

ULTRA PRECISION MILLING MACHINE VISES WITH SWIVEL BASE



SERIES 388:

Special construction prevents tilting of jaw and work. Manufactured to highest precision standards with many features including: totally enclosed lead screw, hardened and ground and easily removable jaws, ground top and bottom surfaces, coolant trough, graduated swivel base, flame hardened vise bed, etc.



Width of Jaws	Height of Jaws	Jaw Opening*	Overall Height	Weight	Order No.	Price
4	1-1/8	4	4-3/4	46 lbs.	2235104	
6	1-1/2	5-1/2	6	107 lbs.	2235106	
8	2	7-3/4	7	225 lbs.	2235108	

* By repositioning the jaws the clamping capacity can be increased.

ULTRA PRECISION MILLING MACHINE VISE - TYPE II



SERIES 388:

Similar features to above vises but without Swivel Base.



- Perfect for multiple vise setups NC/CNC Machines.
- Permits fast, accurate multiple machining.
- All sides accurately ground permitting clamping in different modes (up-right, vertical, and sideways).

Width of Jaws	Height of Jaws	Jaw Opening	Overall Height	Weight	Order No.	Price
6	1-3/4	5-3/4	4-11/16	66 lbs.	2235506	

ULTRA PRECISION MILLING MACHINE VISE WITH TWO CLAMPING STATIONS

SERIES 388:



- Produce twice the parts per table load.
- Reversible jaws can be changed from standard to stepped part holding mode for thin or small parts.
- Every side of body is precision ground and the height matched within +0.15", can be mounted in multiples - parallel or vertically.
- High precision and rigidity.
- Anti-tilt mechanism eliminates the life of movable jaw.
- The advanced structure can avoid clamping deflection by transmitting equal and opposing force into the stationary jaw.
- Ductile cast iron body with hardened upper guide surface for improved rigidity and wear resistance.

Jaws Width	Jaw Height	Vise Height	OAL	Weight	Order No.	Price
6"	1-1/2"	5"	24"	110 lbs.	3880001	

WORK STOPS FOR VISES

SERIES 366: KURT SERIES 388: MEDA



For use with SERIES 366 & 388 type vises. Permits fast, completely accurate positioning of repetitive work.



Jaw Width	MEDA		KURT	
	Order No.	Price	Order No.	Price
4	3880004		3660024	
6	3880006		3660026	
8	3880008		3660028	

SPEED HANDLES FOR VISES

SERIES 366: KURT
SERIES 388: MEDA



Fits all SERIES 366 & 388 type vises.

Jaw Width	Hex Size	MEDA		KURT	
		Order No.	Price	Order No.	Price
4	9/16	3881004		3660034	
6	3/4	3881006		3660036	
8	7/8	3881008		-	

VERSATILE LOCK™ VISES

SERIES 366:



The Kurt Versatile Lock Vises are designed for maximum workholding versatility in most CNC machining applications. Versatile Lock vises are stronger, lighter and more easily mounted than any other precision machine vise. With their modular design they are easily convertible in special clamping situations.

Hydraulic and Air models also available; please inquire.



FEATURES

Can be mounted upright or on either side.
.0005" clamping repeatability
Foot print on the short version (Model No. 3620V) is 13", ideal for the smallest machines.
10 year limited warranty

JAW PLATE POSITION



Type	Model No.	Jaw Width	Jaw* Opening	Length	Wt. lbs.	Order No.	Price
Standard	3600V	6"	6"	15.060	69	3663600	
Short	3620V	6"	4"	12.940	64	3663620	

*In AA position

Jaw Plate Position	Maximum Jaw Opening	
	Standard	Short
BB	9.500	7.500
CC	11.250	9.250
DD	14.750	12.750

**ANGLOCK® D-SERIES VISES**

SERIES 366:



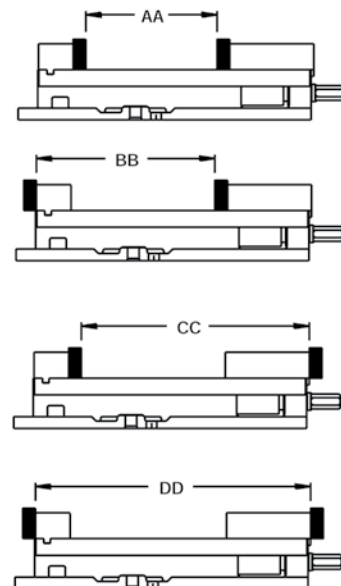
The original KURT AngLock D-Series Vises are designed for precision part clamping on basic machine tools such as knee type mills, grinders and machining centers. D-Series vises are ideal for use in running production parts where datums, flatness and parallelism is important. You can precision bore, tap, drill, grind and finish with high accuracy on most parts made of die cast aluminum, steel, and iron, in your KURT AngLock Vises.

All KURT vises have a friction reducing, needle bearing, thrust collar on the screw. The needle bearing increases jaw clamping pressure.

OTHER FEATURES

- AngLock design assures the moveable jaw does not lift.
- Hardened jaw plates.
- Semi-hard steel screw. 80,000 PSI ductile iron construction.
- Ten year limited warranty.

ACCESSORIES Swivel bases, workstops, keys and a variety of jaw plates.



Jaw Width	Jaw* Opening	Length	Weight.	Model No.	Order No.	Price
4	3-7/8	12.340	32	D40	3660040	
6	7-1/2	16.750	75	D675	3660675	
6	8.80	16.810	75	D688	3660688	
8	10	21.810	158	D810	3660810	
10	9-3/4	27.500	300	D100	3660100	

* With jaw plates in AA position (see line drawing).

SWIVEL BASES

Model No.	Wt.	Fits Vise Model No.'s	Order No.	Price
D40-4-SA	16	D40	3600041	
D50-4-SA	20	D50	3600051*	
D60-4-SA	26	D60, D675, D688	3600061	
D80-4-SA	80	D80, D810	3600811	

*LIMITED QUANTITY

Maximum Jaw Opening

Jaw Plate Position	Jaw Width						
	3"	4"	5"	6"	6"***	8"	10"
BB	4-3/8	5-3/4	6-1/2	10-1/2	11.500	13-1/2	14
CC	6-5/8	8-7/16	9-3/4	13-1/8	14.320	17-1/4	19-3/4
DD	8-1/4	10-5/16	12	15-7/8	17.030	20-3/4	24-3/4

*D675 **D688



While we show only the most popular **KURT** items we can supply their entire range of products; please inquire.

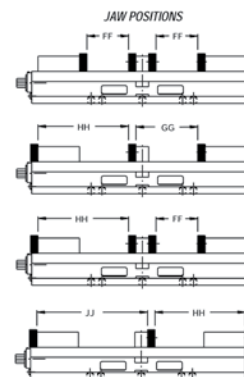
DOUBLELOCK® VISES

Doublelock vises offer cost savings productivity by maximizing the numbered parts in the work envelope.

Hydraulic models also available; please inquire.

FEATURES

- Offers 2 clamping stations
- Large Capacity
 - DL430 3" x 4" each station
 - HDLM6J 4" x 6" each station
 - DL800 6" x 8" each station
- .0002" repeatable clamping accuracy
- Performs first and second operations simultaneously.
- Precision ground on all sides
- 80,000 PSI ductile iron body
- Reversible hardened jaw plates
- Body height matched to within .001"
- 10 Year limited warranty.

**Maximum Jaw Opening**

Jaw Width	Jaw Position		
	GG	HH	JJ
4"	4.547	6.637	8.184
6"	5.965	8.785	10.750
8"	8.925	13.075	16.000

Model No.	Jaw Width	Jaw Opening	Length	Weight lbs.	Order No.	Price
DL430	4"	3"	16.125	45	3660430	
HDLM6J	6"	4"	21.000	100	3660640	
DL800	8"	6"	30.000	250	3660800	

*In FF Position, each station



ANGLOCK® PT-SERIES VISES

SERIES 366:



The AngLock PT Series vises offer high precision function through these important design features: the original, time-proven Kurt AngLock designs prevents parts from lifting upward under heavy clamping loads; the "pull-type" jaw clamping reduces stationary jaw deflection by at least 80% as the movable jaw is "pulled" into the stationary jaw and not pushed like standard screw type vises.

Hydraulic models also available; please inquire.

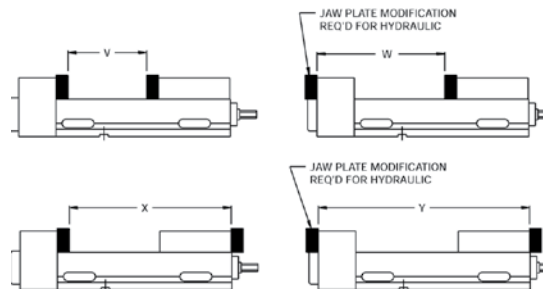
FEATURES

- "Pull-Type" clamping means high precision and repeatability.
- Up to 20,000 lbs. precision clamping force.
- Can be mounted upright or on either side.
- CNC style allows compact spacing.
- Both sides ground square to within .001" with base and top.
- 80,000-PSI ductile iron body.
- 10 year limited warranty.



PT Series vises shown mounted "back to back."

JAW PLATE POSITION AND OPENING-INCHES



Model No.	Jaw Width	Jaw* Opening	Length	Wt. lbs.	Order No.	Price
PT400A	4"	4"	11.438	32	3660400	
PT800A	8"	7-3/8"	19.875	159	9660800	

*In V position

Jaw Plate Position	Maximum Jaw Opening	
	4"	8"
W	6-3/4	12
X	8-9/16	15-13/16
Y	11-5/16	19-13/16



For Work Stops and Speed Handles see page 562 & 565.

KURT VISE ACCESSORIES

SERIES 366:

For Work Stops and Speed Handles see page 562 & 565.



6 PJS MAGNETIC JAW PLATE AND PARALLEL SET

The 6" magnetic jaw set from Kurt comes complete with two jaw plates with an embedded earth magnet for holding the parallels in place, leaving hands free to hold and clamp the workpiece.

This 11 piece set includes:

- 2 - 3/16" x 1" x 6" ground steel parallels.
- 2 - 3/16" x 1-1/4" x 6" ground steel parallels.
- 2 - 3/16" x 1-3/4" x 6" ground steel parallels.
- 1 D60-7 MAG hardened jaw plate with earth magnet.
- 1 D60-315-MAG hardened Groove Lock jaw plate with earth magnet.
- 1 WSRL 46 Kurt Groove Lock workstop.
- 1 WSRL Kurt Groove Lock extended workstop.
- 1 wooden storage box.



FEATURES

- Fits all Kurt 6 inch vises.
- Powerful earth magnets hold the parallels in place securely.
- Genuine Kurt Groove Lock workstops are included.
- D60-315-MAG jaw plate also accepts the Kurt 6AWS Workstop.

Order No. 3660001 Price

6" MAGNETIC JAW PLATE

Features powerful earth magnets for holding parallels securely in place, leaving hands free to hold and clamp the workpiece. Fast and accurate set ups.



Order No. 3660006 Price

6 AWS WORKSTOP

New adjustable workstop can be used on all Kurt high-density vises. It can also be used on any vise with a 5/16-18 UNC tapped hole in the base or side of the jaw. The body clamp has a 2" adjustment and features a 3" long stop pin for fast and easy set ups. A long and short spacer is also available to fit almost any application; please inquire.

FEATURES

- Versatile
- Economical
- Fast, easy set up
- Black oxide finish
- Fast accurate positioning of parts



Order No. 3660016
Price

PARALLEL KEEPER

Place your parallels in the vise against the jaws. Take the parallel keeper, squeeze it together and place it inside the parallels. Release the parallel keeper, it will push against the parallels, holding them against the jaws of the vise. It's that simple! Opens to 6 inches. Your new revolutionary labor saver, your "machinists third hand," is at work, saving part change time.



Order No. 3666000 Price

F-TYPE MILLING VISE

SERIES: 348



Very sturdy construction. Semi-steel body with precision acme thread lead screw. Smooth jaws are made of special steel, heat treated and ground and are easily replaceable. 4 hold down flanges for mounting. Trough returns coolant.



Model No.	Width of Jaws	Height of Jaws	Max. Opening	Overall Height	Weight	Order No.	Price
FMV4*	4	1-1/8	3-1/8	3-1/8	30 lbs.	0921404	
FMV6*	6	1-3/4	4-7/8	4-1/4	72 lbs.	0921406	
FMV8*	8	2-1/2	7-1/4	6-1/8	120 lbs.	0921408	

* LIMITED QUANTITY

K-TYPE MILLING VISE

SERIES 392:



Very sturdy construction. Semi-steel body with precision acme thread lead screw. Smooth jaws are made of special steel, heat treated and ground and are easily replaceable. Vise is mounted on an easily removable graduated swivel base.



Model No.	Width of Jaws	Height of Jaws	Max. Opening	Overall Height	Weight	Order No.	Price
KMV4	4	1-3/16	2-5/8	4	20 lbs.	2255004	
KMV5*	5	1-3/4	3-3/4	5-1/2	55 lbs.	2255005	
KMV6	6	1-5/8	4-9/16	5-7/8	58 lbs.	2255006	
KMV8	8	2-5/16	6	7-9/16	115 lbs.	2255008	

* LIMITED QUANTITY

UNIVERSAL 3-WAY ANGLE MACHINE VISE

SERIES 665:



Made of highest quality ductile iron. Angles can be set and securely locked in 3 directions. 360° graduated swivel base. Vises tilt up to 90° in the horizontal/vertical plane and up to 45° in both right and left directions.



Model No.	Width of Jaws	Height of Jaws	Max. Jaw Opening	Overall Length (Lowered)	Overall Height (Lowered)	Weight	Order No.	Price
UAV3	3-3/16	1-3/16	3-5/8	15-13/16	6	32 lbs.	6650003	
UAV4	4-1/4	1-1/2	4-3/16	18-7/16	6-7/8	65 lbs.	6650004	
UAV5	5-1/4	1-5/8	5-5/8	25	8-3/16	96 lbs.	6650005	

B-TYPE MILLING VISE

SERIES 393:



Similar to Series 392 Vises, but with a coolant trough.



Model No.	Width of Jaws	Height of Jaws	Max. Opening	Overall Height	Weight	Order No.	Price
BMV4*	4	1-1/4	3-1/8	4-7/8	45 lbs.	2260004	
MBV5*	5	1-7/16	3-1/2	5-3/4	80 lbs.	2260005	
BMV6	6	1-5/8	4-9/16	5-7/8	75 lbs.	2260006	
BMV8*	8	2-1/2	6-3/4	7	175 lbs.	2260008	

* LIMITED QUANTITY

COMPOUND MACHINE VISES

SERIES 464:



Three graduated dials enable work to be held at any compound angle. Precise construction allows vise to be locked accurately. Vises are made of high grade semi-steel and the jaw faces of specially selected hardened and ground steel.



Width of Jaws	Height of Jaws	Max. Opening	Overall Height	Weight	Order No.	Price
4	1	2-3/4	6-3/4	25 lbs.	2575004	
6	1-5/8	4-1/2	8-3/4	60 lbs.	2575006	

2 WAY ANGLE MILLING MACHINE VISES WITH SWIVEL BASE

SERIES 388:

This two angle milling machine vise makes most angle settings possible. The moveable jaw, body and swivel base are made of semi-steel. Remaining parts of high quality alloy steel. The jaw plates are hardened and ground. Grooved, Step and Angle jaw plates available; please inquire. The vise rotates 360°. The lead screw is fully covered. This vise can incline from the horizontal position to an angle of 45° up or down. Vises are provided with two mounting bolts with T-nuts and one wrench.



Width of Jaws	Height of Jaws	Max Opening	Overall Height	Weight lbs.	Order No.	Price
4"	1-3/4	4	6-1/4	44	2251004	
6"	2-1/8	6	8	89	2251006	

WORK STOP

SERIES 388:



Order No.	Price
3881000	



- Adjustable, spring loaded clamp for vises.
- Fits all milling vises with 3/8" (9.5mm) thru 3/4" (19.0mm) wide jaws.
- Body 1" (25mm) wide with two steel guide pins for positive clamping.
- Mounts quickly with one socket head screw

2-POSITION SELF-CENTERING MILLING MACHINE VISES

SERIES 395:

FOR HOLDING SHAFTS & ROUND WORKPIECES



This vise is used for clamping round workpieces with diameters from .394" to 6.30". For use on a milling machine or drill press.

SPECIAL FEATURES

- The jaw plates are case-hardened and heat-treated to Rockwell C 55-60.
- The vise body and 2 movable jaws are made of semi-steel.
- Vises can be set up in two positions.
- The adjustable sliding rod enables the workpieces to be set in the same position repeatedly.
- Vises are supplied with 2 clamping bolts, wrench, V-block and sliding rod.

Width of Jaws	Shaft Capacity Min. - Max.	Overall Height	OAL	Max Clamping Power lbs.	Weight lbs.	Order No.	Price
4"	.394-2.48	6.69	12.00	2200	65	2270004	

2-PIECE MILLING MACHINE VISES

SERIES 464:

Two piece construction results in utmost clamping flexibility, on work pieces ranging from short to extra long.

Body made of meehanite casting. Jaws are hardened and precision ground. Small movement of detachable handle grips work firmly for even the heaviest cuts. Each half supplied with key slots and wedges for exact locating on machine table.



Jaw Size	Jaw Width	Depth	Weight	Order No.	Price
6	6	3	31 lbs.	2275006	
8	8	3-1/4	40 lbs.	2275008	



QUICK ACTING MACHINE VISES

SERIES 389:



These instant clamping vises are ideal when a large number of the same parts has to be machined on milling machines or drill presses. The clamping of the workpiece is done by a single movement of the lever.

This vise saves a lot of time with it's fast clamping mechanism. The base and movable jaw are made of semi-steel. The jaw plates are case-hardened and heat-treated. The heavy base has six clamping slots and can be clamped to a milling machine table with two bolts. The quick-acting cam can be set instantly to hold work. Jaw plate with horizontal & vertical grooves can clamp different shaped workpieces in different positions. Special 4-position jaw plate is available; please inquire.

Width of Jaws	Height of Jaws	Max Opening	Overall Height	Weight lbs.	Order No.	Price
3"	1.18	3.15	2.8	11.5	7205000*	

* LIMITED QUANTITY

SHAPER & MILLING MACHINE VISES WITH SWIVEL BASE SELF-CENTERING

SERIES 389:



This self-centering, heavy duty, large capacity vise is designed for heavy milling or planing operations. Two movable jaws, body and swivel base are made of semi-steel and remaining parts of high quality alloy steel. The jaw plates are hardened and ground. Grooved, Step and Angle jaw plates available; please inquire. The vise can swivel on the base up to 90°. Vises are provided with two mounting bolts with T-nuts and one wrench.

Width of Jaws	Height of Jaws	Maximum Opening	Overall Height	Weight lbs.	Vise Order No.	Price
8"	2.48	6.3	7.28	130	9210008	

* LIMITED QUANTITY

HEAVY DUTY SHAPER VISES

SERIES 389:



- Rugged construction.
- Large capacity.
- Removable jaws.
- 360° swivel base.
- Rectangular base.

Model No.	Width of Jaws	Depth of Jaws	Max. Jaw Opening	Overall Lgth (Lowered)	Overall Height (Lowered)	Width Overall
SMV10	10	2-3/4	12	29-1/4	8-1/4	18-3/8
SMV12	12	3	14-3/8	34-3/8	8-3/4	21

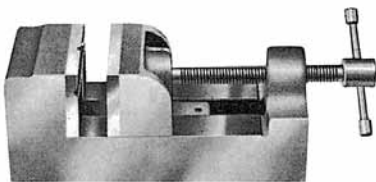
Model No.	Length of Base	Width of Base	Weight	Order No.	Price
SMV10*	18	12-1/2	230 lbs.	921702	
SMV12*	20	14-1/2	330 lbs.	921703	

* LIMITED QUANTITY

DRILL PRESS VISES

SERIES 399:

- For small drilling, tapping and grinding.
- Can be turned on either side or stood on end.
- Accurately machined and assembled from high tensile cast iron.
- Hardened and ground jaws have horizontal and vertical grooves for holding round work.



Jaw Width	Jaw Depth	Jaw Opening	Order No.	Price
2-1/2	1-1/2	2-1/2	2290002	
3-1/2	1-3/4	3-1/2	2290003	
4-1/2	1-3/4	4-1/2	2290004	

ADJUSTABLE ANGLE VISES

SERIES 399:

- All features of above vises, plus...
- Adjustable up to 90°
- Base has slots for mounting



Jaw Width	Jaw Depth	Jaw Opening	Order No.	Price
2-1/2	1-1/2	2-3/8	2295002	
3-1/2	1-3/8	3	2295003	
4-1/2	1-5/8	4	2295004	

SWIVEL AND TILT VISES

SERIES 399:

- All features of above vises, plus...
- The base has keyway and two bolt slots for locating and mounting on machine table.
- Mounted on swivel base, providing complete 360° rotation.



Jaw Width	Jaw Depth	Jaw Opening	Order No.	Price
2-1/2	1-1/2	2-1/2	2300002	
3-1/2	1-3/8	3	2300003	
4-1/2	1-5/8	4	2300004	

QUICK GRIP DRILL PRESS VISES

SERIES 666:

FEATURES :

- Instant setting by moving sliding steel bar attached to moveable jaw.
- Locking lever can be set instantly to hold workpiece.
- Body and sliding jaw are made of high tensile castings.
- Lead bar, sliding bar and locking lever are hardened and ground.
- Bolt lugs for clamping.
- Hollow base for clear through drilling.
- Removable jaw plates are recessed for easy leveling of workpiece.

**HEAVY DUTY DRILL PRESS VISE**

SERIES 402:

- Body made of selected cast iron.
- Four slots for easy clamping to table.



Order No. 2305106

Price

SPECIFICATIONS

Jaw Width: 6
Jaw Depth: 2-1/4
Jaw Opening: 6
Overall Height: 3-3/4
Overall Length: 12
Overall Width: 8
Weight: 32 lbs

DRILL PRESS VISES**FLANGE TYPE**

SERIES 402:

Flanged base for easy clamping to table.



Jaw Width	Jaw Depth	Jaw Opening	Order No.	Price
3	1-1/8	3	2305003	
4	1-3/8	4	2305004	
5	1-1/2	5	2305005	
6	1-1/2	6	2305006	

UTILITY VISE

SERIES 403:

Sturdy construction makes this vise suitable for general machine work (milling, drilling, grinding, etc.)

- Moveable jaw has vertical "V" groove for holding round work.
- 3 lugs for clamping to machine table.
- Low 2-1/2" Overall Height.



Jaw Width	Jaw Depth	Jaw Opening	Order No.	Price
3-1/2	1-3/4	4	2310003	

MEIDA
Superior Import

Jaw Width	Jaw Opening	Jaw Depth	Weight	Order No.	Price
3	3	1-1/4	10	6660003	
4	4-11/16	1-5/16	18	6660004	
6	6-3/16	1-13/16	30	6660006	
8	8-3/8	2	45	6660008	

Models 6660013 and 6660014 are precision ground on both sides so that these vises can be used on their sides.

