

# HARDWARE AND FASTENERS

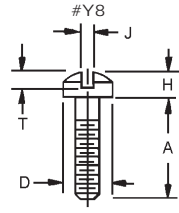
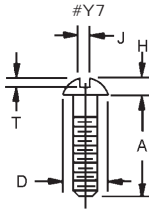
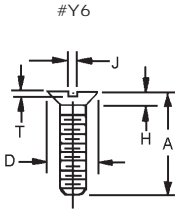
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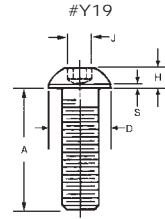
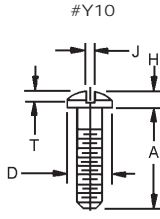
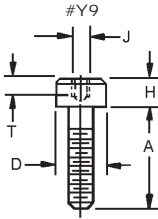
*For metric options, please see our metric catalog.*

# SCREW HEAD

## Technical Data



S SCREW SIZE	#Y6-FLAT HEAD 82°				#Y7-ROUND HEAD				#Y8- FILLISTER HEAD			
	D MAX	H MAX	J MAX	T MAX	D	H	J	T	D MAX	H MAX	J MAX	T MAX
#000	.064	.016	.011	.009	.062	.031	.012	.018	.059	.035	.012	.017
#00	.092	.028	.017	.014	.089	.045	.017	.026	.082	.047	.017	.022
#0	.119	.035	.023	.015	.113	.053	.023	.039	.096	.055	.023	.025
#2	.172	.051	.031	.023	.162	.069	.031	.048	.140	.083	.031	.037
#4	.225	.067	.039	.030	.211	.086	.039	.058	.183	.107	.039	.048
#6	.279	.083	.048	.038	.260	.103	.048	.068	.226	.132	.048	.060
#8	.332	.100	.054	.045	.309	.120	.054	.077	.270	.156	.054	.071
#10	.385	.116	.060	.053	.359	.137	.060	.087	.313	.180	.060	.083
1/4	.507	.153	.075	.070	.472	.175	.075	.109	.414	.237	.075	.109



S SCREW SIZE	#Y6-FLAT HEAD 82°				#Y7-ROUND HEAD				#Y8- FILLISTER HEAD			
	D MAX	H MAX	J MAX	T MIN	D MAX	H MAX	J MAX	T MAX	D MAX	H MAX	S MAX	J MAX
#000	-	-	-	-	.073	.021	.012	.013	-	-	-	-
#00	-	-	-	-	.098	.028	.017	.018	-	-	-	-
#0	.096	.060	.050	.025	.126	.032	.023	.018	.144	.032	.010	.035
#2	.140	.086	5/64	.038	.181	.050	.031	.030	.164	.046	.010	.050
#4	.183	.112	3/32	.051	.235	.068	.039	.042	.213	.059	.015	1/6
#6	.226	.138	7/64	.064	.290	.087	.048	.053	.262	.073	.015	5/64
#8	.270	.164	9/64	.077	.344	.105	.054	.065	.312	.087	.015	3/32
#10	.312	.190	5/32	.090	.390	.123	.060	.077	.361	.101	.020	1/8
1/4	.375	.250	3/16	.120	.525	.165	.075	.105	.437	.132	.031	5/32

# MACHINE SCREWS

THREAD	STYLE	MATERIAL
#000-120	BINDING, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE				CLASS 2A THREAD	A LENGTH
BINDING STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y10-S000-A2	Y6-S000-A2	Y7-S000-A2	Y8-S000-A2	#000-120	1/8
Y10-S000-A3	Y6-S000-A3	Y7-S000-A3	Y8-S000-A3		3/16
Y10-S000-A4	Y6-S000-A4	Y7-S000-A4	Y8-S000-A4		1/4
Y10-S000-A5	Y6-S000-A5	Y7-S000-A5	Y8-S000-A5		5/16
					3/8

THREAD	STYLE	MATERIAL
#00-96	BINDING, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

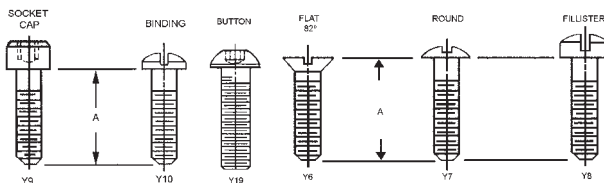
HEAD STYLE				CLASS 2A THREAD	A LENGTH
BINDING STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y10-S00-A2	Y6-S00-A2	Y7-S00-A2	Y8-S00-A2	#00-96	1/8
Y10-S00-A3	Y6-S00-A3	Y7-S00-A3	Y8-S00-A3		3/16
Y10-S00-A4	Y6-S00-A4	Y7-S00-A4	Y8-S00-A4		1/4
Y10-S00-A5	Y6-S00-A5	Y7-S00-A5	Y8-S00-A5		5/16
Y10-S00-A6	Y6-S00-A6	Y7-S00-A6	Y8-S00-A6		3/8

THREAD	STYLE	MATERIAL
#0-80	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S0-A2	Y10S0-A2	Y19-S0-A2	Y6-S0-A2	Y7-S0-A2	Y8-S0-A2	#0-80	1/8
Y9-S0-A3	Y10S0-A3	Y19-S0-A3	Y6-S0-A3	Y7-S0-A3	Y8-S0-A3		3/16
Y9-S0-A4	Y10S0-A4	Y19-S0-A4	Y6-S0-A4	Y7-S0-A4	Y8-S0-A4		1/4
Y9-S0-A5	Y10S0-A5	Y19-S0-A5	Y6-S0-A5	Y7-S0-A5	Y8-S0-A5		5/16
Y9-S0-A6	Y10S0-A6	Y19-S0-A6	Y6-S0-A6	Y7-S0-A6	Y8-S0-A6		3/8
Y9-S0-A8	Y10S0-A8	Y19-S0-A8	Y6-S0-A8	Y7-S0-A8	Y8-S0-A8		1/2

THREAD	STYLE	MATERIAL
#2-56	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S2-A3	Y10-S2-A3	Y19-S2-A3	Y6-S2-A3	Y7-S2-A3	Y8-S2-A3	#2-56 UNC	3/16
Y9-S2-A4	Y10-S2-A4	Y19-S2-A4	Y6-S2-A4	Y7-S2-A4	Y8-S2-A4		1/4
Y9-S2-A5	Y10-S2-A5	Y19-S2-A5	Y6-S2-A5	Y7-S2-A5	Y8-S2-A5		5/16
Y9-S2-A6	Y10-S2-A6	Y19-S2-A6	Y6-S2-A6	Y7-S2-A6	Y8-S2-A6		3/8
Y9-S2-A8	Y10-S2-A8	Y19-S2-A8	Y6-S2-A8	Y7-S2-A8	Y8-S2-A8		1/2



# MACHINE SCREWS

THREAD	STYLE	MATERIAL
#4-40	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

