating decreases as the angle from horizontal decreases. We do not recommend using at angles of less than 45°.
- Loads must always be securely attached and balanced. You must never substitute another chain or exceed the load limit.
- The load bearing chain must be seated at the base of adjusting slot of the Master Control Link. The Alloy Chain and Master Control Link shall not be used separately for general purpose lifting.

Quality Standards
Center-Pull Traditional and
Side-Pull Traditional Style Hoist Rings

Load Bearing Member Components

- All material is domestically manufactured certified alloy steel.
- All components are machined prior to manufacture to remove any surface defects.
- All components are heat treated and certified to manufacturing specifications.
- Bolts are:

Inch	**Metric**
Socket Screw Grade Tensile Strength -180,000 psi - 1/2" or Smaller -170,000 psi - Over 1/2" 100% Magnetic Particle Inspected to ASTM E709-80	Grade 12.9 Tensile Strength -1220 MPa - (177,000 psi) 100% Magnetic Particle Inspected to ASTM E709-80

- All other load bearing components are magnetic particle inspected based upon ASTM E709-80 and MIL-STD-105 with zero defects permissible.
- Bolt torque and hoist ring load limit permanently marked on washer.
- **ISO 9001: 2000 Certified**

Individual certificate of proof-test accompanies Center-Pull and Side-Pull Traditional Style hoist rings in final packaging.

Jergens Cleveland, Ohio

Certificate of Proof Test

(1) Distinguishing Mark	(2) Description of Item Tested	(3) Quantity Tested	(4) Date Tested	(5) Load Applied	(6) Rated Load
BI	23408 HOIST RING	1	01/01/03	2,000 LBS	1,000 LBS

(7) Name and address of supplier: Jergens, Inc., 15700 S. Waterloo Rd., Cleveland, OH 44110

(8) Name and address of Company performing test: Jergens, Inc., 15700 S. Waterloo Rd., Cleveland, OH 44110

(9) Position of signatory in company: Quality Assurance Manager

We hereby certify that Jergens, Inc. Test Procedure 1001 requires all hoist rings to be proof tested and examined; and that this form is evidence that the test operator completed all procedures as required.

(Signature) James Klingenberg

MAB

In substantial agreement with (OSHA) 29 CFR 1918 & 1919 Form NO. 4

Quality Standards For Center-Pull and Side-Pull Traditional Style Hoist Rings

Assembly Data

- Traditional Center Pull and Side Pull hoist ring assemblies are pull-tested and certified to 200% of rated load capacity and stamped with identifying date code.
- All hoist rings are designed for 5:1 strength factor.
- Hoist rings are color coded for easy identification: gold washer denotes inch sizes, silver/clear blue washer denotes metric sizes.
- Finished assembly is black oxide (with the exception of the washer).
- The Jergens name or logo is prominently displayed on assembly for identification of original manufacturer.
- Special plating or marking is available upon customer's request.
- Proper warning label is affixed to each clevis.
- Proof load testing, magnafluxing and heat treating are on file at Jergens, Inc.
- Material Certs available for nominal cost and must be requested with initial order.
- The finished hoist ring product is individually boxed.

NOTE: Specifications for side pull style hoist rings are identical to center pull style with the exception that the clevis is of precision cast alloy material which is serialized and conforms to X-ray specifications.

Contact Jergens for quality standards on all other lifting products.

Multi-lingual safety data instructions included in each package

IMPORTANT
GIVE TO SAFETY MANAGER

IMPORTANT
À FOURNIR AU
DIRECTEUR DE SÉCURITÉ

IMPORTANTE
ENTREGAR AL
SUPERVISOR DE SEGURDAD

IMPORTANTE
CONSEGNARE AL
RESPONSABILE PER LA
SICUREZZA

IMPORTANTE
DÊ PARA O GERENTE
DE SEGURANÇA

WICHTIG
AN DEN
SICHERHEITSMANAGER
WEITERGEBEN

重要
安全管理担当者様

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Cleveland, Ohio 44110-3898
Phone: (216) 486-5540 • Fax: (216) 481-6193

