

Reid Supply
Company®

A Division of Reid Entities

2006
**Stainless
Steel**

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Discount Tables

Additional quantity discounts available – at a glance!

Quantity discounts are not new at Reid Supply but now you can locate them more easily in our catalog. For most of the items we sell, we offer additional discounts when purchasing multiple units. You will find numbered discount tables throughout our catalog showing the quantity and discount where it applies.

31	Quantity	1-99	100-249	250-499	500-999	1000-2499
	Discount	Net	5%	10%	15%	20%

Don't see a discount table for the product you want? Just call our customer service and we'll quickly provide a very competitive price quote!





Adjustable Glides



See page 57



Available in both nylon and elastomer base

Ball Transfers

SKF

Low profile



See page 58

NEW PRODUCT NEW PRODUCT NEW PRODUCT NEW PRODUCT NEW PRODUCT

1/4 Turn Latches

See page 76

EMKA
Elektromechanik

L-Handle



T-Handle



NEMA-4
Water and dust resistant
IP65 rated for electrical use

Wing Handle



Hinges

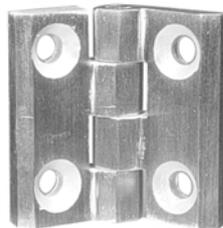
See page 74

EMKA
Elektromechanik

Weld On Hinges



Hinges



With counter sunk screw

180° Screw On Hinges



For projection doors and pressure resistant flush doors



Plungers

Push Fit



Easy installation for use in wood, soft plastic or aluminum

See page 14

Hand Retractable with Threaded Adapter



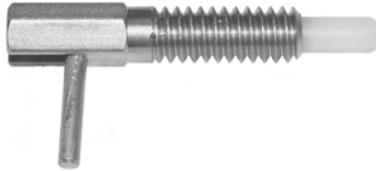
See page 12

Available in locking and non-locking

Hand Retractable Spring Plungers with Delrin Nose

See page 11

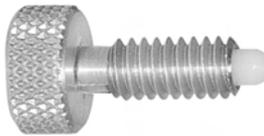
L-Handle



Pull Ring



Knurled Handle



Delrin nose prevents marring of aluminum, brass or other soft materials

Pull Ring



Short length

NEW PRODUCT NEW PRODUCT NEW PRODUCT NEW PRODUCT NEW PRODUCT



60 Case® Linearace® Shaft Metric



See page 45

Especially hardened and finished for high reliability



Bearings



See page 46

Stud Type Cam Followers



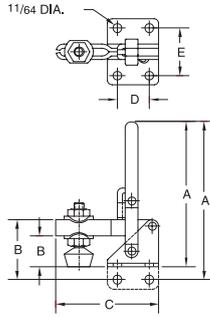
See page 46





CLAMPS

Vertical Type
Series TC-201
Holding Capacity: 100 Lbs.
Handle Moves: 60°, Bar Moves: 110°



Furnished with stainless steel hex head spindle (TC-201943), without neoprene tip.

See table 25 below for additional discounts.

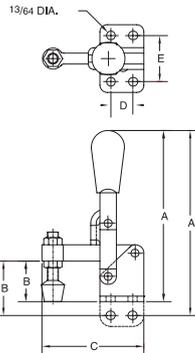
Cat. No.	A	B	C	D	E	Handle Type	Bar Type	Base Type	Price Each 1-49
TC-201-USS	3.03	.63	2.02	.63	.94	Vertical	U-Bar	Flange	17.00

Vertical Type
Series TC-202
Holding Capacity: 200 Lbs.
Handle Moves: 64°, Bar Moves: 104°



TC-202-UBSS

TC-202-SS

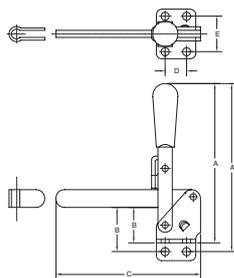


Furnished with stainless steel hex head spindle (TC-202943), without neoprene tip.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Handle Type	Bar Type	Base Type	Price Each 1-49
TC-202-SS	4.21	.94	2.31	.50	1.06	Vertical	Fixed	Flange	21.45
TC-202-USS	4.21	.94	2.73	.50	1.06	Vertical	U-Bar	Flange	21.45
TC-202-UBSS	4.40	1.13	2.73	.50	.25	Vertical	U-Bar	Straight	28.91

Vertical Type
Series TC-207
Holding Capacity: -L and -S Models = 500 Lbs
U Model = 375 Lbs.
Handle Moves: 62°, Bar Moves: 115°

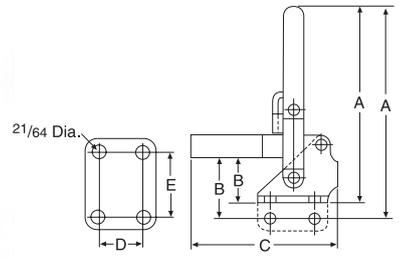


Bolt retainers are furnished with solid bar models. Two flanged washers are furnished with U-bar models. Accommodates any 5/16" spindle.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Handle Type	Bar Type	Base Type	Price Each 1-49
TC-207-USS	5.63	1.25	4.38	.75	1.25	Vertical	U-Bar	Flange	27.65

Vertical Type
Series TC-210
Holding Capacity: 750 Lbs. (max. for solid bar models)
Holding Capacity: 600 Lbs. (max. for U-Bar models)
Handle Moves: 66°, Bar Moves: 122°



Two flanged washers (TC-235106) furnished with U-bar models. Accommodates any 3/8" spindle.

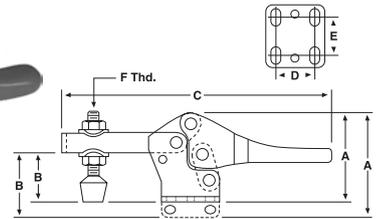
See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Handle Type	Bar Type	Base Type	Price Each 1-49
TC-210-USS	7.66	1.69	5.35	1.25	1.78	Vertical	U-Bar	Flange	37.55

Horizontal Type
Series TC-213, 217, 227



TC-213-USS



Safety designed to give more hand clearance between the bar and handle when clamps are in full, open position. Bar guide feature gives extra lateral support and rigidity to hold-down bar at front of base. Supplied with a hex head spindle assembly. All have U-bar.

See table 25 below for additional discounts.

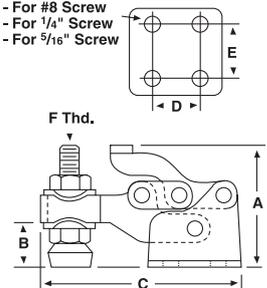
Cat. No.	A	B	C	D	E	F	Handle Moves*	Bar Moves*	Base Type	Holding Capacity	Price Each 1-49
TC-213-USS	1.36	.75	3.94	.53	.69	10-32	60	90	Flange	150	16.90
TC-217-USS	1.97	.97	6.30	1.03	1.15	1/4-20	76	92	Flange	250	20.85
TC-227-USS	2.39	1.31	7.24	1.03	1.23	5/16-18	62	92	Flange	600	27.60

Horizontal Type
Series TC-305, 307, 309



TC-305-USS

(305) - For #8 Screw
 (307) - For 1/4" Screw
 (309) - For 5/16" Screw



Small compact clamps provide considerable holding capacity in a small size. T-handle can be operated from either side or from behind. All have U-Bar and flanged base. TC-305-USS and TC-307-USS handle moves 175°, bar 92°. TC-309-USS handles moves 160°, bar moves 88°. Supplied with fully threaded, stainless steel, hex head spindle, without neoprene tip, except TC-309-USS, which comes with press on neoprene cap.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Holding Capacity	Price Each 1-49
TC-305-USS	1.38	.50	2.22	.53	.63	10-32	150	16.70
TC-307-USS	2.40	.87	3.60	.91	1.16	5/16-18	350	26.10
TC-309-USS	3.55	1.30	5.18	1.38	1.50	3/8-16	750	37.20

See page 7 for accessories.

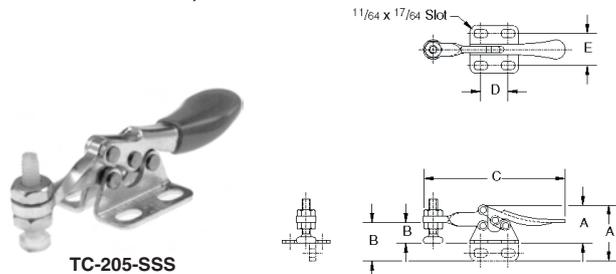
25	Quantity	1-49	50-249	250-499	500-999	1000-2499	2500-4999	5000+
Discount	Net	10%	20%	22%	25%	27.5%	Call	



A DOWER COMPANY

CLAMPS

Horizontal Type
Series TC-205
Holding Capacity: 60 Lbs.
Handle Moves: 80°, Bar Moves: 90°



TC-205-SSS

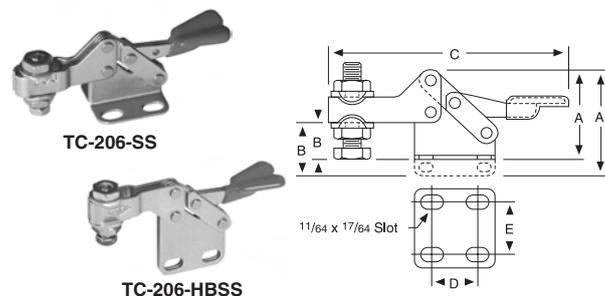
The smallest of the horizontal handle, horizontal bar clamps. Supplied with stainless steel hex head spindle (TC-205943).

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Bar Type	Base Type	Price Each
TC-205-SSS*	.67	.37	2.75	.53	.63	Solid	Flange	12.95
TC-205-USS*	.67	.31	2.66	.53	.63	U-Bar	Flange	12.65

*Handle does not have plastic grip.

Horizontal Type
Series TC-206-SS
Holding Capacity: 100 Lbs.
Handle Moves: 90°, Bar Moves: 90°



TC-206-SS

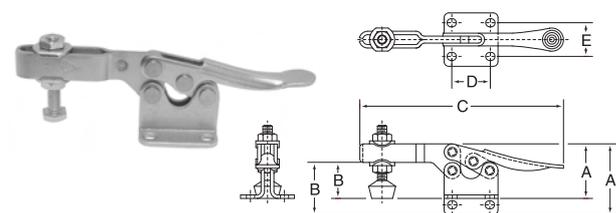
TC-206-HBSS

Offers good clearance height under the bar while maintaining a low profile. Optional high bar provides even more space to clamp for thicker material. Furnished with flanged washers (TC-105906) and stainless steel spindle assembly (TC-205943), two 8-32 lock nuts and one 8-32 x 3/4" bolt.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Bar Type	Base Type	Price Each
TC-206-SS	1.06	.40	2.75	.53	.63	Low U-Bar	Flanged	18.35
TC-206-HBSS	1.28	.98	2.75	.53	—	High U-Bar	Straight	28.29

Horizontal Type
Series TC-215
Holding Capacity: 200 Lbs.
Handle Moves: 70°, Bar Moves: 90°

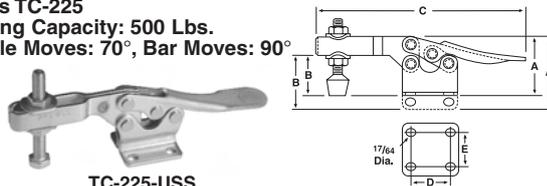


Supplied with stainless steel hex head spindle (TC-202943), without neoprene tip.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Bar Type	Base Type	Price Each
TC-215-USS	1.53	1.03	5.50	1	.88	U-Bar	Flange	17.99

Horizontal Type
Series TC-225
Holding Capacity: 500 Lbs.
Handle Moves: 70°, Bar Moves: 90°



TC-225-USS

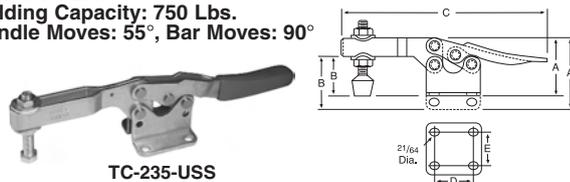
Supplied with stainless steel hex head spindle (TC-207943), without neoprene tip.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Bar Type	Base Type	Price Each
TC-225-USS*	1.84	1.32	6.70	1	.88	U-Bar	Flange	24.45

*Handle does not have plastic grip

Horizontal Type
Series TC-235
Holding Capacity: 750 Lbs.
Handle Moves: 55°, Bar Moves: 90°



TC-235-USS

Stainless steel models supplied with stainless steel hex head spindle (TC-237943), without neoprene tip.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	Bar Type	Base Type	Price Each
TC-235-USS	2.55	1.75	10.87	1.63	1.63	U-Bar	Flanged	41.85
TC-235-UBSS	2.91	2.16	10.87	1.63	.31	U-Bar	Straight	65.03

Latch Action Type
Series TC-301



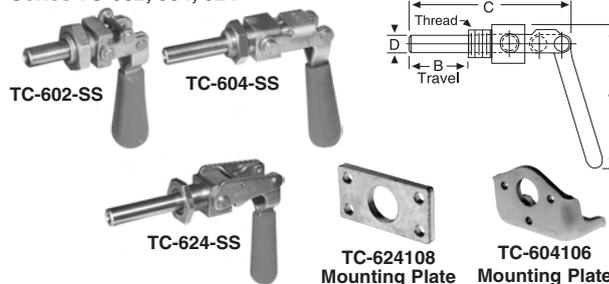
TC-301

Fixed stop automatically limits handle travel at various clamping positions once the clamp is installed. Red vinyl handle for comfortable operation.

See table 25 below for additional discounts.

Cat. No.	A	B	D	E	F	G	J	K	N	Drawing Movement	Holding Capacity (Lbs.)	Price Each
TC-301-SS	1.91	8.40	.75	1.25	1.38	1.75	.28	.56	.12	4.00	375	35.54

Straight Line Action Type
Series TC-602, 604, 624



TC-602-SS

TC-604-SS

TC-624-SS

TC-624108 Mounting Plate

TC-604106 Mounting Plate

Fully retractable locators, these models mount directly through a member by a jam nut on the work side, or flush by drilling and tapping the member. Locks in extended or retracted position. When flush mounted, plunger completely retracts from work area. An optional base mounting is available for TC-604-SS and for TC-624-SS as TC-624108. Mounting plates are steel.

See table 25 below for additional discounts.

Cat. No.	A	Travel B	C	D	Thread	Holding Cap. Lbs.	Internal Thread	Price Each	
TC-602-SS	3.14	.75	2.44	.38	5/8-18	200	1/4-20 x 5/8	41.30	
TC-604-SS	4.16	1.50	4.78	.44	3/4-16	400	5/16-18 x 1	36.95	
TC-624-SS	5.62	2.63	6.69	.62	1-14	700	3/8-16 x 1 1/4	77.30	
TC-604106	Optional Mounting Plate for TC-604-SS								5.60
TC-624108	Optional Mounting Plate for TC-624-SS								9.49

See page 7 for accessories.

25	Quantity	1-49	50-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	10%	20%	22%	25%	27.5%	Call



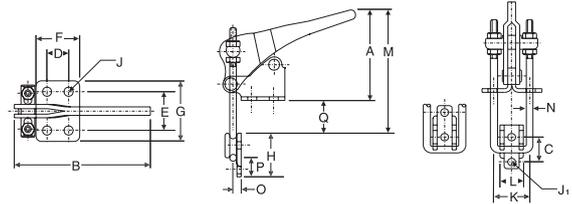
PULL-ACTION LATCH CLAMPS

Series TC-324, 334, 344

Latch plate included with all clamps listed below. Furnished with a thumb control lever.



TC-324-SS



See table 25 below for additional discounts.

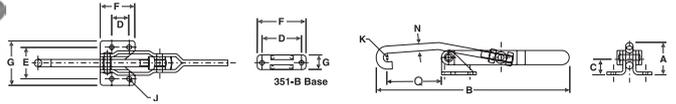
Cat. No.	A	B	C	D	E	F	G	H	Drawing Movement	J	J1	K	L	M	N	O	P	Thread Size	Holding Capacity (Lbs.)	Price Each 1-49
TC-324-SS	2.00	3.35	.56	.50	.88	1.00	1.38	1.00	1.53	.20	.17	.81	.53	2.69	.14	.19	.63	M4	500	27.15
TC-334-SS	2.44	4.25	.81	.75	1.00	1.31	1.56	1.50	2.00	.28	.22	1.13	.68	3.69	.25	.35	.69	M6	1,000	32.05
TC-344-SS	3.25	5.35	1.06	1.25	1.44	1.94	2.13	2.13	2.50	.34	.34	1.75	1.19	5.31	.31	.50	1.25	M8	2,000	54.25

Series TC-330, 351, 371

Pull bar is threaded for convenient adjustment. Furnished with a thumb control lever.



TC-351-SS



See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	Drawing Movement	J	K	N	Q Min.	Q Max.	Holding Capacity (Lbs.)	Price Each 1-49
TC-330-SS	.90	5.64	.56	.50	1.23	1.00	2.31	1.69	2.31	.22	.31	.19	1.60	1.85	200	20.75
TC-351-SS	1.34	8.56	.75	.75	1.38	1.50	4.00	1.94	4.00	.20	.44	.31	1.75	2.18	375	21.20
TC-351-BSS*	1.34	8.56	—	1.50	—	2.00	4.00	.56	4.00	.27	.44	.31	1.75	2.18	375	21.60
TC-371-SS	2.23	12.00	1.42	1.25	1.94	1.94	5.38	2.62	5.38	.34	.50	.39	2.02	2.83	750	47.90

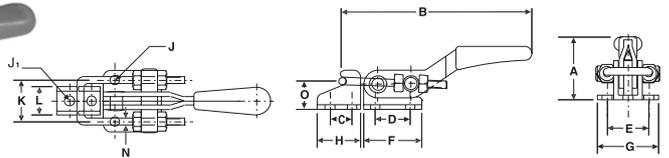
*Narrow base

Series TC-323, 331, 341

The threaded U-bolt permits easy adjustment and provides a positive connection with the **supplied latch plate**. Furnished with a thumb control lever.



TC-323-SS



See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	Drawing Movement	J	J1	K	L	N	O	Holding Capacity (Lbs.)	Price Each 1-49
TC-323-SS	1.13	4.00	.39	.63	.75	1.02	1.11	.79	1.81	.17	.17	.75	.52	.13	.47	360	21.75
TC-331-SS	1.96	5.97	.56	.75	1.25	1.56	1.75	1.00	1.75	.27	.27	1.00	.69	.17	.66	700	25.10
TC-341-SS	2.89	7.50	.75	1.63	1.50	2.38	2.13	1.50	2.50	.33	.33	1.75	1.19	.31	.94	2,000	45.30

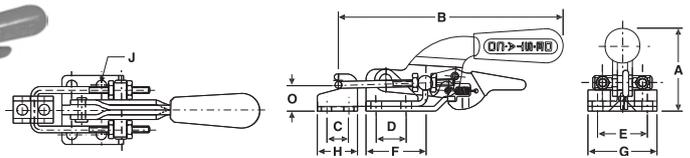
Toggle Lock Plus

Series TC-331-R, 341-R - Latch Action

Toggle-Lock Plus clamps have a locking release lever for improved safety. Used in applications where there is severe stress or vibration on the clamps, or for over-head installations. Supplied with release lever catch which allows clamp to lock in closed position only. The threaded U-bolt provides easy adjustment and a positive connection with the **supplied latch plate**.



TC-331-RSS



See table 25 below for additional discounts.

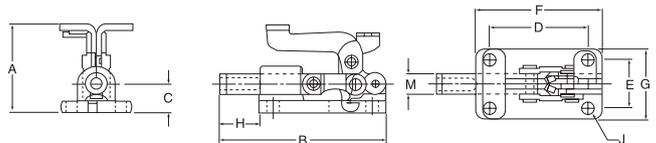
Cat. No.	A	B	C	D	E	F	G	H	J	O	Drawing Movement	Holding Capacity Lbs.	Price Each 1-49
TC-331-RSS	2.08	5.97	.56	.75	1.25	1.56	1.75	1.00	.27	.68	1.75	700	40.70
TC-341-RSS	2.89	7.50	.75	1.63	1.50	2.38	2.12	1.50	.33	.94	2.50	2,000	67.60

TC-6015-MR - Compact Size - Push Pull

Holding Capacity: 350 Lbs.

Plunger Travel: .70"

Compact size allows use in confined areas and on small fixtures where safety is a concern. Features a locking release lever which locks in the clamped position only.



See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	J	M	Plunger Thread	Price Each 1-49
TC-6015-MRSS	1.60	2.95	.50	1.75	.88	2.25	1.25	.70	.22	.38	M6 x 1.0	46.80

See page 7 for accessories.

25	Quantity	1-49	50-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	10%	20%	22%	25%	27.5%	Call

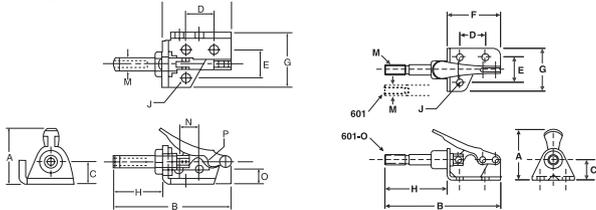


CLAMPS AND ACCESSORIES

Straight Line Action
Series TC-601
Holding Capacity: 100 Lbs.
Plunger Travel: .63"



Series TC-6001-M
Holding Capacity: 150 Lbs.
Plunger Travel: .63"



TC-601-SS, 601-0SS

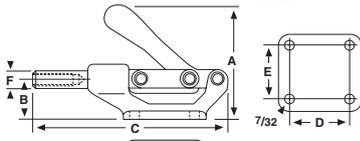
TC-6001-MSS

Smallest of the straight-line toggle clamps. Ideal for electronic applications and similar small fixturing. TC-601-SS has an 8-32 stainless steel spindle (TC-205943). TC-601-0SS has externally threaded 1/4-20 plunger tips. TC-6001-MSS is a heavier duty version and has 50% greater holding capacity. It is manufactured from heavy gauge material and has a more flexible mounting base to enable side-mounting the clamp. TC-6001-MSS has a M4 internal thread.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	J	M	N	O	P	Plunger Type	Price Each
TC-601-SS	1.19	2.63	.50	.63	.63	1.33	1.05	1.29	.17	.25	—	—	—	8-32 Tap	18.90
TC-601-0SS	1.19	2.86	.50	.63	.63	1.31	1.05	1.53	.17	1/4-20	—	—	—	1/4-20 Thread	18.90
TC-6001-MSS	1.26	2.63	.50	.63	.63	1.54	1.23	1.10	.19	.28	.43	.33	.19	M4 Tap	25.05

Series TC-603
Holding Capacity: 600 Lbs.
Plunger Travel: 1-1/4"

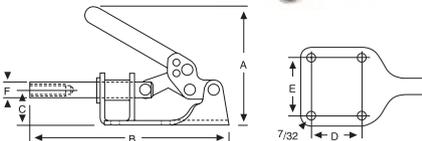


This straight-line action toggle clamp has a large holding capacity for its size. Works well in confined areas because of its small size and low height. Plunger is tapped 5/16-18 x 1" deep for spindle

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Price Each
TC-603-SS	3.28	.97	4.71	1.44	1.31	.44	38.15

TC-6015-MSS
Holding Capacity: 300 Lbs.



For push and pull clamping. Furnished with red vinyl grip. M8 x 1.25 spindle thread.

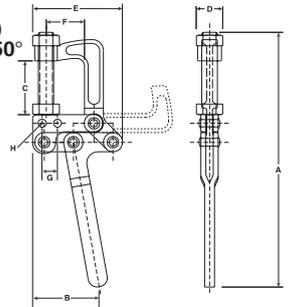
See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Plunger Travel	Price Each
TC-6015-MSS	1.60	2.95	.50	1.75	.88	.38	.70	35.95

Note: Also available as Toggle-Lock Plus Model TC-6015-MSS-R. See page 6.

25	Quantity Discount	1-49	50-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	10%	20%	22%	25%	27.5%	Call	Call

Squeeze Action Type
Series TC-325
Holding Capacity: 800 Lbs. (max)
Jaw Moves: 90°, Handle Moves: 50°



Designed for attachment by welding front of top of base to container or cover. Forged alloy steel jaw moves 90° to clear completely. Red vinyl grip provides easy operation and good-looking appearance. Furnished with stainless steel M12 hex head spindle (TC-325943-M) and lock nut.

See table 25 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	Price Each
TC-325-SS	8.68	2.62	1.78	.75	2.94	1.25	.50	.27	53.30

Hex Head Assemblies with Locknuts



See table 31 below for additional discounts.

Cat. No.	Thread	Thread Lgth.	OAL	Price Each
Inch				
TC-205943	8-32	.75	.86	1.05
TC-213943	8-32	1.03	1.13	2.09
TC-201943	10-32	1.03	1.13	1.10
TC-202943	1/4-20	1.38	1.50	1.10
TC-207943	5/16-18	2.31	2.50	2.66
TC-237943	3/8-16	2.25	2.50	2.94
Metric				
TC-325943-M	M12	2.56	2.83	3.55

Hook Assemblies with Locknuts



U-Hook

J-Hook

See table 31 below for additional discounts.

Cat. No.	Style	For Use w/ Clamp	Price Each
TC-323915	U-Hook	TC-323-SS	5.75
TC-331915	U-Hook	TC-331-SS	5.20
TC-341915	U-Hook	TC-341-SS	8.65
TC-344915	U-Hook	TC-344-SS	8.65
TC-330915*	J-Hook	TC-330-SS	3.45
TC-351915	J-Hook	TC-351-SS	5.20

*Supplied with two jam nuts

Flanged Washers for U-Bar Clamps



See table 31 below for additional discounts.

Cat. No.	Use w/ Spindle	Price Each
TC-102911	No. 10 Spindle	.22
TC-507907	5/16 Spindle	.57
TC-235906	3/8 Spindle	.78
TC-247909	1/2 Spindle	1.35

Latch Plates



A

F

G

H

I

See table 31 below for additional discounts.

Cat. No.	Style	For Use w/ Clamp	Price Each
TC-323104-MSS	A	TC-323-SS	2.28
TC-331905	A	TC-331-SS	3.05
TC-341905	A	TC-341-SS	8.35
TC-330000*	F	TC-331-SS	3.25
TC-351000*	G	TC-351-SS	2.87
TC-371000*	H	TC-371-SS	8.05
TC-381000*	I	TC-381-SS	4.60

*Made of carbon steel.

31	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	10%	15%	20%	25%	Call	Call

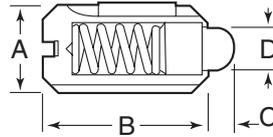
Kipp® SPRING PLUNGERS

integrative Vielfalt

With Long-Lok Thread Lock

The Long-Lok thread lock provides additional resistance to vibration. The resilient nylon insert is squeezed like a wedge between the thread of the plunger and the fastening component, providing extremely high loosening torque. The Long-Lok thread lock does not require initial tension or any defined position so that it is secure in every position. All plungers are pressure and function tested. Plungers have a natural finish. Stainless noses are made of hardened stainless steel. Metric dimensions are in millimeters. Metric end pressures are in Newtons.

Slotted Style



Inch - Light End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-134	.45	1.57	8-36	.35	.06	.07	5.92
KBP-135	.45	1.57	8-32	.35	.06	.07	5.92
KBP-136	.67	2.25	10-32	.47	.08	.09	5.55
KBP-137	.67	2.02	1/4-28	.55	.08	.11	5.44
KBP-138	.67	2.02	1/4-20	.55	.08	.11	5.44
KBP-139	.90	3.60	5/16-18	.63	.08	.16	5.44
KBP-140	.90	3.60	3/8-16	.75	.10	.18	6.42
KBP-141	1.12	6.07	1/2-13	.87	.14	.24	8.34
KBP-142	4.50	10.12	3/8-11	.94	.18	.33	11.73

Inch - Standard End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-102	1.35	4.50	8-36	.35	.06	.07	5.92
KBP-103	1.35	4.50	8-32	.35	.06	.07	5.92
KBP-104	1.35	4.50	10-32	.47	.08	.09	5.55
KBP-105	1.57	4.50	1/4-28	.55	.08	.11	5.55
KBP-106	1.57	4.50	1/4-20	.55	.08	.11	5.44
KBP-107	3.37	6.74	5/16-18	.63	.08	.16	5.44
KBP-108	4.50	7.87	3/8-16	.75	.10	.18	6.42
KBP-109	6.74	10.60	1/2-13	.87	.14	.24	7.85
KBP-110	10.12	22.48	3/8-11	.94	.18	.33	11.10

Hexagon Socket Style



Metric - Light End Pressure

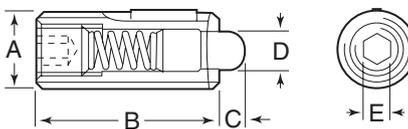
See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-118	2	7	M4	9	1.5	1.8	3.72
KBP-119	3	10	M5	12	2.0	2.4	3.76
KBP-120	3	9	M6	14	2.0	2.7	3.79
KBP-121	4	16	M6	16	2.0	4.0	4.73
KBP-122	4	16	M10	19	2.5	4.5	5.31
KBP-123	5	27	M12	22	3.5	6.0	8.34
KBP-124	20	45	M16	24	4.5	8.5	11.73

Metric - Standard End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-86	6	20	M4	9	1.5	1.8	3.43
KBP-87	6	20	M5	12	2.0	2.4	3.47
KBP-88	7	20	M6	14	2.0	2.7	3.47
KBP-89	15	30	M8	16	2.0	4.0	4.34
KBP-90	20	35	M10	19	2.5	4.5	4.95
KBP-91	30	55	M12	22	3.5	6.0	7.85
KBP-92	45	100	M16	24	4.5	8.5	11.04



Inch - Standard End Pressure

See table 5 below for additional discounts.

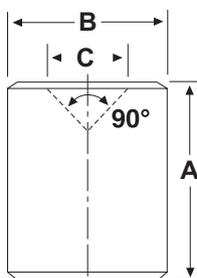
Stainless Nose Cat. No.	Plastic Nose Cat. No.	End Force Lbs.		A	B	C	D	E	Price Each 1-11	
		Initial	Final						Stainless Nose	Plastic Nose
KBP-416	KBP-422	1.12	3.82	10-32	.71	.09	.09	1/16	5.84	5.95
KBP-417	KBP-47	1.35	3.82	1/4-28	.79	.10	.11	5/64	5.84	5.92
KBP-418	KBP-423	1.35	.82	1/4-20	.79	.10	.11	5/64	5.84	5.92
KBP-419	KBP-49	1.80	6.97	5/16-18	.87	.12	.14	3/32	6.55	6.68
KBP-420	KBP-50	2.25	10.57	3/8-16	1.10	.16	.24	5/32	7.57	7.71
KBP-44	KBP-51	2.25	10.57	1/2-13	1.10	.16	.24	5/32	10.95	11.14
KBP-421	KBP-52	10.12	22.48	3/8-11	1.26	.20	.30	3/16	17.23	17.49

Metric - Standard End Pressure

See table 5 below for additional discounts.

Stainless Nose Cat. No.	Plastic Nose Cat. No.	End Force Newtons		A	B	C	D	E	Price Each 1-11	
		Initial	Final						Stainless Nose	Plastic Nose
KBP-13	KBP-19	5	17	M5	18	2.3	2.4	1.5	7.73	5.95
KBP-14	KBP-20	6	17	M6	20	2.5	2.7	2.0	7.70	5.92
KBP-15	KBP-21	7	29	M8	22	3.0	3.5	2.5	7.86	6.68
KBP-16	KBP-400	8	31	M10	22	3.0	4.0	3.0	7.99	7.71
KBP-17	KBP-401	10	47	M12	28	4.0	6.0	4.0	10.95	11.14
KBP-18	KBP-402	45	100	M16	32	5.0	7.5	5.0	17.23	17.49

BALL BUTTONS



The perfect mating detent for ball plungers or for other similar applications. Hardened and ground. Materials is 440C stainless steel.

See table 5 below for additional discounts.

Cat. No.	For use with Ball Diameter	+0.002 -0.000			Price Each 1-11
		A	B	C	
VD-1	.0620	1/8	.1075	.056	3.02
VD-2	.0780	1/8	.1175	.061	3.02
VD-3	.0938	3/16	.1614	.069	3.02
VD-4	.1250	1/4	.2034	.111	3.18
VD-5	.1560	5/16	.2659	.139	3.30
VD-6	.1875	3/8	.3284	.164	3.35
VD-7	.2813	1/2	.4378	.241	3.74
VD-8	.3750	5/8	.5472	.330	4.14

5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

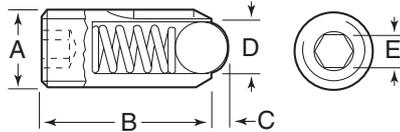
Kipp[®] BALL PLUNGERS

integrative Vielfalt

With Long-Lok Thread Lock

The Long-Lok thread lock provides additional resistance to vibration. A resilient nylon insert is squeezed like a wedge between the thread of the plunger and the fastening component, providing extremely high loosening torque. The Long-Lok thread lock does not require initial tension or any defined position so that it is secure in every position. All plungers are pressure and function tested. Plungers have a natural finish. Noses are hardened. Metric dimensions are in millimeters. Metric end pressures are in Newtons.

Hexagon Socket Style



Inch - Standard End Pressure

See table 5 below for additional discounts.

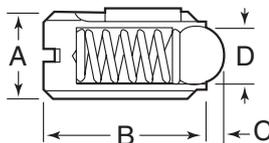
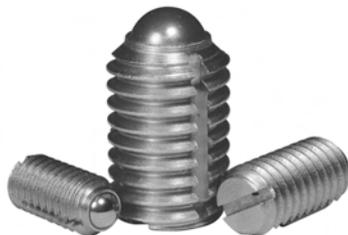
Cat. No.	End Force Lbs.		A	B	C	D	E	Price Each 1-11
	Initial	Final						
KBP-159	2.02	2.92	1/4-28	.59	.04	.14	1/8	5.81
KBP-160	2.02	2.92	1/4-20	.59	.04	.14	1/8	5.81
KBP-161	3.37	6.74	5/16-18	.71	.06	.20	5/32	6.13
KBP-162	4.50	7.87	3/8-16	.91	.08	.24	3/16	7.37
KBP-163	6.74	12.36	1/2-13	1.02	.10	.31	7/32	9.30
KBP-164	14.61	28.10	5/8-11	1.30	.14	.39	5/16	14.72

Inch - Heavy End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	E	Price Each 1-11
	Initial	Final						
KBP-181	6.29	8.99	1/4-28	.59	.04	.14	1/8	5.81
KBP-182	6.29	8.99	1/4-20	.59	.04	.14	1/8	5.81
KBP-183	10.57	16.41	5/16-18	.71	.06	.20	5/32	6.42
KBP-184	14.84	22.48	3/8-16	.91	.08	.24	3/16	7.37
KBP-185	14.84	26.98	1/2-13	1.02	.10	.31	7/32	10.02
KBP-186	20.23	40.46	5/8-11	1.30	.14	.39	5/16	15.79

Slotted Style



Inch - Standard End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-213	.33	.67	6-32	.28	.02	.06	3.59
KBP-214	.90	2.25	8-36	.35	.03	.10	4.71
KBP-215	.90	2.25	8-32	.35	.03	.10	4.71
KBP-216	1.35	2.47	10-32	.47	.04	.12	5.33
KBP-217	2.02	2.92	1/4-28	.55	.04	.14	4.29
KBP-218	2.02	2.92	1/4-20	.55	.04	.14	5.81
KBP-219	3.37	6.74	5/16-18	.63	.06	.20	6.42
KBP-220	4.50	7.87	3/8-16	.75	.08	.24	7.37
KBP-221	6.74	12.36	1/2-13	.87	.10	.31	8.36
KBP-222	14.61	28.10	5/8-11	.94	.14	.39	9.43

Inch - Heavy End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-242	4.27	6.74	10-32	.47	.04	.12	5.33
KBP-243	6.29	8.99	1/4-28	.55	.04	.14	5.33
KBP-244	6.29	8.99	1/4-20	.55	.04	.14	5.81
KBP-245	10.57	16.41	5/16-18	.63	.06	.20	6.42
KBP-246	14.84	22.48	3/8-16	.75	.08	.24	7.37
KBP-247	14.84	26.98	1/2-13	.87	.10	.31	8.36
KBP-248	20.23	40.46	5/8-11	.94	.14	.39	9.93

Metric - Standard End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	E	Price Each 1-11
	Initial	Final						
KBP-148	9	13	M6	15	1.0	3.5	3	6.84
KBP-149	15	30	M8	18	1.5	5.0	4	6.95
KBP-150	20	35	M10	23	2.0	6.0	5	7.09
KBP-151	30	55	M12	26	2.5	8.0	6	9.30
KBP-152	65	125	M16	33	3.5	10.0	8	14.72

Metric - Heavy End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	E	Price Each 1-11
	Initial	Final						
KBP-170	28	40	M6	15	1.0	3.5	3	6.84
KBP-171	47	73	M8	18	1.5	5.0	4	6.95
KBP-172	66	100	M10	23	2.0	6.0	5	7.09
KBP-173	66	120	M12	26	2.5	8.0	6	10.02
KBP-174	90	180	M16	33	3.5	10.0	8	15.79

Metric - Standard End Pressure

See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-195	1.5	3	M3	7	.50	1.5	7.31
KBP-196	4	10	M4	9	.80	2.5	6.69
KBP-197	6	11	M5	12	.90	3.0	6.53
KBP-198	9	13	M6	14	1.0	3.5	6.84
KBP-199	15	30	M8	16	1.5	5.0	6.95
KBP-200	20	35	M10	19	2.0	6.0	7.09
KBP-201	30	55	M12	22	2.5	8.0	7.27
KBP-202	65	125	M16	24	3.5	10.0	9.35

Metric - Heavy End Pressure

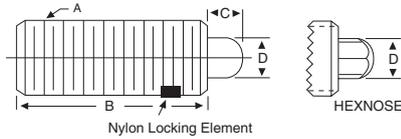
See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	D	Price Each 1-11
	Initial	Final					
KBP-229	19	30	M5	12	.90	3.0	7.16
KBP-230	28	40	M6	14	1.0	3.5	6.84
KBP-231	47	73	M8	16	1.5	5.0	6.95
KBP-232	66	100	M10	19	2.0	6.0	7.09
KBP-233	66	120	M12	22	2.5	8.0	7.32
KBP-234	90	180	M16	24	3.5	10.0	9.93

5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

SPRING PLUNGERS

Inch and Metric
Stainless Steel Bodies with Stainless Steel or Delrin Nose
with or without Nylon Locking Element



For use in fixtures, jigs, detents, dies and other tooling applications. They give sure and positive spring tension. Stainless steel is passivated. Accurate spring pressures. Nose ends accurately radiused. Delrin nose offers long life and high resistance to repeated impacts, moisture and solvents and heat up to 190°F. Metric dimensions are shown in millimeters, metric end forces are shown in Newtons.

See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs./ Newtons		A	B	C	D	Price Each 1-11
		Initial	Final					
Stainless Steel Nose - Heavy End Pressure								
Inch								
SLS-1A	SLS-1AN*	1.0	1.6	6-32	3/8	1/16	.045	5.65
SLS-1	SLS-1N*	1.5	4.5	6-32	17/32	1/16	.045	5.65
SLS-2	SLS-2N*	2.7	7.3	8-32	5/8	3/32	.069	4.94
SLS-3	SLS-3N*	2.9	11.1	10-32	3/4	1/8	.092	4.80
SLS-4A	SLS-4AN	2.0	9.0	1/4-20	3/4	1/8	.118	4.78
SLS-4	SLS-4N	3.0	13.0	1/4-20	1	3/16	.118	4.78
SLS-5	SLS-5N	3.0	13.0	1/4-28	1	3/16	.118	4.78
SLS-6	SLS-6N	3.0	15.0	5/16-18	1	3/16	.134	4.92
SLS-7	SLS-7N	5.5	14.5	3/8-16	1 1/8	3/16	.186	5.40
SLS-8	SLS-8N	6.6	17.4	1/2-13	1 1/4	1/4	.247	7.41
SLS-9	SLS-9N	10.5	25.5	5/8-11	1 1/2	5/16	.309	12.13
SLS-10	SLS-10N	6.7	37.3	3/4-10	1 3/4	5/16	.373	18.12
SLS-11	SLS-11N	16.0	68.0	1-8	2 13/32	1/2	.498	38.20
Metric								
SSM-6A	SSM-6AN	18	50	M6x1.0	20	2.5	2.7	6.90
SSM-8A	SSM-8AN	25	70	M8x1.25	22	3.0	3.5	7.04
SSM-10A	SSM-10AN	25	70	M10x1.5	22	3.0	4.0	7.39
SSM-12A	SSM-12AN	45	110	M12x1.75	28	4.0	6.0	7.54
Stainless Steel Nose - Light End Pressure								
Inch								
STS-1	STS-1N*	0.5	1.5	6-32	17/32	1/16	.045	5.65
STS-2	STS-2N*	0.7	2.3	8-32	5/8	3/32	.069	4.94
STS-3	STS-3N*	1.3	2.7	10-32	3/4	1/8	.092	4.80
STS-4	STS-4N	1.0	4.0	1/4-20	1	3/16	.118	4.78
STS-5	STS-5N	1.0	4.0	1/4-28	1	3/16	.118	4.78
STS-6	STS-6N	1.5	4.5	5/16-18	1	3/16	.134	4.92
STS-7	STS-7N	2.8	7.2	3/8-16	1 1/8	3/16	.186	5.40
STS-8	STS-8N	2.7	9.3	1/2-13	1 1/4	1/4	.247	7.41
STS-9	STS-9N	3.5	10.5	5/8-11	1 1/2	5/16	.309	12.13
STS-11	STS-11N	4.0	31.0	1-8	2 13/32	1/2	.498	38.20
Metric								
SSML-6A	SSML-6AN	7	20	M6x1.0	20	2.5	2.7	6.90
SSML-8A	SSML-8AN	9	35	M8x1.25	22	3.0	3.5	7.04
SSML-10A	SSML-10AN	9	35	M10x1.5	20	3.0	4.0	7.39
SSML-12A	SSML-12AN	10	55	M12x1.75	28	4.0	6.0	7.54
Delrin Nose - Heavy End Pressure								
Inch								
SDH-2	SDH-2N*	2.7	7.3	8-32	5/8	3/32	.069	3.56
SDH-3	SDH-3N*	2.9	11.1	10-32	3/4	1/8	.092	3.39
SDH-4A	SDH-4AN	2.0	9.0	1/4-20	3/4	1/8	.118	3.52
SDH-4	SDH-4N	3.0	13.0	1/4-20	1	3/16	.118	3.52
SDH-5	SDH-5N	3.0	13.0	1/4-28	1	3/16	.118	3.52
SDH-6	SDH-6N	3.0	15.0	5/16-18	1	3/16	.134	3.52
SDH-7	SDH-7N	5.5	14.5	3/8-16	1 1/8	3/16	.186	3.92
SDH-8	SDH-8N	6.6	17.4	1/2-13	1 1/4	1/4	.247	4.14
SDH-9	SDH-9N	10.5	25.5	5/8-11	1 1/2	5/16	.309	7.71
Delrin Nose - Light End Pressure								
Inch								
SDL-2	SDL-2N*	0.7	2.3	8-32	5/8	3/32	.069	3.56
SDL-3	SDL-3N*	1.3	2.7	10-32	3/4	1/8	.092	3.39
SDL-4	SDL-4N	1.0	4.0	1/4-20	1	3/16	.118	3.52
SDL-5	SDL-5N	1.0	4.0	1/4-28	1	3/16	.118	3.52
SDL-6	SDL-6N	1.5	4.5	5/16-18	1	3/16	.134	3.52
SDL-7	SDL-7N	2.8	7.2	3/8-16	1 1/8	3/16	.186	3.92
SDL-8	SDL-8N	2.7	9.3	1/2-13	1 1/4	1/4	.247	4.14

*Nylon patch

Note: Plungers with nylon locking element are not recommended for use in aluminum applications.

Bold catalog numbers conform to TCMAI standards.

5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

BALL PLUNGERS

Inch and Metric
with or without Nylon Locking Element



Ball plungers are compact units ideally suited for many locating or positioning applications in dies, special tooling, automatic feed devices, etc., where controlled end pressure is required. Nylon balls offer resistance to repeated impacts, moisture and solvents. Also resists heat up to 190°F and offers electrical insulating properties. Will not mar soft surfaces such as brass or aluminum. Available with stainless steel or nylon balls. End pressures are shown in pounds for inch sizes and Newtons for metric sizes. Metric dimensions are shown in millimeters. Bodies are color coded on the rear of the assembly to indicate end forces; plain = light end force; black = standard end force; orange = heavy end force.

See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs./ Newtons		A	B	C	D	Price Each 1-11
		Initial	Force					
Stainless Steel Balls								
Inch								
X-1	X1-N*	1/8	1/2	4-48	.0620	.187	.020	2.85
X-2	X2-N*	1/4	3/4	5-40	.0620	.250	.020	2.85
X-3	X3-N*	1/2	1	6-40	.0780	.312	.023	2.79
X-4A	X4A-N*	1/2	1 1/4	8-32	.0937	.344	.025	2.68
X-4	X4-N*	1/2	1 1/4	8-36	.0937	.344	.025	2.68
X-11	X11-N*	1/2	1 1/2	10-32	.0937	.513	.025	2.62
X-5	X5-N*	1 1/2	3	10-32	.0937	.513	.025	2.62
X-12	X12-N*	2	5	10-32	.0937	.513	.025	2.62
X-13	X13-N	2	4	1/4-20	.1250	.531	.035	2.91
X-6	X6-N	3	7	1/4-20	.1250	.531	.035	2.91
X-14	X14-N	4	12	1/4-20	.1250	.531	.035	2.91
X-15	X15-N	2	4 1/2	5/16-18	.1560	.578	.040	3.23
X-7	X7-N	4	9	5/16-18	.1560	.578	.040	3.23
X-16	X16-N	6	17	5/16-18	.1560	.578	.040	3.23
X-17	X17-N	2 1/2	5	3/8-16	.1875	.625	.048	3.62
X-8	X8-N	5	10	3/8-16	.1875	.625	.048	3.62
X-18	X18-N	6	21	3/8-16	.1875	.625	.048	3.62
X-19	X19-N	3	6	1/2-13	.2813	.750	.072	4.85
X-9	X9-N	6	12	1/2-13	.2813	.750	.072	4.85
X-20	X20-N	6	30	1/2-13	.2813	.750	.072	4.85
X-21	X21-N	4 1/2	9	5/8-11	.3750	.984	.096	5.79
X-10	X10-N	9	18	5/8-11	.3750	.984	.096	5.79
X-22	X22-N	7	50	5/8-11	.3750	.984	.096	5.79
Metric								
SBM-120	SBM-120N	4	10	M4x0.7	2.50	9	.8	5.60
SBM-130	SBM-130N	2	6	M6x1.0	3.50	14	1.0	5.73
SBM-125	SBM-125N	9	13	M6x1.0	3.50	14	1.0	5.73
SBM-135	SBM-135N	28	40	M6x1.0	5.00	14	1.0	5.73
SBM-145	SBM-145N	5	10	M8x1.25	5.00	16	1.5	5.97
SBM-140	SBM-140N	15	30	M8x1.25	5.00	16	1.5	5.97
SBM-150	SBM-150N	40	60	M8x1.25	5.00	16	1.5	5.97
SBM-160	SBM-160N	8	15	M10x1.50	6.00	19	2.0	6.55
SBM-155	SBM-155N	20	35	M10x1.50	6.00	19	2.0	6.55
SBM-165	SBM-165N	60	90	M10x1.50	6.00	19	2.0	6.55
SBM-175	SBM-175N	75	20	M12x1.75	8.00	22	2.5	6.72
SBM-170	SBM-170N	30	55	M12x1.75	8.00	22	2.5	6.72
SBM-180	SBM-180N	75	115	M12x1.75	8.00	22	2.5	6.72
Nylon Balls								
Inch								
Y-1	Y-1N*	1/8	1/2	4-48	.0620	.187	.020	5.06
Y-2	Y-2N*	1/4	3/4	5-40	.0620	.250	.020	4.83
Y-3	Y-3N*	1/2	1	6-40	.0780	.312	.023	4.51
Y-4A	Y-4AN*	1/2	1 1/4	8-32	.0937	.344	.025	4.32
Y-4	Y-4N*	1/2	1 1/4	8-36	.0937	.344	.025	4.32
Y-11	Y-11N*	1/2	1 1/2	10-32	.0937	.513	.025	4.83
Y-5	Y-5N*	1 1/2	3	10-32	.0937	.513	.025	4.83
Y-12	Y-12N*	2	5	10-32	.0937	.513	.025	4.83
Y-13	Y-13N	2	4	1/4-20	.1250	.531	.035	5.50
Y-6	Y-6N	3	7	1/4-20	.1250	.531	.035	5.50
Y-14	Y-14N	4	12	1/4-20	.1250	.531	.035	5.50
Y-15	Y-15N	2	4 1/2	5/16-18	.1560	.578	.040	6.01
Y-7	Y-7N	4	9	5/16-18	.1560	.578	.040	6.01
Y-16	Y-16N	6	17	5/16-18	.1560	.578	.040	6.01
Y-17	Y-17N	2 1/2	5	3/8-16	.1875	.625	.048	6.93
Y-8	Y-8N	5	10	3/8-16	.1875	.625	.048	6.93
Y-18	Y-18N	6	21	3/8-16	.1875	.625	.048	6.93
Y-9	Y-9N	3	6	1/2-13	.2813	.750	.072	8.31
Y-10	Y-10N	6	12	1/2-13	.2813	.750	.072	8.31
Y-20	Y-20N	6	30	1/2-13	.2813	.750	.072	8.31
Y-21	Y-21N	4 1/2	9	5/8-11	.3750	.984	.096	10.85
Y-22	Y-22N	7	50	5/8-11	.3750	.984	.096	10.85

*Nylon Patch

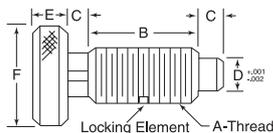
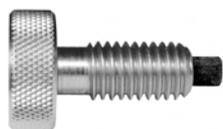
HAND RETRACTABLE SPRING PLUNGERS

With Radiused Delrin or Phenolic Nose
With or Without Nylon Locking Elements

Hand retractable spring plungers permit the plunger to be easily withdrawn and re-engaged by pulling on the handle. Used in machining applications as positioners, loading pins and indexing devices. Locking types have rest button where the plunger can stay in the retracted position. Radiused delrin and phenolic noses prevent marring of aluminum, brass or other soft material.

With Phenolic Nose - With Nylon Locking Element

Knurled Handle Locking

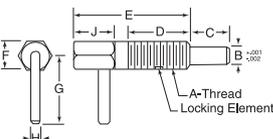


See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D*	E	F	Price Each 1-11
	Initial	Final							
Light End Pressure									
PHR-82	.50	2.5	1/4-20	1/2	1/8	.124	1/4	1/2	13.88
PHR-83	.75	3.0	5/16-18	5/8	3/16	.155	9/32	5/8	14.78
PHR-84	.75	4.0	3/8-16	3/4	7/32	.186	5/16	3/4	16.30
PHR-85	1.25	5.0	1/2-13	7/8	1/4	.249	3/8	1	17.50
Heavy End Pressure									
PHR-74	1.0	5.0	1/4-20	1/2	1/8	.124	1/4	1/2	13.88
PHR-75	1.5	6.0	5/16-18	5/8	3/16	.155	9/32	5/8	14.78
PHR-76	1.5	8.0	3/8-16	3/4	7/32	.186	5/16	3/4	16.30
PHR-77	2.5	10.0	1/2-13	7/8	1/4	.249	3/8	1	17.50

*Tolerance is +.001/-0.002

L-Handle Locking

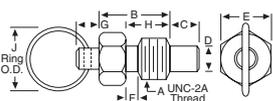


See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B*	C	D	E	F	G	H	J	Price Each 1-11
	Initial	Final										
FR-13	.125	5.0	1/4-20	.156	3/16	7/16	3/4	1/4	9/16	3/32	1/4	12.22
FR-14	.250	1.25	3/8-16	.250	5/16	5/8	1 1/8	3/8	3/4	9/64	3/8	15.49
FR-15	.500	2.00	1/2-13	.312	13/32	7/8	1 1/2	1/2	1	3/16	1/2	14.61
FR-16	.750	2.50	5/8-11	.375	1/2	1 1/8	1 7/8	5/8	1 3/16	3/16	5/8	27.07
FR-5	.500	2.50	1/4-20	.156	3/8	5/8	1 1/4	1/4	5/8	3/32	1/4	12.22
FR-6	.750	3.75	3/8-16	.250	9/16	1 1/16	2	3/8	15/16	9/64	3/8	15.49
FR-7	1.000	5.00	1/2-13	.312	3/4	1 1/8	2 1/8	1/2	1 1/4	3/16	1/2	16.74
FR-8	1.000	5.00	5/8-11	.375	1	1 3/4	3	5/8	1 5/16	3/16	5/8	27.07

*Tolerance is +.001/-0.002

Stubby Ring Handle Non-Locking

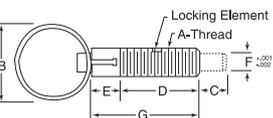


See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D*	E	F	G	H	J	Price Each 1-11
	Initial	Final										
PRSN-5	.50	2.00	1/4-20	7/16	3/16	.156	1/4	1/32	5/32	9/32	3/4	13.61
PRSN-6	.75	3.00	3/8-16	5/8	9/32	.250	3/8	1/8	3/16	7/16	3/4	15.36
PRSN-7	1.00	4.00	1/2-13	13/16	3/8	.312	1/2	1/32	1/4	9/16	1	18.37
PRSN-8	1.25	5.00	5/8-11	1	7/16	.375	5/8	5/32	5/16	11/16	1	20.86

*Tolerance is +.001/-0.002

Ring Handle Locking



See table 5 below for additional discounts.

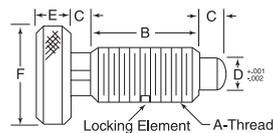
Cat. No.	End Force Lbs.		A	B	C	D	E	F*	G	Price Each 1-11
	Initial	Final								
PR-4	1.0	2.5	1/4-20	1	1/4	13/16	9/16	.156	1 1/8	15.10
PR-5	2.0	4.0	3/8-16	1 1/4	3/8	1 1/4	7/16	.250	1 11/16	17.32
PR-6	2.5	5.0	1/2-13	1 3/8	1/2	1 7/16	9/16	.312	2	20.04

*Tolerance is +.001/-0.002

With Radiused Delrin Nose

Knurled Handle Locking

New!

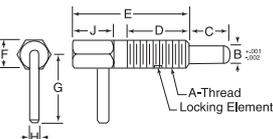


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	Price Each 1-11
		Initial	Final							
Light Pressure										
NKP-16	NKP-16N	.5	2.5	1/4-20	1/2	1/8	.144	1/4	1/2	14.54
NKP-17	NKP-17N	.75	3.0	5/16-18	5/8	3/16	.179	9/32	5/8	15.52
NKP-18	NKP-18N	.75	4.0	3/8-16	3/4	7/32	.216	5/16	3/4	17.12
NKP-19	NKP-19N	1.25	5.0	1/2-13	7/8	1/4	.310	3/8	1	18.38
NKP-20	NKP-20N	3.0	6.0	5/8-11	1	9/16	.373	13/32	1 1/8	23.10
Heavy Pressure										
NKP-6	NKP-6N	1.0	5.0	1/4-20	1/2	1/8	.144	1/4	1/2	14.57
NKP-7	NKP-7N	1.5	6.0	5/16-18	5/8	3/16	.179	9/32	5/8	15.52
NKP-8	NKP-8N	1.5	8.0	3/8-16	3/4	7/32	.216	5/16	3/4	17.12
NKP-9	NKP-9N	2.5	10.0	1/2-13	7/8	1/4	.310	3/8	1	18.38
NKP-10	NKP-10N	5.0	10.0	5/8-11	1	9/16	.373	13/32	1 1/8	23.10

L-Handle - Standard or Short Length Locking

New!

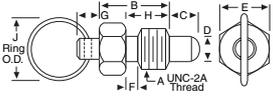


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	H	J	Price Each 1-11
		Initial	Final										
Standard Length													
FRD-5	FRD-5N	0.5	2.5	1/4-20	.156	3/8	5/8	1 1/4	1/4	5/8	3/32	1/2	16.29
FRD-6	FRD-6N	.075	3.75	3/8-16	.250	9/16	1 1/16	2	3/8	15/16	9/64	1 1/16	19.58
FRD-7	FRD-7N	1.0	5.0	1/2-13	.312	3/4	1 1/8	2 1/8	1/2	1 1/4	9/16	3/4	21.21
FRD-8	FRD-8N	1.0	5.0	5/8-11	.375	1	1 3/4	3	5/8	1 5/16	3/16	1 1/16	23.30
Short Length													
FRD-13	FRD-13N	.125	.50	1/4-20	.156	3/8	7/16	3/4	1/4	9/16	3/32	1/4	14.54
FRD-14	FRD-14N	.25	1.25	3/8-16	.250	5/16	5/8	1 1/8	3/8	3/4	9/64	3/8	16.61
FRD-15	FRD-15N	.50	2.0	1/2-13	.312	3/4	1 1/2	1/2	1	1 1/4	3/16	1/2	21.64
FRD-16	FRD-16N	.75	2.5	5/8-11	.375	1/2	1 1/8	1 7/8	5/8	1 3/16	3/16	5/8	30.04

Pull Ring - Short Length Non-Locking

New!

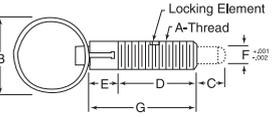


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	H	J	Price Each 1-11
		Initial	Final										
PRSN-14	PRSN-14N	.50	2.0	1/4-20	7/16	3/16	.156	1/4	1/32	5/32	9/32	3/4	15.36
PRSN-15	PRSN-15N	.75	3.0	3/8-16	5/8	9/32	.250	3/8	1/8	3/16	7/16	3/4	17.46
PRSN-16	PRSN-16N	1.0	4.0	1/2-13	13/16	3/8	.312	1/2	9/32	1/4	9/16	1	20.82
PRSN-17	PRSN-17N	1.25	5.0	5/8-11	1	7/16	.375	5/8	5/32	5/16	11/16	1	23.79

Pull Ring - Standard Length Locking

New!



See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	Price Each 1-11
		Initial	Final								
PR-13	PR-13N	1.0	2.5	1/4-20	1	1/4	13/16	9/16	.156	1 1/8	17.08
PR-14	PR-14N	2.0	4.0	3/8-16	1 1/4	3/8	1 1/4	7/16	.250	1 11/16	20.12
PR-15	PR-15N	2.5	5.0	1/2-13	1 3/8	1/2	1 7/16	9/16	.312	2	29.63

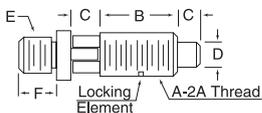
5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

HAND RETRACTABLE SPRING PLUNGERS

With or Without Nylon Locking Element

Hand retractable spring plungers permit the plunger to be easily withdrawn by pulling on the handle. Used in machining applications as positioners, leading pins and indexing devices. Threaded end is designed to accept any internally threaded knob or handle. Locking plunger can be withdrawn completely into the body and locked in a fully retractable position. To engage the plunger, simply turn the end knob to line up with the slot in the body.

Threaded Adapter For Use With Knob or Handle Locking

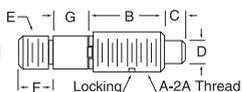


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Kilograms		A	B	C	D*	E	F	Price Each 1-11
		Initial	Final							
Light End Pressure										
NRP-6	NRP-6N	.5	1.5	10-32	13/32	3/32	.104	10-32	15/64	13.20
NRP-7	NRP-7N	.5	2.5	1/4-20	1/2	1/8	.124	10-32	15/64	13.20
NRP-8	NRP-8N	.75	3.0	5/16-18	5/8	3/16	.155	1/4-20	11/32	14.07
NRP-9	NRP-9N	.75	4.0	3/8-16	3/4	7/32	.186	5/16-18	13/32	15.51
NRP-10	NRP-10N	1.25	5.0	1/2-13	7/8	1/4	.249	3/8-16	7/16	16.66
NRP-34	NRP-34N	3.0	6.0	5/8-11	1	5/16	.311	1/2-13	7/16	19.25
Heavy End Pressure										
NRP-20	NRP-20N	1.0	3.0	10-32	13/32	3/32	.104	10-32	15/64	13.20
NRP-21	NRP-21N	1.0	5.0	1/4-20	1/2	1/8	.124	10-32	15/64	13.20
NRP-22	NRP-22N	1.5	6.0	5/16-18	5/8	3/16	.155	1/4-20	11/32	14.07
NRP-23	NRP-23N	1.5	8.0	3/8-16	3/4	7/32	.186	5/16-18	13/32	15.51
NRP-24	NRP-24N	2.5	10.0	1/2-13	7/8	1/4	.249	3/8-16	7/16	16.66
NRP-32	NRP-32N	5.0	10.0	5/8-11	1	5/16	.311	1/2-13	7/16	19.25

* Inch tolerance +.001/-.002 Metric tolerance +.025/-0.050

Threaded Adapter For Use with Knob or Handle Non-Locking



See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	Price Each 1-11
		Initial	Final								
Light End Pressure											
NRP-69	NRP-69N	0.5	2.0	10-32	13/32	3/32	.104	10-32	15/64	.96	13.86
NRP-70	NRP-70N	0.5	2.5	1/4-20	1/2	1/8	.124	10-32	15/64	.130	13.86
NRP-71	NRP-71N	0.75	3.0	5/16-18	5/8	3/16	.155	1/4-20	11/32	.192	14.77
NRP-72	NRP-72N	0.75	4.0	3/8-16	3/4	7/32	.186	5/16-18	13/32	.223	16.29
NRP-73	NRP-73N	1.25	5.0	1/2-13	7/8	1/4	.249	3/8-16	7/16	.255	17.49
NRP-74	NRP-74N	3.0	6.0	5/8-11	1	5/16	.311	1/2-13	7/16	.317	19.25
Heavy End Pressure											
NRP-57	NRP-57N	1.0	3.5	10-32	13/32	3/32	.104	10-32	15/64	.96	13.86
NRP-58	NRP-58N	1.0	5.0	1/4-20	1/2	1/8	.124	10-32	15/64	.130	13.86
NRP-59	NRP-59N	1.5	6.0	5/16-18	5/8	3/16	.155	1/4-20	11/32	.192	14.77
NRP-60	NRP-60N	1.5	8.0	3/8-16	3/4	7/32	.186	5/16-18	13/32	.223	16.29
NRP-61	NRP-61N	2.5	10.0	1/2-13	7/8	1/4	.249	3/8-16	7/16	.255	17.49
NRP-62	NRP-62N	5.0	10.0	5/8-11	1	5/16	.311	1/2-13	7/16	.317	19.25

NEED SOMETHING SPECIAL?

Sometimes a standard spring or ball plunger cannot meet your requirements. Whether you need a variation of a standard item or a completely special design, we can help. Contact our customer service department with the following information to help us expedite your quote.

Spring Plunger Press Fit Plunger
 Ball Plunger Hand Retractable Plunger

Dimensional Data and Specifications

Thread/Outside Diameter: _____

Similar to Standard Catalog Number: _____

Initial Force: _____ Final Force: _____

Length of Travel: _____ Ball or Plunger: _____

End Radius: _____ Flats or Hex: _____

Locking Element? Yes No

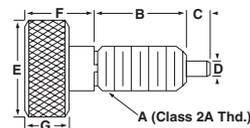
Material (Steel, Stainless Steel, Plastic, Other)

Body: _____ Ball or Plunger: _____

Coating/Plating: _____ Spring: _____

Quantity: _____

Knurled Handle Non Locking

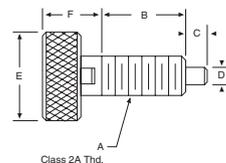
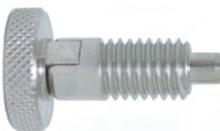


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs./ Newtons		A	B	C	D	E	F	G	Price Each 1-11
		Initial	Final								
Inch											
PHR-00SS	PHR-0SS	.50	3.00	10-32	.400	3/32	.104*	3/8	1/4	.19	11.08
PHR-11SS	PHR-1SS	1.00	4.00	1/4-20	.500	1/8	.124	1/2	5/16	.19	11.94
PHR-22SS	PHR-2SS	1.00	6.00	5/16-18	.625	3/16	.155	5/8	3/8	.25	12.69
PHR-33SS	PHR-3SS	1.00	8.00	3/8-16	.750	7/32	.186	3/4	1/2	.31	14.20
PHR-44SS	PHR-4SS	1.00	10.00	1/2-13	.875	1/4	.249	1	5/8	.38	15.09
Metric											
SPHR-50	—	2.22	13.34	M5x0.80	10	2	2.5	9	6	4	11.81
SPHR-60	SPHR-60N	4.45	17.30	M6x1.00	13	3	3.0	13	8	5	12.84
SPHR-100	SPHR-100N	4.45	35.60	M10x1.50	19	6	5.0	19	13	8	15.24
SPHR-120	—	4.45	44.50	M12x1.75	23	6	6.0	25	16	10	16.25

*.052 radius nose

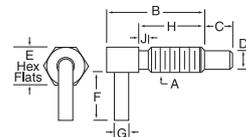
Knurled Handle Locking



See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	Price Each 1-11
		Initial	Final							
SPHR-250	SPHR-250N	.50	2	1/4-20	.40	.125	.124	.50	.405	11.94
SPHR-375	SPHR-375N	.50	3	3/8-16	.75	.220	.186	.75	.510	14.20
SPHR-500	SPHR-500N	.50	4	1/2-13	.65	.250	.249	1.00	.730	15.09

L-Handle Locking

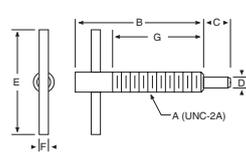


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs./ Newtons		A	B	C	D	E	F	G	H	J	Price Each 1-11
		Initial	Final										
Inch													
SSFR-25*	SSFR-250*	.50	2.50	1/4-20	1.25	.38	.16	.25	.50	.09	.80	—	12.22
SSFR-37	SSFR-375	.75	3.75	3/8-16	2.00	.56	.25	.38	.75	.14	1.31	.13	15.80
SSFR-50	SSFR-500	1.00	5.00	1/2-13	2.11	.75	.31	.50	1.00	.19	1.25	.13	16.74
SSFR-62	SSFR-625	1.00	5.00	5/8-11	3.05	1.00	.38	.62	1.00	.19	2.00	.13	27.07
Metric													
SFRM-6*	SFRM-6N*	2.2	11.1	M6x1.00	32	10	4	6	12.7	2.3	20	—	17.41
SFRM-10	SFRM-10N	3.3	16.7	M10x1.50	51	14	6	10	19.0	3.5	33	3.3	20.94
SFRM-12	SFRM-12N	4.5	22.3	M12x1.75	54	19	7	12	25.4	4.8	32	3.8	23.95

*No thread relief

T-Handle Locking



See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	Price Each 1-11
		Initial	Final								
SSFR-25	SSFR-250	1.0	2.5	1/4-20	1.14	.250	.155	1.13	.13	.8	14.10
SSFR-37	SSFR-375	2.0	4.0	3/8-16	1.68	.375	.233	1.50	.13	1.2	15.15
SSFR-50	SSFR-500	2.5	5.0	1/2-13	2.00	.500	.312	2.00	.16	1.4	19.43
SSFR-62	SSFR-625	2.5	5.0	5/8-11	2.38	.625	.375	2.50	.19	1.7	26.60

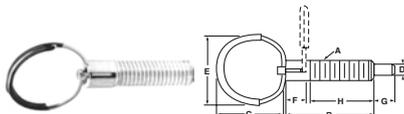
5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

HAND RETRACTABLE SPRING PLUNGERS

With or Without Nylon Locking Element

Hand retractable spring plungers permit the plunger to be easily withdrawn and re-engaged by pulling on the handle. Hardened plunger permits greater side loading and the tapered end on the plunger allows for easy alignment. Used on original equipment and machining applications as positioners, locating pins, indexing devices, etc. Stainless steel Type 303 or equivalent. On ring handle stainless models, all parts are stainless except the ring handle which is nickel plated steel. Locking types have a rest position where the plunger can stay in the retracted position. Nylon locking element not recommended for aluminum applications.

Ring Handle Locking



Designed to function where space is limited. Easy to grasp ring handle allows the plunger to be withdrawn completely into the fully retracted position.

See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	H	Price Each 1-11
		Initial	Final									
SPR-250	SPR-250N	1.0	2.5	1/4-20	1.14	1.08	.155	.62	.23	.250	.8	15.10
SPR-375	SPR-375N	2.0	4.0	3/8-16	1.68	1.19	.233	.98	.35	.375	1.2	17.32
SPR-500	SPR-500N	2.5	5.0	1/2-13	2.00	1.33	.312	1.26	.46	.500	1.4	20.04

Stubby Ring Handle Non-Locking



Plunger does not lock in fully retracted position. All parts are stainless steel except for the ring which is nickel plated steel.

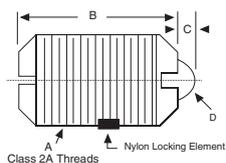
See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	H	J	Price Each 1-11
		Initial	Final										
PRSN-250S*	PRSN-250SN*	.50	2	1/4-20	.44	.19	.16	.25	—	.13	.31	.62	13.61
PRSN-250AS*	PRSN-250ASN*	.50	2	1/4-20	.44	.19	.16	.25	—	.13	.31	.75	12.82
PRSN-375S	PRSN-375SN	.75	3	3/8-16	.63	.28	.25	.38	.13	.19	.44	.75	15.36
PRSN-500S	PRSN-500SN	1.00	4	1/2-13	.81	.38	.31	.50	.13	.25	.56	1.00	18.37
PRSN-625S	PRSN-625SN	1.25	5	3/8-11	1.00	.44	.38	.62	.13	.31	.69	1.00	20.86

*No thread relief

STUBBY SPRING PLUNGERS

Stainless Steel Bodies
Stainless Steel or Delrin Nose
With or Without Nylon Locking Element



Combines the short body of a ball plunger with the long nose of a spring plunger. Used where space is restricted, but where appreciable plunger travel and high end pressures are required. Plunger telescopes completely. Class 2A threads. Permits use where mating surfaces must be flush. Stainless is passivated. Delrin nose offers long life and high resistance to repeated impacts, moisture and solvents and heat up to 190°F. Delrin plunger has electrical insulating properties and will not mar soft metals such as brass and aluminum. Has self-lubricating surface.

See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs./ Newtons		A	B	C	D	Price Each 1-11
		Initial	Final					
Stainless Steel Nose - Heavy End Pressure								
K-1AS	K1A-SN*	1 1/2	4 3/4	8-32	.437	.052	.070	5.48
K-1S	K1-SN*	1 1/2	4 3/4	8-36	.437	.052	.070	5.48
K-2S	K2-SN*	1 3/4	6 1/4	10-32	.468	.065	.093	4.24
K-3S	K3-SN	3	10 1/2	1/4-20	.531	.078	.119	4.24
K-4S	K4-SN	3 3/4	15 1/2	5/16-18	.562	.084	.135	4.30
K-5S	K5-SN	4 1/2	18 1/2	3/8-16	.625	.110	.186	5.36
K-6S	K6-SN	5	28	1/2-13	.750	.151	.248	6.15
K-7S	K7-SN	7	50	5/8-11	1.062	.215	.310	7.32
Stainless Steel Nose - Light End Pressure								
LK-1AS	LK1A-SN*	1/2	1 1/2	8-32	.437	.052	.070	5.48
LK-1S	LK1-SN*	1/2	1 1/2	8-36	.437	.052	.070	5.48
LK-2S	LK2-SN*	3/4	2 1/2	10-32	.468	.065	.093	4.24
LK-3S	LK3-SN	1	3 1/2	1/4-20	.531	.078	.119	4.24
LK-4S	LK4-SN	1 1/4	4	5/16-18	.562	.084	.135	4.30
LK-5S	LK5-SN	1 1/2	5	3/8-16	.625	.110	.186	5.36
LK-6S	LK6-SN	1 3/4	5 1/2	1/2-13	.750	.151	.248	6.15
LK-7S	LK7-SN	2	8 1/2	5/8-11	1.062	.215	.310	7.32
Delrin Nose - Heavy End Pressure								
NK-1AS	NK1A-SN*	1 1/2	4 3/4	8-32	.437	.052	.070	5.07
NK-1S	NK1-SN*	1 1/2	4 3/4	8-36	.437	.052	.070	5.07
NK-2S	NK2-SN*	1 3/4	6 1/4	10-32	.468	.065	.093	4.76
NK-3S	NK3-SN	3	10 1/2	1/4-20	.531	.078	.119	4.66
NK-4S	NK4-SN	3 3/4	15 1/2	5/16-18	.562	.084	.135	4.66
NK-5S	NK5-SN	4 1/2	18 1/2	3/8-16	.625	.110	.186	5.49
NK-6S	NK6-SN	5	28	1/2-13	.750	.151	.248	5.70
NK-7S	NK7-SN	7	50	5/8-11	1.062	.215	.310	6.77
Delrin Nose - Light End Pressure								
LNK-1AS	LNK1A-SN*	1/2	1 1/2	8-32	.437	.052	.070	5.07
LNK-1S	LNK1-SN*	1/2	1 1/2	8-36	.437	.052	.070	5.07
LNK-2S	LNK2-SN*	3/4	2 1/2	10-32	.468	.065	.093	4.76
LNK-3S	LNK3-SN	1	3 1/2	1/4-20	.531	.078	.119	4.66
LNK-4S	LNK4-SN	1 1/4	4	5/16-18	.562	.084	.135	4.66
LNK-5S	LNK5-SN	1 1/2	5	3/8-16	.625	.110	.186	5.49
LNK-6S	LNK6-SN	1 3/4	5 1/2	1/2-13	.750	.151	.248	5.70
LNK-7S	LNK7-SN	2	8 1/2	5/8-11	1.062	.215	.310	6.77

*Nylon patch

Note: Plungers with nylon locking elements are not recommended for aluminum applications.

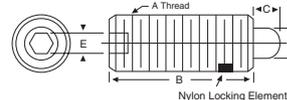
Bold catalog numbers conform to TCMAI standards.

5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

POSI-HEX PLUNGERS

Posi-hex plungers allow for easy installation and removal from the back side using a hex wrench. Plunger assembly will not come apart under critical applications because the hex plug is permanently installed and cannot break loose upon installation or removal. Posi-hex is recommended for use in high torque applications. Made entirely of stainless steel alloy.

Spring Plungers

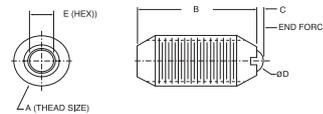


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	Price Each 1-11
		Initial	Final						
Stainless Steel Nose - Heavy End Pressure									
SSPH-48B	SSPH-48BN*	1.0	1.6	6-32	1/2	1/16	.044-.045	.050	5.40
SSPH-48	SSPH-48N*	1.5	4.5	6-32	17/32	1/16	.044-.045	.050	5.19
SSPH-50	SSPH-50N*	2.7	7.3	8-32	3/4	3/32	.069-.070	.063	5.40
SSPH-52	SSPH-52N*	2.9	11.1	10-32	3/4	1/8	.091-.092	.063	5.40
SSPH-54B	SSPH-54BN	2.0	9.0	1/4-20	3/4	1/8	.117-.118	.079	4.93
SSPH-54	SSPH-54N	3.0	13.0	1/4-20	1	3/16	.117-.118	.079	5.25
SSPH-54A	SSPH-54AN	3.0	13.0	1/4-28	1	3/16	.117-.118	.079	5.25
SSPH-56	SSPH-56N	3.0	15.0	5/16-18	1	3/16	.133-.135	.093	5.25
Stainless Steel Nose - Light End Pressure									
SSPH-49	SSPH-49N*	0.5	1.5	6-32	17/32	1/16	.044-.045	.050	5.40
SSPH-51	SSPH-51N*	0.7	2.3	8-32	5/8	3/32	.069-.070	.063	5.40
SSPH-53	SSPH-53N*	1.3	2.7	10-32	3/4	1/8	.091-.092	.063	5.40
SSPH-55	SSPH-55N	1.0	4.0	1/4-20	1	3/16	.117-.118	.079	5.25
SSPH-55A	SSPH-55AN	1.0	4.0	1/4-28	1	3/16	.117-.118	.079	5.25
SSPH-57	SSPH-57N	1.5	4.5	5/16-18	1	3/16	.133-.135	.093	5.25

*Nylon patch

Ball Plungers

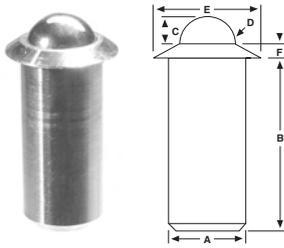


See table 5 below for additional discounts.

Standard Cat. No.	Locking Element Cat. No.	End Force Lbs.		A	B	C	D	E	Price Each 1-11
		Initial	Final						
W-111	W-111N	.50	1.25	8-32	.445	.025	.094	.063	3.62
W-112	W-112N	1.5	3.0	10-32	.570	.025	.094	.079	4.09
W-113	W-113N	3.0	7.0	1/4-20	.675	.035	.125	.079	4.45
W-114	W-114N	4.0	9.0	5/16-18	.720	.040	.156	.095	4.92
W-115	W-115N	5.0	10.0	3/8-16	.800	.048	.188	.156	5.66
W-116	W-116N	6.0	12.0	1/2-13	1.05	.072	.281	.219	6.41
W-117	W-117N	9.0	18.0	5/8-11	1.25	.096	.375	.253	7.24

PUSH FIT BALL PLUNGERS

Push fit ball plungers can be used when a threaded ball plunger is impractical or when threaded adjustments are not required for detent. Easy installation for use in wood, soft plastic or aluminum. Bodies are Type 303, balls are Type 440.



Light Pressure

Stainless Steel Body - Stainless Steel Ball
See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
SPFB-47	.40	1.3	.125	.252	.035	.094	.187	.032	4.05
SPFB-48	.75	2.5	.125	.252	.035	.094	.187	.032	4.05
SPFB-51	1.00	2.5	.188	.405	.058	.156	.250	.035	3.73
SPFB-52	2.00	5.0	.188	.394	.058	.156	.250	.040	3.73
SPFB-53	1.50	3.5	.250	.481	.070	.187	.312	.044	3.88
SPFB-54	3.00	7.0	.250	.471	.070	.187	.312	.048	3.88
SPFB-55	2.00	5.0	.312	.643	.090	.250	.375	.045	4.05
SPFB-56	4.00	10.0	.312	.643	.090	.250	.375	.045	4.05
SPFB-57	2.50	7.0	.375	.785	.110	.312	.500	.078	4.05
SPFB-58	5.00	14.0	.375	.786	.110	.312	.500	.081	4.05
SPFB-59	4.00	9.00	.500	1.130	.161	.437	.688	.088	4.35
SPFB-60	8.00	18.0	.500	1.210	.161	.437	.688	.110	4.53

Stainless Steel Body - Nylon Ball
See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
SPFB-147	.40	1.3	.125	.252	.035	.094	.187	.032	3.94
SPFB-148	.75	2.5	.125	.252	.035	.094	.187	.032	3.94
SPFB-151	1.00	2.5	.188	.394	.058	.156	.250	.040	3.64
SPFB-152	2.00	5.0	.188	.394	.058	.156	.250	.040	3.64
SPFB-153	1.50	3.5	.250	.471	.070	.187	.312	.045	3.76
SPFB-154	3.00	7.0	.250	.471	.070	.187	.312	.048	3.76
SPFB-155	2.00	5.0	.312	.643	.090	.250	.375	.045	3.94
SPFB-157	2.50	7.0	.375	.786	.110	.312	.500	.078	3.94
SPFB-158	5.00	14.0	.375	.786	.110	.312	.500	.081	3.94

Heavy Pressure

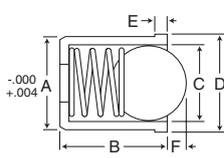
Stainless Steel Body - Stainless Steel Ball
See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
SPFB-200	2.0	5.0	.125	.252	.035	.093	.187	.032	4.33
SPFB-201	4.0	10.0	.188	.405	.058	.156	.250	.035	4.33
SPFB-202	6.0	13.0	.250	.481	.070	.187	.312	.044	4.48
SPFB-203	8.0	16.0	.312	.643	.090	.250	.375	.045	4.57
SPFB-204	10.0	18.0	.375	.785	.110	.312	.500	.078	4.70
SPFB-205	12.0	23.0	.500	1.13	.161	.437	.688	.088	5.03

Stainless Steel Body - Delrin Ball
See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
SPFB-206	2.0	5.0	.125	.252	.035	.093	.187	.032	4.33
SPFB-207	4.0	10.0	.188	.405	.058	.156	.250	.035	4.33
SPFB-208	6.0	13.0	.250	.481	.070	.187	.312	.044	4.48
SPFB-209	8.0	16.0	.312	.643	.090	.250	.375	.045	4.57
SPFB-210	10.0	18.0	.375	.785	.110	.312	.500	.078	4.70
SPFB-211	12.0	23.0	.500	1.13	.161	.437	.688	.088	5.03

Kipp integrative VisiSoft
Plastic or Stainless Steel Body with Stainless Steel Ball



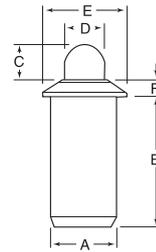
Small and lightweight for use in sensitive and light duty applications. Available with black thermoplastic or stainless steel bodies. The spring and ball are stainless steel.

See table 5 below for additional discounts.