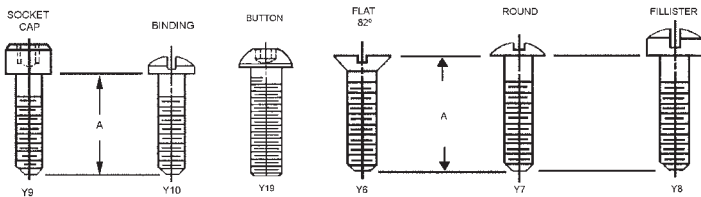
HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S4-A3	Y10-S4-A3	Y19-S4-A3	Y6-S4-A3	Y7-S4-A3	Y8-S4-A3	#4-40 UNC	3/16
Y9-S4-A4	Y10-S4-A4	Y19-S4-A4	Y6-S4-A4	Y7-S4-A4	Y8-S4-A4		1/4
Y9-S4-A5	Y10-S4-A5	Y19-S4-A5	Y6-S4-A5	Y7-S4-A5	Y8-S4-A5		5/16
Y9-S4-A6	Y10-S4-A6	Y19-S4-A6	Y6-S4-A6	Y7-S4-A6	Y8-S4-A6		3/8
Y9-S4-A8	Y10-S4-A8	Y19-S4-A8	Y6-S4-A8	Y7-S4-A8	Y8-S4-A8		1/2
Y9-S4-A10	Y10-S4-A10	Y19-S4-A10	Y6-S4-A10	Y7-S4-A10	Y8-S4-A10		5/8

THREAD	STYLE	MATERIAL
#6-32	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S6-A4	Y10-S6-A4	Y19-S6-A4	Y6-S6-A4	Y7-S6-A4	Y8-S6-A4	#6-32 UNC	1/4
Y9-S6-A5	Y10-S6-A5	Y19-S6-A5	Y6-S6-A5	Y7-S6-A5	Y8-S6-A5		5/16
Y9-S6-A6	Y10-S6-A6	Y19-S6-A6	Y6-S6-A6	Y7-S6-A6	Y8-S6-A6		3/8
Y9-S6-A8	Y10-S6-A8	Y19-S6-A8	Y6-S6-A8	Y7-S6-A8	Y8-S6-A8		1/2
Y9-S6-A10	Y10-S6-A10	Y19-S6-A10	Y6-S6-A10	Y7-S6-A10	Y8-S6-A10		5/8
Y9-S6-A12	Y10-S6-A12	Y19-S6-A12	Y6-S6-A12	Y7-S6-A12	Y8-S6-A12		3/4

THREAD	STYLE	MATERIAL
#8-32	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S8-A4	Y10-S8-A4	Y19-S8-A4	Y6-S8-A4	Y7-S8-A4	Y8-S8-A4	#8-32 UNC	1/4
Y9-S8-A5	Y10-S8-A5	Y19-S8-A5	Y6-S8-A5	Y7-S8-A5	Y8-S8-A5		5/16
Y9-S8-A6	Y10-S8-A6	Y19-S8-A6	Y6-S8-A6	Y7-S8-A6	Y8-S8-A6		3/8
Y9-S8-A8	Y10-S8-A8	Y19-S8-A8	Y6-S8-A8	Y7-S8-A8	Y8-S8-A8		1/2
Y9-S8-A10	Y10-S8-A10	Y19-S8-A10	Y6-S8-A10	Y7-S8-A10	Y8-S8-A10		5/8
Y9-S8-A12	Y10-S8-A12	Y19-S8-A12	Y6-S8-A12	Y7-S8-A12	Y8-S8-A12		3/4
Y9-S8-A16	Y10-S8-A16	Y19-S8-A16	Y6-S8-A16	Y7-S8-A16	Y8-S8-A16		1



# MACHINE SCREWS

THREAD	STYLE	MATERIAL
#10-24	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

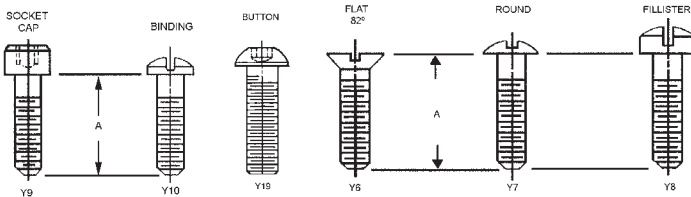
HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S10-A4	Y10-S10-A4	Y19-S10-A4	Y6-S10-A4	Y7-S10-A4	Y8-S10-A4	#10-24 UNC	1/4
Y9-S10-A5	Y10-S10-A5	Y19-S10-A5	Y6-S10-A5	Y7-S10-A5	Y8-S10-A5		5/16
Y9-S10-A6	Y10-S10-A6	Y19-S10-A6	Y6-S10-A6	Y7-S10-A6	Y8-S10-A6		3/8
Y9-S10-A8	Y10-S10-A8	Y19-S10-A8	Y6-S10-A8	Y7-S10-A8	Y8-S10-A8		1/2
Y9-S10-A10	Y10-S10-A10	Y19-S10-A10	Y6-S10-A10	Y7-S10-A10	Y8-S10-A10		5/8
Y9-S10-A12	Y10-S10-A12	Y19-S10-A12	Y6-S10-A12	Y7-S10-A12	Y8-S10-A12		3/4
Y9-S10-A16	Y10-S10-A16	Y19-S10-A16	Y6-S10-A16	Y7-S10-A16	Y8-S10-A16		1

THREAD	STYLE	MATERIAL
#10-32	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
Y9-S11-A4	Y10-S11-A4	Y19-S11-A4	Y6-S11-A4	Y7-S11-A4	Y8-S11-A4	#10-32 UNC	1/4
Y9-S11-A5	Y10-S11-A5	Y19-S11-A5	Y6-S11-A5	Y7-S11-A5	Y8-S11-A5		5/16
Y9-S11-A6	Y10-S11-A6	Y19-S11-A6	Y6-S11-A6	Y7-S11-A6	Y8-S11-A6		3/8
Y9-S11-A8	Y10-S11-A8	Y19-S11-A8	Y6-S11-A8	Y7-S11-A8	Y8-S11-A8		1/2
Y9-S11-A10	Y10-S11-A10	Y19-S11-A10	Y6-S11-A10	Y7-S11-A10	Y8-S11-A10		5/8
Y9-S11-A12	Y10-S11-A12	Y19-S11-A12	Y6-S11-A12	Y7-S11-A12	Y8-S11-A12		3/4
Y9-S11-A16	Y10-S11-A16	Y19-S11-A16	Y6-S11-A16	Y7-S11-A16	Y8-S11-A16		1

THREAD	STYLE	MATERIAL
1/4-20	SOCKET CAP, BINDING, BUTTON, FLAT, ROUND AND FILLISTER	STAINLESS STEEL TYPE 18-8

HEAD STYLE						CLASS 2A THREAD	A LENGTH
SOCKET CAP STOCK NO.	BINDING STOCK NO.	BUTTON STOCK NO.	FLAT STOCK NO.	ROUND STOCK NO.	FILLISTER STOCK NO.		
-	Y10-S12-A4	-	-	Y7-S12-A4	-	1/4-20 UNC	1/4
-	Y10-S12-A5	-	-	Y7-S12-A5	-		5/16
Y9-S12-A6	Y10-S12-A6	Y19-S12-A6	Y6-S12-A6	Y7-S12-A6	Y8-S12-A6		3/8
Y9-S12-A8	Y10-S12-A8	Y19-S12-A8	Y6-S12-A8	Y7-S12-A8	Y8-S12-A8		1/2
Y9-S12-A10	Y10-S12-A10	Y19-S12-A10	Y6-S12-A10	Y7-S12-A10	Y8-S12-A10		5/8
Y9-S12-A12	Y10-S12-A12	Y19-S12-A12	Y6-S12-A12	Y7-S12-A12	Y8-S12-A12		3/4
Y9-S12-A16	Y10-S12-A16	Y19-S12-A16	Y6-S12-A16	Y7-S12-A16	Y8-S12-A16		1



