

WORK HOLDING & TOOL STEEL



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Clamps - DE-STA-CO® Toggle Lock Plus Clamps



DE-STA-CO® has taken several of their popular toggle clamps and have added a locking lever for improved safety. The locking lever helps ensure that the over-center locking condition is maintained. In order to open each clamp, the locking lever must first be released. If a clamp application warrants concerns over accidental clamp opening, severe stresses of vibrations on the clamps, or overhead installations, then the DE-STA-CO® Toggle Lock Plus is the right clamp for the job.

Vertical Style

These clamps are unique in that they lock with the aid of the locking lever in both the clamped and unclamped position. Bolt retainer supplied with solid bar Models 207-LR and 210-SR. Spindle assembly and flanged washers supplied with "U" bar Models 207-UR and 210-UR.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
207-UR	4352-078	6-29/32	1-1/4	4-37/64	500	\$48.89
210-UR	4352-108	8	1-11/16	6-39/64	750	70.67



Model 207-UR

Horizontal Style

Equipped with a locking lever which locks in the clamped position only. Clamps are supplied with bonded neoprene-tipped spindle assemblies and flanged washers.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
225-UR	4352-251	1-59/64	1-21/64	7-9/64	500	\$45.29
235-UR	4352-351	2-35/64	1-45/64	10-17/32	750	77.27
305-UR	4353-051	1-7/16	1/2	2-1/4	150	35.34
307-UR	4353-071	2-7/16	7/8	3-39/64	350	48.31



Model 225-UR

Pull Action Latch Style - Horizontal Type

Supplied with a locking lever catch accessory which allows the clamp to lock in the closed position only. Latch plates are supplied with the clamp.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
323-R	4353-233	1-3/16	4	1-11/64	360	\$31.46
323-RSS	4353-234	1-3/16	4	1-11/64	360	57.93
331-R	4353-311	2-5/64	5-31/32	1-3/4	700	40.35
331-RSS	4353-318	2-1/64	6-11/64	2	700	74.71
341-R	4353-411	2-57/64	7-1/2	2-1/2	2000	59.08
341-RSS	4353-414	2-7/8	8-9/32	2-1/2	2000	126.31
375-R**	4353-751	4-3/16	9-5/8	3-1/2	4000	113.71
385-R**	4353-854	1-3/8	8-3/4	2-3/16	7500	143.73



Model 341-R

J-Hook Pull Action

Supplied with a release lever catch accessory which allows the clamp to lock in the closed position only. Large handle pad improves operability of the clamp.

MODEL NO.	ORDER NO.	HEIGHT TO (*)	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
351-R	4353-511	3/4	9-7/64	4	375	\$40.74



Model 351-R

** Latch plate optional

Plunger Style

Patented design locks the release lever into the forged steel base to prevent accidental opening. Clamps lock in both the extended and retracted positions while the release lever secures the clamp in the extended position only.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (*) OF PLUNGER	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
603-R	4356-032	3-27/64	31/32	4-11/16	1-1/2	600	\$61.67
630-R	4356-301	3-1/16	13/16	7-1/32	2	2500	123.10



Model 603-R

Pull Action Latch Style - Vertical Type

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL LENGTH	DRAWING MOV'MT.	CAPACITY LBS.	PRICE EACH
324-R	4353-248	2-5/64	3-15/32	1-17/32	500	\$46.34
334-R	4353-343	2-35/64	4-1/8	2	1000	57.23
344-R	4353-443	2-25/64	5-49/64	2-1/2	2000	86.87



Model 324-R

Heavy Duty Vertical Hold Down Clamps

Features: High strength forged alloy steel clamping arm, Hardened steel pivot pins and bushings for long life, Large clearance under clamping bar, Black oxide finish.

MODEL NO.	ORDER NO.	HEIGHT TO (*)	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
5110-R	4397-939	8.7	3.37	6.33	1150	88.53



Model 5110-R

Heavy Duty Horizontal Hold Down Clamps

Features: High strength forged alloy steel clamping arm, Hardened steel pivot pins and bushings for long life, Black oxide finish

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
5305-R	4397-975	1.51	1.12	8.36	600	\$98.67
5310-R	4397-979	2.00	1.31	11.02	1300	137.44



Model 5310-R

Vertical Hold Down Clamps

Features: Longer handle with greater hand clearance, Longer clamp arm, Spindle contacts workpiece vertically, Bolts up to legacy model 202

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
2002-UR	4351-902	4.72	0.95	3.29	600	\$37.63
2007-UR	4351-905	7.17	1.25	4.82	1000	55.92
2010-UR	4351-908	9.08	1.7	6.09	1400	81.89



Model 2002-UR

Horizontal Hold Down Clamps

Features: Longer handle with greater hand clearance, Longer clamp arm, Spindle contacts workpiece vertically

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
2013-UR	4351-926	1.3	0.75	5.87	295	\$41.32
2017-UR	4351-927	1.95	0.98	8.65	560	54.37
2027-UR	4351-928	2.25	1.32	9.88	840	59.48

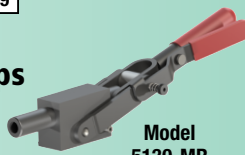


Model 2017-UR

Heavy Duty Straight Line Action Clamps

Features: Hardened plungers, Reverse acting (handle rotates backward as plunger advances) for a low profile, keeps handle out of the work zone, Hardened steel pivot pins and bushings for long life, Black oxide finish

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (*)	OVERALL LENGTH	HOLDING CAPACITY LBS.	DRAWING MOV'MT	PRICE EACH
5130-R	4397-947	3.63	1.38	11.11	1.9	5800	\$118.77

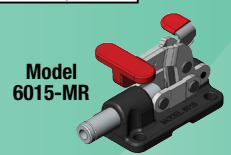


Model 5130-MR

Straight Line Action Clamps

Features: Smallest machined cast base plunger clamp • Compact design combined with high holding capacity • Allow handle to fall below mounting plane to lock in retracted position

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (*)	OVERALL LENGTH	HOLDING CAPACITY LBS.	DRAWING MOV'MT	PRICE EACH
6015-R	4356-114	1-19/32	1/2	2-61/64	45/64	560	\$56.51
6015-MR	4356-014	1-39/64	1/2	2-61/64	45/64	560	58.71



Model 6015-MR

Clamps

Model Identification Code:
 S Solid Holding Bar (bolt retainer furnished)
 SS Stainless Steel
 U Shaped Holding Bar
 *Measured to (C) of mounting holes on straight base models.

2 SS = 7

Straight-Line Action Clamps

Straight-Line Toggle Clamps

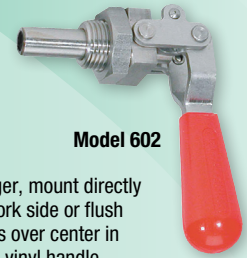
Smallest of the straight-line clamps, ideal for electronic applications and similar small fixturing. Model 601 has an 8-32 nylon spindle.



Model 601

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (C) OF PLUNGER	OVERALL LENGTH	PLUNGER TRAVEL	HOLDING CAPACITY LBS.	PRICE EACH
601	4356-010	1-3/16	1/2	2-5/8	5/8	150	\$15.34
601-O	4356-016	1-3/16	1/2	2-55/64	5/8	100	18.65
601-SS	4356-019	1-3/16	1/2	2-5/8	5/8	100	35.92
6001	4356-003	1-17/64	1/2	2-5/8	5/8	150	29.84

Fully Retractable Plunger Clamps



Model 602

These models have fully retractable plunger, mount directly through a member by a jam nut on the work side or flush by drilling and tapping the member. Locks over center in either extended or retracted position. Red vinyl handle.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL LENGTH	PLUNGER TRAVEL	HOLDING CAPACITY LBS.	PRICE EACH
602	4356-020	3-9/64	2-7/16	3/4	200	\$21.68
602-SS	4356-029	3-9/64	2-7/16	3/4	200	79.21
604	4356-040	4-5/32	4-25/32	1-1/2	300	24.20
604-SS	4356-049	4-5/32	4-25/32	1-1/2	400	71.60
624	4356-240	5-5/8	6-11/16	2-5/8	700	56.41
624-SS	4356-249	5-5/8	6-11/16	2-5/8	700	151.69

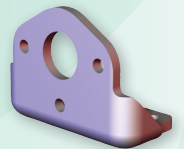
Compact Straight-Line Action Clamps



Model 6015

MODEL NO.	ORDER NO.	HEIGHT TO (*)	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
6015	4356-115	0.5	2.96	0.7	560	\$42.58
6015-SS	4356-113	0.5	2.96	0.7	630	76.95
6015-M	4356-015	1/2	2-61/64	45/64	560	42.58
6015-MSS	4356-013	1/2	2-61/64	45/64	630	69.96

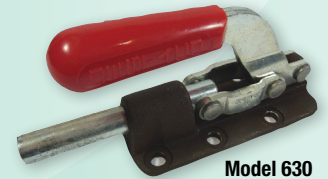
Fully Retractable Plunger Clamp Mounting Brackets



MODEL NO.	ORDER NO.	USE WITH CLAMP	HT. TO (C) OF PLUNGER	PRICE EACH
604106	4356-041	604	1/2	\$18.20

Low Profile Plunger Clamps

Compact models feature De-Sta-Co balanced construction for durability and rigid holding ability. Red vinyl grip. Clamps lock in both the extended and retracted position.



Model 630

Heavy Duty Straight Line Action Clamps

Features: Hardened plungers, Reverse acting (handle rotates backward as plunger advances) for a low profile, keeps handle out of the work zone. Hardened steel pivot pins and bushings for long life, Black oxide finish.



Model 5130

MODEL NO.	ORDER NO.	HEIGHT TO (*)	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
5130	4397-940	1.38	11.11	1.9	5800	\$69.92
5131	4397-948	1.1	7.37	1.1	2500	55.72
5133	4397-956	1.38	12.89	3.18	4600	78.34

Heavy Duty Straight Line Action Clamps - Square Plunger

Features: Smallest machined cast base plunger clamp • Compact design combined with high holding capacity • Allow handle to fall below mounting plane to lock in retracted position



Model 5150

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (*)	OVERALL LENGTH	DRAWING MOV'MT	HOLDING CAPACITY LBS.	PRICE EACH
5150	4397-964	3.63	1.38	11.25	1.91	5800	\$89.71

Large Capacity Clamps

Model has the largest capacity of the straight-line action clamps. Forged alloy steel base and handle. Removeable ring pivot pin construction permits easy removal of plunger after mounting. Locks over center in both extended and retracted position.

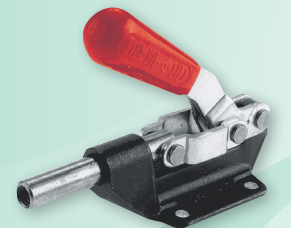


Model 650

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT TO (C) OF PLUNGER	OVERALL LENGTH	PLUNGER TRAVEL	HOLDING CAPACITY LBS.	PRICE EACH
650	4356-500	4-7/8	2-1/4	11-1/4	3	16000	\$193.79

Push-Pull Plunger Clamps

These units have a large holding capacity for their size, and are well suited for use in confined areas. Equipped with red ergonomic grips. Locks in either extended or retracted position.



Model 603

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HUT. BASE TO (C) OF PLUNGER	OVERALL LENGTH	PLUNGER TRAVEL	HOLDING CAPACITY LBS.	PRICE EACH
603	4356-030	3-9/32	31/32	4-23/32	1-1/4	600	\$28.87
603-SS	4356-039	3-9/32	31/32	4-23/32	1-1/4	840	73.14
605	4356-050	3-5/32	31/32	5-7/16	1-1/4	300	23.48
608	4356-080	4-3/64	1-1/4	6-1/8	1-5/8	850	56.32
609	4356-090	3-1/4	31/32	5-7/16	1-1/4	300	29.29

Hold Down Clamps

Vertical Handle Hold-Down Clamps

Model 2002-S



These clamps deliver two to three times the holding capacity of our legacy models in the same envelope. Now you can save valuable space in all your applications without sacrificing holding capacity or clamp performance. The open "U" bar has a knob on the end to prevent the spindle from slipping off the end of the arm. Unique design delivers greater hand clearance in the open position eliminating pinch points and improving safety and ergonomics. Clamp comes complete with ergonomic handle grip, two flanged washers and spindle assembly ("U" bar models only"). All "S" bar models supplied with bolt retainer. To order without a spindle, include a -LS suffix.

MODEL NO.	ORDER NO.	OVERALL HEIGHT (IN.)	HEIGHT UNDER BAR (IN.)	OVERALL LENGTH (IN.)	HOLDING CAPACITY LBS.	PRICE EACH
2002-S	4352-003	4.73	0.95	3.29	600	\$24.32
2002-U	4352-002	4.73	0.95	3.29	600	22.18
2002-UB	4352-004	5.07	1.27	3.29	600	25.72
2007-U	4352-007	7.21	1.25	4.82	1000	30.59
2007-UB*	4352-006	7.64	1.68	4.82	1000	33.90
2010-U	4352-001	9.00	1.70	6.09	1400	47.56

*Code = 7

Hold-Down Action Clamps Vertical Hold-Down Clamps

Model 207-U



All models have a red vinyl handle grip. Many options are available in most model sizes including straight or flanged bases, solid or U-bars, extra length bars and stainless steel. Bolt retainer is furnished with solid bar models, flanged washers with U-bar models. Model 2002-U207 is mounting pattern interchangeable with Model 207-U.

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
201-U	4352-010	3-1/32	5/8	2-1/64	100	\$15.07
201-USS	4352-019	3-1/32	5/8	2-1/64	125	32.99
202	4352-020	4-7/32	15/16	2-5/16	200	15.97
202-SS	4352-029	4-7/32	15/16	2-5/16	250	42.15
202-U	4352-026	4-7/32	15/16	2-47/64	200	15.66
202-UL	4352-120	4-7/32	15/16	3-17/64	200	18.14
202-USS	4352-039	4-7/32	15/16	2-47/64	250	42.35
207-L	4352-084	6-57/64	1-1/4	5-1/64	500	25.40
207-S	4352-080	6-57/64	1-1/4	3-3/4	500	21.59
207-U	4352-070	6-57/64	1-1/4	3-11/16	375	20.47
2002-U207	4352-202	5.01	1-1/4	3.29	600	23.77
207-UL	4352-074	6-57/64	1/14	5-13/32	375	21.52
207-USS	4352-079	5-5/8	1-1/4	4-3/8	450	54.27
210-S	4352-101	8	1-43/64	5-17/32	750	43.04
210-U	4352-100	8	1-43/64	5-17/32	600	31.95
210-USS	4352-109	8	1-43/64	5-17/32	750	80.30
247-S	4352-471	8-11/16	2	6-7/8	1000	57.69
247-U	4352-470	8-11/16	2	6-7/8	1000	48.51
267-U	4352-670	11-7/8	3-5/64	8-59/64	1200	77.92

Heavy Duty Vertical Handle Hold-Down Clamps

- High strength forged alloy steel clamping arm
- Hardened steel pivot pins and bushings for long life
- Black oxide finish

Model 5110



MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	CAPACITY LBS.	PRICE EACH
5905	4397-980	6.75	1.51	4.02	750	\$63.27
5905-B	4397-981	6.24	1.27	4.02	750	56.20
5910	4397-982	9.27	1.99	6.02	1600	80.02
5910-B	4397-983	8.72	1.75	6.02	1600	77.91
5915	4397-984	11.25	2.72	7.5	2750	125.38
LARGE CLEARANCE UNDER CLAMPING BAR						
5110	4397-936	8.7	3.37	6.33	1150	64.10

Horizontal Handle Hold-Down Clamps



Model 2013-U

- 60% more holding capacity than legacy product
- Robust Design
- Low arm deflection under load (greater stiffness)
- Long Handle, increased operator comfort
- DE-STA-CO locks handle in open and closed positions
- Available standard or as an add-on kit
- Large Hand Clearance eliminates "knuckle busters"
- Adjustable Pre-load eliminates arm play for locating applications
- Low Pivot Point Provides perpendicular clamping force
- Bushings at key pivot points provides long life and smooth operation
- Fixed Handle Pivot eliminates sticking points, provides smooth action

MODEL NO.	ORDER NO.	OVERALL HEIGHT (IN.)	HEIGHT UNDER BAR (IN.)	OVERALL LENGTH (IN.)	HOLDING CAPACITY LBS.	PRICE EACH
2013-U	4351-918	1.27	0.75	5.88	295	\$25.30
2017-U	4351-919	1.95	0.98	8.62	560	31.44
2027-U	4351-920	2.20	1.32	9.88	840	34.44

Horizontal Hold-Down Clamps

Low silhouette series requires minimum overhead clearance. Spindle, jam nuts, and flanged washers or bolt retainer are included. Bar opens 90° to completely clear work area. Perfect as OEM component on pressure vessels and in assembly jigs.



200 Series Straight Handle

300 Series T-Handle

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
205-S	4352-060	43/64	3/8	2-25/32	60	\$11.71
205-USS	4352-069	43/64	3/8	2-25/32	75	25.77
205-U	4352-050	43/64	5/16	2-21/32	60	11.54
205-USS	4352-059	43/64	5/16	2-21/32	75	25.25
206-S	4352-067	1-1/16	13/32	2-3/4	100	38.14
213-U	4352-130	1-25/64	23/32	4-1/8	150	15.14
213-USS	4352-139	1-25/64	23/32	4-1/8	150	35.41
215-U	4352-150	1-17/32	1	5-1/2	200	15.60
215-USS	4352-159	1-17/32	1	5-1/2	250	35.25
217-U	4352-170	1-61/64	31/32	6-9/16	200	20.10
217-USS	4352-179	1-61/64	31/32	6-9/16	250	42.81
225-U	4352-250	1-27/32	1-21/64	6-45/64	500	17.80
225-USS	4352-259	1-27/32	1-21/64	6-45/64	600	48.09
227-U	4352-270	2-7/16	1-19/64	7-9/16	500	22.16
227-USS	4352-279	2-7/16	1-19/64	7-9/16	600	57.24
235-U	4352-350	2-35/64	1-3/4	10-7/8	750	31.28
237-U	4352-370	3-13/64	1-5/8	10-43/64	750	40.20
245-U	4352-450	4-1/4	2-1/4	12-21/64	1000	63.76
305-U	4353-050	1-3/8	1/2	2-7/32	150	14.74
305-USS	4353-059	1-3/8	1/2	2-7/32	200	32.35
307-U	4353-070	2-13/32	7/8	3-39/64	350	24.09
307-USS	4353-079	2-13/32	7/8	3-39/64	350	53.60
309-U*	4353-090	3-35/64	1-19/64	5-3/16	750	42.38

*Model 309-U = 7

Heavy Duty Horizontal Handle Hold-Down Clamps

Model 5310



MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	CAPACITY LBS.	PRICE EACH
5305	4397-972	1.51	1.12	8.36	600	\$63.61
5305-B	4397-973	1.2	0.81	8.36	600	58.82
5310	4397-976	2.00	1.31	11.02	1300	94.70
5310-B	4397-977	1.69	1	11.02	1300	91.18

Low Silhouette – Drop Handle Clamp

Combined low silhouette and mounting flexibility provide easy operation for part loading and unloading. Available in U-bar and solid bar models.



Model 317-S

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
317-U	4353-170	5-5/8	2-43/64	6-13/16	375	\$34.34
317-S	4353-171	5-5/8	2-43/64	6-13/16	375	33.34

Pull Action Clamps

Model Identification Code:
S Solid Holding Bar (bolt retainer furnished)
SS Stainless Steel
U Shaped Holding Bar
 *Measured to (C) of mounting holes on straight base models.

2 SS = 7

Latch Type Clamp

Latch-type pull action clamps are convenient to operate. One hand engages or disengages the latch bar while the other moves the handle. Red vinyl grip for comfortable handling.

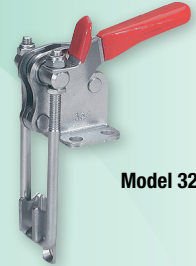


Model 311

MODEL NO.	ORDER NO.	HEIGHT TO (C)	OVERALL LENGTH	DRAWING MOVEMENT	HOLDING CAPACITY LBS.	PRICE EACH
311	4353-110	2-1/16	9-33/64	3-3/8	1200	\$39.98

Vertical Latch Type

Ideal for lid closure applications where it is better to mount the latch on the lid or door and the latch plate on the vessel or container. Height is measured from base to top of handle.



Model 324

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL LENGTH	DRAWING MOVEMENT	HOLDING CAPACITY LBS.	PRICE EACH
324	4353-240	2-63/64	3-23/64	1-17/32	500	\$27.23
324-SS	4353-249	2-63/64	3-23/64	1-17/32	500	52.73
334	4353-340	3-55/64	4-1/4	2	1000	33.76
334-SS	4353-349	3-55/64	4-1/4	2	1000	62.09
344	4353-440	5-19/64	5-23/64	2-1/2	2000	52.35
344-SS	4353-449	5-19/64	5-23/64	2-1/2	2000	105.50

J-Hook Pull-Action Clamps

Pull actions are excellent for many types of latching operations. When base is welded or bolted in place units can be used for latching pressure vessels, clean out doors, etc. J-hook is threaded for easy adjustment. Ergonomic grip.



Model 330

MODEL NO.	ORDER NO.	HEIGHT TO (C)	OVERALL LENGTH	DRAWING MOVEMENT	HOLDING CAPACITY LBS.	PRICE EACH
330	4353-300	9/16	5-41/64	2-5/16	200	\$22.11
330-SS	4353-309	4-7/32	15/16	2-47/64	200	39.86
351	4353-510	3/4	8-9/16	4	375	16.88
351-B	4353-515	55/64	8-9/16	4	375	21.16
351-SS	4353-519	3/4	8-9/16	4	450	39.24
371	4353-710	7/8	11.89	5.38	750	46.78
371-SS	4353-719	7/8	11.89	5.38	750	111.60
381	4353-810	1-27/64	12	5-3/8	750	52.97

Horizontal Pull-Action Clamps

These units combine maximum holding capacity with easy operation and simple adjustment. All use threaded U-bolts for adjustment. An optional forged latch plate is available on some models for applications such as holding two piece molds.



Model 331-R

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL LENGTH	DRAWING MOVEMENT	HOLDING CAPACITY LBS.	PRICE EACH
323	4353-230	1-1/8	4	1-3/16	360	\$16.60
323-SS	4353-239	1-1/8	4	1-3/16	360	37.49
331	4353-310	1-31/32	4	2	700	22.07
331-SS	4353-319	1-31/32	5-5/8	2	700	44.53
341	4353-410	2-3/4	7-1/2	2-1/2	2000	35.27
341-SS	4353-419	2-3/4	7-1/2	2-1/2	2000	84.27
375†	4353-750	4-3/16	10-3/4	3-1/2	4000	86.49
385†	4353-850	3-3/4	8-5/8	2-3/16	7500	110.12
385-L	4353-851	1-27/32	10-1/4	2-3/16	7500	132.84

† Latch plate not included

Pull-Action Latch Clamps 7

Controlled Latch Clamps

Model 3051-R



Innovative controlled motion allows for single handed operation. Once locked over-center, the included J-hook is completely restrained in all directions. Upon opening the hook travels forward 3/4" and then pivots out of the way.

FEATURES:

- Safe, single handed operation
- Innovative controlled motion
- Secure toggle-locking action
- Simple set-up and adjustment
- Clamp hook/arm moves and stays safely out of the way

APPLICATIONS:

- Molding
- Closures for doors, lids, covers
- Assembly
- Checking fixtures

MODEL NO.	ORDER NO.	HEIGHT TO (C)	OVERALL LENGTH	DRAWING MOVEMENT	HOLDING CAPACITY LBS.	PRICE EACH
3051	4353-052	0.69	8.98	0.75	1500	\$55.77
3051-R	4353-063					82.10

MODEL NO.	MAX. HOLDING CAPACITY	WEIGHT	EF:AF	DRAWING MOVEMENT	REPLACEMENT HOOK ASSEMBLY
3051	1500lbf	1.0lb	12:1	0.75	3051208
3051-R					

Pneumatic Power Clamps



Powered Straight-Line Action

Air or hydraulic powered straight-line action clamps provide an economical holding device suited to a wide variety of uses.



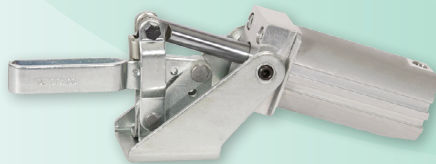
Model 803

7

MODEL NO.	ORDER NO.	OVERALL LENGTH	OVERALL HEIGHT	PLUNGER TRAVEL	HOLDING CAPACITY LBS.	PRICE EACH
803	4358-030	2-23/32	9-53/64	3/4	600	\$238.49
830	4358-300	3-17/64	14-5/64	1-1/4	2500	399.98

Powered Hold-Down Action

DE-STA-CO over center toggle action linkage combined with pneumatic cylinder provides an economical holding device, easily adapted to a wide variety of applications. Units are completely assembled and ready to operate.



Model 807-U

7

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	HOLDING CAPACITY LBS.	PRICE EACH
812-U*	4358-120	1-9/16	11/16	5-39/64	150	\$142.83
802-U	4358-020	2-11/32	1-1/16	7-25/64	200	161.10
807-S	4358-071	3	1-3/8	9-31/32	500	171.91
807-U	4358-070	3	1-3/8	9-7/32	375	171.91
810-S	4358-101	3-51/64	1-51/64	12-1/8	750	308.56
810-U	4358-100	3-51/64	1-51/64	12-9/32	600	277.34
817-S	4358-171	7-27/64	2-11/16	6-3/4	450	211.55
817-U	4358-170	7-27/64	2-11/16	6-3/16	350	202.52
827-S	4358-271	9-21/32	3-7/8	8-41/64	700	361.99
827-U	4358-270	9-21/32	3-7/8	8-3/4	600	358.64
847-U	4358-470	4-11/32	2-1/4	16	800	532.69
858	4358-580	7-1/8	3-27/32	18-3/32	4000	680.62
868	4358-680	14-21/64	4-3/16	10-7/64	4000	797.81

*Model 812-U= 6

Swing Clamps - 9500 Series

The 9500 Series Swing Clamps have been redesigned with flexible mounting options and an additional size with a larger bore.

- Ideal for tight spaces with an arm motion that rotates at the top of the stroke.
- Includes a rod weld cover to protect the rod throughout the entire stroke
- 9500 Swing Clamps can be mounted on any face with optional mounting kit (sold separately)
- Swing arms also sold separately



Model 9522-2L

6

MODEL NO.	ORDER NO.	CLAMPING STROKE	OVERALL HEIGHT	BASE WIDTH	CLAMPING FORCE AT 87PSI	SWING	PRICE EACH
9522-2L	4395-220	0.50	5.22	1.42	34lb.	LH	\$408.26
9522-2R	4395-221	0.50	5.22	1.42	34lb.	RH	408.26
9530-2L	4395-300	0.50	6.54	1.81	76lb.	LH	443.95
9530-2R	4395-302	0.50	6.54	1.81	76lb.	RH	443.95
9540-2L	4395-400	0.79	6.73	2.05	123lb.	LH	459.08
9540-2R	4395-402	0.79	6.73	2.05	123lb.	RH	459.08
9550-2L	4395-500	0.79	7.85	2.52	196lb.	LH	582.68
9550-2R	4395-502	0.79	7.85	2.52	196lb.	RH	582.68

Heavy-Duty Power Roller

These air operated power clamps use a roller and cam principle to clamp work of inconsistent thickness and still maintain a locked condition.

Model 871-2
(Clamp shown in closed position)

14

MODEL NO.	ORDER NO.	OVERALL HEIGHT	OVERALL WIDTH	ARM POSITION: WHEN CLOSED	HOLDING CAPACITY LBS.	PRICE EACH
870-2	4358-700	11-13/32	2-1/8	180	2000	\$ 896.75
871-2	4358-710	11-3/4	2-1/8	90	2000	896.75

Swing Clamps

These versatile pneumatic clamps provide a quick swing-and-clamp movement while exerting just the force your operation requires, without deforming delicate parts. All pneumatic swing clamps are equipped with sensing capabilities as a standard feature. Multiple mounting options allow the clamp to be adapted to the fixture for the best use of space and to minimize installation time.