Plastic Body Cat. No.	Stainless Steel Body Cat. No.	End Force Lbs.						Price Each 1-11	
		A	B	C	D	E	F	Initial	Final
FPF-10	158(4mm)	.197	.118	.181	.04	.028	.67	1.57	.65
FPF-15	197(5mm)	.236	.157	.220	.04	.039	.90	1.57	1.41
FPF-20	236(6mm)	.276	.197	.256	.04	.059	1.35	2.70	1.48
FPF-25	315(8mm)	.354	.256	.335	.04	.071	1.35	2.70	.89 1.85
FPF-70	.394(10mm)	.532	.315	.472	.098	.106	2.25	4.50	1.63
FPF-75	.472(12mm)	.63	.398	.551	.098	.138	3.7	5.62	2.01

5	Quantity Discount	1-11 Net	12-47 10%	48-143 15%	144-499 20%	500+ Call
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Easy installation for use in wood, soft plastic or aluminum. No thread adjustment. Withstands high temperature. Longer travel. Plunger is case hardened to Rc 50-55. Body and plunger are 300 series stainless steel. Spring is 17-7 stainless.



Stainless Steel Body - Stainless Steel Nose

See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
SPFP-51	.75	2.00	.188	.441	.094	.121	.250	.044	3.88
SPFP-52	1.50	4.50	.188	.441	.094	.121	.250	.044	3.88
SPFP-53	1.25	3.00	.250	.521	.125	.168	.312	.055	4.04
SPFP-54	2.50	6.00	.250	.521	.125	.168	.312	.055	4.04
SPFP-57	2.50	7.00	.375	.788	.187	.234	.500	.096	4.22
SPFP-58	5.00	14.00	.375	.786	.187	.234	.500	.096	4.22
SPFP-59	4.00	9.00	.500	1.100	.250	.332	.688	.134	4.53
SPFP-60	8.00	18.00	.500	1.100	.250	.332	.688	.134	4.53

Stainless Steel Body - Delrin Nose

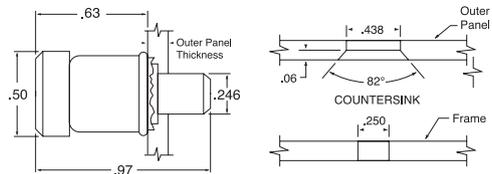
See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		+002 -000						Price Each 1-11
	Initial	Final	A	B	C	D	E	F	
Light Pressure - White Delrin Nose									
SPFP-86	.50	1.0	.125	.252	.062	.070	.187	.032	4.55
SPFP-87	.75	2.5	.188	.405	.094	.121	.250	.035	4.55
SPFP-88	1.5	3.0	.250	.481	.125	.168	.312	.044	4.70
SPFP-89	2.0	5.0	.312	.643	.151	.186	.375	.045	4.80
SPFP-90	2.5	7.0	.375	.785	.187	.234	.500	.078	4.94
SPFP-91	4.0	9.0	.500	1.13	.250	.332	.688	.088	5.28
Heavy Pressure - Brown Delrin Nose									
SPFP-80	1.0	2.0	.125	.252	.062	.070	.187	.032	4.55
SPFP-81	1.5	4.5	.188	.405	.094	.121	.250	.035	4.55
SPFP-82	2.5	6.0	.250	.481	.125	.168	.312	.044	4.70
SPFP-83	4.0	10.0	.312	.643	.151	.186	.375	.045	4.80
SPFP-84	5.0	14.0	.375	.785	.187	.234	.500	.078	4.94
SPFP-85	8.0	18.0	.500	1.13	.250	.332	.688	.088	5.28

5	Quantity Discount	1-11 Net	12-47 10%	48-143 15%	144-499 20%	500+ Call
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SPRING LOADED CATCHES

Flare In



Provides quick release of sliding parts. Optional hold open feature available. Hold open feature operates by turning knob 90° and plunger will remain in retracted position. Simply turn knob back 90° to release. Working shear loads for all plungers are 400 lbs. when installed in steel panels, 300 lbs. for aluminum panels. Made of passivated stainless steel. A flaring tool is available to aid in installation. 82° counter sink is recommended for installation, but not necessary.

See table 31 below for additional discounts.

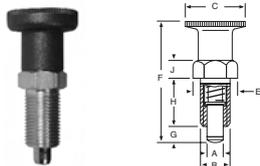
Cat. No.	Southco	Outer Panel Thickness		Price Each 1-99
		w/ Countersink	w/o Countersink	
Without Hold Open				
SC-5611	56-99-192-01	.109-.141	.063-.078	2.80
SC-5612	56-99-192-02	.172-.203	.094-.141	2.80
With Hold Open				
SC-5601	56-10-801-10	.109-.141	.063-.078	2.80
SC-5603	56-10-803-10	.234-.266	.156-.203	2.80
Flaring Tool				
SC-5699	56-0-17355-11	Flaring Tool		31.02

31	Quantity Discount	1-99 Net	100-249 5%	250-499 10%	500-999 15%	1000-2499 20%	2500-4999 25%	5000+ Call
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INDEXING PLUNGERS

These indexing plungers are spring loaded to work in a wide variety of uses in both tooling and equipment. The knob is black matte plastic. Body is Type 303 stainless steel. Locking types have rest position where the plunger can stay in retracted position. Lock nuts sold separately. Metric dimensions are in millimeters, metric end forces are shown in Newtons.

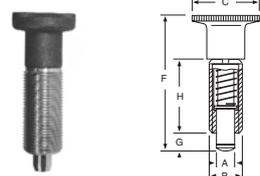
Non-Locking Type with Shoulder



See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	E	F	G	H	J	Price Each 1-11
	Initial	Final									
WIP-210	5.5	12.5	5	M10x1.0	21	13.8	45	5	17	5	21.44
WIP-215	5	11	6	M12x1.5	25	16.2	54.5	6	20	6	24.80
WIP-220	11	26	8	M16x1.5	31	21.9	69	8	26	8	31.50

Non-Locking Type without Shoulder

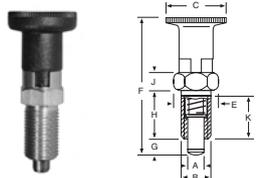


Installation tool required. See below.

See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A mm	B mm	C mm	F mm	G mm	H mm	Installation Tool	Price Each 1-11
	Initial	Final								
WIP-410	5.5	12.5	5	M10x1.0	21	45	5	22	5005	18.66
WIP-425	18	45	10	M20x1.5	31	80	10	43	5020	39.10

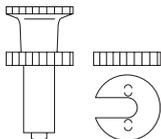
Locking Type with Shoulder



See table 5 below for additional discounts.

Cat. No.	End Force Newtons		A	B	C	E	F	G	H	J	K	Price Each 1-11
	Initial	Final										
WIP-710	5.5	12.5	5	M10x1.0	21	13.8	51	5	17	5	15	24.20
WIP-715	5	11	6	M12x1.5	25	16.2	61	6	20	6	17	28.50
WIP-720	11	26	8	M16x1.5	31	21.9	75.5	7	26	8	23	36.44

Installation Tools



For use with indexing plungers without shoulders. See above. Two slots are provided in the upper end of the body and are accessible when the knob is in the retracted position.

See table 5 below for additional discounts.

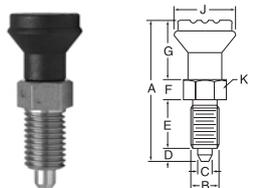
Cat. No.	Description	Price Each		Cat. No.	Description	Price Each 1-11
		1-11	1-11			
WIP-5005	For 5mm Plungers	11.65		WIP-5015	For 8mm Plungers	11.65
WIP-5010	For 6mm Plungers	11.65		WIP-5020	For 10mm Plungers	11.65

Kipp® INDEXING PLUNGERS - LOCKING BOLTS

Integrative Viefahrt

Used to prevent any change in locking position due to shearing force. These are spring loaded for use in fastening, locating and indexing on equipment, tooling and other applications. The plunger can be easily withdrawn by pulling on the handle. Locking types have a rest position where the plunger will stay in the retracted position. The knob is black thermoplastic. Body is Type 303 stainless steel or equivalent.

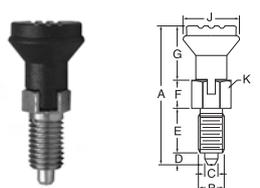
Non-Locking Type with Knob



See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	J	K	Price Each 1-11
	Initial	Final										
GIP-30	1.12	2.70	1.85	3/8-16	.197(5mm)	.20	.67	.28	.71	.83	.51	17.00
GIP-40	1.35	3.15	2.20	1/2-13	.236(6mm)	.24	.79	.31	.87	.98	.55	20.03
GIP-45	3.37	7.87	2.91	5/8-11	.315(8mm)	.31	1.02	.39	1.18	1.30	.75	26.60
GIP-50	4.50	8.99	3.15	3/4-10	.394(10mm)	.39	1.10	.47	1.18	1.30	.87	45.38

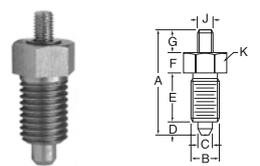
Locking Type with Knob



See table 5 below for additional discounts.

Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	J	K	Price Each 1-11
	Initial	Final										
GIP-80	1.12	2.70	1.85	3/8-16	.197(5mm)	.20	.67	.28	.71	.83	.51	19.04
GIP-85	1.12	2.70	1.85	3/8-24	.197(5mm)	.20	.67	.28	.71	.83	.51	19.04
GIP-90	1.35	3.15	2.20	1/2-13	.236(6mm)	.24	.79	.31	.87	.98	.55	22.56
GIP-95	3.37	7.87	2.91	5/8-11	.315(8mm)	.31	1.02	.39	1.18	1.30	.75	30.66

Non-Locking Type without Knob



Special handle/grips can be fitted on these plungers. Also suitable for actuation with the aid of a pneumatic cylinder, remote control, cable, etc.

See table 5 below for additional discounts.

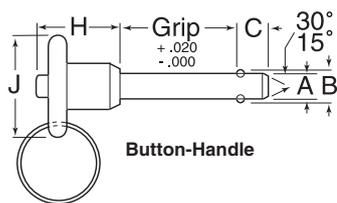
Cat. No.	End Force Lbs.		A	B	C	D	E	F	G	J	K	Price Each 1-11
	Initial	Final										
GIP-130	1.12	2.70	1.46	3/8-16	.197(5mm)	.20	.67	.28	.31	M4	.51	16.45
GIP-140	1.35	3.15	1.69	1/2-13	.236(6mm)	.24	.79	.31	.35	M6	.55	19.35
GIP-145	3.37	7.87	2.20	5/8-11	.315(8mm)	.31	1.02	.39	.47	M8	.75	24.65
GIP-150	4.50	8.99	2.44	3/4-10	.394(10mm)	.39	1.10	.47	.47	M8	.87	54.40

5	Quantity	1-11	12-47	48-143	144-499	500+
	Discount	Net	10%	15%	20%	Call

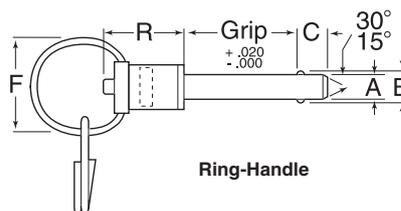
QUICK RELEASE BALL LOCK PINS

Industrial Grade

These industrial quick release pins provide positive locking for all types of applications and equipment. Pins will not release until the spindle is depressed. When the button is pushed, the balls at the end of the pin retract for insertion and removal of the pin. Release the button and the balls are pushed out to lock the pin in place. These pins are produced to tight tolerances and designed to withstand severe application conditions. They are the highest quality and strongest pin on the market today. The button and ring handle pins are made from 17-4 PH or PH 15-7 MO or equivalent. The T-Handle and L-Handle pins components are body and spindle of 17-4 stainless; ring and spring of 17-7 stainless; and the button, handle and collar being 300 series stainless. For less demanding applications we offer a commercial line of T-handle and button handle ball lock pins in popular sizes **on page 18**.



Button-Handle



Ring-Handle

Nom. Dia.	A (Dia.)		±.005		+.000		F Min.	H Max.	J Max.	R Min.	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)	
	Max.	Min.	B	C	Min.	Max.						Steel	Stainless
3/16	.1885	.1870	.220	.260	1.060	.830	.800	.730	200	4,600	5,150		
1/4	.2485	.2470	.289	.290	1.060	.890	.800	.780	230	6,200	9,200		
5/16	.3110	.3095	.375	.330	1.060	.930	1.135	.830	510	12,800	14,400		
3/8	.3735	.3720	.440	.365	1.060	1.040	1.135	.940	575	18,400	20,600		
7/16	.4360	.4345	.509	.380	1.090	1.160	1.400	.980	710	25,000	28,000		
1/2	.4985	.4970	.594	.460	1.160	1.190	1.400	1.140	1160	32,800	36,800		
9/16	.5610	.5595	.666	.510	1.160	1.410	1.650	1.140	1420	41,200	46,000		
5/8	.6235	.6220	.750	.580	1.240	1.500	1.700	1.400	2070	51,200	57,500		
3/4	.7485	.7470	.887	.670	1.640	1.680	1.900	1.625	2950	73,600	82,500		
7/8	.8735	.8720	1.046	.760	1.640	1.985	2.250	1.875	3900	100,000	112,500		
1	.9985	.9970	1.219	.890	1.640	2.140	2.250	2.000	5480	131,000	147,000		

See table 8 below for additional discounts.

Nom. Dia.	Grip Lgth.	Button Handle Cat. No.	Ring Handle Cat. No.	Price Each 1-23
3/16"	.50	BLBS-000	—	18.29
	.75	BLBS-0015	—	20.05
	1.00	BLBS-001	BLRS-001	19.28
	1.25	BLBS-0016	—	23.33
	1.50	BLBS-002	BLRS-002	23.33
	2.00	BLBS-004	BLRS-004	23.33
	2.50	BLBS-005	—	26.61
3.00	BLBS-006	—	29.71	
1/4"	.50	BLBS-009	BLRS-009	14.23
	.75	BLBS-0095	—	14.23
	1.00	BLBS-010	BLRS-010	14.23
	1.25	BLBS-011	—	16.56
	1.50	BLBS-020	BLRS-020	16.56
	2.00	BLBS-030	BLRS-030	16.56
	2.50	BLBS-035	BLRS-035	18.90
	3.00	BLBS-040	BLRS-040	18.90
	3.50	BLBS-045	—	22.72
	4.00	BLBS-050	—	22.72
5/16"	.75	BLBS-0505	—	15.46
	1.00	BLBS-051	BLRS-051	15.46
	1.25	BLBS-0515	—	20.52
	1.50	BLBS-052	BLRS-052	20.52
	2.00	BLBS-053	BLRS-053	20.52
	2.50	BLBS-054	BLRS-054	25.54
	3.00	BLBS-055	—	25.54
	3.50	BLBS-0555	—	30.59
	4.00	BLBS-056	—	30.59
	3/8"	.75	BLBS-0595	—
1.00		BLBS-060	BLRS-060	16.38
1.25		BLBS-065	—	19.14
1.50		BLBS-070	BLRS-070	21.51
2.00		BLBS-080	BLRS-080	21.51
2.50		BLBS-085	BLRS-085	26.59
3.00		BLBS-090	BLRS-090	26.59
3.50		BLBS-095	—	31.72
4.00		BLBS-100	—	31.72
4.50		BLBS-101	—	41.05
5.00		BLBS-102	—	41.05

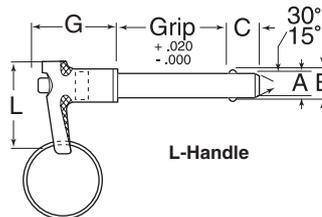
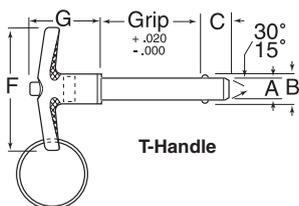
Nom. Dia.	Grip Lgth.	Button Handle Cat. No.	Ring Handle Cat. No.	Price Each 1-23
7/16"	1.00	BLBS-105	—	19.28
	2.00	BLBS-106	—	24.66
	2.50	BLBS-107	—	43.01
	4.50	—	BLRS-1095	40.75
1/2"	1.00	BLBS-110	BLRS-110	21.22
	1.50	BLBS-120	BLRS-120	26.77
	2.00	BLBS-130	BLRS-130	26.77
	2.50	BLBS-135	—	32.34
	3.00	BLBS-140	BLRS-140	32.34
	3.50	BLBS-145	—	37.90
	4.00	BLBS-150	BLRS-150	37.90
5/8"	1.00	BLBS-178	—	31.48
	1.50	BLBS-179	—	34.95
	2.00	BLBS-180	—	34.95
	2.50	BLBS-190	—	41.18
	3.00	BLBS-200	—	41.18
	3.50	BLBS-210	—	47.42
3/4"	4.00	BLBS-220	—	42.46
	5.00	BLBS-230	—	71.00
	1.50	BLBS-245	—	53.60
	2.50	BLBS-260	—	54.03
	3.00	BLBS-270	—	54.03
1"	3.50	BLBS-280	—	47.15
	4.00	BLBS-290	—	60.57
	5.00	BLBS-300	—	67.10
	2.00	BLBS-340	—	83.06
	2.50	BLBS-345	—	79.57
	3.00	BLBS-350	—	42.63
3/4"	4.00	BLBS-360	—	65.65
	5.00	BLBS-365	—	94.57
	6.00	BLBS-370	—	79.17

8	Quantity	1-23	24-47	48-94	95-191	192-499	500-999	1000+
	Discount	Net	10%	12%	15%	17.5%	20%	Call

QUICK RELEASE BALL LOCK PINS

Industrial Grade

These industrial quick release pins provide positive locking for all types of applications and equipment. Pins will not release until the spindle is depressed. When the button is pushed, the balls at the end of the pin retract for insertion and removal of the pin. Release the button and the balls are pushed out to lock the pin in place. These pins are produced to tight tolerances and designed to withstand severe application conditions. They are the highest quality and strongest pin on the market today. The button and ring handle pins are made from 17-4 PH or PH 15-7 MO or equivalent. The T-Handle and L-Handle pins components are body and spindle of 17-4 stainless; ring and spring of 17-7 stainless; and the button, handle and collar being 300 series stainless. For less demanding applications we offer a commercial line of T-handle and button handle ball lock pins in popular sizes **on page 18**.



Nom. Dia.	A (Dia.)		±.005		+.000 -.030		F	L	G	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)	
	Max.	Min.	B	C	Max.	Max.					Steel	Stainless
3/16	.1885	.1870	.220	.260	1.815	1.80	1.270	200	4,600	5,150		
1/4	.2485	.2470	.289	.290	1.815	1.80	1.270	230	8,200	9,200		
5/16	.3110	.3095	.375	.330	1.815	1.80	1.270	510	12,800	14,400		
3/8	.3735	.3720	.440	.365	2.065	2.03	1.450	575	18,400	20,600		
7/16	.4360	.4345	.509	.380	2.065	2.03	1.470	710	25,000	28,000		
1/2	.4985	.4970	.594	.460	2.345	2.36	1.600	1160	32,800	36,800		
9/16	.5610	.5595	.666	.510	2.345	2.36	1.600	1420	41,200	46,000		
5/8	.6235	.6220	.750	.580	3.100	3.07	1.700	2070	51,200	57,500		
3/4	.7485	.7470	.887	.670	3.100	3.07	1.720	2950	73,600	82,500		
7/8	.8735	.8720	1.046	.760	3.520	3.70	2.170	3900	100,000	112,500		
1	.9985	.9970	1.219	.890	3.520	3.70	2.170	5480	131,000	147,000		

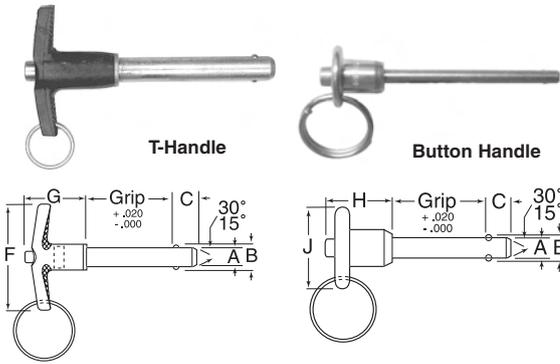
See table 8 below for additional discounts.

Nom Dia.	Grip Lgth.	T-Handle Cat. No.	L-Handle Cat. No.	Price Each 1-23	Nom Dia.	Grip Lgth.	T-Handle Cat. No.	L-Handle Cat. No.	Price Each 1-23
3/16"	.50	BLTS-000	—	16.01	1/2"	1.00	BLTS-110	BLLS-110	27.74
	1.00	BLTS-001	BLLS-001	16.28		1.50	BLTS-120	BLLS-120	31.19
	1.50	BLTS-002	BLLS-002	17.44		2.00	BLTS-130	BLLS-130	31.19
	2.00	BLTS-004	—	17.44		2.50	BLTS-135	BLLS-135	25.69
	2.50	BLTS-005	—	18.55		3.00	BLTS-140	BLLS-140	35.03
3.00	BLTS-006	BLLS-006	17.08	3.50		BLTS-145	BLLS-145	34.76	
1/4"	.50	BLTS-009	BLLS-009	16.90		4.00	BLTS-150	BLLS-150	43.11
	1.00	BLTS-010	BLLS-010	16.90		4.50	BLTS-155	BLLS-155	35.48
	1.50	BLTS-020	BLLS-020	18.43		5.00	BLTS-160	—	35.48
	2.00	BLTS-030	BLLS-030	18.43		5.50	BLTS-165	—	47.58
	2.50	BLTS-035	BLLS-035	18.82	6.00	BLTS-170	—	47.58	
	3.00	BLTS-040	BLLS-040	19.57	5/8"	1.50	BLTS-179	—	36.20
	3.50	BLTS-045	—	16.67		2.00	BLTS-180	—	45.35
4.00	BLTS-050	—	23.70	2.50		BLTS-190	—	38.63	
5/16"	1.00	BLTS-051	BLLS-051	19.59		3.00	BLTS-200	—	41.60
	1.50	BLTS-052	BLLS-052	17.20		3.50	BLTS-210	BLLS-210	43.39
	2.00	BLTS-053	BLLS-053	20.24		4.00	BLTS-220	—	45.12
	2.50	BLTS-054	BLLS-054	20.24	4.50	BLTS-225	—	49.62	
	3.00	BLTS-055	BLLS-055	20.57	5.00	BLTS-230	—	49.62	
	3.50	BLTS-0555	—	29.55	5.50	BLTS-235	—	60.32	
	4.00	BLTS-056	BLLS-056	22.45	6.00	BLTS-240	BLLS-240	60.32	
5.00	BLTS-057	—	23.31	3/4"	1.50	BLTS-245	—	41.91	
6.00	BLTS-058	—	23.83		2.00	BLTS-250	BLLS-250	43.41	
3/8"	1.00	BLTS-060	BLLS-060		18.98	2.50	BLTS-260	BLLS-260	47.47
	1.50	BLTS-070	BLLS-070		21.28	3.00	BLTS-270	—	52.74
	2.00	BLTS-080	BLLS-080		21.28	3.50	BLTS-280	—	60.58
	2.50	—	BLLS-085		29.03	4.00	BLTS-290	—	60.58
	3.00	BLTS-090	BLLS-090	22.83	5.00	BLTS-300	—	61.58	
	3.50	—	BLLS-095	32.90	5.50	BLTS-305	—	63.39	
	4.00	BLTS-100	BLLS-100	25.13	6.00	BLTS-310	—	63.39	
4.50	BLTS-101	BLLS-101	28.02	1"	2.00	BLTS-340	—	66.37	
5.00	BLTS-102	—	28.02		2.50	BLTS-345	—	68.34	
6.00	BLTS-104	—	32.11		3.00	BLTS-350	—	70.78	
7/16"	1.00	BLTS-105	—		18.26	4.00	BLTS-360	—	82.23
	1.50	BLTS-1055	—		23.63	6.00	BLTS-370	—	93.57
	2.00	BLTS-106	—		23.63	7.00	BLTS-375	—	103.72
	2.50	BLTS-107	—		23.20				
	3.50	—	BLLS-1085	34.39					

8	Quantity	1-23	24-47	48-94	95-191	192-499	500-999	1000+
	Discount	Net	10%	12%	15%	17.5%	20%	Call

QUICK RELEASE BALL LOCK PINS

T-Handles and Button Handles Commercial Grade Inch



These stainless steel commercial pins provide positive locking and are perfect for less demanding applications where fastening and locating are primary. This line represents the most popular sizes of our full line offering at an economical cost. The handles are aluminum; the button is brass 360, the rest of the pin is series 300 stainless steel. Other sizes and L-handle and ring handle styles are available as special order. Please call for price and delivery. For more demanding applications needing higher double shear strength see page 17 for our industrial T-handles and page 16 for our industrial button handles.

T-Handle Specifications

Nom. Dia.	+0.000/-0.0015	+0.005	+0.000/-0.030	F	G	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)
1/4	.2485	.289	.290	1.815	1.270	180	2,200
5/16	.3110	.375	.330	1.815	1.270	400	3,500
3/8	.3735	.440	.365	2.065	1.450	450	4,500
1/2	.4985	.594	.460	2.345	1.600	900	11,500
5/8	.6235	.750	.580	3.100	1.700	1,500	19,000

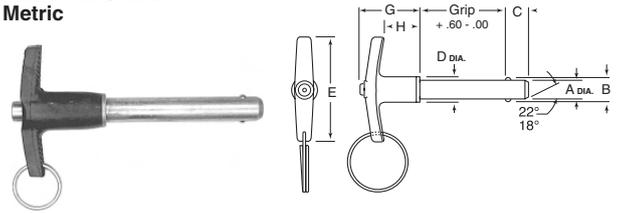
Button Handle Specifications

Nom. Dia.	+0.000/-0.0015	+0.005	+0.000/-0.030	H	J	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)
1/4	.2485	.289	.290	.890	.800	180	2,200
5/16	.311	.375	.330	.930	1.135	400	3,500
3/8	.3735	.440	.365	1.040	1.135	450	4,500
1/2	.4985	.594	.460	1.190	1.400	900	11,500
5/8	.6235	.750	.580	1.500	1.700	1,500	19,000

See table 8 below for additional discounts.

Nom. Dia.	Grip Lgth.	T-Handle Cat. No.	Button Handle Cat. No.	Price Each 1-23	
				T-Handle	Button Handle
1/4"	0.50	CPT-009	CPB-009	12.40	12.35
	1.00	CPT-010	CPB-010	12.40	12.35
	1.50	CPT-020	CPB-020	14.47	14.38
	2.00	CPT-030	CPB-030	14.47	14.38
	2.50	CPT-035	CPB-035	16.56	16.42
	3.00	CPT-040	CPB-040	16.56	16.42
5/16"	0.50	CPT-0505	CPB-0505	12.83	13.43
	1.00	CPT-051	CPB-051	16.91	13.43
	1.50	CPT-052	CPB-052	17.13	17.81
	2.00	CPT-053	CPB-053	17.13	17.81
	2.50	CPT-054	CPB-054	17.24	22.18
	3.00	CPT-055	CPB-055	21.55	22.18
3/8"	0.50	CPT-0555	CPB-0555	23.11	26.57
	1.00	CPT-056	CPB-056	23.11	26.57
	1.50	CPT-059	CPB-059	13.23	14.22
	2.00	CPT-060	CPB-060	17.10	14.22
	2.50	CPT-070	CPB-070	17.34	18.68
	3.00	CPT-080	CPB-080	17.34	18.68
1/2"	0.50	CPT-085	CPB-085	19.41	23.08
	1.00	CPT-090	CPB-090	21.84	23.08
	1.50	CPT-095	CPB-095	23.41	27.54
	2.00	CPT-100	CPB-100	23.41	27.54
	2.50	CPT-105	CPB-105	16.08	18.41
	3.00	CPT-110	CPB-110	21.19	18.41
5/8"	0.50	CPT-120	CPB-120	20.80	23.24
	1.00	CPT-130	CPB-130	20.80	23.24
	1.50	CPT-135	CPB-135	25.69	28.09
	2.00	CPT-140	CPB-140	25.69	28.09
	2.50	CPT-145	CPB-145	27.19	32.91
	3.00	CPT-150	CPB-150	30.59	32.91
1"	0.50	CPT-177	CPB-177	21.97	27.32
	1.00	CPT-178	CPB-178	30.34	27.32
	1.50	CPT-179	CPB-179	30.34	30.34
	2.00	CPT-180	CPB-180	32.58	30.34
	2.50	CPT-190	CPB-190	32.69	35.74
	3.00	CPT-200	CPB-200	32.69	35.74
1.5"	3.50	CPT-210	CPB-210	33.94	41.17
	4.00	CPT-220	CPB-220	38.18	41.17

T-Handle Industrial Grade Metric



Similar to the ball lock pins shown on page 16, except dimensions are metric. Made from 17-4 PH or 15-7 MO stainless. Handles are made from aluminum alloy. All dimensions are millimeters.

Nom. Dia. (mm)	A	±.25	±1	Max. D	±1 E	Max. G	Min. H	Calculated Double Shear Strength (Newtons)	
5	4.96	4.92	5.54	6	13	46	32	18	24,400
6	5.96	5.92	6.99	7	13	46	32	18	35,640
8	7.96	7.92	9.42	8	13	46	32	18	63,840
10	9.96	9.92	11.86	9	16	51	37	21	100,101
12	11.96	11.92	14.45	10	16	51	37	21	144,060
14	13.96	13.92	16.94	12	21	57	42	22	196,543
16	15.96	15.92	19.00	14	25	76	43	24	257,179
20	19.96	19.92	24.08	17	25	76	44	26	402,867

See table 8 below for additional discounts.

Nom. Dia. (mm)	Grip Lgth.	Cat. No.	Price Each 1-23
6	15	MBL-10	24.86
	25	MBL-15	26.25
	40	MBL-20	27.89
	50	MBL-25	29.54
	65	MBL-30	30.73
8	75	MBL-35	28.58
	15	MBL-40	27.96
	25	MBL-45	29.86
	40	MBL-50	32.31
	50	MBL-55	34.67
10	65	MBL-60	32.24
	75	MBL-65	39.15
	15	MBL-70	34.15
	20	MBL-71	34.15
	25	MBL-75	34.15
12	40	MBL-80	38.66
	50	MBL-85	39.99
	65	MBL-90	41.39
	75	MBL-95	42.80
	100	MBL-100	44.02
14	25	MBL-105	36.01
	50	MBL-110	38.72
	75	MBL-115	42.25
	100	MBL-120	45.94
16	75	MBL-121	59.10
	25	MBL-125	56.93
20	50	MBL-130	56.93
	100	MBL-140	61.22
	25	MBL-145	52.78
25	50	MBL-150	49.09
	75	MBL-155	68.00
	100	MBL-160	72.64

LANYARDS



Style A



Style B

These lanyards have a wide variety of uses for attaching pins and small parts. Stainless steel cable with nylon coating to 1/8". Tab is also stainless.

See table 32 below for additional discounts.

Lgth.	Style A		Style B	
	Cat. No.	Price Each 1-99	Cat. No.	Price Each 1-99
6	FPC-6	1.42	FPC-6N	1.28
8	FPC-8	1.56	FPC-8N	1.42
10	FPC-10	1.74	FPC-10N	1.58
12	FPC-12	1.80	FPC-12N	1.66
15	—	—	PNC-1*	1.23
18	FPC-18	2.24	FPC-18N	2.08
24	FPC-24	2.96	FPC-24N	2.76
—	FPC-1	—	Tab Only	.30

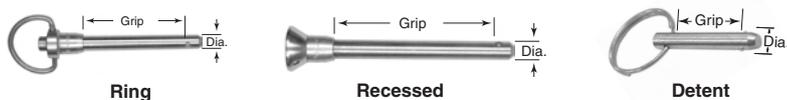
*PNC-1 is 15" cut length. Cable is uncrimped on one end for custom installation.

8	Quantity Discount	1-23	24-47	48-94	95-191	192-499	500-999	1000+
	Net	10%	12%	15%	17.5%	20%	Call	

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	8%	10%	12.5%	15%	Call	

MARINE STYLE BALL LOCK PINS

These quick release pins provide positive locking for all types of applications and equipment. Pins will not release until the spindle is depressed. The body, head and all internal components are made from corrosion resistant stainless steel. The recessed button style prevents accidental release. **For further specifications see page 20.**



Ring Style

See table 8 below for additional discounts.

Price Each			Price Each			Price Each			Price Each						
Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23
SMP-5	3/16	1/2	16.88	SMP-95	5/16	3/4	18.28	SMP-171	3/8	3/4	29.73	SMP-225	5/8	2	51.63
SMP-10	3/16	3/4	16.24	SMP-100	5/16	1	19.01	SMP-180	3/8	4	29.81	SMP-221	5/8	2 1/4	58.02
SMP-15	3/16	1	17.01	SMP-105	5/16	1 1/4	18.68	SMP-176	3/8	4 1/4	32.76	SMP-230	5/8	2 1/2	48.02
SMP-20	3/16	1 1/4	19.02	SMP-110	5/16	1 1/2	19.89	SMP-181	3/8	4 1/2	32.14	SMP-226	5/8	2 3/4	58.02
SMP-25	3/16	1 1/2	17.61	SMP-111	5/16	1 3/4	21.89	SMP-182	3/8	4 3/4	32.14	SMP-235	5/8	3	48.02
SMP-26	3/16	2	18.28	SMP-115	5/16	2	23.85	SMP-183	3/8	5	32.14	SMP-231	5/8	3 1/4	65.53
SMP-30	3/16	2 1/4	18.67	SMP-116	5/16	2 1/4	21.11	SMP-184	3/8	1/2	37.53	SMP-240	5/8	3 1/2	51.63
SMP-31	3/16	2 1/4	20.86	SMP-120	5/16	2 1/2	22.98	SMP-187	1/2	3/4	37.53	SMP-236	5/8	3 3/4	62.80
SMP-35	3/16	2 1/2	18.98	SMP-121	5/16	2 3/4	23.85	SMP-188	1/2	1	37.53	SMP-245	5/8	4	51.63
SMP-36	3/16	2 3/4	19.68	SMP-125	5/16	3	23.60	SMP-189	1/2	1 1/4	39.49	SMP-241	5/8	4 1/4	71.12
SMP-40	3/16	3	18.98	SMP-126	5/16	3 1/4	25.47	SMP-185	1/2	1 1/2	38.06	SMP-246	5/8	4 1/2	69.48
SMP-41	1/4	1/4	17.67	SMP-130	5/16	3 1/2	24.55	SMP-192	1/2	1 3/4	39.49	SMP-247	5/8	4 3/4	69.48
SMP-45	1/4	1/2	17.05	SMP-131	5/16	3 3/4	25.47	SMP-190	1/2	2	39.59	SMP-248	5/8	5	69.48
SMP-50	1/4	3/4	16.08	SMP-135	5/16	4	24.55	SMP-186	1/2	2 1/4	45.81	SMP-249	5/8	1	59.12
SMP-55	1/4	1	17.05	SMP-140	5/16	5	24.55	SMP-195	1/2	2 1/2	36.54	SMP-250	3/4	1 1/2	59.98
SMP-60	1/4	1 1/4	17.39	SMP-145	5/16	6	29.35	SMP-191	1/2	2 3/4	45.81	SMP-252	3/4	1 3/4	62.24
SMP-65	1/4	1 1/2	18.10	SMP-146	3/8	1/4	22.31	SMP-200	1/2	3	46.26	SMP-255	3/4	2	63.10
SMP-76	1/4	2 1/4	20.80	SMP-147	3/8	1/2	22.31	SMP-196	1/2	3 1/4	53.19	SMP-251	3/4	2 1/4	71.47
SMP-70	1/4	1 3/4	18.02	SMP-148	3/8	3/4	22.31	SMP-205	1/2	3 1/2	43.26	SMP-260	3/4	2 1/2	67.04
SMP-75	1/4	2	18.81	SMP-150	3/8	1	21.51	SMP-201	1/2	3 3/4	53.19	SMP-256	3/4	2 3/4	70.92
SMP-80	1/4	2 1/2	19.27	SMP-151	3/8	1 1/4	26.32	SMP-210	1/2	4	43.26	SMP-265	3/4	3	68.35
SMP-81	1/4	2 3/4	17.77	SMP-155	3/8	1 1/2	21.94	SMP-206	1/2	4 1/4	64.05	SMP-262	3/4	3 1/4	78.17
SMP-85	1/4	3	20.43	SMP-152	3/8	1 3/4	26.32	SMP-215	1/2	4 1/2	43.26	SMP-270	3/4	3 1/2	73.02
SMP-86	1/4	3 1/4	19.16	SMP-160	3/8	2	26.05	SMP-211	1/2	4 3/4	61.54	SMP-266	3/4	3 3/4	76.67
SMP-87	1/4	3 1/2	19.16	SMP-165	3/8	2 1/2	25.37	SMP-216	1/2	5	61.54	SMP-275	3/4	4	75.34
SMP-88	1/4	3 3/4	19.16	SMP-156	3/8	2 3/4	28.43	SMP-217	5/8	1	49.06	SMP-276	3/4	4 1/4	82.73
SMP-90	1/4	4	19.00	SMP-170	3/8	3	28.43	SMP-218	5/8	1 1/4	51.51	SMP-280	3/4	4 1/2	63.10
SMP-93	5/16	1/4	18.98	SMP-166	3/8	3 1/4	30.32	SMP-220	5/8	1 1/2	51.63	SMP-281	3/4	4 3/4	82.73
SMP-94	5/16	1/2	18.98	SMP-175	3/8	3 1/2	26.88	SMP-219	5/8	1 3/4	51.51	SMP-282	3/4	5	82.73

Recessed Style

See table 8 below for additional discounts.

Price Each			Price Each			Price Each			Price Each						
Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23
SMP-399	3/16	1/4	20.20	SMP-490	5/16	1	24.00	SMP-558	3/8	4 1/2	46.22	SMP-600	5/8	2 1/4	69.03
SMP-400	3/16	1/2	19.46	SMP-495	5/16	1 1/4	24.68	SMP-559	3/8	4 3/4	46.22	SMP-601	5/8	2 1/2	66.27
SMP-405	3/16	3/4	22.00	SMP-500	5/16	1 1/2	24.68	SMP-542	3/8	5	46.22	SMP-602	5/8	2 3/4	71.80
SMP-410	3/16	1	22.17	SMP-505	5/16	2	27.54	SMP-543	3/8	6	48.87	SMP-603	5/8	3	69.03
SMP-415	3/16	1 1/4	25.08	SMP-506	5/16	2 1/4	33.10	SMP-561	1/2	1/2	43.28	SMP-604	5/8	3 1/4	75.52
SMP-420	3/16	1 1/2	25.18	SMP-507	5/16	2 1/2	33.10	SMP-562	1/2	3/4	43.28	SMP-605	5/8	3 1/2	75.52
SMP-421	3/16	1 3/4	26.13	SMP-508	5/16	2 3/4	33.10	SMP-563	1/2	1	43.28	SMP-606	5/8	3 3/4	75.52
SMP-425	3/16	2	26.11	SMP-510	5/16	3	31.90	SMP-564	1/2	1 1/4	46.86	SMP-607	5/8	4	78.53
SMP-426	3/16	2 1/4	31.97	SMP-511	5/16	3 1/4	38.35	SMP-565	1/2	1 1/2	45.16	SMP-608	5/8	4 1/4	85.30
SMP-427	3/16	2 1/2	31.97	SMP-512	5/16	3 1/2	38.35	SMP-566	1/2	1 3/4	50.77	SMP-609	5/8	4 1/2	72.88
SMP-428	3/16	2 3/4	31.97	SMP-513	5/16	3 3/4	38.35	SMP-570	1/2	2	48.92	SMP-610	5/8	4 3/4	72.88
SMP-430	3/16	3	26.11	SMP-515	5/16	4	36.96	SMP-571	1/2	2 1/4	52.53	SMP-611	5/8	5	72.88
SMP-434	1/4	1/4	21.56	SMP-516	5/16	5	43.61	SMP-575	1/2	2 1/2	45.16	SMP-612	3/4	1	63.41
SMP-435	1/4	1/2	20.77	SMP-518	3/8	1/4	30.10	SMP-576	1/2	2 3/4	55.74	SMP-613	3/4	1 1/2	66.80
SMP-440	1/4	3/4	22.98	SMP-519	3/8	1/2	30.10	SMP-580	1/2	3	48.92	SMP-614	3/4	1 3/4	66.80
SMP-445	1/4	1	23.06	SMP-520	3/8	3/4	29.00	SMP-581	1/2	3 1/4	66.40	SMP-615	3/4	2	66.80
SMP-450	1/4	1 1/4	25.82	SMP-525	3/8	1	24.16	SMP-582	1/2	3 1/2	66.40	SMP-616	3/4	2 1/4	73.32
SMP-455	1/4	1 1/2	25.60	SMP-530	3/8	1 1/4	26.71	SMP-583	1/2	3 3/4	66.40	SMP-617	3/4	2 1/2	73.32
SMP-460	1/4	1 3/4	27.61	SMP-535	3/8	1 1/2	26.27	SMP-585	1/2	4	48.92	SMP-618	3/4	2 3/4	73.32
SMP-465	1/4	2	27.40	SMP-536	3/8	1 3/4	29.53	SMP-586	1/2	4 1/4	71.15	SMP-619	3/4	3	73.32
SMP-466	1/4	2 1/4	31.67	SMP-540	3/8	2	28.46	SMP-590	1/2	4 1/2	68.59	SMP-620	3/4	3 1/4	79.94
SMP-470	1/4	2 1/2	29.90	SMP-541	3/8	2 1/4	34.49	SMP-591	1/2	4 3/4	71.15	SMP-621	3/4	3 1/2	79.94
SMP-471	1/4	2 3/4	31.67	SMP-545	3/8	2 1/2	26.27	SMP-592	1/2	5	71.15	SMP-622	3/4	3 3/4	79.94
SMP-475	1/4	3	31.73	SMP-546	3/8	2 3/4	30.52	SMP-593	1/2	6	81.01	SMP-623	3/4	4	79.94
SMP-476	1/4	3 1/4	37.38	SMP-550	3/8	3	33.24	SMP-595	5/8	1	58.96	SMP-624	3/4	4 1/4	86.54
SMP-477	1/4	3 1/2	37.38	SMP-551	3/8	3 1/4	34.49	SMP-596	5/8	1 1/4	62.80	SMP-625	3/4	4 1/2	98.12
SMP-478	1/4	3 3/4	37.38	SMP-555	3/8	3 1/2	38.89	SMP-597	5/8	1 1/2	62.80	SMP-626	3/4	4 3/4	98.12
SMP-483	5/16	1/4	24.80	SMP-556	3/8	3 3/4	40.37	SMP-598	5/8	1 3/4	62.80	SMP-627	3/4	5	98.12
SMP-484	5/16	1/2	24.80	SMP-557	3/8	4 1/4	46.22	SMP-599	5/8	2	65.31	SMP-628	3/4	6	105.54
SMP-485	5/16	3/4	23.90												

Detent Style

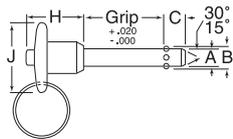
See table 8 below for additional discounts.

Price Each			Price Each			Price Each			Price Each						
Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23	Cat. No.	Dia.	Grip	1-23
SMP-800	3/16	1/4	6.32	SMP-829	5/16	1/2	9.27	SMP-858	3/8	3 3/4	15.19	SMP-887	5/8	2	21.20
SMP-801	3/16	1/2	6.32	SMP-830	5/16	3/4	9.27	SMP-859	3/8	4	15.19	SMP-888	5/8	2 1/4	23.17
SMP-802	3/16	3/4	6.32	SMP-831	5/16	1	9.27	SMP-860	3/8	4 1/4	17.23	SMP-889	5/8	2 1/2	23.17
SMP-803	3/16	1	6.32	SMP-832	5/16	1 1/4	10.67	SMP-861	3/8	4 1/2	17.23	SMP-890	5/8	2 3/4	23.17
SMP-804	3/16	1 1/4	7.46	SMP-833	5/16	1 1/2	10.67	SMP-862	3/8	4 3/4	17.23	SMP-891	5/8	3	23.17
SMP-805	3/16	1 1/2	7.46	SMP-834	5/16	1 3/4	10.67	SMP-863	3/8	5	17.23	SMP-892	5/8	3 1/4	25.25
SMP-806	3/16	1 3/4	7.46	SMP-835	5/16	2	10.67	SMP-864	1/2	1/2	14.84	SMP-893	5/8	3 1/2	25.25
SMP-807	3/16	2	7.46	SMP-836	5/16	2 1/4	11.72	SMP-865	1/2	3/4	14.84	SMP-894	5/8	3 3/4	25.25
SMP-808	3/16	2 1/4	7.86	SMP-837	5/16	2 1/2	11.72	SMP-866	1/2	1	14.84	SMP-895	5/8	4	25.25
SMP-809	3/16	2 1/2	7.86	SMP-838	5/16	2 3/4	11.72	SMP-867	1/2	1 1/4	15.48	SMP-896	5/8	4 1/4	27.33
SMP-810	3/16	2 3/4	7.86	SMP-839	5/16	3	11.72	SMP-868	1/2	1 1/2	15.48	SMP-897	5/8	4 1/2	27.33
SMP-811	3/16	3	7.86	SMP-840	5/16	3 1/4	13.15	SMP-869	1/2	1 3/4	15.48	SMP-898	5/8	4 3/4	27.33
SMP-812	1/4	1/4	7.60	SMP-841	5/16	3 1/2	13.15	SMP-870	1/2	2	15.48	SMP-899	5/8	5	27.33
SMP-813	1/4	1/2	7.60	SMP-842	5/16	3 3/4	13.15	SMP-871	1/2	2 1/4	16.87	SMP-900	3/4	1 1/2	27.04
SMP-814	1/4	3/4	7.60	SMP-843	5/16	4	13.15	SMP-872	1/2	2 1/2	16.87	SMP-901	3/4	1 3/4	27.04</

QUICK RELEASE BALL LOCK PINS

Industrial Grade

High Tension



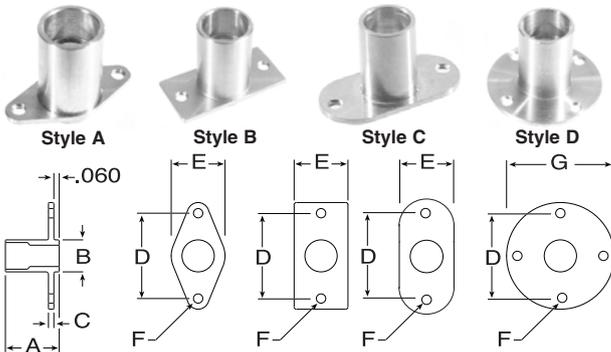
These quick release pins provide positive locking for all types of applications and equipment. Pins will not release until the spindle is depressed. Shank is made from 17-4 PH or PH15-7 MO or equivalent, and spindle is CRES 440C. Four balls offer greater pull out strength.

Nom. Dia.	A (Dia.)		±.005 B	+.000 C	H	J			Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)
	Max.	Min.				Max.	Min.	Min.		
1/4	.2485	.2470	.289	.290	.890	.800	.720	1,500	9,200	
5/16	.3110	.3095	.375	.330	.930	1.135	.810	1,700	14,400	
3/8	.3735	.3720	.440	.365	1.040	1.135	.810	3,100	20,800	
1/2	.4985	.4970	.594	.460	1.190	1.400	1.300	5,500	36,800	

See table 8 below for additional discounts.

Nom. Dia.	Grip Lgth.	Cat. No.	Price Each 1-23
1/4"	.50	HTB-009	67.55
	1.00	HTB-010	67.55
	1.50	HTB-020	76.81
	2.00	HTB-030	76.81
	2.50	HTB-035	86.06
	3.00	HTB-040	86.06
5/16"	.50	HTB-047	70.75
	1.00	HTB-051	70.75
	1.50	HTB-052	90.59
	2.00	HTB-053	90.59
	2.50	HTB-054	110.44
	3.00	HTB-055	110.44
3/8"	.50	HTB-059	80.97
	1.00	HTB-060	80.97
	2.00	HTB-080	101.08
	2.50	HTB-085	121.19
	3.00	HTB-090	121.19
	4.00	HTB-100	141.34
1/2"	.50	HTB-1095	117.32
	1.00	HTB-110	117.32
	1.50	HTB-120	139.25
	2.00	HTB-130	139.25
	2.50	HTB-135	161.17
	3.00	HTB-140	161.17
3/8"	.50	HTB-059	80.97
	1.00	HTB-060	80.97
	2.00	HTB-080	101.08
	2.50	HTB-085	121.19
	3.00	HTB-090	121.19
	4.00	HTB-100	141.34
1/2"	.50	HTB-1095	117.32
	1.00	HTB-110	117.32
	1.50	HTB-120	139.25
	2.00	HTB-130	139.25
	2.50	HTB-135	161.17
	3.00	HTB-140	161.17

FLANGED RECEPTACLES



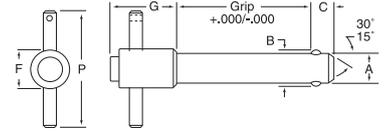
These flanged receptacles provide a permanent and proper mating hole for all our quick release pins. Designed for use on materials and in applications where the pin does not have anything to lock against. Pin does not protrude past bottom of receptacles, so they are ideal for blind hole applications. Receptacles can be mounted with screws, rivets or bolts. Made from 303 stainless steel.

See table 18 below for additional discounts.

Cat. No.	Fits Pin Diameter		±.010 A	±.005 B	±.005 C	±.010 D	±.010 E	Thread F	±.010 G	Price Each 1-25
	Style	Style								
SLR-5-303	1/4	A	.650	.375	.060	1.000	.625	6-32	—	18.04
SLR-10-303	5/16	A	.783	.469	.060	1.000	.625	6-32	—	19.16
SLR-15-303	3/8	A	.913	.562	.060	1.000	.625	6-32	—	19.41
SLR-20-303	1/2	A	1.195	.750	.100	1.125	.875	10-32	—	24.32
SLR-30-303	3/4	B	.650	.375	.060	1.000	.625	6-32	—	18.04
SLR-35-303	5/16	B	.783	.469	.060	1.000	.625	6-32	—	19.16
SLR-40-303	3/8	B	.913	.562	.060	1.000	.625	6-32	—	19.41
SLR-55-303	1/4	C	.650	.375	.060	1.000	.625	6-32	—	18.04
SLR-60-303	5/16	C	.783	.469	.060	1.000	.625	6-32	—	18.20
SLR-65-303	3/8	C	.913	.562	.060	1.000	.625	6-32	—	18.44
SLR-70-303	1/2	C	1.195	.750	.100	1.125	.875	10-32	—	24.32
SLR-80-303	1/4	D	.650	.375	.060	1.000	—	6-32	1.25	18.04
SLR-85-303	5/16	D	.783	.469	.060	1.000	—	6-32	1.25	19.16
SLR-90-303	3/8	D	.913	.562	.060	1.000	—	6-32	1.25	18.44
SLR-95-303	1/2	D	1.195	.750	.100	1.125	—	10-32	1.50	23.10

8	Quantity Discount	1-23	24-47	48-94	95-191	192-499	500-999	1000+
	Net	10%	12%	15%	17.5%	20%	Call	

Heavy Duty T-Handle



These pins are similar to the pins shown on page 16 and 17 except they have a heavy duty handle. They are also known as ground handling pins used in the handling of aircraft and service equipment. Shank and spindle are made of 17-4 PH or PH 15-7 MO or equivalent.

Nom Dia.	A Dia.		±.005 B	C	F	G	P	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)
	Max.	Min.							
1/4	.2485	.2470	.287	.380	.500	1.55	2.00	230	9,200
5/16	.3110	.3095	.372	.400	.500	1.55	2.00	510	14,400
3/8	.3735	.3720	.438	.490	.625	1.55	2.00	575	20,800
1/2	.4985	.4970	.598	.530	.750	1.82	2.50	1,160	36,800
5/8	.6235	.6220	.748	.650	.875	1.82	3.00	2,070	57,500
3/4	.7485	.7470	.887	.780	1.000	1.82	3.00	2,950	82,500
1	.9985	.9970	1.217	1.000	1.250	2.14	3.50	5,480	147,000

See table 8 below for additional discounts.

Nom. Dia.	Grip Lgth.	Cat. No.	Price Each 1-23
1/4"	.50	GHP-5	23.66
	1.00	GHP-10	23.66
	1.50	GHP-15	26.13
	2.00	GHP-20	26.13
	2.50	GHP-25	28.58
	3.00	GHP-30	28.58
5/16"	.50	GHP-45	24.17
	1.00	GHP-50	24.17
	1.50	GHP-55	28.06
	2.00	GHP-60	28.06
	2.50	GHP-65	30.87
	3.00	GHP-70	30.87
3/8"	.50	GHP-75	35.56
	1.00	GHP-80	35.56
	1.50	GHP-85	40.26
	2.00	GHP-90	26.18
	2.50	GHP-95	26.18
	3.00	GHP-100	31.56
1/2"	.50	GHP-105	31.56
	1.00	GHP-110	32.81
	1.50	GHP-115	32.81
	2.00	GHP-120	37.56
	2.50	GHP-125	37.56
	3.00	GHP-130	42.32
5/8"	.50	GHP-135	34.19
	1.00	GHP-140	34.19
	1.50	GHP-145	42.12
	2.00	GHP-150	42.12
	2.50	GHP-155	48.78
	3.00	GHP-160	48.78
3/4"	.50	GHP-165	55.45
	1.00	GHP-170	55.45
	1.50	GHP-175	62.09
	2.00	GHP-180	58.06
	2.50	GHP-185	64.52
	3.00	GHP-190	64.52
1"	.50	GHP-195	64.52
	1.00	GHP-200	70.22
	1.50	GHP-205	70.16
	2.00	GHP-210	73.55
	2.50	GHP-215	71.15
	3.00	GHP-220	68.15
3/4"	.50	GHP-225	75.16
	1.00	GHP-230	75.16
	1.50	GHP-235	81.29
	2.00	GHP-240	88.71
	2.50	GHP-245	89.19
	3.00	GHP-250	86.54
1"	.50	GHP-255	93.82
	1.00	GHP-260	105.29
	1.50	GHP-265	113.54
	2.00	GHP-270	113.54
	2.50	GHP-275	124.58
	3.00	GHP-280	124.58

RECEIVER CAPS



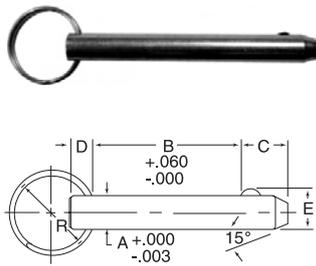
Receiver caps fit over the end of the quick release pins. Allows pins to be used in applications where the receiving hole is not within tolerance, or is out of round. Receiver caps can replace cotter pins and hitch pins. Caps are made from Type 303 stainless steel.

See table 18 below for additional discounts.

Cat. No.	Fits Pin Diameter	±.010 A	±.010 B	Price Each 1-25
SLRC-55	5/16	0.650	0.469	7.34
SLRC-60	3/8	0.730	0.562	8.78
SLRC-65	1/2	1.000	0.750	9.52

18	Quantity Discount	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Net	2%	5%	8%	10%	12.5%	Call	

QUICK RELEASE PINS



Quick release pins are economical pins that can be applied in both military and commercial equipment. Solid body construction with direct spring loaded ball provides dependable operating qualities. High shear capacity stainless steel gives maximum strength for all applications. They can be used to lock telescoping tubes, secure bracket assemblies, anchor clevis fittings, hinge pins, replace cotter pins where frequent removal is necessary and set up jigs and fixtures. Stainless steel pins may be more specifically used in the aircraft industry, food processing machinery, marine equipment, laboratory and testing equipment and any application where corrosion is a concern. Hole sizes - commercial drill tolerances provide clearance for standard pins. Type 303 stainless steel. These pins are available in other diameters through 1" diameter. Grip lengths other than listed below are available in increments of one tenth inch as special order. Call for pricing and delivery.

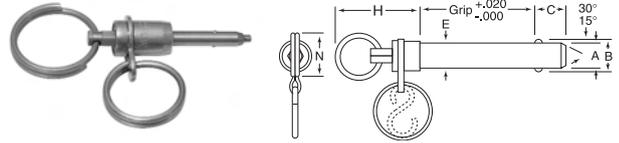
See table 32 below for additional discounts.

Cat. No.	Nom. Dia.	Grip Lgth.	A	B	C	D	E	R	Price Each	
									1-99	1-99
FPSC3-05R	3/16	.5	.200	.187	.204	1.00	1.78			
FPSC3-08R	3/16	.8	.200	.187	.204	1.00	1.78			
FPSC3-10R	3/16	1.0	.200	.187	.204	1.00	1.78			
FPSC3-13R	3/16	1.3	.200	.187	.204	1.00	1.93			
FPSC3-15R	3/16	1.5	.200	.187	.204	1.00	1.93			
FPSC3-20R	3/16	2.0	.200	.187	.204	1.00	1.93			
FPSC3-25R	3/16	2.5	.200	.187	.204	1.00	2.12			
FPSC3-30R	3/16	3.0	.200	.187	.204	1.00	2.12			
FPSC4-05R	1/4	.5	.312	.250	.286	1.00	1.78			
FPSC4-08R	1/4	.8	.312	.250	.286	1.00	1.78			
FPSC4-10R	1/4	1.0	.312	.250	.286	1.00	1.78			
FPSC4-13R	1/4	1.3	.312	.250	.286	1.00	1.93			
FPSC4-15R	1/4	1.5	.312	.250	.286	1.00	1.93			
FPSC4-20R	1/4	2.0	.312	.250	.286	1.00	1.93			
FPSC4-25R	1/4	2.5	.312	.250	.286	1.00	2.12			
FPSC4-30R	1/4	3.0	.312	.250	.286	1.00	2.12			
FPSC5-08R	5/16	.8	.375	.250	.358	1.00	2.06			
FPSC5-10R	5/16	1.0	.375	.250	.358	1.00	2.06			
FPSC5-13R	5/16	1.3	.375	.250	.358	1.00	2.24			
FPSC5-15R	5/16	1.5	.375	.250	.358	1.00	2.24			
FPSC5-20R	5/16	2.0	.375	.250	.358	1.00	2.24			
FPSC5-25R	5/16	2.5	.375	.250	.358	1.00	2.43			
FPSC5-30R	5/16	3.0	.375	.250	.358	1.00	2.43			
FPSC5-35R	5/16	3.5	.375	.250	.358	1.00	2.68			
FPSC5-40R	5/16	4.0	.375	.250	.358	1.00	2.68			
FPSC6-08R	3/8	.8	.500	.250	.426	1.00	2.29			
FPSC6-10R	3/8	1.0	.500	.250	.426	1.00	2.29			
FPSC6-13R	3/8	1.3	.500	.250	.426	1.00	2.48			
FPSC6-15R	3/8	1.5	.500	.250	.426	1.00	2.48			
FPSC6-20R	3/8	2.0	.500	.250	.426	1.00	2.48			
FPSC6-25R	3/8	2.5	.500	.250	.426	1.00	2.68			
FPSC6-30R	3/8	3.0	.500	.250	.426	1.00	2.68			
FPSC6-35R	3/8	3.5	.500	.250	.426	1.00	3.00			
FPSC6-40R	3/8	4.0	.500	.250	.426	1.00	3.00			
FPSC6-45R	3/8	4.5	.500	.250	.426	1.00	3.19			
FPSC6-50R	3/8	5.0	.500	.250	.426	1.00	3.19			
FPSC8-10R	1/2	1.0	.625	.312	.570	1.25	5.83			
FPSC8-13R	1/2	1.3	.625	.312	.570	1.25	6.23			
FPSC8-15R	1/2	1.5	.625	.312	.570	1.25	6.23			
FPSC8-20R	1/2	2.0	.625	.312	.570	1.25	6.23			
FPSC8-25R	1/2	2.5	.625	.312	.570	1.25	6.66			
FPSC8-30R	1/2	3.0	.625	.312	.570	1.25	6.66			
FPSC8-35R	1/2	3.5	.625	.312	.570	1.25	7.39			
FPSC8-40R	1/2	4.0	.625	.312	.570	1.25	7.39			
FPSC8-50R	1/2	5.0	.625	.312	.570	1.25	7.77			
FPSC8-55R	1/2	5.5	.625	.312	.570	1.25	8.31			
FPSC8-60R	1/2	6.0	.625	.312	.570	1.25	8.31			
FPSC10-20R	5/8	2.0	.750	.375	.710	1.25	8.61			
FPSC10-25R	5/8	2.5	.750	.375	.710	1.25	8.99			
FPSC10-45R	5/8	4.5	.750	.375	.710	1.25	10.22			
FPSC12-20R	3/4	2.0	.937	.375	.856	1.50	13.94			
FPSC12-25R	3/4	2.5	.937	.375	.856	1.50	14.48			
FPSC12-30R	3/4	3.0	.937	.375	.856	1.50	14.48			
FPSC12-35R	3/4	3.5	.937	.375	.856	1.50	15.42			
FPSC12-45R	3/4	4.5	.937	.375	.856	1.50	15.98			
FPSC12-50R	3/4	5.0	.937	.375	.856	1.50	15.98			
FPSC12-65R	3/4	6.5	.937	.375	.856	1.50	17.52			
FPSC12-70R	3/4	7.0	.937	.375	.856	1.50	17.52			
FPSC16-20R	1	2.0	1.250	.500	1.140	1.50	18.65			
FPSC16-30R	1	3.0	1.250	.500	1.140	1.50	19.49			
FPSC16-35R	1	3.5	1.250	.500	1.140	1.50	20.56			
FPSC16-40R	1	4.0	1.250	.500	1.140	1.50	20.56			
FPSC16-80R	1	8.0	1.250	.500	1.140	1.50	24.20			

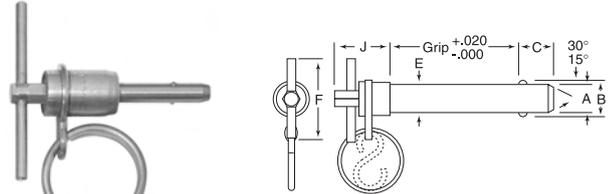
QUICK RELEASE BALL LOCK PINS

Industrial Grade

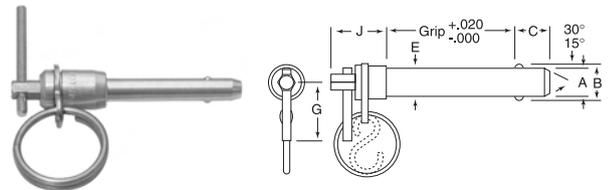
Double Acting
Ring Handles - T-Handles and L-Handles



Ring Handle



T-Handle



L-Handle

These pins are similar to the pins shown on page 16 except they are both self locking and positive locking. All components are made of stainless steel 17-4 PH or PH15-7 MO or equivalent.

Nom. Dia.	A (Dia.)		±.005		+.000		E	F	G	H	J	N	Pull Out Strength (Lbs.)	Calculated Double Shear Strength (Lbs.)
	Max.	Min.	B	C	Max.	Max.								
3/16	.1885	.1870	.220	.260	.450	1.750	1.300	1.945	1.030	1.125	200	5,150		
1/4	.2485	.2470	.289	.290	.450	1.750	1.300	1.945	1.030	1.125	230	9,200		
5/16	.3110	.3095	.375	.330	.505	1.750	1.300	1.945	1.030	1.125	510	14,400		
3/8	.3735	.3720	.440	.365	.630	2.000	1.500	2.025	1.090	1.125	575	20,600		
7/16	.4360	.4345	.509	.380	.630	2.000	1.500	2.025	1.090	1.125	710	28,000		
1/2	.4985	.4970	.594	.460	.755	2.250	1.655	2.200	1.270	1.125	1160	36,800		

See table 8 below for additional discounts.

Nom. Dia.	Grip Lgth.	Ring Handle Cat. No.	T-Handle Cat. No.	L-Handle Cat. No.	Price Each 1-23		
					Ring Handle	T-Handle	L-Handle
3/16"	.50	DARS-000*	DATS-000	—	35.57	37.37	—
	1.00	DARS-001	DATS-001	—	35.57	37.37	—
	1.50	—	DATS-002	—	—	42.23	—
	2.00	DARS-004	DATS-004	—	40.22	42.23	—
	2.50	DARS-005	—	—	44.86	—	—
1/4"	.50	DARS-009	DATS-009	—	30.74	32.29	—
	1.00	—	DATS-010	DALS-010	—	32.29	32.29
	1.50	DARS-020	DATS-020	—	32.58	34.24	—
	2.00	DARS-030	DATS-030	—	32.58	34.24	—
	2.50	DARS-035	DATS-035	—	35.18	36.92	—
	3.00	DARS-040*	—	—	35.18	—	—
	3.00	DARS-040	DATS-040	—	35.18	36.92	—
4.00	DARS-050	—	—	38.94	—	—	
5/16"	1.00	DARS-051	DATS-051	—	29.90	31.39	—
	1.50	DARS-052*	—	—	33.66	—	—
	1.50	DARS-052	DATS-052	DALS-052	33.66	35.33	35.33
	2.00	—	DATS-053	—	—	35.33	—
	2.50	DARS-054	DATS-054	—	35.03	45.15	—
	3.00	—	DATS-055	—	—	45.15	—
4.50	—	—	DALS-062	—	—	50.55	
3/8"	1.00	—	DATS-060	—	—	32.94	—
	1.50	DARS-070	DATS-070	—	35.05	36.82	—
	2.00	—	DATS-080*	—	—	36.82	—
	2.00	DARS-080	DATS-080	DALS-080	35.05	36.82	36.82
	2.50	—	DATS-085	—	—	39.87	—
	3.00	—	DATS-090	—	—	39.87	—
	3.50	DARS-095	—	—	44.91	—	—
	5.00	DARS-102	—	—	51.86	—	—
1/2"	1.50	—	DATS-120	—	—	38.45	—
	2.00	DARS-130	DATS-130	—	36.62	38.45	—
	2.50	DARS-135	DATS-135	—	49.78	52.26	—
	3.00	DARS-140	DATS-140	DALS-140	49.78	52.26	52.26
	3.50	DARS-145	DATS-145	—	57.68	52.26	—
	4.50	DARS-155	—	—	65.57	—	—

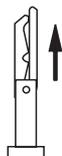
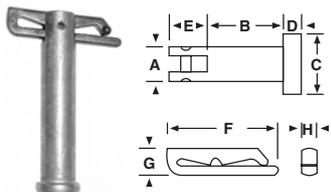
*Handle has drive-out feature. Used where removal of pin is necessary while in a shear loaded condition.

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

8	Quantity	1-23	24-47	48-94	95-191	192-499	500-999	1000+
	Discount	Net	10%	12%	15%	17.5%	20%	Call

CLEVIS PINS

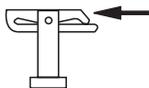
Swivel Locking



Insert - Pin and clip remain attached to make insertion an easy one-handed operation.



Swivel - Just flip the clip downward before you lock.



Lock - Slide the clip to lock into place. To release just lift on top of clip and slide.

The swivel locking pin is quick and easy to use, replacing the traditional clevis/cotter pin set up. The swivel clip will not come off when the pin is not in use and is easy to lock in place. Eliminates lost, broken and hard to remove cotter pins. The solid body construction and delrin clip provides dependable operation in all types of applications. Type 302 stainless steel. Other diameters, lengths, materials and machined pins are also available on a special order basis. Please call for price and delivery. US Patent #4822197. Foreign Patents Pending.

See table 32 below for additional discounts.

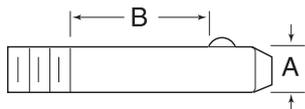
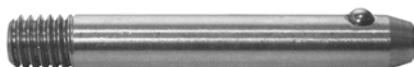
Cat. No.	Nom. Dia. A	Shank Dia. Tolerance	B	C	D	E	F	G	H	Price Each 1-99
SLP-520	3/16	.186/181	1 1/2	5/16	.070	.196	.825	.185	.089	6.44
SLP-535	1/4	.248/243	3/4	3/8	.100	.196	.825	.185	.089	5.80
SLP-540	1/4	.248/243	1	3/8	.100	.196	.825	.185	.089	5.93
SLP-545	1/4	.248/243	1 1/2	3/8	.100	.196	.825	.185	.089	6.20
SLP-565	5/16	.311/306	1	7/16	.100	.315	1.240	.300	.150	6.65
SLP-575	5/16	.311/306	2	7/16	.100	.315	1.240	.300	.150	7.62
SLP-585	3/8	.373/368	3/4	1/2	.130	.315	1.240	.300	.150	6.80
SLP-590	3/8	.373/368	1	1/2	.130	.315	1.240	.300	.150	6.80
SLP-595	3/8	.373/368	1 1/2	1/2	.130	.315	1.240	.300	.150	7.36
SLP-600	3/8	.373/368	2	1/2	.130	.315	1.240	.300	.150	7.95
SLP-620	1/2	.496/491	1	5/8	.160	.441	1.663	.425	.210	7.84
SLP-625	1/2	.496/491	1 1/4	5/8	.160	.441	1.663	.425	.210	7.84
SLP-640	1/2	.496/491	2	5/8	.160	.441	1.663	.425	.210	8.71

Delrin Clips Only

See table 32 below for additional discounts.

Cat. No.	For Pin Size	Price Each 1-99	Cat. No.	For Pin Size	Price Each 1-99
SLP-01	3/16 and 1/4	.35	SLP-03	1/2	.60
SLP-02	5/16 and 3/8	.60	SLP-04	5/8 and 3/4	1.25

THREADED END BALL LOCK PINS

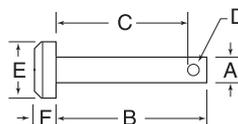


These quick release pins are similar to the other pins shown above except one end is threaded allowing you to attach any special handle or fixture to the pin. Made of Type 303 stainless steel. It is recommended that a thread locking adhesive be used to secure handle to the pin.

See table 32 below for additional discounts.

Cat. No.	Nom. Dia. A	Grip Lgth. B	Thread Size	Lgth.	Price Each 1-99
FPU-10	3/16	1/2	10-32	5/16	1.62
FPU-15	3/16	1	10-32	5/16	1.66
FPU-20	3/16	1 1/2	10-32	5/16	1.73
FPU-30	1/4	1/2	1/4-20	3/8	1.86
FPU-35	1/4	1	1/4-20	3/8	2.04
FPU-45	1/4	2	1/4-20	3/8	2.48
FPU-50	1/4	2 1/2	1/4-20	3/8	2.74
FPU-55	5/16	1	5/16-18	3/8	2.22
FPU-60	5/16	1 1/2	5/16-18	3/8	2.48

Standard



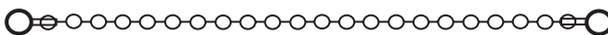
Manufactured to SAE standards (except hole size and point). For use with cotter pins or spring pins. 300 series stainless steel, 18-8 equivalent.

See table 32 below for additional discounts.

Cat. No.	Shank Dia. Tolerance	A	B	C	D	E	F	Price Each 1-99
CLP-2S	.186/181	3/16	1/2	23/64	3/32	5/16	1/16	.82
CLP-6S	.186/181	3/16	5/8	31/64	3/32	5/16	1/16	.82
CLP-8S	.186/181	3/16	3/4	39/64	3/32	5/16	1/16	.84
CLP-12S	.186/181	3/16	1	55/64	3/32	5/16	1/16	.90
CLP-14S	.186/181	3/16	1 1/4	17/64	3/32	5/16	1/16	.97
CLP-16S	.186/181	3/16	1 1/2	123/64	3/32	5/16	1/16	.96
CLP-20S	.186/181	3/16	2	155/64	3/32	5/16	1/16	1.06
CLP-30S	.248/243	1/4	3/4	39/64	3/32	3/8	3/32	1.05
CLP-36S	.248/243	1/4	1	55/64	3/32	3/8	3/32	1.13
CLP-38S	.248/243	1/4	1 1/8	63/64	3/32	3/8	3/32	1.13
CLP-40S	.248/243	1/4	1 1/4	17/64	3/32	3/8	3/32	1.15
CLP-42S	.248/243	1/4	1 3/8	115/64	3/32	3/8	3/32	1.22
CLP-44S	.248/243	1/4	1 1/2	123/64	3/32	3/8	3/32	1.23
CLP-46S	.248/243	1/4	1 5/8	131/64	3/32	3/8	3/32	1.29
CLP-48S	.248/243	1/4	1 3/4	139/64	3/32	3/8	3/32	1.32
CLP-52S	.248/243	1/4	2	155/64	3/32	3/8	3/32	1.38
CLP-56S	.248/243	1/4	2 1/4	27/64	3/32	3/8	3/32	1.43
CLP-60S	.248/243	1/4	2 1/2	223/64	3/32	3/8	3/32	.41
CLP-78S	.311/306	5/16	1	25/32	9/64	7/16	3/32	.33
CLP-82S	.311/306	5/16	1 1/4	11/32	9/64	7/16	3/32	1.29
CLP-84S	.311/306	5/16	1 3/8	15/32	9/64	7/16	3/32	1.31
CLP-94S	.311/306	5/16	2	25/32	9/64	7/16	3/32	1.60
CLP-98S	.311/306	5/16	2 1/4	21/32	9/64	7/16	3/32	1.68
CLP-100S	.311/306	5/16	2 1/2	29/32	9/64	7/16	3/32	2.12
CLP-104S	.373/368	3/8	3/4	33/64	5/32	1/2	1/8	1.88
CLP-106S	.373/368	3/8	1	49/64	5/32	1/2	1/8	2.01
CLP-110S	.373/368	3/8	1 1/8	57/64	5/32	1/2	1/8	2.07
CLP-112S	.373/368	3/8	1 1/4	11/64	5/32	1/2	1/8	2.14
CLP-116S	.373/368	3/8	1 3/8	19/64	5/32	1/2	1/8	2.25
CLP-118S	.373/368	3/8	1 1/2	117/64	5/32	1/2	1/8	2.27
CLP-120S	.373/368	3/8	1 5/8	125/64	5/32	1/2	1/8	2.33
CLP-122S	.373/368	3/8	1 3/4	133/64	5/32	1/2	1/8	2.41
CLP-126S	.373/368	3/8	2	149/64	5/32	1/2	1/8	2.60
CLP-130S	.373/368	3/8	2 1/4	21/64	5/32	1/2	1/8	2.73
CLP-134S	.373/368	3/8	2 3/8	29/64	5/32	1/2	1/8	2.88
CLP-136S	.373/368	3/8	2 1/2	217/64	5/32	1/2	1/8	2.42
CLP-138S	.373/368	3/8	2 3/4	233/64	5/32	1/2	1/8	3.08
CLP-140S	.373/368	3/8	3	249/64	5/32	1/2	1/8	3.13
CLP-144S	.373/368	3/8	4	349/64	5/32	1/2	1/8	3.72
CLP-152S	.436/431	7/16	1 1/2	117/64	5/32	9/16	5/32	2.95
CLP-156S	.436/431	7/16	2	149/64	5/32	9/16	5/32	3.34
CLP-164S	.496/491	1/2	1 1/4	11/64	5/32	5/8	5/32	3.31
CLP-168S	.496/491	1/2	1 1/2	117/64	5/32	5/8	5/32	3.53
CLP-170S	.496/491	1/2	1 3/4	133/64	5/32	5/8	5/32	3.71
CLP-172S	.496/491	1/2	2	149/64	5/32	5/8	5/32	3.93
CLP-174S	.496/491	1/2	2 1/4	21/64	5/32	5/8	5/32	4.17
CLP-176S	.496/491	1/2	2 1/2	217/64	5/32	5/8	5/32	4.41
CLP-180S	.496/491	1/2	2 3/4	233/64	5/32	5/8	5/32	4.83
CLP-182S	.496/491	1/2	3	249/64	5/32	5/8	5/32	5.13
CLP-184S	.496/491	1/2	3 1/2	317/64	5/32	5/8	5/32	5.37
CLP-186S	.496/491	1/2	4	349/64	5/32	5/8	5/32	5.72

BALL LOCK PIN ATTACHMENTS

Bead Chain

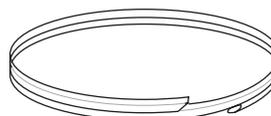


Stainless steel chain with 3/16" ID terminals at each end.

See table 32 below for additional discounts.

Cat. No.	Lgth.	Price Each 1-99	Cat. No.	Lgth.	Price Each 1-99
FPB-3	3	.63	FPB-8	8	.91
FPB-4	4	.63	FPB-12	12	1.21
FPB-6	6	.68			

Split Ring



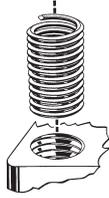
Type 316 stainless steel.

See table 32 below for additional discounts.

Cat. No.	Wire Dia.	ID	OD	Price Each 1-99
SRH-110	.070	.930	1.076	.44
SRH-120	.090	1.160	1.340	.51
SRH-130	.105	1.395	1.605	.73

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Screw Locking Inserts



Quickly and permanently restore stripped, worn and damaged threads in any material. Coil tension securely holds the insert in place without undue tension on the surrounding material. They are vibration and impact resistant and will not strip or seize. All inserts are made from 18-8 stainless steel with a hardness of RC 43-50 and tensile strength above 200,000 psi. Screw-Locking inserts have a series of straight segments to provide self-locking torque on the bolt, eliminating the need for other thread locking devices.

See table 34 below for additional discounts.

Thread	Lgth.	Free Running Cat. No.	HeliCoil	Price Each 1-99	Screw Locking Cat. No.	HeliCoil	Price Each 1-99	Thread	Lgth.	Free Running Cat. No.	HeliCoil	Price Each 1-99	Screw Locking Cat. No.	HeliCoil	Price Each 1-99
Coarse Threads															
2-56	.086	TI-05	1185-02CN-086	.41	TI-605	3585-02CN-086	.63	10-32	.190	TI-2130	1191-3CN-190	.41	TI-2630	3591-3CN-190	.55
2-56	.129	TI-10	1185-02CN-129	.43	—	—	—	10-32	.285	TI-2140	1191-3CN-285	.43	TI-2640	3591-3CN-285	.58
2-56	.172	TI-15	1185-02CN-172	.46	—	—	—	10-32	.380	TI-2150	1191-3CN-380	.46	TI-2650	3591-3CN-380	.62
4-40	.112	—	—	—	TI-670	3585-04CN-112	.63	1/4-28	.250	TI-2160	1191-4CN-250	.41	TI-2660	1191-4CN-250	.55
4-40	.168	TI-80	1185-04CN-168	.50	TI-680	3585-04CN-168	.66	1/4-28	.375	TI-2170	1191-4CN-375	.43	TI-2670	3591-4CN-375	.58
4-40	.224	TI-90	1185-04CN-224	.52	TI-690	3585-04CN-224	.70	1/4-28	.500	TI-2180	1191-4CN-500	.46	—	—	—
5-40	.188	TI-110	1185-05CN-188	.43	—	—	—	5/16-24	.312	TI-2190	1191-5CN-312	.46	—	—	—
5-40	.250	TI-120	1185-05CN-250	.46	—	—	—	5/16-24	.469	TI-2200	1185-5CN-469	.53	—	—	—
6-32	.138	TI-130	1185-06CN-138	.41	—	—	—	5/16-24	.625	TI-2210	1191-5CN-625	.65	—	—	—
6-32	.207	TI-140	1185-06CN-207	.43	TI-740	3585-06CN-207	.66	3/8-24	.562	TI-2230	1191-6CN-562	.71	—	—	—
6-32	.276	TI-150	1185-06CN-276	.46	TI-750	3585-06CN-276	.70	3/8-24	.750	TI-2240	1191-6CN-750	.95	—	—	—
8-32	.164	TI-160	1185-2CN-164	.41	—	—	—	7/16-20	.438	TI-2250	1191-7CN-438	.68	—	—	—
8-32	.246	TI-170	1185-2CN-246	.43	TI-770	3585-2CN-246	.66	7/16-20	.656	TI-2260	1191-7CN-656	.83	—	—	—
8-32	.328	TI-180	1185-2CN-328	.46	TI-780	3585-2CN-328	.70	7/16-20	.875	TI-2270	1191-7CN-875	1.11	—	—	—
10-24	.190	TI-190	1185-3CN-190	.41	—	—	—	1/2-20	.500	TI-2280	1191-8CN-500	.72	—	—	—
10-24	.285	TI-200	1185-3CN-285	.43	TI-800	3585-3CN-285	.66	1/2-20	.750	TI-2290	1191-8CN-750	1.11	TI-2790	3591-8CN-750	1.46
10-24	.380	TI-210	1185-3CN-380	.65	TI-810	3585-3CN-380	.70	1/2-20	1.000	TI-2300	1191-8CN-1000	1.51	—	—	—
1/4-20	.250	TI-250	1185-4CN-250	.41	TI-850	3585-4CN-250	.63	9/16-18	.844	TI-2320	1185-5CN-469	2.06	—	—	—
1/4-20	.375	TI-260	1185-4CN-375	.43	TI-860	3585-4CN-375	.66	5/8-18	.625	TI-2340	1191-10CN-625	2.19	—	—	—
1/4-20	.500	TI-270	1185-4CN-500	.46	TI-870	3585-4CN-500	.70	5/8-18	.938	TI-2350	1191-10CN-938	2.67	—	—	—
5/16-18	.312	TI-280	1185-5CN-312	.46	—	—	—	3/4-16	.750	TI-2370	1191-12CN-750	2.96	—	—	—
5/16-18	.469	TI-290	1185-5CN-469	.53	TI-890	3585-5CN-469	.81	3/4-16	1.125	TI-2380	1191-12CN-1125	3.86	—	—	—
5/16-18	.625	TI-300	1185-5CN-625	.65	TI-900	3585-5CN-625	1.03	Metric							
3/8-16	.375	TI-310	1185-6CN-375	.59	TI-920	3585-6CN-562	1.10	M5x0.8	5.0	TI-3070	1084-5CN-50	.58	—	—	—
3/8-16	.562	TI-320	1185-6CN-562	.71	TI-930	3585-6CN-750	1.50	M5x0.8	7.5	TI-3080	1084-5CN-75	.43	—	—	—
3/8-16	.750	TI-330	1185-6CN-750	.95	—	—	—	M5x0.8	10.0	TI-3090	1084-5CN-100	.46	TI-3680	1084-5CN-100	.62
7/16-14	.438	TI-340	1185-7CN-438	.68	—	—	—	M6x1.0	6.0	TI-3100	1084-6CN-60	.41	TI-3690	1084-6CN-60	.55
7/16-14	.656	TI-350	1185-7CN-656	.83	—	—	—	M6x1.0	9.0	TI-3110	1084-6CN-90	.43	TI-3700	4184-6CN-90	.83
1/2-13	.500	TI-370	1185-8CN-500	.72	TI-980	3585-8CN-750	1.67	M6x1.0	12.0	TI-3120	1084-6CN-120	.46	TI-3710	4184-6CN-120	.62
1/2-13	.750	TI-380	1185-8CN-750	1.11	TI-990	3585-8CN-1000	2.32	M8x1.25	8.0	TI-3160	1084-8CN-80	.46	—	—	—
1/2-13	1.000	TI-390	1185-8CN-1000	1.51	—	—	—	M8x1.25	12.0	TI-3170	1084-8CN-120	.53	TI-3760	4184-8CN-120	.71
5/8-11	.625	TI-430	1185-10CN-625	2.19	—	—	—	M8x1.25	16.0	TI-3180	1084-8CN-160	.65	TI-3770	4184-8CN-160	.90
5/8-11	.938	TI-440	1185-10CN-938	2.67	—	—	—	M10x1.5	10.0	TI-3190	1084-10CN-100	.59	—	—	—
5/8-11	1.250	TI-450	1185-10CN-1250	3.37	—	—	—	M10x1.5	15.0	TI-3200	1084-10CN-150	.71	—	—	—
3/4-10	.750	TI-460	1185-12CN-750	2.96	—	—	—	M10x1.5	20.0	TI-3210	1084-10CN-200	.95	TI-3800	4184-10CN-200	1.30
3/4-10	1.125	TI-470	1185-12CN-1125	3.86	—	—	—	M12x1.75	12.0	TI-3220	1084-12CN-120	.72	—	—	—
3/4-10	1.500	TI-480	1185-12CN-1500	4.69	—	—	—	M12x1.75	18.0	TI-3230	1084-12CN-180	1.11	—	—	—
7/8-9	.875	TI-490	1185-14CN-875	4.12	—	—	—	M12x1.75	24.0	TI-3240	1084-12CN-240	1.51	—	—	—
7/8-9	1.312	TI-500	1185-14CN-1312	7.36	—	—	—	—	—	—	—	—	—	—	—
1-8	1.000	TI-520	1185-16CN-1000	5.15	—	—	—	—	—	—	—	—	—	—	—
1-8	1.500	TI-530	1185-16CN-1500	7.71	—	—	—	—	—	—	—	—	—	—	—
1-8	2.000	TI-540	1185-16CN-2000	9.37	—	—	—	—	—	—	—	—	—	—	—

34	Quantity	1-99	100-499	500-999	1000-4999	5000+
	Discount	Net	10%	25%	30%	Call

Tang Break Off Tools



The driving tangs of HeliCoil inserts must be removed to prevent interference with the end of the assembled bolt. For inserts over 1/2" use long nose pliers. Other sizes available as special order. Call for price and delivery.

