Glenair®

Interconnect Cable Assembly Tools

Band-It® Shield Termination Tools, Connector-to-Backshell Holding Tools, Fiber Optic Termination Kits and More!

United States ■ United Kingdom ■ Germany ■ France ■ Nordic ■ Italy ■ Spain ■ Japan

To Most People
It's Just a Backshell

To Glenair
It's a Promise

Most customers have a simple expectation when they go shopping for safety-critical interconnect components: They want fast and accurate service. Glenair addresses this most basic customer requirement in several different ways. First and foremost, by providing immediate access to our technical information and product documentation: whether you prefer an office visit, the telephone, the Internet, a CD or a printed catalog, Glenair is ready with answers to your most complex questions and design challenges. Secondly, Glenair stocks thousands of popular catalog products for those situations when even a two or three week lead-time is just too long. We stock over 65,000 interconnect components—bagged and tagged and ready for immediate shipment. And for those situations when a customized solution is required, our engineers are fully versed in all aspects of interconnect system design: from shielding against EMI, to reducing weight and connector package size, to stopping corrosion and other forms of environmental damage.

You have a simple expectation: fast and accurate service. At Glenair, we're ready to give you exactly that. It's a promise.

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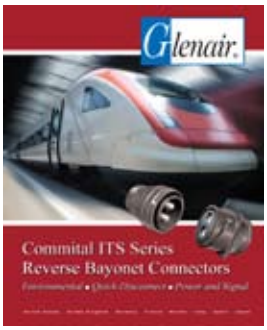
The world's broadest selection of interconnect products–in stock and ready for immediate same-day shipment

Available now: Glenair's Interconnect Product Guide CD, featuring our entire library of Glenair catalogs and data sheets.

In addition to over a dozen product line catalogs, the CD includes a powerful part number development program that takes all the pain and confusion out of ordering interconnect components. An easy-to-use inventory search program provides ready access to 60,000 MIL-STD and commercial part numbers.

Series ITS Reverse Bayonet Power and Signal Connectors

Over 200 MIL-C-5015 power and signal insert arrangements: AWG #18 to #4/0. Ruggedized reverse bayonet coupling. VG95234 qualification. Ideal for rail, mass transit and military vehicles.

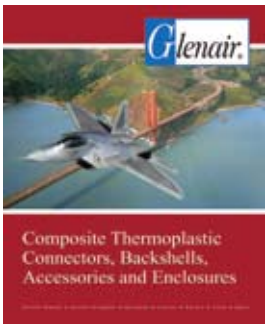


Micro-D Twistpin Connectors and Accessories

Glenair offers both Military Standard 83513 Micro-D connectors as well as COTS selections, backshells, mounting hardware and more. Our TwistPin contact provides superior performance.

Composite Thermoplastic Interconnect Solutions

Glenair is the world's leading manufacturer of composite interconnect solutions. We are the 'go-to' supplier for advanced composite technologies for commercial and military interconnect applications.



Series 89 Nanominiature Connectors

MIL-DTL-32139 and Glenair commercial equivalent .025 inch contact spacing ultra-miniature interconnects used in mission-critical applications such as: UAV's, satellites, missile systems and geophysical instruments.

Military Standard Connector Accessories

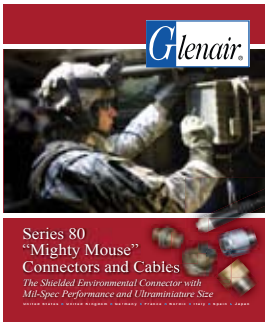
If the MS connector accessory you need isn't in here – it doesn't exist. Search this easy-to-use catalog by accessory type or Mil-Spec slash number, then place your order against Glenair's 60,000 part number same-day inventory.

Fiber Optic Interconnect Solutions

Tactical fiber optic connectors, cables, and termini for airframe, shipboard, and military ground vehicles. Catalog features Glenair's innovative high-density (GHD) connector system for reduced size and weight applications.

Series 80 "Mighty Mouse" Connectors and Cables

Glenair's connector series that reduces interconnect system size and weight by 50% compared to standard MIL-DTL-38999 connectors. Now used on hundreds of mission-critical military and commercial applications.



Visit us at www.glenair.com and use the literature order form for immediate catalog fulfillment

Glenair®

A World of Interconnect Solutions

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Backshell Assembly Tools, Banding Tools and Accessories

Plus Fiber Optic Termination Kits

Stop Toolin' Around

Finding the right tool for the job just got a little bit easier

Nobody can grasp the ins-and-outs of interconnect tool design and manufacturing without a full understanding of cable harness assembly.

At Glenair, we not only manufacture the connectors, backshells, cables and enclosures which go into interconnect cable harnesses, we run a top-flight cable assembly service of our own. And we've drawn on this extensive experience to design and build a complete family of specialized backshell assembly tools for most Mil-Standard circular connectors, as well as connector wrenches, mini-strap wrenches, universal connector holding tools and braid termination tools for production use and field maintenance.

Glenair is also now offering a broad range of fiber optic termination tools, including complete kits for both our Mil-T-29504 and front-release COTS termini.

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Glenair Tools Help Prevent False Tightening and Distortion

Backshell tightening tools designed by Glenair provide a full 360° gripping surface on backshell coupling nuts. These innovative tools minimize the possibility of coupling nut distortion and false tightening problems when mating backshells to circular connectors.

Reliable Installation of Glenair Backshells on Circular Connectors

When used with the appropriate connector holders and torque wrenches, Glenair Backshell Assembly Tools provide the user with consistent, repeatable backshell installations. Designed primarily for production assembly use, the tools can also be used equally well for successful field maintenance operations.

Glenair Backshell Assembly Tools may also be utilized effectively with backshell rotatable couplers produced by other manufacturers. Consult the Glenair Backshell Assembly Tools, Banding Tools and Accessories catalog for details.

Wide Variety of Glenair Tools for Proper Backshell Installation

Glenair offers a variety of tools to accomplish proper tightening. Our 600 Series pliers with replaceable pads are configured to make maximum circumferential support to each specific size backshell to be tightened, and our TG70 strap wrench is intended for general use on any diameter between .50 to 3.00 inches. Hand-held and bench-mount torque wrenches accommodate our 600-005 plug or receptacle connector holders.

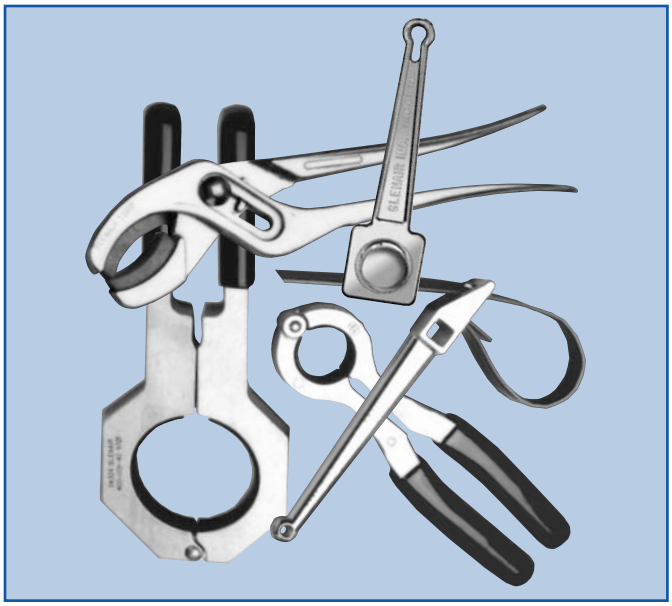
When tightening a backshell onto a connector, it is important to follow Glenair's recommended procedures for each tool being used. Our Backshell Assembly Tools, Banding Tools and Accessories catalog shows torque values for each specific connector series the backshell is being fastened onto. The recommended values are based on several factors, primarily the connector and backshell thread strengths. Torque values consider additional factors such as plug-to-receptacle alignment key strength, barrel hoop strength and material strength.

Glenair offers torque wrenches in three configurations. The hand-held torque wrench pictured above (top left), and the bench-mounted version (top center) are adjustable to a desired torque level of 20 to 360 inch pounds, and feature a 3/8" drive. A digital model (30-350 in/lbs) features LEDs, audible alarm, and user programmable pre-sets. A bench mount stand is available. A full range of receptacle and plug holders for Mil-Spec connectors and backshells is also offered as well as circular connector backshell assembly and composite hex coupling wrenches, strap wrenches, and soft-jaw pliers.

When tightening backshells with rotatable coupling nuts, Glenair recommends the backshell be hand tightened to engage the connector's interlocking teeth or spline features, making sure the teeth are fully engaged before fully torquing with our tools.

We suggest retorquing by removing the tool and reinstalling the tool approximately 90° away from the initial position and tightening to the recommended value. When applying torque with our TG70 strap wrench, allow for a slight torque variance between the Glenair torque wrench and the offset socket drive on the strap wrench. A strap wrench torque variance chart is provided on page 12 of this catalog.

Introduction:
Backshell to Connector
Assembly Tools



Glenair's selection of circular backshell assembly wrenches include round wrenches in all standard sizes that are designed to be employed with Glenair's hand-held or bench-mounted torque wrenches. The round design assures even distribution of pressure around the backshell, thereby preventing false tightening and distortion problems. A hex design for Glenair composite coupling applications is offered. Strap wrenches, soft-jaw pliers and connector wrenches for a full range of Mil-Spec applications are available.

Glenair offers a full range of connector backshell assembly tools to serve virtually all Mil-Spec connectors and backshell accessories. The specially-designed round wrenches prevent false tightening and distortion problems by assuring even distribution of forces throughout the circumference of the backshell and connector.

Glenair's TG80 Tool Kit is designed for field use with circular electrical connectors. The products included with this kit fit most connectors covered by Military Specifications, and are used for holding during assembly and disassembly of rear clamp and adapter hardware, and to facilitate connector field repairs and servicing.

Contained in a rugged, compact foam-padded metal case, the kit includes two TG70 Strap Wrenches, a pair of TG69 Soft Jaw Pliers, a set of parallel jaw pliers and instructions.

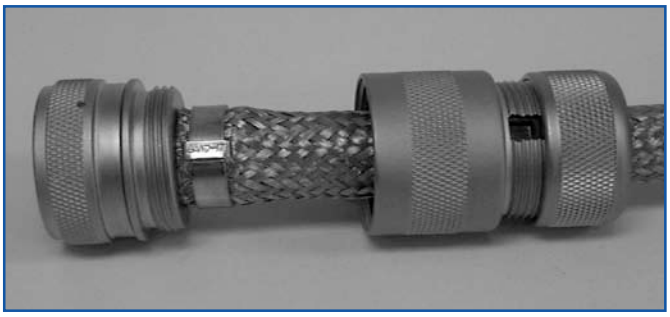
Glenair also offers a selection of tool kits per MIL-T-83507. Details are available by contacting the factory, your local Glenair representative, or your local Glenair sales and engineering office.

BAND-IT® Pneumatic Banding Tools are offered in two designs, each of which can be enhanced by Band-It's optional foot pedal kit to free both of the operator's hands to help assure more accurate, reliable and faster shield terminations. The Standard Tie-Dex II® Pneumatic Banding Tool accommodates standard clamping bands in a tension range from 100-180 lbs. The Tie-Dex II® Pneumatic Banding Tool accommodates micro banding clamps in a tension range of 50 to 80 lbs. Each lightweight tool weighs only 2.52 lbs. (91.14 Kg); the control boxes weigh only 2.74 lbs. (1.24 Kg) each.

Introduction:
EMI Shield Termination Tools
The *BAND-IT*® System

Fast, Cost-Effective Field and Factory Terminations

The *BAND-IT*® clamping system provides quick and highly reliable termination of braided metallic shielding or fabric braid. Banding technology was first introduced in our industry in 1985 as a solution to the field repair of magnaformed shield terminations on installed cable assemblies for the B-1 bomber. Banding has been a staple of the industry ever since.



Reliable termination is quickly and easily accomplished in the field with Band-It® precalibrated pocket-sized hand tools. High-speed, mass termination production is afforded by the pneumatic clamping tool.

Reliable RFI/EMI/EMP Terminations

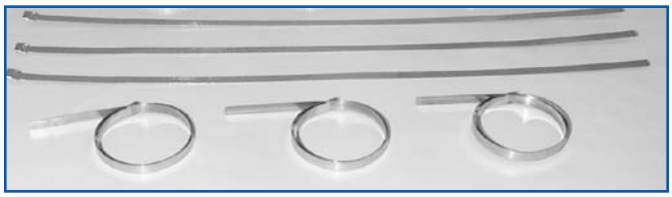
The unique low profile and smooth inside diameter of the one-piece type 304 austenitic stainless steel clamping band virtually eliminates RFI/EMI/EMP leakage paths. The lock maintains constant tension under extreme environmental conditions. *BAND-IT*® has passed severe shock, vibration and thermal cycle testing with negligible deterioration of shell conductivity.

Single Piece Band Construction

No welding, soldering, magna forming, and no crimping! The clamping bands provide quick, easy and cost-effective shielding terminations. (Note: Bands must be double coiled.)

Clamp Small Diameters Easily, Reliably

Double-wrapped, the clamping band is designed to clamp small diameters as easily, quickly and reliably as large diameters.



BAND-IT® clamping bands are precision constructed of 300 Series SST/Passivate, and designed for use with the Band-It® Hand Banding Tool or the Pneumatic Banding Tool. The bands are offered in the following four configurations to suit a wide range of requirements: Double-wrapped Standard Band accommodates diameters up to 1.8 inches. Double-wrapped Extended Length Standard Band accommodates diameters up to 2.5 inches (63.5mm). The double-wrapped Micro Band accommodates diameters up to .88 inches (22.5mm). The double-wrapped Extended Length Micro Band accommodates diameters to 1.88 inches (47.8mm). All BAND-IT® clamping bands may be ordered flat or precoiled in bagged and tagged quantities from 1 to 100.

Quick, Easy Field Terminations with the Precalibrated Hand Tool

The precalibrated hand tool is lightweight and pocket-sized, affording fast braided RFI/EMI/EMP shield termination in the field.

Pneumatic Banding Tool for High-Speed Mass Production

The pneumatic clamping tool offers the capability to tackle high volume braided shielding terminations quickly and easily.

Glenair Assembly Tools Help Prevent Distortion and False Tightening Problems

Backshell tightening tools are available which provide virtually a full 360° gripping surface on backshell coupling nuts. These innovative tools minimize the possibility of coupling nut distortion and false tightening problems which can be caused by soft-jaw pliers or strap wrenches.

Reliable Installation of Glenair Backshells on Circular Connectors

When used with the appropriate connector holders and torque wrenches, Glenair Backshell Assembly Tools provide the user with consistent,

repeatable backshell installations. Designed primarily for production assembly use, the tools can also be used equally well for successful field maintenance operations.

Glenair Backshell Assembly Tools may also be utilized effectively with backshell rotatable couplers produced by other manufacturers, providing the "B" reference diameters are consistent with those shown within this catalog.

Recommended Connector-to-Backshell Tightening Procedures

Recommended tightening procedures, tools and torque values offered by Glenair are intended as an aid to properly fasten the backshell to the connector interface threads.

Glenair offers a variety of tools to accomplish proper tightening; our 600 Series pliers with replaceable pads are configured to make maximum circumferential support to each specific size backshell to be tightened, our TG70 strap wrench (page 12) is intended for general use on any diameter between .50 to 3.00 inches. Hand-held and bench-mount torque wrenches accomodate our 600-005 plug or receptacle connector holders.

When tightening backshell onto connectors, it is important to follow Glenair's recommended procedures for each tool being used.

When tightening backshells with rotatable coupling nuts, Glenair recommends the backshell to be hand tightened to engage the connectors interlocking teeth or spline features, making sure the teeth are fully engaged before fully torquing with our tools. We also suggest retorquing by removing the tool and reinstalling the tool approximately 90° away from the intial position and tightening to the connector manufacturer's recommended value.

Composite backshells should be tightened with 600-079/157 hex pliers to the values shown for MIL-C-85049 light and medium duty torque. Secondary components such as: Glenair's cable clamps, gland sealing nuts, sleeves or adapters, not directly fastened to the connector should be tightened 40 to 60 inch pounds to insure proper performance.

Four Easy Steps for Proper Backshell Assembly

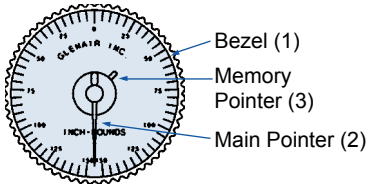
1. Select plug or receptacle holder (most holder series provide "universal polarization", but a few connector series require specific polarization for each alternate keying arrangement).
2. Set desired torque on torque wrench.
3. Mount holder on square drive of torque wrench. Carefully mate with connector, and hand-tighten Glenair backshell coupling. To assure proper mating, anti-rotation teeth must be fully engaged.
4. Tighten rotatable coupler with assembly tool. Do not use excessive grip on handles. When coupler begins to tighten, relax grip and rotate assembly tool back 90°, then resume grip and continue to tighten; repeating this sequence until desired torque level is reached.

CAUTION: *Do not apply torque in excess of signal setting. Excess torque will cause signal pointer to reset and give erroneous readings.*

Setting Torque Levels

To verify proper backshell installation values, electrical signals are built into bench-mounted (audio) and hand-held (light) torque wrenches. The procedure for setting torque levels is the same for both units.

Setting Desired Torque for Right-Hand Thread Tightening:



To set torque, turn Bezel (1) clockwise until signal is on. Continue to turn Bezel until Main Pointer (2) is at desired torque level on scale. You may cover the audio signal during this procedure to minimize noise level when setting the bench-mounted unit.

The Memory Pointer (3) is set by the above procedure. With this accomplished, turn Bezel counter-clockwise until the Main Pointer is aligned with zero on the scale. Your torque wrench is now ready for operation.

Setting Desired Torque for Left-Handed Thread Tightening:

Simply reverse the above procedure for setting the desired torque for left-hand thread tightening.

Resetting the Memory Pointer:

When you wish to change torque levels, rotate the Bezel counter-clockwise until the signal is on. Continue to rotate Bezel until Memory Pointer is aligned with zero on the scale. now repeat the above procedure for setting torque.

See Page 15 for Digital Torque Wrench Information

Interconnect Tooling Terms and Definitions

Barrel

(1) Conductor Barrel - The section of the terminal, splice or contact that accommodates the stripped conductor. (2) Insulation Barrel - The section of the terminal, splice or contact that accommodates the conductor insulation.

Boot

A form placed around the wire terminations of a multiple contact connector as a protective housing or as a container for potting compound.

Braid

Flexible conductor made of a woven or braided assembly of fine wires.

Busing

The joining of two or more circuits.

Butting Dies (Bottoming Dies)

Crimping dies so designed that the nest and indentor touch at the end of the crimping cycle.

Cable Shielding Backshell

A device consisting of a backshell and cable support designed to terminate the screen (shield) of an electrical cable.

Circumferential Crimp

The type of crimp where the crimping dies completely surround a barrel resulting in symmetrical indentations in the barrel.

Closed Entry

A contact or contact cavity design in the insert or body of the connector which limits the size or position of the mating contact or printed circuit board to a predetermined dimension.

Coaxial Contact

A contact having two conducting surfaces, a center contact and a coaxially placed sleeve.

Color Coding

A system of identification of terminals, wires, and related devices.

Conductor Stop

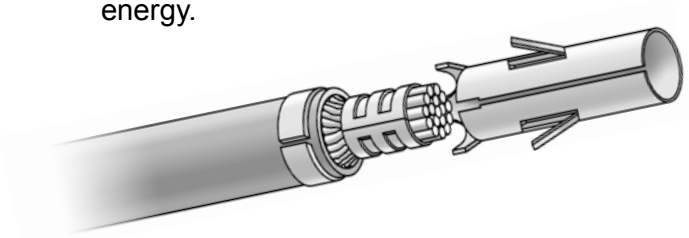
A device on a terminal, splice, contact or tool to prevent excessive extension of the conductor barrel.

Connection

The joining of two metals by pressure without use of solder, braze, or any method requiring heat.

Contact

The conductive element in a connector which makes actual contact to transfer electrical energy.



Contact Area

The area in contact between two conductors, two contacts, or a conductor and a contact permitting the flow of electricity.

Contact Resistance

Electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or millivolt drop at a specified current over the engaged contacts.

Contact Retainer

A device either on the contact or in the insert to retain the contact in an insert or body.

Contact Size

An assigned number denoting the size of the contact engaging end.

Crimp

The physical compression (deformation) of a contact barrel around a conductor in order to make an electrical connection.

Glenair®

Introduction: Interconnect System
Tooling Glossary

Crimping
A pressure method of mechanically securing a terminal, splice or contact to a conductor.

Crimping Dies
Portion of the crimping tool that shapes the crimp.

Crimping Tool
Mechanism used for crimping.

Depth of Crimp
The distance the indenter penetrates into the barrel.

Die Closure
The gap between indenter dies at full handle closure. Usually defined by Go/No-Go dimensions.

Full Cycle Control
Controls placed on the crimping cycle of crimping tools forcing the tool to be closed to its fullest extent completing the crimping cycle before the tool can be opened.

Head Assembly
A positioner or turret designed to attach to a crimping tool.

Indentor
The part of a crimping die, usually the moving part, which indents or compresses the contact barrel.

Insertion and Removal Tool
A device used to install or remove contacts into a connector. A device used to install or remove taper pins into taper pin receptacles.

Inspection Hole
A hole placed at one end of a barrel to permit visual inspection to see that the conductor has been inserted to the proper depth in the barrel prior to crimping.

Locator (See Stop Plate)
Device for positioning terminals, splices, or contacts into crimping dies, positioner, or turret heads.

Nest
The portion of a crimping die which supports the barrel during crimping.

Positioner
A device when attached to a crimping tool locates the contact in the correct position.

Ram
The moving portion of the head of a crimping tool.

Ratchet Control
A device to ensure the full crimping cycle of a crimping tool.

Stop Plate (See Locator)
A device used to properly locate a terminal, splice or contact in the tool prior to crimping.

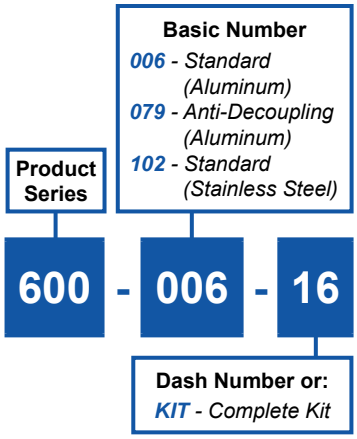
Strip
To remove insulation from a conductor.

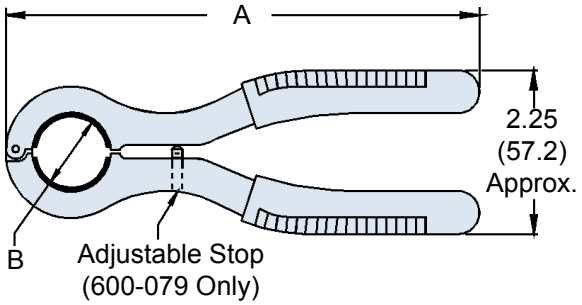
Stripper
A tool or chemical used to remove insulation material from wire or cable.

Tensile Test
A controlled pull test on the crimp joint to determine its mechanical strength.

Wire Gauge
The sizes of conductors accommodated by a particular barrel. Also the diameters of wires accommodated by a sealing grommet.

Work Curve
A graph which plots the pull out force, indent force and relative conductivity of a crimp joint as a function of various depths of crimping.





APPLICATION NOTES

1. Grips are covered in vinyl.
2. Metric dimensions (mm) are indicated in parentheses.

600-006 and 600-102 (Standard Coupling)

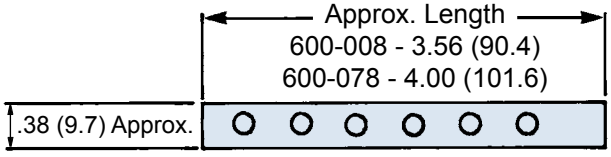
Dash No.	Shell Size Ref.	A Ref.	B Ref.
08	08/09	6.50 (165.1)	.617 (15.7)
10	10/11	6.50 (165.1)	.734 (18.6)
12	12/13	6.50 (165.1)	.858 (21.8)
14	14/15	6.50 (165.1)	.984 (25.0)
16	16/17	6.50 (165.1)	1.112 (28.2)
18	18/19	7.00 (177.8)	1.198 (30.4)
20	20/21	7.00 (177.8)	1.323 (33.6)
22	22/23	7.00 (177.8)	1.448 (36.8)
24	24/25	7.00 (177.8)	1.573 (40.0)
28	28	7.00 (177.8)	1.969 (50.0)

600-079 and 600-103 (Anti-Decoupling)

Dash No.	Shell Size Ref.	A Ref.	B Ref.
01	08/09	7.38 (187.5)	.659 (16.7)
02	10/11	7.50 (190.5)	.783 (19.9)
03	12/13	7.50 (190.5)	.906 (23.0)
04	14/15	7.50 (190.5)	1.035 (26.3)
05	16/17	7.50 (190.5)	1.140 (29.0)
06	18/19	7.75 (196.9)	1.260 (32.0)
07	20/21	8.00 (203.2)	1.383 (35.1)
08	22/23	8.25 (209.6)	1.510 (38.4)
10	24/25	8.25 (209.6)	1.630 (41.4)

Consult Factory for Larger Sizes

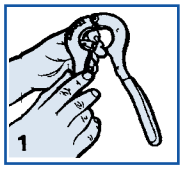
Replacement Insert Pads

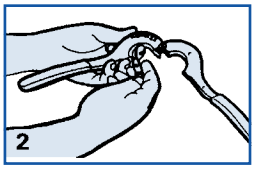


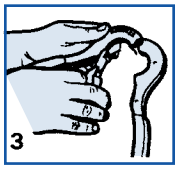
600-008 Fits standard coupling series sizes 08 through 24, color black.

600-078-01 Fits anti-decoupling coupling sizes 09 through 23, color red.

600-078-02 Fits anti-decoupling coupling size 25, color red.





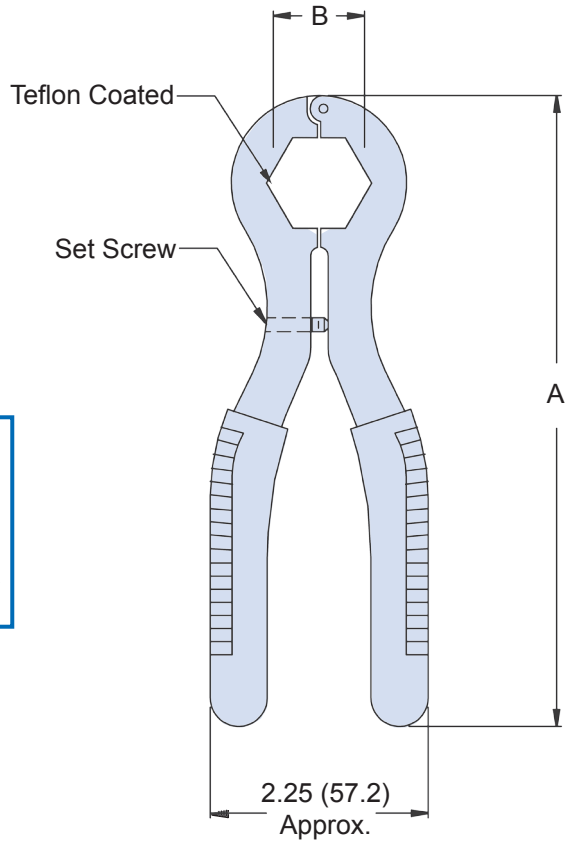


Replacing Insert Pads in Backshell Assembly Tools

1. The urethane pad strips are mechanically retained without adhesive. To remove, grasp an edge of the strip and pull loose from tool.
2. Beginning with retaining hole adjacent to assembly tool hinge, insert first retaining knob on strip into hole. Continue inserting knobs on pad strip into remaining holes on tool.
3. Using side-cutters or scissors, trim end of pad strip flush with metal surface of assembly tool. Retain remainder of strip for replacement in other size assembly tools.

