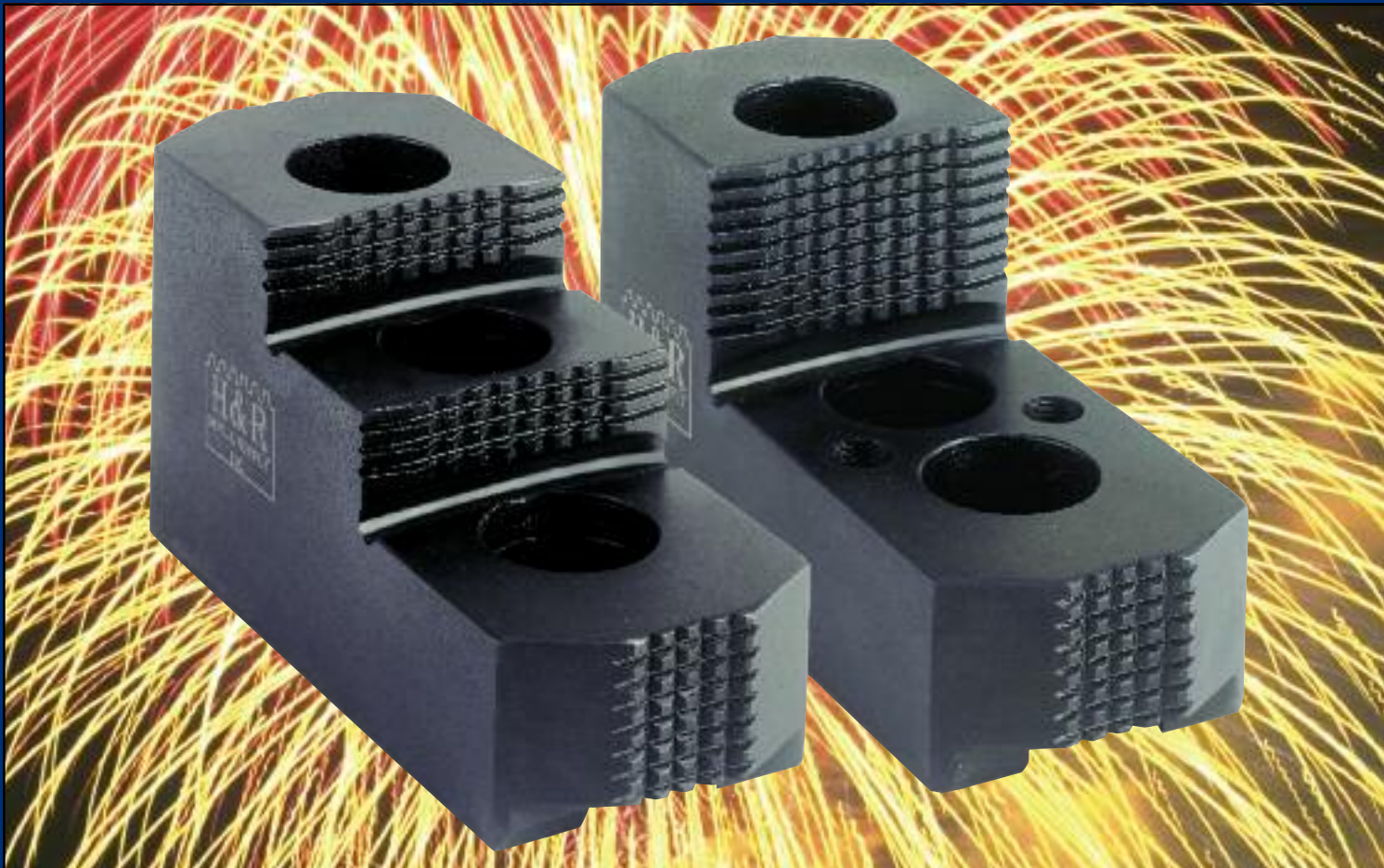


CHUCK & MACHINE TOOL ACCESSORIES

Hard & Soft Jaws



- **QUALITY CERTIFICATION**
- **COMPETITIVE PRICING**
- **ON TIME DELIVERIES**
- **QUICK TURNAROUND**



MADE IN THE U.S.A.



LETTER OF COMMITMENT TO H&R CUSTOMERS:

I wish to take this opportunity to introduce **H&R Mfg. and Supply, Inc.** to You and Your Company. Please take a few moments to **read** this memo and the "Technical Specification for Jaws."

H&R has been in business for over 29 years. We are dedicated to the **Design** and **Manufacturing** of full service **Tooling** and **Workholding** for **All Standard** and **Special Chucks**.

H&R inventories a **full line** of **standard products** of **Soft Jaws**, **Hard Jaws**, and **Accessories**. In **Soft Jaws**, **H&R** stocks- standards, offset and offset pointed jaws. In **Hard Jaws**, **H&R** stocks- single step, two step, and Extended Hard Jaws. In **Jaw Nuts**, **H&R** stocks- American and Metric threaded jaw nuts.

H&R Engineering Department has an **innovative approach** to the **design** of **special jaws** (both Hard and Soft Jaws) and other custom holding devices to fit your special requirements. **H&R** supports tooling for **Multi-Tasking** or **Just in Time**.

H&R will also **design** and **manufacture** other parts for chucks and numerous other pieces of equipment for the machine tool industry.

H&R's Return Policy and Restocking Charges are based upon the **problem** the **customer** is having within a **60 day period** of time. **Standard products, not used or abused**, can be **accepted** very readily at the **standard 15% restocking charge**. **Special tooling made to customer specification** are **non-returnable**. If the **problem** is a **manufacturing defect**, **H&R** will **fix-it** to **your satisfaction**.

WARRANTY OF CASTING PRODUCTS: **H&R** standard warranty will be in place for all products, in that they will be free of material and workmanship defects; but with castings, minor surface porosity is not to be considered a defect for the purposes of casting warranty. If you have a question or problem-call us.

All return shipments are to be prepaid. If merchandise is **defective**, **credit** will be issued for the freight; otherwise, the return shipment will be at the customer expense. **"No credit given until H&R receives merchandise in good condition."**

Damaged or lost shipments: **ALL U.P.S. SHIPMENTS** with these problems, **notify your U.P.S. Driver** and the **U.P.S. office immediately**. **YOU MUST FILE A CLAIM WITH U.P.S.** (the sooner the better). Then advise **H&R** for reshipment etc. **Keep damaged goods** and **shipping containers for U.P.S. inspection**.

All common carrier shipments: damage must be reported on the delivery receipt and the claim filed at the destination. Therefore, check your order very carefully upon arrival.

The **H&R catalog** is designed to be **user-friendly** to assist **"You"** in **ordering** the correct jaw or other parts the first time. If you need assistance in ordering or cross-over of numbers, **please call us** and the **H&R team** will be happy to help you solve your problem and place a correct order. **H&R reserves the right to change technical specification and or pricing at any time without notification**. Visit our web site for additional assistance. www.hrmfg.com

A handwritten signature in dark ink, appearing to read "Harvey L. Hivnor", is written over a horizontal line.

HARVEY L. HIVNOR, President

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TECHNICAL SPECIFICATIONS FOR JAWS

Jaw Terminology:

- | | | |
|--|---|--|
| (1) SH = standard height | (4) H = heavy duty tongue and groove jaw | (7) CI = cast iron jaw |
| (2) EH = extended height | (5) O = offset jaw | (8) AL = aluminum jaw |
| (3) M = medium duty tongue and groove jaw | (6) P = pointed jaw | (9) 2.0 Or any Other Number following the base part number denotes height (B Dimension). |

Soft Jaws - Mild Steel or Aluminum

Hard Jaws - Mild Steel Carburized

Keys - 4140 HT

Operating Screws - 4140 HT

Thrust Bearings - Mild Steel
Carburized

Chuck Adapters - Mild Steel

Milling Machine Arbors - 4140 Heat Treat

Outboard Supports - Cast Malleable

Full Wrap Jaws

Aluminum

Cast Iron

Custom Made Mild Steel

“VEE” Block - Cast Iron

Boring Mill - Cast Steel and Carburized Steel

Tail Stock - Cast Iron

Face Plate - Mild Steel

Right Angle Drive - Cast Mild Steel

NOTE: All Critical Dimensions are shown in a Blue shaded area in this catalog.

Part Number: H&R's part number describes the **Technical Specifications** of the jaws, Mounting Base and associated accessories. The base number is used for all Serrated Parts.

Examples:

Soft Jaw
HR-108-2.5

Hard Jaw
HR-108-RJ

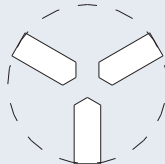
Full-Wrap Jaw
HR-108-2-AL

Jaw Nuts
JN-108-A

Pointing A Jaw: There are 3 different ways to point a jaw:

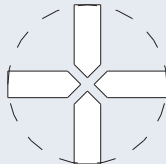
3-Jaw Chuck

30°



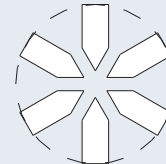
4-Jaw Chuck

45°



6-Jaw Chuck

60°



NOTE: Point by adding a “P” to part number. Be specific on the degree of point. Standard is 30°.

Example: HR-108-2.5-P

Offset Jaws: H&R has accepted and promoted the philosophy that the offset jaw provides more **Dollar-Value** to the ultimate customer by providing more boring options, with a longer jaw that approximated the full range of the chuck face. These jaws come both square and pointed. **Example:** HR-108-2.5-O HR-108-2.5-OP

Hard Jaws: H&R standard hard jaws are made from mild steel and carburized at 56 to 60 RC with a depth of .030 to .040. **MACHINING OF HARD JAWS IS NOT RECOMMENDED.** Once .030 is removed from a jaw, the remaining material will be soft.

“CAUTION” Never Weld on a Hard Jaw

Jaw Nut Engagement: It is important that all bolts are engaged to their fullest length in both Jaw Nuts and T-Nuts.

Warranty: H&R Mfg. and Supply, Inc. will warranty their products for workmanship to meet or exceed specifications listed in this catalog. This warranty is expressly made in lieu of all other warranties, expressed or implied.

OEM steel specifications verse actual material (inch standards verse metric standards)

H&R makes every attempt to match specifications from the OEM. However, standard steel specifications and availability may dictate the height or weight over OEM. In most cases, these minor deviations will not cause any technical problems in applications.

H&R will strive to give our customers the best value for their dollar by using standard available U.S.A. material.

Caution: Jaws made or revised to design specifications different than those listed in this catalog may result in reduced capabilities of the chuck. The Chuck operating manual should be reviewed in these applications.

H&R reserves the right to make changes in design specifications and price without prior notification. Those in place at day of shipment will apply.

For: Bergman, Bison, Buck, Cushman, Huron,
Rohm, Forkhardt, Pratt Burnerd America,
SCA, S.P., W&S, Nobel & Yuasa

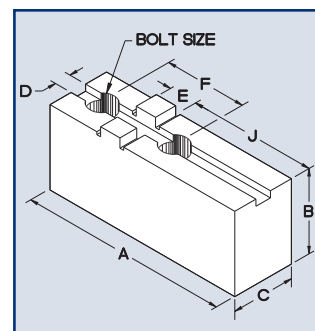
Mild Steel Standard
Aluminum Available

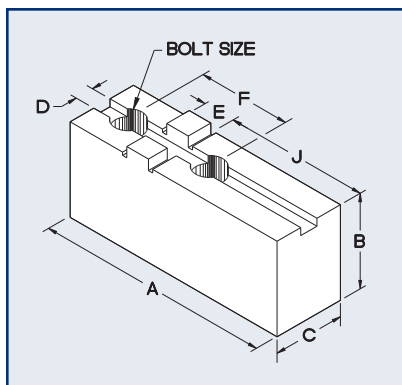
"P" - means Pointed Jaw
"O" - means Tongue is Offset (see "J" dimension)
"***" - means 1/8" Tongue Height
"****" - means 3/16" Tongue Height

Medium Duty Soft Jaws											
Chuck Size	Standard Height									Extra Height	
	Part No.	A	B	C	D	E	F	Bolt	J	Part No.	B
5" - 6" **	HR-5MSH	2-3/16	1-3/8	3/4	.313	.500	1.250	5/16	CENTER	HR-5MEH	3-3/8
	HR-6MSH	2-13/16	1-3/8	1	.313	.500	1.50	3/8	CENTER	HR-6MEH	3-3/8
	HR-447	2-5/8	1-5/8	1-1/4	.313	.500	1.50	3/8	1-1/8	HR-471	3-3/8
	HR-6MSH-O	3-1/4	1-3/8	1	.313	.500	1.50	3/8	1-13/16	HR-6MEH-O	3-3/8
	HR-6MSH-OP	3-1/4	1-3/8	1	.313	.500	1.50	3/8	1-13/16	HR-6MEH-OP	3-3/8
	HR-459-P	3-3/16	1-5/8	1-1/4	.313	.500	1.50	3/8	1-11/16	HR-483-P	3-3/8
8" **	HR-8MSH	3-5/16	1-7/8	1-1/4	.313	.500	1.75	3/8	CENTER	HR-8MEH	3-3/8
	HR-450	3-1/2	1-5/8	1-1/4	.313	.500	1.75	3/8	1-5/8	HR-474	3-3/8
	HR-8MSH-O	3-3/4	1-7/8	1-1/4	.313	.500	1.75	3/8	2-3/16	HR-8MEH-O	3-3/8
	HR-8MSH-OP	3-3/4	1-7/8	1-1/4	.313	.500	1.75	3/8	2-3/16	HR-8MEH-OP	3-3/8
8" W&S	HR-462-P	3-15/16	1-5/8	1-1/4	.313	.500	1.75	3/8	2-1/4	HR-486-P	3-3/8
	M-1603-BV2307B1	3-1/2	2-1/8	1-1/4	.313	.500	1.75	1/2	1-13/16	M-1603-LV2307B2	2-7/8
10" **	HR-10MSH	3-15/16	1-7/8	1-1/2	.500	.750	2.12	1/2	CENTER	HR-10MEH	3-3/8
	HR-452	4-1/4	1-7/8	1-1/2	.500	.750	2.12	1/2	1-15/16	HR-476	3-3/8
	HR-10MSH-O	4-5/8	1-7/8	1-1/2	.500	.750	2.12	1/2	2-5/8	HR-10MEH-O	3-3/8
	HR-10MSH-OP	4-5/8	1-7/8	1-1/2	.500	.750	2.12	1/2	2-5/8	HR-10MEH-OP	3-3/8
	HR-464-P	4-13/16	1-7/8	1-1/2	.500	.750	2.12	1/2	2-11/16	HR-488-P	3-3/8
10" W&S	M-1605-BV2309B1	4-1/4	2-3/8	1-3/4	.500	.750	2.12	5/8	2-1/8	M-1605-LV2309B2	3-3/8
12" **	HR-12MSH	4-1/2	2-1/8	1-3/4	.500	.750	2.50	1/2	CENTER	HR-12MEH	3-7/8
	HR-454	4-7/8	2-3/8	1-3/4	.500	.750	2.50	1/2	2-5/16	HR-478	3-7/8
	HR-12MSH-O	5-3/8	2-1/8	1-3/4	.500	.750	2.50	1/2	3-1/8	HR-12MEH-O	3-7/8
	HR-12MSH-OP	5-3/8	2-1/8	1-3/4	.500	.750	2.50	1/2	3-1/8	HR-12MEH-OP	3-7/8
12" W&S	HR-466-P	5-3/4	2-3/8	1-3/4	.500	.750	2.50	1/2	3-3/8	HR-490-P	3-7/8
	M-1607-BV2311B1	4-7/8	2-3/8	1-3/4	.500	.750	2.50	5/8	2-1/2	M-1607-LV2311B2	3-7/8
15" ***	HR-15MSH	5-3/16	2-5/16	1-3/4	.500	.750	3.00	5/8	CENTER	HR-15MEH	3-13/16
	HR-456	5-5/8	2-5/16	2	.500	.750	3.00	5/8	2-3/4	HR-480	3-13/16
	HR-15MSH-O	6-1/4	2-5/16	1-3/4	.500	.750	3.00	5/8	3-5/8	HR-15MEH-O	3-13/16
	HR-15MSH-OP	6-1/4	2-5/16	1-3/4	.500	.750	3.00	5/8	3-5/8	HR-15MEH-OP	3-13/16
	HR-468-P	7-1/4	2-5/16	2	.500	.750	3.00	5/8	4-1/2	HR-495-P	3-13/16
15" W&S	M-1609-B	5-3/4	3-1/4	2	.500	.750	3.00	3/4	3	M-1609-L	4-3/4
18" - 21" ****	HR-18MSH	5-3/16	2-13/16	2-1/4	.500	.750	3.00	3/4	CENTER	HR-18MEH	4-13/16
	HR-457	5-5/8	2-5/16	2	.500	.750	3.00	3/4	2-3/4	HR-481	3-13/16
	HR-18MSH-O	6-3/8	2-13/16	2-1/4	.500	.750	3.00	3/4	3-3/4	HR-18MEH-O	4-13/16
	HR-18MSH-OP	6-3/8	2-13/16	2-1/4	.500	.750	3.00	3/4	3-3/4	HR-18MEH-OP	4-13/16
	HR-519-P	7-1/4	3-5/16	2-1/2	.500	.750	3.00	3/4	4-1/2	HR-520-P	4-13/16
18" W&S	M-1611-B	6	3-1/4	2-1/2	.500	.750	3.00	3/4	3	M-1611-L	4-3/4
24" - 36" ****	HR-458	5-5/8	3-5/16	2-1/2	.500	.750	3.00	3/4	2-3/4	HR-482	4-13/16

SMW-KNCS & FORKHARDT TYPE "WAK"

Chuck Size	"WAK" Soft Jaws								
	PART #	A	B	C	D	E	F	J	Bolt
5 1/2"	HR-WAK 140	2-3/4	1-3/8	3/4	.315	.706	1.250	1	M8
	HR-WAKB-140	2-1/2	1-3/8	1-1/2	.315	.706	1.250	1	M8
6 1/4"	HR-WAK 160/175	3-3/8	1-3/8	3/4	.315	.706	1.250	1	M8
	HR-WAKB 160/175	2-1/2	1-3/8	1-1/2	.315	.706	1.250	1	M8
8"	HR-WAK 200	4-1/8	1-5/8	7/8	.395	.787	1.575	2	M8
	HR-WAKB 200	2-3/4	1-3/8	1-1/2	.395	.787	1.575	1-1/16	M8
10"	HR-WAK 250/315	5	1-7/8	1-1/4	.472	.787	1.575	2-3/4	M12
	HR-WAKB 250	3-1/2	1-7/8	2-1/4	.472	.787	1.575	1-3/4	M12
	HR-WAKEH 250/315	5	3-7/8	1-1/4	.472	.787	1.575	2-3/4	M12
12"	HR-WAKB 315	3-1/2	1-7/8	3	.472	.787	1.575	1-3/4	M12
	HR-WAK 400	5-3/4	1-7/8	1-1/4	.472	1.022	2.125	2-3/4	M12
16"	HR-WAKB 400	4	2-3/8	3	.472	1.022	2.125	1-3/4	M12
	HR-WAK 500/630	7	2-7/8	1-3/4	.708	1.180	2.362	3	M16
24"	HR-WAKB 500/630	6	2-7/8	4	.708	1.180	2.362	3	M16



AMERICAN STANDARD TONGUE & GROOVE


For: Bergman, Bison, Buck, Cushman, Huron, Rohm, Forkhardt, Pratt Burnerd America, SCA, SP, W&S, Nobel & Yuasa

*Mild Steel Standard
Aluminum Available*

“P” - means Pointed Jaw
 “O” - means Tongue is Offset (see “J” dimension)
 “**” - means 1/8" Tongue Height
 “***” - means 3/16" Tongue Height

Heavy Duty Soft Jaws											
Chuck Size	Standard Height									Extra Height	
	Part No.	A	B	C	D	E	F	Bolt	J	Part No.	B
6" **	HR-6HSH	2-13/16	1-3/8	1-1/2	.313	.500	1.50	7/16	CENTER	HR-6HEH	3-3/8
	HR-448	2-5/8	1-5/8	1-1/4	.313	.500	1.50	7/16	1-1/8	HR-472	3-3/8
	HR-6HSH-O	3-1/4	1-3/8	1-1/2	.313	.500	1.50	7/16	1-13/16	HR-6HEH-O	3-3/8
	HR-6HSH-OP	3-1/4	1-3/8	1-1/2	.313	.500	1.50	7/16	1-13/16	HR-6HEH-OP	3-3/8
	HR-460-P	3-3/16	1-5/8	1-1/4	.313	.500	1.50	7/16	1-11/16	HR-484-P	3-3/8
8" **	HR-8HSH	3-5/16	1-7/8	1-1/2	.313	.500	1.75	1/2	CENTER	HR-8HEH	3-3/8
	HR-451	3-1/2	1-7/8	1-1/2	.313	.500	1.75	1/2	1-5/8	HR-475	3-3/8
	HR-8HSH-O	3-3/4	1-7/8	1-1/2	.313	.500	1.75	1/2	2-3/16	HR-8HEH-O	3-3/8
	HR-8HSH-OP	3-3/4	1-7/8	1-1/2	.313	.500	1.75	1/2	2-3/16	HR-8HEH-OP	3-3/8
	HR-463-P	3-15/16	1-7/8	1-1/2	.313	.500	1.75	1/2	2-1/4	HR-487-P	3-3/8
10" **	HR-10HSH	3-15/16	1-7/8	1-3/4	.500	.750	2.12	5/8	CENTER	HR-10HEH	3-7/8
	HR-453	4-1/2	2-3/8	1-3/4	.500	.750	2.12	5/8	1-15/16	HR-477	3-7/8
	HR-10HSH-O	4-5/8	1-7/8	1-3/4	.500	.750	2.12	5/8	2-5/8	HR-10HEH-O	3-7/8
	HR-10HSH-OP	4-5/8	1-7/8	1-3/4	.500	.750	2.12	5/8	2-5/8	HR-10HEH-OP	3-7/8
	HR-465-P	4-13/16	2-3/8	1-3/4	.500	.750	2.12	5/8	2-11/16	HR-489-P	3-7/8
12" **	HR-12HSH	4-1/2	2-1/8	2	.500	.750	2.50	5/8	CENTER	HR-12HEH	3-7/8
	HR-455	4-7/8	2-3/8	2	.500	.750	2.50	5/8	2-5/16	HR-479	3-7/8
	HR-12HSH-O	5-3/8	2-1/8	2	.500	.750	2.50	5/8	3-1/8	HR-12HEH-O	3-7/8
	HR-12HSH-OP	5-3/8	2-1/8	2	.500	.750	2.50	5/8	3-1/8	HR-12HEH-OP	3-7/8
	HR-467-P	5-3/4	2-3/8	2	.500	.750	2.50	5/8	3-3/8	HR-491-P	3-7/8
15" - 36" ***	HR-15HSH	5-3/16	2-5/16	2-1/2	.500	.750	3	3/4	CENTER	HR-15HEH	4-13/16
	HR-457	5-5/8	2-5/16	2	.500	.750	3	3/4	2-3/4	HR-481	3-13/16
	HR-15HSH-O	6-1/4	2-5/16	2-1/2	.500	.750	3	3/4	3-5/8	HR-15HEH-O	4-13/16
	HR-15HSH-OP	6-1/4	2-5/16	2-1/2	.500	.750	3	3/4	3-5/8	HR-15HEH-OP	4-13/16
	HR-469-P	7-1/4	2-5/16	2	.500	.750	3	3/4	4-1/2	HR-496-P	3-13/16
18" - 36" ***	HR-18HSH	5-3/16	2-13/16	3	.500	.750	3	3/4	CENTER	HR-18HEH	4-13/16
	HR-458	5-5/8	3-5/16	2-1/2	.500	.750	3	3/4	2-3/4	HR-482	4-13/16
	HR-18HSH-O	6-3/8	2-13/16	3	.500	.750	3	3/4	3-3/4	HR-18HEH-O	4-13/16
	HR-18HSH-OP	6-3/8	2-13/16	3	.500	.750	3	3/4	3-3/4	HR-18HEH-OP	4-13/16
	HR-519-P	7-1/4	3-5/16	2-1/2	.500	.750	3	3/4	4-1/2	HR-520-P	4-13/16
24" - 36" *** NOBEL	HR-28HSH	6-3/8	2-13/16	3	.500	.750	3	7/8	3-3/4	HR-28HEH	4-13/16
	HR-28HSH-O	7-1/2	2-13/16	3	.500	.750	3	7/8	4-1/2	HR-28HEH-O	4-13/16
	HR-28HSH-OP	7-1/2	2-13/16	3	.500	.750	3	7/8	4-1/2	HR-28HEH-OP	4-13/16

For: Bergman, Bison, Buck, Cushman, Huron, Rohm,
Forkhardt, Pratt Burnerd America, SCA, S.P., W&S,
Nobel & Yuasa

ADD TO PART NUMBER

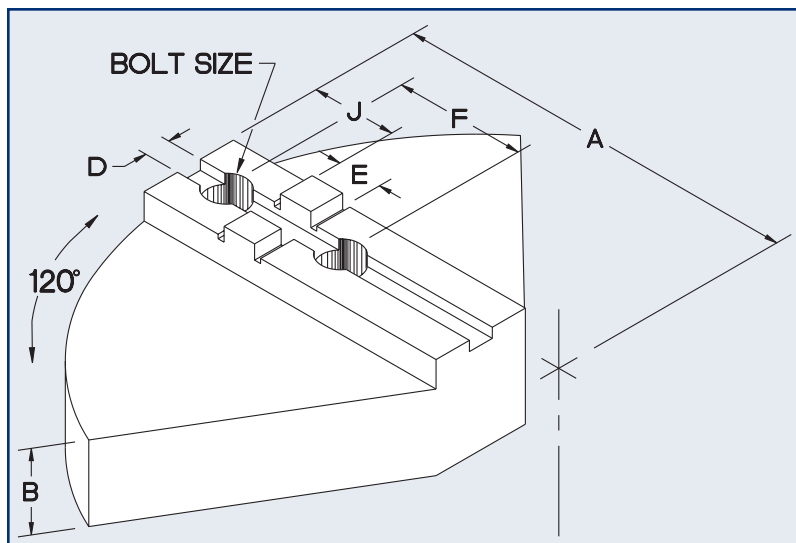
“AL” - for Aluminum

“CI” - for Cast Iron

“ST” - for Steel

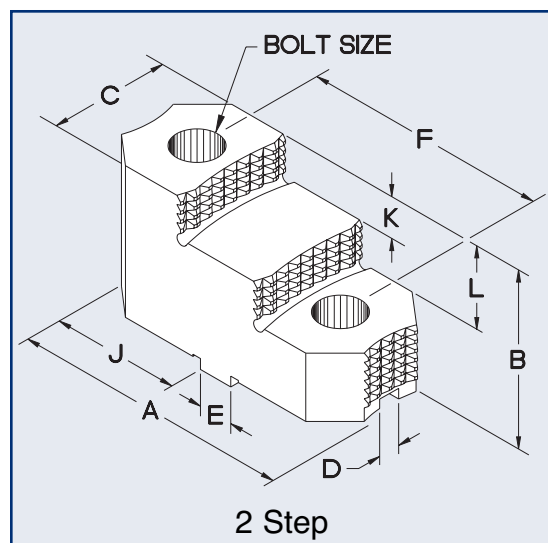
“**” - means 1/8" Tongue Height

“***” - means 3/16" Tongue Height



Chuck Size	Full Wrap Jaws							
	Part No.	A	B	D	E	F	J	Bolt
6" ** Medium	HR-6MSH-2-	3	2	.313	.500	1.500	center	3/8
	HR-6MEH-4-	3	4	.313	.500	1.500	center	3/8
6" ** Heavy	HR-6HSH-2-	3	2	.313	.500	1.500	center	7/16
	HR-6HEH-4-	3	4	.313	.500	1.500	center	7/16
8" ** Medium	HR-8MSH-2-	4	2	.313	.500	1.750	center	3/8
	HR-8MEH-4-	4	4	.313	.500	1.750	center	3/8
8" ** Heavy	HR-8HSH-2-	4	2	.313	.500	1.750	center	1/2
	HR-8HEH-4-	4	4	.313	.500	1.750	center	1/2
10" ** Medium	HR-10MSH-2-	5	2	.500	.750	2.125	1-1/2	1/2
	HR-10MEH-4-	5	4	.500	.750	2.125	1-1/2	1/2
10" ** Heavy	HR-10HSH-2-	5	2	.500	.750	2.125	1-1/2	5/8
	HR-10HEH-4-	5	4	.500	.750	2.125	1-1/2	5/8
12" ** Medium	HR-12MSH-2-	6	2	.500	.750	2.500	2	1/2
	HR-12MEH-4-	6	4	.500	.750	2.500	2	1/2
12" ** Heavy	HR-12HSH-2-	6	2	.500	.750	2.500	2	5/8
	HR-12HEH-4-	6	4	.500	.750	2.500	2	5/8
15" *** Medium	HR-15MSH-2-	7-1/2	2	.500	.750	3.000	2-1/4	5/8
	HR-15MEH-4-	7-1/2	4	.500	.750	3.000	2-1/4	5/8
15" *** Heavy	HR-15HSH-2-	7-1/2	2	.500	.750	3.000	2-1/4	3/4
	HR-15HEH-4-	7-1/2	4	.500	.750	3.000	2-1/4	3/4
18" *** Medium	HR-18MSH-3-	9	3	.500	.750	3.000	3-1/4	3/4
	HR-18MEH-4-	9	4	.500	.750	3.000	3-1/4	3/4
18" *** Heavy	HR-18HSH-3-	9	3	.500	.750	3.000	3-1/4	3/4
	HR-18HEH-4-	9	4	.500	.750	3.000	3-1/4	3/4
21" *** Medium	HR-21MSH-3-	10-1/2	3	.500	.750	3.000	4-1/2	3/4
	HR-21MEH-4-	10-1/2	4	.500	.750	3.000	4-1/2	3/4
24" - 28" *** Heavy	HR-28HSH-3-	12	3	.500	.750	3.000	5-1/4	7/8
	HR-28HEH-4-	12	4	.500	.750	3.000	5-1/4	7/8

Oversize Full Wraps are available on Standard Bases.
Consult your Chuck Specifications for reduced RPM's.