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Jergens Conversion Charts

Decimal Equivalents of Standard Drill Sizes

Size	Decimal Conversion	Size	Decimal Conversion	Size	Decimal Conversion	Size	Decimal Conversion	Size	Decimal Conversion	Size	Decimal Conversion
80	.0135	5/64	.0781	17	.1730	N	.3020	43/64	.6719	1-7/32	1.2188
79	.0145	47	.0785	16	.1770	5/16	.3125	11/16	.6875	1-15/64	1.2344
1/64	.0156	46	.0810	15	.1800	O	.3160	45/64	.7031	1-1/4	1.2500
78	.0160	45	.0820	14	.1820	P	.3230	23/32	.7188	1-17/64	1.2656
77	.0180	44	.0860	13	.1850	21/64	.3281	47/64	.7344	1-9/32	1.2812
76	.0200	43	.0890	3/16	.1875	Q	.3320	3/4	.7500	1-19/64	1.2969
75	.0210	42	.0935	12	.1890	R	.3390	49/64	.7656	1-5/16	1.3125
74	.0225	3/32	.0938	11	.1810	11/32	.3438	25/32	.7812	1-21/64	1.3281
73	.0240	41	.0960	10	.1935	S	.3480	51/64	.7969	1-11/32	1.3438
72	.0250	40	.0980	9	.1960	T	.3580	13/16	.8125	1-23/64	1.3594
71	.0260	39	.0995	8	.1990	23/64	.3594	53/64	.8281	1-3/8	1.3750
70	.0280	38	.1015	7	.2010	U	.3680	27/32	.8438	1-25/64	1.3906
69	.0292	37	.1040	13/64	.2031	3/8	.3750	55/64	.8594	1-13/32	1.4062
68	.0310	36	.1065	6	.2040	V	.3770	7/8	.8750	1-27/64	1.4219
1/32	.0312	7/64	.1094	5	.2055	W	.3860	57/64	.8906	1-7/16	1.4375
67	.0320	35	.1100	4	.2090	25/64	.3906	29/32	.9062	1-29/64	1.4531
66	.0330	34	.1110	3	.2130	X	.3970	59/64	.9219	1-15/32	1.4688
65	.0350	33	.1130	7/32	.2188	Y	.4040	15/16	.9375	1-31/64	1.4844
64	.0360	32	.1160	2	.2210	13/32	.4062	61/64	.9531	1-1/2	1.5000
63	.0370	31	.1200	1	.2280	Z	.4130	31/32	.9688	1-33/64	1.5156
62	.0380	1/8	.1250	A	.2340	27/64	.4219	63/64	.9844	1-17/32	1.5312
61	.0390	30	.1285	15/64	.2344	7/16	.4375	1"	1.0000	1-35/64	1.5469
60	.0400	29	.1360	B	.2380	29/64	.4531	1-1/64	1.0156	1-9/16	1.5625
59	.0410	28	.1405	C	.2420	15/32	.4688	1-1/32	1.0312	1-37/64	1.5781
58	.0420	9/64	.1406	D	.2460	31/64	.4844	1-3/64	1.0469	1-19/32	1.5938
57	.0430	27	.1440	1/4	.2500	1/2	.5000	1-1/16	1.0625	1-39/64	1.6094
56	.0465	26	.1470	F	.2570	33/64	.5156	1-5/64	1.0781	1-5/8	1.6250
3/64	.0469	25	.1495	G	.2610	17/32	.5312	1-3/32	1.0938	1-41/64	1.6406
55	.0520	24	.1520	17/64	.2656	35/64	.5469	1-7/64	1.1094	1-21/32	1.6562
54	.0550	23	.1540	H	.2660	9/16	.5625	1-1/8	1.1250	1-43/64	1.6719
53	.0595	5/32	.1562	I	.2720	37/64	.5781	1-9/64	1.1406	1-11/16	1.6875
1/16	.0625	22	.1570	J	.2770	19/32	.5938	1-5/32	1.1562	1-45/64	1.7031
52	.0635	21	.1590	K	.2810	39/64	.6094	1-11/64	1.1719	1-23/32	1.7188
51	.0670	20	.1610	9/32	.2812	5/8	.6250	1-3/16	1.1875	1-47/64	1.7344
50	.0700	19	.1660	L	.2900	41/64	.6406	1-13/64	1.2031	1-3/4	1.7500
49	.0730	18	.1695	M	.2950	21/32	.6562				
48	.0760	11/64	.1719	19/64	.2969						