Cat. No.	HeliCoil	Thread	Price Each	Cat. No.	HeliCoil	Thread	Price Each
Coarse Threads							
TI-8105	3695-02	2-56 & 3-48	49.99	TI-8140	3695-4	10-24, 10-32 & 12-24	49.99
TI-8110	3695-04	4-40 & 5-40	49.99	TI-8150	3695-4	1/4-20	49.99
TI-8120	3695-06	6-32	49.99	Metric Threads			
TI-8130	3695-2	8-32	49.99	TI-8310	4238-5	M5	50.02
TI-8140	3695-4	10-24, 10-32 & 12-24	49.99	TI-8320	4238-6	M6	49.99
TI-8150	3695-4	1/4-20	49.99	TI-8340	4238-8	M8	85.70
TI-8160	3695-5	5/16-18	85.70	—	—	—	—

Note: TI-8140 and 8150 can be used on both coarse and fine threads

Extracting Tools



The extracting tools are used to remove HeliCoil inserts. This is done by applying the tool to the insert, striking the head of tool and turning it counter clockwise.

Cat. No.	HeliCoil	Thread	Price Each
TI-8005	1227-02	#2	27.39
TI-8010	1227-06	#3 thru #8	27.39
TI-8020	1227-6	#10 thru 3/8, M5 thru M10	27.39
TI-8030	1227-16	7/16 thru 1, M11 thru M24	30.70

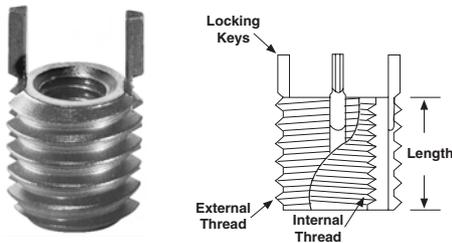
Thread Repair Kits - New Style



Each kit provides everything you need to install HeliCoil inserts; three different lengths of inserts (1 x diameter, 1-1/2 x diameter and 2 x diameter). Quantities in each kit are listed below. Also included is a tap, an installation tool, a drill and a tang removal tool. All items are packed in a plastic case.

Cat. No.	HeliCoil	Thread Size	Inserts per Kit	Price Each	Cat. No.	HeliCoil	Thread Size	Inserts per Kit	Price Each
Coarse Threads									
TI-9005	5401-04	4-40	12	41.36	TI-9060	5402-06	6-40	12	65.96
TI-9010	5401-05	5-40	12	65.96	TI-9065	5402-2	8-36	12	65.96
TI-9015	5401-06	6-32	12	48.66	TI-9070	5402-3	10-32	12	43.44
TI-9020	5401-2	8-32	12	41.59	TI-9075	5402-4	1/4-28	12	44.66
TI-9025	5401-3	10-24	12	38.88	TI-9080	5402-5	5/16-24	12	46.31
TI-9030	5401-1	12-24	12	39.30	TI-9085	5402-6	3/8-24	6	48.79
TI-9035	5401-4	1/4-20	12	40.11	TI-9090	5402-7	7/16-20	6	51.28
TI-9040	5401-5	5/16-18	12	41.77	TI-9095	5402-8	1/2-20	6	70.30
TI-9045	5401-6	3/8-16	6	42.60	Metric Fine Threads				
TI-9050	5401-7	7/16-14	6	45.08	TI-9145	5404-8	M8x1	6	48.59
TI-9055	5401-8	1/2-13	6	64.11	TI-9150	5404-10	M10x1	6	55.85
Metric Coarse Threads									
TI-9100	5403-3	M3x0.5	12	65.96	TI-9155	5405-10	M10x1.25	6	55.85
TI-9110	5403-4	M4x0.7	6	41.59	TI-9160	5405-12	M12x1.25	6	76.02
TI-9115	5403-5	M5x0.8	6	42.04	TI-9165	5406-12	M12x1.5	6	76.02
TI-9120	5403-6	M6x1	6	39.69	—	—	—	—	—
TI-9125	5403-7	M7x1	6	40.32	—	—	—	—	—
TI-9130	5403-8	M8x1.25	6	40.32	—	—	—	—	—
TI-9135	5403-10	M10x1.5	6	57.17	—	—	—	—	—
TI-9140	5403-12	M12x1.75	6	54.77	—	—	—	—	—

KEYLOCKING THREADED INSERTS



Installation Instructions

- Step 1 — Drill out hole to allow full tap depth shown in the description. Note the tap drill is oversized.
- Step 2 — Countersink to specifications in the chart.
- Step 3 — Tap hole to specifications in the chart.
- Step 4 — Screw in insert (by hand) to .010" to .030" below surface.
- Step 5 — Drive down locking keys with installation tool.

Quickly repair stripped damaged or worn out threads with a new stronger thread using keylocking inserts. Keylocking inserts are easily installed using standard drills and taps. Once the locking keys are driven down, the insert is tightly locked and will not turn. Inserts are 303 stainless steel, passivated. Internal threads are class 2B, external threads are 2A. Inserts with internal thread size 5/16 or M7 and larger have four locking keys. Smaller sizes have two locking keys. Solid inserts allow you to relocate or fill in holes that are too large. All the inserts listed are in stock for same day shipment. Other sizes and clear and dichromate finishes are available as special orders. Please call for price and delivery.

Inch

INSERT External Thread Class 2A	INSTALLATION DATA				REMOVAL DATA	
	Tap Drill Size	C'Sink Dia. +.010 -.000	Thread Tap Class 2B	Drill Size	Depth	
					Size	Depth
5/16-18	I	.32	5/16-18	7/32	1/8	
3/8-16	Q	.38	3/8-16	9/32	1/8	
7/16-14	X	.44	7/16-14	11/32	3/16	
1/2-13	29/64	.51	1/2-13	13/32	3/16	
9/16-12	37/64	.57	9/16-12	15/32	3/16	
5/8-11	39/64	.63	5/8-11	17/32	3/16	
3/4-16	45/64	.76	3/4-16	21/32	3/16	
7/8-14	53/64	.88	7/8-14	25/32	5/16	
1-12	15/16	1.02	1-12	27/32	5/16	
1 1/8-12	1 1/16	1.14	1 1/8-12	31/32	5/16	
1 1/4-12	1 3/16	1.27	1 1/4-12	13/32	5/16	
1 3/8-12	1 5/16	1.39	1 3/8-12	17/32	5/16	
1 1/2-12	1 7/16	1.52	1 1/2-12	111/32	5/16	
1 5/8-12	1 9/16	1.64	1 5/8-12	115/32	5/16	
1 7/8-12	1 11/16	1.89	1 7/8-12	123/32	5/16	

See table 107 below for additional discounts.

Cat. No.	Int. Thread	Ext. Thread	Lgth.	Min. Tap Depth	Price Each 1-24	Installation Tools	
						Cat. No.	Price Each
Thinwall							
KLI-66321	10-24	5/16-18	.31	.37	3.10	KLI-64721	17.35
KLI-66521	10-32	5/16-18	.31	.37	3.10	KLI-64721	17.35
KLI-66322	1/4-20	3/8-16	.37	.43	3.36	KLI-64722	17.50
KLI-66522	1/4-28	3/8-16	.37	.43	3.36	KLI-64722	17.50
KLI-66323	5/16-18	7/16-14	.43	.50	5.36	KLI-64723	14.87
KLI-66523	5/16-24	7/16-14	.43	.50	5.36	KLI-64723	14.87
KLI-66324	3/8-16	1/2-13	.50	.56	6.57	KLI-64724	23.70
KLI-66524	3/8-24	1/2-13	.50	.56	7.41	KLI-64724	23.70
KLI-66525	7/16-20	9/16-12	.56	.62	10.14	KLI-64725	23.82
KLI-66326	1/2-13	5/8-11	.62	.68	10.50	KLI-64726	16.34
KLI-66526	1/2-20	5/8-11	.62	.68	11.03	KLI-64726	16.34
Heavy Duty							
KLI-66300	8-32	5/16-18	.31	.37	2.79	KLI-64700	23.60
KLI-66301	10-24	3/8-16	.31	.37	3.05	KLI-64701	21.39
KLI-66501	10-32	3/8-16	.31	.37	3.05	KLI-64701	21.39
KLI-66302	1/4-20	7/16-14	.37	.43	3.31	KLI-64702	14.47
KLI-66502	1/4-28	7/16-14	.37	.43	3.31	KLI-64702	14.47
KLI-66503	5/16-24	7/16-14	.43	.50	4.89	KLI-64703	14.62
KLI-66304	3/8-16	9/16-12	.50	.56	5.73	KLI-64704	16.37
KLI-66504	3/8-24	9/16-12	.50	.56	5.73	KLI-64704	16.37
KLI-66305	7/16-14	5/8-11	.62	.68	8.61	KLI-64705	16.14
KLI-66505	7/16-20	5/8-11	.62	.68	8.61	KLI-64705	16.14
KLI-66306	1/2-13	3/4-16	.62	.68	10.45	KLI-64706	17.55
KLI-66506	1/2-20	3/4-16	.62	.68	10.45	KLI-64706	17.55
KLI-66307	9/16-12	3/4-16	.81	.94	11.19	KLI-64707	17.71
KLI-66308	5/8-11	7/8-14	.87	1.00	13.50	KLI-64708	20.22
KLI-66508	5/8-18	7/8-14	.87	1.00	13.50	KLI-64708	20.22
KLI-66309	3/4-10	1 1/8-12	1.12	1.31	16.38	KLI-64709	22.32
KLI-66509	3/4-16	1 1/8-12	1.12	1.31	16.38	KLI-64709	22.32
KLI-66310	7/8-9	1 1/4-12	1.25	1.44	41.79	KLI-64710	23.60
KLI-66311	1-8	1 3/8-12	1.37	1.56	44.94	KLI-64711	29.48
Extra Heavy Duty							
KLI-66334	1/4-20	1/2-13	.37	.43	32.66	KLI-64734	41.46
KLI-66335	5/16-18	9/16-12	.43	.50	32.76	KLI-64735	41.46
KLI-66336	3/8-16	5/8-11	.50	.56	34.32	KLI-64736	37.48
KLI-66338	1/2-13	7/8-14	.68	.75	41.72	KLI-64738	37.48
Solid							
KLI-66408	—	7/8-14	.87	1.00	93.08	KLI-64808	71.80

Single Size Kits



Each kit contains inserts of one size per box and includes the quantity of inserts are shown below. Also included, one installation tool and installation and removal instructions. Other sizes available. All are heavy duty style. Other sizes available as special order. Please call for price and delivery.

Cat. No.	Internal Thread	External Thread	Lgth.	Inserts Per Kit	Price Each
KLI-68302	1/4-20	7/16-14	.37	8	27.07
KLI-68303	5/16-18	1/2-13	.43	7	34.17
KLI-68304	3/8-16	9/16-12	.50	6	35.40

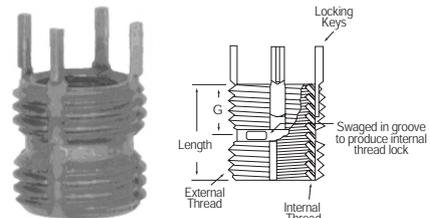
Metric

INSERT External Thread Class 6g Dia. Pitch	INSTALLATION DATA				REMOVAL DATA		INSERT External Thread Class 6g Dia. Pitch	INSTALLATION DATA				REMOVAL DATA	
	Tap Drill Size	C' Sink Dia. +.25 -.00	Thread Class 6H	Tap	Drill			Tap Drill Size	C' Sink Dia. +.25 -.00	Thread Class 6H	Drill		
					Size	Depth					Size	Depth	
M8 x 1.25	6.9	8.25	M8 x 1.25	5.5	4.00	M20 x 1.5	18.75	20.25	M20 x 1.5	17.5	4.75		
M10 x 1.25	8.8	10.25	M10 x 1.25	7.5	4.75	M22 x 1.5	20.5	22.25	M22 x 1.5	17.75	6.35		
M12 x 1.25	10.8	12.25	M12 x 1.25	9.5	4.75	M24 x 1.5	22.5	24.25	M24 x 1.5	19.75	6.35		
M14 x 1.5	12.8	14.25	M14 x 1.5	11.5	4.75	M30 x 2.0	28.0	30.25	M30 x 2.0	25.75	6.35		
M16 x 1.5	14.75	16.25	M16 x 1.5	13.5	4.75	M32 x 2.0	30.0	32.25	M32 x 2.0	27.75	6.35		
M18 x 1.5	16.75	18.25	M18 x 1.5	15.5	4.75	M33 x 2.0	31.0	33.25	M33 x 2.0	28.75	6.35		

See table 107 below for additional discounts.

Cat. No.	Internal Thread	External Thread	Lgth.	Min. Tap Depth	Price Each 1-24	Installation Tools	
						Cat. No.	Price Each
Thinwall							
KLI-66351	M5 x 0.8	M8 x 1.0	8	9.5	8.10	KLI-64751	47.48
KLI-66352	M6 x 1.0	M10 x 1.0	10	11.5	8.49	KLI-64752	32.11
KLI-66353	M8 x 1.25	M12 x 1.25	12	13.5	9.02	KLI-64753	28.71
KLI-66535	M8 x 1.0	M12 x 1.2	12	13.5	12.88	KLI-64753	28.71
KLI-66355	M10 x 1.5	M14 x 1.4	14	15.5	10.10	KLI-64755	41.76
KLI-66356	M12 x 1.75	M16 x 1.6	16	17.5	11.55	KLI-64756	32.11
Heavy Duty							
KLI-66363	M4 x 0.7	M8 x 1.0	8	9.5	8.45	KLI-64763	37.30
KLI-66364	M5 x 0.8	M10 x 1.0	10	12.5	8.10	KLI-64764	38.17
KLI-66365	M6 x 1.0	M12 x 1.2	12	14.5	8.49	KLI-64765	38.58
KLI-66366	M8 x 1.25	M14 x 1.4	14	16.5	9.02	KLI-64766	38.51
KLI-66566	M8 x 1.0	M14 x 1.4	14	16.5	12.88	KLI-64766	38.51
KLI-66367	M10 x 1.5	M16 x 1.6	16	18.5	10.10	KLI-64767	38.51
KLI-66369	M12 x 1.75	M18 x 1.8	18	20.5	11.55	KLI-64769	38.51
KLI-66371	M16 x 2.0	M22 x 2.2	22	24.5	40.38	KLI-64771	38.85

Internal Locking - Stainless Steel - Inch and Metric



Similar to the keylocking inserts shown above except the inserts have a swaged in groove to produce an internal thread lock. This internal thread lock eliminates the need for other thread locking devices. Made from 303 stainless steel, passivated. Metric dimensions are shown in millimeters. Other sizes available as special order. Please call for price and delivery.

See table 107 below for additional discounts.

Cat. No.	Internal Thread	External Thread	Lgth.	G	Min. Tap Depth	Price Each 1-24	Installation Tools	
							Cat. No.	Price Each
Thin Wall - Inch								
KLI-71321	10-24	5/16-18	.31	.15	.37	6.07	KLI-64721	17.35
KLI-71321	10-32	5/16-18	.31	.15	.37	6.07	KLI-64721	17.35
KLI-71322	1/4-20	3/8-16	.37	.18	.43	6.27	KLI-64722	17.50
KLI-71522	1/4-28	3/8-16	.37	.18	.43	6.27	KLI-64722	17.50
KLI-71323	5/16-18	7/16-14	.43	.21	.50	9.53	KLI-64723	14.87
KLI-71324	3/8-16	1/2-13	.50	.25	.56	11.00	KLI-64724	23.70
Thin Wall - Metric								
KLI-71353	M8x1.25	M12x1.25	12	6	13.5	17.07	KLI-64753	28.71
Heavy Duty - Inch								
KLI-71300	8-32	5/16-18	.31	.15	.37	5.80	KLI-64700	23.60
KLI-71301	10-24	3/8-16	.31	.15	.37	6.07	KLI-64701	21.39
KLI-71501	10-32	3/8-16	.31	.15	.37	6.07	KLI-64701	21.39
KLI-71302	1/4-20	7/16-14	.37	.18	.43	6.27	KLI-64702	14.47
KLI-71303	5/16-18	1/2-13	.43	.21	.50	9.53	KLI-64703	14.62
KLI-71304	3/8-16	9/16-12	.50	.25	.56	11.00	KLI-64704	16.37

107	Quantity	1-24	25-249	250-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	25%	Call

EZLOK INSERTS AND REPAIR KITS

Individual Inserts



- Prevent/repair stripped threads
- No special tools required
- Install with bolt and wrench
- Power drive tools available for volume use

Automatic self-locking external thread with use-activated epoxy adhesive.

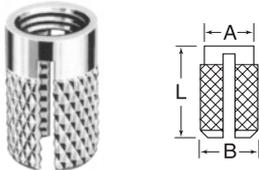
See table 20 below for additional discounts.

Cat. No.	Internal Thread Size	Tap Drill Size	Tap Size External Thread	Lgth.	Drive Tool Used	Price Each 1-499
303 Stainless Steel Passivated - Coarse Thread						
303-004	4-40	5/32	1/4-32	.250	—	1.61
303-006	6-32	#7	1/4-20	.280	—	1.82
303-008	8-32	F	5/16-18	.290	500-1	2.04
303-3	10-24	5/16	5/8-16	.406	500-2	2.23
303-4	1/4-20	13/64	7/16-14	.437	500-3	2.38
303-5	5/16-18	27/64	1/2-13	.484	500-4	2.46
303-6	3/8-16	31/64	9/16-12	.515	500-5	2.56
303-7	7/16-14	17/32	5/8-11	.656	500-6	3.16
303-8	1/2-13	21/32	3/4-10	.656	500-7	3.80
303-10	5/8-11	49/64	7/8-9	.687	500-8	4.14
303-12	3/4-10	7/8	1-8	.781	500-9	5.87
303 Stainless Steel Passivated - Fine Thread						
303-332	10-32	5/16	3/8-16	.406	500-2	2.23
303-428	1/4-28	23/64	7/16-14	.437	500-3	2.38
303-624	3/8-24	31/64	9/16-12	.515	500-5	2.56
303-720	7/16-20	17/32	5/8-11	.656	500-6	3.16
303-820	1/2-20	21/32	3/4-10	.656	500-7	3.80
Metric - Stainless Steel Passivated - Metric Internal - Inch External						
653-6	M6x1.0	5/16	3/8-16	.406	500-3	2.40
653-8	M8x1.25	27/64	1/2-13	.484	500-4	2.75
653-10	M10x1.50	31/64	9/16-12	.515	500-5	3.16
653-10F	M10x1.25	31/64	9/16-12	.515	500-5	3.16
653-12	M12x1.75	21/32	3/4-10	.656	500-6	4.28
Metric - Stainless Steel Passivated - Metric Internal and External						
453-3	M3x0.5	5.1mm	M6x1.0	6.5mm	—	1.73
453-4	M4x0.7	6.9mm	M8x1.25	7.5mm	500-1	2.10
453-5	M5x0.8	6.9mm	M8x1.25	7.5mm	500-1	2.28
453-6	M6x1.0	8.6mm	M10x1.5	10.5mm	500-3	2.44
453-8	M8x1.25	10.4mm	M12x1.75	12.5mm	500-4	2.84
453-10	M10x1.5	14.0mm	M16x2.0	17.0mm	500-5	3.58
453-12	M12x1.75	14.0mm	M16x2.0	17.0mm	500-6	4.11

Press Inserts for Plastics

Use for cored or drilled holes in plastics. Designed to replace molded-in inserts and threads in plastic castings. Provides clean threads and screw locking action not obtainable in molded-in inserts. Saves time and money. Type 303 stainless steel.

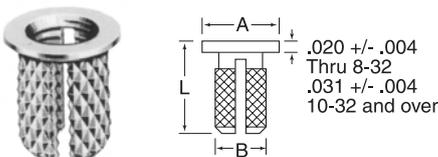
Headless



See table 20 below for additional discounts.

Cat. No.	Internal Thread	+/- .010 A	+/- .004 B	+/- .010 L	Starting Hole Size*	Price Each 1-499
EZ-302	2-56	.125	.135	.156	.125 (1/8)	.50
EZ-304	4-40	.156	.166	.188	.156 (5/32)	.52
EZ-306	6-32	.187	.199	.250	.188 (3/16)	.53
EZ-308	8-32	.218	.230	.313	.219 (7/32)	.91
EZ-310	10-32	.250	.262	.375	.250 (1/4)	1.25
EZ-314	1/4-20	.312	.326	.500	.313 (5/16)	1.41
EZ-316	5/16-18	.375	.389	.563	.375 (3/8)	1.68
EZ-318	3/8-16	.437	.451	.625	.438 (7/16)	2.00

With Head



Recommended for use in terminal strips and like applications in electronic assemblies.

See table 20 below for additional discounts.

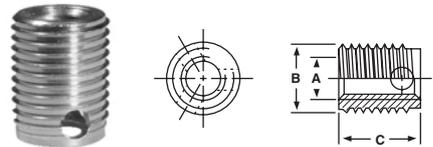
Cat. No.	Internal Thread Size	+/- .010 A	+/- .004 B	+/- .010 L	Starting Hole Size*	Price Each 1-499
EZ-700	2-56	.187	.135	.156	.125 (1/8)	.40
EZ-702	4-40	.218	.166	.188	.156 (5/32)	.56
EZ-704	6-32	.249	.199	.250	.188 (3/16)	.67
EZ-706	8-32	.280	.230	.313	.219 (7/32)	.82
EZ-708	10-32	.312	.262	.375	.250 (1/4)	1.12
EZ-710	1/4-20	.375	.326	.500	.313 (5/16)	1.60

*These hole sizes are based on average materials and torque requirements, hole sizes may vary with the material used and the screw dimensions may vary with different standards

20	Quantity	1-499	500-999	1000-2499	2500-4999	5000-9999
	Discount	Net	5%	8%	10%	12.5%

SELF TAPPING THREAD INSERTS

These threaded inserts are screwed into preformed or predrilled holes and cut their own threads into the wall for permanent installation. Eliminates the time and expense of tapping. Provides a strong wear and vibration resistant thread. Type 303 stainless steel. Can be installed with hand installation tools sold below. Metric, other inch sizes and fine threads are available as special order. Please call for price and delivery. Hole size listed below is for reference only. Optimum hole size to be determined through experimentation. A 60° countersink is required for flush mounting.

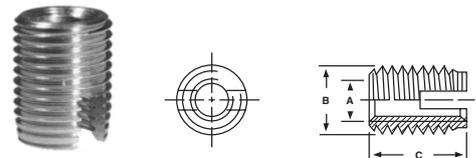


For use in aluminum, aluminum alloy, magnesium and mild steel.

See table 31 below for additional discounts.

Cat. No.	Int. Thd.	Hole Size*			Hole Depth	Price Each 1-99
		A	B	C		
STI-410	6-32	.236	.197	.216	.276	.85
STI-420	8-32	.256	.236	.236	.315	.93
STI-425	8-32	.256	.315	.236	.394	.93
STI-430	10-24	.315	.276	.291	.354	.94
STI-435	10-24	.315	.394	.291	.512	.94
STI-440	1/4-20	.394	.315	.366	.394	1.19
STI-445	1/4-20	.394	.472	.366	.591	1.19
STI-450	5/16-18	.473	.354	.437	.433	1.34
STI-455	5/16-18	.473	.551	.437	.669	1.34
STI-460	3/8-16	.552	.394	.516	.512	2.14
STI-465	3/8-16	.552	.709	.516	.866	2.14

*+.003/-.000 for reference only



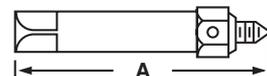
For use in plastics, light metal alloys and hard wood.

See table 31 below for additional discounts.

Cat. No.	Int. Thd.	Hole Size*			Hole Depth	Price Each 1-99
		A	B	C		
STI-110	6-32	.236	.315	.208	.216	.394
STI-115	8-32	.256	.315	.228	.236	.394
STI-120	10-24	.315	.394	.279	.287	.512
STI-125	1/4-20	.394	.551	.338	.350	.669
STI-130	5/16-18	.473	.590	.417	.429	.709
STI-135	3/8-16	.552	.709	.496	.508	.866

*+.003/-.000 for reference only

Hand Installation Tools



These installation tools are good for low volume use. For very low volume, a bolt with a nut can be used. High volume insertion tools that fit on drill presses or tapping machines are available as special order. Please call for price and delivery.

See table 31 below for additional discounts.

Cat. No.	Thread	Square End		Cat. No.	Thread	Square End		Price Each 1-99
		A	B			A	B	
STI-910	6-32	.236	.197	STI-930	5/16-18	2.95	.315	47.53
STI-915	8-32	.236	.197	STI-935	3/8-16	3.74	.492	55.47
STI-925	1/4-20	2.95	.315					

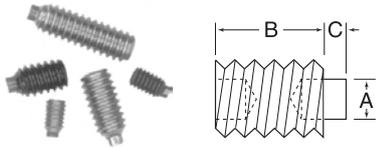
31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

HEX SOCKET SET SCREWS

Brass and Nylon Tipped

Used to lock collars, gears, shafts, bearings, etc. to shafts. Protects finished surfaces. Type 18-8 stainless steel. All sizes conform to ANSI standards.

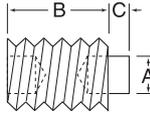
Inch



See table 32 below for additional discounts.

Thread	A	B	C	Brass Tip Cat. No.	Price Each 1-99	Nylon Tip Cat. No.	Price Each 1-99
2-56	1/32	1/8	1/32	BTS-610	.73	BTS-910	.46
2-56	1/32	1/4	1/32	BTS-615	.81	BTS-915	.51
4-40	1/16	1/8	1/32	—	—	BTS-920	.43
4-40	1/16	1/4	1/32	BTS-630	.47	BTS-930	.36
6-32	1/16	1/8	1/32	—	—	BTS-935	.41
6-32	1/16	3/16	1/32	—	—	BTS-940	.39
6-32	1/16	1/4	1/32	—	—	BTS-945	.39
8-32	3/32	1/8	3/64	—	—	BTS-950	.47
8-32	3/32	3/16	3/64	—	—	BTS-955	.41
8-32	3/32	1/4	3/64	—	—	BTS-960	.37
8-32	3/32	3/8	3/64	—	—	BTS-965	.43
10-24	3/32	3/16	3/64	—	—	BTS-970	.32
10-32	3/32	3/16	3/64	BTS-695	.48	BTS-995	.33
10-32	3/32	1/4	3/64	BTS-700	.44	BTS-1000	.30
10-32	3/32	3/8	3/64	—	—	BTS-1005	.34
10-32	3/32	1/2	3/64	BTS-710	.52	BTS-1010	.35
10-32	3/32	3/4	3/64	—	—	BTS-1015	.38
1/4-20	1/8	1/4	1/16	—	—	BTS-1020	.34
1/4-20	1/8	5/16	1/16	BTS-725	.44	—	—
1/4-20	1/8	3/8	1/16	BTS-730	.44	BTS-1030	.35
1/4-20	1/8	1/2	1/16	BTS-735	.50	BTS-1035	.40
1/4-28	1/8	3/8	1/16	—	—	BTS-1045	.35
5/16-18	3/16	3/8	3/32	—	—	BTS-1065	.46
5/16-18	3/16	1	3/32	BTS-780	.99	—	—
5/16-24	3/16	3/8	3/32	BTS-785	.66	—	—
3/8-16	3/16	3/4	3/32	BTS-810	.86	—	—
3/8-16	3/16	1	3/32	—	—	BTS-1115	.89

Metric



See table 32 below for additional discounts.

Thread	A	B	C	Nylon Tip Cat. No.	Price Each 1-99
M3x0.5	1.6	3	.8	BTS-1410	.71
M3x0.5	1.6	4	.8	BTS-1415	.72
M3x0.5	1.6	5	.8	BTS-1420	.72
M4x0.7	2.4	4	1.2	BTS-1425	.72
M4x0.7	2.4	6	1.2	BTS-1430	.73
M4x0.7	2.4	10	1.2	BTS-1435	.75
M5x0.8	2.4	6	1.2	BTS-1440	.73
M5x0.8	2.4	10	1.2	BTS-1445	.74
M6x1.0	3.2	6	1.6	BTS-1450	.73

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Socket Set Screw Assortments



MK-200-11SS contains:

Qty.	Size	Qty.	Size	Qty.	Size
10	6-32x3/16	20	1/4-28x1/4	20	5/16-18x1/2
10	8-32x3/16	20	1/4-20x3/8	10	3/8-16x3/8
10	10-24x1/4	30	5/16-18x3/8	10	3/8-24x3/8
10	1/4-20x1/4	20	5/16-24x3/8	10	3/8-16x1/2
10	1/4-20x1/4	20	5/16-18x1/2	15	4-40x1/4
10	1/4-20x1/4	20	10-32x1/4	15	5/16-18x1/2

Each BTS- kit contains:

Qty.	Size	Qty.	Size	Qty.	Size
20	4-40x1/8	15	8-32x1/4	20	5/16-18x3/8
20	8-32x3/16	15	1/4-20x3/8	15	6-32x1/4
20	1/4-20x1/8	20	6-32x1/8	15	10-32x3/8
20	10-32x1/4	20	10-32x1/4	15	5/16-18x1/2

Great for maintenance, prototyping and model making.

Cat. No.	Description	Price Each
MK-200-11SS	Inch Stainless Socket Set Screw Assortment	60.00

Cat. No.	Description	Price Each
BTS-5015	Inch - Stainless Steel with Brass Tips	107.04
BTS-5025	Inch - Stainless Steel with Nylon Tips	107.04

COTTER PIN ASSORTMENT



Contents - MK-315-6SS
Total of 315 pieces



Cat. No.	Size	Qty. In Asst.	Price Each
MK-CP-11	1/16 x 3/4	80	.30
MK-CP-12	3/32 x 1 1/4	50	.40
MK-CP-13	5/32 x 2 1/4	15	.50
MK-CP-14	3/64 x 1/2	75	.30
MK-CP-15	5/64 x 1	60	.40
MK-CP-16	1/8 x 1 1/2	35	.50

See table 20 below for additional discounts.

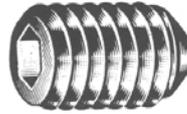
Cat. No.	Description	Price Each 1-999
MK-315-6SS	Stainless Steel Cotter Pin Asst.	25.00

20	Quantity	1-999	500-999	1000-2499	2500-4999	5000-9999	10000+
	Discount	Net	5%	8%	10%	12.5%	Call



HEX SOCKET SET SCREWS

Cup Point



Made by Holo-Krome, These stainless screws are not heat treated. Inquire for quantity discounts. Unified 3A thread fit.

Thd. x Lgth.	Key Size	Cat. No.	Price Each 1-99	Thd. x Lgth.	Key Size	Cat. No.	Price Each 1-99
UNC				UNC			
#4-40 x 1/8	.050	HK-52018	.13	1/4-20 x 3/4	1/8	HK-52072	.23
#6-32 x 1/8	1/16	HK-52024	.13	3/8-16 x 3/8	3/16	HK-52088	.31
#8-32 x 3/16	5/64	HK-52036	.14	3/8-16 x 1	3/16	HK-52094	.46
#8-32 x 1/4	5/64	HK-52038	.14	1/2-13 x 3/4	1/4	HK-52100	.76
#8-32 x 1/2	5/64	HK-52044	.16	UNF			
#10-24 x 1/4	3/32	HK-52048	.16	#10-32 x 3/16	3/32	D-53022	.23
1/4-20 x 3/16	1/8	HK-52060	.16	#10-32 x 1/4	3/32	D-53024	.24
1/4-20 x 1/4	1/8	HK-52062	.17	#10-32 x 3/8	3/32	D-53028	.25
1/4-20 x 3/8	1/8	HK-52066	.18	#10-32 x 5/8	3/32	D-53032	.30

SOCKET HEAD CAP SCREWS



Made from 302 HQ stainless steel. Unified 3A thread fit. Please inquire for quantity discounts.

Cat. No.	Thread	Length Under Head	Key Size	Price Each 1-99	Cat. No.	Thread	Length Under Head	Key Size	Price Each 1-99
Coarse					Coarse				
HK-78004	#2-56	1/4	5/64	.20	HK-78072	5/16-18	1/2	1/4	.44
HK-78006	#2-56	3/8	5/64	.20	HK-78076	5/16-18	3/4	1/4	.49
HK-78014	#4-40	1/2	3/32	.16	HK-78080	5/16-18	1	1/4	.54
HK-78020	#6-32	1/2	7/64	.17	HK-78082	5/16-18	1 1/4	1/4	.60
HK-78022	#6-32	5/8	7/64	.18	HK-78084	5/16-18	1 1/2	1/4	.67
HK-78026	#8-32	3/8	9/64	.17	HK-78088	5/16-18	2	1/4	.80
HK-78028	#8-32	1/2	9/64	.18	HK-78098	3/8-16	1	5/16	.82
HK-78030	#8-32	5/8	9/64	.19	HK-78100	3/8-16	1 1/4	5/16	.93
HK-78032	#8-32	3/4	9/64	.21	HK-78102	3/8-16	1 1/2	5/16	1.03
HK-78034	#8-32	1	9/64	.23	HK-78104	3/8-16	1 3/4	5/16	1.14
HK-78038	#10-24	1/2	5/32	.19	HK-78106	3/8-16	2	5/16	1.24
HK-78042	#10-24	3/4	5/32	.22	HK-78108	3/8-16	2 1/2	5/16	1.54
HK-78052	1/4-20	3/8	3/16	.25	HK-78112	1/2-13	1	3/8	1.58
HK-78054	1/4-20	1/2	3/16	.26	HK-78114	1/2-13	1 1/4	3/8	1.73
HK-78056	1/4-20	5/8	3/16	.27	HK-78116	1/2-13	1 1/2	3/8	1.89
HK-78058	1/4-20	3/4	3/16	.27	HK-78118	1/2-13	1 3/4	3/8	2.05
HK-78060	1/4-20	7/8	3/16	.30	Fine				
HK-78062	1/4-20	1	3/16	.32	HK-79020	#10-32	1/2	5/32	.19
HK-78064	1/4-20	1 1/4	3/16	.37	HK-79022	#10-32	5/8	5/32	.21
HK-78066	1/4-20	1 1/2	3/16	.41	HK-79024	#10-32	3/4	5/32	.22
HK-78068	1/4-20	1 3/4	3/16	.46	HK-79028	#10-32	1	5/32	.25
HK-78070	1/4-20	2	3/16	.51	HK-79032	#10-32	1 1/2	5/32	.33

SPRING PINS



Type 420 stainless steel. Rockwell C45-52.

See table 12 below for additional discounts.

Cat. No.	Description	Price Per Set 1-24
PA-2	500 Stainless Spring Pin Assortment Diameters range from 1/16" through 3/8" Lengths range from 1/4" to 2"	83.42

12	Quantity	1-24	25-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	10%	15%	25%	Call

See table 20 below for additional discounts.

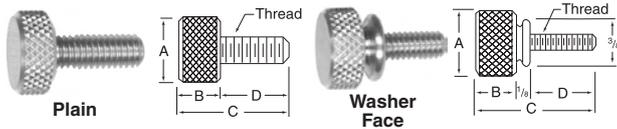
Cat. No.	Dia.	Lgth.	Price Each 1-499	Cat. No.	Dia.	Lgth.	Price Each 1-499
P-100	1/16	1/4	.05	P-240	3/16	1 1/4	.13
P-105	1/16	3/8	.05	P-245	3/16	1 1/2	.15
P-110	1/16	1/2	.05	P-255	7/32	3/4	.10
P-115	1/16	5/8	.05	P-280	1/4	5/8	.12
P-125	3/32	3/8	.05	P-285	1/4	3/4	.13
P-130	3/32	1/2	.05	P-295	1/4	1	.16
P-140	3/32	3/4	.05	P-305	1/4	1 1/2	.22
P-145	3/32	1	.05	P-310	1/4	1 3/4	.30
P-155	1/8	1	.05	P-315	1/4	2	.29
P-165	1/8	3/4	.05	P-340	5/16	1	.22
P-170	1/8	7/8	.05	P-355	5/16	1 3/4	.36
P-175	1/8	1	.06	P-400	3/8	2 1/4	.84
P-215	3/16	1/2	.07	P-410	3/8	3	.98
P-225	3/16	3/4	.09	P-430	1/2	1 1/2	1.10
P-230	3/16	7/8	.10	P-455	1/2	3	1.44
P-235	3/16	1	.11	P-460	1/2	3 1/2	1.69

20	Quantity	1-499	500-999	1000-2499	2500-4999	5000-9999
	Discount	Net	5%	8%	10%	12.5%

KNURLED HEAD SCREWS

303 Stainless Steel

Knurled Thumb Screws



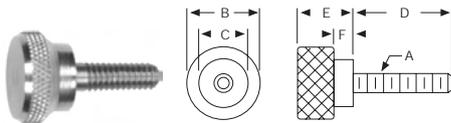
General purpose thumb screws for a wide variety of applications. The washer face provides an excellent bearing surface and extends the height of the knob from the surface. Plain finish. Please call for quantity discounts.

See table 32 below for additional discounts.

Plain Cat. No.	Thread	A	B	C	D	Price Each 1-99	Washer Face Cat. No.	Thread	A	B	C	D	Price Each 1-99
AJ-553	4-40	5/16	3/16	1/2	5/16	1.86	AJ-983	4-40	3/8	3/16	5/8	5/16	2.82
AJ-556	4-40	5/16	3/16	9/16	3/8	1.86	AJ-986	4-40	3/8	3/16	11/16	3/8	2.88
AJ-559	4-40	5/16	3/16	11/16	1/2	2.36	AJ-989	4-40	3/8	3/16	3/4	7/16	2.94
AJ-562	6-32	5/16	3/16	1/2	5/16	1.86	AJ-992	6-32	3/8	3/16	11/16	3/8	2.88
AJ-565	6-32	5/16	3/16	9/16	3/8	1.86	AJ-995	6-32	3/8	3/16	3/4	7/16	2.94
AJ-568	6-32	5/16	3/16	11/16	1/2	2.24	AJ-998	6-32	3/8	3/16	13/16	1/2	3.04
AJ-571	8-32	3/8	3/16	9/16	3/8	2.62	AJ-1001	8-32	7/16	3/16	13/16	3/8	3.65
AJ-574	8-32	3/8	3/16	11/16	1/2	3.18	AJ-1004	8-32	7/16	3/16	11/16	1/2	3.88
AJ-577	8-32	3/8	3/16	13/16	5/8	3.36	AJ-1007	8-32	7/16	3/16	15/16	5/8	4.06
AJ-580	10-32	7/16	3/16	9/16	3/8	3.60	AJ-1010	10-32	7/16	3/16	11/16	3/8	3.66
AJ-583	10-32	7/16	3/16	11/16	1/2	3.78	AJ-1013	10-32	7/16	3/16	13/16	1/2	3.88
AJ-586	10-32	7/16	3/16	13/16	5/8	4.02	AJ-1016	10-32	7/16	3/16	15/16	5/8	4.06
AJ-589	1/4-20	1/2	1/4	3/4	1/2	4.88	AJ-1019	1/4-20	1/2	1/4	3/4	3/8	4.72
AJ-592	1/4-20	1/2	1/4	7/8	5/8	5.18	AJ-1022	1/4-20	1/2	1/4	7/8	1/2	5.02
AJ-595	1/4-20	1/2	1/4	1	3/4	5.46	AJ-1025	1/4-20	1/2	1/4	1	5/8	5.28
							AJ-1028	1/4-20	1/2	1/4	1 1/8	3/4	5.56

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Knurled Knob Thumb Screws

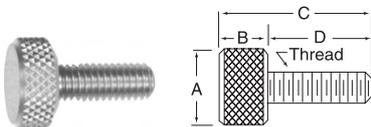


Diamond knurl on head. Shoulder provides an excellent bearing surface.

See table 21 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Price Each 1-49
KTS-4202	6-32	7/16	3/8	7/16	5/16	3/32	3.44
KTS-4204	6-32	7/16	3/8	9/16	5/16	3/32	3.44
KTS-4205	8-32	7/16	3/8	5/16	5/16	3/32	3.44
KTS-4206	8-32	7/16	3/8	3/8	5/16	3/32	3.44
KTS-4208	8-32	7/16	3/8	1/2	5/16	3/32	3.70
KTS-4301	8-32	1/2	3/8	5/16	5/16	3/32	3.68
KTS-4302	8-32	1/2	3/8	3/8	5/16	3/32	3.68
KTS-4303	8-32	1/2	3/8	7/16	5/16	3/32	4.35
KTS-4304	8-32	1/2	3/8	1/2	5/16	3/32	4.50
KTS-4305	8-32	1/2	3/8	5/8	5/16	3/32	4.50
KTS-4401	10-32	1/2	3/8	5/16	5/16	3/32	4.23
KTS-4402	10-32	1/2	3/8	3/8	5/16	3/32	4.23
KTS-4403	10-32	1/2	3/8	7/16	5/16	3/32	4.35
KTS-4404	10-32	1/2	3/8	1/2	5/16	3/32	4.50
KTS-4405	10-32	1/2	3/8	9/16	5/16	3/32	4.50
KTS-4406	10-32	1/2	3/8	5/8	5/16	3/32	4.50

Thumb Screws Metric

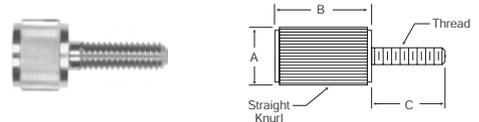


Dimensions are shown in millimeters.

See table 21 below for additional discounts.

Cat. No.	Thread	A	B	C	D	Price Each 1-49
AJ-603	M3x0.5	8	5	13	8	2.02
AJ-609	M3x0.5	8	5	16	11	2.06
AJ-612	M3x0.5	8	5	18	13	2.10
AJ-615	M3.5x0.6	8	5	13	8	2.02
AJ-624	M3.5x0.6	8	5	18	13	2.10
AJ-627	M4x0.7	10	5	14	9	2.52
AJ-630	M4x0.7	10	5	16	11	2.60
AJ-633	M4x0.7	10	5	18	13	2.66
AJ-636	M4x0.7	10	5	19	14	2.68
AJ-639	M4x0.7	10	5	21	16	2.74
AJ-642	M5x0.8	11	5	14	9	2.80
AJ-645	M5x0.8	11	5	16	11	2.88
AJ-648	M5x0.8	11	5	18	13	2.98
AJ-654	M5x0.8	11	5	21	16	3.08
AJ-657	M6x1	13	6	19	13	3.50
AJ-660	M6x1	13	6	21	14	3.64
AJ-663	M6x1	13	6	22	16	3.68
AJ-666	M6x1	13	6	24	18	3.82
AJ-669	M6x1	13	6	25	19	3.86

Panel Screws



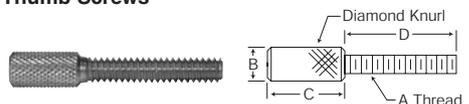
Extra large head - one piece construction. Type 303 stainless.

See table 23 below for additional discounts.

Cat. No.	A	B	C	Thread	Price Each 1-49
LPS-110	5/8	1/2	1/2	1/4-20	3.44
LPS-120	5/8	1/2	3/4	1/4-20	3.52
LPS-140	3/4	9/16	1	9/16-18	4.34
LPS-150	7/8	1 1/16	3/4	3/8-16	5.19
LPS-160	7/8	1 1/16	1	3/8-16	5.71
LPS-180	1	1 3/16	1	1/2-13	6.41

23	Quantity	1-49	50-99	100-149	150-249	250-499	500-999	1000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

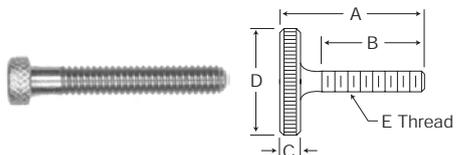
Precision Thumb Screws



See table 2 below for additional discounts.

Cat. No.	A	B	C	D	Price Each 1-11
KTS-4118	4-40	3/16	3/8	1	2.21
KTS-4122	6-32	3/16	3/8	1	2.21
KTS-4219	8-32	3/16	3/8	1/2	2.07
KTS-4228	8-32	3/16	3/8	1	2.18
KTS-4310	10-24	1/4	1/2	1/2	2.45
KTS-4326	10-24	1/4	1/2	1	2.52
KTS-4359	10-32	1/4	1/2	1/2	2.45
KTS-4374	10-32	1/4	1/2	1	2.53
KTS-4410	1/4-20	5/16	1/2	1/2	2.53
KTS-4413	1/4-20	5/16	1/2	1	2.59

Knurled Head Screws



See table 2 below for additional discounts.

Cat. No.	A	B	C	D	E	Price Each 1-11
KTS-8255	1	7/16	1/2	1/4	6-32	1.93
KTS-8262	1 1/2	13/16	1/2	1/4	8-32	2.34
KTS-8264	5/8	3/8	1/8	3/8	8-32	2.17
KTS-8281	15/16	5/8	3/16	1/2	10-32	3.90
KTS-8283	17/16	1	3/16	1/2	10-32	5.28
KTS-8287	17/16	1	3/16	3/4	10-32	6.86
KTS-8289	15/16	5/8	3/16	3/4	1/4-20	6.02
KTS-8291	17/16	1	3/16	3/4	1/4-20	6.86
KTS-8294	15/16	5/8	3/16	1	1/4-20	7.15
KTS-8296	17/16	1	3/16	1	1/4-20	8.64

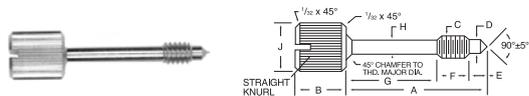
21	Quantity	1-49	50-99	100-149	150-249	250-499	500-999	1000+
	Discount	Net	5%	10%	15%	20%	25%	Call

2	Quantity	1-11	12-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	17.5%	Call

CAPTIVE PANEL SCREWS

Made from non-magnetic 303 stainless steel (ASTM-A-581, A-582). For use in panel assemblies, cabinets, enclosures and other applications. They can be held captive by using the stainless steel split washers shown on page 29. Other sizes and materials available as special order. Please call for price and delivery.

Knurled Head



See table 13 below for additional discounts.

Cat. No.	Thread	A	B	D	E	F	G	H	J	Price Each 1-24
RAF-1350	4-40	3/8	1/4	.078	5/64	1/8	11/64	.078	1/4	2.59
RAF-1352	4-40	7/16	1/4	.078	5/64	1/8	15/64	.078	1/4	2.62
RAF-1000	4-40	1/2	1/4	.078	5/64	1/8	19/64	.078	1/4	2.50
RAF-1354	4-40	9/16	1/4	.078	5/64	1/8	23/64	.078	1/4	2.68
RAF-1356	4-40	5/8	1/4	.078	5/64	1/8	27/64	.078	1/4	3.05
RAF-1358	4-40	11/16	1/4	.078	5/64	1/8	31/64	.078	1/4	3.24
RAF-1002	4-40	3/4	1/4	.078	5/64	1/8	35/64	.078	1/4	3.23
RAF-1360	4-40	13/16	1/4	.078	5/64	1/8	39/64	.078	1/4	3.45
RAF-1362	4-40	7/8	1/4	.078	5/64	1/8	43/64	.078	1/4	3.44
RAF-1364	4-40	15/16	1/4	.078	5/64	1/8	47/64	.078	1/4	3.51
RAF-1004	4-40	1	1/4	.078	5/64	1/8	51/64	.078	1/4	3.35
RAF-1366	4-40	3/8	5/16	.078	5/64	1/8	11/64	.078	5/16	2.71
RAF-1368	4-40	7/16	5/16	.078	5/64	1/8	15/64	.078	5/16	2.88
RAF-1006	4-40	1/2	5/16	.078	5/64	1/8	19/64	.078	5/16	2.78
RAF-1370	4-40	9/16	5/16	.078	5/64	1/8	23/64	.078	5/16	2.97
RAF-1372	4-40	5/8	5/16	.078	5/64	1/8	27/64	.078	5/16	3.17
RAF-1374	4-40	11/16	5/16	.078	5/64	1/8	31/64	.078	5/16	3.93
RAF-1008	4-40	3/4	5/16	.078	5/64	1/8	35/64	.078	5/16	3.75
RAF-1376	4-40	13/16	5/16	.078	5/64	1/8	39/64	.078	5/16	4.02
RAF-1378	4-40	7/8	5/16	.078	5/64	1/8	43/64	.078	5/16	4.06
RAF-1380	4-40	15/16	5/16	.078	5/64	1/8	47/64	.078	5/16	4.13
RAF-1010	4-40	1	5/16	.078	5/64	1/8	51/64	.078	5/16	3.95
RAF-1382	6-32	7/16	5/16	.095	3/32	1/4	.095	5/16	2.94	
RAF-1012	6-32	1/2	5/16	.095	3/32	1/4	.095	5/16	2.60	
RAF-1384	6-32	9/16	5/16	.095	3/32	1/4	.095	5/16	3.03	
RAF-1386	6-32	5/8	5/16	.095	3/32	1/4	.095	5/16	3.26	
RAF-1388	6-32	11/16	5/16	.095	3/32	1/4	.095	5/16	4.03	
RAF-1014	6-32	3/4	5/16	.095	3/32	1/4	.095	5/16	3.83	
RAF-1390	6-32	13/16	5/16	.095	3/32	1/4	.095	5/16	4.11	
RAF-1392	6-32	7/8	5/16	.095	3/32	1/4	.095	5/16	4.17	
RAF-1394	6-32	15/16	5/16	.095	3/32	1/4	.095	5/16	4.23	
RAF-1016	6-32	1	5/16	.095	3/32	1/4	.095	5/16	4.05	
RAF-1396	6-32	11/16	5/16	.095	3/32	1/4	.095	5/16	4.34	
RAF-1398	6-32	13/16	5/16	.095	3/32	1/4	.095	5/16	4.40	
RAF-1400	6-32	15/16	5/16	.095	3/32	1/4	.095	5/16	4.46	
RAF-1402	6-32	11/16	5/16	.095	3/32	1/4	.095	5/16	4.51	
RAF-1404	8-32	7/16	5/16	.120	3/32	1/4	.120	5/16	2.94	
RAF-1018	8-32	1/2	5/16	.120	3/32	1/4	.120	5/16	2.80	
RAF-1406	8-32	9/16	5/16	.120	3/32	1/4	.120	5/16	3.03	
RAF-1408	8-32	5/8	5/16	.120	3/32	1/4	.120	5/16	3.26	
RAF-1410	8-32	11/16	5/16	.120	3/32	1/4	.120	5/16	4.03	
RAF-1020	8-32	3/4	5/16	.120	3/32	1/4	.120	5/16	3.83	
RAF-1412	8-32	13/16	5/16	.120	3/32	1/4	.120	5/16	4.11	
RAF-1414	8-32	7/8	5/16	.120	3/32	1/4	.120	5/16	4.17	
RAF-1416	8-32	15/16	5/16	.120	3/32	1/4	.120	5/16	4.23	
RAF-1022	8-32	1	5/16	.120	3/32	1/4	.120	5/16	4.05	
RAF-1418	8-32	11/16	5/16	.120	3/32	1/4	.120	5/16	4.34	
RAF-1420	8-32	13/16	5/16	.120	3/32	1/4	.120	5/16	4.40	
RAF-1422	8-32	15/16	5/16	.120	3/32	1/4	.120	5/16	4.46	
RAF-1424	8-32	1	5/16	.120	3/32	1/4	.120	5/16	4.51	
RAF-1024	10-24	1/2	7/16	.130	5/32	1/4	.130	3/8	3.45	
RAF-1426	10-24	9/16	7/16	.130	5/32	1/4	.130	3/8	3.71	
RAF-1428	10-24	5/8	7/16	.130	5/32	1/4	.130	3/8	3.77	
RAF-1430	10-24	11/16	7/16	.130	5/32	1/4	.130	3/8	4.33	
RAF-1026	10-24	3/4	7/16	.130	5/32	1/4	.130	3/8	4.53	

Fillister Head



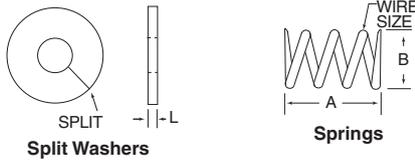
See table 13 below for additional discounts.

Cat. No.	Thread	A	B	D	E	F	G	Price Each 1-24
RAF-1206	4-40	1/4	.107	3/16	1/16	.078	11/64	1.49
RAF-1208	4-40	5/16	.107	3/16	1/8	.078	11/64	1.51
RAF-1210	4-40	3/8	.107	3/16	3/16	.078	11/64	1.53
RAF-1212	4-40	7/16	.107	3/16	1/4	.078	11/64	1.55
RAF-1214	4-40	9/16	.107	3/16	3/8	.078	11/64	1.59
RAF-1216	4-40	5/8	.107	3/16	7/16	.078	11/64	1.60
RAF-1218	4-40	11/16	.107	3/16	1/2	.078	11/64	1.63
RAF-1220	4-40	13/16	.107	3/16	5/8	.078	11/64	2.49
RAF-1222	4-40	7/8	.107	3/16	11/16	.078	11/64	2.51
RAF-1224	4-40	15/16	.107	3/16	3/4	.078	11/64	2.53
RAF-1226	6-32	5/16	.132	7/32	3/32	.095	7/32	1.54
RAF-1228	6-32	3/8	.132	7/32	5/32	.095	7/32	1.56
RAF-1230	6-32	7/16	.132	7/32	7/32	.095	7/32	1.58
RAF-1232	6-32	9/16	.132	7/32	11/32	.095	7/32	1.63
RAF-1234	6-32	5/8	.132	7/32	13/32	.095	7/32	1.65
RAF-1236	6-32	11/16	.132	7/32	15/32	.095	7/32	1.67
RAF-1238	6-32	13/16	.132	7/32	17/32	.095	7/32	2.68
RAF-1240	6-32	7/8	.132	7/32	21/32	.095	7/32	2.70
RAF-1242	6-32	15/16	.132	7/32	23/32	.095	7/32	2.72
RAF-1056	6-32	1/2	.107	3/16	5/16	.078	11/64	1.48
RAF-1062	6-32	3/4	.132	7/32	9/32	.095	7/32	2.43
RAF-1064	6-32	5/8	.132	7/32	11/32	.095	7/32	2.43
RAF-1068	8-32	1/2	.156	7/32	9/32	.120	1/4	2.55
RAF-1070	8-32	3/4	.156	7/32	11/32	.120	1/4	2.68
RAF-1072	8-32	1	.156	7/32	25/32	.120	1/4	4.10
RAF-1074	10-32	1/2	.180	9/32	7/32	.130	5/16	3.65
RAF-1076	10-32	3/4	.180	9/32	15/32	.130	5/16	3.88
RAF-1078	10-32	1	.180	9/32	23/32	.130	5/16	4.10

Cat. No.	Thread	A	B	D	E	F	G	H	J	Price Each 1-24
RAF-1432	10-24	13/16	7/16	.130	5/32	1/4	13/32	.130	3/8	4.98
RAF-1434	10-24	7/8	7/16	.130	5/32	1/4	15/32	.130	3/8	5.08
RAF-1436	10-24	15/16	7/16	.130	5/32	1/4	17/32	.130	3/8	5.13
RAF-1028	10-24	1	7/16	.130	5/32	1/4	19/32	.130	3/8	4.88
RAF-1438	10-24	11/16	7/16	.130	5/32	1/4	21/32	.130	3/8	5.18
RAF-1440	10-24	11/8	7/16	.130	5/32	1/4	23/32	.130	3/8	5.25
RAF-1442	10-24	13/16	7/16	.130	5/32	1/4	25/32	.130	3/8	5.30
RAF-1444	10-24	11/4	7/16	.130	5/32	1/4	27/32	.130	3/8	5.39
RAF-1446	10-24	15/16	7/16	.130	5/32	1/4	29/32	.130	3/8	5.44
RAF-1448	10-24	13/8	7/16	.130	5/32	1/4	31/32	.130	3/8	5.50
RAF-1450	10-24	17/16	7/16	.130	5/32	1/4	11/32	.130	3/8	5.57
RAF-1452	10-24	11/2	7/16	.130	5/32	1/4	13/32	.130	3/8	5.63
RAF-1454	10-24	19/16	7/16	.130	5/32	1/4	15/32	.130	3/8	5.71
RAF-1456	10-24	15/8	7/16	.130	5/32	1/4	17/32	.130	3/8	5.80
RAF-1458	10-24	111/16	7/16	.130	5/32	1/4	19/32	.130	3/8	5.87
RAF-1460	10-24	3/4	7/16	.130	5/32	1/4	111/32	.130	3/8	5.93
RAF-1462	10-24	113/16	7/16	.130	5/32	1/4	113/32	.130	3/8	6.25
RAF-1464	10-24	17/8	7/16	.130	5/32	1/4	115/32	.130	3/8	6.33
RAF-1466	10-24	115/16	7/16	.130	5/32	1/4	117/32	.130	3/8	6.41
RAF-1468	10-24	2	7/16	.130	5/32	1/4	119/32	.130	3/8	6.49
RAF-1030	10-32	1/2	7/16	.130	5/32	1/4	5/32	.130	3/8	3.45
RAF-1032	10-32	9/16	7/16	.130	5/32	1/4	7/32	.130	3/8	3.71
RAF-1034	10-32	5/8	7/16	.130	5/32	1/4	9/32	.130	3/8	3.55
RAF-1472	10-32	11/16	7/16	.130	5/32	1/4	13/32	.130	3/8	4.33
RAF-1036	10-32	3/4	7/16	.130	5/32	1/4	15/32	.130	3/8	4.53
RAF-1474	10-32	13/16	7/16	.130	5/32	1/4	17/32	.130	3/8	4.98
RAF-1038	10-32	7/8	7/16	.130	5/32	1/4	19/32	.130	3/8	4.80
RAF-1476	10-32	15/16	7/16	.130	5/32	1/4	17/32	.130	3/8	5.13
RAF-1038	10-32	1	7/16	.130	5/32	1/4	19/32	.130	3/8	4.88
RAF-1478	10-32	111/16	7/16	.130	5/32	1/4	21/32	.130	3/8	5.18
RAF-1480	10-32	11/8	7/16	.130	5/32	1/4	23/32	.130	3/8	5.25
RAF-1482	10-32	13/16	7/16	.130	5/32	1/4	25/32	.130	3/8	5.30
RAF-1040	10-32	11/4	7/16	.130	5/32	1/4	27/32	.130	3/8	5.10
RAF-1484	10-32	15/16	7/16	.130	5/32	1/4	29/32	.130	3/8	5.39
RAF-1486	10-32	13/8	7/16	.130	5/32	1/4	31/32	.130	3/8	5.44
RAF-1488	10-32	17/16	7/16	.						

SPLIT WASHERS AND SPRINGS

303 Stainless Steel



Washers

See table 13 below for additional discounts.

Cat. No.	For Thread Size	OD	ID	L	Price Each 1-24	Cat. No.	For Thread Size	OD	ID	L	Price Each 1-24
RAF-1082	6-32	.171	.112	.010	.51	RAF-1088	10-32	.312	.166	.012	.51
RAF-1084	8-32	.312	.146	.012	.51	RAF-1090	1/4-20	.312	.204	.012	.51

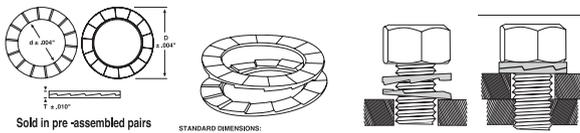
Springs

See table 13 below for additional discounts.

Cat. No.	A	B	Wire Size	Price Each 1-24	Cat. No.	A	B	Wire Size	Price Each 1-24
RAF-1001	3/4	3/16	.010	.51	RAF-1003	1 1/8	.310	.016	.51

13	Quantity Discount	1-24	25-249	250-999	1000-2499	2500-4999	5000+
		Net	5%	10%	15%	25%	Call

VIBRATION PROOF FASTENERS



These heavy duty locking devices solve fastener failure by maintaining adequate tension on the bolt and nut to prevent any loosening due to vibration and/or thermal loads. Consists of a pair of lock washers, each with a succession of cams or wedges on one side and radial teeth on the other. Installed so cam faces are together, the lead angle of cams is greater than the pitch of the threads on bolts and prevents the nut from turning. Should screw loosen, a wedge action is produced and the preload is maintained. Can be used on standard as well as high grade bolts. Type 316 stainless steel. Right hand thread only. Sold in preassembled pairs only. Other sizes available as special order. Please call for price and delivery.

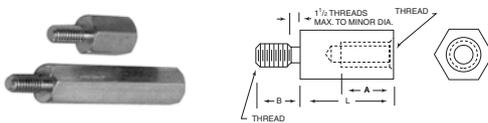
See table 32 below for additional discounts.

Cat. No.	Bolt Size		ID d	OD D	T	Price Per Pair 1-99
	Inch	mm				
NL-00SS	#4 and #5	3	.1340	.2760	.087	.61
NL-0SS	#8	4	.173	.354	.087	.61
NL-1SS	3/16	5	.2130	.3540	.087	.61
NL-2SS	1/4	6	.2560	.4250	.087	.98
NL-3SS	5/16	8	.3430	.5310	.087	1.07
NL-4SS	3/8	10	.4210	.630	.087	1.21
NL-5SS	7/16	11	.4490	.7280	.087	1.68
NL-6SS	1/2	12	.5120	.7680	.087	2.12
NL-8SS	5/8	16	.669	1.000	.126	3.05
NL-9SS	3/4	20	.8430	1.209	.126	4.42

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
		Net	5%	8%	10%	12.5%	15%	Call

STANDOFFS

1/4" Hex Male/Female Threaded Standoffs



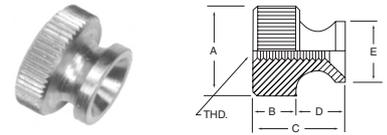
See table 16 below for additional discounts.

Cat. No.	Thread	A	B	L	Price Each 1-24
RAF-806	4-40	1/4	3/16	1/2	1.03
RAF-822	6-32	3/8	1/4	1/2	1.16
RAF-824	6-32	3/8	1/4	5/8	1.27
RAF-826	6-32	3/8	1/4	3/4	1.31
RAF-828	6-32	3/8	1/4	7/8	1.39
RAF-830	6-32	3/8	1/4	1	1.46
RAF-846	8-32	7/16	3/8	1	1.57
RAF-848	8-32	7/16	3/8	1 1/4	1.80

16	Quantity Discount	1-24	25-249	250-499	500-999	1000-2499	2500-9999
		Net	15%	25%	35%	45%	55%

THUMB NUTS

Knurled

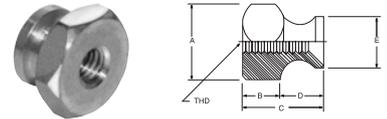


See table 21 below for additional discounts.

Cat. No.	Thread	A	B	C	D	E	Price Each 1-49
AJ-743	2-56	1/4	1/8	1/4	1/8	3/16	2.00
AJ-746	4-40	5/16	1/8	1/4	1/8	1/4	2.10
AJ-749	6-32	3/8	1/8	9/32	5/32	11/32	2.52
AJ-752	8-32	7/16	1/8	9/32	5/32	3/8	2.68
AJ-755	10-24	1/2	5/32	11/32	3/16	13/32	3.18
AJ-758	10-32	1/2	5/32	11/32	3/16	13/32	3.18
AJ-761	1/4-20	9/16	5/32	3/8	7/32	15/32	3.72
AJ-764	5/16-18	5/8	3/16	13/32	7/32	17/32	4.42
AJ-767	3/8-16	3/4	7/32	15/32	1/4	5/8	8.54

21	Quantity Discount	1-49	50-99	100-149	150-249	250-499	500-999	1000+
		Net	5%	10%	15%	20%	25%	Call

Hex



See table 13 below for additional discounts.

Cat. No.	Thread	A	B	C	D	E	Price Each 1-24
AJ-670	2-56	1/4	1/8	1/4	1/8	3/16	1.56
AJ-672	4-40	5/16	1/8	1/4	1/8	1/4	1.65
AJ-674	6-32	3/8	1/8	9/32	5/32	11/32	1.97
AJ-676	8-32	7/16	1/8	9/32	5/32	3/8	2.09
AJ-678	10-24	1/2	5/32	11/32	3/16	13/32	2.49
AJ-680	10-32	1/2	5/32	11/32	3/16	13/32	2.49
AJ-682	1/4-20	9/16	5/32	3/8	7/32	15/32	2.92
AJ-684	5/8-16	5/8	3/16	13/32	7/32	17/32	3.45
AJ-686	3/8-16	3/4	7/32	15/32	1/4	5/8	6.68

13	Quantity Discount	1-24	25-249	250-999	1000-2499	2500-4999	5000+
		Net	5%	10%	15%	25%	Call

ACORN NUTS

303 Stainless Steel



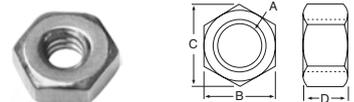
See table 11 below for additional discounts.

Cat. No.	A	Hex B	C	Price Each 1-24
MAN-10	5/16-18	5/8	5/8	3.52
MAN-11	3/8-16	3/4	3/4	4.13
MAN-12	1/2-13	7/8	15/16	7.00
MAN-14	3/4-10	1 1/4	1 3/8	9.95

11	Quantity Discount	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
		Net	5%	8%	10%	12.5%	15%	Call

HEX NUTS

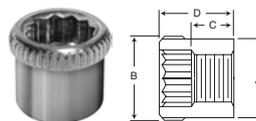
303 Stainless Steel



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Qty. In Assortment	Price Each 1-99
MHN-3314	4-40	1/4	.289	7/64	20	.18
MHN-3315	6-32	5/16	.361	1/8	20	.23
MHN-3316	8-32	11/32	.397	9/64	20	.28
MHN-3317	10-32	3/8	.433	9/64	20	.40
MHN-3318	10-24	3/8	.433	9/64	10	.40
MHN-3319	1/4-20	7/16	.505	13/64	10	.43
MHN-3320	5/16-18	1/2	.577	9/32	10	.52
MHN-3321	5/16-24	1/2	.577	9/32	5	.52
MHN-3322	3/8-16	9/16	.650	11/32	5	.82
MHN-3323	3/8-24	9/16	.650	11/32	5	.82
MHN-3324	Assortment					52.36

HOLO-KROME ALLENUTS



Austenitic stainless steel. Please inquire for quantity discounts.

See table 32 below for additional discounts.

Cat. No.	Thread	A	B	Min C	D	Hex Size	Min. C/Bore*	Price Each 1-99
HAN-6070	4-40	.185	.207	.080	.175	1/8	.202	1.30
HAN-6078	1/4-20	.400	.427	.225	.414	1/4	.421	2.38
HAN-6080	5/16-18	.495	.523	.285	.517	5/16	.516	3.03
HAN-6082	3/8-16	.587	.617	.325	.613	3/8	.610	3.84

*Min. counterbore hole size in applications where allenut is to be pressed or drawn into non-hardened materials for anchoring purposes.

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
		Net	5%	8%	10%	12.5%	15%	Call

COMPRESSION SPRINGS

Type 302 Stainless Steel Music Wire



MUSIC WIRE



Made of full hard Type 302 stainless. Many uses including springs, control linkages, wire forms, etc. Other sizes available as special orders. Please call for price and delivery.

See table 32 below for additional discounts.

Cat. No.	Dia.	Gauge	Ft. Per Lb.	Lb. Size	Price Each 1-99
PBW-9010	.010	1	3,749	1	81.99
PBW-9020	.020	8	937	1	51.87
PBW-9024	.024	10	650	1	47.36
PBW-9029	.029	12	450	1	42.62
PBW-9031	.031	13	400	1	41.56
PBW-9041	.041	18	223	1	35.68
PBW-9045	.045	20	190	1	33.27
PBW-9059	.059	25	110	1	29.99
PBW-9062*	.063	26	95	1	29.99
PBW-9080	.080	30	58	1	28.68
PBW-9090	.090	32	45	1	26.26
PBW-9125	.125	—	24	1	24.07

10" Long Assortments

See table 31 below for additional discounts.

Cat. No.	Description	Price Per Set 1-99
SSA-1	30 Springs	30.60
(two each of stainless springs starred below)		
SSA-2	60 Springs	82.26
(two each of stainless springs listed below)		

10" Long Individual Springs

See table 31 below for additional discounts.

Cat. No.	OD	Wire Dia.	Coils Per Inch	Price Each 1-99
*SSS-1	3/32	.010	28	.81
*SSS-2	3/32	.014	28	.78
*SSS-3	1/8	.012	23	.90
*SSS-4	1/8	.016	25	.93
*SSS-5	3/16	.014	13	.81
*SSS-6	3/16	.018	14	.84
*SSS-7	3/16	.025	16	.96
*SSS-8	1/4	.018	9	.78
*SSS-9	1/4	.026	10	.93
*SSS-10	1/4	.031	11	.96
*SSS-11	1/4	.035	13	.96
SSS-12	1/4	.042	10	.96
SSS-13	1/4	.047	11	1.11
*SSS-14	5/16	.022	10	.99
*SSS-15	5/16	.031	10	1.14
*SSS-16	5/16	.038	11	1.20
*SSS-17	5/16	.042	9	1.20
SSS-18	5/16	.047	10	1.29
SSS-19	5/16	.055	9	1.26
SSS-20	3/8	.043	7	1.11
SSS-21	3/8	.055	7	1.23
SSS-22	3/8	.063	8	1.47
SSS-23	3/8	.073	8	1.68
SSS-24	7/16	.063	6	1.35
SSS-25	7/16	.076	6	1.50
SSS-26	7/16	.086	6	1.68
SSS-27	1/2	.063	5	1.41
SSS-28	1/2	.075	5	1.53
SSS-29	1/2	.093	6	2.25
SSS-30	1/2	.114	6	2.67

20" Long Individual Springs

Long length compression springs can be cut to create a custom length spring. End coils may be bent back to touch the previous coil to create a squared end. The constant divided by the number of coils equals the load rate per inch.

See table 31 below for additional discounts.

Cat. No.	OD	Wire Dia.	Rate/Inch	Price Each 1-99
SSS-201	.125	.013	1.1	2.38
SSS-204	.125	.020	5.8	2.69
SSS-205	.187	.015	1.0	2.69
SSS-206	.187	.017	1.4	2.57
SSS-207	.187	.020	2.9	2.57
SSS-208	.187	.026	7.3	2.57
SSS-209	.250	.015	.6	2.67
SSS-210	.250	.017	1.0	2.67
SSS-211	.250	.020	1.6	2.67
SSS-212	.250	.026	4.2	2.85
SSS-213	.250	.032	10.0	2.85
SSS-214	.312	.020	1.2	2.98
SSS-215	.312	.026	2.9	2.98
SSS-216	.312	.032	7.0	2.98
SSS-217	.312	.041	15.0	3.20
SSS-218	.375	.032	4.4	3.20
SSS-219	.375	.041	11.0	3.31
SSS-220	.375	.054	32.0	3.31
SSS-221	.438	.041	7.6	3.55
SSS-222	.438	.054	23.0	3.55
SSS-223	.500	.054	18.0	3.66
SSS-224	.500	.072	61.0	4.22
SSS-225	.562	.041	3.8	4.61
SSS-226	.562	.054	14.0	5.58
SSS-227	.562	.072	44.0	6.28
SSS-228	.562	.091	128.0	7.44
SSS-229	.625	.072	35.0	7.80
SSS-230	.625	.091	99.0	7.95
SSS-231	.750	.091	66.0	4.15

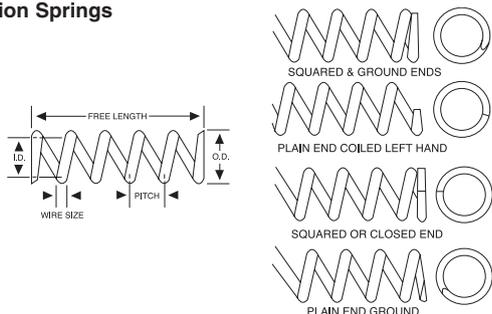
32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

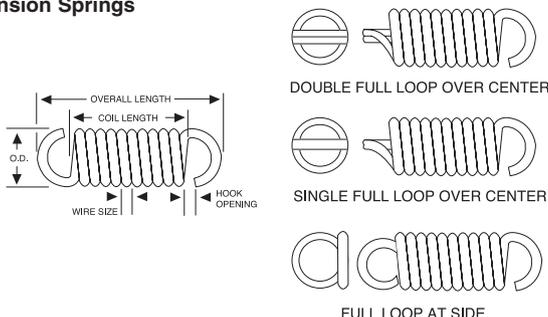
CUSTOM MADE SPRINGS

All springs listed in our catalog are in stock and available for same day shipment. If you need a spring that is not listed, we can special order it to your exact specifications. You may provide a drawing, a sample or the spring data as called out in the drawing below. Please call for price and delivery information.

Compression Springs



Extension Springs



Note: Please be sure to include overall length, coil length, OD, wire diameter, type of metal, hook openings and end type.

10	Quantity	1-249	250-999	1000-1499	1500-2499	2500-4999	5000+
	Discount	Net	10%	15%	20%	25%	Call

BELLEVILLE DISC SPRINGS



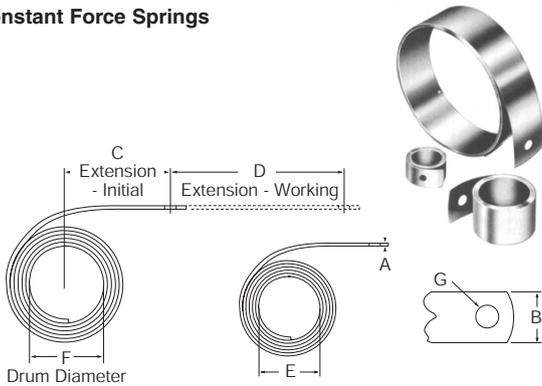
Conical in shape, these disc springs have special geometric relationships of OD, ID, thickness and height. They are used singly or in stacks to achieve desired load and travel in situations where coil springs are not practical. They are also used to maintain and absorb pressure in bolted assemblies. Made from 17/7 PH stainless steel for use up to 500°F. Deflection is shown at 75% of height. Other sizes are available as special orders. Please call for price and delivery.

See table 10 below for additional discounts.

Cat. No.	A	B	C	D	E	Deflection @ F=.75h		Price Each 1-249
						Load Lbs.	Deflection	
BDA-405	.315	.165	.0157	.0080	.0236	50	.0060	.28
BDA-410	.394	.205	.0197	.0099	.0295	78	.0074	.31
BDA-415	.492	.244	.0197	.0139	.0335	70	.0104	.33
BDA-420	.492	.244	.0276	.0119	.0394	159	.0090	.35
BDA-425	.551	.283	.0197	.0158	.0354	66	.0119	.33
BDA-430	.551	.283	.0315	.0119	.0433	191	.0090	.41
BDA-440	.630	.323	.0236	.0179	.0413	97	.0134	.40
BDA-450	.630	.323	.0354	.0140	.0492	242	.0105	.45
BDA-455	.709	.323	.0315	.0199	.0512	187	.0149	.51
BDA-470	.787	.402	.0394	.0219	.0610	343	.0164	.74
BDA-475	.787	.402	.0433	.0179	.0610	364	.0134	.74
BDA-485	.906	.402	.0394	.0278	.0669	314	.0208	.71
BDA-490	.984	.480	.0591	.0218	.0807	702	.0164	1.40
BDA-495	1.100	.559	.0394	.0318	.0709	264	.0238	1.27
BDA-500	1.100	.559	.0591	.0258	.0846	683	.0193	1.71
BDA-505	1.240	.642	.0492	.0358	.0846	454	.0268	1.66
BDA-535	1.570	.642	.0591	.0515	.1102	658	.0386	2.20
BDA-540	1.570	.803	.0591	.0456	.1043	627	.0342	2.13
BDA-545	1.570	.803	.0886	.0358	.1240	1,570	.0269	4.51
BDA-560	1.970	1.000	.0787	.0557	.1339	1,129	.0418	5.43
BDA-565	1.970	1.000	.1181	.0438	.1614	2,871	.0329	6.57
BDA-575	2.360	1.201	.1181	.0678	.1850	3,184	.0508	8.80

SPRINGS

Constant Force Springs



Well suited to long extensions with no load build up. The spring is usually mounted with the ID tightly wrapped on a drum and the free end attached to a loading force such as a counterbalance. Load capacity can be multiplied by using two or more strips in tandem, back to back or laminated. In use, be sure to leave at least 1-1/2" coiled on the drum at full extension. The spring ID will wrap tightly on the drum so that most applications require no fastening to the drum. Made from Type 301 stainless steel.

See table 28 below for additional discounts.

Cat. No.	A	B	Lgth.	Min.			F	+/- 10% Load Lbs.	G	Price Each 1-5
				C	D	E				
4,000 Cycle Fatigue Life										
CFS-10	.004	.25	15	.61	12	.34	.40	.50	.131	4.62
CFS-15	.005	.31	18	.75	15	.42	.50	.75	.131	4.56
CFS-20	.006	.37	22	.92	18	.51	.62	1.12	.131	4.08
CFS-25	.007	.50	26	1.06	21	.59	.75	1.62	.131	5.28
CFS-35	.010	.68	34	1.53	27	.85	1.00	3.50	.187	8.34
CFS-40	.012	.81	38	1.84	30	1.02	1.25	5.00	.187	8.04
CFS-45	.014	1.00	43	2.14	33	1.19	1.50	7.00	.187	9.93
40,000 Cycle Fatigue Life										
CFS-50	.006	.37	21	2.03	12	1.13	1.36	.25	.131	4.16
CFS-65	.010	.68	36	3.38	21	1.88	2.26	.75	.187	6.52
CFS-75	.014	1.00	48	4.74	27	2.63	3.16	1.62	.187	10.76

28	Quantity	1-5	6-49	50-99	100-249	250-499	500+
	Discount	Net	25%	30%	35%	40%	Call

Extension Springs

20" Long



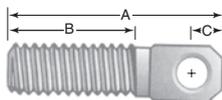
Long length extension springs can be custom cut to length. End coils can be bent into hooks or loops. Spring is 20" long and made of 302 stainless steel.

See table 31 below for additional discounts.

Cat. No.	OD	Wire Dia.	Lbs. Per In.	Price Each 1-99
ES-253	.125	.017	1.44	5.03
ES-254	.125	.020	3.50	5.17
ES-255	.187	.015	.18	5.23
ES-256	.187	.017	.40	5.34
ES-257	.187	.020	.88	5.47
ES-258	.187	.026	3.56	5.59
ES-261	.250	.020	.33	5.69
ES-262	.250	.026	1.19	5.75
ES-263	.250	.032	4.03	6.33
ES-264	.312	.020	.16	6.60
ES-266	.312	.032	1.87	6.78
ES-267	.312	.041	7.33	7.51
ES-268	.375	.032	1.02	7.86
ES-269	.375	.041	3.96	8.04
ES-270	.375	.054	17.35	8.12
ES-271	.438	.041	23.00	8.55
ES-272	.500	.054	6.50	9.11
ES-273	.438	.054	10.00	10.03
ES-274	.500	.072	29.00	10.87
ES-276	.562	.072	19.00	11.77
ES-275	.562	.054	4.40	10.92
ES-277	.562	.091	68.00	12.94
ES-279	.625	.091	51.00	14.58
ES-280	.750	.091	27.00	15.11

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

Spring Anchors



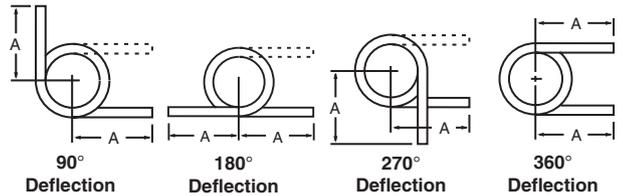
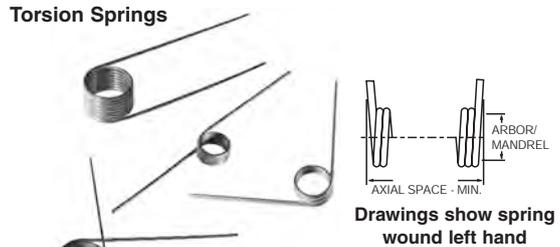
Spring anchors offer an economical way to secure the ends of extension springs, and provide easy adjustments. 300 series stainless steel.