Model 8015 Model 8115

6

MODEL NO.	ORDER NO.	BODY STYLE	OVERALL HEIGHT	BASE WIDTH	SWING	CLAMPING FORCE @ 80 PSI	PRICE EACH
8015	4358-015	Threaded Body	4-7/8	1 1/8-16	RH	22	\$383.68
8016	4358-016	Threaded Body	4-7/8	1 1/8-16	LH	22	383.68
8115	4358-115	Block Style	4-7/8	1-1/4	RH	22	366.47
8116	4358-116	Block Style	4-7/8	1-1/4	LH	22	366.47
8215	4358-215	Threaded Body	6-23/64	2 1/4-12	RH	80	507.68
8216	4358-216	Threaded Body	6-23/64	2 1/4-12	LH	80	507.68
8315	4358-315	Block Style	6-23/64	3	RH	80	498.65
8316	4358-316	Block Style	6-23/64	3	LH	80	498.65
8415	4358-415	Threaded Body	6-9/64	1 3/4-12	RH	62	479.95
8416	4358-416	Threaded Body	6-9/64	1 3/4-12	LH	62	479.95

Miniature

- Compact Design
- Long life cycle
- High holding torques
- Low weight (aluminum body)

- Two mounting areas (front, rear)
- Toggle action mechanism
- Models can be fitted with magnetic end sensors

14

Model 81L20-10100



MODEL NO.	ORDER NO.	HEIGHT (mm)	WIDTH (mm)	PISTON DIA. (mm)	HLDG. TQ. MAX. [in-lbf.]	PRICE EACH
81L12-10100	4358-130	104	28	12	220	\$509.14
81L16-10100	4358-132	119	30	16	528	553.03
81L20-10100	4358-134	151	35	20	885	643.73
81L25-10100	4358-136	151	35	25	885	643.73

Pneumatic Lever Clamps - 8700 Series

- Alternative clamping solution to swing clamps when space is limited
- Lever arm can be positioned left, forward, or right within the same clamp body
- Consistent clamping force over a range of part thickness
- Up to 25% more clamping force than comparably sized swing clamps
- Convenient mounting using the upper flange or through a clearance hole using optional jam nuts



Model 8725

6

MODEL NO.	ORDER NO.	OVERALL HEIGHT	HEIGHT UNDER BAR	OVERALL LENGTH	CAPACITY LBS.	PRICE EACH
8725	4387-250	5.67	15-25	1.97	43	\$429.39
8732	4387-320	6.65	16-30	2.36	64	446.03
8740	4387-400	6.93	19-29	2.35	106	462.67
8750	4387-500	7.87	22-33	2.95	167	495.96

Accessories

1

Polyurethane Caps—Flat Tipped



POLYURETHANE CAPS			
MODEL NO.	FOR SPINDLE DIAMETER	ORDER NO.	PRICE EACH
215219	1/4-20	4359-110	\$2.37
225219	5/16-18	4359-111	2.37
235219	3/8-16	4359-112	2.81

Neoprene Caps For Hex Head Spindles



POLYURETHANE CAPS			
MODEL NO.	FOR SPINDLE DIAMETER	ORDER NO.	PRICE EACH
215119	1/4	4359-102	\$0.95
225119	5/16	4359-103	1.02
235119	3/8	4359-105	1.19

Flanged Washers



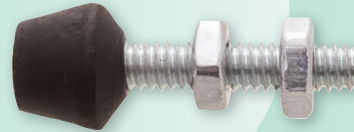
MODEL NO.	SIZE	ORDER NO.	PRICE EACH
102111	For No. 10 Spindle	4359-121	\$0.55
105106	For No. 8 Spindle	4359-122	0.48
215105	For 1/4 Spindle	4359-123	0.55
235106	For 3/8 Spindle	4359-124	0.82
247109	For 1/2 Spindle	4359-126	1.45
507107	For 5/16 Spindle	4359-125	0.66

Hex Head Spindle Assembly with Locknuts



MODEL NO.	SIZE	ORDER NO.	PRICE EACH
105203	8-32 x 27/32 (Nylon)	4359-301	\$2.10
207203	5/16-18 x 2-3/4	4359-304	2.22
210203	3/8-16 x 3	4359-305	2.69

Bolt Assembly with Bonded Cap & Locknuts



MODEL NO.	ORDER NO.	SIZE	LENGTH	PRICE EACH
201208	4359-816	10-32	1-3/8	\$ 2.66
201208-M	4359-824	M4 X 0.7	1-17/64	2.76
202208	4359-803	1/4-20	1-5/8	3.06
202208-M	4359-825	M6 X 1.0	1-47/64	3.37
205208-M	4359-836	M4 X 0.7	7/8	3.32
215208	4359-805	1/4-20	2-1/8	3.59
215208-M	4359-827	M6 X 1.0	2-1/8	3.73
225208	4359-807	5/16-18	2-3/16	3.59
225208-M	4359-828	M8 X 1.25	2-3/32	3.73
507208	4359-812	5/16-18	3"	3.66

MODEL NO.	ORDER NO.	SIZE	LENGTH	PRICE EACH
507208-M	4359-831	M8 X 1.25	3-17/64	\$3.88
240208	4359-809	3/8-16	3-1/4	4.83
240208-M	4359-830	M10 X 1.50	3-7/64	5.16
527208	4359-815	3/8-16	3-1/2	5.45
235208	4359-808	3/8-16	5-3/4	6.62
247208	4359-820	1/2-13	4"	7.47
247208-M	4359-835	M12 X 1.75	3-53/64	10.22
307208-M	4359-839	M8 X 1.25	1-9/64	3.69
305208-M	4359-838	M5 X 0.8	1-11/16	3.17

Swing Clamp Arms



MODEL NO.	ORDER NO.	USE WITH CLAMP	OVERALL LENGTH	SPINDLE SIZE	PRICE EACH
9522150	4395-222	9522-2	1.77	M6	\$42.54
9522153	4395-223	9522-2	2.56	M6	54.28
9540150	4395-404	9530-2/9540-2	1.97	M8	46.18
9540153	4395-405	9530-2/9540-2	3.15	M8	59.95
9550150	4395-504	9550-2	2.56	M10	47.80
9550153	4395-505	9550-2	3.54	M10	67.58

Sensors

These sensors are used along with pneumatic clamps to sense position of the cylinder piston.



MODEL NO.	ORDER NO.	MOUNT STYLE	CONNECTOR	FUNCTION	PRICE EACH
810169	4358-188	Round	M8 Male	Reed	\$79.24
810173	4358-192	Round	M8 Male	PNP	80.77
810174	4358-193	Round	M8 Male	NPN	80.02
8EA-109-1	4358-195	T-Slot	M8 Male	Reed	124.86
810170	4358-189	T-Slot	M8 Male	Reed	106.11
810151	4358-510	Tie Rod	None, 9ft. cord	Reed	154.68
810155	4358-155	Tie Rod	None, 9ft. cord	Reed	171.53
810158	4358-158	Bnd. Clp.	None, 9ft. cord	Reed	171.53

Extension Cables

MODEL NO.	ORDER NO.	CONNECTOR	PRICE EACH
CABL-010	4359-202	M8	\$41.58
CABL-013	4359-203	M8	42.88

Side Flange Mounting Kits



MODEL NO.	ORDER NO.	WEIGHT	USE WITH CLAMP	PRICE EACH
952260	4395-224	0.14	9522-2	\$51.13
953060	4395-304	0.25	9530-2	58.23
954060	4395-406	0.26	9540-2	58.23
955060	4395-506	0.51	9550-2	60.69

Tapped Hole Mounting Kits



MODEL NO.	ORDER NO.	WEIGHT (LBS.)	USE WITH CLAMP	PRICE EACH
952261	4395-225	0.09	9522-2	\$42.91
953061	4395-305	0.16	9530-2	49.45
954061	4395-407	0.16	9540-2	47.20
955061	4395-507	0.34	9550-2	42.32

Standard Mounting Kits



MODEL NO.	ORDER NO.	WEIGHT (LBS.)	BOLT SIZE	USE W/ CLAMP	PRICE EACH
952262	4395-226	0.15	M5 x 100	9522-2	\$19.00
953062	4395-306	0.26	M6 x 120	9530-2, 9540-2	15.42

Clamps



NEW ITEM

Squeeze Action Clamps 2

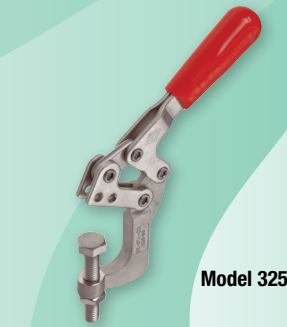
Squeeze Action

Most models have De-Sta-Co trigger release for easy one hand operation. These clamps are ideal for a wide range of applications for clamping and fixturing, holding and processing, etc.

MODEL NO.	ORDER NO.	OVERALL LENGTH	WIDTH OPENING	THROAT DEPTH	HOLDING CAPACITY LBS.	PRICE EACH
325	4353-250	8-11/16	1-25/32	1-1/4	800	\$42.28
325-SS**	4353-259	8-11/16	1-25/32	1-1/4	800	103.58
424	4354-240	4-3/4	1	1-5/64	200	27.13
441	4354-410	6-1/16	1-1/4	1-49/64	350	34.21
462	4354-620	8-1/2	1-3/4	2-23/32	700	51.62
463	4354-630	8-1/2	3	2-23/32	700	59.22
482*	4354-820	9-3/16	1-45/64	2-9/16	1200	68.83
484*	4354-840	9-1/16	3-53/64	2-9/16	1200	71.58
486*	4354-860	9-7/32	6	2-9/16	1000	76.77

** SS = 7

* Code = 14



Model 325



Model 462



Model 424



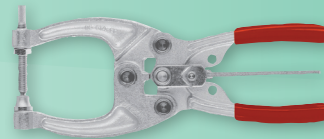
Model 463



Model 441



Model 484



Model 482



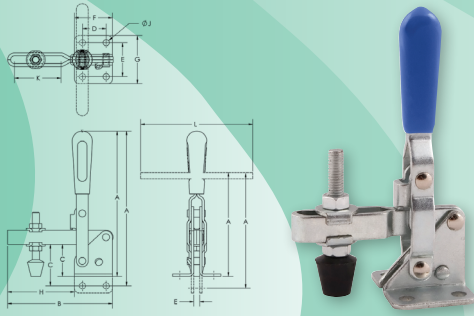
Model 486

**New Models Added Daily
Call for any models not shown**

Vertical Handle Toggle Clamps

Model 11011CR

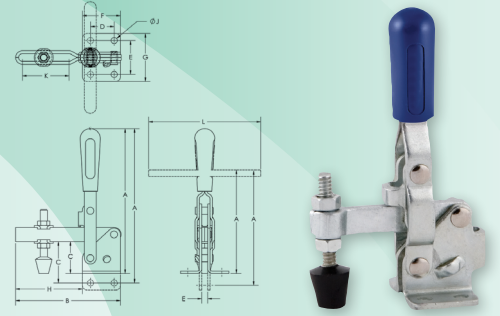
- Bar Opens: 100°
- Handle Opens: 56°
- Spindle Type: Bonded Neoprene
- Spindle Size: #10-24 x 1.38



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11011CR	201-U	4311-011	\$7.65	100	.13	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11011CR	3.38	2.07	0.73	0.63	0.95	1.00	1.32	1.06	0.17	0.77	-

Model 11020CR

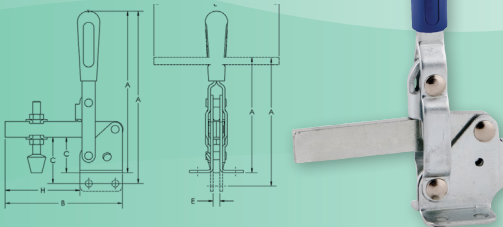
- Bar Opens: 100°
- Handle Opens: 60°
- Spindle Type: Bonded Neoprene
- Spindle Size: 1/4-20 x 1.75



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11020CR	202	4311-020	\$8.35	200	.37	Flanged	Solid	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11020CR	4.01	2.5	0.98	0.51	1	0.98	1.5	1.28	0.21	-	-

Model 11074CR

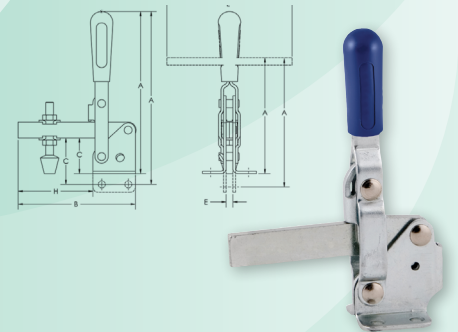
- Bar Opens: 100°
- Handle Opens: 60°
- Spindle Type: Bonded Neoprene
- Spindle Size: 5/16-18 x 2.50



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11074CR	207-S	4311-074	\$10.75	375	.75	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11074CR	5.9	3.75	1.26	0.74	1.25	1.37	1.8	2.24	0.27	-	-

Model 11671CR

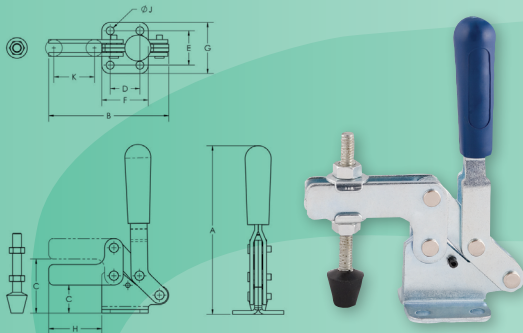
- Bar Opens: 140°
- Handle Opens: 60°
- Spindle Type: Hex Head
- Spindle Size: 3/8-16 x 3.50



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11671CR	267-U	4311-671	\$34.95	1200	5.6	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11671CR	11.87	9	3.08	2	2.75	2.99	3.75	5.99	0.48	4.33	-

Model 11352CR

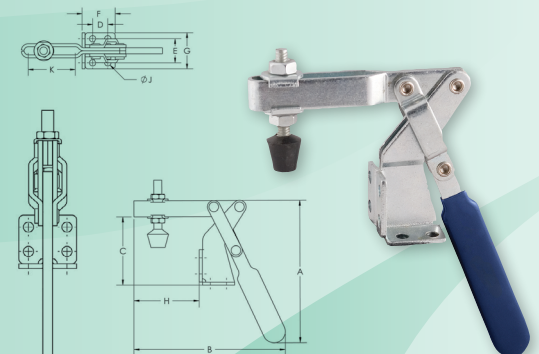
- Bar Opens: 90°
- Handle Opens: 85°
- Spindle Type: Bonded Neoprene
- Spindle Size: 3/8-16 x 3.50



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11352CR	136-DI	4311-352	\$10.85	850	1.32	Flanged	high U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11352CR	6.85	4.22	2.26	1.26	1.44	1.97	2.2	2.25	0.33	1.53	-

Model 11170CR

- Bar Opens: 185°
- Handle Opens: 60°
- Spindle Type: Bonded Neoprene
- Spindle Size: 5/16-18 x 2.50



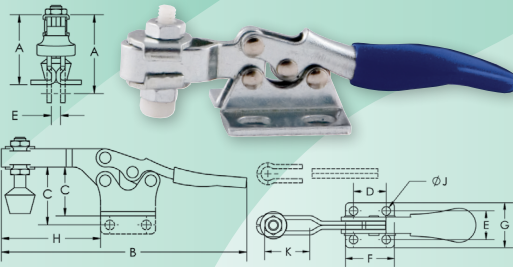
MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
11170CR	317-U	4311-170	\$14.71	375	.88	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
11170CR	6.37	5.86	2.8	0.64	1.02	1.39	1.54	2.55	0.26	2.11	-

Horizontal Handle Toggle Clamps

4 CLAMP-RITE

Models 14051CR- 14054CR

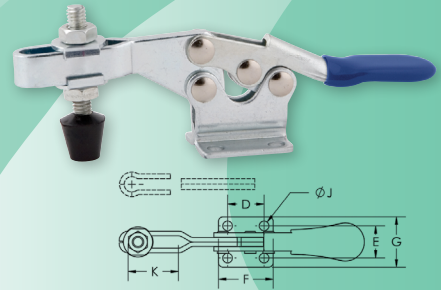
- Bar Opens: 90°
- Handle Opens: 80°
- Spindle Type: Nylon Hex Head
- Spindle Size: #8-32 x .75



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE		
14051CR	205-U	4314-051	\$5.95	60	.06	Flanged	U-bar	Std.		
14054CR	205-S	4314-054	5.95	60	.06	Flanged	Solid	Std.		
MODEL NO.	A	B	C	D	E	F	G	H	J	K
14051CR	0.70	3.10	0.34	0.53	0.42	0.95	0.98	0.78	0.17	0.48
14054CR	0.73	5.24	1.42	1.38	0.41	0.95	0.98	0.87	0.17	-

Model 14151CR

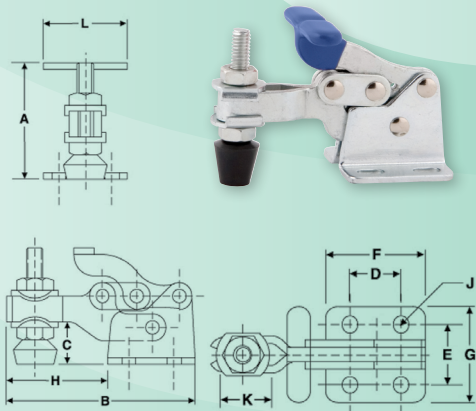
- Bar Opens: 85°
- Handle Opens: 60°
- Spindle Type: Bonded Neoprene
- Spindle Size: 1/4-20 x 2.13



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE		
14151CR	215-U	4314-151	\$8.11	200	.29	Flanged	U-bar	Std.		
MODEL NO.	A	B	C	D	E	F	G	H	J	K
14151CR	1.52	5.90	0.96	0.98	0.86	1.46	1.36	2.29	0.21	1.51

Models 16051CR- 16071CR

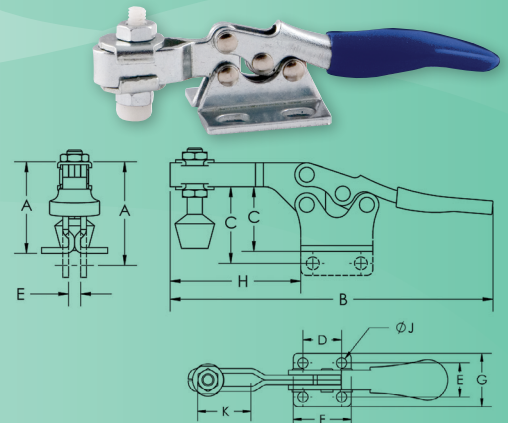
- Bar Opens: 90°
- Handle Opens: 170°
- Spindle Type: Bonded Neoprene
- Spindle Size: #10-24 x 1.38 (16051)
5/16-18 x 2.50 (16071)



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
16051CR	305-U	4316-051	\$7.40	150	.13	Flanged	U-bar	T-Handle			
16071CR	307-U	4316-071	10.90	350	.51	Flanged	U-bar	T-Handle			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
16051CR	1.47	2.30	0.65	0.53	0.66	1.03	1.03	1.26	0.17	0.44	1.32
16071CR	2.49	3.68	0.89	0.91	1.17	1.72	1.82	1.93	0.28	0.77	2.01

Model 14252CR

- Bar Opens: 90°
- Handle Opens: 65°
- Spindle Type: Bonded Neoprene
- Spindle Size: 5/16-18 x 3.00



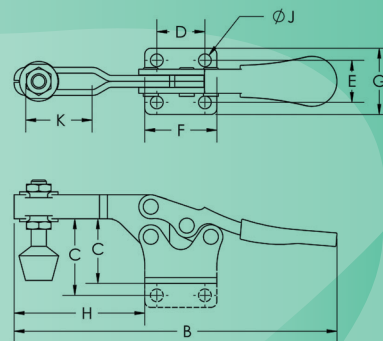
MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
14252CR	225-UB	4314-252	\$10.35	500	.7	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
14252CR	2.18	6.87	1.66	0.99	0.23	1.51	-	2.91	0.28	1.42	-

Model 14351CR

- Bar Opens: 85°
- Handle Opens: 50°
- Spindle Type: Bonded Neoprene
- Spindle Size: 3/8-16 x 3.50



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	WT.	BASE TYPE	BAR TYPE	HANDLE TYPE			
14351CR	235-U	4314-351	\$15.65	750	1.5	Flanged	U-bar	Std.			
MODEL NO.	A	B	C	D	E	F	G	H	J	K	L
14351CR	2.55	10.4	1.73	1.62	1.6	2.25	2.23	4.29	0.31	2.74	-

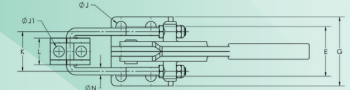
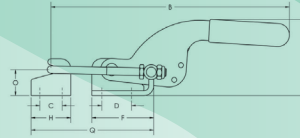


Pull Action Clamps

4 CLAMP-RITE

Models 12310CR, 12410CR

- Drawing Movement: 1.75" (12310), 2.50" (12410)
- Hook Size: M5 (12310), M8 (12410)
- Spindle Type: U-Hook
- Base Type: Flanged
- Bar Type: Standard

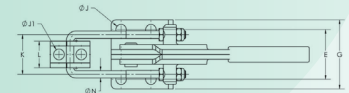
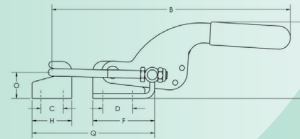


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY. WT.	A	B	C	D	E	F
12310CR	331	4312-310	\$11.56	700 .50	1.91	6.56	0.48	0.78	1.25	1.52
12410CR	341	4312-410	18.55	2,000 1.5	2.75	8.48	0.76	1.62	1.44	2.39
12410CRSS	341-SS	4312-410SS	41.55	2,000 1.5	2.75	8.48	0.76	1.62	1.44	2.39

MODEL NO.	G	H	J	K	L	M	N	O	P	Q MIN	Q MAX
12310CR	1.75	1.01	0.28	1.00	0.79	-	0.17	0.50	-	2.53	3.69
12410CR	2.12	1.17	0.34	1.75	1.17	-	0.31	0.83	-	4.39	5.37
12410CRSS	2.12	1.17	0.34	1.75	1.17	-	0.31	0.83	-	4.39	5.37

Model 12750CR

- Drawing Movement: 3.50"
- Spindle Type: U-Hook
- Hook Size: M10
- Base Type: Flanged
- Bar Type: Standard

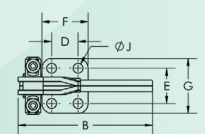
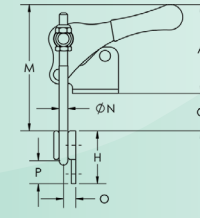
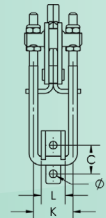


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY. WT.	A	B	C	D	E	F
12750CR	375	4312-750	\$39.70	4,000 2.78	3.96	11.39	1.37	2.24	2.28	3.42

MODEL NO.	G	H	J	K	L	M	N	O	P	Q MIN	Q MAX
12750CR	3.21	2.32	0.41	1.71	3.14	-	0.39	1.17	-	6.22	7.21

Models 12240CR, 12340CR

- Drawing Movement: 1.53" (12240), 2.00" (12340)
- Spindle Type: U-Hook
- Hook Size: M4 (12240), M5 (12340)
- Base Type: Flanged
- Bar Type: Standard

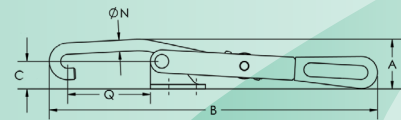
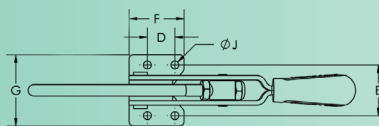


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY. WT.	A	B	C	D	E	F
12240CR	324	4312-240	\$12.15	500 .25	2.22	3.15	0.57	0.51	0.87	1.02
12340CR	334	4312-340	14.90	1,000 .55	2.86	4.71	0.81	0.75	1.02	1.30

MODEL NO.	G	H	J	K	L	M	N	O	P	Q MIN	Q MAX
12240CR	1.39	1.00	0.21	0.86	0.54	3.43	0.12	0.20	0.43	0.54	1.20
12340CR	1.56	1.50	0.28	1.06	0.67	4.36	0.23	0.25	0.64	0.54	1.50

Models 12710CR, 12810CR

- Drawing Movement: 5.38" (12710), 6.13" (12810)
- Spindle Type: U-Hook
- Hook Size: M10 (12710), M12 (12810)



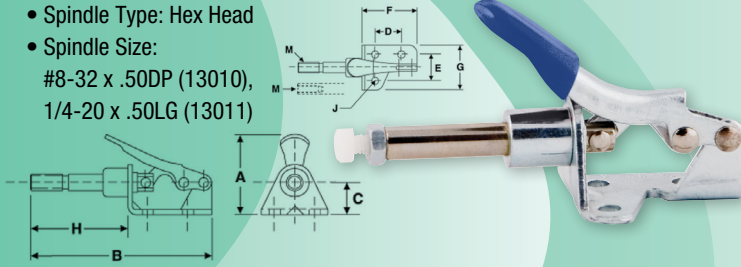
MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY. WT.	BASE TYPE	HANDLE TYPE
12710CR	371	4312-710	\$17.00	750 1.38	Flanged	Std.
12810CR	381	4312-810	18.40	1000 2.49	Flanged	Std.

MODEL NO.	A	B	C	D	E	F	G	J	N	Q MIN	Q MAX
12710CR	2.17	11.46	0.96	1.25	1.97	1.86	2.61	0.35	0.39	2.70	3.44
12810CR	2.62	13.80	1.82	1.13	2.49	2.13	3.30	0.41	0.47	2.75	3.60

Straight-Line Action Clamps

Models 13010CR, 13011CR

- Spindle Type: Hex Head
- Spindle Size:
#8-32 x .50DP (13010),
1/4-20 x .50LG (13011)

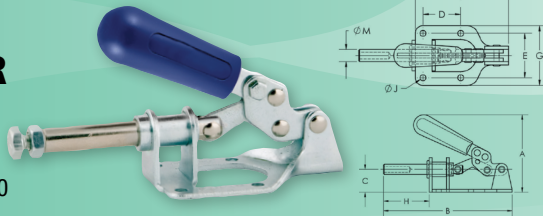


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13010CR	610	4313-010	\$8.10	100	.11	0.63	Fing.	Std.	Int.
13011CR	601-0	4313-011	6.42	100	.11	0.63	Flanged	Std.	Ext.

MODEL NO.	A	B	C	D	E	F	G	H	J	M
13010CR	1.57	2.67	0.52	0.63	0.61	1.31	1.07	1.35	0.17	0.25
13011CR	1.59	2.85	0.57	0.63	0.61	1.32	1.07	1.53	0.17	1/4-20

Model 13050CR

- Spindle Type: Hex Head
- Spindle Size: 5/16-18 x 1.00



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13050CR	605	4313-050	\$11.90	300	.66	1.25	Fing.	Std.	

MODEL NO.	THD.	A	B	C	D	E	F	G	H	J	K
13050CR	Int.	3.14	5.45	0.98	1.38	1.64	3.55	2.22	1.90	0.22	0.47

Models 13090CR

- Spindle Type: Hex Head
- Spindle Size: 5/16-18 x 1.00

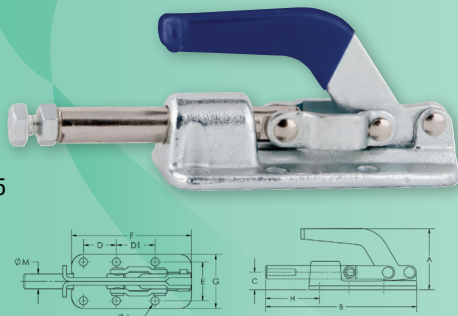


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13090CR	609	4313-090	\$12.95	300	.76	1.25	Flanged	Std.	

MODEL NO.	THD.	A	B	C	D	E	F	G	H	J	K
13090CR	Int.	4.10	5.00	0.85	1.57	1.33	3.27	1.95	1.71	0.26	0.47

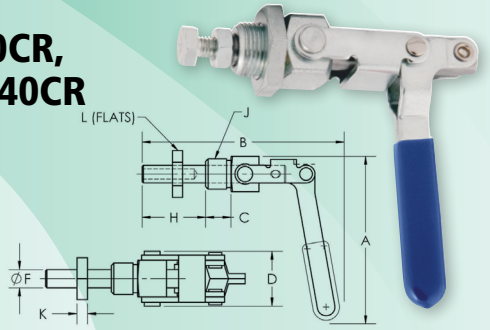
Models 13070CR, 13300CR

- Spindle Type: Hex Head
- Spindle Size: 3/8-16 x 125



Models 13020CR, 13040CR, 13240CR

- Spindle Type: Hex Head
- Spindle Size:
1/4-20 x .63 (13020)
5/16-18 x 1.00 (13040)
3/8-16 x 1.25 (13240)

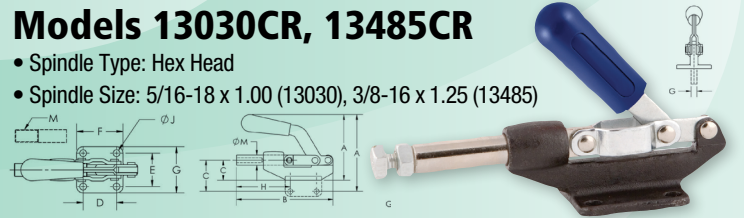


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	MOUNT TYPE	HANDLE TYPE
13020CR	602	4313-020	\$11.25	200	.25	0.75	Through-hole	Std.
13040CR	604	4313-040	12.65	300	.60	1.50	Through-hole	Std.
13240CR	624	4313-240	25.30	700	1.54	2.63	Through-hole	Std.