# LONG-LOK® AND NYLOC® MACHINE SCREWS

THREAD	STYLE	MATERIAL
#0-80	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®		CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.			
Y6-S0-A2-L	Y7-S0-A2-L	Y8-S0-A2-L	Y10-S0-A2-L	Y9-S0-A2-N	#0-80	1/8	
Y6-S0-A3-L	Y7-S0-A3-L	Y8-S0-A3-L	Y10-S0-A3-L	Y9-S0-A3-N		3/16	
Y6-S0-A4-L	Y7-S0-A4-L	Y8-S0-A4-L	Y10-S0-A4-L	Y9-S0-A4-N		1/4	
Y6-S0-A5-L	Y7-S0-A5-L	Y8-S0-A5-L	Y10-S0-A5-L	Y9-S0-A5-N		5/16	
Y6-S0-A6-L	Y7-S0-A6-L	Y8-S0-A6-L	Y10-S0-A6-L	Y9-S0-A6-N		3/8	
Y6-S0-A8-L	Y7-S0-A8-L	Y8-S0-A8-L	Y10-S0-A8-L	Y9-S0-A8-N		1/2	

THREAD	STYLE	MATERIAL
#2-56	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®		CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.			
Y6-S2-A3-L	Y7-S2-A3-L	Y8-S2-A3-L	Y10-S2-A3-L	Y9-S2-A3-N	#2-56	3/16	
Y6-S2-A4-L	Y7-S2-A4-L	Y8-S2-A4-L	Y10-S2-A4-L	Y9-S2-A4-N		1/4	
Y6-S2-A5-L	Y7-S2-A5-L	Y8-S2-A5-L	Y10-S2-A5-L	Y9-S2-A5-N		5/16	
Y6-S2-A6-L	Y7-S2-A6-L	Y8-S2-A6-L	Y10-S2-A6-L	Y9-S2-A6-N		3/8	
Y6-S2-A8-L	Y7-S2-A8-L	Y8-S2-A8-L	Y10-S2-A8-L	Y9-S2-A8-N		1/2	

THREAD	STYLE	MATERIAL
#4-40	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®		CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.			
Y6-S4-A3-L	Y7-S4-A3-L	Y8-S4-A3-L	Y10-S4-A3-L	Y9-S4-A3-N	#4-40	3/16	
Y6-S4-A4-L	Y7-S4-A4-L	Y8-S4-A4-L	Y10-S4-A4-L	Y9-S4-A4-N		1/4	
Y6-S4-A5-L	Y7-S4-A5-L	Y8-S4-A5-L	Y10-S4-A5-L	Y9-S4-A5-N		5/16	
Y6-S4-A6-L	Y7-S4-A6-L	Y8-S4-A6-L	Y10-S4-A6-L	Y9-S4-A6-N		3/8	
Y6-S4-A8-L	Y7-S4-A8-L	Y8-S4-A8-L	Y10-S4-A8-L	Y9-S4-A8-N		1/2	
Y6-S4-A10-L	Y7-S4-A10-L	Y8-S4-A10-L	Y10-S4-A10-L	Y9-S4-A10-N		5/8	

THREAD	STYLE	MATERIAL
#6-32	CLASS A SELF LOCKING - VIBRATION PROOF BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®		NYLOC®		THREAD	LENGTH
BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.	BINDING STYLE STOCK NO.			
Y10-S6-A4-L	Y9-S6-A4-N	Y10-S6-A4-N	#6-32	1/4	
Y10-S6-A5-L	Y9-S6-A5-N	Y10-S6-A5-N		5/16	
Y10-S6-A6-L	Y9-S6-A6-N	Y10-S6-A6-N		3/8	
Y10-S6-A8-L	Y9-S6-A8-N	Y10-S6-A8-N		1/2	
Y10-S6-A10-L	Y9-S6-A10-N	Y10-S6-A10-N		5/8	
Y10-S6-A12-L	Y9-S6-A12-N	Y10-S6-A12-N		3/4	

See drawings on page F4

# LONG-LOK® AND NYLOC® MACHINE SCREWS

THREAD	STYLE	MATERIAL
#8-32	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®	CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.		
Y6-S8-A4-L	Y7-S8-A4-L	Y8-S8-A4-L	Y10-S8-A4-L	Y9-S8-A4-N	#8-32	1/4
Y6-S8-A5-L	Y7-S8-A5-L	Y8-S8-A5-L	Y10-S8-A5-L	Y9-S8-A5-N		5/16
Y6-S8-A6-L	Y7-S8-A6-L	Y8-S8-A6-L	Y10-S8-A6-L	Y9-S8-A6-N		3/8
Y6-S8-A8-L	Y7-S8-A8-L	Y8-S8-A8-L	Y10-S8-A8-L	Y9-S8-A8-N		1/2
Y6-S8-A10-L	Y7-S8-A10-L	Y8-S8-A10-L	Y10-S8-A10-L	Y9-S8-A10-N		5/8
Y6-S8-A12-L	Y7-S8-A12-L	Y8-S8-A12-L	Y10-S8-A12-L	Y9-S8-A12-N		3/4
Y6-S8-A16-L	Y7-S8-A16-L	Y8-S8-A16-L	Y10-S8-A16-L	Y9-S8-A16-N		1

THREAD	STYLE	MATERIAL
#10-24	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®	CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.		
Y6-S10-A4-L	Y7-S10-A4-L	Y8-S10-A4-L	Y10-S10-A4-L	Y9-S10-A4-N	#10-24	1/4
Y6-S10-A5-L	Y7-S10-A5-L	Y8-S10-A5-L	Y10-S10-A5-L	Y9-S10-A5-N		5/16
Y6-S10-A6-L	Y7-S10-A6-L	Y8-S10-A6-L	Y10-S10-A6-L	Y9-S10-A6-N		3/8
Y6-S10-A8-L	Y7-S10-A8-L	Y8-S10-A8-L	Y10-S10-A8-L	Y9-S10-A8-N		1/2
Y6-S10-A10-L	Y7-S10-A10-L	Y8-S10-A10-L	Y10-S10-A10-L	Y9-S10-A10-N		5/8
Y6-S10-A12-L	Y7-S10-A12-L	Y8-S10-A12-L	Y10-S10-A12-L	Y9-S10-A12-N		3/4
Y6-S10-A16-L	Y7-S10-A16-L	Y8-S10-A16-L	Y10-S10-A16-L	Y9-S10-A16-N		1

THREAD	STYLE	MATERIAL
#10-32	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®	CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.		
Y6-S11-A4-L	Y7-S11-A4-L	Y8-S11-A4-L	Y10-S11-A4-L	Y9-S11-A4-N	#10-32	1/4
Y6-S11-A5-L	Y7-S11-A5-L	Y8-S11-A5-L	Y10-S11-A5-L	Y9-S11-A5-N		5/16
Y6-S11-A6-L	Y7-S11-A6-L	Y8-S11-A6-L	Y10-S11-A6-L	Y9-S11-A6-N		3/8
Y6-S11-A8-L	Y7-S11-A8-L	Y8-S11-A8-L	Y10-S11-A8-L	Y9-S11-A8-N		1/2
Y6-S11-A10-L	Y7-S11-A10-L	Y8-S11-A10-L	Y10-S11-A10-L	Y9-S11-A10-N		5/8
Y6-S11-A12-L	Y7-S11-A12-L	Y8-S11-A12-L	Y10-S11-A12-L	Y9-S11-A12-N		3/4
Y6-S11-A16-L	Y7-S11-A16-L	Y8-S11-A16-L	Y10-S11-A16-L	Y9-S11-A16-N		1

