BAR CLAMPS FOR WELDING & FABRICATING

SHOP FLOOR CLAMPS

- Swivel pressure pad
- Rail and fixed top jaw are heat treated and tempered
- High quality construction insures long life



Clamping

Price

Throat

BESSE		;	
Model	Mfg.	Pad	Clarr
No.	No.		Capa

No.	No.	Pad	Capacity"	Depth"	Force (lbs.)	/Each
TKZ890	660S-8	Standard-duty	8	4	660	
TKZ891	660S-12	Standard-duty	12	4	660	
TKZ892	660S-18	Standard-duty	18	4	660	
TN210	SQ-4	Standard-duty	6	4 3/4	1330	
TN211	SQ-8	Heavy-duty	8	5 1/2	2660	
TD320	SQ-12	Heavy-duty	12	5 1/2	2660	
TKZ893	SQ-16	Heavy-duty	16	5 1/2	2660	
TD321	SQ-20	Heavy-duty	20	5 1/2	2660	
TKZ894	SQ-24	Heavy-duty	24	5 1/2	2660	

PROFESSIONAL CLAMPS

- Bessey[®] Morpad[™] allows for greater angle of pivot
- Rail and fixed top jaw are
- heat treated and tempered
 High quality construction insures long life



BESSEY

Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Price /Each
HEAVY-D	DUTY				
TN047	4800S-12	12	7	4880	
THZ886	4800S-18	18	7	4880	
TKZ901	4800S-24	24	7	4880	
THZ887	4800S-36	36	7	4880	
TKZ902	4800S-48	48	7	4880	
TKZ903	4800S-60	60	7	4880	
EXTRA H	EAVY-DUTY				
TN177	7200S-12	12	8	7770	
THZ888	7200S-18	18	8	7770	
THZ889	7200S-36	36	8	7770	

REGULAR-DUTY ALL-STEEL BAR CLAMPS WITH ERGONOMIC BESSEY' GRIP



BESSEY

Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Price /Each
TLY342	2400S-8	8	5 1/2	2800	
TLY343	2400S-12	12	5 1/2	2800	
TLY344	2400S-16	16	5 1/2	2800	
TLY345	2400S-20	20	5 1/2	2800	
TLY346	2400S-24	24	5 1/2	2800	
TLY347	2400S-36	36	5 1/2	2800	
TLY348	2400S-48	48	5 1/2	2800	
TLY349	2400S-60	60	5 1/2	2800	

STEP-OVER STEEL CLAMPS

- Rail, fixed jaws and pressure plate heat-formed in one
- piece from cold drawn profiled and precision steel
- Heat treated, high carbon Acme threaded screw, spatter resistant
 Unique Bessey[®] MorpadTM tilts to 35[°] comes standard with **TLY352** and **TLY353**
- Ergonomic Bessey[®] grip handle on model TLY352



Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Step-Over"	MorPad	Bessey [®] ∕Grip	Pri /Ea
TLY351	J18-8	10	4 3/4	880	2 1/4	-	Yes	
TLY352	2400J-12	12	5 1/2	2660	4	Yes	Yes	
TLY353	4800J-20	20	7	4880	6	Yes	-	

LEVER CLAMPS (LC SERIES)

- Large tilting pressure plate
 Secure ratchet mechanism for
- secure ratchet mechanism for rapid vibration-resistant clamping
- Torsion-resistant, fixed bracket and pressure plate produced and tempered in one piece for maximum tensile strength and sturdiness



BESSEY

Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Price /Each
TLV282	LC4	4	2 3/8	400	
TN207	LC8	8	4	660	
TN205	LC12	12	5 1/2	1200	
TN206	LC20	20	4 3/4	1200	
TLV283	1800L12	10	5 1/2	1800	

MULTI-PURPOSE CLAMPS

- KombiKlamp[™] robust Variable Angle Device (VAD) allows for a solid grip on odd shapes - also reverses for spreading
- Ergonomic Bessey[®] grip offers greater comfort and slides with the T-handle
 Removable screw acts as a slide stop
- Easily converts to a spreading device



Model	Mfg.	Clamping	Throat	Clamping	Load	Price
No.	No.	Capacity"	Depth"	Force (lbs.)	Limit (lbs.)	/Each
TLY350	SG30VAD	11	4.75	2600	3000	

REGULAR-DUTY I BAR CLAMPS NO. 640 • A rapid acting powerful clamp designed and

- constructed for hard, everyday production work
- Patented, quick action, no slip clutches are 3/4" apart and formed in the web for greater bar strength
- High strength ductile slide cannot slip or bind, easily released
- Steel handle, with comfortable wood crank handle for fast clamping
- Bar dimensions: 7/16" x 1 1/2" x 5/32"
- Screw diameter: 5/8"

TOOLS &

- Throat depth is 1 13/16" and clamp face is 1 7/8" $\,$

Model No.	Mfg. No.	Opening Capacity'	Load Capacity Ibs.	Price /Each
TD798	21801	2	6000	
TD800	21803	3	6000	
TD801	21804	4	6000	
TD802	21805	5	6000	
TD803	21806	6	6000	

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MENT METAL

WORKING EQUI<u>PMENT</u>

PACKAG

ES & F

PRODUCTS



KANT-TWIST® CLAMPS



Model Mfg.		Throat Deep		Clar	nping	Price
No.	No.	Open"	Closed"	Capacity"	Force (lbs.)	/Each
ORIGINA	L KANT-TWIST®					
TKZ949	1KT	1/2	1/2	1 1/16	300	
TKZ950	2KT	1 1/8	1 1/4	2	700	
TKZ952	3KT	1 1/4	1 3/4	3	1500	
TKZ953	4 1/2KT	2 1/4	2 1/2	4 1/2	1500	
TKZ954	6KT	2 1/8	3 3/8	6	1800	
TKZ955	6DKT	4 5/8	5 1/2	6	1800	

QUICK-GRIP® PIPE CLAMPS

- · Innovative clutch system eliminates the need for threaded pipe
- Larger feet offer more stability and clearance between handle and worktop
- · Larger, more ergonomic handle offers easier clamping with reduced hand fatigue
- Larger clutch plates allow for easier release and increased durability and dependability



RWIN

Model No.	Mfg. No.	Pipe Size	Throat Depth	Price /Each
TBR730	224134	3/4" (19 mm)	1 7/8" (47 mm)	
TBR731	224212	1/2" (12 mm)	1 1/2" (37 mm)	

QUICK-GRIP® CLUTCH LOCK BAR CLAMPS

- Soft-Grip handle is larger and more ergonomic, allowing high clamping pressure with less effort
- I-beam bar reduces flexing and bowing
- Larger clutch plates allow for easier release,
- and increase durability and dependability 3" throat depth accommodates
- a variety of projects



Model No. Mfg. Clamping Throat Price No. Capacity Depth /Each TBR488 223106 6" (15 cm) 3 1/8" (76 mm) **TBR424** 223112 12" (30 cm) 3 1/8" (76 mm) TBR425 223118 18" (45 cm) 3 1/8" (76 mm) **TBR426** 223124 24" (60 cm) 3 1/8" (76 mm) 36" (91 cm) **TBR427** 223136 3 1/8" (76 mm)

QUICK-GRIP® PASSIVE LOCK BAR CLAMPS

- Soft-Grip handle is larger and more ergonomic, allowing high clamping pressure with less effort
- I-beam bar reduces flexing and bowing
- 5" throat depth offers greater versatility

Model No.	Mfg. No.	Clamping Capacity	Throat Depth	Price /Each
TBR357	223212	12" (30 cm)	4 7/8" (12 cm)	
TBR358	223218	18" (45 cm)	4 7/8" (12 cm)	
TBR359	223224	24" (60 cm)	4 7/8" (12 cm)	
TBR360	223230	30" (75 cm)	4 7/8" (12 cm)	

WELDERS ANGLE CLAMPS

- Automatic adjustment to work pieces of different thicknesses
- Sturdy jaws and base made from
- high grade cast iron
- Copper plated spindles resist spatter Accurate 90° angle •



Model Mfg. No. Maximum Material Size Jaw Height' Price /Each for Mitre Joints" No **TLY361** WSM9 13/8 3 1/2 **WSM12 TLY362** 2 2/8 43/4

U STYLE BAR CLAMPS

- Light-duty U style bar clamp offers a unique step-over design .
- Small, lightweight and very handy
- Rail is made of quality steel drawn in a single piece for durability and strength .
- Sliding arm is made of die cast zinc: light, stable and break resistant
- Comes with non-marking plastic caps on both jaws

BESSEY



Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Price /Each
TLY358	LMU2.004	4	2	330	
TLY359	LMU2.006	6	2	330	
TLY360	LMU2.008	8	2	330	

PIPE CLAMPS, H STYLE

- H shape foot assembly stabilizes clamp in two dimensions giving dual-axis stability
- Extra high base provides industry
- leading clearance from the work surface Cast jaws for durability
- Smooth action spindle
- Pipe not included .