STANDARD REVERSIBLE HARD JAWS


For: Bergman, Bison, Buck, Cushman, Huron, Rohm,
 Forkhardt, Pratt Burnerd America, SCA, S.P., W&S,
 Nobel & Yuasa

SPECIAL HARD JAWS
MADE TO ORDER
QUICK CHANGE JAW SYSTEMS
MADE TO ORDER

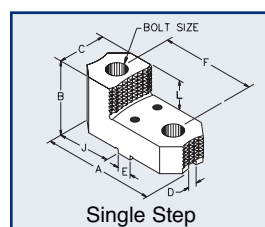
CALL FOR MORE INFORMATION

“STGRJ” Series
 Horizontal Serrations Only

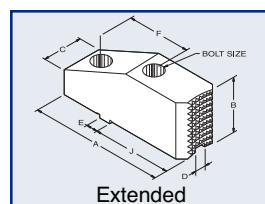
Chuck Size	Medium Duty 2 Step Rev Hard Jaws										
	Part No.	A	B	C	D	E	F	J	K	L	Bolt
6"	HR-6 MTGRJ	2.788	1.969	1-1/2	.313	.500	1.500	1.125	.530	1.060	3/8
	HR-8 MTGRJ	3.286	1.969	1-1/2	.313	.500	1.750	1.375	.530	1.060	3/8
8"	HR-8 STGRJ	3.270	1.625	1	.313	.500	1.750	1.375	.375	.750	3/8
	HR-10 MTGRJ	3.920	2.469	1-3/4	.500	.750	2.125	1.563	.650	1.300	1/2
10"	HR-10 STGRJ	3.750	1.875	1-1/4	.500	.750	2.125	1.563	.500	1.000	1/2
	HR-12 MTGRJ	4.550	2.469	1-3/4	.500	.750	2.500	1.875	.650	1.300	1/2
12"	HR-12 STGRJ	4.375	2.250	1-1/4	.500	.750	2.500	1.875	.625	1.250	1/2
	HR-15 MTGRJ	5.350	3.469	2-1/2	.500	.750	3.000	2.250	.950	1.900	5/8
15" & up	HR-15 STGRJ	5.260	2.750	1-1/2	.500	.750	3.000	2.250	.735	1.469	5/8

Chuck Size	Heavy Duty 2 Step Rev Hard Jaws										
	Part No.	A	B	C	D	E	F	J	K	L	Bolt
8"	HR-8 HTGRJ	3.286	1.969	1-1/2	.313	.500	1.750	1.375	.530	.910	1/2
10"	HR-10 HTGRJ	3.920	2.469	1-3/4	.500	.750	2.125	1.563	.650	1.300	5/8
12"	HR-12 HTGRJ	4.550	2.469	1-3/4	.500	.750	2.500	1.875	.650	1.300	5/8
15" - 24"	HR-15 HTGRJ	5.350	3.469	2-1/2	.500	.750	3.000	2.250	.950	1.900	3/4
15" - 24"	HR-18 STGRJ	5.260	3.469	1-3/4	.500	.750	3.000	2.250	.950	1.900	3/4
24" - 36"	HR-24 HTGRJ	6.942	3.969	3	.500	.750	3.000	3.750	1	2	3/4
24" - 36"	HR-28 HTGRJ	6.942	3.969	3	.500	.750	3.000	3.750	1	2	7/8

Chuck Size	“WAK” 2 Step Rev Hard Jaws										
	Part No.	A	B	C	D	E	F	J	K	L	Bolt
8"	HR-WAK-200-RJ	2.75	1.565	1	.394	.787	1.575	1.004	.395	.790	8MM
10"	HR-WAK-250/315-RJ	3.79	2.250	1.750	.472	.787	1.575	1.813	.550	1.100	12MM
16"	HR-WAK-400-RJ	4.23	2.500	2	.472	1.022	2.125	1.587	.687	1.375	12MM
24"	HR-WAK-500/630-RJ	4.76	3.000	2	.708	1.180	2.362	1.780	.687	1.375	16MM

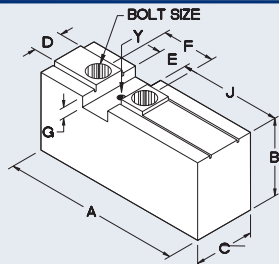


Chuck Size	Heavy Duty Single Step Hard Jaws									
	Part No.	A	B	C	D	E	F	J	L	Bolt
12"	HR-12-HTGRJ-SS	4.550	2.469	2.000	.500	.750	2.50	1.875	1.262	5/8
15" - 24"	HR-15-HTGRJ-SS	5.350	3.469	2.500	.500	.750	3.00	2.250	1.900	3/4
24" - 36"	HR-24-HTGRJ-SS	6.960	3.750	3.000	.500	.750	3.00	3.750	2.000	3/4
24" - 36"	HR-28-HTGRJ-SS	6.960	3.750	3.000	.500	.750	3.00	3.750	2.000	7/8
24"	HR-WAK-500/630-RJ-SS	4.76	3.000	2.000	.708	1.180	2.362	1.780	1.375	16MM



Chuck Size	Heavy Duty Extended Stroke Hard Jaws								
	Part No.	A	B	C	D	E	F	J	Bolt
15" - 24"	HR-15-HTGRJ-EX	6.820	3.469	2-1/2	.500	.750	3.00	3.750	3/4

Extended Stroke means: J=3.860 or 1.50 inch per Jaw Extended.

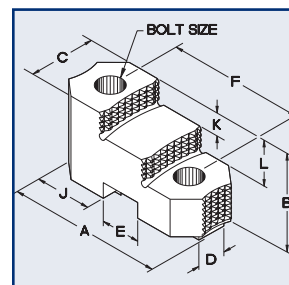

ACME SERRATED KEYED

For: Buck, Cushman, Gisholt, S.P., Howa & Pratt Burnerd America

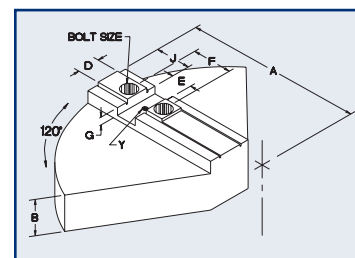
 *** - means GROOVE NOT TONGUE
 *** - means 590 SERIES CHUCK

Chuck Size	Soft Jaws											Extra Height	
	Part No.	A	B	C	D	E	F	G	J	Y	BOLT	Part No.	B
8" *	HR-8-LSH	3-3/4	2	1-1/2	.670	.601	1.250	.375	2-1/8	10-24	1/2		
	P.B.7749-27038	3-3/4	2	1-1/2	.670	.601	1.250	.375	2-1/8	10-24	1/2		
10" ** Howa HO7MC-12	HR-10ACSH	4-1/8	2-5/16	1-3/4	.750	1.031	1.750	.375	2-1/8	5/16-18	1/2	HR-10ACEH	3-5/16
	HR-10ACSH-5.5	5-1/2	2-5/16	1-3/4	.750	1.031	1.750	.375	3-1/2	5/16-18	1/2	HR-10ACEH-5.5	3-5/16
12" ** Howa HO7MC-15	HR-12ACSH	5-1/8	2-5/16	1-3/4	.875	1.031	2.000	.375	2-7/8	5/16-18	5/8	HR-12ACEH	3-5/16
	HR-12ACSH-5.5	5-1/2	2-5/16	1-3/4	.875	1.031	2.000	.375	3-1/4	5/16-18	5/8	HR-12ACEH-5.5	3-5/16
15" - 18" **	HR-15ACSH	6	3-5/16	2-1/2	1	1.531	2.500	.375	2-5/8	3/8-16	3/4	HR-15ACEH	4-13/16
	HR-15ACSH-7.5	7-1/2	3-5/16	2-1/2	1	1.531	2.500	.375	4-1/4	3/8-16	3/4	HR-15ACEH-7.5	4-13/16
	05-225934	5	2-13/16	2	1	1.531	2.500	.375	2	3/8-16	3/4		
21" & Over	HR-21ACSH	6	3-5/16	3	1.250	1.531	3.000	.375	2-5/8	3/8-16	7/8	HR-21ACEH	4-13/16
	HR-21ACSH-8.0	8	3-5/16	3	1.250	1.531	3.000	.375	4-5/8	3/8-16	7/8	HR-21ACEH-8.0	4-13/16
32" Matsumoto	HR-30M-2.5	7-7/8	2-5/16	2-1/2	.984	1.456	2.562	.413	2-13/16	M10X1.5	22M		
	HR-30M-3.5	7-7/8	3-5/16	2-1/2	.984	1.456	2.562	.413	2-13/16	M10X1.5	22M		
	HR-30M-5.0	7-7/8	4-13/16	2-1/2	.984	1.456	2.562	.413	2 13/16	M10X1.5	22M		

Chuck Size	Reversible Hard Jaws										
	Part No.	A	B	C	D	E	F	J	K	L	Bolt
8"	HR-8-LSH-RJ	3-1/2	1.969	1-1/2	.670	.601	1.250	1.755	.530	1.060	1/2
10"	HR-10-ASRJ	4-1/4	2.469	1-3/4	.750	1.031	1.750	1.705	.600	1.200	1/2
12"	HR-12-ASRJ	4-7/8	2.469	1-3/4	.875	1.031	2.000	2.032	.550	1.100	5/8
15" to 18"	HR-15/18-ASRJ	5-1/2	3.469	2-1/2	1.000	1.531	2.500	2.375	.950	1.900	3/4
	HR-15/18-ASRJ-SS	6	3.500	2-1/2	1.000	1.531	2.500	2.375	1.900	1.900	3/4
21" & Over	HR-21/24-ASRJ	6-1/2	3.469	3	1.250	1.531	3.000	2.965	.950	1.900	7/8



Chuck Size	Full Wrap Jaws								
	Part No.	A	B	D	E	F	J	Y	Bolt
8"	HR-8LSH-2-	4	2	.670	.601	1.250	1-3/8	10-24	1/2
	HR-8LEH-4-	4	4	.670	.601	1.250	1-3/8	10-24	1/2
10"	HR-10ACSH-2-	5	2	.750	1.031	1.750	1-1/2	5/16-18	1/2
	HR-10ACEH-4-	5	4	.750	1.031	1.750	1-1/2	5/16-18	1/2
12"	HR-12ACSH-2-	6	2	.875	1.031	2.000	1-3/4	5/16-18	5/8
	HR-12ACEH-4-	6	4	.875	1.031	2.000	1-3/4	5/16-18	5/8
15"	HR-15ACSH-2-	7-1/2	2	1.000	1.531	2.500	2	3/8-16	3/4
	HR-15ACEH-4-	7-1/2	4	1.000	1.531	2.500	2	3/8-16	3/4
18"	HR-18ACSH-3-	9	3	1.000	1.531	2.500	2-1/2	3/8-16	3/4
	HR-18ACEH-4-	9	4	1.000	1.531	2.500	2-1/2	3/8-16	3/4
21"	HR-21ACSH-3-	10-1/2	3	1.250	1.531	3.000	3	3/8-16	7/8
	HR-21ACEH-4-	10-1/2	4	1.250	1.531	3.000	3	3/8-16	7/8
24"	HR-24ACSH-3-	12	3	1.250	1.531	3.000	3-1/2	3/8-16	7/8
	HR-24ACEH-4-	12	4	1.250	1.531	3.000	3-1/2	3/8-16	7/8

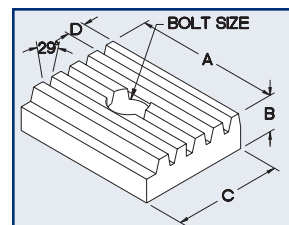

ADD TO PART NUMBER

"AL" - for Aluminum

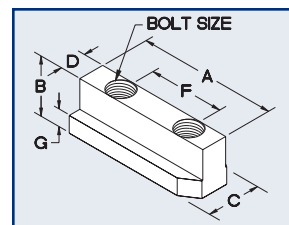
"CI" - for Cast Iron

"ST" - for Steel

Chuck Size	Master Keys					
	Part No.	A	B	C	D	Bolt
8"	8-LAK	1-1/2	.383	.600	.156	#10
10" - 12" (25-10912)	12-AK	1-11/16	.500	1.030	.250	5/16
10" - 12"	12-AKSP	2	.500	1.187	.250	3/8
15" - 18" (25-10907)	15-AK	2-7/16	.500	1.530	.250	3/8
15" - 18"	15-AKSP	2	.500	1.530	.250	3/8
21" - 24" (25-11199)	21-AK	2-7/8	.500	1.530	.250	3/8

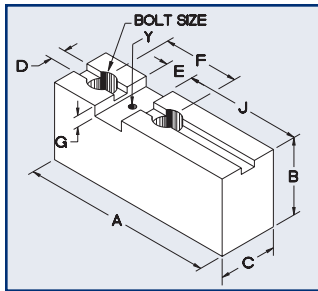


Chuck Size	Jaw Nuts							
	Part No.	A	B	C	D	G	F	Bolt
8"	JN-8L	2	1.000	1.030	.668	.440	1-1/4	1/2-13
	JN-8LSH	2	1.000	.937	.670	.437	1-1/4	1/2-13
10" (25-010918)	JN-C10	2-1/2	.640	.940	.678	.381	1-3/4	1/2-13
12" (25-010911)	JN-C12	3	.745	1.060	.802	.440	2	5/8-11
15" - 18" (25-010916)	JN-C15/18	3-1/2	.931	1.250	.933	.550	2-1/2	3/4-10
21" - 24" (25-011200)	JN-C21	4-3/4	1.186	1.555	1.159	.684	3	7/8-9

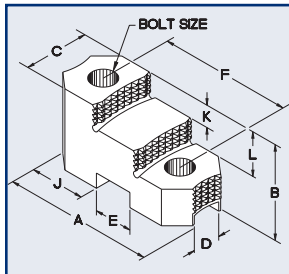


SQUARE SERRATED KEYED

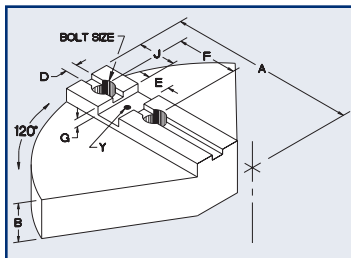
For: Cushman, Logansport, Autoblok, Howa, Buck, S.P., W&S & Pratt Burnerd America



Chuck Size	Soft Jaws											Extra Height	
	Part No.	A	B	C	D	E	F	G	J	BOLT	Y	Part No.	B
6" Manual "Buck"	HR-T-10050	2-3/4	2	1	.74	.37	1.680	.200	1-3/16	5/16	N/A		
7 1/2" Manual "Buck"	HR-T-10105	3-3/16	2	1-1/4	.86	.37	1.680	.200	1-3/8	5/16	N/A		
8"	HR-8-SQSH	3	2	1-1/4	.500	.745	1.437	.275	1-1/4	3/8	1/4-20		
10" - 12"	HR-12-SQSH	4-3/8	2-1/2	1-3/4	.750	.994	1.750	.375	2	1/2	5/16-18	HR-12-SQEH	3-1/2
	HR-12-SQSH-O	5	2-1/2	1-3/4	.750	.994	1.750	.375	3	1/2	5/16-18	HR-12-SQEH-O	3-1/2
10" - 12"	HR-12-SQSH	4-3/8	2-1/2	1-3/4	.750	.994	1.750	.375	2	5/8	5/16-18	HR-12-SQEH	3-1/2
	HR-12-SQSH-O	5	2-1/2	1-3/4	.750	.994	1.750	.375	3	5/8	5/16-18	HR-12-SQEH-O	3-1/2
15" - 18" **	HR-15-SQSH	5	3	2-1/4	1.000	1.488	2.500	.375	1-3/4	3/4	3/8-16	HR-15-SQEH	5
	HR-15-SQSH-O	6-1/4	3	2-1/4	1.000	1.488	2.500	.375	3-1/2	3/4	3/8-16	HR-15-SQEH-O	5
21" & Over	HR-21-SQSH	6	3	2-1/4	1.000	1.488	3.000	.375	2-3/4	3/4	3/8-16	HR-21-SQEH	5

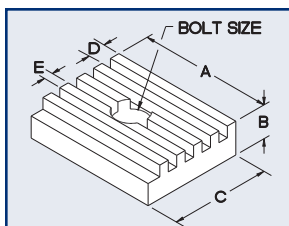


Chuck Size	Reversible Hard Jaws										
	Part No.	A	B	C	D	E	F	J	K	L	Bolt
12"	HR-12-SQRJ	4-7/8	2.469	1-3/4	.750	.994	1.750	2.437	.650	1.300	1/2
12" A	HR-12A-SQRJ	4-7/8	2.469	1-3/4	.750	.994	1.750	2.437	.650	1.300	5/8
15" to 18"	HR-15/18-SQRJ	5-1/2	3.469	2-1/2	1.000	1.488	2.500	2.535	.950	1.900	3/4
21"	HR-21-SQRJ	5-1/2	3.469	2-1/2	1.000	1.488	3.000	1-5/8	.950	1.900	3/4
21" A	HR-21A-SQRJ	5-1/2	3.469	2-1/2	1.000	1.488	3.000	1-5/8	.950	1.900	7/8

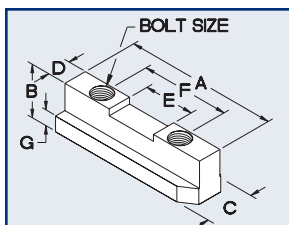


Chuck Size	Full Wrap Jaws								
	Part No.	A	B	D	E	F	J	Y	Bolt
8"	HR-8-SQSH-2-	4	2	.500	.745	1.437	1-1/4	1/4-20	3/8
	HR-8-SQEH-4-	4	4	.500	.745	1.437	1-1/4	1/4-20	3/8
10"	HR-10-SQSH-2-	5	2	.750	.994	1.750	1-1/4	5/16-18	1/2
	HR-10-SQEH-4-	5	4	.750	.994	1.750	1-1/4	5/16-18	1/2
12"	HR-12-SQSH-2-	6	2	.750	.994	1.750	1-1/2	5/16-18	5/8
	HR-12-SQEH-4-	6	4	.750	.994	1.750	1-1/2	5/16-18	5/8
15"	HR-15-SQSH-2-	7-1/2	2	1.000	1.488	2.500	1-3/4	3/8-16	3/4
	HR-15-SQEH-4-	7-1/2	4	1.000	1.488	2.500	1-3/4	3/8-16	3/4
18"	HR-18-SQSH-3-	9	3	1.000	1.488	2.500	2	3/8-16	3/4
	HR-18-SQEH-4-	9	4	1.000	1.488	2.500	2	3/8-16	3/4
21"	HR-21-SQSH-3-	10-1/2	3	1.000	1.488	3.000	2-1/2	3/8-16	3/4
	HR-21-SQEH-4-	10-1/2	4	1.000	1.488	3.000	2-1/2	3/8-16	3/4

ADD TO PART NUMBER
 "AL" - for Aluminum
 "CI" - for Cast Iron
 "ST" - for Steel



Chuck Size	Master Keys						
	Part No.	A	B	C	D	E	Bolt
8" SP	8-CC-310-A	1.446	.440	.745	.156	.076	1/4
8"	8-SQK	1-5/16	3/8	.993	.200	.098	1/4
12"	12-SQK	1-11/16	1/2	.993	.250	.124	5/16
15"	15-SQK	2	1/2	1.487	.250	.124	3/8
18"	18-SQK	2-1/4	1/2	1.487	.250	.124	3/8
21"	21-SQK	2-1/2	1/2	1.487	.250	.124	3/8
	21-SQ-SP	2-1/2	1/2	1.530	.250	.120	3/8



Chuck Size	Jaw Nuts								
	Part No.	A	B	C	D	E	F	G	Bolt
8" WC	JN-WC8	2-1/8	.996	.993	.748	7/8	1-7/16	3/8	1/2-13
8"	JN-SP-8	2-1/8	.996	.875	.498	7/8	1-7/16	3/8	3/8-16
10" - 12"	JN-SP-10/12	2-7/16	1	1.000	.748	1-1/16	1-3/4	3/8	1/2-13
12" CC	JN-SP-12CC	2-1/2	1	1.000	.748	1-1/16	1-3/4	3/8	5/8-11
15" - 18"	JN-SP-15/18	3-3/4	1-1/4	1.250	1.000	1-9/16	2-1/2	7/16	3/4-10
21" - 24"	JN-SP-21/24	4-1/2	1-1/4	1.250	1.000	1-9/16	3	7/16	3/4-10

Square Ends

H&R Part No.	Head Length			Handle Dia-Length
HR-1/4SQ	3-1/2	7	~	1/2 - 7
HR-5/16SQ	4	8	~	1/2 - 7
HR-3/8SQ	4	8	~	1/2 - 7
HR-400SQ	4	8	~	1/2 - 10
HR-7/16SQ	4	8	~	1/2 - 12
HR-1/2SQ	5	7-1/2	10	3/4 - 18
HR-9/16SQ	5	7-1/2	10	3/4 - 18
HR-5/8SQ	5	7-1/2	10	3/4 - 18
HR-11/16SQ	5	7-1/2	10	3/4 - 18
HR-3/4SQ	5	7-1/2	10	1 - 24
HR-7/8SQ	5	7-1/2	10	1 - 24
HR-1SQ	5	7-1/2	10	1 - 24

Metric Square Ends

H&R Part No.	Head Length	Handle Dia-Length
HR-14MMSQ	7-1/2	3/4 - 18
HR-15MMSQ	9	3/4 - 18
HR-16MMSQ	9	3/4 - 18
HR-17MMSQ	6, 7-1/2, 10	3/4 - 18
HR-19MMSQ	6, 11-1/2	3/4 - 18
HR-22MMSQ	6, 12-1/2	3/4 - 18

Double Ends Square

H&R Part No.	Head Length	Handle Dia-Length
HR-1/2DES	5	3/4 - 18
HR-9/16DES	5	3/4 - 18
HR-5/8DES	5	3/4 - 18
HR-11/16DES	6	3/4 - 18
HR-3/4DES	6	1 - 24
HR-7/8DES	6	1 - 24
HR-1DES	6-1/2	1 - 24

Hex End

H&R Part No.	Head Length		Handle Dia-Length
HR-1/2HEX	5	10	3/4 - 18
HR-9/16HEX	5	10	3/4 - 18
HR-5/8HEX	5	10	3/4 - 18
HR-11/16HEX	5	10	3/4 - 18
HR-3/4HEX	5	10	3/4 - 18
HR-7/8HEX	5	10	1 - 24
HR-1HEX	5	10	1 - 24

Internal Square

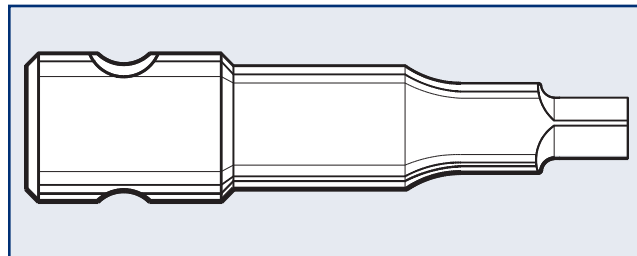
H&R Part No.	Head Length	Handle Dia-Length
HR-7/8INTSQ	6	1 - 24
HR-1INTSQ	6	1 - 24

O.S.H.A. Safety Springs Available on Request

SPECIAL CHUCK WRENCHES made to Order

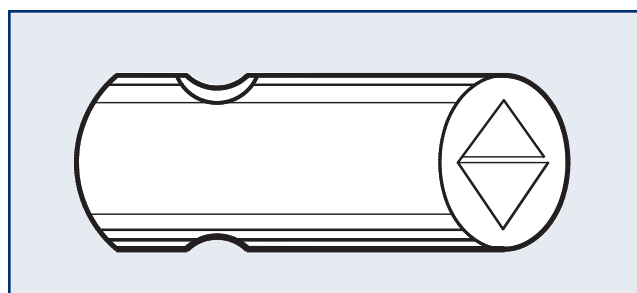
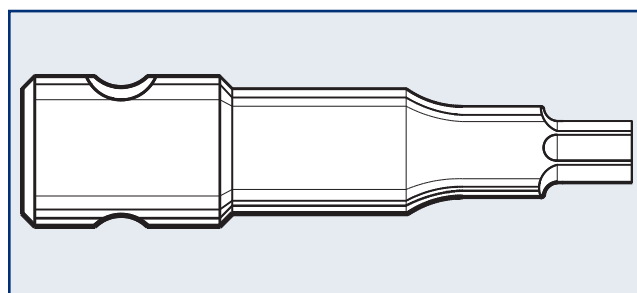
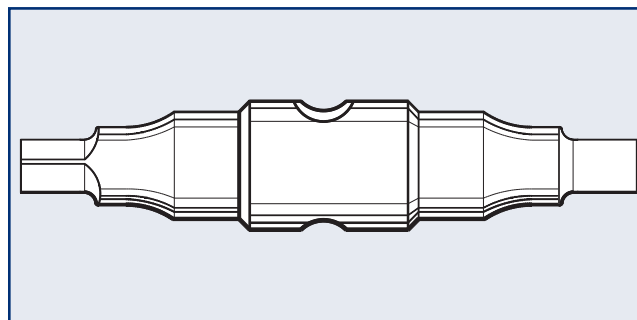
All Chuck Wrenches Made of 4140 Heat Treat Material

Other Sizes Available on Request



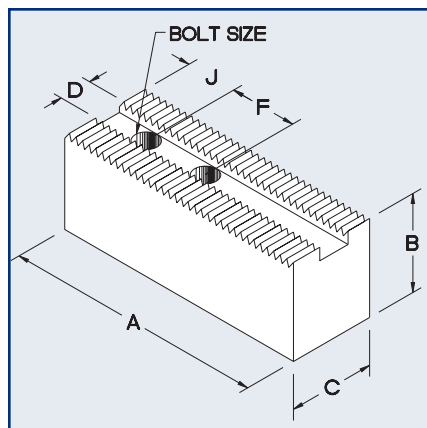
WARRANTY IS VOID if handle extension, (Cheater Pipe) is used or has been used with wrenches and/or any modification made to wrench.

Handle lengths are designed for MAXIMUM twisting load.