MODEL NO.	A	B	C	D	F	H	J	K	L
13020CR	3.06	2.67	0.48	1.03	0.37	0.81	0.58	0.26	0.94
13040CR	4.16	4.26	0.63	1.28	0.43	1.57	0.73	0.25	1.17
13240CR	5.43	6.73	0.88	1.86	0.63	2.80	1.05	0.35	1.59

Models 13030CR, 13485CR

- Spindle Type: Hex Head
- Spindle Size: 5/16-18 x 1.00 (13030), 3/8-16 x 1.25 (13485)

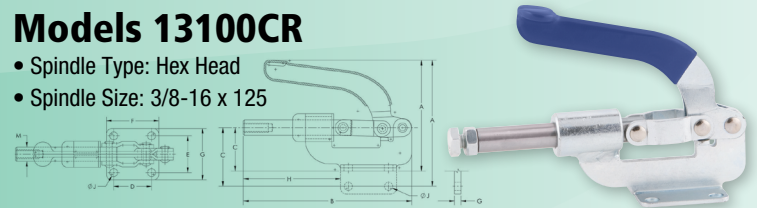


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13030CR	603	4313-030	\$15.55	600	.7	1.25	Fing.	45°	Int.
13485CR	608	4313-485	25.75	850	1.28	1.65	Fing.	45°	Int.

MODEL NO.	A	B	C	D	E	F	G	H	J	M
13030CR	3.34	3.64	0.98	1.44	1.32	2.30	1.85	2.03	0.23	0.43
13485CR	4.19	6.41	1.25	1.62	1.63	2.33	2.25	3.13	0.33	0.63

Models 13100CR

- Spindle Type: Hex Head
- Spindle Size: 3/8-16 x 125



MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13100CR	610	4313-100	\$19.95	800	1.76	1.63	Flanged	Std.	

MODEL NO.	THD.	A	B	C	D	E	F	G	H	J	M
13100CR	Int.	5.04	6.82	1.75	1.63	1.58	2.25	2.20	4.23	0.34	0.62

MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDG. CPCTY.	PLNGR. WT.	TRAVEL	BASE TYPE	HANDLE TYPE	THD.
13070CR	607	4313-070	\$23.25	800	1.7	1.63	Flanged	Std.	Int.
13300CR	630	4313-300	29.25	2500	2.06	2.00	Flanged	Std.	Int.

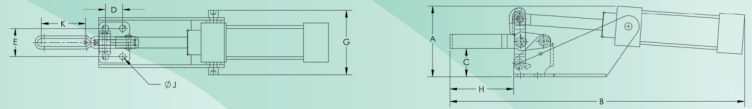
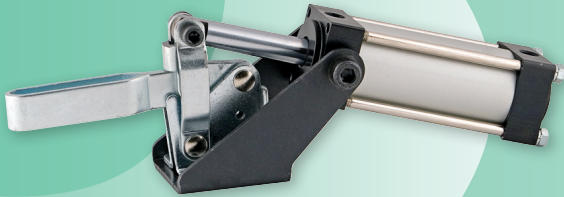
MODEL NO.	A	B	C	D	E	F	G	H	J	M
13070CR	3.28	6.10	0.68	1.38	1.62	4.30	2.18	1.86	0.28	0.51
13300CR	2.93	7.06	0.88	1.39	1.63	5.25	2.24	1.82	0.35	0.63

Pneumatic Hold-Down Clamps

4 CLAMP-RITE

Models 17018CR, 17101CR

- Spindle Type: Bonded Neoprene
- Spindle Size: 5/16-18 x 2.50 (17018)
3/8-16 x 3.50 (17101)

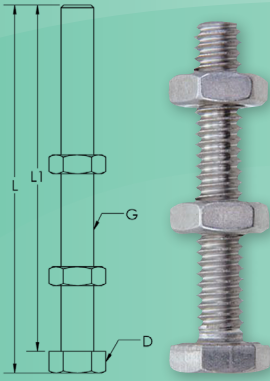


MODEL NO.	DE-STA-CO CROSS-REF. NO.	ORDER NO.	PRICE EACH	HLDC. CPCTY.	WT.	PORT SIZE	TYPE	BAR TYPE
17101CR	810-U	4317-101	\$120.16	600	4.00	1/8 NPT	Horizontal Adj. Hold-Down	
17121CR	812-U	4317-121	57.62	150	.46	10-32NF	Horizontal Adj. Hold-Down	

MODEL NO.	A	B	C	D	F	G	H	J	K
17101CR	3.69	15.43	1.74	1.25	1.78	4.00	3.74	0.33	2.31
17121CR	1.60	6.63	0.69	0.63	0.94	3.00	0.94	0.13	0.77

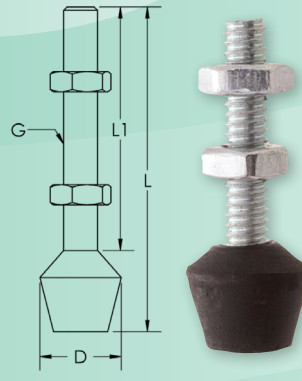
Clamp Accessories

Hex Head Spindle



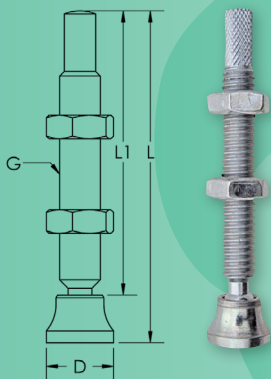
MODEL NO.	ORDER NO.	PRICE EACH	D	G	L	L1
19112CR	4319-112	\$0.82	0.43	1/4-20	1.65	1.50
19212CR	4319-212	0.89	0.49	5/16-18	2.71	2.50
19338CR	4319-338	1.02	0.55	3/8-16	3.23	3.00
19310CR	4319-310	1.82	0.74	1/2-13	3.31	3.00

Bonded Neoprene Spindle



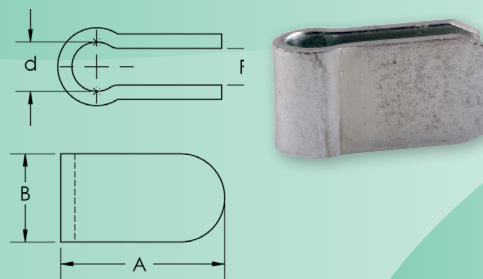
MODEL NO.	ORDER NO.	PRICE EACH	D	G	L	L1
19218	4319-218	\$1.34	0.59	1/4-20	2.17	1.59
19312	4319-312	2.00	0.88	3/8-16	3.44	2.60

Swivel Foot Spindle



MODEL NO.	ORDER NO.	PRICE EACH	D	G	L	L1
19214	4319-214	\$2.10	0.43	1/4-20	3.20	2.80
19234	4319-234	2.25	0.47	5/16-18	2.72	2.44
19300	4319-300	2.58	0.63	3/8-16	2.91	2.56

Bolt Retainer



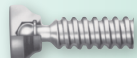
MODEL NO.	ORDER NO.	PRICE EACH	BOLT SIZE	A	B	F1	d
19516	4319-516	\$0.90	5/16, M8	1.20	0.64	0.25	0.32
19380	4319-380	1.25	3/8, M10	1.47	0.74	0.33	0.41
19120	4319-120	1.35	1/2, M12	1.70	1.19	0.38	0.67

Clamps

WILTON Series 400 Deep Throat Clamps

400 SERIES FEATURES:

- Drop Forged steel frame, regular-duty with extra deep throat.
- Both Black-oxide and copper spindles w/Perma-Pad® and are replaceable.
- Innovative frame geometry for maximum strength.
- Spark Duty Series features copper plated spindles for better resistance to welding spatter and corrosion.
- V-grooved anvil provides secure hold for all material shapes including round, square, and flat.



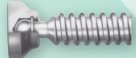
Wilton's exclusive Perma-Pad® Design.

WILTON CAT. NO.	CAPACITY	THROAT DEPTH	SPINDLE DIAMETER	MIN. PROOF TEST (LBS.)	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
400 SERIES							
402	0 - 2-1/8"	2-1/4"	9/16"	3500	2	9540-464	\$29.80
403	0 - 3	2-1/2	9/16	3500	3	9540-465	\$6.40
404	0 - 4-1/4	3-1/4	3/4	6200	4	9540-466	\$4.60
406	0 - 6-1/16	4-1/8	3/4	6600	6	9540-467	\$2.70
408	0 - 8-1/4	5	3/4	6900	7	9540-468	\$10.50
410	2 - 10-1/8	6	3/4	8000	11	9540-469	\$142.20
412	2 - 12-1/4	6-5/16	7/8	9300	15	9540-470	\$228.20
400 SERIES HI-VISIBILITY							
402SF	0 - 2-1/8"	2-1/4"	9/16"	3500	2	9540-477	\$28.10
403SF	0 - 3	2-1/2	9/16	3500	3	9540-478	\$6.40
404SF	0 - 4-1/4	3-1/4	3/4	6200	4	9540-479	\$4.60
406SF	0 - 6-1/16	4-1/8	3/4	6600	6	9540-480	\$6.00
408SF	0 - 8-1/4	5	3/4	6900	7	9540-481	\$109.10
410SF	2 - 10-1/8	6	3/4	8000	11	9540-482	\$147.20
412SF	2 - 12-1/4	6-5/16	7/8	9300	15	9540-483	\$241.40
400 SERIES SPARK DUTY (COPPER PLATED SPINDLE)							
402P	0 - 2-1/8"	2-5/8"	9/16"	3500	2	9540-536	\$29.80
403P	0 - 3	2-1/2	5/8	3500	3	9540-537	\$9.70
404P	0 - 4-1/4	3-1/4	3/4	6200	4	9540-538	\$6.20
406P	0 - 6-1/16	4-1/8	3/4	6600	6	9540-539	\$9.30
408P	0 - 8-1/4	5	3/4	6900	7	9540-540	\$109.10
410P	2 - 10-1/8	6	3/4	8000	11	9540-541	\$153.80
412P	2 - 12-1/4	6-5/16	7/8	9300	15	9540-542	\$249.70

WILTON Series 800 Standard Throat Clamps

800 SERIES FEATURES:

- Drop-forged, regular-duty with standard throat depth.
- A value alternative for clamping, not requiring as much throat depth or clamping pressure as a 400 series clamp.
- Equipped with Wilton Perma-Pads® and a precision-cut, single lead acme thread.
- ACME rolled spindle and black oxide coating.



Wilton's exclusive Perma-Pad® Design.

WILTON CAT. NO.	CAPACITY	THROAT DEPTH	SPINDLE DIAMETER	MIN. PROOF TEST (LBS.)	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
800 SERIES							
803	0 - 3"	1-15/16"	9/16"	3000	1-5/8	9540-516	\$34.70
804	0 - 4	2-5/16	5/8	3700	2-7/8	9540-517	\$48.00
806	0 - 6	2-15/16	5/8	4500	3-7/8	9540-518	\$79.40
808	0 - 8	3-7/16	3/4	5200	6-3/4	9540-519	\$89.30

Pittsburg® C-Clamps

- Malleable Cast Reinforced Frame
- Black Oxide Spindle and Handle



DIMENSIONS	ORDER NO.	PRICE EACH
3 x 2"	7738-130	\$6.75
3 x 4-1/2"	7738-134	9.01
4 x 3"	7738-144	12.02
5 x 3-1/4"	7738-145	15.32
6 x 3-1/2"	7738-146	17.63
8 x 4"	7738-148	24.19

WILTON Series 100 Clamps

Designed for heavy industrial and construction work. Frames are forged of special quality steel. Standard throat. Forged spindle end permits wrench tightening. Spindles are black oxide coated.



WILTON CAT. NO.	CAPACITY	THROAT DEPTH	SPINDLE DIAMETER	MIN. PROOF TEST (LBS.)	ORDER NO.	PRICE EACH
102	0 - 2"	1-1/2"	9/16"	7500	9540-508	\$68.60
103	0 - 3	2	5/8	8750	9540-509	\$124.00
104	0 - 4	2-3/8	5/8	8750	9540-510	\$140.60
106	2 - 6	2-1/2	5/8	8750	9540-511	\$196.80
108	4 - 8	2-5/8	5/8	8750	9540-512	\$254.60

WILTON Series 540 Carriage Clamps

The 540 Series is rugged constructed with a hardened steel spindle. To permit a truly acceptable stress point, Wilton engineers selected a high tensile ductile alloy casting for the 540's body.



WILTON CAT. NO.	CAPACITY	THROAT DEPTH	SPINDLE DIA.	ORDER NO.	PRICE EACH
540A-4	0 - 4	2-1/8	5/8	9540-645	\$36.40
540A-6	0 - 6	2-3/4	5/8	9540-647	\$4.60
540A-8	0 - 8	3-11/32	3/4	9540-648	\$71.10

WILTON Super-Junior® Forged C-Clamps

FEATURES:

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

WILTON CAT. NO.	CAPACITY	THROAT DEPTH	ORDER NO.	PRICE EACH
50	0 - 1"	1"	9540-626	\$8.30
51	0 - 1	1-1/2	9540-627	8.30
52	0 - 1-1/4	1-1/4	9540-628	8.30

IRWIN

QUICK-GRIP Medium-Duty One-Handed Bar Clamps



FEATURES:

- Evenly distributes up to 300 lbs. of sustained clamping force
- I-beam bar to reduce flexing & bowing
- New grip design and Quick-Release™ trigger provide simple, one-handed operation

MFG. NO.	CLAMPING CAPACITY	SPREADING CAPACITY	THROAT DEPTH	ORDER NO.	PRICE EACH
1964717	6"	7-7/8" - 13-3/8"	3-3/16"	3255-450	\$24.30
1964718	12"	7-7/8" - 19-3/8"	3-3/16"	3255-451	\$27.01
1964719	18"	7-7/8" - 25-3/8"	3-3/16"	3255-452	\$31.06
1964720	24"	7-7/8" - 31-3/8"	3-3/16"	3255-453	\$33.76
1964741	36"	7-7/8" - 43-3/8"	3-3/16"	3255-454	\$40.50

IRWIN

QUICK-GRIP Heavy-Duty One-Handed Bar Clamps



FEATURES:

- Evenly distributes up to 600lbs of sustained clamping pressure; one of the top performance One-Handed Bar clamps available
- Ideal for heavy-duty applications such as installation, demolition and rough glue-up
- Dual removable swivel jaws and non-marring, full-faced pads for even distribution of clamping force
- Pads can be removed for full contact of the swivel jaws to combat flexing at extreme pressure and to conform to irregular shapes
- New grip design and Quick-Release™ trigger provide simple, one-handed operation

MFG. NO.	CLAMPING CAPACITY	SPREADING CAPACITY	THROAT DEPTH	ORDER NO.	PRICE EACH
1974711	6"	9-1/4"-14-7/8"	3-5/8"	3255-460	\$31.21
1974712	12"	9-1/4"-20-7/8"	3-5/8"	3255-461	\$34.81
1974713	18"	9-1/4"-26-7/8"	3-5/8"	3255-462	\$38.66
1974714	24"	9-1/4"-32-7/8"	3-5/8"	3255-463	\$43.21
1974715	36"	9-1/4"-44-7/8"	3-5/8"	3255-464	\$51.62

Pittsburg® Bar Clamps

- Sliding Quick Release Precision Steel Jaw,
- Steel Bar, Protective Clamp Pad



DIMENSIONS	ORDER NO.	PRICE EACH
6 x 2-1/2"	7738-202	\$10.66
12 x 2-1/2"	7738-204	10.58
18 x 2-1/2"	7738-206	11.90
24 x 2-1/2"	7738-208	15.66
30 x 2-1/2"	7738-210	15.08
36 x 2-1/2"	7738-212	19.08

Clamps



Spring Clamps

- Heavy Gauge Metal Frame
- Extra Thick/Durable PVC/Rubber Tip and Grip

3



DIMENSIONS	ORDER NO.	PRICE EACH
1"	7738-301	\$2.14
2"	7738-302	3.50
3"	7738-303	7.45



Tool Maker's Parallel Clamps

- Hardened & tempered jaws
- Clamps equipped with spring screw clip.
- Black finish.
- Useful for holding small work together when drilling, welding, assembling.

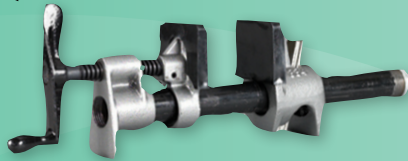
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JAW LENGTH	JAW OPENING	ORDER NO.	PRICE EACH
2	1-1/4	3100-102	\$ 3.85
3	2-1/4	3100-104	6.35
4	2-3/4	3100-106	7.95
5	3-1/2	3100-108	13.50
Complete Set Sizes 2 thru 5		3100-110	20.60



Pipe Clamps



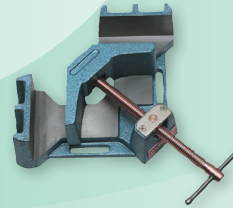
- Malleable Iron Bodies, Extra Wide Base
- Quick Release Clutch Mechanism
- Pipe not included

3

DIMENSIONS	ORDER NO.	PRICE EACH
1/2"	7738-332	\$16.70
3/4"	7738-334	24.69
4 pc. Pipe Clamp Pad Set Order No. 7738-399		Price Each \$1.73



90° Steel Angle Clamps



The 90° angle clamp is made of high quality cast iron.

- The copper plated spindle pivots allowing the moveable jaw to securely grip parts at 90°
- Slotted holes are provided in the base for convenient workbench mounting
- Work surfaces (including base) are milled for added precision

2

WILTON CAT. NO.	CAPACITY MITER	JAW HEIGHT	JAW LENGTH	SHIP WT. LBS. EA.	ORDER NO.	PRICE EACH
AC-326	4-3/8"	2-3/8"	4-1/8"	18	9540-843	\$244.70

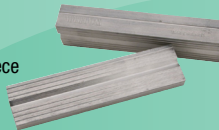


Vise Jaws

Magnefix Vise Jaw Caps

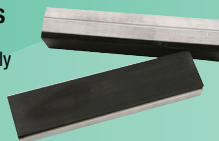
MODEL A-ALUMINUM MAGNEFIX JAW CAPS

- Aluminum alloy design includes six grooves to compensate for the unevenness of the workpiece
- Deeper V-groove for more secure clamping of circular workpieces
- Use together with rubber magnefix jaw caps



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

- Aluminum alloy with synthetic rubber cover
- Jaw construction includes a 120° horizontal V-groove, three vertical V-grooves and a 90° groove for marking out and center punching
- Ideal for light tapping and thread cutting



2

WILTON NO.	JAW WIDTH	ORDER NO.	PRICE EA.
A-3.5	3-1/2	9540-399	\$30.25
A-4	4	9540-400	51.30
A-4.5	4-1/2	9540-401	52.90
A-5	5	9540-402	54.60
A-5.5	5-1/2	9540-403	59.50
A-6	6	9540-404	59.50
A-6.5	6-1/2	9540-405	62.80

WILTON NO.	JAW WIDTH	ORDER NO.	PRICE EA.
R-3.5	3-1/2	9540-423	\$33.15
R-4	4	9540-424	51.30
R-4.5	4-1/2	9540-425	54.60
R-5	5	9540-426	54.60
R-5.5	5-1/2	9540-427	59.50
R-6	6	9540-428	59.50
R-6.5	6-1/2	9540-429	61.20

WILTON NO.	JAW WIDTH	ORDER NO.	PRICE EA.
P-3.5	3-1/2	9540-415	\$33.15
P-4	4	9540-416	56.20
P-4.5	4-1/2	9540-417	61.20
P-5	5	9540-418	61.20
P-5.5	5-1/2	9540-419	64.50
P-6	6	9540-420	62.80
P-6.5	6-1/2	9540-421	66.10



Copper Jaw Caps



- Designed to avoid marring the surface of materials
- 100% copper jaw caps have polished faces and pliable copper extensions for a sure-grip fit

2

WILTON CAT. NO.	JAW WIDTH	ORDER NO.	PRICE EACH
404-3	3"	9540-389	\$ 56.20
404-3-1/2	3-1/2"	9540-390	74.40
404-4	4"	9540-391	77.70
404-4-1/2	4-1/2"	9540-392	79.40
404-5	5"	9540-393	112.40
404-5-1/2	5-1/2"	9540-394	137.20
404-6	6"	9540-395	160.40
404-6-1/2	6-1/2"	9540-396	188.50

Clamps

Pony & Jorgensen products are subject to availability.



'Adjustable'™ "C" Clamps



Carriage Clamps

- Most universally-used general-purpose "C" clamps for regular-duty industrial service.
- **Frame** - heat-treated, perlitic and/or ductile iron; ribbed to resist side strain.
- **Anvil** - machine-ground; extra-wide.
- **Screw** - cold-drawn steel with special, smoothly cut acme threads; steel sliding-pin handle.
- **Swivel** - exclusive JORGENSEN design with steel internal tooth washers for positive "stay-on" power.

3

MFG. NO.	OPENING MAX.	MIN.	DEPTH OF THROAT	SCREW DIA.	NORMAL LOAD LIMIT.	ORDER NO.	PRICE EACH
103	3"	0	1-7/8"	9/16"	1,800 lbs.	9545-041	\$11.65
108	8"	0	3-1/4"	3/4"	2,400 lbs.	9545-045	36.53
110	10"	1-1/2"	3-5/8"	13/16"	2,400 lbs.	9545-046	49.30
112	12"	3-7/16"	3-5/8"	13/16"	2,400 lbs.	9545-047	65.04

MFG. NO.	OPENING	DEPTH	NORMAL LOAD LIMIT	ORDER NO.	PRICE EACH
1413	1"	3"	400 lbs.	9545-251	\$ 4.16
1415	1-1/2"	1-1/2"	400 lbs.	9545-252	3.02
1422	2-1/2"	1-3/8"	600 lbs.	9545-254	4.21
1423	2"	3-1/2"	400 lbs.	9545-255	5.91
1425	2-1/2"	2-1/2"	600 lbs.	9545-256	4.87
1430	3"	2"	800 lbs.	9545-257	5.10
1480	8"	4"	1200 lbs.	9545-262	16.66

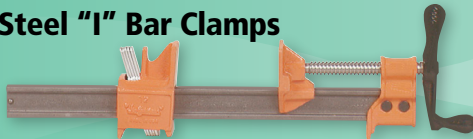
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#1491 3-piece set - Contains one each of the following "C" clamps: #1410, #1420, #1430. Features are identical to the preceding ADJUSTABLE Style No. 1400 "C" clamps.

Order No. 9545-305
Price Each...\$ 8.81



Steel "I" Bar Clamps



- Clamping faces- approximately 2"x 1-3/4".
- Bar- 1-1/2" x 7/16" high carbon steel; rolled to a special "I" beam shape.

2

MFG. NO.	MAX. OPENING CAPACITY	NORMAL LOAD LIMIT	ORDER NO.	PRICE EACH
7224	24"	7000 lbs.	9545-750	\$45.39
7236	36"	7000 lbs.	9545-752	50.67
7248	48"	7000 lbs.	9545-753	56.41



Bar Clamps



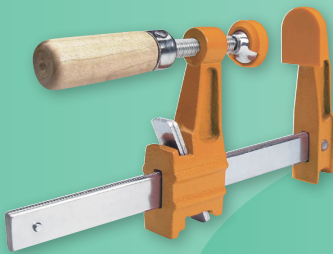
- Dual durometer handle design for comfort.
- 10-40% more clamping force.

2

MFG. NO.	BAR LENGTHS	ORDER NO.	PRICE EACH
33012	12"	9545-481	23.71
33024	24"	9545-483	29.29
33036	36"	9545-484	33.76



Steel Bar Clamps and Pads



2

FEATURES FOR LIGHT AND MEDIUM DUTY:

- Clutch discs- hardened, plated steel; two clutch discs and one clutch spring constitute the Multiple-Disc-Clutch.
- Swivel- 3/4" diameter; plated steel; ball-and-socket type.

FEATURES FOR HEAVY DUTY:

These are made for all wood types of heavy-duty clamping. Used by cabinet-makers, woodworkers, metalworkers or for home-shop and do-it-yourself projects. Protective pads made for thick, durable plastic. Clamps rest parallel on work surface for ease of work placement and adjustment.

FEATURES FOR BAR CLAMP PADS:

Protective non-mar, non-stick, non-slip pads.

MFG. NO.	MAX. OPENING CAPACITY	NORMAL LOAD LIMIT	ORDER NO.	PRICE EACH
LIGHT DUTY				
3704-LD	4"	300 lbs.	9545-560	\$7.76
3706-LD	6"	300 lbs.	9545-561	7.97
3708-LD	8"	300 lbs.	9545-562	8.38
3712-LD	12"	300 lbs.	9545-563	9.09
MEDIUM DUTY				
3706	6"	600 lbs.	9545-570	\$10.92
3712	12"	600 lbs.	9545-571	12.08
3718	18"	600 lbs.	9545-572	13.34
3724	24"	600 lbs.	9545-573	15.02
3730	30"	600 lbs.	9545-574	17.05
HEAVY DUTY				
3706-HD	6"	1,000 lbs.	9545-580	\$15.27
3712-HD	12"	1,000 lbs.	9545-581	16.25
3724-HD	24"	1,000 lbs.	9545-583	19.54
3730-HD	30"	1,000 lbs.	9545-584	21.12
3736-HD	36"	1,000 lbs.	9545-585	22.27
BAR CLAMP PADS (for light/med. duty only)				
7437	8 piece pack		9545-764	\$3.85



Cabinet Master 90° Parallel Steel Bar Clamps



2

MFG. NO.	MAX. OPENING CAPACITY	NORMAL LOAD LIMIT	ORDER NO.	PRICE EACH
8024	24"	1,000 lbs.	9545-772	\$46.66
8036	36"	1,000 lbs.	9545-774	53.69
8048	48"	1,000 lbs.	9545-775	59.30

Clamps

PONY

Spring Clamps

FEATURES:

- Jaws- light-weight, nickel-plated steel.
- Spring- heavy-duty tempered steel for maximum strength
- Handles- designed for optimum comfort with minimized spread.
- Poly-vinyl handles and jaw tips.



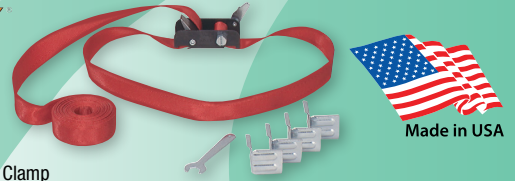
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MFG. NO.	MAX. OPENING CAPACITY	JAW LENGTH	REACH	ORDER NO.	PRICE EACH
3201-HT	1"	4"	1-1/4"	9545-364	\$1.90
3203-HT	3"	9"	3"	9545-404	8.28

Pony & Jorgensen products are subject to availability.

PONY

Band Clamp



Made in USA

2

The small, lightweight Band Clamp features 15 feet of 1-inch width, high-strength nylon webbing which enables the perimeter clamping of round, rectangular and irregular shapes. Positive hold is afforded by the self-locking aluminum cam which is also allows instant release. Four cleverly designed steel "corners" are furnished to assist in clamping mitered joints and to protect the nylon band from sharp corners. A small steel wrench is also furnished to apply final clamping pressure.

MFG. NO.	LOAD LIMIT	ORDER NO.	PRICE EACH
1215	1,000 lbs.	9545-240	\$15.04



Adjustable Handscrews

FEATURES:

- The jaws hold odd shapes easily, are capable of overlapping.
- Provide protection against marring of finished surfaces.
- Seasoned hard maple.



Made in USA

2

MFG. NO.	JAW IN.	MAX OPENING IN.	REACH IN.	ORDER NO.	PRICE EACH
0	8"	4-1/2"	4"	9545-004	\$26.82
1	10"	6"	5"	9545-005	30.46
2	12"	8-1/2"	6"	9545-006	37.92



Hold-Down Clamp



Made in USA

2

#1623 Hold-down clamps offer the advantage of bench-top and machine "surface" clamping. Designed to rotate 360 degrees around the holding bolt. Use anywhere on wood or metal surfaces.