Model No.	Mfg. No.	Pipe Diameter"	Throat Depth"	Price /Each
TLV267	BPC-H34	3/4"	1 3/4	
TLV268	BPC-H12	1/2"	1 1/2	

CLUTCH STYLE BAR CLAMPS

- Powder coated, malleable cast iron jaws .
- 2-piece slip clutch plates for quick adjustment
- Nickel-plated, drawn serrated rail
- Non-marring pads on the top and bottom jaws to protect work surface
- Ergonomically shaped wood handle



Model No.	Mfg. No.	Clamping Capacity"	Throat Depth"	Clamping Force (lbs.)	Price /Each
TLV269	GSCC2.506	6	2.5	600	
TLV270	GSCC2.512	12	2.5	600	
TLV271	GSCC2.518	18	2.5	600	
TLV272	GSCC2.524	24	2.5	600	
TLV273	GSCC2.530	30	2.5	600	
TLV274	GSCC2.536	36	2.5	600	
TLV275	GSCC3.512	12	3.5	1000	
TLV276	GSCC3.518	18	3.5	1000	
TLV277	GSCC3.524	24	3.5	1000	
TLV278	GSCC5.012	12	5	1200	
TLV279	GSCC5.018	18	5	1200	
TLV280	GSCC5.024	24	5	1200	

TOOLS & EQUIPMENT



BAR CLAMPS FOR CONSTRUCTION & WOODWORKING

PARALLEL BAR CLAMPS K BODY' REVOT

- · Large parallel jaw surfaces are made from non-marring polyamide
- . Internal steel frames insure 90° angles
- Large composite handle for better comfort while working
- Bessey® anti-slip system for improved grip and safety Swivel fitting ensures
- clamp sits parallel to the bench top
- 3 3/4" throat depth



Model	Mfg.	Clamping	Spreading	Price
No.	No.	Capacity"	Capacity"	/Each
TKZ904	KR3.512	12	9 1/4 - 15	
TKZ905	KR3.524	24	9 1/4 - 28 1/2	
TKZ906	KR3.531	31	9 1/4 - 36 1/2	
TKZ907	KR3.540	40	9 1/4 – 44	
TKZ908	KR3.550	50	9 1/4 - 53	
TKZ909	KR3.560	60	9 1/4 - 63	
TKZ910	KR3.582	82	9 1/4 - 85	
TKZ911	KR3.598	98	9 1/4 100	

ACCESSORIES FOR PARALLEL CLAMPS

KP FRAMING SYSTEMS

- Blocks align clamps for door and panel construction
- Clamps sit in grooves to make 90° angles
- Four blocks to a set

Model No. TKZ957 Mfg. No. KP Blocks Price/Set \$

K BODY' EXTENDERS

- Connects two Bessey® clamps together for extended reach
- . Durable aluminum construction
- · Includes: Extender, nuts, bolts and washers
- Model No. TKZ959

Mfg. No. K Body Extender Price/Each \$



TG PROFESSIONAL SERIES MALLEABLE CAST CLAMPS

- High quality construction
- Perfect for high pressure
- applications and wide openings
- · Two part composite handle

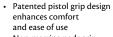


Model	Mfg.	Clamping	Throat	Clamping	Price
No.	No.	Capacity"	Depth"	Force (lbs.)	/Eacl
LIGHT-D	UTY				
TKZ912	TGJ2.5062K	6	2 1/2	600	
TKZ913	TGJ2.5122K	12	2 1/2	600	
TKZ914	TGJ2.5182K	18	2 1/2	600	
TKZ915	TGJ2.5242K	24	2 1/2	600	
TKZ916	TGJ2.5302K	30	2 1/2	600	
TKZ917	TGJ2.5362K	36	2 1/2	600	
TKZ918	TG4.0082K	8	4	880	
TKZ919	TG4.0122K	12	4	880	
TKZ920	TG4.0162K	16	4	880	
TKZ921	TG4.0242K	24	4	880	
MEDIUN	1-DUTY				
TKZ922	TG4.5122K	12	4 1/2	1000	
TKZ923	TG4.5182K	18	4 1/2	1000	
TKZ924	TG4.5242K	24	4 1/2	1000	
TKZ925	TG4.5302K	30	4 1/2	1000	
TKZ926	TG4.5402K	40	4 1/2	1000	
TKZ927	TG5.5122K	12	5 1/2	1320	
TKZ928	TG5.5182K	18	5 1/2	1320	
TKZ929	TG5.5242K	24	5 1/2	1320	
TKZ932	TG7.0162K	16	7	1320	
TKZ933	TG7.0242K	24	7	1320	
TKZ936	TG7.0482K	48	7	1320	
HEAVY-	DUTY				
TKZ937	TGK4.5162K	16	4 1/2	1540	
TKZ938	TGK4.5242K	24	4 1/2	1540	
TKZ939	TGK4.5402K	40	4 1/2	1540	
TKZ940	TGK4.5502K	50	4 1/2	1540	
TKZ941	TGK4.5792K	79	4 1/2	1540	
DEEP RE	АСН				
TKZ942	CDS24-10WP	24	10	1550	
TKZ943	CDS24-12WP	24	12	1550	
TKZ944	CDS24-20WP	24	20	990	

QUICK-GRIP® ONE-HANDED CLAMPS

BAR CLAMPS/SPREADERS

- Quick-Change® jaw quickly converts from clamp to spreader and requires no tools
- Constructed of high-tech reinforced resin for strength and durability
- · Exerts up to 250 lbs. of clamping pressure



- Non-marring pads grip firmly and protect workpiece Ideal for clamping/gluing,
- holding work for sawing/drilling and positioning work for fastening



TAW063

TBR758

Model No.	Mfg. No.	Clamping Capacity	Spreading Capacity	Throat Depth	Price /Each
TAW063	506QC	6" (15 cm)	7 1/2" - 14 5/8" (195 mm - 360 mm)	3 1/4" (80 mm)	
TAW062	512QC	12" (30 cm)	7 1/2" - 20 5/8" (195 mm - 515 mm)	3 1/4" (80 mm)	
TBR688	518QC	18" (45 cm)	7 1/2" - 26 5/8" (195 mm - 665 mm)	3 1/4" (80 mm)	
TBR689	524QC	24" (60 cm)	7 1/2" - 32 5/8" (195 mm - 820 mm)	3 1/4" (80 mm)	
TBR690	536QC	36" (91 cm)	7 1/2" - 44 5/8" (195 mm - 1120 mm)	3 1/4" (80 mm)	

Spreading

Capacity

MINI BAR CLAMPS

- 25% smaller than Quick-Change® clamps for smaller projects or for working in confined spaces
- Constructed of high-tech reinforced resin for strength and durability
- Exerts up to 150 lbs. of clamping pressure Patented pistol grip design enhances
- comfort and ease of use Non-marring pads grip firmly
- and protect workpiece Ideal for clamping/gluing, holding work for
- sawing/drilling and positioning work for fastening

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TOOLS & EQUIPMENT

Mode

TBR758

No.

Mfg.

5412

No.

Clamping

Capacity

12" (30 cm)



Throat

Depth

2 7/16" (62 mm)

Price

/Each

QUICK-GRIP® ONE-HANDED MICRO **BAR CLAMP/SPREADER** • One-handed Quick-Release™ trigger allows for fast and easy positioning Perfect size for hobby and craft applications · Converts to a spreader by reversing the clamp pads Price /Each Model Mfg. Clamping Spreading Throat No. No. Capacity Capacity Depth TBR692 4 1/4" (10 cm) 8" (20 cm) 1 3/16" (30 mm) 53006

XP[™] ONE-HANDED BAR CLAMP & SPREADER

- I-beam bar resists twisting and bowing
 Power Locks[™] hold better, allowing for up to 900 lbs. of force
 Quick-Change[™] jaw, converts clamp to spreader quickly
- Non-marring pads grip securely .
- Quick-Release[™] trigger

Model No.	Mfg. No.	Clamping Capacity	Spreading Capacity	Throat Depth	Prio /Eac
TKZ880	2021406	6" (15 cm)	7 1/2"-14 5/8" (190 mm-371 mm)	3 1/4" (83 mm)	
TKZ881	2021412	12" (30 cm)	7 1/2"-20 5/8" (190 mm-523 mm)	3 1/4" (83 mm)	
TKZ882	2021418	18" (45 cm)	7 1/2"-26 5/8" (190 mm-676 mm)	3 1/4" (83 mm)	
TKZ883	2021424	24" (60 cm)	7 1/2"-32 5/8" (190 mm-828 mm)	3 1/4" (83 mm)	
TKZ884	2021436	36" (91 cm)	7 1/2"-44 5/8" (190 mm-1133 mm)	3 1/4" (83 mm)	
TKZ885	2021450	50" (127 cm)	7 1/2"-58 5/8" (190 mm-1489 mm)	3 1/4" (83 mm)	



 Deep 3 3/- Secure loc ProTouch Resin body marring at Up to 1150 	king system prevents handle for an ergonor y and jaws prevents nd glue adhesion I bs. of pressure Mfg.	nized pressure distribution ; jaws from slipping mic grip Clamping	Throat	Price	
No.	No.	Capacity	Depth"	/Each	IRWIN.
TLY300 TLY301	2026500 2026501	24" (60 cm) 48" (115 cm)	3 3/4 3 3/4		OUICK-GRIP

PARALLEL JAW CLAMPS

- Aluminum die-cast handles have a quick adjustment • mechanism for easy sizing
- Serrations in the steel rails engage with a hardened steel insert in the jaw to eliminate slipping
- Clamp jaws are encased in non-marring, glue resistant polypropylene casing
- · Clamps up to 2.5 KN of pressure



Model No.	Clamping Capacity	Throat Width	Throat Depth	Price /Each	aurorato
TYB500	24"	1 1/2"	3 1/3"		
TYB501	50"	1 1/2"	3 1/3"		

TOOLS & EQUIPMENT

QUICK-GRIP® HANDI-CLAMP®

- Quick-Release[™] trigger allows for fast
- and easy positioning and release Patented ratcheting mechanism provides adjustable •
- clamping pressure and significantly reduces hand force required to generate clamping pressure
- High-tech resin construction
- provides strength and durability Specially designed jaws hold odd-shaped workpieces