600-091
Composite-Hex-Coupling Wrench

ALUMINUM TOOL FOR USE WITH GLENAIR COMPOSITE BACKSHELLS



600 - 091 - 16

- **Product Series**
- **Basic Number**
- **Dash Number**
  (Table I)
  For Individual Sizes
  For Kit:
  KC *- Dash Numbers 08 through 28*
  KLC *- Dash Numbers 32 through 44*
  KIT *- Dash Numbers 08 through 44*

TABLE I: DASH NUMBER AND DIMENSIONS

Dash No.	A Ref.	B +/-.005 (.13) Hex*	Shell Size Ref.
08	7.38 (187.5)	.750 (19.1)	08/09
10	7.50 (190.5)	.875 (22.2)	10/11
12	7.50 (190.5)	1.000 (25.4)	12/13
14	7.50 (190.5)	1.125 (28.6)	14/15
16	7.50 (190.5)	1.250 (31.8)	16/17
18	7.75 (196.9)	1.375 (34.9)	18/19
20	8.00 (203.2)	1.500 (38.1)	20/21
22	8.25 (209.6)	1.625 (41.3)	22/23
24	8.25 (209.6)	1.750 (44.5)	24/25
28	8.50 (215.9)	2.000 (50.8)	28
32	10.00 (254.0)	2.250 (57.2)	32
36	10.00 (254.0)	2.500 (63.5)	36

* See Note 3

APPLICATION NOTES

1. This backshell assembly tool is designed for Glenair composite hex coupling applications and should be used in conjunction with Glenair torque wrenches (see page 14).
2. These wrenches are made of aluminum alloy with vinyl grips.
3. B Hex is critical, adjust set screw until dimension is within tolerance (+/- .005)
4. Metric dimensions (mm) are indicated in parentheses.

600-157
Composite-Hex-Coupling Wrench

STAINLESS STEEL TOOL FOR USE WITH GLENAIR COMPOSITE BACKSHELLS

600 - 157 - K

- **600** — Product Series
- **157** — Basic Number
- **K** — Dash Number for Individual Wrench or:
  - ***K*** *- All Wrench Sizes 08 through 24, No Case*
  - ***KC*** *- All Wrench Sizes 08 through 24 with Case*

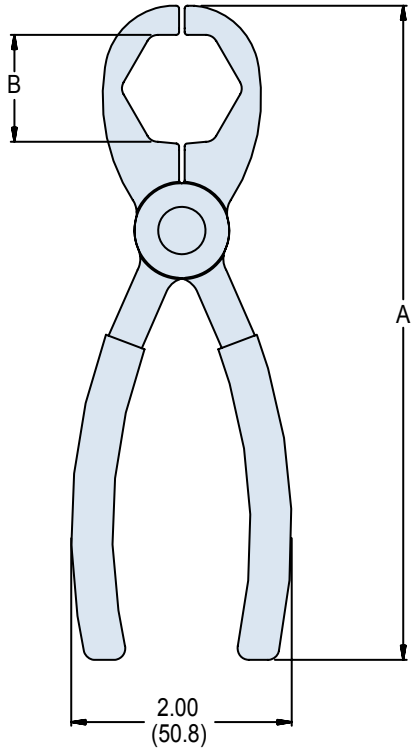
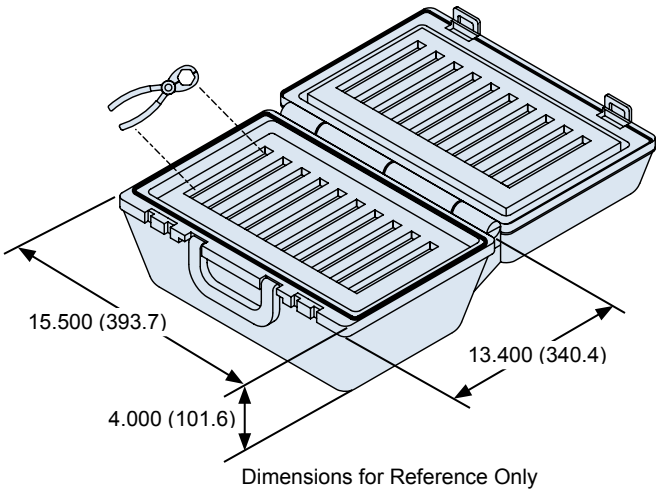


TABLE I: DASH NUMBER

Dash Number	A Ref	B Hex ±.005 (0.1)	Connector for Shell Size	
			Codes A & F	Code H
08	6.700 (170.2)	.750 (19.1)	08	09
10	6.750 (171.5)	.875 (22.2)	10	11
12	6.810 (173.0)	1.000 (25.4)	12	13
14	6.880 (174.8)	1.125 (28.6)	14	15
16	6.950 (176.5)	1.250 (31.8)	16	17
18	7.050 (179.1)	1.375 (34.9)	18	19
20	7.150 (181.6)	1.500 (38.1)	20	21
22	7.380 (187.5)	1.625 (41.3)	22	23
24	7.440 (189.0)	1.750 (44.5)	24	25

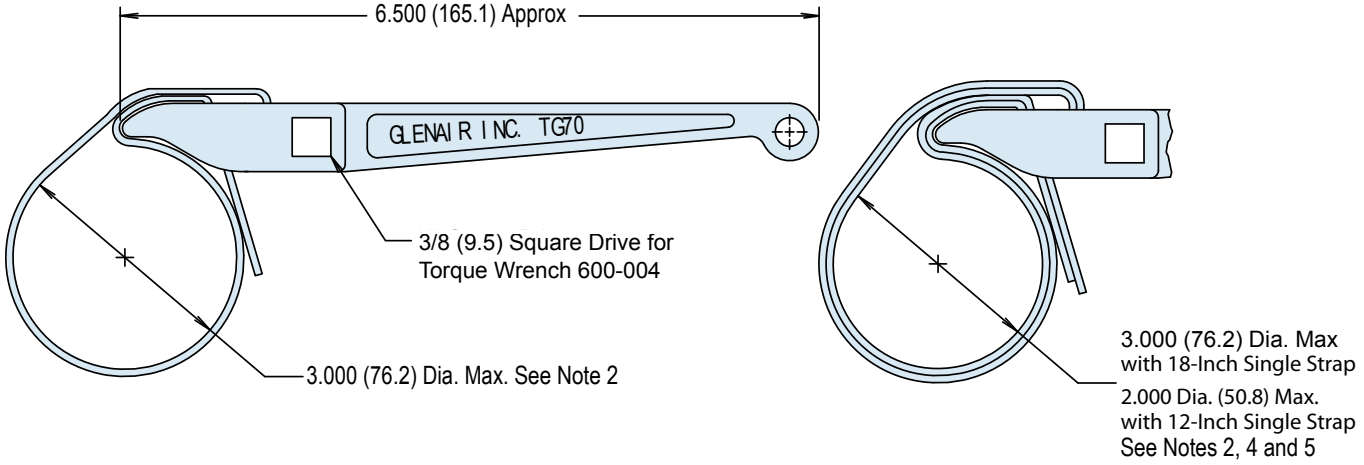
APPLICATION NOTES

1. This backshell assembly tool is designed for Glenair composite hex coupling applications and should be used in conjunction with Glenair torque wrenches (see page 14).
2. These wrenches are made of stainless steel with vinyl grips.
3. Metric dimensions (mm) are indicated in parentheses.



Dimensions for Reference Only

TG70
Strap Wrench



Basic Part Number	Torque Wrench (Omit for None)	Strap Length in Inches (See Note 3)
TG70	1	18

Lengths Available: 12, 18, 24 and 36-Inch Only
Standard length is 12 Inches,
Omit Dash Number for Standard

APPLICATION NOTES

1. These wrenches are made of the following materials:
   Wrench Handle - Aluminum Alloy/Nickel Plate
   Wedge - Stainless Steel/Passivated
   Strap - Impregnated Fabric
2. Replacement straps are available. Specify part number G70515-xx for 12, 18, 24 or 36-inch strap.
3. Metric dimensions (mm) are indicated in parentheses.
4. Not recommended for composite coupling nuts (use 600-091 or 600-157).
5. Double wrap for heavy duty range.

VARIANCE CHART
TG-70 Strap Wrench Used with Glenair Torque Wrenches

Accessory Shell Size	Recommended Installation Torque: Light/Medium Duty ± 5 Inch Pounds — TG70 Torque	Light/Medium Duty ± 5 Inch Pounds — Part Torque	Heavy Duty ± 5 Inch Pounds — TG70 Torque	Heavy Duty ± 5 Inch Pounds — Part Torque
08/09	28	35	45	60
10/11	28	35	70	80
12/13	30	40	75	110 [80]
14/15	30	40	75	120 [80]
16/17	30	40	75	120 [80]
18/19	30	40	75	120 [80]
20/21	75	80	95	140 [100]
22/23	75	80	120*	140
24/25	75	80	120*	140
28			135*	150
32			150*	150
36			150*	150

* TG70 Not Recommended For Values of 120 Inch Lbs. or Greater.

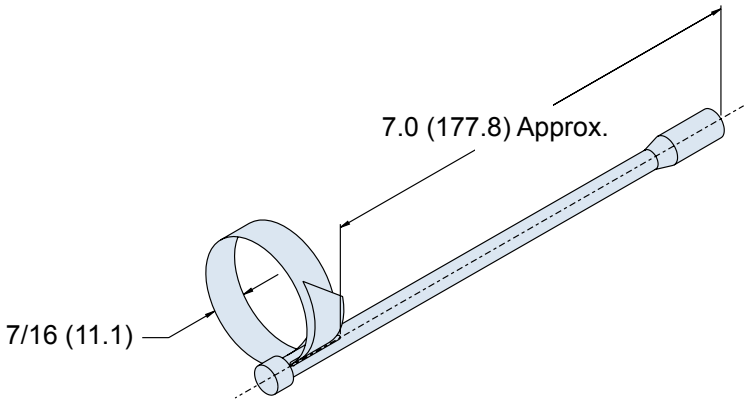
VARIANCE CHART NOTES

1. Recommended installation torque is approximately 80% of MIL-C-85049 accessory thread strength values.
2. Heavy duty installation torque values may be difficult to attain with the TG70 Strap Wrench; the values shown in brackets [ ] are the maximum attainable with the TG70 Strap Wrench.
3. Glenair recommends using 600 series torque tools whenever possible when torque loading exceeds 75 inch pounds, or to attain the heavy duty torque values shown.

TG69 Soft Jaw Pliers, TG80 Tool Kit and TG82 Strap Wrench

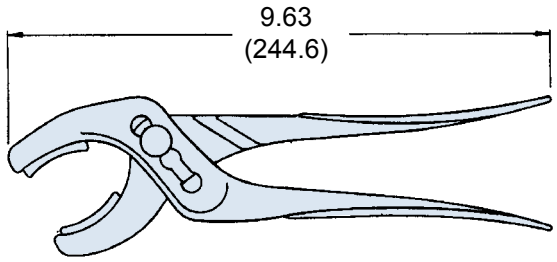
TG82
Strap Wrench
2.50 (63.5) Max Capacity
(1/4 Drive)
Note: The replacement strap part number is G62748-11.

Consult factory for other lengths.



NOTE: Not recommended for composite coupling nuts (use 600-091 or 600-157)

TG69
Soft Jaw Pliers



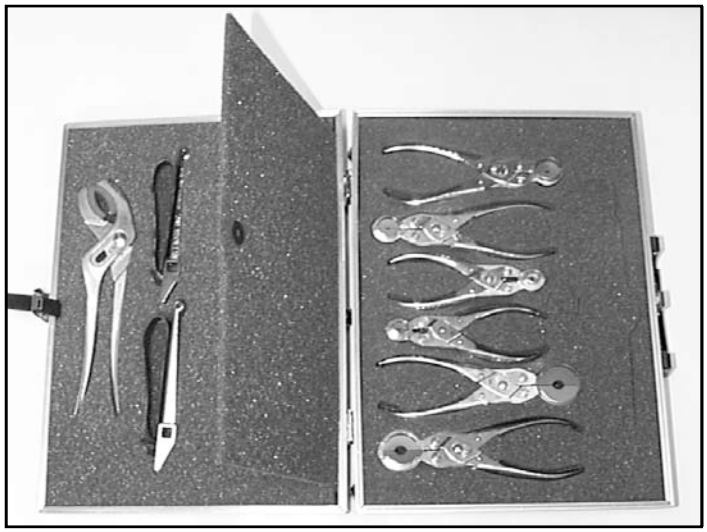
NOTE: Not recommended for composite coupling nuts (use 600-091 or 600-157)

TG80 Tool Kit

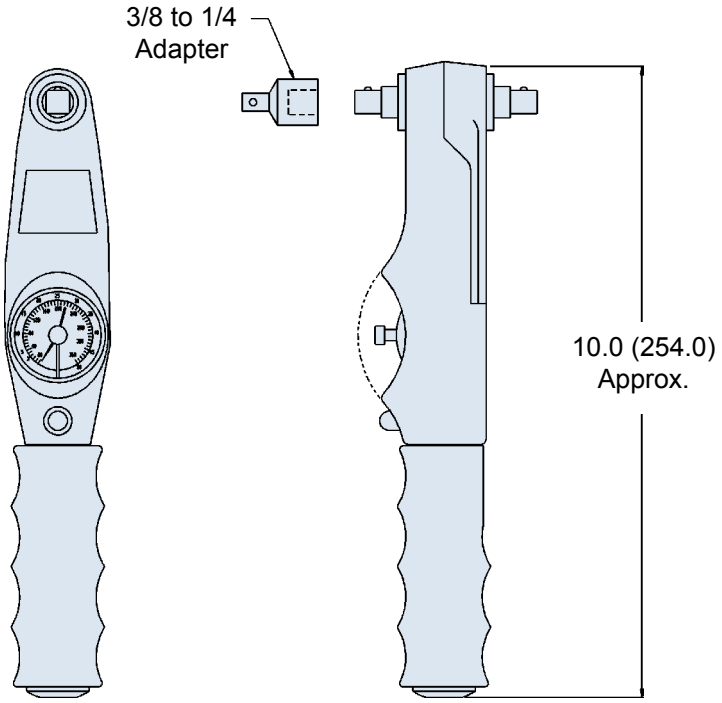
The TG80 Tool Kit is designed for field use with circular electrical connectors. The products included with this kit fit most connectors covered by Military Specifications, and are used for holding during assembly and disassembly of rear clamp and adapter hardware, and to facilitate connector field repairs and servicing.

Kit includes 2 TG70 Strap Wrenches, a pair of TG69 Soft Jaw Pliers, a set of parallel jaw pliers and instructions.

Also available: Tool kits per MIL-T-83507. Please consult factory for ordering information.



600-004, 600-007, 600-076 and 600-077 Torque Wrenches



Hand-Held Torque Wrench

3/8" Drive

Requires two Panasonic SR44W or equivalent batteries

600-076 High Torque

Adjustable to desired torque level of 20 to 360 inch pounds

600-004 Standard Torque

0 - 150 lb./in. (Not Shown)

Bench-Mounted Torque Wrench

3/8" Drive

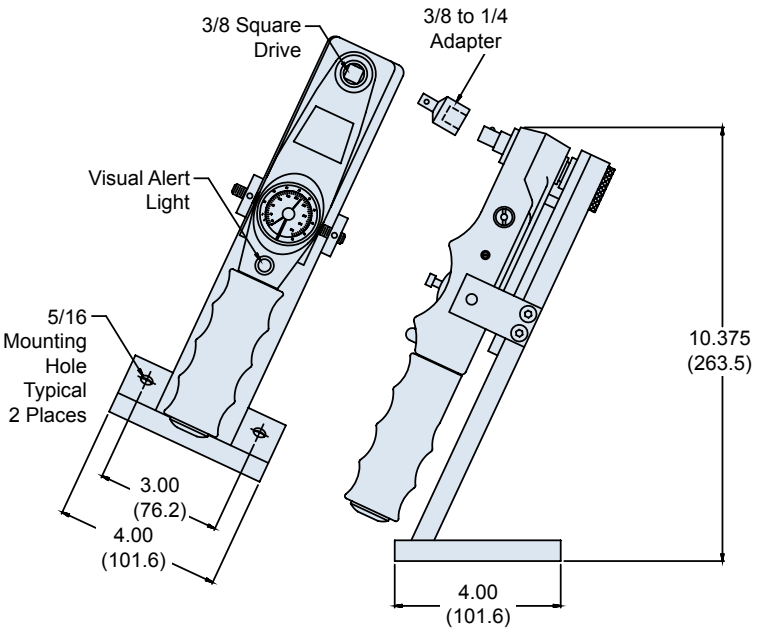
Require two Panasonic SR44W or equivalent batteries

600-077 High Torque

Adjustable to desired torque level of 20 to 360 inch pounds

600-007 Standard Torque

0 - 150 lb./in. (Not Shown)

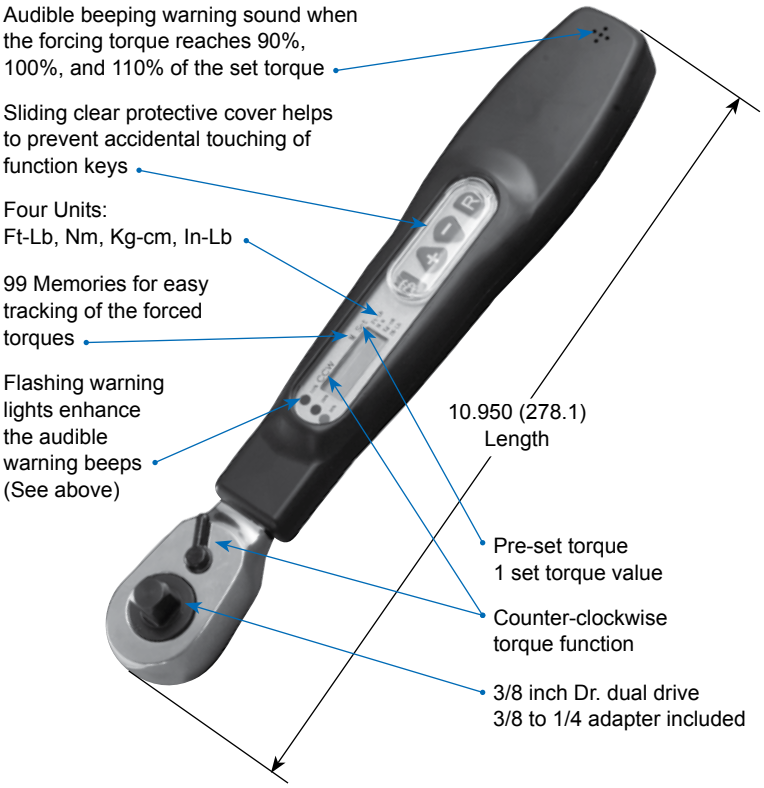


Metric dimensions (mm) shown in parentheses.

CAGE Code 06324

Printed in U.S.A.

600-161 Digital Torque Wrench and 600-162 Bench Stand



Hand-Held Digital Torque Wrench

3/8" Dual Drives Top and Bottom to facilitate bench mount operation
Requires two AAA batteries

600-161

99 Presets available for torque level 29 to 310 inch pound range

Clockwise and counter-clockwise provide ± 2% accuracy

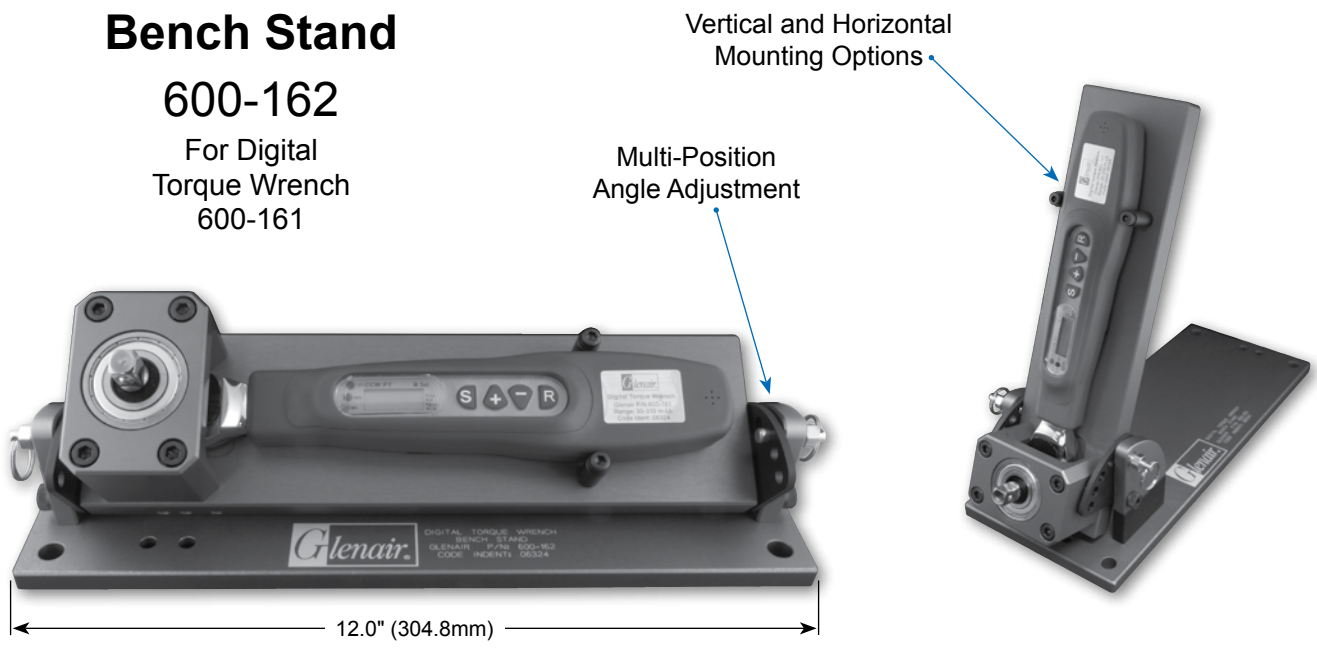
Torque range:

Ft-Lb = 2.5 ~ 25 Ft-Lb
N m = 3.3 ~ 35N.M
Kg-cm = 34 ~ 340 Kg-cm
In-Lb = 29 ~ 310 In-Lb

Bench Stand

600-162

For Digital Torque Wrench 600-161



Shown with 600-161 Digital Torque Wrench in Position

CAGE Code 06324
Printed in U.S.A.

Series 80 "Mighty Mouse" Jam Nut Spanner and Connector Holding Tools

Spanner Tool for Tightening Series 80 Jam Nuts

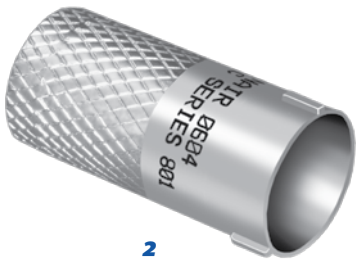
Spanner Tool

Use these tools to tighten Series 80 jam nuts. 1/4" or 3/8" square drive for use with torque wrenches. Heat-treated steel, nickel plated.

Shell Size	Spanner Tool Part Number					
	Series 800	Series 801	Series 803	Series 804 Style 07	Series 804 Style 00	Series 805
5	600-146-01	600-146-02	600-137-02	600-146-03	600-147-5	
6	600-146-02	600-146-03	600-137-03	600-146-04	600-147-6	
7	600-146-03	600-146-05	600-137-05	600-146-06	600-147-7	
8	600-146-04	600-146-05	600-137-05	600-146-06	600-147-7	600-154-08
9	600-146-05	600-146-06	600-137-06	600-146-07	600-147-9	600-154-09
10	600-146-06	600-146-07	600-137-07	600-146-08	600-147-10	600-154-09
11	—	—	—	—	—	600-154-11
12	600-146-08	—	600-137-10	600-146-10	600-147-12	600-154-12
13	—	600-146-10	—	—	—	—
14	600-146-10	—	600-137-13	600-146-12	600-147-14	—
15	600-146-11	—	600-137-14	600-146-13	600-147-15	600-154-15
16	—	600-146-13	—	—	—	—
17	—	600-146-14	—	—	—	—
18	—	—	—	—	—	600-154-18
19	—	—	—	—	—	600-154-19

Connector Holding Tool for\Tightening Backshells and Accessories

1 *Plug Holder*



2 *Receptacle Holder*

Use these tools to hold Series 80 connectors while installing thread-on adapters or backshells.

1 Plug tool for holding Series 80 plug connectors. Heat-treated steel, nickel plated.

2 Receptacle tool for holding Series 80 receptacle connectors. Heat-treated steel, nickel plated.

Shell Size	Holding Tool Part Number (Add P or R)				
	Series 800	Series 801	Series 803	Series 804	Series 805
5	600M005-05★	600MM005-05♦	600-140-5★	600-141-5 ■	—
6	600M005-06★	600MM005-06♦	600-140-6★	600-141-6 ■	—
7	600M005-07★	600MM005-07♦	600-140-7★	600-141-7 ■	—
8	600M005-08★	600MM005-08♦	600-140-8★	600-141-8 ■	600-155-8■
9	600M005-09★	600MM005-09♦	600-140-9★	600-141-9 ■	600-155-9■
10	600M005-10★	600MM005-10♦	600-140-10★	600-141-10 ■	600-155-10■
11	—	—	—	—	600-155-11■
12	600M005-12★	—	600-140-12★	600-141-12 ■	600-155-12■
13	—	600MM005-13♦	—	—	—
14	—	—	600-140-14★	600-141-14■	—
15	—	—	600-140-15★	600-141-15 ■	600-155-15■
16	—	600MM005-16♦	—	—	—
17	—	600MM005-17♦	—	—	—
18	—	—	—	—	600-155-18■
19	—	—	—	—	600-155-19■

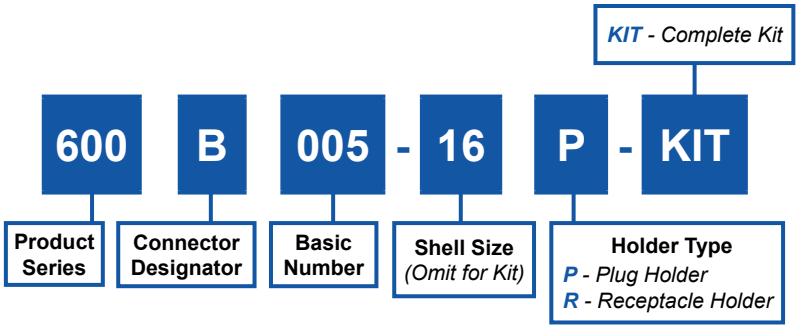
★ Add ***P*** for plug holder or ***R*** for receptacle holder, followed by polarizing position (***N***, ***X***, ***Y***, ***Z*** or ***U*** for universal keying).

♦ Add ***P*** for plug holder or ***R*** for receptacle holder, followed by polarizing position (***A***, ***B***, ***C***, ***D*** or ***U*** for universal keying).

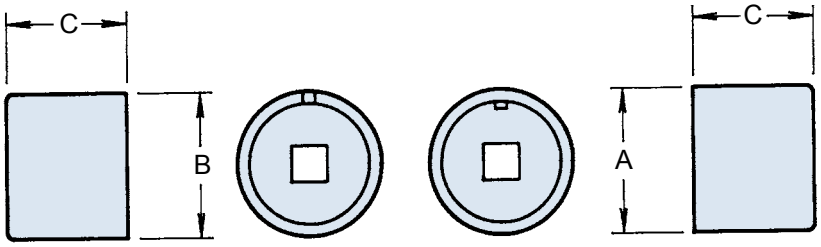
■ Add ***P*** for plug holder or ***R*** for receptacle holder.