See table 33 below for additional discounts.

Cat. No.	Thread	A	B	C	Hole Size	Load/Lbs.	Price Each 1-99
SSA-60	8-32	.875	.625	.085	.07	170	6.78
SSA-70	1/4-20	1.25	.875	.13	.10	500	7.20
SSA-80	1/4-28	1.25	.875	.13	.10	500	7.58
SSA-90	3/8-16	1.62	1.125	.18	.17	835	9.28

33	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	2%	5%	8%	10%	Call

Torsion Springs



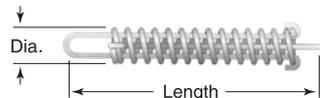
Widely used to store and release energy of rotation or to maintain a pressure over a short distance. Normally used over a supporting mandrel or arbor. The suggested mandrel sizes below allow about 10% clearance at the deflection listed. Sufficient room (minimum axial space) must be provided in the assembly for the spring to function properly. These springs should be used in the direction that winds the coils. Torque values listed are recommended maximum torques. For inspection purposes, the load should be applied at 1/2 leg length (A). These values can be increased 20% for static conditions with only slight setting. Type 302 stainless, plain finish. (ASTM-A313 or AMS-5688). Other sizes available as special orders. Please call for price and delivery.

See table 12 below for additional discounts.

Left Hand Wound Cat. No.	Right Hand Wound Cat. No.	Wire Dia.	Outside Dia.	Degree of Deflection	Torque In-Lbs.	Mandrel Size	A	Min. Axial Space	Price Each 1-24
TSP-30	—	.015	.130	180	.093	.078	.500	.107	3.20
TSP-60	TSP-560	.017	.259	270	.117	.156	.750	.123	3.20
TSP-90	TSP-590	.021	.271	360	.218	.187	1.000	.242	3.20
TSP-110	TSP-610	.025	.235	90	.375	.140	.750	.096	3.20
TSP-120	TSP-620	.025	.224	180	.375	.140	.750	.206	3.20
TSP-130	TSP-630	.028	.249	180	.515	.140	1.000	.238	3.20
—	TSP-640	.030	.281	90	.625	.172	1.000	.116	3.33
TSP-150	—	.032	.288	90	.820	.172	1.000	.152	3.33
TSP-160	TSP-660	.035	.315	90	1.000	.187	1.250	.135	3.33
TSP-170	TSP-670	.035	.450	180	1.000	.281	1.250	.212	3.38
TSP-180	—	.038	.353	270	1.190	.218	1.250	.465	3.38
TSP-190	TSP-690	.040	.309	90	1.375	.187	1.250	.198	3.60
TSP-200	TSP-700	.045	.357	90	2.000	.203	1.250	.259	3.60
TSP-210	TSP-710	.045	.556	270	2.000	.359	2.000	.415	3.60
TSP-220	TSP-720	.048	.375	90	2.500	.218	1.250	.238	4.01
TSP-230	TSP-730	.048	.404	180	2.500	.250	1.250	.450	4.01
TSP-240	TSP-740	.051	.408	90	2.900	.234	2.000	.293	4.01
TSP-250	TSP-750	.054	.484	90	3.275	.296	2.000	.310	4.28
TSP-260	TSP-760	.059	.499	90	4.200	.296	2.000	.340	4.59
TSP-270	TSP-770	.059	.526	180	4.200	.328	2.000	.560	4.59
TSP-280	TSP-780	.063	.560	90	5.150	.343	2.000	.362	4.91
TSP-290	TSP-790	.063	.767	180	5.150	.500	2.000	.475	5.40
TSP-300	TSP-800	.070	.826	270	7.000	.531	2.000	.717	5.54
TSP-310	TSP-810	.078	.687	90	9.750	.406	2.000	.450	5.22
TSP-320	TSP-820	.078	.803	180	9.750	.500	2.000	.660	5.89

12	Quantity	1-24	25-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	10%	15%	25%	Call

Drawbar Springs



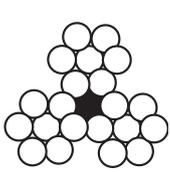
Drawbar springs have long steel loops that pass through the center of the spring and hook around to opposite end, thus compressing the spring upon loading. This design produces physical extension stops to prevent unexpected overloading and fracturing it will continue to hold a static load. Available in zinc plated spring steel or stainless steel. The rate lbs./in. listed below indicates the pounds needed to pull out the inch of the spring. For example, if the rate is 25 lbs. it will take 25 lbs. to pull out the first inch, 50 lbs. for the second inch, etc.

See table 33 below for additional discounts.

Cat. No.	Rates Lbs./Inch	Max. Deflection	Max. Load Lbs.	Lgth.	Dia.	Price Each 1-99

CABLE AND ACCESSORIES

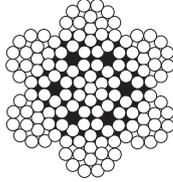
Offered in a wide variety of materials, coating, diameters and strand styles. Other sizes and types are available as special order. See page 18 for lanyard assemblies. Due to custom cutting on cable, no returns can be made.



3 x 7



7 x 7



7 x 19

Clear Nylon Coated - 304 Stainless

See table 32 below for additional discounts.

Cat. No.	Wire Dia.	Coating	Strand	Breaking Strength	Price/Ft. 1-99	Cat. No.	Wire Dia.	Coating	Strand	Breaking Strength	Price/Ft. 1-99
CBL-15	.009	.014	3x7	10	.42	CBL-130	1/16	3/32	7x7	480	.51
CBL-17	.018	.024	7x7	40	.43	CBL-330	1/16	3/32	7x19	480	1.05
CBL-19	.027	.034	7x7	90	.67	CBL-140	3/32	1/8	7x7	920	.77
CBL-110	.032	.037	7x7	120	.58	CBL-340	3/32	1/8	7x19	920	1.18
CBL-310	.032	.037	7x19	120	1.03	CBL-150	1/8	3/16	7x7	1,700	.99
CBL-1210	.036	.046	7x7	150	.35	CBL-350	1/8	3/16	7x19	1,760	1.48
CBL-312	.036	.046	7x19	160	1.33	CBL-1215	3/16	1/4	7x19	3,700	1.47
CBL-120	3/64	1/16	7x7	270	.44	CBL-1220	1/4	5/16	7x19	6,400	2.23
CBL-320	3/64	1/16	7x19	270	1.08						

Uncoated Cable - 304 Stainless

See table 32 below for additional discounts.

Cat. No.	Wire Dia.	Strand	Breaking Strength	Price/Ft. 1-99	Cat. No.	Wire Dia.	Strand	Breaking Strength	Price/Ft. 1-99
CBL-7	.018	7x7	40	.39	CBL-40	3/32	7x7	920	.58
CBL-210	.032	7x19	120	.94	CBL-240	3/32	7x19	920	.96
CBL-1010	.036	7x7	150	.25	CBL-50	1/8	7x7	1,700	.70
CBL-212	.036	7x19	160	1.25	CBL-250	1/8	7x19	1,760	1.14
CBL-20	3/64	7x7	270	.36	CBL-1015	3/16	7x19	3,700	1.00
CBL-220	3/64	7x19	270	1.08	CBL-1020	1/4	7x19	6,400	1.27
CBL-30	1/16	7x7	480	.35	CBL-1025	5/16	7x19	9,000	1.81
CBL-230	1/16	7x19	480	.92	CBL-1030	3/8	7x19	12,200	2.30

Clear Teflon Coated - 304 Stainless

See table 32 below for additional discounts.

Cat. No.	Wire Dia.	Coating	Strand	Breaking Strength	Price/Ft. 1-99	Cat. No.	Wire Dia.	Coating	Strand	Breaking Strength	Price/Ft. 1-99
CBL-357	.018	.026	7x7	40	.53	CBL-367	.036	.049	7x19	160	1.40
CBL-359	.027	.036	7x7	90	.75	CBL-369	3/64	.062	7x7	270	.74
CBL-361	.040	.040	7x7	120	.95	CBL-371	3/64	.062	7x19	270	1.29
CBL-363	.036	.040	7x19	120	1.25	CBL-375	1/16	.084	7x19	480	1.39

Uncoated - 316 Stainless

See table 32 below for additional discounts.

Cat. No.	Wire Dia.	Strand	Breaking Strength	Price/Ft. 1-99	Cat. No.	Wire Dia.	Strand	Breaking Strength	Price/Ft. 1-99
CBL-1035	3/64	7x7	240	.21	CBL-1050	1/8	7x19	1,300	.64
CBL-1040	1/16	7x7	360	.22	CBL-1055	3/16	7x19	2,900	1.04
CBL-1045	3/32	7x7	700	.36					

Thimbles



- Type 316 stainless steel
- Meets Fed. Spec. FF-T-276b for Type III thimbles

Used with loop sleeves or wire clips to protect cable from wear.

See table 32 below for additional discounts.

Cat. No.	For Cable Dia.	OAL	Inside Width	Price Each 1-99
CBL-505	.015-3/64	27/64	.188	.40
CBL-510	3/64, 1/16, 5/64	15/16	.339	.53
CBL-515	3/32, 7/64, 1/8	1	.339	.80
CBL-520	3/16	1 1/2	1/2	1.29
WRT-300	1/4	1 7/8	1 1/16	1.44

Wire Rope Clips



- Type 304 stainless steel
- Furnished with hex nuts
- Meet Fed. Spec. FF-C-450c, Type I, Class 1

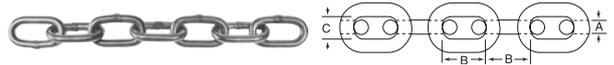
See table 32 below for additional discounts.

Cat. No.	For Cable Dia.	Min. No. of Clips	Price Each 1-99
CBL-555	1/16	2	2.79
CBL-565	3/32-1/8	2	3.53
CBL-575	3/16	3	4.47
WRC-510	1/4	2	7.59
WRC-520	3/8	2	10.34

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	8%	10%	12.5%	15%	Call	

CHAIN

Grade 40 High Test Chain



Type 316L stainless steel. Commonly used for commercial and marine applications. Made to "proof coil" dimensions. Larger sizes available as special order. Please call for price and delivery.

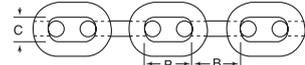
See table 22 below for additional discounts.

Cat. No.	Size	A	B	C	Working Load Limit	Price Per Foot 1-49
SUN-220	5/32	.16	.77	.28	500	3.60
SUN-225	3/16	.20	.92	.34	930	4.92
SUN-230	1/4	.25	1.00	.43	1,570	8.84
SUN-235	5/16	.32	1.03	.49	2,400	14.08
SUN-240	3/8	.39	1.22	.61	3,550	18.00
SUN-245	1/2	.47	1.50	.78	5,400	37.44

Grade 50 Lifting Chain



APPROVED FOR LIFTING



Type 316L stainless steel. Working loads are based on gradual pull, and not shock loads. Make sure all components in your assembly are overhead lifting rated and have the same working loads.

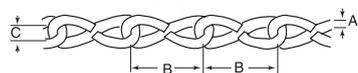
See table 22 below for additional discounts.

Cat. No.	Size	A	B	C	Working Load Limit	Price Per Foot 1-49
SUN-265	3/16	.19	.58	.25	1,100	11.40
SUN-270	9/32	.28	.85	.38	2,200	19.16
SUN-275	5/16	.32	.95	.45	2,700	23.50
SUN-280	3/8	.39	1.18	.55	4,400	35.66
SUN-285	1/2	.51	1.55	.75	7,300	47.14

Single Jack Chain



LIFTING



Light duty wire chain used where high strength is not required. Ideal for lighting fixtures.

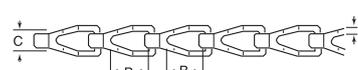
See table 22 below for additional discounts.

Cat. No.	Size	A	B	C	Working Load Limit	Price Per Foot 1-49
SUN-305	#18	.05	.39	.12	5	.62
SUN-310	#16	.06	.52	.15	10	.72
SUN-315	#14	.08	.63	.2	16	1.04
SUN-320	#12	.10	.75	.23	29	1.58
SUN-325	#10	.13	.85	.31	43	2.52

Sash Chain



LIFTING



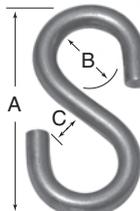
Flat metal chain operates smoother over pulleys, lighting fixtures, etc.

See table 22 below for additional discounts.

Cat. No.	Size	A	B	C	Working Load Limit	Price Per Foot 1-49
SUN-290	#35	.08	.57	.17	225	2.54
SUN-295	#25	.06	.57	.24	200	2.34
SUN-300	#8	.06	.57	.24	150	2.54

22	Quantity Discount	1-49	50-99	100-149	150-249	250-499	500-999	1000+
	Net	2%	5%	8%	10%	12.5%	Call	

S-HOOKS



Made of Type 304 stainless steel. Any deviations such as angular lifts, shock loads, modifications of the S-hook will result in drastically reduced maximum loads.

See table 31 below for additional discounts.

Cat. No.	Wire Dia.	A	B	C	Max. Load (Lbs.)	Price Each 1-99
SH-29	.186	1 3/4	1/2	1/4	40	.91
SH-30	.220	2 1/8	5/8	5/16	58	1.33
SH-31	.250	2 1/2	3/4	7/16	70	1.87

31	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	10%	15%	20%	25%	Call	

ANCHOR SHACKLES

Made from Type 316 stainless steel. Meets Federal Specifications RRC-271D, Type IV. Screw pin style has a pin that threads into one portion of the shackle. Safety style has a bolt that runs all the way through the shackle, secured with a nut and a cotter pin through the threaded bolt. Chain shackles and round pin anchor shackles also available as special order. Please call for price and delivery.

Screw Pin



See table 31 below for additional discounts.

Cat. No.	Nom. Shackle Size	B	C	D	Rated Load Tons	Price Each 1-99
SUN-65	3/16	1/4	.44	.89	3/16	5.30
SUN-70	1/4	5/16	.56	1.10	1/2	6.52
SUN-75	5/16	3/8	.62	1.29	3/4	7.28
SUN-80	3/8	7/16	.65	1.39	1	10.60
SUN-85	7/16	1/2	.75	1.78	1 1/2	17.36
SUN-90	1/2	5/8	.87	1.84	2	19.46
SUN-95	5/8	3/4	1.21	2.49	3	36.12
SUN-100	3/4	7/8	1.29	2.76	4	57.20
SUN-105	7/8	1	1.50	3.41	1/2	102.74
SUN-110	1	1 1/8	1.73	3.78	6	122.04

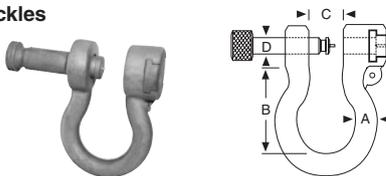
Safety



See table 31 below for additional discounts.

Cat. No.	Nominal Shackle Size	B	C	D	Rated Load Tons	Price Each 1-99
SUN-130	1/4	5/16	.56	1.10	1/2	16.88
SUN-135	5/16	3/8	.62	1.29	3/4	18.18
SUN-140	3/8	7/16	.65	1.39	1	22.62
SUN-145	7/16	1/2	.75	1.78	1 1/2	31.50
SUN-150	1/2	5/8	.87	1.84	2	38.12

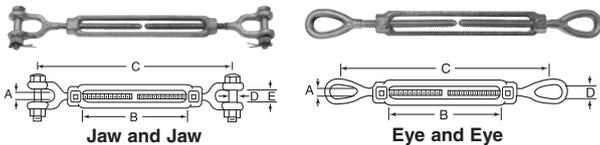
One Piece Shackles



Patented one piece design, with non-removable bolt, requires no tools, saves time on installation and removal. For safety, a two step process is required to open the slide and release the non-removable bolt. You never have to replace nuts, pins or cotter keys. To open, depress the roller pin and disengage the locking slide. The bolt slides free but stays with the shackle. The shackle and spring are made of 316 stainless steel. Safety factor is 2. Meets all test requirements of RR-C-271B.

Cat. No.	Safe Working Load (Tons)	A	B	C	D	Price Each
OPS-5500	1	1/2	1 5/8	1 3/16	5/8	39.17
OPS-5625	1 1/2	5/8	2	1 1/16	3/4	67.50
OPS-5750	2 1/2	3/4	2 3/8	1 1/4	7/8	85.00

TURNBUCKLES



Made from 316 stainless steel. Meets dimensions of ASTM specification F1145-92 Type 1, Class D. Other sizes available as special order. Please call for price and delivery.

See table 31 below for additional discounts.

Cat. No.	A	B	C	D	E	Rated Load Lbs.	Price Each 1-99
Jaw and Jaw							
SUN-330	1/4	4.0	7.50	.20	.45	500	41.60
SUN-335	5/16	4.5	8.50	.25	.51	800	59.00
SUN-340	3/8	6.0	10.75	.30	.54	1,200	89.60
SUN-345	1/2	6.0	12.00	.37	.63	2,200	103.80
SUN-350	5/8	6.0	13.50	.50	.82	3,500	140.26
SUN-355	3/4	6.0	15.00	.62	1.03	5,200	169.38
SUN-360	1	6.0	19.00	.75	1.23	10,000	301.88
SUN-365	1	12.0	24.00	.75	1.23	10,000	362.26
Eye and Eye							
SUN-375	1/4	4.0	7.50	.45	—	500	27.54
SUN-380	5/16	4.5	8.50	.50	—	800	39.68
SUN-385	3/8	6.0	10.75	.51	—	1,200	61.62
SUN-390	1/2	6.0	12.00	.71	—	2,200	93.22
SUN-395	5/8	6.0	13.50	.87	—	3,500	122.12
SUN-400	3/4	6.0	15.00	.98	—	5,200	135.68
SUN-405	1	6.0	19.00	1.35	—	10,000	249.06

31	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	10%	15%	20%	25%	Call	Call

LINKS

Master Links

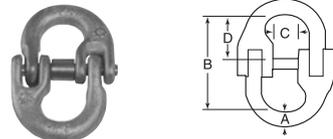


Used to assemble slings and allow safe maximum spread of sling legs without binding. Formed and welded construction. Each link is stamped with size and working load. Each link has been proof tested and passivated. Made from Type 316 stainless steel.

See table 31 below for additional discounts.

Cat. No.	A	B	C	Working Load Limit	Price Each 1-99
SUN-5	3/8	3.00	1.50	2,000	21.44
SUN-10	1/2	5.00	2.50	3,000	35.70
SUN-15	5/8	6.00	3.00	4,000	57.14
SUN-20	3/4	5.50	2.75	6,000	82.14
SUN-25	1	7.00	3.50	12,000	142.84
SUN-30	1 1/4	8.75	4.38	20,000	271.40

Mechanical Coupling Links



Used to assemble chain legs to the master link and/or attach eye type fittings. Forged construction. Made from Type 316 stainless steel

Cat. No.	A	B	C	D	Working Load Limit	Price Each 1-99
SUN-35	3/16	1.42	.50	.50	1,100	21.30
SUN-40	1/4	2.09	.64	.64	1,100	25.06
SUN-45	5/16	2.20	.75	.75	2,800	35.50
SUN-50	3/8	2.81	.91	.91	4,400	54.24
SUN-55	1/2	3.62	1.09	1.09	7,400	76.14
SUN-60	5/8	4.09	1.45	1.45	11,000	118.80

Quick Links

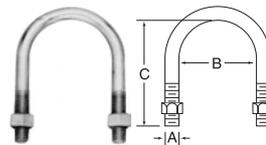


Attaches accessories quickly without tools. Use only with chain of equal or lower load limit. Made from Type 316 stainless steel.

See table 23 below for additional discounts.

Cat. No.	Link Size	Working Load	Price Each 1-49	Cat. No.	Link Size	Working Load	Price Each 1-49
SUN-175	1/8	100	2.00	SUN-200	5/16	2,000	5.00
SUN-180	5/32	300	2.34	SUN-205	23/64	3,000	6.94
SUN-185	3/16	800	2.74	SUN-210	3/8	3,500	8.34
SUN-190	1/4	1,200	3.00	SUN-215	1/2	5,000	13.62
SUN-195	9/32	1,400	4.40				

U-BOLTS



Made from 304 stainless with stainless nuts included. Rolled threads. Larger sizes, cut threads, square and V-bends, strap washers and u-bolt plates are available as special order. Please call for price and delivery.

See table 31 below for additional discounts.

Cat. No.	A	Pipe Size	B	C	D	Price Each 1-99
DUB-4010	1/4-20	3/8	3/4	1 1/4	5/8	1.56
DUB-4080	1/4-20	3/4	1 1/8	2	1	1.91
DUB-4090	1/4-20	1	1 1/2	2 3/4	1 3/8	2.21
DUB-4100	1/4-20	1 1/4	1 3/4	3	1 3/8	2.28
DUB-4110	1/4-20	1 1/2	2	3 1/4	1 3/8	2.43
DUB-4200	5/16-18	1	1 3/8	2 3/8	1	2.70
DUB-4220	5/16-18	1 1/4	1 3/4	2 11/16	1 1/8	3.15
DUB-4240	5/16-18	1 1/2	2	2 11/16	1	3.17
DUB-4270	5/16-18	2	2 1/2	3 3/16	1	3.54
DUB-4310	3/8-16	2	2 1/2	3 1/8	1 1/4	4.83
DUB-4320	3/8-16	2 1/2	3	3 5/8	1 1/4	5.38

BENT EYE BOLTS



- Type 304 stainless steel
- Furnished with hex nut
- Rolled threads
- Not recommended for lifting

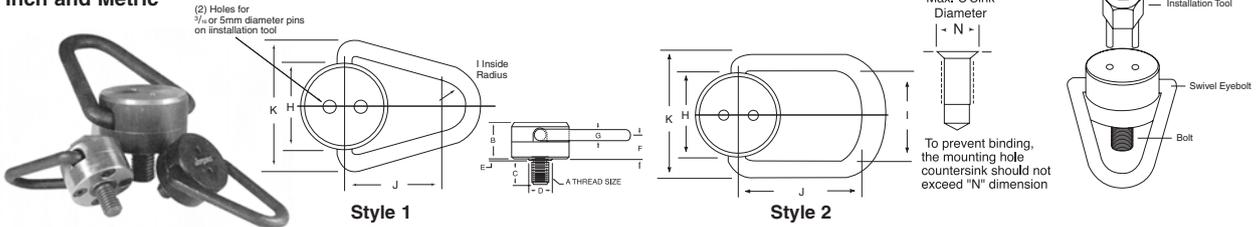
See table 31 below for additional discounts.

Cat. No.	Thread	OAL	Shank Lgth.	Thread Lgth.	Eye ID	Price Each 1-99
BEB-1400	1/4-20	2	1	7/8	1/2	1.16
BEB-1420	1/4-20	2 1/2	1 1/2	1 1/4	1/2	1.26
BEB-1450	1/4-20	4	3	1 1/2	1/2	1.51
BEB-1500	5/16-18	3 1/8	2	1 1/4	5/8	2.01
BEB-1520	5/16-18	4 1/8	3	1 1/2	5/8	2.31
BEB-1610	3/8-16	4	2 1/2	1 1/2	3/4	3.25
BEB-1630	3/8-16	5 1/2	4	2 1/2	3/4	5.92
BEB-1640	3/8-16	7 1/2	6	4	3/4	3.03

23	Quantity Discount	1-49	50-99	100-149	150-249	250-499	500-999	1000+
	Net	5%	8%	10%	12.5%	15%	Call	Call

EYEBOLTS

Tamper Resistant Swivel Eyebolts™ Inch and Metric



Full swivel and pivoting action allows you to flip and turn parts without unhooking. Tamper resistant design is ideal for permanent mounting on OEM applications or on molds, dies and fixtures. Forged, one piece lift ring. Made from Type 316 stainless steel. Safety factor of 5:1. Installation tool sold separately below. Align installation tool pins to the holes on top of the swivel eyebolt. Turn the bolt until the pins drop into place (see dwg). Tighten to recommended torque with a ratchet or wrench. Remove installation tool.

See table 9 below for additional discounts.

Swivel Eyebolt Cat. No.	Rated Load	Style	A	B	C	D	E	F	G	H	I	J	K	N	Price Each 1-23	Installation Tool Cat. No.	Torque	Price Each
SHR-47631	500	1	3/8-16	1 3/32	9/16	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8	1/2	127.06	SHR-47641	25N/m	11.09
SHR-47632	1,000	1	1/2-13	1 3/32	3/4	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8	5/8	127.06	SHR-47641	25N/m	11.09
SHR-47633	1,500	2	5/8-11	1 33/64	15/16	7/8	1/32	57/64	1/2	2 1/2	2 3/4	3 1/2	3 13/16	3/4	154.52	SHR-47643	80N/m	13.92

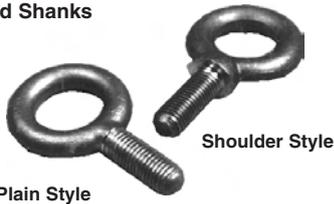
*Rated load based on specific thread torques as shown above. Inch ratings are in lbs. Metric are in kg.

Note: To prevent binding, the screw mounting hole countersink should not exceed the diameters listed above. Do not use spacers between bushing flange and workpiece mounting hole. Swivel eyebolt should be tightened down to recommended torque values listed above. Do not use on oversized hook when lifting. After installation, make sure the swivel eyebolt swivels and pivots freely in all directions. On side lifts, the side of the swivel eyebolt must not contact the workpiece. When lifting the workpiece, gradually apply force. Do not apply shock loads. If a shock load occurs, do not use swivel eyebolt. Loosening of the swivel eyebolt may occur during use. Periodically, re-tighten the swivel eyebolt to the recommended torque values.

INSTALLATION AND SAFETY NOTE: Do not apply load greater than the rated capacity indicated on the top of the swivel eyebolt. Tap workpiece so that the swivel eyebolt screw is installed perpendicular to workpiece surface. Workpiece must be flat to provide complete contact with the swivel eyebolt.

9	Quantity	1-23	24-47	48-95	96-191	192+
	Discount	Net	5%	10%	12.5%	Call

Fully Threaded Shanks



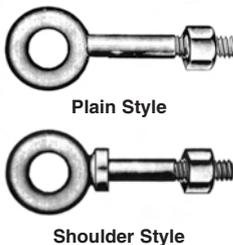
Made of Type 304 stainless steel.

See table 31 below for additional discounts.

Plain Cat. No.	Shoulder Cat. No.	Thread Size	Shank Length	Eye ID	Thread Lgth.	Rated Capacity	Price Each 1-99
FP-1SS*	—	1/4-20	4	1/2	1	460	27.56
FP-2SS*	—	5/16-18	4	5/8	1 1/4	780	23.57
FP-50SS	FS-20SS	3/8-16	1 1/4	1	1 1/4	1,160	12.37
—	FS-3SS*	3/8-16	4 1/2	3/4	1 1/2	1,160	29.44
—	FS-25SS	1/2-13	1 1/2	1 3/16	1 1/2	2,150	15.09
FP-5SS*	—	1/2-13	6	1	2	2,150	37.21
—	FS-30SS	5/8-11	1 3/4	1 3/8	1 3/4	3,440	29.24
FP-7SS*	FS-7SS*	5/8-11	6	1 3/8	2 1/4	3,440	57.36
—	FS-35SS	3/4-10	2	1 1/2	2	5,140	32.04
—	FS-8SS*	3/4-10	6	1 1/2	2 1/2	5,140	85.27
—	FS-40SS	1-8	2 1/2	1 13/16	2 1/2	9,370	55.96
—	FS-10SS*	1-8	6	1 13/16	3	9,370	98.65

*Provided with stainless steel hex nut

Partially Threaded Shanks



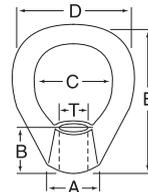
Drop forged with machine thread. Type 316 stainless steel. Furnished with hex nuts. Loads are based on a safety factor of 5 to 1. Any deviations such as angular lifts, shock loads, modification of the basic forging, etc. will result in drastically reduced maximum loads.

See table 31 below for additional discounts.

Plain Cat. No.	Shoulder Cat. No.	Thread Size	Shank Length	Eye I.D.	Rated Capacity (Lbs.)	Price Each 1-99
CHE-100	CHE-109	1/4-20	2	1/2	500	9.84
CHE-102	—	1/4-20	4	1/2	500	15.44
CHE-104	—	1/4-20	6	1/2	500	12.85
CHE-106	—	5/16-18	3 1/4	5/8	800	13.96
CHE-107	CHE-116	3/8-16	2 1/2	3/4	1,200	16.63
—	CHE-117	1/2-13	3 1/4	1	2,200	21.55

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

EYE NUTS



Made of Type 304 stainless steel.

See table 11 below for additional discounts.

Thread Dia.	A	B	C	D	E	Max Load*	Price Each 1-24	
EN-1SS	3/8-16	7/8	5/8	1 1/4	2	2 1/2	2,700	26.28
EN-2SS	1/2-13	7/8	5/8	1 1/4	2	2 1/2	2,700	27.48
EN-3SS	5/8-11	1 3/8	3/4	1 1/2	2 1/2	3	5,000	48.45
EN-4SS	3/4-10	1 3/8	3/4	1 1/2	2 1/2	3	5,000	52.09
EN-6SS	1-8	1 13/16	1 1/16	2 1/4	4	5	10,000	198.45

*Based on a safety factor of 5 to 1

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

PAD EYES



No Linear Lifting

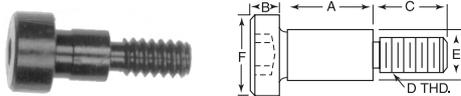
Type 316 stainless steel. Not recommended for lifting.

Cat. No.	Size	Eye ID	Base Dia.	Overall Length	Price Each
SUN-410	3/16	.50	.38	1.06	3.18
SUN-415	1/4	.63	.56	1.31	3.44
SUN-420	5/16	.75	.63	1.56	6.62
SUN-425	3/8	1.00	.86	2.00	8.94
SUN-430	1/2	1.25	1.00	2.50	12.82
SUN-435	5/8	1.50	1.38	3.25	24.82

SHOULDER SCREWS

Many uses in the construction of tool, jig and fixture work. Made of Type 303 stainless steel.

Standard Type Hex Head

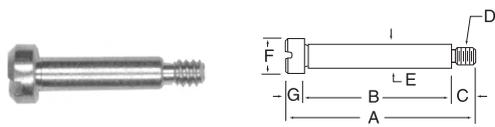


See table 31 below for additional discounts.

Cat. No.	+.005/- .000			+.000/- .001			Price Each
	A	B	C	D	E	F	
MMS-1	1/4	3/16	3/8	10-24	1/4	3/8	2.64
MMS-2	3/8	3/16	3/8	10-24	1/4	3/8	2.67
MMS-3	1/2	3/16	3/8	10-24	1/4	3/8	2.72
MMS-4	5/8	3/16	3/8	10-24	1/4	3/8	3.18
MMS-5	3/4	3/16	3/8	10-24	1/4	3/8	3.74
MMS-6	1	3/16	3/8	10-24	1/4	3/8	3.84
MMS-7	1/4	7/32	7/16	1/4-20	5/16	7/16	3.90
MMS-8	3/8	7/32	7/16	1/4-20	5/16	7/16	3.96
MMS-9	1/2	7/32	7/16	1/4-20	5/16	7/16	4.10
MMS-10	5/8	7/32	7/16	1/4-20	5/16	7/16	4.13
MMS-11	3/4	7/32	7/16	1/4-20	5/16	7/16	4.27
MMS-12	1	7/32	7/16	1/4-20	5/16	7/16	4.44
MMS-13	1/4	1/4	1/2	5/16-18	3/8	9/16	4.16
MMS-14	3/8	1/4	1/2	5/16-18	3/8	9/16	4.27
MMS-15	1/2	1/4	1/2	5/16-18	3/8	9/16	4.69
MMS-16	5/8	1/4	1/2	5/16-18	3/8	9/16	4.79
MMS-17	3/4	1/4	1/2	5/16-18	3/8	9/16	5.12
MMS-18	1	1/4	1/2	5/16-18	3/8	9/16	5.45
MMS-19	3/8	5/16	5/8	3/8-16	1/2	3/4	6.24
MMS-20	1/2	5/16	5/8	3/8-16	1/2	3/4	6.32
MMS-21	5/8	5/16	5/8	3/8-16	1/2	3/4	6.42
MMS-22	3/4	5/16	5/8	3/8-16	1/2	3/4	6.77
MMS-23	1	5/16	5/8	3/8-16	1/2	3/4	6.85
MMS-24	1/2	3/8	3/4	1/2-13	5/8	7/8	8.09
MMS-25	5/8	3/8	3/4	1/2-13	5/8	7/8	8.18
MMS-26	3/4	3/8	3/4	1/2-13	5/8	7/8	8.62
MMS-27	1	3/8	3/4	1/2-13	5/8	7/8	8.82

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

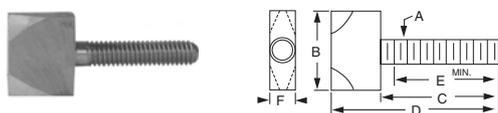
Slotted Head Type



See table 32 below for additional discounts.

Cat. No.	+.002/- .000			+.000/- .001			Price Each	
	A	B	C	D	E	F		
ART-5	19/32	1/8	5/32	4-40	1/8	1/4	.91	
ART-10	19/32	3/16	5/32	4-40	1/8	1/4	.91	
ART-15	19/32	1/4	5/32	4-40	1/8	1/4	.98	
ART-20	19/32	5/16	5/32	4-40	1/8	1/4	1.03	
ART-25	15/32	3/8	5/32	4-40	1/8	1/4	1.11	
ART-30	15/32	1/8	3/16	8-32	3/16	5/16	1.06	
ART-35	11/32	3/16	3/16	8-32	3/16	5/16	1.11	
ART-40	19/32	1/4	3/16	8-32	3/16	5/16	1.22	
ART-45	21/32	5/16	3/16	8-32	3/16	5/16	1.37	
ART-50	23/32	3/8	3/16	8-32	3/16	5/16	1.37	
ART-55	27/32	1/2	3/16	8-32	3/16	5/16	1.39	
ART-60	31/32	5/8	3/16	8-32	3/16	5/16	1.58	
ART-65	19/32	3/4	3/16	8-32	3/16	5/16	2.09	
ART-70	111/32	1	3/16	8-32	3/16	5/16	2.31	
ART-75	119/32	1 1/4	3/16	8-32	3/16	5/16	2.50	
ART-80	127/32	1 1/2	3/16	8-32	3/16	5/16	2.65	
ART-85	9/16	1/8	1/4	10-32	1/4	3/8	1.49	
ART-90	5/8	3/16	1/4	10-32	1/4	3/8	1.52	
ART-95	11/16	1/4	1/4	10-32	1/4	3/8	1.64	
ART-100	3/4	5/16	1/4	10-32	1/4	3/8	1.69	
ART-105	19/16	3/8	1/4	10-32	1/4	3/8	1.70	
ART-110	19/16	1/2	1/4	10-32	1/4	3/8	1.92	
ART-115	11/16	5/8	1/4	10-32	1/4	3/8	2.40	
ART-120	13/16	3/4	1/4	10-32	1/4	3/8	2.50	
ART-125	17/16	1	1/4	10-32	1/4	3/8	2.55	
ART-130	111/16	1 1/4	1/4	10-32	1/4	3/8	2.79	
ART-135	115/16	1 1/2	1/4	10-32	1/4	3/8	2.96	
ART-140	29/32	1/4	7/16	1/4-20	5/16	1/2	7/32	2.45
ART-145	31/32	5/16	7/16	1/4-20	5/16	1/2	7/32	2.50
ART-155	15/32	1/2	7/16	1/4-20	5/16	1/2	7/32	2.60
ART-165	113/32	3/4	7/16	1/4-20	5/16	1/2	7/32	2.85

QUARTER TURN SCREWS



Made of Type 303 stainless steel.

See table 2 below for additional discounts.

Cat. No.	Price Each						
	A	B	C	D	E	F	
QTL-005	10-32	3/4	1	1 1/2	7/8	3/16	1.11
QTL-005S	10-32	3/4	1 1/2	2	1 3/8	3/16	12.20
QTL-1S	1/4-20	3/4	1 1/4	1 7/8	1	1/4	11.54
QTL-1S	1/4-20	3/4	1 3/4	2 3/8	1 1/2	1/4	14.28
QTL-2S	5/16-18	1	1 1/2	2 1/4	1 1/4	5/16	13.90
QTL-3S	3/8-16	1	1 1/2	2 1/2	1 1/4	3/8	15.23

**B* is 3/4" on stainless

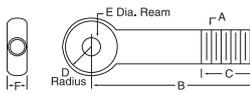
32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

SWING EYE BOLTS

Partially and Fully Threaded



Made of Type 300 series stainless steel. Have many applications in the construction of machinery, jigs, fixtures and other tooling. Fully threaded eye bolts allow you to shorten the shank without sacrificing thread length.

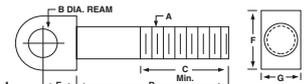


See table 32 below for additional discounts.

Cat. No.	+.001/+ .003						Price Each
	A	B	C	D	E**	F	
EB-100	1/4-20	2 1/8	7/8	1/4	3/16	1/4	10.20
EB-105	1/4-20	2 1/8	7/8	1/4	1/4	1/4	10.20
EB-110	1/4-20	3	1 1/4	1/4	1/4	1/4	11.36
EB-220*	1/4-20	3	2 1/2	1/4	1/4	1/4	12.24
EB-115	5/16-18	3 1/2	1 1/2	5/16	1/4	5/16	12.57
EB-120	5/16-18	3 1/2	1 1/2	5/16	5/16	5/16	12.57
EB-125	5/16-18	4	2	5/16	1/4	5/16	13.64
EB-225*	5/16-18	4	3 1/2	5/16	5/16	5/16	15.73
EB-155	3/8-16	3	1 1/2	3/8	3/8	3/8	15.08
EB-130	3/8-16	3 1/2	1 1/2	3/8	3/8	3/8	15.31
EB-135	3/8-16	3 3/4	2	3/8	3/8	3/8	16.11
EB-160	3/8-16	4	1 1/2	3/8	3/8	3/8	16.07
EB-140	3/8-16	5	2 1/2	3/8	3/8	3/8	17.92
EB-230*	3/8-16	5	4 1/2	3/8	3/8	3/8	20.63
EB-145	1/2-13	3 3/4	1 1/2	1/2	1/2	1/2	19.36
EB-165	1/2-13	4	1 1/2	1/2	3/8	1/2	13.64
EB-170	1/2-13	5	1 1/2	1/2	3/8	1/2	16.96
EB-150	1/2-13	5	2	1/2	1/2	1/2	25.33
EB-235*	1/2-13	5	4 1/4	1/2	1/2	1/2	18.24
EB-175	1/2-13	6	1 1/2	1/2	3/8	1/2	17.88
EB-180	3/8-11	5	1 3/4	5/8	5/8	5/8	20.07
EB-185	3/8-11	6	1 3/4	5/8	5/8	5/8	21.80
EB-240*	3/8-11	6	5 1/4	5/8	5/8	5/8	23.43
EB-195	5/8-11	8	1 3/4	5/8	5/8	5/8	26.49
EB-200	3/4-10	5	1 3/4	3/4	3/4	3/4	26.40
EB-205	3/4-10	6	1 3/4	3/4	3/4	3/4	28.68
EB-245*	3/4-10	6	5 1/8	3/4	3/4	3/4	30.75

*Fully threaded

SWING OR LATCH BOLTS



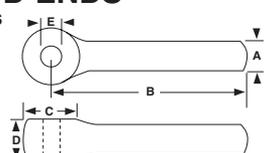
Made of Type 303 stainless steel.

See table 2 below for additional discounts.

Cat. No.	Price Each							
	A	B	C	D	E	F	G	
SWB-4S	1/4-20	1/4	3/4	1 3/16	5/16	1/2	5/16	9.59
SWB-4LS	1/4-20	1/4	1 1/4	2 3/16	5/16	1/2	5/16	11.32
SWB-5S	5/16-18	5/16	1	1 5/8	3/8	5/8	3/8	11.70
SWB-5LS	5/16-18	5/16	1 3/8	2 5/8	3/8	5/8	3/8	13.73
SWB-1S	3/8-16	3/8	1 3/8	2	1/2	3/4	1/2	15.93
SWB-1LS	3/8-16	3/8	1 3/4	3	1/2	3/4	1/2	18.71
SWB-2S	1/2-13	1/2	1 3/4	2 1/2	5/8	1	5/8	22.24
SWB-2LS	1/2-13	1/2	2 1/4	3 1/2	5/8	1	5/8	25.53
SWB-3S	5/8-11	5/8	1 3/4	2 3/4	3/4	1 1/4	3/4	30.51
SWB-3LS	5/8-11	5/8	2 1/2	4	3/4	1 1/4	3/4	35.51

FORGED ROD ENDS

Blanks



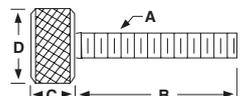
Made from forged Type 304 stainless steel. They are available as blanks from stock, however, we can make modifications to your exact requirements.

See table 32 below for additional discounts.

Cat. No.	Price Each							
	A	B	C	D	E	Thd.		
WBS-38	3/8	6	3/4	7/16	—	3/8-16	3	12.88
WBS-50	1/2	6	1	9/16	—	1/2-13	3	22.11
WBS-75	3/4	6	1 1/2	1 1/16	—	3/4-10	3	31.54
WBS-88	7/8	6	1 3/4	1 5/16	—	7/8-9	3	43.09

KNURLED HEAD SCREWS

Flat Point



For jig and fixture work. Made of Type 303 stainless steel.

See table 2 below for additional discounts.

Cat. No.	Price Each							
	A	B	C	D	E	F	G	
SKHS-0S	10-32	1 1/2	1 1/2	3/16	5/8	—	—	3.08
SKHS-0	10-32	2	2	3/16	5/8	—	—	3.23
SKHS-1S	10-24	1 1/2	1 1/2	3/16	5/8	—	—	3.08
SKHS-1	10-24	2	2	3/16	5/8	—	—	3.23
SKHS-2S	1/4-20	1 1/2	1 1/2	7/32	1 1/16	—	—	3.26
SKHS-2	1/4-20	2	2	7/32	1 1/16	—	—	4.58
SKHS-3S	5/16-18	1 3/4	1 3/4	1/4	3/4	—	—	3.52
SKHS-3	5/16-18	2 1/4	2 1/4	1/4	3/4	—	—	4.50
SKHS-3L	5/16-18	3	3	1/4	3/4	—	—	5.28
SKHS-4S	3/8-16	2	2	5/16	7/8	—	—	5.88
SKHS-4	3/8-16	2 1/2	2 1/2	5/16	7/8	—	—	5.97
SKHS-4L	3/8-16	3	3	5/16				

FULLY THREADED STUDS



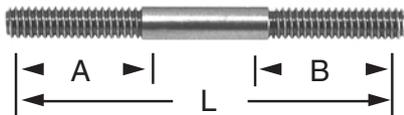
Made of 18-8 stainless steel. Other sizes available upon request as special order. Please call for price and delivery.

See table 31 below for additional discounts.

Cat. No.	Thread	Lgth.	Price Each 1-99
AMS-269	4-40	3/4	.14
AMS-270	4-40	1	.16
AMS-271	4-40	1 1/2	.20
AMS-272	4-40	2	.23
AMS-273	4-40	2 1/2	.26
AMS-274	6-32	3/4	.13
AMS-275	6-32	1	.13
AMS-276	6-32	1 1/2	.17
AMS-277	6-32	2	.18
AMS-278	6-32	2 1/2	.23
AMS-280	8-32	3/4	.17
AMS-281	8-32	1	.19
AMS-282	8-32	1 1/2	.22
AMS-283	8-32	2	.25
AMS-284	8-32	2 1/2	.32
AMS-285	8-32	3	.36
AMS-287	10-24	3/4	.18
AMS-288	10-24	1	.19
AMS-289	10-24	1 1/2	.27
AMS-290	10-24	2	.30
AMS-291	10-24	2 1/2	.38
AMS-292	10-24	3	.44
AMS-293	10-24	4	.55
AMS-294	10-32	3/4	.18
AMS-295	10-32	1	.21
AMS-296	10-32	1 1/2	.27
AMS-297	10-32	2	.31
AMS-298	10-32	2 1/2	.34
AMS-301	1/4-20	1	.23
AMS-701	1/4-20	1 1/4	.28
AMS-302	1/4-20	1 1/2	.30
AMS-303	1/4-20	2	.36
AMS-703	1/4-20	1 3/4	.33
AMS-304	1/4-20	2 1/2	.41
AMS-305	1/4-20	3	.47
AMS-705	1/4-20	2 1/4	.39
AMS-306	1/4-20	3 1/2	.52
AMS-307	1/4-20	4	.56
AMS-710	1/4-20	4 1/2	.63
AMS-311	5/16-18	1	.31
AMS-312	5/16-18	1 1/4	.34
AMS-313	5/16-18	1 1/2	.38
AMS-314	5/16-18	2	.47
AMS-316	5/16-18	2 1/2	.53
AMS-716	5/16-18	1 3/4	.42
AMS-317	5/16-18	3	.58
AMS-323	3/8-16	1	.33
AMS-324	3/8-16	1 1/4	.38
AMS-325	3/8-16	1 1/2	.49
AMS-326	3/8-16	1 3/4	.56
AMS-327	3/8-16	2	.61
AMS-328	3/8-16	2 1/4	.67
AMS-329	3/8-16	2 1/2	.73
AMS-330	3/8-16	3	.84
AMS-331	3/8-16	3 1/2	.96
AMS-332	3/8-16	4	1.07
AMS-333	3/8-16	4 1/2	1.21
AMS-334	3/8-16	5	1.34
AMS-336	3/8-16	6	1.61
AMS-338	1/2-13	1 1/2	1.07
AMS-340	1/2-13	2	1.37
AMS-744	1/2-13	2 1/4	1.44
AMS-341	1/2-13	2 1/2	1.52
AMS-342	1/2-13	3	1.71
AMS-747	1/2-13	3 1/2	1.90
AMS-749	1/2-13	4 1/2	2.25

31	Quantity Discount	1-99 Net	100-249 5%	250-499 10%	500-999 15%	1000-2499 20%	2500-4999 25%	5000+ Call
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SETUP STUDS



Made from Type 303 stainless steel.

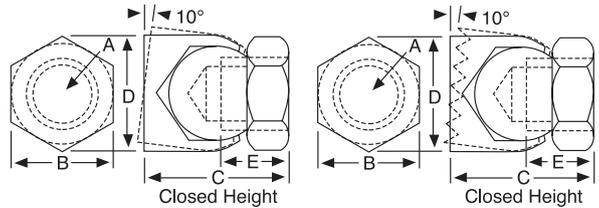
See table 32 below for additional discounts.

Cat. No.	Thread	L	A	B	Price Each 1-99
SUS-270	1/4-20	3	1	1	1.79
SUS-201	5/16-18	3	1 1/8	1 1/8	2.36
SUS-202	5/16-18	4	1 1/8	1 1/8	2.74
SUS-207	3/8-16	3	1 1/4	1 1/4	2.35
SUS-208	3/8-16	4	1 1/4	1 1/4	2.73
SUS-209	3/8-16	5	1 1/4	1 1/4	3.05
SUS-212	3/8-16	8	1 1/4	1 1/4	4.20
SUS-214	1/2-13	4	1 1/2	1 1/2	4.49
SUS-215	1/2-13	5	1 1/2	1 1/2	4.80
SUS-216	1/2-13	6	1 1/2	1 1/2	5.54
SUS-218	1/2-13	8	1 1/2	1 1/2	6.87
SUS-224	5/8-11	4	1 3/4	1 3/4	6.47
SUS-225	5/8-11	5	1 3/4	1 3/4	7.48
SUS-226	5/8-11	6	1 3/4	1 3/4	8.35

Bold catalog numbers conform to TCMAI standards

32	Quantity Discount	1-99 Net	100-249 5%	250-499 8%	500-999 10%	1000-2499 12.5%	2500-4999 15%	5000+ Call
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TOGGLE OR SWIVEL PADS



Flat Bottom

Serrated Bottom

Made of 300 series stainless steel. Available with flat bottom or serrated bottom. The flat bottom are available with stainless or delrin pads. The serrated bottom has a stainless pad. The ball portion is hardened. Pad is not heat treated.

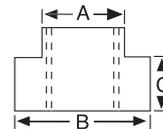
See table 41 below for additional discounts.

Stainless Pad Cat. No.	Delrin Pad Cat. No.	Max. Load Stainless	Max. Load Delrin	A	B	C	D	E	Price Each 1-23
Flat Bottom									
RP-1S	RP-1SN	5,000	360	1/4-20	1/2	5/8	5/8	5/16	6.75
RP-2S	RP-2SN	7,600	360	5/16-18	9/16	3/4	11/16	3/8	6.84
RP-3S	RP-3SN	8,250	570	3/8-16	5/8	13/16	3/4	3/8	7.10
RP-4S	RP-4SN	9,000	570	1/2-13	3/4	15/16	7/8	7/16	8.27
RP-5S	RP-5SN	12,900	1,000	5/8-11	7/8	1	1	7/16	8.48
RP-6S	RP-6SN	17,400	1,300	3/4-10	1 1/16	1 11/32	1 1/4	5/8	12.10
RP-7S	RP-7SN	24,200	1,570	1-8	1 3/8	1 53/64	1 5/8	13/16	20.09
Serrated Bottom									
RP-20S	—	5,000	—	1/4-20	1/2	5/8	5/8	5/16	7.34
RP-21S	—	7,600	—	5/16-18	9/16	3/4	11/16	3/8	7.43
RP-22S	—	8,250	—	3/8-16	5/8	13/16	3/4	3/8	7.72
RP-23S	—	9,000	—	1/2-13	3/4	15/16	7/8	7/16	8.89
RP-24S	—	12,900	—	5/8-11	7/8	1	1	7/16	9.12

41	Quantity Discount	1-23 Net	24-143 10%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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T-NUTS

Safety Type



Used for setting up work on machine tools. Also used with stud sets and have many applications on jig and fixture work.

Tongue of T-nuts slightly undersize to fit machine table slot-A. Made from Type 304 stainless steel. The safety design is tapped one thread short of going through to prevent the stud from being screwed into the table. Custom T-nuts can be made to meet your exact requirements.

See table 32 below for additional discounts.

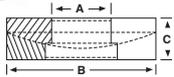
Cat. No.	Table Slot A	Thread	B	C	Overall Lgth.	Overall Height	Price Each 1-99
TN-200	.343	5/16-18	5/8	7/32	3/4	13/32	4.39
TN-205	.418	5/16-18	11/16	1/4	1 1/16	3/8	4.39
TN-210	.430	3/8-16	3/4	7/32	1	1/2	4.92
TN-215	.490	3/8-16	7/8	1/4	7/8	5/8	4.92
TN-220	.543	3/8-16	7/8	5/16	1 1/4	5/8	4.92
TN-225	.555	1/2-13	7/8	11/32	1 1/4	3/4	5.90
TN-240	.625	1/2-13	1	3/8	1 1/4	3/4	6.16
TN-250	.665	1/2-13	1 1/8	13/32	1 1/4	3/4	6.32
TN-260	.687	5/8-11	1 1/4	15/32	1 1/2	1	7.57
TN-265	.780	5/8-11	1 1/4	17/32	1 1/2	1	7.57
TN-270	.800	3/4-10	1 3/8	17/32	1 3/4	1 1/8	11.36
TN-280	.968	3/4-10	1 5/8	9/16	1 3/4	1	12.76

*Designed for Bridgeport mills

32	Quantity Discount	1-99 Net	100-249 5%	250-499 8%	500-999 10%	1000-2499 12.5%	2500-4999 15%	5000+ Call
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WASHERS

Reid SELECT Two-Piece Spherical Washers

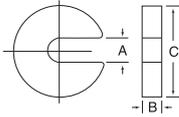


Made from 303 stainless steel. Precision machined and all sharp corners removed. Tops and bottoms are available separately. To order add a "T" or "B" part number. They are priced at one half the cost of a pair.

See table 2 below for additional discounts.

Cat. No.	Bolt Size	+/-015 A	+/-015 B	+/-015 C	Price Per Pair 1-11
SSPW-1	1/4	9/32	5/8	3/16	3.60
SSPW-2	5/16	11/32	13/16	1/4	4.20
SSPW-3	3/8	13/32	15/16	1/4	5.20
SSPW-4	1/2	17/32	13/16	5/16	6.00
SSPW-5	5/8	21/32	13/8	5/16	6.80
SSPW-6	3/4	25/32	15/8	3/8	8.20
SSPW-7	7/8	15/16	17/8	3/8	9.80
SSPW-8	1	11/16	2	1/2	11.00

Heavy Duty C-Washers



Made from Type 303 stainless steel and have a knurl on the outside.

See table 2 below for additional discounts.

Cat. No.	A	B	C	Price Each 1-11
CW-100	11/64	3/16	5/8	4.02
CW-105	13/64	3/16	3/4	4.35
CW-110	17/64	3/16	7/8	4.76
CW-115	21/64	1/4	1	5.22
CW-120	25/64	5/16	11/4	6.03

Reid SELECT Heavy Duty Machined Flat Washers



Made from 303 stainless steel. All are machined flat and parallel.

See table 2 below for additional discounts.

Cat. No.	Bolt Size	A	B	C	Price Each 1-11
SFW-1	1/4	17/64	11/16	3/16	1.76
SFW-2	5/16	11/32	13/16	3/16	1.81
SFW-3	3/8	25/64	15/16	3/16	1.91
SFW-4	1/2	17/32	1 1/8	3/16	2.40
SFW-5	5/8	21/32	1 3/8	3/16	2.66
SFW-6	3/4	25/32	1 5/8	1/4	3.06
SFW-7	7/8	29/32	1 3/4	1/4	4.11
SFW-8	1	11/32	2	1/4	4.90

2	Quantity Discount	1-11 Net	12-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 17.5%	2500+ Call
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FINISHED FLAT WASHERS



Manufactured from non-magnetic corrosion resistant 300 series stainless steel. Parallelism within .001".

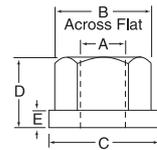
See table 32 below for additional discounts.

Cat. No.	Bolt Size	A	B	C	Price Each 1-99	Cat. No.	Bolt Size	A	B	C	Price Each 1-99
AMP-20 #2	3/32	3/16	.028		.50	AMP-85	3/8	13/32	3/4	3/32	1.35
AMP-25 #4	1/8	5/16	5/64		1.12	AMP-90	3/8	13/32	19/16	1/8	1.40
AMP-40 #6	3/16	3/8	1/64		1.17	AMP-95	3/8	13/32	7/8	1/8	1.63
AMP-45 #8	3/16	7/16	3/64		1.22	AMP-100	3/8	13/32	1	1/8	2.05
AMP-50 #8	11/64	3/8	1/16		.95	AMP-110	7/16	15/32	1	1/8	1.71
AMP-55 #10	13/64	1/2	3/32		1.60	AMP-115	1/2	17/32	1 1/8	1/8	1.90
AMP-60 #10	3/16	7/16	5/64		1.16	AMP-120	5/8	21/32	1 3/8	1/8	2.09
AMP-65	1/4	9/32	5/8	1/8	1.73	AMP-125	3/4	25/32	1 5/8	1/8	2.14
AMP-70	1/4	9/32	1/2	5/64	1.45	AMP-130	3/4	25/32	1 5/8	5/32	2.27
AMP-75	5/16	11/32	3/4	1/8	1.73	AMP-140	1	11/32	2	3/16	2.85
AMP-80	5/16	11/32	5/8	3/32	1.45	AMP-150	1 1/4	19/32	2 1/2	9/32	5.06

32	Quantity Discount	1-99 Net	100-249 5%	250-499 8%	500-999 10%	1000-2499 12.5%	2500-4999 15%	5000+ Call
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NUTS

Collar or Flange Nuts

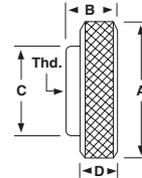


Contact surface of flange is flat. Made of Type 303 stainless steel.

See table 2 below for additional discounts.

Cat. No.	A	B	C	D	E	Price Each 1-11
FNC-101	1/4-20	1/2	5/8	5/16	3/32	4.16
FNC-102	5/16-18	9/16	3/4	3/8	3/32	4.50
FNC-102F	5/16-24	9/16	3/4	3/8	3/32	4.51
FNC-103	3/8-16	11/16	7/8	1/2	1/8	4.71
FNC-103F	3/8-24	11/16	7/8	1/2	1/8	4.97
FNC-105	1/2-13	7/8	1 1/8	11/16	5/32	6.23
FNC-105F	1/2-20	7/8	1 1/8	11/16	5/32	6.50
FNC-106	5/8-11	1 1/16	1 3/8	13/16	3/16	7.31
FNC-106F	5/8-18	1 1/16	1 3/8	13/16	3/16	7.82
FNC-107	3/4-10	1 1/4	1 5/8	1	1/4	10.15

Reid SELECT Check Nuts



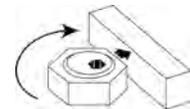
Check nuts can be used in conjunction with many other components such as knurled head screws, torque thumb screws, hand knob assemblies, toggle shoe clamp assemblies and many other tooling applications. Made of Type 303 stainless steel.

See table 2 below for additional discounts.

Cat. No.	A	B	C	D	Thread	Price Each 1-11
VS-1	3/4	7/32	1/2	5/32	10-32	3.12
VS-2	3/4	7/32	1/2	5/32	1/4-20	3.35
VS-3	3/4	5/16	1/2	1/4	5/16-18	3.35
VS-4	3/4	5/16	1/2	1/4	3/8-16	3.35
VS-5	1	3/8	3/4	1/4	1/2-13	3.70

2	Quantity Discount	1-11 Net	12-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 17.5%	2500+ Call
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MITEE-BITE PRODUCTS INC. FIXTURE CLAMPS



The Mitee-Bite™ clamping system combines strength, versatility and performance with economy and ease of use. Consisting of a cam action socket cap screw with a brass hex washer, set ups are simplified even for hard to hold parts. Its small size allows more parts per load on multiple series jobs. The low profile makes programming easier because there are no clamps to jump over. Fast to use (just 1/4 turn of screw loosens clamp) and no loose parts to set up each time. Economical - all six sides of the hex nut can be used. Metric sizes are in millimeters.

See table 11 below for additional discounts.

Cat. No.	Screw Size	Thread Lgth.	Hex Size	Hex Ht.	Total Throw	No. of Clamps Per Pkg.	Price Per Pkg. 1-24
MB-10203	1/4-20	.470	.625	.190	.040	4	54.10
Metric MB-50207	M8	15.0	20.60	6.35	1.01	4	72.50

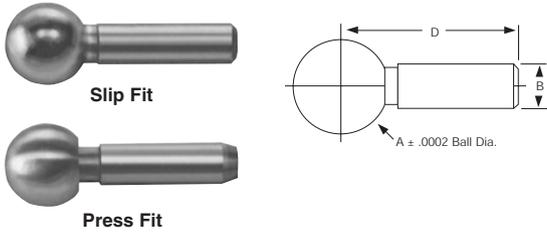
11	Quantity Discount	1-24 Net	25-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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TOOLING AND CONSTRUCTION BALLS

One Piece Construction

These high quality tooling and construction balls provide a precise reference point for critical machining operations. The standard and shoulder type listed below are available with slip fit or light press fit shank diameters. Slip fit shank tolerance is $\pm .0000/.0004$ ". Press fit shank tolerance is $\pm .0003/-.0000$ ". Ball and shank are concentric within $.0002$ " T.I.R. Made from 440-C stainless steel, and heat treated to 55-58 RC.

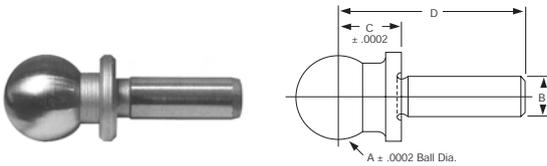
Standard Tooling Balls



See table 11 below for additional discounts.

Slip Fit Cat. No.	Press Fit Cat. No.	+/- .0002		D	Price Each 1-24
		A	B		
STB-26705	STB-26706	.2500	.1250	.5630	17.43
STB-26710	STB-26711	.3750	.1875	.7500	18.29

Shoulder Tooling Balls

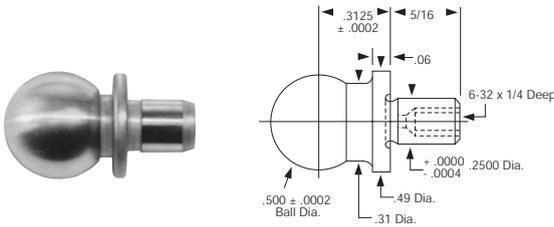


Precision ground shoulder provides precise "C" dimension to facilitate locating ball center line.

See table 11 below for additional discounts.

Slip Fit Cat. No.	Press Fit Cat. No.	+/- .0002		+/- .0002		Price Each 1-24
		A	B	C	D	
STB-26805	STB-26806	.2500	.1250	.2000	.5630	20.00
STB-26810	STB-26811	.3750	.1875	.3000	.7500	21.43
STB-26815	STB-26816	.5000	.2500	.4000	.9400	23.43
STB-26820	STB-26821	.5000	.2500	.5000	1.3750	24.43

Construction Balls



One size fits majority of applications. Available with tapped hole for screw mounting. Shoulder provides precise $.3125 (+/- .0002)$ shoulder base to center line dimension to facilitate locating ball center line. Ball and shank are concentric within $.0002$ T.I.R.

See table 11 below for additional discounts.

Cat. No.	Description	Price Each 1-24
STB-26875	With tapped shank as shown	25.29
STB-26877	Shank not tapped	25.26

11	Quantity Discount	1-24 Net	25-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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THREADED ROD



Made from stainless steel type 304 in 36" lengths. Other sizes available as special order. Please call for price and delivery.

See table 38 below for additional discounts.

Cat No.	Size	Price Each 1-9	Cat No.	Size	Price Each 1-9
TR-32	6-32	61.46	TR-92	3/8-16	16.56
TR-42	8-32	22.82	TR-112	1/2-13	24.84
TR-52	10-24	20.54	TR-132	5/8-11	44.86
TR-72	1/4-20	10.70	TR-142	3/4-10	66.68
TR-82	5/16-18	12.19			

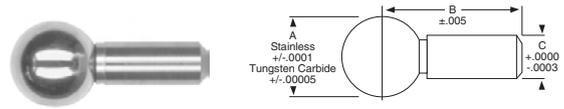
38	Quantity Discount	1-9 Net	10-24 5%	25-49 8%	50-99 10%	100-249 12.5%	250-499 15%	500+ Call
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FIXTURE AND CHECKING BALLS

Two Piece Welded Construction

Made from 440-C stainless steel and hardened to 55-58 RC. **The weld or brazing between the ball and shank is designed so the ball will fall off if subjected to an unusually heavy lateral force.** This prevents set up and inspection errors that may occur because of a bent shank. Eccentricity, ball to shank $.0002$ T.I.R. max.

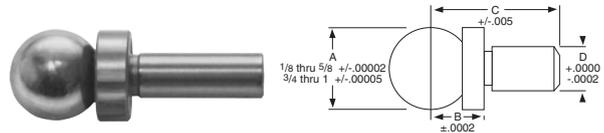
Fixture Balls - Plain Shank



See table 11 below for additional discounts.

Cat. No.	A	B	C	Price Each 1-24
JFB-29001	.250	.56	.1247	23.18
JFB-29002	.375	.75	.1872	28.50
JFB-29003	.500	.94	.2497	30.95
JFB-29004	.625	1.06	.3122	46.22
JFB-29005	.750	1.25	.3747	50.21
JFB-29007	1.000	1.62	.4997	94.58

Checking Balls with Reference Shoulder



See table 11 below for additional discounts.

Cat. No.	A	B	C	D	Price Each 1-24
JFB-29011	.250	.2000	.560	.1247	26.45
JFB-29012	.375	.3000	.750	.1872	33.95
JFB-29013	.500	.4000	.940	.2497	38.83
JFB-29014	.625	.4500	1.060	.3122	52.10
JFB-29015	.750	.5000	1.250	.3747	63.22
JFB-29016	.875	.6000	1.440	.4372	81.06
JFB-29017	1.000	.7000	1.620	.4997	94.58

11	Quantity Discount	1-24 Net	25-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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SQUARE KEYSTOCK



Stainless Keystone Tolerances

Size	Tolerance
1/8 to 3/16	$\pm .003$
1/4	$+0/-.002$
5/16 nto 7/16	$+0/-.003$
1/2 to 1	$+0/-.004$

Type 303/304 stainless steel. Size is clearly marked on each bar. 12" lengths. Other lengths available as special order. Please call for price and delivery

Cat. No.	Fractional Size	Millimeter Size	Price Per Pair	Cat. No.	Fractional Size	Millimeter Size	Price Per Pair
KS-57501	1/8	3.1750	2.27	KS-57505	3/8	9.5250	10.69
KS-57502	3/16	4.7630	2.83	KS-57507	1/2	12.7000	16.80
KS-57503	1/4	6.3500	4.04	KS-57508	5/8	15.8750	26.97
KS-57504	5/16	7.9375	5.91				

Note: Tolerance: 1/8" and 3/16" = $\pm .003$, 1/4" = $.002/+0.000$, 5/16" to 7/16" = $.003/+0.000$, 1/2" to 1" = $.004/+0.000$.

SHIM STOCK



Made from 302 stainless steel. Used for tool and die work, machine repair, bearing adjustments, prototype work and short run production. Rolled to precision tolerances. Rolls are packaged in convenient dispenser. No. 2 finish. Assortment sheets are 6" x 18", packed in a fold type carton with sizes clearly marked. Assortment contains one each of the sizes listed below.

See table 38 below for additional discounts.

Cat. No.	Thick-ness	Price Each 1-9	Cat. No.	Thick-ness	Price Each 1-9	Cat. No.	Thick-ness	Price Each 1-9
DE-SS-1	.001	38.33	DE-SS-5	.005	39.31	DE-SS-20	.020	57.36
DE-SS-3	.003	35.05	DE-SS-6	.006	39.26	DE-SS-25	.025	67.25
DE-SS-4	.004	34.19	DE-SS-10	.010	42.71	DE-SSP-15	Assort.	90.30



SLOTTED SHIMS

Solves alignment and leveling problems on pumps, generators and other machinery. Tabs eliminate need to place hands under machinery. Conforms to standard bolt and stud sizes. Made from 300 series stainless. The stainless sets contain 20 each of the thicknesses listed below. Comes in metal box. Metric shims are also available as special order. Please call for price and delivery.



Assortments

See table 38 below for additional discounts.

Cat. No.	Shim Size	Slot Size	Price Each 1-9	Cat. No.	Shim Size	Slot Size	Price Each 1-9
PS-42900	2 x 2	5/8	492.78	PS-42910	3 x 3	3/4	595.39

Individual Shim Packages

See table 38 below for additional discounts.

Thick-ness	Pkg. Qty.	2 x 2 Cat. No.	Price/Pack 1-9	3 x 3 Cat. No.	Price/Pack 1-9	4 x 4 Cat. No.	Price/Pack 1-9
.001	20	PS-42205	35.02	—	—	—	—
.002	20	PS-42210	35.02	PS-42310	42.00	—	—
.004	20	PS-42220	35.02	—	—	PS-42420	55.31
.005	20	PS-42225	35.02	PS-42325	42.00	PS-42425	55.31
.010	20	PS-42230	35.02	PS-42330	42.00	PS-42430	55.31
.015	10	PS-42235	17.50	—	—	PS-42435	27.67
.020	10	PS-42240	19.57	—	—	PS-42440	29.74
.025	10	PS-42245	19.57	PS-42345	21.00	PS-42445	29.74
.050	5	PS-42250	10.53	PS-42350	13.14	PS-42450	18.40
.075	5	PS-42255	11.91	—	—	—	—
.100	5	PS-42260	14.02	—	—	—	—
.125	5	PS-42265	15.40	PS-42365	16.17	PS-42465	37.65



FEELER GAUGE ASSORTMENT



Made from 301 stainless steel. Sturdy vinyl case with individual sleeves keeps gages clean. Fits conveniently in your pocket. Set contains 20 gages with the sizes as indicated below. Each gage is 1/2" wide and is marked with the thickness.

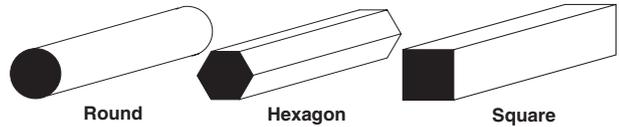
See table 38 below for additional discounts.

Cat. No.	Description	Price Each 1-9
PSW-19G80	5" Stainless Steel Gauge Set - Inch 2 each of: .001, .0015, .002, .003 1 each of: .004, .005, .006, .007, .008, .009, .010, .012, .015, .020, .025, .031	64.90

38	Quantity Discount	1-9	10-24	25-49	50-99	100-249	250-499	500+ Call
	Net	5%	8%	10%	12.5%	15%		

HEX, ROUND AND SQUARE STOCK

In addition to the items listed below, we offer a full line of other materials, shapes and sizes as special order. Please call for price and availability. All items listed below will be shipped F.O.B. Waukesha, WI or Addison, IL. All pieces are solid. **Note:** Due to custom cutting, no returns can be made.



Stainless Type 303

Type 303 stainless steel is highly corrosion resistant and non-magnetic. It has non-galling and non-seizing qualities which allow for easy machining and is better for lighter equipment if welding is not required. When cold worked - can become slightly magnetic. Free machining for heavier cuts in automatic machining operations. Corrosion resistant to atmospheric exposures, sterilizing solutions, most organic and many inorganic chemicals, most dyes, nitric acid and foods. Machinability is 70% (1212 crs = 100% and 1018 crs = 78%). Length tolerances are +/-1".

See table 39 below for additional discounts.

3 Ft. Cat. No.	6 Ft. Cat. No.	Size	Lbs. Per Foot	Price Each 1-9 3 Ft.	Price Each 1-9 6 Ft.
Hexagons					
MES-2	MES-20	3/8	.41	11.39	20.50
MES-4	MES-22	7/16	.56	12.26	22.06
MES-6	MES-24	1/2	.74	18.40	32.02
MES-8	MES-26	9/16	.93	25.62	44.58
MES-10	MES-28	5/8	1.15	34.50	60.03
MES-12	MES-30	3/4	1.66	49.68	86.44
MES-14	MES-32	7/8	2.25	73.26	127.46
MES-16	MES-34	1	2.94	95.68	166.48
Rounds					
MES-38	MES-92	3/16	.09	2.63	4.57
MES-40	MES-94	1/4	.17	3.76	6.53
MES-42	MES-96	5/16	.26	5.87	10.21
MES-44	MES-98	3/8	.38	7.51	13.07
MES-46	MES-100	7/16	.51	10.22	17.79
MES-48	MES-102	1/2	.67	13.35	23.23
MES-50	MES-104	9/16	.85	16.90	29.40
MES-52	MES-106	5/8	1.04	20.86	36.30
MES-54	MES-108	3/4	1.50	30.04	52.27
MES-56	MES-110	7/8	2.05	40.90	71.17
MES-58	MES-112	1	2.67	51.62	92.92
MES-60	MES-114	1 1/8	3.38	65.35	117.62
MES-62	MES-116	1 1/4	4.17	80.68	145.22
MES-64	MES-118	1 3/8	5.05	97.61	175.71
MES-66	MES-120	1 1/2	6.01	116.15	209.08
MES-68	MES-122	1 5/8	7.05	136.34	245.41
MES-70	MES-124	1 3/4	8.18	158.11	284.59
MES-72	MES-126	1 7/8	9.39	181.50	326.70
MES-74	MES-128	2	10.68	206.48	371.66
MES-76	MES-130	2 1/4	13.52	261.39	470.50
MES-78	MES-132	2 1/2	16.69	322.67	580.81
MES-80	MES-134	2 3/4	20.19	390.34	702.61
MES-82	MES-136	3	24.03	464.58	836.24
MES-84	MES-138	3 1/4	28.21	545.39	981.71
MES-86	MES-140	3 1/2	32.71	632.39	1138.03
MES-88	MES-142	4	42.73	854.60	1487.00
Squares					
MES-146	MES-162	1/2	.85	25.50	45.90
MES-148	MES-164	3/4	1.91	57.39	103.30
MES-150	MES-166	1	3.41	115.03	214.20
MES-152	MES-168	1 1/4	5.31	179.76	323.56
MES-154	MES-170	1 1/2	7.65	258.83	465.89
MES-156	MES-172	1 3/4	10.42	352.21	633.97
MES-158	MES-174	2	13.61	460.13	828.24

Stainless Type 316 Rounds

Best corrosion resistance of the standard stainless steels. Resists pitting and most chemicals used in paper, textile and photographic industries. High temperature strength. Non magnetic. Length tolerances are +/-1".

See table 39 below for additional discounts.

3 Ft. Cat. No.	6 Ft. Cat. No.	Size	Lbs. Per Foot	Price Each 1-9 3 Ft.	Price Each 1-9 6 Ft.
MES-178	MES-222	3/16	.09	3.63	6.54
MES-180	MES-224	1/4	.17	5.84	10.16
MES-182	MES-226	5/16	.26	8.48	14.75
MES-184	MES-228	3/8	.38	12.20	21.23
MES-186	MES-230	1/2	.67	21.70	37.75
MES-188	MES-232	5/8	1.04	31.29	54.44
MES-190	MES-234	3/4	1.50	45.06	78.40
MES-192	MES-236	7/8	2.05	61.35	106.75
MES-194	MES-238	1	2.67	80.10	144.18
MES-196	MES-240	1 1/4	4.17	121.02	217.83
MES-198	MES-242	1 1/2	6.01	174.23	313.62
MES-200	MES-244	1 3/4	8.18	256.93	462.47
MES-202	MES-246	2	10.68	335.53	603.95
MES-204	MES-248	2 1/4	13.52	424.75	764.56
MES-206	MES-250	2 1/2	16.69	524.34	943.82
MES-208	MES-252	2 3/4	20.19	634.30	1141.07
MES-210	MES-254	3	24.03	754.94	1358.09
MES-212	MES-256	3 1/4	28.20	886.26	1595.03
MES-214	MES-258	3 1/2	32.71	1027.06	1849.08
MES-216	MES-260	3 3/4	37.55	1179.07	2123.05
MES-218	MES-262	4	42.73	1495.06	2602.03

39	Quantity Discount	1-9	10-24	25-49	50-99	100-249	250+ Call
	Net	2%	5%	10%	15%		

RETAINING RINGS

E-Clips



Contents - MK-206-12SS
Total of 205 Pieces

See table 20 below for additional discounts.

Cat. No.	Size	Qty. In Asst.	Price Each 1-499
MK-E-12SS	1/8	25	.11
MK-E-15SS	5/32	15	.11
MK-E-18SS	3/16	25	.12
MK-E-21SS	7/32	15	.14
MK-E-25SS	1/4	25	.15
MK-E-31SS	5/16	25	.15
MK-E-37SS	3/8	25	.23
MK-E-43SS	7/16	15	.23
MK-E-50SS	1/2	15	.33
MK-E-62SS	5/8	10	.45
MK-E-75SS	3/4	5	.75
MK-E-87SS	7/8	5	.98

See table 20 below for additional discounts.

Cat. No.	Description	Price Each 1-499
MK-206-12SS	SS E-Clip Asst.	110.00

Snap Rings External Type



Contents - MK-195-12SS
Total of 195 pieces

See table 20 below for additional discounts.

Cat. No.	Size	Qty. In Asst.	Price Each 1-499
MK-SR-25SS	1/4	25	.53
MK-SR-31SS	5/16	20	.60
MK-SR-37SS	3/8	25	.60
MK-SR-43SS	7/16	15	.60
MK-SR-50SS	1/2	20	.68
MK-SR-56SS	9/16	15	.68
MK-SR-62SS	5/8	25	.68
MK-SR-75SS	3/4	20	.83
MK-SR-81SS	13/16	5	.83
MK-SR-87SS	7/8	15	.90
MK-SR-100SS	1	5	1.05
MK-SR-125SS	1 1/4	5	1.50

See table 20 below for additional discounts.

Cat. No.	Description	Price Each 1-499
MK-195-12SS	SS Snap Ring Asst.	160.00

20	Quantity Discount	1-499 Net	500-999 5%	1000-2499 8%	2500-4999 10%	5000-9999 12.5%	10000+ Call
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QUICK-ACTION BANDCLAMPS™



Ideal for temporary hose and tube connections, maintenance and repeated use such as testing, filter bags, dust gaiters, molds, etc. Made from 304 stainless steel. Slotted screw adjustment and draw latch for quick clamping. Band is .63" wide.



- All hose clamps have rounded edges to protect the hose
- Three piece interlock construction - no spot welds to corrode
- Easily installed with screwdriver, nut driver, or socket wrench
- Sold in boxed quantities of 10

See table 38 below for additional discounts.

Clamp Diameter	Fractional		Metric		SAE #	Partial Stainless		All 300 Stainless		All 316 Stainless	
	Min.	Max.	Min.	Max.		Cat. No.	Price/ Pkg. of 10 1-9	Cat. No.	Price/ Pkg. of 10 1-9	Cat. No.	Price/ Pkg. of 10 1-9
5/16 Band	7/32	5/8	5.6	15.9	4	HCL-M4P	3.43	HCL-M4HSP	4.87	HCL-M4HSPX	7.64
	5/16	7/8	7.9	22.2	6	HCL-M6P	3.43	HCL-M6HSP	5.02	HCL-M6HSPX	7.90
	7/16	1	11.1	25.4	8	HCL-M8P	4.88	—	—	—	—
1/2 Band	3/8	7/8	9.5	22.2	6	HCL-6H	4.60	HCL-6HSP	6.04	HCL-6HSPX	7.64
	7/16	1	11.1	25.4	8	HCL-8H	4.60	HCL-8HSP	6.27	HCL-8HSPX	7.78
	9/16	1 1/16	14.3	27	10	HCL-10H	4.60	HCL-10HSP	6.60	HCL-10HSPX	7.90
	9/16	1 1/4	14.3	31.7	12	HCL-12H	4.60	HCL-12HSP	6.76	HCL-12HSPX	8.04
	1 1/16	1 1/2	17.5	38.1	16	HCL-16H	4.83	HCL-16HSP	7.56	HCL-16HSPX	8.80
	3/4	1 3/4	19.1	44.4	20	HCL-20H	4.83	HCL-20HSP	7.80	HCL-20HSPX	9.20
	1 1/16	2	27	50.8	24	HCL-24H	4.83	HCL-24HSP	8.04	HCL-24HSPX	9.56
	1 5/16	2 1/4	33.3	57.2	28	HCL-28H	4.83	HCL-28HSP	8.20	HCL-28HSPX	9.96
	1 9/16	2 1/2	39.7	63.5	32	HCL-32H	5.05	HCL-32HSP	8.51	HCL-32HSPX	10.32
	1 13/16	2 3/4	46	69.9	36	HCL-36H	5.05	HCL-36HSP	8.76	HCL-36HSPX	10.72
	2 1/16	3	52.4	76.2	40	HCL-40H	8.25	HCL-40HSP	9.24	HCL-40HSPX	11.16
	2 5/16	3 1/4	58.7	82.6	44	HCL-44H	8.50	HCL-44HSP	9.51	HCL-44HSPX	11.92
	2 9/16	3 1/2	65.1	88.9	48	HCL-48H	8.68	HCL-48HSP	9.91	HCL-48HSPX	12.44
	2 13/16	3 3/4	71.4	95.3	52	HCL-52H	9.48	HCL-52HSP	10.38	HCL-52HSPX	12.88
	3 1/16	4	77.8	101.6	56	HCL-56H	9.80	HCL-56HSP	10.67	—	—
	3 9/16	4 1/2	90.5	114.3	64	HCL-64H	10.23	HCL-64HSP	11.43	HCL-64HSPX	14.36
4 5/8	5 1/2	117.5	139.7	80	HCL-80H	12.73	HCL-80HSP	13.37	HCL-80HSPX	17.10	
4 1/2	6 1/2	104	152.4	96	HCL-96H	15.93	HCL-96HSP	17.24	HCL-96HSPX	21.94	

38	Quantity Discount	1-9 Net	10-24 5%	25-49 8%	50-99 10%	100-249 12.5%	250-499 15%	500+ Call
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TOOL WRAPS



Protects the surface of air hardening tool steels from scale and oxide buildup during heat treating in atmospheric furnaces. Made of type 321 high titanium stainless steel. Highly resistant to scaling and chromium carbide precipitation. .002" thick. Can be folded and crease sealed easily. A seam roller tool is available for easy sealing. Sold separately.

See table 14 below for additional discounts.

Cat. No.	Description	Price Each 1-24
TW-3	50 ft. Tool Wrap - 12" wide	86.29
TW-1	50 ft. Tool Wrap - 24" Wide	152.38
TW-5	100 ft. Tool Wrap - 12" Wide	158.39
TW-4	100 ft. Tool Wrap - 24" Wide	289.51
TW-2	Seam Roller Tool	7.16

14	Quantity Discount	1-24 Net	25-49 28%	50-99 57%	100-499 62%	500-999 67%	1000+ Call
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HEAT TREAT ENVELOPES



Stainless steel foil envelope provides a protective sheath and automatically neutralizes the entrapped atmosphere. The envelope heats more rapidly than the work piece. As a result the undesirable elements in the entrapped atmosphere react with the envelope long before the workpiece is hot enough to be damaged by them. For high carbon, high chrome and air hardening steels.

See table 22 below for additional discounts.