DWIN

Model No.	Mfg. No.	Clamping Capacity	Spreading Capacity	Throat Depth	Price /Each
TBQ662	59100CD	1 1/2" (37 mm)	1 1/2" (37 mm)	1 1/2" (37 mm)	
TBR083	59200CD	2" (50 mm)	2" (50 mm)	2" (50 mm)	
TBR085	59400CD	4" (10 cm)	4" (10 cm)	3" (75 mm)	

QUICK CLAMPS

- One hand mechanism for ease of clamping
- Adjustable and reversible: Changes from a clamp to a spreader



Model	Mfg.	Clamping	Price
No.	No.	Capacity	/Each
TGZ584	XC2-2	1"	
TGZ585	XC5-2	2"	

STEEL QUICK CLAMPS

- · One hand mechanism for ease of clamping
- Adjustable and reversible: changes • from a clamp to a spreader
- Vinyl-covered grips and tips



FULLER

Model No.	Mfg. No.	Clamping Capacity	Price /Each
TGZ581	450-0101	1"	
TGZ582	450-0102	2"	
TGZ583	450-0103	3"	

LOCKING PLIERS - C-CLAMPS W/SWIVEL PADS

- · Tempered chrome vanadium steel jaws
- · Hardened tension bar with toggle mechanism
- provides secure locking action Smooth screw adjustment for easy
- and rapid setting
- · Meets ANSI standards



auroratools

Model No.	Grip	Length"	Price /Each
TJZ096	Steel	6	
TJZ097	Steel	11	

PROFESSIONAL ONE HAND EDGE CLAMP

Twin Spindle: Outer spindle acts as the clamping jaws on work surface while inner spindle applies pressure to the edge

XC7-2

· Large Jaws: Soft non slip pads for positive grip



Model	Clamping	Clamping	Throat	Price
No.	Capacity	Force	Depth	/Each
TKZ945	2 1/8"	500 lbs.	3"	

C-CLAMPS

- Manufactured from SG iron with over 60000 PSI of tensile strength Swiveling pad adapts to the correct angle to apply even
- pressure on the work piece
- Textured powder coat finish on frame and black oxide finish on spindle increases corrosion resistance



auroratools

Model No.	Clamping Capacity	Throat Depth	Min. Proof Test Ibs.	Price /Each
TYB502	2"	1 5/8"	800	
TYB503	3"	1 11/16"	1000	
TYB504	4"	2 11/32"	1200	
TYB505	6"	3"	1400	
TYB506	8"	3 1/8"	1700	
TYB507	10"	3 1/2"	2200	
TYB508	12"	4"	2500	

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TGZ586

TOOLS & EQUIPMENT



3"

QUICK-GRIP® C-CLAMPS

- Double-rolled thread for faster clamping and increased durability
- Larger handle for greater clamping pressure
- with less effort and reduced hand fatigue • Larger swivel pad reduces marring on work
- surface and increases stability



VISES, MAGNETS & CLAMPS

ECONOMY C-CLAMPS

- Reinforced at all stress points designed to last through the toughest application
- Constructed of high quality ductile iron
- with a heavy-duty steel screw
- for maximum strength
- Fully enameled for long life



F	U		R

IRWIN

			OUIC	OUICK-GRIP	
Model No.			Throat Depth	Price /Each	
TBR751	225101	1" (25 mm)	1 3/16" (30 mm)		
TBR752	225102	2" (50 mm)	1 5/16" (33 mm)		
TBR753	225103	3" (75 mm)	2 1/4" (51 mm)		
TBR754	225104	4" (10 cm)	3" (75 mm)		
TBR755	225106	6" (15 cm)	3 1/2" (87 mm)		
TBR756	225108	8" (20 cm)	4" (10 cm)		
TBQ959	225123	2" (50 mm)	3 1/2" (87 mm)		
TBQ960	225134	3" (75 mm)	4 1/2" (12 cm)		

Model No.	Mfg. No.	Max. Opening"	Throat Depth"	Price /Each		
VE830*	450-0761	1	1			
VE831*	450-0762	2	1 1/2			
VE832	450-0772	2 1/2	2 3/8			
VE833	450-0763	3	1 3/4			
VE834	450-0764	4	2 3/8			
VE835	450-0765	5	2 1/2			
VE836	450-0766	6	2 3/4			
VE837	450-0768	8	3 3/8			
VE838	450-0769	2 1/2	4 3/8			

* Constructed of malleable iron

ARMSTRONG INDUSTRIAL HAND TOOLS

ARMSTRONG INDUSTRIAL HAND TOOLS

C-CLAMPS

GENERAL SERVICE PATTERN

• Designed for uses which do not require the throat depth of the square or deep throat pattern

Model	Mfg.	Capa	city"	Depth of Throat from	Thread	Length	Min. Proof	Wt.	Price
No.	No.	Max.	Min.	Center of Screw"	Size"	of Screw"	Test lbs.	lbs.	/Each
U0707	78-102	2	0	1 3/8	1/2-13	4 7/8	7500	1.26	
U0708	78-103	3	0	1 3/4	5/8-11	6 3/8	8750	2.60	
U0709	78-104	4	0	2	3/4-10	7 7/8	10000	4.13	
U0710	78-106	6	2	2 1/4	3/4-10	7 7/8	11250	5.90	
U0712	78-108	8	4	2 1/4	3/4-10	7 7/8	12500	6.90	
U0714	78-110	10	6	2 3/8	3/4-10	7 7/8	13750	8.00	
U0716	78-112	12	8	2 5/8	7/8-9	10 1/4	15000	11.61	
U0718	78-115	15	10	2 3/4	7/8-9	10 1/4	16250	14.95	
U0720	78-118	18	13	2 7/8	7/8-9	10 1/4	17500	18.21	



C-CLAMPS

SQUARE THROAT PATTERN, BLACK FINISH

Designed for those jobs where a super deep throat is required
Square throat clamps offer up to 89% more throat depth than other patterns, but embody all the strength and durability inherent in a drop forged C-clamp

Model No.	Mfg. No.		city" Min.	Depth of Throat from Center of Screw"	Thread Size"	Length of Screw"	Min. Proof Test Ibs.	Wt. Ibs.	Price /Each
U0722	78-303	3	0	3 1/2	1/2-8	4 7/8	3500	2.52	
U0723	78-304	4	0	4 1/2	3/4-6	7 5/8	4100	4.49	
U0724	78-306	6	0	6 1/2	3/4-6	97/8	5400	8.05	
U0725	78-308	8	0	8 1/2	3/4-6	12 3/8	5900	13.11	

DEEP THROAT PATTERN, ZINC-PLATED

• Design and materials are exactly the same as deep throat pattern

· Forcing screw is zinc-plated to resist the adhesion of welding spatter

Model No.	Mfg. No.	Capa Max.		Depth of Throat from Center of Screw"	Thread Size"	Length of Screw"	Min. Proof Test Ibs.	Wt. Ibs.	Price /Each
U0740	78-431	1 1/2	0	1 3/8	3/8-16	3 1/4	1400	0.37	
U0741	78-432	2	0	2	1/2-8	4 3/4	3300	1.23	
U0742	78-433	3	0	2 3/8	1/2-8	5 3/4	3500	2.11	
U0743	78-434	4	0	2 3/4	3/4-6	7 5/8	4100	2.89	
U0744	78-436	6	0	3 5/8	3/4-6	9 7/8	5400	4.83	
U0745	78-438	8	0	4 1/2	3/4-6	12 3/8	5900	6.98	
U0746	78-440	10	3	5 3/8	3/4-6	12 3/8	6200	9.66	
U0748	78-442	12	4	5 3/4	7/8-6	13 1/2	9300	12.85	

PRODUCTS

SCALES &

TOOLS & EQUIPMENT

WELDING & TALWORKING AFETY JA JIPMENT M

JANITORIAL &

AURORA TOOLS® HOLD DOWN CLAMPS

- Commonly used clamps in manufacturing
- Perfect for holding work pieces in place •
- Durable steel construction

Model

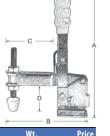
TLV625

TLV626

TLV627

VERTICAL HOLD-DOWN CLAMPS

- Includes bonded neoprene-tipped spindle and flanged washers
- Open arm provides adjustable spindle location •



Dimen	sions"			Base		Wt.	Price
Dimen B	sions" C	D	Ľ"	Base x	W "	Wt. Ibs.	Price /Each
	sions" C	D 1			W" 1 3/4		

2 1/2

17/8

х

600 HORIZONTAL HOLD-DOWN CLAMPS

Holding

Cap. lbs

200

375

- Includes bonded neoprene-tipped spindle and flanged washers
- Low height design is ideal when space is a concern .
- · Open arm provides adjustable spindle location



1.25

Model	Holding	Dimensions"			Base			Wt.	Price	
No.	Cap. lbs.	A	B	C D	L"		X	W"	lbs.	/Each
TLV628	200	1 1/16	5 5/8	2 1/4 1	1 7/1	6	Х	1 7/16	0.28	
TLV629	500	1 13/16	6 3/4	2 11/16 1 5/	6 13/8	8	Х	1 1/2	0.52	