MFG. NO.	OPENING CAPACITY	DEPTH OF THROAT	SCREW DIA.	NORMAL LOAD LMT.	ORDER NO.	PRICE EACH
1623	3"	1-3/4"	9/16"	2,000 lbs.	9545-310	\$19.55

Bench Vises

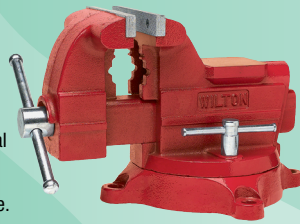


Utility Workshop Vises

Versatile, all-around vise recommended for the professional craftsman or home workshop enthusiast.

FEATURES:

- Replaceable, serrated steel top jaws. • 180° swivel base.
- Large anvil work area. • Built-in pipe jaws



2

WILTON CAT. NO.	JAW WIDTH	MAX OPENING	PIPE CAP.	JAW DEPTH	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
674U	4-1/2"	4"	1/8" - 2"	3-1/2"	19	9540-346	\$ 201.70
675U	5-1/2"	5"	1/8 - 2-1/2	4"	29	9540-347	248.00
676U	6-1/2"	5-1/2"	1/8 - 2-1/2	5"	41	9540-348	337.30
656UHD	6"	6"	1/8 - 3"	6"	63	9540-368	451.40
648UHD	8"	7-1/2"	1/8 - 3"	8"	79	9540-367	633.30



Cam Action Drill Press Vises



- Simple push or pull on the center bar knob sets the jaw in position
- Easy press locking lever cams the jaw ahead 3/32", exerting a holding pressure that is adjustable from 400 to 1100 lbs.
- Base is designed for clear through drilling applications
- Unique top locking lever can be raised/lowered to tighten/loosen against the work piece. 2

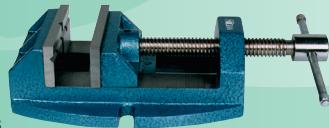
WILTON CAT. NO.	JAW WIDTH	MAX OPENING	JAW DEPTH	HEIGHT	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
1204	4"	4-11/16"	1-5/16"	3-1/4"	18	9540-439	\$277.80
1206	6"	6-3/16"	1-13/16"	3-3/4"	35	9540-440	482.80
1208	8"	8-3/16"	2"	4-7/16"	53	9540-441	601.90



Drill Press Vises

FEATURES:

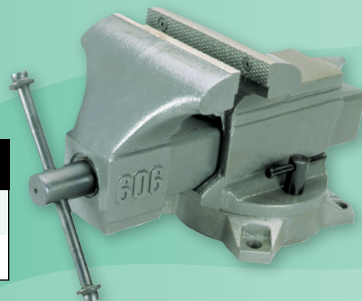
- The 1300 series is made of graded cast iron and offers a ground vise bed for a smooth, consistent jaw movement and hardened top u-groove jaws.
- The 1400 series is made of graded cast iron and features precision 90° machining of the vise's side bodies, which allows them to be used additionally as bases. A rapid action nut for fast loading of production material. The nut provides extra tightening capabilities. Sturdy main castings provides extra strength and increased durability. 2



WILTON CAT. NO.	JAW WIDTH	JAW OPENING	JAW DEPTH	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
SERIES 1300						
1335	3"	1-7/8"	2-1/2"	6	9540-442	\$127.30
1345	4"	2-1/8"	3-3/4"	12	9540-443	183.50
1360	5"	2-1/8"	4-7/8"	24	9540-444	261.30
SERIES 1400						
1445	4-1/2"	1-7/8"	4-3/4"	15	9540-446	292.70
1460	6"	2-1/8"	6-3/4"	38	9540-447	408.40

Pittsburg® Mechanics' Bench Vises

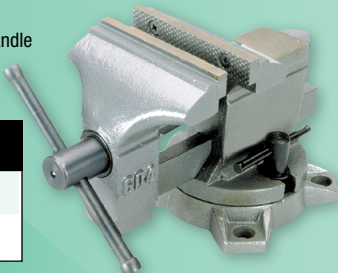
- 30,000 PSI Castings, Heavy Duty Construction
- Chrome Plated Spindle/Handle
- Hardened Steel Replaceable Jaw Faces
- 270° Swivel Base, 4 Lug Reinforcement 3



DIMENSIONS	ORDER NO.	PRICE EACH
4"	7738-614	\$ 105.17
5"	7738-615	145.98
6"	7738-616	210.47
7"	7738-617	243.38

Pittsburg® Workshop Series Bench Vises

- 20,000 PSI Castings, Black Oxide Spindle/Handle
- Hardened Steel Replaceable Jaw Faces
- 270° Swivel Base, 4 Lug Reinforcement 3



DIMENSIONS	ORDER NO.	PRICE EACH
3"	7738-603	\$ 30.07
4"	7738-604	61.07
5"	7738-605	111.10
6"	7738-606	155.85



Super Precision 3-Way Tilting Machine Vise

FEATURES:

- Perfect vise for 3 axis jobs in milling, drilling, grinding, shaping and jig boring
- Manufactured from close grain high tensile cast iron
- Jaw plates, hardened and ground
- Hardness of jaws - 55 ±3 HRC
- No jaw tilt
- Accuracy indexed for 3 way angular work
- All ground surfaces are made to close accuracies
- 360° swivel base • 45° tilting range on either side • 90° vertical indexing 2



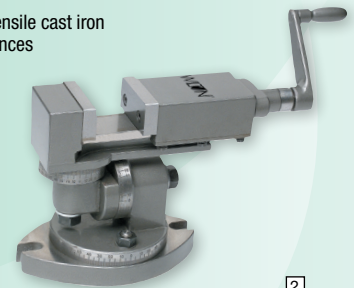
WILTON CAT. NO.	JAW WIDTH	JAW OPENING	JAW DEPTH	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
TLT/SP-50	2"	2"	5/16"	8	9541-159	\$514.30
TLT/SP-75	3"	3"	1-15/16"	24	9541-160	849.90



Super Precision 2-Way Angular Machine Vise

FEATURES:

- Manufactured from close grained high tensile cast iron
- All ground surfaces made to close tolerances
- Jaw plates, hardened and ground
- Perfect vise for grinding, jig boring, and shaping jobs
- No jaw tilt
- Hardness of jaws - 55 ±3 HRC
- 90° vertical and 180° horizontal indexing
- 360° swivel base
- 90° tilting range
- Perfectly indexed for angular work 2



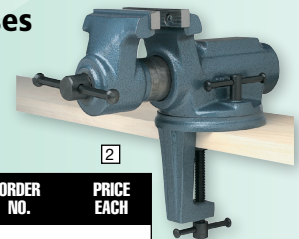
WILTON CAT. NO.	JAW WIDTH	JAW OPENING	JAW DEPTH	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
AMV/SP-75	3"	3"	1-15/16"	21	9541-163	\$603.50
AMV/SP-100	4"	4"	1-9/16"	38	9541-164	740.80



Super Junior Vises

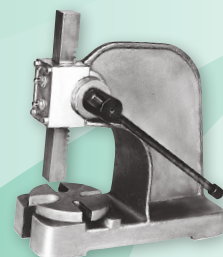
FEATURES:

- Clamp-on models are portable.
- Top jaws are grooved and replaceable.
- Spindle is fully enclosed.
- Double lockdowns ensure stability. 2



WILTON CAT. NO.	JAW WIDTH	MAX. OPENING	SHIP WT. (LBS.)	ORDER NO.	PRICE EACH
CLAMP-ON BASE					
CBV-65	2-1/2"	2-1/2"	9	9540-378	\$157.10
CBV-100	4"	4"	15	9540-377	186.90
SWIVEL BASE					
SBV-65	2-1/2"	2-1/2"	8	9540-380	135.60
SBV-100	4"	4"	14	9540-379	150.50

Pittsburg® Arbor Presses



3

MODEL NO.	PRESS TONS	HT. OF PRESS	BASE DIAM.	MAX HEIGHT	LARGEST ARBOR	ORDER NO.	PRICE EACH
0	1/2 TON	10"	4" x 9-1/2"	4-1/2"	1-1/8"	2904-000	\$ 50.20
1	1 TON	12"	5" x 11"	5-1/4"	1-3/8"	2904-010	68.40
2	2 TON	17"	6-3/4" x 17"	8-1/2"	1-3/4"	2904-020	164.80
3	3 TON	21-1/2"	8" x 18"	12-1/2"	2-1/2"	2904-030	298.10

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Drill Bushings

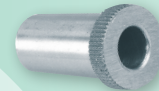
NOTE: Standard sizes in a given I.D. range are sizes listed in the decimal equivalent chart either as a fraction, number or letter size. Any other decimal or millimeter size within a given range is considered special and will be priced accordingly.

1-5 pcs.....List	Quantity Discounts: 24-49 pcs.....-34%	200-499 pcs...-51%
6-11 pcs.....-18%	50-99 pcs.....-43%	500 pcs. up.....-52%
12-23 pcs.....-29%	100-199 pcs...-47%	Same Size - No Mix

ANSI Tolerances – Sizes Not Listed Available on Request



TYPE "P"



TYPE "H"



TYPE "SF"

Headless Press Fit

O.D.				BODY LENGTH – LIST PRICE – UNGROUND BUSHINGS ARE AVAILABLE															
I.D. RANGE (STD. DRILL SIZE)		ANSI		1/4	5/16	3/8	1/2	5/8	3/4	1"	1-1/4	1-3/8	1-1/2	1-3/4	2"	2-1/8	2-1/2	3"	
NOM.	DECIMAL	NOM.	ACTUAL	SYMBOL	-4	-5	-6	-8	-10	-12	-16	-20	-22	-24	-28	-32	-34	-40	-48
#55-1/16	.0520-.0625	5/32	.1578-.1575	P-10	\$18.53	\$19.21	\$19.70	\$19.90	-	\$21.58	-	-	-	-	-	-	-	-	-
#52-#39	.0625-.0995	13/64	.2046-.2043	P-13	8.68	9.69	10.38	10.70	-	11.73	\$12.75	-	\$19.37	-	-	-	-	-	-
#40-9/64	.0980-.1406	1/4	.2516-.2513	P-16	7.99	8.50	9.17	9.69	\$10.38	10.88	12.05	-	19.05	\$19.94	\$20.90	-	-	-	-
1/8-#10	.1250-.1935	5/16	.3141-.3138	P-20	6.65	6.97	7.30	7.66	7.99	8.33	8.68	-	12.75	14.79	16.83	-	-	-	-
#10-#1	.1935-.2280	3/8	.3766-.3763	P-24	5.77	5.94	6.46	6.65	6.97	7.30	8.50	-	-	-	-	-	-	-	-
3/16-F	.1875-.2570	13/32	.4078-.4075	P-26	5.77	5.94	6.46	6.65	-	7.30	8.50	-	9.69	10.88	12.05	-	-	-	-
A-L	.2340-.2900	7/16	.4392-.4389	P-28	5.77	5.94	6.46	6.65	6.97	7.30	8.50	-	-	-	-	-	-	-	-
3/16-0	.1875-.3160	1/2	.5017-.5014	P-32	5.77	5.94	6.46	6.65	-	7.30	8.50	-	9.69	10.88	12.05	-	\$24.31	-	-
M-11/32	.2950-.3437	9/16	.5642-.5639	P-36	6.65	5.77	6.13	6.13	6.46	6.65	6.97	-	-	-	-	-	-	-	-
5/16-7/16	.3125-.4375	5/8	.6267-.6264	P-40	6.65	5.77	6.13	6.13	6.46	6.65	6.97	\$ 9.53	9.53	10.02	10.88	-	13.08	-	-
5/16-17/32	.3125-.5312	3/4	.7518-.7515	P-48	6.97	5.94	6.65	6.65	6.97	6.97	7.66	9.69	9.69	10.38	11.24	-	13.25	\$24.31	-
1/2-21/32	.5000-.6562	7/8	.8768-.8765	P-56	-	8.68	9.00	7.99	8.33	8.33	8.68	9.53	9.53	10.38	11.39	-	13.08	15.13	-
1/2-49/64	.5000-.7656	1"	1.0018-1.0015	P-64	-	-	-	8.33	8.33	8.33	8.84	9.53	9.53	10.70	11.73	-	13.08	15.13	\$25.33
5/8-1-1/32	.6250-1.0312	1-3/8	1.3772-1.3768	P-88	-	-	-	13.08	12.40	10.88	13.08	14.45	14.45	15.81	17.13	\$19.70	19.94	22.26	30.75

Boxed prices indicate counterbored bushings.

Head Press Fit

O.D.				BODY LENGTH – LIST PRICE – UNGROUND BUSHINGS ARE AVAILABLE															
I.D. RANGE (STD. DRILL SIZE)		ANSI		1/4	5/16	3/8	1/2	5/8	3/4	1"	1-1/4	1-3/8	1-1/2	1-3/4	2"	2-1/8	2-1/2	3"	
NOM.	DECIMAL	NOM.	ACTUAL	SYMBOL	-4	-5	-6	-8	-10	-12	-16	-20	-22	-24	-28	-32	-34	-40	-48
#55-1/16	.0520-.0625	5/32	.1578-.1575	H-10	\$19.37	\$19.70	\$19.94	\$20.22	-	\$22.60	-	-	-	-	-	-	-	-	-
#52-#39	.0635-.0995	13/64	.2046-.2043	H-13	11.24	11.39	12.05	12.40	-	14.10	\$18.19	-	-	-	-	-	-	-	-
#40-9/64	.0980-.1406	1/4	.2516-.2513	H-16	9.69	10.38	10.88	11.24	\$12.40	13.76	17.52	-	\$25.33	\$27.02	-	-	-	-	-
1/8-#10	.1250-.1935	5/16	.3141-.3138	H-20	7.99	8.50	9.00	9.17	9.36	9.53	11.39	-	19.21	21.76	-	-	-	-	-
#10-#1	.1935-.2280	3/8	.3766-.3763	H-24	7.30	7.99	8.33	8.50	8.84	9.00	10.70	-	-	-	-	-	-	-	-
3/16-F	.1875-.2570	13/32	.4078-.4075	H-26	7.30	7.66	8.33	8.50	-	9.00	10.70	-	12.05	13.43	\$14.79	-	-	-	-
A-L	.2340-.2900	7/16	.4392-.4389	H-28	7.30	7.99	8.33	8.50	8.84	9.00	10.70	-	-	-	-	-	-	-	-
3/16-0	.1875-.3160	1/2	.5017-.5014	H-32	7.30	7.66	8.33	8.50	-	9.00	10.70	-	12.40	13.43	14.79	-	-	-	-
M-11/32	.2950-.3437	9/16	.5642-.5639	H-36	8.33	7.30	7.99	7.99	8.33	8.33	9.00	-	-	-	-	-	-	-	-
5/16-7/16	.3125-.4375	5/8	.6767-.6264	H-40	8.33	7.30	7.66	7.66	8.33	8.33	9.00	-	12.05	12.75	13.76	-	-	-	-
5/16-17/32	.3125-.5312	3/4	.7518-.7515	H-48	9.00	7.99	8.33	8.33	8.68	9.00	9.69	\$12.40	12.40	13.08	13.92	-	\$16.32	-	-
1/2-21/32	.5000-.6562	7/8	.8768-.8765	H-56	-	-	-	10.02	10.02	10.21	10.70	11.73	11.73	13.08	14.45	-	16.32	\$19.57	-
1/2-49/64	.5000-.7656	1"	1.0018-1.0015	H-64	-	-	-	10.38	-	10.38	11.24	-	12.05	14.10	15.81	-	18.53	21.24	\$32.80
5/8-1-1/32	.6250-1.0312	1-3/8	1.3772-1.3768	H-88	-	-	-	16.83	-	15.46	17.01	-	18.86	20.22	21.58	-	24.67	27.68	38.91

Boxed prices indicate counterbored bushings.

Slip-Fixed Renewable

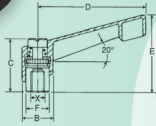
O.D.				BODY LENGTH – LIST PRICE – UNGROUND BUSHINGS ARE AVAILABLE															
I.D. RANGE (STD. DRILL SIZE)		ANSI		1/4	5/16	3/8	1/2	5/8	3/4	1"	1-1/4	1-3/8	1-1/2	1-3/4	2"	2-1/8	2-1/2	3"	
NOM.	DECIMAL	NOM.	ACTUAL	SYMBOL	-4	-5	-6	-8	-10	-12	-16	-20	-22	-24	-28	-32	-34	-40	-48
#39-9/64	.0995-.1406	1/4	.2500-.2498	SF-16	\$12.05	\$12.05	\$12.40	\$13.08	\$13.92	\$14.79	-	-	-	-	-	-	-	-	-
#55-1/16	.0520-.0625	5/16	.3125-.3123	SF-20	-	21.92	22.60	22.75	-	25.00	-	-	-	-	-	-	-	-	-
#52-#43	.0635-.0890	5/16	.3125-.3123	SF-20	-	13.25	13.59	14.10	-	15.98	\$19.57	-	-	-	-	-	-	-	-
#42-#31	.0935-.1200	5/16	.3125-.3123	SF-20	-	12.05	12.40	13.08	-	14.79	17.52	-	\$22.21	-	-	-	-	-	-
1/8-#10	.1250-.1935	5/16	.3125-.3123	SF-20	-	11.73	12.05	12.58	-	14.27	17.13	-	21.92	-	-	-	-	-	-
#10-#1	.1935-.2280	3/8	.3750-.3748	SF-24	8.33	8.84	9.17	9.69	\$10.02	10.38	11.73	-	-	-	-	-	-	-	-
A-L	.2340-.2900	7/16	.4375-.4373	SF-28	8.33	8.84	9.17	9.69	10.02	10.38	11.73	-	-	-	-	-	-	-	-
#28-3/16	.1405-.1875	1/2	.5000-.4998	SF-32	-	10.02	10.38	10.70	-	11.73	13.43	-	15.46	16.49	17.85	-	-	-	-
#12-11/32	.1890-.3437	1/2	.5000-.4998	SF-32	-	8.84	9.17	9.53	-	10.38	11.73	-	14.10	14.79	16.15	-	\$30.09	-	-
M-11/32	.2950-.3437	9/16	.5625-.5623	SF-36	8.33	8.84	9.17	9.69	10.02	10.38	11.73	-	-	-	-	-	-	-	-
S-7/16	.3480-.4375	5/8	.6250-.6248	SF-40	-	-	9.36	9.36	9.69	10.02	10.54	\$14.10	-	-	-	-	-	-	-
9/32-9/16	.2812-.5625	3/4	.7500-.7498	SF-48	-	-	9.17	9.36	-	10.02	10.70	-	\$14.10	15.13	16.32	-	18.53	\$31.61	\$43.84
35/64-21/32	.5469-.6562	7/8	.8750-.8748	SF-56	-	-	-	11.73	12.05	12.24	13.08	14.27	-	15.81	-	-	-	-	-
15/32-25/32	.4687-.7812	1"	1.0000-.9998	SF-64	-	-	-	11.73	-	12.05	13.08	-	14.27	15.46	17.13	-	20.54	33.63	44.35
21/32-1-1/16	.7187-1.0625	1-3/8	1.3750-1.3747	SF-88	-	-	-	-	-	17.85	20.22	-	21.92	23.29	25.16	-	28.21	38.06	49.45

Boxed prices indicate counterbored bushings.

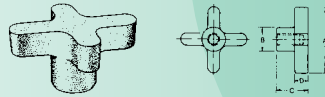
Jig Fixtures & Components

Adjustable Clamping Levers Plastic Handle and Die-Cast Zinc Handle

- Black thermoplastic handle with metal insert.
- Zinc die-cast handle with black finish
- All steel parts ensure durability
- Internal thread with black oxide finish



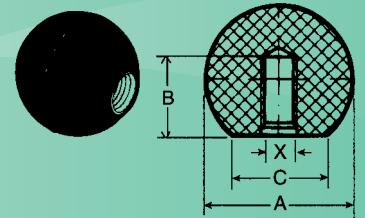
X THREAD	B	C	D	E	F	PLASTIC HANDLE			DIE-CAST HANDLE		
						REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
#10-24	.55	.95	1.65	1.30	.39	AH-101	3161-968	\$ 4.85	MH-101	3163-658	\$6.30
#10-32	.55	.95	1.65	1.30	.39	AH-102	3161-969	4.85	MH-102	3163-659	6.30
#1/4"-20	.55	.95	1.65	1.30	.39	AH-103	3161-970	4.85	MH-103	3163-660	6.30
# 1/4"-20	.71	1.22	2.56	1.77	.53	AH-104	3161-971	5.80	MH-104	3163-661	7.45
#5/16"-18	.71	1.22	2.56	1.77	.53	AH-105	3161-972	5.80	MH-105	3163-662	7.45
#5/16"-18	.86	1.41	3.07	2.12	.63	AH-106	3161-973	7.20	MH-106	3163-663	8.80
#3/8"-16	.86	1.41	3.07	2.12	.63	AH-107	3161-974	7.20	MH-107	3163-664	8.80
3/8"-16	.98	1.69	3.62	2.52	.75	AH-108	3161-975	8.95	MH-108	3163-665	10.35
1/2"-13	.98	1.69	3.62	2.52	.75	AH-109	3161-976	8.95	MH-109	3163-666	10.35
1/2"-13	1.18	1.98	4.25	2.95	.91	-	-	-	MH-112	3163-667	13.70
5/8"-11	1.18	1.98	4.25	2.95	.91	-	-	-	MH-113	3163-668	13.70



Hand Knobs — Zinc Plated

CAST IRON						ALUMINUM					
A	B	C	D	R REAM	T TAPPED	REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
1-1/2	5/8	7/8	3/8		5/16-18	HK 307	3160-523	\$6.15	HK 307A	3161-923	\$6.30
1-1/2	5/8	7/8	3/8	.3115		HK 308	3160-524	6.10	HK 308A	3161-924	6.30
1-1/2	5/8	7/8	3/8	BLANK		HK 309	3160-525	4.95	HK 309A	3161-925	5.05
2	3/4	7/8	3/8		3/8-16	HK 410	3160-526	7.60	HK 410A	3161-926	7.50
2	3/4	7/8	3/8	.3115		HK 411	3160-527	7.55	HK 411A	3161-927	7.50
2	3/4	7/8	3/8	.374		HK 412	3160-528	7.55	HK 412A	3161-928	7.50
2	3/4	7/8	3/8	BLANK		HK 413	3160-529	6.20	HK 413A	3161-929	6.05
2-1/2	1	2-1/4	1/2	BLANK		HK 515	3160-531†	5.35	-	-	-
2-1/2	1-1/8	1-1/2	1/2		1/2-13	HK 616	3160-532	9.85	HK 616A	3161-932	10.70
2-1/2	1-1/8	1-1/2	1/2	.499		HK 617	3160-533	9.85	HK 617A	3161-933	10.60
2-1/2	1-1/8	1-1/2	1/2		5/8-11	HK 618	3160-534	10.25	HK 618A	3161-934	10.60
2-1/2	1-1/8	1-1/2	1/2	.624		HK 619	3160-535	10.75	HK 619A	3161-935	10.95
2-1/2	1-1/8	1-1/2	1/2	.374		HK 620	3160-536	11.45	HK 620A	3161-936	10.85
2-1/2	1-1/8	1-1/2	1/2	BLANK		HK 621	3160-537	8.80	HK 621A	3161-937	9.00
3	1-1/4	1-3/4	1/2	BLANK		HK 725	3160-541†	5.10	-	-	-
3	1-1/2	1-3/4	1/2		3/4-10	HK 826	3160-542†	6.90	HK 826A	3161-942	17.60
3	1-1/2	1-3/4	1/2	.624		-	-	-	HK 827A	3161-943	17.60
3	1-1/2	1-3/4	1/2	.749		-	-	-	HK 828A	3161-944	17.60
3	1-1/2	1-3/4	1/2	BLANK		HK 829	3160-545†	5.55	HK 829A	3161-945	14.10

Plastic Ball Knobs

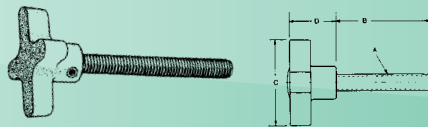


Plastic Ball Knobs have brass insert

A	B TAP	REF. NO.	ORDER NO.	PRICE EACH
3/4	#10-32	PB5	3160-809	\$2.25
1	1/4-20	PB9	3160-810	2.45
1	5/16-1/8	PB 10	3160-811	2.55
1-3/8	3/8-16	PB 11	3160-812	3.00
1-1/2	1/2-13	PB 13	3160-814	6.30

† Limited Quantities

Hand Knob Screws



CAST IRON				ALUMINUM					
A	B	C	D	REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
1/4-20	1			HKS-2510	3160-546	\$7.80	HKS-2510A	3161-946	\$7.55
	1-1/2			HKS-2515	3160-547	7.95	HKS-2515A	3161-947	7.80
	1-3/4	1/2	7/8	HKS-2517	3160-548	8.75	HKS-2517A	3161-948	8.50
	2			HKS-2520	3160-549	9.25	HKS-2520A	3161-949	8.75
	3			HKS-2530	3160-550	9.85	HKS-2530A	3161-950	9.20
5/16-18	1-3/4			HKS-3117	3160-551	9.30	HKS-3117A	3161-951	9.55
	2-1/2			HKS-3125	3160-552	9.80	HKS-3125A	3161-952	10.20
	3			HKS-3130	3160-553	10.50	HKS-3130A	3161-953	10.50
3/8-16	1-1/4	2	7/8	HKS-3712	3160-554	9.80	HKS-3712A	3161-954	10.20
	1-3/4			HKS-3717	3160-555	9.90	HKS-3717A	3161-955	10.30
	2			HKS-3720	3160-556	10.60	HKS-3720A	3161-956	10.40
	2-1/2			HKS-3725	3160-557	10.75	HKS-3725A	3161-957	10.70
	3			HKS-3730	3160-558	11.60	HKS-3730A	3161-958	11.30
1/2-13	1-1/2			HKS-5015	3160-559	13.70	HKS-5015A	3161-959	12.75
	1-3/4			HKS-5017	3160-560	14.85	HKS-5017A	3161-960	13.30
	2			HKS-5020	3160-561	14.95	HKS-5020A	3161-961	13.45
	2-1/2			HKS-5025	3160-562	15.40	HKS-5025A	3161-962	14.25
	3	2-1/2	1-1/2	HKS-5030	3160-563	15.60	HKS-5030A	3161-963	14.70
5/8-11	1-3/4			HKS-6217	3160-564	15.65	HKS-6217A	3161-964	14.60
	2-1/2			HKS-6225	3160-565	16.40	HKS-6225A	3161-965	15.60
	3			HKS-6230	3160-566	16.50	HKS-6230A	3161-966	15.75
	3-1/2			HKS-6235	3160-567	17.20	HKS-6235A	3161-967	16.50

Precision Stainless Steel Thumb Screw



- Made from 303 stainless steel
- Diamond knurl on head
- Longer head length than standard thumb screw

A	D	B	C	PART #	ORDER NO.	PRICE EACH
4-40	1"	3/16	3/8	4118	3164-825	\$2.40
6-32	1"	3/16	3/8	4122	3164-826	2.40
8-32	1/2	3/16	3/8	4219	3164-828	2.35
8-32	1"	3/16	3/8	4228	3164-829	2.40
10-24	1/2	1/4	1/2	4310	3164-831	2.90
10-24	1"	1/4	1/2	4326	3164-833	2.95
10-32	1/2	1/4	1/2	4359	3164-835	2.90
10-32	1"	1/4	1/2	4374	3164-836	3.05
1/4-20	1/2	5/16	1/2	4410	3164-838	3.05
1/4-20	1"	5/16	1/2	4413	3164-840	3.00

Jig Fixtures & Components

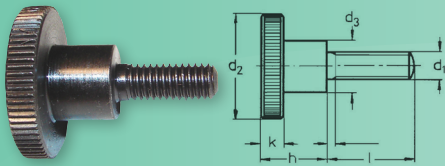
Adjustable Clamping Levers Plastic Handle w/ Stud and Die-Cast Zinc Handle w/ Stud

- Black thermoplastic handle with metal insert
- Steel parts give increased stability and rigidity
- External steel stud with black oxide finish
- Additional thread lengths available upon request