Cat. No.	Size	Price Each 1-49	Cat. No.	Size	Price Each 1-49	Cat. No.	Size	Price Each 1-49
SP-1	2 1/2 x 5	2.15	SP-5	6 x 8	4.82	SP-9	10 x 12	9.53
SP-2	2 1/2 x 8	3.15	SP-6	6 x 12	7.22	SP-12	12 x 18	15.85
SP-3	4 x 6	3.15	SP-7	8 x 10	7.22			
SP-4	4 x 9	4.25	SP-8	8 x 14	9.53			

22	Quantity Discount	1-49 Net	50-99 2%	100-149 5%	150-249 8%	250-499 10%	500-999 12.5%	1000+ Call
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HOSE CLAMPS

Partial Stainless - Stainless steel band and housing with carbon screw. Recommended for most applications.

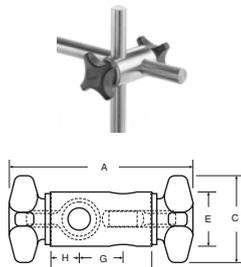
All 300 Stainless - 300 series Stainless steel band, housing, and screw. Highly corrosion resistant and low in magnetic permeability

All 316 Stainless - Marine grade 316 Stainless steel band, housing, and screw. Recommended in highly corrosive and salt-water environments. Non-magnetic.

HEAVY DUTY CROSS BLOCKS

Used for connecting two round rods at 90°. Adjustment can be made by loosening the hand knob. Plastic knobs function independently for precise adjustment. Stainless steel eye bolt firmly clamps around the adjusting rod for superior holding strength. Eyelet does not mar the rod when tightened, resulting in a smooth rod surface that easily slides thru the cross block. No set screws are used. Stainless steel bodies accept 1/2" or 5/8" rods. Several variations available with two knobs, nut and knob and two nuts. Stainless steel parts made of Type 304 stainless steel.

Cross Block with Two Knobs

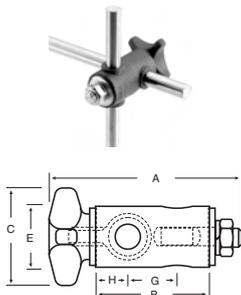


Stainless steel body and plastic knobs with brass inserts. Stainless steel hardware. Loosen hand knobs for quick adjustment.

See table 32 below for additional discounts.

Cat. No.	Rod Sizes	Thread Size						Price Each 1-99
		A	B	C	E	G	H	
VG-4	1/2 x 1/2	4.20	2.31	2.00	1.25	1.00	.66	22.97
VG-5	1/2 x 5/8	4.20	2.31	2.00	1.25	1.00	.66	22.97
VG-6	5/8 x 5/8	4.20	2.31	2.00	1.25	1.00	.66	22.97

Cross Block with One Nut and One Knob

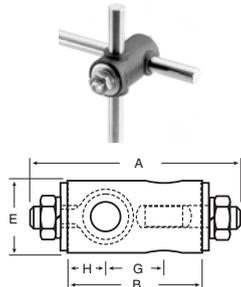


Stainless steel body and plastic knob. Stainless steel washer and nut. Use hand knob for frequent adjustments. Use lock washer and nut for more permanent positioning.

See table 32 below for additional discounts.

Cat. No.	Rod Sizes	Thread Size						Price Each 1-99
		A	B	C	E	G	H	
VG-10	1/2 x 1/2	3.80	2.31	2.00	1.25	1.00	.66	21.42
VG-11	1/2 x 5/8	3.80	2.31	2.00	1.25	1.00	.66	21.42
VG-12	5/8 x 5/8	3.80	2.31	2.00	1.25	1.00	.66	21.42

Cross Block with Two Nuts



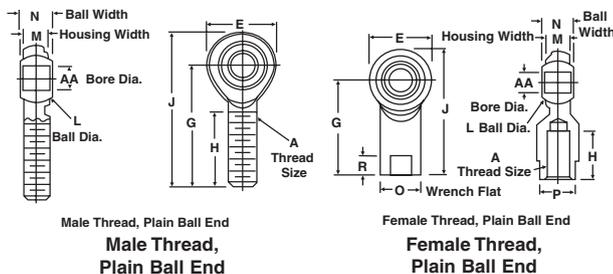
Stainless steel body with stainless steel lock washers and nuts. Used when less frequent adjustments are necessary.

See table 32 below for additional discounts.

Cat. No.	Rod Sizes	Thread Size						Price Each 1-99
		A	B	E	G	H		
VG-16	1/2 x 1/2	3.40	2.31	1.25	1.00	.66	19.92	
VG-17	1/2 x 5/8	3.40	2.31	1.25	1.00	.66	19.92	
VG-18	5/8 x 5/8	3.40	2.31	1.25	1.00	.66	19.92	

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net		5%	8%	10%	12.5%	15%	Call

BALL JOINT ROD ENDS



Stainless steel housing and ball. Housing is made from 303 and the ball is made from 440L stainless, heat treated. Operating temperature from -30° to 350°F. Maximum misalignment is 55°.

Male Thread - Plain Ball End Stainless Steel, Teflon Raceway

See table 11 below for additional discounts.

Cat. No.	Thread Size	Thread Size										Price Each 1-24	
		A	AA	E	G	H	J	L	M	N	P		R
SSTM-3	10-32	.189	.191	.625	1.250	.750	1.562	.438	.250	.312	.406	.312	21.47
SSTM-4	1/4-28	.250	.252	.750	1.562	1.000	1.937	.516	.281	.375	.469	.375	22.06
SSTM-5	5/16-24	.3125	.3145	.875	1.875	1.250	2.312	.625	.344	.437	.500	.437	24.38
SSTM-6	3/8-24	.375	.377	1.000	1.937	1.250	2.437	.719	.406	.500	.687	.500	30.48

Female Thread - Plain Ball End Stainless Steel, Teflon Raceway

See table 11 below for additional discounts.

Cat. No.	Thread Size	Thread Size										Price Each 1-24	
		A	AA	E	G	H	J	L	M	N	O		P
SSTF-3	10-32	.189	.191	.625	1.062	.500	1.375	.438	.250	.312	.406	.312	19.55
SSTF-4	1/4-28	.250	.252	.750	1.312	.687	1.687	.516	.281	.375	.469	.375	21.68
SSTF-5	5/16-24	.3125	.3145	.875	1.375	.687	1.812	.625	.344	.437	.500	.437	24.77
SSTF-6	3/8-24	.375	.377	1.000	1.625	.812	2.125	.719	.406	.500	.687	.562	29.43

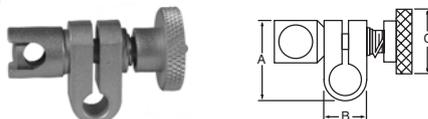
11	Quantity Discount	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Net		5%	8%	10%	12.5%	15%	Call

SWIVEL JOINTS



Precision made, column lock feature, will not become loose when adjusting. Universal design, will fit any make magnetic base, surface gage or indicator. Type 303 stainless steel.

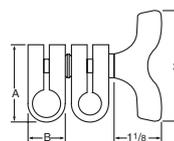
Knob Style



See table 32 below for additional discounts.

Cat. No.	Hole Sizes			Price Each 1-99	
	A	B	C		
SSJ-1	1	1/2	13/16	1/4 x 1/4	17.86
SSJ-4	1	1/2	13/16	5/16 x 5/16	17.86
SSJ-5	1	1/2	13/16	1/4 x 3/8	19.82
SSJ-7	1 1/16	5/8	1	5/8 x 5/8	28.53
SSJ-8	1 1/16	5/8	1	5/8 x 1/2	29.86

Single Wing Knob



See table 32 below for additional discounts.

Cat. No.	Hole Sizes			Price Each 1-99
	A	B	C	
SSJ-9	1 1/2	3/4	3/8 x 3/8	33.44
SSJ-10	1 1/2	3/4	3/8 x 1/2	35.44
SSJ-11	1 1/2	3/4	1/2 x 1/2	45.09
SSJ-13	2	1	5/8 x 5/8	50.41
SSJ-15	2	1	3/4 x 3/4	74.36

32	Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net		5%	8%	10%	12.5%	15%	Call

Vernier Calipers



- Has a depth scale that can be read directly on Verniers
- Micro-fine black graduation on satin chrome finish for easy reading
- All measuring surfaces are ground and lapped for extreme accuracy
- Jaws designed for outside, inside and thread measurement
- Full hardened stainless steel with satin chrome finish throughout
- Graduations 1/1000" on top and 1/20mm on bottom

Cat. No.	Range	Price Each
SO-200-210	0-6" / 150mm	23.20
SO-200-215	0-8" / 200mm	28.70
SO-200-220	0-12" / 300mm	50.20

Vernier Calipers with Fine Adjustments



- All measurements can be read directly on Verniers
- Extra long vernier to insure accuracy
- Raised sliding surfaces prevent defacement and wear of graduations
- Easy to read clear, crisp, black engraved graduations
- Jaws designed for outside, inside and thread measurement
- Full hardened stainless steel with satin chrome finish throughout
- Graduations 1/1000" on top and 1/20mm on bottom

Cat. No.	Range	Price Each
SO-200-600	0-6" / 150mm	23.20
SO-200-605	0-8" / 200mm	24.77
SO-200-610	0-12" / 300mm	50.20

Vernier Calipers Heavy Duty - Extra Long



- Made of hardened stainless steel throughout, ground and lapped for accuracy
- Accuracy meets U.S. federal specifications
- Longer jaws permit greater accessibility
- Easy to read clear, crisp, black engraved graduations
- Satin chrome finish
- Adjustable Vernier plates
- Graduations 1/1000" on top and 1/50mm on bottom

Cat. No.	Range	Jaw Depth	Price Each
SO-200-588	0-12" / 300mm	3	78.80
SO-200-590	0-18" / 450mm	3 1/2	126.50
SO-200-592	0-24" / 600mm	4	147.00

Dial Calipers



- Direct reading to .001" on large, clear dial
- Measuring face is hardened, precision ground, and micro lapped for absolute accuracy
- Accurate to .001" per 6"
- Adjusting slide for fine adjustment
- Crisp engraved graduation
- Inside, outside and depth measurements
- Satin chrome finish
- Covered rack
- Clamp for repetitive setting
- .100 per one revolution continuous dial 0-100
- Made of stainless steel

Inch Cat. No.	Range (Inches)	Graduations Inches	Price Each	Metric Cat. No.	Range (mm)	Graduations mm	Price Each
SO-200-582	0-6	.001	33.10	SO-200-583	150	.02	36.50
SO-200-584	0-8	.001	55.90	SO-200-585	200	.01	58.40
SO-200-586	0-12	.001	78.70	SO-200-587	300	.02	82.50

Dial Calipers



- Knife edge contacts for inside and outside measurements
- Thumb-operated, fine adjusting roll
- Hardened stainless steel rack for lasting accuracy
- Locknut for locking at any setting
- Provided with case

Cat. No.	Starrett	Size	Bar Graduation	Dial Indicator		Price Each
				Graduation	Range per Rev.	
STR-120Z-6	120A-6	6	.100	.001	.100	149.21
STR-120Z-9	120AZ-9	9	.100	.001	.100	241.00

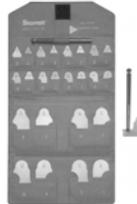
Digital Calipers



- Thumb operated, fine adjusting roll for one handed use
- Knurled thumb screw locks jaw at any setting
- Full one year battery life
- Hardened stainless body
- Measures inside, outside, depths and steps
- Extensive electronic readout functions
- Interfaces for SPC
- Includes case

Cat. No.	Starrett	Range	Resolution	Linear Accuracy	Price Each
STR-65143	721B-6/150mm	0-6	.0005	+/- .001	199.00

Radius Gage Set



Made of satin finish stainless steel. Rust and stain resistant. Each gage is clearly marked with its radius. Each has five different gaging surfaces for both convex and concave radii. All have precision finished radii with extra smooth, accurate edges.

Cat. No.	Radii Range	Graduations	Qty.	Description	Price Each
STR-S167CHZ	1/64 - 17/64" 9/32 - 1/2	32nds, 64ths	25	Radius Gage w/ Holder	110.16

Slide Utility Calipers



Inside and outside graduations in 32nd's and mm. Available in pocket sizes and larger capacity 10" size. GEN-730 has a reversing slide to convert to a height or step gage. Made of stainless steel.

Cat. No.	Capacity	Price Each
GEN-132	3"	7.02
GEN-729	4"	8.69
GEN-730	10"	13.44

Protractors

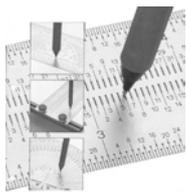


For setting bevels, measuring and transferring angles. 3-3/8" x 2" head. 6" adjustable arm locks into place with knurled thumb nut. Permanently etched graduations 0 to 180°. Made from ground stainless steel for greater accuracy.

Cat. No.	Description	Price Each
GEN-17	Square Head Protractor	10.46
GEN-18	Round Head Protractor	10.62

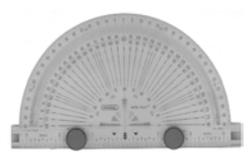
GENERAL™ ULTRA-RULE™

Rules and Protractors



Micro-fine guide holes and slots for marking a fine dot or short line with a sharp pencil or metal scribe. Ultra thin stainless steel for greater precision. All lines and characters are engraved.

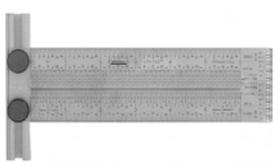
Precision Protractor



The Ultra Rule™ precision protractor has micro-fine guide holes at every 45°, 30°, 22.5°, 5°, 1° and 0.5° intervals to plot any angle with ease and absolute accuracy. A metal T-bar and see through cross hairs provide exact alignment against the edge of your workpiece. Remove the T-bar to work on flat surfaces or to use the 6" centering scale. Four angle scales: 0° left to 180° right; 180° left to 0° right; 0° top to 90° left and right, and 90° top to 0° left and right.

Cat. No.	Description	Graduations	Price Each
GEN-30	Ultra Rule Protractor	1°, 1/2°, 1/32°	23.04

Flexible T-Rules



Micro-fine marking holes and slots at every 1/16", 1/32", and 1/64" scale position. Available in six and twelve inch lengths, two inches wide.

Cat. No.	Description	Graduations	Price Each
GEN-831	6" Flexible T-Rule	16ths, 32nds, 64ths	15.21
GEN-832	12" Flexible T-Rule	16ths, 32nds, 64ths	23.51

Precision Centering Rule



Micro-fine top and bottom guide holes every 1/32" let you plot perfectly symmetrical marks from exact center of any workpiece that measures 12" wide. A built in protractor has guide slots to position your mark exactly at every 45, 30, 22.5 and 5 degree intervals. 1-5/8" wide.

Cat. No.	Description	Graduations	Price Each
GEN-1211	12" Flexible Centering Rule	32nds	16.77

Flexible Marking Rules



Micro-fine marking holes and slots at every scale position allow you to instantly locate a sharp pencil point or scribe exactly where you want it. Available in six and twelve inch lengths. 7/8" wide.

Cat. No.	Description	Graduations	Price Each
GEN-641	6" Flexible Marking Rule	32nds, mm	6.60
GEN-642	6" Flexible Marking Rule	32nds, 10ths	6.60
GEN-1241	12" Flexible Marking Rule	32nds, mm	10.08
GEN-1242	12" Flexible Marking Rule	32nds, 10ths	10.08

Mitutoyo CALIPERS

Dial Calipers 505 Series Inch and Metric

- Stainless Steel
- Thumb Roller
- Supplied in fitted carrying case



These dial calipers have been designed with a new dial movement to give an ultra smooth feel and to provide extra shock protection for the gear train. To increase tool life a TiN coating has been applied to the beam wear surfaces on the 6" and 8" calipers.

Cat. No.	Range	Resolution	Range per Rev.	Depth of Jaws	Price Each
MI-505-717	0-6	.001	.200	19/16	77.28
MI-505-633-50	0-150mm	.05mm	5mm	40mm	74.34
MI-505-675	0-6	.001	.100	19/16	85.68
MI-505-712*	0-6	.001	.100	19/16	136.92
MI-505-719	0-8	.002	.200	1 15/16	115.08
MI-505-676	0-8	.002	.100	1 15/16	124.32
MI-505-720	0-12	.002	.200	2 1/2	173.04
MI-505-677	0-12	.002	.100	40mm	184.80

*CO/ID carbide jaw

Digimatic Calipers 500 Series with Output for SPC

- Accuracy +/- .001"
- Both LCD and imprinted line scale
- Stainless steel construction
- No rack, pinion, or glass scale
- OD, ID, step and depth measurements with a resolution of +/- .0005"
- In/mm selection
- Zero set
- Automatic shut-off after two hours idle time



Cat. No.	Range	Resolution	Price Each
MI-500-506-10	0-24" / 0-600mm	.0005	710.00

Digimatic Calipers 500 Series Solar Powered

The same as the MI-500-506-10 (see above) digimatic calipers except these have solar cells which gather light energy and convert it to power. Eliminates the need for battery replacement. When ambient illumination is over 125 lux., the surplus power is stored. It can be run for approximately three hours after fully



Cat. No.	Range	Resolution	Price Each
MI-500-473	0-4 / 0-100mm	.0005	119.28
MI-500-474	0-6 / 0-150mm	.0005	128.52
MI-500-475	0-8 / 0-200mm	.0005	168.84

Mitutoyo RULES



Cat. No.	Lgth.	Width	Thickness	Graduations	Price Each
Wide Rigid Rules					
MI-182-101	6	3/4	3/64	1/8, 1/16, 1/32, 1/64 (4R)	13.44
MI-182-104	6	3/4	3/64	1/32, 1/64, 1/10, 1/50 (3R)	13.44
MI-182-123	12	1	3/64	1/32, 1/64, 1/10, 1/100 (5R)	25.62
MI-182-124	12	1	3/64	1/32, 1/64, 1/10, 1/50 (3R)	25.62
MI-182-162	24	1 3/64	3/64	1/32, 1/64, 1/50, 1/100 (16R)	65.94
Full - Flexible Rules					
MI-182-201	6	1/2	1/64	1/8, 1/16, 1/32, 1/64 (4R)	13.44
MI-182-202	6	1/2	1/64	1/32, 1/64, 1/50, 1/100 (16R)	13.44
MI-182-203	6	1/2	1/64	1/32, 1/64, 1/10, 1/100 (5R)	13.44
MI-182-204	6	1/2	1/64	1/32, 1/64, 1/10, 1/50 (3R)	13.44
MI-182-207	6 x 150mm	1/2	1/64	1/10, 1/100, 0.5 mm, 1mm	13.44
MI-182-221	12	1/2	1/64	1/8, 1/16, 1/32, 1/64 (4R)	25.62
MI-182-222	12	1/2	1/64	1/32, 1/64, 1/50, 1/100 (16R)	25.62
MI-182-223	12	1/2	1/64	1/32, 1/64, 1/10, 1/100 (5R)	25.62
MI-182-224	12	1/2	1/64	1/32, 1/64, 1/10, 1/50 (3R)	25.62
MI-182-226	12 x 300mm	1/2	1/64	1/50, 1/100, 0.5mm, 1mm	25.62

ANGLE GAGES



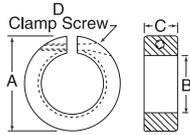
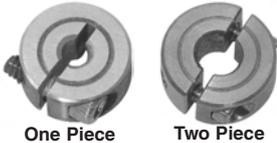
- Checks primary, 1/2 primary and complimentary angles
- Checks angles and ID or OD chamfers
- Set contains 18 gages in vinyl pouch
- Individual gages can be purchased separately

Cat. No.	Description	Price Each
AG-375-9	Angle Gage Set	77.75



SHAFT COLLARS

One and Two Piece

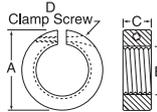


These collars offer full radial holding power without marring the shaft. Two piece design allows for installation without disassembling equipment.

See table 32 below for additional discounts.

One Piece Cat. No.	Two Piece Cat. No.	A	B	C	Clamp Screw D	Price Each 1-99 One Piece	Two Piece
CTC-2SS	—	1/2	3/8	1/4	4-40	7.31	—
CTC-4SS	—	5/8	3/16	5/16	4-40	5.05	—
CTC-6SS	CTC-106SS	11/16	1/4	5/16	4-40	4.84	7.62
CTC-8SS	—	11/16	5/16	5/16	4-40	4.84	—
CTC-10SS	CTC-110SS	7/8	3/8	11/32	6-32	5.36	8.50
CTC-12SS	CTC-112SS	15/16	7/16	3/8	6-32	6.28	9.37
—	CTC-114SS	11/8	1/2	13/32	8-32	—	9.84
—	CTC-116SS	11/4	9/16	7/16	10-32	—	12.05
—	CTC-118SS	15/16	5/8	7/16	10-32	—	11.64
CTC-19SS	—	13/8	11/16	7/16	10-32	9.45	—
CTC-22SS	CTC-122SS	11/2	3/4	1/2	1/4-28	10.20	14.47
CTC-26SS	CTC-126SS	15/8	7/8	1/2	1/4-28	12.36	16.22
—	CTC-127SS	13/4	15/16	1/2	1/4-28	—	16.30
—	CTC-130SS	13/4	1	1/2	1/4-28	12.67	15.66
—	CTC-131SS	17/8	11/16	1/2	1/4-28	—	16.48
CTC-34SS	CTC-134SS	17/8	11/8	1/2	1/4-28	15.45	19.78
CTC-38SS	CTC-138SS	21/16	11/4	1/2	1/4-28	17.10	21.12
—	CTC-139SS	21/8	15/16	9/16	1/4-28	—	22.76
—	CTC-142SS	21/4	13/8	9/16	1/4-28	—	27.66
CTC-46SS	CTC-146SS	23/8	11/2	9/16	1/4-28	23.54	28.48
CTC-62SS	CTC-162SS	3	2	11/16	5/16-24	40.43	45.53

Threaded One Piece

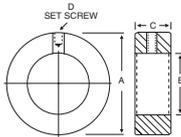


These threaded collars offer full radial holding power without marring the shaft.

See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Price Each 1-99
CTC-202SS	11/16	1/4-20	5/16	4-40	4.84
CTC-206SS	11/16	5/16-18	9/32	4-40	4.84
CTC-210SS	7/8	3/8-16	11/32	6-32	5.72
CTC-212SS	7/8	3/8-24	11/32	6-32	5.72
CTC-250SS	15/16	7/16-14	11/32	6-32	6.44
CTC-255SS	15/16	7/16-20	11/32	6-32	6.44
CTC-214SS	11/8	1/2-13	13/32	8-32	7.36
CTC-216SS	11/8	1/2-20	13/32	8-32	7.36
CTC-218SS	15/16	5/8-11	7/16	10-32	8.65
CTC-220SS	15/16	5/8-18	7/16	10-32	8.65
CTC-222SS	11/2	3/4-10	1/2	1/4-28	10.71
CTC-224SS	11/2	3/4-16	1/2	1/4-28	10.71

Standard Type



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Price Each 1-99
LSC-04SS	1/2	.2510-.2530	5/16	10-32	2.21
LSC-05SS	5/8	.3135-.3155	5/16	10-32	2.68
LSC-06SS	3/4	.3760-.3780	3/8	1/4-20	3.88
LSC-08SS	1	.5010-.5030	7/16	1/4-20	4.02
LSC-10SS	1 1/8	.6260-.6280	1/2	5/16-18	5.09
LSC-12SS	1 1/4	.7510-.7530	9/16	5/16-18	6.10
LSC-13SS	1 1/2	.8135-.8155	5/8	5/16-18	6.22
LSC-16SS	1 1/2	1.001-1.003	5/8	5/16-18	9.45
LSC-20SS	2	1.251-1.254	11/16	3/8-16	15.14
LSC-24SS	2 1/4	1.501-1.504	3/4	3/8-16	17.42

32 Quantity Discount	1-99 Net	100-249 5%	250-499 8%	500-999 10%	1000-2499 12.5%	2500-4999 15%	5000+ Call
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SHAFT COUPLINGS

Rigid Clamp Style - One Piece



Available with or without a keyway. Clamp screws are forged and treated with an antirivibration coating to keep them from loosening.

See table 11 below for additional discounts.

Bore A	Keyway A	Bore B	Keyway B	Length	OD	With Keyway Cat. No.	Price Each 1-24	Without Keyway Cat. No.	Price Each 1-24
.250	—	.250	—	—	5/8	—	—	CC-701	31.23
.375	3/32	.375	3/32	1 3/8	7/8	CC-603	42.24	CC-703	34.20
.500	1/8	.375	3/32	1 3/4	1 1/8	—	—	CC-704	49.12
.500	1/8	.500	1/8	1 3/4	1 1/8	CC-605	53.27	CC-705	41.92
.625	3/16	.500	1/8	2	1 5/16	—	—	CC-706	67.13
.625	3/16	.625	3/16	2	1 5/16	—	—	CC-707	58.12
.750	3/16	.750	3/16	2 1/4	1 1/2	CC-610	86.51	CC-710	68.41
1.125	1/4	1.125	1/4	3 1/8	1 7/8	CC-616	135.31	—	—
1.250	1/4	1.250	1/4	3 1/4	2 1/16	CC-619	157.62	—	—

11 Quantity Discount	1-24 Net	25-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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GRIP FAST™ SELF LOCKING COLLARS

Locks Automatically without Tools



Great for quick change over and quick adjustments, these self locking collars slide on in one direction and lock automatically. No tools are necessary for installation or removal. The ball bearings jam themselves between the inner metal ring and the shaft allowing up to 500 lbs. of axial holding power (based on cold rolled drawn steel). For harder shafts, call for special modifications. Made from Type 304 stainless steel. All collars are designed to fit shaft tolerances of +/- .020". Custom design and metric sizes are available as special order. Please call for price and delivery.



See table 38 below for additional discounts.

Cat. No.	Bore Size	OD	Lgth. (Max.)	Price Each 1-99
SMI-250SS	1/4	.750	1.00	49.40
SMI-312SS	5/16	.750	1.00	49.40
SMI-375SS	3/8	1.125	1.10	43.68
SMI-500SS	1/2	1.125	1.10	49.92
SMI-625SS	5/8	1.400	1.50	58.24
SMI-750SS	3/4	1.400	1.50	62.40
SMI-1000SS	1	1.875	2.00	76.44
SMI-1500SS	1 1/2	2.200	2.00	95.94

38 Quantity Discount	1-9 Net	10-24 5%	25-49 8%	50-99 10%	100-249 12.5%	250-499 15%	500+ Call
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HINGED SHAFT COLLARS



Hinged construction and a captive clamp screw to simplify assembly. These fully split collars eliminate lost screws and downtime. Hinged collars provide the same axial load handling capabilities as our two piece collars. Both halves are machined from the same stock and then joined together by a heat-treated triple-link hinge. These collars have a smooth ID, OD, and sides with no protruding pins or screws. Made of 303 stainless steel.

See table 32 below for additional discounts.

Cat. No.	Bore Size	OD	Dimensions Width	Screw	Price Each 1-99
CTC-400SS	.375	1.063	.313	6-32	25.82
CTC-403SS	.750	1.750	.500	1/4-28	32.30
CTC-404SS	.875	1.875	.500	1/4-28	35.09
CTC-405SS	1.000	2.000	.500	1/4-28	35.09
CTC-406SS	1.125	2.125	.500	1/4-28	56.70
CTC-410SS	1.500	2.500	.500	1/4-28	64.25

HEXAGON BORE CLAMP TYPE COLLARS



One-Piece

Two-Piece

Clamp-type shaft collars to fit hexagon shafts. Made of stainless steel. They can be modified (drilled, tapped, welded, etc.) to act as a mount for other components. They are non-marring and have high holding power.

See table 32 below for additional discounts.

One Piece Cat. No.	Two Piece Cat. No.	Hex Bore	Dimensions ID	OD	Width	Screw	Price Each 1-99 One Piece	Two Piece
CTC-601	CTC-650	1/4	.250	.813	.250	4-40	—	23.77
CTC-602	—	3/16	.375	1.063	.313	6-32	19.45	—
CTC-603	CTC-653	1/2	.500	1.250	.375	8-32	19.45	25.91
CTC-604	CTC-654	5/8	.625	1.500	.406	10-32	23.77	30.23
CTC-605	CTC-655	3/4	.750	1.875	.500	1/4-28	28.09	34.55
CTC-607	CTC-657	1	1.000	2.125	.500	1/4-28	29.17	35.64

32 Quantity Discount	1-99 Net	100-249 5%	250-499 8%	500-999 10%	1000-2499 12.5%	2500-4999 15%	5000+ Call
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THOMSON™ 60 CASE® LINEARACE® SHAFTS



Thomson's 60 Case® LinearRace® shafts are precision ground to exacting standards for superior linear bearing performance and life. Made from 440C stainless steel, corrosion resistant, with a hardness of 50-55C. Roundness is 80 millionth of an inch. Surface finish 12 Ra micro inch. The items below are in stock for same day shipping. Other sizes and styles are available as special orders. Please call for price and delivery.

Inch

See table 23 below for additional discounts.

Cat. No.	Thomson	Nom. Dia.	Actual Dia.	Lgth.	Price Each 1-49
TLM-1601	1/4 LSS x 6	1/4	.2495/.2490	6	7.54
TLM-1602	1/4 LSS x 12	1/4	.2495/.2490	12	15.08
TLM-1603	1/4 LSS x 18	1/4	.2495/.2490	18	22.61
TLM-1604	1/4 LSS x 24	1/4	.2495/.2490	24	30.15
TLM-1605	1/4 LSS x 36	1/4	.2495/.2490	36	45.25
TLM-1606	1/4 LSS x 48	1/4	.2495/.2490	48	60.30
TLM-1607	3/8 LSS x 6	3/8	.3745/.3740	6	7.60
TLM-1608	3/8 LSS x 12	3/8	.3745/.3740	12	15.22
TLM-1609	3/8 LSS x 18	3/8	.3745/.3740	18	22.82
TLM-1611	3/8 LSS x 36	3/8	.3745/.3740	36	45.61
TLM-1613	1/2 LSS x 6	1/2	.4995/.4990	6	7.58
TLM-1614	1/2 LSS x 12	1/2	.4995/.4990	12	15.46
TLM-1615	1/2 LSS x 18	1/2	.4995/.4990	18	23.20
TLM-1616	1/2 LSS x 24	1/2	.4995/.4990	24	30.92
TLM-1617	1/2 LSS x 36	1/2	.4995/.4990	36	46.39
TLM-1618	1/2 LSS x 48	1/2	.4995/.4990	48	61.85
TLM-1619	5/8 LSS x 6	5/8	.6245/.6240	6	9.90
TLM-1620	5/8 LSS x 12	5/8	.6245/.6240	12	20.19
TLM-1621	5/8 LSS x 18	5/8	.6245/.6240	18	30.29
TLM-1622	5/8 LSS x 24	5/8	.6245/.6240	24	40.38
TLM-1623	5/8 LSS x 36	5/8	.6245/.6240	36	60.57
TLM-1624	5/8 LSS x 48	5/8	.6245/.6240	48	80.75
TLM-1625	3/4 LSS x 6	3/4	.7495/.7490	6	10.90
TLM-1626	3/4 LSS x 12	3/4	.7495/.7490	12	22.25
TLM-1627	3/4 LSS x 18	3/4	.7495/.7490	18	33.35
TLM-1628	3/4 LSS x 24	3/4	.7495/.7490	24	44.48
TLM-1629	3/4 LSS x 36	3/4	.7495/.7490	36	66.69
TLM-1630	3/4 LSS x 48	3/4	.7495/.7490	48	88.94
TLM-1631	1 LSS x 12	1	.9995/.9990	12	30.81
TLM-1632	1 LSS x 18	1	.9995/.9990	18	47.16
TLM-1633	1 LSS x 24	1	.9995/.9990	24	62.87
TLM-1634	1 LSS x 36	1	.9995/.9990	36	94.30
TLM-1635	1 LSS x 48	1	.9995/.9990	48	125.74

23	Quantity	1-49	50-99	100-149	150-249	250-499	500-999	1000+
	Discount	Net	2%	5%	8%	10%	12.5%	Call

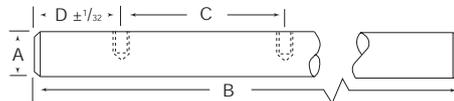
Metric

See table 11 below for additional discounts.

Cat. No.	Nom. Dia.	Actual Dia.	Length	Price Each 1-24
TLM-3039	12	12.00/11.99	250	4.78
TLM-3040	12	12.00/11.99	500	9.55
TLM-3041	12	12.00/11.99	750	14.31
TLM-3042	12	12.00/11.99	1000	19.09
TLM-3043	12	12.00/11.99	1500	28.63
TLM-3044	12	12.00/11.99	2000	38.20
TLM-3045	16	16.00/15.99	250	6.02
TLM-3046	16	16.00/15.99	500	12.04
TLM-3047	16	16.00/15.99	750	18.05
TLM-3048	16	16.00/15.99	1000	24.09
TLM-3049	16	16.00/15.99	1500	36.14
TLM-3050	16	16.00/15.99	2000	48.18
TLM-3051	20	20.00/19.99	250	8.42
TLM-3052	20	20.00/19.99	500	16.81
TLM-3053	20	20.00/19.99	750	25.23
TLM-3054	20	20.00/19.99	1000	33.64
TLM-3055	20	20.00/19.99	1500	50.44
TLM-3056	20	20.00/19.99	2000	67.27
TLM-3057	25	25.00/24.99	500	20.45
TLM-3058	25	25.00/24.99	750	30.69
TLM-3059	25	25.00/24.99	1000	40.90
TLM-3060	25	25.00/24.99	1500	61.35
TLM-3061	25	25.00/24.99	2000	81.80
TLM-3062	30	30.00/29.99	500	26.59
TLM-3063	30	30.00/29.99	750	39.88
TLM-3064	30	30.00/29.99	1000	53.18
TLM-3065	30	30.00/29.99	1500	79.76
TLM-3066	30	30.00/29.99	2000	106.35
TLM-3067	40	40.00/39.99	500	51.12
TLM-3068	40	40.00/39.99	750	76.70
TLM-3069	40	40.00/39.99	1000	102.27
TLM-3070	40	40.00/39.99	1500	153.39
TLM-3071	40	40.00/39.99	2000	204.54

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Pre-Drilled 60 Case® LinearRace® Shafting



Pre-drilled shafting mounts easily to pre-drilled support rails. For use with open style bearings and pillow blocks. All holes are drilled and tapped to the center of the shaft.

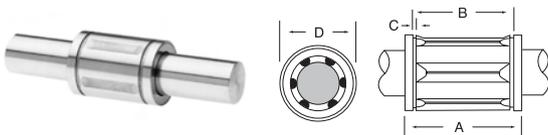
See table 11 below for additional discounts.

Cat. No.	A	B	C	D	Thread	Price Each 1-24
TLM-1831	1/2	24	4	2	6-32	75.63
TLM-1834	5/8	24	4	2	8-32	84.14
TLM-1836	5/8	72	4	2	8-32	236.91
TLM-1837	3/4	24	6	3	10-32	79.47
TLM-1838	3/4	48	6	3	10-32	158.97
TLM-1839	3/4	72	6	3	10-32	238.34
TLM-1840	1	24	6	3	1/4-20	94.96
TLM-1841	1	48	6	3	1/4-20	189.92
TLM-1842	1	72	6	3	1/4-20	284.88

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

PRECISION BALL BUSHING® BEARINGS

Closed Type for End Supported Applications



- Coefficient of friction as low as 0.001
- All metal construction for maximum rigidity
- Travel speeds up to 10 ft/s
- High temperature capability
- Can be mounted in customized housing
- Other sizes and types available as special order. Please call for price and delivery

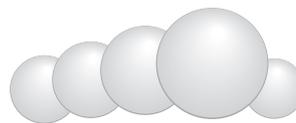
See table 38 below for additional discounts.

Cat. No.	Thomson	Dia.	A	B	C	D	No. of Ball Circuits	Dynamic Load (Lbs.)	Price Each 1-9
TLM-50	A-4812SS	.250	.750/.735	.515/.499	.039	.5000/.4996	3	19	35.98
TLM-55	A-61014SS	.375	.875/.860	.640/.624	.039	.6250/.6246	4	37	38.74
TLM-60	A-81420SS	.500	1.250/1.235	.967/.951	.046	.8750/.8746	4	85	42.21
TLM-65	A-122026SS	.750	1.625/1.610	1.170/1.154	.056	1.2500/1.2496	5	200	49.42

Note: 60 Case LinearRace shafts are not recommended for these bearings. "S" style shafting is recommended and available as special order. Please call for price and delivery.

38	Quantity	1-9	10-24	25-49	50-99	100-249	250-499	500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

STAINLESS STEEL BALLS



Grade	100
Sphericity	.0001"
Diameter Tolerance	+/- .0005"
Hardness: Rockwell C	55-61

Used by leading manufacturers of precision ball bearings where precise spherical and tolerance accuracy are required. Balls are AISI type 440 stainless steel. Balls offer maximum uniform hardness and outstanding corrosion resistance for valve and bearing applications. Other sizes available as special order. Please call for price and delivery.

See table 20 below for additional discounts.

Dia.	Cat. No.	Price Each 1-499	Dia.	Cat. No.	Price Each 1-499
3/16	BB-205	.06	13/16	BB-305	2.62
7/32	BB-210	.08	15/16	BB-320	3.89
9/32	BB-220	.12	1	BB-325	4.69
5/16	BB-225	.16	1 1/8	BB-335	6.44
3/8	BB-235	.24	1 3/16	BB-340	7.51
7/16	BB-245	.36	1 1/2	BB-365	15.68
1/2	BB-255	.55	2	BB-390	32.06
13/16	BB-305	2.62			

20	Quantity	1-499	500-999	1000-2499	2500-4999	5000-9999	10000+
	Discount	Net	5%	8%	10%	12.5%	Call

CAM FOLLOWERS

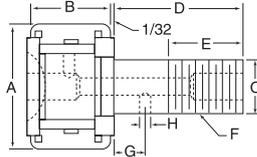
Needle Bearing

Stud Type Followers



Regular Duty

Heavy Duty



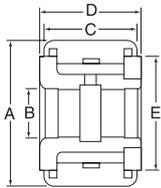
Regular Duty - Made of 440C stainless steel. Extends your bearing life and reduces maintenance cost. They use food grade lubricant. Hex socket.

Heavy Duty - Made of 440C stainless steel. Similar to the regular duty. Hex socket.

See table 11 below for additional discounts.

Cat. No.	Size	+0.00				E	F	G	H	Dynamic Rating Lbs.	Static Rating Lbs.	Price Each 1-24
		A	B	C	D							
Regular Duty												
CCF-350	1/2	.500	.375	.190	.625	.250	10-32	—	—	544	632	41.13
CCF-355	5/8	.625	.438	.250	.750	.312	1/4-28	—	—	796	796	40.88
CCF-360	3/4	.750	.500	.375	.875	.375	7/16-24	1/4	3/32	1,328	1,652	41.39
CCF-370	1	1.000	.625	.438	1.000	.500	1/2-20	1/4	3/32	1,780	2,448	50.21
CCF-380	1 1/4	1.250	.750	.500	1.250	.625	1 1/2-20	5/16	3/32	3,144	3,400	60.22
CCF-390	1 1/2	1.500	.875	.625	1.500	.750	5/8-18	3/8	3/32	3,872	4,572	73.76
CCF-400	1 3/4	1.750	1.000	.750	1.750	.875	3/4-16	7/16	3/32	5,108	6,336	91.77
CCF-410	2	2.000	1.250	.875	2.000	1.000	7/8-14	1/2	1/8	6,472	8,456	127.17
Heavy Duty												
CCF-965	1/2	.500	.375	.250	.625	.250	1/4-28	—	—	544	1106	44.10
CCF-970	5/8	.625	.438	.313	.750	.312	1/4-28	—	—	796	1736	43.72
CCF-975	3/4	.750	.500	.438	.875	.375	7/16-24	1/4	3/32	1,328	2,891	44.10
CCF-980	1	1.000	.625	.625	1.000	.500	1/2-20	1/4	3/32	1,780	4,284	54.11
CCF-985	1 1/4	1.250	.750	.750	1.250	.625	3/4-16	5/16	3/32	3,144	5,950	65.03
CCF-990	1 1/2	1.500	.875	.875	1.500	.750	5/8-14	3/8	3/32	3,872	7,896	80.22
CCF-995	1 3/4	1.750	1.000	1.000	1.750	.875	1-14	7/16	3/32	5,108	11,088	99.75
CCF-1000	2	2.000	1.250	1.125	2.000	1.000	1 1/8-12	1/2	1/8	14,798	6,472	138.01

Yoke Type Rollers



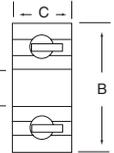
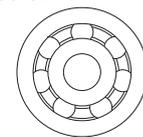
Similar in construction to the stud type followers. Can support heavier loads because stud deflection is not a factor. Bearings are sealed.

See table 11 below for additional discounts.

Cat. No.	Size	+0.00				E	Oil Hole Dia.	Dynamic Rating Lbs.	Static Rating Lbs.	Price Each 1-24
		A	B	C	D					
CCF-430	3/4	.750	.2500	.500	.5625	3/8	3/32	1,328	3,304	35.75
CCF-440	1	1.000	.3125	.625	.6875	23/32	3/32	1,780	4,896	43.49
CCF-450	1 1/4	1.250	.3750	.750	.8125	1	3/32	3,144	6,800	48.02
CCF-460	1 1/2	1.500	.4375	.875	.9375	1 1/8	3/32	3,872	9,024	58.21
CCF-470	1 3/4	1.750	.5000	1.000	1.0625	1 1/4	3/32	5,180	12,672	73.61

EER BALL BEARINGS

6000 Series



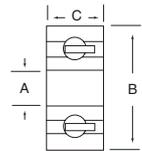
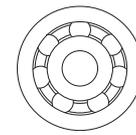
Specifically designed for applications where space limitations are a primary consideration and shafts are relatively large. Available with metal shields or Buna N seals. The 6000 series is capable of withstanding radial and thrust loads within the limitations of their ball complement. The conrad construction of the R series enables these bearings to take a thrust load as well as a radial load. The well designed ball complement and selection of retainers permit use of this series in high speed motor applications.

See table 30 below for additional discounts.

Cat. No.	Peer	A	B	C	Max. rpm No Load	Load Capacity Lbs.			Price Each 1-5
						Dynamic	Static	1-24	
Inch									
PRB-1	SS77R4	1/4	5/8	.196	2,352	56	51	5.66	
PRB-2	SS77R6	3/8	7/8	7/32	1,600	126	99	10.88	
PRB-3	SS77R8	1/2	1 1/8	1/4	1,142	165	129	13.64	
PRB-4	SS77R10	5/8	1 3/8	7/16	1,069	207	138	23.80	
PRB-5	SS77R12	3/4	1 5/8	5/16	840	234	156	28.42	
PRB-6	SS77R16	1	2	1/2	729	276	183	49.34	
Metric									
PRB-7	SS608	8	22	7	1,600	126	99	7.95	
PRB-8	SS6002	15	32	9	1,142	165	128	21.48	
PRB-9	SS6003	17	35	10	1,069	207	138	25.11	
PRB-10	SS6203	17	40	12	1,069	207	138	23.37	

30	Quantity Discount	1-5	6-14	15-24	25-49	50-99	100+
		Net	5%	8%	10%	12.5%	Call

BEARINGS



These Type 316 stainless steel bearings are semi-precision unground type. Ideal for hostile environments and wash down applications where the load is too heavy for plastic bearings. Type 316 stainless is non-magnetic and can be run without lubrication at slow speeds. Type 316 stainless provides greater corrosion resistance over 440 type stainless. Cage is made of a polymer. Metric dimensions are in millimeters.

See table 11 below for additional discounts.

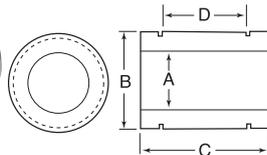
Cat. No.	Bearing Number	A	B	C	Max. rpm No Load	Load Capacity Lbs.			Price Each 1-24
						Dynamic	Static	1-24	
Inch									
NNB-60	R4	1/4	5/8	.196	2,352	89	51	17.00	
NNB-62	R6	3/8	7/8	7/32	1,600	126	99	18.00	
NNB-63	R6A	3/8	7/8	9/32	1,600	126	99	18.25	
NNB-64	R8	1/2	1 1/8	1/4	1,142	165	129	18.75	
NNB-66	R10B	1/2	1 3/8	7/16	1,069	207	138	20.56	
NNB-67	R10B	5/8	1 3/8	7/16	1,069	207	138	20.56	
NNB-68	R12	3/4	1 5/8	5/16	840	234	156	25.93	
NNB-69	R16	1	2	1/2	729	276	183	39.17	
Metric									
NNB-92	608	8	22	7	1,600	126	99	17.00	
NNB-95	6002	15	32	9	1,142	165	129	18.98	
NNB-96	6003	17	35	10	1,069	207	138	20.56	
NNB-102	6203	17	40	12	1,069	207	138	25.93	

LINEAR BEARINGS

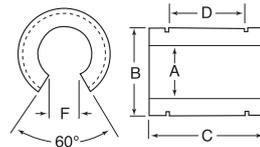
FDA/USDA Compliant



Closed Style



Open Style

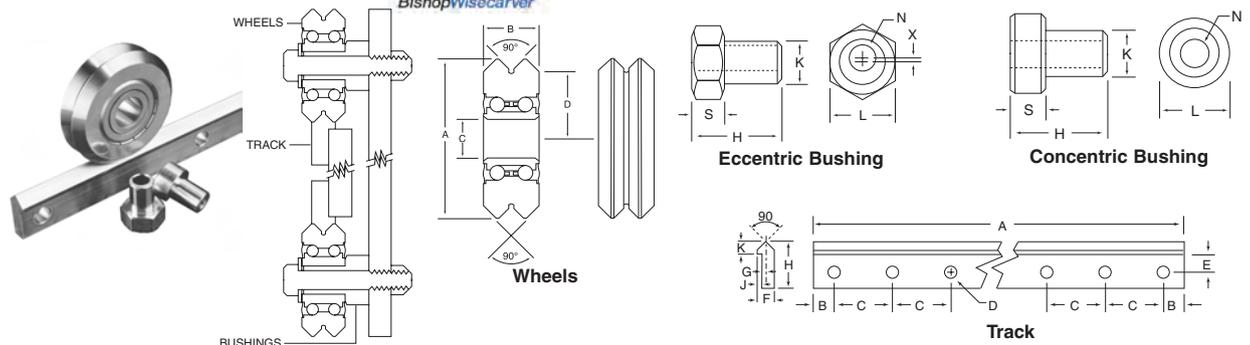


Stainless steel shell features FDA/USDA compliant, self-lubricating Teflon composite liner. Bearings are direct drop-in replacements for inch size linear ball bushings. Designed to run on soft 300 series shafting. Minimum shaft hardness is RB25. Ideal for drug/food processing equipment and packaging equipment where direct contact would be a factor. Bearing is unaffected by wash downs, contamination or submersion. Coefficient of friction is .12 to .20. Temperature range is -400°F to +375°F. The max. static psi is 1,000. Max. SFM without any load is 400. PV max. is 10,000. Other sizes available as special order. Please call for price and delivery.

See table 11 below for additional discounts.

Closed Style Cat. No.	Open Style Cat. No.	A	B	C	D	F	Max. Static Load (Lbs.)	Price Each 1-24	
								Closed Style	Open Style
LMB-5	LMB-25	.3755	.6250	.875	.562	.156	1,643	17.98	23.36
LMB-10	LMB-30	.8750	1.2500	1.625	.875	.312	3,128	19.11	28.00
LMB-15	LMB-35	.7508	1.2500	1.625	1.062	.438	6,100	25.48	32.15
LMB-20	LMB-40	1.0008	1.5625	2.250	1.625	.563	11,259	32.55	43.58

11	Quantity Discount	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
		Net	5%	8%	10%	12.5%	15%	Call



The guide rail system is an economical method of obtaining precision linear motion for all types of mechanical applications. Ideally suited for applications where contaminants are present. There are no linear seals to wear out. The guide wheels are precision ground, double row angular contact ball bearings, which are prelubricated. The wheels are available with seal only. Wheels are 440C hardened 58-60 Rc. The track is cold formed from stainless steel, and is hardened and polished on the "V" contact surfaces. The lower portion of the track is left soft to permit drilling for mounting. Track is AISI 420 stainless steel hardened to 40 Rc. Eccentric bushings are used opposite concentric bushings to provide a simple and effective means of adjusting the free play of the system. The bushings are 303 stainless steel. Since the circumference of the wheel is greater at the major diameter than the minor diameter, there is a constant wiping action on the track which gives a self-cleaning effect. All parts are sold separately.

Wheels

See table 11 below for additional discounts.

Cat. No.	Size	A	B	C	D	Static Radial Capacity Lbs.	Price Each 1-24
WZ-31	1	.77	.310	.1875	.313	250	41.33
WZ-32	2	1.21	.437	.3750	.500	625	45.65
WZ-33	3	1.80	.625	.4724	.750	1,135	65.96
WZ-34	4	2.36	.750	.5906	1.000	1,776	87.29
WZ-99	4	2.97	1.000	.8661	1.250	3,215	184.80

Bushings

See table 11 below for additional discounts.

Eccentric Cat. No.	Concentric Cat. No.	Size	H	K	L	Screw Size N	X*	S	Price Each 1-24	
									Eccentric Concentric	
WZ-51	WZ-95	1	.550	.1873	7/16	#6	.012	.250	6.20	3.80
WZ-52	WZ-96	2	.706	.3748	9/16	1/4	.024	.281	7.40	4.68
WZ-53	WZ-97	3	.990	.4722	3/4	5/16	.042	.375	9.92	6.48
WZ-54	WZ-98	4	1.177	.5904	7/8	3/8	.060	.437	10.72	10.72

*Mounting information assumes a "central" position for bushing allowing an adjustment from +X to -X, eccentric bushings only.

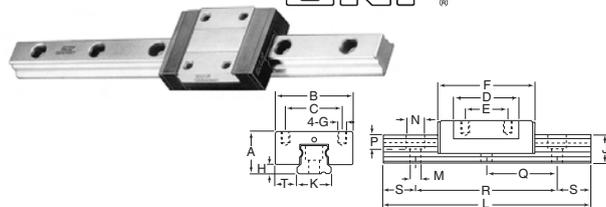
Track

See table 11 below for additional discounts.

Cat. No.	Size	No. Of Holes	±.005 A	±.005 B	C	D	E	F	G	H	J	K	Price Each 1-24
WZ-20	1	7	12.50	.25	2	.156	.156	.187	.031	.437	.062	.125	24.28
WZ-25	1	13	24.50	.25	2	.156	.156	.187	.031	.437	.062	.125	46.18
WZ-26	1	19	36.50	.25	2	.156	.156	.187	.031	.437	.062	.125	68.07
WZ-27	1	25	48.50	.25	2	.156	.156	.187	.031	.437	.062	.125	89.97
WZ-28	1	31	60.50	.25	2	.156	.156	.187	.031	.437	.062	.125	111.87
WZ-29	1	37	72.50	.25	2	.156	.156	.187	.031	.437	.062	.125	133.78
WZ-40	2	5	12.63	.31	3	.203	.219	.250	.031	.625	.093	.187	28.47
WZ-45	2	9	24.63	.31	3	.203	.219	.250	.031	.625	.093	.187	54.10
WZ-46	2	13	36.63	.31	3	.203	.219	.250	.031	.625	.093	.187	79.72
WZ-47	2	17	48.63	.31	3	.203	.219	.250	.031	.625	.093	.187	105.33
WZ-48	2	21	60.63	.31	3	.203	.219	.250	.031	.625	.093	.187	130.97
WZ-49	2	25	72.63	.31	3	.203	.219	.250	.031	.625	.093	.187	156.58
WZ-60	3	5	12.75	.38	3	.281	.313	.343	.062	.875	.109	.250	44.87
WZ-65	3	9	24.75	.38	3	.281	.313	.343	.062	.875	.109	.250	85.73
WZ-66	3	13	36.75	.38	3	.281	.313	.343	.062	.875	.109	.250	126.62
WZ-67	3	17	48.75	.38	3	.281	.313	.343	.062	.875	.109	.250	167.47
WZ-68	3	21	60.75	.38	3	.281	.313	.343	.062	.875	.109	.250	208.33
WZ-69	3	25	72.75	.38	3	.281	.313	.343	.062	.875	.109	.250	249.20
WZ-80	4	4	13.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	63.80
WZ-85	4	7	25.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	121.37
WZ-86	4	10	37.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	178.01
WZ-87	4	13	49.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	236.43
WZ-88	4	16	61.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	294.00
WZ-89	4	19	73.00	.50	4	.344	.375	.437	.093	1.062	.125	.312	351.53

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

SKF MINIATURE PROFILE RAIL GUIDES



Ideal for precision applications where mounting space is limited. Small and lightweight with high load carrying capacity and high speed linear motion up to 3m/second. Gothic arch grooves at the raceway contacts enable the slide to sustain loads and movements from any direction. Height tolerance is +/- .020 mm. Width tolerance is +/- .025 mm. Free of clearance, no preload for applications with constant load and low friction. All parts are stainless steel or plastic for corrosion resistance. End caps have oil holes for easy lubrication. All dimensions are in millimeters.

See table 38 below for additional discounts.

Cat. No.	Number Of Carriages	L	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T	Basic Load Rating* (Lbs.)	Price Each 1-9
SKF-0	1	80	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	60	10	5.5	416	78.62
SKF-1	1	110	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	80	15	5.5	416	86.18
SKF-2	2	110	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	80	15	5.5	416	127.01
SKF-3	1	140	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	120	10	5.5	416	93.74
SKF-4	2	140	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	120	10	5.5	416	136.08
SKF-5	1	170	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	140	15	5.5	416	101.30
SKF-6	2	170	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	140	15	5.5	416	143.64
SKF-7	2	200	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	180	10	5.5	416	151.20
SKF-8	2	260	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	240	10	5.5	416	166.32
SKF-9	2	290	10	20	15	21.5	10	32	M3x3	2	6.5	9	3.5	6	3.5	20	260	15	5.5	416	175.39
SKF-10	1	110	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	75	17.5	7.5	573	93.74
SKF-11	1	150	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	125	12.5	7.5	573	105.84
SKF-12	2	150	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	125	12.5	7.5	573	154.22
SKF-13	1	190	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	150	20	7.5	573	116.42
SKF-14	2	190	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	150	20	7.5	573	164.81
SKF-15	1	230	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	200	15	7.5	573	127.01
SKF-16	2	230	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	200	15	7.5	573	175.41
SKF-17	2	310	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	275	17.5	7.5	573	198.06
SKF-18	2	390	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	350	20	7.5	573	219.24
SKF-19	2	470	13	27	20	23	15	36	M3x3.5	3	8.8	12	3.5	6	4.5	25	450	10	7.5	573	241.92
SKF-20	1	110	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	80	15	8	742	127.01
SKF-21	1	150	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	120	15	8	742	143.64
SKF-222	2	150	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	120	15	8	742	207.14
SKF-23	1	190	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	160	15	8	742	161.78
SKF-24	2	190	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	160	15	8	742	225.30
SKF-25	1	230	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	200	15	8	742	178.42
SKF-26	2	230	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	200	15	8	742	241.92
SKF-27	2	310	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	280	15	8	742	276.71
SKF-28	2	390	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	340	15	8	742	311.47
SKF-29	2	470	14	40	28	32.5	15	45.5	M3x3.5	3	8.8	24	4.5	8	4.5	40	440	15	8	742	346.25

*Basic load rating is the constant load which a system can theoretically accept for a nominal life of 100,000 m of travel with 90% reliability

38	Quantity	1-9	10-24	25-49	50-99	100-249	250-499	500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

THREADED PIPE FITTINGS

Type 316 & 304 Stainless Steel

These high quality stainless steel fittings are excellent for low-pressure applications where you need corrosion resistance in water, oil and gas (W.O.G.). Fittings have pressure ratings of 150 psi for W.O.G. and meet ANSI B 16.3 and MSS-SP114. Type 316 material has a higher corrosion and heat resistance than type 304 material. All connections are NPT threaded. Sizes up to six inches, high-pressure, and 3,000 psi can be special ordered. For pipe nipples see page 50, for 316 SS unthreaded fittings see page 49, for flanges see page 49.



90° Elbow



45° Elbow



Street Elbow



Tee



Union

See table 33 below for additional discounts.

Pipe Size	90° Elbow Cat. No.	Price Each 1-99	45° Elbow Cat. No.	Price Each 1-99	Street Elbow Cat. No.	Price Each 1-99	Tee Cat. No.	Price Each 1-99	Union Cat. No.	Price Each 1-99
316 Stainless Steel										
1/8	SSP-3002	3.98	SSP-3006	4.73	SSP-3010	5.32	SSP-3014	4.94	SSP-2022	7.68
1/4	SSP-3022	3.98	SSP-3026	4.73	SSP-3030	5.43	SSP-3034	4.94	SSP-2054	7.68
3/8	SSP-3042	4.82	SSP-3046	5.78	SSP-3050	6.67	SSP-3054	6.55	SSP-2086	9.35
1/2	SSP-3062	5.33	SSP-3066	6.34	SSP-3070	7.84	SSP-3074	6.90	SSP-2118	11.75
3/4	SSP-3082	7.73	SSP-3086	8.33	SSP-3090	10.35	SSP-3094	10.19	SSP-2150	16.56
1	SSP-3102	9.70	SSP-3106	10.43	SSP-3110	16.51	SSP-3114	12.78	SSP-2182	23.89
1 1/4	SSP-3122	16.63	SSP-3126	16.42	SSP-3130	24.67	SSP-3134	25.45	SSP-2214	42.66
1 1/2	SSP-3142	22.18	SSP-3146	19.52	SSP-3150	27.49	SSP-3154	30.88	SSP-2244	51.14
2	SSP-3162	28.05	SSP-3166	27.30	SSP-3170	39.26	SSP-3174	39.78	SSP-2274	67.56
304 Stainless Steel										
1/8	SSP-3000	3.10	SSP-3004	3.92	SSP-3008	4.43	SSP-3012	4.16	SSP-2020	8.00
1/4	SSP-3020	3.10	SSP-3024	3.92	SSP-3028	4.43	SSP-3032	4.16	SSP-2052	8.00
3/8	SSP-3040	3.85	SSP-3044	4.60	SSP-3048	5.33	SSP-3052	5.30	SSP-2084	9.78
1/2	SSP-3060	4.10	SSP-3064	5.06	SSP-3068	6.27	SSP-3072	5.57	SSP-2116	12.01
3/4	SSP-3080	5.88	SSP-3084	7.38	SSP-3088	8.70	SSP-3092	8.84	SSP-2148	15.75
1	SSP-3100	8.34	SSP-3104	9.02	SSP-3108	15.06	SSP-3112	11.27	SSP-2180	23.28
1 1/4	SSP-3120	14.63	SSP-3124	14.45	SSP-3128	21.87	SSP-3132	22.40	SSP-2212	49.07
1 1/2	SSP-3140	19.48	SSP-3144	17.18	SSP-3148	25.88	SSP-3152	27.85	SSP-2242	55.47
2	SSP-3160	24.69	SSP-3164	24.18	SSP-3168	35.03	SSP-3172	35.78	SSP-2272	66.35



Cross



Round Cap



Sq. Head Plug



Hex Head Plug



Coupling

See table 33 below for additional discounts.

Pipe Size	Cross Cat. No.	Price Each 1-99	Round Cap Cat. No.	Price Each 1-99	Sq. Head Plug Cat. No.	Price Each 1-99	Hex Head Plug Cat. No.	Price Each 1-99	Coupling Cat. No.	Price Each 1-99
316 Stainless Steel										
1/8	SSP-3018	8.93	SSP-2002	1.88	SSP-2018	1.59	SSP-2014	1.31	SSP-2006	1.75
1/4	SSP-3038	8.93	SSP-2026	1.88	SSP-2050	1.59	SSP-2042	1.31	SSP-2030	2.12
3/8	SSP-3058	10.51	SSP-2058	2.51	SSP-2082	2.07	SSP-2074	1.72	SSP-2062	2.46
1/2	SSP-3078	13.05	SSP-2090	2.70	SSP-2114	2.40	SSP-2106	2.18	SSP-2094	3.32
3/4	SSP-3098	22.79	SSP-2122	3.96	SSP-2146	3.57	SSP-2138	3.25	SSP-2126	4.62
1	SSP-3118	27.51	SSP-2154	6.09	SSP-2178	5.78	SSP-2170	5.25	SSP-2158	7.50
1 1/4	SSP-3138	39.78	SSP-2186	17.97	SSP-2210	13.70	SSP-2202	13.38	SSP-2190	11.38
1 1/2	SSP-3158	49.65	SSP-2218	19.65	SSP-2240	15.13	SSP-2234	15.84	SSP-2222	14.53
2	SSP-3178	68.39	SSP-2248	23.31	SSP-2270	20.96	SSP-2262	22.83	SSP-2252	20.78
304 Stainless Steel										
1/8	SSP-3016	7.23	SSP-2000	1.98	SSP-2016	1.69	SSP-2012	1.38	SSP-2004	1.70
1/4	SSP-3036	7.23	SSP-2024	1.98	SSP-2048	1.69	SSP-2040	1.38	SSP-2028	2.02
3/8	SSP-3056	8.62	SSP-2056	2.67	SSP-2080	2.21	SSP-2072	1.80	SSP-2060	2.36
1/2	SSP-3076	10.62	SSP-2088	2.74	SSP-2112	2.59	SSP-2104	2.27	SSP-2092	3.34
3/4	SSP-3096	18.17	SSP-2120	3.98	SSP-2144	3.70	SSP-2136	3.37	SSP-2124	4.53
1	SSP-3116	26.90	SSP-2152	5.85	SSP-2176	5.95	SSP-2168	5.40	SSP-2156	7.79
1 1/4	SSP-3136	31.94	SSP-2184	11.85	SSP-2208	11.84	SSP-2200	11.35	SSP-2188	10.16
1 1/2	SSP-3156	39.56	SSP-2216	15.60	SSP-2238	14.18	SSP-2232	14.14	SSP-2220	13.45
2	SSP-3176	56.63	SSP-2246	19.91	SSP-2268	16.79	SSP-2260	19.44	SSP-2250	19.47



Half Coupling



Reducer



Hex Bushing

See table 33 below for additional discounts.

Pipe Size	Half Coupling Cat. No.	Price Each 1-99	Pipe Size	Reducer Cat. No.	Price Each 1-99	Pipe Size	Hex Bushing Cat. No.	Price Each 1-99
316 Stainless Steel								
1/8	SSP-2010	1.14	1/4 x 1/8	SSP-2046	2.90	1/4 x 1/8	SSP-2034	1.99
1/4	SSP-2038	1.17	3/8 x 1/4	SSP-2078	3.45	3/8 x 1/4	SSP-2066	2.28
3/8	SSP-2070	1.30	1/2 x 3/8	SSP-2110	4.70	1/2 x 3/8	SSP-2098	2.66
1/2	SSP-2102	1.87	3/4 x 1/2	SSP-2142	5.98	3/4 x 1/2	SSP-2130	3.64
3/4	SSP-2134	2.72	1 x 3/4	SSP-2174	9.91	1 x 3/4	SSP-2162	5.70
1	SSP-2166	4.43	1 1/4 x 1	SSP-2206	16.67	1 1/4 x 1	SSP-2194	14.06
1 1/4	SSP-2198	6.70	1 1/2 x 1 1/4	SSP-2236	18.79	1 1/2 x 1 1/4	SSP-2226	16.64
1 1/2	SSP-2230	8.95	2 x 1 1/2	SSP-2266	30.58	2 x 1 1/2	SSP-2254	23.64
2	SSP-2258	11.65						
304 Stainless Steel								
1/8	SSP-2008	1.14	1/4 x 1/8	SSP-2044	3.01	1/4 x 1/8	SSP-2032	2.03
1/4	SSP-2036	1.38	3/8 x 1/4	SSP-2076	3.51	3/8 x 1/4	SSP-2064	2.24
3/8	SSP-2068	1.48	1/2 x 3/8	SSP-2108	4.40	1/2 x 3/8	SSP-2096	2.83
1/2	SSP-2100	2.05	3/4 x 1/2	SSP-2140	5.68	3/4 x 1/2	SSP-2128	4.00
3/4	SSP-2132	2.72	1 x 3/4	SSP-2172	9.07	1 x 3/4	SSP-2160	5.76
1	SSP-2164	4.04	1 1/4 x 1	SSP-2204	13.26	1 1/4 x 1	SSP-2192	12.21
1 1/4	SSP-2196	6.77	2 x 1 1/2	SSP-2264	31.94	1 1/2 x 1 1/4	SSP-2224	14.98
1 1/2	SSP-2228	9.31						
2	SSP-2256	12.16						

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Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500+
Net		2%	5%	8%	10%	Call

UNTHREADED PIPE FITTINGS

Socket Weld - Type 316 Stainless Steel - Class 150

These socket weld or unthreaded pipe fittings can be used in low pressure applications for gas, water or oil. These fittings are made to be used with schedule 10 or schedule 40 pipe which can be inserted and welded to prevent leakage. Made of Type 316 stainless steel and sand cast. Meet ANSI B16.3, ANSI B16.11 and ASTM A351 requirements. For threaded stainless steel pipe fittings see page 48.



90° Elbow



45° Elbow



Tee



Union



Coupling

See table 33 below for additional discounts.

Pipe Size	90° Elbow Cat. No.	Price Each 1-99	45° Elbow Cat. No.	Price Each 1-99	Tee Cat. No.	Price Each 1-99	Union Cat. No.	Price Each 1-99	Coupling Cat. No.	Length	Price Each 1-99
1/2	SSP-4004	5.63	SSP-4006	6.60	SSP-4010	7.53	SSP-4012	14.69	SSP-4002	1 3/8	4.69
3/4	SSP-4016	8.34	SSP-4018	9.09	SSP-4024	11.01	SSP-4026	18.25	SSP-4014	1 1/2	6.75
1	SSP-4030	10.36	SSP-4032	11.33	SSP-4042	14.18	SSP-4044	26.02	SSP-4028	1 3/4	9.57
1 1/4	SSP-4048	15.87	SSP-4050	17.00	SSP-4060	22.08	SSP-4062	44.67	SSP-4046	1 7/8	14.33
1 1/2	SSP-4066	19.02	SSP-4068	20.93	SSP-4082	28.00	SSP-4084	54.81	SSP-4064	2	19.34
2	SSP-4088	29.30	SSP-4090	29.77	SSP-4106	40.24	SSP-4108	67.98	SSP-4086	2 1/2	25.48

FLANGES

Type 304 and 316 Stainless Steel Class 150 and 300

These flanges are forged and manufactured to ASTM A182.



Reducer

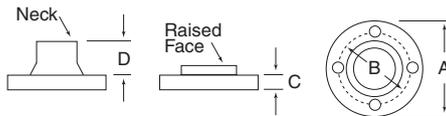


Insert (Male x Female)

See table 33 below for additional discounts.

Pipe Size	150 Class					300 Class						
	OD	Bolt Circle Dia.	No. of Bolt Holes	Bolt Hole Dia.	Weld Neck	OD	Bolt Circle Dia.	No. of Bolt Holes	Bolt Hole Dia.	Weld Neck		
1/2	3 1/2	2 3/8	7/16	4	5/8	17/8	3 3/4	2 5/8	9/16	4	5/8	2 1/16
3/4	3 7/8	2 9/4	1/2	4	5/8	2 1/16	4 5/8	3 1/4	5/8	4	3/4	2 1/4
1	4 1/4	3 1/8	9/16	4	5/8	2 3/16	4 1/4	3 1/2	1 1/16	4	3/4	2 7/16
1 1/4	4 5/8	3 1/2	5/8	4	5/8	2 1/4	5 1/4	3 7/8	3/4	4	3/4	2 9/16
1 1/2	5	3 7/8	1 1/16	4	5/8	2 1/2	6 1/8	4 1/2	1 3/16	4	7/8	2 11/16
2	6	4 3/4	3/4	4	3/4	2 1/2	2 3/4	5	7/8	8	3/4	2 3/4
2 1/2	7	5 1/2	7/8	4	3/4	2 3/4	7 1/2	5 7/8	1	8	7/8	3
3	7 1/2	6	1 5/16	4	3/4	2 3/4	8 1/4	6 5/8	1 1/8	8	7/8	3 1/8
4	9	7 1/2	1 5/16	8	3/4	3	10	7 7/8	1 1/4	8	7/8	3 3/8

Reducer Cat. No.	Pipe Size	Price Each 1-99	Insert Cat. No.	Pipe Size	Price Each 1-99
SSP-4000	3/8 x 1/4	4.57	SSP-4020	3/4 x 1/2	6.29
SSP-4008	1/2 x 3/8	6.38	SSP-4034	1 x 1/2	8.45
SSP-4022	3/4 x 1/2	5.46	SSP-4036	1 x 3/4	8.45
SSP-4038	1 x 1/2	13.34	SSP-4052	1 1/4 x 1/2	14.55
SSP-4040	1 x 3/4	11.01	SSP-4054	1 1/4 x 3/4	14.55
SSP-4058	1 1/4 x 1	15.86	SSP-4056	1 1/4 x 1	14.55
SSP-4078	1 1/2 x 1	21.89	SSP-4070	1 1/2 x 1/2	18.48
SSP-4080	1 1/2 x 1 1/4	19.19	SSP-4072	1 1/2 x 3/4	18.48
SSP-4102	2 x 1	31.69	SSP-4074	1 1/2 x 1	18.48
SSP-4104	2 x 1 1/2	35.67	SSP-4076	1 1/2 x 1 1/4	18.48
			SSP-4092	2 x 1/2	27.53
			SSP-4094	2 x 3/4	27.53
			SSP-4096	2 x 1	27.53
			SSP-4098	2 x 1 1/4	27.53
			SSP-4100	2 x 1 1/2	27.53



Blind



Lap Joint



Slip On



Socket Weld



Threaded



Weld Neck

See table 33 below for additional discounts.

Pipe Size	Blind Cat. No.	Price Each 1-99	Lap Joint Cat. No.	Price Each 1-99	Slip On Cat. No.	Price Each 1-99	Socket Weld Cat. No.	Price Each 1-99	Threaded Cat. No.	Price Each 1-99	Weld Neck Cat. No.	Price Each 1-99
Class 150 - 304 Stainless Steel												
1/2	SSP-1000	9.57	SSP-1008	17.08	SSP-1012	9.19	SSP-1020	10.56	SSP-1028	10.56	SSP-1036	10.56
3/4	SSP-1044	11.04	SSP-1052	18.56	SSP-1056	10.31	SSP-1064	11.39	SSP-1072	11.83	SSP-1080	11.39
1	SSP-1088	11.78	SSP-1096	20.79	SSP-1100	11.03	SSP-1108	13.59	SSP-1116	12.85	SSP-1124	13.59
1 1/4	SSP-1132	20.20	SSP-1140	33.19	SSP-1144	16.19	SSP-1152	19.67	SSP-1160	18.61	SSP-1168	19.67
1 1/2	SSP-1176	19.75	SSP-1184	33.19	SSP-1188	19.34	SSP-1196	23.26	SSP-1204	22.22	SSP-1212	23.26
2	SSP-1220	25.97	SSP-1228	40.71	SSP-1232	25.08	SSP-1240	29.94	SSP-1248	28.83	SSP-1256	29.94
2 1/2	SSP-1264	38.30	SSP-1272	59.30	SSP-1276	36.54	SSP-1284	45.78	SSP-1288	41.98	SSP-1296	45.78
3	SSP-1304	42.26	SSP-1312	62.40	SSP-1316	38.29	SSP-1324	47.54	SSP-1328	44.00	SSP-1336	47.54
4	SSP-1344	58.99	SSP-1352	85.41	SSP-1356	53.27	SSP-1364	69.11	SSP-1368	61.22	SSP-1376	69.11
Class 150 - 316 Stainless Steel												
1/2	SSP-1002	11.72	SSP-1010	20.94	SSP-1014	11.71	SSP-1022	13.18	SSP-1030	13.44	SSP-1038	13.18
3/4	SSP-1046	13.23	SSP-1054	23.23	SSP-1058	13.22	SSP-1066	14.32	SSP-1074	15.19	SSP-1082	14.32
1	SSP-1090	15.12	SSP-1098	24.75	SSP-1102	14.36	SSP-1110	16.58	SSP-1118	16.49	SSP-1126	16.58
1 1/4	SSP-1134	19.64	SSP-1142	32.75	SSP-1146	16.57	SSP-1154	22.03	SSP-1162	19.74	SSP-1170	22.03
1 1/2	SSP-1178	19.64	SSP-1186	32.75	SSP-1190	19.28	SSP-1198	23.38	SSP-1206	22.15	SSP-1214	23.38
2	SSP-1222	26.86	SSP-1230	41.12	SSP-1234	25.74	SSP-1242	31.02	SSP-1250	29.57	SSP-1258	31.02
2 1/2	SSP-1266	39.75	SSP-1274	59.40	SSP-1278	37.10	SSP-1286	46.93	SSP-1290	42.62	SSP-1298	46.93
3	SSP-1306	43.16	SSP-1314	63.97	SSP-1318	39.75	SSP-1326	49.21	SSP-1330	45.66	SSP-1338	49.21
4	SSP-1346	61.32	SSP-1354	89.47	SSP-1358	55.64	SSP-1366	71.54	SSP-1370	63.92	SSP-1378	71.54
Class 300 - 304 Stainless Steel												
1/2	SSP-1004	17.82	—	—	SSP-1016	16.74	SSP-1024	20.52	SSP-1032	19.98	SSP-1040	20.52
3/4	SSP-1048	17.82	—	—	SSP-1060	16.74	SSP-1068	20.52	SSP-1076	19.98	SSP-1084	20.52
1	SSP-1092	17.82	—	—	SSP-1104	16.74	SSP-1112	20.52	SSP-1120	19.98	SSP-1128	20.52
1 1/4	SSP-1136	24.03	—	—	SSP-1148	25.65	SSP-1156	31.86	SSP-1164	30.51	SSP-1172	31.86
1 1/2	SSP-1180	24.03	—	—	SSP-1192	25.65	SSP-1200	31.86	SSP-1208	30.51	SSP-1216	31.86
2	SSP-1224	24.84	—	—	SSP-1236	28.62	SSP-1244	32.67	SSP-1252	34.29	SSP-1260	32.67
2 1/2	SSP-1268	50.49	—	—	SSP-1280	50.76	—	—	SSP-1292	61.02	SSP-1300	51.30
3	SSP-1308	52.11	—	—	SSP-1320	52.38	—	—	SSP-1332	62.91	SSP-1340	54.00
4	SSP-1348	70.47	—	—	SSP-1360	72.63	—	—	SSP-1372	87.21	SSP-1380	93.15
Class 300 - 316 Stainless Steel												
1/2	SSP-1006	21.33	—	—	SSP-1018	18.90	SSP-1026	24.30	SSP-1034	22.95	SSP-1042	24.30
3/4	SSP-1050	21.33	—	—	SSP-1062	18.90	SSP-1070	24.30	SSP-1078	22.95	SSP-1086	24.30
1	SSP-1094	21.33	—	—	SSP-1106	18.90	SSP-1114	24.30	SSP-1122	22.95	SSP-1130	24.30
1 1/4	SSP-1138	28.89	—	—	SSP-1150	30.78	SSP-1158	37.80	SSP-1166	37.26	SSP-1174	37.80
1 1/2	SSP-1182	28.89	—	—	SSP-1194	30.78	SSP-1202	37.80	SSP-1210	37.26	SSP-1218	37.80
2	SSP-1226	29.70	—	—	SSP-1238	34.29	SSP-1246	38.61	SSP-1254	41.31	SSP-1262	38.61
2 1/2	SSP-1270	61.02	—	—	SSP-1282	62.37	—	—	SSP-1294	74.52	SSP-1302	62.64
3	SSP-1310	63.72	—	—	SSP-1322	64.26	—	—	SSP-1334	77.22	SSP-1342	66.15
4	SSP-1350	85.59	—	—	SSP-1362	88.56	—	—	SSP-1374	106.38	SSP-1382	112.86

33

Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500+
Net		2%	5%	8%	10%	Call

PIPE NIPPLES



See table 33 below for additional discounts.

Lgth.	304 SS Cat. No.	Price Each 1-99	316 SS Cat. No.	Price Each 1-99
1/8" Pipe Size				
3/4	SSP-5000*	.93	SSP-5028*	1.07
1 1/2	SSP-5002	1.18	SSP-5030	1.42
2	SSP-5004	1.38	SSP-5032	1.70
2 1/2	SSP-5006	1.58	SSP-5034	1.95
3	SSP-5008	1.79	SSP-5036	2.23
3 1/2	SSP-5010	2.04	SSP-5038	2.57
4	SSP-5012	2.25	SSP-5040	2.85
4 1/2	SSP-5014	2.45	SSP-5042	3.09
5	SSP-5016	2.66	SSP-5044	3.39
5 1/2	SSP-5018	2.86	SSP-5046	3.64
6	SSP-5020	3.07	SSP-5048	3.93
8	SSP-5022	4.00	—	—
10	SSP-5024	4.87	—	—
12	SSP-5026	5.69	—	—
1/4" Pipe Size				
7/8	SSP-5050*	1.05	SSP-5078*	1.22
1 1/2	SSP-5052	1.27	SSP-5080	1.51
2	SSP-5054	1.51	SSP-5082	1.82
2 1/2	SSP-5056	1.75	SSP-5084	2.15
3	SSP-5058	2.01	SSP-5086	2.47
3 1/2	SSP-5060	2.34	SSP-5088	2.88
4	SSP-5062	2.62	SSP-5090	3.24
4 1/2	SSP-5064	2.88	SSP-5092	3.53
5	SSP-5066	3.13	SSP-5094	3.89
5 1/2	SSP-5068	3.36	SSP-5096	4.20
6	SSP-5070	3.64	SSP-5098	4.55
8	SSP-5072	4.82	—	—
10	SSP-5074	5.91	—	—
12	SSP-5076	6.94	—	—
3/8" Pipe Size				
1	SSP-5100*	1.24	SSP-5122*	1.46
1 1/2	SSP-5102	1.47	SSP-5124	1.76
2	SSP-5104	1.75	SSP-5126	2.13
2 1/2	SSP-5106	2.05	SSP-5128	2.53
3	SSP-5108	2.36	SSP-5130	2.92
3 1/2	SSP-5110	2.74	SSP-5132	3.41
4	SSP-5112	3.05	SSP-5134	3.81
4 1/2	SSP-5114	3.36	SSP-5136	4.17
5	SSP-5116	3.66	SSP-5138	4.59
5 1/2	SSP-5118	3.94	SSP-5140	4.99
6	SSP-5120	4.28	SSP-5142	5.38
1/2" Pipe Size				
1 1/8	SSP-5144*	1.53	SSP-5166*	1.90
1 1/2	SSP-5146	1.79	SSP-5168	2.29
2	SSP-5148	2.10	SSP-5170	2.73
2 1/2	SSP-5150	2.48	SSP-5172	3.25
3	SSP-5152	2.86	SSP-5174	3.77
3 1/2	SSP-5154	3.34	SSP-5176	4.43
4	SSP-5156	3.73	SSP-5178	4.97
4 1/2	SSP-5158	4.14	SSP-5180	5.48
5	SSP-5160	4.49	SSP-5182	6.01
5 1/2	SSP-5162	4.86	SSP-5184	6.51
6	SSP-5164	5.25	SSP-5186	7.06

*Close thread style

304 and 316 Stainless Welded - ASTM A 733, ASME/ANSI B 1.20.1, ASME/ANSI B 36.19, ASTM A 312.

WELDED CUT PIPE

Unthreaded - Schedule 40
Type 304 and 316 Stainless Steel



This pipe can be used for air, water, oil, gas or steam; and is all drop shipped from IL. Sold in 6 ft. - 7 ft. lengths. Meets ASTM A312. Also available in 20 ft. lengths as special order. Please call for price and delivery.

See table 33 below for additional discounts.

Pipe Size	304SS Cat. No.	Price Each 1-99	316SS Cat. No.	Price Each 1-99
1/8	SSP-7000	19.72	SSP-7024	26.32
1/4	SSP-7002	23.72	SSP-7026	31.35
3/8	SSP-7004	29.49	SSP-7028	37.20
1/2	SSP-7006	37.76	SSP-7030	49.95
3/4	SSP-7008	43.52	SSP-7032	55.80
1	SSP-7010	58.13	SSP-7034	77.47
1 1/4	SSP-7012	73.66	SSP-7036	100.72
1 1/2	SSP-7014	92.07	SSP-7038	114.11
2	SSP-7016	108.35	SSP-7040	147.87
2 1/2	SSP-7018	159.40	SSP-7042	231.11
3	SSP-7020	205.81	SSP-7044	297.78
4	SSP-7022	287.74	SSP-7046	413.47

33

Quantity Discount	1-99	100-249	250-499	500-999	1000-2499	2500+
	Net	2%	5%	8%	10%	Call

These welded pipe nipples are either fully NPT threaded "close length" or NPT threaded at both ends. We can special order any length, any diameter, any wall thickness of the materials below as well as seamless, brass, chrome-plated brass, and aluminum.

See table 33 below for additional discounts.