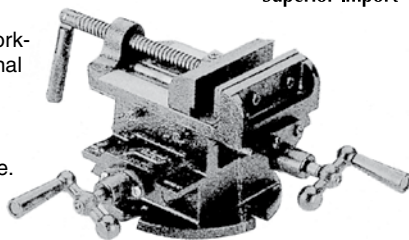
Jaw Width	Jaw Opening	Jaw Depth	Weight	Order No.	Price
3-1/8	2-3/4	1-1/2	10	6660013	
4	3-1/8	1-3/4	18	6660014	

CROSS SLIDE VISES

SERIES 464:

Heavy duty cross slide vise moves work-piece in both horizontal and longitudinal directions for precise centering and drilling.

- Independent cross feed and traverse.
- Cast iron body with mounting lugs
- Adjustable gibs.
- Adjustable, graduated dials.

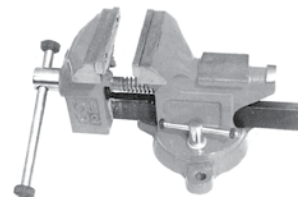


MEDA
Superior Import

BENCH VISES WITH SWIVEL BASE

SERIES 398:

- Removable hardened alloy steel jaw inserts.
- Completely enclosed center screw.
- Attractive hammered enamel finish.



MEDA
Superior Import

Jaw Width	Jaw Depth	Jaw Opening	Height	Table Travel	Weight (lbs)	Order No.	Price
3"	1-1/8	2-3/4	4-5/8	3" x 5"	14	4640003	
4"	1-7/16	3-3/4	5-3/8	4" x 6"	21	4640004	
5"	1-9/16	4-3/4	6-1/8	5" x 7"	30	4640005	
6"	1-5/8	5-3/4	6-1/4	6" x 8"	36	4640006	

LIMITED QUANTITIES

Jaw Width	Jaw Opening	Weight Lbs	Order No.	Price
2-1/2 3	2-1/2 3	8 14	3980102 3980103	

BENCH VISES - SWIVEL BASE

SERIES 464:

- 360° Swivel
- Heavy Duty Castings
- Steel Jaws
- Acme Thread Operating Screws
- Positive Lock
- Concealed Screw
- Unbreakable Nut

Model No.	Width of Jaws (inches)	Depth of Jaws (inches)	Opening of Jaws (inches)	Weight	Order No.	Price
3BH	3	1-7/8	3-1/4	15 lbs.	920773	
4BH	4	2-3/4	4-3/4	40 lbs.	920774	
5BH	5	3-1/4	6-1/2	67 lbs.	920775	
6BH	6	3-1/2	8	90 lbs.	920776	

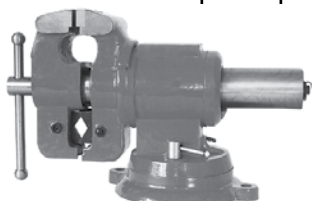


MEDA
Superior Import

HEAVY DUTY MULTI-PURPOSE ROTATING VISES

SERIES 398:

- Full 360° rotational jaws. Head swivels 360°.
- Machine cut parallel jaws.
- Larger, stronger pipe jaws.
- Unique "V" jaws provide 4 point holding power.



MEDA
Superior Import

BABY BENCH VISES

SERIES 398:

- Versatile tool for filing, flattening or laying out work.



MEDA
Superior Import

Parallel		Jaws Throat	Pipe Jaws Max.	"V" Jaws Max.	Anvil Size	Wt lbs	Order No.	Price
Width	Open	Dept.	Open	Open				
4"	3-1/2"	2-1/2"	2"	3-1/2"	2-3/8x3-1/8"	52	3980040	
5"	4"	3-1/2"	3"	4"	2-1/2x3-1/2"	89	3980050	
6"	5-1/4"	3-1/2"	6-1/4"	7-1/4"	3x4"	97	3980060	

Order No.	Description	Anvil Size/Jaw Width	Price
3980001	Baby bench vise fixed	2"/50mm	
3980002	Baby bench vise with swivel base	2"/50mm	

STANDARD PANAVISE

SERIES 345:

Model 301

The original! The 301 Standard PanaVise is an all-purpose work holding unit, perfect for both industrial and home hobbyist applications. A single knob controls the "tilt, turn and rotate" function of the patented split ball, which allows the head to move easily and conveniently through three planes (360° rotation, 360° swivel and 90° pivot). Jaws are 2-1/2" (64mm) wide and open to 2-1/4" (58mm), and the base features a 4-5/16" (111mm) bolt circle. The combination stands 6-1/4" (173mm) tall, weighs 2 lbs. 11 oz. (1.2kg).

PANAVISE



VACUUM BASE PANAVISE

SERIES 345:

Model 381

The 381 Vacuum Base PanaVise provides all of the "tilt, turn and rotate" versatility of a 301 Standard PanaVise with the convenience of added portability. A half turn of the mount lever attaches or releases the powerful suction pad and allows rapid set-ups in a variety of locations (for use on smooth, nonporous surfaces only). This combination stands 6-1/8" (157 mm) tall and weighs 2 lbs. 13 oz. (1.3kg).

PANAVISE



Order No. 3450301 Price

Order No. 3450381 Price

MECHANICS' VISES

SERIES 179:

2 YEAR GUARANTEE
MEETS ALL GOVERNMENT SPECIFICATIONS

Wilton's Mechanics' Vises are the best buy for professional mechanics.

Jaw Width	Jaw Opening	Throat Depth	Pipe Jaw Capacity	Ship Wgt. lbs. Ea.	Model No.	Order No.	Price
4"	4-1/2"	3-7/16"	1/4" - 2"	37	744	7900744	
5"	5-1/4"	3-3/4"	1/4" - 2-1/2"	50	745	7900745	
6"	5-3/4"	4-1/8"	1/4" - 3-1/2"	64	746	7900746	

Replaceable hardened steel serrated jaw inserts and replaceable pipe jaws provide sure grip.

Heavy duty 30,000 PSI castings for long life and added strength.



Large anvil.

Enclosed, unbreakable box frame, steel channel.

Swivel base rotated 360° and has double lockdowns ensuring maximum stability.

Exclusive straight line design - positions spindle and nut horizontally, reducing thread wear and increasing clamping power.

WILTON
TOOL GROUP

TRADESMAN SWIVEL BASE VISES

SERIES 179:

3 YEAR GUARANTEE MEETS ALL GOVERNMENT SPECIFICATIONS

Sturdy swivel base has serrated teeth on the inside track of the base. This "positive locking action" prevents slippage of the vise.

Top jaws are reversible - either standard serrated jaws for extra grip on sturdier materials or smooth jaws for more delicate pieces.

60,000PSI ductile iron

Precision thrust bearing creates greater clamping pressure and increased longevity.



Replaceable top & pipe jaws

New WIDER JAWS! Extra 1/2" added to already generous jaw width on 1745, 1755, and 1765. Provides greater clamping surface.

Large anvil

Fully enclosed spindle

Straight line design

WILTON
TOOL GROUP

Jaw Width	Jaw Opening	Throat Depth	Pipe Jaw Capacity	Ship Wgt. lbs. Ea.	Model No.	Order No.	Price
4-1/2"	4"	3-1/4"	1/4" - 2-1/2"	42	1745*	7901745	
5-1/2"	5"	3-3/4"	1/4" - 3"	53	1755*	7901755	
6-1/2"	6-1/2"	4"	1/4" - 3-1/2"	72	1765*	7901765	
8"	7"	4-3/4"	1/8" - 3-1/2"	109	1780A	7901780	
Pedestal Base fits models 1755 & 1765				55	159V	7900159	

* USA Made of USA and Canadian Components

Pedestal Base for Swivel Base Models

- Perfect for 1755 and 1765 Tradesman Swivel base models.
- 33-1/2" Tall Base.
- Made from fabricated steel.

**MACHINISTS' SWIVEL BASE VISES**

SERIES 179:

5 YEAR GUARANTEE. MEETS ALL GOVERNMENT SPECIFICATIONS.

Jaw Width	Jaw Opening	Throat Depth	Ship Wgt. lbs. Ea.	Model No.	Order No.	Price
3-1/2"	5-1/4"	2-3/4"	41	350S	7900350	
4"	6-1/2"	3-1/2"	62	400S*	7900400	
4-1/2"	7-1/2"	4"	72	450S	7900450	
5"	8"	4-1/4"	95	500S	7900500	
6"	10"	5-1/2"	150	600S	7900600	

* USA Made of USA and Canadian Components

Hardened steel jaw, replaceable inserts are machine serrated for safe, sure grip under maximum torque.

60,000PSI ductile iron

Precision thrust bearing creates greater clamping pressure and increased longevity.

Extra deep throat - Wilton's design gives you more working room where it counts.



Large anvil

Enclosed design keeps contaminants out, lifetime lubrication for smooth operation.

Locking swivel base - 360° rotation is enhanced by serrated swivel base with double lockdowns for non-slip holding and four mounting points.

WILTON
TOOL GROUP

COMBINATION PIPE & BENCH VISES

SERIES 179:

5 YEAR GUARANTEE MEETS ALL GOVERNMENT SPECIFICATIONS

- The "Workhorse" of the Wilton Vise Line-Up.
- Perfect to handle any workholding jobs your maintenance or construction crew encounter.
- Massively Built.
- Tool Steel Serrated Top Jaws & Pipe Jaws.

Jaw Width	Jaw Opening	Throat Depth	Pipe Jaw Capacity	Ship Wgt. lbs. Each	Model No.	Order No.	Price
3-1/2"	5"	4-1/2"	1/8" - 2-1/2"	52	C-0	7900052	
4-1/2"	6"	4-3/4"	1/8" - 3-1/2"	78	C-1*	7900078	
5"	7"	5-5/16"	1/8" - 4-1/2"	113	C-2	7900113	
6"	9"	6-5/8"	1/4" - 6"	205	C-3	7900205	

* USA Made of USA and Canadian Components

Self-centering pipe jaws - hardened steel jaws hold up to 6" pipe safely, securely.

Built for the Toughest Applications

- Plant Maintenance
- Oil Field Service
- Heavy Construction

Hardened steel jaw inserts - machine serrated, replaceable jaws assure a positive hold.

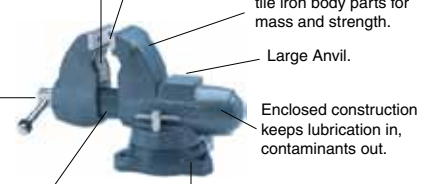
60,000 PSI tensile ductile iron body parts for mass and strength.

Large Anvil.

Precision thrust bearing creates greater clamping pressure and increased longevity.

Alloy steel slide bar added strength and keyed for a precision fit.

Locking swivel base - with double lockdowns for non-slip hold in any position.



Enclosed construction keeps lubrication in, contaminants out.

WILTON
TOOL GROUP



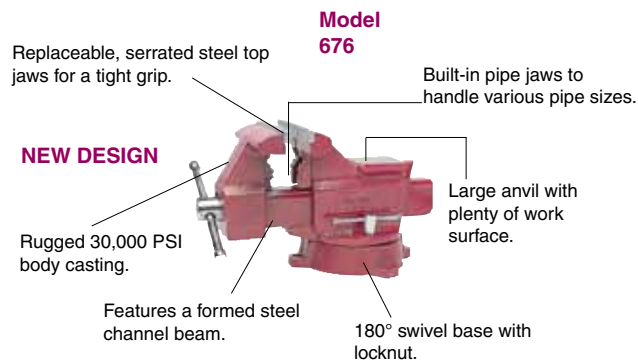
UTILITY WORKSHOP VISE

SERIES 179:

The Durable 600 Series Utility Vise is "America's Value Vise"

- Versatile, all-around vises.
- Handles a variety of applications.
- Perfect for use in utility and light duty applications.
- For heavy duty application, use the Wilton Combination Pipe & Bench Vises Machinists' Vises or Tradesman Vises (all on page 573).

Jaw Width	Jaw Opening	Throat Depth	Pipe Jaw Capacity	Wt.	Model No.	Order No.	Price
4-1/2"	4"	2-5/8"	1/8" - 2"	19	674	7900674	
5-1/2"	5"	3-7/16"	1/8" - 2-1/2"	29	675	7900675	
6-1/2"	5-1/2"	3-11/16"	1/8" - 2-1/2"	41	676	7900676	
6"	6"	4-3/16"	1/8" - 3"	63	656HD	7900656	
8"	7-1/2"	4-1/2"	1/8" - 3"	79	648HD	7900648	



MACHINIST'S VISES

SERIES 179:

- Strong, ductile iron main castings are guaranteed against defects in workmanship and materials.
- Steel jaw faces made from hardened tool steel - have deep knurled pattern to ensure positive gripping.
- All sizes feature a generous ground/polished anvil.
- Plain jaw faces are available on request.
- Stationary models have a flat base, making it unnecessary to modify bench top for mounting.
- Swivel base models rotate 360° and gear lock bolt ensures positive locking against slippage.

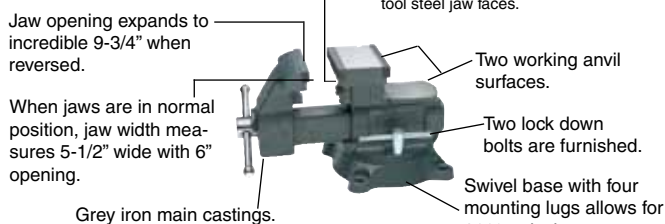


Jaw Width	Jaw Opening	Throat Depth	Wt.	Model No.	Order No.	Price
4"	6"	3-5/8"	46	604M3	7906043	
4-1/2"	7"	4-1/8"	59	604-1/2M3	7906045	
5"	8"	4-1/4"	79	605M3	7906053	

MULTI-PURPOSE MACHINIST'S VISE

SERIES 179:

Jaw Width: 5-1/2"
Throat Depth: 3-3/4"
Pipe Jaw Capacity: 1/8" - 3"
Wt.: 50 lbs.
Model No.: 4500



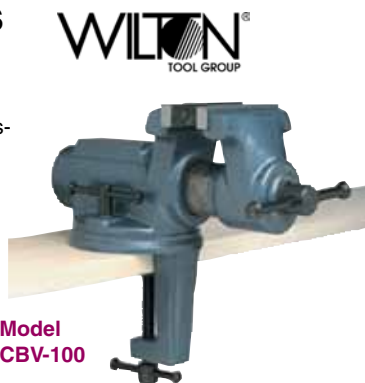
Jaw Opening	Order No.	Price
5-1/2" 9-3/4"*	7904500	

* With 4500 vise jaws in reverse position.

SUPER JUNIOR VISES

SERIES 179:

- New Super Junior Vises come in 2 styles- Clamp-on & Swivel Base.
- Both clamp-on models are portable.
- Top Jaws are grooved and replaceable.
- Spindle is fully enclosed.
- Double lockdowns ensure stability.
- Both swivel and clamp-on base models can rotate 45° left or right on base.
- Clamp-on opening for CBV-65 = 1-5/8"
Clamp-on opening for CBV-100 = 3".



Jaw Width	Jaw Opening	Wt.	Model No.	Order No.	Price
Clamp-on Base					
2-1/2"	2-1/8"	9	CBV-65	7900065	
4"	2-1/4"	15	CBV-100	7900100	
Swivel Base					
2-1/2"	2-1/8"	8	SBV-65	7900165	
4"	2-1/4"	14	SBV-100	7901100	

VISE ACCESSORIES

SERIES 179:

IMPROVE CLAMPING VERSATILITY & SAFETY

WILTON COPPER JAW CAPS

Permanent or Temporary Work-Holding.

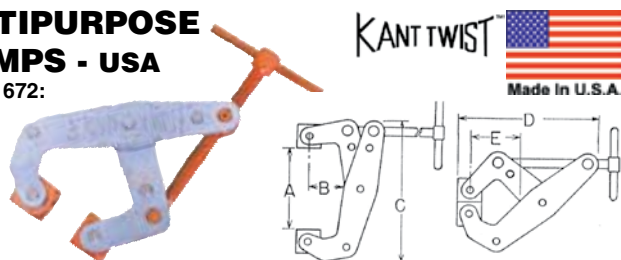
- Designed to avoid marring the surface of softer metals and to protect jaw face.
- 100% Copper Jaw Caps have polished faces and pliable copper extensions for a sure-grip fit on any make vise.



Jaw Width	Model No.	Order No.	Price
3"	404 - 3	7904041	
3-1/2"	404 - 3-1/2	7904042	
4"	404 - 4	7904043	
4-1/2"	404 - 4-1/2	7904044	
5"	404 - 5	7904045	
5-1/2"	404 - 5-1/2	7904046	
6"	404 - 6	7904047	
6-1/2"	404 - 6-1/2	7904048	
8"	404 - 8	7904049	

**MULTIPURPOSE
CLAMPS - USA**

SERIES 672:



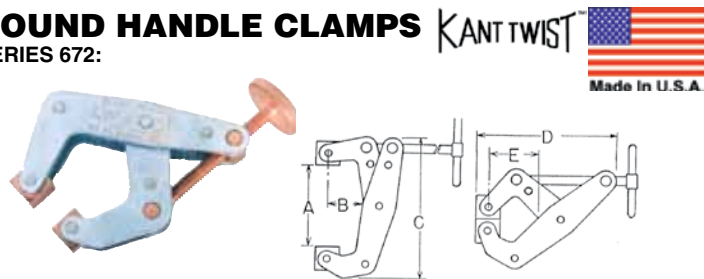
Lightweight and 40% stronger than "C" clamps. Floating jaws that always stay parallel. Designed to eliminate distorting or twisting action. Cantilever action provides 4: 1 clamping ratio. Built-in "V" blocks for round or rod stock. Full support, no loose pads to walk off center. Copper plated jaws & screws are ideal for welding clamps.

Model No.	Max. Opening "A"	Open Throat Depth "B"	Closed Throat Depth "E"	Order No.	Price
401	1	1/2	1/2	6720401	
405	2	1-1/8	1-1/4	6720405	
407	2-1/2*	2-7/16	1-13/16	6720407	
410	3	1-1/4	1-3/4	6720410	
415	4-1/2*	2-1/4	3-13/16	6720415	
420	6	2-1/8	3-3/8	6720420	
421	6*	4-1/2	5-1/2	6720421	
430	9	3-3/8	5-1/4	6720430	
435	10	6	7	6720435	
440	12	5	7	6720440	

*Deep throat type.

ROUND HANDLE CLAMPS

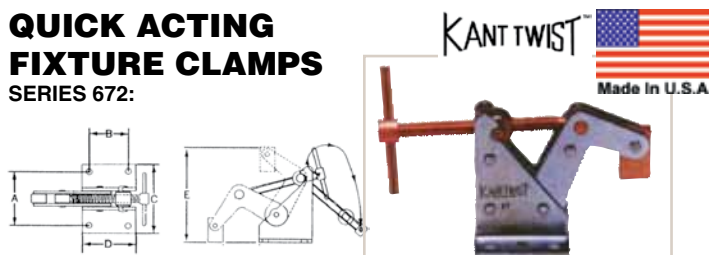
SERIES 672:



Model No.	Max. Opening A	Open Throat Depth B	Closed Throat Depth E	Order No.	Price
396	3/4"	3/8"	3/8"	6720396	
401-1	1	1/2"	1/2"	6724011	
403-1	1-1/2	1-1/8"	1"	6724031	
405-1	2	1-1/8"	1-1/4"	6724051	

**QUICK ACTING
FIXTURE CLAMPS**

SERIES 672:



Model No.	A	B	C	E	Order No.	Price
411	1.92"	1 - 1/2"	2-11/16"	4"	6720411	
411-2	T-slot Mounting		2-11/16"	4-1/8"	6724112	
423	2.908	2 - 5/8"	3-3/4"	6-7/8"	6720423	
423-1	T-slot Mounting		3-3/4"	7-1/4"	6724231	

"C" CLAMPS
SERIES 308:**MEGA**
Superior Import

HEAVY DUTY C-CLAMPS
Drop forged and designed with a deep throat. Copper plated screw and swivel pad to prevent weld splatter from sticking to them.



Capacity		Depth	Screw Dia.	Order No.	Price
Max.	Min.				
2	0	1-1/4	1/2	1907002	
3	0	1-5/8	1/2	1907003	
4	0	2-1/8	5/8	1907004	
6	0	2-7/8	3/4	1907006	
8	0	3-3/4	3/4	1907008	
10	3	4-3/4	3/4	1907010	
12	4	5-1/4	7/8	1907012	

SPRING CLAMPS

SERIES 179:

JET**Steel Spring Clamps**

- Nickel plated for durability and corrosion resistance.
- Tempered steel spring maintains substantial pressure at the jaw tips.
- Ergonomic-shaped handles and jaws are available with polyvinyl covers for comfort, as well as protection of workpieces.



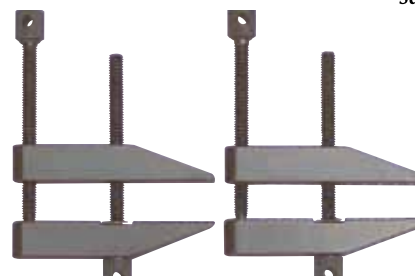
MODEL 636

Max. Open. Pipe Size	Overall Length	Ship Case Qty.	Ship Wgt. lbs. Ea.	Model No.	Order No.	Price
Steel Spring Clamps with protective handles & grips						
1"	4"	12	3/4	14896	1790634	
2"	6"	12	3/4	14897	1790636*	
3"	9"	6	1 1/4	14898	1790639	

*LIMITED QUANTITY

PARALLEL CLAMPS

SERIES 307:

MEGA
Superior Import

Jaws are made of hardened and tempered steel. Clamps are equipped with spring clips.

Jaw Opening	Jaw Length	Order No.	Price Each
1-1/4	2	1910020	
1-3/4	2-1/2	1910025	
2-1/4	3	1910030	
2-3/4	4	1910040	
3-1/2	5	1910050	
4-1/2	6	1910060	
6	8	1910080	



"C" CLAMPS STEEL, NATURAL FINISH SERIES 903:



Deep Throat Pattern Parco-Lubrite Finish

Our most popular and versatile pattern. Frame is drop forged Carbon Steel; all other parts are machined from Carbon Steel.



Deep Throat Pattern Zinc Plated

Design and materials are exactly the same as Parco-Lubrite finish. However, forcing screw is zinc plated to resist the adhesion of welding splatter.



Capacity		Throat Depth	Screw Dia.	Min.Proof Test, lbs.	Weight lbs.	Order No.	Price
Max.	Min.						
Standard Screw							
1-1/2	0	1-3/8	3/8	1400	.37	78401	
2	0	2	1/2	3300	1.25	78402	
3	0	2-3/8	1/2	3500	2.04	78403	
4	0	2-3/4	3/4	4100	2.96	78404	
6	0	3-5/8	3/4	5400	4.82	78406	
8	0	4-1/2	3/4	5900	6.81	78408	
10	3	5-3/8	3/4	6200	9.86	78410	
12	4	5-3/4	7/8	9300	12.69	78412	
Full Length Screw							
10	0	5-3/8	3/4	6200	9.86	78411	
12	0	5-3/4	7/8	9300	12.96	78413	

Capacity		Throat Depth	Screw Dia.	Min. Proof Test, lbs.	Weight lbs.	Order No.	Price
Max.	Min.						
Standard Screw							
1-1/2	0	1-3/8	3/8	1400	.37	78431	
2	0	2	1/2	3300	1.23	78432	
3	0	2-3/8	1/2	3500	2.11	78433	
4	0	2-3/4	3/4	4100	2.89	78434	
6	0	3-5/8	3/4	5400	4.83	78436	
8	0	4-1/2	3/4	5900	6.98	78438	
10	3	5-3/8	3/4	6200	9.66	78440	
12	4	5-3/4	7/8	9300	12.85	78442	
Full Length Screw							
10	0	5-3/8	3/4	6200	9.66	78441	
12	0	5-3/4	7/8	9300	12.85	78443	

Deep Throat Pattern High Visibility Finish

Same in all respects-except for finish- as other Deep Throat C-Clamps, above. However, High Visibility Clamp Frames are finished in your choice of "Safety Yellow" or "Safety Orange" high-gloss baked-on enamel. Screws and handles are finished in black. Easy to see; hard to lose or misplace. High Visibility C-Clamps are furnished with standard screws only.