THREAD	STYLE	MATERIAL
#1/4-20	SELF LOCKING - VIBRATION PROOF FLAT, ROUND, FILLISTER, BINDING AND SOCKET CAP	STAINLESS STEEL TYPE 18-8 WITH NYLON INSERT

LONG-LOCK®				NYLOC®	CLASS A THREAD	A LENGTH
FLAT STYLE STOCK NO.	ROUND STYLE STOCK NO.	FILLISTER STYLE STOCK NO.	BINDING STYLE STOCK NO.	SOCKET CAP STYLE STOCK NO.		
Y6-S12-A6-L	Y7-S12-A6-L	Y8-S12-A6-L	Y10-S12-A6-L	Y9-S12-A6-N	1/4-20	3/8
Y6-S12-A8-L	Y7-S12-A8-L	Y8-S12-A8-L	Y10-S12-A8-L	Y9-S12-A8-N		1/2
Y6-S12-A10-L	Y7-S12-A10-L	Y8-S12-A10-L	Y10-S12-A10-L	Y9-S12-A10-N		5/8
Y6-S12-A12-L	Y7-S12-A12-L	Y8-S12-A12-L	Y10-S12-A12-L	Y9-S12-A12-N		3/4
Y6-S12-A16-L	Y7-S12-A16-L	Y8-S12-A16-L	Y10-S12-A16-L	Y9-S12-A16-N		1

See drawings on page F4

# NYLON MACHINE SCREWS

THREAD	STYLE	MATERIAL
#2-56	FLAT, ROUND, FILLISTER AND PAN	MOLDED NYLON, WHITE

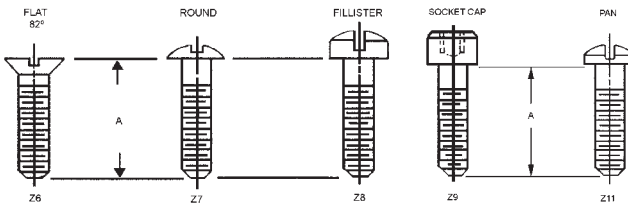
FLAT 82°	ROUND	FILLISTER	PAN	THREAD	LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N2-A2	Z7-N2-A2	Z8-N2-A2	Z11-N2-A2	#2-56	1/8
Z6-N2-A3	Z7-N2-A3	Z8-N2-A3	Z11-N2-A3		3/16
Z6-N2-A4	Z7-N2-A4	Z8-N2-A4	Z11-N2-A4		1/4
Z6-N2-A5	Z7-N2-A5	Z8-N2-A5	Z11-N2-A5		5/16
Z6-N2-A6	Z7-N2-A6	Z8-N2-A6	Z11-N2-A6		3/8
Z6-N2-A8	Z7-N2-A8	Z8-N2-A8	Z11-N2-A8		1/2
Z6-N2-A10	Z7-N2-A10	Z8-N2-A10	Z11-N2-A10		5/8
Z6-N2-A12	Z7-N2-A12	Z8-N2-A12	Z11-N2-A12		3/4

THREAD	STYLE	MATERIAL
#4-40	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N4-A3	Z7-N4-A3	Z8-N4-A3	Z11-N4-A3	Z9-N4-A3	#4-40	3/16
Z6-N4-A4	Z7-N4-A4	Z8-N4-A4	Z11-N4-A4	Z9-N4-A4		1/4
Z6-N4-A5	Z7-N4-A5	Z8-N4-A5	Z11-N4-A5	Z9-N4-A5		5/16
Z6-N4-A6	Z7-N4-A6	Z8-N4-A6	Z11-N4-A6	Z9-N4-A6		3/8
Z6-N4-A8	Z7-N4-A8	Z8-N4-A8	Z11-N4-A8	Z9-N4-A8		1/2
Z6-N4-A10	Z7-N4-A10	Z8-N4-A10	Z11-N4-A10	Z9-N4-A10		5/8
Z6-N4-A12	Z7-N4-A12	Z8-N4-A12	Z11-N4-A12	Z9-N4-A12		3/4

THREAD	STYLE	MATERIAL
#6-32	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N6-A4	Z7-N6-A4	Z8-N6-A4	Z11-N6-A4	Z9-N6-A4	#6-32	1/4
Z6-N6-A5	Z7-N6-A5	Z8-N6-A5	Z11-N6-A5	Z9-N6-A5		5/16
Z6-N6-A6	Z7-N6-A6	Z8-N6-A6	Z11-N6-A6	Z9-N6-A6		3/8
Z6-N6-A8	Z7-N6-A8	Z8-N6-A8	Z11-N6-A8	Z9-N6-A8		1/2
-	Z7-N6-A10	Z8-N6-A10	Z11-N6-A10	Z9-N6-A10		5/8
-	Z7-N6-A12	Z8-N6-A12	Z11-N6-A12	Z9-N6-A12		3/4





# NYLON MACHINE SCREWS

THREAD	STYLE	MATERIAL
#8-32	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	A LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N8-A4	Z7-N8-A4	Z8-N8-A4	Z11-N8-A4	Z9-N8-A4	#8-32	1/4
Z6-N8-A5	Z7-N8-A5	Z8-N8-A5	Z11-N8-A5	Z9-N8-A5		5/16
Z6-N8-A6	Z7-N8-A6	Z8-N8-A6	Z11-N8-A6	Z9-N8-A6		3/8
Z6-N8-A8	Z7-N8-A8	Z8-N8-A8	Z11-N8-A8	Z9-N8-A8		1/2
Z6-N8-A10	Z7-N8-A10	Z8-N8-A10	Z11-N8-A10	Z9-N8-A10		5/8
Z6-N8-A12	Z7-N8-A12	Z8-N8-A12	Z11-N8-A12	Z9-N8-A12		3/4
Z6-N8-A16	Z7-N8-A16	Z8-N8-A16	Z11-N8-A16	Z9-N8-A16	1	

THREAD	STYLE	MATERIAL
#10-24	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

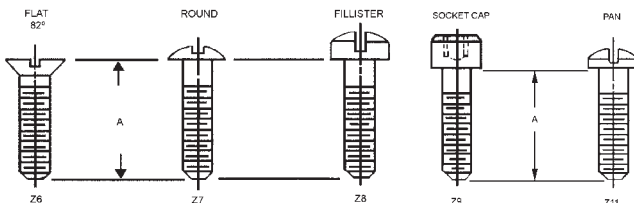
FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	A LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N10-A4	Z7-N10-A4	Z8-N10-A4	Z11-N10-A4	Z9-N10-A4	#10-24	1/4
Z6-N10-A6	Z7-N10-A6	Z8-N10-A6	Z11-N10-A6	Z9-N10-A6		3/8
Z6-N10-A8	Z7-N10-A8	Z8-N10-A8	Z11-N10-A8	Z9-N10-A8		1/2
Z6-N10-A12	Z7-N10-A12	Z8-N10-A12	Z11-N10-A12	Z9-N10-A12		3/4
Z6-N10-A16	Z7-N10-A16	Z8-N10-A16	Z11-N10-A16	Z9-N10-A16		1