Lgth.	304 SS Cat. No.	Price Each 1-99	316 SS Cat. No.	Price Each 1-99
3/4" Pipe Size				
1 3/8	SSP-5188*	1.91	SSP-5210*	2.43
1 1/2	SSP-5190	2.02	SSP-5212	2.57
2	SSP-5192	2.35	SSP-5214	3.06
2 1/2	SSP-5194	2.76	SSP-5216	3.64
3	SSP-5196	3.19	SSP-5218	4.24
3 1/2	SSP-5198	3.71	SSP-5220	4.97
4	SSP-5200	4.14	SSP-5222	5.55
4 1/2	SSP-5202	4.58	SSP-5224	6.12
5	SSP-5204	4.99	SSP-5226	6.73
5 1/2	SSP-5206	5.39	SSP-5228	7.35
6	SSP-5208	5.83	SSP-5230	7.90
1" Pipe Size				
1 1/2	SSP-5232*	2.54	SSP-5252*	3.29
2	SSP-5234	3.10	SSP-5254	4.09
2 1/2	SSP-5236	3.62	SSP-5256	4.83
3	SSP-5238	4.19	SSP-5258	5.62
3 1/2	SSP-5240	4.90	SSP-5260	6.61
4	SSP-5242	5.45	SSP-5262	7.40
4 1/2	SSP-5244	6.00	SSP-5264	8.17
5	SSP-5246	6.59	SSP-5266	8.98
5 1/2	SSP-5248	7.15	SSP-5268	9.77
6	SSP-5250	7.71	SSP-5270	10.56
1 1/4" Pipe Size				
1 5/8	SSP-5272*	3.40	SSP-5292*	4.52
2	SSP-5274	3.75	SSP-5294	5.05
2 1/2	SSP-5276	4.59	SSP-5296	6.24
3	SSP-5278	5.31	SSP-5298	7.27
3 1/2	SSP-5280	6.22	SSP-5300	8.55
4	SSP-5282	6.93	SSP-5302	9.59
4 1/2	SSP-5284	7.64	SSP-5304	10.63
5	SSP-5286	8.38	SSP-5306	11.64
5 1/2	SSP-5288	9.14	SSP-5308	12.67
6	SSP-5290	9.82	SSP-5310	13.70
1 1/2" Pipe Size				
1 3/4	SSP-5312*	3.93	SSP-5332*	5.35
2 1/2	SSP-5314	4.91	SSP-5334	6.89
2	SSP-5316	5.04	SSP-5336	7.00
3	SSP-5318	5.84	SSP-5338	8.17
3 1/2	SSP-5320	6.83	SSP-5340	9.83
4	SSP-5322	7.64	SSP-5342	10.79
4 1/2	SSP-5324	8.49	SSP-5344	11.97
5	SSP-5326	9.23	SSP-5346	13.12
5 1/2	SSP-5328	9.61	SSP-5348	14.36
6	SSP-5330	10.83	SSP-5350	15.45
2" Pipe Size				
2	SSP-5352*	6.07	SSP-5370*	8.25
2 1/2	SSP-5354	6.53	SSP-5372	9.17
3	SSP-5356	7.44	SSP-5374	10.58
3 1/2	SSP-5358	8.73	SSP-5376	12.50
4	SSP-5360	9.76	SSP-5378	14.02
4 1/2	SSP-5362	10.76	SSP-5380	15.51
5	SSP-5364	11.82	SSP-5382	17.08
5 1/2	SSP-5366	12.82	SSP-5384	18.58
6	SSP-5368	13.88	SSP-5386	20.13

*Close thread style

SWING CHECK VALVES

Type 316 Stainless Steel



Maximum pressure is 200 psi WOG at 350 degree F. Made of Type 316 stainless steel except for gaskets which are Teflon. Other types of valves available as special order. Please call for price and delivery.

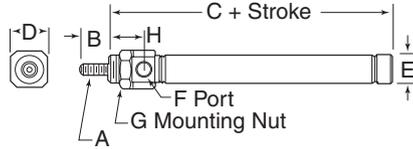
See table 33 below for additional discounts.

Cat. No.	Pipe Size	OAL	CV*	Price Each 1-99	Cat. No.	Pipe Size	OAL	CV*	Price Each 1-99
SSP-6016	1/4	2.38	3	56.29	SSP-6024	1	3.50	17.5	77.11
SSP-6018	3/8	2.38	5	56.29	SSP-6026	1 1/4	4.22	30	89.82
SSP-6020	1/2	2.56	6.5	56.29	SSP-6028	1 1/2	4.81	47	128.88
SSP-6022	3/4	3.13	11	72.61	SSP-6030	2	5.50	77	172.46

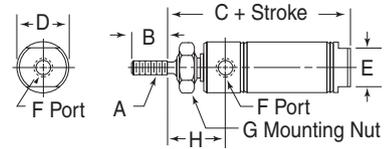
*The volume of water in gal./min. that will pass through a given valve with a pressure drop of 1 psi

Type 304 stainless steel polished to a micro-inch finish on the ID to provide for low friction and long life on cylinder tube. OD has matte finish. Heads and caps are made of aluminum construction for smooth breakaway. Piston rods are made of 303 stainless steel. All cylinders are prelubricated. All piston and rod seals are of lip seal construction. Maximum pressure 250 psi. Temperature rating -10°F to 165°F. MFP-1 through MFP-27 include a mounting nut. **See pages 52 and 54 for other cylinders.**

Front Nose Mount - Double Acting



MFP-1 - MFP-16

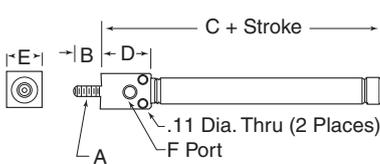


MFP-17 - MFP-36

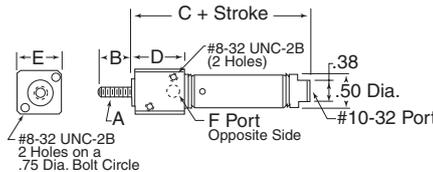
Cat. No.	Parker	Bore	Stroke	A	B	C	D	E	F	G	H	Price Each
MFP-1	.31DSR1.00	5/16	1	5-40	.375	1.64	.500	.360	10-32	3/8-24	.47	15.53
MFP-2	.31DSR2.00	5/16	2	5-40	.375	1.64	.500	.360	10-32	3/8-24	.47	16.70
MFP-3	.31DSR3.00	5/16	3	5-40	.375	1.64	.500	.360	10-32	3/8-24	.47	17.89
MFP-4	.31DSR4.00	5/16	4	5-40	.375	1.64	.500	.360	10-32	3/8-24	.47	19.06
MFP-5	.75DSR1.00	3/4	1	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	26.36
MFP-6	.75DSR2.00	3/4	2	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	18.84
MFP-7	.75DSR3.00	3/4	3	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	20.46
MFP-8	.75DSR4.00	3/4	4	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	22.06
MFP-9	.75DSR5.00	3/4	5	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	23.66
MFP-10	.75DSR6.00	3/4	6	1/4-28	.500	2.97	.860	.810	1/8-27	5/8-18	.97	25.27
MFP-11	.88DSR1.00	7/8	1	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	18.76
MFP-12	.88DSR2.00	7/8	2	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	20.34
MFP-13	.88DSR3.00	7/8	3	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	21.96
MFP-14	.88DSR4.00	7/8	4	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	24.67
MFP-15	.88DSR5.00	7/8	5	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	25.17
MFP-16	.88DSR6.00	7/8	6	1/4-28	.500	2.94	.930	.930	1/8-27	5/8-18	.97	26.77
MFP-17	1.25DSR2.00	1 1/4	2	7/16-20	.750	4.00	1.34	.88	1/8-27	3/4-16	1.62	32.03
MFP-18	1.25DSR3.00	1 1/4	3	7/16-20	.750	4.00	1.34	.88	1/8-27	3/4-16	1.62	34.04
MFP-19	1.25DSR4.00	1 1/4	4	7/16-20	.750	4.00	1.34	.88	1/8-27	3/4-16	1.62	36.09
MFP-20	1.25DSR5.00	1 1/4	5	7/16-20	.750	4.00	1.34	.88	1/8-27	3/4-16	1.62	38.11
MFP-21	1.25DSR6.00	1 1/4	6	7/16-20	.750	4.00	1.34	.88	1/8-27	3/4-16	1.62	40.17
MFP-22	1.50DSR1.00	1 1/2	1	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	32.99
MFP-23	1.50DSR2.00	1 1/2	2	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	35.34
MFP-24	1.50DSR3.00	1 1/2	3	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	37.27
MFP-25	1.50DSR4.00	1 1/2	4	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	38.06
MFP-26	1.50DSR5.00	1 1/2	5	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	40.29
MFP-27	1.50DSR6.00	1 1/2	6	7/16-20	.750	3.69	1.56	.88	1/8-27	3/4-16	1.50	42.53
MFP-28*	2.00DSR2.00	2	2	1/2-20	.880	4.69	2.08	1.25	1/4-18	1 1/4-12	1.84	54.51
MFP-29*	2.00DSR3.00	2	3	1/2-20	.880	4.69	2.08	1.25	1/4-18	1 1/4-12	1.84	57.09
MFP-30*	2.00DSR4.00	2	4	1/2-20	.880	4.69	2.08	1.25	1/4-18	1 1/4-12	1.84	59.66
MFP-31*	2.00DSR5.00	2	5	1/2-20	.880	4.69	2.08	1.25	1/4-18	1 1/4-12	1.84	62.24
MFP-32*	2.00DSR6.00	2	6	1/2-20	.880	4.69	2.08	1.25	1/4-18	1 1/4-12	1.84	64.80
MFP-33*	3.00DSR3.00	3	3	5/8-18	1.25	5.25	3.16	2.00	3/8-18	1 1/2-12	2.09	107.21
MFP-34*	3.00DSR4.00	3	4	5/8-18	1.25	5.25	3.16	2.00	3/8-18	1 1/2-12	2.09	110.41
MFP-35*	3.00DSR5.00	3	5	5/8-18	1.25	5.25	3.16	2.00	3/8-18	1 1/2-12	2.09	113.64
MFP-36*	3.00DSR6.00	3	6	5/8-18	1.25	5.25	3.16	2.00	3/8-18	1 1/2-12	2.09	116.86

*Mounting nut must be ordered separately, see below.

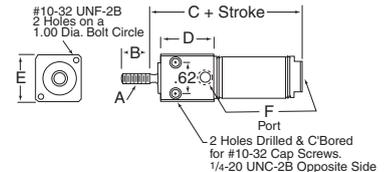
Front Block Mount - Double Acting



MFP-48 - MFP-51



MFP-52 - MFP-55

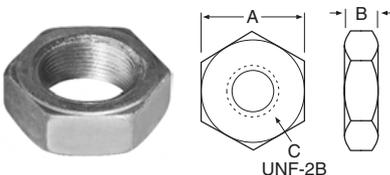


MFP-56 - MFP-61

Cat. No.	Parker	Bore	Stroke	A	B	C	D	E (Sq.)	F	Price Each
MFP-48	.31BFDSR1.00	5/16	1	5-40	.380	1.72	.710	.50	10-32	23.03
MFP-49	.31BFDSR2.00	5/16	2	5-40	.380	1.72	.710	.50	10-32	24.23
MFP-50	.31BFDSR3.00	5/16	3	5-40	.380	1.72	.710	.50	10-32	25.39
MFP-51	.31BFDSR4.00	5/16	4	5-40	.380	1.72	.710	.50	10-32	26.57
MFP-52	.44BFDSR1.00	7/16	1	10-32	.500	2.12	.880	.75	10-32	25.07
MFP-53	.44BFDSR2.00	7/16	2	10-32	.500	2.12	.880	.75	10-32	26.27
MFP-54	.44BFDSR3.00	7/16	3	10-32	.500	2.12	.880	.75	10-32	28.67
MFP-55	.44BFDSR4.00	7/16	4	10-32	.500	2.12	.880	.75	10-32	29.90
MFP-56	.75BFDSR1.00	3/4	1	1/4-28	.750	3.22	1.12	1.00	1/8-27	26.36
MFP-57	.75BFDSR2.00	3/4	2	1/4-28	.750	3.22	1.12	1.00	1/8-27	27.97
MFP-58	.75BFDSR3.00	3/4	3	1/4-28	.750	3.22	1.12	1.00	1/8-27	29.56
MFP-59	.75BFDSR4.00	3/4	4	1/4-28	.750	3.22	1.12	1.00	1/8-27	31.16
MFP-60	.75BFDSR5.00	3/4	5	1/4-28	.750	3.22	1.12	1.00	1/8-27	32.77
MFP-61	.75BFDSR6.00	3/4	6	1/4-28	.750	3.22	1.12	1.00	1/8-27	34.36

Accessories

Mounting Nuts



Cat. No.	Parker	Used On Bore	A	B	C	Price Each
MFP-550	LO73801200	2	1.88	.50	1 1/4-12	3.87
MFP-551	LO73801500	3	2.25	.84	1 1/2-12	4.73

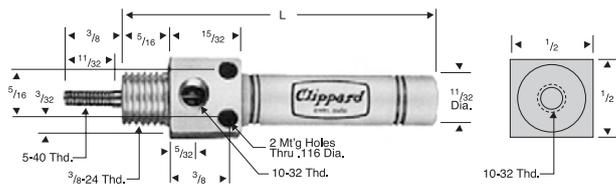
PNEUMATIC CYLINDERS

- Polished ID 304 stainless tubes for low break away
- Precision rolled construction for a solid, leakproof cylinder
- Machined aluminum heads, clear anodized for extra protection
- Ground, polished and roller burnished 303 stainless rods for longer life cycles
- Temperature range -30°F to 230°F, maximum psi 250

Force = Power Factor (IA²) x Pressure (PSIG)

Bore Size	Power Factor
5/16	.07
1/2	.19
5/8	.31
3/4	.44
1 1/16	.88
1 1/4	1.20
1 1/2	1.70
1 3/4	2.40
2	3.10
2 1/2	4.90

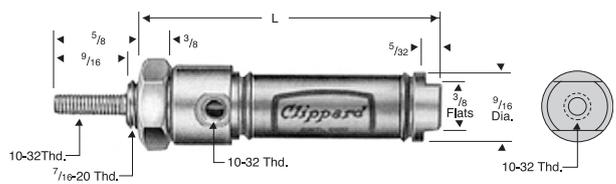
5/16" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-5	SDR-05-1/2	1/2	2 1/16	14.23
PAC-10	SDR-05-1	1	2 9/16	14.90
PAC-15	SDR-05-1 1/2	1 1/2	3 1/16	15.58

Furnished with nut.

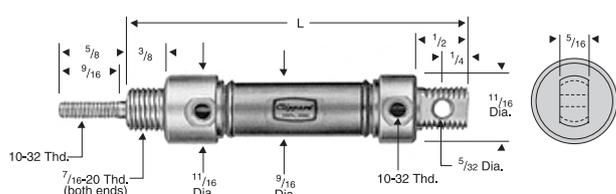
1/2" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-20	SDR-08-1/2	1/2	2 5/8	11.93
PAC-25	SDR-08-1	1	3 1/8	12.60
PAC-30	SDR-08-1 1/2	1 1/2	3 5/8	13.28
PAC-35	SDR-08-2	2	4 1/8	13.95

Furnished with nut.

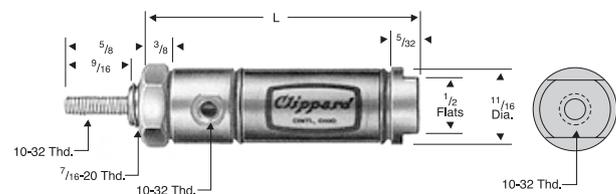
1/2" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-45	UDR-08-1/2	1/2	3 5/16	14.23
PAC-50	UDR-08-1	1	3 13/16	14.90
PAC-55	UDR-08-1 1/2	1 1/2	4 5/16	15.58

Furnished without nuts.

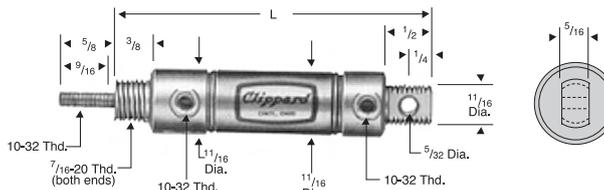
5/8" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-70	SDR-10-1/2	1/2	2 5/8	12.48
PAC-75	SDR-10-1	1	3 1/8	13.15
PAC-80	SDR-10-1 1/2	1 1/2	3 5/8	13.83
PAC-85	SDR-10-2	2	4 1/8	14.50
PAC-90	SDR-10-3	3	5 1/8	15.85
PAC-95	SDR-10-4	4	6 1/8	17.20

Furnished with nut.

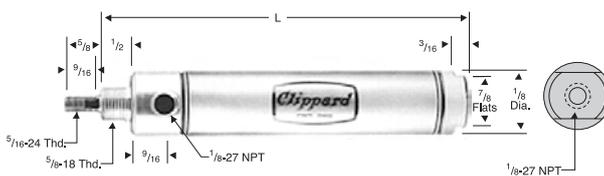
5/8" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-100	UDR-10-1/2	1/2	3 5/16	14.83
PAC-105	UDR-10-1	1	3 13/16	15.50
PAC-110	UDR-10-1 1/2	1 1/2	4 5/16	16.18
PAC-115	UDR-10-2	2	4 13/16	16.85
PAC-120	UDR-10-3	3	5 13/16	18.20

Furnished without nuts.

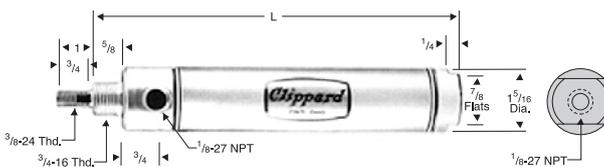
1-1/16" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-130	SDR-17-1	1	4 1/8	15.60
PAC-135	SDR-17-2	2	5 1/8	17.05
PAC-140	SDR-17-3	3	6 1/8	18.50
PAC-145	SDR-17-4	4	7 1/8	19.95

Furnished with nut.

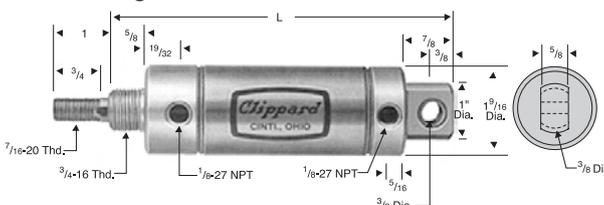
1-1/4" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-170	SDR-20-1	1	4 3/4	26.30
PAC-175	SDR-20-2	2	5 3/4	28.45
PAC-180	SDR-20-3	3	6 3/4	30.60
PAC-185	SDR-20-4	4	7 3/4	32.75

Furnished with nut.

1-1/2" Bore Clevis Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-230	CDR-24-1	1	5 1/2	30.65
PAC-235	CDR-24-2	2	6 1/2	33.00
PAC-240	CDR-24-3	3	7 1/2	35.35
PAC-245	CDR-24-4	4	8 1/2	37.70

Furnished without nuts.

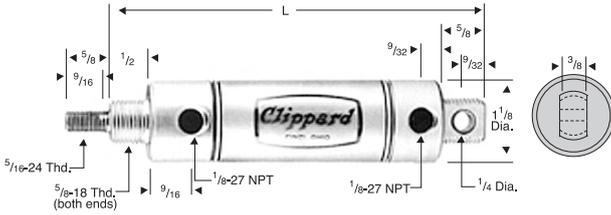
PNEUMATIC CYLINDERS

- Polished ID 304 stainless tubes for low break away
- Precision rolled construction for a solid, leakproof cylinder
- Machined aluminum heads, clear anodized for extra protection
- Ground, polished and roller burnished 303 stainless rods for longer life cycles
- Temperature range -30°F to 230°F, maximum psi 250

Force = Power Factor (IA²) x Pressure (PSIG)

Bore Size	Power Factor
5/16	.07
1/2	.19
5/8	.31
3/4	.44
1 1/16	.88
1 1/4	1.20
1 1/2	1.70
1 3/4	2.40
2	3.10
2 1/2	4.90

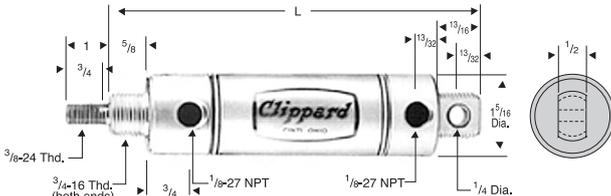
1-1/16" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-150	UDR-17-1	1	5	18.50
PAC-155	UDR-17-2	2	6	19.95
PAC-160	UDR-17-3	3	7	21.40
PAC-165	UDR-17-4	4	8	22.85

Furnished without nuts.

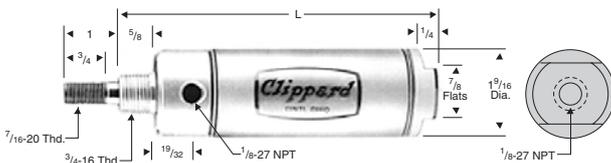
1-1/4" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-190	UDR-20-1	1	5 7/8	29.95
PAC-195	UDR-20-2	2	6 7/8	32.10
PAC-200	UDR-20-3	3	7 7/8	34.25
PAC-205	UDR-20-4	4	8 7/8	36.40

Furnished without nuts.

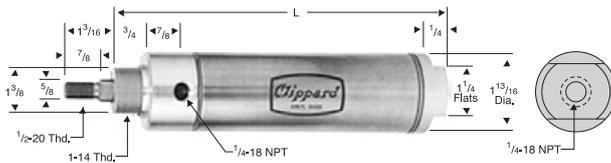
1-1/2" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-210	SDR-24-1	1	4 7/16	27.25
PAC-215	SDR-24-2	2	5 7/16	29.60
PAC-220	SDR-24-3	3	6 7/16	31.95
PAC-225	SDR-24-4	4	7 7/16	34.30

Furnished with nut.

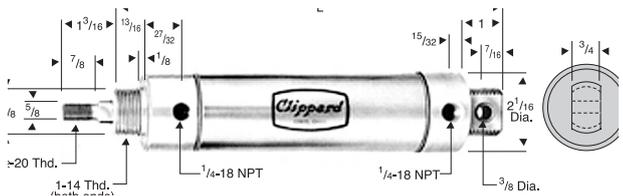
1-3/4" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-255	SDR-28-2	2	6 3/8	41.95
PAC-260	SDR-28-3	3	7 3/8	44.40
PAC-265	SDR-28-4	4	8 3/8	46.85

Furnished with nut.

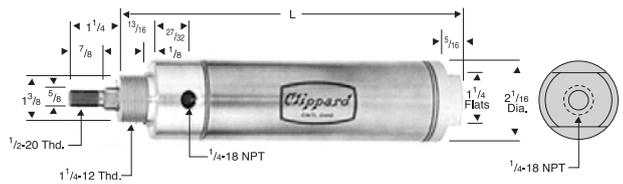
1-3/4" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-270	UDR-28-1	1	6 15/16	44.95
PAC-275	UDR-28-2	2	7 15/16	47.40
PAC-285	UDR-28-4	4	9 15/16	52.30

Furnished without nuts.

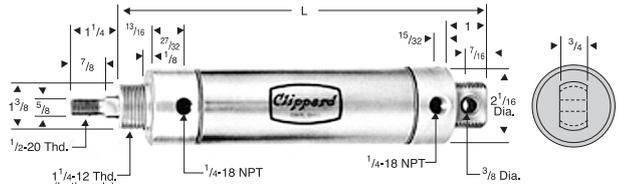
2" Bore Stud Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-290	SDR-32-1	1	5 5/16	43.05
PAC-295	SDR-32-2	2	6 5/16	45.50
PAC-300	SDR-32-3	3	7 5/16	47.95
PAC-305	SDR-32-4	4	8 5/16	50.40

Furnished with nut.

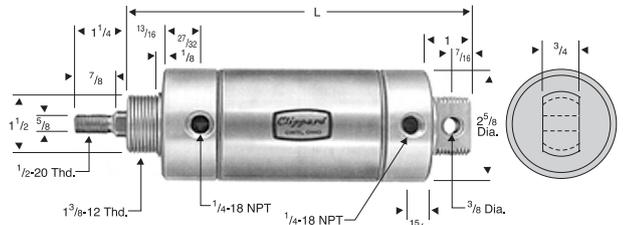
2" Bore Universal Mount Double Acting



Cat. No.	Clippard	Stroke	L	Price Each
PAC-310	UDR-32-1	1	6 11/16	48.50
PAC-315	UDR-32-2	2	7 11/16	50.95
PAC-320	UDR-32-3	3	8 11/16	53.40
PAC-325	UDR-32-4	4	9 11/16	55.85

Furnished without nuts.

2-1/2" Bore Universal Mount Double Acting

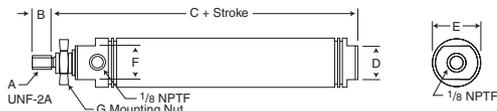


Cat. No.	Clippard	Stroke	L	Price Each
PAC-330	UDR-40-1	1	6 11/16	71.75
PAC-335	UDR-40-2	2	7 11/16	75.00
PAC-340	UDR-40-3	3	8 11/16	78.25
PAC-345	UDR-40-4	4	9 11/16	81.50

Furnished without nuts.

Stainless steel cylinder tube for low breakaway friction and attractive appearance. Clear anodized head covers for protection against corrosion. The piston rod is stainless steel on the 3/4" and 7/8" sizes and hard chrome plated steel on the other sizes. Max pressure 250 psi. Pre-lubricated. All sizes listed below are in stock for same day shipping, however, we can supply you with other sizes, styles and options as special orders. Please call for price and delivery. **See pages 52 and 53 for other air cylinders.**

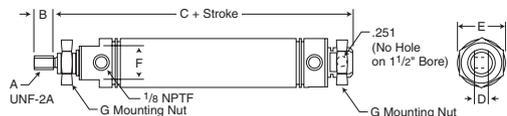
Double Acting - Front Nose



See table 11 below for additional discounts.

Cat. No.	Bore	Stroke	A	B	C	D	E	F	G	Price Each 1-24
SMC-4003	3/4	1	1/4-28	1/2	2.97	.62	.86	.75	5/8-18	16.53
SMC-4005	3/4	2	1/4-28	1/2	2.97	.62	.86	.75	5/8-18	17.87
SMC-4007	3/4	3	1/4-28	1/2	2.97	.62	.86	.75	5/8-18	19.21
SMC-4011	3/4	5	1/4-28	1/2	2.97	.62	.86	.75	5/8-18	21.89
SMC-4013	3/4	6	1/4-28	1/2	2.97	.62	.86	.75	5/8-18	23.23
SMC-4015	7/8	1	1/4-28	1/2	2.94	.75	.93	.75	5/8-18	18.03
SMC-4017	7/8	2	1/4-28	1/2	2.94	.75	.93	.75	5/8-18	19.36
SMC-4019	7/8	3	1/4-28	1/2	2.94	.75	.93	.75	5/8-18	20.70
SMC-4021	7/8	4	1/4-28	1/2	2.94	.75	.93	.75	5/8-18	22.04
SMC-4025	7/8	6	1/4-28	1/2	2.94	.75	.93	.75	5/8-18	24.72
SMC-4027	1 1/16	1	5/16-24	1/2	3.25	.88	1.12	.88	5/8-18	19.21
SMC-4029	1 1/16	2	5/16-24	1/2	3.25	.88	1.12	.88	5/8-18	20.55
SMC-4031	1 1/16	3	5/16-24	1/2	3.25	.88	1.12	.88	5/8-18	21.25
SMC-4033	1 1/16	4	5/16-24	1/2	3.25	.88	1.12	.88	5/8-18	23.23
SMC-4037	1 1/16	6	5/16-24	1/2	3.25	.88	1.12	.88	5/8-18	25.90
SMC-4039	1 1/4	1	7/16-20	.75	4.00	1.06	1.32	1.06	3/4-16	28.94
SMC-4041	1 1/4	2	7/16-20	.75	4.00	1.06	1.32	1.06	3/4-16	30.69
SMC-4043	1 1/4	3	7/16-20	.75	4.00	1.06	1.32	1.06	3/4-16	32.40
SMC-4045	1 1/4	4	7/16-20	.75	4.00	1.06	1.32	1.06	3/4-16	34.20
SMC-4049	1 1/4	6	7/16-20	.75	4.00	1.06	1.32	1.06	3/4-16	37.70
SMC-4051	1 1/2	1	7/16-20	.75	3.69	1.25	1.56	1.25	3/4-16	33.48
SMC-4053	1 1/2	2	7/16-20	.75	3.69	1.25	1.56	1.25	3/4-16	35.64
SMC-4055	1 1/2	3	7/16-20	.75	3.69	1.25	1.56	1.25	3/4-16	37.80
SMC-4059	1 1/2	5	7/16-20	.75	3.69	1.25	1.56	1.25	3/4-16	42.13
SMC-4061	1 1/2	6	7/16-20	.75	3.69	1.25	1.56	1.25	3/4-16	44.29

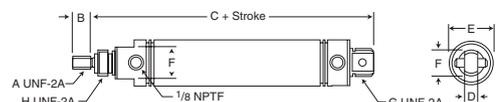
Double Acting - Double End Mounts



See table 11 below for additional discounts.

Cat. No.	Bore	Stroke	A	B	C	D	E	F	G	Price Each 1-24
SMC-4071	3/4	2	1/4-28	1/2	4.03	.38	.86	.75	5/8-18	22.20
SMC-4079	3/4	6	1/4-28	1/2	4.03	.38	.86	.75	5/8-18	27.55
SMC-4119	1 1/2	2	7/16-20	3/4	4.50	—	1.56	1.25	3/4-16	43.16

Double Acting - Rear Pivot Mount

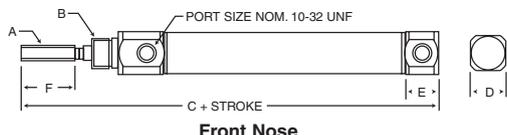


See table 11 below for additional discounts.

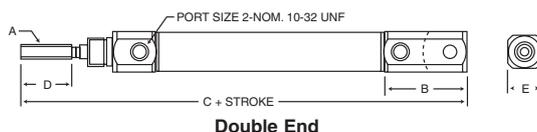
Cat. No.	Bore	Stroke	A	B	C	D	E	F	G	H	Price Each 1-24
SMC-4129	3/4	1	1/4-28	1/2	4.03	.38	.86	.75	5/8-18	5/8-18	19.72
SMC-4131	3/4	2	1/4-28	1/2	4.03	.38	.86	.75	5/8-18	5/8-18	20.75
SMC-4133	3/4	3	1/4-28	1/2	4.03	.38	.86	.75	5/8-18	5/8-18	22.40
SMC-4155	1 1/16	2	5/16-24	1/2	4.12	.38	1.12	.88	5/8-18	5/8-18	24.05
SMC-4157	1 1/16	3	5/16-24	1/2	4.12	.38	1.12	.88	5/8-18	5/8-18	25.39
SMC-4163	1 1/16	6	5/16-24	1/2	4.12	.38	1.12	.88	5/8-18	5/8-18	29.41
SMC-4179	1 1/2	2	7/16-20	3/4	4.75	.62	1.56	1.25	—	3/4-16	40.22
SMC-4187	1 1/2	6	7/16-20	3/4	4.75	.62	1.56	1.25	—	3/4-16	48.87

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Miniature Stainless Steel Bodies Double Acting - Single Rod



Front Nose



Double End

These stainless cylinders offer space savings, high performance, and interchangeability with other stainless cylinders. A wear ring extends the seal life and a bronze rod bushing is standard.

Front Nose

See table 11 below for additional discounts.

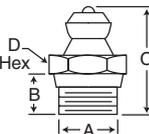
Cat. No.	Bore	Stroke	A	B	C	D	E	F	Price Each 1-24
SMC-5005	1/4	1/2	5-40	1/4-28	3.03	.47	.28	.60	13.96
SMC-5011	1/4	2	5-40	1/4-28	3.03	.47	.28	.60	15.81
SMC-5013	3/8	1/2	6-40	5/16-24	2.91	.47	.37	.60	14.73
SMC-5015	3/8	1	6-40	5/16-24	2.91	.47	.37	.60	15.35
SMC-5021	3/8	3	6-40	5/16-24	2.91	.47	.37	.60	17.82
SMC-5027	3/8	6	6-40	5/16-24	2.91	.47	.37	.60	26.53
SMC-5029	5/8	1/2	10-32	3/8-24	2.95	.71	.37	.60	15.19
SMC-5031	5/8	1	10-32	3/8-24	2.95	.71	.37	.60	16.07
SMC-5037	5/8	3	10-32	3/8-24	2.95	.71	.37	.60	19.57
SMC-5045	5/8	7	10-32	3/8-24	2.95	.71	.37	.60	26.57

Double End

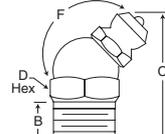
See table 11 below for additional discounts.

Cat. No.	Bore	Stroke	A	B	C	D	E	Price Each 1-24
SMC-5083	5/8	8	10-32	1.08	3.66	.60	.71	28.33

HYDRAULIC GREASE FITTINGS



Type 1 Straight



Type 3 Angle

Available standard and NPT, straight or angled. All have a ball check.

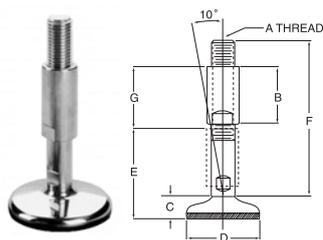
See table 32 below for additional discounts.

Cat. No.	Equal to	A	Type	B	C	D	Degree	Price Each 1-99
HGF-38	—	1	1/4	5/8	7/16	—	—	2.02
HGF-39	—	3	11/32	63/64	7/16	45	—	4.49
HGF-40	1923-S	1/8 NPT	3	17/64	13/16	7/16	90	4.49
HGF-42	1966-S	1/4-28	1	3/16	17/32	5/16	—	1.16

*No ball check

32	Quantity	1-99	100-249	250-499	500-999	1000-	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

H3A with Threaded Casing

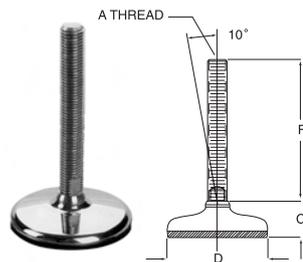


Stainless steel mounts meet all USDA requirements. Stainless steel provides high corrosion resistance. Full range of motion up to 10 degrees. Pivot provides secure footing and complete vibration control. Thread casing provides full FDA approval. H3A-FDA certified.

See table 4 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Load	Price Each
SX-5	5/8-11	2.5	1.3	2.36	3.98	6.5	1100	41.09
SX-6	3/4-11	3.5	1.3	2.36	5.15	8.5	1100	48.12
SX-7	3/4-10	2.5	1.3	2.36	3.98	6.5	1100	46.98
SX-8	3/4-10	3.5	1.3	2.36	5.15	8.5	1100	52.00
SX-9	1-8	2.5	1.3	2.36	3.98	6.5	1100	52.00
SX-10	1-8	3.5	1.3	2.36	5.15	8.5	1100	56.59
SX-11	5/8-11	2.5	1.22	3.15	4.05	6.5	2200	48.68
SX-12	5/8-11	3.5	1.22	3.15	5.24	8.5	2200	55.73
SX-13	3/4-10	2.5	1.22	3.15	4.05	6.5	2200	54.57
SX-14	3/4-10	3.5	1.22	3.15	5.24	8.5	2200	59.60
SX-15	1-8	2.5	1.22	3.15	4.05	6.5	2200	59.60
SX-16	1-8	3.5	1.22	3.15	5.24	8.5	2200	64.19
SX-17	5/8-11	2.5	1.34	3.94	4.29	6.5	3300	59.69
SX-18	5/8-11	3.5	1.34	3.94	5.47	8.5	3300	66.74
SX-19	3/4-10	2.5	1.34	3.94	4.29	6.5	3300	65.58
SX-20	3/4-10	3.5	1.34	3.94	5.47	8.5	3300	70.62
SX-21	1-8	2.5	1.34	3.94	4.29	6.5	3300	70.62
SX-22	1-8	3.5	1.34	3.94	5.47	8.5	3300	75.66
SX-23	5/8-11	2.5	1.5	4.72	4.4	6.5	5500	73.58
SX-24	5/8-11	3.5	1.5	4.72	5.59	8.5	5500	80.72
SX-25	3/4-10	2.5	1.5	4.72	4.4	6.5	5500	79.57
SX-26	3/4-10	3.5	1.5	4.72	5.59	8.5	5500	84.60
SX-27	1-8	2.5	1.5	4.72	4.4	6.5	5500	84.60
SX-28	1-8	3.5	1.5	4.72	5.59	8.5	5500	89.19
SX-29	5/8-11	2.5	1.73	5.51	4.53	6.5	7700	93.64
SX-30	5/8-11	3.5	1.73	5.51	5.71	8.5	7700	100.67
SX-31	3/4-10	2.5	1.73	5.51	4.53	6.5	7700	99.53
SX-32	3/4-10	3.5	1.73	5.51	5.71	8.5	7700	104.55
SX-33	1-8	2.5	1.73	5.51	4.53	6.5	7700	104.55
SX-34	1-8	3.5	1.73	5.51	5.71	8.5	7700	109.14

Overall Hygienic

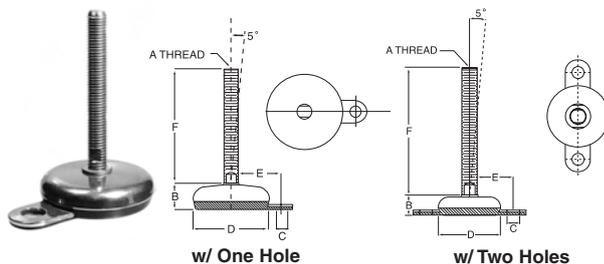


Overall hygienic stainless steel mounts meet all USDA requirements for food processing equipment. Rubber contains no voids and is vulcanized to the housing for a completely hygienic seal. ANSI 304 stainless steel provides high corrosion resistance. Full range of motion up to 10 degrees. Pivot provides secure footing and complete vibration control.

See table 4 below for additional discounts.

Cat. No.	A	C	D	F	Load	Price Each
SX-35	1/2-13	1.3	2.36	4	1100	14.51
SX-36	1/2-13	1.3	2.36	6	1100	15.23
SX-37	5/8-11	1.3	2.36	6	1100	17.49
SX-38	5/8-11	1.3	2.36	8	1100	18.59
SX-39	3/4-10	1.3	2.36	6	1100	20.58
SX-40	3/4-10	1.3	2.36	8	1100	22.21
SX-41	7/8-9	1.3	2.36	6	1100	22.60
SX-42	7/8-9	1.3	2.36	8	1100	24.44
SX-43	1/2-13	1.22	3.15	4	2200	22.11
SX-44	1/2-13	1.22	3.15	6	2200	22.83
SX-45	5/8-11	1.22	3.15	6	2200	25.08
SX-46	5/8-11	1.22	3.15	8	2200	26.19
SX-47	3/4-10	1.22	3.15	6	2200	28.19
SX-48	3/4-10	1.22	3.15	8	2200	29.81
SX-49	7/8-9	1.22	3.15	6	2200	30.21
SX-50	7/8-9	1.22	3.15	8	2200	32.05
SX-51	1/2-13	1.34	3.94	4	3300	33.12
SX-52	1/2-13	1.34	3.94	6	3300	33.84
SX-53	5/8-11	1.34	3.94	6	3300	36.09
SX-54	5/8-11	1.34	3.94	8	3300	37.20
SX-55	3/4-10	1.34	3.94	6	3300	39.20
SX-56	3/4-10	1.34	3.94	8	3300	40.82
SX-57	7/8-9	1.34	3.94	6	3300	41.22
SX-58	7/8-9	1.34	3.94	8	3300	43.06
SX-59	1/2-13	1.5	4.72	4	5500	47.11
SX-60	1/2-13	1.5	4.72	6	5500	47.83
SX-61	5/8-11	1.5	4.72	6	5500	50.08
SX-62	5/8-11	1.5	4.72	8	5500	51.19
SX-63	3/4-10	1.5	4.72	6	5500	53.19
SX-64	3/4-10	1.5	4.72	8	5500	54.81
SX-65	7/8-9	1.5	4.72	6	5500	55.20
SX-66	7/8-9	1.5	4.72	8	5500	57.05
SX-67	1/2-13	1.73	5.51	4	7700	67.06
SX-68	1/2-13	1.73	5.51	6	7700	67.78
SX-69	5/8-11	1.73	5.51	6	7700	70.04
SX-70	5/8-11	1.73	5.51	8	7700	71.14
SX-71	3/4-10	1.73	5.51	6	7700	73.14
SX-72	3/4-10	1.73	5.51	8	7700	74.76
SX-73	7/8-9	1.73	5.51	6	7700	75.17
SX-74	7/8-9	1.73	5.51	8	7700	77.00

Anchoring Hygienic Anti-Vibration Mounts

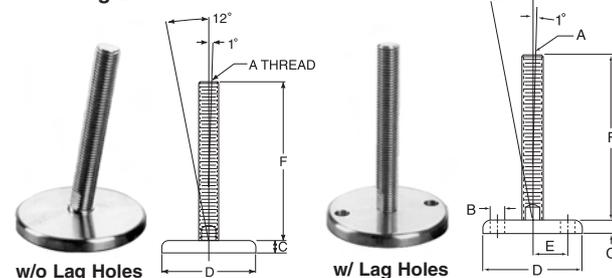


ANSI Type 304 stainless steel provides high corrosion resistance. Rounded polished base for fluid run-off during wash down applications. 5° swivel for good floor contact. Rubber base meets FDA 177-2600. Operating temperature are -20° to 100° celsius. Available with one or two anchoring holes.

See table 4 below for additional discounts.

Cat. No.	1-Hole	2-Holes	A	B	C	D	E	F	Load	Price Each
SX-75	SX-83	1/2-13	.87	.63	2.95	2.05	4	1770	22.38	26.16
SX-76	SX-84	1/2-13	.87	.63	2.95	2.05	6	1770	22.80	26.57
SX-77	SX-85	5/8-11	.87	.63	2.95	2.05	6	1770	24.65	28.41
SX-78	SX-86	5/8-11	.87	.63	2.95	2.05	8	1770	25.74	29.52
SX-79	SX-87	3/4-10	.87	.63	2.95	2.05	6	1770	27.74	31.52
SX-80	SX-88	3/4-10	.87	.63	2.95	2.05	8	1770	29.36	33.13
SX-81	SX-89	7/8-9	.87	.63	2.95	2.05	6	1770	29.75	33.53
SX-82	SX-90	7/8-9	.87	.63	2.95	2.05	8	1770	31.60	35.38
SX-91	—	1/2-13	1.26	.63	3.94	2.64	4	2220	33.03	—
SX-92	—	1/2-13	1.26	.63	3.94	2.64	6	2220	33.03	—
SX-93	—	5/8-11	1.26	.63	3.94	2.64	6	2220	35.29	—
SX-94	—	5/8-11	1.26	.63	3.94	2.64	8	2220	36.38	—
SX-95	—	3/4-10	1.26	.63	3.94	2.64	6	2220	38.38	—
SX-96	—	3/4-10	1.26	.63	3.94	2.64	8	2220	40.01	—
SX-97	—	7/8-9	1.26	.63	3.94	2.64	6	2220	40.41	—
SX-98	—	7/8-9	1.26	.63	3.94	2.64	8	2220	42.24	—

Low Profile Anchoring Leveler



Solid stainless steel construction for high loads. Rounded profile makes leveler easy to clean. Available without lag holes or with two holes for extra hold down strength. ANSI Type 304 stainless steel for high chemical resistance. Withstands temperatures of -20 to 100° celsius. Wrench flats in bolt provide full use of threaded bolt. Available with either 1° or 12° of swivel.

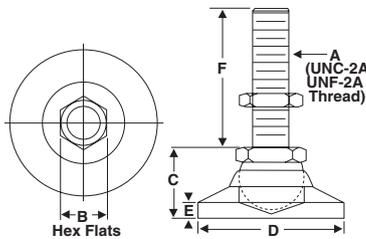
See table 4 below for additional discounts.

Cat. No.	12°	A	B	C	D	E	F	Load	Price Each	
SX-99	SX-115	1/2-13	—	0.47	3.54	—	4	13300	29.15	36.40
SX-100	SX-116	1/2-13	—	0.47	3.54	—	6	13300	31.53	39.47
SX-101	SX-117	5/8-11	—	0.47	3.54	—	6	13300	34.24	42.17
SX-102	SX-118	5/8-11	—	0.47	3.54	—	8	13300	35.61	43.55
SX-103	SX-119	3/4-10	—	0.47	3.54	—	6	13300	38.10	46.04
SX-104	SX-120	3/4-10	—	0.47	3.54	—	8	13300	40.15	48.09
SX-105	SX-121	7/8-9	—	0.47	3.54	—	6	13300	40.59	48.52
SX-106	SX-122	7/8-9	—	0.47	3.54	—	8	13300	42.87	50.79
SX-107	SX-123	1/2-13	—	0.47	4.33	—	4	13300	35.16	43.65
SX-108	SX-124	1/2-13	—	0.47	4.33	—	6	13300	38.11	46.04
SX-109	SX-125	5/8-11	—	0.47	4.33	—	6	13300	40.83	48.76
SX-110	SX-126	5/8-11	—	0.47	4.33	—	8	13300	42.18	50.13
SX-111	SX-127	3/4-10	—	0.47	4.33	—	6	13300	44.68	52.62
SX-112	SX-128	3/4-10	—	0.47	4.33	—	8	13300	46.61	54.56
SX-113	SX-129	7/8-9	—	0.47	4.33	—	6	13300	47.18	55.10
SX-114	SX-131	7/8-9	—	0.47	4.33	—	8	13300	49.44	57.37
SX-132	SX-148	1/2-13	0.5	0.47	3.54	1.26	4	13300	30.39	43.65
SX-133	SX-149	1/2-13	0.5	0.47	3.54	1.26	6	13300	33.46	45.94
SX-134	SX-150	5/8-11	0.5	0.47	3.54	1.26	6	13300	36.30	48.64
SX-135	SX-151	5/8-11	0.5	0.47	3.54	1.26	8	13300	37.53	50.01
SX-136	SX-152	3/4-10	0.5	0.47	3.54	1.26	6	13300	40.02	52.51
SX-137	SX-153	3/4-10	0.5	0.47	3.54	1.26	8	13300	42.07	54.55
SX-138	SX-154	7/8-9	0.5	0.47	3.54	1.26	6	13300	42.52	54.99
SX-139	SX-155	7/8-9	0.5	0.47	3.54	1.26	8	13300	44.80	57.26
SX-140	SX-156	1/2-13	0.5	0.47	4.33	1.73	4	13300	38.78	50.92
SX-141	SX-157	1/2-13	0.5	0.47	4.33	1.73	6	13300	41.96	54.55
SX-142	SX-158	5/8-11	0.5	0.47	4.33	1.73	6	13300	44.79	57.26
SX-143	SX-159	5/8-11	0.5	0.47	4.33	1.73	8	13300	46.05	58.63
SX-144	SX-160	3/4-10	0.5	0.47	4.33	1.73	6	13300	48.53	61.12
SX-145	SX-161	3/4-10	0.5	0.47	4.33	1.73	8	13300	47.25	63.06
SX-146	SX-162	7/8-9	0.5	0.47	4.33	1.73	6	13300	51.03	63.61
SX-147	SX-163	7/8-9	0.5	0.47	4.33	1.73	8	13300	53.29	65.87

Reid SELECT LEVELING PADS

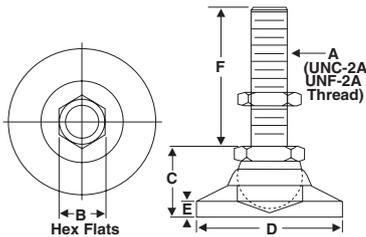
MADE IN U.S.A.

These leveling pads have a 15° swivel off centerline to adjust to uneven surfaces and level machine tools, electronic racks, benches, etc. Large diameter pad design assures solid support.



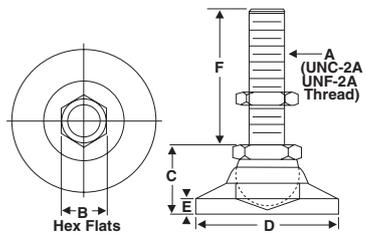
See table 4 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Load	Price Each 1-11
Without Pad								
TL-00SS	10-32	3/8	17/32	3/4	7/64	1	900	10.41
TL-10SS	10-32	3/8	17/32	3/4	7/64	2	700	11.32
TL-0SS	1/4-20	1/2	45/64	1	5/32	1 1/4	1,480	12.78
TL-15SS	1/4-20	1/2	45/64	1	5/32	2 1/2	1,100	13.49
TL-1SS	3/8-16	5/8	7/8	1 1/4	3/16	2	3,750	13.88
TL-20SS	3/8-16	5/8	7/8	1 1/4	3/16	4	3,750	16.77
TL-2SS	1/2-13	3/4	1 1/8	1 7/8	1/4	2	5,000	21.92
TL-25SS	1/2-13	3/4	1 1/8	1 7/8	1/4	4	5,000	23.41
TL-3SS	5/8-11	7/8	1 1/4	2 1/2	5/16	2	6,000	36.38
TL-30SS	5/8-11	7/8	1 1/4	2 1/2	5/16	4	6,000	37.72
TL-4SS	3/4-10	1 1/16	1 1/2	3	1/2	2	7,200	50.60
TL-35SS	3/4-10	1 1/16	1 1/2	3	1/2	4	7,200	52.09
TL-5SS	1-8	1 3/8	1 7/8	4	13/32	4 1/4	22,000	75.46
TL-40SS	1-8	1 3/8	1 7/8	4	13/32	8	22,000	65.53



See table 4 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Load	Price Each 1-11
With 1/8" Elastomer Pad								
TLE-00SS	10-32	3/8	21/32	3/4	15/64	1	650	15.14
TLE-0SS	1/4-20	1/2	53/64	1	9/32	1 1/4	1,000	18.00
TLE-15SS	1/4-20	1/2	53/64	1	9/32	2 1/2	800	19.80
TLE-1SS	3/8-16	5/8	1	1 1/4	5/16	2	2,800	20.64
TLE-20SS	3/8-16	5/8	1	1 1/4	5/16	4	2,800	22.71
TLE-2SS	1/2-13	3/4	1 1/4	1 7/8	3/8	2	3,750	32.58
TLE-25SS	1/2-13	3/4	1 1/4	1 7/8	3/8	4	3,450	35.85
TLE-3SS	5/8-11	7/8	1 3/8	2 1/2	7/16	2	4,500	48.83
TLE-4SS	3/4-10	1 1/16	1 5/8	3	5/8	2	5,400	72.53
TLE-35SS	3/4-10	1 1/16	1 5/8	3	5/8	4	5,400	79.78
TLE-5SS	1-8	1 3/8	2	4	17/32	4 1/4	21,000	96.19
TLE-40SS	1-8	1 3/8	2	4	17/32	8	16,400	105.80

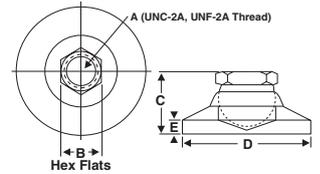


See table 4 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Load	Price Each 1-11
With Delrin Pad								
TD-00SS	10-32	3/8	17/32	3/4	7/64	1	525	9.32
TD-10SS	10-32	3/8	17/32	3/4	7/64	2	150	10.25
TD-0SS	1/4-20	1/2	45/64	1	5/32	1 1/4	800	11.50
TD-15SS	1/4-20	1/2	45/64	1	5/32	2 1/2	200	12.65
TD-1SS	3/8-16	5/8	7/8	1 1/4	3/16	2	2,800	13.29
TD-20SS	3/8-16	5/8	7/8	1 1/4	3/16	4	300	14.62
TD-2SS	1/2-13	3/4	1 1/8	1 7/8	1/4	2	3,750	20.01
TD-25SS	1/2-13	3/4	1 1/8	1 7/8	1/4	4	4,500	30.46
TD-3SS	5/8-11	7/8	1 1/4	2 1/2	5/16	2	4,200	33.51
TD-4SS	3/4-10	1 1/16	1 1/2	3	1/2	2	5,400	43.27
TD-35SS	3/4-10	1 1/16	1 1/2	3	1/2	4	1,800	47.60
TD-5SS	1-8	1 3/8	1 7/8	4	13/32	4 1/4	16,400	60.39

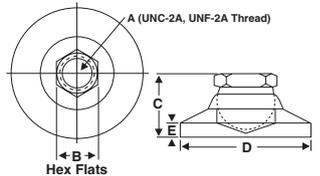
Bold catalog numbers conform to TCMAI standards.

4	Quantity	1-11	12-23	24-47	48-71	72-96	97-499
	Discount	Net	7%	12%	20%	25%	30%



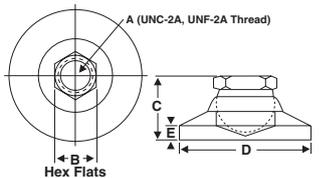
See table 4 below for additional discounts.

Cat. No.	A	Min. Thd. Depth	B	C	D	E	Load	Price Each 1-11
Without Pad								
L-5SS	10-32	.17	3/8	.53	3/4	.11	900	6.47
L-6SS	1/4-20	.31	1/2	.70	1	.15	1,400	9.84
L-0SS	3/8-16	.38	5/8	7/8	1 1/4	3/16	3,750	11.19
L-1SS	1/2-13	.44	3/4	1 1/8	1 7/8	1/4	5,000	15.47
L-2SS	5/8-11	.44	7/8	1 1/4	2 1/2	5/16	6,000	28.39
L-3SS	3/4-10	.62	1 1/16	1 1/2	3	1/2	7,200	42.58
L-4SS	1-8	.81	1 3/8	1 7/8	4	13/32	28,000	55.43



See table 4 below for additional discounts.

Cat. No.	A	Min. Thd. Depth	B	C	D	E	Load	Price Each 1-11
With 1/8" Elastomer Pad								
LE-6SS	1/4-20	.31	1/2	.83	1	.28	1,000	13.93
LE-0SS	3/8-16	.38	5/8	1	1 1/4	5/16	2,800	18.20
LE-1SS	1/2-13	.44	3/4	1 1/4	1 7/8	3/8	3,750	31.02
LE-2SS	5/8-11	.44	7/8	1 3/8	2 1/2	7/16	4,500	46.24
LE-3SS	3/4-10	.62	1 1/16	1 5/8	3	3/8	5,400	64.78
LE-4SS	1-8	.81	1 3/8	2	4	.53	21,000	66.92



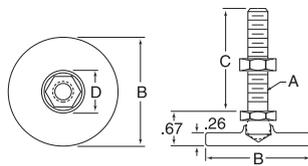
See table 4 below for additional discounts.

Cat. No.	A	Min. Thd. Depth	B	C	D	E	Load	Price Each 1-11
With Delrin Pad								
LD-5SS	10-32	.17	3/8	.53	3/4	.11	150	8.39
LD-6SS	1/4-20	.31	1/2	.70	1	.15	200	10.35
LD-0SS	3/8-16	.38	5/8	7/8	1 1/4	3/16	300	11.96
LD-1SS	1/2-13	.44	3/4	1 1/8	1 7/8	1/4	700	18.01
LD-3SS	3/4-10	.62	1 1/16	1 1/2	3	1/2	1,800	38.94
LD-4SS	1-8	.81	1 3/8	1 7/8	4	13/32	2,400	54.35

ECONOLINE® LEVELING PADS

The Econoline series offers a low cost alternative for a wide range of leveling applications. They feature a low profile ergonomic design and stylish appearance. These pads swivel off center to automatically compensate for uneven surfaces. Delrin pads are black.

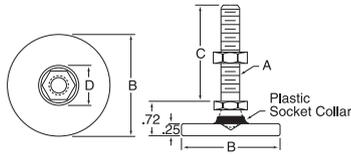
Stud Type Black Delrin Pad Stainless Steel Stud



See table 4 below for additional discounts.

Cat. No.	A	B	C	D	Load Lbs.	Price Each 1-11
EL-48	1/4-20	1.5	1.25	5/8	225	9.73
EL-49	1/4-20	1.5	2.50	5/8	225	11.91
EL-50	3/8-16	1.5	2.00	5/8	250	11.17
EL-51	3/8-16	1.5	4.00	5/8	250	13.96
EL-55	1/2-13	1.5	2.00	5/8	275	15.31
EL-56	1/2-13	1.5	4.00	5/8	275	19.14
EL-65	3/8-16	2.0	2.00	5/8	250	11.17
EL-66	3/8-16	2.0	4.00	5/8	250	13.96
EL-70	1/2-13	2.0	2.00	5/8	275	16.14
EL-71	1/2-13	2.0	4.00	5/8	275	19.14
EL-80	3/8-16	2.5	2.00	5/8	250	11.85
EL-81	3/8-16	2.5	4.00	5/8	250	13.96

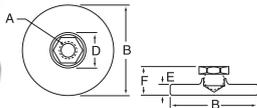
Stud Type Stainless Steel Pad w/Stainless Steel Stud



See table 4 below for additional discounts.

Cat. No.	A	B	C	D	Load Lbs.	Price Each 1-11
EL-183	1/4-20	1.5	1.25	5/8	700	12.70
EL-184	1/4-20	1.5	2.50	5/8	500	15.88
EL-185	3/8-16	1.5	2.00	5/8	2,500	14.89
EL-186	3/8-16	1.5	4.00	5/8	1,825	18.61
EL-190	1/2-13	1.5	2.00	5/8	1,825	20.41
EL-191	1/2-13	1.5	4.00	5/8	2,500	25.51
EL-195	5/8-11	1.5	2.00	5/8	3,000	32.12
EL-200	3/8-16	2.0	2.00	5/8	1,825	14.89
EL-201	3/8-16	2.0	4.00	5/8	1,825	18.61
EL-205	1/2-13	2.0	2.00	5/8	2,000	20.41
EL-206	1/2-13	2.0	4.00	5/8	2,500	25.51
EL-211	5/8-11	2.0	4.00	5/8	3,000	40.14
EL-213	3/4-10	2.0	4.00	3/4	3,800	51.71
EL-215	3/8-16	2.5	2.00	5/8	1,825	14.89
EL-216	3/8-16	2.5	4.00	5/8	1,825	18.61
EL-220	1/2-13	2.5	2.00	5/8	2,500	20.41
EL-221	1/2-13	2.5	4.00	5/8	2,500	25.51
EL-226	5/8-11	2.5	4.00	5/8	3,000	40.14
EL-228	3/4-10	2.5	4.00	3/4	3,800	51.71

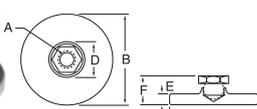
Socket Type Black Delrin Pad w/Stainless Steel Socket



See table 4 below for additional discounts.

Cat. No.	A	B	D	E	F	Load Rate Lbs.	Price Each 1-11
EL-360	1/4-20	1.5	5/8	.26	.79	225	7.62
EL-365	3/8-16	1.5	5/8	.26	.79	250	8.93
EL-370	1/2-13	1.5	3/4	.26	1.29	275	12.25
EL-380	3/8-16	2.0	5/8	.26	.79	250	8.93
EL-385	1/2-13	2.0	3/4	.26	1.29	275	12.25
EL-400	3/8-16	2.5	5/8	.26	.79	250	8.93
EL-405	1/2-13	2.5	3/4	.26	1.29	275	12.25
EL-410	5/8-11	2.5	7/8	.26	1.42	350	19.27

Socket Type Stainless Steel Pad w/Stainless Steel Socket



See table 4 below for additional discounts.

Cat. No.	A	B	D	E	F	Load Rate Lbs.	Price Each 1-11
EL-560	1/4-20	1.5	5/8	.25	.84	700	11.35
EL-565	3/8-16	1.5	5/8	.25	.84	1,825	12.98
EL-580	3/8-16	2.0	5/8	.25	.84	1,825	12.98
EL-585	1/2-13	2.0	3/4	.25	1.34	2,500	17.24
EL-600	3/8-16	2.5	5/8	.25	.84	1,825	12.98
EL-605	1/2-13	2.5	3/4	.25	1.34	2,500	17.24
EL-610	5/8-11	2.5	7/8	.25	1.47	3,000	27.68
EL-615	3/4-10	2.5	1 1/16	.25	1.59	3,800	35.30

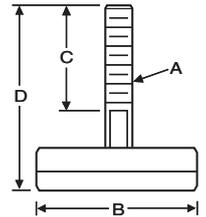
New! ADJUSTABLE GLIDES



Nylon Base



Elastomer Base



These industrial glides are an excellent and inexpensive solution for light duty applications such as office furniture, shelving, point of purchase (POP) displays, cabinetry and small machinery. The bases are available in a sturdy nylon base for glide applications or an elastomer base for non-skid applications. Studs are type 303 stainless steel.

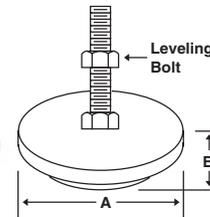
See table 4 below for additional discounts.

Cat. No.	Thread A	Base Dia. B	Thread Lgth. C	Total Ht. D	Max Load (Lbs.)	Price Each 1-11
Nylon Base						
GL-175	10-24	1.200	1 1/2	2 1/4	250	3.04
GL-180	1/4-20	1.200	1 1/2	2 1/4	250	3.20
GL-185	5/16-18	1.200	1 1/2	2 1/4	250	3.74
GL-190	5/16-18	2.030	2	3	250	4.24
GL-195	3/8-16	2.030	2	3	250	4.78
GL-200	3/8-16	2.400	2	3	250	5.26
GL-205	3/8-16	2.400	4	5	250	5.36
GL-210	1/2-13	2.400	2	3	250	6.14
GL-215	1/2-13	2.400	4	5	250	6.78
GL-220	1/2-13	2.800	2	3 1/16	500	8.18
GL-225	1/2-13	2.800	4	5 1/16	500	8.46
GL-230	5/8-11	2.800	2	3 1/16	500	9.44
GL-235	5/8-11	2.800	4	5 1/16	500	10.46
GL-240	1/2-13	3.187	4	5 1/8	500	10.88
GL-245	1/2-13	3.187	6	7 1/8	500	11.50
GL-250	5/8-11	3.187	4	5 1/8	500	11.16
GL-255	5/8-11	3.187	6	7 1/8	500	12.00
Elastomer Base						
GL-260	10-24	1.200	1 1/2	2 1/4	250	3.38
GL-265	1/4-20	1.200	1 1/2	2 1/4	250	3.54
GL-270	5/16-18	1.200	1 1/2	2 1/4	250	4.08
GL-275	5/16-18	2.030	2	3	250	5.04
GL-280	3/8-16	2.030	2	3	250	5.58
GL-285	3/8-16	2.400	2	3	250	6.06
GL-290	3/8-16	2.400	4	5	250	6.16
GL-295	1/2-13	2.400	2	3	250	6.94
GL-300	1/2-13	2.400	4	5	250	7.58
GL-305	1/2-13	2.800	2	3 1/16	500	9.22
GL-310	1/2-13	2.800	4	5 1/16	500	9.44
GL-315	5/8-11	2.800	2	3 1/16	500	10.06
GL-320	5/8-11	2.800	4	5 1/16	500	11.46
GL-325	1/2-13	3.187	4	5 1/8	500	12.16
GL-330	1/2-13	3.187	6	7 1/8	500	13.00
GL-335	5/8-11	3.187	4	5 1/8	500	12.56
GL-340	5/8-11	3.187	6	7 1/8	500	13.50



ANTI-VIBRATION MOUNTS

Stainless for damp or corrosive areas. Durable thread connection to equipment. Swivel movement ± 7° for stable support on inclined floors. Neoprene rubber ensures equipment does not move.



- Corrosive resistant design
- Designed with high grade materials, nitrile rubber, #2 stainless steel
- Available in a wide variety of sizes

See table 4 below for additional discounts.

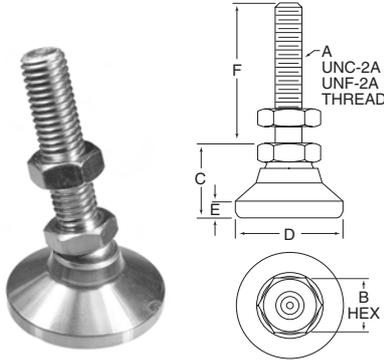
Cat. No.	Bolt Size	Bolt Length	A Dia.	B Base Ht.	Load (Lbs.)	Price Each 1-11
RY-605	1/2-13	4	2.64	.63	250	42.77
RY-620	1/2-13	4	2.64	.63	500	43.88
SX-625	1/2-13	6	2.64	.63	500	44.97
RY-630	5/8-11	4	2.64	.63	500	45.00
SX-635	5/8-11	6	2.64	.63	500	51.33
RY-640	1/2-13	4	3.86	.94	1,000	46.05
SX-645	1/2-13	6	3.86	.94	1,000	47.03
RY-650	5/8-11	4	3.86	.94	1,000	50.35
SX-655	5/8-11	6	3.86	.94	1,000	54.58
RY-660	3/4-10	4	3.86	.94	1,000	58.91
SX-665	3/4-10	6	3.86	.94	1,000	62.12
RY-670	1/2-13	4	3.86	.94	2,000	47.11
SX-675	1/2-13	6	3.86	.94	2,000	49.28
SX-680	5/8-11	4	3.86	.94	2,000	51.41
RY-685	5/8-11	6	3.86	.94	2,000	56.71
SX-690	3/4-10	4	3.86	.94	2,000	58.81
RY-695	3/4-10	6	3.86	.94	2,000	64.26

4	Quantity Discount	1-11 Net	12-23 7%	24-47 12%	48-71 20%	72-96 25%	97-499 30%
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IMPORT LEVELING PADS

These import leveling pads offer good quality product with value pricing. They have a hardened ball, except stainless, for high load ratings and wear. Large diameter base for added support. 15° off center swivel for quick leveling on sloped surfaces.

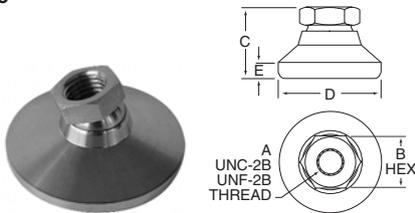
Stud Type



See table 4 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Load Rate	Price Each 1-11
HVTL-00SS	10-32	3/8	17/32	3/4	7/64	1	700	9.50
HVTL-10SS	10-32	3/8	17/32	3/4	7/64	2	700	10.45
HVTL-0SS	1/4-20	1/2	45/64	1	5/32	1 1/4	1,100	12.95
HVTL-15SS	1/4-20	1/2	45/64	1	5/32	2 1/2	1,100	13.24
HVTL-1SS	3/8-16	5/8	7/8	1 1/4	3/16	2	3,750	14.77
HVTL-20SS	3/8-16	5/8	7/8	1 1/4	3/16	4	3,750	17.30
HVTL-2SS	1/2-13	3/4	1 1/8	1 7/8	1/4	2	5,000	22.75
HVTL-25SS	1/2-13	3/4	1 1/8	1 7/8	1/4	4	5,000	23.98
HVTL-3SS	5/8-11	7/8	1 1/4	2 1/2	5/16	2	6,000	36.61
HVTL-30SS	5/8-11	7/8	1 1/4	2 1/2	5/16	4	6,000	40.41
HVTL-4SS	3/4-10	1 1/16	1 1/2	3	1/2	2	7,200	52.17
HVTL-35SS	3/4-10	1 1/16	1 1/2	3	1/2	4	7,200	53.36
HVTL-5SS	1-8	1 3/8	1 7/8	4	13/32	4 1/4	22,000	56.95
HVTL-40SS	1-8	1 3/8	1 7/8	4	13/32	8	22,000	70.43

Socket Type

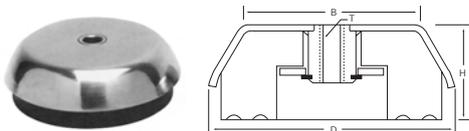


See table 4 below for additional discounts.

Cat. No.	A	Min. Thd. Depth	B	C	D	E	Load Rate	Price Each 1-11
HVL-5SS	10-32	.17	3/8	17/32	3/4	7/64	700	5.09
HVL-6SS	1/4-20	.31	1/2	45/64	1	5/32	1,100	8.25
HVL-0SS	3/8-16	.38	5/8	7/8	1 1/4	3/16	3,750	10.76
HVL-1SS	1/2-13	.44	3/4	1 1/8	1 1/8	1/4	5,000	15.04
HVL-2SS	5/8-11	.44	7/8	1 1/4	2 1/2	5/16	6,000	28.30
HVL-3SS	3/4-10	.62	1 1/16	1 1/2	3	1/2	7,200	41.75
HVL-4SS	1-8	.81	1 9/8	1 7/8	4	13/32	22,000	45.75

VIBRATION ISOLATION PADS

Compression/Shear Mounts For Harsh Environments



Compression/Shear mounts provide excellent protection against shock vibration and noise in compression and shear applications. Developed specially for applications in harsh working environments in food, pharmaceutical industries, or others where strict hygiene is required. High dampening characteristics. Stainless top plate is dome shaped to guard against oil contamination. Low profile, compact design. Elastomer insert is made from highly chemical resistant nitril with good deflection properties. Concentric rings on the base of the insert firmly anchor machine to the floor.

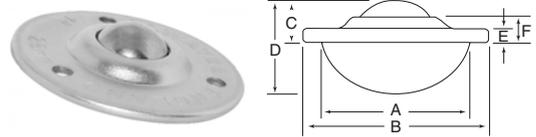
See table 4 below for additional discounts.

Cat. No.	Max. Load in Lbs.		B	D	H	T	Price Each 1-11
	Non-Impact Machinery	Impact Machinery					
VP-31	1,200	800	2 3/4	3 5/8	1 3/8	1/2-13	54.00
VP-32	1,800	1,200	2 3/4	3 5/8	1 3/8	1/2-13	56.00
VP-33	2,800	1,800	4	5 9/16	1 11/16	5/8-11	62.00

4	Quantity Discount	1-11	12-23	24-47	48-71	72-96	97-499
	Net		7%	12%	20%	25%	30%

SKF BALL TRANSFERS

Low Profile - Metric

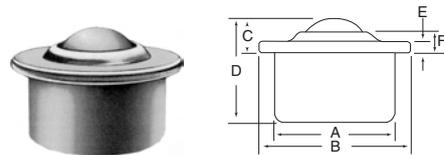


Flange mounted ball transfers offer a low profile, multi-directional solution to various material handling, positioning, and/or conveyance applications. They have a unique multi-hole filtration system designed to purge out contamination and are provided with no oil/no seal, which allows the unit to operate in harsh conditions by efficiently filtering out debris through the base. Other styles with higher load capacities are available as specials. Please contact us for details. Metric dimensions are in millimeters.

See table 11 below for additional discounts.

Cat. No.	Ball Dia.	Load Up Cap. Lbs.	Load Down Cap. Lbs.	A	B	C	D	E	F	Price Each 1-24
SKF-3274	31.7	276	121	45.5	73.7	16.2	19.9	4.2	8	28.40

Medium Duty - Metric



Used for heavier loads than ball casters. Ball transfers use a recirculating ball system to support and facilitate the rotation of the primary ball. The small balls travel on a hardened steel, precision machined track that resists wear and damage. Runs equally well in any position. Ideal where damage and impact protection is essential. Ball units provide instantaneous change of direction not possible with wheel casters. Zinc plated housing with Type 420 stainless steel balls. A felt seal is included on all but SKF-701. Max. temperature is 212°F. Dimensions are in millimeters.

See table 11 below for additional discounts.

Cat. No.	Ball Dia.	Load Cap. Lbs.	A	B	C	D	E	F	Price Each 1-24
SKF-701	15	132	24	31	9.5	21.0	2.8	6.3	5.85
SKF-702	22	352	36	45	9.8	30.0	2.8	5.5	9.78
SKF-703	30	661	45	55	13.8	37.0	4.0	8.3	15.87
SKF-704	45	1,344	62	75	19.0	53.5	4.0	10.0	34.13

11	Quantity Discount	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Net		5%	8%	10%	12.5%	15%	Call

DR-18 MACHINIST'S READY REFERENCE

Newly Revised 9th Edition



4-1/2" x 6" reference book designed for use by machinists, toolmakers, students, apprentices, draftsmen, and designers. It contains all the most frequently used tables and charts. Copyright 1998.

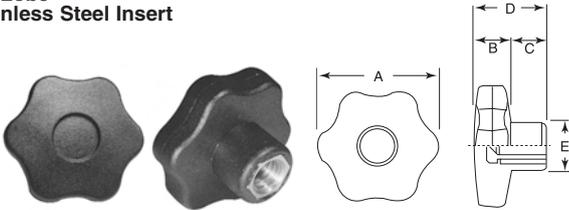
Cat. No.	Description	Price Each
DR-18	Machinist's Ready Reference	24.95

Reid SELECT PLASTIC KNOBS

Black Thermoplastic - Stainless Steel Inserts or Studs

These knobs are made of glass filled nylon with a black matte finish. There are no cavities. Recommended for use in the food processing industry as no contaminants can collect. Knobs are durable. They will not chip or crack and are resistant to high temperatures making them an excellent choice for lighting equipment, machinery, etc.

Six Lobe Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Insert		Price Each
						Thread	Depth*	
JCL-166	1.18	.39	.39	.79	.59	1/4-20	.375	2.57
JCL-167	1.18	.39	.39	.79	.59	5/16-18	.469	2.93
JCL-168	1.58	.45	.49	.94	.67	1/4-20	.375	2.93
JCL-169	1.58	.45	.49	.94	.67	5/16-18	.469	3.35
JCL-171	1.58	.45	.49	.94	.67	3/8-16	.563	3.89
JCL-172	1.97	.55	.57	1.12	.79	5/16-18	.469	3.65
JCL-173	1.97	.55	.57	1.12	.79	3/8-16	.563	4.19
JCL-174	1.97	.55	.57	1.12	.79	1/2-13	.750	4.49
JCL-176	2.36	.59	.71	1.30	.94	5/16-18	.469	4.25
JCL-177	2.36	.59	.71	1.30	.94	3/8-16	.563	4.67
JCL-178	2.36	.59	.71	1.30	.94	1/2-13	.750	4.91

*Minimum

Six Lobe Thru Hole Stainless Steel Insert

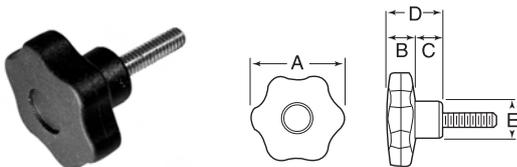


See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Insert		Price Each
						Thread	Depth*	
JCL-179	1.18	.39	.39	.79	.59	1/4-20	.375	2.57
JCL-181	1.58	.45	.49	.94	.67	1/4-20	.375	2.93
JCL-182	1.58	.45	.49	.94	.67	5/16-18	.469	3.35
JCL-183	1.97	.55	.57	1.12	.79	5/16-18	.469	3.65
JCL-184	1.97	.55	.57	1.12	.79	3/8-16	.563	4.19
JCL-186	2.36	.59	.71	1.30	.94	3/8-16	.563	4.67
JCL-187	2.36	.59	.71	1.30	.94	1/2-13	.750	4.91

*Minimum

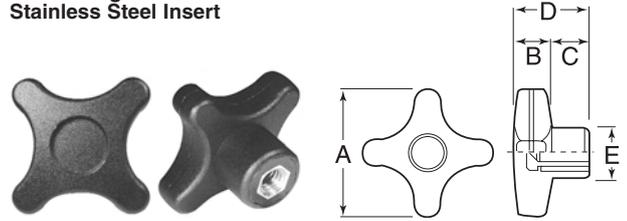
Six Lobe Stainless Steel Stud



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Stud		Price Each
						Thread	Lgth.	
JCL-188	1.18	.39	.39	.79	.59	1/4-20	.51	3.33
JCL-189	1.18	.39	.39	.79	.59	1/4-20	.98	3.41
JCL-191	1.58	.45	.49	.94	.67	1/4-20	.98	3.74
JCL-192	1.58	.45	.49	.94	.67	5/16-18	.75	3.83
JCL-193	1.58	.45	.49	.94	.67	5/16-18	.98	3.88
JCL-194	1.97	.55	.57	1.12	.79	5/16-18	.98	4.22
JCL-196	1.97	.55	.57	1.12	.79	5/16-18	1.25	4.25
JCL-197	1.97	.55	.57	1.12	.79	3/8-16	.98	4.35
JCL-198	1.97	.55	.57	1.12	.79	3/8-16	1.25	4.43
JCL-199	2.36	.59	.71	1.10	.94	3/8-16	.98	4.79
JCL-201	2.36	.59	.71	1.10	.94	3/8-16	1.25	4.88
JCL-202	2.36	.59	.71	1.10	.94	1/2-13	.98	5.25
JCL-203	2.36	.59	.71	1.10	.94	1/2-13	1.25	5.38

Four Prong Stainless Steel Insert



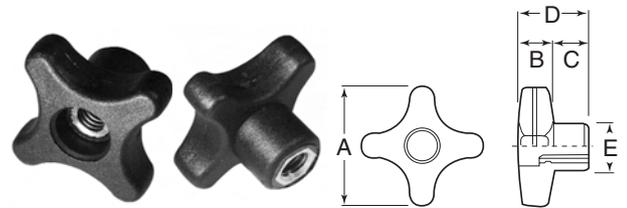
Made of glass filled nylon with a black matte finish.

See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Insert		Price Each
						Thread	Depth*	
JCL-204	1.26	.43	.47	.91	.59	1/4-20	.375	2.69
JCL-206	1.26	.43	.47	.91	.59	5/16-18	.469	3.05
JCL-207	1.58	.45	.49	.95	.63	1/4-20	.375	2.81
JCL-208	1.58	.45	.49	.95	.63	5/16-18	.469	3.23
JCL-209	1.58	.45	.49	.95	.63	3/8-16	.563	3.83
JCL-211	1.97	.55	.57	1.12	.79	5/16-18	.469	3.59
JCL-212	1.97	.55	.57	1.12	.79	3/8-16	.563	4.13
JCL-213	1.97	.55	.57	1.12	.79	1/2-13	.750	4.43
JCL-214	2.36	.59	.71	1.30	.95	5/16-18	.469	4.19
JCL-216	2.36	.59	.71	1.30	.95	3/8-16	.563	4.61
JCL-217	2.36	.59	.71	1.30	.95	1/2-13	.750	4.85

*Minimum

Four Prong Thru Hole Stainless Steel Insert

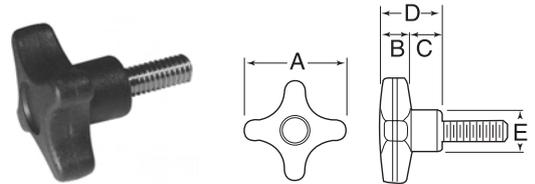


See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Insert		Price Each
						Thread	Depth*	
JCL-218	1.26	.43	.47	.91	.59	1/4-20	.375	2.69
JCL-219	1.58	.45	.49	.95	.63	1/4-20	.375	2.81
JCL-221	1.58	.45	.49	.95	.63	5/16-18	.469	3.23
JCL-222	1.97	.55	.57	1.12	.79	5/16-18	.469	3.59
JCL-223	1.97	.55	.57	1.12	.79	3/8-16	.563	4.13
JCL-224	2.36	.59	.71	1.30	.95	3/8-16	.563	4.19
JCL-226	2.36	.59	.71	1.30	.95	1/2-13	.750	4.85

*Minimum

Four Prong Stainless Steel Stud



See table 32 below for additional discounts.

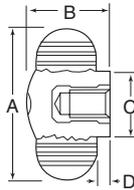
Cat. No.	A	B	C	D	E	Stud		Price Each
						Thread	Lgth.	
JCL-227	1.26	.43	.47	.91	.59	1/4-20	.51	3.49
JCL-228	1.26	.43	.47	.91	.59	1/4-20	.98	3.56
JCL-229	1.58	.45	.49	.95	.63	1/4-20	.98	3.63
JCL-231	1.58	.45	.49	.95	.63	5/16-18	.75	3.72
JCL-232	1.58	.45	.49	.95	.63	5/16-18	.98	3.78
JCL-233	1.97	.55	.57	1.12	.79	5/16-18	.98	3.96
JCL-234	1.97	.55	.57	1.12	.79	5/16-18	1.25	4.02
JCL-236	1.97	.55	.57	1.12	.79	3/8-16	.98	4.08
JCL-237	1.97	.55	.57	1.12	.79	3/8-16	1.50	4.22
JCL-238	2.36	.59	.71	1.30	.95	3/8-16	.98	4.47
JCL-239	2.36	.59	.71	1.30	.95	3/8-16	1.50	4.61
JCL-241	2.36	.59	.71	1.30	.95	1/2-13	.98	4.90
JCL-242	2.36	.59	.71	1.30	.95	1/2-13	1.50	5.14

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

NOVO-GRIP® KNOBS AND HANDLES

Black Thermoplastic
Stainless Steel Inserts or Studs

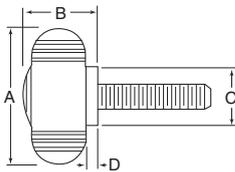
T-Handles Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
KBP-307	1.10	.59	.47	.09	8-32	.24	1.19
KBP-308	1.10	.59	.47	.09	10-32	.30	1.19
KBP-309	1.10	.59	.47	.09	1/4-20	.35	1.19

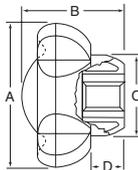
T-Handles Stainless Steel Stud



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Stud		Price Each 1-99
					Thread	Lgth.	
KBP-318	1.10	.59	.47	.09	8-32	.39	1.27
KBP-319	1.10	.59	.47	.09	8-32	.79	1.38
KBP-320	1.10	.59	.47	.09	10-32	.39	1.27
KBP-321	1.10	.59	.47	.09	10-32	.79	1.38
KBP-322	1.10	.59	.47	.09	1/4-20	.79	1.38
KBP-323	1.10	.59	.47	.09	1/4-20	1.18	1.52
KBP-324	1.10	.59	.47	.09	5/16-18	.79	1.38
KBP-325	1.10	.59	.47	.09	5/16-18	1.57	1.73

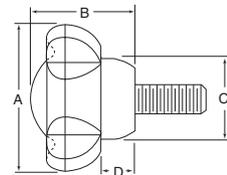
Clamp Grips Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
KBP-332	1.97	1.37	1.11	.45	5/16-18	.55	4.77
KBP-333	1.97	1.37	1.11	.45	3/8-16	.55	4.77
KBP-334	1.97	1.37	1.11	.45	1/2-13	.71	5.29
KBP-335	2.48	1.73	1.4	.57	3/8-16	.55	5.39
KBP-336	2.48	1.73	1.4	.57	1/2-13	.71	4.26

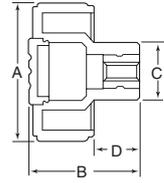
Clamp Grips Stainless Steel Stud



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Stud		Price Each 1-99
					Thread	Lgth.	
KBP-345	1.97	1.37	1.11	.45	3/8-16	.79	4.96
KBP-346	1.97	1.37	1.11	.45	3/8-16	1.57	5.39
KBP-347	2.48	1.73	1.4	.57	3/8-16	.79	5.29
KBP-348	2.48	1.73	1.4	.57	3/8-16	1.57	5.72

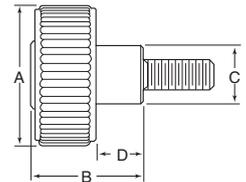
Knurled Knobs Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
KBP-378	1.57	1.22	.65	.51	10-32	.39	3.72
KBP-379	1.57	1.22	.65	.51	1/4-20	.39	3.72
KBP-380	1.57	1.22	.65	.51	5/16-18	.55	4.18
KBP-381	1.97	1.42	.71	.59	5/16-18	.55	4.96
KBP-382	1.97	1.42	.71	.59	3/8-16	.55	5.00
KBP-383	2.48	1.61	.87	.67	3/8-16	.55	6.06
KBP-384	2.48	1.61	.87	.67	1/2-13	.71	6.63

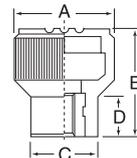
Knurled Knobs Stainless Steel Stud



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Stud		Price Each 1-99
					Thread	Lgth.	
KBP-385	1.57	1.22	.65	.51	10-32	.39	3.54
KBP-386	1.57	1.22	.65	.51	10-32	.79	3.54
KBP-387	1.57	1.22	.65	.51	1/4-20	.79	3.54
KBP-388	1.57	1.22	.65	.51	1/4-20	1.18	3.66
KBP-389	1.57	1.22	.65	.51	5/16-18	.79	3.72
KBP-390	1.57	1.22	.65	.51	5/16-18	1.57	3.90
KBP-391	1.97	1.42	.71	.59	5/16-18	.79	4.59
KBP-392	1.97	1.42	.71	.59	5/16-18	1.57	4.88
KBP-393	1.97	1.42	.71	.59	3/8-16	.79	4.67
KBP-394	1.97	1.42	.71	.59	3/8-16	1.57	4.90
KBP-395	2.48	1.61	.87	.67	3/8-16	.79	5.68
KBP-396	2.48	1.61	.87	.67	3/8-16	1.57	5.95

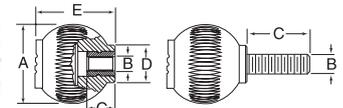
Knurled Knobs Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
Inch							
GK-140	.83	.87	.55	.32	10-32	.39	2.26
GK-145	.83	.87	.55	.32	1/4-20	.39	2.26
GK-150	1.02	1.02	.71	.37	5/16-18	.55	2.81
GK-160	1.34	1.41	.87	.51	3/8-16	.55	3.36
Metric							
GK-195	.83	.87	.55	.32	M4X0.7	.39	2.26

Ball Grip Knobs Stainless Steel Insert or Stud



Ergonomic shape for easier gripping. Unique styling gives a very distinctive look and feel. Features belt fluting for non-slip gripping. Made from black thermoplastic with stainless steel stud or inserts.