1.5MM (0.0591) @ 60° SERRATED

For: Kitagawa, Matsumoto, Howa, Seike, SamChully & Strong



3 holes are available –
 Call for pricing

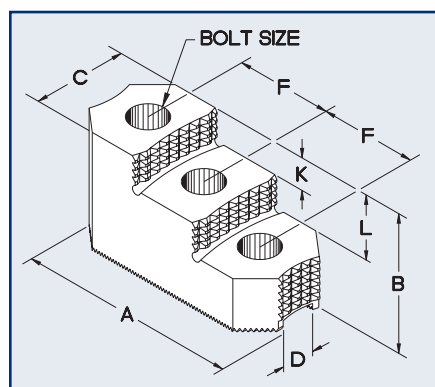
Mild Steel Standard
 Aluminum Available

Chuck Size	Soft Jaws								Extra Length/Pointed			
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
4" Kitagawa	HR-4K-1.0-P	2	1	1	.316	.375	.600	5MM				
5" Howa Solid	HR-138-1.0-P	2-5/16	1	1	.395	.313	.750	8MM				
	HR-138-1.5-P	2-5/16	1-1/2	1	.395	.313	.750	8MM				
5" Kitagawa	HR-135-1.5-P	2-5/16	1-1/2	1	.395	.313	.708	8MM				
5" Nikko	HR-50-1.5-P	2-3/8	1-1/2	1	.433	.438	.669	8MM				
	HR-50-2.0-P	2-3/8	2	1	.433	.438	.669	8MM				
6" Nikko	HR-6B-1.5-P	3-1/8	1-1/2	1	.433	.438	.969	8MM				
	HR-6B-2.0-P	3-1/8	2	1	.433	.438	.969	8MM				
6" Matsumoto	HR-6B-3.0-P	3-1/8	3	1	.433	.438	.969	8MM				
	HR-6K-1.5-P	3-1/8	1-1/2	1-1/4	.472	.438	.787	10MM				
6" Kitagawa	HR-6K-2.0-P	3-1/8	2	1-1/4	.472	.438	.787	10MM				
	HR-6K-3.0-P	3-1/8	3	1-1/4	.472	.438	.787	10MM				
Howa HO12MB (3 HLS)	HR-146-2.5-P	3-1/2	2-1/2	1-1/2	.827	.500	.984	12MM				
8" Kitagawa (208)	HR-149-1.5	3-1/2	1-1/2	1-1/2	.551	.781	1.000	12MM	HR-149-1.5-0	4-1/4	HR-149-1.5-OP	4-1/4
	HR-149-2.0	3-1/2	2	1-1/2	.551	.781	1.000	12MM	HR-149-2.0-0	4 1/4	HR-149-2.0-OP	4 1/4
	HR-149-2.5	3-1/2	2-1/2	1-1/2	.551	.781	1.000	12MM	HR-149-2.5-0	4-1/4	HR-149-2.5-OP	4-1/4
	HR-149-3.5	3-1/2	3-1/2	1-1/2	.551	.781	1.000	12MM	HR-149-3.5-0	4-1/4	HR-149-3.5-OP	4-1/4
8" Matsumoto	HR-149-5.0	3-1/2	5	1-1/2	.551	.781	1.000	12MM	HR-149-5.0-0	4-1/4	HR-149-5.0-OP	4-1/4
	HR-80-1.5	4	1-1/2	1-1/2	.551	.945	1.181	10MM				
8" Howa HO7MA-8	HR-80-2.5	4	2-1/2	1-1/2	.551	.945	1.181	10MM				
	HR-81-1.5	4	1-1/2	1-1/2	.630	.650	.984	12MM	HR-81-1.5-0	5	HR-81-1.5-OP	5
10" Howa Solid	HR-81-2.5	4	2-1/2	1-1/2	.630	.650	.984	12MM	HR-81-2.5-0	5	HR-81-2.5-OP	5
	HR-81-3.5	4	3-1/2	1-1/2	.630	.650	.984	12MM	HR-81-3.5-0	5	HR-81-3.5-OP	5
HO7MA-10	HR-82-2.0	4	2	1-3/4	.630	.650	1.181	12MM	HR-82-2.0-0	5	HR-82-2.0-OP	5
	HR-82-2.5	4	2-1/2	1-3/4	.630	.650	1.181	12MM	HR-82-2.5-0	5	HR-82-2.5-OP	5
B-10 Kitagawa	HR-82-3.5	4	3-1/2	1-3/4	.630	.650	1.181	12MM	HR-82-3.5-0	5	HR-82-3.5-OP	5
	HR-82-5.0	4	5	1-3/4	.630	.650	1.181	12MM	HR-82-5.0-0	5	HR-82-5.0-OP	5
B-210 Kitagawa	HR-85-2.0	4	2	1-1/2	.630	.650	1.266	12MM	HR-85-2.0-0	5	HR-85-2.0-OP	5
	HR-85-4.0	4	4	1-1/2	.630	.650	1.266	12MM	HR-85-4.0-0	5	HR-85-4.0-OP	5
11" Matsumoto	HR-87-1.75	4	1-3/4	1-3/4	.827	.625	1.181	16MM	HR-87-1.75-0	5	HR-87-1.75-OP	5
	HR-95-2.5	4-13/16	2-1/2	1-3/4	.827	1.190	1.578	20MM				
10" Seike	HR-95-3.5	4-13/16	3-1/2	1-3/4	.827	1.190	1.578	20MM				
	HR-95-5.0	4-13/16	5	1-3/4	.827	1.190	1.578	20MM				
10" Howa HO12MA-10	HR-108-2.0	5-1/4	2	2	.710	1.188	1.181	14MM	HR-108-2.0-0	6-1/4	HR-108-2.0-OP	6-1/4
	HR-108-2.5	5-1/4	2 1/2	2	.710	1.188	1.181	14MM	HR-108-2.5-0	6-1/4	HR-108-2.5-OP	6-1/4
12" Matsumoto	HR-108-3.5	5-1/4	3 1/2	2	.710	1.188	1.181	14MM	HR-108-3.5-0	6-1/4	HR-108-3.5-OP	6-1/4
	HR-108-5.0	5-1/4	5	2	.710	1.188	1.181	14MM	HR-108-5.0-0	6-1/4	HR-108-5.0-OP	6-1/4
B-12 Kitagawa	HR-112-2.0	5-1/4	2	2	.827	1.188	1.181	16MM	HR-112-2.0-0	6-1/4	HR-112-2.0-OP	6-1/4
	HR-112-2.5	5-1/4	2-1/2	2	.827	1.188	1.181	16MM	HR-112-2.5-0	6-1/4	HR-112-2.5-OP	6-1/4
	HR-112-3.5	5-1/4	3-1/2	2	.827	1.188	1.181	16MM	HR-112-3.5-0	6-1/4	HR-112-3.5-OP	6-1/4
	HR-112-5.0	5-1/4	5	2	.827	1.188	1.181	16MM	HR-112-5.0-0	6-1/4	HR-112-5.0-OP	6-1/4
B-212 Kitagawa	HR-125-2.5	5-1/4	2-1/2	1-3/4	.788	1.188	1.375	12MM	HR-125-2.5-0	6-1/4	HR-125-2.5-OP	6-1/4
	HR-125-3.5	5 1/4	3-1/2	1-3/4	.788	1.188	1.375	12MM	HR-125-3.5-0	6-1/4	HR-125-3.5-OP	6-1/4
10" - 12" Nikko	HR-147-2.5	5	2-1/2	2	.827	1.190	1.375	16MM	HR-147-2.5-0	6	HR-147-2.5-OP	6
	HR-147-3.5	5	3-1/2	2	.827	1.190	1.375	16MM	HR-147-3.5-0	6	HR-147-3.5-OP	6
12" Howa-HO27M12	HR-150-2.5	5-5/16	2-1/2	2-1/2	1.022	1.190	1.969	22MM	HR-150-2.5-0	6-5/16	HR-150-2.5-OP	6-5/16
	HR-150-3.5	5-5/16	3-1/2	2-1/2	1.022	1.190	1.969	22MM	HR-150-3.5-0	6-5/16	HR-150-3.5-OP	6-5/16
New 12" Howa	HR-151-2.5	6	2 1/2	2-1/2	1.022	1.190	1.656	20MM	HR-151-2.5-0	7	HR-151-2.5-OP	7
	HR-155-2.5	6-1/2	2-1/2	2-1/2	.866	1.400	1.690	20MM	HR-155-2.5-0	7-1/2	HR-155-2.5-OP	7-1/2
B-15 Kitagawa	HR-155-3.5	6-1/2	3-1/2	2-1/2	.866	1.400	1.690	20MM	HR-155-3.5-0	7-1/2	HR-155-3.5-OP	7-1/2
	HR-155-5.0	6-1/2	5	2-1/2	.866	1.400	1.690	20MM	HR-155-5.0-0	7-1/2	HR-155-5.0-OP	7-1/2
B-18 (New)	HR-115-2.5	6-1/2	2-1/2	2-1/2	1.000	1.400	1.690	20MM	HR-115-2.5-0	7-1/2	HR-115-2.5-OP	7-1/2
	HR-115-3.5	6-1/2	3-1/2	2-1/2	1.000	1.400	1.690	20MM	HR-115-3.5-0	7-1/2	HR-115-3.5-OP	7-1/2
B-215 Kitagawa	HR-115-5.0	6-1/2	5	2-1/2	1.000	1.400	1.690	20MM	HR-115-5.0-0	7-1/2	HR-115-5.0-OP	7-1/2
	HR-160-2.5	6-1/4	2-1/2	2	.827	1.500	1.771	16MM	HR-160-2.5-0	7-1/4	HR-160-2.5-OP	7-1/4
14" - 16" Nikko	HR-160-3.5	6-1/4	3-1/2	2	.827	1.500	1.771	16MM	HR-160-3.5-0	7-1/4	HR-160-3.5-OP	7-1/4

For: Kitagawa, Matsumoto, Howa, Seike, SamChully & Strong

Double Step Reversible Hard Jaws

Chuck Size	Kitagawa	Matsumoto								
	Part No.	Part No.	A	B	C	D	F	K	L	Bolt
6"	HR-6K-RJ		3	1.969	1-1/4	.472	.787	.500	1.000	10MM
6"		HR-6B-RJ	3	1.969	1-1/4	.433	.969	.500	1.000	8MM
8"	HR-149-RJ	HR-149-RJ	3-1/2	1.969	1-1/2	.551	1.000	.530	1.060	12MM
	HR-81-RJ	HR-81-RJ	4-1/4	2.500	1-3/4	.630	.984	.650	1.300	12MM
10"	HR-82-RJ	HR-82-RJ	4-1/4	2.469	1-3/4	.630	1.181	.650	1.300	12MM
11"		HR-82-RJ	4-1/4	2.469	1-3/4	.630	1.181	.650	1.300	12MM
12" (B-12)	HR-108-RJ	HR-108-RJ	4-7/8	2.469	2	.710	1.181	.650	1.300	14MM
12" (B-212)	HR-112-RJ		4-7/8	2.469	2	.827	1.181	.650	1.300	16MM
12" Howa H027M12		HR-147-RJ	4-7/8	2.500	1-3/4	.827	1.375	.650	1.300	16MM
15" (B-15)	HR-155-RJ		5 1/2	3.469	2-1/2	.866	1.690	.950	1.900	20MM
15" (B-215)	HR-115-RJ		5-1/2	3.469	2-1/2	1.000	1.690	.950	1.900	20MM

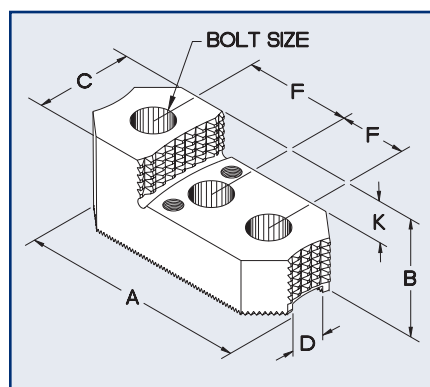

SPECIAL HARD JAWS

MADE TO ORDER

**QUICK CHANGE
JAW SYSTEMS**

MADE TO ORDER

CALL FOR MORE INFORMATION


Single Step Reversible Hard Jaws

Chuck Size	Kitagawa	Matsumoto							
	Part No.	Part No.	A	B	C	D	F	K	Bolt
6"		HR-6B-RJ-SS	3	1.969	1-1/4	.433	.969	1.000	8MM
6"	HR-6K-RJ-SS		3	1.969	1-1/4	.472	.787	1.000	10MM
8"	HR-149-RJ-SS	HR-149-RJ-SS	3-1/2	1.969	1-1/2	.551	1.000	1.030	12MM
10"	HR-82-RJ-SS	HR-82-RJ-SS	4-1/4	2.469	1-3/4	.630	1.181	1.250	12MM
11"		HR-82-RJ-SS	4-1/4	2.469	1-3/4	.630	1.181	1.250	12MM
12" (B-12)	HR-108-RJ-SS	HR-108-RJ-SS	4-7/8	2.469	2	.710	1.181	1.300	14MM
12" (B-212)	HR-112-RJ-SS		4-7/8	2.469	2	.827	1.181	1.300	16MM
15" (B-15)	HR-155-RJ-SS		5-1/2	3.469	2-1/2	.866	1.690	1.900	20MM
15" (B-215)	HR-115-RJ-SS		5-1/2	3.469	2-1/2	1.000	1.690	1.900	20MM

Autoblok Chuck Series ALM-BHM-BBM

Chuck Size	Soft Jaws								Extra Length/Pointed			
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
165 AND/ALM/BHM 165/175(6.5) Autoblok 175 BBM	AB-M175-1.5	2-3/4	1-1/2	1-1/4	.472	.63	.787	10MM	AB-M175-1.5-0	3-1/2	AB-M175-1.5-OP	3-1/2
	AB-M175-2.0	2-3/4	2	1-1/4	.472	.63	.787	10MM	AB-M175-2.0-0	3-1/2	AB-M175-2.0-OP	3-1/2
	AB-M175-3.0	2-3/4	3	1-1/4	.472	.63	.787	10MM	AB-M175-3.0-0	3-1/2	AB-M175-3.0-OP	3-1/2
210 ANM/ALM 210(8.3) Autoblok Bhm/rcm/bbm	AB-M210-1.5	3-1/2	1-1/2	1-1/2	.669	.79	.906	12MM	AB-M210-1.5-0	4-1/4	AB-M210-1.5-OP	4-1/4
	AB-M210-2.0	3-1/2	2	1-1/2	.669	.79	.906	12MM	AB-M210-2.0-0	4-1/4	AB-M210-2.0-OP	4-1/4
	AB-M210-3.5	3-1/2	3-1/2	1-1/2	.669	.79	.906	12MM	AB-M210-3.5-0	4-1/4	AB-M210-3.5-OP	4-1/4
305 RCM 315(12.5) Autoblok 315 ANM/BHM/GHM	AB-M315-2.5	5	2-1/2	2	.827	.87	1.180	16MM	AB-M315-2.5-0	6	AB-M315-2.5-OP	6
	AB-M315-3.5	5	3-1/2	2	.827	.87	1.180	16MM	AB-M315-3.5-0	6	AB-M315-3.5-OP	6
	AB-M315-5.0	5	5	2	.827	.87	1.180	16MM	AB-M315-5.0-0	6	AB-M315-5.0-OP	6
400(16) Autoblok 400ANM	AB-M400-2.5	5-1/2	2-1/2	2-1/2	1.003	1.062	1.496	20MM	AB-M400-2.5-0	6-1/2	AB-M400-2.5-OP	6-1/2
	AB-M400-3.5	5-1/2	3-1/2	2-1/2	1.003	1.062	1.496	20MM	AB-M400-3.5-0	6-1/2	AB-M400-3.5-OP	6-1/2
	AB-M400-5.0	5-1/2	5	2-1/2	1.003	1.062	1.496	20MM	AB-M400-5.0-0	6-1/2	AB-M400-5.0-OP	6-1/2

1.5MM (0.0591) @ 60° SERRATED

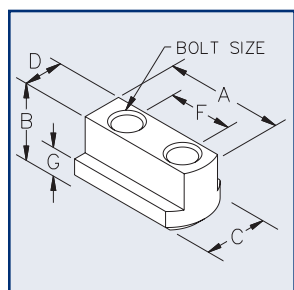
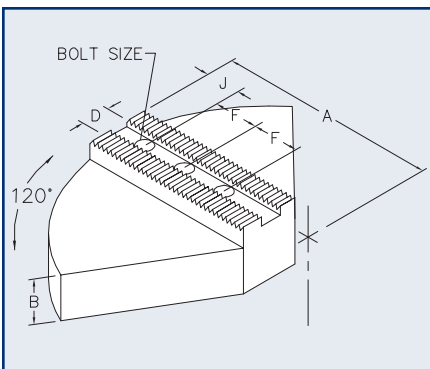
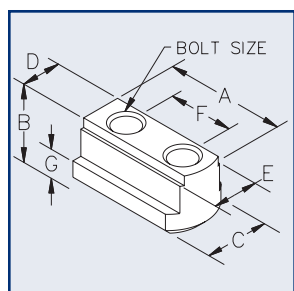
For: Kitagawa, Nikko,
 Matsumoto, Howa, Seike,
 SamChully & Strong

**ADD TO PART
 NUMBER**

“AL” - for Aluminum

“CI” - for Cast Iron

“ST” - for Steel


**Double Step
 Jaw Nut**


Chuck Size	Full Wrap Jaws							
	Part No.	A	B	D	J	F	Holes	Bolt
6"	HR-6B-2-	3	2	.433	.750	.969	2	8MM
	HR-6B-4-	3	4	.433	.750	.969	2	8MM
	HR-6K-2-	3	2	.475	.750	.787	3	10MM
	HR-6K-4-	3	4	.475	.750	.787	3	10MM
8"	HR-149-2-	4	2	.551	.781	1.000	3	12MM
	HR-149-4-	4	4	.551	.781	1.000	3	12MM
10"	HR-82-2-	5	2	.630	.750	1.181	3	12MM
	HR-82-4-	5	4	.630	.750	1.181	3	12MM
12"	HR-108-2-	6	2	.710	1.000	1.181	3	14MM
	HR-108-4-	6	4	.710	1.000	1.181	3	14MM
	HR-112-2-	6	2	.827	1.000	1.181	3	16MM
	HR-112-4-	6	4	.827	1.000	1.181	3	16MM
15"	HR-155-2-	7-1/2	2	.866	1.400	1.690	3	20MM
	HR-155-4-	7-1/2	4	.866	1.400	1.690	3	20MM
	HR-115-2-	7-1/2	2	1.000	1.400	1.690	3	20MM
	HR-115-4-	7-1/2	4	1.000	1.400	1.690	3	20MM

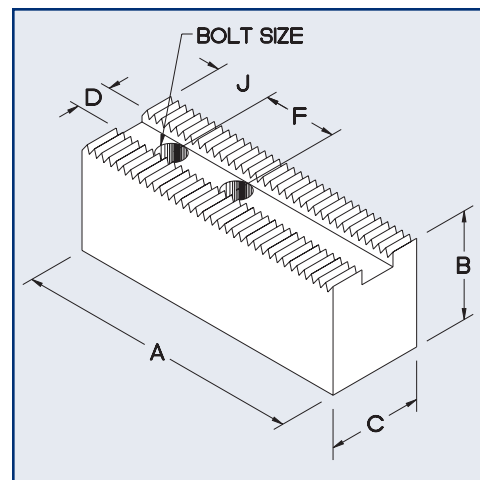
Chuck Size	Jaw Nuts							
	Part No.	A	B	C	D	F	G	Bolt
5" Kitagawa	JN-135-A	1-3/16	.612	.550	.394	.708	.215	5/16-18
6" Matsumoto	JN-6B-M	1-7/16	.885	.689	.430	.969	.295	8MM
	JN-6B-A							5/16-18
B-6" Kitagawa Howa-HO15M-6	JN-6K-M	1-7/16	.885	.689	.471	.786	.295	10MM
	JN-6K-A							3/8-16
6" Kitagawa B-206	JN-206-M	1-7/16	.728	.690	.472	.787	.295	10MM
8" Kitagawa 8" Matsumoto Howa HO7MA-8 Howa HO15-8	JN-149-M	1-7/8	.970	.807	.549	1.000	.340	12MM
	JN-149-A							1/2-13
8" Kitagawa B-208	JN-208-M	1-7/8	.810	.807	.549	1.000	.340	12MM
	JN-208-A							1/2-13
10" Howa HO7MA-10/HO27M-8	JN-81-M	2	1.000	.910	.628	.984	.374	12MM
	JN-81-A							1/2-13
10" Kitagawa B-10 11" Matsumoto Howa HO1MA-10 B-10	JN-82-M	2	1.000	.910	.628	1.181	.340	12MM
	JN-82-A							1/2-13
10" Kitagawa B-210	JN-210-M	2	.850	.885	.628	1.181	.340	12MM
	JN-210-A							1/2-13
10" Howa Hollow HO7MA-15	JN-95-M	2-1/2	1.141	1.000	.825	1.578	.413	20MM
	JN-95-A							3/4-10
HO27M-12	JN-147-A	2-1/2	1.141	1.000	.825	1.378	.413	5/8-11
12" Kitagawa B-12 12" Matsumoto 10" Howa HO1MA-12 HO7MA-12	JN-108-M	2-1/4	1.250	1.040	.708	1.181	.530	14MM
	JN-108-A							9/16-12
12" Kitagawa B-212	JN-112-M	2-3/16	1.095	1.160	.826	1.181	.455	16MM
	JN-112-A							5/8-11
10" -12" Nikko Hollow	JN-125-A	2-3/16	1.320	1.040	.787	1.375	.531	1/2-13
15" Kitagawa B-15	JN-155-M	3-1/4	1.750	1.320	.864	1.690	.625	20MM
	JN-155-A							3/4-10
15" Kitagawa B-215	JN-115-M	3-5/32	1.545	1.375	.998	1.693	.742	20MM
	JN-115-A							3/4-10

Chuck Size	Double Step Jaw Nuts								
	Part No.	A	B	C	D	E	F	G	Bolt
B-12 to B-212	JN-220-A	2.188	1.120	1.159	.708	.826	1.181	.454	9/16-12
	JN-220-M								14MM
B-15	JN-B15-A	3.150	1.772	1.315	.866	.944	1.693	.630	3/4-10
	JN-B15-M								20MM

For: Kitagawa, Matsumoto, Howa, Pratt Burnerd America & Seike

“P” - means Pointed Jaw
 “O” - means Offset Jaw
 “OP” - means Offset Pointed Jaw

3 holes are available –
 Call for pricing



Chuck Size	Soft Jaws								Extra Length/Pointed			
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
8"	HR-83-2.5	4	2-1/2	1-1/2	.551	1	1	12MM				
	HR-83-3.5	4	3-1/2	1-1/2	.551	1	1	12MM				
10" - 12" Howa Solid	HR-113-1.5	4	1-1/2	1-1/2	.630	.650	1.181	12MM	HR-113-1.5-O	5	HR-113-1.5-OP	5
	HR-113-2.5	4	2-1/2	1-1/2	.630	.650	1.181	12MM	HR-113-2.5-O	5	HR-113-2.5-OP	5
	HR-113-3.5	4	3-1/2	1-1/2	.630	.650	1.181	12MM	HR-113-3.5-O	5	HR-113-3.5-OP	5
10" - 12"	HR-123-2.5	4-3/4	2-1/2	1-1/2	.591	1.250	1.181	12MM	HR-123-2.5-O	5-1/2	HR-123-2.5-OP	5-1/2
	HR-123-3.5	4-3/4	3-1/2	1-1/2	.591	1.250	1.181	12MM	HR-123-3.5-O	5-1/2	HR-123-3.5-OP	5-1/2
12" - 14" Howa Solid	HR-143-2.5	5-1/4	2-1/2	2	.710	1.188	1.181	14MM	HR-143-2.5-O	6-1/4	HR-143-2.5-OP	6-1/4
	HR-143-3.5	5-1/4	3-1/2	2	.710	1.188	1.181	14MM	HR-143-3.5-O	6-1/4	HR-143-3.5-OP	6-1/4
	HR-143-5.0	5-1/4	5	2	.710	1.188	1.181	14MM	HR-143-5.0-O	6-1/4	HR-143-5.0-OP	6-1/4
15" - 18" Matsumoto	HR-153-2.5	6	2-1/2	2-1/2	.866	1.250	1.968	20MM	HR-153-2.5-O	7	HR-153-2.5-OP	7
	HR-153-3.5	6	3-1/2	2-1/2	.866	1.250	1.968	20MM	HR-153-3.5-O	7	HR-153-3.5-OP	7
	HR-153-5.0	6	5	2-1/2	.866	1.250	1.968	20MM	HR-153-5.0-O	7	HR-153-5.0-OP	7
15" Howa H(01)07MA-15	HR-157-2.5	5-1/4	2-1/2	2	.827	1.188	1.578	16MM	HR-157-2.5-O	6-1/4	HR-157-2.5-OP	6-1/4
	HR-157-3.5	5-1/4	3-1/2	2	.827	1.188	1.578	16MM	HR-157-3.5-O	6-1/4	HR-157-3.5-OP	6-1/4
	HR-157-5.0	5-1/4	5	2	.827	1.188	1.578	16MM	HR-157-5.0-O	6-1/4	HR-157-5.0-OP	6-1/4
18" - 20" Howa	HR-183-2.5	6-1/4	2-1/2	2-1/2	1.022	1.500	1.968	20MM	HR-183-2.5-O	7-1/2	HR-183-2.5-OP	7-1/2
	HR-183-3.5	6-1/4	3-1/2	2-1/2	1.022	1.500	1.968	20MM	HR-183-3.5-O	7-1/2	HR-183-3.5-OP	7-1/2
	HR-183-5.0	6-1/4	5	2-1/2	1.022	1.500	1.968	20MM	HR-183-5.0-O	7-1/2	HR-183-5.0-OP	7-1/2
18" Kitagawa	HR-203-2.5	7	2-1/2	2-1/2	.984	1.550	1.907	20MM	HR-203-2.5-O	8	HR-203-2.5-OP	8
	HR-203-3.5	7	3-1/2	2-1/2	.984	1.550	1.907	20MM	HR-203-3.5-O	8	HR-203-3.5-OP	8
	HR-203-5.0	7	5	2-1/2	.984	1.550	1.907	20MM	HR-203-5.0-O	8	HR-203-5.0-OP	8
21" Kitagawa	HR-213-2.5	7	2-1/2	2-1/2	.984	1.550	2.362	20MM	HR-213-2.5-O	8-1/2	HR-213-2.5-OP	8-1/2
	HR-213-3.5	7	3-1/2	2-1/2	.984	1.550	2.362	20MM	HR-213-3.5-O	8-1/2	HR-213-3.5-OP	8-1/2
	HR-213-5.0	7	5	2-1/2	.984	1.550	2.362	20MM	HR-213-5.0-O	8-1/2	HR-213-5.0-OP	8-1/2
24" Kitagawa	HR-223-2.5	8-1/2	2-1/2	2-1/2	.984	1.550	3.150	20MM	HR-223-2.5-O	10	HR-223-2.5-OP	10
	HR-223-3.5	8-1/2	3-1/2	2-1/2	.984	1.550	3.150	20MM	HR-223-3.5-O	10	HR-223-3.5-OP	10
	HR-223-5.0	8-1/2	5	2-1/2	.984	1.550	3.150	20MM	HR-223-5.0-O	10	HR-223-5.0-OP	10

3MM (.1181) @ 60° SERRATED

For: Kitagawa, Matsumoto, Howa, Pratt Burnerd America & Seike

SPECIAL HARD JAWS

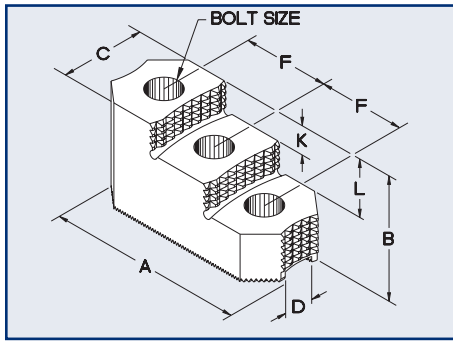
MADE TO ORDER

SEE PAGE 39 OR CALL FOR MORE INFORMATION

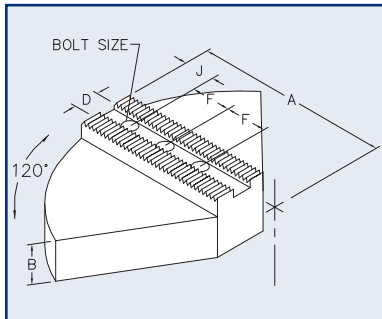
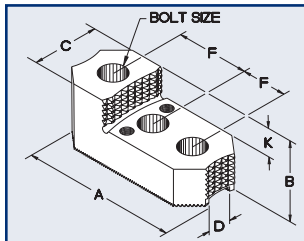
QUICK CHANGE JAW SYSTEMS

MADE TO ORDER

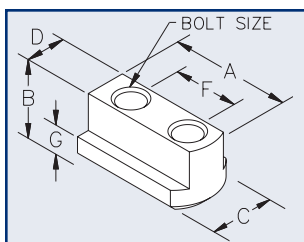
SEE PAGE 40 OR CALL FOR MORE INFORMATION



*JN-203-A Jaw Nut required.