600B005
MIL-C-5015 and MIL-C-83723 Series II
Plug and Receptacle Holder

Glenair®



NO POLARIZATION REQUIRED



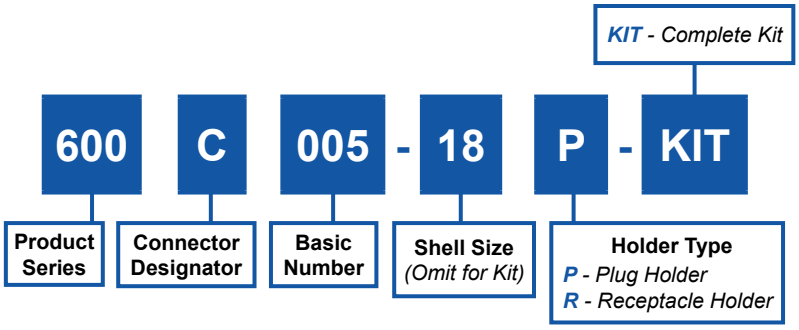
RECEPTACLE HOLDER PLUG HOLDER

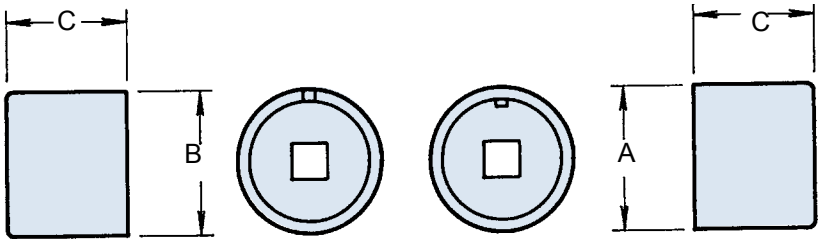
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	60	.456 (11.6)	.365 (9.3)	1.25 (31.8)
10	80	.575 (14.6)	.440 (11.2)	1.25 (31.8)
12	110	.691 (17.6)	.555 (14.1)	1.25 (31.8)
14	120	.816 (20.7)	.675 (17.1)	1.25 (31.8)
16	120	.941 (23.9)	.805 (20.4)	1.25 (31.8)
18	120	1.060 (26.9)	.930 (23.6)	1.25 (31.8)
20	140	1.185 (30.1)	1.050 (26.7)	1.25 (31.8)
22	140	1.310 (33.3)	1.175 (29.8)	1.25 (31.8)
24	140	1.435 (36.4)	1.300 (33.0)	1.25 (31.8)
28	150	1.685 (42.8)	1.520 (38.6)	1.25 (31.8)
32	150	1.935 (49.1)	1.777 (45.0)	1.25 (31.8)
36	150	2.177 (55.3)	1.980 (50.3)	1.25 (31.8)

APPLICATION NOTES

1. Also mates with MIL-C-83723, Series II.
2. Metric dimensions (mm) are indicated in parentheses.
3. Material: Case hardened carbon steel with electroless nickel finish.
4. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600C005
MIL-C-22992
Plug and Receptacle Holder





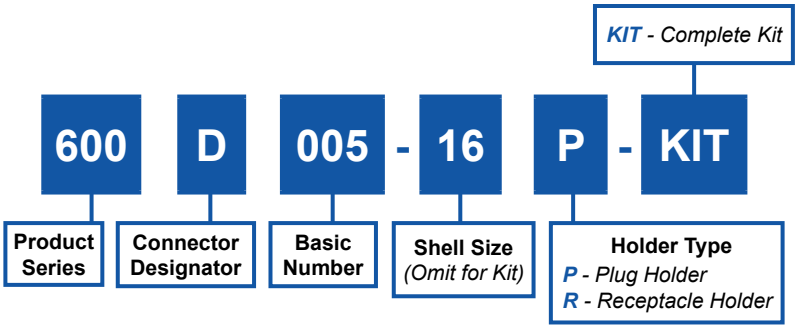
RECEPTACLE HOLDER PLUG HOLDER

Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
12	110	.824 (20.9)	.552 (14.0)	1.280 (32.5)
14	120	.950 (24.1)	.677 (17.2)	1.280 (32.5)
16	120	1.058 (26.9)	.802 (20.4)	1.280 (32.5)
18	120	1.183 (30.0)	.927 (23.5)	1.280 (32.5)
20	140	1.315 (33.4)	1.053 (26.7)	1.280 (32.5)
22	140	1.425 (36.2)	1.177 (29.9)	1.280 (32.5)
24	140	1.683 (42.7)	1.302 (33.1)	1.280 (32.5)
28	150	1.931 (49.0)	1.521 (38.6)	1.280 (32.5)
32	150	2.183 (55.4)	1.771 (45.0)	1.280 (32.5)
36	150	2.445 (62.1)	1.990 (50.5)	1.280 (32.5)

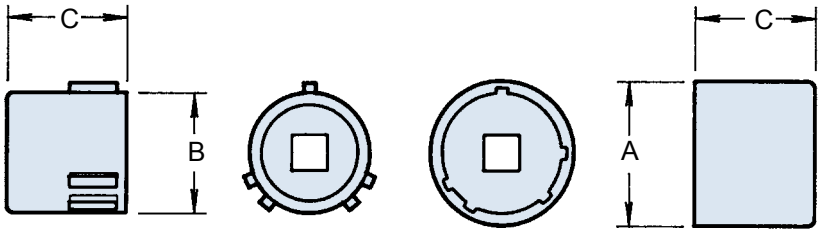
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell size 12; 3/8" - Shell sizes 14 and up.
4. Consult Facrory for larger sizes.

600D005
MIL-C-26482 Series I and II,
MIL-C-83723 Series I, and NAS 1599
Plug and Receptacle Holder



NO POLARIZATION REQUIRED



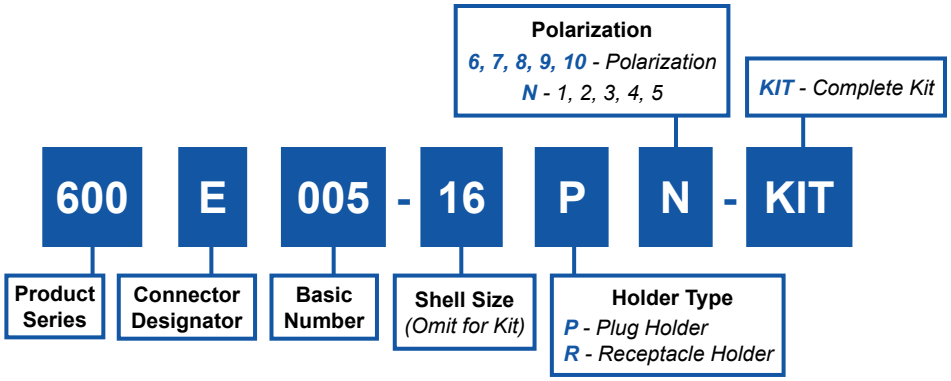
RECEPTACLE HOLDER PLUG HOLDER

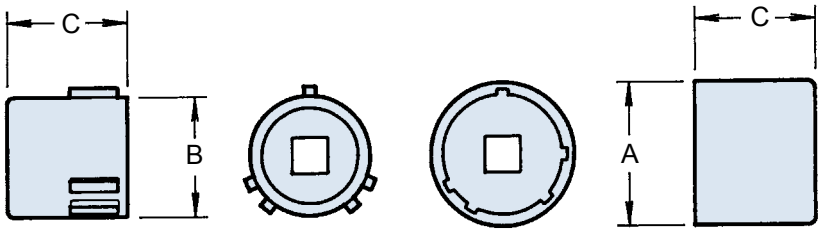
Shell Size	Max. Recommended Torque (Inch Pounds) Series I	Series II	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	40	60	.478 (12.1)	.358 (9.1)	.910 (23.1)
10	40	80	.599 (15.2)	.486 (12.3)	.910 (23.1)
12	40	110	.758 (19.3)	.598 (15.2)	.910 (23.1)
14	40	120	.882 (22.4)	.723 (18.4)	.910 (23.1)
16	40	120	1.007 (25.6)	.848 (21.5)	.910 (23.1)
18	40	120	1.133 (28.8)	.948 (24.1)	.910 (23.1)
20	80	140	1.257 (31.9)	1.073 (27.3)	.910 (23.1)
22	80	140	1.382 (35.1)	1.198 (30.4)	.910 (23.1)
24	80	140	1.507 (38.3)	1.323 (33.6)	.910 (23.1)

APPLICATION NOTES

1. Also mates with MIL-C-83723, Series I; 40M39569.
2. Metric dimensions (mm) are indicated in parentheses.
3. Material: Case hardened carbon steel with electroless nickel finish.
4. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600E005
MIL-DTL-26500 and MIL-DTL-83723 Series III
Plug and Receptacle Holder





RECEPTACLE HOLDER PLUG HOLDER

Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	60	.537 (13.6)	.424 (10.8)	1.031 (26.2)
10	80	.660 (16.8)	.526 (13.4)	1.031 (26.2)
12	110	.830 (21.1)	.696 (17.7)	1.031 (26.2)
14	120	.899 (22.8)	.765 (19.4)	1.031 (26.2)
16	120	1.026 (26.1)	.892 (22.7)	1.031 (26.2)
18	120	1.132 (28.8)	.998 (25.3)	1.031 (26.2)
20	140	1.259 (32.0)	1.123 (28.6)	1.031 (26.2)
22	140	1.382 (35.1)	1.248 (31.7)	1.031 (26.2)
24	140	1.509 (38.3)	1.373 (34.9)	1.031 (26.2)
28*	150	1.740 (44.2)	1.623 (41.2)	1.031 (26.2)

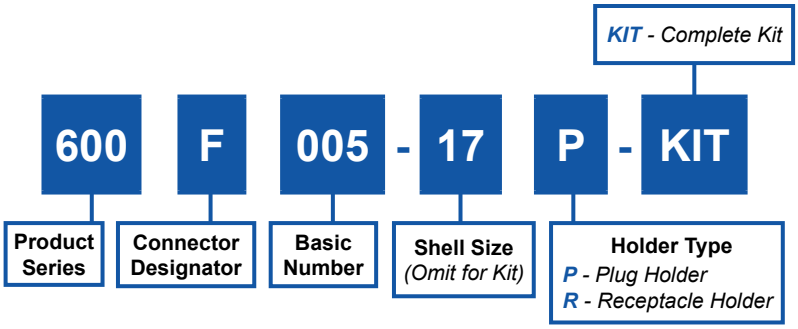
* Non-Military standard shell size

APPLICATION NOTES

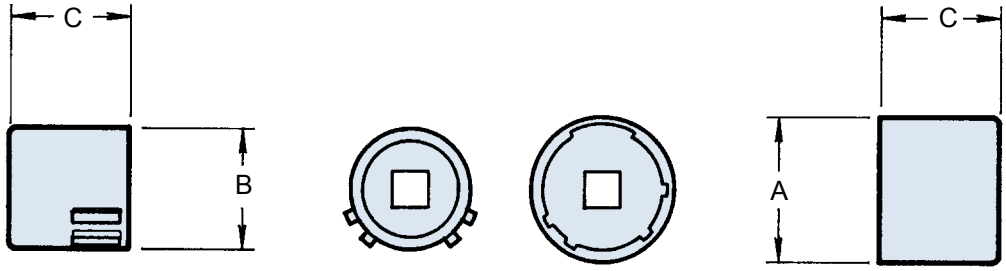
1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

CAGE Code 06324 Printed in U.S.A.

600F005
MIL-C-27599 and MIL-C-38999 Series I
Plug and Receptacle Holder



NO POLARIZATION REQUIRED



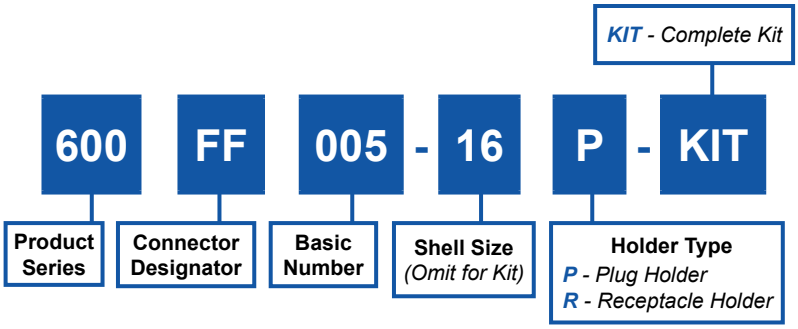
RECEPTACLE HOLDER PLUG HOLDER

Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
09	40	.577 (14.7)	.438 (11.1)	1.031 (26.2)
11	40	.709 (18.0)	.566 (14.4)	1.031 (26.2)
13	40	.829 (21.1)	.678 (17.2)	1.031 (26.2)
15	40	.954 (24.2)	.803 (20.4)	1.031 (26.2)
17	40	1.107 (28.1)	.928 (23.6)	1.031 (26.2)
19	40	1.190 (30.2)	1.033 (26.2)	1.031 (26.2)
21	80	1.315 (33.4)	1.158 (29.4)	1.031 (26.2)
23	80	1.440 (36.6)	1.283 (32.6)	1.031 (26.2)
25	80	1.565 (39.8)	1.408 (35.8)	1.031 (26.2)

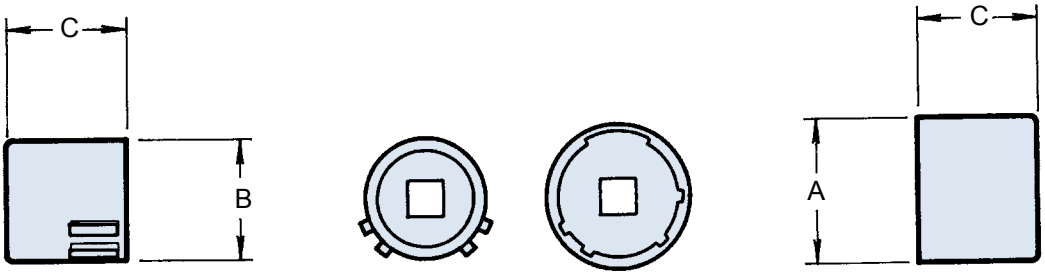
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600FF005
MIL-C-38999 Series II
Plug and Receptacle Holder



NO POLARIZATION REQUIRED



RECEPTACLE HOLDER

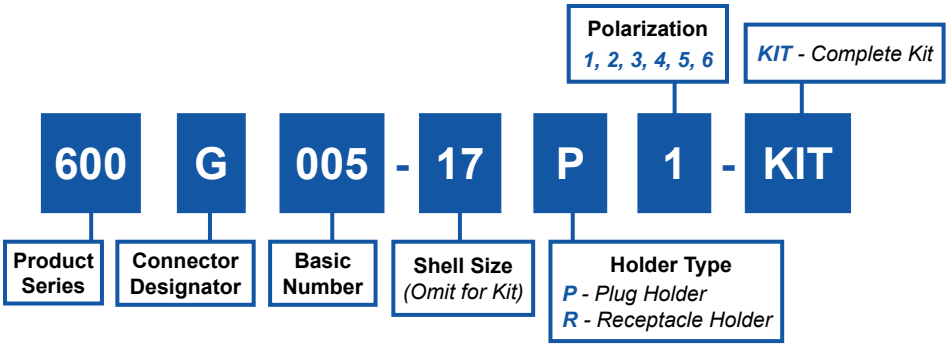
PLUG HOLDER

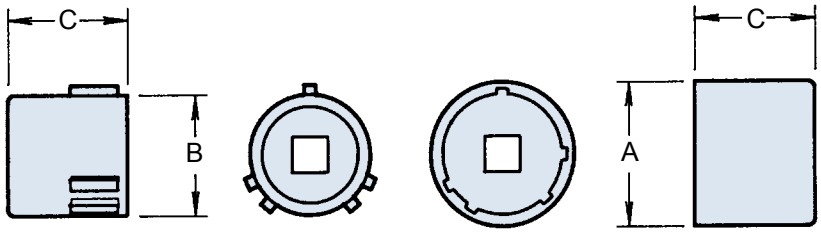
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	40	.478 (12.1)	.358 (9.1)	.910 (23.1)
10	40	.599 (15.2)	.486 (12.3)	.910 (23.1)
12	40	.758 (19.3)	.603 (15.3)	.910 (23.1)
14	40	.882 (22.4)	.728 (18.5)	.910 (23.1)
16	40	1.007 (25.6)	.853 (21.7)	.910 (23.1)
18	40	1.133 (28.8)	.958 (24.3)	.910 (23.1)
20	80	1.257 (31.9)	1.083 (27.5)	.910 (23.1)
22	80	1.382 (35.1)	1.208 (30.7)	.910 (23.1)
24	80	1.507 (38.3)	1.333 (33.9)	.910 (23.1)

APPLICATION NOTES

1. Also mates with 40M38277.
2. Metric dimensions (mm) are indicated in parentheses.
3. Material: Case hardened carbon steel with electroless nickel finish.
4. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600G005
MIL-C-28840
Plug and Receptacle Holder





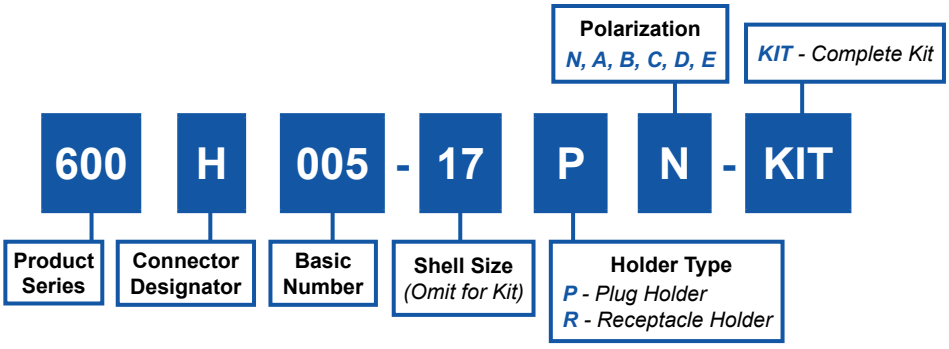
RECEPTACLE HOLDER PLUG HOLDER

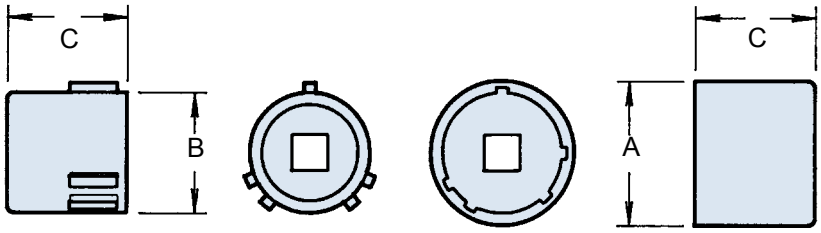
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
11	80	.697 (17.7)	.502 (12.8)	.945 (24.0)
13	110	.822 (20.8)	.626 (15.9)	.945 (24.0)
15	120	.995 (25.3)	.798 (20.3)	.945 (24.0)
17	120	1.058 (26.9)	.868 (22.0)	.945 (24.0)
19	120	1.245 (31.6)	1.035 (26.3)	.945 (24.0)
23	140	1.433 (36.4)	1.220 (31.0)	.945 (24.0)
25	140	1.558 (39.6)	1.381 (35.1)	.945 (24.0)
29	150	1.745 (44.3)	1.547 (39.3)	.945 (24.0)
33	150	1.933 (49.1)	1.739 (44.2)	.945 (24.0)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600H005
MIL-C-38999 Series III
Plug and Receptacle Holder





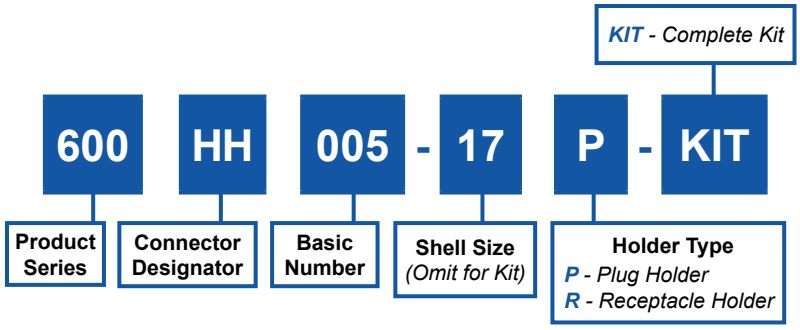
RECEPTACLE HOLDER PLUG HOLDER

Shell Size		Recommended Torque (+/- 5 Inch-Pounds)		A Dia.	B Dia.	C Dim.
Com'l	Mil. Ref.	Metal	Composite	Max.	Max.	Max.
09	A	60	35	.577 (14.7)	.438 (11.1)	1.031 (26.2)
11	B	80	35	.709 (18.0)	.566 (14.4)	1.031 (26.2)
13	C	110	40	.829 (21.1)	.678 (17.2)	1.031 (26.2)
15	D	120	40	.954 (24.2)	.803 (20.4)	1.031 (26.2)
17	E	120	40	1.107 (28.1)	.928 (23.6)	1.031 (26.2)
19	F	120	40	1.190 (30.2)	1.033 (26.2)	1.031 (26.2)
21	G	140	80	1.315 (33.4)	1.158 (29.4)	1.031 (26.2)
23	H	140	80	1.440 (36.6)	1.283 (32.6)	1.031 (26.2)
25	J	140	80	1.565 (39.8)	1.408 (35.8)	1.031 (26.2)

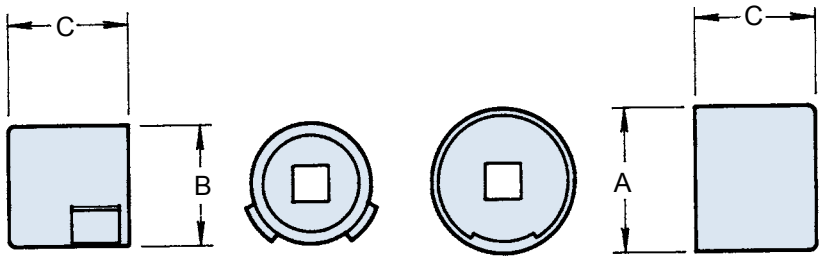
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.
4. Composite values apply when using Glenair 600-091, 600-157 or 600-007 tools.

600HH005
MIL-C-38999 Series IV
Plug and Receptacle Holder



NO POLARIZATION REQUIRED



PLUG HOLDER

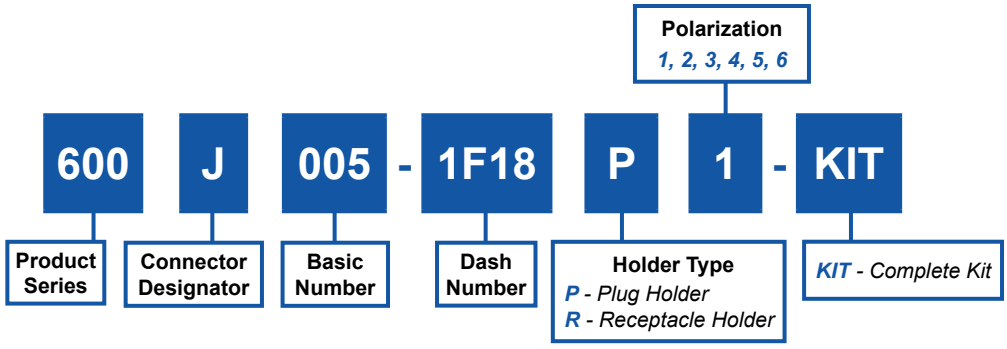
RECEPTACLE HOLDER

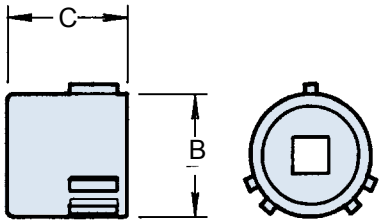
Shell Size Com'l	Shell Size Mil. Ref.	Max. Recommended Torque (Inch Pounds)	A Dia. Max.		B Dia. Max.		C Dim. Max.	
11	B	80	.83	(21.1)	.515	(13.1)	1.28	(32.5)
13	C	110	.95	(24.1)	.650	(16.5)	1.28	(32.5)
15	D	120	1.07	(27.2)	.775	(19.7)	1.28	(32.5)
17	E	120	1.20	(30.5)	.901	(22.9)	1.28	(32.5)
19	F	120	1.28	(32.5)	1.015	(25.8)	1.28	(32.5)
21	G	140	1.40	(35.6)	1.140	(29.0)	1.28	(32.5)
23	H	140	1.53	(38.9)	1.265	(32.1)	1.28	(32.5)
25	J	140	1.66	(42.2)	1.392	(35.4)	1.28	(32.5)

APPLICATION NOTES

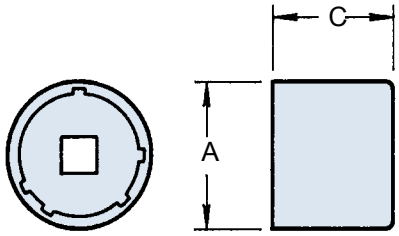
1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 11 and 13; 3/8" - Shell sizes 15 and up.

600J005
MIL-C-81511 Series I Thru IV
Plug and Receptacle Holder





RECEPTACLE HOLDER



PLUG HOLDER

SERIES I & III

Dash No.	Shell Size Com'l	Shell Size Mil. Ref.	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
1A08	08	A	40	.556 (14.1)	.394 (10.0)	.950 (24.1)
1B10	10	B	40	.681 (17.3)	.519 (13.2)	.950 (24.1)
1D14	14	D	40	.931 (23.6)	.769 (19.5)	.950 (24.1)
1E16	16	E	40	1.058 (26.9)	.895 (22.7)	.950 (24.1)
1F18	18	F	40	1.181 (30.0)	1.019 (25.9)	.950 (24.1)
1G20	20	G	40	1.306 (33.2)	1.144 (29.1)	.950 (24.1)
1H22	22	H	40	1.431 (36.3)	1.269 (32.2)	.950 (24.1)
1J24	24	J	40	1.556 (39.5)	1.394 (35.4)	.950 (24.1)

SERIES II & IV

Dash No.	Shell Size Com'l	Shell Size Mil. Ref.	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
2A08	08	A	40	.544 (13.8)	.374 (9.5)	.950 (24.1)
2B10	10	B	40	.669 (17.0)	.499 (12.7)	.950 (24.1)
2D14	14	D	40	.919 (23.3)	.749 (19.0)	.950 (24.1)
2E16	16	E	40	1.045 (26.5)	.875 (22.2)	.950 (24.1)
2F18	18	F	40	1.169 (29.7)	.999 (25.4)	.950 (24.1)

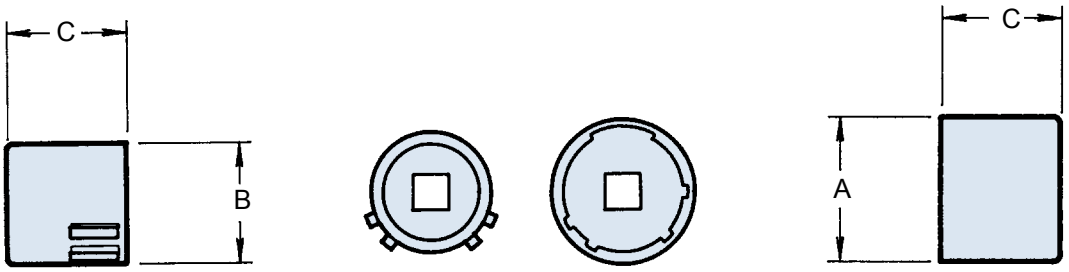
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10 and 12; 3/8" - Shell sizes 14 and up.

CAGE Code 06324
Printed in U.S.A.