THREAD	STYLE	MATERIAL
#10-32	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	A LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N11-A4	Z7-N11-A4	Z8-N11-A4	Z11-N11-A4	Z9-N11-A4	#10-32	1/4
Z6-N11-A6	Z7-N11-A6	Z8-N11-A6	Z11-N11-A6	Z9-N11-A6		3/8
Z6-N11-A8	Z7-N11-A8	Z8-N11-A8	Z11-N11-A8	Z9-N11-A8		1/2
Z6-N11-A12	Z7-N11-A12	Z8-N11-A12	Z11-N11-A12	Z9-N11-A12		3/4
Z6-N11-A16	Z7-N11-A16	Z8-N11-A16	Z11-N11-A16	Z9-N11-A16		1

THREAD	STYLE	MATERIAL
1/4-20	FLAT, ROUND, FILLISTER, PAN AND SOCKET CAP	MOLDED NYLON, WHITE

FLAT 82°	ROUND	FILLISTER	PAN	SOCKET CAP	THREAD	A LENGTH
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.		
Z6-N12-A4	Z7-N12-A4	Z8-N12-A4	Z11-N12-A4	Z9-N12-A4	1/4-20	1/4
Z6-N12-A6	Z7-N12-A6	Z8-N12-A6	Z11-N12-A6	Z9-N12-A6		3/8
Z6-N12-A8	Z7-N12-A8	Z8-N12-A8	Z11-N12-A8	Z9-N12-A8		1/2
Z6-N12-A12	Z7-N12-A12	Z8-N12-A12	Z11-N12-A12	Z9-N12-A12		3/4
Z6-N12-A16	Z7-N12-A16	Z8-N12-A16	Z11-N12-A16	Z9-N12-A16		1



# INTEGRAL SEAL SCREWS

THREAD	STYLE	MATERIAL
#2-56	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

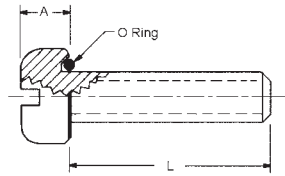
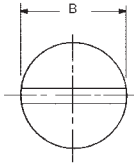
STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S2-A4	#2-56	1/4	.055	.168	.091	.095
Y18-S2-A6		3/8				
Y18-S2-A8		1/2				
Y18-S2-A10		5/8				

THREAD	STYLE	MATERIAL
#4-40	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S4-A4	#4-40	1/4	.069	.220	.125	.129
Y18-S4-A8		1/2				
Y18-S4-A12		3/4				
Y18-S4-A16		1				

THREAD	STYLE	MATERIAL
#6-32	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S6-A4	#6-32	1/4	.083	.271	.147	.152
Y18-S6-A8		1/2				
Y18-S6-A12		3/4				
Y18-S6-A16		1				



- Reusable
- Clearance holes recommended for maximum sealing
- Maximum temperature range +500°F to -160°F
- Pressure range - up to 6000 psi

# INTEGRAL SEAL SCREWS

THREAD	STYLE	MATERIAL
#8-32	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S8-A4	#8-32	1/4	.097	.323	.173	.179
Y18-S8-A8		1/2				
Y18-S8-A12		3/4				
Y18-S8-A16		1				

THREAD	STYLE	MATERIAL
#10-24	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

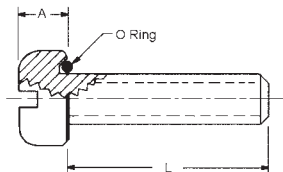
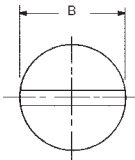
STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S10-A6	#10-24	3/8	.113	.374	.199	.204
Y18-S10-A8		1/2				
Y18-S10-A12		3/4				
Y18-S10-A16		1				

THREAD	STYLE	MATERIAL
#10-32	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S11-A6	#10-32	3/8	.113	.374	.199	.204
Y18-S11-A8		1/2				
Y18-S11-A12		3/4				
Y18-S11-A16		1				

THREAD	STYLE	MATERIAL
1/4-20	SLOTTED PAN HEAD	300 SERIES STAINLESS STEEL SCREW WITH SILICONE O RING

STOCK NO.	THREAD SIZE	LENGTH	A	B	CLEARANCE HOLE	
					MIN.	MAX.
Y18-S12-A6	1/4-20	3/8	.148	.493	.265	.269
Y18-S12-A8		1/2				
Y18-S12-A12		3/4				
Y18-S12-A16		1				
Y18-S12-A20		1-1/4				

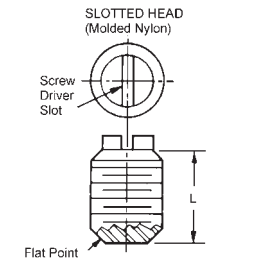
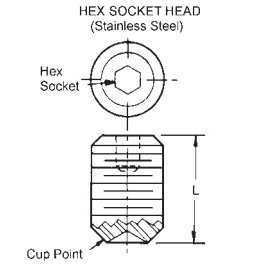
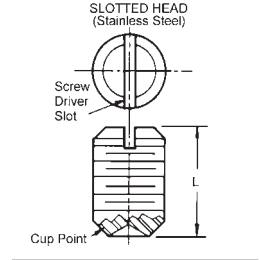


- Reusable
- Clearance holes recommended for maximum sealing
- Maximum temperature range +500°F to -160°F
- Pressure range - up to 6000 psi

# SET SCREWS

THREAD	STYLE	MATERIAL
#0-80 TO 3/4-10	SLOTTED HEAD AND HEX SOCKET	STAINLESS STEEL 18-8 AND NYLON (SLOTTED HEAD ONLY)

SLOTTED HEAD	HEX SOCKET HEAD	SLOTTED HEAD	THREAD	L
STAINLESS STEEL	STAINLESS STEEL	NYLON		
STOCK NO.	STOCK NO.	STOCK NO.		
SC1-18	SC2-18	-	#0-80	1/8
SC1-19	SC2-19	-	#0-80	3/16
SC1-50	SC2-50	-	#2-56	3/32
SC1-1	SC2-1	-	#2-56	1/8
SC1-24	SC2-24	SC11-24	#2-56	3/16
-	SC2-25	SC11-25	#2-56	1/4
-	SC2-59	-	#2-64	1/16
SC1-14	SC2-14	-	#2-64	1/8
SC1-51	SC2-51	-	#4-40	3/32
SC1-2	SC2-2	-	#4-40	1/8
-	SC2-27	-	#4-40	3/16
-	SC2-28	SC11-28	#4-40	1/4
-	SC2-15	-	#5-40	3/16
-	SC2-52	-	#6-32	3/32
SC1-3	SC2-3	-	#6-32	1/8
-	SC2-30	SC11-30	#6-32	1/4
-	SC2-31	SC11-31	#6-32	3/8
-	SC2-32	SC11-32	#6-32	1/2
-	SC2-53	-	#8-32	1/8
SC1-4	SC2-4	-	#8-32	3/16
-	SC2-33	SC11-33	#8-32	1/4
SC1-54	-	SC11-54	#8-32	5/16
-	SC2-34	SC11-34	#8-32	3/8
-	SC2-35	SC11-35	#8-32	1/2
-	SC2-36	SC11-36	#8-32	5/8
-	SC2-16	-	#10-24	3/16
-	SC2-62	-	#10-24	1/4
SC1-60	SC2-60	SC11-60	#10-24	5/16
SC1-61	SC2-61	SC11-61	#10-24	3/8
SC1-5	SC2-5	-	#10-32	3/16
-	SC2-37	SC11-37	#10-32	1/4
SC1-55	SC2-55	SC11-55	#10-32	3/8
-	SC2-38	SC11-38	#10-32	1/2
-	SC2-39	-	#10-32	3/4
-	SC2-40	-	#10-32	1
-	SC2-41	SC 11-41	1/4-20	1/4
-	SC2-56	-	1/4-20	5/16
SC1-6	SC2-6	SC11-6	1/4-20	3/8
-	SC2-42	SC11-42	1/4-20	1/2
-	SC2-43	-	1/4-20	3/4
-	SC2-44	-	1/4-20	1
-	SC2-45	-	1/4-20	1-1/4
-	SC2-17	-	1/4-28	5/16
-	SC2-64	-	1/4-28	3/8
SC1-7	SC2-7	-	5/16-18	1/2
-	SC2-65	-	5/16-18	3/4
SC1-8	SC2-8	-	3/8-16	1/2
-	SC2-57	-	3/8-16	3/8
-	SC2-58	-	3/8-16	1/4
-	SC2-66	-	3/8-16	1
SC1-10	SC2-10	-	1/2-13	1/2
SC1-12	SC2-12	-	5/8-11	3/4
SC1-13	SC2-13	-	3/4-10	3/4