Tool Maker's Pattern Parco-Lubrite Finish

Small, lightweight C-Clamps are ideal for pattern making, wood working and other light duty applications. Both frame and screw are drop forged from Carbon Steel. Square below thumb screw head allows screw to be set up extra tight with a wrench.



Capacity		Throat Depth	Screw Dia.	Min. Proof Test, lbs.	Weight lbs.	Order No.	Price
Max.	Min.						
Yellow Frame							
1-1/2	0	1-3/8	3/8	1400	.37	78601	
2	0	2	1/2	3300	1.25	78602	
3	0	2-3/8	1/2	3500	2.04	78603	
4	0	2-3/4	3/4	4100	2.96	78604	
6	0	3-5/8	3/4	5400	4.82	78606	
8	0	4-1/2	3/4	5900	6.81	78608	
10	3	5-3/8	3/4	6200	9.86	78610	
12	4	5-3/4	7/8	9300	12.69	78612	
Orange Frame							
1-1/2	0	1-3/8	3/8	1400	.37	78631	
2	0	2	1/2	3300	1.25	78632	
3	0	2-3/8	1/2	3500	2.04	78633	
4	0	2-3/4	3/4	4100	2.96	78634	
6	0	3-5/8	3/4	5400	4.82	78636	
8	0	4-1/2	3/4	5900	6.81	78638	
10	3	5-3/8	3/4	6200	9.86	78640	
12	4	5-3/4	7/8	9300	12.69	78642	

Capacity		Throat Depth	Screw Dia.	Weight	Order No.	Price
Max.	Min.					
1	0	11/16	5/16	.25	78671	
2	0	13/16	3/8	.46	78672	
3	1	15/16	3/8	.56	78673	
4	1-1/4	1-1/8	7/16	.92	78674	



While we show only the most popular **ARMSTRONG** items we can supply their entire range of products; please inquire.



"C" CLAMPS

SERIES 903:



Heavy Duty Pattern

The strongest C-Clamp made. Square-head screw has hardened point. Screw does not include a handle—it must be tightened with a wrench. Extra long hub helps prevent springing even under great stress.



Order No.	Capacity Inches		Throat Depth	Screw Dia.	Min. Proof Test, lbs.	Weight lbs.	Price
	Max.	Min.					
78000	13/16	0	5/8	3/8 - 16	2,800	.38	
78010	1-5/16	0	15/16	7/16 - 14	5,600	.74	
78015	1-3/4	0	1-7/16	5/8 - 11	8,750	1.91	
9978020	2-3/8	1/2	1-9/16	3/4 - 10	12,500	3.28	
78030	3-5/16	5/8	2	7/8 - 9	16,250	5.83	
78040	4-5/8	1	2-7/16	1 - 8	20,000	10.10	
78050	5-3/8	1-1/4	2-7/8	1 - 8	23,800	14.08	
78060	6-5/8	2-1/2	3-1/4	1-1/8 - 7	27,500	18.92	
78080	8-1/4	2-1/4	3	1-1/4 - 7	31,250	27.50	
78090	10-3/8	4-1/4	3-1/8	1-1/4 - 7	35,000	30.59	
78092	12-1/2	6-3/8	3-1/2	1-1/4 - 7	40,000	37.22	

Heavy Duty Pattern, With Full-Length Screw

Order No.	Capacity Inches		Throat Depth	Screw Dia.	Min. Proof Test, lbs.	Weight lbs.	Price
	Max.	Min.					
78021	2-3/8	0	1-9/16	3/4 - 10	12,500	3.28	
78031	3-15/16	0	2	7/8 - 9	16,250	5.83	
78041	4-5/8	0	2-7/16	1 - 8	20,000	10.10	
78051	5-3/8	0	2-7/8	1 - 8	23,800	14.08	
78061	6-5/8	0	3-1/4	1-1/8 - 7	27,500	18.92	
78081	8-1/4	0	3	1-1/4 - 7	31,250	27.50	
78091	10-3/8	0	3-1/8	1-1/4 - 7	35,000	30.59	
78093	12-1/2	0	3-1/2	1-1/4 - 7	40,000	37.22	



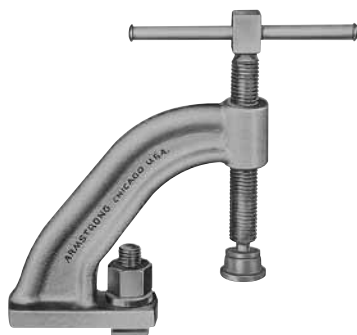
"T-SLOT" CLAMPS

SERIES 903:



Drop Forged Carbon Steel

A unique tool for holding down work on all machine tools equipped with slotted tables. Because they are drop forged from Carbon Steel, Armstrong T-Slot Clamps embody strength far beyond that required for normal clamping operations. And should any slight spring ever occur under extreme conditions, the drop forged frame will not take a permanent set. It's therefore safe to predict your Armstrong T-Slot Clamps will outlive the machine tools you intend to use them on. And over the years, they'll save countless hours of operator set-up time, paying for themselves many times over. Screw features Armstrong's patented ball-joint swivel pad—the most secure and permanent system for locking pad to screw. Pad is V-notched to aid clamping of small rounds. T-Slot Clamp body, screw and handle are black finish. Each clamp is furnished with one T-Slot Bolt, Washer, and Hex Nut.



Order No.	Capacity In.	T-Slot Bolt Size, In.	Clamping Depth In.	Weight lbs.	Price
79401	0 to 2-1/4	1/2 x 1-1/2	2	2.29	
79403	0 to 3-1/4	5/8 x 2	2-1/4	4.62	
79405	0 to 3-1/4	3/4 x 2-1/2	2-1/4	5.00	

SET-UP WEDGES

SERIES 903:

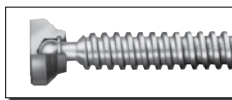


Order No.	Lgth Inches	Width Inches	Max. Thickness Inches	Weight lbs.	Price
79493	3	1	1/4	.11	
79495	5	1	1/2	.31	
79496	6	1-1/4	3/4	.68	

400 SERIES C-CLAMPS

SERIES 179:

Drop Forged, Regular Duty, Extra Deep Throat



Wilton exclusive
Perma-Pads®



Hi-Tech frames - stronger and deeper throat depth.

This is Wilton's number one C-Clamp line.

- Series 400 clamps include all the Wilton innovations: drop-forged steel frame, extra throat depth, Perma-Pad®, lacquer finish - plus innovative design frame geometry for maximum strength.
- Spindles and Perma-Pads® are black oxide coated to resist corrosion.
- 400 Series bodies are heat treated.
- Spindle and pad are replaceable.
- Provided in individual boxes, Wilton 400 C-Clamps are high quality tools.

Opening Capacity	Throat Depth	Spindle Diameter	Min. Proof Test lbs.	Ship. Case Qty.	Ship. Wgt. lbs. Ea.	Model No.	Order No.	Price
0" - 2 1/8"	2 1/4"	9/16"	3500	1	1-3/4	402	14214	
0" - 3"	2 1/2"	9/16"	3500	1	2-1/4	403	14228	
0" - 4 1/4"	3 1/4"	3/4"	6200	1	3-3/4	404	14242	
0" - 6 1/16"	4 1/8"	3/4"	6600	1	5-1/2	406	14256	
0" - 8 1/4"	5"	3/4"	6900	1	6-3/4	408	14270	
2" - 10 1/8"	6"	3/4"	8000	1	10-1/4	410	14284	
2" - 12 1/4"	6 5/16"	7/8"	9300	1	14-1/2	412	14298	



800 SERIES C-CLAMPS

SERIES 179:

Standard Throat - Regular Duty, Regular Throat Depth

- The 800 series is recommended at a value alternative for clamping work not requiring as much throat depth or clamping pressure as a 400 series clamp.
- 800 series are drop forged, equipped with Wilton Perma-Pads® and a precision-cut, single-lead, Acme thread.

Opening Capacity	Throat Depth	Spindle Diameter	Min. Proof Test lbs.	Ship. Case Qty.	Ship. Wgt. lbs. Ea.	Model No.	Order No.	Price
0" - 2"	1-13/16"	9/16"	2700	6	1-1/4	802	14714	
0" - 3"	1-15/16"	9/16"	3000	6	1-5/8	803	14728	
0" - 4"	2-5/16"	5/8"	3700	6	2-7/8	804	14742	
0" - 6"	2-15/16"	5/8"	4500	6	3-7/8	806	14756	
2" - 8"	3-7/16"	3/4"	5200	1	6-3/4	808	14770	
1 1/2" - 10"	3-3/4"	3/4"	6000	1	8-3/4	810	14784	
1 1/8" - 12"	3-7/8"	3/4"	8000	1	12	812	14798	

HARGRAVE C-CLAMPS

SERIES 179:

Super-Junior® Forged C-Clamps

- Super Junior® clamps are forged steel with heat treated frames to provide a much stronger clamp than pressed steel or malleable clamps.
- Steel screws are nickel plated for longer life.



Opening Capacity	Throat Depth	Min. Proof Test lbs.	Ship. Case Qty.	Ship. Wgt. lbs. Ea.	Model No.	Order No.	Price
0" - 1"	1"	500	12	1/4	50	921301	
0" - 1"	1-1/2"	500	12	1/4	51	21302	
0" - 1-1/4"	1-1/4"	800	12	1/4	52	921303	
0" - 1-1/2"	1-1/2"	850	12	1/4	53	21304	
0" - 2"	1-1/4"	875	6	1/4	54	21305	
0" - 3"	1-3/8"	1,100	6	1/2	55	21306	
0" - 2-1/2"	2-1/2"	850	6	1/2	56	21307	

540-A SERIES C-CLAMPS

SERIES 179:

Carriage C-Clamps



- High tensile ductile alloy casting provides excellent strength in a cast clamp.
- The 540 series is ruggedly constructed with a hardened steel spindle.
- Our carriage clamp is recommended for any work load which does not require the additional depth or strength of Series 400 C-Clamps or 800 series C-Clamps.

Opening Capacity	Throat Depth	Spindle Diameter	Min. Proof Test lbs.	Ship. Case Qty.	Ship. Wgt. lbs. Ea.	Model No.	Order No.	Price
0 - 2-1/2"	1-3/4"	1/2"	1100	6	1-3/4	540A-2 1/2	9999212	
0 - 3"	1-7/8"	1/2"	1800	6	1-1/2	540A-3	00213	
0 - 4"	2-1/16"	5/8"	2150	6	2-1/8	540A-4	00214	
0 - 6"	2-3/4"	5/8"	2450	6	3-1/4	540A-6	00215	
0 - 8"	3-1/4"	3/4"	2750	1	5	540A-8	00216	
0 - 10"	3-5/8"	7/8"	2850	1	6-7/8	540A-10	00217	
0 - 12"	3-5/8"	7/8"	2850	1	8-1/2	540A-12	00218	

C-CLAMPS**SERIES 179:**

Forged, Copper Spindle, High-Visibility C-Clamps
Regular Duty, Extra Deep Throat



- Improved frame design allows for a higher proof test, greater throat depth, and lower overall weight.
- 400CS series offers a drop forged frame c-clamp with an anti-spatter, copper plated spindle, swivel pad, and cross-pin handle.
- Therefore, a tool that offers more uses, is easier to handle and creates less fatigue.
- Spindle threads are Acme roll threaded to provide user with maximum strength and clamping force.
- Sliding pin handle with rounded, ergonomic ends.

Opening Capacity	Throat Depth	Spindle Diameter	Min. Proof Test lbs.	Ship. Wgt. lbs. Ea.	Model No.	Order No.	Price
0" - 2"	2"	1/2"	3500	1-1/2	H402CS	20479	
0" - 3"	2-3/8"	5/8"	3500	1-3/4	H403CS	20481	
0" - 4"	2-3/4"	3/4"	6500	2-3/4	H404CS	20483	
0" - 6"	3-5/8"	3/4"	6900	4-3/4	H406CS	20484	
0" - 8"	4-1/2"	3/4"	6900	8-1/2	H408CS	20485	
0" - 10"	5-3/8"	7/8"	8000	10-1/2	H410CS	20486	
0" - 12"	5-3/4"	7/8"	9500	14	H412CS	20487	

COPPER PLATED L-CLAMPS**SERIES 179:**

L-Clamps fit a wide variety of applications. Perfect for jobs that require clamping wide or high parts, or where extreme throat depth is necessary.



- U.S. made replaceable Perma-Pads[®] swivel to adapt to angular workpieces.
- U.S. made solid steel spindles are copper plated for anti-spatter resistance.
- U.S. made Wilton-Grip[™] soft rubber handles, standard on all 6300/6400 series models, provide comfortable grip.
- Improved clamping speed by sliding along rail to work. Use of L-Clamps expose less spindle screw and the clamp is less likely to twist and bend.
- One size L-Clamp can be used on multiple size (clamping) requirements.



Nominal Opening Capacity	Throat Depth	Nominal Rail Size	Nominal Clamping Pressure/lbs.	Nominal Spindle Diameter	Ship. Wgt. lbs. Each	Model No.	Order No.	Price
Light Duty Copper Plated L-Clamp with Wilton-Grip[™] Handles								
6"	3"	5/8" x 5/16"	1000	1/2"	2	6306B STG	63249	
8"	4"	3/4" x 3/8"	1000	5/8"	3	6308B STG	63250	
10"	4-3/4"	7/8" x 7/16"	1500	5/8"	3-3/4	6310B STG	63251	
12"	5-1/2"	1" x 15/32"	1600	3/4"	5	6312B STG	963252	
16"	4-3/4"	1" x 15/32"	1600	3/4"	5-1/2	6316B STG	963253	
20"	4-3/4"	1" x 15/32"	1600	3/4"	5-3/4	6320B STG	63254	
24"	4-3/4"	1" x 15/32"	1600	3/4"	6-1/2	6324B STG	63255	
32"	4-3/4"	1-11/16" x 1/2"	2000	3/4"	7-3/4	6332B STG	63256	
40"	4-3/4"	1-11/16" x 1/2"	2000	3/4"	9	6340B STG	63257	
48"	4-3/4"	1-11/16" x 1/2"	2000	3/4"	10-1/2	6348B STG	63258	
Regular Duty Copper Plated L-Clamp with Wilton-Grip[™] Handles								
10"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	6-1/2	6410B STG	63259	
12"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	7-1/4	6412B STG	963260	
16"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	7-1/2	6416B STG	963261	
20"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	8-1/4	6420B STG	963262	
32"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	10-1/4	6432B STG	963263	
40"	4-3/4"	1-3/16" x 9/16"	2600	13/16"	11-3/4	6440B STG	963264	
Heavy Duty Copper Plated L-Clamps								
12"	7"	1-9/16" x 3/4	4800	7/8"	12	6512B	963267	
16"	7"	1-9/16" x 3/4	4800	7/8"	13-1/4	6516B	963268	
20"	7"	1-9/16" x 3/4	4800	7/8"	14-1/2	6520B	63269	
24"	7"	1-9/16" x 3/4	4800	7/8"	15-1/2	6524B	63270	
32"	7"	1-9/16" x 3/4	4800	7/8"	17-3/4	6532B	63271	
40"	7"	1-9/16" x 3/4	4800	7/8"	20	6540B	963272	
48"	7"	1-9/16" x 3/4	4800	7/8"	22-1/2	6548B	963273	

ECONOMY SERIES L-CLAMPS

SERIES 179:

- Versatile, economy series L-Clamps are designed for economical repetitive clamping.
- Economy series offers generous throat depth, substantial clamping pressure with a competitive price.
- Swivel pads are cold pressed on to provide secure clamping.
- Black oxide spindle acts as a rust inhibitor.



Nominal Opening Capacity	Throat Depth	Nominal Rail Size	Nominal Clamping Pressure/lbs.	Nominal Spindle Diameter	Ship. Wgt. lbs. Each	Model No.	Order No.	Price
Economy L-Clamps								
6"	4-3/4"	7/8" x 7/16"	1500	1/2"	2	606	963056	
8"	4-3/4"	7/8" x 7/16"	1500	5/8"	2	608	63057	
10"	4-3/4"	1-3/16" x 9/16"	2600	5/8"	3	610	63058	
12"	4-3/4"	1-3/16" x 9/16"	2600	3/4"	4	612	963059	
16"	4-3/4"	1-3/16" x 9/16"	2600	3/4"	5	616	963191	
20"	4-3/4"	1-3/16" x 9/16"	2600	3/4"	5	620	963192	
24"	4-3/4"	1-3/16" x 9/16"	2600	3/4"	6	624	963193	

FLOAT LOCK VISE FOR DRILL PRESSES

SERIES 403:



Easy to mount in minutes. Expand the capacity of your machines - boost production in a variety of setups. Work is tightly locked, or completely released by a quick turn of the hinged handle which operates the vise jaw. Vise turns on three sides, which permits drilling many holes without removing work.

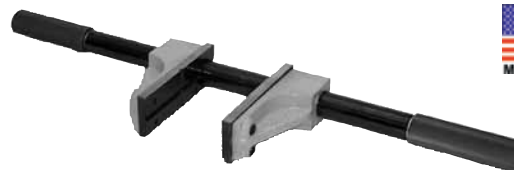
The "T" bolt mounting clamp locks the vise securely at any position on the table, making it a dependable drill jig when large quantities of the same part are to be drilled. The mounting clamp also allows the vise to swing to the edge of the table for clamping long parts. When the vise is not in use the mounting clamp can quickly swing the vise completely off the table and out of the way eliminating the time consuming need of removal and storage.

Vises come complete with removable jaw pads and mounting clamp. Jaw pads feature Horizontal and Vertical "V" grooves that align and grip rounds securely. Parallel grooves make for easy alignment of jigs and fixtures.

Description	Order No.	Price
Float Lock Safety Vise for Drill Presses with 9" capacity and Thumb Release	4030009	
Float Lock Safety Vise for Drill Presses with 12" capacity and Thumb Release	4030012	
Optional Mounting Bracket for Drill Presses	4030000	

FLOAT LOCK VISE FOR BAND SAWS

SERIES 403:



Ideal for fast setups on production pieces. With Float-Lock Band Saw Vise, you cut accurately and safely—all shapes and thicknesses of material; maximum capacity 10". Wide angle control (like steering a motorcycle) makes intricate sawing easy. Grip or release work with simple twist of handles. Handles never need to touch the work, assuring safety. Vise also reduces blade damage.

For hard-to-hold pieces, vertical cutting, automatic chain feed operation, irregular shapes and compound angle cutting. Allows intricate cutting while safely keeping hands away from the material.

Removable jaw pads feature Horizontal and Vertical "V" grooves that align and grip rounds securely. Parallel grooves make for easy alignment of parts.

Description	Order No.	Price
Float Lock Safety Vise for Band Saws with 10" capacity	4030010	



**See our Machinery Section
for Drill Presses and Band Saws.**



TOGGLE CLAMPS

SERIES 611:



HOLD-DOWN ACTION CLAMPS (VERTICAL HANDLE)



Model
No. 201



Model
No. 202



Model
No. 207-S



Model
No. 210-S



Model
No. 247-U

Model No.	Holding Capacity	Weight	Handle Moves	Bar Opens	Height Under Bar	Order No.	Price
201-U	100 lbs.	0.15 lbs.	60°	110°	0.63"	952010	
202	200 lbs.	0.33 lbs.	64°	104°	0.94"	952020	
202-U	200 lbs.	0.35 lbs.	64°	104°	0.94"	952026	
207-S	475 lbs.	0.69 lbs.	62°	115°	1.25"	52080	
207-U	375 lbs.	0.67 lbs.	62°	115°	1.25"	52070	
207-UL	350 lbs.	0.75 lbs.	62°	115°	1.25"	52074	
210-S	750 lbs.	1.29 lbs.	58°	106°	1.69"	52101	
210-U	600 lbs.	1.29 lbs.	58°	106°	1.69"	52100	
247-U	1000 lbs.	2.36 lbs.	75°	136°	2.00"	52470	

Spindle assembly must be ordered separately on Model Nos. 207 & 210.

HOLD-DOWN ACTION CLAMPS (HORIZONTAL HANDLE)



Model
No. 213-U



Model
No. 225-U



Model
No. 235-U

Please inquire for more dimensional information, line drawings, etc.

Model No.	Holding Capacity	Weight	Handle Moves	Bar Opens	Height Under Bar	Order No.	Price
213-U	150 lbs.	0.17 lbs.	60°	90°	0.75"	52130	
217-U	200 lbs.	0.40 lbs.	76°	92°	0.97"	52170	
227-U	500 lbs.	0.68 lbs.	62°	92°	1.31"	52270	
237-U	750 lbs.	1.60 lbs.	63°	92°	1.77"	52370	
215-U	200 lbs.	0.32 lbs.	70°	90°	1.03"	52150	
225-U	500 lbs.	0.55 lbs.	70°	90°	1.34"	52250	
235-U	750 lbs.	1.47 lbs.	55°	90°	1.75"	52350	

SQUEEZE ACTION CLAMPS



Model
No. 424



Model
No. 441



Model
No. 462

Model No.	Holding Capacity	Weight	Jaw Opening	Order No.	Price
424	200 lbs.	0.31 lbs.	2.06"	954240	
441	350 lbs.	0.63 lbs.	2.86"	954410	
462*	700 lbs.	1.13 lbs.	4.10"	954620	

* Trigger Release

FLAT-TIP BONDED NEOPRENE CAP SPINDLE ASSEMBLIES

Cone-Tip Spindle Assemblies available. See our website or inquire.

Overall Length	Dia of Tip	Thread (G)	EDP No.	Price
1.38	0.56	10-32	59816	
1.63	0.75	1/4-20	59803	
2.13	0.75	1/4-20	59805	
2.25	0.75	5/16-18	59807	
3.00	0.75	5/16-18	59812	
3.25	0.88	3/8-16	59809	
3.50	0.88	3/8-16	59815	
5.75	0.88	3/8-16	59808	
4.00	1.13	1/2-13	59820	
5.00	1.38	5/8-11	59821	
1.00	0.56	8-32	59802	
1.25	0.56	8-32	59801	
1.00	0.63	1/4-20	59811	
1.50	0.63	1/4-20	59810	





PULL ACTION CLAMPS (VERTICAL HANDLE)

Model No.	Holding Capacity	Weight	Drawing Movement	Hook Adjustment	Order No.	Price
324	500 lbs.	0.25 lbs.	1.53"	0.63"	9953240	
334	1000 lbs.	0.60 lbs.	2.00"	0.69"	53340	
344	2000 lbs.	1.50 lbs.	2.50"	1.19"	53440	



Model No. 324

PULL ACTION CLAMPS (HORIZONTAL HANDLE)



Model No. 323



Model No. 351



Model No. 375



While we show the most popular  items, we can supply their entire range of products including metric models. See our website or inquire.