600L005
LN29729 (SJT)
Plug and Receptacle Holder

600	L	005	-	16	P
Product Series	Connector Designator	Basic Number		Shell Size	Holder Type *P - Plug Holder* *R - Receptacle Holder*



RECEPTACLE HOLDER

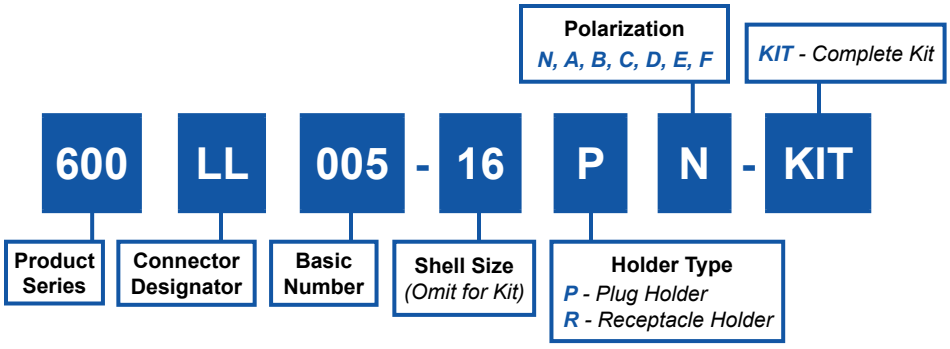
PLUG HOLDER

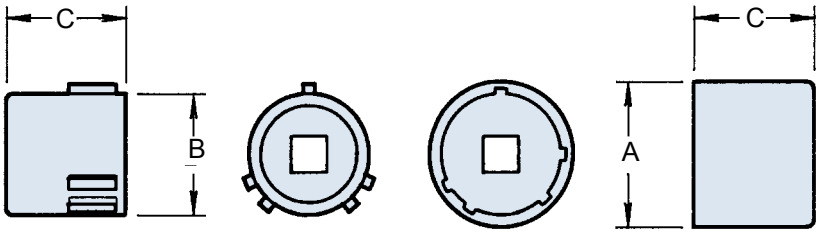
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	40	.478 (12.1)	.358 (9.1)	.910 (23.1)
10	40	.599 (15.2)	.486 (12.3)	.910 (23.1)
12	40	.758 (19.3)	.603 (15.3)	.910 (23.1)
14	40	.882 (22.4)	.728 (18.5)	.910 (23.1)
16	40	1.007 (25.6)	.853 (21.7)	.910 (23.1)
18	40	1.133 (28.8)	.958 (24.3)	.910 (23.1)
20	80	1.257 (31.9)	1.083 (27.5)	.910 (23.1)
22	80	1.382 (35.1)	1.208 (30.7)	.910 (23.1)
24	80	1.507 (38.3)	1.333 (33.9)	.910 (23.1)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600LL005
PATT 602
Plug and Receptacle Holder





RECEPTACLE HOLDER PLUG HOLDER

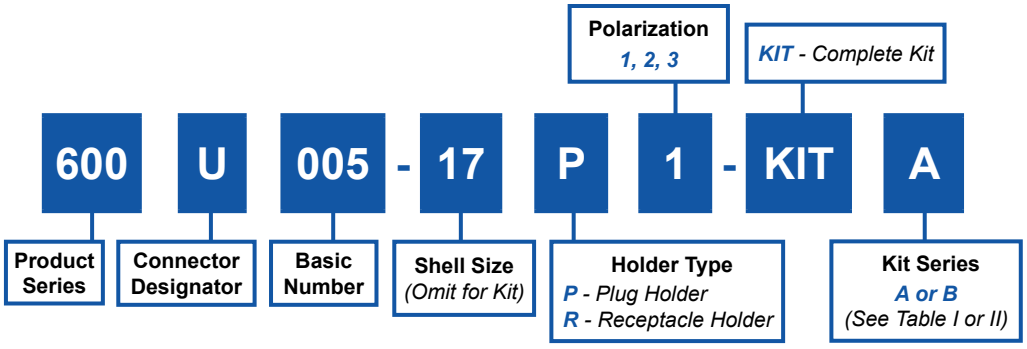
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	60	.474 (12.0)	.357 (9.1)	.88 (22.4)
10	80	.591 (15.0)	.485 (12.3)	.88 (22.4)
12	110	.751 (19.1)	.602 (15.3)	.88 (22.4)
14	120	.876 (22.3)	.727 (18.5)	.88 (22.4)
16	120	1.001 (25.4)	.852 (21.6)	.88 (22.4)
18	120	1.126 (28.6)	.957 (24.3)	.88 (22.4)
20	140	1.251 (31.8)	1.082 (27.5)	.88 (22.4)
22	140	1.376 (35.0)	1.207 (30.7)	.88 (22.4)
24	140	1.501 (38.1)	1.332 (33.8)	.88 (22.4)

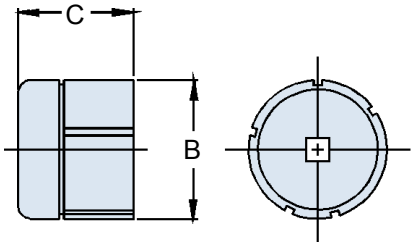
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

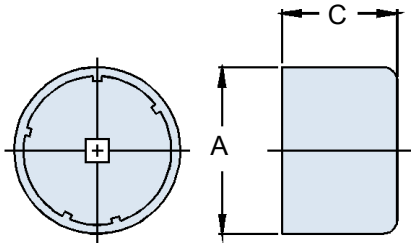
CAGE Code 06324 Printed in U.S.A.

600U005
MIL-C-29600, DG123 and DG123A
Plug and Receptacle Holder





RECEPTACLE HOLDER



PLUG HOLDER

TABLE I - SERIES A

Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
08	40	.570 (14.5)	.388 (9.9)	1.09 (27.7)
10	40	.690 (17.5)	.513 (13.0)	1.09 (27.7)
14	40	.945 (24.0)	.763 (19.4)	1.09 (27.7)
16	40	1.090 (27.7)	.889 (22.6)	1.09 (27.7)
18	40	1.250 (31.8)	1.013 (25.7)	1.09 (27.7)
20	40	1.375 (34.9)	1.138 (28.9)	1.09 (27.7)
22	40	1.500 (38.1)	1.262 (32.1)	1.09 (27.7)
24	40	1.590 (40.4)	1.388 (35.3)	1.09 (27.7)

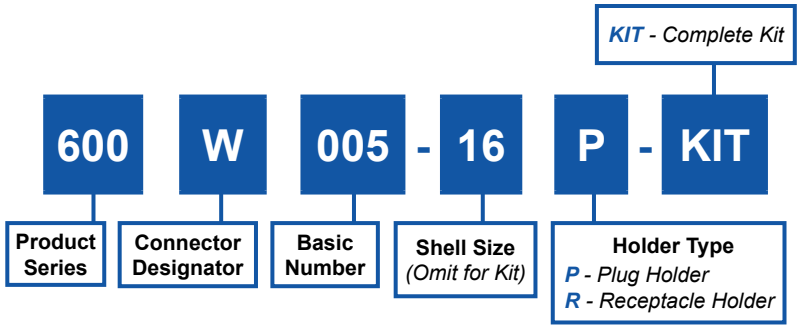
TABLE II - SERIES B

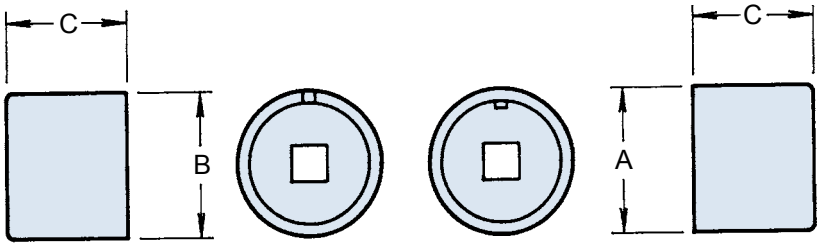
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
09	40	.570 (14.5)	.388 (9.9)	1.09 (27.7)
11	40	.690 (17.5)	.513 (13.0)	1.09 (27.7)
13	40	.820 (20.8)	.638 (16.2)	1.09 (27.7)
15	40	.945 (24.0)	.763 (19.4)	1.09 (27.7)
17	40	1.060 (26.9)	.889 (22.6)	1.09 (27.7)
19	40	1.250 (31.8)	1.013 (25.7)	1.09 (27.7)
21	40	1.375 (34.9)	1.138 (28.9)	1.09 (27.7)
23	40	1.500 (38.1)	1.262 (32.1)	1.09 (27.7)
25	40	1.590 (40.4)	1.388 (35.3)	1.09 (27.7)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 08, 10, 12; 3/8" - Shell sizes 14 and up.

600W005
Glenair GL4000 Series Connectors
Plug and Receptacle Holder





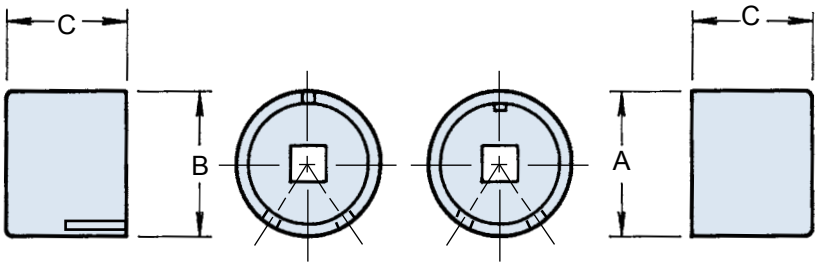
RECEPTACLE HOLDER PLUG HOLDER

NO POLARIZATION REQUIRED

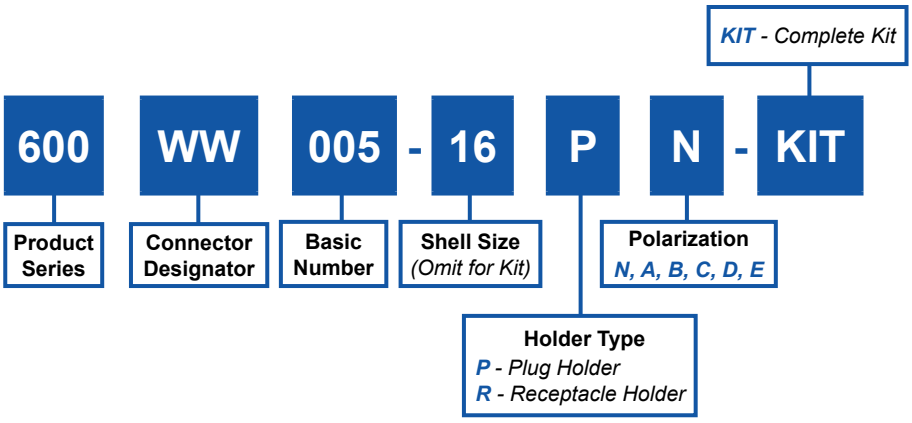
Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
10	40	.690 (17.5)	.500 (12.7)	1.03 (26.2)
12	40	.815 (20.7)	.620 (15.7)	1.03 (26.2)
14	50	.940 (23.9)	.750 (19.1)	1.03 (26.2)
16	50	1.055 (26.8)	.870 (22.1)	1.03 (26.2)
18	60	1.180 (30.0)	.995 (25.3)	1.03 (26.2)
20	70	1.305 (33.1)	1.120 (28.4)	1.03 (26.2)
22	80	1.430 (36.3)	1.245 (31.6)	1.03 (26.2)
24	100	1.560 (39.6)	1.370 (34.8)	1.03 (26.2)
28	140	1.680 (42.7)	1.495 (38.0)	1.03 (26.2)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 10 and 12; 3/8" - Shell sizes 14 and up.



RECEPTACLE HOLDER PLUG HOLDER

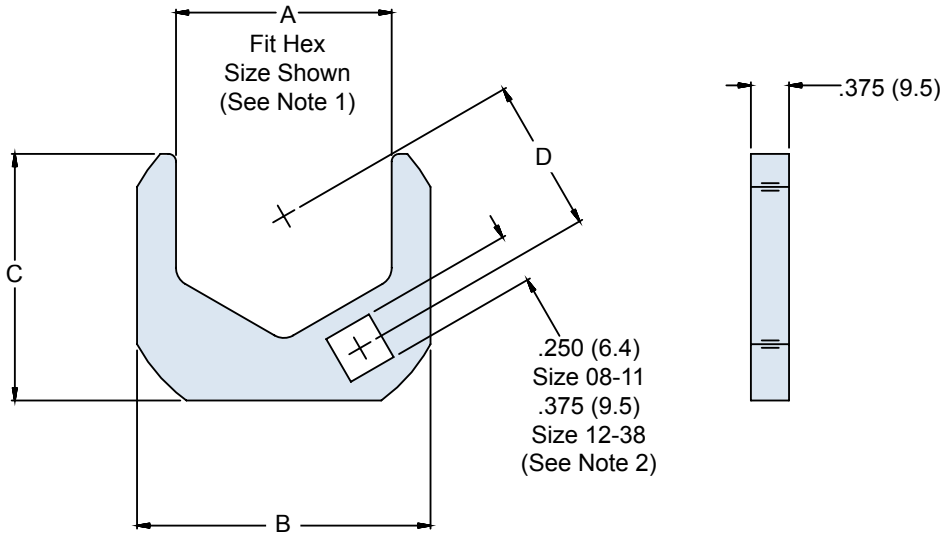


Shell Size	Max. Recommended Torque (Inch Pounds)	A Dia. Max.	B Dia. Max.	C Dim. Max.
10	40	.705 (17.9)	.496 (12.6)	1.03 (26.2)
12	40	.830 (21.1)	.620 (15.7)	1.03 (26.2)
14	50	.955 (24.3)	.750 (19.1)	1.03 (26.2)
16	50	1.070 (27.2)	.870 (22.1)	1.03 (26.2)
18	60	1.195 (30.4)	.995 (25.3)	1.03 (26.2)
20	70	1.320 (33.5)	1.120 (28.4)	1.03 (26.2)
22	80	1.445 (36.7)	1.245 (31.6)	1.03 (26.2)
24	100	1.570 (39.9)	1.370 (34.8)	1.03 (26.2)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Case hardened carbon steel with electroless nickel finish.
3. Receptacle and plug holder drives: 1/4" - Shell sizes 10 and 12; 3/8" - Shell sizes 14 and up.

600-129
Torque Tool Hex Foot
for Composite Coupling Nuts



600 - 129 - 16

- **600** — Product Series
- **129** — Basic Number
- **16** — Jaw Size Order No. *(See Table I)*

TABLE I: JAW SIZE ORDER NUMBER

Order No.	Shell Size	A Hex	B Ref	C Ref	D Ref	Recommended Coupling Torque Inch/Pounds	Recommended Coupling Torque Newton-Meters
08	08/09	.750 (19.1)	1.250 (31.8)	1.000 (22.1)	.625 (15.9)	35	[4.0]
10	10/11	.875 (22.2)	1.380 (35.1)	1.120 (28.4)	.687 (17.4)	35	[4.0]
12	12/13	1.000 (25.4)	1.630 (41.4)	1.380 (35.1)	.812 (20.6)	40	[4.5]
14	14/15	1.125 (28.6)	1.750 (44.5)	1.500 (38.1)	.875 (22.2)	40	[4.5]
16	16/17	1.250 (31.8)	1.880 (47.8)	1.630 (41.4)	.937 (23.8)	40	[4.5]
18	18/19	1.375 (34.9)	2.000 (50.8)	1.810 (46.0)	1.000 (25.4)	40	[4.5]
20	20/21	1.500 (38.1)	2.130 (54.1)	1.880 (47.8)	1.062 (27.0)	80	[9.0]
22	22/23	1.625 (41.3)	2.250 (57.2)	1.940 (49.3)	1.125 (28.6)	80	[9.0]
24	24/25	1.750 (44.5)	2.380 (60.5)	2.000 (50.8)	1.187 (30.1)	80	[9.0]
28	28	2.000 (50.8)	2.750 (69.9)	2.130 (54.1)	1.312 (33.3)	120	[13.5]

APPLICATION NOTES

1. Hex accommodates Coupling Nut with size shown.
2. Square accommodates Standard Square Socket Tools for Composite Coupling Nut.
3. Metric Dimensions (mm) are indicated in parentheses.
4. Newton-Meters [nm] are indicated in brackets.
5. Actual torque to part is affected by D offset. Apply approximately 35 Inch Lbs [4] to achieve 40 Inch Lbs [4.5]; 70 Inch Lbs [8] for 80 Inch Lbs [9]; and 100 Inch Lbs [13] for 120 Inch Lbs [13.5] recommended torque to parts.

CAGE Code 06324
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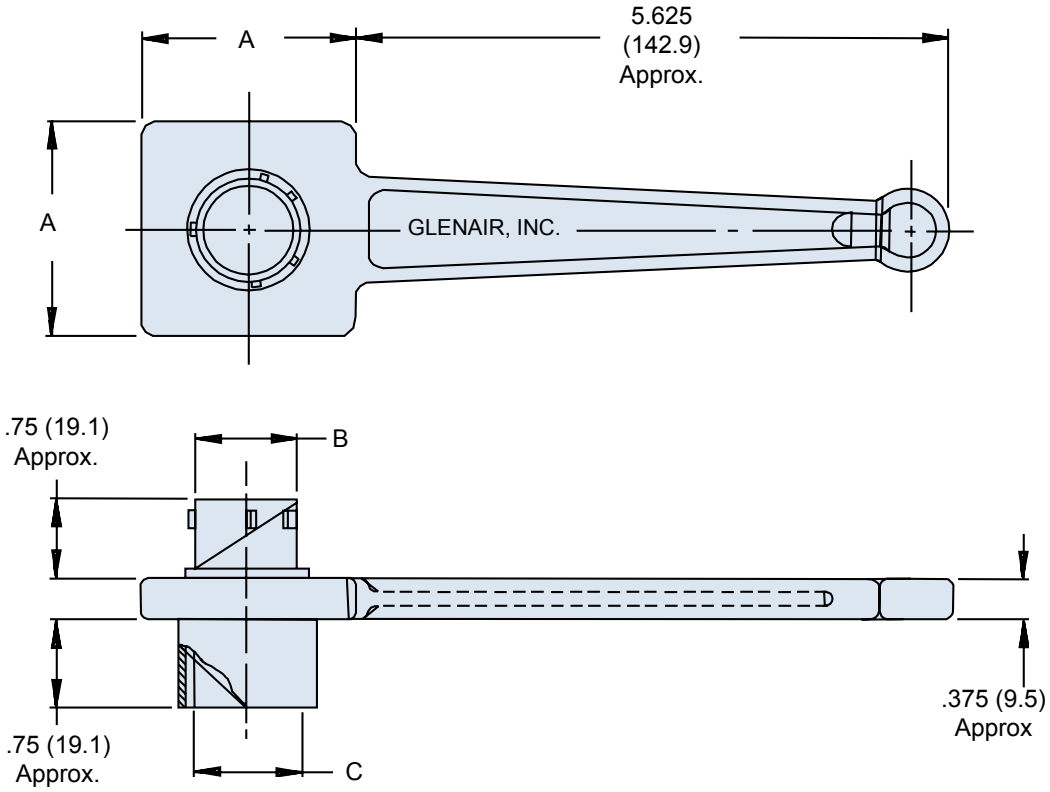
TG37
MIL-C-26500 and MIL-C-83723 Series III
Connector Wrench

TG47 - 20 N

- **TG47** — Basic Part Number
- **20** — Shell Size
- **N** — Polarization
  N - Normal
  6, 7, 8, 9 or 10 (See Note 3)



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.	C Dia. Ref.
8	1.250 (31.8)	.424 (10.8)	.428 (10.9)
10	1.250 (31.8)	.526 (13.4)	.530 (13.5)
12	1.250 (31.8)	.696 (17.7)	.700 (17.8)
14	2.000 (50.8)	.765 (19.4)	.769 (19.5)
16	2.000 (50.8)	.892 (22.7)	.896 (22.8)
18	2.000 (50.8)	.998 (25.3)	1.002 (25.5)
20	2.000 (50.8)	1.123 (28.5)	1.127 (28.6)
22	2.000 (50.8)	1.248 (31.7)	1.252 (31.8)
24	2.000 (50.8)	1.373 (34.9)	1.377 (35.0)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.
3. Polarization 10 not available for shell size 8.
4. Wrench has been designed to be used with both threaded and bayonet style connectors.

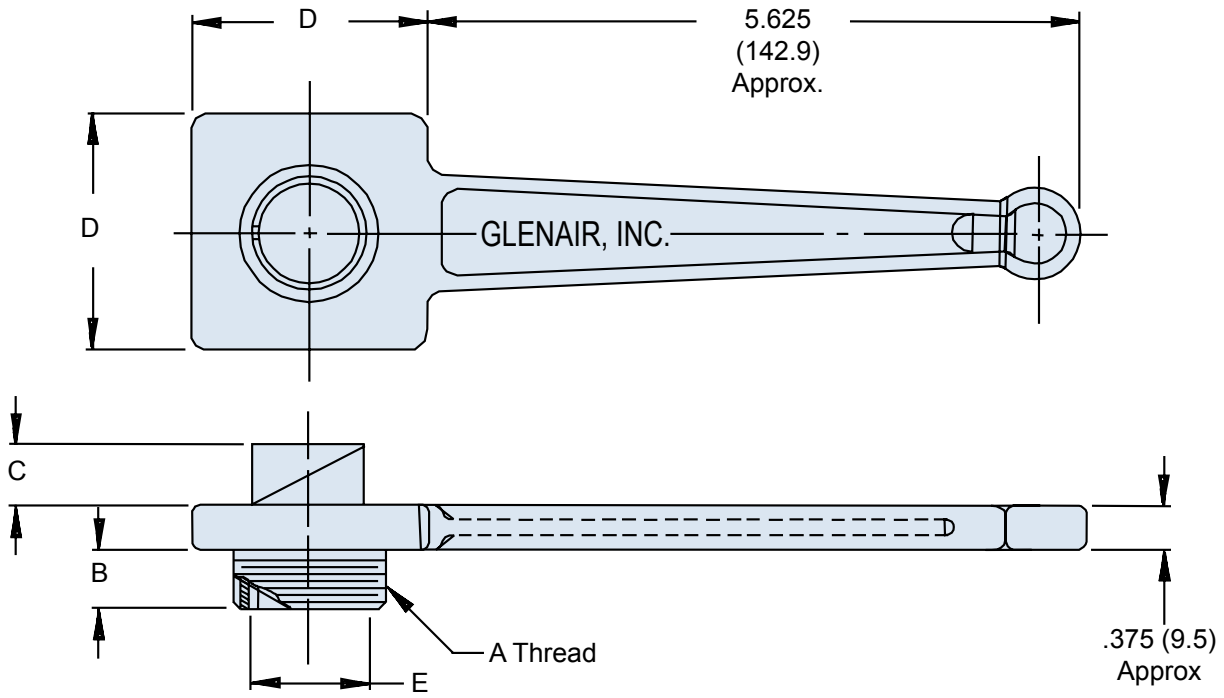
TG38
MIL-C-5015 and MIL-C-83723 Series II
Connector Wrench

TG38 - 20

- TG38: Basic Part Number
- 20: Dash Number

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.



Dash No.	Shell Size	A Thread Class 2A	B Approx.	C Approx.	D Dia. ± .062 (1.6)	E Dia. Ref.
8	8, 8S	1/2 -28 UNEF	.687 (17.4)	.718 (18.2)	1.250 (31.8)	.375 (9.5)
10	10S, 10SL	5/8 -24 UNEF	.687 (17.4)	.718 (18.2)	1.250 (31.8)	.450 (11.4)
12	12, 12S	3/4 -20 UNEF	.750 (19.1)	.921 (23.4)	1.250 (31.8)	.565 (14.4)
14	14, 14S	7/8 -20 UNEF	.750 (19.1)	.921 (23.4)	1.250 (31.8)	.685 (17.4)
16	16, 16S	1 -20 UNEF	.750 (19.1)	.921 (23.4)	2.000 (50.8)	.815 (20.7)
18	18	1 1/8 -18 UNEF	.750 (19.1)	.921 (23.4)	2.000 (50.8)	.940 (23.9)
20	20	1 1/4 -18 UNEF	.750 (19.1)	.921 (23.4)	2.000 (50.8)	1.060 (26.9)
22	22	1 3/8 -18 UNEF	.750 (19.1)	.921 (23.4)	2.000 (50.8)	1.185 (30.1)
24	24	1 1/2 -18 UNEF	.750 (19.1)	.921 (23.4)	2.000 (50.8)	1.317 (33.5)
28	28	1 3/4 -18 UNS	.750 (19.1)	.921 (23.4)	2.750 (69.9)	1.530 (38.9)
32	32	2 -18 UNS	.750 (19.1)	.921 (23.4)	2.750 (69.9)	1.780 (45.2)
36	36	2 1/4 -16 UN	.750 (19.1)	.921 (23.4)	2.750 (69.9)	1.995 (50.7)
40	40	2 1/2 -16 UN	.750 (19.1)	.921 (23.4)	2.750 (69.9)	2.245 (57.0)
44	44	2 3/4 -16 UN	.750 (19.1)	.921 (23.4)	2.750 (69.9)	2.500 (63.5)
48	48	3 -16 UN	.750 (19.1)	.921 (23.4)	2.750 (69.9)	2.750 (69.9)

CAGE Code 06324
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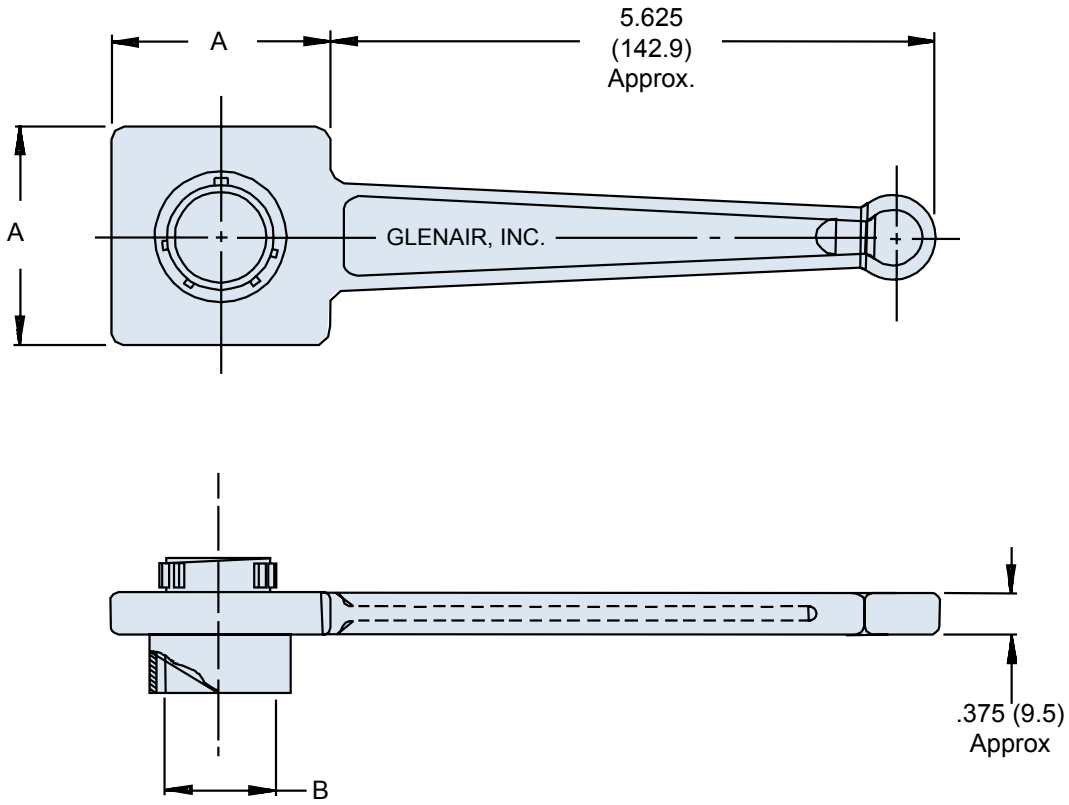
TG39
MIL-C-26482 Series I and II, MIL-C-83723 Series I, and NAS 1599 Connector Wrench

TG39 - 20

- TG39 — Basic Part Number
- 20 — Dash Number



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.
8	1.250 (31.8)	.362 (9.2)
10	1.250 (31.8)	.490 (12.4)
12	1.250 (31.8)	.607 (15.4)
14	1.250 (31.8)	.732 (18.6)
16	2.000 (50.8)	.857 (21.8)
18	2.000 (50.8)	.962 (24.4)
20	2.000 (50.8)	1.087 (27.6)
22	2.000 (50.8)	1.212 (30.8)
24	2.000 (50.8)	1.337 (34.0)

APPLICATION NOTES

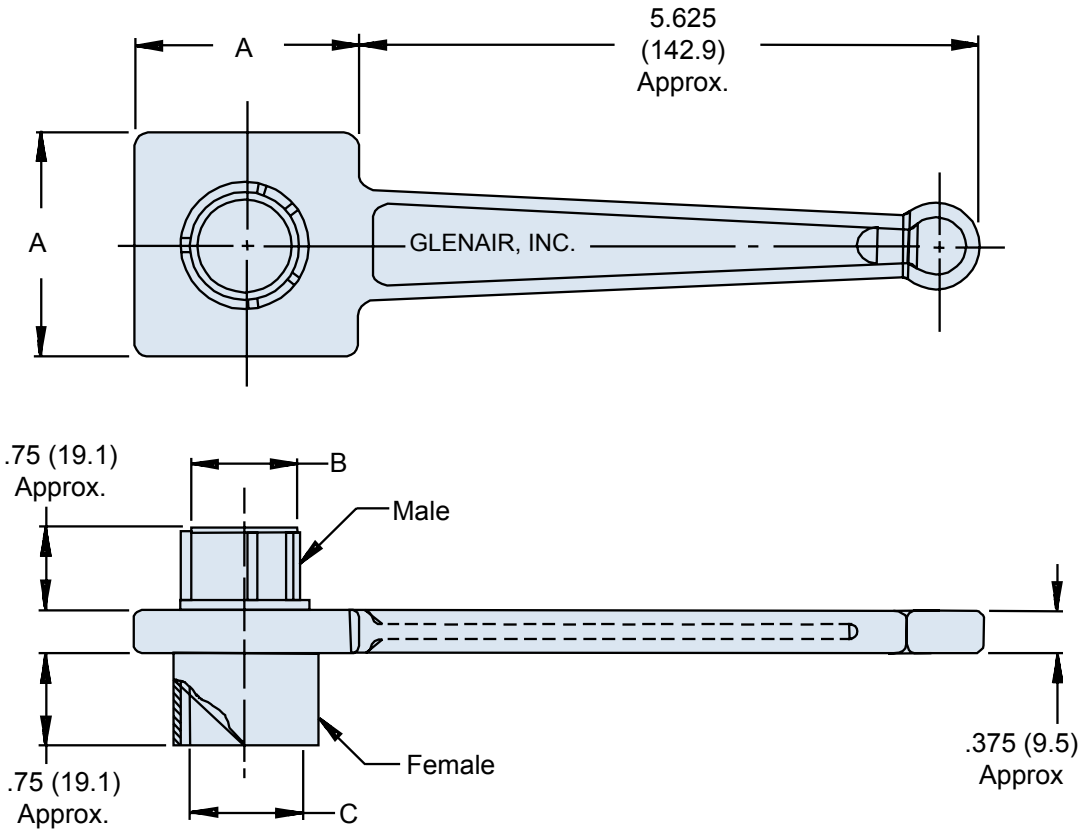
1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