4 13/16 3 13/4

4

6

8 1/8

LATCH CLAMPS

Commonly used to hold molds, dies, and jigs together •

Includes latch plate

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н в — н	1



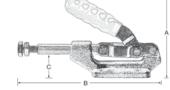
TLV626



Model No.	Holding Cap. Ibs.	Dimensio A	ons" B	Ľ	Base x	w "	Wt. lbs.	Price /Each
TLV630	360	11/4	4	1 1/16	х	1	0.16	
TLV631	700	1 5/8	6 7/8	1 1/2	х	1 11/16	0.55	

STRAIGHT LINE CLAMPS

· Commonly used in assembly operations or with welding jigs





Model Holding Base Price Dimensions Wt. W /Each No. Cap. lbs B lbs. A х TLV632 600 3 5 1/4 3 1/4 17/8 2 1/4 0.80 х TLV633 300 4 5/16 4 1/2 N/A 0.42

AUTO-ADJUST TOGGLE CLAMPS

- Automatically adjust to variations in work piece dimensions
- . The integrated clamping force adjustment screw can be used to create an actually
- applied clamping force from 25 to 550 lbs. (max holding capacity of 700 lbs.)
- The large (2 1/4" x 2 1/2") flanged base is designed for use with 1/4" or M6 fasteners • • The removable non-marring plastic cap is included on the 7/8" diameter swivel pads

Model No.	Mfg. No.	Opening"	Clamping Force Range (lbs.)	Holding Capacity (lbs.)	Pric /Eac
	AL TOGGLE CLAMP		nunge (1855)	cupacity (1951)	/240
TNB028	STC-HH20	13/16	25 - 550	450	
TLV284	STC-HH50	1 9/16	25 - 550	700	
TLV285	STC-HH70	2 3/8	25 - 550	700	
INLINE TOO	GGLE CLAMPS				
TNB029	STC-IHH15	3/8	25 - 550	450	
TLV286	STC-IHH25	5/8	25 - 550	700	



TOOLS & EQUIPMENT

BESSEY



TLV628

VERTICAL HOLD-DOWN CLAMPS

The most popular type of hold-down clamp, manufactured in capacities of up to 6000 lbs. The hold-down bar exhibits a minimum 90° opening angle and can be solid or U-shaped. Stainless steel units are available for the food industry or corrosive environments.

201 SERIES

202 SERIES

200-lb. capacity version

of 201 series. Furnished

with bonded neoprene-tipped

nuts and flang washers (TN123).

1/4-20 spindle (TN134) lock

The smallest vertical clamp available. U-shaped hold-down bar furnished with bonded neoprene-tipped 10-32 spindle assembly (TN140) and flanged washers (TN121).

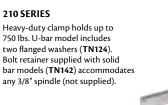


207 SERIES

210 SERIES

Available in solid bar model, including bolt retainer (TN141) 500-lb.-capacity. U-bar model includes two flanged washers (TN125) and accommodates 5/16" spindle (not supplied).





Model	Mfg.	Holding		Dime	nsions"			Base		Wt.	Price
No.	No.	Cap. lbs.	А	В	C	D	Ľ	х	W "	lbs.	/Each
TN059	201-U	100	3 1/16	2 1/64	11/16	5/8	1	х	1 5/16	0.15	
TN061	202-U	200	3 3/4	2 3/8	1	15/16	1	х	1 9/16	0.35	
TN065	207-S	500	5 1/2	3 25/32	-	1 9/16	1 3/8	х	1 3/4	0.69	
TN064	207-U	375	5 1/2	3 25/32	13/8	1 9/16	13/8	х	1 3/4	0.67	
TN066	210-U	600	7 1/2	5 7/8	2 5/8	1 11/16	1 29/32	х	2 17/32	1.29	
TN067	210-S	750	7 1/2	5 7/8	-	1 11/16	1 29/32	х	2 17/32	1.29	

TOGGLE-LOCK PLUS[™] LATCH CLAMPS

Feature a release lever catch accessory which allows clamps to lock in the closed position only. Supplied with latch plate and equipped with an ergonomic handle grip. Model TV727 same as model TV726 only with greater holding capacity.

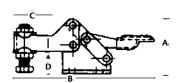
Model	Mfg.	Holding	Dimer	isions"	Thread		Base		Drawing	Wt.	Price
No.	No.	Cap. lbs.	A	В	Adjustment"	Ľ"	х	W"	Cap."	lbs.	/Each
TV726	331-R	700	1 15/32	6 1/4	11/64	1 9/16	х	13/4	2	0.6	
TV727	341-R	2000	2 3/4	6 1/2	9/16	2 3/8	х	2 3/8	2 1/2	0.6	

Equipped with a release lever catch accessory which allow clamps to stay locked in the closed position. Large handle pad improves operation of clamp.

Model	Mfg.	Holding	Dime	nsions"	Thread		Base		Drawing	Wt.	Price
No.	No.	Cap. Ibs.	Α	В	Adjustment"	Ľ"	x	W"	Cap."	lbs.	/Each
TV728	351-R	375	1 7/16	9 11/16	5/16	1 1/2	Х	1 15/16	4	0.8	
TV729	371-R	750	2 1/4	13	11/16	1 15/16	Х	1 15/16	5 3/8	0.6	

HORIZONTAL HOLD-DOWN CLAMPS

Low height design makes clamps outstanding when headroom is a concern. Unlike the handle on the vertical clamp, the horizontal clamp moves in the opposite direction. Hold down bar available in solid or U-shaped format. Some models available in stainless steel on request. Holding capacities to 500 lbs. Larger capacities available.



205 SERIES

215 & 225 SERIES

tipped spindle assembly (TN134) and washers (TN123). The 225 Series includes a 5/16-18 bonded neoprene spindle assembly (TN135) and flanged washers (TN125).

The smallest clamps in the horizontal series clamps supplied with nylon spindle assembly (TN126). Flanged washers supplied with U-bar models (TN122).

U-bar horizontal clamps provide greater rigidity and overall performance. The 215 Series includes a 1/4-20 bonded neoprene-



305 SERIES

TV726

TV728

Feature a handle that can be operated from either side or from behind. U-bar model includes bonded neoprene-tipped spindle (TN140) and flanged washers (TN121).



Model Mfg. Holding **Dimensions**' Base Price Wt. No. No. Cap. lbs A C W" lbs. /Each Х TN062 205-U 60 3/4 2 21/32 3/8 5/16 15/16 15/16 0.06 Х TN063 205-S 60 3/4 2 3/4 3/8 15/16 15/16 0.06 х TN068 215-U 200 1 1/2 5 7/16 1 1/4 1 7/16 13/8 0.32 1 Х TN069 225-U 500 17/8 6 19/32 1 11/32 13/8 1 1/2 13/8 0.55 TN070 305-U 150 13/8 2 1/4 1/2 1/2 1 1/32 0.13 1

TOOLS & EQUIPMENT



STRAIGHT LINE CLAMPS

Popular in assembly operations or used in conjunction

strong holding force. Most clamps lock in two positions

These models can be bolted or welded to a flat surface.

Plungers extend out to clamp material against a fence or

square surface. Model TN103 includes a 8-32 nylon spindle

with welding jigs. Straight line clamps provide quick,

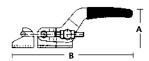
allowing them to be used as a push or pull clamp.

assembly (TN126). Model TN105 plunger is tapped for 5/16-18 adjustment spindle (not provided). Model TN107 plunger is tapped for

601, 603 & 609 SERIES

LATCH CLAMPS

Commonly used to hold lids, molds, dies and jigs together. Completely adjustable hook grabs latch installed on material or jig to be pulled together, and holds both sides together. Clamps can be bolted or welded into place. Ideal for high vibration applications. Pull bar is threaded for easy adjustment.



300 SERIES

The over-center toggle locking action of these clamps suits them ideally for holding against heavy forces such as those generated in plastic molding operations clamping of doors, lids and access covers. Each clamp includes latch plate.

Holding

Caps. lbs

360

500

700

2000

4000

Holding

Cap. lbs

100

200

600

300

300

Holding

Cap. lbs

200

700

Dimensions"

R

3 27/32

3 27/32

5 5/8

81/4

10 3/8

Clamping

Thickness" (A)

13/4

Dimensions

В

2 27/32 1/2

2 7/16

4 1/2 31/32

4 15/16

4 7/16

31/32

A

15/32

15/32

15/8

2 3/4

4

LATCH CLAMPS

Mfg.

No.

323

324

331

341

375

Mfg.

No.

424

462

STRAIGHT LINE CLAMPS

Mfg

No.

601

602

603

604

609

PLIER CLAMPS

Model

TN073

TN074

TN076

TN077

TN081

Mode

TN097

TN102

Mode

TN103

TN104

TN105

TN106

TN107

PLIER HOLD-DOWN CLAMPS

Quick action pliers offer excellent workholding capacity, they are portable to many applications and highly versatile. Only normal hand pressure is required to close and lock clamps in place. Clamp thickness may be adjusted by turning the threaded spindle. Once set, the clamp can be used repeatedly at that opening. Standard style clamps open by pulling handles apart. Trigger release style С

pull the two-way release (up and down) for easy one-handed release.



424 SERIES

Has a single 1/4-20 adjustable neoprene-tipped spindle assembly. Clamp opens by manually pulling handles apart.

462 SERIES

Thread

Adiustment

25/32

25/32

1

11/2

1/2

Throat

Depth" (B)

1 1/8

2 3/4

1 5/16

2

Two trigger release clamp includes 3/8-16 steel swivel foot adjustment spindle assembly

5/8

5/8

3/4

23/8

3 3/8 Х 3 1/8

Base

39/16 x 23/16

Base

Х

Х

Х

Х

Overall

Length" (C)

4 1/2

8 1/2

W"

x 11/6

x 17/8

W

17/64

17/64

1 39/64

2 33/64





Wt

lbs.