See Index for Allen Socket Head Keys.  
These parts are sold in packages of 10.

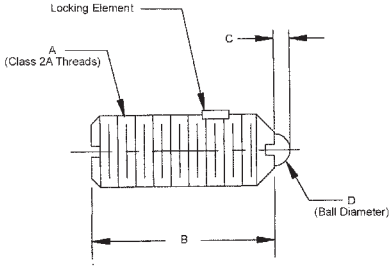


## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-SC2	STAINLESS HEX HEAD SET SCREWS #2 TO 1/4"
KIT-SCA	SET SCREWS - STAINLESS STEEL - CUP POINT AND SOFT TIP #0-80 TO 1/4"

# SET SCREWS

THREAD	STYLE	MATERIAL
#4-48 TO 1/4-20	BALL BUTTON	440 STAINLESS STEEL

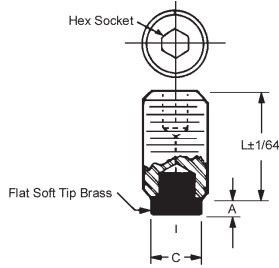
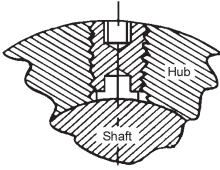


STOCK NO.	END FORCE (lbs.) INITIAL	FINAL	A	B	C	D
SC12-1	1/8	1/2	#4-48	.187	.020	.062
SC12-2	1/4	3/4	#5-40	.250	.020	.062
SC12-3	1/2	1	#6-40	.312	.023	.078
SC12-4	1/2	1-1/4	#8-36	.344	.025	.0937
SC12-5	1/2	1-1/2	#10-32	.513	.025	.0937
SC12-6	3	7	1/4-20	.531	.035	.125

Other materials available on request.

# SET SCREWS

THREAD	STYLE	MATERIAL
#2-56 TO 3/8-16	BRASS SOFT TIP HEX SOCKET	STAINLESS STEEL AND HEAT TREATED ALLOY STEEL



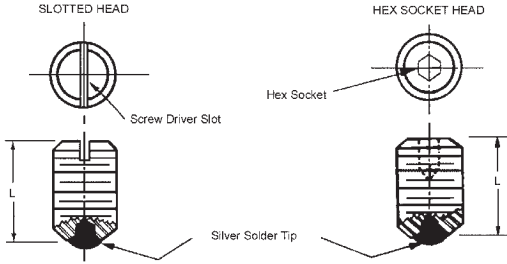
STOCK NO.	THREAD	L	C	A	MATERIAL
SC10-30 SC10-31	#2-56 UNC-2A	1/8 1/4	1/32	1/32	303 STAINLESS STEEL
SC10-32 SC10-33 SC10-34	#4-40 UNC-2A	1/8 1/4 3/8	1/16	1/32	
SC10-35 SC10-36 SC10-37	#6-32 UNC-2A	1/8 1/4 3/8	1/16	1/32	
SC10-38 SC10-39 SC10-40	#8-32 UNC-2A	3/16 1/4 3/8	3/32	3/64	
SC10-41	#10-24 / UNC-2A	1/4	1/8	3/64	
SC10-1 SC10-2 SC10-3	#10-32 UNF-2A	1/4 3/8 1/2	1/8	3/64	
SC10-4 SC10-5 SC10-6 SC10-7 SC10-8 SC10-10	1/4-20 UNC-2A	3/16 1/4 5/16 3/8 1/2 3/4	1/8	3/64	ALLOY STEEL BLACK OXIDE FINISH ROCKWELL C48-52
SC10-12 SC10-14 SC10-15 SC10-16	5/16-18 UNC-2A	1/4 3/8 1/2 5/8	3/16	3/64	
SC10-21 SC10-22 SC10-24	3/8-16 UNC-2A	3/8 1/2 3/4	3/16	3/64	

- Non marring
- Self locking
- Also used as position adjustment screw
- Screws may be used over and over
- Conforms to shaft surface for positive grip

Length is exclusive of brass tip.

# SET SCREWS

THREAD	STYLE	MATERIAL
#2-56 TO 3/4-10	SILVER SOLDER TIP SLOTTED HEAD AND HEX SOCKET	STAINLESS STEEL TYPE 18-8



SLOTTED HEAD STOCK NO.	HEX SOCKET HEAD STOCK NO.	SCREW SIZE	L LENGTH
-	SC6-1	#2-56	1/8
-	SC6-2	#4-40	1/8
-	SC6-28	#4-40	1/4
SC5-3	SC6-3	#6-32	1/8
SC5-30	SC6-30	#6-32	1/4
SC5-4	SC6-4	#8-32	3/16
SC5-34	SC6-34	#8-32	3/8
SC5-61	SC6-61	#10-24	3/8
SC5-5	SC6-5	#10-32	3/16
SC5-55	SC6-55	#10-32	3/8
SC5-41	SC6-41	1/4-20	1/4
SC5-6	SC6-6	1/4-20	3/8
-	SC6-64	1/4-28	3/8
SC5-7	SC6-7	5/16-18	1/2
-	SC6-65	5/16-18	3/4
SC5-8	SC6-8	3/8-16	1/2
-	SC6-66	3/8-16	1
SC5-10	SC6-10	1/2-13	1/2
SC5-12	SC6-12	5/8-11	3/4
SC5-13	SC6-13	3/4-10	3/4

- Also used as position adjustment screw
- Conforms to shaft surface for positive grip
- Non marring
- Self locking

Special sizes are available on request.

Length is exclusive of silver tip.