X THREAD	L	B	C	D	E	F	PLASTIC HANDLE			DIE-CAST HANDLE		
							REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
#10-24	.63	.55	.95	1.65	1.30	.39	AH-301	3161-986	\$5.60	MH-301	3163-680	\$6.80
#10-32	.63	.55	.95	1.65	1.30	.39	AH-302	3161-987	5.60	MH-302	3163-681	6.80
#10-32	1.25	.55	.95	1.65	1.30	.39	AH-3027	3162-085	5.60	MH-3027	3163-732	6.90
1/4"-20	.78	.55	.95	1.65	1.30	.39	AH-303	3161-988	5.60	MH-303	3163-682	6.80
1/4"-20	1.25	.55	.95	1.65	1.30	.39	AH-3034	3162-087	5.60	MH-3034	3163-734	6.90
1/4"-20	1.57	.55	.95	1.65	1.30	.53	AH-3038	3162-091	6.60	MH-3038	3163-738	7.70
1/4"-20	.98	.71	1.22	2.56	1.77	.53	AH-3035	3162-088	7.45	MH-3035	3163-735	8.80
5/16"-18	.78	.71	1.22	2.56	1.77	.53	AH-3037	3162-090	7.45	MH-3037	3163-737	8.50
5/16"-18	1.26	.71	1.22	2.56	1.77	.53	AH-3039	3162-092	7.45	MH-3039	3163-739	8.50
5/16"-18	1.57	.71	1.22	2.56	1.77	.53	AH-304	3161-989	7.45	MH-304	3163-683	8.50
5/16"-18	2.48	.71	1.22	2.56	1.77	.53	AH-3045	3162-094	7.45	MH-3045	3163-741	8.50
3/8"-16	.78	.71	1.22	2.56	1.77	.53	AH-3047	3162-095	7.45	MH-3047	3163-742	8.50
3/8"-16	1.25	.71	1.22	2.56	1.77	.53	AH-3048	3162-096	7.45	MH-3048	3163-743	8.50
3/8"-16	1.57	.71	1.22	2.56	1.77	.53	AH-305	3161-990	7.45	MH-305	3163-684	8.50
5/16"-18	1.97	.86	1.41	3.07	2.12	.63	AH-3053	3162-097	9.30	MH-3053	3163-744	10.15
3/8"-16	.98	.86	1.41	3.07	2.12	.63	AH-3056	3162-098	9.30	MH-3056	3163-745	10.15
3/8"-16	1.26	.86	1.41	3.07	2.12	.63	AH-3058	3162-099	9.30	MH-3058	3163-746	10.15
3/8"-16	1.57	.86	1.41	3.07	2.12	.63	AH-306	3161-991	9.30	MH-306	3163-685	10.10
3/8"-16	1.97	.86	1.41	3.07	2.12	.63	AH-307	3161-992	9.30	MH-307	3163-686	10.10
3/8"-16	2.48	.86	1.41	3.07	2.12	.63	AH-3079	3162-102	9.30	MH-3079	3163-749	10.40
3/8"-16	1.57	.98	1.69	3.62	2.52	.75	AH-3075	3162-100	10.55	MH-3075	3163-747	12.55
3/8"-16	1.97	.98	1.69	3.62	2.52	.75	AH-3078	3162-101	10.55	MH-3078	3163-748	12.55
1/2"-13	1.25	.98	1.69	3.62	2.52	.75	AH-308	3161-993	10.55	MH-308	3163-687	12.55
1/2"-13	1.57	.98	1.69	3.62	2.52	.75	AH-3085	3162-103	10.55	MH-3085	3163-750	12.55
1/2"-13	1.97	.98	1.69	3.62	2.52	.75	AH-309	3161-994	10.55	MH-309	3163-688	12.55
1/2"-13	2.48	.98	1.69	3.62	2.52	.75	AH-310	3161-995	10.75	MH-310	3163-689	12.55
1/2"-13	1.57	1.18	1.98	4.25	2.95	.91	-	-	-	MH-321	3163-690	15.95
1/2"-13	2.48	1.18	1.98	4.25	2.95	.91	-	-	-	MH-322	3163-691	15.95
5/8"-11	1.57	1.18	1.98	4.25	2.95	.91	-	-	-	MH-324	3163-692	15.95
5/8"-11	2.48	1.18	1.98	4.25	2.95	.91	-	-	-	MH-325	3163-693	15.95

Knurled Thumb Screws



- Metric and Inch sizes available
- Available in stainless steel and steel
- Solid one-piece construction
- Straight knurl

d ²	THREAD	THREAD LGTH	d ³	h	k	STEEL			STAINLESS STEEL		
						PART NO.	ORDER NO.	PRICE EACH	PART NO.	ORDER NO.	PRICE EACH
1	1/4-20	5/16	1/2	5/8	1/4	KK-2531	3163-061	\$5.10	KK-2531SS	3163-106	\$8.55
1	1/4-20	3/8	1/2	5/8	1/4	KK-2537	3163-062	5.20	KK-2537SS	3163-107	8.95
1	1/4-20	1/2	1/2	5/8	1/4	KK-2550	3163-063	5.45	KK-2550SS	3163-108	9.40
1	1/4-20	5/8	1/2	5/8	1/4	KK-2562	3163-064	5.75	KK-2562SS	3163-109	9.95
1	1/4-20	3/4	1/2	5/8	1/4	KK-2575	3163-065	5.95	KK-2575SS	3163-110	10.75
1	1/4-20	1	1/2	5/8	1/4	KK-2510	3163-060	6.25	KK-2510SS	3163-105	11.40
1-1/4	5/16-18	1/2	5/8	3/4	1/4	KK-3150	3163-069	7.50	KK-3150SS	3163-114	13.10
1-1/4	5/16-18	5/8	5/8	3/4	1/4	KK-3162	3163-070	7.70	KK-3162SS	3163-115	13.60
1-1/4	5/16-18	3/4	5/8	3/4	1/4	KK-3175	3163-071	8.05	KK-3175SS	3163-116	14.45
1-1/4	5/16-18	1	5/8	3/4	1/4	KK-3110	3163-066	8.95	KK-3110SS	3163-111	16.15
1-1/4	5/16-18	1-1/4	5/8	3/4	1/4	KK-3112	3163-067	9.20	KK-3112SS	3163-112	17.50
1-1/4	5/16-18	1-1/2	5/8	3/4	1/4	KK-3115	3163-068	10.45	KK-3115SS	3163-113	18.65
1-3/8	3/8-16	5/8	3/4	1	5/16	KK-3762	3163-075	10.80	KK-3762SS	3163-120	21.20
1-3/8	3/8-16	3/4	3/4	1	5/16	KK-3775	3163-076	11.60	KK-3775SS	3163-121	22.50
1-3/8	3/8-16	1	3/4	1	5/16	KK-3710	3163-072	12.20	KK-3710SS	3163-117	22.95
1-3/8	3/8-16	1-1/4	3/4	1	5/16	KK-3712	3163-073	14.80	KK-3712SS	3163-118	23.75
1-3/8	3/8-16	1-1/2	3/4	1	3/4	KK-3715	3163-074	15.50	KK-3715SS	3163-119	24.10

Metric Thumb Screws

- Carbon steel, black oxide finish
- Straight knurl



X THREAD	THREAD LENGTH D	B	C	PART NO.	ORDER NO.	PRICE EACH
M3	6mm	12mm	2.5mm	521203006	3165-050	\$2.45
M3	10	12	2.5	521203013	3165-051	2.50
M3	16	12	2.5	521203016	3165-052	2.55
M4	8	16	3.5	521604008	3165-053	2.80
M4	10	16	3.5	521604010	3165-054	2.85
M4	12	16	3.5	521604012	3165-055	2.90
M4	16	16	3.5	521604016	3165-056	3.20
M4	20	16	3.5	521604020	3165-057	3.60
M5	10	20	4	522005010	3165-058	3.40
M5	12	20	4	522005012	3165-059	3.50
M5	16	20	4	522005016	3165-060	3.60
M5	20	20	4	522005020	3165-061	4.25
M6	12	24	5	522406012	3165-062	4.45
M6	16	24	5	522406016	3165-063	4.50
M6	20	24	5	522406020	3165-064	4.70
M6	30	24	5	522406030	3165-065	6.25
M6	40	24	5	522406040	3165-066	7.50
M8	16	30	6	523008016	3165-067	6.50
M8	20	30	6	523008020	3165-068	7.20
M8	25	30	6	523008025	3165-069	7.45
M8	30	30	6	523008030	3165-070	9.20
M8	40	30	6	523008040	3165-071	10.95
M10	20	36	8	523610020	3165-072	9.90
M10	25	36	8	523610025	3165-073	11.25
M10	30	36	8	523610030	3165-074	12.95
M10	40	36	8	523610040	3165-075	15.50

Precision Thumb Screws w/Shoulder

- Precision thumb screw for a wide variety of applications
- 303 stainless steel or carbon steel with black oxide finish
- Shoulder provides an excellent bearing surface
- Diamond knurl on head

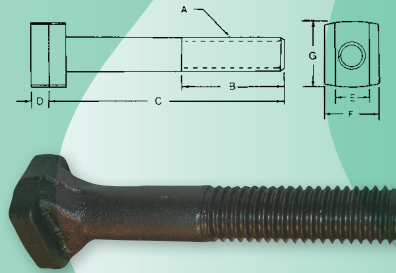


A THREAD	B	C	D	E	F	STEEL			STAINLESS STEEL		
						PART NO.	ORDER NO.	PRICE EACH	PART NO.	ORDER NO.	PRICE EACH
4-40	3/8	1/4	1/4	3/16	3/32	3101	3164-619	\$2.45	-	-	-
4-40	3/8	1/4	1/4	3/16	3/32	3102	3164-620	2.45	-	-	-
6-32	7/16	3/8	7/6	5/16	3/32	3202	3164-621	2.55	4202	3164-853	\$3.25
6-32	7/16	3/8	9/16	5/16	3/32	3204	3164-622	2.55	4204	3164-854	3.25
8-32	7/16	3/8	5/16	5/16	3/32	3205	3164-623	2.55	4205	3164-855	3.25
8-32	7/16	3/8	3/8	5/16	3/32	3206	3164-624	2.55	4206	3164-856	3.25
8-32	7/16	3/8	7/16	5/16	3/32	3207	3164-625	2.55	4207	3164-857	3.25
8-32	7/16	3/8	1/2	5/16	3/32	3208	3164-626	2.75	4208	3164-858	3.60
8-32	7/16	3/8	9/16	5/16	3/32	3209	3164-627	2.75	4209	3164-859	3.60
8-32	1/2	3/8	5/16	5/16	3/32	3301	3164-628	2.95	4301	3164-860	4.20
8-32	1/2	3/8	3/8	5/16	3/32	3302	3164-629	2.95	4302	3164-861	4.20
8-32	1/2	3/8	7/16	5/16	3/32	3303	3164-630	3.00	4303	3164-862	4.25
8-32	1/2	3/8	1/2	5/16	3/32	3304	3164-631	3.15	4304	3164-863	4.35
8-32	1/2	3/8	5/8	5/16	3/32	3305	3164-632	3.15	4305	3164-864	4.35
10-32	1/2	3/8	5/16	5/16	3/32	3401	3164-646	2.85	4401	3164-865	4.25
10-32	1/2	3/8	3/8	5/16	3/32	3402	3164-647	2.85	4402	3164-866	4.25
10-32	1/2	3/8	7/16	5/16	3/32	3403	3164-648	3.05	4403	3164-867	4.40
10-32	1/2	3/8	1/2	5/16	3/32	3403	3164-649	3.20	4404	3164-868	4.50
10-32	1/2	3/8	9/16	5/16	3/32	3405	3164-650	3.20	4405	3164-869	4.50
10-32	1/2	3/8	5/8	5/16	3/32	3406	3164-651	3.25	4406	3164-870	4.50

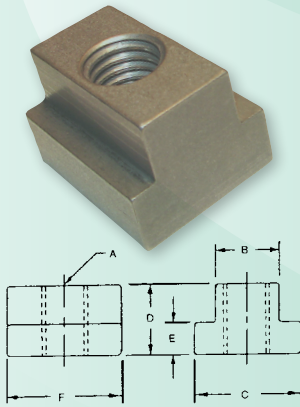
Jig Fixtures & Components

A	B	C	D	E	F	G	REF. NO.	ORDER NO.	PRICE EACH
3/8-16	5/8	1	13/16	3/8	5/8	3/4	TB-3710	3161-640	\$13.25
3/8-16	1	1-1/2	13/16	3/8	5/8	3/4	TB-3715	3161-641	13.75
3/8-16	1-1/4	2	13/16	3/8	5/8	3/4	TB-3720	3161-642	14.40
3/8-16	1-1/2	2-1/2	13/16	3/8	5/8	3/4	TB-3725	3161-643	14.55
3/8-16	1-1/2	3	13/16	3/8	5/8	3/4	TB-3730	3161-644	14.95
3/8-16	1-1/2	3-1/2	13/16	3/8	5/8	3/4	TB-3735	3161-645	15.25
3/8-16	1-1/2	4	13/16	3/8	5/8	3/4	TB-3740	3161-646	15.75
1/2-13	1	1-1/2	1/4	1/2	13/16	15/16	TB-5015	3161-647	17.65
1/2-13	1-1/4	2	1/4	1/2	13/16	15/16	TB-5020	3161-648	18.65
1/2-13	1-1/2	2-1/2	1/4	1/2	13/16	15/16	TB-5025	3161-649	19.40
1/2-13	1-1/2	3	1/4	1/2	13/16	15/16	TB-5030	3161-650	19.70
1/2-13	1-1/2	3-1/2	1/4	1/2	13/16	15/16	TB-5035	3161-651	20.20
1/2-13	1-1/2	4	1/4	1/2	13/16	15/16	TB-5040	3161-652	21.10
1/2-13	1-1/2	5	1/4	1/2	13/16	15/16	TB-5050	3161-653	23.40
1/2-13	2	6	1/4	1/2	13/16	15/16	TB-5060	3161-654	24.20
5/8-11	1	1-1/2	5/16	5/8	1-1/64	1-1/8	TB-6215	3161-655	20.75
5/8-11	1-1/4	2	5/16	5/8	1-1/64	1-1/8	TB-6220	3161-656	21.05
5/8-11	1-1/2	2-1/2	5/16	5/8	1-1/64	1-1/8	TB-6225	3161-657	22.40
5/8-11	1-1/2	3	5/16	5/8	1-1/64	1-1/8	TB-6230	3161-658	23.10
5/8-11	1-1/2	3-1/2	5/16	5/8	1-1/64	1-1/8	TB-6235	3161-659	23.75
5/8-11	1-1/2	4	5/16	5/8	1-1/64	1-1/8	TB-6240	3161-660	25.50
5/8-11	1-1/2	5	5/16	5/8	1-1/64	1-1/8	TB-6250	3161-661	27.25
5/8-11	2	6	5/16	5/8	1-1/64	1-1/8	TB-6260	3161-662	28.90
5/8-11	3	8	5/16	5/8	1-1/64	1-1/8	TB-6280	3161-663	29.90
3/4-10	1-1/2	3	3/8	3/4	1-1/4	1-3/8	TB-7530	3161-664	29.10
3/4-10	1-1/2	3-1/2	3/8	3/4	1-1/4	1-3/8	TB-7535	3161-665	32.00
3/4-10	1-1/2	4	3/8	3/4	1-1/4	1-3/8	TB-7540	3161-666	34.00

T-Slot Bolts



T-Slot Nuts

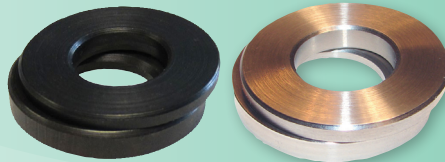
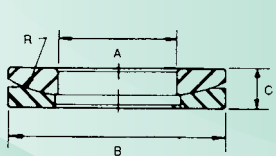


A TAP	B	C	D	E	F	CARBON STEEL			STAINLESS STEEL		
						REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
5/16-18	.343	5/8	13/32	7/32	3/4	TN 0	3161-129	\$4.15	TN OSS	3170-365	\$7.30
5/16-18	.418	11/16	3/8	1/4	11/16	TN 00	3161-130	3.90	TN 00SS	3170-366	7.65
3/8-16	.430	3/4	1/2	7/32	1	TN 05	3161-131	3.65	TN 05SS	3170-367	7.95
3/8-16	.490	7/8	5/8	1/4	7/8	TN 10	3161-132	3.90	TN 10SS	3170-368	8.30
3/8-16	.543	7/8	5/8	5/16	1-1/4	TN 15	3161-133	4.20	TN 15SS	3170-369	8.30
1/2-13	.555	7/8	3/4	11/32	1-1/4	TN 20	3161-134	4.50	TN 20SS	3170-370	9.75
1/2-13	.562	7/8	3/4	5/16	1-1/4	TN 1	3161-135	4.60	TN 1SS	3170-371	11.10
1/2-13	.562	1-1/8	3/4	25/64	1-1/4	TN 2	3161-136	4.60	TN 2SS	3170-372	10.15
1/2-13	.625	1	3/4	3/8	1-1/4	TN 22	3161-137	4.60	TN 22SS	3170-373	9.95
1/2-13	.625	1-1/8	3/4	7/16	1-1/4	TN 23	3161-138	5.45	TN 23SS	3170-374	10.25
1/2-13	.665	1-1/8	3/4	13/32	1-1/4	TN 21	3161-139	4.60	TN 21SS	3170-375	10.30
5/8-11	.675	1-1/8	1-1/8	15/32	1-1/2	TN 30	3161-140	6.90	TN 30SS	3170-376	14.20
5/8-11	.687	1-1/4	1	15/32	1-1/2	TN 3	3161-141	6.60	TN 3SS	3170-377	13.75
5/8-11	.780	1-1/4	1	17/32	1-1/2	TN 31	3161-142	6.90	TN 31SS	3170-378	13.90
3/4-10	.800	1-3/8	1-3/8	17/32	1-3/4	TN 40	3161-143	9.40	TN 40SS	3170-379	20.00
3/4-10	.812	1-1/2	1	9/16	1-3/4	TN 5	3161-144	9.15	TN 5SS	3170-380	21.20
3/4-10	.968	1-5/8	1	9/16	1-3/4	TN 4	3161-145	9.15	TN 4SS	3170-381	20.60
3/4-10	1.030	1-5/8	1	9/16	1-3/4	TN 41	3161-150	9.40	TN 41SS	3170-382	22.10

Carbon steel is case hardened. Black oxide finish. **Note:** An imperfect thread is left in the base to eliminate the danger of damaging the table by screwing the stub through.

Spherical Washer Sets

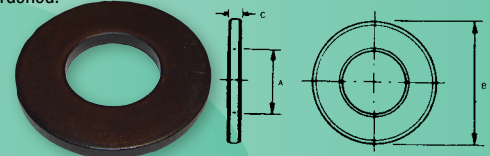
Carbon steel is case hardened. Black oxide finish.



BOLT SIZE	A	B	C	R	CARBON STEEL			STAINLESS STEEL		
					REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
1/4	9/32	5/8	3/16	3/4	SP 0	3161-009	\$2.90	SP 0SS	3170-187	\$5.50
5/16	11/32	3/4	1/4	1	SP 01	3161-010	3.50	SP 01SS	3170-188	6.20
3/8	13/32	7/8	1/4	1-1/4	SP 1	3161-011	3.60	SP 1SS	3170-189	7.30
1/2	17/32	1-1/8	5/16	1-1/2	SP 2	3161-012	4.50	SP 2SS	3170-190	8.90
5/8	21/32	1-3/8	5/16	1-3/4	SP 3	3161-013	6.20	SP 3SS	3170-191	11.30
3/4	25/32	1-5/8	3/8	2-1/4	SP 4	3161-014	7.70	SP 4SS	3170-192	13.80
7/8	15/16	1-3/4	3/8	2-1/2	SP 5	3161-015	9.20	SP 5SS	3170-193	17.40
1	1-1/16	2	1/2	2-3/4	SP 6	3161-016	11.20	SP 6SS	3170-194	20.80
1-1/8	1-3/16	2-1/4	1/2	3	SP 7	3161-017	17.50	SP 7SS	3170-195	32.80
1-1/4	1-5/16	2-5/8	1/2	3	SP 8	3161-018	20.40	SP 8SS	3170-196	38.00
1-1/2	1-9/16	2-7/8	9/16	3-1/2	SP 9	3161-019	25.00	SP 9SS	3170-197	47.00
1-5/8	1-11/16	3-1/4	11/16	3-1/2	SP 10	3161-020	31.20	SP 10SS	3170-198	54.20
1-3/4	1-13/16	3-1/4	11/16	3-1/2	SP 11	3161-021	34.60	SP 11SS	3170-199	68.50
2	2-1/16	3-7/8	3/4	4	SP 12	3161-022	39.50	SP 12SS	3170-200	86.00

Precision Flat Washers

Carbon steel is case hardened. Black oxide finish.

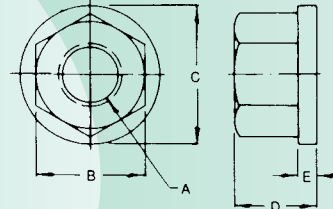
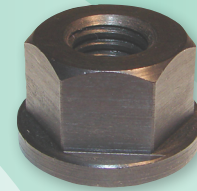


BOLT SIZE	A	B	C	CARBON STEEL			STAINLESS STEEL		
				REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
1/4	9/32	5/8	1/8	FW 0	3160-474	\$0.79	FW OSS	3170-100	\$1.68
5/16	11/32	3/4	1/8	FW 01	3160-475	0.88	FW 01SS	3170-101	1.85
3/8	13/32	7/8	1/8	FW 1	3160-476	0.90	FW 1SS	3170-102	2.10
1/2	17/32	1-1/8	1/8	FW 2	3160-477	0.96	FW 2SS	3170-103	2.80
5/8	21/32	1-3/8	1/8	FW 3	3160-478	1.15	FW 3SS	3170-104	3.35
3/4	25/32	1-5/8	5/32	FW 4	3160-479	1.52	FW 4SS	3170-105	3.60
7/8	29/32	1-3/4	5/32	FW 5	3160-480	1.78	FW 5SS	3170-106	4.60
1	1-1/32	2	3/16	FW 6	3160-481	2.45	FW 6SS	3170-107	6.20

Jig Fixtures & Components

Collar Nuts

					LOW CARBON STEEL			STAINLESS STEEL		
A	B	C	D	E	REF. NO.	ORDER NO.	PRICE EACH	REF. NO.	ORDER NO.	PRICE EACH
1/4-20	1/2	5/8	5/16	3/32	CN 0	3160-298	\$ 3.10	CN OSS	3170-045	\$ 5.30
5/16-18	9/16	3/4	3/8	3/32	CN 00	3160-299	3.60	CN 00SS	3170-046	5.50
3/8-16	11/16	7/8	1/2	1/8	CN 10	3160-300	3.65	CN 10SS	3170-047	5.90
7/16-14	3/4	1	9/16	5/32	CN 15	3160-301	3.85	CN 15SS	3170-048	6.90
1/2-13	7/8	1-1/8	11/16	5/32	CN 20	3160-302	4.50	CN 20SS	3170-049	7.90
5/8-11	1-1/16	1-3/8	13/16	3/16	CN 30	3160-303	5.20	CN 30SS	3170-050	9.90
3/4-10	1-1/4	1-5/8	1	1/4	CN 40	3160-304	7.85	CN 40SS	3170-051	13.80
7/8-9	1-7/16	1-3/4	1-1/8	1/4	CN 50	3160-305	10.75	CN 50SS	3170-052	21.30
1-8	1-5/8	2	1-1/4	1/4	CN 60	3160-306	12.85	CN 60SS	3170-053	25.75
1-1/8-7	1-13/16	2-1/4	1-1/4	1/4	CN 70	3160-307	20.10	CN 70SS	3170-054	47.00
1-1/4-7	1-13/16	2-1/4	1-1/4	1/4	CN 80	3160-308	24.95	CN 80SS	3170-055	63.00
1/4-28	1/2	5/8	5/16	3/32	CN 100	3160-310	3.15	CN 100SS	3170-056	5.45
5/16-24	9/16	3/4	3/8	3/32	CN 105	3160-309	3.65	CN 105SS	3170-057	5.75
3/8-24	11/16	7/8	1/2	1/8	CN 110	3160-311	3.75	CN 110SS	3170-058	6.20
7/16-20	3/4	1	9/16	5/32	CN 115	3160-312	3.85	CN 115SS	3170-059	7.10
1/2-20	7/8	1-1/8	11/16	5/32	CN 120	3160-313	4.60	CN 120SS	3170-060	8.55
5/8-18	1-1/16	1-3/8	13/16	3/16	CN 130	3160-314	5.55	CN 130SS	3170-061	10.15
3/4-16	1-1/4	1-5/8	1	1/4	CN 140	3160-315	8.45	CN 140SS	3170-062	14.20
7/8-14	1-7/16	1-3/4	1-1/8	1/4	CN 150	3160-316	10.95	CN 150SS	3170-063	21.60
1-14	1-5/8	2	1-1/4	1/4	CN 160	3160-317	13.10	CN 160SS	3170-064	26.00
1-1/8-12	1-13/16	2-1/4	1-1/4	1/4	CN 170	3160-318	20.50	CN 170SS	3170-065	48.25
1-1/4-12	1-13/16	2-1/4	1-1/4	1/4	CN 180	3160-319	25.50	CN 180SS	3170-066	64.50



Acorn Nuts

- Available in case hardened steel or stainless steel
- Excellent for protecting exposed threads



CARBON STEEL IS CASE HARDENED AND BLACK OXIDE FINISHED.

Swing Bolts

- Available in case hardened black oxide finish steel or stainless steel.
- Precision machined from bar stock.
- Swing bolts are not to be used for lifting.