Glenair®

TG47
MIL-C-22992
Connector Wrench

TG47 - 20

- TG47: Basic Part Number
- 20: Shell Size



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.	C Dia. Ref.
12	1.250 (31.8)	.554 (14.1)	.567 (14.4)
14	2.000 (50.8)	.674 (17.1)	.692 (17.6)
16	2.000 (50.8)	.804 (20.4)	.817 (20.8)
18	2.000 (50.8)	.929 (23.6)	.942 (23.9)
20	2.000 (50.8)	1.052 (26.7)	1.068 (27.1)
22	2.750 (69.9)	1.177 (29.9)	1.192 (30.3)
24	2.750 (69.9)	1.302 (33.1)	1.317 (33.5)
28	2.750 (69.9)	1.522 (38.7)	1.536 (39.0)
32	2.750 (69.9)	1.772 (45.0)	1.786 (45.4)
36	2.750 (69.9)	1.982 (50.3)	2.005 (50.9)

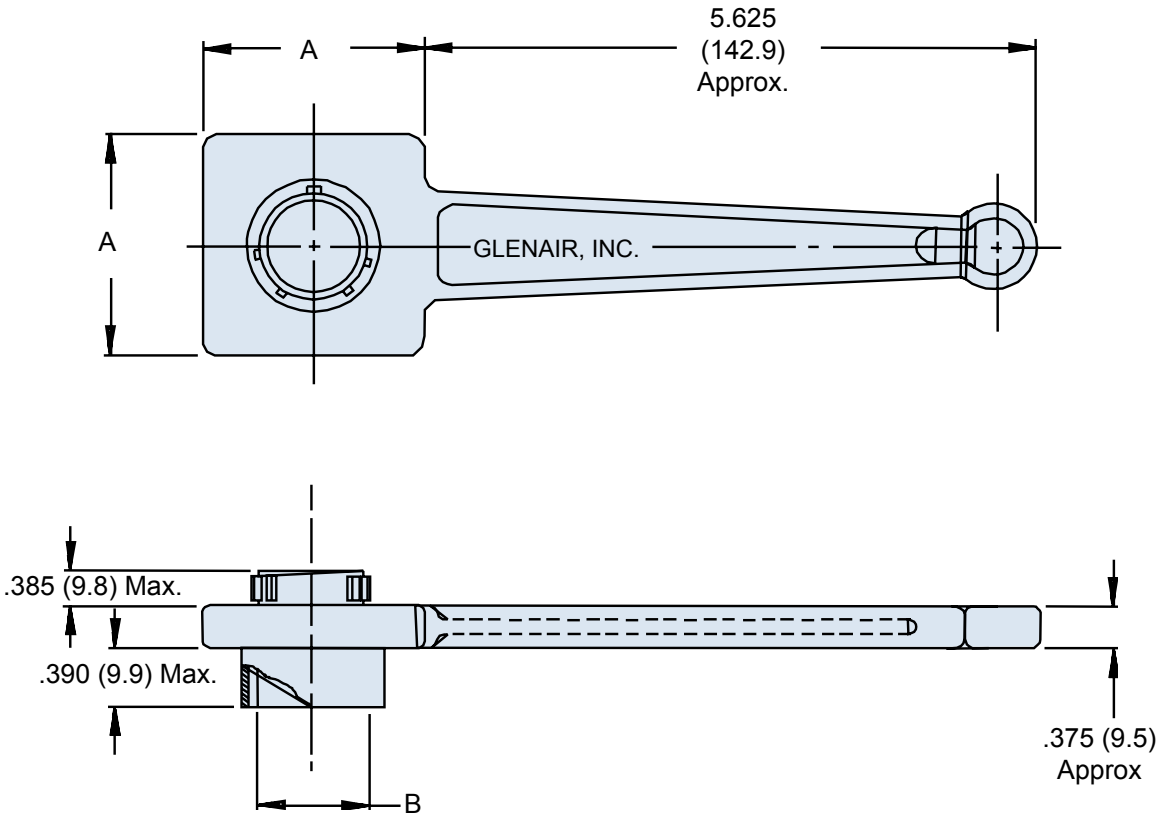
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

TG48
MIL-C-38999 Series II
Connector Wrench

TG48 - 20

- TG48: Basic Part Number
- 20: Shell Size



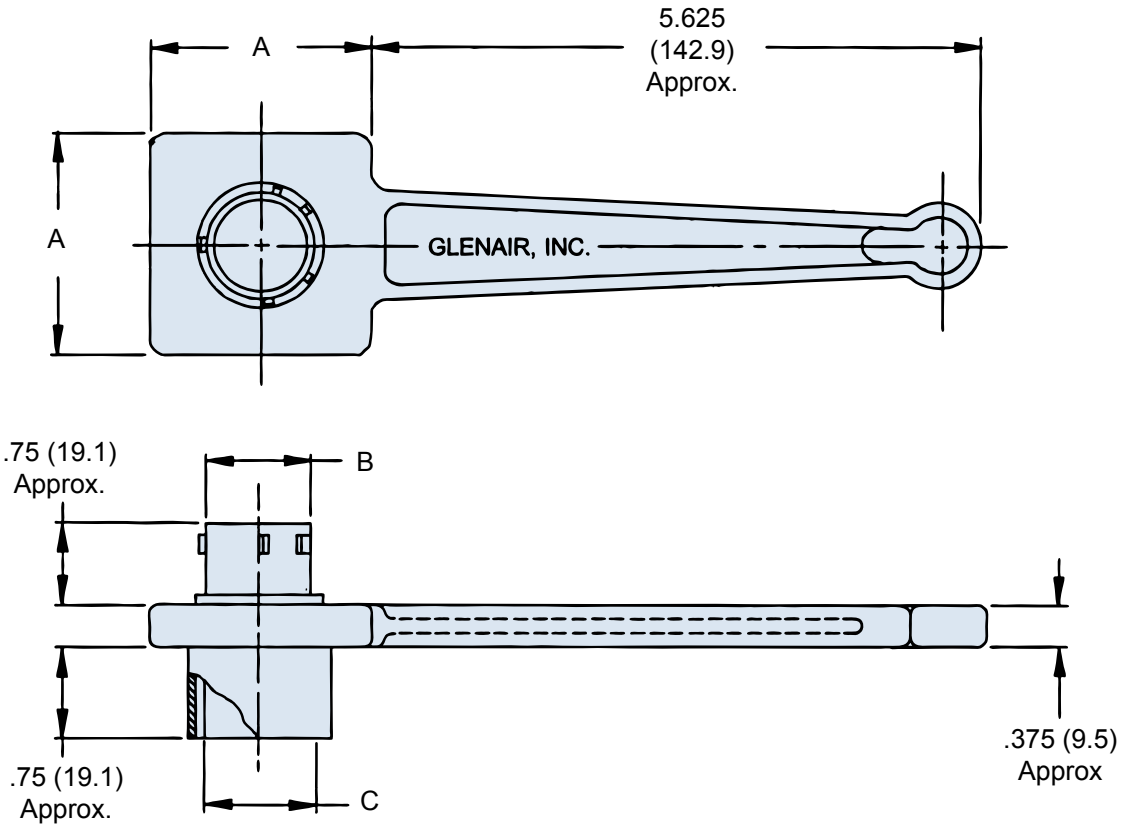
Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.
8	1.250 (31.8)	.362 (9.2)
10	1.250 (31.8)	.490 (12.4)
12	1.250 (31.8)	.607 (15.4)
14	1.250 (31.8)	.732 (18.6)
16	2.000 (50.8)	.857 (21.8)
18	2.000 (50.8)	.962 (24.4)
20	2.000 (50.8)	1.087 (27.6)
22	2.000 (50.8)	1.212 (30.8)
24	2.000 (50.8)	1.337 (34.0)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

TG52
MIL-C-81511 Series II and IV
Connector Wrench

TG52	-	14	1
Basic Part Number		Shell Size	Polarization *1, 2, 3, 4, 5, 6* *(Omit for Normal)*



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.	C Dia. Ref.
8	1.250 (31.8)	.382 (9.7)	.386 (9.8)
10	1.250 (31.8)	.507 (12.9)	.511 (13.0)
14	2.000 (50.8)	.757 (19.2)	.761 (19.3)
16	2.000 (50.8)	.883 (22.4)	.887 (22.5)
18	2.000 (50.8)	1.007 (25.6)	1.011 (25.7)

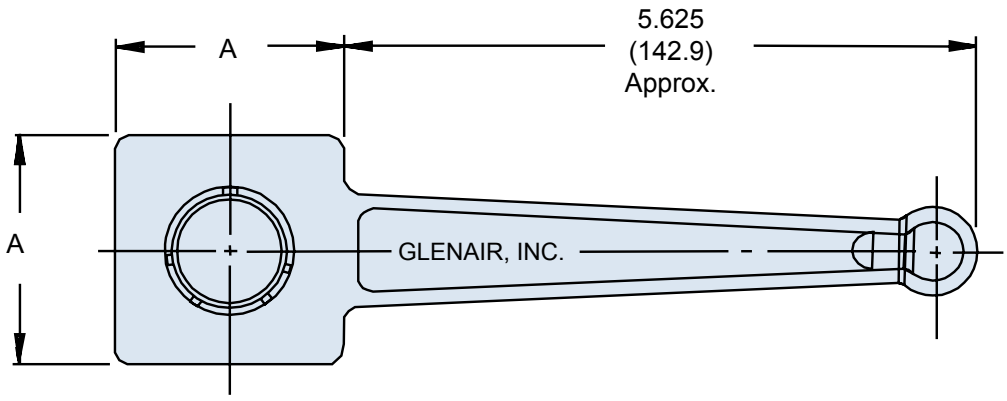
APPLICATION NOTES

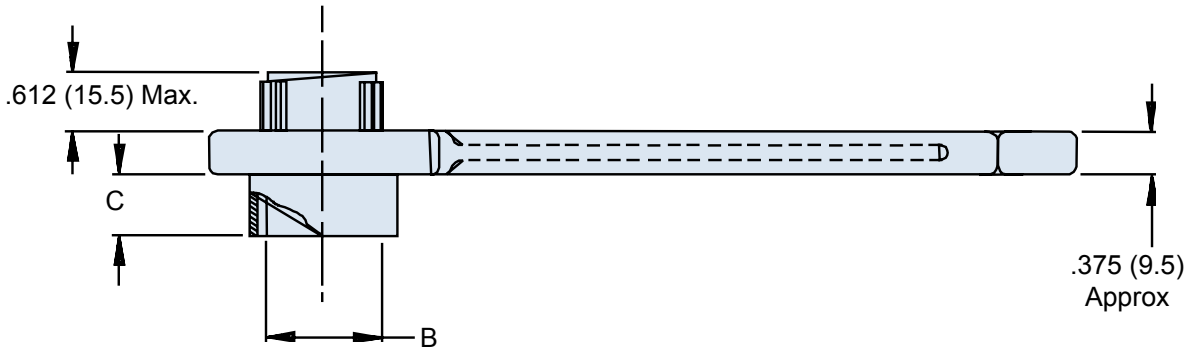
1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

TG60
MIL-C-27599 and MIL-C-38999 Series I
Connector Wrench

TG60 - 15

- TG60 — Basic Part Number
- 15 — Shell Size





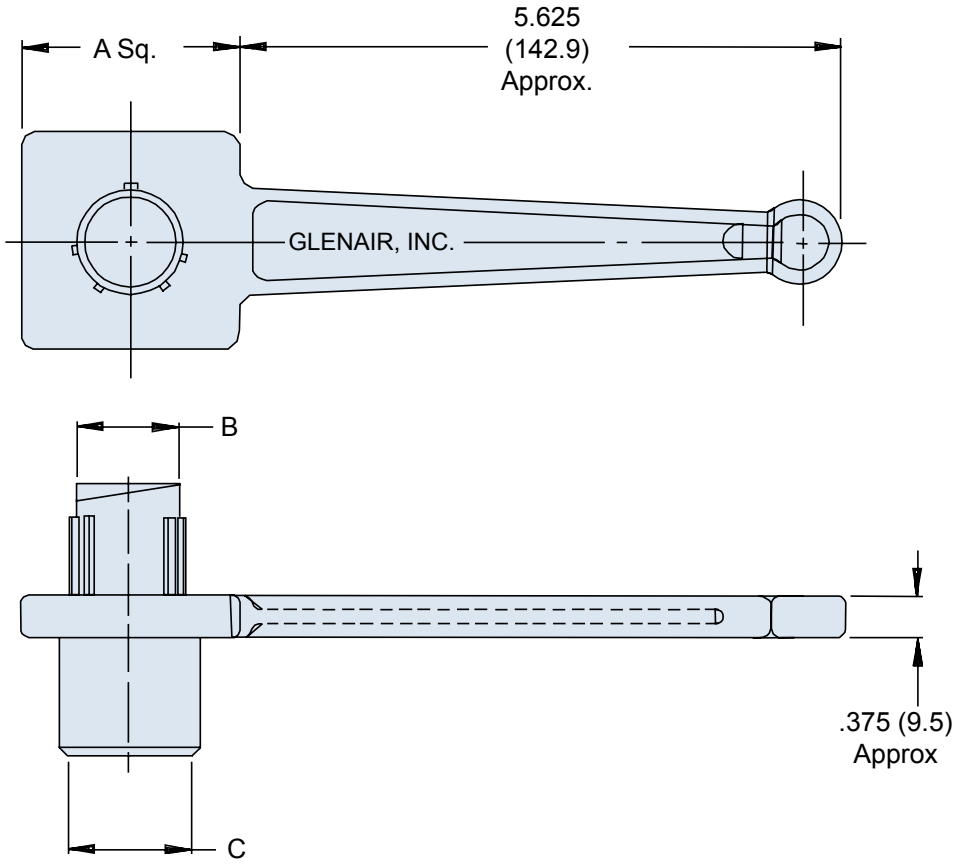
Shell Size	A Dim. Ref.	B Dia. Ref.	C Max
9	1.250 (31.8)	.442 (11.2)	.647 (16.4)
11	1.250 (31.8)	.570 (14.5)	.647 (16.4)
13	1.250 (31.8)	.687 (17.4)	.647 (16.4)
15	2.000 (50.8)	.812 (20.6)	.647 (16.4)
17	2.000 (50.8)	.937 (23.8)	.647 (16.4)
19	2.000 (50.8)	1.042 (26.5)	.647 (16.4)
21	2.000 (50.8)	1.167 (29.6)	.617 (15.7)
23	2.000 (50.8)	1.292 (32.8)	.617 (15.7)
25	2.000 (50.8)	1.417 (36.0)	.617 (15.7)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

TG61
MIL-C-81511 Series I and III
Connector Wrench

TG48	-	20	1
Basic Part Number		Shell Size	Polarization *1, 2, 3, 4, 5, 6* *(Omit for Normal)*



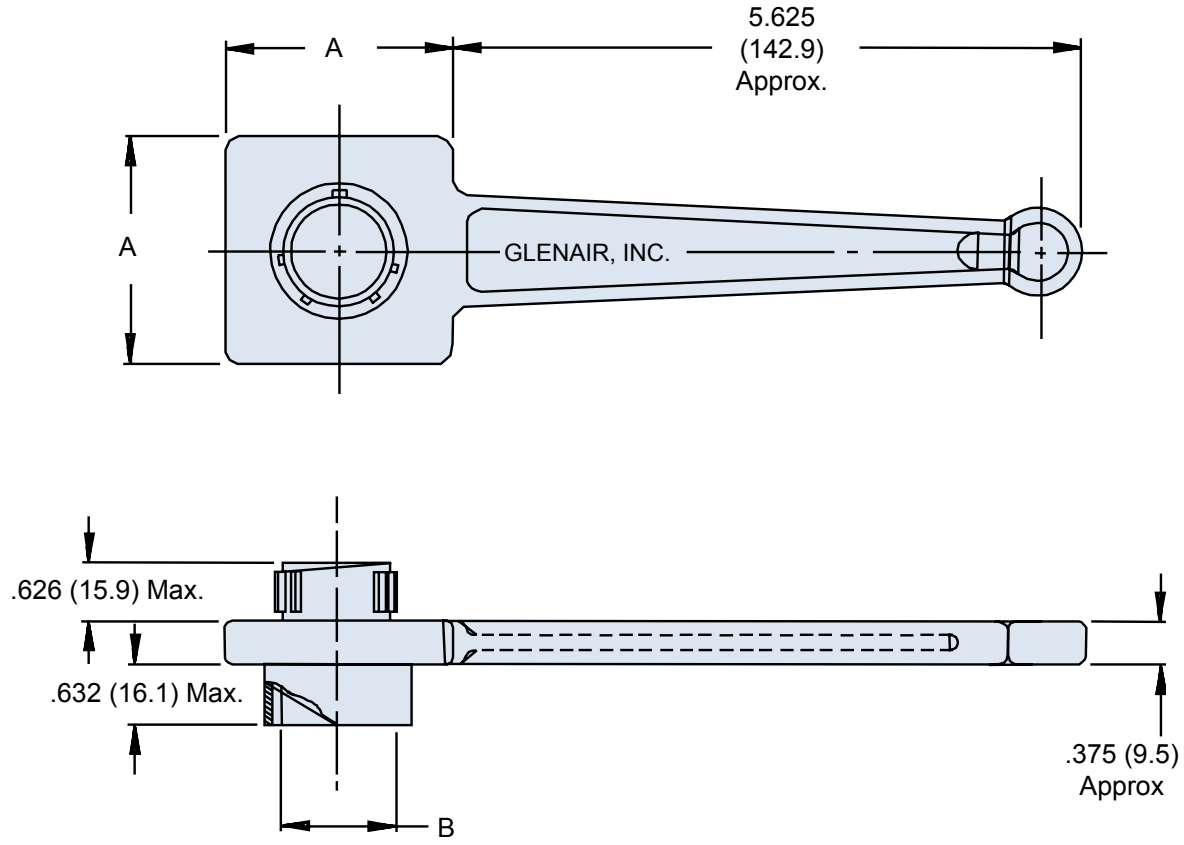
Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.	C Dia. Ref.
08	1.250 (31.8)	.378 (9.6)	.407 (10.3)
10	1.250 (31.8)	.503 (12.8)	.532 (13.5)
14	2.000 (50.8)	.751 (19.1)	.782 (19.9)
16	2.000 (50.8)	.877 (22.3)	.908 (23.1)
18	2.000 (50.8)	1.001 (25.4)	1.032 (26.2)
20	2.000 (50.8)	1.126 (28.6)	1.157 (29.4)
22	2.750 (69.9)	1.251 (31.8)	1.282 (32.6)
24	2.750 (69.9)	1.376 (35.0)	1.407 (35.7)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

TG83
(LN29729)
Wrench for SJT Connectors

TG38	-	20
Basic Part Number		Shell Size



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.
8	1.250 (31.8)	.362 (9.2)
10	1.250 (31.8)	.490 (12.4)
12	1.250 (31.8)	.607 (15.4)
14	1.250 (31.8)	.732 (18.6)
16	2.000 (50.8)	.857 (21.8)
18	2.000 (50.8)	.962 (24.4)
20	2.000 (50.8)	1.087 (27.6)
22	2.000 (50.8)	1.212 (30.8)
24	2.000 (50.8)	1.337 (34.0)

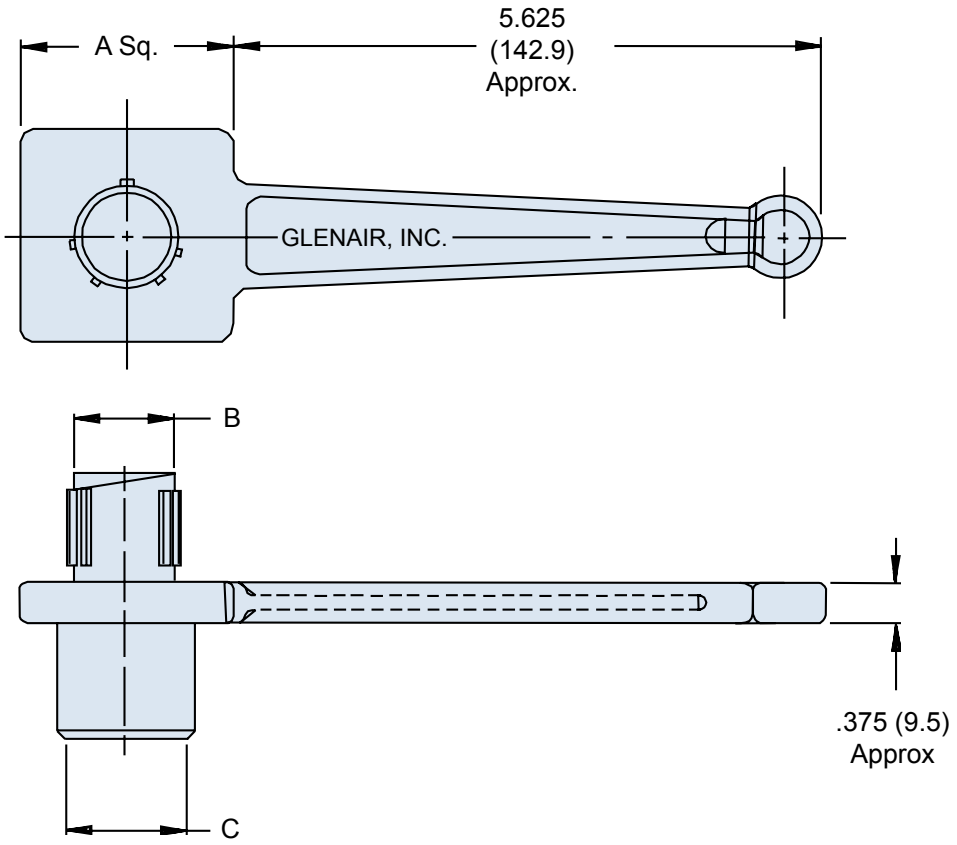
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Wrench handle and sockets - Aluminum alloy with electroless nickel finish.

TG90
MIL-C-38999 Series III
Connector Wrench

TG90 - 15 A

- **TG90** — Basic Part Number
- **15** — Shell Size
- **A** — Polarization *A, B, C, D, E* (Omit for Normal)



Shell Size	A Dim. ± .062 (1.6)	B Dia. Ref.	C Dia. Ref.
09	1.250 (31.8)	.438 (11.1)	.441 (11.2)
11	1.250 (31.8)	.566 (14.4)	.569 (14.5)
13	1.250 (31.8)	.678 (17.2)	.682 (17.3)
15	2.000 (50.8)	.802 (20.4)	.811 (20.6)
17	2.000 (50.8)	.928 (23.6)	.931 (23.6)
19	2.000 (50.8)	1.032 (26.2)	1.037 (26.3)
21	2.000 (50.8)	1.155 (29.3)	1.162 (29.5)
23	2.750 (69.9)	1.283 (32.6)	1.288 (32.7)
25	2.750 (69.9)	1.407 (35.7)	1.411 (35.8)

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Material: Aluminum alloy with electroless nickel finish.

CAGE Code 06324
Printed in U.S.A.

Fast, Cost-Effective Shielding Termination

The *BAND-IT*® clamping system provides quick, easy, cost-effective and highly reliable termination of braided metallic shielding or fabric braid. Combined with Glenair's vast selection of connector accessories, braided shielding, cable, convoluted tubing, flexible metal core conduit, adapters, transitions, Geo-Marine® and special connectors, you have everything needed to design and build complete cable assemblies, wire harnesses and conduit systems.

Manual Hand Tool

Reliable RFI/EMI/EMP Terminations

The unique low profile and smooth inside diameter of the one-piece type 304 austenitic stainless steel clamping band virtually eliminates RFI/EMI/EMP leakage paths. The lock maintains constant tension under extreme environmental conditions. *BAND-IT*® has passed severe shock, vibration and thermal cycle testing with negligible deterioration of shell conductivity.

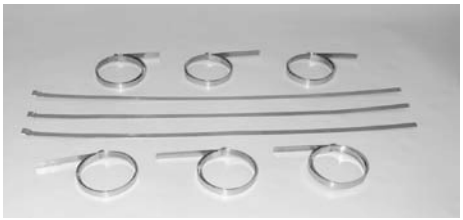
Pneumatic Clamping Tool

Single Piece Band Construction

No welding, soldering, magna forming, and no crimping! The clamping bands provide quick, easy and cost-effective shielding terminations. (Note: Bands must be double-coiled.)

Clamp Small Diameters Easily, Reliably

Double-wrapped, the clamping band is designed to clamp small diameters as easily, quickly and reliably as large diameters.



Bands - Available Flat or Precoiled

Quick, Easy Field Terminations with the Precalibrated Hand Tool

The precalibrated hand tool is lightweight and pocket-sized, affording fast braided RFI/EMI/EMP shield termination in the field.

Pneumatic Banding Tool for High-Speed Mass Production

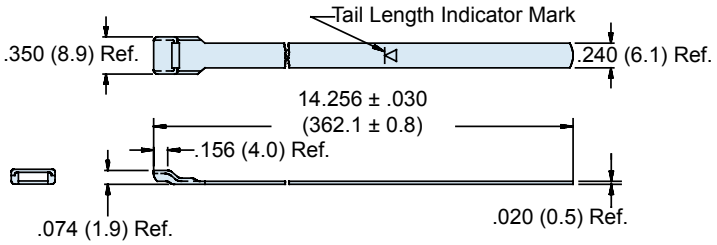
The pneumatic clamping tool offers the capability to tackle high volume braided shielding terminations quickly and easily.

Completed Termination

Assembly Instructions on Page 50

600-052, 600-090, 600-057, 600-083
600-052-1, 600-090-1, 600-057-1 & 600-083-1
Clamping Bands

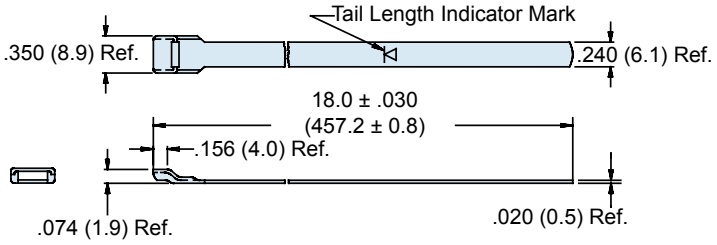
Standard Band 600-052 and Precoiled Standard Band 600-052-1



The 600-052 Standard Band is precision constructed of 300 Series SST/Passivate and designed for use with the 600-058 Hand Banding Tool or the 600-067 Pneumatic Banding Tool. Double-wrapped bands will accommodate diameters up to approximately 1.8 inches (45.7). Bands may be ordered flat (600-052) or precoiled (600-052-1). Bands come bagged and tagged in quantities from 1 to 100.

Reference: *BAND-IT*® part number A10086

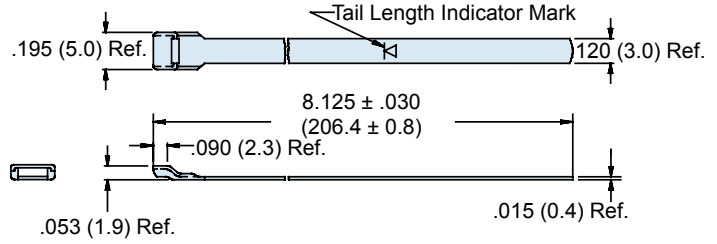
Extended-Length Standard Band 600-090 & Precoiled Extended-Length Standard Band 600-090-1



The 600-090 Extended Length Standard Band is precision constructed of 300 Series SST/Passivate, and designed for use with the 600-058 Hand Banding Tool or the 600-067 Pneumatic Banding Tool. Double-wrapped bands will accommodate diameters up to approximately 2.5 inches (63.5). Bands may be ordered flat (600-090), or precoiled (600-090-1). Bands come bagged and tagged in quantities from 1 to 100.