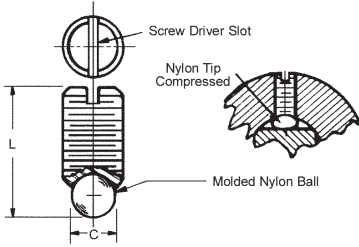
## Also available

SLOTTED HEAD KIT ASSORTMENT (IN LUCITE BOX)		
STOCK NO.	SCREW RANGE	NO. OF PIECES
SC5-B	#6-32 TO 1/4-20	60
SC5-C	#10 TO 3/8-16	60

SLOTTED HEAD KIT ASSORTMENT (IN LUCITE BOX)		
STOCK NO.	SCREW RANGE	NO. OF PIECES
SC6-A	#4-40 TO #8-32	60
SC6-B	#8-32 TO 1/4-20	60
SC6-C	1/4-20 TO 3/8-16	60

# SET SCREWS

THREAD	STYLE	MATERIAL
#2-56 TO 1/2-13	SOFT TIP SLOTTED HEAD	STAINLESS STEEL TYPE 18-8 WITH NYLON TIP

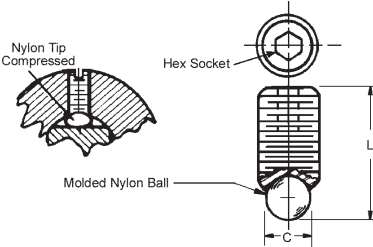


SLOTTED HEAD			
STOCK NO.	THREAD	L	C
SC3-1	#2-56	5/32	1/16
SC3-2	#4-40	11/64	1/16
SC3-3	#6-32	11/64	1/16
SC3-4	#8-32	17/64	3/32
SC3-5	#10-32	17/64	3/32
SC3-6	1/4-20	15/32	1/8
SC3-7	5/16-18	19/32	1/8
SC3-8	3/8-16	5/8	3/16
SC3-10	1/2-13	11/16	1/4



- Will not damage shafts
- Nylon compresses to make full face contact with surface

THREAD	STYLE	MATERIAL
#2-56 TO 1/2-13	SOFT TIP HEX SOCKET HEAD	STAINLESS STEEL TYPE 18-8 WITH NYLON TIP



HEX SLOTTED HEAD			
STOCK NO.	THREAD	L	C
SC4-1	#2-56	5/32	1/16
SC4-2	#4-40	11/64	1/16
SC4-3	#6-32	11/64	1/16
SC4-4	#8-32	17/64	3/32
SC4-5	#10-32	17/64	3/32
SC4-6	1/4-20	15/32	1/8
SC4-7	5/16-18	19/32	1/8
SC4-8	3/8-16	5/8	3/16
SC4-10	1/2-13	11/16	1/4

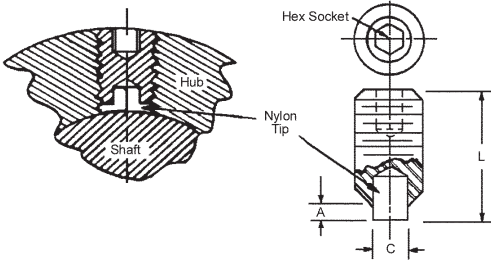


- Will not damage shafts
- Nylon compresses to make full face contact with surface



# SET SCREWS

THREAD	STYLE	MATERIAL
#2-56 TO 1/2-13	SOFT TIP HEX SOCKET HEAD	STAINLESS STEEL TYPE 18-8 WITH NYLON TIP



STOCK NO.	THREAD	L	C	A
SC8-1 SC8-2	#2-56	5/32 9/32	1/32	1/32
SC8-5 SC8-32	#4-40	5/32 9/32	1/32	1/32
SC8-6	#4-40	13/32	1/16	1/32
SC8-7 SC8-8	#5-40	5/32 3/8	1/16	1/32
SC8-17 SC8-9 SC8-29 SC8-10 SC8-34	#6-32	5/32 7/32 9/32 5/16 17/32	1/16	1/32
SC8-11 SC8-12 SC8-35	#8-32	15/64 27/64 43/64	3/32	3/64
SC8-30	#8-32	15/32	3/32	3/32
SC8-19 SC8-20	#10-24	15/64 27/64	3/32	3/64
SC8-13 SC8-14 SC8-21 SC8-36	#10-32	15/64 19/64 27/64 43/64	3/32	3/64
SC8-15 SC8-22 SC8-16 SC8-37 SC8-38	1/4-20	5/16 7/16 9/16 13/16 1-1/16	1/8	1/16
SC8-23	1/4-28	7/16	1/8	1/16
SC8-24 SC8-39 SC8-40	5/16-18	19/32 27/32 1-3/32	3/16	3/32
SC8-25 SC8-41 SC8-42	3/8-16	19/32 27/32 1-3/32	3/16	3/32
SC8-26 SC8-43	1/2-13	3/4 1-1/8	1/4	1/8

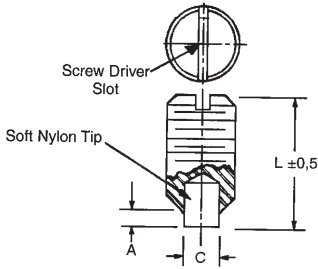
- Self locking
- Extra holding power from full face control
- Will not mar or damage shaft
- Nylon "soft tip" conforms to shape of shaft

## Also available

STOCK NO.	DESCRIPTION OF KIT	NO. OF PARTS
KITSC8-A	SOFT TIP SET SCREW KIT #2-56 TO #10	90 PIECES
KIT-SC8-B	SOFT TIP SET SCREW #10-24 TO 1/2-13	60 PIECES

# SET SCREWS

THREAD	STYLE	MATERIAL
#2-56 TO 1/4-20	SOFT TIP SLOTTED HEAD	STAINLESS STEEL TYPE 18-8 WITH NYLON TIP



STOCK NO.	THREAD	L	C	A
SC7-1	#2-56	5/32	1/32	1/32
SC7-5	#4-40	5/32	1/16	
SC7-17	#6-32			
SC7-11	#8-32	15/64	3/32	3/64
SC7-19	#10-24			
SC7-13	#10-32			
SC7-15	1/4-20	5/16	1/8	1/16

- Self locking
- Non marring
- Also used as position adjustment screw
- Screw may be used over and over
- Conforms to shaft surface for positive grip

# SHOULDER SCREWS

THREAD	STYLE	MATERIAL
#4-40 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

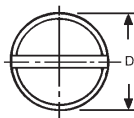
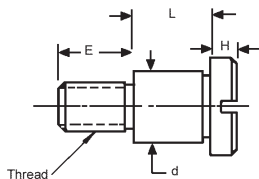
416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E
STOCK NO.	STOCK NO.						
PL-1 PL-2 PL-3 PL-4 PL-5	PL-1-3 PL-2-3 PL-3-3 PL-4-3 PL-5-3	#4-40 UNC-2A	.1245	.1255 .1880 .2505 .3130 .3755	1/4	1/8	5/32

THREAD	STYLE	MATERIAL
#8-32 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E
STOCK NO.	STOCK NO.						
PL-6 PL-7 PL-8 PL-9 PL-10 PL-11 PL-12 PL-13 PL-14 PL-15 PL-16	PL-6-3 PL-7-3 PL-8-3 PL-9-3 PL-10-3 PL-11-3 PL-12-3 PL-13-3 PL-14-3 PL-15-3 PL-16-3	#8-32 UNC-2A	.1870	.1255 .1880 .2505 .3130 .3755 .5005 .6255 .7505 1.0005 1.2605 1.5005	5/16	5/32	3/16

THREAD	STYLE	MATERIAL
#10-32 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E
STOCK NO.	STOCK NO.						
PL-17 PL-18 PL-19 PL-20 PL-21 PL-22 PL-23 PL-24 PL-25 PL-26 PL-27	PL-17-3 PL-18-3 PL-19-3 PL-20-3 PL-21-3 PL-22-3 PL-23-3 PL-24-3 PL-25-3 PL-26-3 PL-27-3	#10-32 UNF-2A	.2495	.1255 .1880 .2505 .3130 .3755 .5005 .6255 .7505 1.0005 1.2505 1.5005	3/8	3/16	1/4