See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	Price Each 1-99
GK-425	.98	1/4-20	.39	.47	.98	6.35
GK-430	1.26	5/16-18	.55	.61	1.30	7.60
GK-440	1.97	3/8-16	.55	.94	2.00	12.10
GK-445	1.97	1/2-13	.71	.94	2.00	12.10
w/ Stud						
GK-700	.98	1/4-20	.79	.47	.98	6.18
GK-705	.98	1/4-20	1.18	.47	.98	6.49
GK-720	1.57	3/8-16	.79	.75	1.67	8.44
GK-735	1.97	1/2-13	1.57	.94	2.00	17.04

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000-9999
	Discount	Net	5%	8%	10%	12.5%	15%	17.5%

Kipp® STAR GRIP KNOBS

Black Thermoplastic

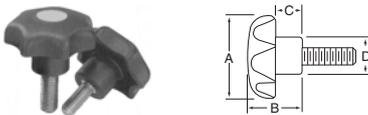
Stainless Steel Insert



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
KBP-282	.98	.63	.31	.47	10-32	.39	1.64
KBP-283	1.26	.79	.39	.55	1/4-20	.39	1.69
KBP-284	1.57	.98	.51	.71	5/16-18	.55	2.02
KBP-285	1.97	1.26	.67	.87	3/8-16	.55	2.96
KBP-286	2.48	1.57	.83	1.02	1/2-13	.71	5.41

Stainless Steel Stud



See table 32 below for additional discounts.

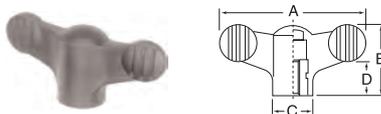
Cat. No.	A	B	C	D	Thread	Stud Lgth.	Price Each 1-99
KBP-288	.98	.63	.31	.47	10-32	.79	1.28
KBP-289	1.26	.79	.39	.55	1/4-20	.79	1.66
KBP-290	1.26	.79	.39	.55	1/4-20	1.18	1.73
KBP-292	1.57	.98	.51	.71	5/16-18	.79	2.72
KBP-293	1.57	.98	.51	.71	5/16-18	1.57	3.24
KBP-294	1.97	1.26	.67	.87	3/8-16	1.57	3.59

Kipp® NOVO-GRIP® KNOBS

Black Thermoplastic

Stainless Steel Inserts
Inch and Metric

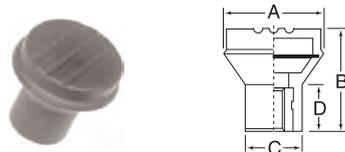
T-Handles



See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
GK-25	1.97	.94	.55	.45	10-32	.39	2.44
GK-30	1.97	.94	.55	.45	1/4-20	.39	2.44
GK-35	2.95	1.38	.83	.65	5/16-18	.55	3.00
GK-40	2.95	1.38	.83	.65	3/8-16	.55	3.00
Metric							
GK-70	1.97	.94	.55	.45	M6x1.00	.39	2.44
GK-75	2.95	1.38	.83	.65	M8x1.25	.55	3.00

Mushroom Knobs

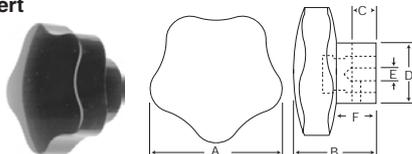


See table 32 below for additional discounts.

Cat. No.	A	B	C	D	Insert		Price Each 1-99
					Thread	Depth	
GK-375	.98	.98	.55	.47	M6 x 1.00	.39	3.00
GK-380	1.30	1.30	.71	.59	M8 x 1.25	.55	4.29

elsa

Five Lobe
Solid Black Phenolic
Stainless Steel Insert



Made of tough, smooth plastic. This solid handle is highly polished with all parting lines removed. All inserts extend beyond the "B" dimension so any pressure is taken up by the insert and not the plastic surface.

See table 32 below for additional discounts.

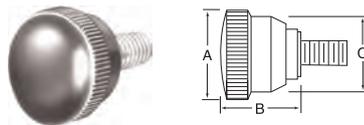
Cat. No.	A	B	C	D	E	F	Price Each 1-99
KHY-355	1.57	1.06	.51	.83	5/16-18	.47	8.95
KHY-360	1.97	1.30	.67	.98	3/8-16	.55	11.31

*Tapped for set screw

32	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

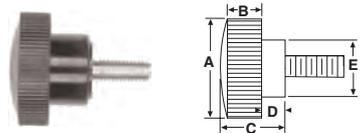
KNURLED PLASTIC KNOBS

Black Phenolic



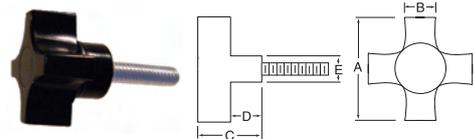
See table 31 below for additional discounts.

Cat. No.	A	B	C	Thread	Stud Lgth.	Price Each 1-99
DKS-44	3/4	17/32	5/8	10-32	1	1.42
DKS-45	3/4	17/32	5/8	1/4-20	1/2	1.16
DKS-46	3/4	17/32	5/8	1/4-20	1	1.34



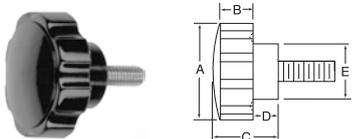
See table 31 below for additional discounts.

Cat. No.	A	B	C	D	E	Thread	Stud Lgth.	Price Each 1-99
DKS-34	1	1/4	21/32	5/16	5/8	10-32	1	1.82
DKS-35	1	1/4	21/32	5/16	5/8	1/4-20	1/2	1.82
DKS-36	1	1/4	21/32	5/16	5/8	1/4-20	1	1.82
DKS-19	1 3/8	9/32	25/32	3/8	3/4	1/4-20	1/2	1.58
DKS-20	1 3/8	9/32	25/32	3/8	3/4	1/4-20	1 1/4	1.63
DKS-21	1 3/8	9/32	25/32	3/8	3/4	5/16-18	3/4	1.74
DKS-22	1 3/8	9/32	25/32	3/8	3/4	5/16-18	1 1/2	3.65
DKS-11	1 7/8	5/16	1	1/2	1	5/16-18	1	3.24
DKS-12	1 7/8	5/16	1	1/2	1	5/16-18	2	4.04
DKS-13	1 7/8	5/16	1	1/2	1	3/8-16	1	4.03
DKS-14	1 7/8	5/16	1	1/2	1	3/8-16	2	4.34



See table 31 below for additional discounts.

Cat. No.	A	B	C	D	E	Thread	Stud Lgth.	Price Each 1-99
DKS-86	1 1/4	1/4	7/8	3/8	5/8	5/16-18	1	1.91
DKS-96	2 1/4	5/16	1 1/8	9/16	1	3/8-16	1	4.41
DKS-97	2 1/4	5/16	1 1/8	9/16	1	3/8-16	1 1/2	4.57
DKS-98	2 1/4	5/16	1 1/8	9/16	1	3/8-16	2	4.73

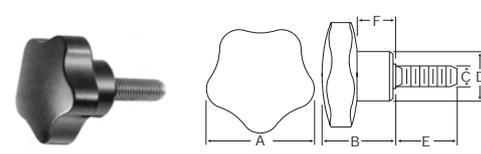


See table 31 below for additional discounts.

Cat. No.	A	B	C	D	E	Thread	Stud Lgth.	Price Each 1-99
DKS-72	1 3/8	23/64	27/32	25/64	27/32	1/4-20	1	1.68
DKS-73	1 3/8	23/64	27/32	25/64	27/32	5/16-18	1/2	1.73
DKS-74	1 3/8	23/64	27/32	25/64	27/32	5/16-18	1	1.79
DKS-26	1 3/4	7/16	1 1/16	1/2	1 1/16	5/16-18	3/4	2.20
DKS-27	1 3/4	7/16	1 1/16	1/2	1 1/16	5/16-18	1 1/2	4.46
DKS-28	1 3/4	7/16	1 1/16	1/2	1 1/16	3/8-16	3/4	4.46
DKS-29	1 3/4	7/16	1 1/16	1/2	1 1/16	3/8-16	1 1/2	4.78
DKS-5	2 3/8	1/2	1 5/16	5/8	1 1/4	3/8-16	1	4.93
DKS-6	2 3/8	1/2	1 5/16	5/8	1 1/4	3/8-16	2	5.56
DKS-7	2 3/8	1/2	1 5/16	5/8	1 1/4	1/2-13	1	5.51
DKS-8	2 3/8	1/2	1 5/16	5/8	1 1/4	1/2-13	2	6.14

elsa

Five Lobe



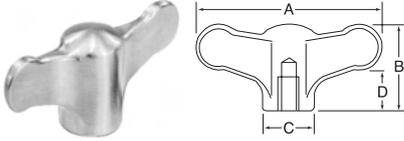
Same shape as the above knobs, but has a stainless steel stud.

See table 32 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Price Each 1-99
KHY-405	1.26	.91	1/4-20	.75	.75	.43	7.40
KHY-410	1.26	.91	1/4-20	.75	1.00	.43	8.04
KHY-415	1.57	1.06	5/16-18	.83	.75	.47	10.47
KHY-420	1.57	1.06	5/16-18	.83	1.00	.47	11.13
KHY-425	1.57	1.06	5/16-18	.83	1.25	.47	11.78
KHY-430	1.97	1.30	3/8-16	.98	1.00	.55	12.56
KHY-435	1.97	1.30	3/8-16	.98	1.25	.55	13.02
KHY-440	1.97	1.30	3/8-16	.98	1.50	.55	14.09
KHY-445	1.97	1.30	3/8-16	.98	2.00	.55	15.27

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

Winged Knobs



See table 17 below for additional discounts.

Cat. No.	A	B	C	D	Thread	Price Each
KHJ-100	1.97	.94	.55	.45	10-24	14.65
KHJ-102	1.97	.94	.55	.45	1/4-20	14.65
KHJ-104	2.95	1.38	.82	.65	9/16-18	18.06
KHJ-106	2.95	1.38	.82	.65	3/8-16	18.06

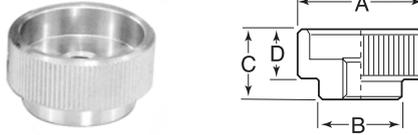
Pull Knobs



See table 17 below for additional discounts.

Cat. No.	A	B	C	Thread	Depth	Price Each
KHJ-108	.827	.827	.47	8-32	.39	7.53
KHJ-110	.827	.827	.47	10-24	.39	7.53
KHJ-112	.984	.984	.55	1/4-20	.39	8.36
KHJ-114	1.3	1.3	.71	5/16-18	.55	11.70

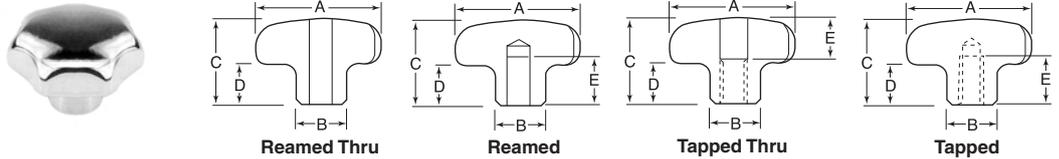
Knurled Knobs



See table 17 below for additional discounts.

Cat. No.	A	B	C	D	Thread	Price Each
KHJ-116	.787	.55	.47	.32	10-24	3.03
KHJ-118	.944	.63	.55	.39	1/4-20	3.53
KHJ-120	1.18	.78	.67	.47	5/16-18	4.78
KHJ-122	1.42	1.10	.79	.55	3/8-16	7.32
KHJ-124	1.57	1.26	.94	.63	1/2-13	10.12

Scalloped Knobs

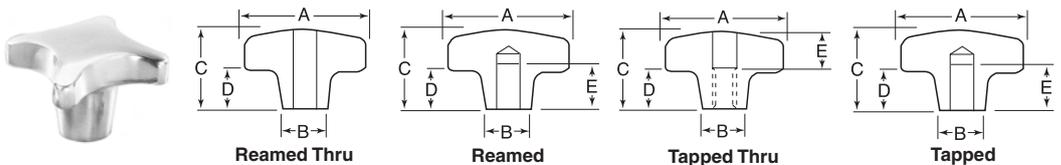


See table 17 below for additional discounts.

Reamed Thru							Price Each	
Cat. No.	Reamed Cat. No.	A	B	C	D	E	Ream	1-25
KHJ-200	KHJ-208	1.25	.47	.82	.39	.47	1/4	6.54
KHJ-202	KHJ-210	1.57	.55	1.02	.51	.59	5/16	7.30
KHJ-204	KHJ-212	1.96	.71	1.33	.66	.71	3/8	8.56
KHJ-206	KHJ-214	2.48	.78	1.65	.82	.86	1/2	9.21
								10.35
								11.06
								13.59
								14.51

Tapped Thru							Price Each	
Cat. No.	Tapped Cat. No.	A	B	C	D	E	Thread	1-25
KHJ-216	KHJ-224	1.25	.47	.82	.39	.47	1/4-20	8.09
KHJ-218	KHJ-226	1.57	.55	1.02	.51	.59	5/16-18	8.09
KHJ-220	KHJ-228	1.96	.71	1.33	.66	.71	3/8-16	10.22
KHJ-222	KHJ-230	2.48	.78	1.65	.82	.86	1/2-13	12.06
								12.06
								15.30
								15.30

Four Prong Knobs



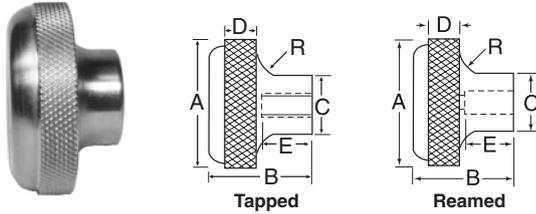
See table 17 below for additional discounts.

Reamed Thru							Price Each	
Cat. No.	Reamed Cat. No.	A	B	C	D	E	Ream	1-25
KHJ-150	KHJ-158	1.25	.47	.79	.39	.47	1/4	8.55
KHJ-152	KHJ-160	1.57	.55	.98	.51	.59	5/16	9.53
KHJ-154	KHJ-162	1.96	.71	1.26	.67	.71	3/8	11.18
KHJ-156	KHJ-164	2.48	.79	1.57	.85	.87	1/2	13.53
								14.45
								17.13
								18.38

Tapped Thru							Price Each	
Cat. No.	Tapped Cat. No.	A	B	C	D	E	Thread	1-25
KHJ-166	KHJ-174	1.25	.47	.79	.39	.47	1/4-20	10.56
KHJ-168	KHJ-176	1.57	.55	.98	.51	.59	5/16-18	10.56
KHJ-170	KHJ-178	1.96	.71	1.26	.67	.71	3/8-16	13.35
KHJ-172	KHJ-180	2.48	.79	1.57	.85	.87	1/2-13	13.35
								15.76
								15.76
								19.35
								19.35

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	17.5%	Call

Domed Knurled Knobs

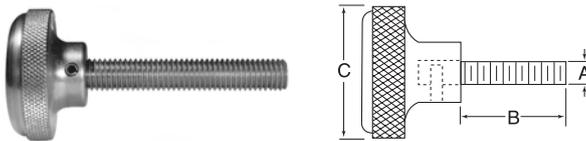


Similar to the Fastrol knobs on page 63 except the dome head gives the knob a more stylistic look. Steel knobs are 12L14 steel with black oxide finish. Stainless knobs are Type 303. Aluminum knobs are Grade 6262-T6 with clear anodize finish.

See table 1 below for additional discounts.

Blind Tapped Hole Cat. No.	Thread	Blind Reamed Hole Cat. No.	+ .000/-.002 Hole Dia.	A	B	C	D	E	R	Min. Depth	Price Each 1-11
TSDK-0A	10-32	—	—	3/4	5/8	1/2	1/4	3/8	5/64		7.79
TSDK-1A	10-24	RSDK-1A	3/16	3/4	5/8	1/2	1/4	3/8	5/64		7.79
TSDK-1B	1/4-20	RSDK-1B	1/4	3/4	5/8	1/2	1/4	3/8	5/64		7.79
TSDK-2A	1/4-20	RSDK-2A	1/4	1	3/4	5/8	1/4	1/2	1/8		8.94
TSDK-2B	5/16-18	RSDK-2B	5/16	1	3/4	5/8	1/4	1/2	1/8		8.94
TSDK-3A	5/16-18	RSDK-3A	5/16	1 1/2	1	3/4	5/16	5/8	3/16		10.97
TSDK-3B	3/8-16	RSDK-3B	3/8	1 1/2	1	3/4	5/16	5/8	3/16		10.97
TSDK-4A	3/8-16	RSDK-4A	3/8	2	1 1/8	1	3/8	5/8	1/4		14.19
TSDK-4B	1/2-13	RSDK-4B	1/2	2	1 1/8	1	3/8	5/8	1/4		14.19

Domed Knurled Knob Assemblies



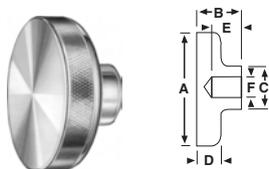
Assemblies consist of knurled knob listed above with threaded stud. Stud assembled to knob with light press fit and held in place with spring pin. Steel knobs are 12L14 with black oxide finish. Stainless knobs are Type 303. Aluminum knobs are grade 6262-T6 with clear anodize finish. Stainless has a 420 stainless steel spring pin and an 18-8 stainless stud. Aluminum has a carbon steel spring pin and stud. Other sizes available as special order. Please call for price and delivery.

See table 1 below for additional discounts.

Cat. No.	Knob Used	A	B	C	Price Each 1-11
SDKA-00	RSDK-1A	10-32	1/2	3/4	11.07
SDKA-0	RSDK-1A	10-32	1	3/4	11.07
SDKA-1	RSDK-1A	10-24	1/2	3/4	11.07
SDKA-2	RSDK-1A	10-24	1	3/4	11.40
SDKA-3	RSDK-1B	1/4-20	3/4	3/4	11.23
SDKA-4	RSDK-1B	1/4-20	1 1/4	3/4	11.51
SDKA-5	RSDK-2A	1/4-20	1 3/4	1	13.11
SDKA-6	RSDK-2A	1/4-20	3	1	13.41
SDKA-7	RSDK-2B	5/16-18	1 3/4	1	13.11
SDKA-8	RSDK-2B	5/16-18	3	1	13.98
SDKA-9	RSDK-3A	5/16-18	1 3/4	1 1/2	15.76
SDKA-10	RSDK-3A	5/16-18	3	1 1/2	16.31
SDKA-11	RSDK-3B	3/8-16	1 3/4	1 1/2	15.76
SDKA-12	RSDK-3B	3/8-16	3	1 1/2	16.31
SDKA-13	RSDK-4A	3/8-16	1 3/4	2	19.10
SDKA-14	RSDK-4A	3/8-16	3	2	19.58
SDKA-15	RSDK-4B	1/2-13	1 3/4	2	19.10
SDKA-16	RSDK-4B	1/2-13	3	2	19.65

1	Quantity	1-11	12-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	12%	15%	17.5%	20%	22.5%	Call

Diamond Knurl - w/o Handle



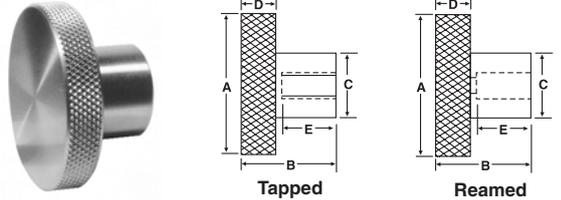
An outstanding knob for use on delicate mechanisms, gauging fixtures, precision instruments, or wherever high quality knobs are required. Made of Type 303 stainless steel. Enhances the value of equipment. Available as blanks or with reamed hole. Solid knobs have centered pilot hole for easy centering. Knobs with handles are diamond knurl only.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Price Each 1-25
SG-1N	1	.813	.500	.375	.625	.250	11.92
SG-2N	1	.813	.500	.375	—	Solid	11.19
SG-3N	2	1.125	.813	.563	.875	.375	26.67

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Knurled Knobs

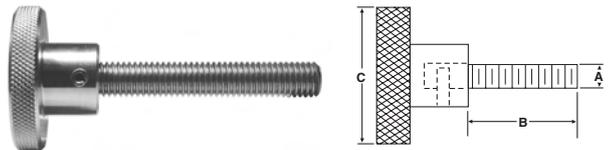


Designed for applications where plastic or aluminum won't hold up, yet appearance is important. Special knobs can also be made to your exact specifications. Steel knobs are 12L14 steel with black oxide finish. Stainless knobs are Type 303.

See table 1 below for additional discounts.

Blind Tapped Hole Cat. No.	Thread	Blind Reamed Hole Cat. No.	+ .000/-.002 Hole Dia.	A	B	C	D	E	Min. Depth	Price Each 1-11
SKKT-0A	10-32	—	—	3/4	5/8	1/2	1/4	3/8		6.86
SKKT-1A	10-24	SKKR-1A	3/16	3/4	5/8	1/2	1/4	3/8		6.86
SKKT-1B	1/4-20	SKKR-1B	1/4	3/4	5/8	1/2	1/4	3/8		6.86
SKKT-2A	1/4-20	SKKR-2A	1/4	1	3/4	5/8	1/4	1/2		7.90
SKKT-2B	5/16-18	SKKR-2B	5/16	1	3/4	5/8	1/4	1/2		7.90
SKKT-3A	5/16-18	SKKR-3A	5/16	1 1/2	1	3/4	5/16	5/8		9.57
SKKT-3B	3/8-16	SKKR-3B	3/8	1 1/2	1	3/4	5/16	5/8		9.57
SKKT-4A	3/8-16	SKKR-4A	3/8	2	1 1/8	1	3/8	5/8		12.48
SKKT-4B	1/2-13	SKKR-4B	1/2	2	1 1/8	1	3/8	5/8		12.48

Knurled Knob Assemblies



Assembly consists of knurled knob, listed above, with threaded stud. Stud assembled to knob with light press fit and held in place with spring pin. Steel knobs are 12L14 with black oxide finish. Stainless knobs are Type 303 with a 420 stainless steel spring pin and 18-8 stainless stud. Specials made to order.

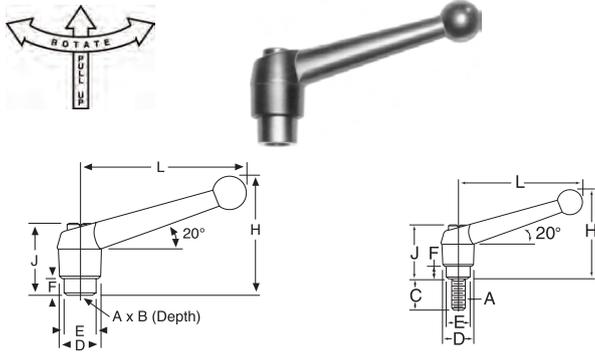
See table 1 below for additional discounts.

Cat. No.	Knob Used	A	B	C	Steel	Price Each 1-11
SSKA-00	SKKR-1A	10-32	1/2	3/4	5.10	9.78
SSKA-0	SKKR-1A	10-32	1	3/4	5.10	9.78
SSKA-1	SKKR-1A	10-24	1/2	3/4	5.10	9.78
SSKA-2	SKKR-1A	10-24	1	3/4	5.30	10.19
SSKA-3	SKKR-1B	1/4-20	3/4	3/4	5.10	9.78
SSKA-4	SKKR-1B	1/4-20	1 1/4	3/4	5.30	10.19
SSKA-5	SKKR-2A	1/4-20	1 3/4	1	6.03	11.65
SSKA-6	SKKR-2A	1/4-20	3	1	6.24	12.06
SSKA-7	SKKR-2B	5/16-18	1 3/4	1	6.03	11.65
SSKA-8	SKKR-2B	5/16-18	3	1	6.24	12.06
SSKA-9	SKKR-3A	5/16-18	1 3/4	1 1/2	7.07	13.73
SSKA-10	SKKR-3A	5/16-18	3	1 1/2	7.28	14.14
SSKA-11	SKKR-3B	3/8-16	1 3/4	1 1/2	7.07	13.73
SSKA-12	SKKR-3B	3/8-16	3	1 1/2	7.28	14.14
SSKA-13	SKKR-4A	3/8-16	1 3/4	2	8.53	16.64
SSKA-14	SKKR-4A	3/8-16	3	2	8.74	17.06
SSKA-15	SKKR-4B	1/2-13	1 3/4	2	8.53	16.64
SSKA-16	SKKR-4B	1/2-13	3	2	8.74	17.06

Kipp® ADJUSTABLE HANDLES

**Powder Coated Zinc - Black Finish
Stainless Steel Components
Inch and Metric**

Insert and other components are steel or stainless steel.
Metric dimensions are in millimeters.



Blank, Tapped and Reamed Type

Stud Type

Blank, Tapped and Reamed Hole Type

See table 17 below for additional discounts.

Cat. No.	A	B	D	E	F	H	J	L	Price Each
Inch									
KHB-502	Blank	.35	.53	.39	.15	1.30	.95	1.57	13.29
KHB-504	10-32	.35	.53	.39	.15	1.30	.95	1.57	12.66
KHB-508	1/4-20	.35	.53	.39	.15	1.30	.95	1.57	13.29
KHB-514	1/4-20	.47	.71	.53	.25	1.81	1.14	2.56	16.56
KHB-516	5/16-18	.47	.71	.53	.25	1.81	1.14	2.56	16.56
KHB-524	5/16-18	.55	.84	.62	.39	2.28	1.47	3.15	18.69
KHB-526	3/8-16	.55	.84	.62	.39	2.28	1.47	3.15	18.69
KHB-530	3/8-16	.67	1.00	.75	.39	2.63	1.68	3.74	22.81
KHB-534	3/8-16	.67	1.00	.75	.39	2.63	1.68	3.74	22.81
KHB-536	1/2-13	.67	1.00	.75	.39	2.63	1.68	3.74	22.81
KHB-540	1/2-13	.67	1.00	.75	.39	2.63	1.68	3.74	23.95
Metric									
KHX-515	M6x1	9	13.5	10	4	33	24	40	12.33
KHX-520	M6x1	12	18	13.5	6.5	46	29	65	17.01
KHX-530	M8x1.25	12	18	13.5	6.5	46	29	65	17.01
KHX-535	M8x1.25	14	21.5	16	10	58	37.5	80	19.20
KHX-545	M10x1.50	14	21.5	16	10	58	37.5	80	18.32
KHX-550	M10x1.50	17	25.5	19	10	67	42.5	95	24.60
KHX-560	M12x1.75	17	25.5	19	10	67	42.5	95	23.48

Stud Type

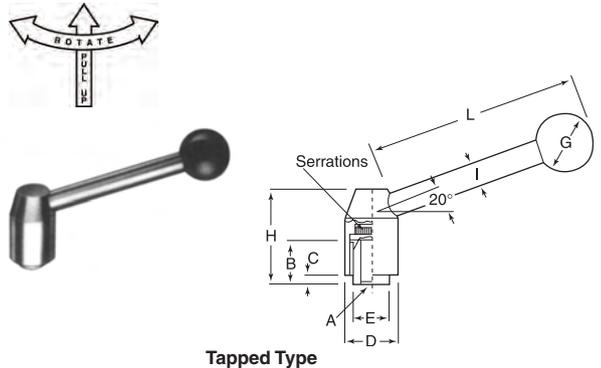
See table 17 below for additional discounts.

Cat. No.	A	C	D	E	F	H	J	L	Price Each
Inch									
KHB-704	10-32	.59	.53	.39	.15	1.30	.95	1.57	14.81
KHB-706	10-32	.78	.53	.39	.15	1.30	.95	1.57	14.81
KHB-718	1/4-20	.39	.53	.39	.15	1.30	.95	1.57	13.47
KHB-720	1/4-20	.59	.53	.39	.15	1.30	.95	1.57	13.47
KHB-722	1/4-20	.78	.53	.39	.15	1.30	.95	1.57	14.14
KHB-724	1/4-20	1.18	.53	.39	.15	1.30	.95	1.57	14.14
KHB-726	1/4-20	1.57	.53	.39	.15	1.30	.95	1.57	15.34
KHB-728	1/4-20	1.77	.53	.39	.15	1.30	.95	1.57	16.07
KHB-730	5/16-18	.59	.71	.53	.25	1.81	1.14	2.56	17.56
KHB-732	5/16-18	.78	.71	.53	.25	1.81	1.14	2.56	17.56
KHB-734	5/16-18	1.18	.71	.53	.25	1.81	1.14	2.56	17.56
KHB-736	5/16-18	1.57	.71	.53	.25	1.81	1.14	2.56	18.75
KHB-738	5/16-18	1.77	.71	.53	.25	1.81	1.14	2.56	19.65
KHB-740	5/16-18	1.96	.71	.53	.25	1.81	1.14	2.56	18.75
KHB-742	5/16-18	2.36	.71	.53	.25	1.81	1.14	2.56	18.75
KHB-760	3/8-16	.78	.84	.62	.39	2.28	1.47	3.15	19.98
KHB-762	3/8-16	1.18	.84	.62	.39	2.28	1.47	3.15	19.98
KHB-764	3/8-16	1.57	.84	.62	.39	2.28	1.47	3.15	20.31
KHB-766	3/8-16	1.77	.84	.62	.39	2.28	1.47	3.15	20.31
KHB-768	3/8-16	1.96	.84	.62	.39	2.28	1.47	3.15	20.31
KHB-770	3/8-16	2.36	.84	.62	.39	2.28	1.47	3.15	21.33
KHB-788	1/2-13	.78	1.00	.75	.39	2.63	1.68	3.74	24.23
KHB-790	1/2-13	1.18	1.00	.75	.39	2.63	1.68	3.74	24.23
KHB-792	1/2-13	1.38	1.00	.75	.39	2.63	1.68	3.74	25.72
KHB-794	1/2-13	1.57	1.00	.75	.39	2.63	1.68	3.74	25.72
KHB-796	1/2-13	1.77	1.00	.75	.39	2.63	1.68	3.74	25.72
KHB-798	1/2-13	1.96	1.00	.75	.39	2.63	1.68	3.74	25.72
KHB-800	1/2-13	2.36	1.00	.75	.39	2.63	1.68	3.74	27.01
Metric									
KHX-635	M6x1	20	13.5	10	4	33	24	40	13.86
KHX-640	M6x1	25	13.5	10	4	33	24	40	14.53
KHX-645	M6x1	30	13.5	10	4	33	24	40	13.86
KHX-650	M6x1	35	13.5	10	4	33	24	40	15.76
KHX-665	M8x1.25	15	18	13.5	6.5	46	29	65	18.04
KHX-670	M8x1.25	20	18	13.5	6.5	46	29	65	18.04
KHX-675	M8x1.25	25	18	13.5	6.5	46	29	65	17.21
KHX-680	M8x1.25	30	18	13.5	6.5	46	29	65	17.21
KHX-685	M8x1.25	35	18	13.5	6.5	46	29	65	19.26
KHX-690	M8x1.25	40	18	13.5	6.5	46	29	65	18.39
KHX-695	M8x1.25	45	18	13.5	6.5	46	29	65	19.26
KHX-700	M8x1.25	50	18	13.5	6.5	46	29	65	19.26
KHX-760	M10x1.50	20	21.5	16	10	58	37.5	80	20.52
KHX-775	M10x1.50	35	21.5	16	10	58	37.5	80	21.90
KHX-780	M10x1.50	40	21.5	16	10	58	37.5	80	20.91
KHX-790	M10x1.50	50	21.5	16	10	58	37.5	80	21.90
KHX-860	M12x1.75	40	25.5	19	10	67	42.5	95	26.47
KHX-875	M12x1.75	60	25.5	19	10	67	42.5	95	27.73

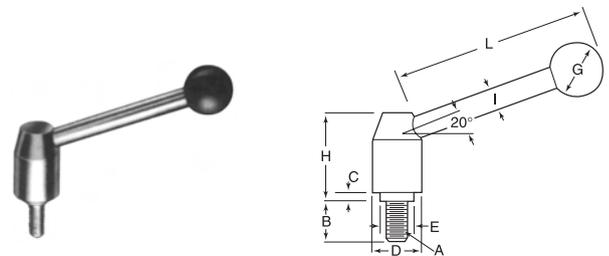
HEAVY DUTY ADJUSTABLE LEVERS

Inch and Metric

These heavy duty adjustable levers are designed for applications which require greater torquing power than our standard levers. Stronger body and longer arms provide greater leverage. Ideal for clamping in confined spaces. Pulling up on the handle disengages it for adjustment while the insert remains stationary. Releasing the lever automatically engages it. The handle body, arm, insert and spring are made from stainless steel. Satin finish. Ball knob is black phenolic. Metric dimensions are in millimeters.



Tapped Type



Threaded Stud Type

Tapped Type

See table 38 below for additional discounts.

Cat. No.	A	B	C	D	E	G	H	I	L	Price Each
Inch										
WAL-1	1/4-20	.39	.04	.83	.53	.79	1.32	.31	2.76	33.64
WAL-2	5/16-18	.39	.04	.83	.53	.79	1.32	.31	2.76	33.64
WAL-3	5/16-18	.55	.10	.94	.63	.98	1.57	.39	3.78	41.17
WAL-4	3/8-16	.55	.10	.94	.63	.98	1.57	.39	3.78	41.17
WAL-5	3/8-16	.67	.18	1.10	.75	1.18	1.91	.47	4.33	50.13
WAL-6	1/2-13	.67	.18	1.10	.75	1.18	1.91	.47	4.33	50.13
Metric										
WAL-8	M6x1.0	10	1	21	13.5	20	33.5	8	70	36.77
WAL-9	M8x1.25	10	1	21	13.5	20	33.5	8	70	36.77
WAL-10	M8x1.25	14	2.5	24	16	25	40	10	96	45.00
WAL-12	M10x1.5	17	4.5	28	19	30	48.5	12	110	54.79
WAL-13	M12x1.75	17	4.5	28	19	30	48.5	12	110	54.79

Threaded Stud Type

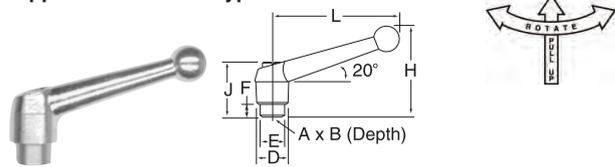
See table 38 below for additional discounts.

Cat. No.	A	B	C	D	E	G	H	I	L	Price Each
Inch										
WAL-15	5/16-18	.79	.04	.83	.53	.79	1.32	.31	2.76	37.53
WAL-16	5/16-18	.98	.04	.83	.53	.79	1.32	.31	2.76	37.98
WAL-17	5/16-18	1.26	.04	.83	.53	.79	1.32	.31	2.76	37.98
WAL-20	5/16-18	2.48	.04	.83	.53	.79	1.32	.31	2.76	39.37
WAL-22	3/8-16	.98	.10	.94	.63	.98	1.57	.39	3.78	47.07
WAL-23	3/8-16	1.26	.10	.94	.63	.98	1.57	.39	3.78	47.07
WAL-24	3/8-16	1.57	.10	.94	.63	.98	1.57	.39	3.78	47.60
WAL-26	3/8-16	2.48	.10	.94	.63	.98	1.57	.39	3.78	49.88
WAL-27	1/2-13	.98	.18	1.10	.75	1.18	1.91	.47	4.33	57.26
WAL-28	1/2-13	1.26	.18	1.10	.75	1.18	1.91	.47	4.33	57.26
WAL-29	1/2-13	1.57	.18	1.10	.75	1.18	1.91	.47	4.33	57.58
WAL-30	1/2-13	1.97	.18	1.10	.75	1.18	1.91	.47	4.33	59.09
WAL-31	1/2-13	2.48	.18	1.10	.75	1.18	1.91	.47	4.33	60.30
Metric										
WAL-33	M8x1.25	20	1	21	13.5	20	33.5	8	70	37.53
WAL-35	M8x1.25	32	1	21	13.5	20	33.5	8	70	37.98
WAL-36	M8x1.25	40	1	21	13.5	20	33.5	8	70	38.30
WAL-37	M8x1.25	50	1	21	13.5	20	33.5	8	70	44.07
WAL-39	M10x1.5	20	2.5	24	16	25	40	10	96	45.93
WAL-52	M10x1.5	25	2.5	24	16	25	40	10	96	46.56
WAL-42	M10x1.5	40	2.5	24	16	25	40	10	96	47.60
WAL-43	M10x1.5	50	2.5	24	16	25	40	10	96	48.26
WAL-44	M10x1.5	63	2.5	24	16	25	40	10	96	54.53
WAL-53	M10x1.5	80	2.5	24	16	25	40	10	96	56.44
WAL-47	M12x1.75	32	4.5	28	19	30	48.5	12	110	57.26
WAL-48	M12x1.75	40	4.5	28	19	30	48.5			

Inch and Metric

Handle, insert, stud and other components are Type 303 stainless steel. Polished finish. Metric dimensions are in millimeters.

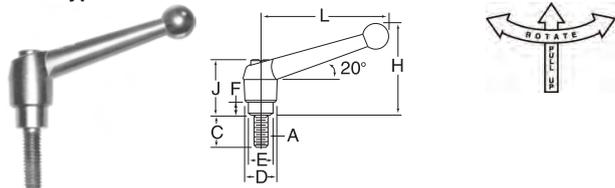
Tapped and Reamed Type



See table 17 below for additional discounts.

Cat. No.	A	B	D	E	F	H	J	L	Price Each 1-25
Inch									
KHZ-122	Blank	.35	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-126	1/4-20	.35	.53	.39	.15	1.30	.95	1.57	44.66
KHZ-2	1/4-20	.47	.71	.53	.25	2.00	1.14	2.56	40.06
KHZ-4	5/16-18	.47	.71	.53	.25	2.00	1.14	2.56	40.06
KHZ-8	9/16	.47	.71	.53	.25	2.00	1.14	2.56	38.89
KHZ-12	3/8-16	.55	.84	.62	.39	2.00	1.47	3.15	42.33
KHZ-16	3/8	.55	.84	.62	.39	2.00	1.47	3.15	42.33
KHZ-162	Blank	.67	1	.75	.39	2.63	1.68	3.74	47.70
KHZ-164	3/8-16	.67	1	.75	.39	2.63	1.68	3.74	47.70
KHZ-166	1/2-13	.67	1	.75	.39	2.63	1.68	3.74	47.70
KHZ-168	3/8	.67	1	.75	.39	2.63	1.68	3.74	47.70
KHZ-170	1/2	.67	1	.75	.39	2.63	1.68	3.74	47.70
Metric									
KHZ-158	M6x1	9	13.5	10	4	33	24	40	32.88
KHZ-18	M6x1	12	18	13.5	6.5	46	29	65	40.06
KHZ-22	M8x1.25	12	18	13.5	6.5	46	29	65	40.06
KHZ-26	M8	14	21.5	16	10	58	37.5	80	42.33
KHZ-28	M10x1.50	14	21.5	16	10	58	37.5	80	42.33
KHZ-172	M10x1.50	17	25.5	19	10	67	42.5	95	47.71
KHZ-174	M12x1.75	17	25.5	19	10	67	42.5	95	47.71
KHZ-176	M10	17	25.5	19	10	67	42.5	95	47.71

Stud Type

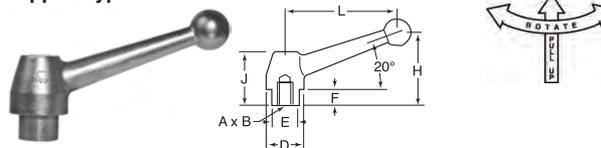


See table 17 below for additional discounts.

Cat. No.	A	C	D	E	F	H	J	L	Price Each 1-25
Inch									
KHZ-32	10-32	.59	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-44	10-24	1.18	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-48	1/4-20	.59	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-50	1/4-20	.78	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-52	1/4-20	1.18	.53	.39	.15	1.30	.95	1.57	32.88
KHZ-54	1/4-20	1.57	.53	.39	.15	1.30	.95	1.57	33.93
KHZ-56	1/4-20	1.77	.53	.39	.15	1.30	.95	1.57	33.93
KHZ-60	5/16-18	.59	.71	.53	.25	1.81	1.14	2.56	41.49
KHZ-62	5/16-18	.78	.71	.53	.25	1.81	1.14	2.56	41.49
KHZ-64	5/16-18	1.18	.71	.53	.25	1.81	1.14	2.56	41.49
KHZ-66	5/16-18	1.57	.71	.53	.25	1.81	1.14	2.56	42.41
KHZ-68	5/16-18	1.77	.71	.53	.25	1.81	1.14	2.56	42.41
KHZ-70	5/16-18	1.96	.71	.53	.25	1.81	1.14	2.56	42.41
KHZ-72	5/16-18	2.36	.71	.53	.25	1.81	1.14	2.56	42.41
KHZ-76	3/8-16	.78	.84	.62	.39	2.28	1.47	3.15	43.73
KHZ-78	3/8-16	1.18	.84	.62	.39	2.28	1.47	3.15	43.73
KHZ-80	3/8-16	1.57	.84	.62	.39	2.28	1.47	3.15	45.13
KHZ-82	3/8-16	1.77	.84	.62	.39	2.28	1.47	3.15	45.13
KHZ-84	3/8-16	1.96	.84	.62	.39	2.28	1.47	3.15	45.13
KHZ-178	1/2-13	.59	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-180	1/2-13	.78	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-182	1/2-13	1.18	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-184	1/2-13	1.38	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-186	1/2-13	1.57	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-188	1/2-13	1.77	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-190	1/2-13	1.96	1	.75	.39	2.63	1.68	3.74	49.62
KHZ-192	1/2-13	2.36	1	.75	.39	2.63	1.68	3.74	49.62
Metric									
KHZ-132	M5x.80	15	13.5	10	4	33	24	40	32.77
KHZ-134	M5x.80	20	13.5	10	4	33	24	40	32.77
KHZ-136	M5x.80	25	13.5	10	4	33	24	40	32.77
KHZ-140	M6x1	15	13.5	10	4	33	24	40	32.77
KHZ-142	M6x1	20	13.5	10	4	33	24	40	32.77
KHZ-144	M6x1	25	13.5	10	4	33	24	40	32.77
KHZ-150	M6x1	35	13.5	10	4	33	24	40	33.93
KHZ-152	M6x1	40	13.5	10	4	33	24	40	33.93
KHZ-88	M8x1.25	15	18	13.5	6.5	46	29	65	37.41
KHZ-90	M8x1.25	20	18	13.5	6.5	46	29	65	41.15
KHZ-92	M8x1.25	25	18	13.5	6.5	46	29	65	41.15
KHZ-96	M8x1.25	35	18	13.5	6.5	46	29	65	42.42
KHZ-98	M8x1.25	40	18	13.5	6.5	46	29	65	42.42
KHZ-102	M8x1.25	50	18	13.5	6.5	46	29	65	42.42
KHZ-106	M10x1.50	20	21.5	16	10	58	37.5	80	43.74
KHZ-110	M10x1.50	30	21.5	16	10	58	37.5	80	43.74
KHZ-112	M10x1.50	35	21.5	16	10	58	37.5	80	45.15
KHZ-116	M10x1.50	50	21.5	16	10	58	37.5	80	45.15
KHZ-120	M10x1.50	60	21.5	16	10	58	37.5	80	45.15
KHZ-194	M12x1.75	25	25.5	19	10	67	42.5	95	49.62
KHZ-196	M12x1.75	30	25.5	19	10	67	42.5	95	49.62
KHZ-198	M12x1.75	40	25.5	19	10	67	42.5	95	49.62
KHZ-200	M12x1.75	50	25.5	19	10	67	42.5	95	49.62
KHZ-202	M12x1.75	60	25.5	19	10	67	42.5	95	49.62

These adjustable handles act as a standard clamping lever, yet can adjust to several positions depending on the size. Pulling up on the handle disengages it while the insert or stud remains stationary, allowing you to adjust the handle to the desired position. Releasing the handle reengages it for tightening and loosening. Metric dimensions are in millimeters.

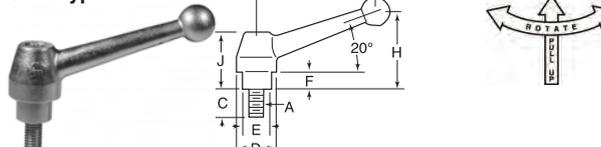
Tapped Type



See table 17 below for additional discounts.

Cat. No.	A	B	D	E	F	H	J	L	Price Each 1-25
KHT-8	5/16-18	.67	1.10	.75	.47	2.13	1.61	3.26	36.87
KHT-9	3/8-16	.67	1.10	.75	.47	2.13	1.61	3.26	36.87
KHT-10	1/2-13	.67	1.10	.75	.47	2.13	1.61	3.26	36.87

Stud Type



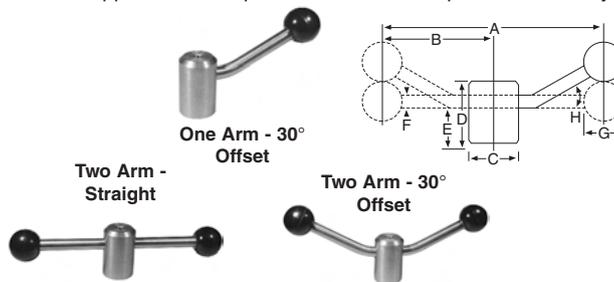
See table 17 below for additional discounts.

Cat. No.	A	C	D	E	F	H	J	L	Price Each 1-25
KHT-47	3/8-16	.78	1.10	.75	.47	2.13	1.61	3.26	40.49
KHT-48	3/8-16	1.18	1.10	.75	.47	2.13	1.61	3.26	40.49
KHT-49	3/8-16	1.57	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-50	3/8-16	1.77	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-51	3/8-16	1.96	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-52	3/8-16	2.36	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-53	1/2-13	.78	1.10	.75	.47	2.13	1.61	3.26	40.49
KHT-54	1/2-13	1.18	1.10	.75	.47	2.13	1.61	3.26	40.49
KHT-55	1/2-13	1.57	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-56	1/2-13	1.77	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-57	1/2-13	1.96	1.10	.75	.47	2.13	1.61	3.26	40.76
KHT-58	1/2-13	2.36	1.10	.75	.47	2.13	1.61	3.26	40.76

Reid SELECT CLAMPING HANDLES

Stainless Steel with Black Plastic Knob Set Screw or Welded Construction

Type 303 stainless steel. Available in single or double handle, offset or straight types. Can be supplied as blanks, tapped or reamed, or can be machined as required to your specifications. By loosening the set screw on the straight type, handles can be shifted off center to provide additional leverage. Welded construction permits hole to be tapped or reamed the full length of body. Can be supplied with red plastic knobs. Call for price and delivery.



See table 32 below for additional discounts.

A	B	C	D	E*	F	G	H	Blank Set Screw Construction Cat. No.	Price Each 1-99	Blank Welded Construction Cat. No.	Price Each 1-99
4	2	7/8	1 1/2	1	1/4	3/4	—	SSDB-1	12.33	SSDB-1B	16.31
6	3	1 1/8	1 3/4	1 1/16	3/8	1	—	SSDB-2	14.05	SSDB-2B	18.55
8	4	1 3/8	2 1/4	1 1/4	1/2	1 3/8	—	SSDB-3	22.73	SSDB-3B	27.13
4	2	7/8	1 1/2	1	1/4	3/4	30°	SODB-1	13.02	SODB-1B	17.39
6	3	1 1/8	1 3/4	1 1/16	3/8	1	30°	SODB-2	14.98	SODB-2B	19.18
8	4	1 3/8	2 1/4	1 1/4	1/2	1 3/8	30°	SODB-3	23.32	SODB-3B	27.93
—	2	7/8	1 1/2	1	1/4	3/4	30°	SOSB-1	10.82	SOSB-1B	12.31
—	3	1 1/8	1 3/4	1 1/16	3/8	1	30°	SOSB-2	12.02	SOSB-2B	13.80
—	4	1 3/8	2 1/4	1 1/4	1/2	1 3/8	30°	SOSB-3	18.09	SOSB-3B	20.53

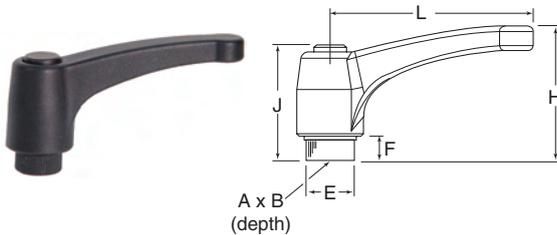
*Tapped and reamed hole must be less than dimension "E".

Reid SELECT ADJUSTABLE HANDLES

Black Thermoplastic - Stainless Steel Inserts or Studs

These adjustable handles act as a standard clamping lever yet can adjust to several positions. Pulling up on the handle disengages it while the insert or stud remains stationary, allowing you to adjust the handle to the desired position. Releasing the handle reengages it for tightening and loosening. Allows for convenient positioning for maximum leverage as well as saving space and keeping the handle out of the way. Available with stainless steel insert or stainless steel stud. Body is black thermoplastic.

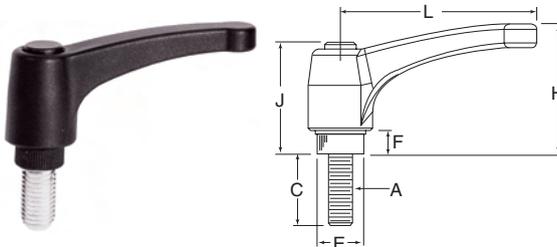
Tapped Type



See table 17 below for additional discounts.

Cat. No.	A	B	E	F	H	J	L	Price Each
JCL-303	1/4-20	.32	.45	.24	1.30	1.26	1.70	3.43
JCL-304	5/16-18	.39	.59	.32	1.61	1.54	2.05	4.07
JCL-306	1/4-20	.39	.59	.32	1.61	1.54	2.05	4.70
JCL-307	5/16-18	.39	.59	.32	1.69	1.54	2.56	4.30
JCL-308	1/4-20	.39	.59	.32	1.69	1.54	2.56	4.86
JCL-309	5/16-18	.59	.75	.33	2.13	1.85	3.15	4.92
JCL-311	3/8-16	.59	.75	.33	2.13	1.85	3.15	5.52

Stud Type



See table 17 below for additional discounts.

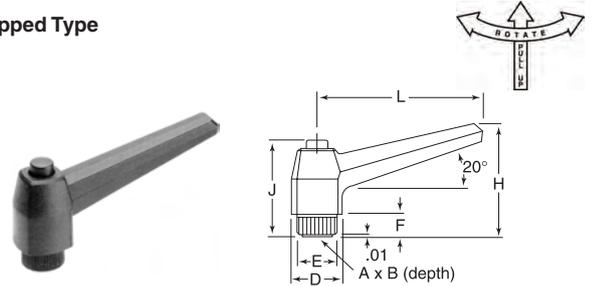
Cat. No.	A	C	E	F	H	J	L	Price Each
JCL-243	1/4-20	.50	.45	.24	1.30	1.26	1.70	4.40
JCL-244	1/4-20	.75	.45	.24	1.30	1.26	1.70	4.44
JCL-246	1/4-20	1.00	.45	.24	1.30	1.26	1.70	4.51
JCL-247	1/4-20	1.25	.45	.24	1.30	1.26	1.70	4.58
JCL-248	1/4-20	1.50	.45	.24	1.30	1.26	1.70	4.74
JCL-249	1/4-20	2.00	.45	.24	1.30	1.26	1.70	4.94
JCL-251	5/16-18	.50	.59	.32	1.61	1.54	2.05	4.71
JCL-252	5/16-18	.75	.59	.32	1.61	1.54	2.05	4.76
JCL-253	5/16-18	1.00	.59	.32	1.61	1.54	2.05	4.85
JCL-254	5/16-18	1.25	.59	.32	1.61	1.54	2.05	4.91
JCL-256	5/16-18	1.50	.59	.32	1.61	1.54	2.05	5.00
JCL-257	5/16-18	2.00	.59	.32	1.61	1.54	2.05	5.15
JCL-258	1/4-20	.50	.59	.32	1.61	1.54	2.05	4.64
JCL-259	1/4-20	.75	.59	.32	1.61	1.54	2.05	4.67
JCL-261	1/4-20	1.00	.59	.32	1.61	1.54	2.05	4.75
JCL-262	1/4-20	1.25	.59	.32	1.61	1.54	2.05	4.79
JCL-263	1/4-20	1.50	.59	.32	1.61	1.54	2.05	4.86
JCL-264	1/4-20	2.00	.59	.32	1.61	1.54	2.05	4.97
JCL-266	5/16-18	.50	.59	.32	1.69	1.54	2.56	4.87
JCL-267	5/16-18	.75	.59	.32	1.69	1.54	2.56	4.92
JCL-268	5/16-18	1.00	.59	.32	1.69	1.54	2.56	5.00
JCL-269	5/16-18	1.25	.59	.32	1.69	1.54	2.56	5.07
JCL-271	5/16-18	1.50	.59	.32	1.69	1.54	2.56	5.15
JCL-272	5/16-18	2.00	.59	.32	1.69	1.54	2.56	5.30
JCL-273	1/4-20	.50	.59	.32	1.69	1.54	2.56	4.79
JCL-274	1/4-20	.75	.59	.32	1.69	1.54	2.56	4.83
JCL-276	1/4-20	1.00	.59	.32	1.69	1.54	2.56	4.90
JCL-277	1/4-20	1.50	.59	.32	1.69	1.54	2.56	4.94
JCL-278	1/4-20	1.25	.59	.32	1.69	1.54	2.56	5.02
JCL-279	1/4-20	2.00	.59	.32	1.69	1.54	2.56	5.12
JCL-281	5/16-18	.50	.75	.33	2.13	1.85	3.15	5.81
JCL-282	5/16-18	.75	.75	.33	2.13	1.85	3.15	5.86
JCL-283	5/16-18	1.00	.75	.33	2.13	1.85	3.15	5.91
JCL-284	5/16-18	1.25	.75	.33	2.13	1.85	3.15	6.03
JCL-286	5/16-18	1.50	.75	.33	2.13	1.85	3.15	6.08
JCL-287	5/16-18	2.00	.75	.33	2.13	1.85	3.15	6.29
JCL-288	3/8-16	.50	.75	.33	2.13	1.85	3.15	5.90
JCL-289	3/8-16	.75	.75	.33	2.13	1.85	3.15	5.97
JCL-291	3/8-16	1.00	.75	.33	2.13	1.85	3.15	6.04
JCL-292	3/8-16	1.25	.75	.33	2.13	1.85	3.15	6.18
JCL-293	3/8-16	1.50	.75	.33	2.13	1.85	3.15	6.24
JCL-294	3/8-16	2.00	.75	.33	2.13	1.85	3.15	6.49
JCL-296	1/2-13	.50	.75	.33	2.13	1.85	3.15	6.14
JCL-297	1/2-13	.75	.75	.33	2.13	1.85	3.15	6.26
JCL-298	1/2-13	1.00	.75	.33	2.13	1.85	3.15	6.49
JCL-299	1/2-13	1.25	.75	.33	2.13	1.85	3.15	6.63
JCL-301	1/2-13	1.50	.75	.33	2.13	1.85	3.15	6.95
JCL-302	1/2-13	2.00	.75	.33	2.13	1.85	3.15	7.33

elesa ADJUSTABLE HANDLES

Black Plastic - Stainless Steel Inserts or Studs

These adjustable handles act as a standard clamping lever, yet can adjust to several positions depending on the size. Pulling up on the handle disengages it while the insert or stud remains stationary, allowing you to adjust the handle to the desired position. Releasing the handle reengages it for tightening and loosening.

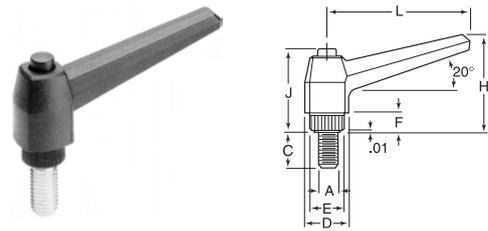
Tapped Type



See table 17 below for additional discounts.

Cat. No.	A	B	D	E	F	H	J	L	Price Each
ECL-138	1/4-20	.39	.71	.47	.24	1.26	1.14	1.65	7.62
ECL-139	5/16-18	.51	.91	.59	.31	1.69	1.46	2.48	9.02
ECL-140	3/8-16	.67	1.10	.75	.39	2.13	1.85	3.15	11.49

Stud Type

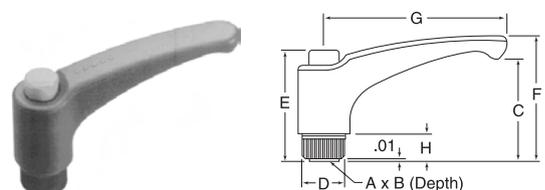


See table 17 below for additional discounts.

Cat. No.	A	C	D	E	F	H	J	L	Price Each
ECL-141	1/4-20	.50	.71	.47	.24	1.26	1.14	1.65	7.31
ECL-142	1/4-20	.75	.71	.47	.24	1.26	1.14	1.65	7.62
ECL-143	1/4-20	1.00	.71	.47	.24	1.26	1.14	1.65	8.33
ECL-144	5/16-18	.75	.91	.59	.31	1.69	1.46	2.48	10.71
ECL-145	5/16-18	1.00	.91	.59	.31	1.69	1.46	2.48	11.40
ECL-146	5/16-18	1.25	.91	.59	.31	1.69	1.46	2.48	12.09
ECL-147	3/8-16	1.00	1.10	.75	.39	2.13	1.85	3.15	11.69
ECL-148	3/8-16	1.25	1.10	.75	.39	2.13	1.85	3.15	12.20
ECL-149	3/8-16	1.50	1.10	.75	.39	2.13	1.85	3.15	14.00
ECL-150	3/8-16	2.00	1.10	.75	.39	2.13	1.85	3.15	14.76

ERGOSTYLE by elesa

Tapped Type



These adjustable handles act as a standard clamping lever, yet can adjust to many positions. When tightening, lift the handle to disengage the teeth of the clamping element and return to the starting position. By releasing the handle the return spring automatically engages the teeth in the clamping position. Knurling on the projection makes initial tightening easier. Handle body is black glass fiber reinforced plastic. Push button is orange for easy identification. Available with 303 stainless steel bushing with tapped blind hole.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	Price Each
ESP-265	1/4-20	.39	.98	.47	1.16	1.28	1.73	.24	7.96
ESP-270	5/16-18	.51	1.36	.59	1.48	1.69	2.48	.31	8.93
ESP-275	3/8-16	.67	1.73	.75	1.85	2.13	3.07	.47	11.40

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

GEAR LEVERS

Shafts



These gear lever handles and shafts have many uses for machinery and other applications. Made of Type 303 stainless steel.

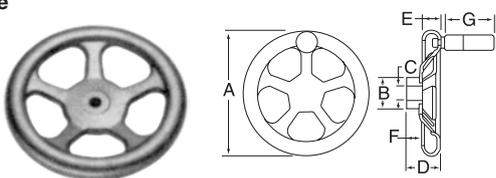
See table 17 below for additional discounts.

Cat. No.	Price Each					
	A	B	C	D	E	
GLS-70	.312	2.5	1/4-20	.50	.375	6.58
GLS-75	.312	3.5	1/4-20	.50	.375	7.08
GLS-80	.312	5.0	1/4-20	.50	.375	7.55
GLS-85	.375	2.5	5/16-18	.50	.375	7.00
GLS-90	.375	3.5	5/16-18	.50	.375	7.45
GLS-95	.375	5.0	5/16-18	.50	.375	8.00
GLS-100	.438	3.0	3/8-16	.50	.375	7.78
GLS-105	.438	4.5	3/8-16	.50	.375	8.95
GLS-110	.438	6.0	3/8-16	.75	.375	9.75
GLS-115	.563	4.0	1/2-13	.50	.500	10.33
GLS-120	.563	6.0	1/2-13	.75	.500	12.35
GLS-125	.563	8.0	1/2-13	1.00	.500	14.70

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

HAND WHEELS

Five Spoke



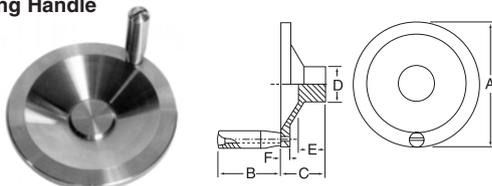
Made of pressed Type 304 stainless steel with satin finish. Stainless steel hub is welded to body. Available with revolving plastic handle with stainless steel stem or without handle.

See table 26 below for additional discounts.

w/ Handle	Cat. No.	w/o Handle	Cat. No.	No. of Spokes	Price Each						
					A	B	C	D	E	F	G
WSH-1	WSH-4	4	6.30	1.18	.500	1.54	.87	.79	3.15	135.58	110.33
WSH-2	WSH-5	4	7.87	1.57	.625	1.73	.87	.94	3.15	176.84	151.58
WSH-3	WSH-6	5	9.84	1.77	.750	2.05	1.18	1.10	3.54	222.72	197.47

26	Quantity	1-4	5-9	10-19	20-29	30-49	50-99	100-249	250+
	Discount	Net	5%	8%	10%	12.5%	15%	17.5%	Call

Solid Web - Dishd w/ Revolving Handle



Made of Type 300 series stainless steel. Comes with stainless steel revolving handle. Hand wheel and handle are machined with a smooth finish. **Handles also sold separately. See below.**

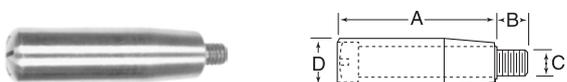
See table 28 below for additional discounts.

Cat. No.	Price Each						
	A	B	C	D	E	F	1-4
AS-3	3	1.49	1.10	.87	.67	.24	60.71
AS-4	4	1.57	1.25	1.02	.71	.31	86.01
AS-6	6	2.50	1.50	1.50	.87	.39	151.77

28	Quantity	1-4	5-9	10-19	20-29	30-49	50-99	100-249	250+
	Discount	Net	2%	5%	8%	10%	12.5%	15%	Call

MACHINE HANDLES

Revolving - Externally Threaded



Made of Type 302 stainless steel.

See table 17 below for additional discounts.

Cat. No.	Price Each				
	A	B	C	D	1-25
B7-3S	1.50	.24	10-32	.39	12.97
B7-4S	1.57	.31	1/4-20	.47	15.37
B7-6S	2.50	.39	5/16-18	.75	21.83

IMPORTANT NOTE: Besides being able to give you an immediate shipment on these standard items, we are equipped to modify to your specific requirements. The more common modifications, bores, keyways, and setscrew holes may be priced from the charts **shown on page 88.**

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	8%	10%	12.5%	15%	17.5%	Call

DRAWER SLIDES

Medium and Heavy Duty

Full Extension

Non-Disconnect Medium Duty

Positive stop slide that once installed will not disconnect. Requires 16 #8 Pan Head or M4 screw (not included).

See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair	
				1-24	250+
SUG-256	176	12	12.56	59.63	
SUG-258	169	14	14.56	66.90	
SUG-260	160	16	16.56	75.63	
SUG-262	149	18	18.56	84.36	
SUG-264	143	20	20.56	93.08	
SUG-266	129	22	22.56	98.91	
SUG-268	114	24	24.56	107.63	
SUG-270	105	26	26.56	114.90	
SUG-272	90	28	28.56	120.72	

Non-Disconnect Heavy Duty

Positive stop slide that once installed will not disconnect. Recommended for drawers carrying a heavier load. Requires 32 #8 Pan Head or M4 screw (not included).

See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair	
				1-24	250+
SUG-274	599	12	12.56	181.82	
SUG-276	590	14	14.56	197.82	
SUG-278	570	16	16.56	210.90	
SUG-280	550	18	18.56	239.99	
SUG-282	530	20	20.56	261.81	
SUG-284	504	22	22.56	276.36	
SUG-286	475	24	24.56	311.27	
SUG-288	440	26	26.56	330.18	
SUG-290	400	28	28.56	347.63	

3/4 Extension

Non-Disconnect Medium Duty

Positive Stop - Positive Catch

Positive stop, and positive catch slide feature holds the drawer in the closed position. Once installed these slides will not disconnect. Requires 16 #8 Pan Head or M4 screws (not included).

See table 11 below for additional discounts.

Cat. No.	Load Capacity Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair	
				1-24	250+
SUG-328	107	12	9	33.45	
SUG-330	103	14	11	37.81	
SUG-332	94	16	12	42.17	
SUG-334	90	18	13	46.54	
SUG-336	81	20	15	50.90	
SUG-338	74	22	16	53.81	
SUG-340	66	24	17	58.18	
SUG-342	59	26	19	61.09	
SUG-344	55	28	20	65.45	

Non-Disconnect Heavy Duty

Positive stop slide that once installed will not disconnect. Recommended for drawers carrying a heavier load. Requires 32 #8 Pan Head or M4 screw (not included).

See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair	
				1-24	250+
SUG-346	251	12	8.72	65.81	
SUG-348	240	14	10.22	95.99	
SUG-350	229	16	11.72	103.27	
SUG-352	224	18	13.72	119.27	
SUG-354	218	20	14.22	136.73	
SUG-356	207	22	16.72	145.45	
SUG-358	196	24	17.72	157.09	
SUG-360	189	26	18.22	165.81	
SUG-362	176	28	19.72	174.54	

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

DRAWER SLIDES

These ball bearing drawer slides are made entirely from type 304 passivated stainless steel. They are most commonly used in applications needing corrosion resistance such as laboratories, humid/damp environments, marine applications, and clean rooms. The slides have a bright finish, tight tolerance, quiet operation, and smooth glide. All slides on this page are side mounted drawer slides except the under carriage version.

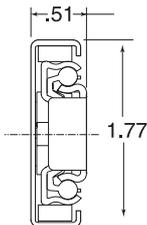
FULL EXTENSION

These three member slides are manufactured to allow you to pull the drawer out further than the slide length. This feature allows full access to the contents of the drawer.

Front-Disconnect Lever



Popular style made in 304 stainless steel. These disconnect in the front by lifting a lever and have conventional and 32mm mounting pattern for 16 #8 Pan Head or M4 screws (not included).



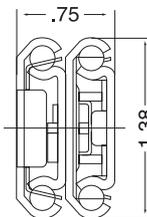
See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair 1-24
SUG-400	115	9.84	9.57	15.63
SUG-402	111	11.81	12	18.10
SUG-404	108	13.78	14	21.01
SUG-406	104	15.75	16	23.20
SUG-408	100	17.72	18	26.10
SUG-410	97	19.69	20	29.01
SUG-412	95	21.65	22	31.92
SUG-414	92	23.62	24	35.45
SUG-416	90	25.59	26	39.81
SUG-418	87	27.56	28	42.54

Front-Disconnect Latch Lever



Front disconnect by pressing a drawer latch lever. Positive locking mechanism will keep drawer locked in open position until actively released. Requires 16 #8 Pan Head or M4 screws (not included).



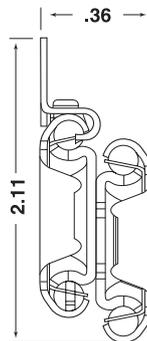
See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair 1-24
SUG-220	139	12	13.22	84.35
SUG-222	131	14	15.22	93.08
SUG-224	124	16	17.22	104.72
SUG-226	115	18	19.22	116.36
SUG-228	106	20	21.22	126.54
SUG-230	99	22	23.22	133.82
SUG-232	92	24	25.22	144.00
SUG-234	85	26	27.22	149.82
SUG-236	79	28	29.22	159.99

Quick-Disconnect Button



Positive stop slide with a quick disconnect. Simply open the drawer and press the button to release the slide from its drawer-mounting rail. Requires 16 #8 Pan Head or M4 screw (not included).



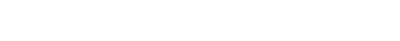
See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair 1-24
SUG-238	143	12	13.09	69.08
SUG-240	134	14	15.09	77.09
SUG-242	134	16	17.09	88.73
SUG-244	123	18	19.09	94.54
SUG-246	114	20	21.09	104.00
SUG-248	114	22	23.09	112.72
SUG-250	105	24	25.09	117.81
SUG-252	94	26	27.09	125.09
SUG-254	94	28	29.09	133.82

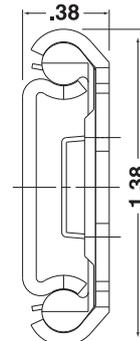
3/4 EXTENSION

These two member slides are manufactured to allow you to pull the drawer out 3/4 the length of the slide.

Front-Disconnect Friction



Friction brake allows drawer to come to a slow stop and front disconnects by pulling firmly on the drawer until it releases. Requires 16 #8 Pan Head or M4 screws (not included).



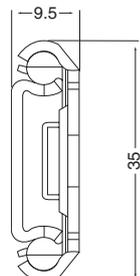
See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair 1-24
SUG-292	107	12	9	26.18
SUG-294	103	14	11	30.54
SUG-296	94	16	12	34.90
SUG-298	90	18	13	37.81
SUG-300	81	20	15	42.18
SUG-302	74	22	16	45.09
SUG-304	66	24	17	48.00
SUG-306	59	26	19	50.91
SUG-308	55	28	20	53.81

Front-Disconnect Latch Lever Positive Lock



Front disconnect by pressing a drawer latch lever. Positive locking mechanism will keep drawer locked in open position until actively released. Requires 16 #8 Pan Head or M4 screws (not included).



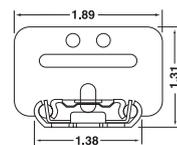
See table 11 below for additional discounts.

Cat. No.	Load Rating Lbs./Pr.	Slide Length	Slide Travel	Price Per Pair 1-24
SUG-310	107	12	9	34.90
SUG-312	103	14	11	36.36
SUG-314	94	16	12	39.26
SUG-316	90	18	13	42.17
SUG-318	81	20	15	46.54
SUG-320	74	22	16	49.45
SUG-322	66	24	17	52.36
SUG-324	59	26	19	55.27
SUG-326	55	28	20	56.72

Under Carriage Front-Disconnect Friction



Friction brake stop and front disconnect. Under carriage slides are mounted underneath the drawer and only one is needed per drawer. Shipped with a bracket and two plastic tacks. Requires eight #8 Pan Head or M4 screw (not included).



See table 11 below for additional discounts.

Cat. No.	Load Rating	Slide Length	Slide Travel	Price Each 1-24
SUG-364	18	12.75	8.50	19.64
SUG-366	17	14.75	10.50	21.09
SUG-368	15	16.75	12.00	24.00
SUG-370	15	18.75	12.50	26.18
SUG-372	14	20.75	14.50	28.36
SUG-374	13	22.75	16.50	32.00
SUG-376	12	24.75	17.50	33.46
SUG-378	11	26.75	19.50	33.17

Note: Sold as each, not in pairs.

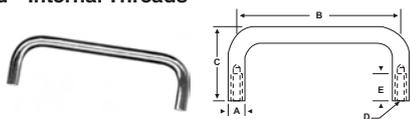
11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

PULL HANDLES

303 or 304 Stainless Steel

Passivated - Dull Finish

Round - Internal Threads



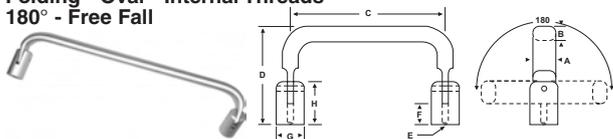
See table 17 below for additional discounts.

Cat. No.	A	B	C	Thread	Min.	Price Each	Cat. No.	A	B	C	Thread	Min.	Price Each	Cat. No.	A	B	C	Thread	Min.	Price Each	
																					1-25
VPH-210	5/32	1	1	4-40	1/4	9.49	VPH-232	5/16	3 1/2	1 1/2	10-32	3/8	16.04	VPH-258	3/8	7	1 3/4	10-32	3/8	14.91	
VPH-217	5/32	1 1/2	1	4-40	1/4	9.85	VPH-230	5/16	4	1 1/2	10-32	3/8	16.47	VPH-259	3/8	8	1 3/4	10-32	3/8	17.64	
VPH-218	5/32	1 3/4	1	4-40	1/4	9.96	VPH-2465	5/16	4	3	10-32	3/8	19.25	VPH-262	3/8	12	1 3/4	1 1/4-20	3/8	21.07	
VPH-220	5/32	2	1	4-40	1/4	9.96	VPH-237	5/16	4 1/2	1 1/2	10-32	3/8	17.13	VPH-260	1/2	4	1 7/8	10-32	3/8	16.27	
VPH-222	5/32	2 1/2	1	4-40	1/4	10.36	VPH-242	5/16	5	1 1/2	10-32	3/8	17.64	VPH-2530	1/2	4	3	10-32	3/8	17.00	
VPH-225	5/32	3	1	4-40	1/4	10.60	VPH-2467	5/16	5	3	10-32	3/8	19.72	VPH-264	1/2	5	1 7/8	10-32	3/8	16.80	
VPH-2410	1/4	1 1/2	1 1/2	8-32	5/16	8.22	VPH-2460	5/16	5 1/2	1 1/2	10-32	3/8	18.20	VPH-2535	1/2	5	3	10-32	3/8	18.38	
VPH-2415	1/4	2	1 1/2	8-32	5/16	8.45	VPH-245	5/16	6	1 1/2	10-32	3/8	18.69	VPH-265	1/2	6	1 7/8	1 1/4-20	3/8	17.36	
VPH-2420	1/4	2 1/2	1 1/2	8-32	5/16	8.75	VPH-2469	5/16	6	3	10-32	3/8	20.18	VPH-2555	1/2	6	3	1 1/4-20	3/8	18.47	
VPH-2425	1/4	3	1 1/2	8-32	5/16	8.96	VPH-2471	5/16	6 1/2	3	10-32	3/8	20.65	VPH-270	1/2	7	1 7/8	1 1/4-20	3/8	17.89	
VPH-2430	1/4	3 1/2	1 1/2	8-32	5/16	9.31	VPH-244	5/16	7	1 1/2	10-32	3/8	19.75	VPH-2560	1/2	7	3	1 1/4-20	3/8	26.68	
VPH-2435	1/4	4	1 1/2	8-32	5/16	9.49	VPH-246	5/16	7 1/2	1 1/2	10-32	3/8	13.96	VPH-275	1/2	8	1 7/8	1 1/4-20	3/8	18.42	
VPH-2440	1/4	4 1/2	1 1/2	8-32	5/16	9.84	VPH-247	5/16	8	1 1/2	10-32	3/8	14.20	VPH-2565	1/2	8	3	1 1/4-20	3/8	20.20	
VPH-2445	1/4	5	1 1/2	8-32	5/16	10.04	VPH-248	5/16	9	1 1/2	10-32	3/8	17.50	VPH-280	1/2	10	1 7/8	5/16-18	3/8	19.51	
VPH-2450	1/4	6	1 1/2	8-32	5/16	10.58	VPH-250	3/8	3	1 3/4	10-32	3/8	13.24	VPH-2580	1/2	10	3	5/16-18	3/8	14.91	
VPH-227	5/16	2	1 1/2	10-32	3/8	14.25	VPH-255	3/8	4	1 3/4	10-32	3/8	14.24	VPH-285	1/2	12	1 7/8	5/16-18	3/8	20.60	
VPH-228	5/16	2 1/2	1 1/2	10-32	3/8	14.96	VPH-256	3/8	5	1 3/4	10-32	3/8	11.40	VPH-2585	1/2	12	3	5/16-18	3/8	21.16	
VPH-229	5/16	3	1 1/2	10-32	3/8	15.42	VPH-257	3/8	6	1 3/4	10-32	3/8	12.27								

These general use pull handles are type 303 stainless steel and are all passivated with a dull finish. All items listed below are in stock for same day shipping.

Folding - Oval - Internal Threads

180° - Free Fall



See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	Price Each
VPH-1920	5/8	9/32	4	2	10-32	7/16	5/8	1 1/16	45.17
VPH-1940	5/8	9/32	6	2	10-32	7/16	5/8	1 1/16	46.92

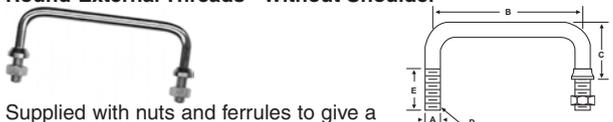
Round w/ Shoulder - External Threads



See table 17 below for additional discounts.

Cat. No.	A	B	C	Thread	D	E	Price Each
VPH-1470	5/16	4	4	1 1/8-16	10-32	1/2	13.02
VPH-1480	5/16	6	6	1 1/8-16	1 1/4-20	1/2	13.98
VPH-1490	5/16	8	8	1 1/8-16	1 1/4-20	1/2	13.84

Round-External Threads - Without Shoulder



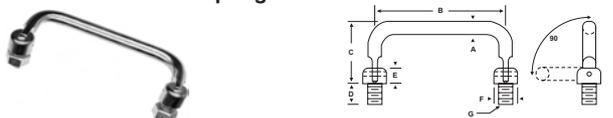
Supplied with nuts and ferrules to give a neat finished look.

See table 17 below for additional discounts.

Cat. No.	A	B	C	Thread	D	E	Price Each
VPH-704	5/16	3	1 7/16	5/16-18	15/16	17.71	
VPH-706	5/16	3 3/4	1 7/16	5/16-18	15/16	17.82	
VPH-708	5/16	4	1 7/16	5/16-18	15/16	17.91	
VPH-710	5/16	4 1/4	1 7/16	5/16-18	15/16	17.87	
VPH-712	5/16	4 1/2	1 7/16	5/16-18	15/16	17.98	
VPH-714	5/16	5	1 7/16	5/16-18	15/16	18.07	
VPH-715	5/16	6	1 7/16	5/16-18	15/16	18.31	
VPH-750	3/8	4	1 1/2	3/8-24	15/16	21.40	
VPH-760	3/8	4 1/2	1 1/2	3/8-24	15/16	22.38	
VPH-770	3/8	5	1 1/2	3/8-24	15/16	22.64	
VPH-775	3/8	6	1 1/2	3/8-24	15/16	22.78	
VPH-780	3/8	9	1 1/2	3/8-24	15/16	21.82	

Folding - Round - External Threads

90° - Two Position - Spring Loaded Detents

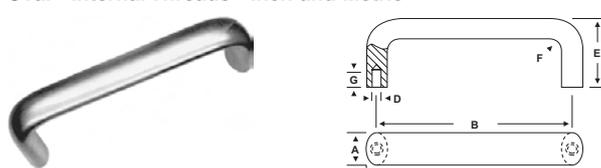


These folding handles work in two positions. They are held secure in both the open and retracted position by spring loaded detents. Supplied with nuts.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Thread	G	Price Each
VPH-3780	1/4	4 1/2	1.43	9/16	5/16	7/16	1/4-28		40.02
VPH-3785	1/4	5	1.43	9/16	5/16	7/16	1/4-28		40.29
VPH-3790	1/4	6	1.43	9/16	5/16	7/16	1/4-28		40.87
VPH-930	3/8	4	1.85	5/8	1/2	5/8	3/8-24		52.25
VPH-950	3/8	4 1/2	1.85	5/8	1/2	5/8	3/8-24		52.53
VPH-960	3/8	5	1.85	5/8	1/2	5/8	3/8-24		53.41
VPH-970	3/8	6	1.85	5/8	1/2	5/8	3/8-24		54.95
VPH-980	3/8	8	1.85	5/8	1/2	5/8	3/8-24		56.87

Oval - Internal Threads - Inch and Metric



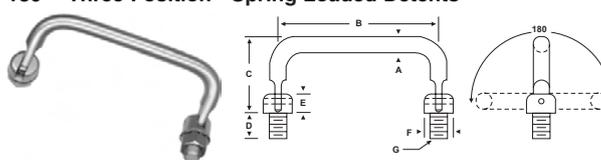
See page 26 for fasteners.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Min. G	Price Each
VPH-1010	7/16	3	9/32	10-32	1 9/32	1/2	3/8	12.73
VPH-3710	7/16	3	9/32	10-32	1 1/2	3/8	5/16	12.71
VPH-3715	7/16	4	9/32	10-32	1 1/2	3/8	5/16	13.96
VPH-1020	7/16	4 9/16	9/32	10-32	1 1/2	1/2	3/8	11.43
VPH-3720	7/16	5	9/32	10-32	1 1/2	3/8	5/16	15.25
VPH-3725	7/16	6	9/32	10-32	1 1/2	3/8	5/16	16.56
VPH-1030	7/16	9	9/32	10-32	1 3/4	1/2	3/8	16.92
VPH-1011	5/8	3	9/32	10-32	1 1/2	1/2	3/8	12.06
VPH-1012	5/8	4	9/32	10-32	1 1/2	1/2	3/8	12.41
VPH-1022	5/8	4	9/32	10-32	3	1/2	3/8	13.69
VPH-1013	5/8	4 1/2	9/32	10-32	1 1/2	1/2	3/8	20.44
VPH-1014	5/8	4 9/16	9/32	10-32	1 1/2	1/2	3/8	13.11
VPH-1015	5/8	5	9/32	10-32	1 1/2	1/2	3/8	13.44
VPH-1016	5/8	6	9/32	10-32	1 1/2	1/2	3/8	16.15
VPH-1023	5/8	6	9/32	10-32	3	1/2	3/8	16.21
VPH-1017	5/8	7	9/32	10-32	1 1/2	1/2	3/8	16.50
VPH-1018	5/8	8	9/32	10-32	1 1/2	1/2	3/8	16.84
VPH-1024	5/8	8	9/32	10-32	3	1/2	3/8	16.42
VPH-1019	5/8	10	9/32	10-32	1 1/2	1/2	3/8	19.53
VPH-1021	5/8	12	9/32	10-32	1 1/2	1/2	3/8	19.86

Folding - Round - External Threads

180° - Three Position - Spring Loaded Detents

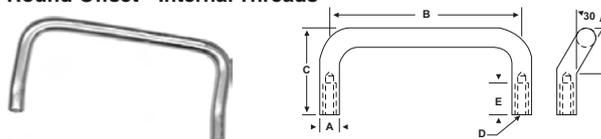


These folding handles work in three positions. They are held secure in the up, down and mid position by spring load detents. Supplied with nuts.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	Thread	G	Price Each
VPH-1710	3/8	3	1.85	5/8	1/2	5/8	3/8-24		50.91
VPH-1740	3/8	5	1.85	5/8	1/2	5/8	3/8-24		53.75

Round Offset - Internal Threads



See table 17 below for additional discounts.