Reference: *BAND-IT*® part number A11086

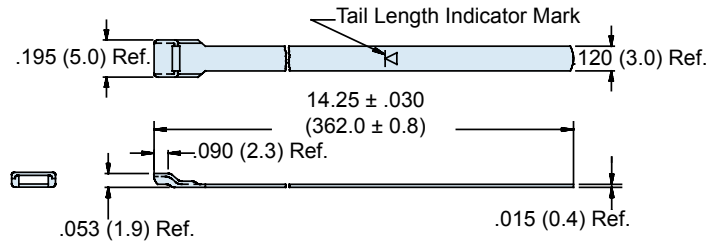
Micro-Band 600-057 Precoiled Micro-Band 600-057-1



The 600-057 Micro Band is precision constructed of 300 Series SST/Passivate, and designed for use with the 600-061 Hand Banding Tool or the 600-068 Pneumatic Banding Tool. Double-wrapped bands will accommodate diameters up to approximately .88 inches (22.4). Bands may be ordered flat (600-057), or precoiled (600-057-1). Bands come bagged and tagged in quantities from 1 to 100.

Reference: *BAND-IT*® part number A31186

Extended Length Micro-Band 600-083 Precoiled Micro-Band 600-083-1

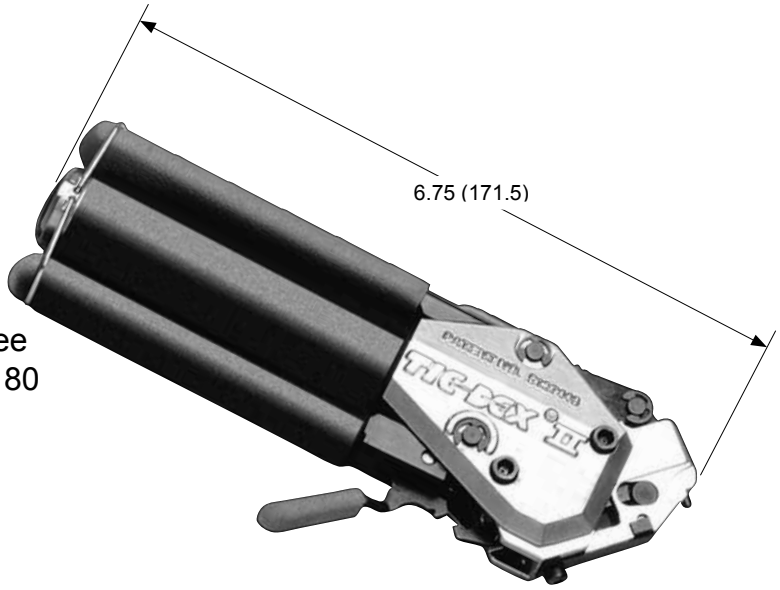


The 600-083 Extended Length Micro-Band is precision constructed of 300 Series SST/Passivate, and designed for use with the 600-061 Hand Banding Tool or the 600-068 Pneumatic Banding Tool. Double-wrapped bands will accommodate diameters up to approximately 1.88 inches (47.8). Bands may be ordered flat (600-083), or precoiled (600-083-1). Bands come bagged and tagged in quantities from 1 to 100.

Reference: *BAND-IT*® part number A31086.

Metric dimensions (mm) are indicated in parentheses. Consult factory for diameters above 2.5 inches (63.5).

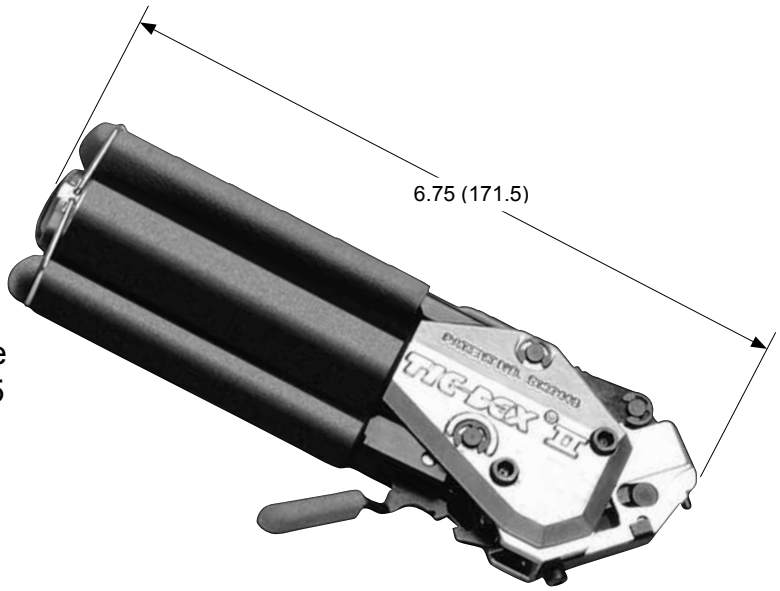
Hand Banding Tool 600-058



The 600-058 Hand Banding Tool weighs 1.18 lbs., and is designed for standard clamping bands 600-052 and 600-090 (see page 36) in a tension range from 100 to 180 lbs. Calibrate at 150 lbs. ± 5 lbs.
For most shield terminations. Tool and band should never be lubricated.

Reference: *BAND-IT*® part number A40199.

Hand Micro Banding Tool 600-061

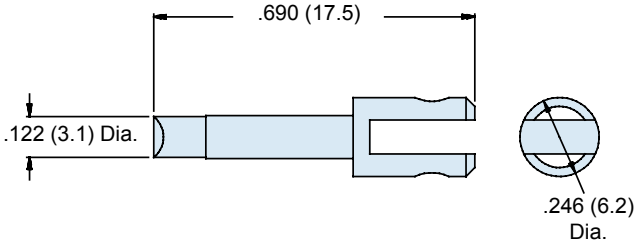


The 600-061 Hand Micro Banding Tool weighs 1.18 lbs., and is designed for micro clamping bands 600-057 and 600-083 (see page 36) in a tension range from 50 to 85 lbs. Calibrate at 80lbs ± 5 lbs.
For most shield terminations. Tool and band should never be lubricated.

Reference: *BAND-IT*® part number A30199.

Metric Dimensions (mm) are indicated in parentheses.

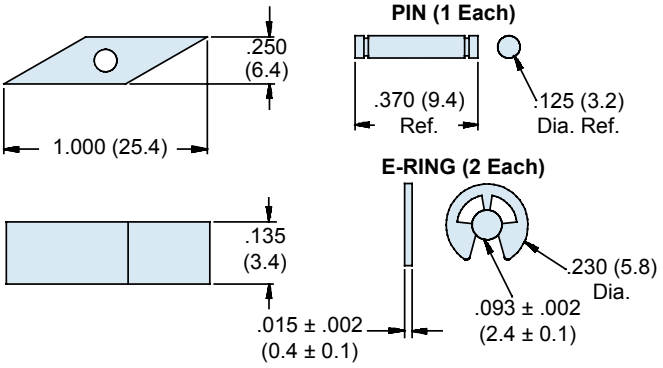
600-082, 600-056, 600-060 & 600-062 Banding Tool Replacement Parts Kits



600-082 Cutter Knife

The 600-082 Cutter Knife replaces the cutter knife on the 600-061 Hand Banding Tool, and the 600-068 Pneumatic Banding Tool. Material is heat treated steel finished with black oxide and rust preventative.

Reference: *BAND-IT*® part number A48087

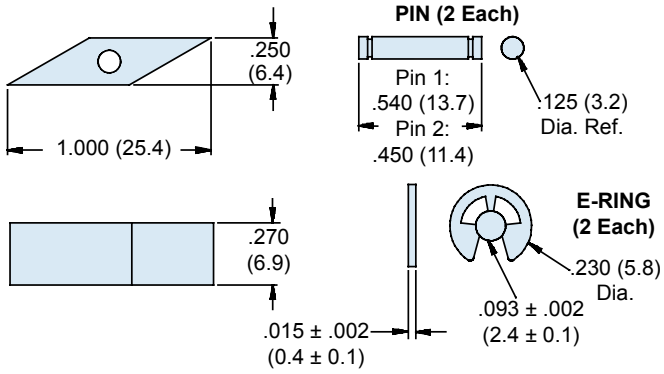


600-060-1 Micro Cut-Off Blade Kit

The 600-060-1 Micro Cut-Off Blade Kit for Serial Numbers up to 20999 consists of the blade, two E-rings and one pin, providing all parts needed to replace the cut-off blade on the 600-061 Hand Micro Banding Tool and the 600-068 Pneumatic Micro Banding Tool. Material is heat treated steel finished with black oxide and rust preventative.

Reference: *BAND-IT*® part number A43999.

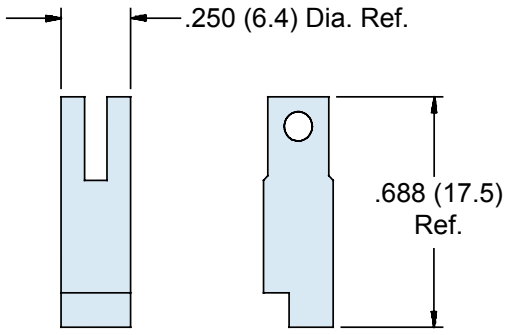
600-060-2 Ref. *BAND-IT*® P/N A47899 for Serial Numbers 21000 and above.



600-056 Cut-Off Blade Kit

The 600-056 Cut-Off Blade Kit consists of the blade, two E-rings and one pin, providing all parts needed to replace the cut-off blade on the 600-058 Hand Banding Tool and the 600-067 Pneumatic Banding Tool. Material is heat treated steel finished with black oxide and rust preventative.

Reference: *BAND-IT*® part number A40699.



600-062 Cutter Knife

The 600-062 Cutter Knife for Serial Numbers up to 16589 replaces the cutter knife on the 600-058 Hand Banding Tool and the 600-067 Pneumatic Banding Tool. Material is heat treated steel finished with black oxide and rust preventative.

Reference: *BAND-IT*® part number A40788.

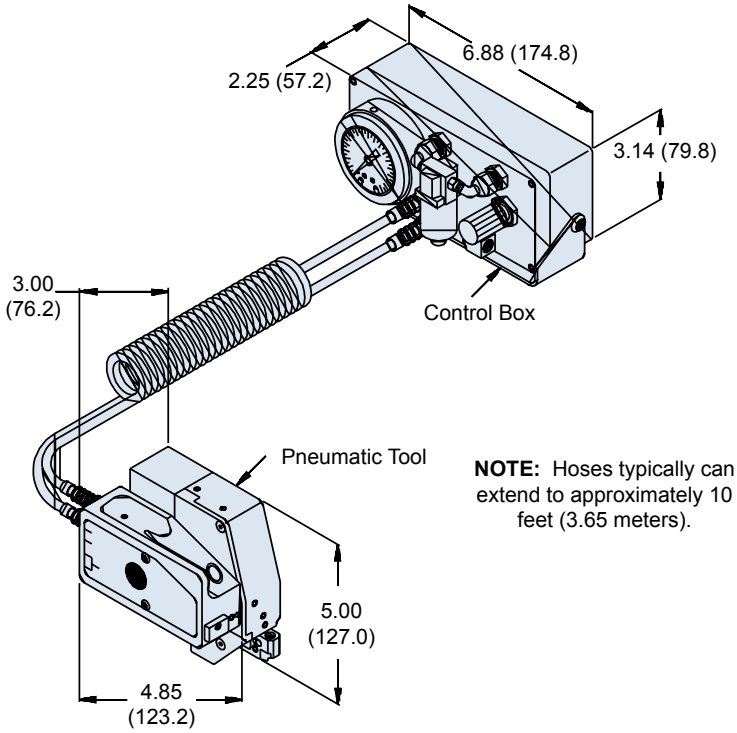
600-062-1 for Serial Numbers 16590 and above.
Reference: *BAND-IT*® part number A67787.

Metric Dimensions (mm) are indicated in parentheses.

600-067 *Tie-Dex II*® Pneumatic Standard Banding Tool

The 600-067 Tie-Dex II® Standard Banding Tool accommodates standard 600-052 and 600-090 bands (see page 36) in a tension range of from 100-180 lbs. Calibrate at 150 lbs. ± 5 lbs for most shield terminations. Weight of the tool is 2.52 lbs (1.14 Kg); the control box weighs 2.74 lbs (1.24 Kg).

Reference: *BAND-IT*® part number A35199.

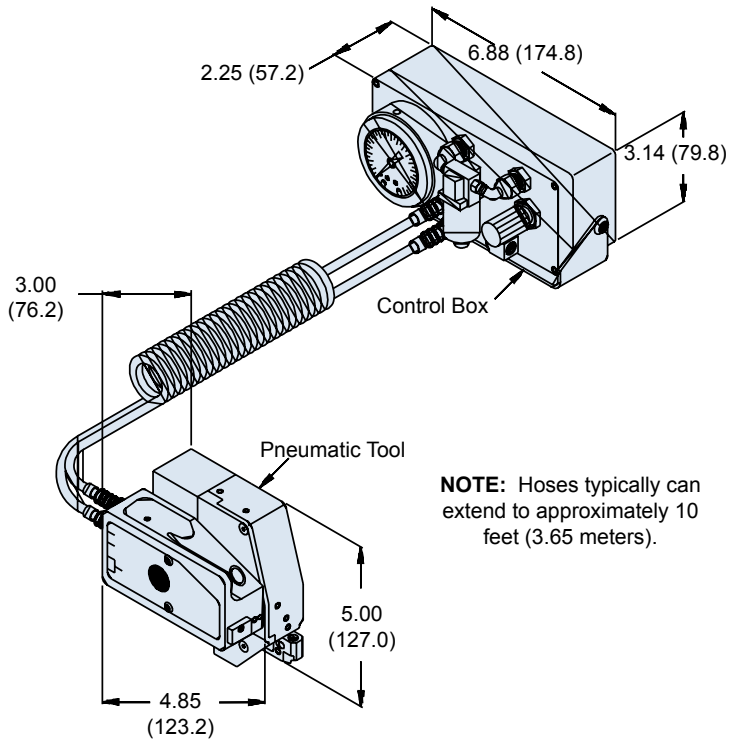


NOTE: Hoses typically can extend to approximately 10 feet (3.65 meters).

600-068 *Tie-Dex II*® Pneumatic Micro Banding Tool

The 600-068 Tie-Dex II® Pneumatic Micro Banding Tool accommodates 600-057 and 600-083 Micro Bands (see page 36) in a tension range of from 50 to 80 lbs. Calibrate at 75 lbs. +2 lbs. -7 lbs. for most shield terminations. Weight of the tool is 2.52 lbs (1.14 Kg); the control box weighs 2.74 lbs (1.24 Kg).

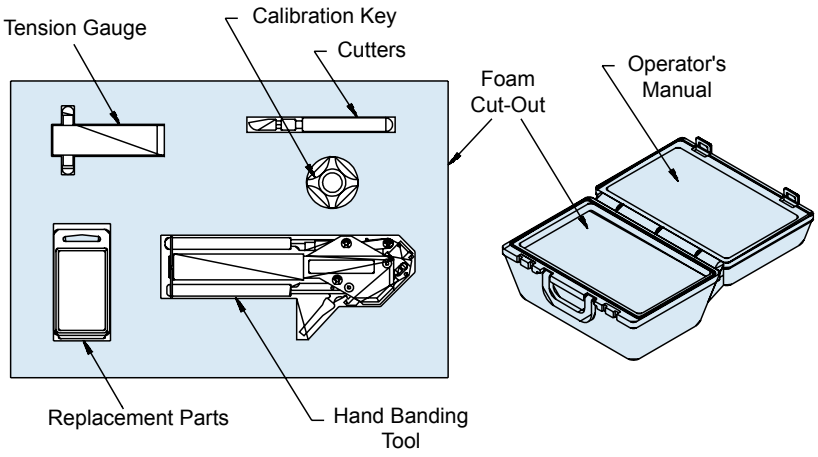
Reference: *BAND-IT*® part number A35599.



NOTE: Hoses typically can extend to approximately 10 feet (3.65 meters).

Metric Dimensions (mm) are indicated in parentheses.

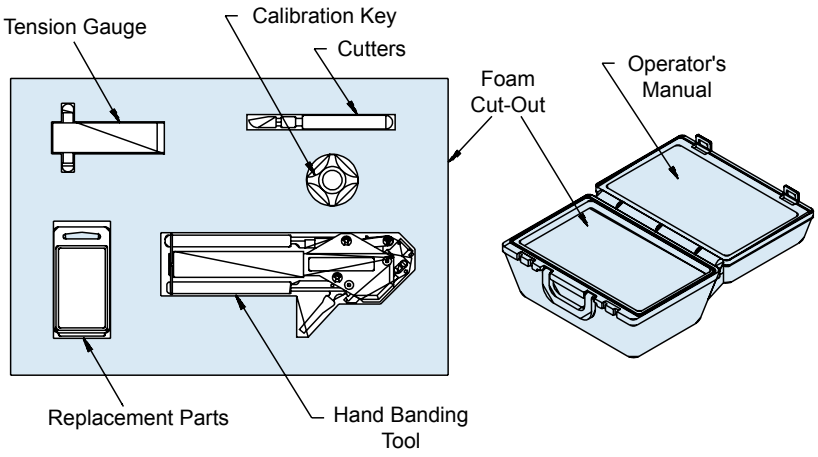
600-086 & 600-072 Field Tool Kits



600-086 Tie-Dex II® Micro-Tool Kit

The 600-086 Tie-Dex II® Micro-Tool Kit contains the 600-061 Hand Micro Banding Tool, the 600-086-1 Tension Gauge, Cutters for clamp removal, 600-055 Calibration Adjustment Key, and 600-060 Replacement Parts (Cut-off Blade Kit). The tension gauge is used to calibrate tool to 80 lbs. ±2 lbs. Complete with rugged 12.00 in. x 8.75 in. x 4.00 in. (304.8 x 222.3 x 101.9mm) foam padded carrying case and operator's manual.

Reference: *BAND-IT*® part number A59099.

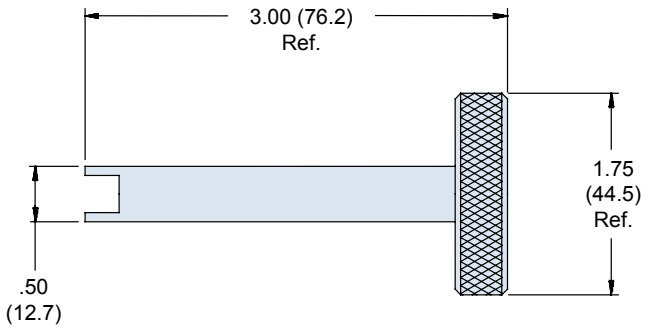


600-072 Tie-Dex II® Tool Kit

The 600-072 Tie-Dex II® Tool Kit contains the 600-058 Hand Banding Tool, the 600-072-1 Tension Gauge, Cutters for clamp removal, 600-055 Calibration Adjustment Key, and 600-056 Replacement Parts (Cut-off Blade Kit). The tension gauge is used to calibrate tool to 150 ±5 lbs. Complete with rugged 12.00 in. x 8.75 in. x 4.00 in. (304.8 x 222.3 x 101.9mm) foam padded carrying case and operator's manual.

Reference: *BAND-IT*® part number A49099.

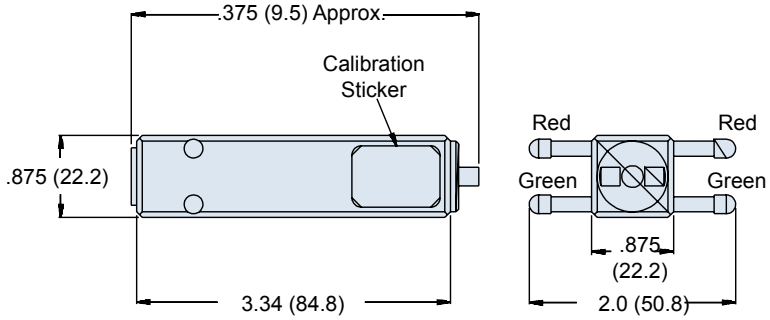
Metric Dimemsions (mm) are indicated in parentheses.



600-055 Calibration Key

The 600-055 Calibration Key is designed for use with the 600-061 and 600-058 Hand Banding Tools. Material is black anodized aluminum alloy. One full turn clockwise will advance the tension range by 25 lbs., and a counter-clockwise turn will decrease tension by the same amount. Recommended for purchase with 600-072-1 and 600-086-1.

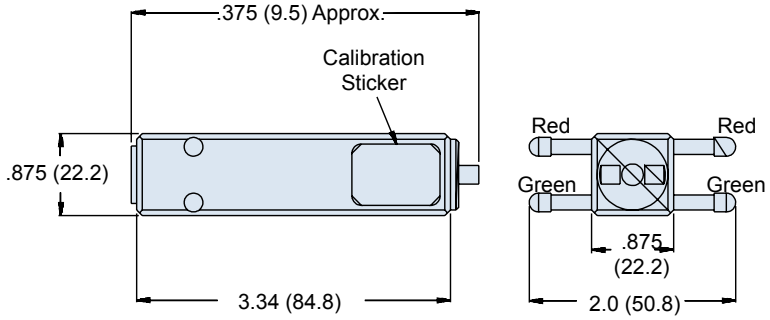
Reference: *BAND-IT*® part number A44699.



600-072-1 Standard Tension Gauge

The 600-072-1 Tension Gauge is used to check and calibrate *the Tie-Dex II*® standard hand tool to values noted on calibration sticker. Constructed of hardened steel, the gauge's accuracy is within ±2 lbs.

Reference: *BAND-IT*® part number A48599.



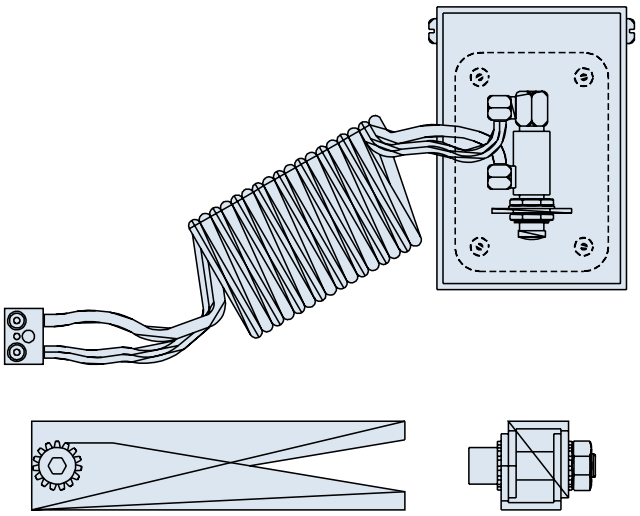
600-086-1 Micro Tension Gauge

The 600-086-1 Micro Tension Gauge is used to check and calibrate *the Tie-Dex II*® micro hand tool to values noted on calibration sticker. Constructed of hardened steel, the gauge's accuracy is within ±2 lbs.

Reference: *BAND-IT*® part number A47599.

Metric Dimensions (mm) are indicated in parentheses.

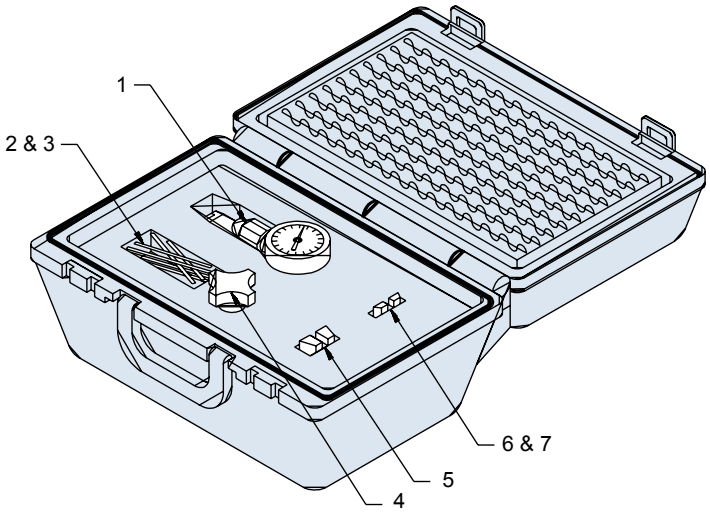
600-074 Pneumatic Banding Tool Foot Pedal Control, and 600-065 Calibration Kit for All Banding Tools



600-074 Foot Pedal Control for 600-067 and 600-068 Pneumatic Banding Tools

The 600-074 Foot Pedal Control frees both hands to help assure more accurate, reliable and faster shield terminations.

Reference: *BAND-IT*® part number A37099.



600-065 Calibration Kit For All Banding Tools

The 600-065 Calibration Kit includes the (**1**) 600-065-3 Calibration Device, (**2**) Fifty 600-065-2 Micro Test Bands, (**3**) Fifty 600-065-1 Standard Test Bands, (**4**) 600-055 Calibration Key, and the (**5**) 600-065-4, (**6**) 600-065-5 and (**7**) 600-065-6 Mounting Bracket Kits. Range of the Calibration Device is 60 to 170 lbs, and accuracy is calibrated to ±2 lbs. at factory. Dimensions: 6.65 in. x 2.47 in. x 2.83 in. (168.9 x 62.7 x 71.9mm). Weight: 2.10 lbs. (1.0Kg).

Reference: *BAND-IT*® part number A50099.

Metric Dimensions (mm) are indicated in parentheses.

Shield Termination Assembly Process

1. Prepare Cable Braid for termination process (Figure 1).
2. Push Braid forward over Adapter Retention Lip to the Adapter Incline Point (or .4" [10.2mm] minimum braid length). Milk Braid as required to remove slack and insure a snug fit around the shield termination area (Figure 2).
3. Prepare the Band in the following manner:

   I**MPORTANT:** Due to Connector/Adapter circumference, it may be necessary to prepare the Band around the Cable or Retention Area.

   A. Roll Band through the Buckle Slot twice. (Bands must be double-coiled.)

   B. Pull on Band until Mark (▷|) is within approximately .250 inch (6.4mm) of Buckle Slot (Figure 3). The Band may be tightened further if desired.

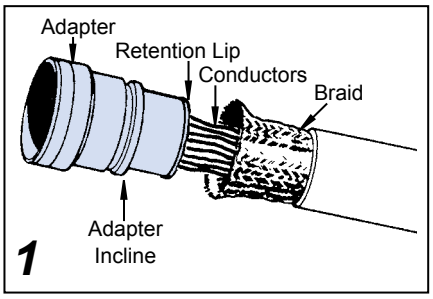
   NOTE: Prepared Band should have (▷|) Mark visible approximately where shown in Figure 3.

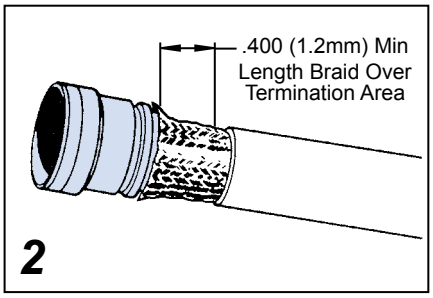
Shield Termination
Clamping Process (Figures 4 thru 8)

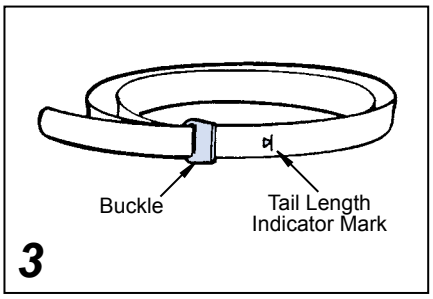
NOTE: To free Tool Handles, move Holding Clips to center of Tool.

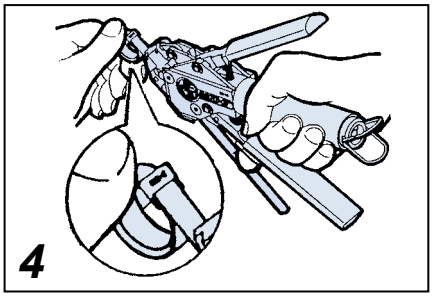
4. Squeeze Gripper Release Lever and insert Band into the front end opening of the Tool. (NOTE: Circular portion of looped band must always face downward.)
5. Aligning the Band and Tool with the Shield Termination Area, squeeze Black Pull-Up Handle repeatedly using short strokes until it locks against Tool Body. (This indicates the Band is compressed to the Tool Precalibrated Tension.)

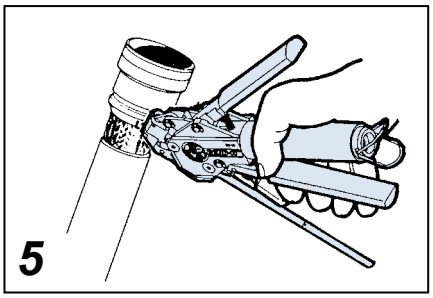
   NOTE: If alignment of band and shield is unsatisfactory, tension on band can be relaxed by pushing on slotted release lever on top of tool. Make adjustments as necessary and again squeeze black pull-up handle.
6. Complete the Clamping Process by squeezing the Gray Cut-Off Handle.
7. Remove excess band from tool and dispose.
8. Inspect Shield Termination.