ADD TO PART NUMBER
 "AL" - for Aluminum
 "CI" - for Cast Iron
 "ST" - for Steel



Kitagawa Reversible Hard Jaws									
Chuck Size	Part No.	A	B	C	D	F	K	L	Bolt
10"	HR-113-RJ	4-1/4	2.469	1-3/4	.630	1.181	.650	1.300	12MM
12"	HR-143-RJ	4-7/8	2.469	1-3/4	.710	1.181	.650	1.300	14MM
18"	HR-203-RJ *	6-1/2	3.469	2-1/2	.984	1.907	.950	1.900	20MM
21" - 24"	HR-213-RJ	7-3/8	3.469	2-1/2	.984	2.362	.950	1.900	20MM

Matsumoto Reversible Hard Jaws									
Chuck Size	Part No.	A	B	C	D	F	K	L	Bolt
15" - 18"	HR-153-RJ	6-1/2	3.469	2-1/2	.866	1.969	.950	1.900	20MM
HOWA	HR-183-RJ	6-1/2	3.469	2-1/2	1.022	1.969	.950	1.900	20MM

Single Step Hard Jaws								
Chuck Size	Part No.	A	B	C	D	F	K	Bolt
18"	HR-203-RJ-SS *	6-1/2	3.469	2-1/2	.984	1.907	1.900	20MM
15" - 18"	HR-153-RJ-SS	6-1/2	3.469	2-1/2	.866	1.964	1.900	20MM
21" - 24"	HR-213-RJ-SS	7-3/8	3.469	2-1/2	.984	2.362	1.900	20MM

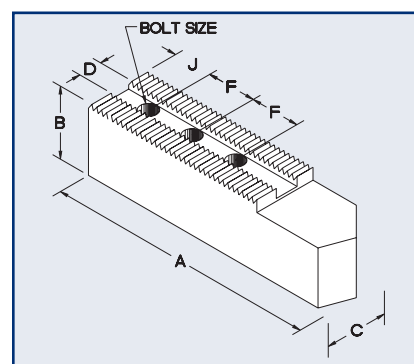
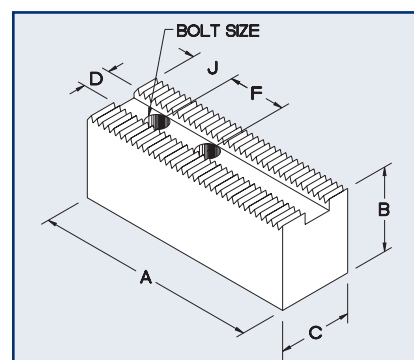
Full Wrap Jaws								
Chuck Size	Part No.	A	B	D	J	F	Holes	Bolt
15"	HR-153-2-	7-1/2	2	.866	1.187	1.969	3	20MM
	HR-153-4-	7-1/2	4	.866	1.187	1.969	3	20MM
	HR-157-2-	7-1/2	2	.827	1.187	1.578	3	16MM
	HR-157-4-	7-1/2	4	.827	1.187	1.578	3	16MM
18"	HR-203-3-	9	3	.984	1.500	1.907	3	20MM
	HR-203-4-	9	4	.984	1.500	1.907	3	20MM
21"	HR-213-3-	10-1/2	3	.984	1.500	2.362	3	20MM
	HR-213-4-	10-1/2	4	.984	1.500	2.362	3	20MM
24"	HR-223-3-	12	3	.984	2.000	3.150	3	20MM
	HR-223-4-	12	4	.984	2.000	3.150	3	20MM

Jaw Nuts								
Chuck Size	Part No.	A	B	C	D	G	F	Bolt
10" to 12" Howa Solid	JN-113-M	2	.875	.875	.630	.335	1.181	12MM
	JN-113-A							1/2-13
12" Howa HO7-MA-12	JN-108-M	2-1/16	1.250	1.040	.708	.530	1.181	14MM
	JN-108-A							9/16-12
18" - 20" Howa Howa HO27M-18	JN-183-M	3-1/4	1.575	1.339	1.022	.669	1.968	20MM
	JN-183-A							3/4-10
18" Kitagawa	JN-203-A	3-1/4	1.500	1.476	.984	.500	1.907	3/4-10
21" Kitagawa	JN-213-A	3-3/4	1.500	1.476	.984	.500	2.362	3/4-10
24" Kitagawa	JN-223-A	4-3/4	1.500	1.476	.984	.500	3.150	3/4-10
15" - 18" Matsumoto	JN-153-M	3-5/32	1.500	1.330	.864	.750	1.960	20MM
	JN-153-A	3-5/32	1.500	1.330	.864	.750	1.960	3/4-10
12" Pratt Burnerd	JN-26512	2-1/2	1.060	1.220	.825	.438	1.250	5/8-11
21" - 24" Kitagawa	HR-TN-213A	1-1/2	1.770	1.476	.984	.746		3/4-10
"T" Nut	HR-TN-213M	1-1/2	1.770	1.476	.984	.746		20MM

For: Cushman, Gamet, Erickson, Power Hold, Rohm, Autoblok, Forkhardt, SMW & Pratt Burnerd America

Chuck Size	Soft Jaws								Extra Length/Pointed			
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
5" - 6"	*HR-6-JSH	3-1/8	1-1/2	1-1/4	.433	.437	.718	5/16	*ASTERISK MEANS 2 HOLES ONLY			
	*HR-6-JEH	3-1/8	3	1-1/4	.433	.437	.718	5/16				
	*HR-WB-11-90	3-1/2	2-1/2	1-1/2	.669	.600	.866	1/2				
	*HR-WB-11-70	2-3/4	2-1/2	1-1/2	.669	.600	.866	1/2				
8" - 10"	HR-10-JSH	4-1/4	2	1-1/2	.551	.562	.875	3/8	HR-10-JSH-O	5	HR-10-JSH-OP	5
	HR-10-JEH	4-1/4	3-1/2	1-1/2	.551	.562	.875	3/8	HR-10-JEH-O	5	HR-10-JEH-OP	5
10" HD	HR-11-JSH	4-5/8	2	1-3/4	.788	.625	1.187	1/2	HR-11-JSH-O	5-1/4	HR-11-JSH-OP	5-1/4
	HR-11-JEH	4-5/8	3-1/2	1-3/4	.788	.625	1.187	1/2	HR-11-JEH-O	5-1/4	HR-11-JEH-OP-OP	5-1/4
	HR-11-JEH-4	4-5/8	4	1-3/4	.788	.625	1.187	1/2	HR-11-JEH-4-O	5-1/4	HR-11-JEH-4-OP	5-1/4
11" - 12"	*HR-WB-12	4-3/4	3	2	.827	1.187	1.125	5/8	HR-WB-12-O	5-3/4	HR-WB-12-OP	5-3/4
	HR-12-JSH	5-1/4	2-1/2	1-3/4	.788	.625	1.187	1/2	HR-12-JSH-O	6-1/4	HR-12-JSH-OP	6-1/4
	HR-12-JEH	5-1/4	3-1/2	1-3/4	.788	.625	1.187	1/2	HR-12-JEH-O	6-1/4	HR-12-JEH-OP	6-1/4
	HR-12-JEH-4	5-1/4	4	1-3/4	.788	.625	1.187	1/2	HR-12-JEH-4-O	6-1/4	HR-12-JEH-4-OP	6-1/4
14" - 15"	*HR-WB-13	5-1/2	3-1/2	2-1/4	1.003	1.187	1.375	20MM	HR-WB-13-O	6-1/4	HR-WB-13-OP	6-1/4
	HR-15-JSH	6-5/8	2-1/2	1-3/4	.826	.750	1.562	5/8	HR-15-JSH-O	7-1/2	HR-15-JSH-OP	7-1/2
	HR-15-JEH	6-5/8	3-1/2	1-3/4	.826	.750	1.562	5/8	HR-15-JEH-O	7-1/2	HR-15-JEH-OP	7-1/2
	HR-15-JEH-4	6-5/8	4	1-3/4	.826	.750	1.562	5/8	HR-15-JEH-4-O	7-1/2	HR-15-JEH-4-OP	7-1/2
	HR-15-JEH-5	6-5/8	5	1-3/4	.826	.750	1.562	5/8	HR-15-JEH-5-O	7-1/2	HR-15-JEH-5-OP	7-1/2
18"	HR-18-JSH	6-5/8	2-1/2	2	.826	.750	1.562	5/8	HR-18-JSH-O	7-1/2	HR-18-JSH-OP	7-1/2
	HR-18-JEH	6-5/8	3-1/2	2	.826	.750	1.562	5/8	HR-18-JEH-O	7-1/2	HR-18-JEH-OP	7-1/2
	HR-18-JEH-5	6-5/8	5	2	.826	.750	1.562	5/8	HR-18-JEH-5-O	7-1/2	HR-18-JEH-5-OP	7-1/2
18" HD Gamet	HR-18-HD	8	3	2-1/2	1.181	.750	1.970	20MM				
	HR-18-HD-EH	8	5	2-1/2	1.181	.750	1.970	20MM				

Chuck Size	Pratt Burnerd							
	Part No.	A	B	C	D	J	F	Bolt
6½"	2740-17512	2-1/2	1-1/2	1	.475	.312	.718	5/16
	2860-17512	2-3/4	1-1/2	1-1/4	.475	.500	.830	1/2
8"	2740-21512	3	1-3/4	1-1/4	.670	.312	.875	5/16
	2860-21512	3-3/16	2	1-1/2	.669	.500	1.000	1/2
10"	2740-26512	3-1/2	2	1-1/2	.827	.500	1.000	1/2
	2860-26512	4	2-1/4	1-3/4	.827	.750	1.250	5/8
12½"	2740-32512	4-1/2	2-1/4	1-1/2	.827	.500	1.187	1/2
	2860-32512	4-1/2	2-1/2	2	.827	.625	1.250	5/8
14"	2740-32512	4-1/2	2-1/4	1-1/2	.827	.500	1.187	1/2
16"	2860-40512	6	3	2	1.000	.750	1.750	3/4
SMW 2 Holes								
6½"	11-6.5-2	3-1/2	2	1-1/2	.551	.437	.984	3/8
8"	11-8-2.0	3-1/2	2	1-1/2	.669	.500	1.130	1/2
	11-8-3.5	3-1/2	3-1/2	1-1/2	.669	.500	1.130	1/2
10" - 12½" L	11-12.5-2.5	4-3/4	2-1/2	2	.827	1.125	1.187	1/2
	11-12.5-3.5	4-3/4	3-1/2	2	.827	1.125	1.187	1/2
	11-12.5-5.0	4-3/4	5	2	.827	1.125	1.187	1/2
SMW 3 Holes								
5"	12-5-1.5-P	2-1/2	1-1/2	1	.433	.437	.600	5/16
6½"	12-6.5-1.5-P	3-1/4	1-1/2	1-1/2	.552	.437	.875	3/8
	12-6.5-2.5-P	3-1/4	2-1/2	1-1/2	.552	.437	.875	3/8
8"	12-8-2.0-P	4-1/4	2	1-1/2	.669	.500	.875	1/2
	12-8-3.5-P	4-1/4	3-1/2	1-1/2	.669	.500	.875	1/2
10" - 12½" L	12-12.5-2.5-P	5-1/4	2-1/2	2	.827	.625	1.187	1/2
	12-12.5-3.5-P	5-1/4	3-1/2	2	.827	.625	1.187	1/2
	12-12.5-5.0-P	5-1/4	5	2	.827	.625	1.187	1/2

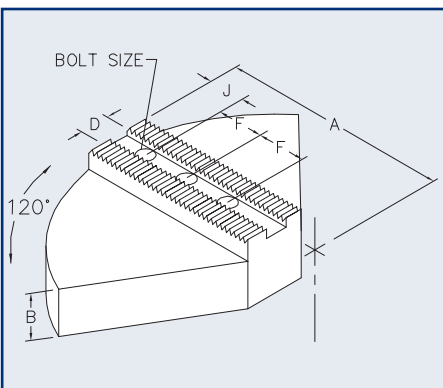
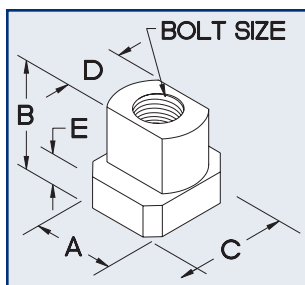
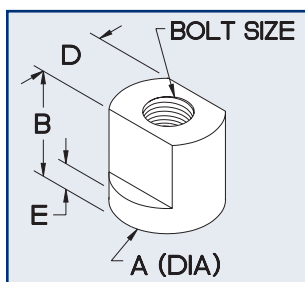
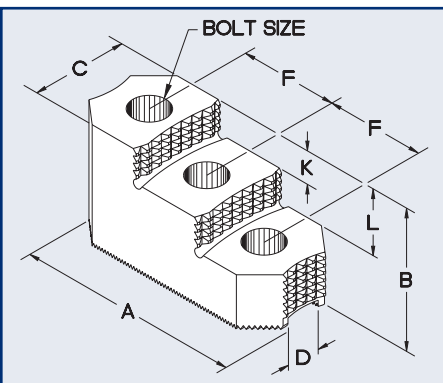


Autoblok Chuck Series HDB-BHD-RCD-BBD

Chuck Size	Soft Jaws								Extra Length/Pointed			
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
125 AND/ALD Autoblok 130BHD & 140BBD	AB-D140-1.5-P	2-3/8	1-1/2	1-1/4	.472	.595	.63	8MM				
	AB-D140-2.0-P	2-3/8	2	1-1/4	.472	.595	.63	8MM				
	AB-D210-1.5	3-1/2	1-1/2	1-1/2	.669	.787	.906	12MM	AB-D210-1.5-O	4-1/4	AB-D210-1.5-OP	4-1/4
210(8) Autoblok	AB-D210-2.0	3-1/2	2	1-1/2	.669	.787	.906	12MM	AB-D210-2.0-O	4-1/4	AB-D210-2.0-OP	4-1/4
	AB-D210-3.5	3-1/2	3-1/2	1-1/2	.669	.787	.906	12MM	AB-D210-3.5-O	4-1/4	AB-D210-3.5-OP	4-1/4
AND/ALD/BHD/BBD/RCD	AB-D250-2.5	4	2-1/2	2	.827	.787	1.181	16MM	AB-D250-2.5-O	5	AB-D250-2.5-OP	5
	AB-D250-3.5	4	3-1/2	2	.827	.787	1.181	16MM	AB-D250-3.5-O	5	AB-D250-3.5-OP	5
	AB-D250-5.0	4	5	2	.827	.787	1.181	16MM	AB-D250-5.0-O	5	AB-D250-5.0-OP	5
200 CLD & 315 BBD 200/315(12) Autoblok 250 All Models	AB-D315-2.5	5	2-1/2	2	.827	.870	1.181	16MM	AB-D315-2.5-O	6	AB-D315-2.5-OP	6
	AB-D315-3.5	5	3-1/2	2	.827	.870	1.181	16MM	AB-D315-3.5-O	6	AB-D315-3.5-OP	6
	AB-D315-5.0	5	5	2	.827	.870	1.181	16MM	AB-D315-5.0-O	6	AB-D315-5.0-OP	6

1/16" @ 90° SERRATED

For: Cushman, Gamet, Erickson, Power Hold, Rohm, Autoblok, Forkhardt, SMW & Pratt Burnerd America



ADD TO PART NUMBER
 "AL" - for Aluminum
 "CI" - for Cast Iron
 "ST" - for Steel

Reversible Hard Jaws

Chuck Size	SMW								
	Part No.	A	B	C	D	F	K	L	Bolt
6½"	HR-11-6.5-RJ	3	2	1-1/4	.551	.865	3/8	3/4	3/8
8"	HR-11-8-RJ	3-1/2	1.969	1-1/2	.669	.945	.530	1.060	1/2
10" - 12"L	HR-11-12.5-RJ	4-7/8	2.469	1-3/4	.827	1.181	.650	1.300	1/2
Chuck Size	Pratt Burnerd								
	Part No.	A	B	C	D	F	K	L	Bolt
6½"	HR-16-6.5-RJ	3	2	1-1/4	.510	.719	3/8	3/4	5/16
8"	HR-16-8-RJ	3-9/16	2	1-1/2	.669	.875	3/8	3/4	3/8
10"	HR-16-10-RJ	4-1/4	2-1/2	1-1/2	.827	.980	1/2	1	1/2
Chuck Size	Others								
	Part No.	A	B	C	D	F	K	L	Bolt
5" - 6"	HR-6-JSH-RJ	3	2	1-1/4	.433	.719	1/2	1	5/16
8" - 10"	HR-10-JSH-RJ	3-1/2	2	1-1/2	.551	.875	1/2	1	3/8
11" - 12"	HR-12-JSH-RJ	4-1/4	2.469	1-3/4	.788	1.181	.650	1.300	1/2
14" - 15"	HR-15-JSH-RJ	4-7/8	2.469	1-3/4	.827	1.562	.650	1.300	5/8
18"	HR-18-HD-RJ	6-1/2	3.469	2-1/2	1.181	1.970	.950	1.900	3/4

SMW "T" Nuts

Chuck Size	Part No.	A	B	D	E	Bolt
5" SP-125	HR-TN-SMW-125	.630	.850	.433	.300	5/16-18
6½" SP-160	HR-TN-SMW-160	.790	1.040	.551	.370	3/8-16
8" SP-200	HR-TN-SMW-200	.910	1.080	.669	.370	1/2-13
10" - 12½" SP-250	HR-TN-BB-250/315	1.100	1.180	.826	.430	1/2-13
12½"	HR-TN-15	1.100	1.180	.826	.430	5/8-11

Forkhardt "T" Nuts

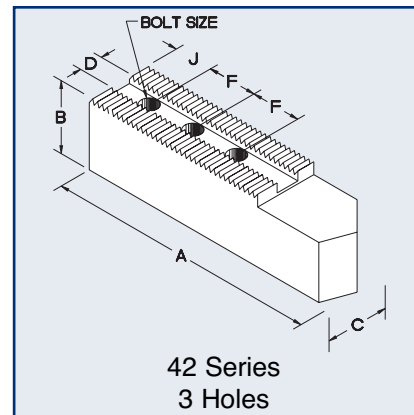
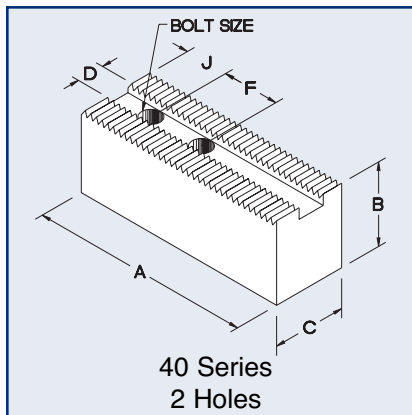
Chuck Size	Part No.	A	B	C	D	E	Bolt
FN-315	HR-TN-FN-315	.934	1.065	1.125	.830	.433	5/8-11
FN-230	HR-TN-FN-230	.551	.669	.669	.472	.276	M8
FN-293	HR-TN-FN-293	.590	.728	.708	.551	.314	M10
FN-231	HR-TN-FN-231	.748	.905	.866	.699	.354	M12
FN-232	HR-TN-FN-232	.925	1.063	1.122	.708	.433	M16
FN-233	HR-TN-FN-233	1.082	1.141	1.417	1.003	.433	M20
FN-187	HR-TN-FN-187	1.375	1.614	1.653	1.181	.590	M24

Full Wrap Jaws

Chuck Size	Part No.	A	B	D	F	J	Holes	Bolt
6"	HR-6JSH-2-	3	2	.433	.718	3/4	3	5/16
	HR-6JEH-4-	3	4	.433	.718	3/4	3	5/16
8"	HR-10JSH-2-	4	2	.551	.875	3/4	3	3/8
	HR-10JEH-4-	4	4	.551	.875	3/4	3	3/8
10" HD	HR-11JSH-2-	5	2	.788	1.187	3/4	3	1/2
	HR-11JEH-4-	5	4	.788	1.187	3/4	3	1/2
12"	HR-12JSH-2-	6	2	.788	1.187	1	3	1/2
	HR-12JEH-4-	6	4	.788	1.187	1	3	1/2
15"	HR-15JSH-2-	7-1/2	2	.826	1.563	1-3/16	3	5/8
	HR-15JEH-4-	7-1/2	4	.826	1.563	1-3/16	3	5/8
18" HD	HR-18HD-3-	9	3	1.181	1.970	1	3	.800
	HR-18HD-4-	9	4	1.181	1.970	1	3	.800
11" HD	HR-WB-12-2-	6	2	.827	1.125	1-1/4	3	5/8
	HR-WB-12-4-	6	4	.827	1.125	1-1/4	3	5/8
15"	HR-WB-13-2-	7-1/2	2	1.003	1.375	1-1/4	3	.800
	HR-WB-13-4-	7-1/2	4	1.003	1.375	1-1/4	3	.800
6½" SMW	HR-12-6.5-2-	3	2	.551	.875	3/4	3	3/8
	HR-12-6.5-4-	3	4	.551	.875	3/4	3	3/8
8" SMW	HR-12-8-2-	4	2	.669	.875	3/4	3	1/2
	HR-12-8-4-	4	4	.669	.875	3/4	3	1/2
10" SMW	HR-11-12.5-2-	5	2	.827	1.187	3/4	3	1/2
	HR-11-12.5-4-	5	4	.827	1.187	3/4	3	1/2
12½" SMW	HR-12-12.5-2-	6	2	.827	1.187	1	3	1/2
	HR-12-12.5-4-	6	4	.827	1.187	1	3	1/2

For: SMW, Rohm, Forkhardt, "BIG BORE" Chucks & Autoblok

SPECIAL HARD JAWS
MADE TO ORDER
QUICK CHANGE JAW SYSTEMS
MADE TO ORDER
CALL FOR MORE INFORMATION

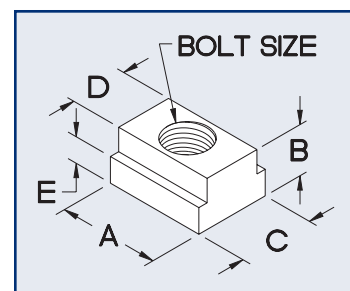
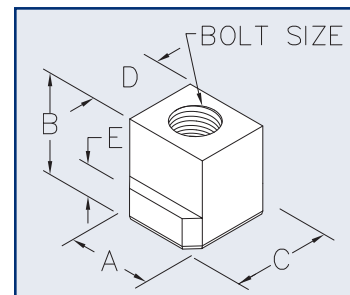


Chuck Size	Soft Jaws								Extra Length/Pointed			
	SMW											
	Part No.	A	B	C	D	J	F	Bolt	Part No.	A	Part No.	A
16" - 20" 400 Series 500 Series	HR-40-16	6-1/4	3	2-1/2	1.000	1-7/16	1.562	3/4				
	HR-40-16-5	6-1/4	5	2-1/2	1.000	1-7/16	1.562	3/4				
	HR-40-16-6	6-1/4	6	2-1/2	1.000	1-7/16	1.562	3/4				
	HR-42-16	8	3	2-1/2	1.000	1-3/8	1.562	3/4	HR-42-16-0	9	HR-42-16-OP	9
	HR-42-16-5	8	5	2-1/2	1.000	1-3/8	1.562	3/4	HR-42-16-5-0	9	HR-42-16-5-OP	9
	HR-42-16-6	8	6	2-1/2	1.000	1-3/8	1.562	3/4	HR-42-16-6-0	9	HR-42-16-6-OP	9
25" - 31 1/2" 630 Series 800 Series	HR-40-25	8-1/4	3-1/2	3-1/2	1.181	1-1/4	2.500	1.0				
	HR-40-25-5	8-1/4	5	3-1/2	1.181	1-1/4	2.500	1.0				
	HR-40-25-6	8-1/4	6	3-1/2	1.181	1-1/4	2.500	1.0				
	HR-42-25	11	3-1/2	3-1/2	1.181	1-1/2	2.500	1.0	HR-42-25-0	12	HR-42-25-OP	12
	HR-42-25-5	11	5	3-1/2	1.181	1-1/2	2.500	1.0	HR-42-25-5-0	12	HR-42-25-5-OP	12
	HR-42-25-6	11	6	3-1/2	1.181	1-1/2	2.500	1.0	HR-42-25-6-0	12	HR-42-25-6-OP	12
35" - 40" 850 Series 1000 Series	HR-40-35	10	3-1/2	3-1/2	1.181	2-3/4	2.750	1.0				
	HR-40-35-5	10	5	3-1/2	1.181	2-3/4	2.750	1.0				
	HR-42-35	12	3-1/2	3-1/2	1.181	2-3/4	2.750	1.0	HR-42-35-0	14	HR-42-35-OP	14
	HR-42-35-5	12	5	3-1/2	1.181	2-3/4	2.750	1.0	HR-42-35-5-0	14	HR-42-35-5-OP	14
Forkhardt												
16" - 20"	HR-WB-23	6	3-1/2	2-1/2	1.000	1.181	1.375	.800	HR-WB-23-0	8	HR-WB-23-OP	8
	HR-WB-23-5	6	5	2-1/2	1.000	1.181	1.375	.800	HR-WB-23-5-0	8	HR-WB-23-5-OP	8
25" - 31 1/2"	HR-250	10	3-1/2	2-1/2	1.000	.787	1.771	.800	HR-250-0	12	HR-250-OP	12
	HR-250-5	10	5	2-1/2	1.000	.787	1.771	.800	HR-250-5-0	12	HR-250-5-OP	12
31 1/2" - 40"	HR-350	12	3-1/2	2-1/2	1.000	.787	2.375	.800	HR-350-0	14	HR-350-OP	14
	HR-350-5	12	5	2-1/2	1.000	.787	2.375	.800	HR-350-5-0	14	HR-350-5-OP	14
Autoblok												
20" - 32"	HR-20-32	6-3/4	3	3	1.102	1.500	1.625	3/4	HR-20-32-0	9	HR-20-32-OP	9
	HR-20-32-5	6-3/4	5	3	1.102	1.500	1.625	3/4	HR-20-32-5-0	9	HR-20-32-5-OP	9

Chuck Size	Forkhardt "T" Nuts						
	Part No.	A	B	C	D	E	Bolt
Forkhardt FN-233	HR-TN-FN-233	1.082	1.141	1.417	1.003	.433	M20
Forkhardt FN-187	HR-TN-FN-187	1.378	1.614	1.653	1.181	.590	M24
Forkhardt 400/630	HR-TN-FN-400/630	1.090	1.145	1.412	.999	.440	3/4-10

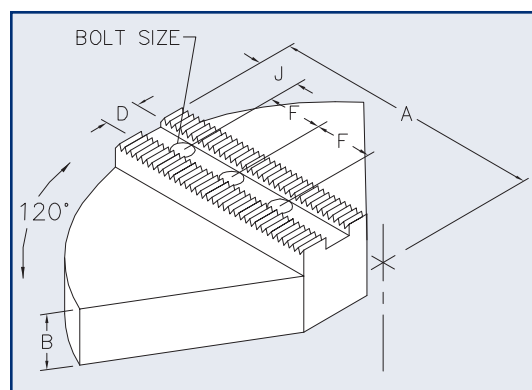
Chuck Size	Autoblok, Schunk, & SMW "T" Nuts						
	Part No.	A	B	C	D	E	Bolt
16" - 20"	HR-TN-BB-400/500	1.417	1.358	1.417	.999	.571	3/4-10
25" - 31 1/2"	HR-TN-BB-630/800	1.750	1.752	1.750	1.180	.728	1-8

Chuck Size	Square "T" Nuts						
	Part No.	A	B	C	D	E	Bolt
Autoblok 20" - 32"	HR-AB-20-32-M	1.570	1.260	1.570	1.101	.610	20MM



3/32" @ 90° SERRATED

For: SMW, Rohm, Forkhardt, "BIG BORE" Chucks & Autoblok

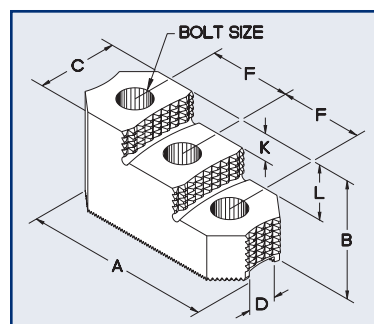

ADD TO PART NUMBER

"AL" - for Aluminum

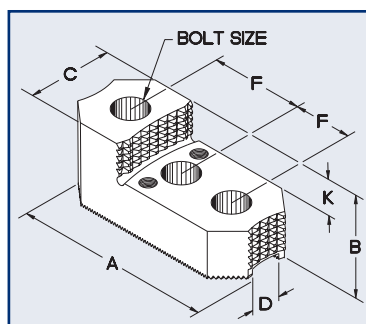
"CI" - for Cast Iron

"ST" - for Steel

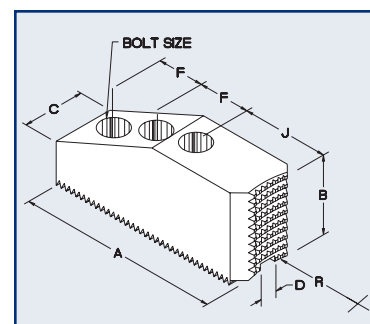
Chuck Size	Full Wrap Jaws							
	Part No.	A	B	D	F	J	Holes	Bolt
15"	HR-40-16-2-	7-1/2	2	1.000	1.562	1-1/2	3	3/4
	HR-40-16-4-	7-1/2	4	1.000	1.562	1-1/2	3	3/4
21"	HR-42-16-3-	10-1/2	3	1.000	1.562	1-1/2	3	3/4
	HR-42-16-4-	10-1/2	4	1.000	1.562	1-1/2	3	3/4
24"	HR-42-25-3-	12	3	1.181	2.500	2	3	1
	HR-42-25-4-	12	4	1.181	2.500	2	3	1



2 Step



Single Step



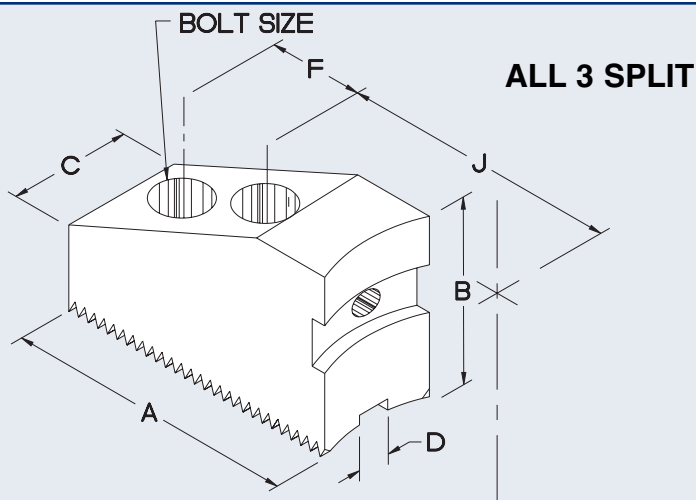
Extended

Chuck Size	2 Step & Single Step Hard Jaws								
	Part No.	A	B	C	D	F	K	L	Bolt
16" - 20"	HR-BB-500-RJ	5-1/2	3.469	2-1/2	1.000	1.625	.950	1.900	3/4
	HR-BB-500-RJ-SS	5-1/2	3.469	2-1/2	1.000	1.625	1.900	NA	3/4
25" - 31 1/2"	HR-BB-630-RJ	8-1/4	3.969	3-1/2	1.180	2.375	1.000	2	1
	HR-BB-630-RJ-SS	8-1/4	3.969	3-1/2	1.181	2.375	2.000	NA	1

BB=SMW Chucks • LVE=Forkhardt Chucks

Chuck Size	Extended Hard Jaws								
	Part No.	A	B	C	D	F	J	R	Bolt
16"	HR-BB-400	6-1/4	2-1/2	2-1/2	1.000	1.500	1.936	1.750	3/4
	HR-LVE-400	6-1/4	2-1/2	2-1/2	1.000	1.500	1.936	1.750	20MM
20"	HR-BB-500	8-1/2	3	2-1/2	1.000	1.625	3.561	1.750	3/4
	HR-LVE-500	8-1/2	3	2-1/2	1.000	1.625	3.561	1.750	20MM
25"	HR-BB-630	9	3	2-1/2	1.181	2.375	2.604	3.500	1
	HR-LVE-630	9	3	2-1/2	1.000	2.375	2.604	3.500	20MM
31 1/2"	HR-BB-800	11	3-1/2	2-1/2	1.181	2.500	4.300	5.000	1
	HR-LVE-800	11	3-1/2	2-1/2	1.000	2.500	4.300	5.000	20MM
35"	HR-BB-850	12-3/4	3-1/2	3-1/2	1.181	2.500	6.500	5.000	1
	HR-LVE-850	12-3/4	3-1/2	3-1/2	1.000	2.500	6.500	5.000	20MM
40"	HR-BB-1000	12-3/4	3-1/2	3-1/2	1.181	2.500	6.500	5.000	1
	HR-LVE-1000	12-3/4	3-1/2	3-1/2	1.000	2.500	6.500	5.000	20MM

Specify
Collet No. Size
"A"
With
Part Number
#3
#4
#5
#6


1.5MM Serrations

Chuck Size	Part No.	"A"				B	C	D	F	J	Bolt
		#3	#4	#5	#6						
6" KITAGAWA	HR-6K-MC-	2-1/4				2	1-1/4	.475	.787	1.810	10MM
8" KITAGAWA 8" MATSUMOTO	HR-149-MC-	3-1/2	3-1/8			2-1/2	1-1/2	.551	1.000	2.250	1/2
8" NIKKO	HR-80-MC-	3-1/2	3-1/8			2	1-1/2	.551	1.181	2.250	10MM
10" HOWA SOLID	HR-81-MC-	4-1/2	4-1/8	3-13/16	3-1/2	2-1/2	1-1/2	.630	.984	3.000	1/2
10" KITAGAWA 11" MATSUMOTO	HR-82-MC-	4-1/2	4-1/8	3-13/16	3-1/2	2-1/2	1-3/4	.630	1.181	3.000	1/2
10" SEIKE	HR-85-MC-	4-1/2	4-1/8	3-13/16	3-1/2	2	1-1/2	.630	1.266	3.000	1/2
12" KITAGAWA	HR-108-MC-		5-1/8	4-3/4	4-7/16	2-1/2	2	.710	1.181	3.610	9/16
12" MATSUMOTO	HR-112-MC-		5-1/8	4-3/4	4-7/16	2-1/2	2	.827	1.181	3.610	5/8
10" - 12" NIKKO	HR-125-MC-		4-1/2	4	3-3/4	2-1/2	1-3/4	.788	1.375	3.000	1/2
12" HOWA	HR-150-MC-			4-3/4	4-1/4	4-1/4	2-1/2	1.022	1.968	3.250	3/4
15" KITAGAWA	HR-155-MC-			6.000	5-11/16	4-7/8	2-1/2	.866	1.690	4.300	3/4
	HR-115-MC-			6.000	5-11/16	4-7/8	2-1/2	1.000	1.690	4.300	3/4