Model No.	Holding Capacity	Weight	Drawing Movement	Hook Adjustment	Order No.	Price
323	360 lbs.	0.15 lbs.	1.81"	0.39"	9953230	
331	700 lbs.	0.56 lbs.	1.75"	0.31"	9953310	
341	2000 lbs.	1.43 lbs.	2.50"	0.56"	9953410	
351	375 lbs.	0.61 lbs.	4.00"	0.34"	53510	
371	750 lbs.	1.53 lbs.	5.38"	0.81"	53710	
381	1000 lbs.	2.56 lbs.	6.13"	0.75"	53810	
375*	4000 lbs.	2.75 lbs.	3.50"	0.63"	53750	
385*	7500 lbs.	3.62 lbs.	2.19"	1.00"	53850	

*Latch plate must be ordered separately.

STRAIGHT-LINE ACTION CLAMPS



Model No. 602



Model No. 604



Model No. 605



Model No. 608



Model No. 640



Model No. 601



Model No. 603



Model No. 607



Model No. 624



Model No. 630

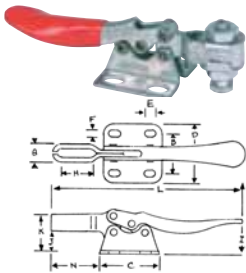
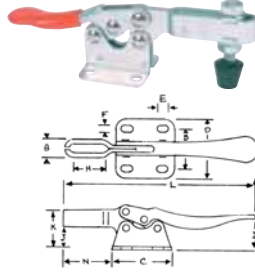
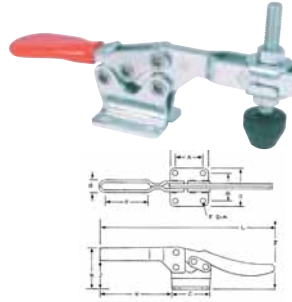
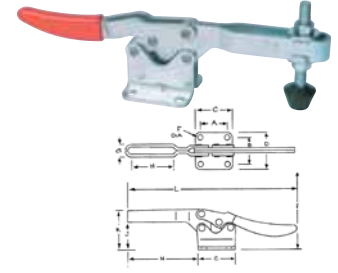


Model No. 650

Model No.	Holding Capacity	Weight	Plunger Travel	Plunger Thread	Plunger Height	Order No.	Price
601	100 lbs.	0.09 lbs.	0.63"	8-32	0.50"	9956010	
602	200 lbs.	0.25 lbs.	0.75"	1/4-20	0.50"	56020	
604	300 lbs.	0.44 lbs.	1.50"	5/16-18	0.63"	956040	
624	700 lbs.	1.63 lbs.	2.63"	3/8-16	0.88"	56240	
603	600 lbs.	0.83 lbs.	1.25"	5/16-18	0.97"	956030	
605	300 lbs.	0.69 lbs.	1.25"	5/16-18	0.97"	56050	
607	800 lbs.	1.63 lbs.	1.63"	5/16-18	0.69"	56070	
608	850 lbs.	1.25 lbs.	1.63"	3/8-16	1.25"	956080	
630	2500 lbs.	1.90 lbs.	2.00"	3/8-16	0.81"	56300	
640	7500 lbs.	6.71 lbs.	4.00"	1/2-13	1.25"	9956400	
650	16000 lbs.	5.59 lbs.	3.00"	5/8-11	2.25"	9956500	

HORIZONTAL HANDLE TOGGLE CLAMPS

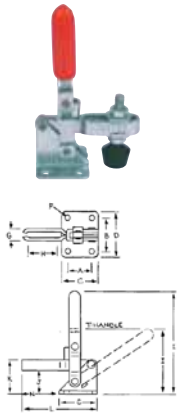
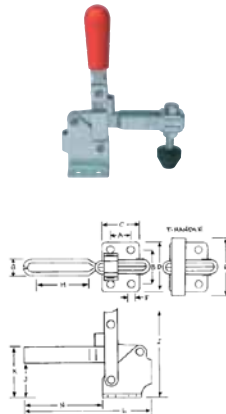
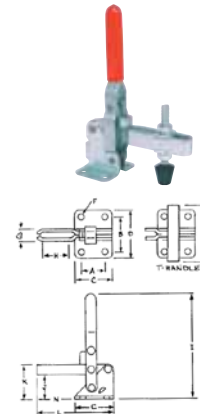
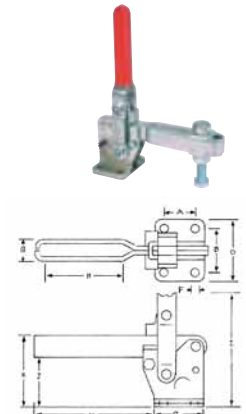
SERIES 321:

MEIDA
Superior ImportHolding Capacity: 60 lbs.
Handle Moves 80°, Bar 90°**Order No. 51100****Price**Holding Capacity: 200 lbs.
Handle Moves 60°, Bar 85°**Order No. 51110****Price**Holding Capacity: 500 lbs.
Handle Moves 65°, Bar 90°**Order No. 51120****Price**Holding Capacity: 750 lbs.
Handle Moves 50°, Bar 85°**Order No. 51130****Price**

Order No.	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Capacity	Weight
51100	U-bar, Flanged Baseln mm	.63	.63	.95	.93	.25	.16	.38	.17	2.42	.41	.53	3.19	-	.63	-	60lbs	1.5oz
		16.0	16.0	24.1	23.6	6.54	4.28	9.7	4.3	61.5	10.4	13.5	81.0	-	16.0	-	27kg	43gr
51110	U-bar, Flanged Baseln mm	1.00	.88	1.50	1.34	.25	.20	.45	1.47	1.56	1.00	1.46	5.58	-	2.10	-	200lbs	4.6oz
		25.4	22.4	38.1	34.1	6.54	5.1	11.5	37.3	39.6	25.4	37.1	141.7	-	53.3	-	90kg	13gr
51120	U-bar, Flanged Baseln mm	1.00	.88	1.57	1.40	-	.27	.60	1.37	1.87	1.38	1.84	6.63	-	2.75	-	500lbs	9.4oz
		25.4	22.4	39.8	35.5	-	6.9	15.2	34.8	47.5	35.1	46.7	169.2	-	69.9	-	227kg	256gr
51130	U-bar, Flanged Baseln mm	1.63	1.63	2.25	2.25	-	.33	.74	2.50	2.50	1.75	2.50	10.4	-	4.31	-	750lbs	22.6oz
		41.4	41.4	57.2	57.2	-	8.4	18.77	63.5	63.5	44.5	63.5	263.8	-	109.5	-	340kg	640gr

VERTICAL HANDLE TOGGLE CLAMPS

SERIES 321:

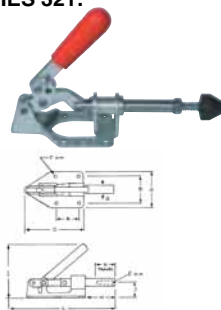
MEIDA
Superior ImportHolding Capacity: 100 lbs.
Handle Moves 56°, Bar 100°**Order No. 9950100****Price**Holding Capacity: 200 lbs.
Handle Moves 60°, Bar 100°**Order No. 9950110****Price**Holding Capacity: 500 lbs.
Handle Moves 60°, Bar 100°**Order No. 9950120****Price**Holding Capacity: 750 lbs.
Handle Moves 58°, Bar 105°**Order No. 9950130****Price**Holding Capacity: 1000 lbs.
Handle Moves 70°, Bar 135°***Order No. 9950140****Price**

Order No.	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Capacity	Weight
9950100	U-bar, Flanged Base, In Straight Handle mm	.63	.94	1.00	1.33	-	.17	.36	.79	3.20	.65	.98	2.20	-	-	-	100lb	2.4oz
		16.0	23.9	25.4	33.8	-	4.3	9.1	20.1	81.3	16.5	24.9	55.9	-	-	-	45kg	68gr
9950110	Fixed Spindle, Flanged In Base, Straight Handle mm	.50	1.06	1.00	1.56	-	.19	.53	-	3.90	.93	1.30	2.50	-	-	-	200lb	5.1oz
		12.7	26.9	25.4	39.6	-	4.8	13.5	-	99.1	23.6	33.1	63.5	-	-	-	90kg	145gr
9950120	Short U-bar, Flanged In Base, Straight Handle mm	.75	1.25	1.53	1.89	-	.28	.62	2.02	6.31	1.64	2.16	4.55	-	2.80	-	500lbs	11.7oz
		19.1	31.8	38.8	48.1	-	7.1	15.7	51.3	161.0	41.6	54.9	115.6	-	71.1	-	227kg	332gr
9950130	U-bar, Flanged Base, In Straight Handle mm	1.25	1.83	1.93	2.55	-	.320	.726	2.47	7.75	1.61	2.36	5.60	-	-	-	750lbs	6.95oz
		31.8	46.5	49.0	64.8	-	8.1	18.4	62.7	196.9	40.9	59.9	142.2	-	-	-	340kg	197gr
9950140	U-bar, Flanged Base, In Straight Handle mm	1.25	1.93	2.00	2.53	-	.330	.920	3.06	8.88	1.90	2.75	-	-	5.00	-	1000lbs	3.2oz
		31.8	49.0	50.8	64.3	-	8.4	23.4	77.7	225.6	48.5	69.9	-	-	127.0	-	450kg	145gr

*Without Roll Pin. With Roll Pin - Handle Move 58°, Bar 100°

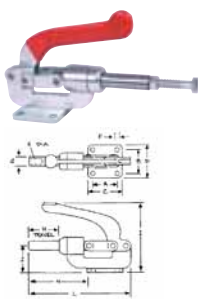
PUSH / PULL TOGGLE CLAMPS

SERIES 321:



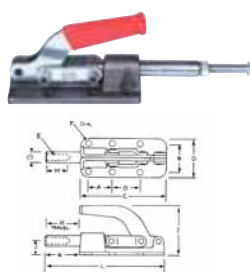
Holding Capacity: 300 lbs.
Plunger Travel: 1-1/4 in.
(32mm)

Order No. 952120
Price



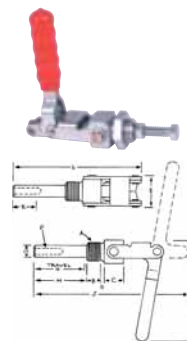
Holding Capacity: 800 lbs.
Plunger Travel: 1-5/8 in.
(41.1mm)

Order No. 52160
Price



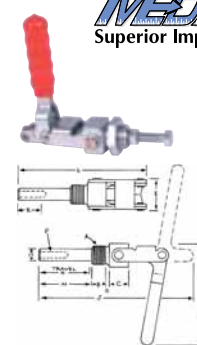
Holding Capacity: 2500 lbs.
Plunger Travel: 1.63 in.
(41.1mm)

Order No. 52190
Price



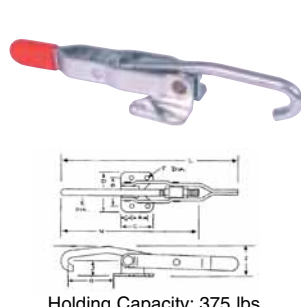
Holding Capacity: 300 lbs.
Plunger Travel: 1-1/2 in.
(38mm)

Order No. 52101
Price



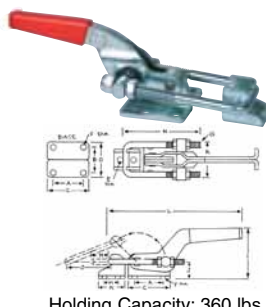
Holding Capacity: 700 lbs.
Plunger Travel: 2-19/32 in.
(66.8mm)

Order No. 52102
Price



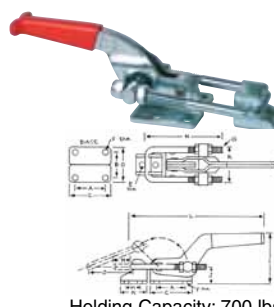
Holding Capacity: 375 lbs.

Order No. 9953110
Price



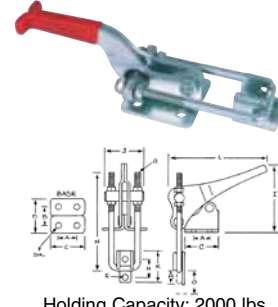
Holding Capacity: 360 lbs.

Order No. 53160
Price



Holding Capacity: 700 lbs.

Order No. 9953170
Price



Holding Capacity: 2000 lbs.

Order No. 53180
Price

Order No.	Description		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Capacity	Weight
952120	Push/Pull Internal Threads	In mm	1.40 3.55	1.63 41.5	3.60 91.4	2.19 55.5	5/16-18 -	.220 5.6	.429 10.9	1.28 32.6	3.27 83.2	.968 24.6	-	5.52 140.3	-	1.74 44.2	-	300lbs 136kg	10.5oz 300gr
52160	Push/Pull Internal Threads	In mm	1.63 41.4	1.63 41.4	2.25 57.2	2.25 57.2	3/8-16 -	.34 8.6	.63 16.0	1.63 41.4	4.56 115.8	1.70 43.2	-	6.75 171.5	-	3.84 97.5	-	800lbs 364kg	28oz 800gr
52190	Push/Pull Internal Threads	In mm	1.38 35.1	1.63 41.4	5.02 127.6	2.30 58.4	3/8-16 -	.34 8.6	.62 15.7	1.97 50.1	3.14 79.8	.85 21.6	-	7.25 184.1	1.82 46.2	2.20 55.9	1.63 41.4	2500lbs 1136kg	33.0oz 935gr
52101	Plunger Clamp w/ Threaded Collar	In mm	3/4-16 -	.63 15.9	.69 17.62	.25 6.58	1.25 31.8	5/16-18 -	.44 11.1	1.50 38.1	3.88 98.6	4.75 120.7	1.00 25.4	4.75 120.7	-	-	-	300lbs 136kg	9.5oz 270gr
52102	Plunger Clamp w/ Threaded Collar	In mm	1-14 -	.88 22.2	1.00 25.4	.188 4.8	1.56 39.6	3/8-16 -	.63 15.9	2.63 66.8	5.56 141.2	6.69 169.9	1.25 31.8	6.69 169.9	-	-	-	700lbs 318kg	24.3oz 690gr
9953110	Latch Type, Flanged Base, Straight Handle	In mm	.75 19.1	1.38 35.1	1.50 38.1	1.94 49.3	.31 7.9	.22 5.6	.50 12.7	-	1.36 34.7	.75 19.1	-	8.63 219.2	-	6.09 154.7	2.25 57.1	375lbs 170kg	9.5oz 270gr
53160	Latch, Flanged Base, Straight Handle	In mm	.63 16.0	.75 19.1	1.03 26.2	1.11 28.2	.17 4.3	.17 4.3	8-36 -	.39 9.9	1.29 32.9	.47 11.9	.75 19.1	3.47 88.1	2.20 55.9	2.11 55.2	1.19 30.2	360lbs 163.6kg	1.5oz 42gr
9953170	Latch, Flanged Base, T-Handle	In mm	.75 19.1	1.24 31.5	1.65 41.9	1.75 44.5	.280 7.2	.273 6.9	1/4-20 -	.46 11.7	1.77 44.9	.60 15.3	1.00 25.4	5.70 144.8	1.12 28.4	3.52 89.4	2.00 50.8	700lbs 318kg	7.0oz 196gr
53180	Latch, Flanged Base, T-Handle	In mm	1.65 41.9	1.50 38.1	2.57 65.3	2.47 62.7	.33 8.4	.33 8.4	5/16-20 -	.75 19.1	2.53 64.2	.85 21.6	1.49 37.8	7.50 190.5	1.50 38.1	5.04 128.1	3.33 84.6	2000lbs 900kg	24oz 680gr

FLAT CUSHION-TIP BONDED SPINDLE ASSEMBLIES



Order No.	Part No.	Description	Price
955110	FC-10138	10-24 x 1 3/8	
955120	FC-14134	1/4-20 x 1 3/4	
955125	FC-14218	1/4-20 x 2 1/8	
55130	FC-56212	5/16-18 x 2 1/2	
55135	FC-56300	5/16-18 x 3	
55140	FC-38312	3/8-16 x 3 1/2	
955145	FC-38412	3/8-16 x 4 1/2	
55150	FC-12334	1/2-13 x 3 3/4	

CONE CUSHION-TIP BONDED SPINDLE ASSEMBLIES



Order No.	Part No.	Description	Price
9955310	CC-10138	10-24 x 1 3/8	
55320	CC-14134	1/4-20 x 1 3/4	
55325	CC-14218	1/4-20 x 2 1/8	
55330	CC-56212	5/16-18 x 2 1/2	
55340	CC-38312	3/8-16 x 3 1/2	

FLANGED WASHERS FOR "U" BAR CLAMPS ONLY



Order No.	Part No.	Description	Price
55500	FW-080	For 8 Spindle	
55510	FW-100	For 10 Spindle	
55520	FW-140	For 1/4 Spindle	
55530	FW-516	For 5/16 Spindle	
55540	FW-380	For 3/8 Spindle	
55550	FW-120	For 1/2 Spindle	
55560	FW-580	For 5/8 Spindle	

NEOPRENE CAPS

Slip on Standard Adjustable Spindle Heads

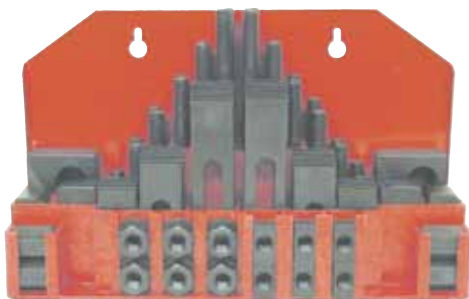


Order No.	Part No.	Description	Price
55620	NC-140	For 1/4 Spindle	
55630	NC-516	For 5/16 Spindle	
55640	NC-380	For 3/8 Spindle	
55650	NC-120	For 1/2 Spindle	

CLAMPING KITS

SERIES 436:

52 pc. set in fitted rack suitable for hanging
50 pc. set with fitted wooden container

**INCLUDES**

- 24 Studs (4 each: 3", 4", 5", 6", 7", 8")
- 4 Coupling nuts
- 6 Flange nuts (4 in wooden set)
- 6 T-Slot nuts
- 6 Step clamps
- 6 Pair Step blocks (1" wide)

Model No.	Stud Size	Table Slot	Order No.		Price
			In Wood	In Steel	
CS001	3/8-16	7/16	-	7800001	
CS002		1/2	-	7800002	
CS003		9/16	-	7800003	
CM001	1/2-13*	9/16	-	7801001	
CM002		5/8	-	7801002	
CM003		11/16	-	7801003	
CL001	5/8-11	11/16	-	7802001	
CL002		3/4	-	7802002	
CL003		13/16	-	7802003	
CEL01	3/4-10	13/16	7753001	-	
CEL02		7/8	7753002	-	
CEL03		1	7753003	-	

*For Bridgeport® and similar machines.

Quality Clamping Kits
The Choice Is Yours!!!**T-SLOT BOLTS**

SERIES 711:

- Forged from selected steel.
- Cannot twist or jam in slots.
- National Coarse cut threads.



Length Under Head	3/8-16		1/2-13		5/8-11		3/4-10	
	Order No.	Price	Order No.	Price	Order No.	Price	Order No.	Price
1-1/2	7112415		-		-		-	
2	7112420		7113220		7114020		-	
3	7112430		7113230		7114030		7114830	
4	7112440		7113240		7114040		7114840	
5	7112450		7113250		7114050		7114850	
6	7112460		7113260		7114060		7114860	
8	-		7113280		7114080		7114880	
10	-		-		-		7114890	

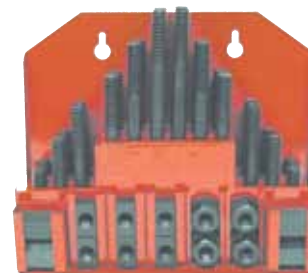
T-NUT AND STUD SETS

SERIES 438:

38 pc. set in fitted rack suitable for hanging
38 pc. set with fitted wooden container.

INCLUDES

- 24 studs (4 each: 3", 4", 5", 6", 7", 8")
- 4 Coupling nuts
- 4 Flange nuts
- 6 T-Slot nuts



Model No.	Stud Size	Table Slot	Order No.		Price
			In Wood	In Steel	
TS001	3/8-16	7/16	-	7900001	
TS002		1/2	-	7900002	
TS003		9/16	-	7900003	
TM001	1/2-13*	9/16	-	7901001	
TM002		5/8	-	7901002	
TM003		11/16	-	7901003	
TL001	5/8-11	11/16	-	7902001	
TL002		3/4	-	7902002	
TL003		13/16	-	7902003	
TEL01	3/4-10	13/16	7853001	-	
TEL02		7/8	7853002	-	
TEL03		1	7853003	-	

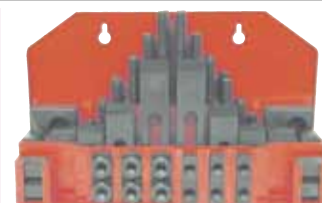
*For Bridgeport® and similar machines.

METRIC CLAMPING KITS - 58 PC.

SERIES 436:

M10 through M18 sets include a fitted rack suitable for hanging.

Table Slot	Stud Size	Order No.	Price
M10	M8-1.25	4013008	
M12	M10-1.25	4013010	
M14	M12-1.75	4013012	
M15.7		4013112	
M16	M14-2.0	4013014	
M18	M16-2.0	4013016	
M20	M18-2.5	4013018*	
M22	M20-2.5	4013020*	



* Packed with wooden container.

T-SLOT NUTS

SERIES 674:

- Case Hardened Steel
- Black Oxide Finish

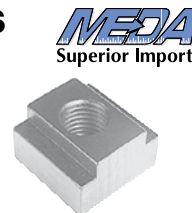


Table Slot.	Thread Size	Order No.	Price
7/16	3/8-16	6740437	
1/2		6740500	
9/16		6740560	
9/16	1/2-13	6740562	
5/8		6740625	
11/16		6740680	
11/16	5/8-11	6740687	
3/4		6740750	
13/16		6740800	
13/16	3/4-10	6740812	
7/8		6740875	
1		6740102	

COUPLING NUTS

SERIES 674:



STEP BLOCKS (1" WIDE)

SERIES 674:



- Case Hardened Steel
- Black Oxide Finish

Couple any number of studs together to make a stud of any desired length.

Model No.	Thread Size	Order No.	Price
CN38	3/8-16	6742024	
CN12	1/2-13	6742032	
CN58	5/8-11	6742040	
CN34	3/4-10	6742048	



- Case Hardened Steel
- Black Oxide Finish

One step block consists of 2 pieces.

Height Range	Order No.	Price
3/4 - 1-5/8	6744000	
1-1/8 - 2-1/2	6744001	
2-1/2 - 6	6744002	

STEP CLAMPS

SERIES 674:



- Case Hardened Steel
- Black Oxide Finish

Teeth will match any step block.