							STEEL			STAINLESS STEEL		
A	B	C	D	E	F	G	PART NO.	ORDER NO.	PRICE EACH	PART NO.	ORDER NO.	PRICE EACH
1/4-20	1/4	3/4	1-3/16	1-1/2	1/2	5/16	SWB-01	3161-119	\$ 7.85	SWB-01SS	3170-350	\$ 13.80
1/4-20	1/4	1-1/4	2-3/16	2-1/2	1/2	5/16	SWB-02	3161-120	9.55	SWB-02SS	3170-351	16.75
5/16-18	5/16	1	1-5/8	2	5/8	3/8	SWB-03	3161-121	9.50	SWB-03SS	3170-352	17.35
5/16-18	5/16	1-3/8	2-5/8	3	5/8	3/8	SWB-04	3161-122	10.30	SWB-04SS	3170-353	19.90
3/8-16	3/8	1-3/8	2-5/8	3	5/8	3/8	SWB-1	3161-123	12.40	SWB-1SS	3170-354	23.40
3/8-16	3/8	2	3	3-1/2	3/4	1/2	SWB-10	3161-126	13.00	SWB-10SS	3170-357	27.30
1/2-13	1/2	1-5/8	2-1/2	3-1/8	1	5/8	SWB-2	3161-124	13.60	SWB-2SS	3170-355	33.30
1/2-13	1/2	2-1/2	3-1/2	4-1/8	1	5/8	SWB-20	3161-127	17.65	SWB-20SS	3170-358	39.50
5/8-11	5/8	1-5/8	2-3/4	3-1/2	1-1/4	3/4	SWB-3	3161-125	25.70	SWB-3SS	3170-356	47.50
5/8-11	5/8	2-1/2	4	4-3/4	1-1/4	3/4	SWB-30	3161-128	29.80	SWB-30SS	3170-359	52.00

LOW CARBON STEEL						
A	THREAD	HEX	C	PART NO.	ORDER NO.	PRICE EACH
5/16-18	5/8	5/8	15/16	AN-0	3160-000	\$ 3.95
3/8-16	3/4	3/4	15/16	AN-1	3160-002	4.25
1/2-13	7/8	15/16	15/16	AN-2	3160-003	5.25
5/8-11	1-1/16	1-3/16	15/16	AN-3	3160-004	6.85
3/4-10	1-1/4	1-3/8	15/16	AN-4	3160-005	8.60
7/8-9	1-3/8	1-5/8	15/16	AN-5	3160-006	9.95

STAINLESS STEEL						
A	THREAD	HEX	C	PART NO.	ORDER NO.	PRICE EACH
5/16-18	5/8	5/8	15/16	AN-0SS	3170-000	\$ 5.15
3/8-16	3/4	3/4	15/16	AN-1SS	3170-001	6.60
1/2-13	7/8	15/16	15/16	AN-2SS	3170-002	9.20
5/8-11	1-1/16	1-3/16	15/16	AN-3SS	3170-003	15.40
3/4-10	1-1/4	1-3/8	15/16	AN-4SS	3170-004	18.50
7/8-9	1-3/8	1-5/8	15/16	AN-5SS	3170-005	25.00

Tapped End Clamp Straps

- Case hardened, black oxide finish
- Machined from carbon steel



Stainless Steel Clamp Straps

- Made from 300 series stainless steel



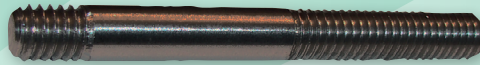
A	B	C	D	E	F	G	H	PART NO.	ORDER NO.	PRICE EACH
3/8	5/8	2	1/2	1	9/32	1/4-20	7/32	CS-7A	3160-338	\$ 7.95
3/8	5/8	2-1/2	1/2	1-1/8	9/32	1/4-20	1/32	CS-107	3160-374	8.10
1/2	1	2-3/4	7/16	1-1/2	11/32	5/16-18	9/32	CS-71	3160-365	11.10
1/2	1	3-1/4	13/16	1-1/2	11/32	5/16-18	9/32	CS-72	3160-366	12.00
1/2	1	3-3/4	1-3/16	1-1/2	11/32	5/16-18	9/32	CS-73	3160-367	13.85
5/8	1-1/4	3	3/4	1-11/16	13/32	3/8-16	5/16	CS-74	3160-368	14.10
5/8	1-1/4	4	1	2-3/16	13/32	3/8-16	5/16	CS-75	3160-369	14.20
5/8	1-1/4	5	1-1/2	2-11/16	13/32	3/8-16	5/16	CS-76	3160-370	16.90
5/8	1-1/4	6	2	3-3/16	13/32	3/8-16	5/16	CS-77	3160-371	17.10
5/8	1-1/4	4	1	2-1/4	17/32	1/2-13	7/16	CS-7	3160-340	17.00
5/8	1-1/4	4-1/2	1	2-1/4	17/32	1/2-13	7/16	CS-700	3160-392	17.35
5/8	1-1/4	5	1-1/2	2-1/4	17/32	1/2-13	7/16	CS-8	3162-342	16.90
5/8	1-1/4	6	1-1/2	2-1/4	17/32	1/2-13	7/16	CS-9	3160-341	18.50
3/4	1-1/2	4-1/2	1	2-1/2	21/32	5/8-11	1/2	CS-10	3160-342	18.50
3/4	1-1/2	5	1-1/2	2-1/2	21/32	5/8-11	1/2	CS-1000	3160-393	18.90
3/4	1-1/2	5-1/2	1-1/2	2-1/2	21/32	5/8-11	1/2	CS-11	3160-343	18.85
3/4	1-1/2	6	1-1/2	2-1/2	21/32	5/8-11	1/2	CS-12	3160-344	22.00

A	B	C	D	E	F	G	H	J	PART NO.	ORDER NO.	PRICE EACH
1/4	1/2	1-1/2	5/16	5/8	5/64	10-32	7/32	11/16	1503	3164-503	\$ 11.55
1/4	1/2	1-3/4	7/16	3/4	5/64	10-32	7/32	13/16	1504	3164-504	12.25
1/4	1/2	2	9/16	7/8	5/64	10-32	7/32	15/16	1505	3164-505	12.65
5/16	5/8	1-3/4	3/8	3/4	3/32	1/4-20	9/32	3/4	1628	3164-518	14.40
5/16	5/8	2	1/2	7/8	3/32	1/4-20	9/32	7/8	1629	3164-519	15.30
5/16	5/8	2-1/2	11/16	1-1/16	3/32	1/4-20	9/32	1-3/16	1630	3161-193	16.85
3/8	3/4	2	1/2	7/8	1/8	5/16-18	11/32	13/16	1753	3164-528	14.70
3/8	3/4	2-1/2	3/4	1-1/8	1/8	5/16-18	11/32	1-1/16	1754	3164-529	16.30
3/8	3/4	3	7/8	1-5/16	1/8	5/16-18	11/32	1-3/8	1755	3164-530	17.50
1/2	7/8	3	3/4	1-5/16	1/8	3/8-16	13/32	1-5/16	1878	3164-536	22.50
1/2	7/8	3-1/2	1	1-1/2	1/8	3/8-16	13/32	1-5/8	1879	3164-537	24.40
1/2	7/8	4	1-1/8	1-5/8	1/8	3/8-16	13/32	2	1879	3164-538	25.15

Jig Fixtures & Components

Stainless Steel Available Upon Request

Set-Up Studs



STEEL			
SIZE	LENGTH	ORDER NO.	PRICE EACH
1/4	1-1/2	3161-459	\$4.30
1/4	2	3161-460	4.25
1/4	2-1/2	3161-461	3.10
1/4	3	3161-462	3.70
1/4	3-1/2	3161-463	4.20
1/4	4	3161-464	4.75
5/16	1-1/2	3161-473	3.85
5/16	2	3161-474	3.75
5/16	2-1/2	3161-475	3.70
5/16	3	3161-476	3.75
5/16	3-1/2	3161-477	3.85
5/16	4	3161-478	3.90
5/16	4-1/2	3161-479	4.30
5/16	5	3161-480	4.35
5/16	6	3161-482	4.60
5/16	7	3161-483	4.90
5/16	8	3161-485	5.25
3/8	1-1/2	3161-487	3.75
3/8	2	3161-488	3.80
3/8	2-1/2	3161-489	3.80
3/8	3	3161-490	3.90
3/8	3-1/2	3161-491	4.00
3/8	4	3161-492	4.20
3/8	4-1/2	3161-493	4.45
3/8	5	3161-494	4.75
3/8	5-1/2	3161-495	4.90
3/8	6	3161-496	5.10
3/8	6-1/2	3161-497	5.35
3/8	7	3161-498	5.65

STEEL			
SIZE	LENGTH	ORDER NO.	PRICE EACH
3/8	7-1/2	3161-499	\$5.90
3/8	8	3161-500	6.15
1/2	1-1/2	3161-501	5.10
1/2	2	3161-502	5.05
1/2	2-1/2	3161-503	5.05
1/2	3	3161-504	5.10
1/2	3-1/2	3161-505	5.40
1/2	4	3161-506	5.65
1/2	4-1/2	3161-507	6.50
1/2	5	3161-508	7.10
1/2	5-1/2	3161-509	7.15
1/2	6	3161-510	7.25
1/2	6-1/2	3161-511	7.35
1/2	7	3161-512	7.40
1/2	7-1/2	3161-513	7.55
1/2	8	3161-514	7.65
1/2	9	3161-515	10.70
1/2	10	3161-516	13.25
1/2	12	3161-517	15.85
1/2	14	3161-518	17.25
5/8	1-1/2	3161-519	6.60
5/8	2	3161-520	6.45
5/8	2-1/2	3161-521	6.30
5/8	3	3161-522	7.05
5/8	3-1/2	3161-523	7.30
5/8	4	3161-524	7.40
5/8	4-1/2	3161-525	7.95
5/8	5	3161-526	8.40
5/8	5-1/2	3161-527	8.90
5/8	6	3161-528	9.05

STEEL			
SIZE	LENGTH	ORDER NO.	PRICE EACH
5/8	6-1/2	3161-529	\$9.35
5/8	7	3161-530	9.60
5/8	7-1/2	3161-531	9.75
5/8	8	3161-532	10.25
5/8	9	3161-533	15.75
5/8	10	3161-534	17.45
5/8	12	3161-535	17.80
5/8	14	3161-536	19.40
3/4	3	3161-538	8.10
3/4	4	3161-540	8.90
3/4	5	3161-542	11.50
3/4	6	3161-544	13.65
3/4	7	3161-546	14.30
3/4	8	3161-548	15.10
3/4	9	3161-549	23.40
3/4	10	3161-550	24.20
3/4	12	3161-551	26.50
3/4	14	3161-552	27.50
7/8	3	3161-553	11.25
7/8	4	3161-555	11.95
7/8	5	3161-557	12.20
7/8	6	3161-559	13.50
7/8	7	3161-561	14.20
7/8	8	3161-563	15.30
7/8	9	3161-564	18.10
7/8	10	3161-565	20.45
7/8	12	3161-566	23.20
7/8	14	3161-567	26.75

STEEL			
SIZE	LENGTH	ORDER NO.	PRICE EACH
1	3	3161-568	12.65
1	4	3161-570	13.55
1	5	3161-572	15.00
1	6	3161-574	15.30
1	7	3161-575	16.20
1	8	3161-577	17.75
1	9	3161-578	22.60
1	10	3161-579	25.30
1	12	3161-580	28.10
1	14	3161-581	30.80

† Limited Quantities

Eye Bolts

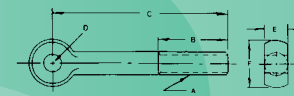
A	B	C	D	E	F	STEEL REF.	STEEL ORDER	STEEL PRICE	STAINLESS REF.	STAINLESS ORDER	STAINLESS PRICE
1/4-20	7/8	2-1/8	3/16	1/4	1/2	EB 0	3160-444	\$ 8.75	EB OSS	3170-070	\$ 16.70
1/4-20	7/8	2-1/8	1/4	1/4	1/2	EB 05	3160-445	8.75	EB 05SS	3170-071	16.60
1/4-20	1-1/4	3	3/16	1/4	1/2	EB 010	3160-446	9.50	EB 010SS	3170-072	17.80
1/4-20	1-1/4	3	1/4	1/4	1/2	EB 020	3160-447	9.50	EB 020SS	3170-073	17.80
5/16-18	1-1/4	2-1/2	1/4	1/4	5/8	EB 030	3160-448	10.45	EB 030SS	3170-074	18.25
5/16-18	1-1/4	2-1/2	5/16	5/16	5/8	EB 040	3160-449	10.45	EB 040SS	3170-075	18.35
5/16-18	1-1/2	3-1/2	1/4	1/4	5/8	EB 050	3160-450	11.85	EB 050SS	3170-076	20.50
5/16-18	1-1/2	3-1/2	5/16	5/16	5/8	EB 060	3160-451	11.85	EB 060SS	3170-077	20.50
5/16-18	2	4	1/4	1/4	5/8	EB 061	3160-452	12.75	EB 061SS	3170-078	22.90
5/16-18	2	4	5/16	5/16	5/8	EB 062	3160-453	12.75	EB 062SS	3170-079	22.90
3/8-16	1-1/2	3-1/2	5/16	5/16	3/4	EB 070	3160-454	12.35	EB 070SS	3170-080	25.10
3/8-16	1-1/2	3-1/2	3/8	3/8	3/4	EB 080	3160-455	12.35	EB 080SS	3170-081	25.10
3/8-16	2	3-3/4	5/16	5/16	3/4	EB 090	3160-456	12.60	EB 090SS	3170-082	26.45
3/8-16	2	3-3/4	3/8	3/8	3/4	EB 100	3160-469	12.50	EB 100SS	3170-083	26.45
3/8-16	2-1/2	5	5/16	3/8	3/4	EB 101	3160-470	13.20	EB 101SS	3170-084	29.50
3/8-16	2-1/2	5	3/8	1/2	3/4	EB 102	3160-471	16.30	EB 102SS	3170-085	29.50
1/2-13	1-1/2	3-3/4	3/8	3/8	1	EB 1	3160-457	18.75	EB 1SS	3170-086	31.50
1/2-13	1-1/2	3-3/4	1/2	1/2	1	EB 5	3160-459	18.65	EB 5SS	3170-087	31.25
1/2-13	2	5	3/8	3/8	1	EB 10	3160-460	20.20	EB 10SS	3170-088	41.25
1/2-13	2	5	1/2	1/2	1	EB 15	3160-461	20.20	EB 15SS	3170-089	41.25
1/2-13	2-1/2	5-1/2	3/8	1/2	1	EB 16	3160-462	24.25	EB 16SS	3170-090	47.50
1/2-13	2-1/2	5-1/2	1/2	1/2	1	EB 17	3160-463	24.25	EB 17SS	3170-091	47.50
5/8-11	1-3/4	4-1/2	5/8	5/8	1-1/4	EB 20	3160-464	26.40	EB 20SS	3170-092	47.50
5/8-11	2	4-1/2	5/8	5/8	1-1/4	EB 2	3160-458	26.25	EB 2SS	3170-093	51.20
5/8-11	2-1/2	6	5/8	5/8	1-1/4	EB 25	3160-465	29.75	EB 25SS	3170-094	60.50
5/8-11	3	6	5/8	5/8	1-1/4	EB 26	3160-466	30.20	EB 26SS	3170-095	64.50
3/4-10	4-1/2	4-1/2	3/4	3/4	1-1/2	EB 30	3160-467	40.65	EB 30SS	3170-096	62.50
3/4-10	6	6	3/4	3/4	1-1/2	EB 35	3160-468	48.85	EB 35SS	3170-097	72.00



Stainless Steel



Steel - Black Oxide



Jig Fixtures & Components

Steel Ball Plungers

- Steel body, stainless steel ball nose.
- All plungers equipped with nylon pellet for positive holding. If you require plungers without the nylon locking element, please specify when ordering.
- Ideal for locating or positioning applications.



A	B	C	DIAM. D	END PRESSURES LBS.		PART. NO.	ORDER NO.	PRICE EACH
				START	FULL			
#4-48	3/16	.020	.062	.12	.5	MBP-100	3163-508	\$5.70
#5-40	1/4	.020	.062	.12	.5	MBP-101	3163-509	5.55
#6-40	5/16	.023	.078	.5	1.0	MBP-102	3163-510	5.40
#8-36	11/32	.025	.093	.5	1.25	MBP-103	3163-511	5.20
#8-32	11/32	.025	.093	.5	1.25	MBP-104	3163-512	5.20
#10-32	33/64	.025	.093	.5	1.5	MBP-106	3160-751	4.90
#10-32	33/64	.025	.093	1.5	3.0	MBP-105	3160-750	4.90
#10-32	33/64	.025	.093	2.0	5.0	MBP-107	3160-752	4.90
1/4-20	17/32	.035	1.25	2.0	4.0	MBP-111	3160-754	4.95
1/4-20	17/32	.035	1.25	3.0	7.0	MBP-110	3160-753	4.95
1/4-20	17/32	.035	1.25	4.0	12.0	MBP-112	3160-755	4.95
5/16-18	37/64	.040	.156	2.0	4.5	MBP-116	3160-757	5.10
5/16-18	37/64	.040	.156	4.0	9.0	MBP-115	3160-756	5.10
5/16-18	37/64	.040	.156	6.0	17.0	MBP-117	3160-758	5.10
3/8-16	5/8	.048	.187	2.5	5.0	MBP-121	3160-760	5.20
3/8-16	5/8	.048	.187	5.0	10.0	MBP-120	3160-759	5.20
3/8-16	5/8	.048	.187	6.0	21.0	MBP-122	3160-749	5.20
1/2-13	3/4	.072	.281	3.0	6.0	MBP-126	3160-762	5.35
1/2-13	3/4	.072	.281	6.0	12.0	MBP-125	3160-761	5.35
1/2-13	3/4	.072	.281	6.0	30.0	MBP-127	3160-763	5.35
5/8-11	63/64	.096	.375	4.5	9.0	MBP-131	3160-765	6.50
5/8-11	63/64	.096	.375	9.0	18.0	MBP-130	3160-764	6.50
5/8-11	63/64	.096	.375	7.0	50.0	MBP-132	3160-766	6.50

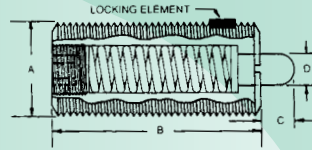
Stainless Steel Ball Plungers

- All parts are made of stainless steel.
- All plungers equipped with nylon pellet for positive holding. If you require plungers without the nylon locking element, please specify when ordering.
- Ideal for locating or positioning applications.



A	B	C	DIAM. D	END PRESSURES LBS.		PART. NO.	ORDER NO.	PRICE EACH
				START	FULL			
#4-48	3/16	.020	.062	.12	.5	MBP-090SS	3163-589	\$5.90
#5-40	1/4	.020	.062	.12	.5	MBP-091SS	3163-590	5.90
#6-40	5/16	.023	.078	.5	1.0	MBP-092SS	3163-591	5.90
#8-36	11/32	.025	.093	.5	1.25	MBP-093SS	3163-592	5.90
#8-32	11/32	.025	.093	.5	1.25	MBP-094SS	3163-593	5.90
#10-32	33/64	.025	.093	.5	1.5	MBP-106SS	3163-595	6.05
#10-32	33/64	.025	.093	1.5	3.0	MBP-105SS	3163-594	6.05
#10-32	33/64	.025	.093	2.0	5.0	MBP-107SS	3163-596	6.05
1/4-20	17/32	.035	1.25	2.0	4.0	MBP-111SS	3163-598	6.20
1/4-20	17/32	.035	1.25	3.0	7.0	MBP-110SS	3163-597	6.20
1/4-20	17/32	.035	1.25	4.0	12.0	MBP-112SS	3163-599	6.20
5/16-18	37/64	.040	.156	2.0	4.5	MBP-116SS	3163-601	7.05
5/16-18	37/64	.040	.156	4.0	9.0	MBP-115SS	3163-600	7.05
5/16-18	37/64	.040	.156	6.0	17.0	MBP-117SS	3163-602	7.05
3/8-16	5/8	.048	.187	2.5	5.0	MBP-121SS	3163-604	10.95
3/8-16	5/8	.048	.187	5.0	10.0	MBP-120SS	3163-603	7.20
3/8-16	5/8	.048	.187	6.0	21.0	MBP-122SS	3163-605	10.95
1/2-13	3/4	.072	.281	3.0	6.0	MBP-126SS	3163-607	12.05
1/2-13	3/4	.072	.281	6.0	12.0	MBP-125SS	3163-606	12.05
1/2-13	3/4	.072	.281	6.0	30.0	MBP-127SS	3163-608	12.05
5/8-11	63/64	.096	.375	4.5	9.0	MBP-131SS	3163-610	14.85
5/8-11	63/64	.096	.375	9.0	18.0	MBP-130SS	3163-609	14.85
5/8-11	63/64	.096	.375	7.0	50.0	MBP-132SS	3163-611	14.85

Spring Plungers - Light Spring Pressures



A	B	C	D	END PRESSURES			REF. NO.	ORDER NO.	PRICE EACH
				START	1/2 WAY	FULL			
#6-32	17/32	.062	.046	0.5	1.0	1.5	MSP-21	3160-780	\$6.70
#8-32	5/8	.093	.070	0.7	1.5	2.3	MSP-22	3160-781	5.85
#10-32	3/4	.125	.093	1.3	2.0	2.7	MSP-23	3160-782	5.40
1/4-20	1	.187	.119	1.0	2.5	4.0	MSP-24	3160-783	5.40
1/4-28	1	.187	.119	1.0	2.5	4.0	MSP-25	3160-784	5.40
5/16-18	1	.187	.135	1.5	3.0	4.5	MSP-26	3160-785	5.85
3/8-16	1-1/8	.187	.186	2.8	5.0	7.2	MSP-27	3160-786	6.05
1/2-13	1-1/4	.250	.248	2.7	6.0	9.3	MSP-28	3160-787	6.05
5/8-11	1-1/2	.312	.310	3.5	7.0	10.5	MSP-29	3160-788	7.20
3/4-10	1-3/4	.312	.374	4.0	10.0	16.0	MSP-30	3160-789	10.65
1-8	2-13/32	.500	.499	4.0	17.5	31.0	MSP-31	3160-790	14.85

Spring Plungers - Heavy Pressures



A	B	C	D	END PRESSURES			REF. NO.	ORDER NO.	PRICE EACH
				START	1/2 WAY	FULL			
#6-32	17/32	.062	.046	1.5	3.0	4.5	MSP-1	3160-767	\$7.05
#6-32	3/8	.062	.046	1.0	1.3	1.6	MSP-2	3160-768	6.10
#8-32	5/8	.093	.070	2.7	5.0	7.3	MSP-3	3160-769	6.10
#10-32	3/4	.125	.093	2.9	7.0	11.1	MSP-4	3160-770	6.10
1/4-20	1	.187	.119	3.0	8.0	13.0	MSP-5	3160-771	5.35
1/4-28	1	.187	.119	3.0	8.0	13.0	MSP-6	3160-772	5.35
1/4-20	3/4	.125	.119	2.0	5.5	9.0	MSP-7	3160-773	5.35
5/16-18	1	.187	.135	3.0	9.0	15.0	MSP-8	3160-774	6.00
3/8-16	1-1/8	.187	.186	5.5	10.0	14.5	MSP-9	3160-775	7.75
1/2-13	1-1/4	.250	.248	6.6	12.0	17.4	MSP-10	3160-776	7.75
5/8-11	1-1/2	.312	.310	10.5	18.0	25.5	MSP-11	3160-777	8.95
3/4-10	1-3/4	.312	.374	6.7	22.0	37.3	MSP-12	3160-778	12.25
1-8	2-13/32	.500	.499	16.0	42.0	68.0	MSP-13	3160-779	19.95

Metric Ball Plungers

- Steel body, stainless steel ball nose, zinc plated finish.
- All plungers equipped with nylon pellet for positive holding. If you require plungers without the nylon locking element, please specify when ordering.
- Ideal for locating or positioning applications.



A	B	C	DIAM. D	END PRESSURES KILOGRAMS		PART. NO.	ORDER NO.	PRICE EACH
				START	FULL			
M 4 x 0.7	9.00	0.60	2.36	.25	.50	MBP-150	3163-513	\$7.15
M 5 x 0.8	13.00	0.60	2.36	.25	.70	MBP-151	3163-514	7.35
M 5 x 0.8	13.00	0.60	2.36	.70	1.35	MBP-152	3163-515	7.35
M 5 x 0.8	13.00	0.60	2.36	.90	2.25	MBP-153	3163-516	7.35
M 6 x 1.0	13.50	0.90	3.20	.90	1.80	MBP-154	3163-517	7.55
M 6 x 1.0	13.50	0.90	3.20	1.35	3.15	MBP-155	3163-518	7.55
M 6 x 1.0	13.50	0.90	3.20	1.80	5.40	MBP-156	3163-519	7.55
M 8 x 1.25	15.00	1.00	3.96	.90	2.00	MBP-157	3163-520	7.60
M 8 x 1.25	15.00	1.00	3.96	1.80	4.00	MBP-158	3163-521	7.60
M 8 x 1.25	15.00	1.00	3.96	2.70	7.65	MBP-159	3163-522	7.60
M 10 x 1.5	16.00	1.20	4.75	1.13	2.25	MBP-160	3163-523	7.80
M 10 x 1.5	16.00	1.20	4.75	2.25	4.50	MBP-161	3163-524	7.80
M 10 x 1.5	16.00	1.20	4.75	2.70	9.50	MBP-162	3163-525	7.80
M 12 x 1.75	19.00	2.00	7.14	1.35	2.70	MBP-163	3163-526	7.85
M 12 x 1.75	19.00	2.00	7.14	2.70	5.40	MBP-164	3163-527	7.85
M 12 x 1.75	19.00	2.00	7.14	2.70	13.50	MBP-165	3163-528	7.85

Precision Ground Flat Stock - Oil Hardening

AISI/SAE Type 0-1

O-1 GROUND FLAT STOCK is an electric furnace melted oil-hardening tool steel supplied with a fully spheroidized structure. A non-shrinking general-purpose tool steel, it has excellent abrasion resistance, toughness and machinability characteristics.

Tolerance:
 Thickness ±.001" Width +.000"/.005"

		18" LENGTH		36" LENGTH	
THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1/64	1/2	3190-010	\$117.92	-	-
	3/4	3190-020	122.60	-	-
	1	3190-030	128.85	-	-
	1-1/4	3190-040	135.01	-	-
	1-1/2	3190-050	148.70	-	-
	2	3190-060	184.70	-	-
	2-1/2	3190-070	211.79	-	-
	3	3190-080	253.73	-	-
1/32	1/2	3190-100	21.42	-	-
	3/4	3190-110	28.89	-	-
	1	3190-120	33.65	-	-
	1-1/4	3190-130	39.91	-	-
	1-1/2	3190-140	46.19	-	-
	2	3190-150	58.35	-	-
	2-1/2	3190-160	70.69	-	-
	3	3190-170	83.36	-	-
3/64	1/2	3190-200†	26.74	-	-
	5/16	3190-210†	23.38	-	-
	3/8	3190-220†	14.83	-	-
	1/2	3190-230	18.77	3200-230	\$32.32
	3/4	3190-240	24.25	-	-
	1	3190-250	29.51	3200-250	50.77
	1-1/4	3190-260	34.61	3200-260	59.63
	1-1/2	3190-270	39.93	3200-270	68.82
1/16	1/4	3190-340	44.41	-	-
	5/16	3190-350†	15.82	-	-
	3/8	3190-360	22.17	-	-
	1/2	3190-370	13.26	3200-370	22.79
	3/4	3190-380	16.76	3200-380	28.84
	1	3190-390	20.18	3200-390	34.79
	1-1/4	3190-400	23.54	3200-400	40.53
	1-1/2	3190-410	27.00	3200-410	46.58
5/64	3/8	3190-550†	9.69	-	-
	1/2	3190-560	17.26	-	-
	3/4	3190-570	21.48	-	-
	1	3190-580	25.62	-	-
	1-1/2	3190-590	33.83	-	-
	2	3190-600	42.19	-	-
	2-1/2	3190-610	50.10	-	-
	3	3190-620	58.53	-	-
3/32	1/4	3190-650	55.95	-	-
	5/16	3190-660†	15.16	-	-
	3/8	3190-670	30.70	-	-
	1/2	3190-680	17.26	3200-680	29.81
	3/4	3190-690	21.48	3200-690	36.85
	1	3190-700	25.62	3200-700	44.14
	1-1/4	3190-710	29.65	3200-710	51.11
	1-1/2	3190-720	33.83	3200-720	58.31

		18" LENGTH		36" LENGTH	
THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
3/32	1-3/4	3190-730	\$37.97	3200-730	\$65.49
	2	3190-740	42.19	3200-740	72.62
	2-1/2	3190-750	50.54	3200-750	87.09
	3	3190-760	58.92	3200-760	101.53
	3-1/2	3190-770†	19.40	-	-
	4	3190-780	75.59	3200-780	130.13
	5	3190-790	92.21	3200-790	158.83
	6	3190-800	108.89	3200-800	187.54
	8	3190-810	162.85	3200-810	280.45
	10	3190-820	214.40	3200-820	369.30
7/64	1/2	3190-840	20.59	-	-
	3/4	3190-850	25.55	-	-
	1	3190-860	30.38	-	-
	1-1/4	3190-870	35.16	-	-
	1-1/2	3190-880	40.07	-	-
	2	3190-890	49.96	-	-
	2-1/2	3190-900	62.54	-	-
	3	3190-910	69.58	-	-
	4	3190-920	89.16	-	-
	1/8	1/8	3190-930	38.13	-
1/4		3190-940	13.69	-	-
5/16		3190-950	14.97	-	-
3/8		3190-960	15.80	-	-
1/2		3190-970	17.46	3200-970	30.04
5/8		3190-980	19.40	3200-980	33.44
3/4		3190-990	21.48	3200-990	36.85
1		3191-000	25.35	3201-000	43.63
1-1/4		3191-010	29.07	3201-010	49.94
1-1/2		3191-020	32.94	3201-020	56.71
1-3/4		3191-030	36.87	3201-030	63.54
2		3191-040	40.82	3201-040	70.28
2-1/2		3191-050	48.61	3201-050	83.63
3		3191-060	56.45	3201-060	97.21
3-1/2	3191-070	64.30	3201-070	110.72	
4	3191-080	72.11	3201-080	124.21	
4-1/2	-	-	3201-090†	56.82	
5	3191-100	87.75	3201-100	151.17	
6	3191-110	103.40	3201-110	178.05	
7	3191-120	136.59	3201-120	235.19	
8	3191-130	154.79	3201-130	266.55	
10	3191-140	190.81	3201-140	328.61	
12	3191-150	227.03	3201-150	391.04	
14	3191-160	262.17	3201-160	451.60	
9/64	9/64	3191-170†	13.28	-	-
	1/2	3191-180	21.64	-	-
	3/4	3191-190	24.66	-	-
	1	3191-200	29.24	-	-
	1-1/4	3191-210	35.18	-	-
	1-1/2	3191-220	37.92	-	-
	2	3191-230	46.95	-	-
	3	3191-240	64.89	-	-
5/32	1-1/2	3191-250	82.81	-	-
	5/32	3191-260	35.34	-	-
	1/4	3191-270	52.93	-	-
	5/16	3191-280†	16.98	-	-
	3/8	3191-290	30.70	-	-
	1/2	3191-300	21.49	3201-300	36.96
	3/4	3191-310	26.31	3201-310	45.30
	1	3191-320	31.11	3201-320	53.60
	1-1/4	3191-330	35.64	3201-330	61.32
	1-1/2	3191-340	40.30	3201-340	69.37
	1-3/4	3191-350	45.05	3201-350	77.65
	2	3191-360	49.94	3201-360	85.94
	2-1/2	3191-370	59.36	3201-370	102.19
	3	3191-380	68.91	3201-380	118.72
3-1/2	3191-390	78.47	3201-390	135.17	
4	3191-400	88.00	3201-400	151.54	
5	3191-410	107.11	3201-410	184.45	
6	3191-420	126.10	3201-420	217.21	
8	3191-430	188.06	3201-430	323.88	
3/16	3/16	3191-460	33.14	-	-
	1/4	3191-470	18.28	-	-
	5/16	3191-480	19.82	-	-
	3/8	3191-490	20.69	-	-
	1/2	3191-500	22.79	3201-500	39.22
	3/4	3191-510	27.31	3201-510	47.02
	1	3191-520	32.00	3201-520	55.08
	1-1/4	3191-530	36.28	3201-530	62.60
	1-1/2	3191-540	40.98	3201-540	70.61
	1-3/4	3191-550	45.60	3201-550	78.63
	2	3191-560	50.33	3201-560	86.65
	2-1/2	3191-570	59.59	3201-570	102.63
	3	3191-580	68.96	3201-580	118.76