Decimal Equivalents of Millimeter Sizes

mm	Decimal	mm	Decimal	mm	Decimal	mm	Decimal	mm	Decimal	mm	Decimal
.35	.0138	1.75	.0689	3.4	.1339	5.75	.2264	8.1	.3189	12.5	.4921
.4	.0157	1.8	.0709	3.5	.1378	5.8	.2283	8.2	.3228	13.0	.5118
.45	.0177	1.85	.0728	3.6	.1417	5.9	.2323	8.25	.3248	13.5	.5315
.5	.0197	1.9	.0748	3.7	.1457	6.0	.2362	8.3	.3268	14.0	.5512
.55	.0217	1.95	.0768	3.75	.1477	6.1	.2401	8.4	.3307	14.5	.5709
.6	.0236	2.0	.0787	3.8	.1496	6.2	.2441	8.5	.3346	15	.5906
.65	.0256	2.05	.0807	3.9	.1535	6.25	.2461	8.6	.3386	15.5	.6102
.7	.0276	2.1	.0827	4.0	.1575	6.3	.2480	8.7	.3425	16	.6299
.75	.0295	2.15	.0846	4.1	.1614	6.4	.2520	8.75	.3445	16.5	.6496
.8	.0315	2.2	.0866	4.2	.1654	6.5	.2559	8.8	.3465	17	.6693
.85	.0335	2.25	.0886	4.25	.1674	6.6	.2598	8.9	.3504	17.5	.6890
.9	.0354	2.3	.0905	4.3	.1693	6.7	.2638	9.0	.3543	18.0	.7087
.95	.0374	2.35	.0925	4.4	.1732	6.75	.2658	9.1	.3583	18.5	.7283
1.0	.0394	2.4	.0945	4.5	.1772	6.8	.2677	9.2	.3622	19.0	.7480
1.05	.0413	2.45	.0965	4.6	.1811	6.9	.2716	9.25	.3642	19.5	.7677
1.1	.0433	2.5	.0984	4.7	.1850	7.0	.2756	9.3	.3661	20.0	.7874
1.15	.0453	2.55	.1004	4.75	.1870	7.1	.2795	9.4	.3701	20.5	.8071
1.2	.0472	2.6	.1024	4.8	.1890	7.2	.2835	9.5	.3740	21.0	.8268
1.25	.0492	2.65	.1043	4.9	.1929	7.25	.2855	9.6	.3780	21.5	.8465
1.3	.0512	2.7	.1063	5.0	.1968	7.3	.2874	9.7	.3819	22.0	.8661
1.35	.0531	2.75	.1083	5.1	.2008	7.4	.2913	9.75	.3839	22.5	.8858
1.4	.0551	2.8	.1102	5.2	.2047	7.5	.2953	9.8	.3858	23.0	.9055
1.45	.0571	2.9	.1142	5.25	.2067	7.6	.2992	9.9	.3898	23.5	.9252
1.5	.0591	3.0	.1181	5.3	.2087	7.7	.3031	10.0	.3937	24.0	.9449
1.55	.0610	3.1	.1220	5.4	.2126	7.75	.3051	10.5	.4134	24.5	.9646
1.6	.0629	3.2	.1260	5.5	.2165	7.8	.3071	11.0	.4330	25.0	.9843
1.65	.0650	3.25	.1280	5.6	.2205	7.9	.3110	11.5	.4528		
1.7	.0669	3.3	.1299	5.7	.2244	8.0	.3150	12.0	.4724		

Millimeters to Inch Conversion

mm	Inches	mm	Inches	mm	Inches
1	.0394	35	1.3780	68	2.6772
2	.0787	36	1.4173	69	2.7165
3	.1181	37	1.4567	70	2.7559
4	.1575	38	1.4961	71	2.7953
5	.1969	39	1.5354	72	2.8336
6	.2362	40	1.5748	73	2.8740
7	.2756	41	1.6142	74	2.9134
8	.3150	42	1.6535	75	2.9528
9	.3543	43	1.6929	76	2.9921
10	.3937	44	1.7323	77	3.0315
11	.4331	45	1.7717	78	3.0709
12	.4724	46	1.8110	79	3.1102
13	.5118	47	1.8504	80	3.1496
14	.5512	48	1.8898	81	3.1890
15	.5906	49	1.9291	82	3.2283
16	.6299	50	1.9685	83	3.2677
17	.6693	51	2.0079	84	3.3071
18	.7087	52	2.0472	85	3.3465
19	.7480	53	2.0866	86	3.3858
20	.7874	54	2.1260	87	3.4252
21	.8268	55	2.1654	88	3.4646
22	.8661	56	2.2047	89	3.5039
23	.9055	57	2.2441	90	3.5433
24	.9449	58	2.2835	91	3.5827
25	.9843	59	2.3228	92	3.6220
26	1.0236	60	2.3622	93	3.6614
27	1.0630	61	2.4016	94	3.7008
28	1.1024	62	2.4409	95	3.7402
29	1.1417	63	2.4803	96	3.7795
30	1.1811	64	2.5197	97	3.8189
31	1.2205	65	2.5591	98	3.8583
32	1.2598	66	2.5984	99	3.8976
33	1.2992	67	2.6378	100	3.9370
34	1.3386				

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VBC 12M10/09

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