3MM Serrations

Chuck Size	Part No.	"A"				B	C	D	F	J	Bolt
		#3	#4	#5	#6						
10" - 12" HOWA	HR-113-MC-	4-1/2	4-1/8	3.81	3-1/2	2-1/2	1-1/2	.630	1.181	3	1/2
12" HOWA SOLID	HR-143-MC-		4-1/2	4	3-3/4	2-1/2	2	.710	1.181	3	14MM
15" - 18" MATSUMOTO	HR-153-MC-				4-7/8	3-1/2	2-1/2	.866	1.690	3-1/2	20MM

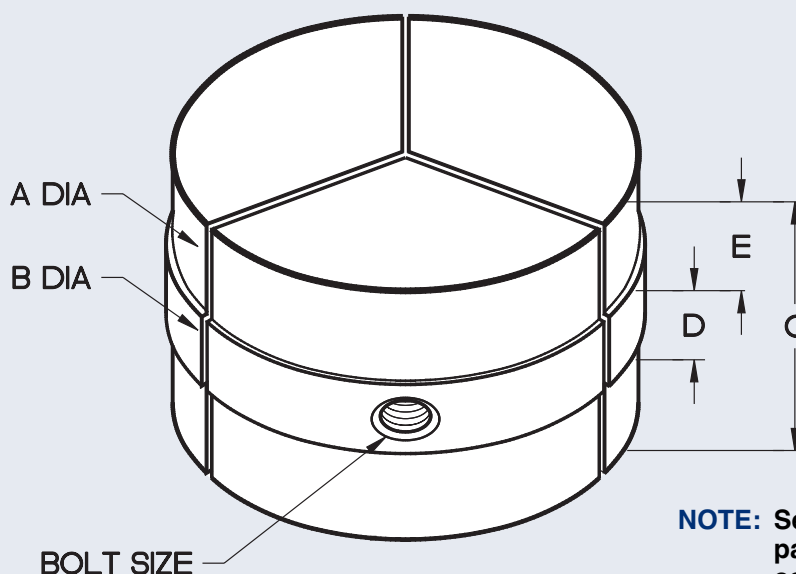
1/16" Serrations

Chuck Size	Part No.	"A"				B	C	D	F	J	Bolt
		#3	#4	#5	#6						
8"	HR-10J-MC-	4-1/8	3-7/8	3-1/2		2	1-1/2	.551	.875	3	3/8
10" HD	HR-11J-MC-	4-3/8	4-1/8	3-3/4		2-1/2	1-3/4	.788	1.187	3-1/2	1/2
11" - 12"	HR-12J-MC-		4-3/4	4-1/4	3-7/8	3	1-3/4	.788	1.187	3-1/4	1/2
14" - 15"	HR-15J-MC-				4-5/8	3	1-3/4	.827	1.562	3-1/2	5/8
12"	HR-WB12-MC-			4-1/8	3-3/4	3	2	.827	1.125	3-1/4	5/8
15"	HR-WB13-MC-				4-5/8	3-1/2	1	1.000	1.375	3-1/2	20MM
6½" SMW	HR-11-6.5-MC-	2-3/4				2	1-1/2	.551	.984	1-13/16	3/8
8" SMW	HR-11-8-MC-	3-1/2	3-1/8			2-1/2	1-1/2	.669	1.130	2-1/4	1/2
10" - 12½" SMW	HR-11-12.5-MC-		5-3/8	5	4-5/8	2-1/2	2	.827	1.187	4	1/2

COLLET PADS

Collet Pads are available in:

Emergency Soft
 Hard Smooth
 and
 Hard Serrated
 Round
 Square
 Hex

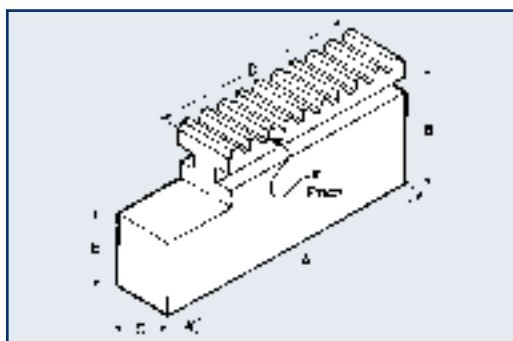


Now available
 for all
 Chucks
 with
 H&R
 Master Collet
 Top Jaws

NOTE: See individual jaw pages for hard master collet jaws

Technical Specifications for Collet Pads

Collets									
Part No.	A	B	C	D	E	Bolt	Max Round	Max Hex	Max Square
#3 COLLET	1.875	1.960	1.375	.434	.594	5/16-24	1.500	1.312	1.062
#4 COLLET	2.375	2.460	1.750	.625	.565	5/16-24	2.000	1.750	1.375
#5 COLLET	3.000	3.085	1.875	.625	.625	3/8-24	2.500	2.187	1.750
#6 COLLET	3.500	3.585	2.250	.625	.812	3/8-24	3.000	2.625	2.125

KNCS MONOBLOCK SOFT JAWS


For: Autoblok, Forkhardt, Rohm, SMW Systems and Schunk

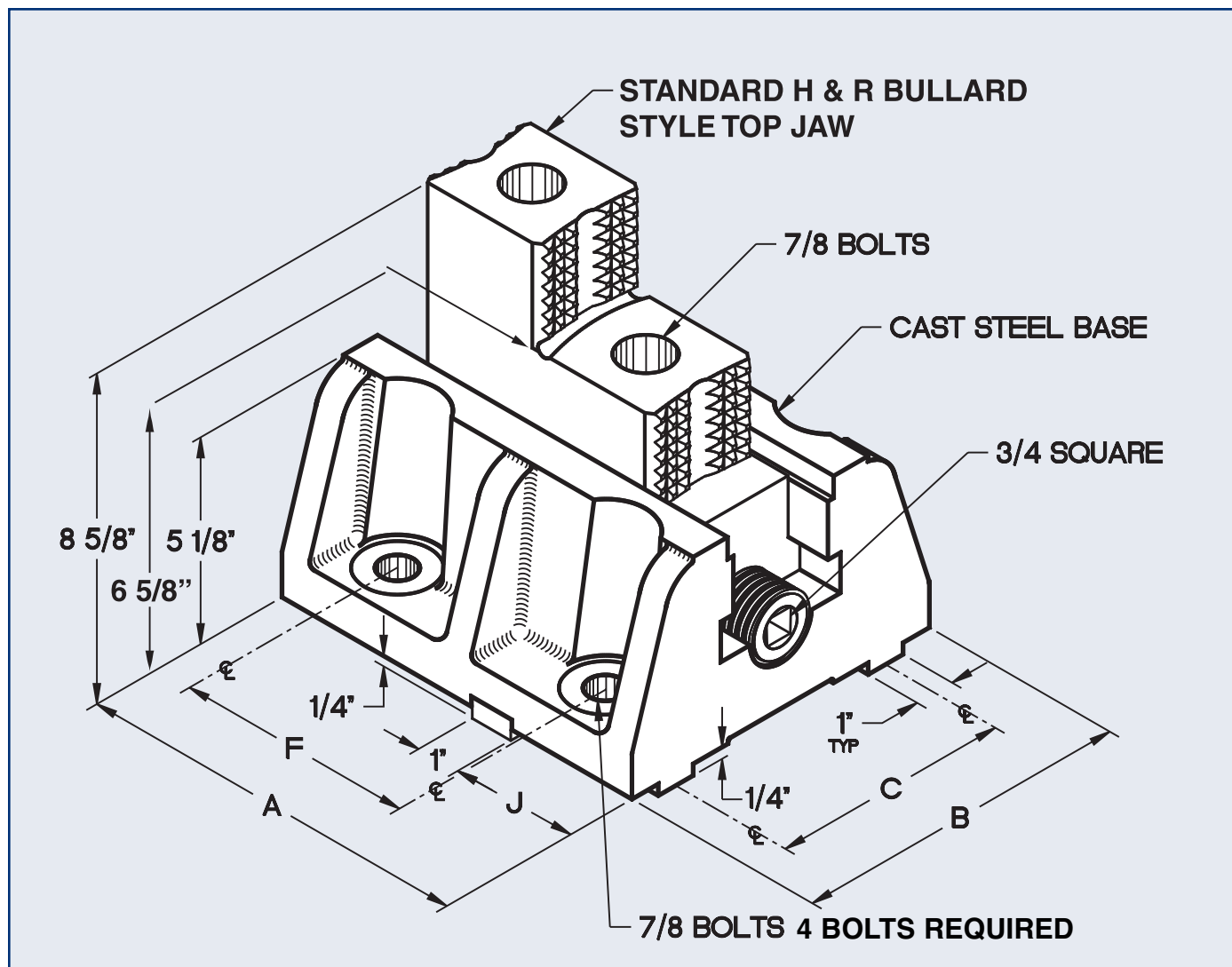
Other Series Soft & Hard Jaws Available

Call With Specifications & Pricing

Specify Brand of Chuck

UVB Series								
Chuck Size	Part No.		A	B	C	D	E	F Pitch
250	UVB-250	MM	97	89	26	76	52.5	5.498
		INCH	3.78	3.50	1.023	3	2.07	
315	UVB-315	MM	118	101.6	32	92	55	5.498
		INCH	4.63	4.00	1.258	3.6	2.17	
400	UVB-400	MM	145	101.6	32	114	55	5.498
		INCH	5.75	4.00	1.258	4.5	2.17	
500	UVB-500	MM	175	124	45	175	124	7.000
		INCH	6.89	4.88	1.77	6.89	4.88	
630	UVB-630	MM	230	124	45	230	124	7.000
		INCH	9.06	4.88	1.77	9.06	4.88	

Replaceable Standard Top Jaws (Soft Jaws available)



Two positions Hardened & Ground Master Jaw Hardened thrust bearing & operating screw for extended wear

Part No.	A	B	C	F	J	Top Jaw Positions
HR-BM-8-6-TJ	8	8-5/8	6	4	3-1/2	1
HR-BM-8-7-TJ	8	8-5/8	7	4	3-1/2	1
HR-BM-10-6-TJ	10	8-5/8	6	6	3	2
HR-BM-10-7-TJ	10	8-5/8	7	6	3	2
HR-BM-12-6-TJ	12	10	6	7	3-1/2	2
HR-BM-12-7-TJ	12	10	7	7	3-1/2	2
HR-BM-14-6-TJ	14	12	6	9	3-1/2	4
HR-BM-14-7-TJ	14	12	7	9	3-1/2	4
HR-BM-8-4.9-TJ**	8	6-3/4	4.921	6	1-7/8	3

Replacement parts available in stock

Special bottom available upon request

T.J. = Std 4" Bullard Hard Jaw

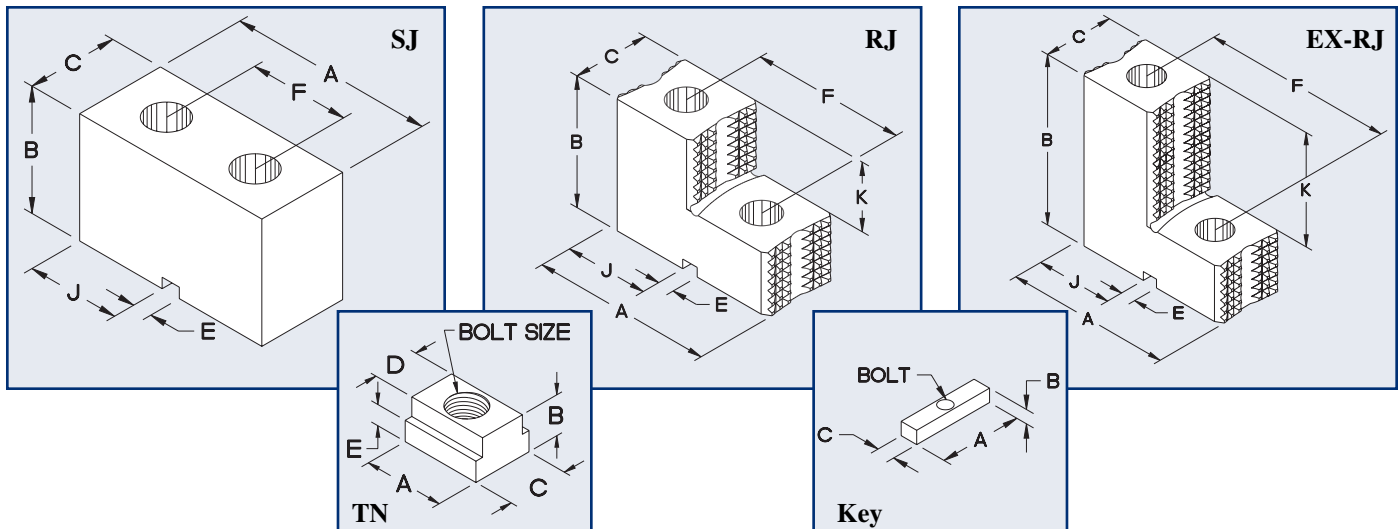
Additional top tooling see page 23

**HR-BM-8-4.9-TJ comes standard with 15-HTGRJ-SS

 **BM-8-4.9-Mounting Pkg
 Other Jaws See Pg 5-6-7

 **Key @ .750, Tongue @ .866, 20mm Bolt - 4 Required
 For Toshiba Vertical Lathes (picture above does not apply)

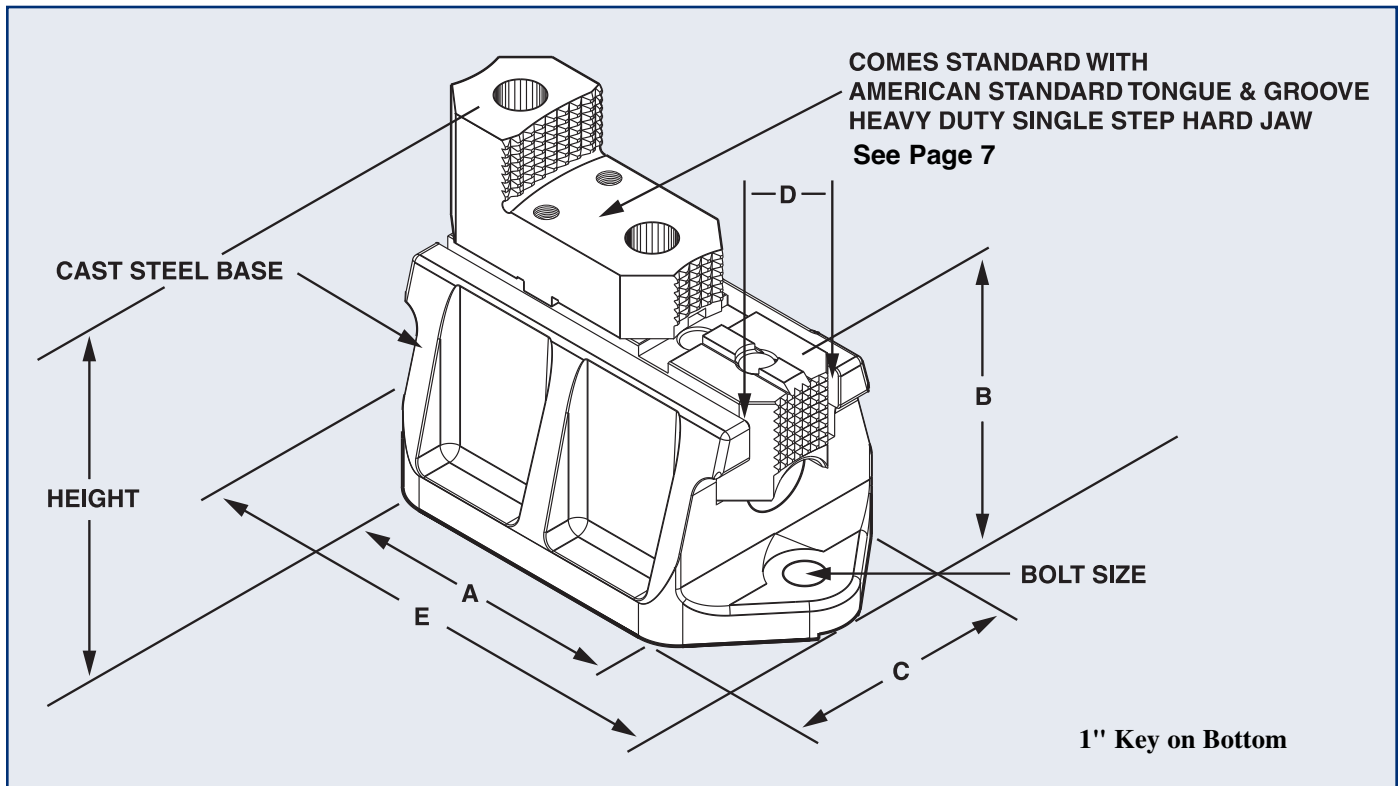
BULLARD TOOLING



Bullard Jaws									
Part No.	A	B	C	D	E	F	J	K	Bolt
HR-BUL-SJ	6-5/8	4	3	~	5/8	3-1/4	CENTER	~	7/8
HR-BUL-RJ	6-5/8	4	3	~	5/8	3-1/4	3	2	7/8
HR-BUL-EX-RJ	6-5/8	6	3	~	5/8	3-1/4	3	4	7/8
HR-BUL-KEY	2-5/8	1/2	5/8	~	~	~	~	~	5/16
HR-BUL-TN	1-3/4	1	1-1/2	.975	.520	~	~	~	7/8-9

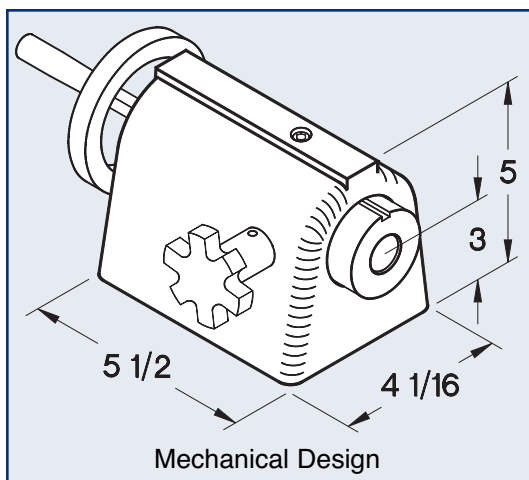
STEEL FACE PLATE JAWS

Two positions Hardened & Ground Master Jaw



Part No.	Top Jaw	A	B	C	D	E	Bolt Size	Height
FPJ-6-TJ	12-HTGRJ-SS	6.00	4.50	5.50	2.00	8.50	5/8	6-27/32
FPJ-8-TJ	15-HTGRJ-SS	8.00	4.50	5.50	2.250	10.50	3/4	7-25/32

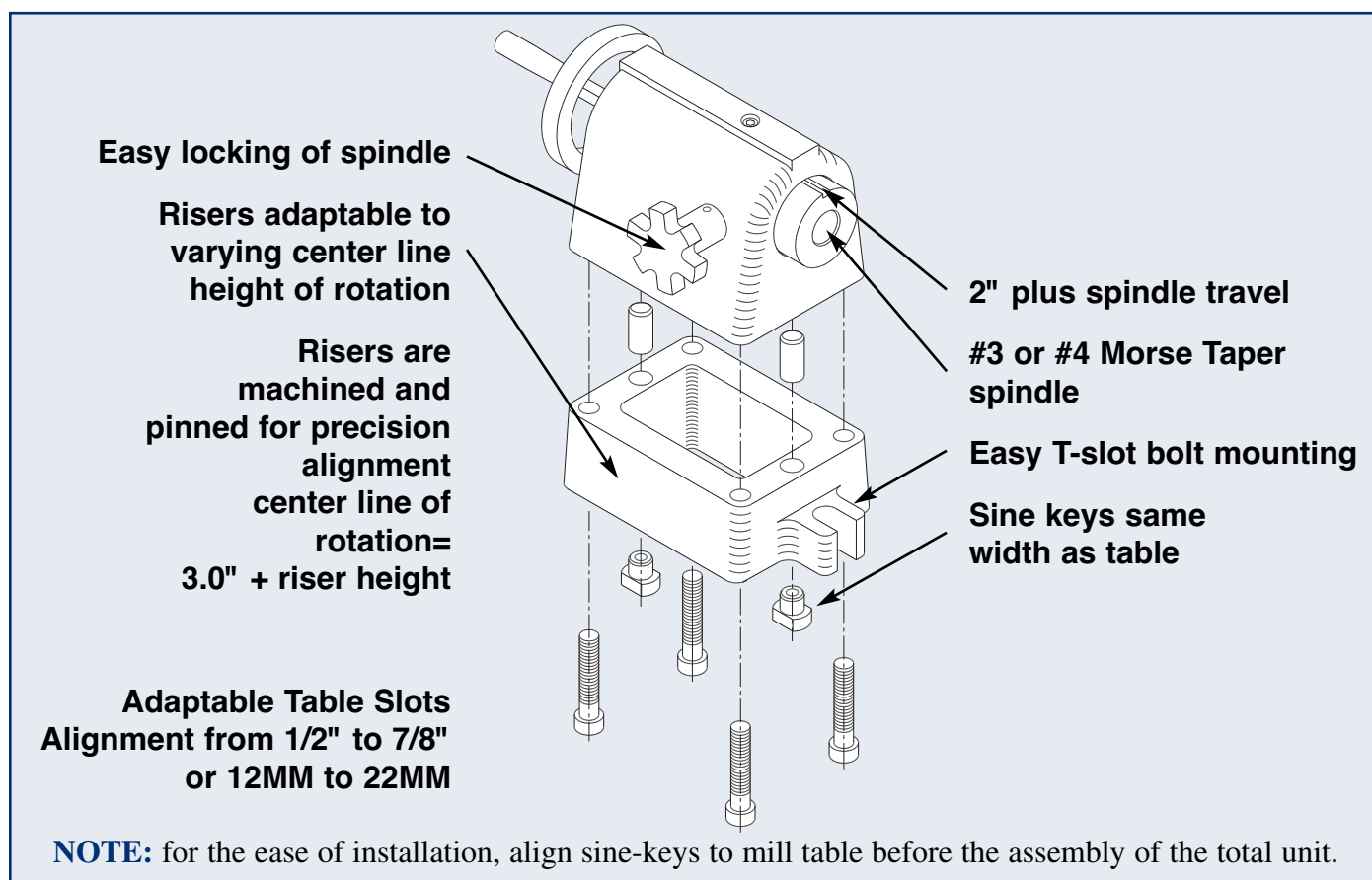
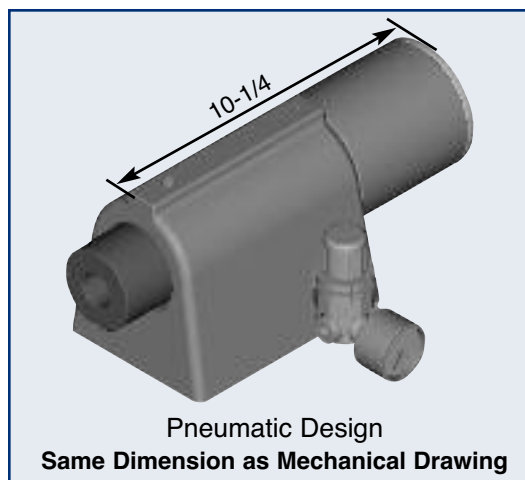
Quick change set-up for machining on your 4 axis machine or indexing head or dividing head



NOTE:

Depending upon size of base, base will be larger than top.

Easily Indicated for Squareness



PNEUMATIC UNIVERSAL AIR DRIVEN TAILSTOCK

- 2 1/4" stroke or spindle travel
- 80 psi working pressure
- 500 lbs working thrust load
- #3 or #4 Morse taper spindle
- Riser height from 3/4" to 6"
- Easily indicated for squareness
- Self-Centering and Self-Alignment

**MANUAL
H&R Part No.**

HR-TS-#3

HR-TS-#4

**PNEUMATIC
H&R Part No.**

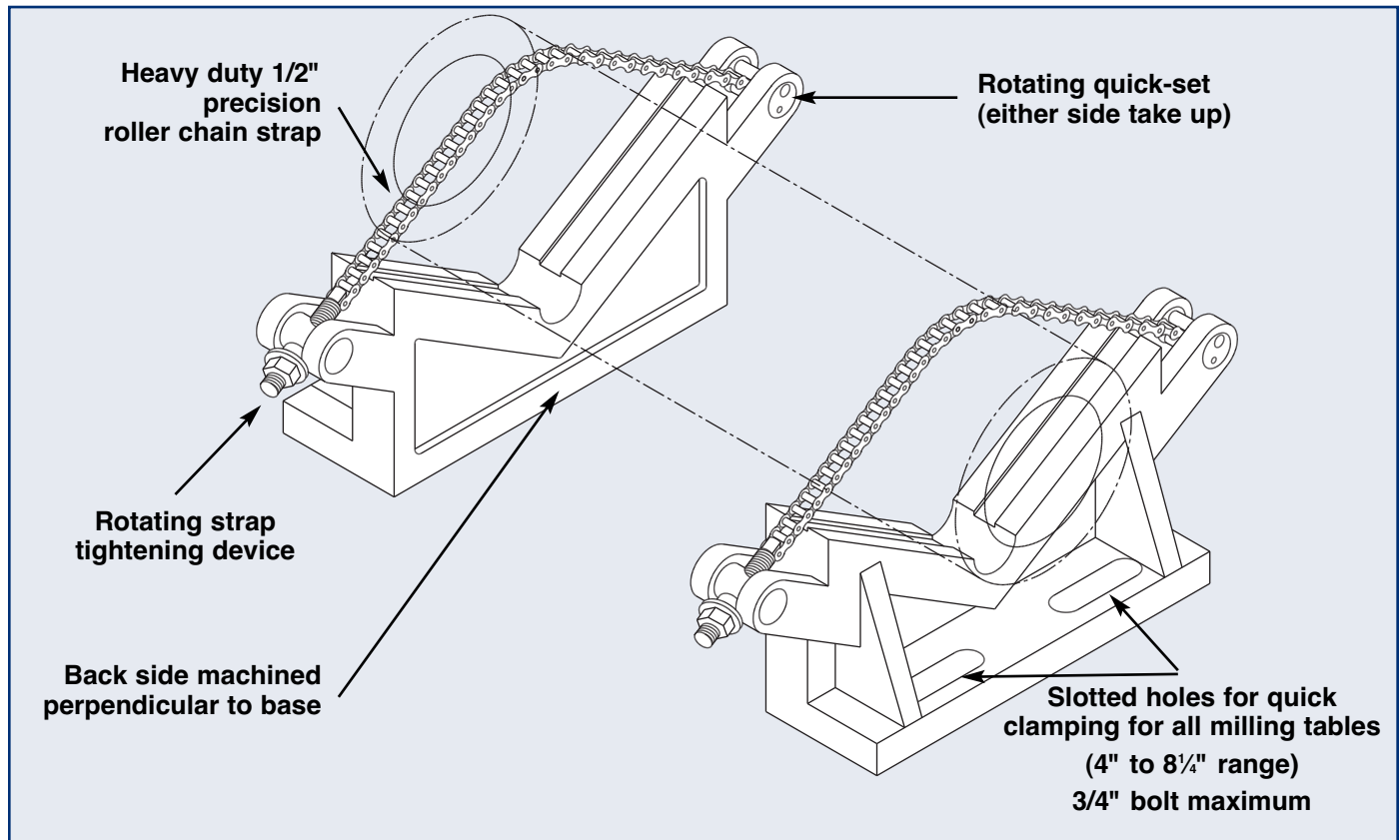
HR-AIR-TS-#3

HR-AIR-TS-#4

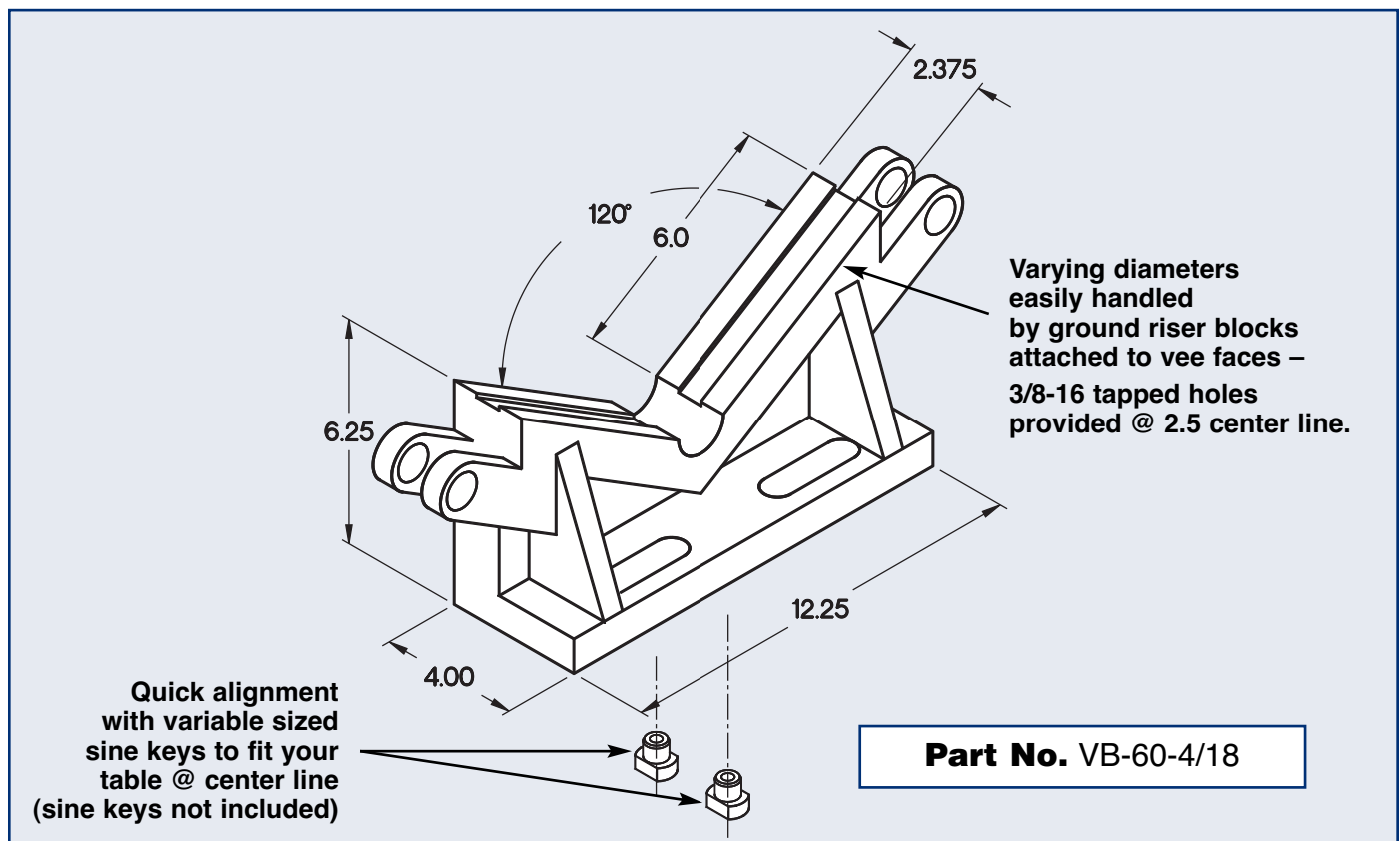
EXTRA HEAVY CAST IRON construction for strength and durability

VEE BLOCK

4" to 18" diameter capacity



Heavy duty cast iron to reduce vibration



Sold in set of **TWO** one **RIGHT** & one **LEFT**

Buy the best right angle drive

NOTE: Special draw bar required.