		18" LENGTH		36" LENGTH		
THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	
3/16	3-1/2	3191-590	\$78.31	3201-590	\$134.94	
	4	3191-600	87.47	3201-600	150.74	
	4-1/2	3191-605†	34.13	-	-	
	5	3191-610	106.19	3201-610	182.85	
	6	3191-620	124.82	3201-620	214.97	
	8	3191-630	185.57	3201-630	319.61	
	10	3191-640	228.16	3201-640	393.09	
	12	3191-650	271.27	-	-	
	7/32	7/32	3191-660	31.79	-	-
		5/16	3191-670†	19.02	-	-
		3/8	3191-680†	14.99	-	-
		1/2	3191-690	27.27	3201-690	46.93
3/4		3191-700	32.84	3201-700	56.50	
1		3191-710	38.44	3201-710	66.13	
1-1/4		3191-720	43.63	3201-720	75.24	
1-1/2		3191-730	49.21	3201-730	84.71	
2		3191-740	60.36	3201-740	103.86	
2-1/2		3191-750	71.97	3201-750	123.97	
3		3191-760	82.60	3201-760	142.14	
4		3191-770	104.69	3201-770	180.32	
6	3191-780	149.10	3201-780	256.84		
1/4	1/4	3191-790	31.84	3201-790	54.79	
	5/16	3191-800	48.69	-	-	
	3/8	3191-810	24.89	-	-	
	1/2	3191-820	27.15	3201-820	46.74	
	3/4	3191-830	32.36	3201-830	55.73	
	1	3191-840	37.72	3201-840	64.96	
	1-1/8	3191-845†	14.40	-	-	
	1-1/4	3191-850	42.56	3201-850	73.35	
	1-1/2	3191-860	47.93	3201-860	82.56	
	1-3/4	3191-870	52.85	3201-870	91.01	
	2	3191-880	58.54	3201-880	100.80	
	2-1/2	3191-890	69.03	3201-890	118.93	
	3	3191-900	79.63	3201-900	137.19	
	3-1/2	3191-910	90.28	3201-910	155.40	
4	3191-920	100.87	3201-920	173.67		
4-1/2	3191-930	111.38	3201-930	191.84		
5	3191-940	121.96	3201-940	210.05		
5-1/2	3191-950	132.59	3201-950	228.32		
6	3191-960	148.91	3201-960	256.47		
7	3191-970	168.32	3201-970	324.38		
8	3191-980	213.02	3201-980	366.99		
10	3191-990	261.69	3201-990	450.73		
12	3192-000	310.63	3202-000	535.06		
14	3192-010	358.07	3202-010	616.77		
9/32	9/32	3192-020	33.08	-	-	
	1/2	3192-030	31.32	-	-	
	3/4	3192-040	37.28	-	-	
	1	3192-050	43.40	-	-	
	1-1/4	3192-060	48.84	-	-	
	1-1/2	3192-070	54.95	-	-	
	1-3/4	3192-080†	25.39	-	-	
	2	3192-090	66.88	-	-	
	2-1/2	3192-100†	33.14	-	-	
	3	3192-110	90.88	-	-	
	4	3192-120	114.81	-	-	
	6	3192-130	162.63	-	-	
5/16	5/16	3192-140	34.33	3202-140		

Precision Ground Flat Stock - Oil Hardening

2

AISI/SAE Type 0-1 Continued from Previous Page

		18" LENGTH		36" LENGTH				18" LENGTH		36" LENGTH				18" LENGTH		36" LENGTH		
THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	THICK	WIDTH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	
3/8	3-1/2	3192-450	\$129.26	3202-450	\$222.71	9/16	9/16	3192-880	\$59.27	3202-880	\$102.08	1	1	3193-450	\$119.77	3203-450	\$206.22	
	4	3192-460	144.34	3202-460	248.50		3/4	3192-890	66.81	3202-890	115.09		1-1/4	3193-460	133.50	3203-460	229.87	
	4-1/2	3192-470	159.29	3202-470	274.35		1	3192-900	76.98	3202-900	132.66		1-1/2	3193-470	148.23	3203-470	255.27	
	5	3192-480	174.31	3202-480	300.18		1-1/4	3192-910	87.06	3202-910	149.94		1-3/4	3193-480	162.86	3203-480	280.59	
	5-1/2	3192-490†	189.39	3202-490	326.23		1-1/2	3192-920	97.26	3202-920	167.49		2	3193-490	177.58	3203-490	305.91	
	6	3192-500	204.41	3202-500	352.04		2	3192-930	117.76	3202-930	202.78		2-1/2	3193-500	207.02	3203-500	356.63	
	7	3192-510	268.02	3202-510	461.61		5/8	3192-940	64.64	3202-940	111.43		3	3193-510	236.32	3203-510	407.01	
	8	3192-520	302.81	3202-520	521.62		3/4	3192-950	70.05	3202-950	120.61		3-1/2	3193-520	265.78	3203-520	457.71	
	10	3192-540	371.76	3202-540	640.26		1	3192-960	80.61	3202-960	138.79		4	3193-530	295.10	3203-530	508.34	
	12	3192-550	441.02	3202-550	759.57		1-1/4	3192-970	90.83	3202-970	156.41		4-1/2	3193-540†	145.96	3203-540†	252.27	
	7/16	7/16	3192-560	51.47	3202-560		88.62	1-1/2	3192-980	101.42	3202-980		174.60	5	3193-550	355.29	3203-550	611.94
		1/2	3192-570	46.56	3202-570		80.11	2	3192-990	122.53	3202-990		211.10	6	3193-560	414.12	3203-560	713.24
3/4		3192-580	55.13	3202-580	94.95	2-1/2	3193-000	143.65	3203-000	247.52	8	3193-580	603.87	3203-580	1040.07			
1		3192-590	63.73	3202-590	109.74	3	3193-010	164.89	3203-010	283.95	10	3193-600	728.83	3203-600	1255.36			
1-1/4		3192-600	71.72	3202-600	123.45	3-1/2	3193-020	186.06	3203-020	320.47	12	3193-610	853.70	3203-610	1470.45			
1-1/2		3192-610	80.30	3202-610	138.26	4	3193-030	207.22	3203-030	356.91	1-1/8	1-1/2	3193-620	177.76	-	-		
2		3192-620	97.49	3202-620	167.93	5	3193-040	250.88	3203-040	432.09		2	3193-630	211.47	3203-630	364.22		
2-1/2		3192-630	114.74	3202-630	197.60	6	3193-050	293.19	3203-050	505.00		2-1/2	3193-635	94.45	-	-		
3		3192-640	131.95	3202-640	227.27	7	3193-060†	161.66	-	-		3	3193-640	278.67	3203-640	480.04		
4		3192-650	162.21	3202-650	279.40	8	3193-070†	199.26	3203-070†	332.64		4	3193-650	346.00	3203-650	595.95		
6		3192-660	235.31	3202-660	405.29	10	3193-090†	230.83	3203-090†	400.68		6	3193-660	482.01	3203-660	830.21		
1/2		1/2	3192-670	49.41	3202-670	85.07	3/4	3/4	3193-110	83.25	3203-110	143.40	1-1/4	1-1/4	3193-670	168.59	3203-670	290.37
	5/8	3192-680	53.97	3202-680	93.00	1		3193-120	95.66	3203-120	164.75	1-1/2		3193-680	186.72	3203-680	321.66	
	3/4	3192-690	58.63	3202-690	100.93	1-1/4		3193-130	107.34	3203-130	184.84	2		3193-690	223.20	3203-690	384.48	
	1	3192-700	67.79	3202-700	116.75	1-1/2		3193-140	119.66	3203-140	206.03	2-1/2		3193-700	259.52	3203-700	446.97	
	1-1/4	3192-710	76.66	3202-710	132.04	1-3/4		3193-150	131.95	3203-150	227.31	3		3193-710	295.75	3203-710	509.38	
	1-1/2	3192-720	85.81	3202-720	147.81	2		3193-160	144.27	3203-160	248.48	4		3193-730	368.40	3203-730	634.51	
	1-3/4	3192-730	95.33	3202-730	164.16	2-1/2		3193-170	168.86	3203-170	290.85	5		3193-740	442.57	3203-740	762.21	
	2	3192-740	104.23	3202-740	179.59	3		3193-180	193.58	3203-180	333.48	6		3193-750	515.22	3203-750	887.41	
	2-1/2	3192-750	122.69	3202-750	211.34	3-1/2		3193-190	218.19	3203-190	375.84	8		3193-770†	324.24	3203-770†	549.57	
	3	3192-760	141.12	3202-760	243.04	4		3193-200	242.87	3203-200	418.30	10		-	-	3203-790†	663.78	
	3-1/2	3192-770	159.49	3202-770	274.72	4-1/2		3193-210	267.56	3203-210	460.75	1-1/2		1-1/2	3193-830	217.89	3203-830	375.29
	4	3192-780	177.98	3202-780	306.51	5		3193-220	293.60	3203-220	505.61			2	3193-840	259.56	3203-840	447.05
	4-1/2	3192-790	196.41	3202-790	338.32	6		3193-225†	123.73	-	-			2-1/2	3193-850	301.28	3203-850	518.83
	5	3192-800	216.13	3202-800	372.16	8		3193-230	342.85	3203-230	590.53			3	3193-860	342.96	3203-860	590.76
6	3192-810	264.82	3202-810	456.11	8	3193-250	501.61	3203-250	863.96	3-1/2	3193-870†		170.03	3203-870†	292.52			
7	3192-820	334.92	3202-820	576.84	10	3193-270	604.99	3203-270	1041.95	4	3193-880		426.35	3203-880	734.34			
8	3192-830	378.23	3202-830	651.47	12	3193-280	708.42	3203-280	1220.14	5	-	-	3203-890†	388.77				
10	3192-850	455.26	3202-850	784.15	7/8	7/8	3193-290	104.32	3203-290	179.66	6	3193-900	601.79	3203-900	1036.49			
12	3192-860	531.49	-	-		1	3193-300	111.34	3203-300	191.75	8	3193-920	832.95	3203-920	1434.63			
14	3192-870†	265.18	-	-		1-1/4	3193-310	124.53	3203-310	214.49	10	3193-940†	456.97	3203-940†	765.57			
						1-1/2	3193-320	138.54	3203-320	238.63	2	2	3193-980	332.54	3203-980	572.70		
						2	3193-330	166.46	3203-330	286.69		3	3193-990	437.30	3203-990	753.24		
						2-1/2	3193-340†	85.69	3203-340†	151.24		4	3194-000	542.25	3204-000	933.93		
					3	3193-350	222.55	3203-350	383.35	6		3194-010	721.93	3204-010	1243.36			
					4	3193-370	278.62	3203-370	479.86									
					6	3193-390	392.08	3203-390	675.21									

Overize Available Upon Request

Precision Ground Flat Stock - Low Carbon

2

AISI/SAE Type C-1018

Tolerance:

Thickness ±.001" Width +.000"/.005"

LOW CARBON GROUND FLAT STOCK is a fine-grained, vacuum-degassed carbon steel. It is easily machined, has excellent weldability, and responds uniformly to case hardening. The manganese content provides greater strength and hardness compared to many other carbon steels. It is often used in its natural state for such applications as back-up plate, stripper plates, punch pads, and machine parts. As a case-hardened material, it is used for jigs, fixtures, cams and patterns.

Also Available:
 • S-7 • D-2
 • A-6 • Nutec 42

		24" LENGTH				24" LENGTH				24" LENGTH				24" LENGTH	
THICK.	WIDTH	ORDER NO.	PRICE EACH	THICK.	WIDTH	ORDER NO.	PRICE EACH	THICK.	WIDTH	ORDER NO.	PRICE EACH	THICK.	WIDTH	ORDER NO.	PRICE EACH
1/16	3/4	3210-380	\$18.54	3/32	5	3210-790	\$89.03	5/32	3	3211-380	\$58.70	1/4	1-1/2	3211-860	\$49.87
	1	3210-390	22.08		6	3210-800	109.87		3-1/2	3211-390	67.38		2	3211-880	60.41
	1-1/4	3210-400	25.58		10	3210-820	176.18		4	3211-400	74.67		2-1/2	3211-890	71.34
	1-1/2	3210-410	28.98		12	3210-830	209.92		5	3211-410	90.54		3	3211-900	81.65
	2	3210-430	37.37	1/8	1/2	3210-970	18.45		6	3211-420	106.88		3-1/2	3211-910	91.18
	2-1/2	3210-440	45.30		3/4	3210-990	22.08		12	3211-450	200.57		4	3211-920	102.58
	3	3210-450	51.88		1	3211-000	25.92		1/2	3211-500	31.09		5	3211-940	122.06
	3-1/2	3210-460	59.08		1-1/4	3211-010	28.69		3/4	3211-510	35.31		6	3211-960	145.14
	4	3210-470	66.15		1-1/2	3211-020	34.24		1	3211-520	41.90		8	3211-980	183.59
	5	3210-480	79.88		2	3211-040	39.64		1-1/4	3211-530	45.26		10	3211-990	219.47
	6	3210-490	96.20	2-1/2	3211-050	46.92	1-1/2		3211-540	50.81	5/16		5/16	3212-140	31.68
	8	3210-500	127.95	3	3211-060	53.01	2		3211-560	61.80			1/2	3212-160	35.52
10	3210-510	154.54	3-1/2	3211-070	60.48	3-1/2	3211-580	82.35	3/4	3212-170		40.25			
12	3210-520	185.78	4	3211-080	66.06	4	3211-590	94.67	1	3212-180		47.47			
3/32	1/2	3210-680	19.06	5	3211-100	80.14	5	3211-600	106.10	1-1/4		3212-190	51.52		
	3/4	3210-690	23.43	10	3211-140	152.89	6	3211-610	128.55	1-1/2		3212-200	57.51		
	1	3210-700	27.52	12	3211-150	181.35	6	3211-620	154.22	2	3212-220	68.75			
	1-1/4	3210-710	31.11	5/32	1/2	3211-300	22.70	8							

Precision Ground Flat Stock - Low Carbon

AISI/SAE Type C-1018 Continued from Previous Page

Oversize Available
Upon Request

24" LENGTH			
THICK.	WIDTH	ORDER NO.	PRICE EACH
5/16	4	3212-260	\$114.79
	5	3212-280	136.46
	6	3212-290	160.96
	7	3212-300	187.98
	8	3212-310	208.80
	10	3212-330	251.68
12	3212-340	289.39	
3/8	3212-350	36.85	
1/2	3212-360	40.39	
3/4	3212-370	44.53	
1	3212-380	52.39	
1-1/4	3212-390	57.51	
1-1/2	3212-400	62.21	
2	3212-420	73.78	
2-1/2	3212-430	88.46	
3	3212-440	94.83	
3-1/2	3212-450	111.06	
4	3212-460	120.45	
5	3212-480	148.09	
6	3212-500	173.21	
7	3212-510	197.34	
8	3212-520	219.47	
9	3212-530	243.08	
10	3212-540	266.53	
1/2	3212-670	46.95	
3/4	3212-690	52.85	
1	3212-700	61.10	
1-1/4	3212-710	67.79	
1-1/2	3212-720	74.54	
2	3212-740	86.28	
2-1/2	3212-750	99.36	
3	3212-760	111.17	

24" LENGTH				
THICK.	WIDTH	ORDER NO.	PRICE EACH	
1/2	3-1/2	3212-770	\$126.38	
	4	3212-780	137.90	
	5	3212-800	165.98	
	6	3212-810	192.38	
	7	3212-820	210.17	
	8	3212-830	243.08	
	10	3212-850	291.75	
	12	3212-860	334.67	
	5/8	5/8	3212-940	56.07
		3/4	3212-950	60.14
		1	3212-960	68.96
		1-1/4	3212-970	78.51
1-1/2		3212-980	85.58	
2		3212-990	100.62	
2-1/2		3213-000	113.60	
3		3213-010	128.87	
3-1/2		3213-020	141.89	
4		3213-030	156.41	
5		3213-040	188.27	
6		3213-050	215.11	
7	3213-060	242.53		
9	3213-080	305.59		
10	3213-090	328.00		
12	3213-100	381.28		
3/4	3/4	3213-110	66.08	
	1	3213-120	81.87	
	1-1/4	3213-130	88.94	
	1-1/2	3213-140	97.87	
	2	3213-160	114.08	
	2-1/2	3213-170	129.67	
	3	3213-180	146.90	
	3-1/2	3213-190	163.01	

24" LENGTH				
THICK.	WIDTH	ORDER NO.	PRICE EACH	
3/4	4	3213-200	\$177.92	
	5	3213-220	210.05	
	6	3213-230	243.83	
	7	3213-240	275.03	
	8	3213-250	310.47	
	9	3213-260	337.02	
	10	3213-270	365.59	
	12	3213-280	422.99	
	7/8	7/8	3213-290	88.00
		1	3213-300	93.07
		1-1/4	3213-310	101.46
		1-1/2	3213-320	109.49
2		3213-330	129.35	
2-1/2		3213-340	145.09	
3		3213-350	160.68	
3-1/2		3213-360	178.62	
4		3213-370	196.68	
5		3213-380	241.83	
7		3213-400	309.96	
8		3213-410	348.63	
9	3213-420	389.91		
10	3213-430	421.78		
1	1	3213-450	98.38	
	1-1/4	3213-460	111.13	
	1-1/2	3213-470	120.89	
	2	3213-490	139.98	
	2-1/2	3213-500	157.55	
	3	3213-510	175.06	
	3-1/2	3213-520	194.92	
	4	3213-530	209.90	
	6	3213-560	277.71	
	8	3213-580	357.00	

24" LENGTH			
THICK.	WIDTH	ORDER NO.	PRICE EACH
1	9	3213-590	\$399.22
	10	3213-600	430.55
	12	3213-610	483.83
1-1/4	1-1/4	3213-670	132.20
	1-1/2	3213-680	147.70
	2	3213-690	168.59
	2-1/2	3213-700	191.84
	3	3213-710	212.29
	3-1/2	3213-720	233.23
	4	3213-730	255.35
	5	3213-740	304.31
	6	3213-750	337.44
	7	3213-760	400.54
	8	3213-770	437.32
	9	3213-780	477.77
10	3213-790	518.09	
12	3213-800	592.20	
1-1/2	1-1/2	3213-830	171.86
	2	3213-840	198.79
	2-1/2	3213-850	223.95
	3-1/2	3213-870	273.32
	7	3213-910	466.32
	8	3213-920	501.48
	9	3213-930	551.56
	10	3213-940	595.51
	12	3213-950	741.70

Precision Ground Flat Stock - Air Hardening

AISI/SAE
Type A-2

Tolerances:

Thickness ±.001"
Width +.000"/.005"

A-2 GROUND FLAT STOCK

is made from fine grain, electric furnace air hardening, 5% chrome tool steel. It is a superior quality steel which has excellent wear and abrasion resistance properties. AIR-TRUE is furnished with a fully spheroidized structure and is 100% free of decarb and other imperfections. AIR-TRUE's low sulphur content makes it non-freemachining.

THICK	WIDTH	18" LENGTH		36" LENGTH		
		ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	
1/16	1/2	5330-010	\$17.39	5340-010	\$31.34	
	3/4	5330-020	23.47	5340-020	42.17	
	1	5330-030	26.88	5340-030	48.39	
	1-1/4	5330-040	31.41	5340-040	56.53	
	1-1/2	5330-050	36.18	5340-050	65.10	
	2	5330-060	45.51	5340-060	81.92	
	2-1/2	5330-070	55.06	5340-070	99.08	
	3	5330-080	58.35	5340-080	105.01	
	4	5330-090	83.47	5340-090	150.28	
	3/32	1/2	5330-100	22.95	5340-100	41.44
		3/4	5330-110	28.84	5340-110	51.93
		1	5330-120	34.74	5340-120	62.51
1-1/4		5330-130	40.41	5340-130	72.77	
1-1/2		5330-140	46.35	5340-140	83.36	
2		5330-150	58.06	5340-150	104.57	
2-1/2		5330-160	69.92	5340-160	125.89	
3		5330-170	81.65	5340-170	147.04	
4		5330-180	105.33	5340-180	189.57	
1/8		1/2	5330-190	19.93	5340-190	35.79
		5/8	5330-200	22.17	5340-200	39.93
		3/4	5330-210	24.39	5340-210	43.95
	1	5330-220	28.94	5340-220	52.05	
	1-1/4	5330-230	33.17	5340-230	59.63	
	1-1/2	5330-240	37.67	5340-240	67.77	
	1-3/4	5330-250	42.19	5340-250	75.98	
	2	5330-260	46.74	5340-260	84.13	
	2-1/2	5330-270	55.73	5340-270	100.30	
	3	5330-280	64.78	5340-280	116.61	
	3-1/2	5330-290	75.29	5340-290	135.58	
	4	5330-300	82.93	5340-300	149.28	
5	5330-310	100.94	5340-310	181.80		
6	5330-320	119.01	5340-320	214.35		
7	5330-330	161.85	5340-330	291.45		
8	5330-340	183.43	5340-340	330.33		
10	5330-350	226.33	5340-350	407.53		
12	5330-360	269.27	5340-360	484.84		
5/32	1/2	5330-370	25.55	5340-370	45.97	
	3/4	5330-380	31.34	5340-380	56.46	
	1	5330-390	37.28	5340-390	67.15	
	1-1/4	5330-400	42.83	5340-400	77.17	
	1-1/2	5330-410	48.61	5340-410	87.52	
	1-3/4	5330-420	54.53	5340-420	98.13	
	2	5330-430	60.41	5340-430	108.78	
	2-1/2	5330-440	72.09	5340-440	129.83	
	3	5330-450	83.89	5340-450	151.06	
	3-1/2	5330-460	95.65	5340-460	172.13	
	4	5330-470	107.38	5340-470	193.35	
	5	5330-480	130.88	5340-480	235.61	
6	5330-490	154.28	5340-490	277.82		
8	5330-500	254.40	5340-500	457.98		
3/16	3/16	5330-510	45.58	5340-510	82.13	
	1/2	5330-520	26.93	5340-520	48.50	

THICK	WIDTH	18" LENGTH		36" LENGTH	
		ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
3/16	3/4	5330-530	32.62	5340-530	58.74
	1	5330-540	38.52	5340-540	69.37
	1-1/4	5330-550	43.93	5340-550	79.06
	1-1/2	5330-560	49.69	5340-560	89.48
	1-3/4	5330-570	55.54	5340-570	99.95
	2	5330-580	61.41	5340-580	110.54
	2-1/2	5330-590	73.01	5340-590	131.45
	3	5330-600	84.64	5340-600	152.39
	3-1/2	5330-610	97.78	5340-610	176.04
	4	5330-620	107.97	5340-620	194.42
	5	5330-630	131.29	5340-630	236.41
	6	5330-640	154.58	5340-640	278.30
7	5330-650	199.20	5340-650	358.71	
8	5330-660	238.74	5340-660	429.85	
1/4	1/4	5330-670	44.55	5340-670	80.25
	1/2	5330-680	32.80	5340-680	58.97
	3/4	5330-690	39.61	5340-690	71.31
	1	5330-700	46.58	5340-700	83.88
	1-1/4	5330-710	52.80	5340-710	95.09
	1-1/2	5330-720	59.77	5340-720	107.63
	1-3/4	5330-730	66.69	5340-730	120.00
	2	5330-740	73.51	5340-740	132.34
	2-1/2	5330-750	87.24	5340-750	157.10
	3	5330-760	100.94	5340-760	181.83
	3-1/2	5330-770	114.77	5340-770	206.63
	4	5330-780	128.52	5340-780	231.47
5	5330-790	156.04	5340-790	280.96	
6	5330-800	183.61	5340-800	330.62	
5/16	5/16	5330-810	50.40	5340-810	90.76
	1/2	5330-820	38.38	5340-820	69.10
	3/4	5330-830	46.22	5340-830	83.25
	1	5330-840	54.12	5340-840	97.33
	1-1/4	5330-850	61.14	5340-850	110.17
	1-1/2	5330-860	69.10	5340-860	124.45
	1-3/4	5330-870	76.98	5340-870	138.60
	2	5330-880	84.78	5340-880	152.66
	2-1/2	5330-890	100.53	5340-890	181.00
	3	5330-900	116.16	5340-900	209.18
	3-1/2	5330-910	131.88	5340-910	237.43
	4	5330-920	147.49	5340-920	265.57
5	5330-960	178.81	5340-930	322.10	
6	5330-970	210.28	5340-940	378.65	
3/8	3/8	5330-980	60.69	5340-950	109.30
	1/2	5330-990	46.90	5340-960	84.46
	3/4	5331-000	56.45	5340-970	101.60
	1	5331-010	65.90	5340-980	118.69
	1-1/4	5331-020	74.47	5340-990	134.14
	1-1/2	5331-030	84.05	5341-000	151.27
	1-3/4	5331-040	93.62	5341-010	168.54
	2	5331-050	103.09	5341-020	185.62
	2-1/2	5331-060	122.12	5341-030	219.84
	3	5331-070	141.12	5341-040	254.08

THICK	WIDTH	18" LENGTH		36" LENGTH	
		ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
3/8	3-1/2	5331-080	\$160.18	5341-050	\$288.38
	4	5331-090	179.17	5341-060	322.62
	5	5331-100	217.14</		

Drill Rod - 36" Length

Oil Hardening - AISI/SAE Type 0-1
& Water Hardening - AISI/SAE Type W-1



Fractional Sizes

FRAC. SIZES	OIL HARDENING		WATER HARDENING	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
3/64	3220-003	\$1.32	-	-
1/16	3220-004	2.95	3223-004	\$1.67
5/64	3220-005	4.87	3223-005	2.83
3/32	3220-006	3.36	3223-006	3.04
7/64	3220-007	4.87	3223-007	4.39
1/8	3220-008	4.48	3223-008	3.36
9/64	3220-009	5.97	3223-009	4.53
5/32	3220-010	5.58	3223-010	4.25
11/64	3220-011	7.27	3223-011	5.67
3/16	3220-012	6.45	3223-012	5.00
13/64	3220-013	8.12	3223-013	6.38
7/32	3220-014	7.70	3223-014	6.19
15/64	3220-015	9.53	3223-015	7.79
1/4	3220-016	7.31	3223-016	6.12
17/64	3220-017	8.87	3223-017	6.99
9/32	3220-018	9.19	3223-018	7.15
19/64	3220-019	11.00	3223-019	8.69
5/16	3220-020	9.19	3223-020	7.98
21/64	3220-021	12.04	3223-021	10.51
11/32	3220-022	12.21	3223-022	10.63
23/64	3220-023	14.42	3223-023	12.64
3/8	3220-024	12.98	3223-024	10.63
25/64	3220-025	16.59	3223-025	13.87
13/32	3220-026	16.82	3223-026	13.83
27/64	3220-027	19.32	3223-027	16.27
7/16	3220-028	17.58	3223-028	14.45
29/64	3220-029	22.35	3223-029	18.76
15/32	3220-030	22.24	3223-030	18.26
31/64	3220-031	25.49	3223-031	21.30
1/2	3220-032	21.58	3223-032	17.42
33/64	3220-033	27.20	3223-033	22.29
17/32	3220-034	28.07	3223-034	22.60
35/64	3220-035	30.58	3223-035	24.92
9/16	3220-036	30.15	3223-036	24.20
37/64	3220-037	34.22	3223-037	27.93
19/32	3220-038	35.18	3223-038	28.20
39/64	3220-039	37.51	3223-039	31.02
5/8	3220-040	33.35	3223-040	24.55
41/64	3220-041	41.42	3223-041	31.09
21/32	3220-042	42.36	3223-042	31.25
43/64	3220-043	45.57	3223-043	34.15
11/16	3220-044	44.50	3223-044	32.75
45/64	3220-045	49.92	3223-045	37.51
23/32	3220-046	50.83	3223-046	37.51
47/64	3220-047	54.42	3223-047	40.85
3/4	3220-048	46.05	3223-048	34.04
49/64	3220-049	56.84	3223-049	42.72
25/32	3220-050	57.67	3223-050	42.67
51/64	3220-051	61.51	3223-051	46.26
13/16	3220-052	59.56	3223-052	44.00
53/64	3220-053	66.51	3223-053	50.05
27/32	3220-054	67.27	3223-054	49.78
55/64	3220-055	71.52	3223-055	53.81