HEAVY DUTY HEX NUTS

SERIES 674:



- Case Hardened Steel
- Black Oxide Finish

Model No.	Stud Size	Overall Lgth	Order No.	Price
SC3825	5/16,3/8	2-1/2	6743242	
SC384	5/16,3/8	4	6743244	
SC386	5/16,3/8	6	6743246	
SC1225	1/2	2-1/2	6743322	
SC124	1/2	4	6743324	
SC126	1/2	6	6743326	
SC5825	5/8	2-1/2	6743402	
SC584	5/8	4	6743404	
SC586	5/8	6	6743406	
SC344	3/4	4	6743484	
SC346	3/4	6	6743486	
SC348	3/4	8	6743488	

Model No.	Hex Size	Thread Size	Order No.	Price
HN14	1/2	1/4-20	6747016	
HN56	9/16	5/16-18	6747020	
HN38	11/16	3/8-16	6747024	
HN12	7/8	1/2-13	6747032	
HN58	1-1/16	5/8-11	6747040	
HN34	1-1/4	3/4-10	6747048	
HN78	1-7/16	7/8-9	6747056	
HN10	1-5/8	1-8	6747064	

FLANGE NUTS

SERIES 674:



- Case Hardened Steel
- Black Oxide Finish

Model No.	Thread Size	Order No.	Price
FN38	3/8-16	6741024	
FN12	1/2-13	6741032	
FN58	5/8-11	6741040	
FN34	3/4-10	6741048	

CLAMPING STUDS

SERIES 674:



- Case Hardened Steel
- Black Oxide Finish

Overall Lgth	3/8-16		1/2-13		5/8-11		3/4-10	
	Order No.	Price	Order No.	Price	Order No.	Price	Order No.	Price
3	6745243		6745323		6745403		6745483	
4	6745244		6745324		6745404		6745484	
5	6745245		6745325		6745405		6745485	
6	6745246		6745326		6745406		6745486	
7	6745247		6745327		6745407		6745487	
8	6745248		6745328		6745408		6745488	

MACHINE STRAP CLAMPS
SERIES 673:

- Drop Forged Steel
- Ideal for holding down all types of work on every type of machine.
- Proper strength and stiffness to handle all types of clamping jobs.

"U" CLAMPS

Overall Lgth	Width	Thickness	Width of Slot	Order No.	Price
4	1-3/4	3/4	11/16	6730004	
6	2	7/8	11/16	6730006	
8	2-3/8	1-1/8	13/16	6730008	
10	2-3/4	1-1/4	15/16	6730010	
12	3-1/4	1-3/8	1-1/16	6730012	

GOOSE NECK CLAMPS

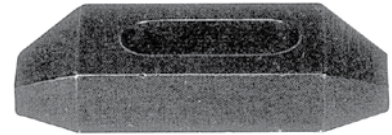
Overall Lgth	Width	Thickness	Width of Slot	Order No.	Price
4	1-3/8	3/4	11/16	6731004	
6	1-3/4	7/8	11/16	6731006	
8	2-1/8	1-1/8	13/16	6731008	

PLAIN CLAMPS

Overall Lgth	Width	Thickness	Width of Slot	Order No.	Price
4	1-5/8	3/4	11/16	6732004	
6	1-3/4	7/8	11/16	6732006	
8	2-1/8	1-1/8	13/16	6732008	

FINGER CLAMPS

Overall Lgth	Width	Thick-ness	Width of Slot	Order No.	Price
4	1-3/8	3/4	11/16	6733004	
6	1-3/4	7/8	11/16	6733006	
8	2-1/8	1-1/8	13/16	6733008	

PLAIN CLAMPS
SERIES 674:

- Case Hardened Steel
- Black Oxide Finish

Stud Size	Overall Lgth	Order No.	Price
5/16, 3/8	2-1/2	6746242	
5/16, 3/8	4	6746244	
5/16, 3/8	6	6746246	
1/2	2-1/2	6746322	
1/2	4	6746324	
1/2	6	6746326	
5/8	2-1/2	6746402	
5/8	4	6746404	
5/8	6	6746406	
3/4	4	6746484	
3/4	6	6746486	
3/4	8	6746488	

T-SLOT CLEANER
SERIES 674:

- Black Oxide Finish

Order No. 6740000	Price	\$4.00
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T-SLOT BRUSH

An easy way to clean chips from T-Slot tables.



Order No. 6000044	Price	\$6.85
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**Quality
Clamping Tools**



The Choice Is Yours!!!



CLAMPING & SET-UP COMPONENTS

SERIES 803:



SUPER CLAMP KITS

Kit Contains:

1 Step Block and Clamp Kit which includes:

- 6 Step Blocks
- 6 Serrated End Clamps

1 T-Nut and Stud Kit which includes:

- 4 Coupling Nuts
- 4 Flange Nuts
- 4 T-Slot Nuts
- 1 T-Slot Cleaner
- 24 studs - 4 each of



English Kits - 3", 4", 5", 6", 7" and 8" long

Metric Kits -

No. 68101: 80, 110, 125, 150, 175, & 200mm long.

Nos. 68102 - 06 & 68110 -12: 80, 110, 140, 150, 175 & 200mm long.

Nos. 68107-08 & 68113-15: 80, 110, 150, 175, 200, & 250mm long

1 Holder (wooden base and metal tray). *Holders are all wooden.

- Bridgeport® type milling machines use Part Nos. 20206, 20212.

Order No.	Price	Step Blk. & Clamp Kit No.	Table T-Slot Size	Stud Size	T-Slot & Stud Kit No.
With 1" Thick Step Blocks					
20201		21001	3/8	5/16-18	20601
20202		21001	7/16	3/8-16	20602
9920203		21001	1/2	3/8-16	20603
20204		21001	9/16	3/8-16	20604
9920205		21002	9/16	1/2-13	20605
9920206		21002	5/8	1/2-13	20606
9920207		21002	11/16	1/2-13	20607
9920208		21003	11/16	5/8-11	20608
9920209		21003	3/4	5/8-11	20609
9920210		21003	13/16	5/8-11	20610
With 1-1/2" Thick Step Blocks					
9920211		21004	9/16	1/2-13	20605
9920212		21004	5/8	1/2-13	20606
9920213		21004	11/16	1/2-13	20607
9920214		21005	11/16	5/8-11	20608
9920215		21005	3/4	5/8-11	20609
9920216		21005	13/16	5/8-11	20610
9920217		21006	13/16	3/4-10	20611
9920218		21006	7/8	3/4-10	20612
9920219		21006	1	3/4-10	20613
9920222		21006	1-1/16	3/4-10	20618
With 2" Thick Step Blocks					
*9920220	\$202.45	21007	1	7/8-9	20614
*20221	\$196.35	21007	1-1/16	1-8	20617
With 25mm Thick Step Blocks					
68101		21001M	10mm	M8 x 1.25	68201
68102		21001M	12mm	M10 x 1.5	68202
68103		21001M	14mm	M10 x 1.5	68203
68104		21002M	14mm	M12 x 1.75	68204
68105		21002M	16mm	M12 x 1.75	68205
68106		21002M	17mm	M12 x 1.75	68206
68107		21003M	18mm	M16 x 2.0	68207
68108		21003M	20mm	M16 x 2.0	68208
With 38mm Thick Step Blocks					
68110		21004M	14mm	M12 x 1.75	68204
68111		21004M	16mm	M12 x 1.75	68205
68112		21004M	17mm	M12 x 1.75	68206
68113		21005M	18mm	M16 x 2.0	68207
68114		21005M	20mm	M16 x 2.0	68208
68115		21006M	22mm	M20 x 2.5	68209

MACHINIST CLAMP KITS

Kit Contains:

- 4 Coupling Nuts
- 6 Flange Nuts
- 6 T-Slot Nuts
- 1 T-Slot Cleaner
- 24 Studs - 4 Each of :

English Kits - 3", 4", 5", 6", 7" and 8" long.

Metric Kits - 80mm, 110mm, 125mm, 150mm, 175mm and 200mm long

- 1 Step Block and Clamp Kit which includes: 6 Step Blocks, 6 Serrated End Clamps, 1 Metal Holder

- Bridgeport® type milling machines use Part No. 20402 or Part No. 9920402.



Order No.	Price	Table T-Slot Size	Stud Size	Step Block & Clamp Kit No.	T-Slot Nut No.
With 1" Thick Step Blocks					
20412		7/16	3/8-16	21001	41404
20413		1/2	3/8-16	21001	41405
20414		9/16	3/8-16	21001	41406
20401		9/16	1/2-13	21002	41409
20402		5/8	1/2-13	21002	41410
9920402*		5/8	1/2-13	20402	41410
20403		11/16	1/2-13	21002	41412
20404		5/8	1/2-13	21002	41411
20415		11/16	5/8-11	21003	41415
20416		3/4	5/8-11	21003	41416
20417		13/16	5/8-11	21003	41417
With 25mm Thick Step Blocks					
68001		12mm	M10 x 1.5	21001M	61404
68002		14mm	M10 x 1.5	21001M	61405
68003		14mm	M12 x 1.75	21002M	61406
68004		16mm	M12 x 1.75	21002M	61407
9968005		17mm	M12 x 1.75	21002M	61408
68006		18mm	M16 x 2.0	21003M	61409
68007		20mm	M16 x 2.0	21003M	61410

* In Plastic Holder

STEP BLOCK KITS

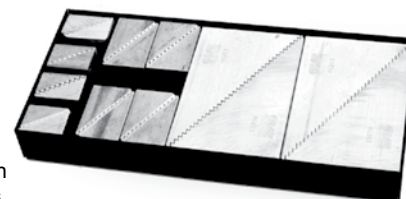
Kit Contains:

- 10 Steel Step Blocks
- 1 Holder

- See page 590 for dimensional data.

- Blocks work in conjunction with Serrated End Clamps.

- Two halves = One Block.



INCH

Order No.	Price	4 Each	4 Each	2 Each
20801		40102	40103	40104
20805		40105	40106	40107
20807		40108	40109	40110

METRIC

Order No.	Price	4 Each	4 Each	2 Each
9920801M		40102M	40103M	40104M
9920805M		40105M	40106M	40107M
9920807M		40108M	40109M	40110M



CLAMPING & SET-UP COMPONENTS

SERIES 803:



T-NUT & STUD KITS

Kit Contains:

- 4 Coupling Nuts, 4 Flange Nuts, 4 T-Slot Nuts, 1 T-Slot Cleaner, 24 Studs - 4 ea. of English Kits: 3", 4", 5", 6", 7" and 8" long

Metric Kits: Kit No. 68201-06: 80mm, 110mm, 140mm, 150mm, 175mm and 200mm long.

Kit No. 68207-09: 80mm, 110mm, 150mm, 175mm, 200mm, and 250mm long

- 1 Holder (wooden base and metal tray).

Bridgeport® type milling machines use Part No. 20606.

Inch

Order No.	Price	T-Slot Nut No.	Table T-Slot Size	Stud Size
20601		41403	3/8	5/16-18
20602		41404	7/16	3/8-16
20603		41405	1/2	3/8-16
20604		41406	9/16	3/8-16
20605		41409	9/16	1/2-13
20606		41410	5/8	1/2-13
20607		41412	11/16	1/2-13
20608		41415	11/16	5/8-11
20609		41416	3/4	5/8-11
20610		41417	13/16	5/8-11
20611		41418	13/16	3/4-10
20612		41419	7/8	3/4-10
20613		41420	1	3/4-10
20618		41422	1-1/16	3/4-10
20614		41423	1	7/8-9
20615		41424	1-1/16	7/8-9
20616		41425	1-1/8	7/8-9
20617		41426	1-1/16	1-8

Metric

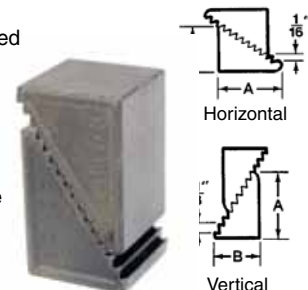
Order No.	Price	T-Slot Nut No.	Table T-Slot Size	Stud Size
68201		61403	10mm	M8 x 1.25
68202		61404	12mm	M10 x 1.5
68203		61405	14mm	M10 x 1.5
68204		61406	14mm	M12 x 1.75
68205		61407	16mm	M12 x 1.75
68206		61408	17mm	M12 x 1.75
68207		61409	18mm	M16 x 2.0
68208		61410	20mm	M16 x 2.0
68209		61411	22mm	M20 x 2.5



STEP BLOCKS

- Larger sizes have chamfered holes for ease of use.
- Blocks work in conjunction with Serrated End Clamps.
- **Two halves = One Block.**

* Indicates chamfered hole



Order No.	Price	Height Adj. Range	A	B
1" Thick Step Blocks				
9940102		3/4 to 1-5/8	1-1/16	11/16
40103		1-1/8 to 2-1/2	1-39/64	1-1/16
40104*		2-1/2 to 6	3-3/4	2-15/32
1-1/2" Thick Step Blocks				
9940105		1-3/4 to 4	2-17/32	1-43/64
40106*		2-1/2 to 6	3-3/4	2-15/32
40107*		3-1/2 to 9	5-21/64	3-7/16
2" Thick Step Blocks				
40108		1-3/4 to 4	2-17/32	1-43/64
40109*		2-1/2 to 6	3-3/4	2-15/32
40110*		3-1/2 to 9	5-21/64	3-7/16
25mm Thick Step Blocks				
8040102		19mm to 41mm	1-1/16	11/16
9040103		29mm to 64mm	1-39/64	1-1/16
8040104		64mm to 152mm	3-3/4	2-15/32
38mm Thick Step Blocks				
8040105		45mm to 102mm	2-17/32	1-43/64
8040106		64mm to 152mm	3-3/4	2-15/32
9040107		89mm to 229mm	5-21/64	3-7/16
51mm Thick Step Blocks				
8040108		45mm to 102mm	2-17/32	1-43/64
8040109		64mm to 152mm	3-3/4	2-15/32
8040110		89mm to 229mm	5-21/64	3-7/16

STEP BLOCK & CLAMP KITS

Kit Contains:

- 6 Steel Step Blocks, 6 Serrated End Clamps, 1 Holder



Inch

Order No.	Price	Step Blocks 2 Each	Stud Size	Serrated End Clamps 2 Each
With 1" Thick Step Blocks				
21001		40102	5/16	30501
		40103	or	30502
		40104	3/8	30503
21002		40102	1/2	30504
		40103		30505
		40104		30506
21003		40102	5/8	30507
		40103	30508	
		40104	30509	
With 1-1/2" Thick Step Blocks				
21004		40105	1/2	30504
		40106		30505
		40107		30506
21005		40105	5/8	30507
		40106		30508
		40107		30509
21006		40105	3/4	30510
		40106		30511
		40107		30512
With 2" Thick Step Blocks				
21007		40108	7/8	30513
		40109	or	30514
		40110	1	30515

*Kit furnished with flat board holder

Metric

Order No.	Step Blocks 2 Each	Stud Size	Serrated End Clamps 2 Each	Price
With 25mm Thick Step Blocks				
8021001	40102M	M10 x 1.5	30501M	
	40103M		30502M	
	40104M		30503M	
8021002	40102M	M12 x 1.75	30504M	
	40103M		30505M	
	40104M		30506M	
8021003	40102M	M16 x 2.0	30507M	
	40103M		30508M	
	40104M		30509M	
With 38mm Thick Step Blocks				
8021004	40105M	M12 x 1.75	30504M	
	40106M		30505M	
	40107M		30506M	
8021005	40105M	M16 x 2.0	30507M	
	40106M		30508M	
	40107M		30509M	
8021006	40105M	M20 x 2.5	30510M	
	40106M		30511M	
	40107M		30512M	



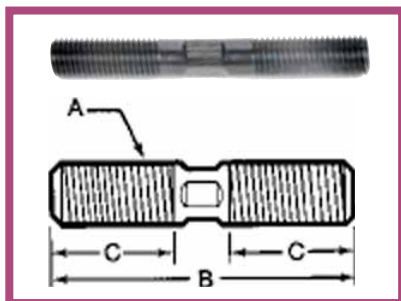
MACHINE SHOP

CLAMPING & SET-UP COMPONENTS

SERIES 803:



DRIVER STUDS (INCH)



- Black Oxide Finish
- Tensile Strength: 125,000 p.s.i. min.
Medium Carbon Steel
- Most studs have wrench flats
- Special lengths and sizes will be quoted upon request

Order No.	Price	Thread A	B	C	Flats
40301		1/4-20	1-1/2	1/2	NO
40302		1/4-20	2	3/4	NO
40303		1/4-20	2-1/2	1	NO
40304		1/4-20	3	1	NO
40305		1/4-20	3-1/2	1	NO
40306		1/4-20	4	1	NO
40307		1/4-20	4-1/2	1	NO
40308		1/4-20	5	1	NO
40309		1/4-20	5-1/2	1	NO
40310		1/4-20	6	1	NO
40311		1/4-20	6-1/2	1	NO
40312		1/4-20	7	1	NO
40313		1/4-20	7-1/2	1	NO
40314		1/4-20	8	1	NO
40401		5/16-18	1-1/2	1/2	NO
40402		5/16-18	2	3/4	NO
40403		5/16-18	2-1/2	1	NO
40404		5/16-18	3	1-1/8	NO
40405		5/16-18	3-1/2	1-1/8	NO
40406		5/16-18	4	1-1/8	NO
40407		5/16-18	4-1/2	1-1/8	NO
40408		5/16-18	5	1-1/8	NO
40409		5/16-18	5-1/2	1-1/8	NO
40410		5/16-18	6	1-1/8	NO
40411		5/16-18	6-1/2	1-1/8	NO
40412		5/16-18	7	1-1/8	NO
40413		5/16-18	7-1/2	1-1/8	NO
40414		5/16-18	8	1-1/8	NO
40501		3/8-16	1-1/2	1/2	NO
40502		3/8-16	2	3/4	NO
40503		3/8-16	2-1/2	1	NO
40504		3/8-16	3	1	YES
40505		3/8-16	3-1/2	1-1/4	YES
40506		3/8-16	4	1-1/4	YES
40507		3/8-16	4-1/2	1-1/4	YES
40508		3/8-16	5	1-1/4	YES
40509		3/8-16	5-1/2	1-1/4	YES
40510		3/8-16	6	1-1/4	YES
40511		3/8-16	6-1/2	1-1/4	YES

Order No.	Price	Thread A	B	C	Flats
40512		3/8-16	7	1-1/4	YES
40513		3/8-16	7-1/2	1-1/4	YES
40514		3/8-16	8	1-1/4	YES
40601		7/16-14	1-1/2	1/2	NO
40602		7/16-14	2	3/4	NO
40603		7/16-14	2-1/2	1	NO
40604		7/16-14	3	1	YES
40605		7/16-14	3-1/2	1-1/4	YES
40606		7/16-14	4	1-3/8	YES
40607		7/16-14	4-1/2	1-3/8	YES
40608		7/16-14	5	1-3/8	YES
40609		7/16-14	5-1/2	1-3/8	YES
40610		7/16-14	6	1-3/8	YES
40611		7/16-14	6-1/2	1-3/8	YES
40612		7/16-14	7	1-3/8	YES
40613		7/16-14	7-1/2	1-3/8	YES
40614		7/16-14	8	1-3/8	YES
40701		1-1/2-13	1-1/2	1/2	NO
40702		1-1/2-13	2	3/4	NO
40703		1-1/2-13	2-1/2	1	NO
40704		1-1/2-13	3	1	YES
40705		1-1/2-13	3-1/2	1-1/4	YES
40706		1-1/2-13	4	1-1/2	YES
40707		1-1/2-13	4-1/2	1-1/2	YES
40708		1-1/2-13	5	1-1/2	YES
40709		1-1/2-13	5-1/2	1-1/2	YES
40710		1-1/2-13	6	1-1/2	YES
40711		1-1/2-13	6-1/2	1-1/2	YES
40712		1-1/2-13	7	1-1/2	YES
40713		1-1/2-13	7-1/2	1-1/2	YES
40714		1-1/2-13	8	1-1/2	YES
40715		1-1/2-13	9	1-1/2	YES
40716		1-1/2-13	10	1-1/2	YES
40717		1-1/2-13	12	1-1/2	YES
40718		1-1/2-13	14	1-1/2	YES
40719		1-1/2-13	16	1-1/2	YES
40801		5/8-11	1-1/2	1/2	NO
40802		5/8-11	2	3/4	NO
40803		5/8-11	2-1/2	1	NO
40804		5/8-11	3	1	YES
40805		5/8-11	3-1/2	1-1/4	YES
40806		5/8-11	4	1-1/2	YES
40807		5/8-11	4-1/2	1-3/4	YES
40808		5/8-11	5	1-3/4	YES
40809		5/8-11	5-1/2	1-3/4	YES
40810		5/8-11	6	1-3/4	YES
40811		5/8-11	6-1/2	1-3/4	YES
40812		5/8-11	7	1-3/4	YES
40813		5/8-11	7-1/2	1-3/4	YES
40814		5/8-11	8	1-3/4	YES
40815		5/8-11	9	1-3/4	YES
40816		5/8-11	10	1-3/4	YES
40817		5/8-11	12	1-3/4	YES
40818		5/8-11	14	1-3/4	YES
40819		5/8-11	16	1-3/4	YES
40820		5/8-11	18	1-3/4	YES
40821		5/8-11	20	1-3/4	YES
40822		5/8-11	22	1-3/4	YES
40823		5/8-11	24	1-3/4	YES

Order No.	Price	Thread A	B	C	Flats
40901		3/4-10	3	1	YES
40902		3/4-10	3-1/2	1-1/4	YES
40903		3/4-10	4	1-1/2	YES
40904		3/4-10	4-1/2	1-3/4	YES
40905		3/4-10	5	2	YES
40906		3/4-10	5-1/2	2	YES
40907		3/4-10	6	2	YES
40908		3/4-10	6-1/2	2	YES
40909		3/4-10	7	2	YES
40910		3/4-10	7-1/2	2	YES
40911		3/4-10	8	2	YES
40912		3/4-10	9	2	YES
40913		3/4-10	10	2	YES
40914		3/4-10	12	2	YES
40915		3/4-10	14	2	YES
40916		3/4-10	16	2	YES
40917		3/4-10	18	2	YES
40918		3/4-10	20	2	YES
40919		3/4-10	22	2	YES
40920		3/4-10	24	2	YES
41001		7/8-9	3	1	YES
41002		7/8-9	3-1/2	1-1/4	YES
41003		7/8-9	4	1-1/2	YES
41004		7/8-9	4-1/2	1-3/4	YES
41005		7/8-9	5	2	YES
41006		7/8-9	5-1/2	2-1/4	YES
41007		7/8-9	6	2-1/4	YES
41008		7/8-9	6-1/2	2-1/4	YES
41009		7/8-9	7	2-1/4	YES
41010		7/8-9	7-1/2	2-1/4	YES
41011		7/8-9	8	2-1/4	YES
41012		7/8-9	9	2-1/4	YES
41013		7/8-9	10	2-1/4	YES
41014		7/8-9	12	2-1/4	YES
41015		7/8-9	14	2-1/4	YES
41016		7/8-9	16	2-1/4	YES
41017		7/8-9	18	2-1/4	YES
41018		7/8-9	20	2-1/4	YES
41019		7/8-9	22	2-1/4	YES
41020		7/8-9	24	2-1/4	YES
41101		1-8	3	1	YES
41102		1-8	3-1/2	1-1/4	YES
41103		1-8	4	1-1/2	YES
41104		1-8	4-1/2	1-3/4	YES
41105		1-8	5	2	YES
41106		1-8	5-1/2	2-1/4	YES
41107		1-8	6	2-1/2	YES
41108		1-8	6-1/2	2-1/2	YES
41109		1-8	7	2-1/2	YES
41110		1-8	7-1/2	2-1/2	YES
41111		1-8	8	2-1/2	YES
41112		1-8	9	2-1/2	YES
41113		1-8	10	2-1/2	YES
41114		1-8	12	2-1/2	YES
41115		1-8	14	2-1/2	YES
41116		1-8	16	2-1/2	YES
41117		1-8	18	2-1/2	YES
41118		1-8	20	2-1/2	YES
41119		1-8	22	2-1/2	YES
41120		1-8	24	2-1/2	YES