RT-STD for 3 $\frac{3}{8}$ " quill
R-8 to R-8 Taper

RT-STD-30 for 3 $\frac{3}{8}$ " quill
#30 National Standard
Taper to R-8

Spreader Bolt

ALL CAST STEEL BODY

Packed in
molybdenum grease

Alignment flat
both sides

TAPERED ROLLER BEARINGS
Both ends for better tolerance
and higher quality performance

Approximate Weight
20 Pounds

1800 RPM input maximum
1350 RPM output

Ribbed support for strength

Special hardened and ground
spiral bevel gears 1.33 to 1
gear reduction ratio

R-8 Spindles are quality
inspected in testing before
shipment .001 T.I.R. Max.

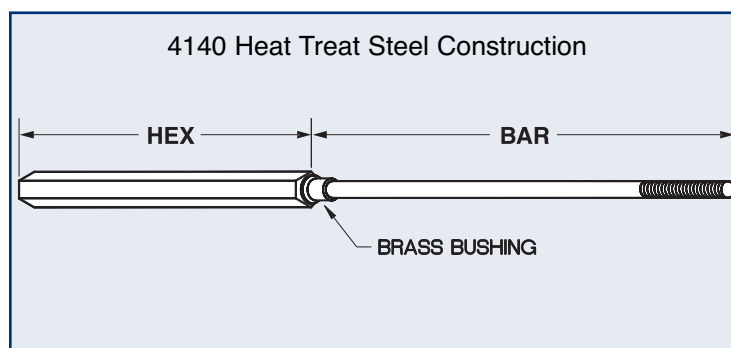
H&R Part No.
RT-STD

H&R Part No.
RT-STD-30

AVAILABLE IN STOCK

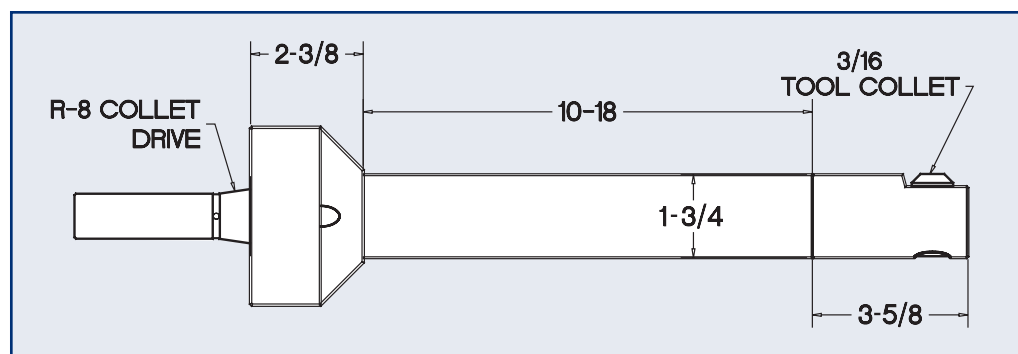
Extended Draw Bar with 7/16-20 Threaded End

Part No.	Hex Length	Bar Length	Machine Specifications
HR-DB-1	2"	18"	Bridgeport Stephead
HR-DB-2	5"	18"	Bridgeport Stephead
HR-DB-3	8"	18"	Bridgeport RAA
HR-DB-4	8"	19"	Lagun Varispeed Alliant
HR-DB-5	11"	18"	Index Varispeed Index RAA Lagun RAA



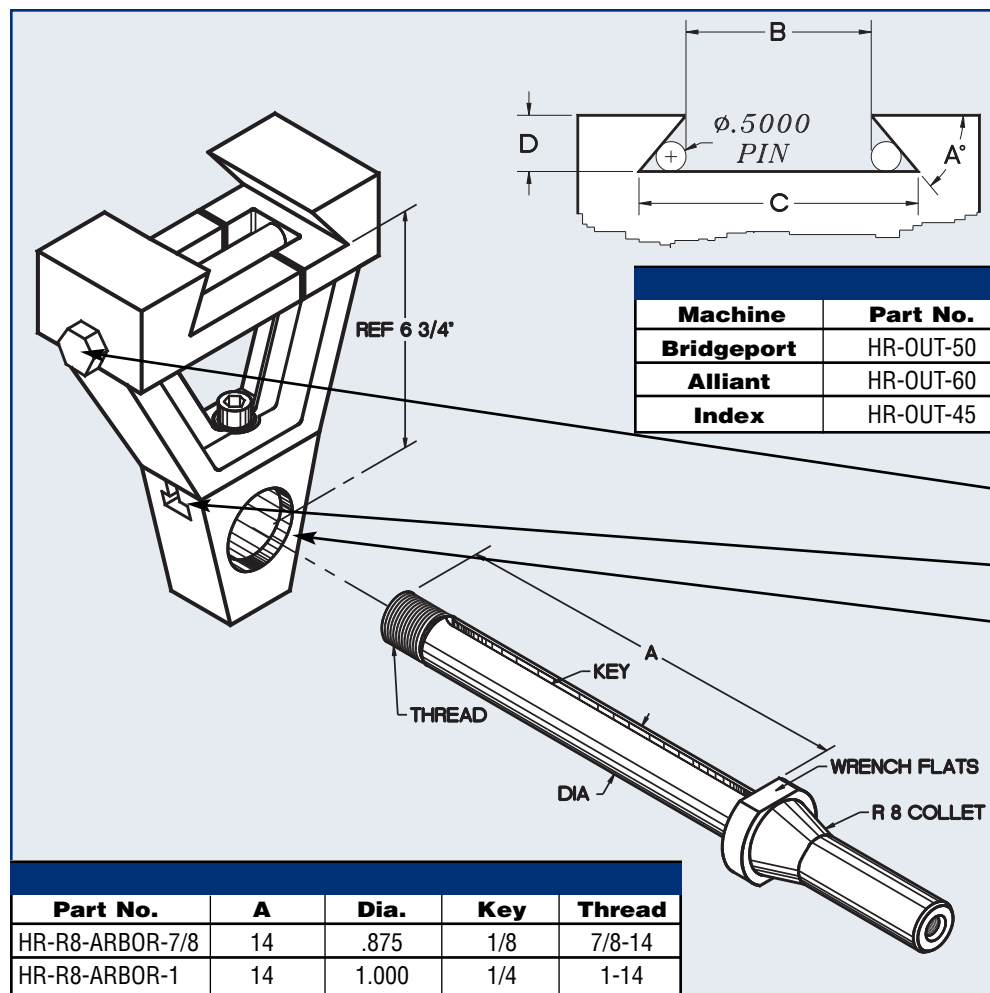
Light Duty Extension

Mounts with 3 @ 1/4" bolts
to H&R
right angle drive only



RIGHT ANGLE DRIVE ACCESSORIES

R-8 Machine Arbor

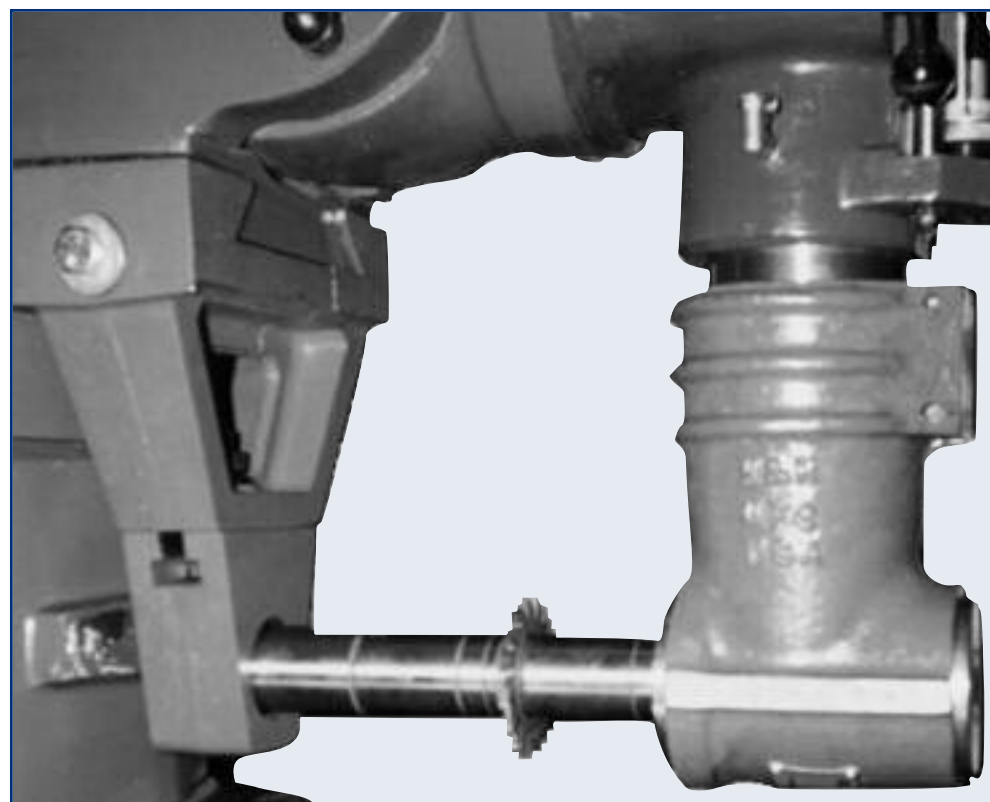


**HEAVY
CAST IRON**

Single bolt clamp
"T" Slot for centering
and alignment
Chip guard

**Arbor Assembly
Comes With**

- 1) 1.625 running bushing
- 2) A series of 1/4", 1/2", 1" and 2" spacers
- 3) Nut



**Convert Your
Vertical Mill**
to a
Horizontal Mill
with a
Right Angle Drive
and
Arbor Support



Mounted
Adaptor
Easily
Centered &
Indicated

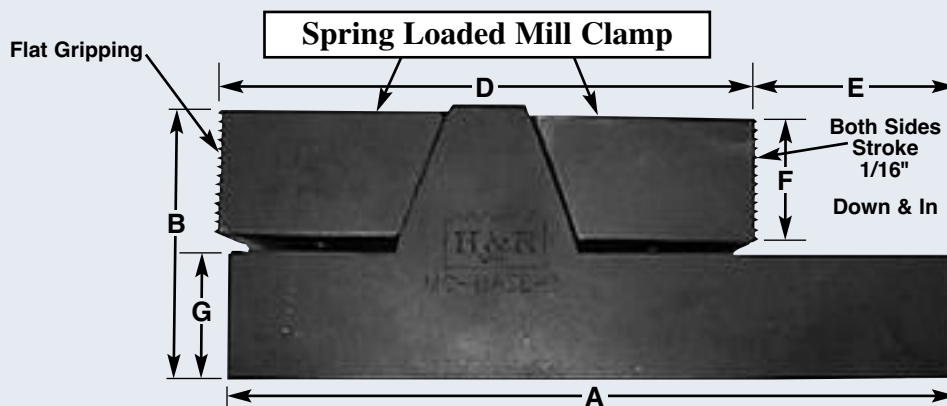


Sine Key
For Easy
Alignment

Bolts &
Tee-Nuts
For Holding

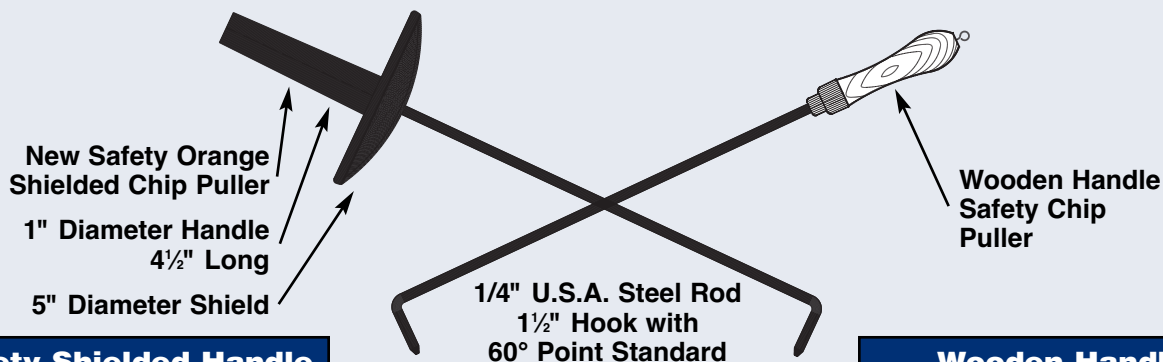
H&R Mfg. 6" "Bison Setrite" Package For "HAAS HRT 160" Call For Pricing!
H&R Mfg. 8" "Bison Setrite" Package For "HAAS HRT 210" Call For Pricing!
H&R Mfg. 10" "Bison Setrite" Package For "HAAS HRT 310" Call For Pricing!
H&R Mfg. 12" "Bison Setrite" Package For "HAAS HRT 310" Call For Pricing!

MACHINING CENTER CLAMP



H&R Part No.	A	B	Width	D	E	F	G	Bolt Size
MC-CLAMP-.500	5.500	2.125	1.250	3.838	1.740	1.000	0.750	1/2"
MC-CLAMP-.750	8.000	2.750	2.000	5.675	2.375	1.250	1.250	3/4"
MC-CLAMP-1.00	10.000	3.750	2.500	7.259	2.859	1.750	1.750	1"

CHIP HOOK-R



Safety Shielded Handle

H&R Part No.	Hook Length
HR-SC-18	18"
HR-SC-24	24"
HR-SC-30	30"

Wooden Handle

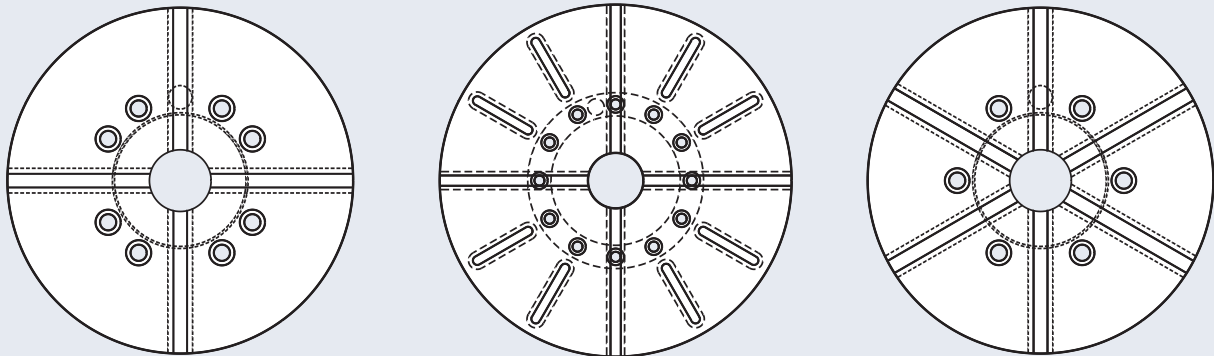
H&R Part No.	Hook Length
HR-WD-18	18"
HR-WD-24	24"
HR-WD-30	30"

"FACEPLATE" TYPE CONVERSION

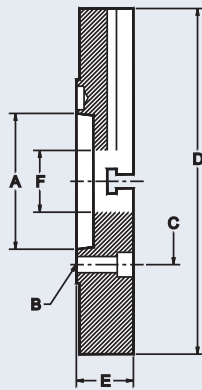
Features:

- Dimensions are per U.S.A. Standards.
- Available with or without hardware.

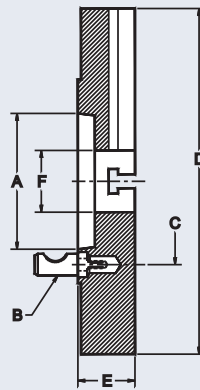
Made From Mild Steel (No Casting)



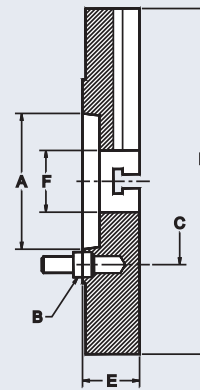
Your Choice of Any Slot Design



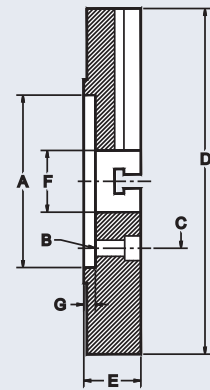
**Type
"A"**
A-Mount



**Type
"B"**
D-Mount



**Type
"C"**
Din-Mount



**Type
"D"**
Flat-Mount

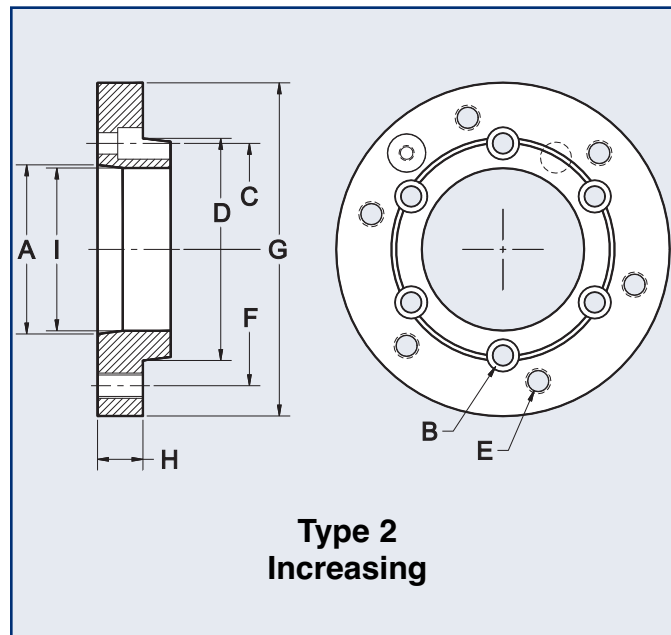
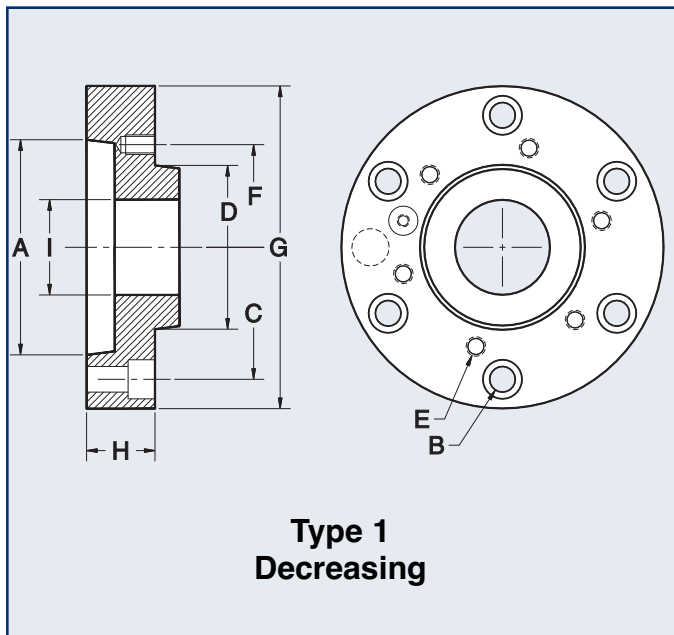
H&R Part No.	Type	A	B	C	Diameter			E	F	G	H	I	J	K	Radial Slot	Bolt Size
					D1	D2	D3									
HR-A6-*	A	4.187	1/2" SHCS	5-1/4	12"	14"	~	2"	2"	N/A	9/16"	1"	1/2"	3/8"	AVAILABLE AT CUSTOMER REQUEST	1/2/13
HR-D6-*	B	4.187	0.875	5-1/4	12"	14"	~	2"	2"	N/A	9/16"	1"	1/2"	3/8"		1/2/13
HR-DIN-6-*	C	4.187	21.5MM	5-1/4	12"	14"	~	2"	2"	N/A	9/16"	1"	1/2"	3/8"		1/2/13
HR-FLAT BACK-*	D	CUSTOMER MUST SUPPLY INFORMATION							2"		9/16"	1"	1/2"	3/8"		1/2/13
HR-A8-*	A	5.5	5/8" SHCS	6-3/4	14"	16"	18"	2-1/4	2"	N/A	9/16"	1"	1/2"	3/8"		1/2/13
HR-D8-*	B	5.5	1	6-3/4	14"	16"	18"	2-1/4	2"	N/A	9/16"	1"	1/2"	3/8"		1/2/13
HR-DIN-8-*	C	5.5	27MM	6-3/4	14"	16"	18"	2-1/4	2"	N/A	9/16"	1"	1/2"	3/8"		1/2/13
HR-FLAT BACK-*	D	CUSTOMER MUST SUPPLY INFORMATION							2"		9/16"	1"	1/2"	3/8"		1/2/13
HR-A11-*	A	7.75	3/4" SHCS	9-1/4	16"	18"	20"	2-3/4	2"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-D11-*	B	7.75	1.187	9-1/4	16"	18"	20"	2-3/4	2"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-DIN-11-*	C	7.75	34MM	9-1/4	16"	18"	20"	2-3/4	2"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-FLAT BACK-*	D	CUSTOMER MUST SUPPLY INFORMATION							3"		3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-A15-*	A	11.25	7/8" SHCS	13	20"	24"	28"	3-1/4	3"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-D15-*	B	11.25	1.375	13	20"	24"	28"	3-1/4	3"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-DIN-15-*	C	11.25	41MM	13	20"	24"	28"	3-1/4	3"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-FLAT BACK-*	D	CUSTOMER MUST SUPPLY INFORMATION							3"		3/4"	1-1/4	3/4"	31/64"		5/8/11
HR-A20-*	A	16.25	1" SHCS	18-1/4	28"	30"	36"	3-1/2	3"	N/A	3/4"	1-1/4	3/4"	31/64"		5/8/11

*After above Part Number put (D1, D2, D3) per your requirement.

Features:

- Dimensions are per U.S.A. Standards.
- Available with UNC or Metric Mounting Bolt

Made From Mild Steel (No Casting)



H&R Part No.	Spindle Machine						Chuck					Dia. G	Offset H	Hole I
	Type	Mount	A	Bolt B (in.)	Bolt B (MM)	Dia. C	Mount	D	Tap E (in.)	Tap E (MM)	Dia. F			
HR-A5-A6	2	5	3.25	7/16"	10MM	4.125	6	4.187	1/2X13	12X1.75	5.25	6.5	1	2.5
HR-A5-A8	2	5	3.25	7/16"	10MM	4.125	8	5.5	5/8X11	16X2	6.75	8.25	1.125	3
HR-A6-A5	1	6	4.187	1/2"	12MM	5.25	5	3.25	7/16X14	10X1.5	4.125	6.5	1.5	1.7
HR-A6-A8	2	6	4.187	1/2"	12MM	5.25	8	5.5	5/8X11	16X2	6.75	8.25	1.125	3.25
HR-A6-A11	2	6	4.187	1/2"	12MM	5.25	11	7.75	3/4X10	20X2.5	9.25	11	1.375	4
HR-A8-A6	1	8	5.5	5/8"	16MM	6.75	6	4.187	1/2X13	12X1.75	5.25	8.25	1.75	2.5
HR-A8-A11	2	8	5.5	5/8"	18MM	6.75	11	7.75	3/4X10	20X2.5	9.25	11	1.375	5.25
HR-A8-A15	2	8	5.5	5/8"	16MM	6.75	15	11.25	7/8X9	22X2.5	13	15	1.625	5.25
HR-A11-A6	1	11	7.75	3/4"	20MM	9.25	6	4.187	1/2X13	12X1.75	5.25	11	1.75	2.5
HR-A11-A8	1	11	7.75	3/4"	20MM	9.25	8	5.5	5/8X11	16X2	6.75	11	1.875	3.25
HR-A11-A15	2	11	7.75	3/4"	20MM	9.25	15	11.25	7/8X9	22X2.5	13	15	1.625	7.5
HR-A11-A20	2	11	7.75	3/4"	20MM	9.25	20	16.25	1X8	24X3	18.25	20.5	1.875	7.5
HR-A15-A8	1	15	11.25	7/8"	22MM	13	8	5.5	5/8X11	16X2	6.75	15	2	3.25
HR-A15-A11	1	15	11.25	7/8"	22MM	13	11	7.5	3/4X10	20X2.5	9.25	15	2.25	5.25
HR-A15-A20	2	15	11.25	7/8"	22MM	13	20	16.25	1X8	24X3	18.25	20.5	1.875	11
HR-A20-A11	1	20	16.25	1"	24MM	18.25	11	7.75	3/4X10	20X2.5	9.25	20.5	2.125	5.25
HR-A20-A15	1	20	16.25	1"	24MM	18.25	15	11.25	7/8X9	22X2.5	13	20.5	2.5	8.25

SPECIFY METRIC OR INCH REQUIREMENTS WHEN ORDERING

Note:

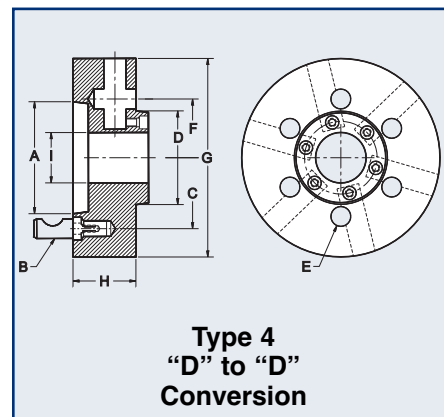
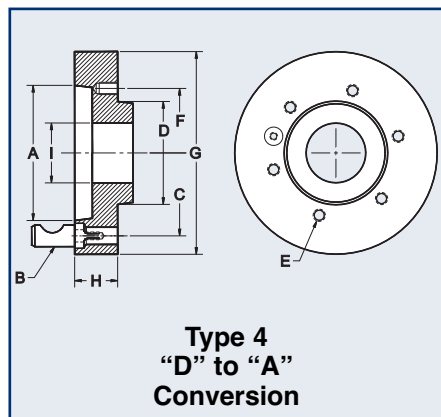
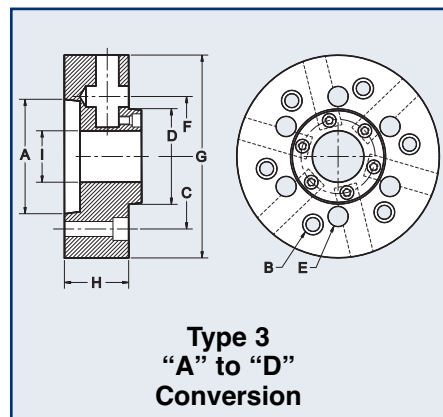
- Spindle and Chuck mountings are outer bolt circle type A2.
- "B" bolts are total of 6 equally spaced 60 DEG. Apart on a bolt circle of "C".
- "E" tapped holes are a total of 12 equally spaced 30 DEG. Apart on a bolt circle of "F".
- Drive button included.