0.15

0.25

0.56

1.43

2.75

Wt.

lbs.

0.31

1.13

Wt.

lbs.

0.09

0.25

0.83

0.44

0.88

Price

/Each

Price

/Each

Price

/Each

Drawing

Cap.

1 3/16

1 1/2

11/4

2 1/2

3 1/2

Spindle

Thread

1/4 x 20

3/8 x 16

Plunger

Travel

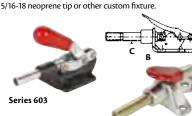
5/8

33/4

1 1/4

1 1/2

1 1/4



Series 601

602 & 604 SERIES

Fully retractable locators mount directly through a member by a jam nut on the work side or flush by drilling and tapping the member, a flat surface is not required. Locks in extended or retracted position.

When flush-mounted, plunger completely retracts from work area.



REPLACEMENT SPINDLES & ACCESSORIES

1 1/4

3 3/32

3 1/2

4 1/16

3 3/8

FLAT-TIP BONDED **NEOPRENE CAPS**

SWIVEL FOOT ADJUSTING SPINDLES

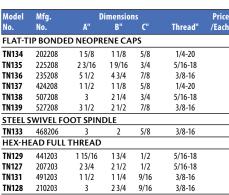
Used primarily for model TN102 plier clamp, but may be used with any clamp with the proper thread size. Steel swivel shoe provides a firm clamp and is suitable for more heavy-duty applications. Includes two adjusting nuts.

HEX HEAD ADJUSTING SPINDLES

Carbon steel fully threaded adjusting spindles are used in applications where a neoprene or swivel type spindle is not necessary. A neoprene cap foot is available for all sizes. Two adjusting nuts included.

Carbon steel replacements





Carbon steel replacements

for S solid hold-down bars.

BOLT RETAINERS

NEOPRENE CAPS

Slip-on heads of hex nut spindles, durometer 60-70 and operates between -40°F and 220°F.





Model	Mfg.	Dimensions				Price
No.	No.	A''	B "	C "	Thread"	/Each
FLANG	ED WASH	ERS (PER	PAIR)			
TN122	105106	11/64	7/16	5/16	Fits Spindle #8	
TN123	215105	17/64	11/16	29/64	1/4	
TN125	507107	21/64	7/8	5/8	5/16	
TN124	235106	13/32	1	23/32	3/8	
BOLT R	ETAINERS	5				
TN141	207105	1 1/4	5/8	21/64	Fits Spindle 5/16	
TN142	210114	1 1/2	3/4	17/32	3/8	
NEOPR	ENE CAPS	;				
TN118	215119	7/16	-	5/8	Fits Spindle 1/4"	
TN119	225119	1/2	-	5/8	5/16	
TN120	235119	17/32	-	3/4	3/8	

FLANGED WASHERS

for U-bar clamps only.



Model	Mfg.	D	imensio	15		Pric
No.	No.	A "	B"	C "	Thread"	/Eac
FLAT-T	IP BONDE	D NEOPR	ENE CA	PS		
TN134	202208	1 5/8	1 1/8	5/8	1/4-20	
TN135	225208	2 3/16	1 9/16	3/4	5/16-18	
TN136	235208	5 1/2	4 3/4	7/8	3/8-16	
TN137	424208	1 1/2	1 1/8	5/8	1/4-20	
TN138	507208	3	2 1/4	3/4	5/16-18	
TN139	527208	3 1/2	2 1/2	7/8	3/8-16	
STEEL S	SWIVEL FO	OOT SPIN	DLE			
TN133	468206	3	2	5/8	3/8-16	
HEX-HI	EAD FULL	THREAD				
TN129	441203	1 15/16	13/4	1/2	5/16-18	
TN127	207203	2 3/4	2 1/2	1/2	5/16-18	
TN131	491203	1 1/2	1 1/4	9/16	3/8-16	

TOOLS & EQUIPMENT

1292



Adjustable spindles provide a cushion between clamps and clamped item. Neoprene tip resists oils and chemicals and has a durometer of 60-70 and an operating temperature of -40°F to 220°F. Each spindle includes two adjusting nuts.

OFF-SET BENCH VISES

- Heavy-duty industrial grade vise
- V notched hardened jaws for vertical gripping •
- Ideal for tall work pieces •
- Hardened anvil striking surface used for forming & shaping Safety locking plate in base prevents the vise from slippage
- Mount Type: Fixed



auroratools

Model	Jaw	Max.	Throat	Price
No.	Width"	Opening"	Depth"	/Each
TYL103	6	6 1/2	4	

MULTI-PURPOSE BENCH VISES

- Heavy-duty casting for demanding applications
- Rotating head for gripping at any angle
- Permanent pipe jaws holds round objects
- . Hardened anvil striking surface used for forming & shaping
- Safety locking plate in base prevents the vise from slippage
- Mount Type: Swivel

VISES, MAGNETS & CLAMPS

UTILITY WORKSHOP VISES

- 80000 PSI Industrial grade ductile iron
- · Built in pipe jaws hold round objects
- Hardened anvil striking surface used for forming & shaping
 - Safety locking plate in base prevents the vise from slippage
 - Mount Type: Swivel



auroratools

Model	Jaw	Jaw	Throat	Price
No.	Width"	Opening"	Depth"	/Each
TYL097	6	6 1/2	3 4/10	

HEAVY-DUTY FIXED BASE BENCH VISES

- 80000 PSI Industrial grade ductile iron
- Built in pipe jaws hold round objects
- Hardened anvil striking surface used for forming & shaping
- Safety locking plate in base preven ts the vise from slippage



auroratools[.]

Model No.	Jaw Width"	Jaw Opening"	Throat Depth"	Price /Each
TYL093	4	4 1/2	2 7/10	
TYL094	5	5 1/2	3 3/10	
TYL095	6	6 1/2	3 1/2	
TYL096	8	8 1/2	4	

HEAVY-DUTY SWIVEL BASE BENCH VISES

- 80000 PSI Industrial grade ductile iron
- Built in pipe jaws hold round objects
- Hardened anvil striking surface used
- for forming & shaping

Safety locking plate in base prevents the vise from slipping



auroratools

Model No.	Jaw Width"	Jaw Opening"	Throat Depth"	Price /Each
TYL098	4	4 1/2	2 1/2	
TYL099	5	5 1/2	3	
TYL100	6	6 1/2	3 4/10	
TYL101	8	8 3/10	3 8/10	



auroratools

Model	Jaw	Jaw	Throat	Price
No.	Width"	Opening"	Depth"	/Each
TYL102	5	5 1/2	3 1/10	

HEAVY-DUTY INDUSTRIAL BENCH VISES

- 90 000 PSI drop forged alloy steel construction for top performance
- Perfect parallel jaw design for secure clamping
- Forged pipe jaws hold up to 2 1/2" pipe (TNB035) .
- . Precision ground and induction hardened jaws
- and anvil for dependable and long life of vise Long length alloy steel spindle handle
- for fast and high force clamping
- 360° rotation swivel base for versatile positioning of parts



BESSEY

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth"	Pipe Jaw Capacity"	Price /Each
TNB033	BV-DF4SB	4	4 1/2	2 3/8	3/8 - 1 1/4	
TNB034	BV-DF5SB	5	6 1/2	3	3/8 - 1 1/2	
TNB035	BV-DF6SB	6	7	4	3/8 - 2 1/2	
					TOOLS &	

EQUIPMENT



COMBINATION PIPE & BENCH VISES

- Perfect to handle any work holding jobs
- Tool steel serrated top jaws and pipe jaws
- Suitable for plant maintenance, oil field service, heavy construction



Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth"	Pipe Jaw Capacity"	Price /Each
TM838	C-0	3 1/2	5	4 1/2	1/8 - 2 1/2	
TM839	C-1	4 1/2	6	4 3/4	1/8 - 3 1/2	
TM840	C-2	5	7	5 5/16	1/8 - 4 1/2	
TM841	C-3	6	9	6 5/8	1/4 - 6	

TRADESMAN VISES

- Meets all Government specifications
- Replaceable top and pipe jaws
- Provides greater clamping surface
- Large anvil
- . Fully enclosed spindle
- Straight line design
- Mounting template and parts list included with every vise
- Precision thrust bearing creates greater
- clamping pressure and increased longevity
- 60 000 PSI ductile iron
- Top jaws are reversible either standard serrated jaws for extra grip on sturdier materials or smooth jaws for more delicate pieces
- 360° swivel base

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth"	Pipe Jaw Capacity"	Price /Each
TD664	1745	4 1/2	4	3 1/4	1/4 - 2 1/2	
TD665	1755	5 1/2	5	3 3/4	1/4 - 3	
TD666	1765	6 1/2	6 1/2	4	1/4 - 3 1/2	
TD667	1780A	8	7	4 3/4	1/8 - 3 1/2	

SHOP VISES

- General duty use
- Instant-Action[™] vise design ensures immediate
- engagement of the nut and spindle screw
- Vise rotates 360°
- Rubber pinch point safety guards 25 000 PSI castings for long life



Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth''	Price /Each
VE839	WS4	4	4	2 3/4	
VE840	WS5	5	5	3	

The ultimate! 210-Piece Socket Set, made of

chrome vanadium steel for extra strength and durability.