CLAMPING & SET-UP COMPONENTS

SERIES 803:

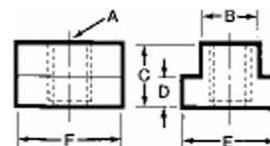


DRIVER STUDS (METRIC)

Order No.	Thread A	B	C	Price
60201	M6 x 1.0	50	20	
60202	M6 x 1.0	65	20	
60203	M6 x 1.0	80	27	
60204	M6 x 1.0	95	27	
60206	M6 x 1.0	110	31	
60208	M6 x 1.0	140	35	
60210	M6 x 1.0	150	35	
60211	M6 x 1.0	175	35	
60213	M6 x 1.0	200	35	
60301	M8 x 1.25	50	20	
60302	M8 x 1.25	65	20	
60303	M8 x 1.25	80	27	
60304	M8 x 1.25	95	31	
60306	M8 x 1.25	110	31	
60308	M8 x 1.25	140	35	
60310	M8 x 1.25	150	35	
60311	M8 x 1.25	175	35	
60313	M8 x 1.25	200	35	
60401	M10 x 1.5	50	20	
60402	M10 x 1.5	65	20	
60403	M10 x 1.5	80	27	
60404	M10 x 1.5	95	31	
60406	M10 x 1.5	110	35	
60407	M10 x 1.5	125	35	
60408	M10 x 1.5	140	35	
60410	M10 x 1.5	150	35	
60411	M10 x 1.5	175	35	
60413	M10 x 1.5	200	35	
60501	M12 x 1.75	50	20	
60502	M12 x 1.75	65	20	
60503	M12 x 1.75	80	27	
60504	M12 x 1.75	95	31	
60506	M12 x 1.75	110	39	
60507	M12 x 1.75	125	39	
60508	M12 x 1.75	140	39	
60510	M12 x 1.75	150	39	
60511	M12 x 1.75	175	39	
60513	M12 x 1.75	200	39	
60603	M16 x 2.0	80	21	
60604	M16 x 2.0	95	31	
60606	M16 x 2.0	110	47	
60607	M16 x 2.0	125	47	
60609	M16 x 2.0	150	47	
60611	M16 x 2.0	175	47	
60613	M16 x 2.0	200	47	
60615	M16 x 2.0	250	47	
60616	M16 x 2.0	300	47	
60703	M20 x 2.5	80	27	
60704	M20 x 2.5	95	31	
60706	M20 x 2.5	110	47	
60707	M20 x 2.5	125	55	
60709	M20 x 2.5	150	55	
60711	M20 x 2.5	175	55	
60713	M20 x 2.5	200	55	
60715	M20 x 2.5	250	55	
60716	M20 x 2.5	300	55	
60805	M24 x 3.0	100	39	
60807	M24 x 3.0	125	55	
60809	M24 x 3.0	150	63	
60811	M24 x 3.0	175	63	
60813	M24 x 3.0	200	63	
60815	M24 x 3.0	250	63	
60816	M24 x 3.0	300	63	

T-SLOT NUTS

- Black Oxide Finish
- Case Hardened
- 1018 Material
- The last thread is incomplete on T-Slot Nuts to prevent the stud from turning through the bottom of the nut.
- Many sizes conform to TCMAI standards



Order No.	Price	Thread A	English* Table Slot B	Metric** Table Slot	C	D	E	F
41401		1/4-20	5/16	8	1/4	3/16	9/16	9/16
41402		1/4-20	3/8	10	3/8	15/64	9/16	9/16
41403		5/16-18	3/8	10	3/8	1/4	5/8	7/8
41433		5/16-18	7/16	12	1/2	7/32	11/16	7/8
41434		5/16-18	1/2	13	1/2	9/32	7/8	7/8
41404		3/8-16	7/16	12	1/2	7/32	11/16	7/8
41405		3/8-16	1/2	12	1/2	9/32	7/8	7/8
41406		3/8-16	9/16	15	5/8	11/32	7/8	1-1/8
41407		7/16-14	1/2	13	1/2	9/32	7/8	7/8
41408		7/16-14	1/2	13	3/8	7/32	3/4	7/8
41409		1/2-13	9/16	15	5/8	11/32	7/8	1-1/8
41410		1/2-13	5/8	16	5/8	11/32	1	1-1/8
41411		1/2-13	5/8	16	3/4	3/8	1-1/8	1-1/8
41412		1/2-13	11/16	18	3/4	7/16	1-1/8	1-1/4
41413		1/2-13	3/4	20	3/4	15/32	1-1/4	1-1/4
41415		5/8-11	11/16	18	3/4	7/16	1-1/8	1-1/4
41416		5/8-11	3/4	20	3/4	15/32	1-1/4	1-1/4
41417		5/8-11	13/16	21	1	9/16	1-1/4	1-1/2
41418		3/4-10	13/16	21	1	9/16	1-1/4	1-1/2
41419		3/4-10	7/8	23	1	9/16	1-1/2	1-1/2
41420		3/4-10	1	26	1	5/8	1-5/8	1-3/4
41421		3/4-10	1	26	1-1/2	3/4	1-3/4	1-3/4
41422		3/4-10	1-1/16	27	1-1/8	11/16	1-5/8	2
41423		7/8-9	1	26	1	5/8	1-5/8	1-3/4
41424		7/8-9	1-1/16	27	1-1/8	11/16	1-5/8	2
41425		7/8-9	1-1/8	28	1-1/2	3/4	1-3/4	2
41429		7/8-9	1-5/16	34	1-1/4	15/16	2	2
41426		1-8	1-1/16	27	1-1/8	11/16	1-5/8	2
41427		1-8	1-1/8	32	1-1/2	3/4	1-3/4	2
41428		1-8	1-1/4	32	1-1/4	7/8	2	2
41430		1-8	1-5/16	34	1-1/4	15/16	2	2
41432		1-1/4-7	1-3/8	36	1-3/4	1-1/8	2-1/2	2-1/2
Order No.	Price	Thread A	Metric* Table Slot B	English** Table Slot	C	D	E	F
61401		M6 x 1.0	8	5/16	10	6	14	19
61402		M6 x 1.0	10	7/16	11	6	16	22
61403		M8 x 1.25	10	7/16	11	6	16	22
61404		M10 x 1.5	12	1/2	13	7	19	22
61405		M10 x 1.5	14	9/16	16	9	22	29
61406		M12 x 1.75	14	9/16	16	9	22	29
61407		M12 x 1.75	16	5/8	16	9	25	29
61408		M12 x 1.75	17	11/16	19	11	29	32
61409		M16 x 2.0	18	3/4	19	11	29	32
9961410		M16 x 2.0	20	13/16	25	14	32	38
61411		M20 x 2.5	22	7/8	25	14	35	38
61412		M24 x 3.0	27	1-1/16	29	18	41	51
61413		M24 x 3.0	33	1-5/16	32	24	51	51

* T-Slot Nuts are undersized to fit machine table slot.

** English T-Slot Nut will fit this size metric machine T-slot



While we show only the most popular  items we can supply their entire range of products; please inquire.



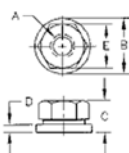
CLAMPING & SET-UP COMPONENTS

SERIES 803:



FLANGE NUTS

- When used with Spherical Washers
Flange Nuts will equalize thread loads
Black Oxide Finish
Case Hardened
12L14 Material
- Available in Coarse or Fine Threads
- Many sizes conform to TCMAI standards



INCH

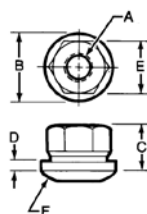
Order No.	Price	Thread A	B	C	D	E
41601		1/4-20	5/8	5/16	3/32	1/2
41602		5/16-18	3/4	3/8	1/8	9/16
41603		3/8-16	7/8	1/2	1/8	11/16
41604		7/16-14	1	9/16	5/32	3/4
41605		1/2-13	1-1/8	11/16	3/16	7/8
41606		5/8-11	1-3/8	13/16	3/16	1-1/16
41607		3/4-10	1-5/8	1	1/4	1-1/4
41608		7/8-9	1-3/4	1-1/8	1/4	1-7/16
41609		1-8	2	1-1/4	1/4	1-5/8
41611		1-1/4-7	2-1/2	1-1/4	1/4	1-13/16
41701		1/4-28	5/8	5/16	3/32	1/2
41702		5/16-24	3/4	3/8	1/8	9/16
41703		3/8-24	7/8	1/2	1/8	11/16
41704		7/16-20	1	9/16	5/32	3/4
41705		1/2-20	1-1/8	11/16	3/16	7/8
41706		5/8-18	1-3/8	13/16	3/16	1-1/16
41707		3/4-16	1-5/8	1	1/4	1-1/4
41708		7/8-14	1-3/4	1-1/8	1/4	1-7/16
41709		1-14	2	1-1/4	1/4	1-5/8

METRIC

Order No.	Thread A	B	C	D	E	Price
61601	M6 x 1.0	16	8	2	10	
61602	M8 x 1.25	19	10	2.5	13	
61603	M10 x 1.5	22	13	3	17	
61604	M12 x 1.75	27	17	4	19	
61605	M16 x 2.0	33	21	5	24	
61606	M20 x 2.5	40	25	6	30	
61607	M24 x 3.0	49	32	7	36	

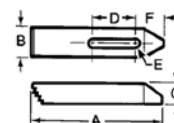
SPHERICAL FLANGE NUTS

- Black Oxide Finish
Case Hardened
12L14 Material
- Many sizes conform to TCMAI standards
- When used with spherical washers flange nuts will equalize thread loads.



Order No.	Price	Thread A	B	C	D	E	F
41801		1/4-20	5/8	5/16	3/32	1/2	3/4
41802		5/16-18	3/4	3/8	1/8	9/16	1-1/4
41803		3/8-16	7/8	1/2	1/8	11/16	1-1/4
41804		7/16-14	1	9/16	5/32	3/4	1-1/2
41805		1/2-13	1-1/8	11/16	3/16	7/8	1-1/2
41806		5/8-11	1-3/8	13/16	3/16	1-1/16	1-3/4
41807		3/4-10	1-5/8	1	1/4	1-1/4	2-1/4
41808		7/8-9	1-3/4	1-1/8	1/4	1-7/16	2-1/2
41809		1-8	2	1-1/4	1/4	1-5/8	2-3/4
41811		1-1/4-7	2-1/2	1-1/4	1/4	1-13/16	3

SERRATED END CLAMPS



Order No.	Price	A	B	C	D	Stud Size E	F
30501		2-1/2	1	1/2	13/16	5/16 or 3/8	27/32
30502		4	1	5/8	1-7/16	5/16 or 3/8	1-1/32
30503		6	1-1/8	3/4	2-3/16	5/16 or 3/8	1-5/32
30504		2-1/2	1-1/8	1/2	11/16	1/2	29/32
30505		4	1-1/4	3/4	1-5/16	1/2	1-5/32
30506		6	1-1/4	7/8	2-1/16	1/2	1-9/32
30507		2-1/2	1-1/4	5/8	9/16	5/8	31/32
30508		4	1-1/2	3/4	1-3/16	5/8	1-9/32
30509		6	1-1/2	7/8	1-15/16	5/8	1-13/32
30510		4	1-1/2	3/4	1-1/16	3/4	1-11/32
30511		6	1-1/2	1	1-15/16	3/4	1-15/32
30512		8	1-3/4	1-1/8	2-3/16	3/4	1-29/32
30513		6	2	1-1/4	1-11/16	7/8 or 1	1-27/32
30514		8	2	1-3/8	1-15/16	7/8 or 1	2-1/32
30515		10	2	1-1/2	2-15/16	7/8 or 1	2-1/32

Order No.	A	B	C	D	Stud Size E	F	Price
8030501	64	25	13	21	M6-M8-M10	21	
8030502	102	25	16	37	M6-M8-M10	26	
8030503	152	29	19	56	M6-M8-M10	29	
8030504	64	29	13	18	M12	23	
8030505	102	32	16	33	M12	29	
8030506	152	32	19	52	M12	29	
8030507	64	32	16	14	M16	25	
8030508	102	38	19	30	M16	31	
8030509	152	38	22	49	M16	34	
8030510	102	38	19	27	M20	33	
8030511	152	38	25	49	M20	37	
8030512	203	45	29	56	M20	48	
9030513	152	51	32	43	M24	44	
8030514	203	51	35	49	M24	52	
9030515	254	51	38	75	M24	52	

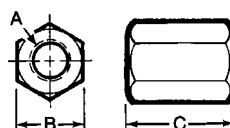
COUPLING (EXTENSION) NUTS

METRIC

- Black Oxide Finish
Case Hardened
1117 Material
Coupling Nuts can be used to join two or more studs for a desired length
- Many sizes conform to TCMAI standards

Order No.	Price	Thread A	B	C
61501		M6 x 1.00	13	16
61502		M8 x 1.25	14	19
9961503		M10 x 1.5	16	24
61504		M12 x 1.75	22	32
61505		M16 x 2.0	27	40
61506		M20 x 2.5	32	51
9961507		M24 x 3.0	38	64

INCH



Order No.	Price	Thread A	B	C
41501		1/4-20	1/2	5/8
41502		5/16-18	9/16	7/8
41503		3/8-16	11/16	1
41504		7/16-14	3/4	1-1/4
41505		1/2-13	7/8	1-1/4
41506		5/8-11	1-1/16	1-5/8
41507		3/4-10	1-1/4	1-7/8
41508		7/8-9	1-7/16	2-1/4
41509		1-8	1-5/8	2-1/2

**CLAMPING & SET-UP COMPONENTS**

SERIES 803:

**HEAVY HEX NUTS**

Black Oxide Finish Case Hardened
 High Grade Alloy Steel
 Will outlast ordinary Hex Nuts when used in repetitive operations

Order No.	Price	Thread Size	Wdth Acs Flats	Thick-ness
42101		1/4-20	1/2	15/64
42102		5/16-18	9/16	19/64
42103		3/8-16	11/16	23/64
42104		7/16-14	3/4	27/64
42105		1/2-13	7/8	31/64
42106		5/8-11	1-1/16	39/64
42107		3/4-10	1-1/4	47/64
42108		7/8-9	1-7/16	55/64
42109		1-8	1-5/8	63/64



42101

HEAVY HEX JAM NUTS

Black Oxide Finish Case Hardened
 High Grade Alloy Steel
 Will outlast ordinary Hex Jam Nuts when used in repetitive operations

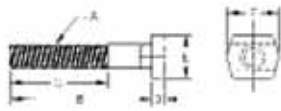
Order No.	Price	Thread Size	Wdth Acs Flats	Thick-ness
42201		1/4-20	1/2	11/64
42202		5/16-18	9/16	13/64
42203		3/8-16	11/16	15/64
42204		7/16-14	3/4	17/64
42205		1/2-13	7/8	19/64
42206		5/8-11	1-1/16	23/64
42207		3/4-10	1-1/4	27/64
42208		7/8-9	1-7/16	31/64
42209		1-8	1-5/8	35/64



42201

TUGGER® T-SLOT BOLTS

Black Oxide Finish
 Medium Carbon Steel
 T-Slot Bolt head dimension "D" is undersized to fit machine table slot
 Thread Class 2A UNC



Order No.	Price	Thread A	B	C	D	E	F	Table Slot
45203		3/8-16	1-1/2	1	3/16	11/16	13/16	3/8
45205		3/8-16	2	1-1/2	3/16	11/16	13/16	3/8
45207		3/8-16	2-1/2	2	3/16	11/16	13/16	3/8
45209		3/8-16	3	2	3/16	11/16	13/16	3/8
45210		3/8-16	3-1/2	2	3/16	11/16	13/16	3/8
45211		3/8-16	4	2	3/16	11/16	13/16	3/8
45212		3/8-16	4-1/2	2	3/16	11/16	13/16	3/8
45213		3/8-16	5	2	3/16	11/16	13/16	3/8
45214		3/8-16	5-1/2	2	3/16	11/16	13/16	3/8
45215		3/8-16	6	2	3/16	11/16	13/16	3/8
45216		3/8-16	7	2	3/16	11/16	13/16	3/8
45217		3/8-16	8	2	3/16	11/16	13/16	3/8
45402		1/2-13	1-1/2	1	1/4	7/8	1-3/16	1/2
45404		1/2-13	2	1-1/2	1/4	7/8	1-3/16	1/2
45406		1/2-13	2-1/2	2	1/4	7/8	1-3/16	1/2
45408		1/2-13	3	2	1/4	7/8	1-3/16	1/2
45409		1/2-13	3-1/2	2	1/4	7/8	1-3/16	1/2
45410		1/2-13	4	2	1/4	7/8	1-3/16	1/2
45411		1/2-13	4-1/2	2	1/4	7/8	1-3/16	1/2
45412		1/2-13	5	2	1/4	7/8	1-3/16	1/2
45413		1/2-13	5-1/2	2	1/4	7/8	1-3/16	1/2
45414		1/2-13	6	2	1/4	7/8	1-3/16	1/2
45415		1/2-13	7	2	1/4	7/8	1-3/16	1/2
45416		1/2-13	8	2	1/4	7/8	1-3/16	1/2
45417		1/2-13	9	2	1/4	7/8	1-3/16	1/2
45418		1/2-13	10	2	1/4	7/8	1-3/16	1/2
45419		1/2-13	12	2	1/4	7/8	1-3/16	1/2
45501		5/8-11	1-1/2	1	11/32	1-1/8	1-5/16	5/8
45502		5/8-11	2	1-1/2	11/32	1-1/8	1-5/16	5/8
45504		5/8-11	2-1/2	2	11/32	1-1/8	1-5/16	5/8
45506		5/8-11	3	2	11/32	1-1/8	1-5/16	5/8
45507		5/8-11	3-1/2	2	11/32	1-1/8	1-5/16	5/8
45508		5/8-11	4	2	11/32	1-1/8	1-5/16	5/8
45509		5/8-11	4-1/2	2	11/32	1-1/8	1-5/16	5/8
45510		5/8-11	5	2	11/32	1-1/8	1-5/16	5/8
45511		5/8-11	5-1/2	2	11/32	1-1/8	1-5/16	5/8
45512		5/8-11	6	2	11/32	1-1/8	1-5/16	5/8
45513		5/8-11	7	2	11/32	1-1/8	1-5/16	5/8
45514		5/8-11	8	2	11/32	1-1/8	1-5/16	5/8
45515		5/8-11	9	2	11/32	1-1/8	1-5/16	5/8
45516		5/8-11	10	2	11/32	1-1/8	1-5/16	5/8
45517		5/8-11	12	2	11/32	1-1/8	1-5/16	5/8
45601		3/4-10	2	1-1/2	15/32	1-1/4	1-9/16	3/4
45602		3/4-10	2-1/2	2	15/32	1-1/4	1-9/16	3/4
45603		3/4-10	3	2	15/32	1-1/4	1-9/16	3/4
45604		3/4-10	3-1/2	2	15/32	1-1/4	1-9/16	3/4
45605		3/4-10	4	2	15/32	1-1/4	1-9/16	3/4
45606		3/4-10	4-1/2	2	15/32	1-1/4	1-9/16	3/4

T-SLOT CLEANER

Order No. 950101 Price

- T-Slot Cleaner allows for easy removal of chips from the machine table
- T-Slot Cleaners are made of steel for durability

**TUGGER® T-SLOT BOLTS (Continued)**

Order No.	Price	Thread A	B	C	D	E	F	Table Slot
45607		3/4-10	5	2	15/32	1-1/4	1-9/16	3/4
45608		3/4-10	5-1/2	2	15/32	1-1/4	1-9/16	3/4
45609		3/4-10	6	2	15/32	1-1/4	1-9/16	3/4
45610		3/4-10	7	2	15/32	1-1/4	1-9/16	3/4
45611		3/4-10	8	2	15/32	1-1/4	1-9/16	3/4
45612		3/4-10	9	2	15/32	1-1/4	1-9/16	3/4
45613		3/4-10	10	2	15/32	1-1/4	1-9/16	3/4
45614		3/4-10	12	2	15/32	1-1/4	1-9/16	3/4
45701		7/8-9	3	2	9/16	1-1/2	1-3/4	7/8
45702		7/8-9	4	2	9/16	1-1/2	1-3/4	7/8
45703		7/8-9	5	2	9/16	1-1/2	1-3/4	7/8
45704		7/8-9	6	2	9/16	1-1/2	1-3/4	7/8
45705		7/8-9	7	2	9/16	1-1/2	1-3/4	7/8
45706		7/8-9	8	2	9/16	1-1/2	1-3/4	7/8
45707		7/8-9	9	2	9/16	1-1/2	1-3/4	7/8
45708		7/8-9	10	2	9/16	1-1/2	1-3/4	7/8
45709		7/8-9	12	2	9/16	1-1/2	1-3/4	7/8
45710		7/8-9	14	2	9/16	1-1/2	1-3/4	7/8
45711		7/8-9	16	2	9/16	1-1/2	1-3/4	7/8
45712		7/8-9	18	2	9/16	1-1/2	1-3/4	7/8
45801		1-8	3	2	11/16	1-3/4	2-1/16	1
45802		1-8	4	2	11/16	1-3/4	2-1/16	1
45803		1-8	5	2	11/16	1-3/4	2-1/16	1
45804		1-8	6	2	11/16	1-3/4	2-1/16	1
45805		1-8	7	2	11/16	1-3/4	2-1/16	1
45806		1-8	8	2	11/16	1-3/4	2-1/16	1
45807		1-8	9	2	11/16	1-3/4	2-1/16	1
45808		1-8	10	2	11/16	1-3/4	2-1/16	1
45809		1-8	12	2	11/16	1-3/4	2-1/16	1
45810		1-8	14	2	11/16	1-3/4	2-1/16	1
45811		1-8	16	2	11/16	1-3/4	2-1/16	1
45812		1-8	18	2	11/16	1-3/4	2-1/16	1



CLAMPING & SET-UP COMPONENTS

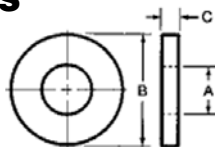
SERIES 803:



HARDENED FLAT WASHERS

Black Oxide Finish
Case Hardened
C1010 Material

- Many sizes conform to TCMAI standards



INCH

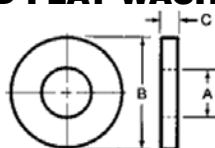
Order No.	Price	Stud Size	A	B	C
42600		3/16	13/64	1/2	3/32
42601		1/4	9/32	5/8	1/8
42602		5/16	11/32	3/4	1/8
42603		3/8	13/32	7/8	1/8
42604		7/16	15/32	1	1/8
42605		1/2	17/32	1-1/8	1/8
42606		5/8	21/32	1-3/8	1/8
42607		3/4	25/32	1-5/8	5/32
42608		7/8	29/32	1-3/4	5/32
42609		1	1-1/32	2	3/16
42610		1-1/8	1-5/32	2-1/4	7/32
42611		1-1/4	1-9/32	2-1/2	9/32
42612		#4	1/8	5/16	5/64
42613		#6	5/32	3/8	5/64
42614		#8	3/16	7/16	5/64

METRIC

Order No.	Stud Size	A	B	C	Price
63601	M6	7	16	3	
63602	M8	9	19	3	
63603	M10	11	25	3	
63605	M12	13	28	3	
63606	M16	17	35	3	
63608	M20	22	44	5	
63609	M24	26	51	4	

HEAVY DUTY HARDENED FLAT WASHERS

Black Oxide Finish
Case Hardened
C1010 Material



INCH

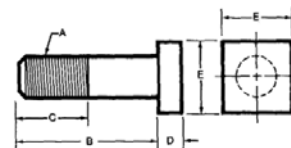
Order No.	Price	Stud Size	A	B	C
42619		1/4	9/32	5/8	3/16
42620		5/16	11/32	3/4	3/16
42621		3/8	13/32	7/8	3/16
42623		1/2	17/32	1-1/8	3/16
42624		5/8	21/32	1-3/8	3/16
42625		3/4	25/32	1-5/8	1/4
42626		7/8	29/32	1-3/4	1/4
42627		1	1-1/32	2	9/32

METRIC

Order No.	Stud Size	A	B	C	Price
963619	M6	7	16	5	
963620	M8	9	19	5	
963621	M10	11	25	5	
63623	M12	13	28	5	
63624	M16	17	35	5	
63626	M20	22	44	6	
63627	M24	26	51	7	

TUGGER® T-BOLTS

Black Oxide Finish
Medium Carbon Steel
Heat Treated
Thread class 2A UNC



Order No.	Price	Thread A	B	C	D	E	Table Slot
46201		3/8-16	1-1/2	1	1/4	11/16	3/8
46202		3/8-16	2	1-1/2	1/4	11/16	3/8
46203		3/8-16	2-1/2	2	1/4	11/16	3/8
46204		3/8-16	3	2	1/4	11/16	3/8
46205		3/8-16	3-1/2	2	1/4	11/16	3/8
46206		3/8-16	4	2	1/4	11/16	3/8
46207		3/8-16	5	2	1/4	11/16	3/8
46208		3/8-16	6	2	1/4	11/16	3/8
46209		3/8-16	7	2	1/4	11/16	3/8
46210		3/8-16	8	2	1/4	11/16	3/8
46401		1/2-13	1-1/2	1	5/16	7/8	1/2
46402		1/2-13	2	1-1/2	5/16	7/8	1/2
46403		1/2-13	2-1/2	2	5/16	7/8	1/2
46404		1/2-13	3	2	5/16	7/8	1/2
46405		1/2-13	3-1/2	2	5/16	7/8	1/2
46406		1/2-13	4	2	5/16	7/8	1/2
46407		1/2-13	5	2	5/16	7/8	1/2
46408		1/2-13	6	2	5/16	7/8	1/2
46409		1/2-13	7	2	5/16	7/8	1/2
46410		1/2-13	8	2	5/16	7/8	1/2
46411		1/2-13	10	2	5/16	7/8	1/2
46412		1/2-13	12	2	5/16	7/8	1/2
46501		5/8-11	1-1/2	1	13/32	1-1/8	5/8
46502		5/8-11	2	1-1/2	13/32	1-1/8	5/8
46503		5/8-11	2-1/2	2	13/32	1-1/8	5/8
46504		5/8-11	3	2	13/32	1-1/8	5/8
46505		5/8-11	3-1/2	2	13/32	1-1/8	5/8
46506		5/8-11	4	2	13/32	1-1/8	5/8
46507		5/8-11	5	2	13/32	1-1/8	5/8
46508		5/8-11	6	2	13/32	1-1/8	5/8
46509		5/8-11	7	2	13/32	1-1/8	5/8
46510		5/8-11	8	2	13/32	1-1/8	5/8
46511		5/8-11	10	2	13/32	1-1/8	5/8
46512		5/8-11	12	2	13/32	1-1/8	5/8
46601		3/4-10	3	2	17/32	1-5/16	3/4
46602		3/4-10	3-1/2	2	17/32	1-5/16	3/4
46603		3/4-10	4	2	17/32	1-5/16	3/4
46604		3/4-10	5	2	17/32	1-5/16	3/4
46605		3/4-10	6	2	17/32	1-5/16	3/4
46606		3/4-10	7	2	17/32	1-5/16	3/4
46607		3/4-10	8	2	17/32	1-5/16	3/4
46608		3/4-10	10	2	17/32	1-5/16	3/4
46609		3/4-10	12	2	17/32	1-5/16	3/4



While we show only the most popular
TE-CO items we can supply their entire
range of products. See our website
or inquire.



CLAMPING & SET-UP COMPONENTS

SERIES 803:



TUGGER® T-SLOT BOLT KITS



SHORT SERIES

Kit Contains:

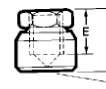
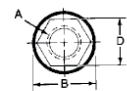
- 24 T-Slot Bolts - 4 Each of 1-1/2", 2", 2-1/2", 3", 3-1/2" and 4" Long.
- 8 Flange Nuts
- 1 T-Slot Cleaner
- 1 Holder

For material information see individual components.

Order No.	Price	Thread Size	Table Slot	4 Each O.A.L.
21330		3/8-16	3/8	1-1/2 thru 4
21332		1/2-13	1/2	1-1/2 thru 4
21334		5/8-11	5/8	1-1/2 thru 4
21331		3/8-16	3/8	3 thru 8
21333		1/2-13	1/2	3 thru 8
21335		5/8-11	5/8	3 thru 8
21336		3/4-10	3/4	3 thru 8

TOGGLE PADS

- Material: 12L14 Steel
- Black oxide finish
- Case Hardened
- Many sizes conform to TCMAI standards
- Pad swivels 10 degrees from vertical in any direction.
- Assures positive gripping
- Use when high clamping pressures are required



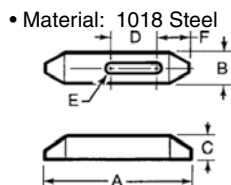
Order No.	Price	Thread A	B	C	D	E
44302		1/4-20	5/8	5/8	1/2	13/32
44303		5/16-18	11/16	11/16	9/16	7/16
44304		3/8-16	3/4	3/4	5/8	1/2
44305		1/2-13	7/8	1	3/4	17/32
44306		5/8-11	1	1-1/16	7/8	9/16
44307		3/4-10	1-1/4	1-5/16	1-1/16	3/4
44308		1-8	1-5/8	1-11/16	1-3/8	1

LONG SERIES

- 1 Holder
- Kit Contains:
- 24 T-Slot Bolts - 4 Each of 3", 4", 5", 6", 7" and 8" Long
- 8 Flange Nuts
- 1 T-Slot Cleaner

For material information see individual components.

PLAIN CLAMPS

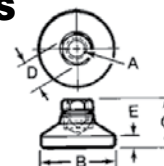


- Tapered nose allows clamping in small areas.
- Case Hardened
- Black Oxide Finish.

Order No.	Price	A	B	C	D	Stud Size E	F
30401		2-1/2	1	1/2	13/16	5/16 and 3/8	27/32
30402		4	1	5/8	1-7/16	5/16 and 3/8	1-1/32
30403		6	1-1/8	3/4	2-3/16	5/16 and 3/8	1-5/32
30404		2-1/2	1-1/8	1/2	11/16	1/2	29/32
30405		4	1-1/4	3/4	1-5/16	1/2	1-5/32
30406		6	1-1/4	7/8	2-1/16	1/2	1-9/32
30407		2-1/2	1-1/4	5/8	9/16	5/8	31/32
30408		4	1-1/2	3/4	1-3/16	5/8	1-9/32
30409		6	1-1/2	7/8	1-15/16	5/8	1-13/32
9930410		4	1-1/2	3/4	1-1/16	3/4	1-11/32
30411		6	1-1/2	1	1-15/16	3/4	1-15/32
30412		8	1-3/4	1-1/8	2-3/16	3/4	1-29/32
30413		6	2	1-1/4	1-11/16	7/8 and 1	1-27/32
30414		8	2	1-3/8	1-15/16	7/8 and 1	2-1/32
30415		10	2	1-1/2	2-15/16	7/8 and 1	2-1/32

LEVELING PADS

- Material: 12L14 Steel
- Black oxide finish
- Case hardened
- Many sizes conform to TCMAI standards
- Pad swivels 10 degrees from vertical in any direction.
- Large pad diameter provides solid support
- Use as a foot for machine tools, benches, electronic racks, etc.
- Special sizes quoted on request.



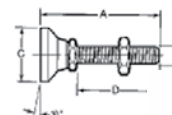
Order No.	Price	Thread A	B	C	D	E	Load Limits
44401		3/8-16	1-1/4	7/8	5/8	3/16	3750 lbs.
44402		1/2-13	1-7/8	1-1/8	3/4	1/4	5000 lbs.
44403		5/8-11	2-1/2	1-1/4	7/8	5/16	6000 lbs.
44404		3/4-10	3	1-1/2	1-1/16	1/2	7200 lbs.

METRIC

Order No.	A	B	C	D	Stud Size E	F	Price
8030401	64	25	13	21	M6-M8-M10	21	
8030402	102	25	16	37	M6-M8-M10	26	
9030403	152	29	19	56	M6-M8-M10	29	
8030404	64	29	13	18	M12	23	
9030405	102	32	16	33	M12	29	
8030406	152	32	19	52	M12	29	
9030407	64	32	16	14	M16	25	
8030408	102	38	19	30	M16	31	
8030409	152	38	22	49	M16	34	
8030410	102	38	19	27	M20	33	
8030411	152	38	25	49	M20	37	
8030412	203	45	29	56	M20	48	
8030413	152	51	32	43	M24	44	
8030414	203	51	35	49	M24	52	
8030415	254	51	38	75	M24	52	

LEVELING PAD & STUD ASSEMBLY

- Material: 12L14 Steel with Zinc Plating
- Zinc coating deters rust
- Integral stud and hardened ball swivels 10 degrees from vertical in any direction
- Swivel action facilitates leveling of machine tools, benches, electronic racks, etc. - even on rough surfaces.



Order No.	Price	A	Thread B	C	Load D	Limits
44450		2-7/8	3/8-16	1-1/4	2-1/32	3750
44451		3-1/8	1/2-13	1-7/8	1-31/32	5000
44452		3-1/4	5/8-11	2-1/2	1-15/16	6000
44453		3-1/2	3/4-10	3	1-31/32	7200



CLAMPING & SET-UP COMPONENTS

SERIES 803



SPHERICAL WASHERS

Black Oxide Finish

Case Hardened

Material: 12L14 steel

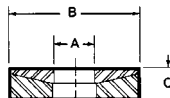
Tops and bottoms also sold separately

Reduces stress on threads

Bottom Washer can be used with Spherical Flange Nuts

- Compensates for slight misalignment between the workpiece and strap clamp.

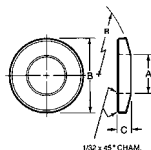
- Many sizes conform to TCMAI standards.



ASSEMBLIES

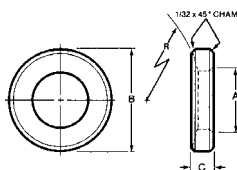
Steel Part No.	Price	A Male Part No.	B Female Part No.	Stud Size	C	Total Deg. Rotation
42701		42721	42741	3/16 and 1/4	3/16	8 and 5
42702		42722	42742	5/16 and 3/8	1/4	5 and 3
42703		42723	42743	7/16 and 1/2	5/16	4 and 2
42704		42724	42744	5/8	5/16	2
42705		42725	42745	3/4	3/8	3
42706		42726	42746	7/8	3/8	3
42707		42727	42747	1	1/2	3
42708		42728	42748	1-1/8	1/2	3
42709		42729	42749	1-1/4	1/2	3
42710		42730	42750	1-1/2	1/2	3

Male (TOP) SPHERICAL WASHERS



Steel Order No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Price
42721	3/16 and 1/4	9/32	5/8	.120	3/4	
42722	5/16 and 3/8	13/32	7/8	.130	1-1/4	
42723	7/16 and 1/2	17/32	1-1/8	.188	1-1/2	
42724	5/8	21/32	1-3/8	.188	1-3/4	
42725	3/4	25/32	1-5/8	.219	2-1/4	
42726	7/8	15/16	1-3/4	.240	2-1/2	
42727	1	1-1/16	2	.330	2-3/4	
42728	1-1/8	1-3/16	2-1/4	.281	3	
42729	1-1/4	1-5/16	2-1/2	.312	3	
42730	1-1/2	1-9/16	2-7/8	.350	3	

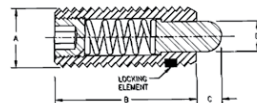
FEMALE (BOTTOM) SPHERICAL WASHERS



Steel Order No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Price
42741	3/16 and 1/4	5/16	5/8	.120	3/4	
42742	5/16 and 3/8	7/16	7/8	.156	1-1/4	
42743	7/16 and 1/2	9/16	1-1/8	.188	1-1/2	
42744	5/8	11/16	1-3/8	.219	1-3/4	
42745	3/4	13/16	1-5/8	.265	2-1/4	
42746	7/8	1	1-3/4	.240	2-1/2	
42747	1	1-1/8	2	.290	2-3/4	
42748	1-1/8	1-1/4	2-1/4	.350	3	
42749	1-1/4	1-3/8	2-1/2	.375	3	
42750	1-1/2	1-5/8	2-7/8	.390	3	

STANDARD SPRING PLUNGERS

Heavy End Forces



- Steel Plunger has Carbon, Case Hardened Nose and Black Oxide finish on bodies.
- Nylon Locking element is standard on all sizes.
- Many sizes conform to TCMAI standards.

INCH

Steel Order No.	Price	End Force lbs.		Thread A	B	C	+0.000 -0.001 D
		Initial	Final				
52001		1.5	4.5	6-32	17/32	0.062	0.046
9952002		1.0	1.6	6-32	3/8	0.062	0.046
52003		2.7	7.3	8-32	5/8	0.093	0.070
52004		2.9	11.1	10-32	3/4	0.125	0.093
52005		3.0	13.0	1/4-20	1	0.187	0.119
52006		3.0	13.0	1/4-28	1	0.187	0.119
52007		2.0	9.0	1/4-20	3/4	0.125	0.119
52008		3.0	15.0	5/16-18	1	0.187	0.135
52009		5.5	14.5	3/8-16	1-1/8	0.187	0.186
52010		6.6	17.4	1/2-13	1-1/4	0.250	0.248
52011		10.5	25.5	5/8-11	1-1/2	0.312	0.310
9952012		6.7	37.3	3/4-10	1-3/4	0.312	0.374
52013		16.0	68.0	1-8	2-13/32	0.500	0.499

METRIC

Steel Part No.	End Force N* (lbs.)		Thread A	B mm	C mm	+0.000mm -0.025mm D	Price
	Initial	Final					
9963701	18 (4.05)	50 (11.24)	M6 x 1.0	20	2.5	2.7	
63702	25 (5.62)	70 (15.74)	M8 x 1.25	22	3	3.5	
63703	25 (5.62)	70 (15.74)	M10 x 1.50	22	3	4	
9963704	45 (10.12)	110 (24.73)	M12 x 1.75	28	4	6	
9963705	7 (1.57)	20 (4.5)	M6 x 1.0	20	2.5	2.7	
63706	9 (2.02)	35 (7.87)	M8 x 1.25	22	3	3.5	
9963707	9 (2.02)	35 (7.87)	M10 x 1.50	22	3	4	
9963708	10 (2.25)	55 (12.36)	M12 x 1.75	28	4	6	

* Newton

SPRING AND BALL PLUNGER WRENCHES



- Designed to eliminate excessive spring compression during installation and removal of spring and ball plungers.

Order No.	Price	Inches	mm
9953001		6-32	
53002		8-32	M4
9953003		10-32	M5
9953004		1/4-20	M6
9953005		5/16-18	M8
53006		3/8-16	M10
53007		1/2-13	M12
53008		5/8-11	
53009		3/4-10	
53010		1-8	

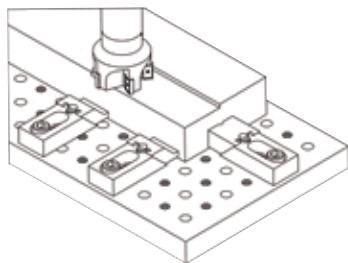
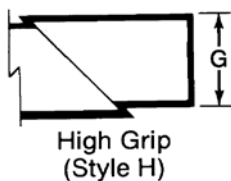
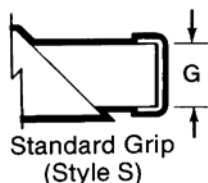
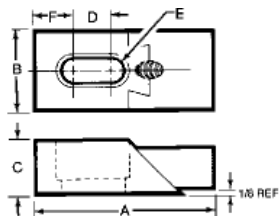
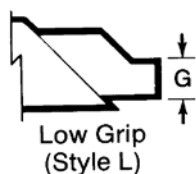


CLAMPING & SET-UP COMPONENTS

SERIES 803



NUZZLER® EDGE CLAMPS



- Clamp material: 1018 steel
- Black oxide finish
- Edge Clamps feature a double action, adjustable nose which exerts clamping pressures both downward and inward through a 45° angle.
- Noses have serrations for better gripping of non-finished or semi-finished workpieces.
- Tapered slots prevent clamp from sliding off the workpiece during tightening.
- Length "A" is calculated with nose raised 1/8".
- The Low Profile Nose provides a greater machining clearance.
- Optional removable aluminum nose cap prevents damage to your workplace.

Order No.	Price	A	B	C	D	E	F	Nose Style	G	Wrench Size
33817		1-7/8	1	5/8	1/4	5/16	13/32	L	1/8	5/32
33819		2-3/8	1	5/8	3/4	5/16	5/16	L	1/8	5/32
33821		2-7/8	1	5/8	1-1/4	5/16	5/16	L	1/8	5/32
33801		2-5/16	1-1/4	5/8	3/8	3/8	7/16	L	1/4	3/16
33890		2-3/4	1-1/4	5/8	13/16	3/8	1/2	L	1/4	3/16
33803		4-1/8	1-1/4	5/8	2	3/8	11/16	L	1/4	3/16
33892		4-11/16	1-1/4	5/8	2-3/16	3/8	15/16	L	1/4	3/16
33805		3-5/16	1-1/2	3/4	3/4	1/2	11/16	L	3/8	1/4
33807		5-3/16	1-1/2	3/4	2-1/2	1/2	5/8	L	3/8	1/4
33823		3-7/8	1-1/2	7/8	1-1/4	1/2	1/2	L	1/4	1/4
33825		5-5/16	1-1/2	7/8	2	1/2	7/8	L	1/4	1/4
33827		7-1/4	1-1/2	7/8	3	1/2	1-3/8	L	1/4	1/4
33809		5-13/16	1-1/2	1-1/4	2-1/4	1/2	1-1/16	L	3/8	1/4
33812		7-1/8	1-1/2	1-1/4	3-5/16	1/2	1-3/16	L	3/8	1/4
33710		3-5/16	1-1/2	3/4	5/8	5/8	11/16	L	3/8	1/4
33712		5-3/16	1-1/2	3/4	2-1/2	5/8	5/8	L	3/8	1/4
33714		3-7/8	1-1/2	7/8	1-1/4	5/8	1/2	L	1/4	1/4
33716		5-5/16	1-1/2	7/8	2	5/8	7/8	L	1/4	1/4
33829		5-1/4	2	1-1/4	1-3/8	3/4	27/32	L	3/8	5/16
33818		1-7/8	1	5/8	1/4	5/16	13/32	S	5/8	5/32
33820		2-3/8	1	5/8	3/4	5/16	5/16	S	5/8	5/32
33822		2-7/8	1	5/8	1-1/4	5/16	5/16	S	5/8	5/32
33802		2-5/16	1-1/4	5/8	3/8	3/8	7/16	S	5/8	3/16
33891		2-3/4	1-1/4	5/8	13/16	3/8	1/2	S	5/8	3/16
33804		4-1/8	1-1/4	5/8	2	3/8	11/16	S	5/8	3/16
33893		4-11/16	1-1/4	5/8	2-3/16	3/8	15/16	S	5/8	3/16
33806		3-5/16	1-1/2	3/4	3/4	1/2	11/16	S	3/4	1/4
33808		5-3/16	1-1/2	3/4	2-1/2	1/2	5/8	S	3/4	1/4
33824		3-7/8	1-1/2	7/8	1-1/4	1/2	1/2	S	7/8	1/4
33826		5-5/16	1-1/2	7/8	2	1/2	7/8	S	7/8	1/4
33828		7-1/4	1-1/2	7/8	3	1/2	1-3/8	S	7/8	1/4
33810		5-13/16	1-1/2	1-1/4	2-1/4	1/2	1-1/16	S	3/4	1/4
33813		7-1/8	1-1/2	1-1/4	3-5/16	1/2	1-3/16	S	3/4	1/4
933711		3-5/16	1-1/2	3/4	5/8	5/8	11/16	S	3/4	1/4
33713		5-3/16	1-1/2	3/4	2-1/2	5/8	5/8	S	3/4	1/4
33715		3-7/8	1-1/2	7/8	1-1/4	5/8	1/2	S	7/8	1/4
33717		5-5/16	1-1/2	7/8	2	5/8	7/8	S	7/8	1/4
33811		6-1/8	1-1/2	1-1/4	2-1/4	1/2	1-1/16	H	1	1/4
33814		7-3/8	1-1/2	1-1/4	3-5/16	1/2	1-3/16	H	1	1/4
33815		5-1/4	2	1-1/4	1-3/8	3/4	27/32	H	1-1/4	5/16
33816		6-7/16	2-1/2	1-1/2	2	7/8	15/16	H	1-1/2	1/2



While we show only the most popular items, we can supply their entire range of products. See our website or inquire.



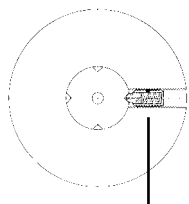
CLAMPING & SET-UP COMPONENTS

SERIES 803:



STANDARD BALL PLUNGERS

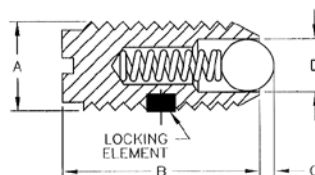
- Stainless Steel Ball
- Bodies are color coded to indicate end forces:
Zinc = Light Force
Black = Standard Force
Gold = Heavy Force
- Nylon locking element is standard on all sizes.
- Many sizes conform to TCMAL Standards.
- It is suggested the tapped installation hole be countersunk 90° by 1/32 larger than major thread diameter to prevent installation damage to locking element.