"D" TYPE CONVERSION ADAPTERS

Features:

- Dimensions are per U.S.A. Standards.
- Available with or without hardware

Made From Mild Steel (No Casting)

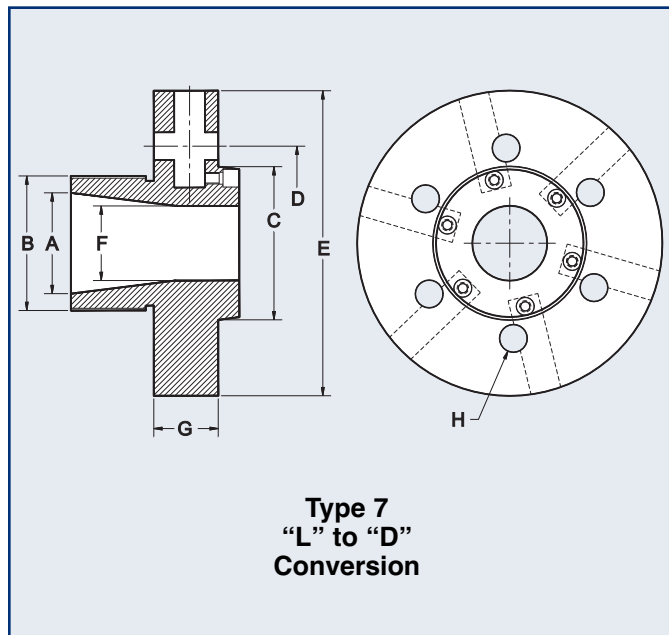
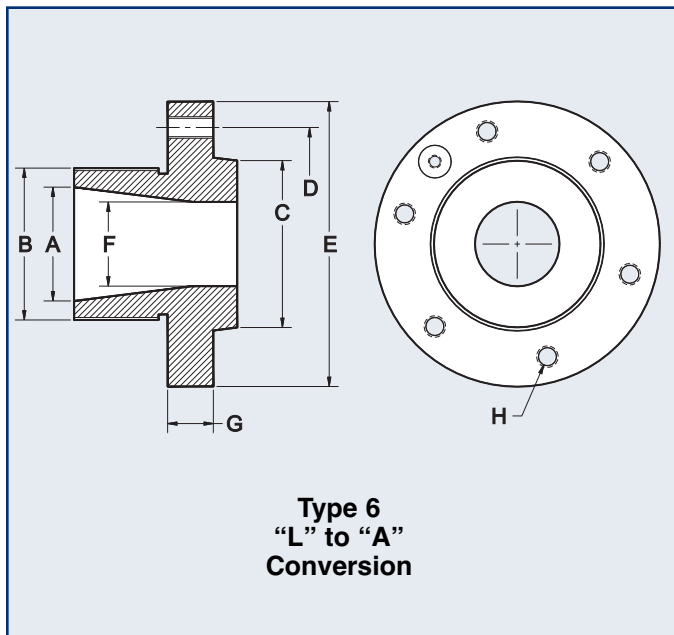


H&R Part No.	Type	Spindle Mount			Chuck Mount		O.D. F	Offset G	I.D. H	I
		A	B	C	D	E				
HR-A5-D5	3	3.25	7/16"	4-1/8	3.25	0.781	4-1/8	5-3/4	1-1/2	1-3/4
HR-A5-D6	3	3.25	7/16"	4-1/8	4.187	0.906	5-1/4	7-1/8	1-3/4	2-1/4
HR-D5-A5	4	3.25	0.75	4-1/8	3.25	7/16"-14"	4-1/8	5-3/4	1-1/2	2-5/8
HR-D5-D6	5	3.25	0.75	4-1/8	4.187	0.906	5-1/4	7-1/8	1-3/4	1-3/4
HR-A6-D6	3	4.187	1/2"	5-1/4	4.187	0.906	5-1/4	7-1/8	1-3/4	2-1/4
HR-A6-D8	3	4.187	1/2"	5-1/4	5.5	1.031	6-3/4	8-7/8	2	3-3/8
HR-D6-A6	4	4.187	0.875	5-1/4	4.187	1/2"-13"	5-1/4	7-1/8	1-5/8	3-4/9
HR-D6-A8	4	4.187	0.875	5-1/4	5.5	5/8"-11"	6-3/4	8-1/4	1-3/4	3-4/9
HR-D6-D8	5	4.187	0.875	5-1/4	5.5	1.031	6-3/4	8-7/8	2	2-1/4
HR-A8-D6	3	5.5	5/8"	6-3/4	4.187	0.906	5-1/4	8-1/4	1-3/4	2-1/4
HR-A8-D8	3	5.5	5/8"	6-3/4	5.5	1.031	6-3/4	8-7/8	2	3-3/8
HR-A8-D11	3	5.5	5/8"	6-3/4	7.75	1.218	9-1/4	11-3/4	2-3/8	5-3/8
HR-D8-A6	4	5.5	1	6-3/4	4.187	1/2"-13"	5-1/4	8-7/8	1-3/4	3-4/9
HR-D8-A8	4	5.5	1	6-3/4	5.5	5/8"-11"	6-3/4	8-7/8	1-3/4	4-5/8
HR-D8-A11	4	5.5	1	6-3/4	7.75	3/4"-10"	9-1/4	11	2	4-5/8
HR-D8-A15	4	5.5	1	6-3/4	11.25	7/8"-9"	13	15	2-1/4	4-5/8
HR-D8-D6	5	5.5	1	6-3/4	4.187	0.906	5-1/4	8-7/8	2	2-1/4
HR-D8-D11	5	5.5	1	6-3/4	7.75	1.218	9-1/4	11-3/4	2-3/8	3-3/8
HR-A11-D8	3	7.75	3/4"	9-1/4	5.5	1.031	6-3/4	11	3-1/2	3-3/8
HR-A11-D11	3	7.75	3/4"	9-1/4	7.75	1.218	9-1/4	11-3/4	2-3/8	5-3/8
HR-A11-D15	3	7.75	3/4"	9-1/4	11.25	1.406	13	15-7/8	2-3/4	7-37/64
HR-D11-A8	4	7.75	1.187	9-1/4	5.5	5/8"-11"	6-3/4	11-3/4	2-1/4	4-5/8
HR-D11-A11	4	7.75	1.187	9-1/4	7.75	3/4"-10"	9-1/4	11-3/4	2-1/4	6-3/4
HR-D11-A15	4	7.75	1.187	9-1/4	11.25	7/8"-9"	13	15	2-1/2	6-3/4
HR-D11-A20	4	7.75	1.187	9-1/4	16.25	1"-8"	18-1/4	20-1/4	2-3/4	6-3/4
HR-D11-D8	5	7.75	1.187	9-1/4	5.5	0.906	6-3/4	11-3/4	2-1/4	3-3/8
HR-D11-D15	5	7.75	1.187	9-1/4	11.25	1.406	13	15-7/8	2-3/4	5-3/8
HR-A15-D8	3	11.25	7/8"	13	5.5	1.031	6-3/4	15	3-7/8	3-3/8
HR-A15-D11	3	11.25	7/8"	13	7.75	1.218	9-1/4	15	4	5-3/8
HR-A15-D15	3	11.25	7/8"	13	11.25	1.406	13	15-7/8	2-3/4	8-3/8
HR-D15-A11	4	11.25	1.375	13	7.75	3/4"-10"	9-1/4	15-7/8	2-1/2	6-3/4
HR-D15-A15	4	11.25	1.375	13	11.25	7/8"-9"	13	15-7/8	2-1/2	10-1/8
HR-D15-A20	4	11.25	1.375	13	16.25	1"-8"	18-1/4	20-1/4	2-3/4	10-1/8
HR-D15-D11	5	11.25	1.375	13	7.75	1.218	9-1/4	15 7/8	2-3/4	5 3/8
HR-D15-D20	5	11.25	1.375	13	16.25	1.656	18 1/4	21 1/2	3	8 3/8

Features:

- Dimensions are per U.S.A. Standards.
- Available with or without hardware

Made From Mild Steel (No Casting)

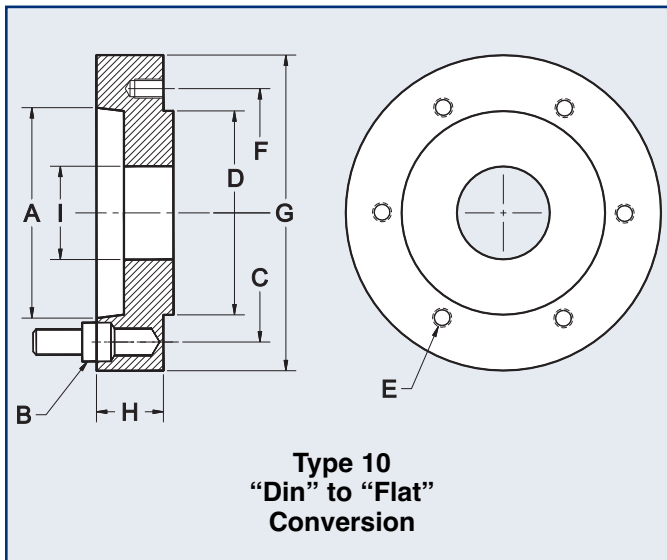
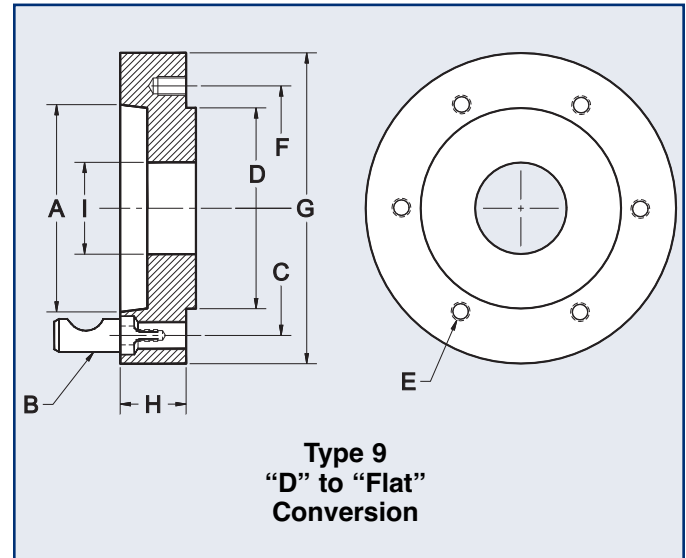
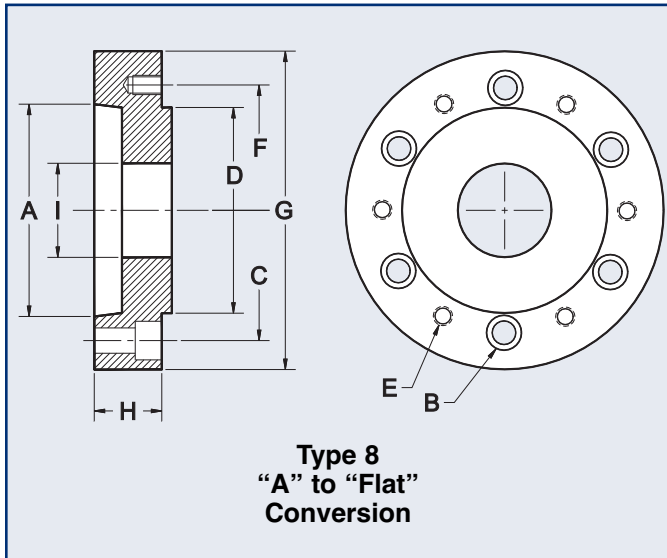


H&R Part No.	Type	A	B	C	D	E	F	G	H
HR-L00-A6	6	2.75	3.745	4.187	5-1/4	6-1/2	2	1-1/4	1/2"-13"
HR-L00-D6	7	2.75	3.745	4.187	5-1/4	7-1/8	2	1-3/4	0.906
HR-L00-A8	6	2.75	3.745	5.5	6-3/4	8-1/4	2	1-1/2	5/8"-11"
HR-L00-D8	7	2.75	3.745	5.5	6-3/4	8-7/8	2	2	1.031
HR-L0-A8	6	3.25	4.495	5.5	6-3/4	8-1/4	2-1/2	1-1/2	5/8"-11"
HR-L0-D8	7	3.25	4.495	5.5	6-3/4	8-7/8	2-1/2	2	1.031
HR-L0-A11	6	3.25	4.495	7.75	9-1/4	11	2-1/2	1-3/4	3/4"-10"
HR-L0-D11	7	3.25	4.495	7.75	9-1/4	11-3/4	2-1/2	2-3/8	1.218
HR-L1-A8	6	4.125	5.995	5.5	6-3/4	8-1/4	3-5/8	1-1/2	5/8"-11"
HR-L1-D8	7	4.125	5.995	5.5	6-3/4	8-7/8	3-5/8	2	1.031
HR-L1-A11	6	4.125	5.995	7.75	9-1/4	11	3-5/8	1-3/4	3/4"-10"
HR-L1-D11	7	4.125	5.995	7.75	9-1/4	11-3/4	3-5/8	2-3/8	1.218
HR-L1-A15	6	4.125	5.995	11.25	13	15	3-5/8	2	7/8"-9"
HR-L1-D15	7	4.125	5.995	11.25	13	15-7/8	3-5/8	2-3/4	1.406
HR-L2-A8	6	5.25	7.745	5.5	6-3/4	8-1/4	4-1/2	1-1/2	5/8"-11"
HR-L2-D8	7	5.25	7.745	5.5	6-3/4	8-7/8	4-1/2	2	1.031
HR-L2-A11	6	5.25	7.745	7.75	9-1/4	11	4-1/2	1-3/4	3/4"-10"
HR-L2-D11	7	5.25	7.745	7.75	9-1/4	11-3/4	4-1/2	2-3/8	1.218
HR-L2-A15	6	5.25	7.745	11.25	13	15	4-1/2	2	7/8"-9"
HR-L2-D15	7	5.25	7.745	11.25	13	15-7/8	4-1/2	2-3/4	1.406
HR-L3-A11	6	6.5	10.37	7.75	9-1/4	11	5-1/2	1-3/4	3/4"-10"
HR-L3-D11	7	6.5	10.37	7.75	9-1/4	11-3/4	5-1/2	2-3/8	1.218
HR-L3-A15	6	6.5	10.37	11.25	13	15	5-1/2	2	7/8"-9"
HR-L3-D15	7	6.5	10.37	11.25	13	15-7/8	5-1/2	2-3/4	1.406
HR-L3-A20	6	6.5	10.37	16.25	18-1/4	20-1/2	5-1/2	2-1/2	1"-8"
HR-L3-D20	7	6.5	10.37	16.25	18-1/4	21-1/2	5-1/2	3-1/4	1.656

FLAT TYPE CONVERSION ADAPTERS
Features:

- Dimensions are per U.S.A. Standards.
- Available with or without hardware

Made From Mild Steel (No Casting)


Customer Supplied Information

"D" Diameter of Chuck Mount _____

"E" Thread size of Mounting Holes _____

"F" Bolt circle of Mounting Holes _____

"G" Outside Diameter _____

"I" Inside Diameter _____

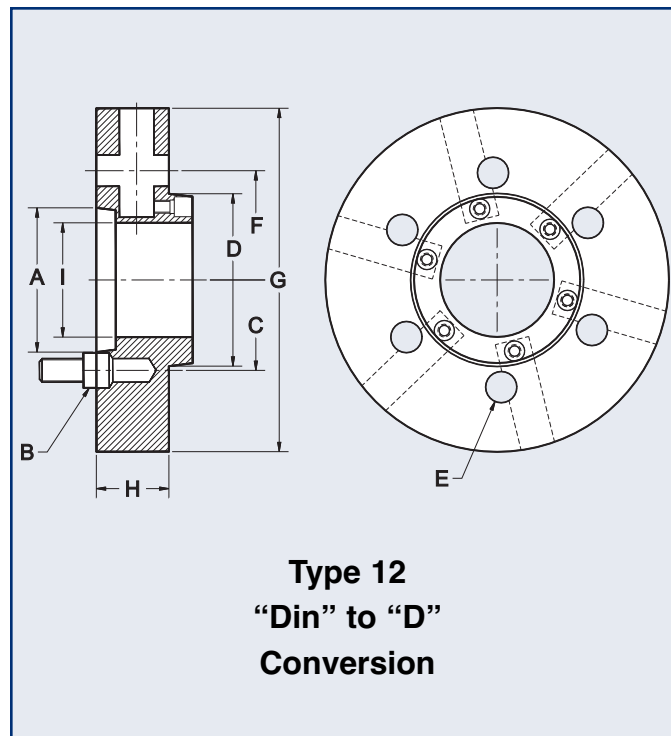
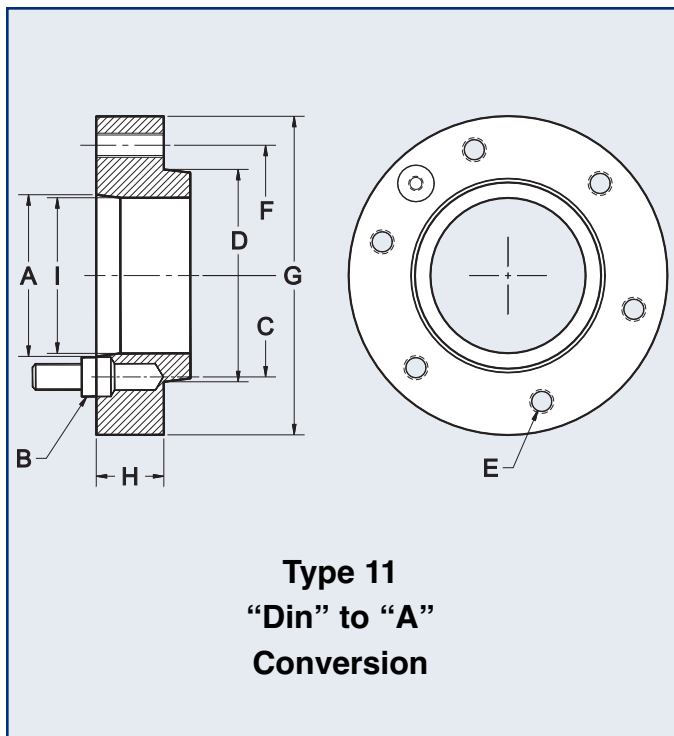
"H" Depth of Chuck Mount _____

H&R Part No.	Type	A	B	C	D	E	F	G	Minimum H	I	J
HR-A5 TO FLAT	8	3.25	7/16" SHCS	4-1/8	CUSTOMER TO SUPPLY INFORMATION				1"		
HR-D5 TO FLAT	9	3.25	.750 STUD	4-1/8					1-1/2		
HR-DIN 5 TO FLAT	10	3.25	19.5/M-10	4-1/8					1-1/2		
HR-A6 TO FLAT	8	4.187	1/2" SHCS	5-1/4					1-1/8		
HR-D6 TO FLAT	9	4.187	.875 STUD	5-1/4					1-5/8		
HR-DIN 6 TO FLAT	10	4.187	21.5/M-12	5-1/4					1-5/8		
HR-A8 TO FLAT	8	5.5	5/8" SHCS	6-3/4					1-1/4		
HR-D8 TO FLAT	9	5.5	1" STUD	6-3/4					1-3/4		
HR-DIN 8 TO FLAT	10	5.5	27/M-16	6-3/4					1-3/4		
HR-A11 TO FLAT	8	7.75	3/4" SHCS	9-1/4					1-1/2		
HR-D11 TO FLAT	9	7.75	1.187 STUD	9-1/4					2-1/4		
HR-DIN 11 TO FLAT	10	7.75	34/M-20	9-1/4					2-1/4		
HR-A15 TO FLAT	8	11.25	7/8" SHCS	13"					1-3/4		

Features:

- Dimensions are per U.S.A. Standards.
- Available with or without hardware

Made From Mild Steel (No Casting)

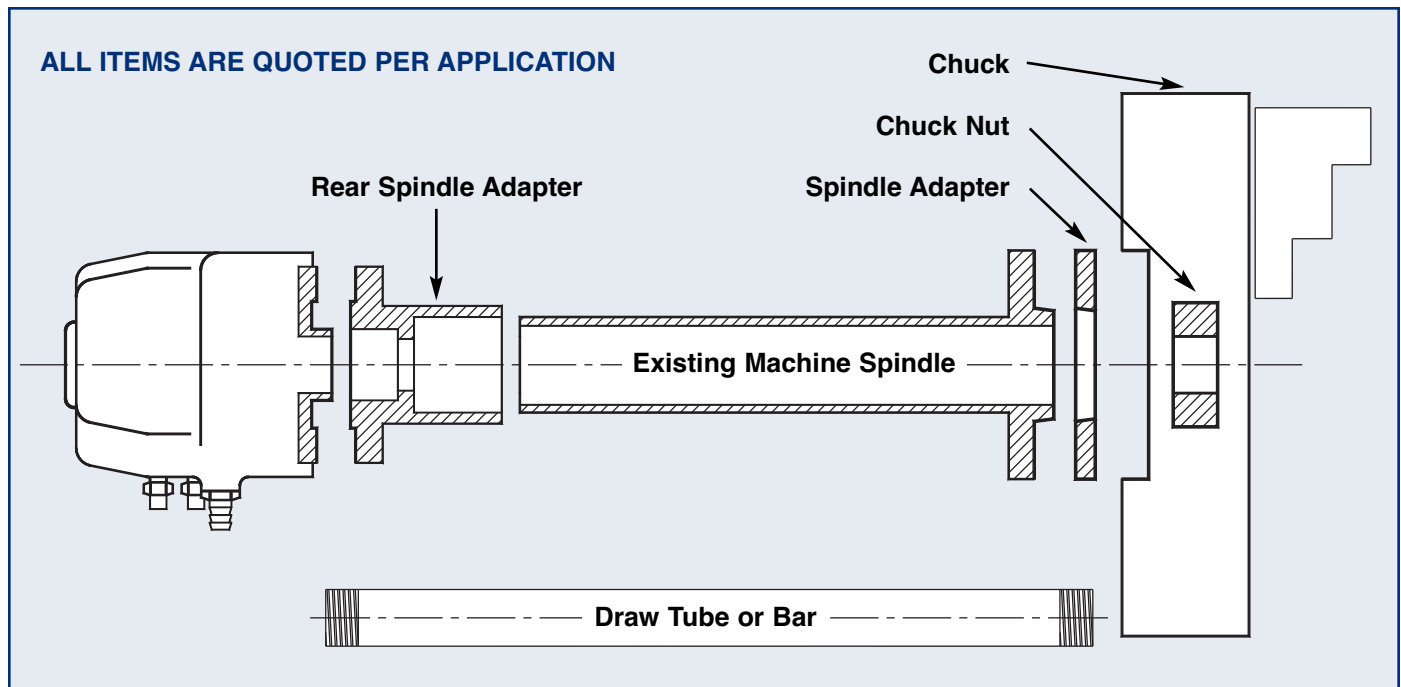


H&R Part No.	Type	Spindle Mount			Chuck Mount						
		A	B1	B2	C	D	E	F	G	H	I
HR-DIN-5 TO A5	11	3.25	19.5MM	M-10	4-1/8	3.25	7/16-14	4-1/8	5-3/8	1-1/2	2-1/2
HR-DIN-5 TO A6	11	3.25	19.5MM	M-10	4-1/8	4.187	1/2-13		5-1/4	6-1/4	1-1/2
2-1/2 HR-DIN-6 TO A6	11	4.187	21.5MM	M-12	5-1/4	4.187	1/2/13		5-1/4	6-3/4	1-3/4
3-1/4 HR-DIN-6 TO D6	12	4.187	21.5MM	M-12	5-1/4	4.187	0.906		5-1/4	7-1/8	1-3/4
2-1/4 HR-DIN-6 TO A8	11	4.187	21.5MM	M-12	5-1/4	5.5	5/8/11	6-3/4	8-1/4	1-3/4	3-1/4
HR-DIN-6 TO D8	12	4.187	21.5MM	M-12	5-1/4	5.5	1.031	6-3/4	8-7/8	2	3-3/8
HR-DIN-8 TO A8	11	5.5	27MM	M-16	6-3/4	5.5	5/8/11	6-3/4	8-3/4	2	5-3/8
HR-DIN-8 TO D8	12	5.5	27MM	M-16	6-3/4	5.5	1.031	6-3/4	8-7/8	2	3 3/8
HR-DIN-8 TO A11	11	5.5	27MM	M-16	6-3/4	7.75	3/4/10	9-1/4	11	2	5-3/8
HR-DIN-8 TO D11	12	5.5	27MM	M-16	6-3/4	7.75	1.218	9-1/4	11	2-3/8	5-3/8
HR-DIN-11 TO A8	11	7.75	34MM	M-20	9-1/4	5.5	5/8/11	6-3/4	11-1/2	2-3/8	5-3/8
HR-DIN-11 TO D8	12	7.75	34MM	M-20	9-1/4	5.5	1.031	6-3/4	11-1/2	2-3/8	3-3/8
HR-DIN-11 TO A11	11	7.75	34MM	M-20	9-1/4	7.75	3/4/10	9-1/4	11-1/2	2-3/8	7-1/2
HR-DIN-11 TO D11	12	7.75	34MM	M-20	9-1/4	7.75	1.218	9-1/4	11-3/4	2-3/8	5-3/8
HR-DIN-11 TO A15	11	7.75	34MM	M-20	9-1/4	11.25	7/8/09	13	15	2-3/8	7-1/2
HR-DIN-11 TO D15	12	7.75	34 MM	M-20	9-1/4	11.25	1.406	13	15-7/8	2-3/4	7-1/2

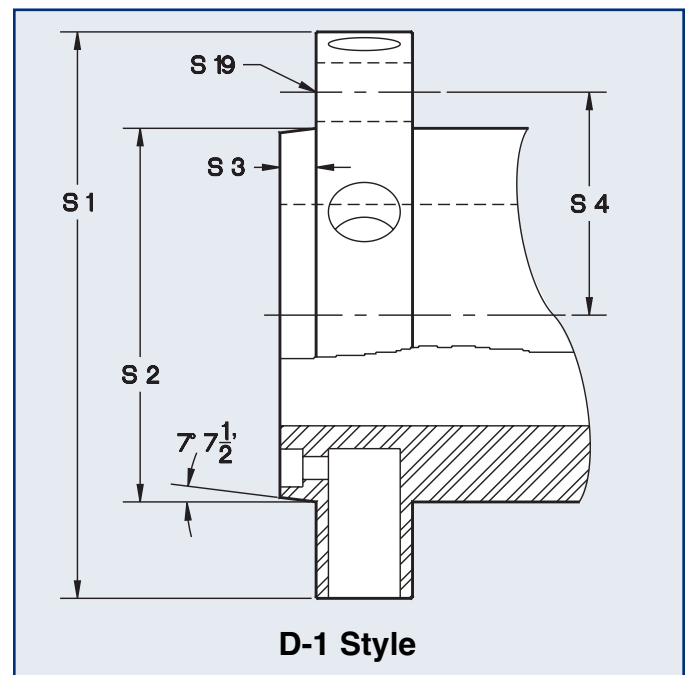
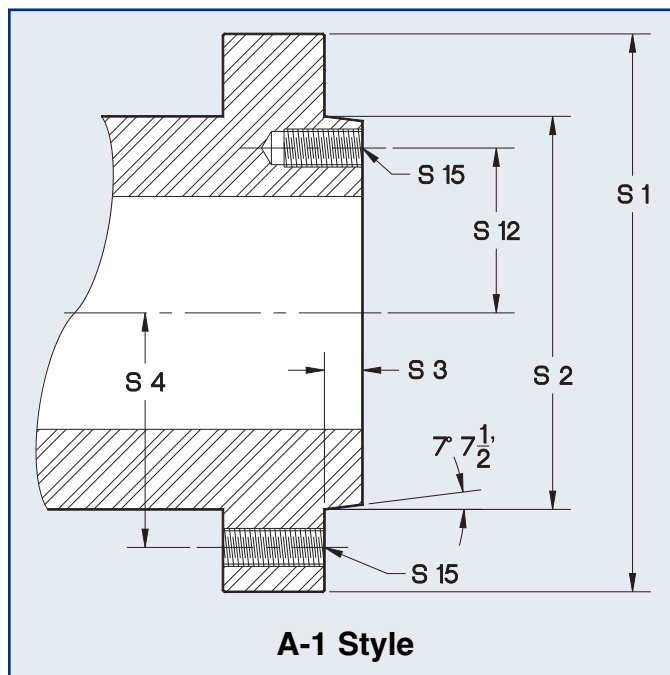
DRAWTUBE ADAPTERS

Complete Engineered Packages or Individual Items to Customer Specifications

ALL ITEMS ARE QUOTED PER APPLICATION



MOUNTING STANDARDS (ASME)



American Standard Type A-1

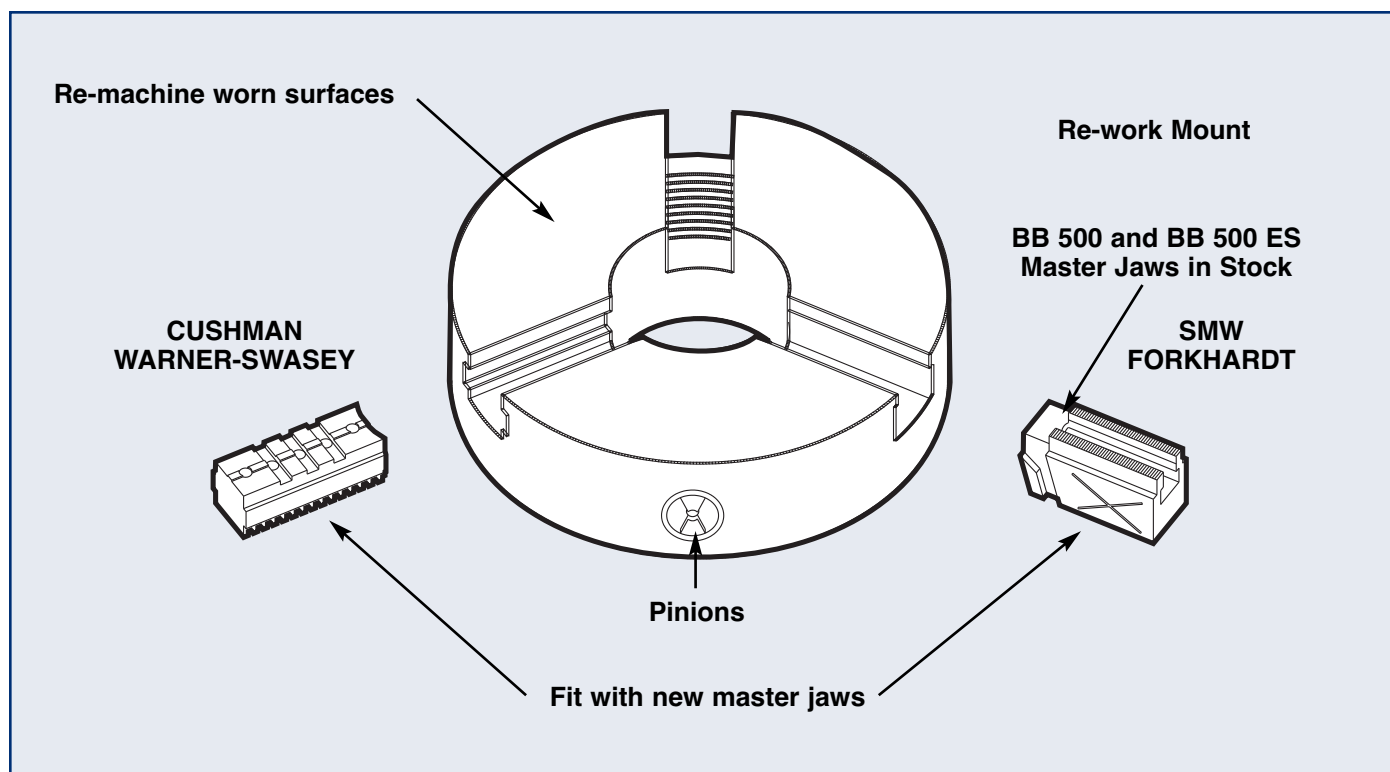
DIM	A-5	A-6	A-8	A-11	A-15	A-20
S 1	5.250	6.500	8.250	11.000	15.000	20.500
S 2	3.250	4.188	5.500	7.750	11.250	16.250
S 3	.562	.625	.688	.750	.812	.875
S 4	2.063	2.625	3.375	4.625	6.500	9.125
S 12	1.219	1.625	2.188	3.250	4.875	7.250
S 15	7/16-14	1/2-13	5/8-11	3/4-10	7/8-9	1-8