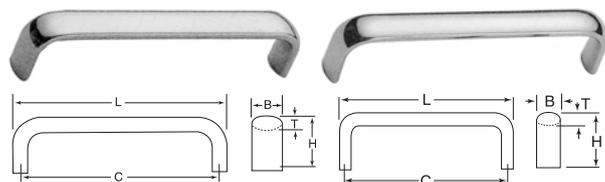
Cat. No.	A	B	C	Thread	D	Min. E	F	Price Each
VPH-2660	5/16	3	1 1/2	10-32	3/8	7/8	16.71	
VPH-2665	5/16	4	1 1/2	10-32	3/8	7/8	17.80	
VPH-2670	5/16	4 1/2	1 1/2	10-32	3/8	7/8	18.45	
VPH-2675	5/16	5	1 1/2	10-32	3/8	7/8	18.96	
VPH-2685	5/16	6	1 1/2	10-32	3/8	7/8	20.02	
VPH-2695	5/16	8	1 1/2	10-32	3/8	7/8	18.10	
VPH-2705	5/16	10	1 1/2	10-32	3/8	7/8	17.60	

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

PULL HANDLES

Internal Threads

Type 303 Stainless - Oval



SUG-7 thru SUG-16

SUG-17 thru SUG-22



SUG-23 thru SUG-34

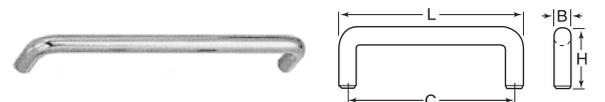
SUG-35 thru SUG-46

These stainless steel general use pull handles are available in a variety of sizes. They are also ideal for a wide range of applications. Handles are Type 303 stainless, and are available with a mirror or satin finish. Handles are supplied with mounting screws. Bold catalog numbers are NSF certified and meet the Food Equipment Industry Standard.

See table 17 below for additional discounts.

Cat. No.	L	C	H	Finish	B	T	Thread Size	Thread Depth	Price Each 1-25
SUG-7	2.756	2 ³³ / ₆₄	.906	Mirror	.512	.236	M4x.7	.394	7.90
SUG-8	2.756	2 ³³ / ₆₄	.906	Satin	.512	.236	M4x.7	.394	7.90
SUG-9	3.543	3 ⁹ / ₁₆	.925	Mirror	.512	.236	M4x.7	.394	9.00
SUG-10	3.543	3 ⁹ / ₁₆	.925	Satin	.512	.236	M4x.7	.394	9.00
SUG-11	4.331	4 ³ / ₃₂	.945	Mirror	.512	.236	M4x.7	.394	10.70
SUG-12	4.331	4 ³ / ₃₂	.945	Satin	.512	.236	M4x.7	.394	10.70
SUG-13	5.118	4 ⁷ / ₈	.965	Mirror	.512	.236	M4x.7	.394	11.90
SUG-14	5.118	4 ⁷ / ₈	.965	Satin	.512	.236	M4x.7	.394	11.90
SUG-15	5.906	5 ¹³ / ₆₄	.984	Mirror	.512	.236	M4x.7	.394	13.50
SUG-16	5.906	5 ¹³ / ₆₄	.984	Satin	.512	.236	M4x.7	.394	13.50
SUG-17	1.969	1 ²⁵ / ₃₂	.866	Mirror	.394	.197	M3x.5	.394	5.70
SUG-18	1.969	1 ²⁵ / ₃₂	.866	Satin	.394	.197	M3x.5	.394	5.70
SUG-19	2.756	2 ⁹ / ₁₆	.886	Mirror	.394	.197	M3x.5	.394	6.80
SUG-20	2.756	2 ⁹ / ₁₆	.886	Satin	.394	.197	M3x.5	.394	6.80
SUG-21	3.543	3 ¹¹ / ₃₂	.906	Mirror	.394	.197	M3x.5	.394	7.70
SUG-22	3.543	3 ¹¹ / ₃₂	.906	Satin	.394	.197	M3x.5	.394	7.70
SUG-23	3.150	2 ²⁷ / ₃₂	1.181	Mirror	.551	.315	M5x.8	.394	11.70
SUG-24	3.150	2 ²⁷ / ₃₂	1.181	Satin	.551	.315	M5x.8	.394	11.70
SUG-25	3.937	3 ⁵ / ₈	1.260	Mirror	.551	.315	M5x.8	.394	13.00
SUG-26	3.937	3 ⁵ / ₈	1.260	Satin	.551	.315	M5x.8	.394	13.00
SUG-27	4.724	4 ¹³ / ₃₂	1.339	Mirror	.551	.315	M5x.8	.472	15.00
SUG-28	4.724	4 ¹³ / ₃₂	1.339	Satin	.551	.315	M5x.8	.472	15.00
SUG-29	5.906	5 ¹⁹ / ₃₂	1.417	Mirror	.551	.315	M5x.8	.472	19.90
SUG-30	5.906	5 ¹⁹ / ₃₂	1.417	Satin	.551	.315	M5x.8	.472	17.70
SUG-31	7.087	6 ²⁵ / ₃₂	1.457	Mirror	.551	.315	M5x.8	.472	22.40
SUG-32	7.087	6 ²⁵ / ₃₂	1.457	Satin	.551	.315	M5x.8	.472	22.40
SUG-33	8.661	8 ¹¹ / ₃₂	1.496	Mirror	.551	.315	M5x.8	.472	27.50
SUG-34	8.661	8 ¹¹ / ₃₂	1.496	Satin	.551	.315	M5x.8	.472	27.50
SUG-35	2.283	1 ³¹ / ₃₂	1.575	Mirror	.551	.315	M5x.8	.433	16.50
SUG-36	2.283	1 ³¹ / ₃₂	1.575	Satin	.551	.315	M5x.8	.433	16.50
SUG-37	3.268	2 ⁶¹ / ₆₄	1.575	Mirror	.551	.315	M5x.8	.433	18.40
SUG-38	3.268	2 ⁶¹ / ₆₄	1.575	Satin	.551	.315	M5x.8	.433	18.40
SUG-39	4.252	3 ¹⁵ / ₁₆	1.575	Mirror	.551	.315	M5x.8	.433	20.30
SUG-40	4.252	3 ¹⁵ / ₁₆	1.575	Satin	.551	.315	M5x.8	.433	20.30
SUG-41	5.236	4 ⁵⁹ / ₆₄	1.575	Mirror	.551	.315	M5x.8	.433	22.30
SUG-42	5.236	4 ⁵⁹ / ₆₄	1.575	Satin	.551	.315	M5x.8	.433	22.30
SUG-43	6.220	5 ²⁹ / ₃₂	1.969	Mirror	.551	.315	M5x.8	.433	27.50
SUG-44	8.189	7 ⁷ / ₈	1.969	Mirror	.551	.315	M5x.8	.433	31.80
SUG-45	10.157	9 ²⁷ / ₃₂	1.969	Mirror	.551	.315	M5x.8	.433	38.30
SUG-46	12.126	11 ¹³ / ₁₆	1.969	Mirror	.551	.315	M5x.8	.433	48.10

Type 316 - Round



All handles are made from Type 316 stainless steel, with a satin finish. Supplied with stainless steel mounting screws. NSF certified products meet Food Equipment Industry Standard.

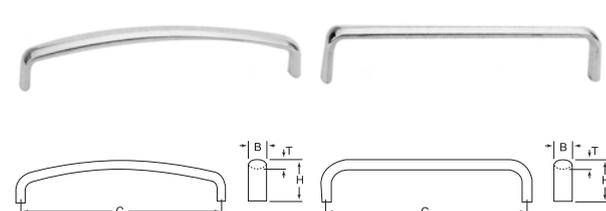
See table 17 below for additional discounts.

Cat. No.	L	C	H	B	Thread	Price Each 1-25
SUG-105	4.37	4	1.378	.394	8-32	6.70
SUG-106	5.374	5	1.378	.394	8-32	7.10
SUG-107	6.378	6	1.378	.394	8-32	7.50
SUG-108	9.37	9	1.378	.394	8-32	8.70
SUG-109	12.382	12	1.378	.394	8-32	9.90
SUG-110	3.315	3	1.339	.315	8-32	5.70
SUG-111	3.815	3 ¹ / ₂	1.339	.315	8-32	6.20
SUG-112	4.094	3 ²⁵ / ₃₂	1.339	.315	8-32	6.40
SUG-113	4.315	4	1.339	.315	8-32	6.50

Bold Catalog Numbers are NSF Certified

Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
Discount	Net	5%	8%	10%	12.5%	15%	17.5%	Call

Type 316 Stainless - Oval



SUG-47 thru SUG-62

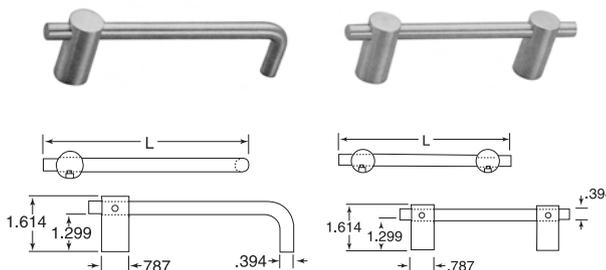
SUG-63 thru SUG-78

These stainless steel pull handles are available in a variety of sizes. They are also ideal for a wide range of applications. Handles are Type 316 stainless, and are available with a mirror or satin finish. Handles are well suited for marine and chemical environments. Supplied with 304 stainless steel mounting screws.

See table 17 below for additional discounts.

Cat. No.	C	H	Finish	B	T	Thread Size	Thread Depth	Price Each 1-25
SUG-47	3 ¹ / ₂	1.26	Mirror	.551	.276	8-32	3 ⁵ / ₈	9.30
SUG-48	3 ¹ / ₂	1.26	Satin	.551	.276	8-32	3 ⁵ / ₈	9.30
SUG-49	4	1.26	Mirror	.551	.276	8-32	3 ⁵ / ₈	9.60
SUG-50	4	1.26	Satin	.551	.276	8-32	3 ⁵ / ₈	9.60
SUG-51	5	1.26	Mirror	.551	.276	8-32	3 ⁵ / ₈	10.40
SUG-52	5	1.26	Satin	.551	.276	8-32	3 ⁵ / ₈	10.40
SUG-53	6	1.26	Mirror	.551	.276	8-32	3 ⁵ / ₈	11.60
SUG-54	6	1.26	Satin	.551	.276	8-32	3 ⁵ / ₈	11.60
SUG-55	3 ¹ / ₂	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	7.20
SUG-56	3 ¹ / ₂	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	7.20
SUG-57	4	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	7.80
SUG-58	4	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	7.80
SUG-59	5	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	8.10
SUG-60	5	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	8.10
SUG-61	6	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	8.60
SUG-62	6	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	8.60
SUG-63	3 ¹ / ₂	1.260	Mirror	.551	.276	8-32	3 ⁵ / ₈	9.10
SUG-64	3 ¹ / ₂	1.260	Satin	.551	.276	8-32	3 ⁵ / ₈	9.10
SUG-65	4	1.260	Mirror	.551	.276	8-32	3 ⁵ / ₈	9.40
SUG-66	4	1.260	Satin	.551	.276	8-32	3 ⁵ / ₈	9.40
SUG-67	5	1.260	Mirror	.551	.276	8-32	3 ⁵ / ₈	10.10
SUG-68	5	1.260	Satin	.551	.276	8-32	3 ⁵ / ₈	10.10
SUG-69	6	1.260	Mirror	.551	.276	8-32	3 ⁵ / ₈	11.00
SUG-70	6	1.260	Satin	.551	.276	8-32	3 ⁵ / ₈	11.00
SUG-71	3 ¹ / ₂	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	7.00
SUG-72	3 ¹ / ₂	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	7.00
SUG-73	4	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	7.50
SUG-74	4	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	7.50
SUG-75	5	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	7.90
SUG-76	5	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	7.90
SUG-77	6	1.181	Mirror	.551	.197	6-32	3 ⁵ / ₈	8.30
SUG-78	6	1.181	Satin	.551	.197	6-32	3 ⁵ / ₈	8.30

Type 316 Stainless - Round Adjustable



SUG-115 thru SUG-118

SUG-119 thru SUG-122

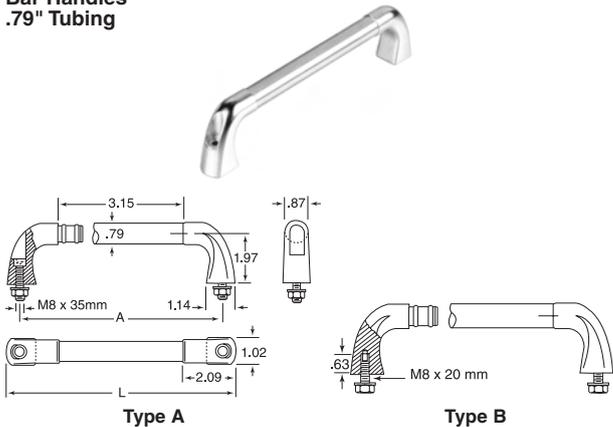
Mounting may be positioned anywhere along length of handle. All handles are Type 316 stainless steel, with a satin finish. These handles are all NSF certified and meet the Food Equipment Industry Standard. Stainless steel mounting screws supplied.

See table 17 below for additional discounts.

Cat. No.	L	Thread Size	Thread Depth	Price Each 1-25
SUG-115	5 ⁶³ / ₆₄	M5x0.8	.394	33.00
SUG-116	10	M5x0.8	.394	39.00
SUG-117	15	M5x0.8	.394	46.00
SUG-118	20	M5x0.8	.394	50.00
SUG-119	5 ⁶³ / ₆₄	M5x0.8	.394	43.00
SUG-120	10	M5x0.8	.394	45.00
SUG-121	15	M5x0.8	.394	48.00
SUG-122	20	M5x0.8	.394	54.00

Rohde HANDLES

Bar Handles .79" Tubing

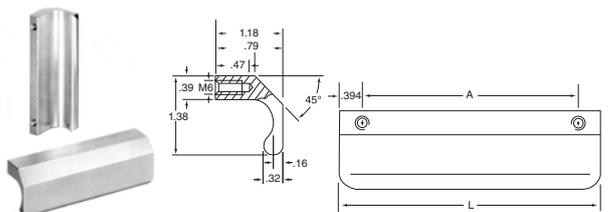


These high quality handles can be fastened from the front or back. The solid shanks are made from precision cast 316 type stainless and electropolished for a dull bright finish. The .093" thick stainless tubes are made from 302 type stainless and electroplated to a semi-matte finish. The shanks have two O-rings to hold and seal the tubing. Type A fastens from the front of the handle and includes M8 x 35mm socket head cap screws, nuts and washers. Type B fastens from the back of the handle and includes M8 x 20mm hex bolts and washers. Other length handles available as specials. Please call for price and delivery.

See table 36 below for additional discounts.

Type A Cat. No.	Type B Cat. No.	A	L	Price Each 1-99	
				Type A	Type B
TCH-165	TCH-174	7.87	8.90	101.33	82.92
TCH-168	TCH-177	11.81	12.84	106.97	88.53
TCH-171	TCH-180	13.78	14.80	109.51	91.09

L-Handles

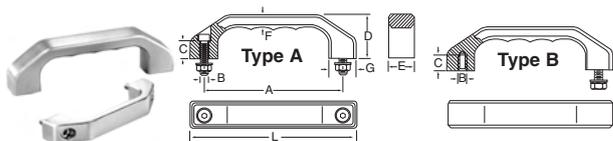


Made from Type 316 stainless steel. They have been blasted and electro polished with a semi-matte finish. Fastens with M6 screws. Other lengths available as special order. Please call for price and delivery.

See table 36 below for additional discounts.

Cat. No.	A	L	Price Each 1-99	
TCH-66	2.36	3.15	35.97	
TCH-69	3.15	3.94	41.04	
TCH-72	3.94	4.72	46.14	
TCH-75	5.12	5.91	53.75	

Pull Handles



Made from 304 stainless casting. The surface is blasted and electroplated with a semi-matte finish. Type A has through holes for front mounting and is supplied with stainless socket screws, washers and nuts. Type B has blind holes and is supplied with stainless hex head screws and washers.

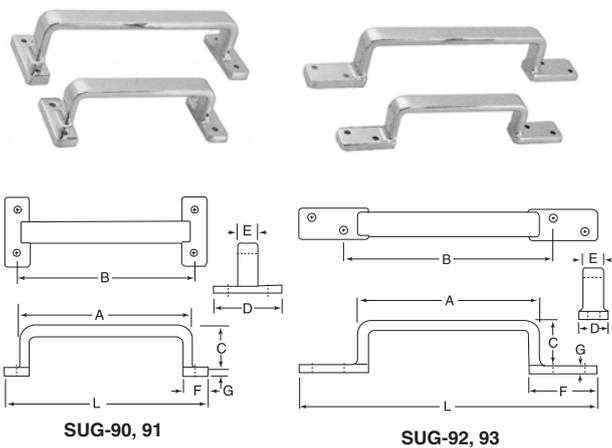
See table 36 below for additional discounts.

Cat. No.	A	L	B	C	D	E	F	G	Price Each 1-99	
Type A										
TCH-36	5.51	6.69	M8x30mm	.59	1.77	.98	.47	1.10	87.00	
TCH-39	7.09	8.58	M10x40mm	.71	2.28	1.26	.59	1.42	117.70	
Type B										
TCH-42	5.51	6.69	M8x18mm	.59	1.77	.98	.47	1.10	83.93	
TCH-45	7.09	8.58	M10x20mm	.71	2.28	1.26	.59	1.42	112.60	

36	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	10%	15%	20%	Call

PULL HANDLES

Type 316 Stainless Steel

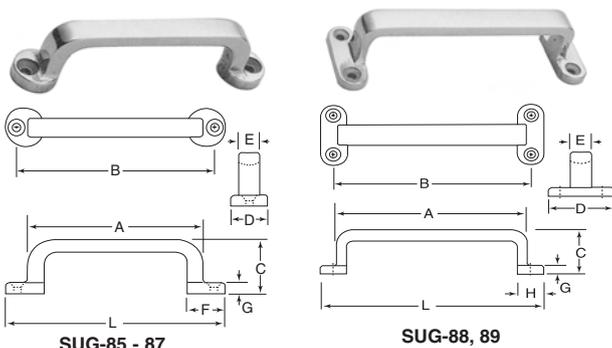


Handles are NSF certified, and meet the Food Industry Standard. Mirror finish. Supplied with stainless steel mounting screws.

See table 17 below for additional discounts.

Cat. No.	L	A	B	C	D	E	F	G	Price Each 1-25	
SUG-90	7.874	6.693	6 ⁵⁷ / ₆₄	1.969	2.756	.866	.984	.315	64.00	
SUG-91	11.024	9.843	9 ³¹ / ₃₂	2.441	3.150	1.024	1.063	.394	110.00	
SUG-92	11.031	6.693	7 ²³ / ₃₂	1.969	1.181	.866	2.559	.315	61.00	
SUG-93	14.563	9.843	10 ²⁹ / ₃₂	2.441	1.417	1.024	2.835	.394	116.10	

Type 304 Stainless Steel Pulls

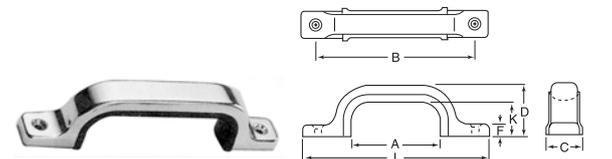


Handles are NSF certified and meet the Food Equipment Industry Standard. Mirror finish. Supplied with stainless steel mounting screws.

See table 17 below for additional discounts.

Cat. No.	L	A	B	C	D	E	F	G	H	Price Each 1-25	
SUG-85	2.559	1.890	2 ¹ / ₄	.630	.512	.276	.512	.138	.511	12.30	
SUG-86	3.150	2.520	2 ²⁷ / ₃₂	.787	.551	.315	.551	.157	.551	14.30	
SUG-87	3.937	2.953	3 ¹⁵ / ₃₂	.984	.709	.394	.709	.197	.709	19.10	
SUG-88	4.724	4.016	4 ¹¹ / ₆₄	1.063	1.417	.472	.551	.197	.551	27.00	
SUG-89	5.906	4.961	5 ⁹ / ₁₆	1.299	1.772	.591	.709	.236	.709	41.50	

Type 304 Stainless Steel Pulls w/ Rubber Grip



Handle has rubber grip for improved handling. Supplied with stainless steel screws.

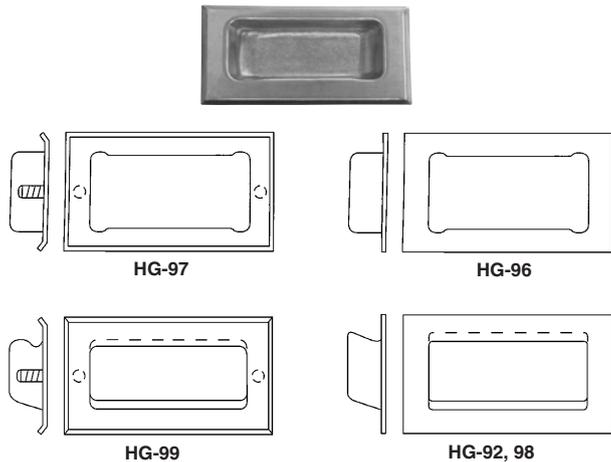
See table 17 below for additional discounts.

Cat. No.	L	A	B	Finish	C	D	E	F	G	H	K	Screw Size	Price Each 1-25
SUG-79	2.756	.787	2 ¹ / ₈	Mirror	.669	1.102	.827	.217	.130	.260	.827	3.1x16	10.80
SUG-80	2.756	.787	2 ¹ / ₈	Satin	.669	1.102	.827	.217	.130	.260	.827	3.1x16	10.80
SUG-81	4.724	2.244	4 ¹ / ₆₄	Mirror	.748	1.260	.827	.256	.150	.299	.827	3.5x20	13.90
SUG-82	4.724	2.244	4 ¹ / ₆₄	Satin	.748	1.260	.827	.256	.150	.299	.827	3.5x20	13.90
SUG-83	6.299	3.465	5 ³⁹ / ₆₄	Mirror	.866	1.476	.906	.295	.161	.319	.906	4.1x25	16.00
SUG-84	6.299	3.465	5 ³⁹ / ₆₄	Satin	.866	1.476	.906	.295	.161	.319	.906	4.1x25	16.50

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

PULL HANDLES

Flush Door or Drawer Pulls



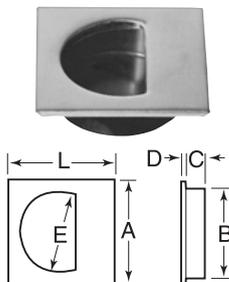
Flush pulls are available with either mounting studs or plain for spot welding. Brushed satin finish on top side only.

See table 31 below for additional discounts.

w/ Studs Cat. No.	w/o Studs Cat. No.	Thread	Stud Center to Center	Plate Size	Price Each	
					1-99	5000+
HG-97	HG-96	10-32	4	4.75 x 2.42	4.44	4.78
HG-99	HG-98	10-32	4	4.75 x 2.42	4.94	3.86

31	Quantity Discount	Price Each						
		1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Net	5%	10%	15%	20%	25%	Call	

Half Moon Type 304 Stainless Steel



Recessed style is low profile. There are no protruding pieces to get work pieces, etc. caught on. Made from Type 304 stainless steel. Satin finish.

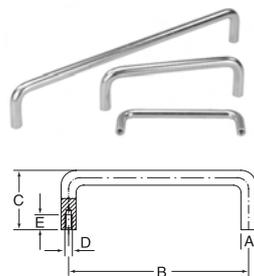
See table 17 below for additional discounts.

Cat. No.	L	A	B (Dia.)	C	D	E	Price Each
							1-25
SUG-99	1.47/64	1.732	1.382	.386	.087	1.220	2.65
SUG-100*	1.47/64	1.732	1.382	.386	.087	1.220	5.10
SUG-101	1.27/32	1.850	1.480	.406	.087	1.339	2.75
SUG-102	2.1/4	2.244	1.913	.406	.087	1.732	2.80

*Handle is brass with a satin finish.

Kipp® Round - Bow Shaped 303 Stainless Steel

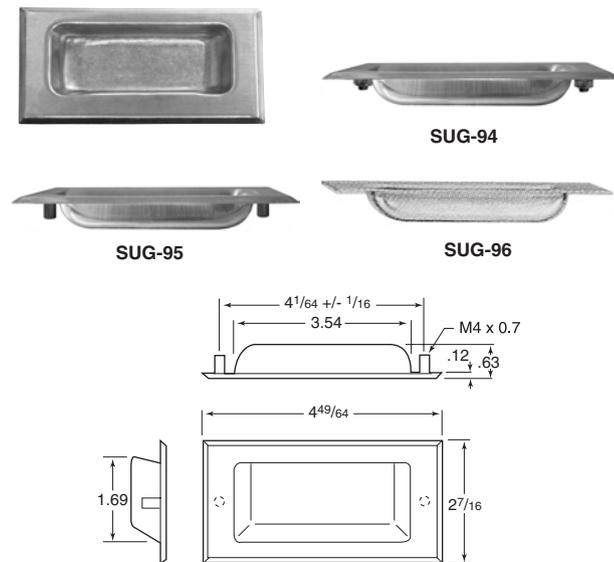
New!



See table 17 below for additional discounts.

Cat. No.	A	B	C	Thread D	Min. E	Price Each
KPB-1411	8	100	35	M5x.80	10	11.40
KPB-1412	10	120	40	M5x.80	10	14.80
KPB-1413	10	250	40	M5x.80	10	19.90
KPB-1414	10	350	40	M5x.80	10	24.03

Flush Drawer Pull Type 304 Stainless Steel

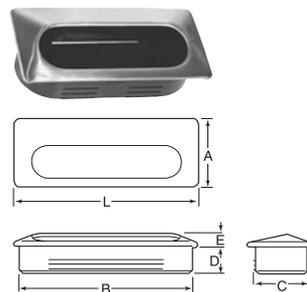


Stainless flush pulls are available with either male or female threaded mounting studs, or as a weld on mount. All are 304 stainless with a satin finish.

See table 17 below for additional discounts.

Cat. No.	Screw Size	Description	Price Each
SUG-94	10-32	Flush Pull Handle with Male Studs	7.50
SUG-95	M4 x 30	Flush Pull Handle with Female Studs	6.80
SUG-96	—	Weld On Flush Pull Handle	5.90

Rectangular Type 304 Stainless Steel



Recessed style is low profile. There are no protruding pieces to get work pieces, etc. caught on. Made from Type 304 stainless steel, with a satin finish. Pull handles are NSF certified to meet the Food Equipment Industry Standard.

See table 17 below for additional discounts.

Cat. No.	L	A	B	C	D	E	Price Each
							1-25
SUG-97	2.61/64	1.417	2.795	1.213	.610	.276	6.40
SUG-98	4.1/8	1.575	3.898	1.280	.610	.295	6.80

Amerock® Bar Pulls



Made of high quality Type 303 and 304 solid stainless steel. The vertical posts are 10mm in diameter. The horizontal bar is 12mm in diameter.

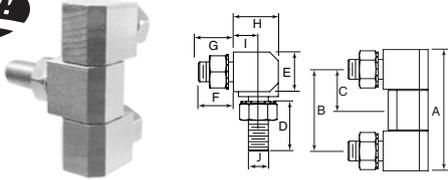
See table 17 below for additional discounts.

Cat. No.	Hole Centers		Overall Length		Price Each
	Inch	mm	Inch	mm	
AN-191	3.78	96	6.14	156	8.28
AN-192	7.56	192	9.84	250	11.97
AN-193	10.08	256	13.23	336	14.73
AN-194	12.60	320	15.75	400	16.57
AN-195	16.38	416	19.53	496	20.26
AN-196	18.90	480	22.05	560	22.10
AN-197	21.42	544	24.57	624	23.03
AN-198	25.20	640	28.35	720	24.00
AN-199	30.24	768	33.39	848	27.63

17	Quantity Discount	Price Each						
		1-25	26-99	100-249	250-499	500-999	1000-2499	2500-4999
	Net	5%	8%	10%	12.5%	15%	17.5%	Call

180° Screw On Hinge For Projection Doors

New!

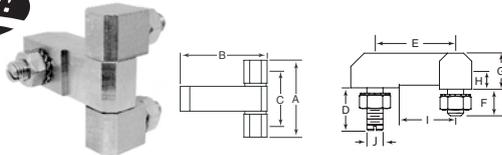


See table 11 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	I	J	Price Each 1-24
304 Stainless Steel											
ELH-915	1.54	1.07	0.54	0.55	0.47	0.39	0.47	0.53	0.3	M6	16.51
ELH-917	1.93	1.3	0.65	0.87	0.63	0.55	0.63	0.71	0.39	M8	25.36
316 Stainless Steel											
ELH-916	1.54	1.07	0.54	0.55	0.47	0.39	0.47	0.53	0.3	M6	47.93
ELH-918	1.93	1.3	0.65	0.87	0.63	0.55	0.63	0.71	0.39	M8	62.85

180° Screw On Hinge For Pressure Resistant Flush Doors

New!

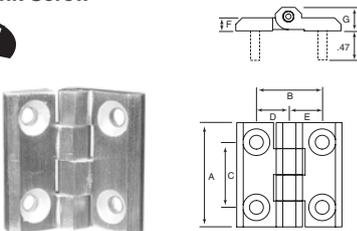


See table 11 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	I	J	Price Each 1-24
304 Stainless Steel											
ELH-919	1.58	1.77	1.11	0.63	1.18	0.39	0.53	0.3	0.71	M6	20.00
ELH-921	2.01	1.97	1.38	0.79	1.14	0.55	0.71	0.39	1.02	M8	33.87
316 Stainless Steel											
ELH-920	1.58	1.77	1.11	0.63	1.18	0.39	0.53	0.3	0.71	M6	63.74
ELH-922	2.01	1.97	1.38	0.79	1.14	0.55	0.71	0.39	1.02	M8	65.08

Stainless Steel - Type 316 Countersunk Screw

New!



See table 11 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	Price Each 1-24
ELH-923	1.57	1.57	0.98	0.49	0.49	0.2	0.35	16.70
ELH-924	1.97	1.97	1.18	0.59	0.59	0.24	0.45	17.13
ELH-925	1.97	2.99	1.18	1.1	1.1	0.24	0.45	18.83
ELH-926	2.36	2.36	1.42	0.71	0.71	0.31	0.59	20.55

Weld-On Hinge

Expanded Line



Weld on hinges for steel cabinets, machinery doors, steel gates, electrical boxes etc. Weld on hinges can handle most applications due to their unique but simple design. They can replace butt hinges, piano hinges, or strap hinges. Includes welding feet and brass bushing.

See table 11 below for additional discounts.

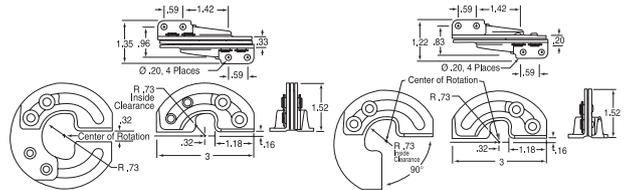
Cat. No.	Stainless Steel Type	A	B	Price Each 1-24
ELH-01	300	1.57	.31	3.86
ELH-927	304	1.57	.31	4.31
ELH-931	316	1.57	.31	21.78
ELH-02	300	1.97	.39	4.64
ELH-928	304	1.97	.39	5.10
ELH-932	316	1.97	.39	24.14
ELH-03	300	2.75	.51	6.29
ELH-929	304	2.75	.51	6.80
ELH-933	316	2.75	.51	26.82
ELH-04	300	3.15	.63	9.05
ELH-930	304	3.15	.63	9.65
ELH-934	316	3.15	.63	29.84

11	Quantity Discount	1-24 Net	25-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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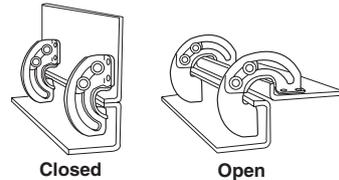
Concealed Hinges Fixed Installation



90° Free Swinging 90° Stay Open 180° Free Swinging



Operation

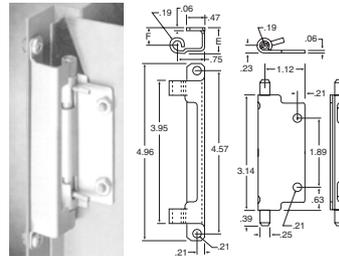


Closed Open

These hinges are available in 90°, 180° and 90° with stay open feature. Type 300 series stainless steel Comes with black acetal washers and bushings. Panels over .16" thick will require a 45° chamfer. Install with either M5 or No. 10 hardware, or weld.

Cat. No.	Southco	Description	Maximum Working Load (lbs)		Price Each
			Radial	Axial	
SC-2	R6-20-23	180° Free Swinging	114	37	16.44
SC-4	R6-21-23	90° Free Swinging	118	42	8.18
SC-6	R6-22-23	90° Door Stay	63	69	11.06

Concealed Removable Hinges

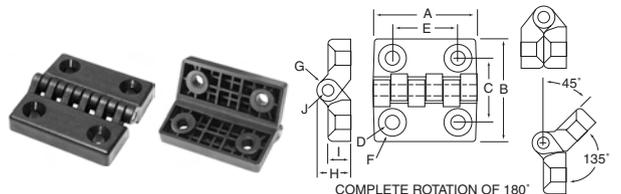


Mounts inside formed doors. Type 300 series stainless steel. Accommodates either left or right hand applications. Internal spring and release pin are Type 300 series stainless steel. Comes with one frame leaf and one door leaf per package. Dimension E + .02" equals the distance from the outside surface of your frame to the inside surface of your door.

See table 11 below for additional discounts.

Cat. No.	Southco	E	F	Price Per Pkg. 1-24
SC-6611	F6-1-1	.67	.47	11.34
SC-6631	F6-3-1	.92	.72	11.34

Reid SELECT THROUGH HOLE HINGES



Made of black reinforced polyamide. Resistant to oils and greases. Satin finish. Stainless steel pin.

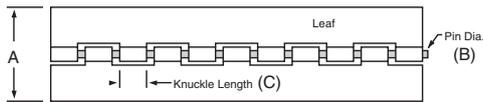
See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	H	I	J	Screw Size	Price Each 1-25
JCL-318	1.26	1.26	.79	.18	.79	.31	.28	.41	.28	.12	M4	4.05
JCL-319	1.89	1.89	1.18	.26	1.18	.51	.39	.61	.41	.20	M6	4.54
JCL-321	2.52	2.52	1.57	.26	1.57	.51	.47	.75	.51	.20	M6	5.19
JCL-322	3.78	3.78	2.48	.33	2.36	.63	.63	.94	.63	.31	M8	11.36
JCL-323	3.78	3.78	2.48	.41	2.36	.79	.63	.94	.63	.31	M10	11.36

17	Quantity Discount	1-25 Net	26-99 5%	100-249 8%	250-499 10%	500-999 12.5%	1000-2499 15%	2500+ Call
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HINGES

Continuous Hinges



Hinges are all six foot length with no holes. Made from Type 304 stainless steel.

See table 11 below for additional discounts.

Cat. No.	A	B	C	D*	Price Each
1-24					
H-201	3/4	.085	1/4	.035	5.88
H-202	1 1/16	.085	1/4	.035	6.84
H-203	1 1/4	.085	1/4	.035	7.56
H-204	1 1/2	.085	1/4	.035	8.52
H-205	2	.085	1/4	.035	10.56
H-208	1 1/2	.091	1/2	.040	9.36
H-209	2	.091	1/2	.040	11.52
H-211	1 1/4	.120	1/2	.050	10.56
H-212	1 1/2	.120	1/2	.050	12.00
H-214	2	.120	1/2	.050	14.64
H-215	2 1/2	.120	1/2	.050	17.28
H-216	3	.120	1/2	.050	19.92
H-220	1 1/4	.120	1/2	.060	12.36
H-221	1 1/2	.120	1/2	.060	14.16
H-223	2	.120	1/2	.060	17.28
H-224	2 1/2	.120	1/2	.060	20.28
H-225	3	.120	1/2	.060	23.28
H-228	1 1/2	.187	5/8	.060	17.28
H-230	2	.187	5/8	.060	20.64
H-232	3	.187	5/8	.060	26.64
H-238	3	.250	1	.070	34.80
H-240	4	.250	1	.070	42.48

*Leaf thickness

Spring Hinges

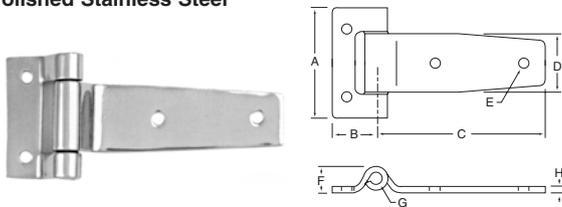


Hold doors open with spring hinges. Made from Type 304 stainless steel.

See table 11 below for additional discounts.

Cat. No.	Length	Open Width	Leaf Thickness	Spring Wire Dia.	Hole Dia.	Price Each
1-24						
HG-1605	1.75	1.5	.035	.025	—	4.05
HG-1612	2.00	1.0	.035	.025	.141	1.45
HG-1615	2.00	1.0	.035	.035	.141	1.87

Strap Hinges Polished Stainless Steel



Hinges are unhandled and available with either square or round holes. Made from Type 304 stainless steel.

See table 11 below for additional discounts.

Round Holes	Square Holes											Price Each
Cat. No.	Cat. No.	A	B	C	D	E		F	G	H	1-24	
H-400	H-401	2.048	.945	3.150	1.102	.205	.205	.433	.236	.099	7.39	
H-402	H-403	2.678	1.418	4.725	1.500	.252	.267	.630	.315	.158	11.29	
H-404	H-405	4.174	1.890	8.000	1.969	.346	.346	.788	.394	.197	28.23	

Slip Joint Hinges

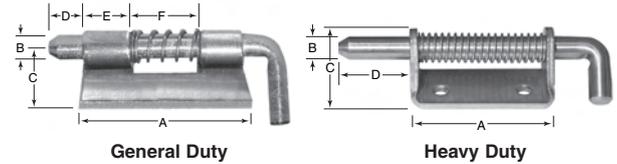


Left hand or right hand mounting. Right hand is pictured. Type 300 series stainless steel. No holes. Two hinges per package.

See table 11 below for additional discounts.

Cat. No.	Hand	Length	Open Width	Pin Dia.	Leaf Thickness	Price Per Pkg.
1-24						
HG-8105	Left	2.0	1.68	.187	.075	5.55
HG-8106	Right	2.0	1.68	.187	.075	5.55
HG-8110	Left	3.0	2.00	.187	.093	10.03
HG-8111	Right	3.0	2.00	.187	.093	10.03
HG-8115	Left	3.0	3.00	.250	.093	12.83
HG-8116	Right	3.0	3.00	.250	.093	12.83

Latch Hinges



General Duty

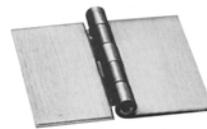
Heavy Duty

Made from Type 302 stainless steel. Dual purpose latch hinges are ideal for lid or door latches, or easily removable hinges. The spring loaded, chamfered pin holds securely, whether used as a latch or hinge. No holes included except on heavy duty latch hinges. Extra heavy duty can be used left handed or right handed. Available left or right handed. Left handed pictured.

See table 11 below for additional discounts.

Cat. No.	Leaf Thickness	Hand	A	B	C	D	E	F	Price Each
1-24									
General Duty - Type 300 Series Stainless Steel									
HG-9223	.040	Right	.875	.125	.500	.187	.250	.375	3.88
HG-9224	.040	Left	.875	.125	.500	.187	.250	.375	3.88
HG-9233	.040	Right	1.390	.156	.750	.250	.375	.625	3.73
HG-9234	.040	Left	1.390	.156	.750	.250	.375	.625	3.73
HG-9243	.050	Right	2.000	.187	.875	.375	.500	1.000	3.03
HG-9244	.050	Left	2.000	.187	.875	.375	.500	1.000	3.03
HG-9253	.062	Right	2.750	.250	1.000	.500	.750	1.250	3.78
HG-9254	.062	Left	2.750	.250	1.000	.500	.750	1.250	3.78
Heavy Duty - Type 300 Series Stainless Steel									
HG-9263	.125	Right	2.000	.375	1.120	1.250	—	—	11.48
HG-9264	.125	Left	2.000	.375	1.120	1.250	—	—	11.48
HG-9273	.187	Right	3.000	.500	1.250	1.500	—	—	17.02
HG-9274	.187	Left	3.000	.500	1.250	1.500	—	—	17.02

BUTT HINGES

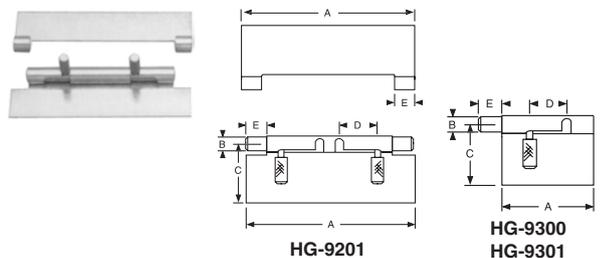


Square and rectangular butt hinges have no holes and pins are spun on both ends. Made from Type 316 stainless steel.

See table 11 below for additional discounts.

Cat. No.	Length	Open Width	Leaf Thickness	Pin Dia.	Price Each
1-24					
HG-7000	1.0	1.06	.035	.086	.27
HG-7004	1.5	1.50	.035	.086	.51
HG-7005	1.5	1.50	.050	.120	1.65
HG-7010	2.0	2.00	.060	.120	2.02
HG-7011	2.0	2.00	.078	.187	4.60
HG-7014	2.5	2.50	.060	.120	1.91
HG-7015	2.5	2.50	.078	.187	4.53
HG-7018	3.0	3.00	.060	.120	2.86
HG-7019	3.0	3.00	.078	.187	4.52
HG-7020	3.0	3.00	.093	.187	6.00
HG-7021	3.0	3.00	.090	.250	5.16
HG-7022	3.0	3.00	.120	.250	5.94
HG-7023	4.0	4.00	.078	.187	6.12
HG-7025	4.0	4.00	.120	.250	9.93
HG-7027	5.0	5.00	.120	.250	11.50
HG-7028	6.0	6.00	.120	.250	15.06
HG-7029	6.0	6.00	.165	.370	29.84

Spring Release Hinges



HG-9201

HG-9300
HG-9301

Door comes right off with the spring release hinge. It is a quick release hinge that can be mounted in any position and requires no tools to take the hinge off. An easy squeeze of the knurled knob retracts the spring loaded pin from the knuckle to release the leaf. Precise manufacturing standards eliminate excess side and end play from minimum door movement. Type 300 series stainless steel. Leaf thickness of .050".

See table 11 below for additional discounts.

Cat. No.	Hand	A	B	C	D	E	Price Each
1-24							
HG-9201	—	4.00	.25	1.00	.41	.37	18.70
HG-9300	Left	1.75	.25	1.00	.53m	.50	12.10
HG-9301	Right	1.75	.25	1.00	.53	.50	12.10

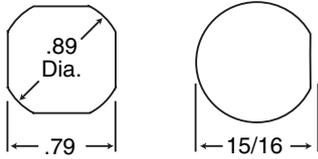
11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call



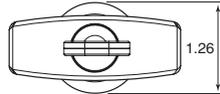
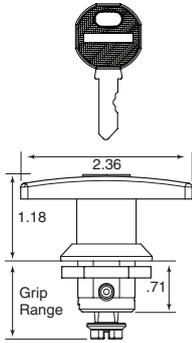
HEAVY DUTY NEMA-4 1/4 TURN LATCHES

Water and Dust Resistant
IP65 Rated Electrical Use

All latches listed below are Nema 4 and IP65 rated. Each latch is shipped assembled and includes the following components: housing, insert, rubber seal, foam in place, gasket, hex nut and cam. Grip range is calculated as the door flange with compressed gasket and cabinet flange. All grip ranges are approximate. Cams for grip ranges other than those listed below can be supplied as a special order. Please call us for any Emka latch or part. **Note:** All of the latches on this page use either of these cut out dimensions.



T-Handle



Non-Locking 304 Stainless Steel - Blank

See table 11 below for additional discounts.

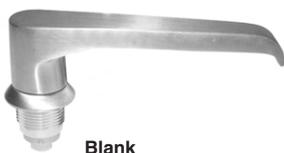
Approx. Grip Height	Cat. No.	Price Each 1-24
1/4	ELH-804	50.52
3/8	ELH-806	50.52
9/16	ELH-808	50.52
3/4	ELH-810	50.52
7/8	ELH-811	50.52
15/16	ELH-812	50.52
1 1/16	ELH-814	50.52
1 1/8	ELH-815	50.52

Non-Locking 316 Stainless Steel

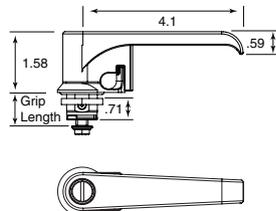
See table 11 below for additional discounts.

Approx. Grip Range	Cat. No.	Price Each 1-24
1/4	ELH-843	105.64
3/8	ELH-845	105.64
9/16	ELH-847	105.64
3/4	ELH-849	105.64
7/8	ELH-850	105.64
15/16	ELH-851	105.64
1 1/16	ELH-853	105.64
1 1/8	ELH-854	105.64

L-Handle With Padlock Option



Blank



Blank 316 Stainless Steel

See table 11 below for additional discounts.

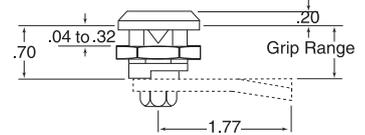
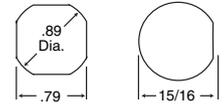
Approx. Grip Range	Cat. No.	Price Each 1-24
1/4	ELH-817	50.52
3/8	ELH-819	50.52
9/16	ELH-821	50.52
3/4	ELH-823	50.52
7/8	ELH-824	50.52
15/16	ELH-825	50.52
1 1/16	ELH-827	50.52
1 1/8	ELH-828	50.52

Padlockable 316 Stainless Steel

See table 11 below for additional discounts.

Approx. Grip Range	Cat. No.	Price Each 1-24
1/4	ELH-830	137.56
3/8	ELH-832	137.56
9/16	ELH-834	137.56
3/4	ELH-836	137.56
7/8	ELH-837	137.56
15/16	ELH-838	137.56
1 1/16	ELH-840	137.56
1 1/8	ELH-841	137.56

Slotted Pawl Latches



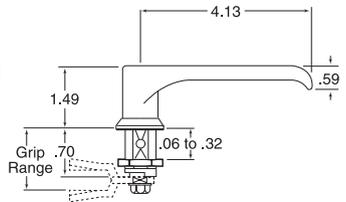
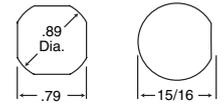
Type 304 stainless steel. Other tool operations available as special order. Please call for price and delivery.

See table 11 below for additional discounts.

Cat. No.	Approx. Grip Range	Price Each 1-24
ELH-30	3/8	28.77
ELH-31	9/16	28.77
ELH-34	7/8	28.77
ELH-35	15/16	28.77
ELH-36	1 1/16	28.77
ELH-37	1 1/8	28.77

L-Handle Pawl Latches

304 stainless steel



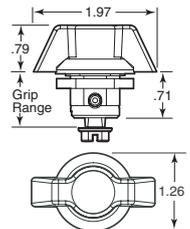
See table 11 below for additional discounts.

Cat. No.	Approx. Grip Range	Price Each 1-24
ELH-206	3/8	65.46
ELH-209	3/4	65.46
ELH-213	1 1/8	65.46

*With lock

Wing Handle

304 Stainless Steel



See table 11 below for additional discounts.

Approx. Grip Range	Cat. No.	Price Each 1-24
1/4	ELH-791	48.12
3/8	ELH-793	48.12
9/16	ELH-795	48.12
3/4	ELH-797	48.12
7/8	ELH-798	48.12
15/16	ELH-799	48.12
1 1/16	ELH-801	48.12
1 1/8	ELH-802	48.12

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

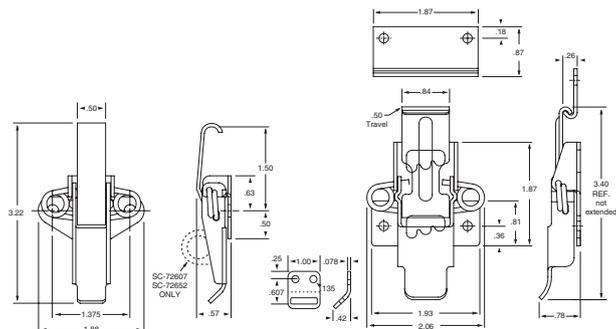
Versa Latch® Tension Latches



SC-72507
SC-72552



SC-74602
SC-74652



Torsion springs compensate for application irregularities. Easy to grasp handle design. Made from Type 300 series stainless steel, passivated. Keepers not included and must be purchased separately. SC-72652 is padlockable.

See table 11 below for additional discounts.

Latches		Keeper		Average Ultimate Load (Lbs.)	Price Each	
Cat. No.	Southco	Cat. No.	Southco		Latches	Keepers
SC-72552	V2-0025-52	SC-7252	V2-0018-52	380	5.20	.49
SC-72652*	V2-0026-52	SC-7252	V2-0018-52	380	5.62	.49
SC-74652	V4-0006-52	SC-7452	V4-0009-52	800	6.50	.76

*Similar to SC-72552 but padlockable

DRAW PULL CATCHES



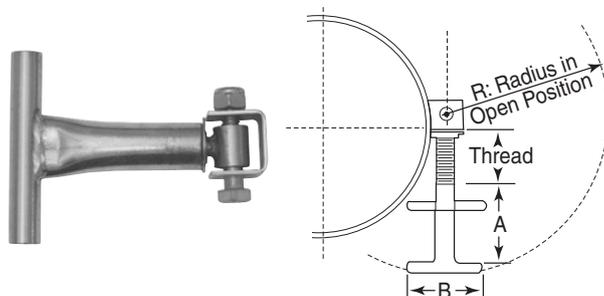
Draw pull catches are available in two sizes. Made from Type 304 stainless steel. Strike included.

See table 11 below for additional discounts.

Cat. No.	OAL	Overall Width	Mounting Holes	Price Each
				1-24
HG-83323	2.25	.93	.130	5.50
HG-83333	3.93	1.03	.195	13.50

*Padlockable

LORENZ CLAMPS

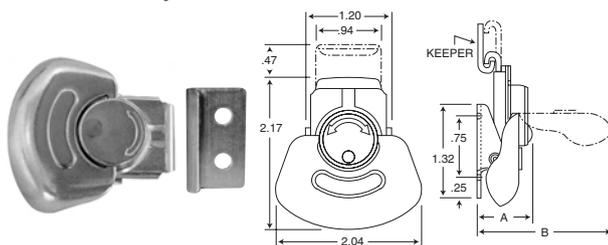


Patented quick clamp is ideal for door openings on bins, hoppers, tanks and manholes. T-handle allows torque without tools. The one piece unit is made of highly polished Type 304 stainless steel. Full 2" adjustment. 180° pivot when disengaged, leaving access doorway unobstructed. Will not loosen through vibration. Brackets supplied for easy installation.

See table 11 below for additional discounts.

Cat. No.	Thread	A	B	R	Price Each
					1-24
LZ-250	1/4	3 1/2	3	6 1/2	11.43
LZ-312S	5/16	2 1/2	3	4	12.70
LZ-312	5/16	3 1/2	3	6 1/2	12.70
LZ-375S	3/8	2	3	4	13.08
LZ-375	3/8	3 1/2	3	6 3/4	13.08
LZ-500	1/2	3 1/2	3	6 3/4	13.85

Link Lock Rotary Action Draw Latches

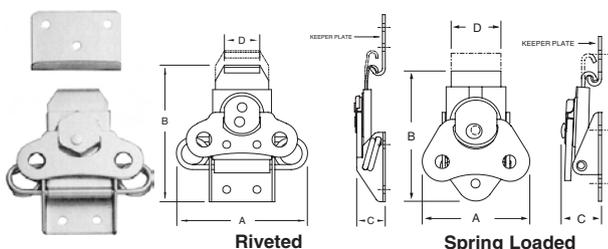


Draws panels together with overcenter clamping force and slide travel of .47". Simply lift wing and twist to disengage. Available with spring loaded option for mounting hole irregularities or shock and vibration. Type 300 series stainless steel. Working load is 190 lbs. Keepers not included and must be purchased separately.

See table 11 below for additional discounts.

Cat. No.	Southco	Description	A	B	Price Each
					1-24
SC-K255	K2-3005-51	Latch	.73	1.89	11.02
SC-843	K4-2338-51	Keeper	—	—	.54

Link Lock Rotary Action Latches



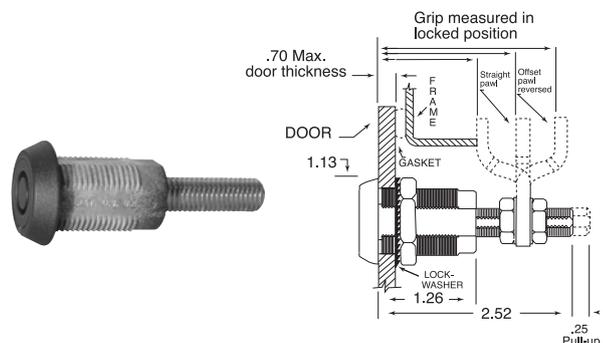
Lift and rotate wing to operate. The catches are available spring loaded or riveted. Spring loaded type compensate up to .156" for misalignment. Keylockable models SC-8433 and SC-8507 come with two keys and are keyed alike. Keepers are not included and must be ordered separately. Made from Type 300 stainless steel.

See table 11 below for additional discounts.

Latches		Keeper		A	B	Load Capacity	Price Each	
Cat. No.	Southco	Cat. No.	Southco				Latches	Keepers
Spring Loaded - Stainless								
SC-8332	K3-1735-52	SC-832	K3-0334-52	1.93	1.82	.58 .69	450	5.76 .46
SC-8552	K5-2856-52	SC-851	K5-2811-52	3.25	3.41	.77 .88	900	12.58 1.51
Riveted - Stainless								
SC-8352	K3-1625-52	SC-832	K3-0334-52	1.50	1.83	.58 .69	450	5.34 .46
SC-8553	K5-2857-52	SC-851	K5-2811-52	2.75	3.43	.67 .88	900	12.18 1.51

*Keylockable

Tubular Key Operated



Type 303 stainless steel. Tubular key must be ordered separately.

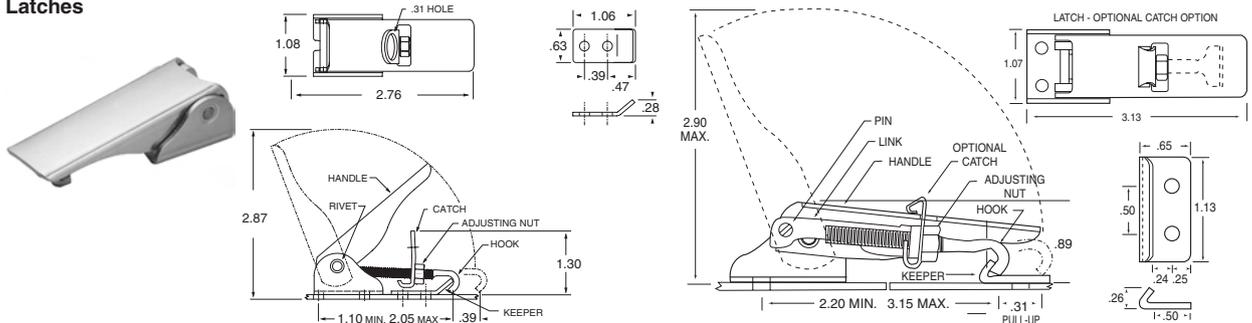
See table 11 below for additional discounts.

Cat. No.	Southco	Grip Range Pawl Forward		Grip Range Pawl Reversed		Price Each
		Min.	Max.	Min.	Max.	
SC-7431	E3-15-15	.45	1.07	2.61	3.00	13.28
SC-7432	E3-15-25	1.00	1.62	2.07	2.69	13.28
SC-7433*	E3-15-35	1.53	2.15	1.53	2.15	13.28
SC-7430	E3-5-15	Tubular Key				1.71
SC-733	E3-24-201-18	Gasket for Gasketed Applications				.61
SC-734	90-6-875	Spur Washer for Optional Round Hole Installation				.63

*Straight pawl

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

Vantage-Downunder™ Latches



Concealed Base

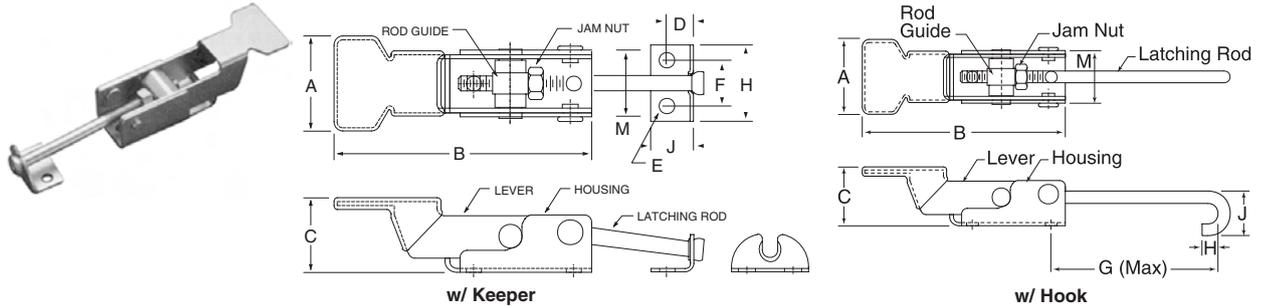
Exposed Base

Under center latch adjusts up to one inch. Available with concealed or exposed bases. Padlock or secondary catch option. Kick out feature moves unlatched hook from keeper. Made from Type 300 series stainless steel, and available in either bright or black finish. **Note:** Keepers not included and must be purchased separately. Average ultimate load 350 lbs.

See table 11 below for additional discounts.

Concealed Base	Southco	Exposed Base	Southco	Description	Color/Material	Price Each
Cat. No.		Cat. No.				1-24
SC-91352	91-512-52	SC-912	91-552-52	Latch	Bright Stainless	8.02
SC-910	91-512-25	SC-913	91-552-25	Latch	Black Stainless	11.02
SC-914	91-522-52	SC-916	91-562-52	Latch w/ Secondary Catch	Bright Stainless	10.94
SC-917	91-532-52	SC-919	91-572-52	Latch w/ Padlock Hasp	Bright Stainless	10.22
SC-91652	91-600-52	SC-845	K4-2338-52	Keeper	Bright Stainless	.41
SC-91663	91-600-63	SC-846	K4-2338-63	Keeper	Black Stainless	.59

Adjustable Draw Latches



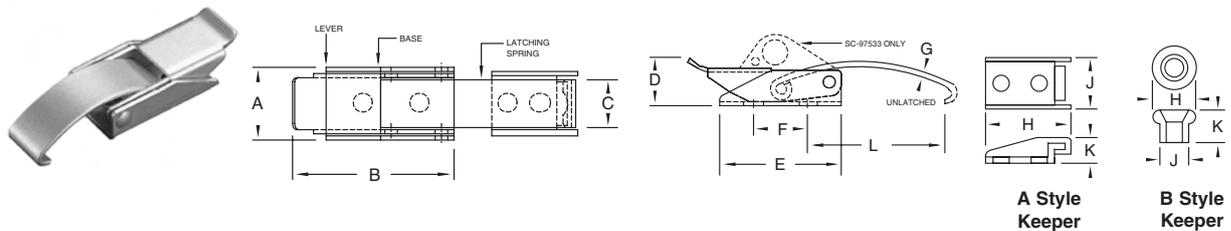
Threaded rod allows periodic adjustments where gasketing and material tolerances may vary. Made from passivated Type 300 series stainless steel.

See table 11 below for additional discounts.

Cat. No.	Southco	A	B	C	D	E	F	G Max.	H	J	M	Working Load Strength Lbs.	Ultimate Load Lbs.	Adjustment	Price Each
With Keeper															
SC-1511	A1-10-501-10	1.06	2.66	.78	.31	.203	.50	—	.88	.56	.82	40	75	.75	8.46
SC-1514	A1-10-501-40	1.06	2.66	.78	.31	.203	.50	—	.88	.56	.82	40	75	.75	15.46
SC-1714	A1-10-701-40	1.56	4.45	1.25	.44	.265	.75	—	1.21	.75	1.21	200	400	1.31	25.20
With Hook															
SC-1724	A1-11-702-40	1.56	4.45	1.25	—	—	—	4.44	.36	1.00	1.21	700	1,100	1.31	33.90

*With yellow vinyl grip

Over Center Draw Latches



Made from passivated stainless steel. Latches mount with M4 or No. 8 screws or 5/32" rivets. For type B keeper use a counter sunk screw. Keepers included. SC-97533 has a hole for a padlock.

See table 11 below for additional discounts.

Cat. No.	Southco	Keeper Style	A	B	C	D	E	F	G	H	J	K	L	Clamping Strength Lbs.	Price Each
A Style Keeper															
SC-97361	97-30-161-12	A	.50	1.08	.33	.31	.85	.380	.035	.56	.42	.14	.89	30	7.00
SC-97363	97-30-163-12	B	.50	1.08	.33	.31	.85	.380	.035	.30	.20	.14	.89	30	7.00
SC-975112	97-50-111-12	A	.89	1.91	.59	.56	1.50	.687	.042	.97	.75	.25	1.16	70	9.84
SC-975132	97-50-113-12	B	.89	1.91	.59	.56	1.50	.687	.042	.44	.31	.25	1.16	70	9.84
SC-97511	97-50-121-12	A	.89	1.91	.59	.56	1.50	.687	.042	.97	.75	.25	1.66	70	9.84
SC-97513	97-50-123-12	B	.89	1.91	.59	.56	1.50	.687	.042	.44	.31	.25	1.66	70	9.84
SC-97533*	97-50-323-12	B	.89	1.91	.59	.56	1.50	.687	.042	.44	.31	.25	1.66	70	9.84
SC-975312	97-50-131-12	A	.89	1.91	.59	.56	1.50	.687	.042	.97	.75	.25	2.16	70	9.84
SC-975332	97-50-133-12	B	.89	1.91	.59	.56	1.50	.687	.042	.44	.31	.25	2.16	70	9.84

*Hole for padlock

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
	Discount	Net	5%	8%	10%	12.5%	15%	Call

TOGGLE LATCHES

These versatile, medium size toggle latches are built for tough use on chests, cabinets, etc. Made from Type 300 series stainless. All mounting holes on latches and strikes will accept .156" dia. rivets or #6 round head screws. Latches that do not require strikes are designed to latch on notches, corners, lips, etc. The secondary latch prevents accidental opening. **Note:** Strikes are not included with the latch and must be purchased separately.



DTL-800ASS



DTL-802GSS

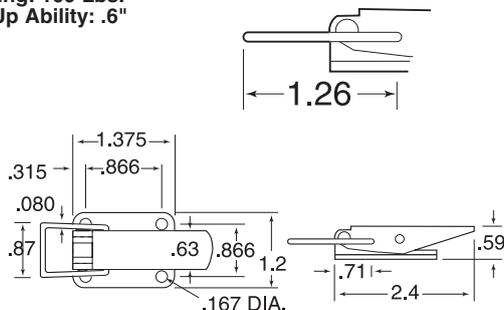


DTL-803GSS



DTL-806DASS

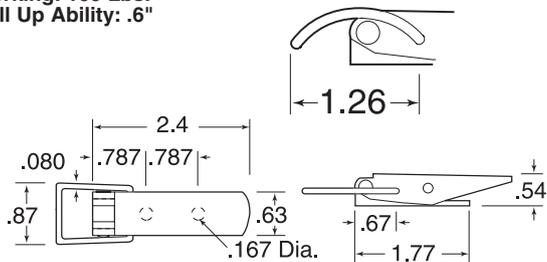
800 Series
Strength: Ultimate: 700 Lbs.
Working: 100 Lbs.
Pull Up Ability: .6"



See table 31 below for additional discounts.

Cat. No.	Secondary Lock	Price Each
DTL-800ASS	No	4.15
DTL-800AXSS	Yes	7.75

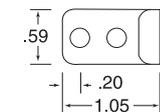
802 Series
Strength: Ultimate: 700 Lbs.
Working: 100 Lbs.
Pull Up Ability: .6"



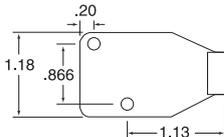
See table 31 below for additional discounts.

Cat. No.	Price Each
DTL-802GSS	4.23

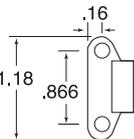
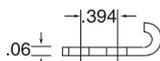
Strikes



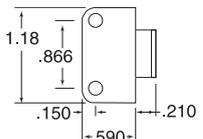
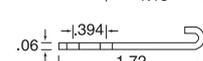
DTL-802-2SS



DTL-800-5SS



DTL-800-7SS



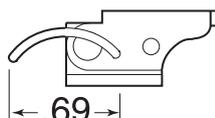
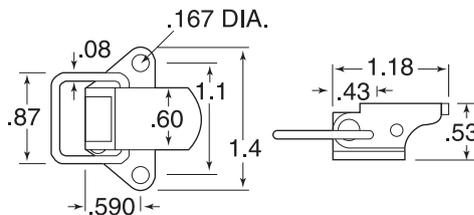
DTL-800-9SS

Any of these strikes may be used with any 800, 802, 803 and 806 latch. All mounting holes are .167" dia.

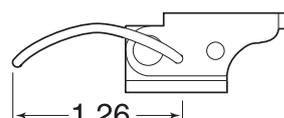
See table 31 below for additional discounts.

Cat. No.	Price Each
DTL-802-2SS	.55
DTL-800-5SS	.88
DTL-800-7SS	.55
DTL-800-9SS	.90

803 Series
Strength: Ultimate: 220 Lbs.
Working: 45 Lbs.
Pull Up Ability: .2"



DTL-803BSS

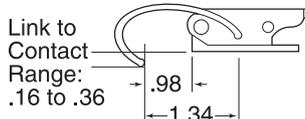
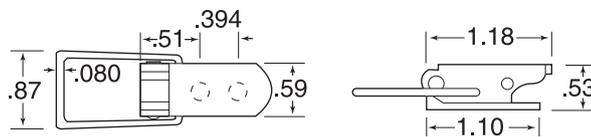


DTL-803GSS

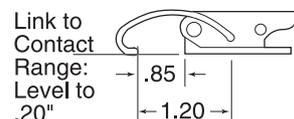
See table 31 below for additional discounts.

Cat. No.	Price Each
DTL-803BSS	4.23
DTL-803GSS	4.23

806 Series
Strength: Ultimate: 220 Lbs.
Working: 45 Lbs.
Pull Up Ability: .2"



DTL-806DBSS
(no strike needed)



DTL-806DASS
(no strike needed)

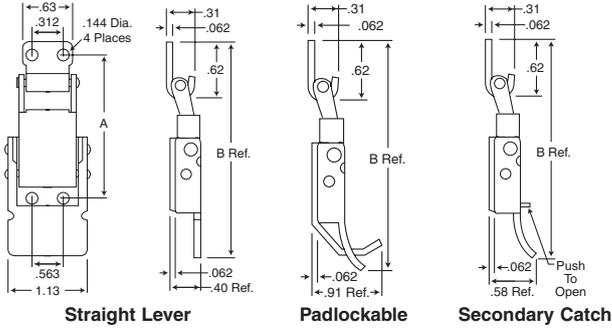
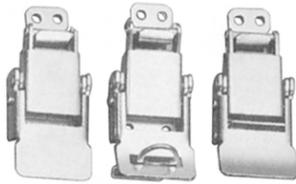
See table 31 below for additional discounts.

Cat. No.	Price Each
DTL-806DBSS	4.63
DTL-806DASS	4.63

31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
	Discount	Net	5%	10%	15%	20%	25%	Call

Nielsen/Sessions LATCHES

Compression Spring Catches



Mounting For Desired Tension		
Lbs.	A	B
30	1.813	2.79
50	1.875	2.85
70	1.938	2.91

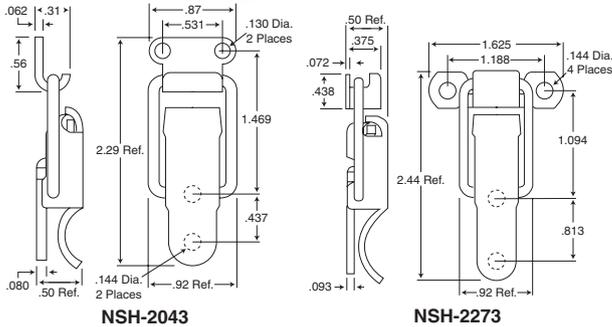
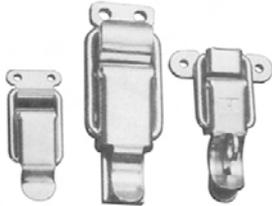
Three internal compression springs supply up to 70 pounds of spring tension. Available as padlockable or with secondary catch. Spring tension compensates for gasket set. Provides exact tension for water tight and air tight seals. Type 304 stainless steel. To increase tension, increase catch/strike separation.

See table 31 below for additional discounts.

Cat. No.	Description	Price Each
NSH-8332	Straight Lever	5.72
NSH-8333	Padlockable	7.22
NSH-8334	Secondary Catch	9.20

*Zinc plated steel

Straight Loop Catches



High strength overcenter catch and strike. Economical and compact. Made from Type 304 stainless steel, with or without mounting holes. Strike is included. Dimensions are as mounted. To increase tension, increase catch/strike separation.

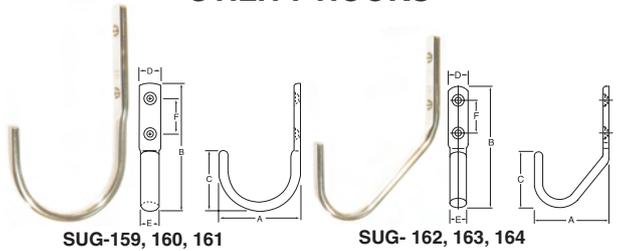
See table 31 below for additional discounts.

Cat. No.	Holes	Price Each
NSH-2043	Yes	3.22
NSH-2273*	Yes	4.22

*Padlockable

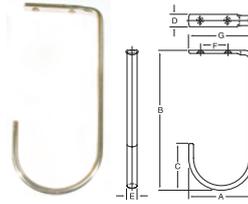
31	Quantity	1-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+
Discount	Net	5%	10%	15%	20%	25%	Call	

UTILITY HOOKS



SUG-159, 160, 161

SUG-162, 163, 164



SUG-165, 166

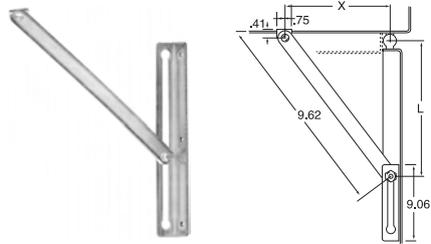
Hooks are made of Type 303 stainless steel, with a mirror finish. NSF certified to meet Food Equipment Industry Standards. Stainless steel screws included.

See table 17 below for additional discounts.

Cat. No.	A	B	C	D	E	F	G	Load Capacity	Screw Size	Price Each
SUG-159	1 ²⁹ / ₃₂	2 ²⁷ / ₃₂	1.339	.472	.394	.787	—	22	3.5x16	13.30
SUG-160	2 ⁴⁹ / ₆₄	4 ²⁹ / ₃₂	2.165	.630	.512	1.378	—	22	4.1x20	23.30
SUG-161	4 ²¹ / ₆₄	7 ⁷ / ₈	3.543	.709	.551	2.756	—	26	5.1x32	37.60
SUG-162	1 ⁹ / ₃₂	2 ²⁹ / ₃₂	1.339	.472	.394	.787	—	26	3.5x16	14.20
SUG-163	3 ⁹ / ₃₂	4 ¹⁷ / ₃₂	1.969	.630	.512	1.181	—	44	4.1x20	24.00
SUG-164	4 ²⁹ / ₃₂	7 ⁷ / ₈	3.543	.709	.551	2.756	—	48	5.1x32	38.00
SUG-165	3 ¹⁷ / ₆₄	7 ³ / ₃₂	2.362	.630	.512	1.378	3 ⁹ / ₃₂	22	4.5x25	30.70
SUG-166	4 ²¹ / ₆₄	10 ¹⁵ / ₆₄	3.543	.709	.551	1.969	4 ¹ / ₃₂	33	5.1x38	44.60

17	Quantity	1-25	26-99	100-249	250-499	500-999	1000-2499	2500+
Discount	Net	5%	8%	10%	12.5%	15%	Call	

DOOR STOP



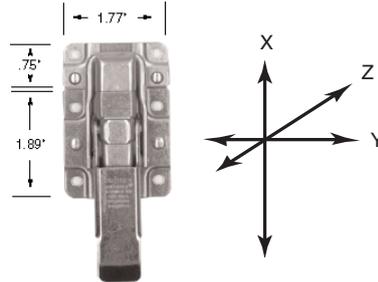
Holds door open at specific angle and prevents door from opening too far. When door is open fully, catch will hold door in place. To release door, push open slightly and catch is released. Made from Type 304 stainless steel. Opening angle is determined by "X" and "L" dimensions.

See table 11 below for additional discounts.

Cat. No.	Description	Price Each
ECS-1088	Type 304 Stainless Door Stop	32.96

11	Quantity	1-24	25-99	100-249	250-499	500-999	1000-2499	2500+
Discount	Net	5%	8%	10%	12.5%	15%	Call	

CATCHBOLT®



Holds firmly in three directions. Initial action pulls two parts together. As lever is latched an integral deadbolt slides into keeper forcing a panel or door to stay firmly in place with no movement in any direction. Six mounting holes are .16" diameter. Latch height when closed is .71". Material is Type 302/304 stainless.

See table 38 below for additional discounts.

Cat. No.	Description	Ultimate Strength Lbs.			Price Each
		X	Y	Z	
PX-881	Stainless Catchbolt	1,323	1,984	1,323	34.93

38	Quantity	1-9	10-24	25-49	50-99	100-249	250-499	500-999
Discount	Net	5%	8%	10%	12.5%	15%	17.5%	

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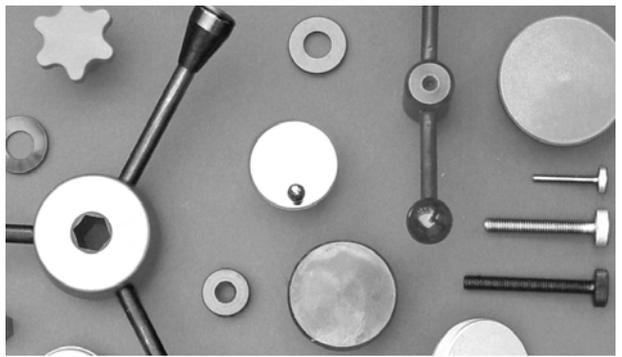
To the best of our knowledge, our manufacturers comply with Federal Occupational Safety and Health Act (OSHA) design standards of any items shown in this catalog as meeting specific OSHA standards. Actual use, however, determines whether all OSHA requirements have been met; thus, the ultimate responsibility for OSHA compliance rests with the end user. Accordingly, Reid Supply does not warrant or represent that merchandise sold complies with any law, including, but not limited to, OSHA, the Walsh-Healey Public Contracts Act, and/or regulations promulgated thereunder.

MANUFACTURERS’ WARRANTIES Many of the products displayed in this catalog are warranted to “Consumers” by their manufacturer. Copies of such manufacturers’ warranties are often supplied with the product, or are available from the manufacturer. Reid Supply may also supply manufacturers’ sales literature to customers. Reid Supply, however, assumes no liability for the content of such manufacturers’ warranties or literature.

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Your Modifications and Specials Source!

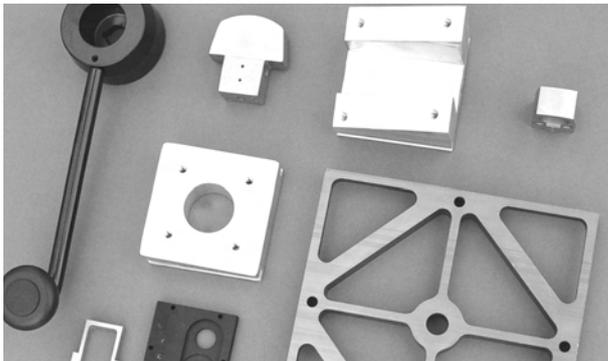
The Reid Supply catalog is filled with thousands of stock items, but occasionally a design calls for modifications. Reamed and tapped holes, broached holes, keyways and set screws are just some of the common modifications we can perform quickly. Price-competitive, modified standard product can be delivered to meet your schedule!



Here are some of the machining services we can offer:

- Milling
- Turning
- Drilling
- Tapping
- Broaching
- Grinding
- Burnishing
- Bending
- Welding

From simple modifications of catalog items to complex machined components and assemblies, Reid can help you get the results you're looking for. We can work from your concept or specifications to design, prototype, or manufacture whatever quantities are needed. Design services, close tolerance work, pre-assembly and certifications are available. Our skilled production team has experience creating unique components for many industries. Simply contact a customer service representative and our Rapid Response Team will get your project started the same day. With Reid Supply, special items and modified standard products are just a phone call away!



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REWORK CHARGES

Reid Supply Company is set up to modify many of the items shown in this catalog. The more common modifications are reboring, bores in blank parts, keyways and setscrew holes. The following charts may be used for rework charges on hand wheels, hand knobs and clamping handles. For your unusual requirements, send us your sketch or drawing for price and delivery. **SPECIAL NOTE:** For prices on quantities of 25 or more of special knobs and handles please call our office at 1-800-253-0421 or fax your inquiry to 1-800-438-1145 for our prompt quotation.

Price Per Bore

Quantity	1/2" Rebore	5/8" Rebore	3/4" Rebore	7/8" Rebore	1" Rebore	1 1/4" Rebore	1 1/2" Rebore	2" Rebore
1	14.55	15.85	18.15	20.65	22.30	39.40	41.95	45.70
2-4	8.25	9.10	9.90	11.55	12.40	22.85	29.25	35.55
5-9	6.60	8.25	9.25	10.75	11.55	21.65	26.70	33.00
10-14	5.65	7.10	8.25	9.45	10.90	19.30	25.40	31.80
15-19	5.30	6.60	7.95	9.10	9.90	18.85	24.70	30.45
20-29	5.15	5.95	7.45	8.25	9.45	18.30	23.95	29.25
30-49	4.95	5.30	7.10	7.95	9.25	18.10	23.15	27.95
50-99	4.80	4.95	6.60	7.45	8.95	17.55	22.85	26.70
100	4.30	4.80	6.45	7.10	8.60	17.30	22.40	25.40

Inquire for prices on quantities over 100.

Bush and rebore to smaller size hole - all quantities - \$29.70

Price per Keyway/ Set Screw Hole

Quantity	Price Per Standard Keyway	Price Per Setscrew Hole
1	18.15	10.90
2-4	9.90	6.30
5-9	9.10	5.65
10-14	7.45	5.30
15-19	6.60	5.15
20-29	5.80	4.95
30-49	5.45	4.80
50-99	5.30	4.15
100-199	4.95	3.45
200-249	4.80	2.85
250	4.30	2.65

Example of pricing a modified item:

1 piece of a WSH-1 hand wheel with 3/4" bore, 3/16" keyway and one #10-24 setscrew hole.

WSH-1	135.58
3/4" Rebore	18.15
Keyway	18.15
(1) Setscrew Hole	10.90
Total Cost Per Wheel	\$182.78