auroratools

1294

TOOLS & EQUIPMENT

Model TLV362

See page 1313

MULTI-PURPOSE MECHANIC'S VISES

- Swivel base with four mounting





Model	Mfg.	Jaw	Jaw	Throat	Pipe Jaw	Price
No.	No.	Width"	Opening"	Depth"	Capacity"	/Each
TD672	4500	5 1/2	9 3/4	3 3/4	1/8 - 3	

MECHANIC'S VISES

- Meets all Government specifications
- Replaceable hardened steel serrated jaw inserts and replaceable pipe jaws provide sure grip
- Enclosed, unbreakable box frame, steel channel
- Large anvil
- Swivel base rotated 360° and has double lockdowns ensuring maximum stability
- Straight line design positions spindle and nut horizontally,
- reducing thread wear and increasing clamping power 30 000 PSI castings for long life and added strength
- · Ideal for professional mechanics





Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth"	Pipe Jaw Capacity"	Price /Each
TD669	744	4	4 1/2	3 7/16	1/4 - 2	
TD670	745	5	5 1/4	3 3/4	1/4 - 2 1/2	
TD671	746	6	5 3/4	4 1/8	1/4 - 3 1/2	

UTILITY WORKSHOP VISES

- Durable, versatile, all-around vises
- Handles a variety of applications
- Perfect for use in utility
- and light duty applications

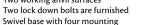


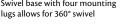
Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Throat Depth"	Pipe Jaw Capacity"	Price /Each
TD677	674	4 1/4	4	2 5/8	1/8 - 2	
TD678	675	5 1/2	5	3 7/16	1/8 - 2 1/2	
TD679	676	6 1/2	5 1/2	3 11/16	1/8 - 2 1/2	
TD680	656HD	6	6	4 3/16	1/8 - 3	
TD681	648HD	8	7 1/2	4 1/2	1/8 - 3	





· Jaw opening expands to 9 3/4" when reversed Grey iron main castings Replaceable, hardened tool steel jaw faces Two working anvil surfaces





VERSATILE DRILL PRESS VISES

Rugged design and large workload capacity make these vises perfect for the most difficult drilling, tapping or reaming operations.

MODELS VE855, TE622 & E586

Made of graded cast iron and offers a ground vise bed for a smooth, consistent jaw movement and hardened top U-groove jaws

MODELS VE858 & VE859

- Made of graded cast iron and features precision 90° machining of the vise's sidebodies, which allows them to be used as bases
- Rapid action nut allows for fast loading and unloading of production material and extra tightening capabilities
- Main castings provide extra strength and increased durability

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Jaw Depth"	Price /Each
CONTINUC	DUS NUT				
VE855	1335	3	2 3/4	1 7/8	
TE622	1345	4	4	2 1/8	
VE856	1360	5	5	2 1/8	
RAPID ACT	ING NUT				
VE858	1445	4 1/2	4 3/4	1 7/8	
VE859	1460	6	6 3/4	2 1/8	

VERTI-LOCK® MACHINE VISES

- Jaw widths from 5" up to 8"
- Needle thrust bearing
- Flat bed parallel to 0.0001 per inch .
- Ductile steel alloy body parts

SWIVEL BASE

- 360° rotation via two 360° scales .
- Calibrated in 1° increments for easy use

WORKSTOP

Quick, accurate positioning Ideal for highly repetitive operations



Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Type of Base	Price /Each
MACHIN	IE VISES				
TE166	1250N	5	4 1/2	Stationary	
TE167	1275N	6	7 1/2	Stationary	
TE168	1280N	8	7 1/2	Stationary	
SWIVEL	BASES				
TE170	5S	5	-	Swivel	
TE171	6S	6	-	Swivel	
TE172	85	8	-	Swivel	

SUPER PRECISION 2 WAY ANGULAR MACHINE VISES

- Perfect vise for grinding, jig
- boring and shaping jobs
- Jaw plates hardened and ground 90° vertical and 180° horizontal indexing
- 360° swivel base and 90° tilting range

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Jaw Depth"	Price /Each
TJW135	AMV/SP-50	2	2	1 5/16	
TJW136	AMV/SP-75	3	3	1 5/16	
TJW137	AMV/SP-100	4	4	1 9/16	
TJW138	AMV/SP-125	5	5	2	
TJW139	AMV/SP-150	6	6	2	

EQUIPMENT

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Jaw Depth"	Overall Height"	Price /Each
TE161	1203	3	3	1 1/4	2 3/4	
TE162	1204	4	4 11/16	1 5/16	3 1/4	
TE163	1206	6	6 3/16	1 13/16	3 3/4	
TE164	1208	8	8 3/16	2	47/16	

SUPER PRECISION 3 WAY TILTING MACHINE VISES

- Perfect vise for 3 axis jobs in milling,
- drilling, grinding, shaping and jig boring
- Accurately indexed for 3 way angular work
- 90° vertical indexing
- 360° swivel base and
- 45° tilting range on either side

VISES, MAGNETS & CLAMPS

BRINK & COTTON VACUUM BASE VISES

- · Lightweight and portable
- Mounts on any clean, flat surface Cast aluminum body
- 360° swivel base and

				-
	180°	head tilt		L
•	200	3WIVCI Das	ic and	

Model	Mfg.	Jaw	Jaw	lype of	Pri
No.	No.	Width"	Opening"	Base	/Ea
TJW113	3VB	2 3/4	2 1/2	Vacuum	

DRILL PRESS VISES

STANDARD MODELS

- Precision grinding of Model TM798 sides and front side face, permits additional mounting positions for drilling, tapping or reaming
- · The body and sides are also ground perfectly parallel and square to
- further ensure complete jaw alignment • Combining a smooth moveable jaw plate with a cross-patterned 90°
- V-groove stationary jaw, the vise is recommended for general use
- Model TM802 utilizes fine pitched ACME-threaded screws with hexagonal heads for tight clamping

ANGLE MODELS

- Models TM800 and TM804 are mounted on a 90° angle base, sturdily constructed to give workpieces an accurate mount
- The hinge pin hole of the vise body is precision drilled and reamed to avoid lateral play







Model No	Mfg. No.	Jaw Width"	Jaw Opening"	Jaw Depth"	Overall Height"	Price /Each
STANDA	RD MODELS	5				
TM798	25	2 1/2	2 1/2	1 1/2	3 2/3	
TM802	30	3	3 1/8	1 3/4	3 2/3	
ANGLE N	ODELS					
TM800	25A	2 1/2	2 1/2	1 1/2	4 1/3	
TM804	30A	3	3 1/8	1/4	4 1/3	

CAM ACTION DRILL PRESS VISES

- Holding pressure is adjustable from 400 to 1100 lbs. · Recessed parallel steel jaw inserts level work, and can be
- removed to accommodate your jig and fixture components The base is designed for clear through drilling applications
- · For added durability, bars and locking
- mechanisms are hardened and ground
- The unique top locking lever can be raised or lowered to tighten or loosen against the workpiece



No.	No.	Width"	Opening"	Depth"	Height"	/Eac
TE161	1203	3	3	1 1/4	2 3/4	
TE162	1204	4	4 11/16	1 5/16	3 1/4	
TE163	1206	6	6 3/16	1 13/16	3 3/4	
TE164	1208	8	8 3/16	2	4 7/16	

- Jaw plates hardened and ground

Model No.	Mfg. No.	Jaw Width"	Jaw Opening"	Jaw Depth''	Price /Each
TJW130	TLT/SP-50	2	2	5/16	
TJW131	TLT/SP-75	3	3	1 5/16	
TJW132	TLT/SP-100	4	4	1 9/16	







MEASURES, RULES, SQUARES & LEVELS

VISE COMBINATIONS

PV IR

- · More like a tool than a vise, the grooved jaws open to 2 7/8" (73 mm) and are made from fibre reinforced thermal composite alloy
- Jaws are controlled with a fine/ coarse adjusting knob, which permits very delicate work
- Head movement is through three planes (360° rotation, 360° swivel and 210° pivot) and is controlled with a single knob
- Base is made of die cast zinc, with a 4 5/16" (109.5 mm) bolt circle countersunk for 1/4" (6.3 mm) flathead bolts (not included)
- 6 3/4" tall (171.4 mm) and weighs 1 1/4 lbs. (0.6 kg)
- Model No. TGZ417 Mfg. No. 201 Price/Each \$

STANDARD

- 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" (63.5 mm) wide and open to 2 1/4" (57.1 mm), and the base features a 4 5/16" (109.5 mm) bolt circle
- The combination stands 6 3/4" (171.4 mm) tall, weighs 2 lbs. 11 oz. (1.2 kg)

Model No. WJ595 Mfg. No. 301 Price/Each \$

VACUUM BASE

- 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, non-porous surfaces only) This combination stands 6 1/8" (155.6 mm)
- tall and weighs 2 lbs. 13 oz. (1.3 kg) Model No. WJ596 Mfg. No. 381

Price/Each \$

WIDE-OPEN HEAD

- · This vise provides a wide gripping head with the full "tilt. turn and rotate" capabilities of the split ball (found in every 300 and 400 series base)
- Unit stands 7 5/16" (185.7 mm) tall and weighs 3 lbs. (1.4kg)
- Model No. WJ597 Mfg. No. 396 Price/Each \$

MULTI-PURPOSE WORK CENTRE

- This is a most versatile combination. perfect for home or hobby needs
- This unit stands 7 7/8" (200 mm) tall and weighs 5 lbs. (2.3 kg)
- Model No. WJ598 Mfg. No. 350 Price/Each \$

PANAVISE"