American Standard Type D-1

DIM	D-5	D-6	D-8	D-11	D-15	D-20
S 1	5.750	7.125	8.875	11.750	15.875	21.500
S 2	3.250	4.187	5.500	7.750	11.250	16.250
S 3	.500	.562	.625	.687	.750	.812
S 4	2.063	2.625	3.375	4.625	6.5	9.125
S 19	.781	.906	1.031	1.218	1.406	1.656

Self Centering Chucks

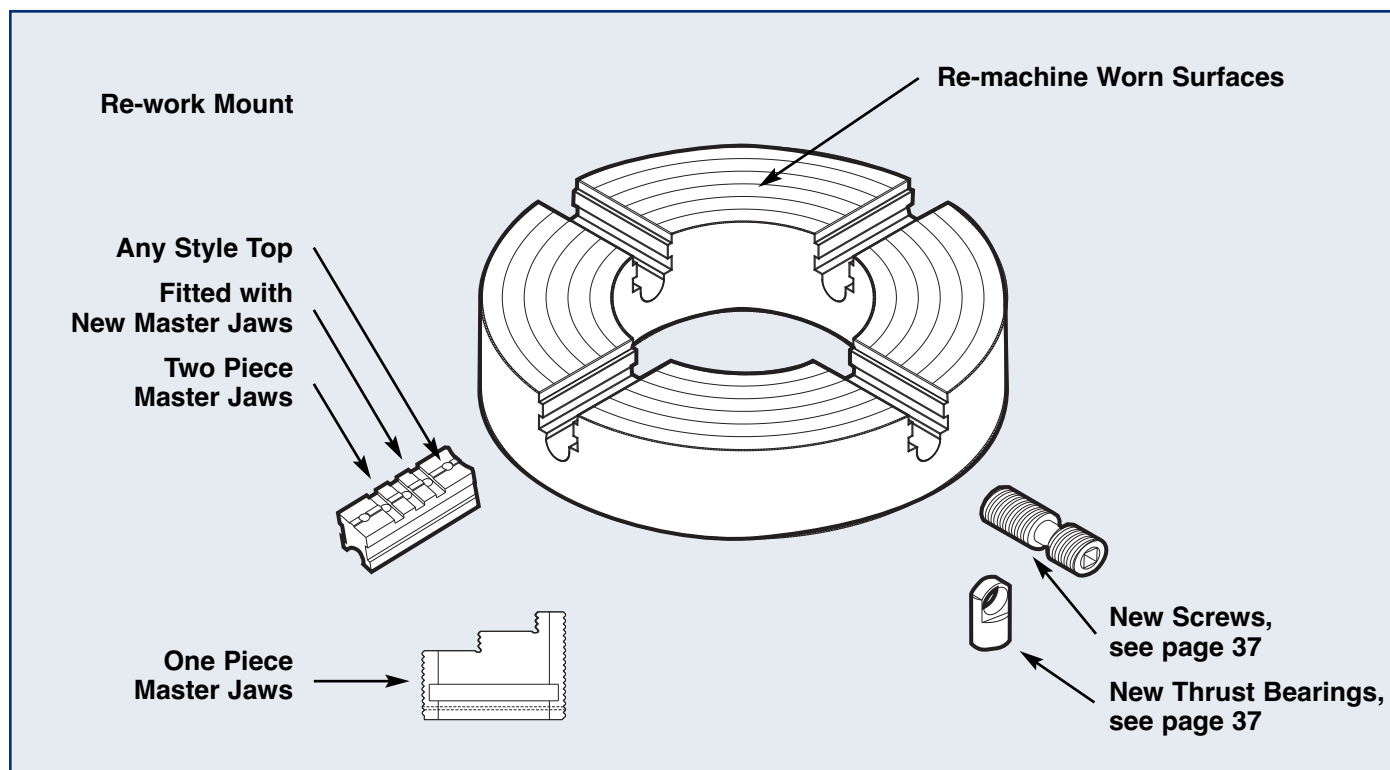
Air Chucks, Power Chucks and Scroll Chucks



O-Ring Kits for Air Chucks in Stock

Independent Chucks and Boring Mill Jaws

Cushman, Warner-Swasey, Union, SCA, Nobel, Skinner, Gisholt and Others



CALL FOR QUOTE

REPLACEMENT SCREWS & THRUST BEARINGS

Cushman Union Skinner and Others

Single End	
Double End	
Internal	
External	
Hex	
Square	
Depth	

4140 Material

Drive End

Pitch	
Right Hand	
Left Hand	
Acme	
Square	

Qty. _____ Approved By _____ Date _____

A	B	C	D	E	F	K	L	M

Single End	
Double End	
Internal	
External	
Hex	
Square	
Depth	

4140 Material

Drive End

Pitch	
Right Hand	
Left Hand	
Acme	
Square	

Qty. _____ Approved By _____ Date _____

A	B	C	D	E	F	G	H	I	J	K	L	M

THRUST BEARINGS

Cushman Union Skinner and Others

Type A

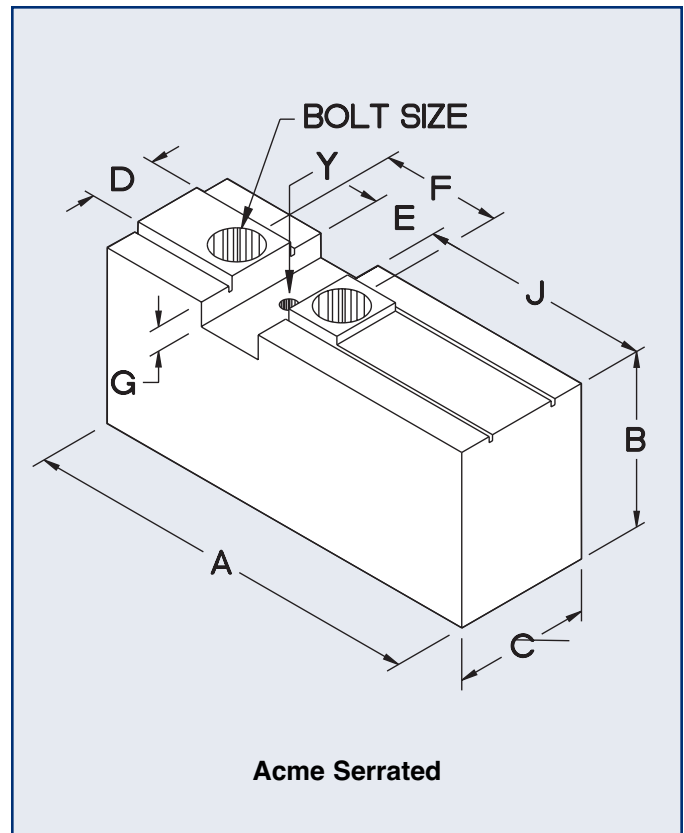
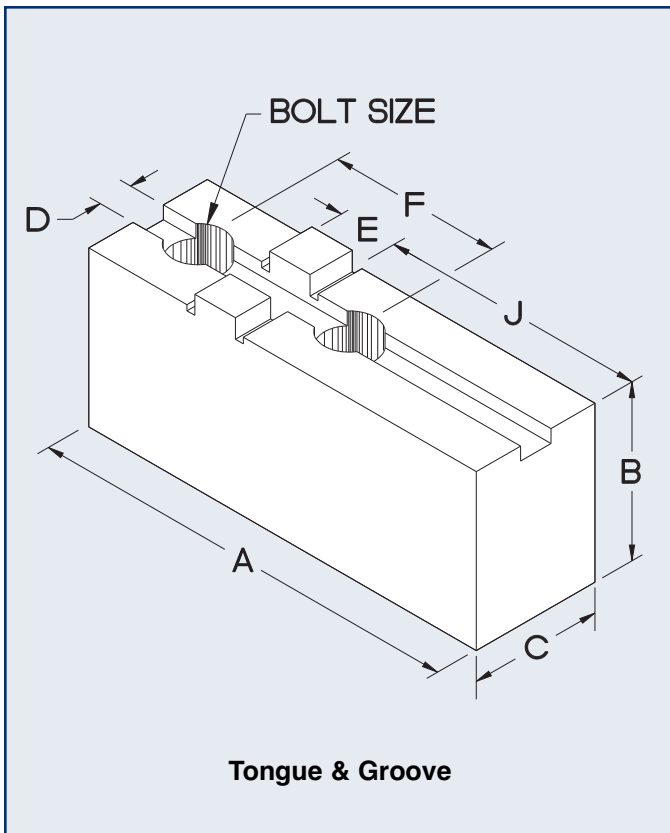
A*	B	C	D*	E	F

Type B

A*	B	C	D*	E	F

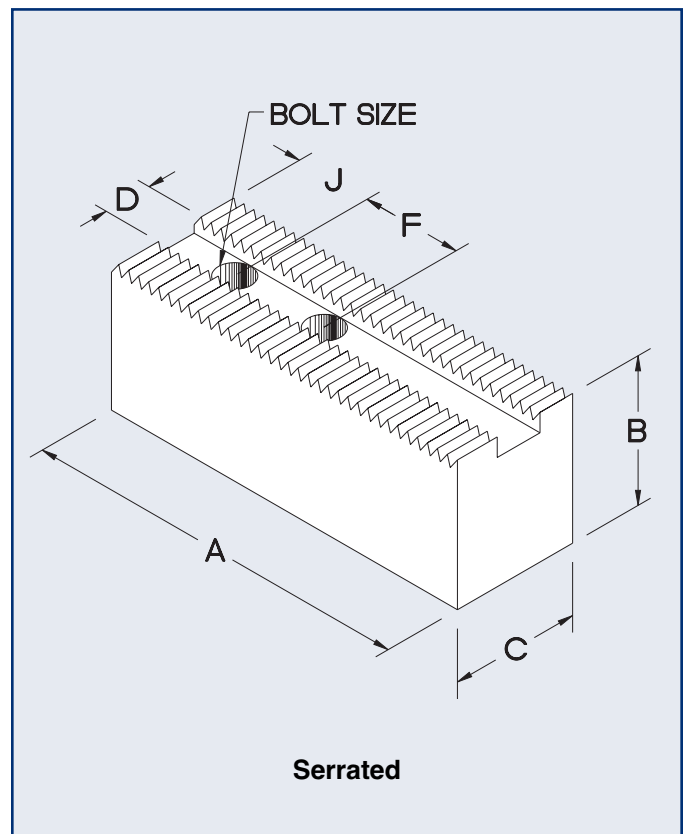
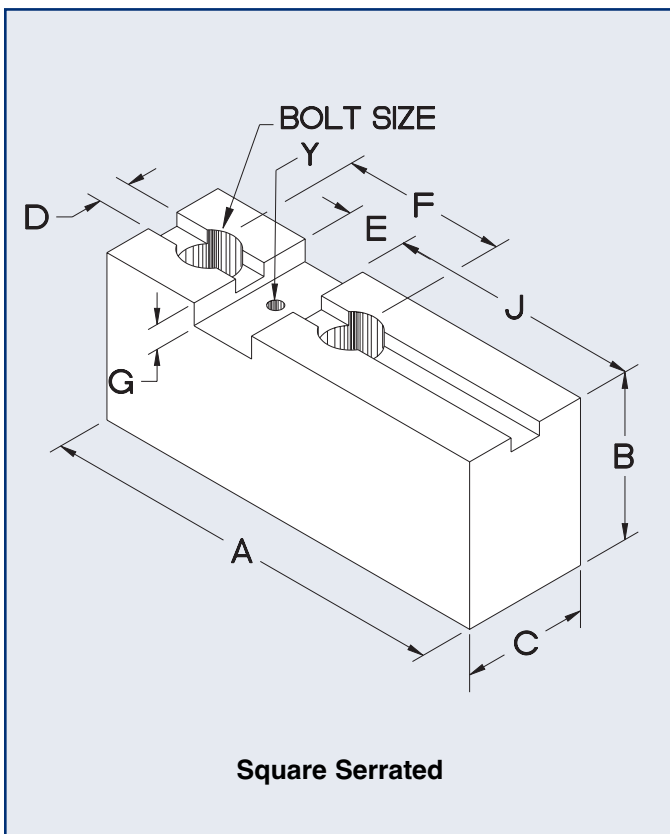
Type _____ Qty. _____ Approved By _____ Date _____

*Diameter



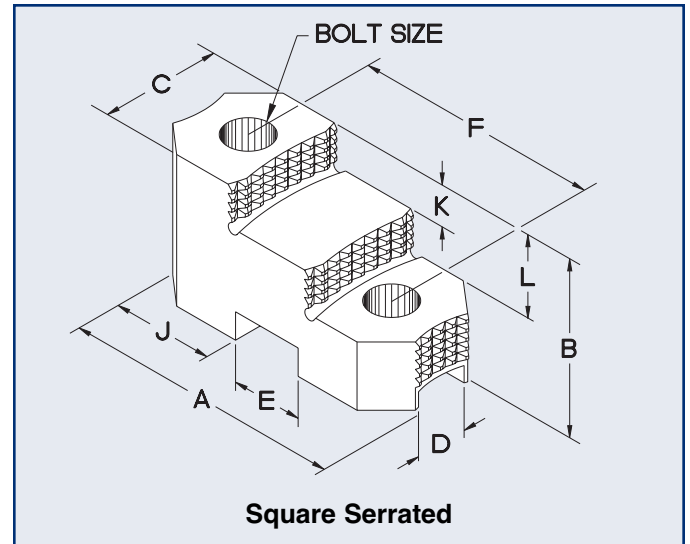
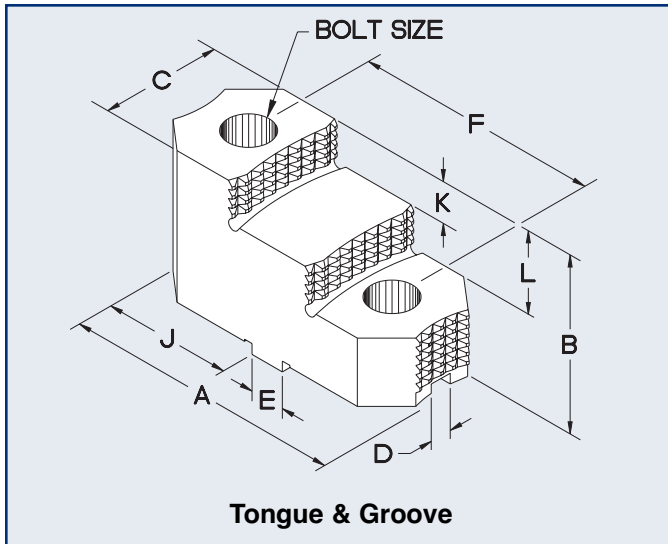
See web site for additional prints

www.hrmfg.com



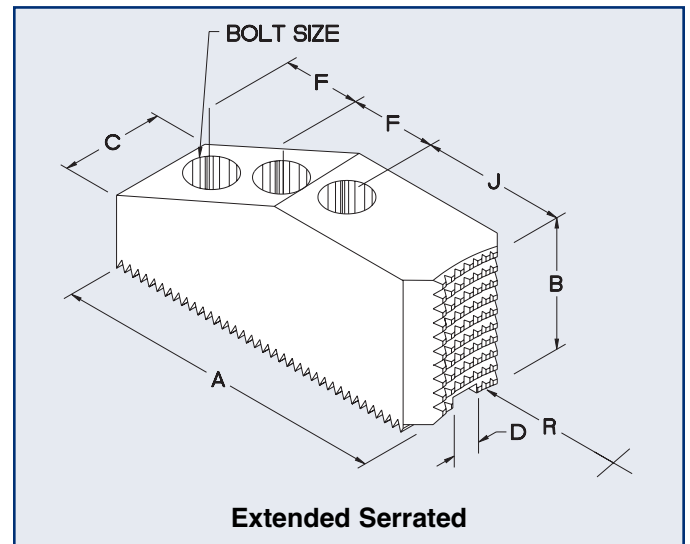
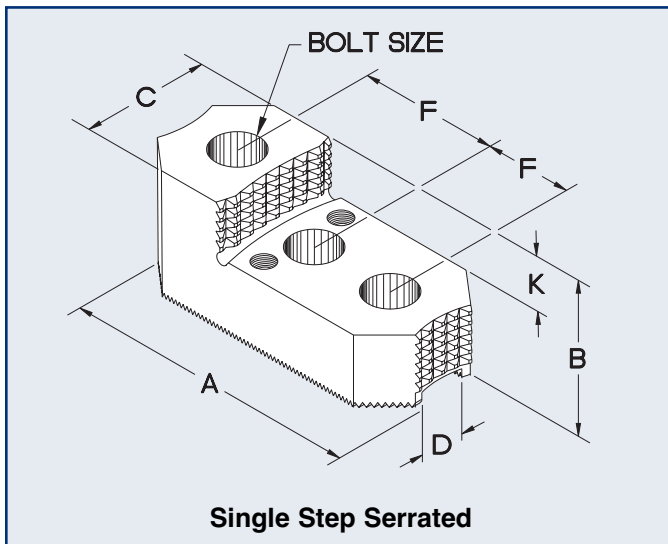
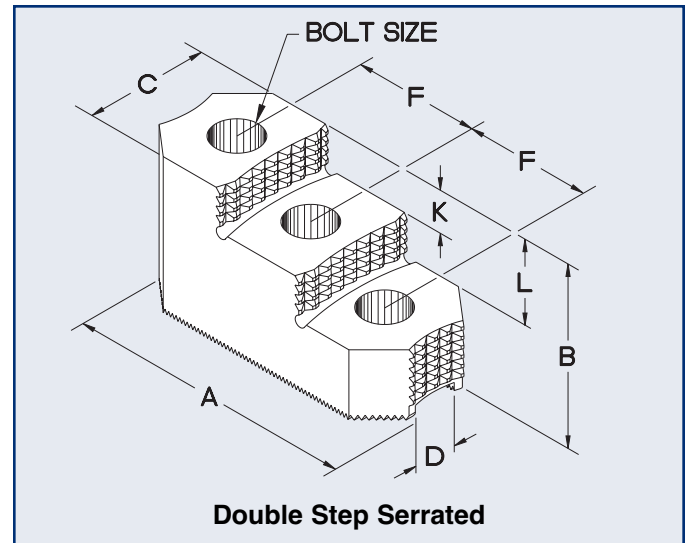
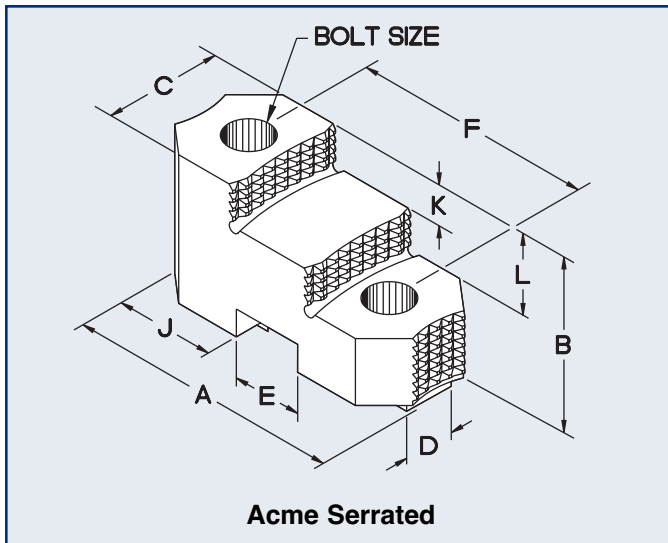
Qty. _____ Approved By _____ Date _____

A	B	C	D	E	F	G	J	Y	Bolt Size	Serration



See web site for additional prints

www.hrmfg.com



Qty. _____ Approved By _____ Date _____

A	B	C	D	E	F	J	K	L	Bolt Size	Serration

One bolt changes insert grip diameter in seconds without moving the master. Companies already using the H&R Quick Change Hard Inserts have documented drastic savings in a 3 to 6 month payback period. A set of Quick Change Inserts, custom sized to your specifications, will virtually eliminate the non-essential need for machining soft jaws over and over again, as well as reduce the man hours spent on tooling, set-up, and costly non-productive machine downtime due to set-up, (**More parts completed**

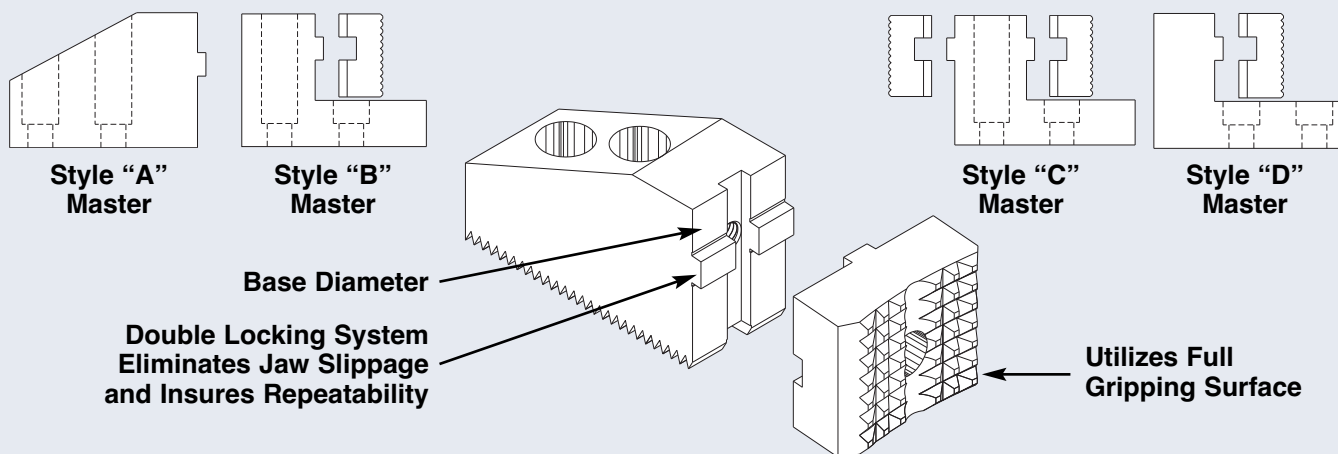
per hour.) When the occasional or frequent need arises for special jaw size, standard H&R soft inserts are available to fit the same rigid double lock master, with the same quick one bolt change. Please call us to prepare a cost estimate for equipping your machines with Quick Change Jaw Inserts to your specifications. Compare this cost to **what your present total system would cost you over the next several years, and you will see the savings you could enjoy with this new system.**

Quick Change Jaw Inserts normally pay for themselves in 3 to 6 months.

LOCATE MASTER TOP JAWS ONCE

Master top jaws remain in one location for a specific range of diameters (*based upon customer specifications and our unique design.*) The inserts are designed to make up the specific different OD sizes requested.

H&R O. D. FLAT SYSTEM



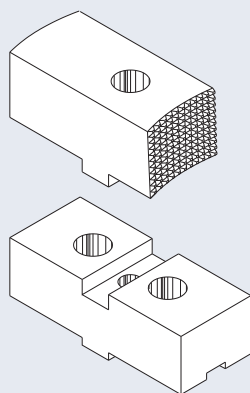
The new integrated double locking system will ensure tool pressure rigidity from any direction, and flat ground surfaces ensure repeatability.

Choice of Insert Styles

- (A) HARD - with teeth or smooth with or without stops
- (B) SOFT - Pointed End / Square End

All custom hard jaw inserts are made to your specified diameter or configuration. Soft blanks also available for those Quick Jobs.

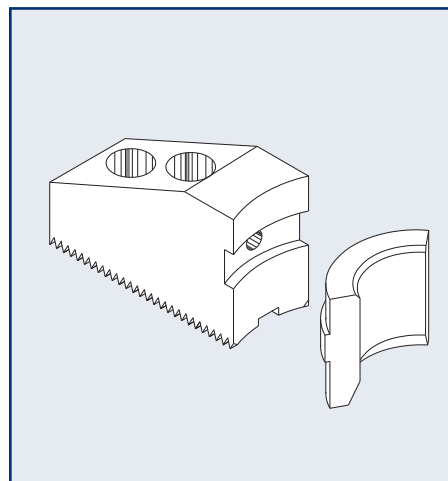
H&R I.D. - O. D. FLAT SYSTEM



Fits Any Chuck

This unique design allows a quick change system with interchangeable soft or hard inserts for **O.D.** and **I.D.**, even on the same jaw. Within certain size ranges, **ONE** insert can have **two sizes one on each end of the same insert reducing your cost even further.** The flat ground connection between the master and the inserts insures repeatability and stability.

Call for more information.



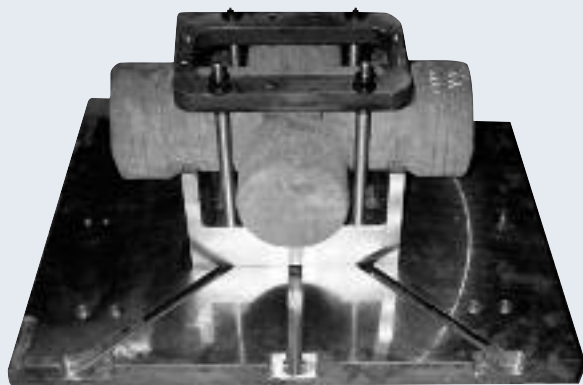
H&R COLLET QUICK CHANGE SYSTEM

MACHINE PARTS COMPLETE IN ONE SETUP

“Just in Time” One Setup Tooling

Horizontal or Vertical Machining Center

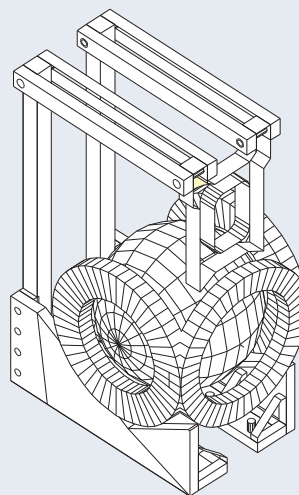
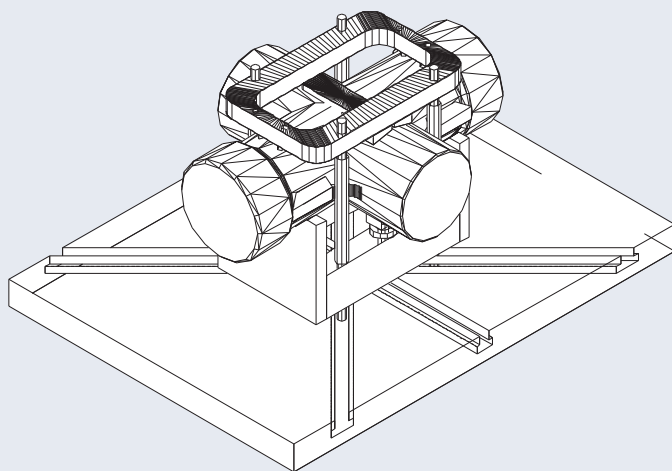
Horizontal Mill fixtures for One Shot Machining



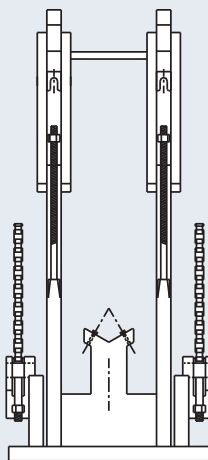
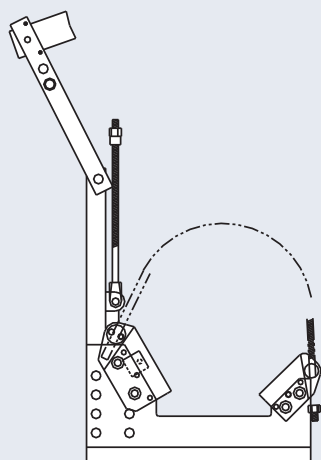
Oilfield Cross's or Tee's



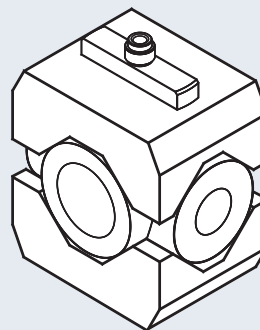
Large Valve Bodies



Interchangeable Fixture Models on Cad



**Custom made indexing jaw
for
Autoblok, Nobel and Royal Chucks**



Soft & Hard Jaws
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Quick Change
Jaw Systems
Boring Mill Jaws
Indexing Jaws & Tooling
Chuck Wrenches
Chuck Rebuilds & Parts
Air Chuck O-Ring Kits
Right Angle Drive
(R-8 & Cat 50)
Tombstone
Tombstone Fixtures
Tail Stock
Vee Blocks
Face Plates
Face Plate Jaws
Chuck Adapters
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