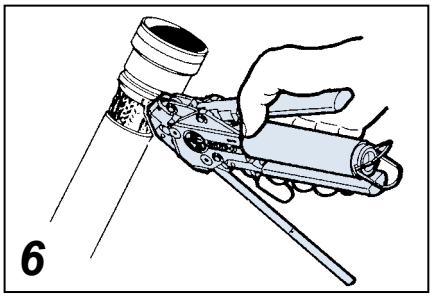


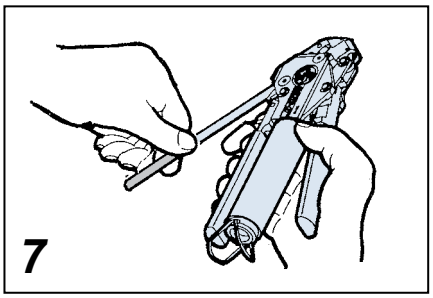


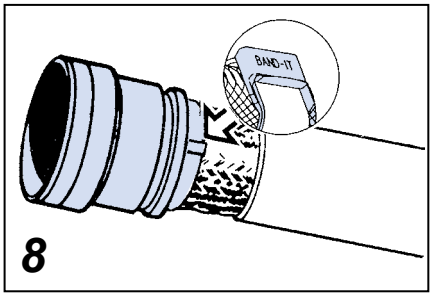












IMPORTANT: Always roll band through the buckle slot twice (see Step 3). Bands must be double-coiled to function correctly. The failure to roll the band through the buckle slot twice is the most common user error in band style terminations.

600-164 Large Broad Blade Utility Shear for Cutting AmberStrand® and Braided Metal Shielding

Also Cuts Rubber, Cable Jacketing, Cable, Plastics and Rope

600	-	164
Product Series		Basic Number

- Nickel Chrome Plating Resists Corrosion and Rusting
- Broad, Short Jaws Provide Powerful Cutting Action
- Extended Handle Provides Comfort and Cutting Leverage
- High Leverage Provides Powerful Cutting Action for Light Metals, Rubber and Heavy Fabrics
- Cuts Rubber, Cables, Light Metal, Wire Metal Screens and Braided EMI/EMP Shielding, Cordage, Plastics and Rope
- Weight: 0.55 Pounds
- Shear Cut Length: 2.000 (51.0)

Recommended AmberStrand® Cutting Procedure

Note: When cutting braid, both metal and especiallly composite, open cutter blades to allow the full 2" cut. Place braid all the way back onto blades as shown.

APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Always wear approved eye protection.
3. Never use on or near live electrical circuits.

CAGE Code 06324

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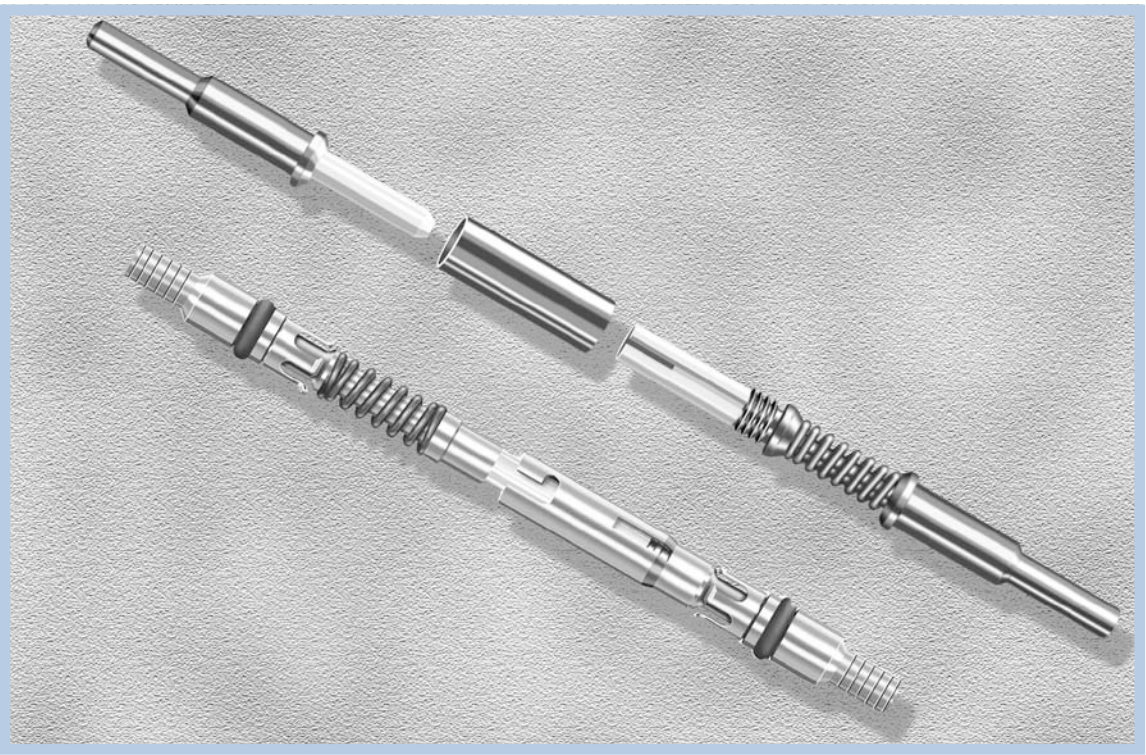
Good Things Come In Small Packages



And at Glenair, They Ship the Same Day

Tired of long lead times for F/O connectors and contacts? Then consider the Glenair difference: We've placed our products in stock, in quantity, and ready for immediate shipment—including both our MIL-T-29504 qualified pin and socket termini as well as our unique front release 181-011 and 181-012 designs. Consider as well Glenair's "no minimum order" policy and our lightning fast turnaround on quotes for price and delivery. At Glenair, we're committed to keeping our products, programs and services current with your every need.

Glenair®

1211 Air Way
Glendale, California 91201-2497
Telephone: 818-247-6000 · Facsimilie: 818-500-9912 · EMail: sales@glenair.com

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Glenair®

Fiber Optic Assembly, Termination and Termini Polishing Tools

PRODUCT FEATURES

- **Test Probe Polishing Tools**
- **Complete Fiber Optic Termination Kits for Field and Factory Use**
- **Cleaning Swabs**
- **Instruction Sheets**
- **No-Nic Strippers**
- **Specialty Tooling for All Termination Operations**
- ***BAND-IT*® Shield Termination System**

Glenair: One Stop Shopping for all Your Fiber Optic Interconnection System Tooling Requirements

The Right Fiber Optic Tool for the Job

Fiber optic connectors are designed to be connected and disconnected many times without affecting the optical performance of the fiber circuit. Key to this performance is the error-free termination of the contact terminus to the fiber circuit—a task which requires the use of a wide range of specialized tooling. Glenair's extensive experience in building fiber optic interconnect cables has enabled us to select the right tools for each step in the termination and assembly process. Our Fiber Optic Termination and Test Probe Kits allow field technicians the convenience of completing final termination of precision termini on location for easy and efficient cable routing and installation. Each kit contains pin and socket polishing tools, jacket strippers, shears, scribes—literally all the tools and supplies required for ongoing termination and test of fiber optic systems. Polishing tools are also sold seperately for factory use or as replacement parts in field termination kits.

A History of Meeting the Industries Interconnect Tooling Requirements

Glenair manufactures many of the specialty tools used in high-reliability interconnect harness assembly. And we are distributors for a wide range of tooling from the industry's other leading suppliers. In addition to our own line of banding tools and connector/backshell assembly tools, Glenair is able to supply custom tool kits and workstations for a broad range of interconnect applications and working environments. We offer custom tool labeling and packaging and same day availability on both individual tool part numbers as well as kits. For more information please consult the factory or visit us at www.glenair.com.

The BAND-IT® Shield Termination System

The *BAND-IT*® Clamping System provides quick, easy and highly-reliable termination of braided shielding or fabric braid. Glenair has designed banding platforms into a number of our specialized fiber optic backshells and conduit adapters. Individual clamping tools, bands and kits are available.

187-017
Glenair Fiber Optic Termination Kit
for MIL-PRF-29504/4 & /5 Termini (181-001 & 002)

- Turn-Key Termination of MIL-PRF-29504/04 and /05 Fiber Termini
- Singlemode or Multimode
- 110 Volt or 220 Volt
- Complete Kit With All Tools, Instruments and Consumables
  - Power Meter
  - LED Source
  - 200X Microscope
  - Polishing Media
  - Curing Oven
  - Hand Tools
  - Epoxies, Wipes and Swabs

Portable "Fiber Optic Lab In A Box" for Field Termination and Repair of D38999 Optical Interconnects

Our termination kit allows field technicians the convenience of on-site optical fiber termination. Each kit contains jacket strippers, polishing tools, hand tools, light source, power meter and microscope as well as a full complement of consumables including epoxy, polishing media, swabs and adhesives.

Key Components

Optical Power Meter Battery-Operated

LED Source Battery-Operated

Curing Oven

200X Microscope Battery-Operated

187-017
Glenair Fiber Optic Termination Kit
for MIL-PRF-29504/4 & /5 Termini (181-001 & 002)

FOR USE WITH GLENAIR MIL-PRF-29504/4 & /5 (181-001 & 002) TERMINI

Mode
MM - Multimode
SM - Single Mode

187	-	017	-	110	MM
Product Series		Basic Number		Voltage *110, 220*	

NOTE: Parts list shown for reference only and may change due to part availability.

PARTS LIST

Item No.	Part Description	Quantity
1	Terminus Procedure (Laminated)	1
2	Pin Termini for 62.5/125 Fiber (181-002-126)	10
3	Socket Termini for 62.5/125 Fiber (181-001-126)	10
4	Polishing Tool, Pin Terminus (181-001P)	1
5	Polishing Tool, Socket Terminus (181-001S)	1
6	Terminus Swabs (Glenair 50/Pkg) (187-024)	1
7	Spare Ceramic Alignment Sleeve (181-001-S)	10
8	Plastic Dust Cover, ST (2.5 mm Dia) (F.I.S.)	10
9	Plastic Dust Cover, Termini (.062" Dia) (CAPLUG)	10
10	Hard Shell Tool Case with Foam (Fibertron)	1
11	Custom Diecut Foam Insert (CHI Case)	1
12	Multi-Cure Oven with Curing Block (9050) (Fibertron)	1
13	D38999 Ferrules Curing Block (Fibertron)	1
14	Microscope, 200X (Noyes)	1
15	Microscope Adapter for D38999 (Noyes)	1
16	Scribe, Fiber (Fibertron)	1
17	Kevlar Shear (Clauss)	1
18	No-Nic Stripper, Gold (Clauss)	1
19	No-Nic Stripper, Blue (Clauss)	1
20	Autocleaner (Netpec)	1
21	Jacket Stripper, T5 (Clauss)	1
22	Alcohol Dispenser, 4 Oz. (F.I.S.)	1
23	Ruler, 6" (Fibertron)	1
24	Diamond Polishing Film, 9 Microm, 6 x 6 (3M)	4
25	Diamond Polishing Film, 3 Micron, 6 x 6 (3M)	6
26	Diamond Polishing Film, 1 Micron, 6 x 6 (3M)	6
27	Resilient Rubber Pad (3M)	1
28	Glass Polishing Plate, 8" x 8" (Fibertron)	1
29	Cleaning Wire (F.I.S.)	1
30	Compressed Air (Fibertron)	1
31	Kim-Wipes (Kimberly-Clark)	1
32	Continuity Test, ST (F.I.S.)	1
33	Epoxy Applicator (Syringe) (Fibertron)	10
34	Mini Foam Swab, 2.5 mm (F.I.S.)	50
35	Tra-Bound Adhesive (Tra-Con)	10
36	Insert/Removal Tool	5
37	LED Source W.D38999 Aptr, 1300nm Wvlngth (Rifocs)	1
38	Power Meter W/D38999 Aptr, 1300nm Wvlngth (Rifocs)	1
39	ST Adapter for Power meter (Rifocs)	1
40	ST Adapter for LED Source (Rifocs)	1
41	Instant Adhesive (Loctite Corp.)	1

CAGE Code 06324
Printed in U.S.A.

187-018
Glenair Fiber Optic Termination Kit
for Front Release 181-011 & -012 Termini

PARTS LIST		
Item No.	Part Description	Quantity
1	181-011 & 181-012 Terminus Priocedure (Laminated)	1
2	Pin Termini for 62.5/125 Fiber (181-012-126)	10
3	Socket Termini for 62.5/125 Fiber (181-011-126)	10
4	Polishing Tool, Pin, Front Release (182-005P)	1
5	Polishing Tool, Socket, Front Release (182-005S)	1
6	Terminus Swabs (Glenair 50/Pkg) (187-045)	1
7	Plastic Dust Cover, ST (2.5 mm Dia) (F.I.S.)	10
8	Plastic Dust Cover, Termini (.062" Dia) (CAPLUG)	10
9	Hard Shell Tool Case with Foam (Fibertron)	1
10	Custom Diecut Foam Insert (CHI Case)	1
11	Multi-Cure Oven with Curing Block (9050) (Fibertron)	1
12	D38999 Ferrules Curing Block (Fibertron)	1
13	Microscope, 200X (Noyes)	1
14	Microscope Adapter for D38999 (Noyes)	1
15	Scribe, Fiber (Fibertron)	1
16	Kevlar Shear (Clauss)	1
17	No-Nic Stripper, Gold (Clauss)	1
18	No-Nic Stripper, Blue (Clauss)	1
19	Autocleaner (Netpec)	1
20	Jacket Stripper, T5 (Clauss)	1
21	Alcohol Dispenser, 4 Oz. (F.I.S.)	1
22	Ruler, 6" (Fibertron)	1
23	Diamond Polishing Film, 9 Microm, 6 x 6 (3M)	4
24	Diamond Polishing Film, 3 Micron, 6 x 6 (3M)	6
25	Diamond Polishing Film, 1 Micron, 6 x 6 (3M)	6
26	Resilient Rubber Pad (3M)	1
27	Glass Polishing Plate, 8" x 8" (Fibertron)	1
28	Cleaning Wire (F.I.S.)	1
29	Compressed Air (Fibertron)	1
30	Kim-Wipes (Kimberly-Clark)	1
31	Continuity Test, ST (F.I.S.)	1
32	Epoxy Applicator (Syringe) (Fibertron)	10
33	Mini Foam Swab, 2.5 mm (F.I.S.)	50
34	Tra-Bound Adhesive (Tra-Con)	10
35	LED Source W/D38999 Aptr, 1300nm Wvlngth (Rifocus)	1
36	Power Meter W/D38999 Aptr, 1300nm Wvlngth (Rifocus)	1
37	ST Adapter for Power meter (Rifocus)	1
38	Crimp Tool for 181-011 & 181-012 Termini (Kitco F.O.)	1
39	ST Adapter for LED Source (Rifocus)	1
40	Terminus Removal Tool, Front Release (Kitco)	1
41	Alignment Sleeve Removal Tool (Kitco)	1

FOR USE WITH GLENAIR FRONT-RELEASE 181-011 & 012 TERMINI

Mode
MM - Multimode
SM - Single Mode

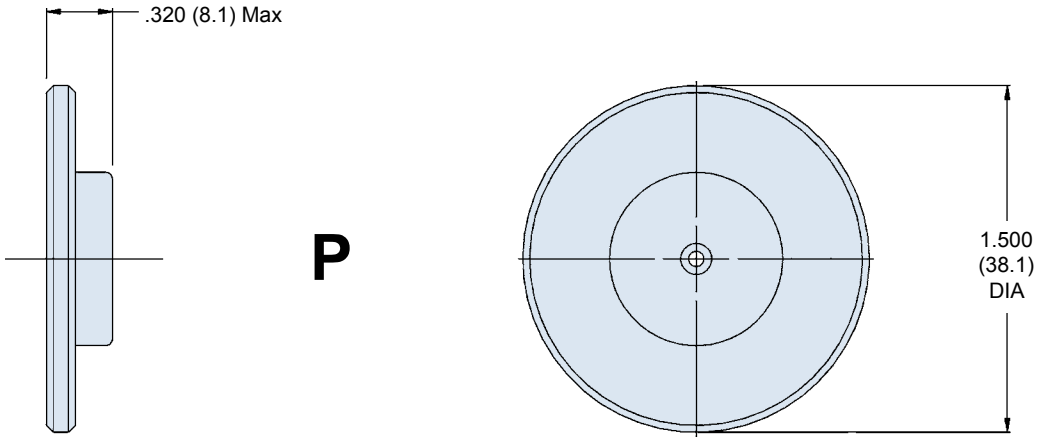
187	-	018	-	110	MM
Product Series		Basic Number		Voltage *110, 220*	

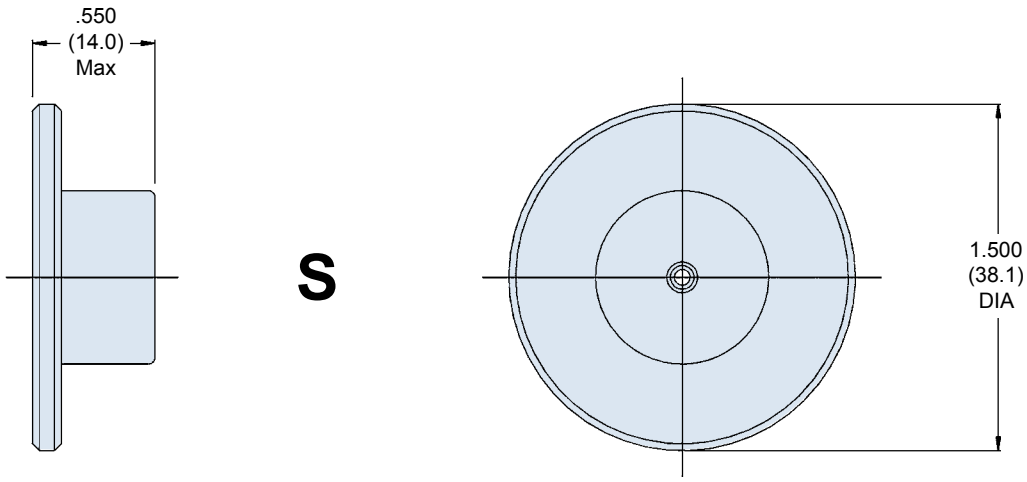
NOTE: Parts list shown for reference only and may change due to part availability.

CAGE Code 06324
Printed in U.S.A.

182-001
Polishing Tool for
181-001 and 181-002 Termini

182	-	001	S	W
Product Series		Basic Number	S - Socket P - Pin	W - Wet Polish Tool Supplied (Omit for Dry Polish)





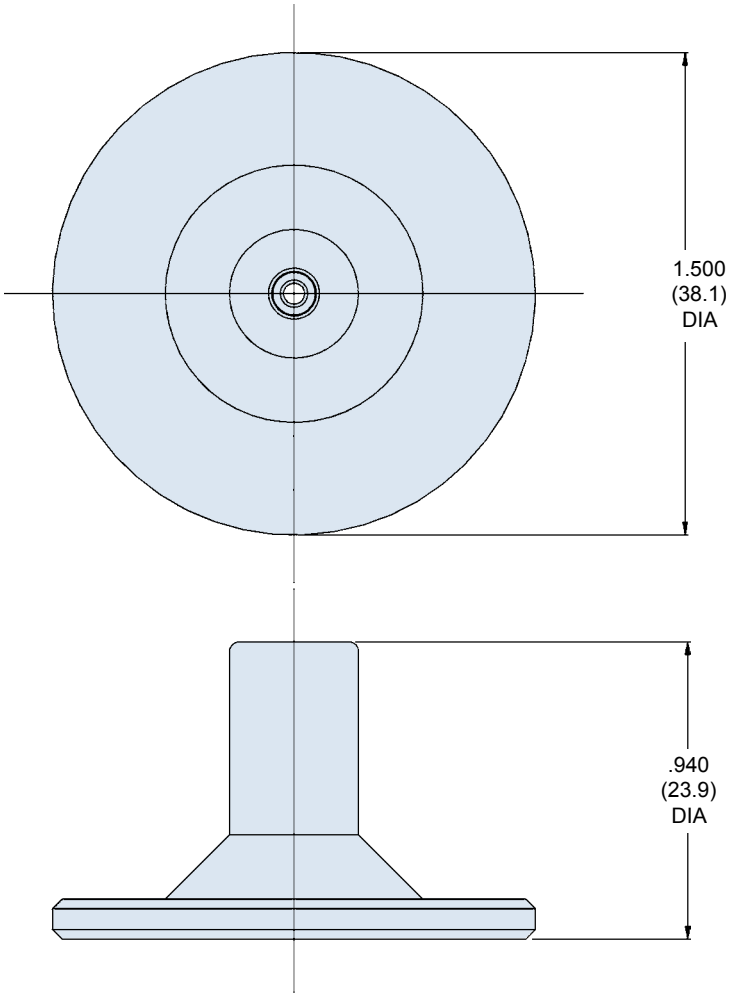
APPLICATION NOTES

1. Metric dimensions (mm) are indicated in parentheses.
2. Assembly packaged in plastic bag and tag identified with manufacturer's name and part number.
3. Material/Finish: Stainless steel/passivated.

182-002
Polishing Tool for
181-006 Test Probe

182 - 002 W

Product Series	Basic Number	W - Wet Polish Tool Supplied with V-Grooves (Omit for Dry Polish)



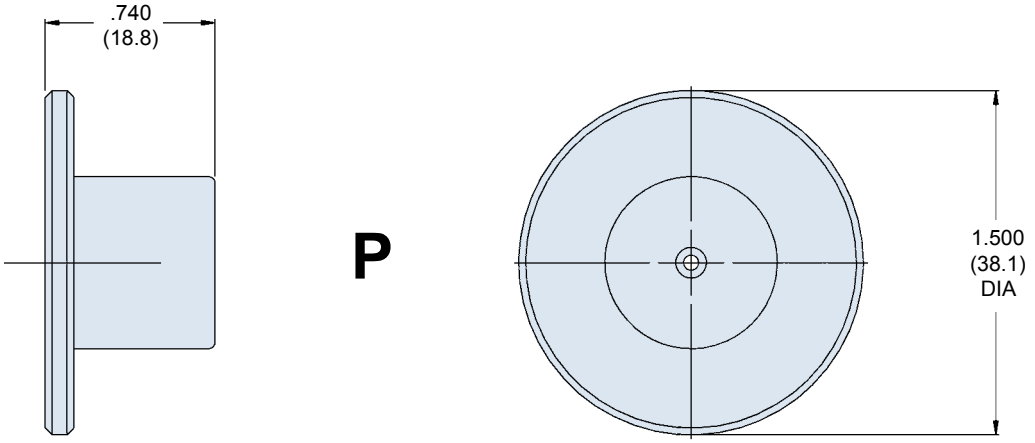
APPLICATION NOTES

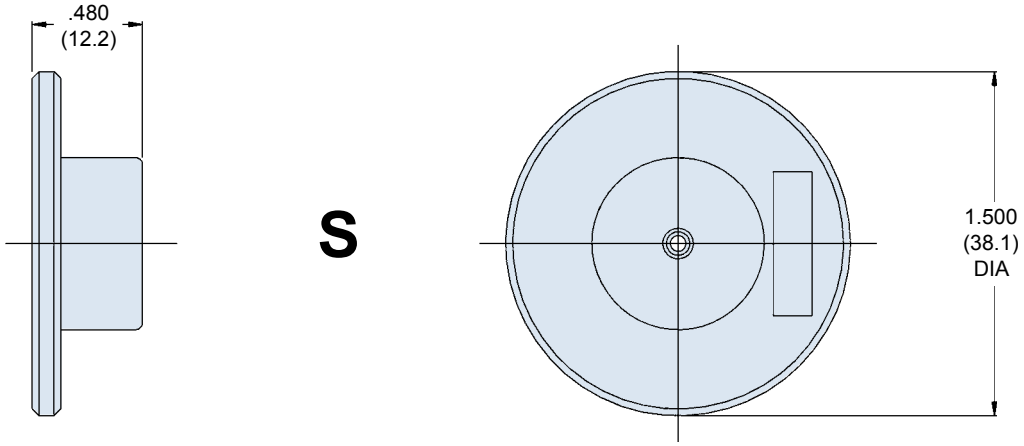
1. Metric dimensions (mm) are indicated in parentheses.
2. Assembly packaged in plastic bag and tag identified with manufacturer's name and part number.
3. Material/Finish: Stainless steel/passivated.

CAGE Code 06324
Printed in U.S.A.

182-005
Polishing Tool for
181-011 and 181-012 Termini, Front Release

182	-	005	S	W
Product Series		Basic Number	S - Socket P - Pin	W - Wet Polish Tool Supplied with V-Grooves (Omit for Dry Polish)





APPLICATION NOTES

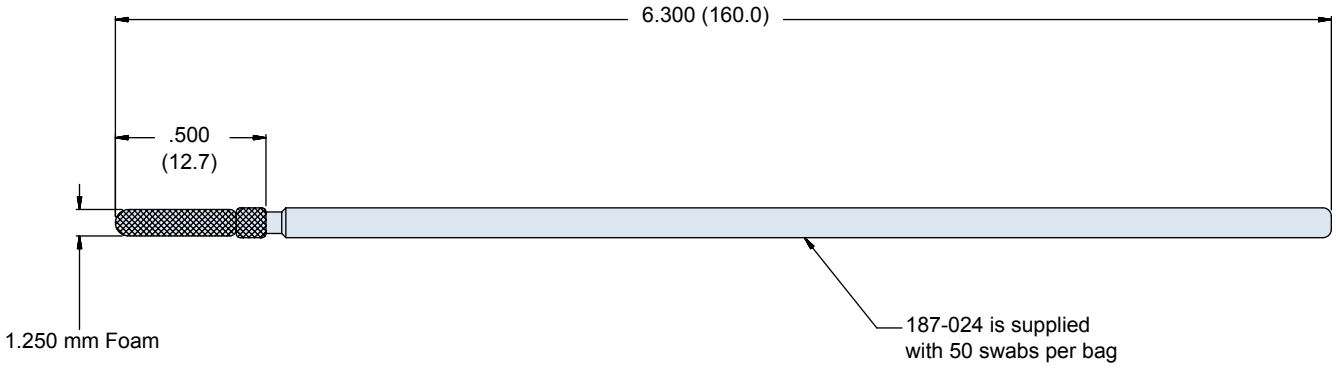
1. Metric dimensions (mm) are indicated in parentheses.
2. Assembly packaged in plastic bag and tag identified with manufacturer's name and part number.
3. Material/Finish: Stainless steel/passivated.

187-024
Cleaning Swab for Glenair
Fiber Optic Termini

187 - **024**

Product Series | **Basic Number**

Glenair has developed this cleaning swab which allows the cleaning of recessed difficult-to-clean socket termini. The swab's foam tip is the perfect size to clean both the alignment sleeve and the glass core area of the fiber.



Glenair Recommends the Following Procedure for Cleaning Glenair Fiber Optic Termini:

1. Remove loose contamination with a dry swab.
2. Blow pressurized, filtered air (or instrument grade canned air) onto terminus end face.
3. Inspect end face using 10X magnification minumum.
4. If contamination is still present, take the following measures:
   - **A.** Soak swab foam tip with 99%+ pure alcohol.
   - **B.** Wipe the wet swab across the terminus end face.
   - **C.** Wipe a dry swab across the terminus end face immediately to guard against potential air-dried alcohol film residue.

GBS1000 and GBS1001 Portable Fiber Optic Video Bore Scope Inspection System

- **Field/Bench Use System Includes Video Display Unit, Inspection Camera and Standard 2.5 mm & 1.25 mm Patchcord Inspection Tips**
- **Tips available Use with all Common F/O Connector Types: SC, LC, ST, and FC *plus* Mil-Dtl-38999 and Small Form Factor Connectors**
- **200X and 400X Magnification**
- **Built-in NiMH Rechargeable Battery with Automatic Shut-off Function**
- **Rugged Watertight Case**

NOTE: Consult factory for D38999, M28876 and other military/ruggedized connector types.

Glenair Video Inspection System Provides The Ultimate Solution to Field Maintenance of Fiber Optic Systems

Dirty or contaminated fiber optic contacts (termini) can seriously degrade the performance of a fiber optic system. But inspecting individual contacts in complex connector devices such as bulkhead feed-throughs and multi-channel Mil-Spec connectors can be a difficult and time-consuming task. The Glenair video inspection system supplies everything you need to quickly and conveniently inspect and clean butt-jointed fiber optic contacts. Optional add-ons enable turnkey integration with computer desktops, digital cameras and powerful optical test software.