Ball Plunger

STAINLESS STEEL BALL PLUNGERS

- Stainless Steel Ball
- Bodies are color coded to indicate end forces:
Plain Stainless Steel = Light Force
Black = Standard Force
Gold = Heavy Force
- Nylon locking element is standard on all sizes.
- Many sizes conform to TCMAL Standards.
- It is suggested the tapped installation hole be countersunk 90° by 1/32 larger than major thread diameter to prevent installation damage to locking element.



INCH

Order No.	Price	Body Color Type	End Force lbs.		Thread A	B	C	Ball Dia. D
			Initial	Final				
52821		Black	0.12	0.50	4-48	3/16	0.02	0.062
52822		Black	0.25	0.75	5-40	1/4	0.02	0.062
52823		Black	0.50	1.00	6-40	5/16	0.023	0.078
52824		Black	0.50	1.25	8-36	11/32	0.025	0.093
952825		Black	.50	1.25	8-32	11/32	0.025	0.093
9952801		Zinc	0.50	1.50	10-32	33/64	0.025	0.093
9952802		Black	1.50	3.00	10-32	33/64	0.025	0.093
9952803		Gold	2.00	5.00	10-32	33/64	0.025	0.093
9952804		Zinc	2.00	4.00	1/4-20	17/32	0.035	0.125
9952805		Black	3.00	7.00	1/4-20	17/32	0.035	0.125
9952806		Gold	4.00	12.00	1/4-20	17/32	0.035	0.125
9952807		Zinc	2.00	4.50	5/16-18	37/64	0.04	0.156
9952808		Black	4.00	9.00	5/16-18	37/64	0.04	0.156
9952809		Gold	6.00	17.00	5/16-18	37/64	0.04	0.156
9952810		Zinc	2.50	5.00	3/8-16	5/8	0.048	0.187
9952811		Black	5.00	10.00	3/8-16	5/8	0.048	0.187
9952812		Gold	6.00	21.00	3/8-16	5/8	0.048	0.187
52813		Zinc	3.00	6.00	1/2-13	3/4	0.072	0.281
52814		Black	6.00	12.00	1/2-13	3/4	0.072	0.281
52815		Gold	6.00	30.00	1/2-13	3/4	0.072	0.281
9952816		Zinc	4.50	9.00	5/8-11	63/64	0.096	0.375
9952817		Black	9.00	18.00	5/8-11	63/64	0.096	0.375
52818		Gold	7.00	50.00	5/8-11	63/64	0.096	0.375

METRIC

Order No.	Body Color Type	End Force N* (lbs.)		Thread A	B mm	C mm	D mm	Price
		Initial	Final					
63901	Black	4 (.90)	10 (2.25)	M4 x 0.7	9	.8	2.5	
63902	Black	9 (2.02)	13 (2.92)	M6 x 1.0	14	1	3.5	
63903	Zinc	2 (.45)	6 (1.35)	M6 x 1.0	14	1	3.5	
63904	Gold	28 (6.30)	40 (9.0)	M6 x 1.0	14	1	3.5	
63905	Black	15 (3.37)	30 (6.75)	M8 x 1.25	16	1.5	5	
9963906	Zinc	5 (1.12)	10 (2.25)	M8 x 1.25	16	1.5	5	
9963907	Gold	40 (9)	60 (13.5)	M8 x 1.25	16	1.5	5	
63908	Black	20 (4.5)	35 (7.87)	M10 x 1.5	19	2	6	
63909	Zinc	8 (1.8)	15 (3.37)	M10 x 1.5	19	2	6	
9963910	Gold	60 (13.5)	90 (20.23)	M10 x 1.5	19	2	6	
63911	Black	30 (6.75)	55 (12.36)	M12 x 1.75	22	2.5	8	
9963912	Zinc	10 (2.25)	20 (4.5)	M12 x 1.75	22	2.5	8	
63913	Gold	75(16.86)	115(25.85)	M12 x 1.75	22	2.5	8	

* Newton



While we show only the most popular **TE-CO** items we can supply their entire range of products; please inquire.



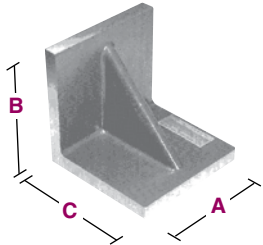
ANGLE PLATES



High tensile cast iron construction seasoned against distortion. Tolerances (Flat and Square): Machined Finish - within .002" per 6".
Ground Finish - within .0005" per 6" on the working surface. All ends machined square and parallel within .002" per 6".

PLAIN ANGLE PLATES

SERIES 411: SUBURBAN - USA
SERIES 412: MEDA - SUPERIOR IMPORT



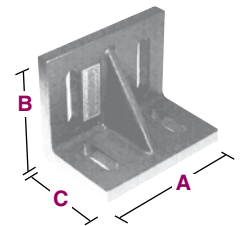
Size ABC	Weight (lbs.)	No. of Ribs	MEDA		SUBURBAN			
			Ground		Machined		Ground	
			Order No.	Price	Order No.	Price	Order No.	Price
1 x 1 x 1	1	0	2355001					
2 x 2 x 2	1	1	2355002		4110002		4110102	
3 x 3 x 3	3	1	2355003		4110003		4110103	
4 x 4 x 4	7	1	2355004		4110004		4110104	
5 x 5 x 5	11	1	2355005		4110005		4110105	
6 x 6 x 6	17	1	2355006		4110006		4110106	
8 x 8 x 8	37	2	2355008		4110008		4110108	
10 x 10 x 10	70	2	2355010		4110010		4110110	
12 x 12 x 12	104	2	2355012		4110012		4110112	

SLOTTED ANGLE PLATES - WEBBED END

SERIES 413: SUBURBAN - USA
SERIES 667: MEDA - SUPERIOR IMPORT

Webbed End plates are Machined or Ground on outside faces and ends.

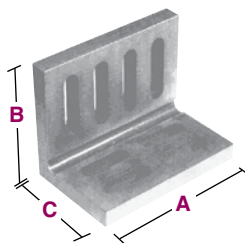
Size			Weight (lbs.)	MEDA		SUBURBAN			
(A)	(B)	(C)		Ground		Machined		Ground	
				Order No.	Price	Order No.	Price	Order No.	Price
3	2-1/2	2	1-1/4	6670030		-		-	
3-1/2	3	2-1/2	4	6670035		4130035		4131135	
4-1/2	3-1/2	3	5	6670045		4130045		4131145	
6	5	4-1/2	13	6670060		4130060		4131160	
7	5-1/2	4-1/2	14	6670070		4130070		4131170	
8	6	5	22	6670080		4130080		4131180	
9	7	6	28	6670090		4130090		4131190	
10	8	6	35	6670100		4130100		4131100	
12	9	8	60	6670120		4130120		4131120	



SLOTTED ANGLE PLATES - OPEN END

SERIES 414: SUBURBAN - USA
SERIES 668: MEDA - SUPERIOR IMPORT

Open End plates are Machined or Ground on all faces and ends.



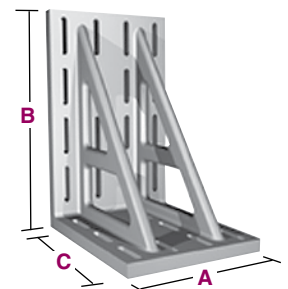
Size			Weight (lbs.)	MEDA		SUBURBAN			
(A)	(B)	(C)		Ground		Machined		Ground	
				Order No.	Price	Order No.	Price	Order No.	Price
4-1/2	3-1/2	3	4	6680045		4140045		4141045	
6	5	4-1/2	12	6680060		4140060		4141060	
7	5-1/2	4-1/2	14	6680070		4140070		4141070	
8	6	5	20	6680080		4140080		4141080	
9	7	6	24	6680090		4140090		4141090	
10	8	6	33	6680100		4140100		4141100	
12	9	8	50	6680120		4140120		4141120	

GIANT SLOTTED ANGLE PLATES

SERIES 413: SUBURBAN - USA
SERIES 667: MEDA - SUPERIOR IMPORT

- Machined Finish*
- Webbed End

Size ABC	Weight	MEDA		SUBURBAN	
		Order No.	Price	Order No.	Price
16 x 12 x 9	72 lbs.	2370001		4150001	
20 x 16 x 12	145 lbs.	2370002		4150002	
12 x 24 x 18	300 lbs.	-		4150003	
24 x 24 x 18	343 lbs.	2370003		-	
18 x 30 x 24	700 lbs.	-		4150004	



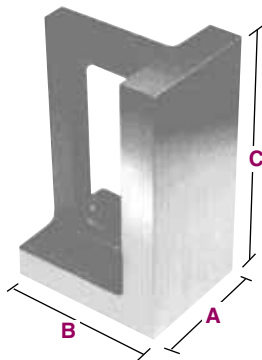
*SUBURBAN Ground Finish plates are available. See our website or inquire.

High tensile cast iron construction seasoned against distortion. Tolerances (Flat and Square): Machined Finish - within .002" per 6".
Ground Finish - within .0005" per 6" on the two working surfaces. All ends machined square and parallel within .00025" per 6".

UNIVERSAL RIGHT ANGLE IRONS

SERIES 419: SUBURBAN - USA

SERIES 669: MEDA - SUPERIOR IMPORT



Size ABC	Weight	MEDA		SUBURBAN			
		Ground		Machined		Ground	
		Order No.	Price	Order No.	Price	Order No.	Price
3-3/4 x 4 x 5	10 lbs.	6690001		4190001		4191001	
4 x 4 x 6	13 lbs.	6690002		4190002		4191002	
4 x 5 x 6*	16 lbs.	6690003		4190003		4191003	
4-1/2 x 5 x 8**	21 lbs.	6690004		4190004		4191004	
5 x 8 x 12	44 lbs.	6690005		4190005		4191005	
5-1/2 x 7 x 10	37 lbs.	6690006		4190006		4191006	
5-1/2 x 8 x 10	40 lbs.	6690007		4190007		4191007	
6 x 6 x 8	32 lbs.	6690008		4190008		4191008	
8 x 10 x 12	75 lbs.	6690009		4190009		4191009	
8 x 9 x 16	94 lbs.	6690010		4190010		4191010	
10 x 12 x 16	130 lbs.	6690011		-		-	
12 x 12 x 24	207 lbs.	6690012		-		-	

*4-1/2 x 5 x 6 = SUBURBAN

**4 x 5 x 8 = SUBURBAN

QUADRUPLE V-BLOCKS

SERIES 418:




Superior Import

- Made from seasoned closed grained cast iron
- Universal V-block consisting of four different size grooves
- Supplied in pairs

Order No.	Width of Vee	
	Inch	mm
2385009	3/4 x 1-3/16 x 1-9/16 x 2	20 x 30 x 40 x 50
2385110	3/4 x 1-3/16 x 1-9/16 x 2	20 x 30 x 40 x 50
2385011	1-3/16 x 1-9/16 x 2 x 2-3/8	30 x 40 x 50 x 60
2385112	1-3/16 x 1-9/16 x 2 x 2-3/8	30 x 40 x 50 x 60
2385013	1-9/16 x 2 x 2-3/8 x 2-3/4	40 x 50 x 60 x 70
2385014	2-3/8 x 2-3/4 x 3-5/32 x 4	60 x 70 x 80 x 100

ADJUSTABLE ANGLE PLATES (TILTING TABLES)

SERIES 417



Superior Import

Strong construction. Setting is locked with two screws. Range 45° right and left from the horizontal, graduated in degrees.



Machined "T" slots.

Model No.	Table Size	Area	Height	Weight	Order No.	Price
AA1	1	5 x 7	3-3/4	17 lbs.	2375001	
AA2	2	7 x 10	5-1/2	41 lbs.	2375002	
AA3	3	10 x 15	7-1/2	80 lbs.	2375003	

Order No.	Length	Height	Thickness of Blocks	Price
2385009	3-3/4" (95mm)	2-3/4" (70mm)	1-3/8" (35mm)	
2385110	4" (100mm)	4" (100mm)	1-3/16" (30mm)	
2385011	4-3/4" (120mm)	4-3/4" (120mm)	1-3/8" (35mm)	
2385112	4-3/4" (120mm)	4-3/4" (120mm)	2-3/8" (60mm)	
2385013	6" (150mm)	6" (150mm)	3" (75mm)	
2385014	8" (200mm)	8" (200mm)	4" (100mm)	

SWIVEL ANGLE PLATES

SERIES 417:



Superior Import



Strong construction. Setting is locked with two screws. Range: 0-90°, graduated in degrees. Machined "T" slots.

Model No.	Size	Table Area	Height	Weight	Order No.	Price
SA1	1	5 x 6	4-1/2	14 lbs.	2380001	
SA2	2	6 x 8	5	26 lbs.	2380002	
SA3	3	8 x 10	6-1/2	62 lbs.	2380003	
SA4	4	10 x 12	8	110 lbs.	2380004	
SA5	5	12 x 15	9	165 lbs.	2380005	

"V" BLOCKS

SERIES 418:

Supplied in matched and numbered pairs. Blocks are accurately machined square and parallel. 90° "V".




Superior Import

Model No.	Lgth.	Dimensions				Order No.	Price
		Length Across "V"	Height	Thick-ness (Each)	Weight (Per Pr.)		
CVB2	2	1	1-1/4	15/16	.9 lbs.	2385002	
CVB3	3	1-3/4	2-3/8	1-5/16	2.4 lbs.	2385003	
CVB4	4	2-1/4	2-5/8	1-5/8	4.6 lbs.	2385004	
CVB5	5	2-1/2	3-1/8	2	8 lbs.	2385005	
CVB6	6	3-1/8	3-1/2	2-1/2	13 lbs.	2385006	
CVB7	7	3-1/2	4-1/2	3	27 lbs.	2385007	
CVB8	8	4-1/2	5-1/2	4	44 lbs.	2385008	
CVB10	10	6	6-1/2	5	76 lbs.	2385010	
CVB12	12	6-1/2	8	7	135 lbs.	2385012	

PERMANENT MAGNETIC CHUCKS - (RECTANGULAR AND ROUND)

SERIES 262:



- Made with closely spaced magnets providing full holding power over entire top plate area.
- Low height for maximum work space.
- End stop plate and hold-down clamps included with each chuck.

RECTANGULAR			ROUND		
Size	Order No.	Price	Diameter	Order No.	Price
4 x 7	1835470		6	1835006	
5 x 10	1835510		8	1835008	
6 x 12	1835612		10	1835010	
6 x 18	1835618		12	1835012	
8 x 24	1835824				

FINE POLE PERMANENT MAGNETIC CHUCKS - (RECTANGULAR AND ROUND)

SERIES 263:

Similar to Series 262 chucks above but with extremely close pole spacing for holding very thin and very small work pieces.



Rectangular



RECTANGULAR			ROUND		
Dimensions	Order No.	Price	Diameter	Order No.	Price
4 x 7	1840047		6	1840006	
5 x 10	1840510		8	1840008	
6 x 12	1840612		10	1840010	
6 x 18	1840618		12	1840012	

MAGNETIC SURFACE GRINDER CHUCKS

SERIES 641:



- Two tie down clamps, two rails and removable ON/OFF handle included.
- Ceramic magnet cannot lose magnetism and cannot be demagnetized. • Sealed against dirt and liquids, and can be used in EDM machines. • Overall height is 2-5/8"
- Standard Pole models have 1/4" poles and 1/8" separators. Fine Pole models have 1/8" poles and 1/8" separators.



PERMANENT MAGNETIC CHUCKS

SERIES 641:



"Magnum Force™" SUBURBAN'S best chuck, combination standard and fine pole.

FEATURES

- **DUAL MAGNETS** provide 120% more power than our standard chuck and positive shut-off for easy workpiece removal.
- **CERAMIC MAGNETS** are used because they never lose their holding power.
- **SUBMERSIBLE DESIGN** for use in EDM or other fluids.
- **MAINTENANCE FREE** because chucks are sealed and lubricated.
- **RIGID WORK SURFACE** provided by laminated and brazed top plate.
- **MAXIMUM HOLDING** of both small and large parts due to combination fine/standard pole spacing
- **LOW HEIGHT** for more work clearance
- **CLAMPS INCLUDED**



Model	L	W	H	Wt.(lbs)	Order No.	Price
DMB-44	4"	4"	2-3/8"	10	6410136	
DMB-48	8"	4"	2-3/8"	20	9410162	
DMB-510	10"	5"	2-1/2"	28	6410139	
DMB-512	12"	5"	2-1/2"	35	6410163	
DMB-66	6-1/2"	6-1/2"	2-1/2"	25	6410137	
DMB-610	10"	6"	2-1/2"	35	6410164	
DMB-612	12"	6"	2-1/2"	44	6410141	
DMB-614	14"	6"	2-1/2"	52	6410165	
DMB-618	18"	6"	2-1/2"	65	6410142	
DMB-815	15"	8"	2-1/2"	73	6410166	
DMB-818	18"	8"	2-1/2"	87	6410167	
DMB-820	20"	8"	2-1/2"	102	6410168	
DMB-824	24"	8"	2-1/2"	116	6410169	
DMB-1015	15"	10"	2-1/2"	90	6410170	
DMB-1018	18"	10"	2-1/2"	101	6410171	
DMB-1020	20"	10"	2-1/2"	125	6410172	
DMB-1024	24"	10"	3-1/2"	134	6410173	
DMB-1218	18"	12"	3-1/2"	158	6410174	
DMB-1224	24"	12"	3-1/2"	192	6410175	

STANDARD					
Model No.	L Inch	W Inch	Weight lbs.	Order No.	Price
MCB-47	7	4	19	6410076	
MCB-510	10	5	35	6410077	
MCB-612	12	6	47	6410078	
MCB-614	14	6	55	6410176	
MCB-618	18	6	70	6410079	
MCB-812	12	8	63	6410177	
MCB-815	15	8	79	6410178	
MCB-818	18	8	95	6410151	
MCB-824	24	8	126	6410080	
MCB-1015	15	10	111	6410179	
MCB-1018	18	10	134	6410180	
MCB-1024	24	10	178	6410181	
MCB-1212	12	12	107	6410182	
MCB-1218	18	12	161	6410153	
MCB-1224	24	12	213	6410183	
FINE POLE					
MC-36-FP*	6	3	13	6410184	
MCB-47-FP	7	4	19	6410081	
MCB-510-FP	10	5	35	6410082	
MCB-612-FP	12	6	47	6410083	
MCB-614-FP	14	6	55	6410185	
MCB-618-FP	18	6	70	6410084	
MCB-812-FP	12	8	63	6410186	
MCB-815-FP	15	8	79	6410187	
MCB-818-FP	18	8	95	6410188	
MCB-824-FP	24	8	126	6410189	
MCB-1015-FP	15	10	111	6410190	
MCB-1018-FP	18	10	134	6410191	
MCB-1024-FP	24	10	178	6410192	
MCB-1212-FP	12	12	107	6410193	
MCB-1218-FP	18	12	161	6410194	
MCN-1224-FP	24	12	213	6410195	

*Parallel chuck only.

ROUND PERMANENT MAGNETIC CHUCKS

SERIES 641:



- Permanent, ceramic magnets for superior holding power, never lose their strength.
- Back surface of the aluminum chuck body has tapped holes and turned counterbore for convenient mounting on machines.
- All models except 5-1/4" dia. which uses the swing-type on-off method, are watertight.
- Standard Pole models have 1/4" poles and 1/8" separators. Fine Pole models have 1/8" poles and 1/8" separators.

STANDARD POLE				
Models	Diameter	Wt. lbs.	Order No.	Price
RMC-5	5-1/4	15	6410085	
RMC-6	6-1/4	17	6410086	
RMC-9	9-1/4	36	6410087	
RMC-12	12-1/4	60	6410088	
RMC-15	15-1/4	120	6410196	
RMC-16	16	96	6410089	
RMC-20	20	205	6410197	
FINE POLE				
RMC-6-FP	6-1/4	18	6410090	
RMC-8-FP	7-3/4	26	6410091	
RMC-10-FP	10	43	6410092	
RMC-12-FP	12-1/4	52	6410093	

MAGNETIC CHUCK, V-BLOCKS AND PARALLELS

SERIES 509:



Ground all over, made of selected steel for transferring maximum holding power of magnetic chucks.

Description	Order No.	Price
Pair of small V-Blocks 1-7/8 x 2-3/8 x 2	1726001	
Individual Long V-Block 1-7/8 x 2-3/8 x 4-3/8	1726002	
Pair of Long V-Blocks 1-7/8 x 2-3/8 x 4-3/8	1726003	
Pair of Parallels 1 x 2 x 4	1726004	
Combination set of one pair small V-Blocks and one pair parallels.	1726005	

MINI MAGNETIC CHUCK

SERIES 239:

Top and bottom surfaces are both magnetic but are separated from each other. Many uses, including converting a regular surface gage to a magnetic unit.
Dimensions: 2-1/2 wide x 3-1/2 long x 7/8 high



Order No.	Price
1635000	

MAGNETIC V-BLOCKS - DUAL VEE

SERIES 509:

- All working surfaces are precision ground.
- Ideal for holding, inspection and light machining.
- Accuracy of Vee is within 0.0003" (0.007mm).
- Powerful, permanent magnet is controlled by rotary ON/OFF switch.
- Supplied in fine finished wooden box.
- 6" long V-blocked is 50% longer and 100% stronger than 4" V-blocks.



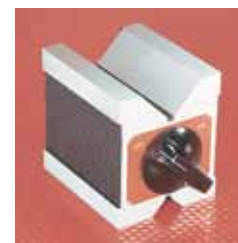
Order No.	Length	Width	Height
1726012	2-3/4"(70mm)	2-1/8"(54mm)	2-7/8"(73mm)
1726006	4"(100mm)	2-3/4"(70mm)	3-3/4"(95mm)
1726212	4"(100mm)	2-3/4"(70mm)	3-3/4"(95mm)
1726220	6"(150mm)	3"(75mm)	3-3/4"(95mm)

Order No.	V-Width		Price
	Big V	Small V	
1726012 (Single)	1-1/2"(38mm)	3/4" (19mm)	
1726006 (Single)	2"(50mm)	3/4" (19mm)	
1726212 (Pair)	2"(50mm)	3/4" (19mm)	
1726220 (Single)	2-1/4"(55mm)	1" (25mm)	

DUAL - VEE MAGNETIC V-BLOCK

STARRETT SERIES 271:

Magnetic V-blocks are designed for versatility and accuracy. All working surfaces are precision ground to provide convenient set-ups for inspection and light machining. Two precision vees will hold round stock sizes from 1/4" to 1-3/4" diameters. A powerful permanent magnet is controlled by a rotary switch. All working surfaces are heat treated for long wear and stability. Each block is 2-1/2" wide x 3" high x 3" (63 x 75 x 75mm) long. The top vee is 1-1/2" (38mm) wide at top, and 3/4" (19mm) wide at bottom with 90° included angles.



Capacity	Catalog No.	EDP No.	Price
1-3/4" (44mm)	566	63323	

DEMAGNETIZER

SERIES 264:



For quickly removing residual magnetism. Works off standard 110 Volt AC current. Unit has precision working surfaces.



Working Surfaces	Order No.	Price
6-3/4 x 4-1/4	1845000	