PALMGREN® DUAL FORCE PRECISION MACHINE VISES

- High quality precision vise
- Wide clamping capacities
- Equipped with dual force anti-lift mechanism Vise nut does not extend past the vise body
- Hardened jaw plates and vise bed
- Bed heights matched to +- 0.0004'
- 80 000 PSI stress relieved ductile iron castings
- Lifetime guarantee
- Jaw Plate: Smooth
- Overall Length: 18-15/16"
- Jaw Deflection: 0.001" @ 4000 lbs.
- Base Type: Slotted



Model No.	Jaw Width	Jaw Opening	Throat Depth	Price /Each
TY0551	5 15/16"	8 63/64"	1 3/4"	
TY0552	8 7/64"	10 7/16"	2 13/64"	

PALMGREN® DUAL FORCE PRECISION DOUBLE STATION MACHINE VISES

- Dual force anti-lift mechanism at both ends of the vise
- 80000 PSI ductile iron casting
- Can be mounted horizontally or vertically
- One handle operates the two moveable jaws
- Can clamp two of the same size parts Clamping force equalization
- Precision ground on all sides
- Height tolerance is within 0.001"
- Different work piece clamping applications
- Lifetime guarantee
- Jaw Plate: Smooth
- Overall Length: 21-7/64"
- Base Type: Slotted

Model	Jaw	Jaw	Throat	Price
No.	Width	Opening	Depth	/Each
TY0553	5 63/64"	12 7/16"	1 3/4"	

PALMGREN® TRADITIONAL DRILL PRESS VISES

- · Vise is ideal for use for drilling, tapping, reaming, spot-facing, counter boring and countersinking operations
 - Made from 30 000 PSI tensile strength, fine grain cast iron
- Base and bed parallel to 0.001"
- Centre of base is open for holding work through the body of the vise
- Can be mounted on base, sides or on end for general use
- Lifetime guarantee
- Jaw Plate: Grooved
- Overall Length: 5-1/8"
- Overall Height: 1-13/16" Jaw Deflection: 0.002" @ 2000 lbs.
- Base Type: Universal
- Model Jaw Jaw Throat Price Depth /Each No. Width Opening TY0554 1 1/2" 1 1/2' 13/4" TY0555 4" 4" . 6" . 6" TY0556 2"

PALMGREN® SWIVEL VISE BASES

- Allows position to 1 degree increments
- Comes with 11/16" keyways to align the
- vise to the machine table
- Base Type: Slotted



Model	Overall	Overall	Price
No.	Length	Height	/Each
TY0557	11"	2 1/2"	
TY0558	13"	2 1/2"	



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TOOLS & EOUIPMENT







VISE ACCESSORIES

IMPROVE CLAMPING VERSATILITY & SAFETY







WILTON MAGNEFIX VISE JAW CAPS TEMPORARY WORK-HOLDING SYSTEMS

- Designed to protect both the vise jaws and the workpiece from marring and distortion during any clamping application
- Caps are constructed from a hardened aluminum alloy with two built-in circular
- permanent magnets on the backside which hold the product securely to the vise • The caps are magnetic towards the vise side to prevent steel filings from attaching
- themselves to the jaws and keep the clamped part from becoming magnetized

MODEL A - ALUMINUM MAGNEFIX JAW CAPS

- Aluminum alloy design includes six grooves to compensate for the unevenness of the workpiece
- Deeper Vee-Groove ensures more secure clamping of circular work pieces
- Use together with Rubber Magnefix Jaw Caps when clamping taper pins and spherical parts

MODEL F - FIBER FACE MAGNEFIX JAW CAPS

- Aluminum alloy with laminated fiber cover to
- prevent the absorption of outside materials
 Heat parts rapidly by concentrating heat into
- Heat parts rapidly by concentrating heat into part
 Use on workpieces to avoid distortion and clamping marks
- Ose on workpieces to avoid distortion and clamping mai

MODEL R - RUBBER FACE MAGNEFIX JAW CAPS

- Aluminum alloy with synthetic rubber cover
- Jaw cap conforms to workpiece and grips firmly
- without slipping while protecting work surface • Use in combination with aluminum and prism
- jaw caps to clamp taper pins or tapered workpieces

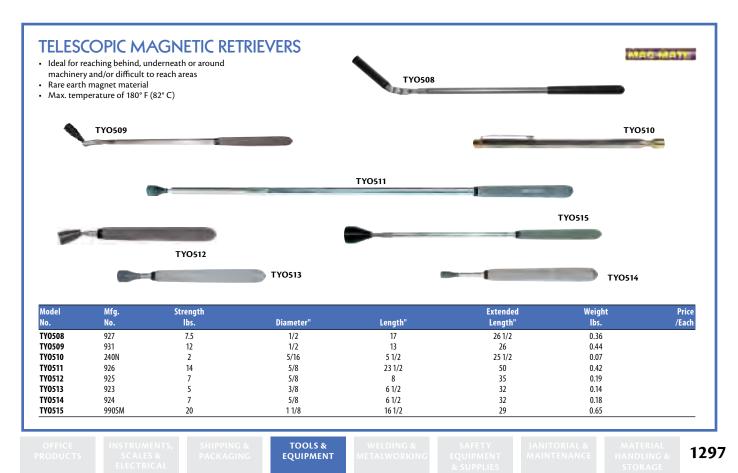
MODEL P - PRISM MAGNEFIX JAW CAPS

- Jaw construction includes a 120° horizontal Vee-Groove, three vertical Vee-Grooves and a 90° groove for marking out and centre punching
- · Ideal for light tapping and thread cutting applications





Model No.	Mfg. No.	Jaw Width"	Price /Each	Model No.	Mfg. No.	Jaw Width"	Price /Each
STANDA	RD ALUMI	NUM MAGNEF	IX JAW CAF	Ś			
TM830	A-3	3		TJW079	A-5.5	5 1/2	
TM832	A-4	4		TM835	A-6	6	
TM833	A-4.5	4 1/2		TJW081	A-6.5	6 1/2	
TM834	A-5	5					
FIBER FA	CE MAGNE	FIX JAW CAPS					
TM844	F-4	4		TM846	F-5	5	
TM845	F-4.5	4 1/2		TM847	F-6	6	
RUBBER	FACE MAG	NEFIX JAW CAI	PS				
TM856	R-4	4		TJW092	R-5.5	5 1/2	
TM857	R-4.5	4 1/2		TM859	R-6	6	
TM858	R-5	5		TJW094	R-6.5	6 1/2	
PRISM N	AGNEFIX J	AW CAPS					
TM851	P-4	4		TJW100	P-5.5	5 1/2	
TM850	P-4.5	4 1/2		TM853	P-6	6	
TM852	P-5	5		TJW102	P-6.5	6 1/2	





· Retrieve hot parts from burn tables

MAG MATE

BURN TABLE/PARTS HANDLING

Model No.	Holding Capacity lbs.	Ľ"	W "	H"	Price /Each
TGY637	55	3 3/8	2 3/8	4 13/16	

ON/OFF MAGNETIC HANGING HOOKS

- · Hanging hooks are perfect for temporary
- holding of lines, hoses, lights, tools and more
- Powerful rare earth magnet
- Locking On/Off handle
- · Attaches to flat or round surface with ease

And the second second

Model	Strength				Weight	Price
No.	lbs.	Diameter"	Length"	Height"	lbs.	/Each
TY0548	35	13/4	5 3/4	2 3/4	0.95	
TY0549	110	2 1/2	7 5/8	4 5/8	4.65	

MAG-MAID MAGNETIC CLEAN-UP TOOLS

- · Picks up steel chips, fasteners and scrap from sworf
- To clean, simply pull the plunger handle to the top
- of the tube and the collected metal falls off Powerful rare earth magnet



Mag Mam

And and the owner water to be a set of				
Model			Wt.	Price
No.	Length"	Diameter"	lbs.	/Each
TGY638	15	1	1.25	
TGY639	36	1	2.75	

LONG REACH MAGNETIC RETRIEVERS

- Powerful pickup tools
- Durable handle with grip .
- Model TGY621 has a 45° angled head

Mag-Ma			3	4
Model	Handle	Head	Holding	Price
No.	Length"	Dimensions	Capacity lbs.	/Each
TGY621	38	3 1/4" Dia.	47.5	
TGY622	39.72	6" x 1 3/8"	28	

MAGNETIC TOOL HOLDERS

- Mount to walls, work
- benches, ladders, etc. 3/16" mounting holes
- and screws provided
- TLY308 and TLY309:
- holes on 16" centres
- · Holds a 10-lb. hammer!