FRAC. SIZES	OIL HARDENING		WATER HARDENING	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
7/8	3220-056	\$68.98	3223-056	\$51.08
57/64	3220-057	76.87	3223-057	57.78
29/32	3220-058	77.60	3223-058	57.42
59/64	3220-059	82.37	3223-059	61.96
15/16	3220-060	82.95	3223-060	61.37
61/64	3220-061	88.02	3223-061	66.22
31/32	3220-062	88.68	3223-062	65.49
63/64	3220-063	93.85	3223-063	70.65
1	3220-064	77.90	3223-064	59.41
1-1/64	3220-065	95.04	3223-065	73.64
1-1/32	3220-066	95.50	3223-066	72.77
1-3/64	3220-067	100.98	3223-067	78.29
1-1/16	3220-068	101.39	3223-068	77.35
1-5/64	3220-069	107.06	3223-069	82.95
1-3/32	3220-070	106.93	3223-070	81.90
1-7/64	3220-071	113.39	3223-071	87.89
1-1/8	3220-072	108.55	3223-072	82.74
1-9/64	3220-073	119.86	3223-073	92.87
1-5/32	3220-074	120.75	3223-074	92.02
1-11/64	3220-075	126.58	3223-075	98.06
1-3/16	3220-076	126.67	3223-076	96.68
1-13/64	3220-077	133.37	3223-077	103.36
1-7/32	3220-078	133.42	3223-078	101.65
1-15/64	3220-079	140.41	3223-079	108.77
1-1/4	3220-080	114.15	3223-080	90.38
1-17/64	3220-081	125.96	3223-081	101.49
1-9/32	3220-082	125.55	3223-082	99.47
1-19/64	3220-083	132.02	3223-083	106.33
1-5/16	3220-084	131.81	3223-084	104.45
1-21/64	3220-085	138.44	3223-085	111.52
1-11/32	3220-086	138.10	3223-086	109.42
1-23/64	3220-087	144.96	3223-087	116.87
1-3/8	3220-088	138.10	3223-088	109.42
1-25/64	3220-089	151.77	3223-089	122.31
1-13/32	3220-090	151.31	3223-090	119.75
1-27/64	3220-091	158.69	3223-091	127.81
1-7/16	3220-092	158.21	3223-092	125.26
1-29/64	3220-093	165.74	3223-093	133.46
1-15/32	3220-094	165.07	3223-094	130.70
1-31/64	3220-095	172.94	3223-095	139.33
1-1/2	3220-096	162.74	3223-096	119.56
1-9/16	3220-100	175.49	3223-100	128.98
1-5/8	3220-104	200.02	3223-104	147.02
1-11/16	3220-108	215.72	3223-108	158.54
1-3/4	3220-112	221.57	3223-112	162.97
1-13/16	3220-116	248.87	3223-116	182.88
1-7/8	3220-120	266.39	3223-120	195.74
1-15/16	3220-124	284.38	3223-124	209.07
2	3220-128	286.99	3223-128	211.36

Also Available
 • Metric Sizes
 • Special Diameters
 • Special Lengths

Fractional Sizes

Air Hardening -
AISI/SAE Type A-2

FRAC. SIZES	DEC. EQUIV.	ORDER NO.	PRICE EACH
1/16	.0625	3225-100	\$ 4.44
5/64	.0781	3225-101	7.61
3/32	.0937	3225-102	7.16
7/64	.1093	3225-104	8.55
1/8	.1250	3225-105	7.82
9/64	.1406	3225-106	11.00
5/32	.1562	3225-107	11.16
11/64	.1718	3225-108	13.48
3/16	.1875	3225-109	11.89
13/64	.2031	3225-110	15.36
7/32	.2187	3225-111	16.57
15/64	.2343	3225-112	19.02
1/4	.2500	3225-113	16.30
17/64	.2656	3225-114	18.13
9/32	.2812	3225-115	20.37
19/64	.2968	3225-116	22.79
5/16	.3125	3225-117	21.03
21/64	.3281	3225-118	25.60
11/32	.3437	3225-119	28.04
23/64	.3593	3225-120	30.67
3/8	.3750	3225-121	29.88
25/64	.3906	3225-122	35.79
13/32	.4062	3225-123	38.74
27/64	.4218	3225-124	41.80
7/16	.4375	3225-125	40.68
29/64	.4531	3225-126	48.14
15/32	.4687	3225-127	51.61
31/64	.4843	3225-128	55.09
1/2	.5000	3225-129	50.95
17/32	.5312	3225-130	64.59
9/16	.5625	3225-131	64.45
19/32	.5937	3225-132	79.29
5/8	.6250	3225-133	78.65
21/32	.6562	3225-134	95.82
11/16	.6875	3225-135	95.20
23/32	.7187	3225-136	115.02
3/4	.7500	3225-137	110.24
13/16	.8125	3225-138	129.37
7/8	.8750	3225-139	150.05
1	1.0000	3225-140	194.79
1-1/16	1.0625	3225-141	219.90
1-1/8	1.1250	3225-142	246.53
1-1/4	1.2500	3225-143	255.72
1-3/8	1.3750	3225-144	309.50
1-1/2	1.5000	3225-145	365.20
1-3/4	1.7500	3225-146	496.98
2	2.0000	3225-147	644.19

Drill Rod - 36" Length

Wire Gage Sizes

Oil Hardening - AISI/SAE Type 0-1

Water Hardening - AISI/SAE Type W-1



WIRE GAGE	OIL HARDENING		WATER HARDENING	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1	3221-001	\$ 8.92	3224-001	\$7.29
2	3221-002	8.36	3224-002	6.72
3	3221-003	8.87	3224-003	6.92
4	3221-004	8.41	3224-004	6.60
5	3221-005	8.25	3224-005	6.38
6	3221-006	7.96	3224-006	6.28
7	3221-007	7.77	3224-007	6.12
8	3221-008	7.70	3224-008	5.96
9	3221-009	7.48	3224-009	5.83
10	3221-010	7.18	3224-010	5.65
11	3221-011	6.99	3224-011	5.58
12	3221-012	8.44	3224-012	6.54
13	3221-013	8.12	3224-013	6.31
14	3221-014	8.02	3224-014	6.19
15	3221-015	7.80	3224-015	6.08
16	3221-016	7.54	3224-016	5.83
17	3221-017	7.31	3224-017	5.67
18	3221-018	6.99	3224-018	5.14
19	3221-019	6.63	3224-019	4.89
20	3221-020	6.45	3224-020	4.98
21	3221-021	6.10	3224-021	4.71
22	3221-022	7.18	3224-022	5.65
23	3221-023	7.13	3224-023	5.58
24	3221-024	6.86	3224-024	5.35
25	3221-025	6.63	3224-025	5.14
26	3221-026	6.45	3224-026	4.98
27	3221-027	6.20	3224-027	4.71
28	3221-028	5.85	3224-028	4.48
29	3221-029	5.42	3224-029	4.16
30	3221-030	4.87	3224-030	3.72
31	3221-031	5.85	3224-031	5.35
32	3221-032	5.42	3224-032	4.92
33	3221-033	5.05	3224-033	4.59
34	3221-034	4.92	3224-034	4.48
35	3221-035	4.78	3224-035	4.34
36	3221-036	4.60	3224-036	4.16
37	3221-037	4.32	3224-037	3.93
38	3221-038	4.27	3224-038	3.75
39	3221-039	4.02	3224-039	3.64
40	3221-040	3.79	3224-040	3.59
41	3221-041	3.68	3224-041	3.43
42	3221-042	6.79	3224-042	3.93
43	3221-043	6.17	3224-043	3.64
44	3221-044	5.67	3224-044	3.43
45	3221-045	5.24	3224-045	3.04
46	3221-046	4.96	3224-046	2.84
47	3221-047	4.78	3224-047	2.76
48	3221-048	4.48	3224-048	2.63
49	3221-049	4.14	3224-049	2.40
50	3221-050	3.73	3224-050	2.20
51	3221-051	3.48	3224-051	2.08
52	3221-052	3.18	3224-052	1.92

Letter Sizes

Oil Hardening - AISI/SAE Type 0-1

Water Hardening - AISI/SAE Type W-1



LETTER SIZES	OIL HARDENING		WATER HARDENING	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
A	3222-001	\$ 9.49	3225-001	\$7.79
B	3222-002	9.88	3225-002	7.98
C	3222-003	10.13	3225-003	8.14
D	3222-004	10.45	3225-004	8.57
E	3222-005	POA	3225-005	POA
F	3222-006	8.25	3225-006	6.49
G	3222-007	8.52	3225-007	6.72
H	3222-008	8.87	3225-008	7.08
I	3222-009	9.28	3225-009	7.36
J	3222-010	9.62	3225-010	7.61
K	3222-011	9.92	3225-011	7.80
L	3222-012	10.49	3225-012	8.36
M	3222-013	10.92	3225-013	8.62
N	3222-014	11.43	3225-014	9.05
O	3222-015	11.22	3225-015	9.88
P	3222-016	11.61	3225-016	10.24
Q	3222-017	12.27	3225-017	10.81
R	3222-018	12.85	3225-018	11.25
S	3222-019	13.48	3225-019	11.89
T	3222-020	14.26	3225-020	12.57
U	3222-021	15.09	3225-021	13.32
V	3222-022	15.47	3225-022	12.94
W	3222-023	16.23	3225-023	13.51
X	3222-024	17.19	3225-024	14.35
Y	3222-025	17.80	3225-025	14.79
Z	3222-026	18.54	3225-026	15.48

Threaded Rod 36" Length



SIZE	PLAIN OIL FINISH		ZINC PLATED	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
6-36	3215-806	\$2.74	3215-906	\$3.48
8-32	3215-808	2.74	3215-908	3.48
10-21	3215-810	2.74	3215-910	3.48
10-32	3215-811	3.01	3215-911	3.83
12-24	3215-812	3.00	3215-912	3.80
1/4-20	3215-816	3.00	3215-916	3.80
1/4-28	3215-817	3.30	3215-917	4.18
5/16-18	3215-820	3.86	3215-920	4.78
5/16-24	3215-821	4.24	3215-921	5.26
3/8-16	3215-824	4.59	3215-924	5.58
3/8-24	3215-825	5.05	3215-925	6.14
7/16-14	3215-828	5.37	3215-928	6.61
7/16-20	3215-829	5.91	3215-929	7.27
1/2-13	3215-832	6.38	3215-932	8.00
1/2-20	3215-833	7.02	3215-933	8.80
9/16-12	3215-836	8.84	3215-936	10.95
9/16-18	3215-837	9.72	3215-937	12.05
5/8-11	3215-840	8.84	3215-940	10.95
5/8-18	3215-841	9.72	3215-941	12.05
3/4-10	3215-848	15.89	3215-948	18.97
3/4-16	3215-849	17.48	3215-949	20.87
7/8-9	3215-856	19.66	3215-956	23.93
7/8-14	3215-857	21.63	3215-957	26.32
1-8	3215-864	24.53	3215-964	29.71
1-14	3215-866	26.99	3215-966	32.68
1-1/8-7	3215-872	40.92	3215-972	54.22
1-1/8-12	3215-873	45.02	3215-973	59.64
1-1/4-7	3215-880	48.69	3215-980	64.18
1-1/4-12	3215-881	53.56	3215-981	70.60
1-3/8-6	3215-888	64.91	3215-988	85.49
1-3/8-12	3215-889	71.40	3215-989	94.04
1-1/2-6	3215-896	79.66	3215-996	102.35
1-1/2-12	3215-897	87.63	3215-997	112.58

Shim Stock



Brass Shim Stock

The unique quality about Precision Brand's Branded Shim® is that everything the user needs to know is clearly marked right on the material:

- Material type, • Material thickness,
- Lot # for full traceability.

Whether in the field or on the shop floor, this clearly marked information is at your fingertips. It eliminates the need for a micrometer, and aids in keeping tool cribs organized, saving time and money.



Steel Shim Stock

- Made from full hard, cold rolled, low carbon C1008/C1010
- Rockwell hardness: <.069 RB 90 MIN., >.070 RB 84 MIN.
- Meets AISI C-1010 and ASTM A-109 specifications.
- Tensile Strength: N/A
- #2 Bright Finish

TYPICAL ANALYSIS: C .13 max, Mn .30-.60, P .04 max, S .05 max



6" x 100" ROLLS			6" x 180" ROLLS		
THICK.	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	
.0010	3226-010	\$34.15	3226-401	\$63.26	
.0015	3226-015	34.35	3226-400	63.26	
.0020	3226-020	35.42	3226-402	63.26	
.0030	3226-030	36.54	3226-403	63.26	
.0040	3226-040	38.52	3226-404	67.02	
.0050	3226-050	39.88	3226-405	76.46	
.0060	3226-060	41.08	3226-406	83.09	
.0070	3226-070	43.04	3226-407	92.57	
.0080	3226-080	45.42	3226-408	92.57	
.0090	3226-090	48.78	3226-409	98.77	
.0100	3226-100	53.08	3226-410	98.77	
.0120	3226-120	57.50	3226-412	122.77	
.0150	3226-150	66.38	3226-415	136.47	
.0200	3226-200	75.02	3226-420	152.56	
.0250	3226-250	89.66	3226-425	184.95	
.0310	3226-310	106.10	3226-431	210.95	

Brass Shim Assortments

- 12 PAK -**
.001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015"
- 15 PAK -**
.001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015", .020", .025", .031"

DESCRIPTION	ORDER NO.	PRICE EACH
12 pc. 6" x 12"	3226-359	\$69.35
15 pc. 6" x 12"	3226-360	94.37
12 pc. 6" x 18"	3226-361	133.97
15 pc. 6" x 18"	3226-362	198.57

6" x 100" ROLLS			6" x 180" ROLLS			12" x 120" ROLLS		
THICK.	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
.0010	3227-010	\$28.77	3227-401	\$58.99	3227-501	\$108.05		
.0015	3227-015	34.18	3227-400	58.99	-	-	-	-
.0020	3227-020	19.70	3227-402	38.04	3227-502	65.37		
.0025	3227-025	24.68	3227-435	67.72	-	-	-	-
.0030	3227-030	21.27	3227-403	32.24	3227-503	68.30		
.0035	3227-035	21.62	-	-	-	-	-	-
.0040	3227-040	21.41	3227-404	35.33	3227-504	66.36		
.0050	3227-050	18.73	3227-405	34.31	3227-505	59.35		
.0060	3227-060	18.35	3227-406	38.07	3227-506	60.66		
.0070	3227-070	20.90	3227-407	41.53	3227-507	68.94		
.0080	3227-080	22.43	3227-408	46.06	3227-508	77.62		
.0090	3227-090	23.50	3227-409	46.06	3227-509	79.48		
.0100	3227-100	19.30	3227-410	39.33	3227-510	67.95		
.0120	3227-112	19.76	3227-412	41.68	3227-512	67.70		
.0150	3227-150	17.92	3227-415	39.78	3227-515	61.78		
.0180	3227-180	27.84	3227-418	59.85	3227-518	97.47		
.0200	3227-200	20.27	3227-420	47.13	3227-520	70.96		
.0220	3227-220	40.31	3227-422	91.94	-	-	-	-
.0250	3227-250	21.69	3227-425	48.27	3227-525	75.23		
.0310	3227-310	22.80	3227-431	51.64	3227-531	83.48		

Steel Shim Flat Sheet Assortments

- 12 PAK -**
.001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015"
- 15 PAK - one each 6" x 18"**
.001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015", .020", .025", .031"

DESCRIPTION	ORDER NO.	PRICE EACH
12 pc. 6" x 12"	3227-364	\$69.98
15 pc. 6" x 12"	3227-365	84.36
12 pc. 6" x 18"	3227-361	103.90
15 pc. 6" x 18"	3227-362	125.26

Blue Tempered Spring Steel Shim Stock

- High carbon 1095 hardened and tempered spring steel.
- Meets AMS 5122, SAE 1095, AISI 1095 specifications.
- Rockwell hardness C48-51. • Tensile Strength: 230,000 p.s.i.

TYPICAL ANALYSIS: C .90-1.04, Mn .30-.50, P .040 max, S .050 max, Si .10-.30



3" x 50" ROLLS			6" x 50" ROLLS			6" x 60" ROLLS		
THICK.	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
.0020	3229-502	\$52.61	-	-	-	-	-	-
.0030	3229-503	55.23	-	-	-	-	-	-
.0040	-	-	3229-504*	\$59.64	-	-	-	-
.0050	-	-	3229-505	52.61	3229-605†	\$ 20.38	-	-
.0060	-	-	3229-506	52.40	-	-	-	-
.0070	-	-	3229-507	53.43	-	-	-	-
.0250	-	-	-	-	3229-625†	31.27	-	-
.0300	-	-	-	-	3229-630†	34.35	-	-

* 5" x 50"

† Limited Quantities

Stainless Steel Shim Stock

- Full hard, cold rolled, type 302
- Rockwell hardness C45 (maximum).
- Meets SAE 30302, AISI-T302, ASTM A-666
- Ultimate tensile strength: 185,000 p.s.i. min.



TYPICAL ANALYSIS:
C .15 max, Mn 2.00 max, P .045 max, S .030 max, Si .75 max, Ni 8.00-10.00, Cr 17.00-19.00, N .10 max

Stainless Steel Assortment

Contains one 6" x 12" of each of the following:
.001", .002", .003", .005", .008", .010", .015", .020"

DESCRIPTION	ORDER NO.	PRICE EACH
8 pc. 6" x 12"	3228-361	\$165.95

6" x 50" ROLLS			6" x 60" ROLLS			
THICK.	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
.0005	3228-005	\$147.34	3228-400	\$212.14		
.0010	3228-010	71.05	3228-401	102.31		
.0015	3228-015	65.09	3228-435	64.98		
.0020	3228-020	45.11	3228-402	62.20		
.0030	3228-030	43.25	3228-403	60.65		
.0040	3228-040	42.14	3228-404	69.83		
.0050	3228-050	48.51	3228-405	69.71		
.0060	3228-060	48.45	3228-406	71.94		
.0070	3228-070	49.92	3228-407	73.05		
.0080	3228-080	50.75	3228-408	82.31		
.0090	3228-090	57.13	3228-409	75.80		
.0100	3228-100	52.68	3228-410	79.25		
.0120	3228-120	55.04	3228-412	85.72		
.0150	3228-150	59.56	3228-415	101.82		
.0200	3228-200	70.68	3228-420	119.27		
.0250	3228-250	82.85	3228-425	135.94		
.0310	3228-310	94.39	3228-431	140.84		

Blue Tempered Assortment

Contains one 6" x 12" of each of the following:
.005", .010", .015", .020", .025", .032"

DESCRIPTION	ORDER NO.	PRICE EACH
6 pc. 6" x 12"	3229-553	\$101.09

Flat Packs

(2 pcs./ 6" x 25")

Brass

THICK.	ORDER NO.	PRICE EACH
.012	3229-012	\$43.20
.015	3229-015	49.69
.020	3229-020	56.38
.025	3229-025	67.21
.031	3229-031	79.56
.032	3229-032†	47.36

† Limited Quantities

Steel Flat Pak

THICK.	ORDER NO.	PRICE EACH
.012	3229-112	\$21.66
.015	3229-115	20.24
.020	3229-120	22.73
.025	3229-125	24.34
.031	3229-131	25.55
.032	3229-132†	10.75

Blue Tempered

THICK.	ORDER NO.	PRICE EACH
.008	3229-308	\$62.42
.010	3229-310	68.07
.012	3229-312	70.20
.015	3229-315	76.32
.020	3229-320	88.82
.025	3229-325	101.52
.032	3229-332	112.50

Stainless Steel

THICK.	ORDER NO.	PRICE EACH
.008	3229-208	\$63.29
.010	3229-210	66.05
.012	3229-212	71.38
.015	3229-215	84.88
.020	3229-220	84.88
.025	3229-225	99.45
.031	3229-231	113.34

Shim Stock



Slotted Shims

- Each shim marked with thickness in decimal and/or metric
- Eliminates misalignment of machinery
- .001"-.010" and .025-.25mm permanently etched; .015"-.125" and .040-2mm permanent stamp
- Shim thickness tolerances meet industry standards; conform to standard bolt/stud sizes

THICK.	"A" 2 x 2 x 5/8		"B" 3 x 3 x 3/4		"C" 4 x 4 x 1-1/4		
	PCS./ PKG.	ORDER NO.	PRICE/ PKG.	ORDER NO.	PRICE/ PKG.	ORDER NO.	PRICE/ PKG.
.001	20	3229-900	\$72.89	3229-920	\$87.42	3229-940	\$115.13
.002	20	3229-901	72.89	3229-921	87.42	3229-941	115.13
.003	20	3229-902	72.89	3229-922	87.42	3229-942	115.13
.004	20	3229-903	72.89	3229-923	87.42	3229-943	115.13
.005	20	3229-904	72.89	3229-924	87.42	3229-944	115.13
.010	20	3229-905	72.89	3229-925	87.42	3229-945	115.13
.015	10	3229-906	36.43	3229-926	43.74	3229-946	57.56
.020	10	3229-907	40.76	3229-927	43.74	3229-947	61.91
.025	10	3229-908	40.76	3229-928	43.74	3229-948	61.91
.050	5	3229-909	21.93	3229-929	27.34	3229-949	38.28
.075	5	3229-910	24.78	3229-930	36.43	3229-950	52.78
.100	5	3229-911	29.19	3229-931	41.04	3229-951	69.21
.125	5	3229-912	32.05	3229-932	45.56	3229-952	78.34



Std. Assortments

20 pcs.: one each of sizes from .001" to .125". 260 pc. assortment includes metal case

STYLE	ORDER NO.	PRICE EACH
A	3229-914	\$1104.62
B	3229-934	1387.97
C	3229-954	2009.47



Mini Assortments

10 pcs.: one each of sizes from .001" to .125"
130 pc. assortment includes metal case

STYLE	ORDER NO.	PRICE EACH
A	3229-915	\$632.35
B	3229-935	772.90
C	3229-955	1101.15

Key Stock- 12" Length- Zinc-Plated & Stainless Steel-



Used to provide driving torque between shafts and pulleys, gears, sprockets, etc.

SQ. SIZE	ZINC-PLATED		STAINLESS STEEL	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1/8	3229-800	\$1.73	3229-454	\$6.43
5/32	3229-804	2.16	-	-
3/16*	3229-808	1.81	3229-456	6.46
7/32	3229-812	2.87	-	-
1/4*	3229-816	2.24	3229-458	9.25
9/32	3229-820	3.49	-	-
5/16*	3229-824	3.00	3229-460	18.91
3/8*	3229-828	3.67	3229-462	21.00
7/16*	3229-832	4.75	3229-464	29.31
1/2*	3229-836	6.29	3229-466	38.47
9/16	3229-840	11.34	-	-
5/8	3229-844	9.56	3229-470	61.80
11/16	3229-848	16.66	-	-
3/4	3229-852	12.49	3229-474	76.65
13/16	3229-856	24.36	-	-
7/8	3229-860	16.65	3229-478	109.84
1	3229-864	20.30	3229-482	140.09
1-1/8	3229-868	36.96	-	-
1-3/16	3229-872	59.27	-	-
1-1/4	3229-876	47.77	-	-
1-3/8	3229-880	53.70	-	-
1-1/2	3229-884	64.13	-	-
1-3/4	3229-888	88.30	-	-
2	3229-892	126.14	-	-
asst.*	3229-895	106.94	3229-498	472.14

*Assortment contains one bundle of each size indicated

Metric Gold Dichromate plating on most sizes for clear identification

(MM) SIZE	ORDER NO.	PRICE EACH	SQ. SIZE	ORDER NO.	PRICE EACH
3MM*	3229-753	\$6.24	14MM	3229-764	\$22.94
4MM	3229-754	3.54	16MM	3229-766	22.94
5MM	3229-755	3.75	18MM	3229-768	28.34
6MM	3229-756	4.18	20MM	3229-770	35.42
7MM	3229-757	10.42	22MM	3229-772	83.35
8MM	3229-758	6.04	25MM*	3229-775	46.88
10MM	3229-760	8.77			
12MM	3229-762	13.34			

*Available in plain finish only.

Tool Wrap

- Type 321 soft annealed stainless steel
- Helps protect from scale and oxide buildup
- Eliminates decarburization buildup
- Resistant to chromium carbide precipitation
- Protects the surface of air hardening tool steels
- Can use in furnaces up to 1850°F
- Approx. 24" wide, .002" thick, in 50 and 100 ft. lengths



QTY.	ORDER NO.	PRICE EACH
100 sq. ft.	3229-990	\$909.57
50 sq. ft.	3229-989	478.77

Feeler Gage

- Made from 1/2" wide spring steel stock, close grain, C1095 high carbon steel
- Thicknesses clearly etched every 6" in decimal and metric.
- Hardened and tempered to RC 48-62
- Used in manufacturing and maintenance operations requiring the setting of close spacing, or checking very tight tolerances



Strips 1/2" x 12"
12 Pcs. Per Package

SIZE	1/2" x 12" STRIPS		1/2" x 25" COILS		SIZE	1/2" x 12" STRIPS		1/2" x 25" COILS	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH		ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
.001	3225-801	\$7.99	3225-851	\$177.22	.017	3225-817	\$3.07	3225-867	\$51.55
.0015	3225-845	4.26	3225-895	86.79	.018	3225-818	3.07	3225-868	51.55
.002	3225-802	4.26	3225-852	86.79	.019	3225-819	3.07	3225-869	51.55
.003	3225-803	4.26	3225-853	86.79	.020	3225-820	3.07	3225-870	51.55
.004	3225-804	3.47	3225-854	62.45	.021	3225-821	3.07	3225-871	51.55
.005	3225-805	3.47	3225-855	62.45	.022	3225-822	3.07	3225-872	51.55
.006	3225-806	3.47	3225-856	62.45	.023	3225-823	3.07	3225-873	51.55
.007	3225-807	3.07	3225-857	51.55	.024	3225-824	3.07	3225-874	51.55
.008	3225-808	3.07	3225-858	51.55	.025	3225-825	3.07	3225-875	51.55
.009	3225-809	3.07	3225-859	51.55	.028	3225-828	3.07	3225-878	51.55
.010	3225-810	3.07	3225-860	51.55	.030	3225-830	3.07	3225-880	51.55
.011	3225-811	3.07	3225-861	51.55	.031	3225-831	3.19	3225-881	58.49
.012	3225-812	3.07	3225-862	51.55	.032	3225-832	3.19	3225-882	58.49
.013	3225-813	3.07	3225-863	51.55	.034	3225-834	3.19	3225-884	58.49
.014	3225-814	3.07	3225-864	51.55	.040	3225-840	3.19	-	-
.015	3225-815	3.07	3225-865	51.55	.050	3225-842	18.86	-	-
.016	3225-816	3.07	3225-866	51.55					

FEELER GAGE ASSORTMENTS		NO. OF PCS.	1/2" x 12" STRIPS		1/2" x 5" STRIPS	
SIZES INCLUDED			ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
.001, .0015, .002, .003, .004, .005, .006, .007, .008, .009, .010, .012, .014, .015, .016, .018, .020, .022, .025, .030		20	3225-849	\$112.06	3225-850	\$48.47 (NEW Poc-Kit® Asst.)

Metric Feeler Gage Kit

- Made of C1095 close grain, high carbon spring steel
- Rockwell Hardness: C Scale 46-62
- Each blade is clearly etched with thickness
- Ends are rounded and edges are smooth for safety



Assortment contains: twenty 12.7mm (1/2") wide x 127mm (5") long blades
 Sizes: .05mm, .10mm, .15mm, .20mm, .25mm, .30mm, .35mm, .40mm, .45mm, .50mm, .55mm, .60mm, .65mm, .70mm, .75mm, .80mm, .85mm, .90mm, .95mm, 1.00mm

Order No.: 3225-899 Price Each: \$77.76

Woodruff Key Set - 250 pcs.

Our Woodruff Keys are made of Zinc Plated Steel.
 Kits contain the following sizes:

- (10) 1/16" x 3/8", (10) 3/32" x 5/8", (5) 3/16" x 5/8",
- (20) 3/32" x 3/8", (30) 1/8" x 5/8", (5) 5/32" x 7/8",
- (10) 1/8" x 3/8", (50) 5/32" x 5/8", (5) 3/16" x 7/8",
- (10) 1/16" x 1/2", (20) 1/8" x 3/4", (5) 7/32" x 7/8",
- (15) 3/32" x 1/2", (10) 5/32" x 3/4", (5) 1/4" x 7/8",
- (15) 1/8" x 1/2", (20) 3/16" x 3/4", (5) 1/4" x 3/4"

Order No.: 3237-640 Price Each: \$71.13