How To Order

GBS1000-U

Basic Part Number Includes:

- Handheld Inspection Monitor
- Inspection Probe (200x & 400x)
- Portable Ruggedized Carrying Case
- Glenair Swabs

Optional Quick Capture USB Module for Computer Inspection and Video Capture.

Fiber check software can be downloaded from: http://www.westoverfiber.com

GBS1000 and GBS1001
Portable Fiber Optic
Video Bore Scope Inspection System

GBS1000 SPECIFICATIONS	
Dimensions	1.8" W x 1.7" H x 5.5" L
Weight	4.08 oz / 115.6 gms
Video Output	NTSC or PAL
Light Source	Blue LED 1000,000+ hour life
Lighting Technique	Coaxial
Attenuation Filter	2 mm thick Schott KG1
Camera type	.33" CCD

GBS1001 SPECIFICATIONS	
Weight	.11 Kg / .25 lb
Resolution	Better than 1.5 Microns
Cable	Integrated USB 2.0 coil cable 2.5' relaxed, 10.5' fully extended
Certification	CE
Warranty	1 year

GBS1001 Inspection Probe with USB Adapter and Fiber Chek 2 Software*

GBS1001

Basic Part Number
Includes:

- Inspection Probe with USB Adapter
- Fiber Chek 2 Software

The GBS1001 is the only inspection probe today with a high resolution, all digital sensor and USB2 video stream which delivers high-resolution uncompressed images directly to your personal computer.

Fiber Chek Software
Fiber Optic Analysis Program*

Fiber Chek is an integrated hardware/software package engineered with the single purpose of critically and consistently grading fiber end-faces. Works hand in hand with the Quick Capture Analog Probe for visual inspection, taking pictures and testing fibers.

- Automatic debris and defect detection, including fine scratches
- Measures epoxy ring for out-of-tolerance conditions
- Inspection results, including image data, can be printed or archived
- Utilizes industry standards or user defined threshold settings

***Fiber Chek software can be downloaded from http://www.westoverfiber.com.**

APPLICATION NOTES

1. Glenair's handheld Bore Scope is a small, lightweight video microscope used to examine fiber optic end-faces. The GBS1000 displays a clear and concise live image with the ability to view fibers at either 200x or 400x magnifications.
2. The Quick Capture GBS1000-U USB Module can be added to the GBS1000. This valuable item allows the user to inspect and capture fiber end-faces on your PC. Works great with Fiber Chek software to inspect, test and capture images. To order separately, use part number GMP-002.
3. The dual magnification mode inherent in all Fiber Chek 2 platforms provides a large, easily centered image during handheld focusing. This greatly simplifies your ability to achieve a quality image. A high-magnification image is acquired, analyzed, and graded.
4. Fiber Chek 2 software can analyze several zones of the fiber end-face.

GCB1000, GCB2000 and GCB3000 Fiber Optic CleanBlast® Cleaning Systems for Fiber Optic Connectors

- **Faster, More Effective and Less Costly than using Swabs or other Cleaning Methods**
- **Excellent at Removing–Instead of Spreading–Debris and Oils around the Ferrule Surface**
- **Complete Selection of Tips Available**
- **Cost per Cleaning Cycle: One Cent!**
- **Rigged Watertight Case**
- **Optional Add-Ons for PC Optical Testing of MIL-PRF-29504 Termini with Quick Capture Analog Probe (6-4 pin Converter) and FiberChek Software.**

Complete CleanBlast® Inspection System
(With Monitor)

GCB1000-U

Basic Part Number Includes:

- Portable CleanBlast® with LCD Monitor and Inspection Probe in Ruggedized Case
- 2.5 mm and 1.25 mm Patch Cord Inspection Tips
- Universal 2.5 mm Bulkhead Cleaning Tip
- Glenair Swabs

Optional Quick Capture Analog Probe with 6 Pin to 4 Pin Converter (Omit for None)

CleanBlast® Basic Kit
(Without Monitor)

GCB2000

Basic Part Number Includes:

- Portable CleanBlast®
- Glenair Swabs

Laboratory Bench Model

GCB3000-M

Basic Part Number Includes:

- Universal 2.5 mm Bulkhead Cleaning Tip
- Glenair Swabs

Optional Digital Mounting Monitor with Inspection Probe and 2.5 mm & 1.25 mm Patch Cord Inspection Tips

Fiber Chek Software
Fiber Optic Analysis Program*

Fiber Chek is an integrated hardware/software package engineered with the single purpose of critically and consistently grading fiber end-faces. Works hand in hand with the Quick Capture Analog Probe for visual inspection, taking pictures and testing fibers on your PC.

- Automatic debris and defect detection, including fine scratches
- Measures epoxy ring for out-of-tolerance conditions
- Inspection results, including image data,can be printed or archived
- Utilizes industry standards or user defined threshold settings

***Fiber Chek software can be downloaded from http://www.westoverfiber.com.**

GCB3000 SPECIFICATIONS	
Power Requirements	110 VAC-220 VAC, 2 amp
Dimensions	8”L x 9”W x 7”D
Weight	12 lb
Air Source	External, compressed air or nitrogen; regulated between 60 – 250 psi
Cleaning Cycle Time	.8 seconds
Certification	CE Approved

GCB1000 and GCB2000 SPECIFICATIONS	
Power Requirements	110 VAC-220 VAC, 2 amp
Dimensions	16”L x 13”W x 7”D
Weight	21 lb
Air Source	40 psi Internal Compressor
Cleaning Cycle Time	5 seconds
Certification	CE Approved

GTK1000
Glenair Fiber Optic Testing Kit
for Front Release 181-011 & -012 Termini

Fiber Size
(See Table I)

GTK1000 - B - A

Basic Part Number Includes:
- *Power and Source Meters (Several Options)*
- *4 Test Probes (3 Meters Long)*
- *Test Probe Feedthrough*

Type of Meter Connection:
- ***A*** *- ST Connector*
- ***B*** *- FC Connector*
- ***C*** *- SC Connector*
- ***E*** *- Customer Defined*

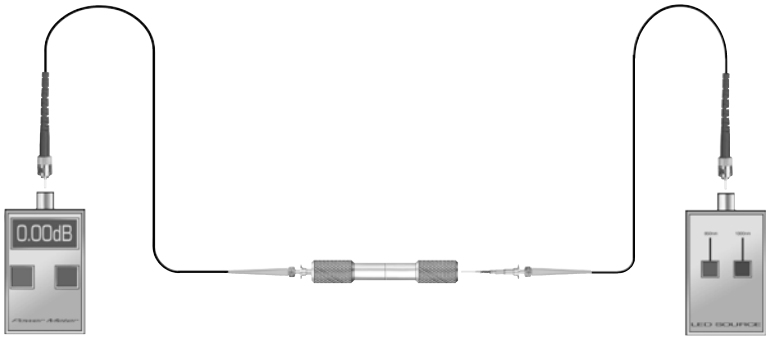


TABLE I: FIBER SIZE

Symbol	Fiber Size
A	100/140u
B	62.5/125u
C	50/125u
D	200/300u
E	9.3 Singlemode
F	Customer Defined

Custom test kits available upon request; consult factory for unique part number.

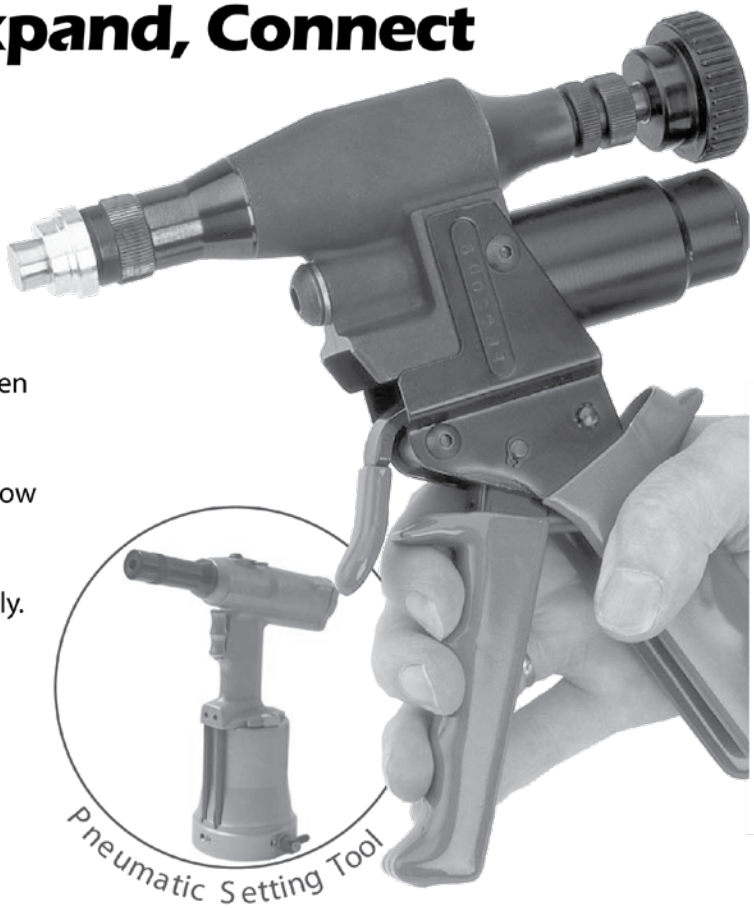
APPLICATION NOTES

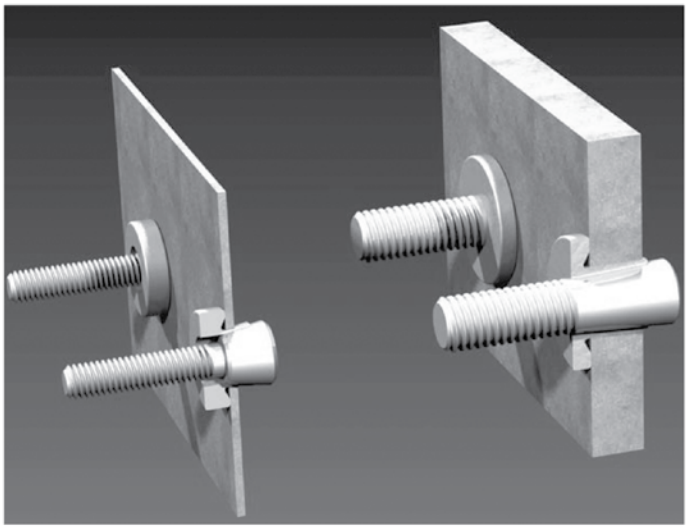
1. Traditional optical test harnesses are expensive and easily contaminated in normal use. Glenair's test probe, in conjunction with our precise-mating test adapter, offers a complete solution to optical test and measurement. The GTK-1000 comes with a power meter, source meter, test probes and a test probe calibrator.
2. For accurate results, the test probe calibrator will "zero out" your meters.
3. Glenair's patented test probe design provides less than 1.0 dB insertion loss, are used with test probe adapters and a calibration feedthrough, and accommodates all standard fiber sizes and several connection options.

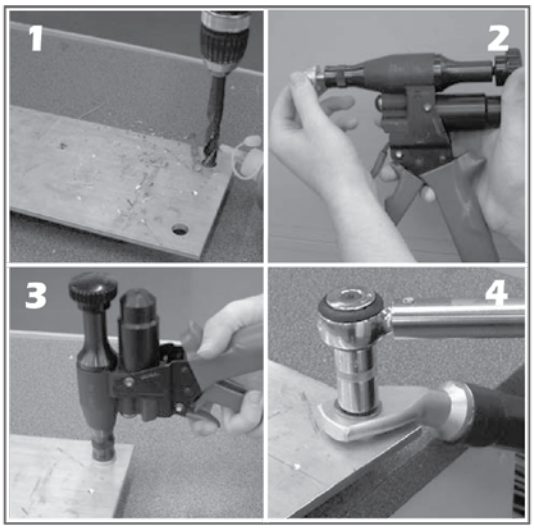
Glenair Earth Bonding System
Introduction
Overall Features and Performance

The easy to use, reliable earth bond system
Drill, Insert, Expand, Connect

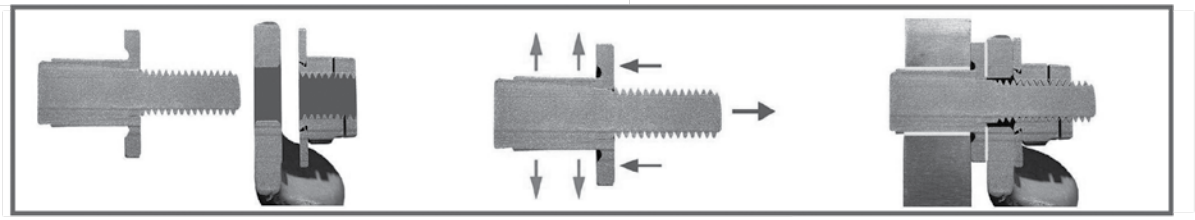
- Lightweight hydraulic setting tool.
- Requires no welding, impacting, cleaning or surface preparation.
- Quality repeatable termination even to uneven and curved surfaces.
- Consistent connection providing low electrical resistance.
- Bond is installed from one side only.
- Available for aluminium and steel plates from 1.5mm thick and upwards.
- High strength joint.







Principle of the Earth Bond



1) Easy Assembly | 2) Tensile Stress | 3) Contact Areas

Electrical Performance: Aluminium Plate

Part Number	80958 – M6	80959 – M10	80960 – M6	80961-M10
Electrical resistance measured at a point between the terminal lug (copper tin plated) and the aluminium plate	60 micro ohms T = 2 mm	50 micro ohms T = 2 mm	60 micro ohms T = 4 mm	20 micro ohms T = 4 mm
Withstand short circuit test – 3 passes of high intensity current with no degradation of the connection	10 Ka	20 Ka	10 Ka	20 Ka
Corrosion Test: 500 hours	90 micro ohms T = 2 mm	50 micro ohms T = 4 mm	-	-

T = Plate Thickness

Mechanical Performance: Aluminium Plate

Part Number	80958-M6	80959-M10	80960-M6	80961-M10
Tensile force applied to the dowel or threaded stud to remove earth bond from the plate	250 daN T = 2 mm	200 daN T = 2 mm	300 daN T = 4 mm	500 daN T= 4 mm
Bending moment (IEC60068-2-21). Force applied at a point 5 mm from the end of the thread	34 daN T = 1.5 mm	100 daN T = 2 mm	200 daN T = 4 mm	300 daN T = 4 mm
Pressure Seal: Pressure applied to both sides of bond for 2 hours with no leak between bush and plate	6 Bar	6 Bar	6 Bar	6 Bar

T = Plate Thickness

Mechanical Performance: Steel + Stainless Steel Plate

Part Number	80923-M6	80924-M10	80925-M6	80926-M10
Electrical resistance measured at a point between the terminal lug (copper tin plated) and the steel plate	25 micro ohms T = 2 mm	20 micro ohms T = 2 mm	25 micro ohms T = 4 mm	20 micro ohms T = 4 mm
Electrical resistance measured at a point between the terminal lug (copper tin plated) and the stainless steel plate	120 micro ohms T = 2 mm	70 micro ohms T = 2 mm	75 micro ohms T = 4 mm	60 micro ohms T = 4 mm
With stand short circuit test-3 passes of high intensity current with no degradation of the connection.	10 Ka	15 Ka	10 Ka	20 Ka
Corrosion test: 500 hours: 2 mm steel plate	30 micro ohms	25 micro ohms	-	-
On 2 mm stainless steel plate	150 micro ohms	90 micro ohms	-	-

T = Plate Thickness

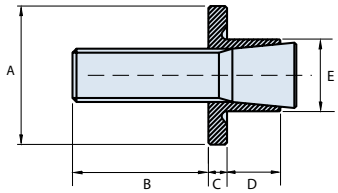
Mechanical Performance: Steel + Stainless Steel Plate

Part Number	80923-M6	80924-M10	80925-M6	80926-M10
Tensile force applied to the dowel or threaded stud to remove earth bond from the plate	400 daN = 2 mm	500 daN T = 2 mm	500 daN T = 4 mm	800 daN T = 4 mm
Bending moment (IEC60068-2-21). Force applied at a point 5 mm from the end of the thread	100 daN T = 1.5 mm	190 daN T = 2 mm	200 daN T = 4 mm	330 daN T = 4 mm
Pressure seal: Pressure applied to both sides of bond for 2 hours with no leak between bond and plate	6 Bar	6 Bar	6 Bar	6 Bar

T = Plate Thickness

Glenair Earth Bonding System
Male Earth Bonds
Selection Chart and Dimensions

Selection Chart



Earth Bond Dimensions

Dimensions shown in parenthesis is approximate stud length from top of flange after setting

Part Number	A	B		C	D	E	Weight PC
80923	16ø	21	(26)	4.5	4.5	11.5ø	16g
80974	16ø	13	(18)	4.5	4.5	11.5ø	14g
80925	16ø	24	(27)	3.5	11	8.5ø	16g
80975	16ø	16	(19)	3.5	11	8.5ø	14g
80924	25ø	24	(31)	5.5	4.5	19.0ø	50g
80926	25ø	28	(31)	3.5	11	13.5ø	42g
80958	16ø	21	(26)	4.5	4.5	11.5ø	12g
80976	16ø	13	(18)	4.5	4.5	11.5ø	12g
80960	16ø	24	(27)	3.5	11	10.5ø	15g
80977	16ø	16	(19)	3.5	11	10.5ø	15g
80959	25ø	24	(31)	5.5	4.5	19.0ø	34g
80961	25ø	28	(31)	3.5	11	15.0ø	36g
81929	20ø	15	(20)	4.5	4.5	15.0ø	29g
81928	20ø	19	(21)	3.5	11	11.5ø	26g
81931	20ø	15	(20)	5.5	4.5	15.0ø	19g
81930	20ø	19	(21)	3.5	11	13.5.ø	26g

Earth Bonds for use with Steel & Stainless Plate

Part Number	Thread Size	Hole Size ø	Plate Thickness	Torque Value	Setting Tool
80923	M6	11.5/11.7mm	1.5 - 4mm	8 Nm	PMT6/PMTC6
80925	M6	8.5/8.7mm	> 4mm	8 Nm	PMT6/PMTC6
80974	M6	11.5/11.7mm	1.5 - 4mm	8 Nm	PMTC6
80975	M6	8.5/8.7mm	> 4mm	8 Nm	PMTC6
81929	M8	15.0/15.2mm	1.5 - 4mm	15 Nm	PMT8
81928	M8	11.5/11.7mm	> 4mm	15 Nm	PMT8
80924	M10	19.0/19.2mm	2 - 4mm	34 Nm	PMT10
80926	M10	13.5/13.7mm	> 4mm	34 Nm	PMT10

Earth Bonds for use with Aluminium Plate

Part Number	Thread Size	Hole Size ø	Plate Thickness	Torque Value	Setting Tool
80958	M6	11.5/11.7mm	1.5-4mm	8 Nm	PMT6/PMTC6
80960	M6	10.5/10.7mm	>4mm	8 Nm	PMT6/PMTC6
80976	M6	11.5/11.7mm	1.5-4mm	8 Nm	PMTC6
80977	M6	10.5/10.7mm	>4mm	8 Nm	PMTC6
81931	M8	15.0/15.2mm	1.5-4mm	15 Nm	PMT8
81930	M8	13.5/13.7mm	>4mm	15 Nm	PMT8
80959	M10	19.0/19.2mm	2-4mm	34 Nm	PMT10
80961	M10	15.0/15.2mm	>4mm	34 Nm	PMT10

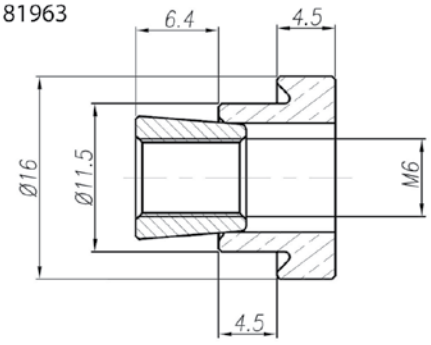
Hydraulic Setting Tool

Part Number	Pulling Force	Weight	Length	Optional Test Gauge
PMT6	10KN	1,28 kg	185mm	80928
PMTC6	10KN	1,28 kg	185mm	80928
PMT8	18KN	1,28 kg	185mm	80928
PMT10	25KN	1,28 kg	185mm	80928

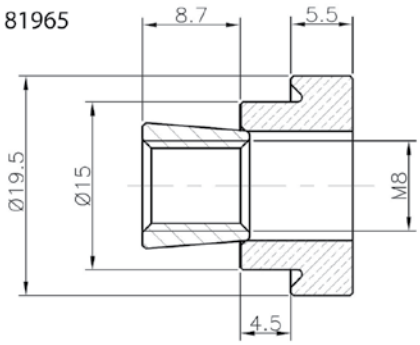
Pneumatic Setting Tool

Part Number	Pulling Force	Weight	Dimensions	Application
PMA10	Adjustable 9 - 28KN	3,70 kg	L270 x B140 x H320	Earth Bonds: M6, M8, M10

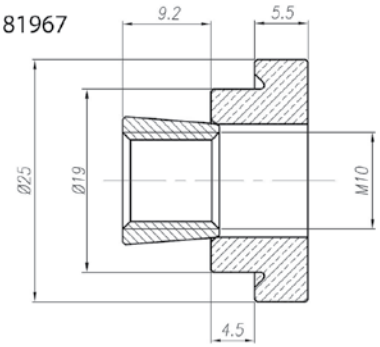
81963



81965



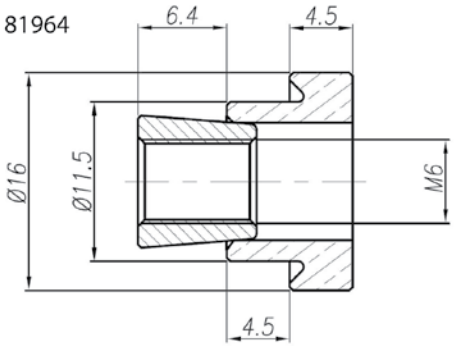
81967



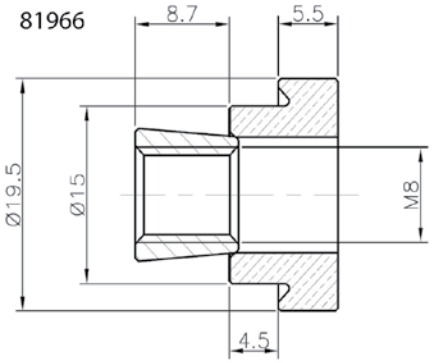
Part Number	Thread Size	Hole Size Diameter (mm)	Plate Thickness (mm)	Torque Value (Nm)	Setting Tool	Screw Adaptor
81963	M6	11.5 / 11.7	1.5- 4	4	PMTC6*	VAV06CV045
81965	M8	15.0 / 15.2	1.5 - 4	10	PMT8*	VAV08CV050
81967	M10	19.0 / 19.2	2 - 4	20	PMT10*	VAV10CV050

Earth Bosses for Aluminium

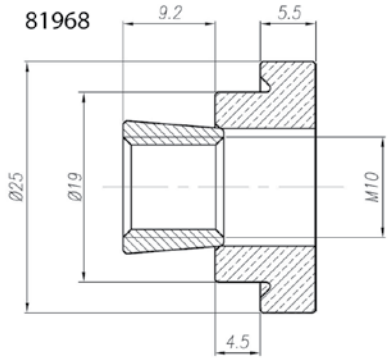
81964



81966



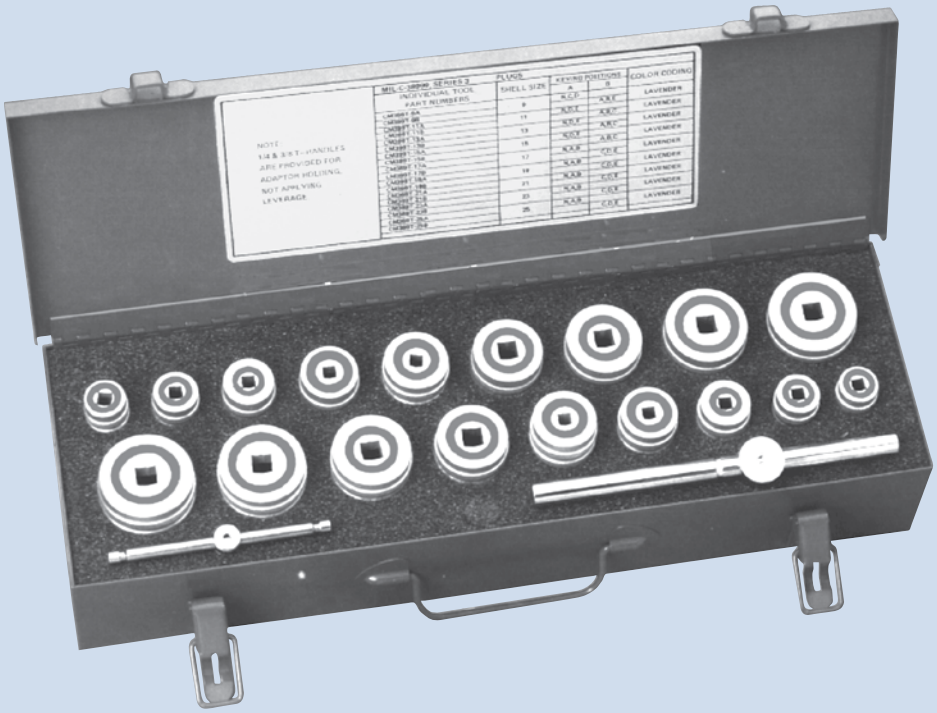
81968



Part Number	Thread Size	Hole Size Diameter (mm)	Plate Thickness (mm)	Torque Value (Nm)	Setting Tool	Screw Adaptor
81964	M6	11.5 / 11.7	1.5 - 4	4	PMTC6*	VAV06CV045
81966	M8	15.0 / 15.2	1.5 - 4	10	PMT8*	VAV08CV050
81968	M10	19.0 / 19.2	2 - 4	20	PMT10*	VAV10CV050

* Denotes use of screw adaptor for setting of earth boss

Tired of searching for the right size and type of connector holding tool?



Why not just buy the whole kit and save yourself the headache?

Glenair makes plug and receptacle holders for virtually every size and type of military standard circular connector. We even make a set of universal holding tools that work on any key position within a specific military connector series (call the factory for details). So really there is no excuse for not having the right tool for the job when you need it. And Glenair kits provide a nice, safe storage space for your tools when they are not in use. So the next time you make up your mind to purchase connector and backshell assembly tools, why not just save yourself time and money and order a complete kit? Our operators are standing by.

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Four Reasons to Add Glenair to Your Short List of Suppliers:

First and foremost you need availability.

Are the products and components you need either in stock or able to be manufactured in a short period of time? Glenair has built its reputation on fast turnaround. We maintain the world's largest inventory of connector accessories and deliver faster turnaround on quotes and orders than anyone else in our business. Today, Glenair is changing the way the interconnect industry operates: from a long lead-time, custom order problem; to a fast response, in-stock solution. From connector accessories to fiber optic termini, Glenair is the "same-day" leader.

Second, you need capacity.

Can the supplier respond to your evolving requirements with the factory capacity and labor necessary to meet every demand—from one piece to one hundred thousand? Glenair has built the largest capacity, broadest capability factory in the interconnect accessory industry. We have the knowledge, experience and equipment necessary to handle any production requirement, no matter how large or complex, and the manpower to tackle even the most aggressive production schedules.

Third, you need convenience in ordering.

Do your current suppliers insist on quantity or dollar minimums whenever you place an order? Are their products available only from distributors with limited product knowledge and equally limited shelf stock? Is it hard to get samples when and where you need them? Do you get charged expediting fees for accelerated production? If your answer to any of these questions is yes, we encourage you to consider Glenair, where complete convenience in ordering has been a guiding principle since 1956.

Finally, you need top quality products backed by outstanding technical support.

At Glenair, we've made product quality and worldwide technical support a major part of our approach to earning your trust and loyalty. We've established an unsurpassed sales, support and engineering presence in every major market in the world. And we've designed quality into every product we ship, by applying the experience and expertise gained from over 50 years in the business.

In every respect, our formula for serving the fiber optic interconnect customer is identical to the "best-value" service model we've relied on to maintain our leadership position in our core, connector accessory business:

- ***Same-Day Delivery on Our Most Popular Part Numbers***
- ***Lightning-Fast Turnaround on Quotes for Price and Delivery***
- ***No Price or Quantity Minimums***
- ***Outstanding Application Engineering and Worldwide Technical Support***

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