MAG-MATE Model Pull Wt. Prio Thickness" H" No. Ľ lbs. lbs. /Eac TLY307 1 1/8 12 120 2.0 2 **TLY308** 18 1 1/8 2 180 3.0 TLY309 1 1/8 2 24 240 4.0

Remove steel parts from bins, boxes, kegs, tables or floors. . Durable aluminum housing

MAGNETIC PARTS RETRIEVERS

- with comfortable non-slip handle
- Powerful, lightweight permanent magnet · Easy release of collected parts or scrap

SHORT HANDLED VERSION

Model No.	Holding Capacity lbs.	Ľ	W"	H"	Price /Each
TGY633	7	4 1/2	2 3/8	7 1/2	
TGY635	11	4 1/2	2 3/8	7 1/2	

ON/OFF POWER GRIPS

- Powerful rare earth magnet
- Securely grips heavy parts
- . Works on flat or pipe
- Locking On/Off handle .
- Comfort grip

MOD MOT

Max. temperature of 180° F (82° C)



MAG MATT

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Model	Strength				Weight	Price
No.	lbs.	Diameter"	Length"	Height"	lbs.	/Each
TY0546	60	2	6	5	1.65	
TY0547	100	3 3/8	7 1/2	7 3/4	5/64	

POWER GRIPS

- Holds against shear force
- Securely grips heavy parts
- Aluminum insulated Epoxy encapsulated magnet



Magman

Model No.	Length"	Height"	Width"	Holding Value Ibs.	Price /Each
LS717	2 1/8	2	3/4	25	
LS718	4	2 1/4	3/4	51.5	
LS719	5 1/4	2 3/4	17/8	92.5	

MAGNETIC PRINT HOLDERS

Ideal for holding papers, prints and charts against steel partitions, machinery and metal desks

Magnetic strength holds

through many layers of paper Does not mark or tear paper



MAGMATE

Model	Pull			Price
No.	lbs.	Dia."	Height"	/Each
TGY600	7	1 13/64	11/16	
TGY601	12	1 13/32	9/32	
TGY602	19	2 1/32	5/16	

MAGNETIC STRIPS

- Conforms to any contour
- Holds many times its weight
- Can be cut, drilled or shaped
- Available with or without adhesive backing

Thick"	Width"	Length'	Max. Pull per Lin. Ft. (Ibs.)	Model No. w/o Adhesive	Price /Roll	Model No. w/Adhesive	Price /Roll
1/32	1/2	200	2	TGY640		TGY648	
1/32	3/4	200	3	TGY641		TGY649	
1/32	1	100	4	TGY642		TGY650	
1/32	1	200	4	TGY643		TGY651	
1/16	1/2	100	5	TGY644		TGY652	
1/16	3/4	100	8	TGY645		TGY653	
1/16	1	50	11	TGY646		TGY654	
1/16	1	100	11	TGY647		TGY655	

TOOLS & EQUIPMENT

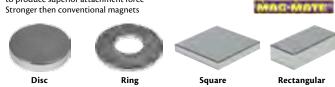






MAX-ATTACH™ RARE EARTH MAGNETS

- Utilizes Polymagnet® multi-pole magnetizing technology
- to produce superior attachment force •



Model No.	Strength lbs.	Diameter"	Height"	Weight lbs.	Price/Each
DISC					
TY0517	7.7	0.125	0.5	0.007	
TY0518	9.3	0.187	0.5	0.037	
TY0519	8.8	0.125	0.5	0.007	
TY0520	10.5	0.187	0.5	0.037	
TY0521	15.3	0.062	0.75	0.007	
TY0522	18	0.125	0.75	0.015	
TY0523	16.5	0.062	1	0.013	
TY0524	37.3	0.125	1	0.027	
TY0525	38.4	0.187	1	0.040	
TY0526	77	0.125	1.5	0.060	
RING					
TY0527	16.3	0.125	0.75	0.014	
TY0528	16	0.125	0.75	0.011	
TY0529	33.2	0.125	1	0.026	
TY0530	67.3	0.125	1.5	0.059	
TY0531	119	0.187	2	0.128	

Model No.	Strength lbs.	Diameter"	Height"	Width"	Weight lbs.	Price/Each
SQUARE						
TY0532	39.8	0.125"	1	1	0.034	
TY0533	13.1	0.125"	0.5	0.5	0.008	
TY0537	86.4	0.125"	1.5"	1.5	0.076	
RECTANG	ULAR					
TY0534	17.1	0.125	1	0.5	0.017	
TY0535	62.1	0.187	1.5	1	0.076	
TY0536	64.8	0.187	1.5	1	0.076	

LOW PROFILE CUP MAGNETS

Cup magnets are ideal for hanging signs, lights, etc. or retrieving steel items from tanks, vats and bins.



TGY620

48

3 3/16



MAG-MATE

Model No.	Holding Capacity Ibs.	Diameter"	Cup Height"	Magnet I.D."	Hole I.D."	Wt. Ibs.	Price /Each
PLATE	D CUP						
TGY603	7	1 1/4	3/16	1/4	5/32	0.10	
TGY605	i 10	1 13/32	9/32	3/8	3/16	0.38	
TGY606	i 13	2 1/32	5/16	7/8	3/16	0.42	
TGY609	9 41	2 5/8	3/8	1	9/32	0.58	
TGY611	35	2 7/8	3/8	1	1/4	0.59	
TGY612	48	3 3/16	7/16	1 7/32	9/32	0.60	
TGY613	95	4 29/32	1/2	13/4	1/2	0.80	

Model No.	Holding Capacity lbs.	Diameter"	Cup Height"	Total Height"	Thread Size	Wt. Ibs.	Price /Each
PLATE	D CUP & BO	LT					
TGY614	7	1 1/4	3/16	1 3/16	6 - 32	0.15	
TGY615	13	2 1/32	5/16	1 13/16	10 - 24	0.56	
TGY616	5	2 1/4	3/16	1 7/8	5/16" - 8	0.32	
TGY617	41	2 5/8	3/8	1 15/16	3/8" - 16	0.60	
TGY618	48	3 3/16	7/16	1 3/16	3/8" - 16	0.68	
Model No.	Holding Capacity lbs.	Dia."	Cup Height"	Total Height"	Loop I.D."	Wt. Ibs.	Price /Each
PLATE	D CUP & LO	ОР					
TGY619	41	2 5/8	3/8	1 15/16	1/2	0.60	

1 3/16

1/2

0.68

TOOLS &

EQUIPMENT

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VISES, MAGNETS & CLAMPS

RECTANGULAR FIXTURE ASSEMBLIES

- A: Ceramic magnet (TKZ965 is Rare Earth). 400 stainless steel channel.
- Use 1/4"-20 (m6) fasteners for mounting. B: Nickel plated rare earth magnet. Bright plated steel channel.
- Use 1/4"-20 (m6) fasteners for mounting. C: Ceramic magnet, 400 stainless steel channel & epoxy filled.
- Use 10-24 (m5) fasteners for mounting.



MAG-MATE

Model		Pull					Wt.	Price
No.	Style	lbs.	Thickness"	W"	L"	Ctrs"	lbs.	/Each
TGY707	A	12.5	3/8	13/8	3 1/4	2 5/8	0.10	
TKZ965	Α	43.5	3/8	1 3/8	3 1/4	2 5/8	0.20	
TGY708	Α	13.5	7/16	1 3/8	3 1/4	2 5/8	0.30	
TGY709	Α	15.5	9/16	1 3/8	3 1/4	2 5/8	0.30	
TKZ966	В	14	3/16	9/16	1 3/4	1 1/2	0.10	
TLY310	C	9	9/16	1	2 1/2	2	0.20	
TLY311	C	21	9/16	1	4 1/2	4	0.40	
TLY312	C	29	9/16	1	6 1/2	6	0.60	
TLY313	С	60	9/16	1	12 1/2	12	1.30	
TGY683	C	63	5/8	1 1/2	12	11	1.62	
TGY685	C	150	5/8	2 1/2	12	11	2.74	

CUP MAGNETS W/HOLDERS

· Secure cables, wires, brooms and more to any steel surface



ING MOTE

Model No.	Strength lbs.	Width"	Length"	Clamp Opening"	Price/Each
TY0538	19	2.03	2-5/16	5/8-1-1/4	
TY0539	11	1.41	1-17/32	3/4-1/1/8	
TY0540	11	1.41	1-17/32	3/4-1-1/8	
TY0541	19	2.03	2-3/16	1-1/2-1-7/8	
TY0542	19	2.03	2.44	1.38	
TY0543	41	2.63	1.13	0.87-1.25	
TY0544	7	1.24	0.44	0.38-0.16	
TY0545	7	0.75	0.75	0.44-1.00	

RARE EARTH MAGNET MATERIAL

- · Extremely powerful magnet is ideal
- for miniaturized applications
- Operates best at temperatures below 94°C High resistance to demagnetization
- Nickel plated finish

-					
	MINTE				
Model	Mfg.			Holding Capacity	Price
No.	No.	Dia."	Length"	lbs.	/Each
TGY656	NE1206NP35	0.120	0.060	0.2	
TGY657	NE1806NP35	0.187	0.060	0.6	
TGY658	NE2225NP35	0.220	0.250	1.5	
TGY659	NE2250NP35	0.220	0.500	1.8	
TGY660	NE2510NP35	0.250	0.100	1.0	
TGY661	NE2512NP35	0.250	0.125	1.2	
TGY662	NE2518NP35	0.250	0.187	1.5	
TGY663	NE2525NP35	0.250	0.250	1.8	
TGY664	NE2550NP35	0.250	0.500	2.1	
TGY665	NE3706NP35	0.375	0.060	1.0	
TGY666	NE3710NP35	0.375	0.100	2.0	
TGY667	NE3712NP35	0.375	0.125	2.6	
TGY668	NE3718NP35	0.375	0.187	4.5	
TGY669	NE3720NP35	0.375	0.200	4.5	
TGY670	NE3725NP35	0.375	0.250	4.6	
TGY671	NE3737NP35	0.375	0.375	5.7	
TGY672	NE3750NP35	0.375	0.500	6.7	
TGY673	NE5006NP35	0.500	0.060	3.0	
TGY674	NE5012NP35	0.500	0.125	4.0	
TGY675	NE5018NP35	0.500	0.187	5.7	
TGY676	NE5020NP35	0.500	0.200	6.0	
TGY677	NE5025NP35	0.500	0.250	6.5	
TGY678	NE5037NP35	0.500	0.375	8.9	
TGY679	NE5050NP35	0.500	0.500	11.2	