# SHOULDER SCREWS

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +.000 -.001	L +.002 -.000	D	H	E
STOCK NO.	STOCK NO.						
PL-28 PL-29 PL-30 PL-31 PL-32 PL-33	PL-28-3 PL-29-3 PL-30-3 PL-31-3 PL-32-3 PL-33-3	1/4-20 UNC-2A	.3120	.2505 .3130 .3755 .5005 .6255 .7505	1/2	7/32	7/16

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +.000 -.001	L +.002 -.000	D	H	E
STOCK NO.	STOCK NO.						
PL-34 PL-35 PL-36 PL-37	PL-34-3 PL-35-3 PL-36-3 PL-37-3	1/4-20 UNC-2A	.3745	.3130 .3755 .5005 .6255	1/2	7/32	7/16

THREAD	STYLE	MATERIAL
5/16-18 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +.000 -.001	L +.002 -.000	D	H	E
STOCK NO.	STOCK NO.						
PL-38 PL-39 PL-40 PL-41	PL-38-3 PL-39-3 PL-40-3 PL-41-3	5/16-18 UNC-2A	.3745	.3130 .3755 .5005 .6255	9/16	1/4	1/2

THREAD	STYLE	MATERIAL
3/8-16 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +.000 -.001	L +.002 -.000	D	H	E
STOCK NO.	STOCK NO.						
PL-42 PL-43 PL-44 PL-45	PL-42-3 PL-43-3 PL-44-3 PL-45-3	3/8-16 UNC-2A	.4995	.5005 .6255 .7505 1.0005	3/4	5/16	5/8

Drawing on previous page.

# SHOULDER SCREWS

THREAD	STYLE	MATERIAL
#4-40 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

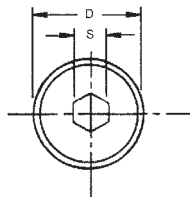
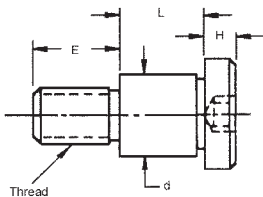
416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d + .000 - .001	L + .002 - .000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-1	PZ-1-3	#4-40 UNC-2A	.1245	.1255	1/4	1/8	5/32	5/64
PZ-2	PZ-2-3			.1880				
PZ-3	PZ-3-3			.2505				
PZ-4	PZ-4-3			.3130				
PZ-5	PZ-5-3			.3755				

THREAD	STYLE	MATERIAL
#8-32 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d + .000 - .001	L + .002 - .000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-6	PZ-6-3	#8-32 UNC-2A	.1870	.1255	5/16	5/32	3/16	3/32
PZ-7	PZ-7-3			.1880				
PZ-8	PZ-8-3			.2505				
PZ-9	PZ-9-3			.3130				
PZ-10	PZ-10-3			.3755				
PZ-11	PZ-11-3			.5005				
PZ-12	PZ-12-3			.6255				
PZ-13	PZ-13-3			.7505				
PZ-14	PZ-14-3			1.0005				
PZ-15	PZ-15-3			1.2505				
PZ-16	PZ-16-3			1.5005				

THREAD	STYLE	MATERIAL
#10-32 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d + .000 - .001	L + .002 - .000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-17	PZ-17-3	#10-32 UNF-2A	.2495	.1255	3/8	3/16	1/4	1/8
PZ-18	PZ-18-3			.1880				
PZ-19	PZ-19-3			.2505				
PZ-20	PZ-20-3			.3130				
PZ-21	PZ-21-3			.3755				
PZ-22	PZ-22-3			.5005				
PZ-23	PZ-23-3			.6255				
PZ-24	PZ-24-3			.7505				
PZ-25	PZ-25-3			1.0005				
PZ-26	PZ-26-3			1.2505				
PZ-27	PZ-27-3			1.5005				



# SHOULDER SCREWS

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-28 PZ-29 PZ-30 PZ-31 PZ-32 PZ-33	PZ-28-3 PZ-29-3 PZ-30-3 PZ-31-3 PZ-32-3 PZ-33-3	1/4-20 UNC-2A	.3120	.2505 .3130 .3755 .5005 .6255 .7505	1/2	7/32	7/16	5/32

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-34 PZ-35 PZ-36 PZ-37	PZ-34-3 PZ-35-3 PZ-36-3 PZ-37-3	1/4-20 UNC-2A	.3745	.3130 .3755 .5005 .6255	1/2	7/32	7/16	5/32

THREAD	STYLE	MATERIAL
5/16-18 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-38 PZ-39 PZ-40 PZ-41	PZ-38-3 PZ-39-3 PZ-40-3 PZ-41-3	5/16-18 UNC-2A	.3745	.3130 .3755 .5005 .6255	9/16	1/4	1/2	3/16

THREAD	STYLE	MATERIAL
3/8-16 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL AND 416 STAINLESS STEEL HARDENED RC 26-36

416 STAINLESS STEEL HARDENED RC 26-36	303 STAINLESS STEEL	THREAD	d +0.000 -0.001	L +0.002 -0.000	D	H	E	S
STOCK NO.	STOCK NO.							
PZ-42 PZ-43 PZ-44 PZ-45	PZ-42-3 PZ-43-3 PZ-44-3 PZ-45-3	3/8-16 UNC-2A	.4995	.5005 .6255 .7505 1.0005	3/4	5/16	5/8	1/4

Drawing on previous page. See index for hex wrenches.

# PRECISION CAPTIVE SCREWS

THREAD	STYLE	MATERIAL
#4-40 TO 10-32 UNC-2A	SLOTTED HEAD	303 STAINLESS STEEL

SLOTTED HEAD STOCK NO.	L	M	H	E	D	THREAD UN-2A
Z12-1 Z12-2	.281 .343	.187 .187	1/8 1/8	.072 .072	1/4 1/4	#4-40 #4-40
Z12-3 Z12-4 Z12-5	.312 .375 .437	.218 .218 .218	1/8 1/8 1/8	.086 .086 .086	9/32 9/32 9/32	#6-32 #6-32 #6-32
Z12-6 Z12-7 Z12-8	.406 .468 .531	.250 .250 .250	5/32 5/32 5/32	.114 .114 .114	5/16 5/16 5/16	#8-32 #8-32 #8-32
Z12-9 Z12-10	.531 .593	.312 .312	3/16 3/16	.136 .136	3/8 3/8	#10-32 #10-32

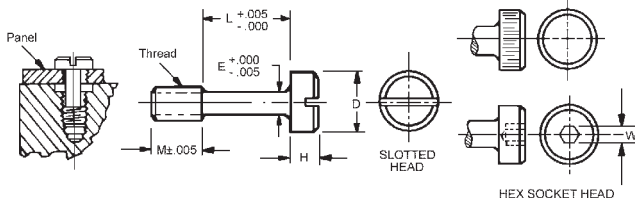
THREAD	STYLE	MATERIAL
#4-40 TO 10-32 UNC-2A	HEX SOCKET HEAD	303 STAINLESS STEEL

HEX SOCKET HEAD STOCK NO.	L	M	H	E	D	THREAD UN-2A	W
Z12-1-H Z12-2-H	.281 .343	.187 .187	1/8 1/8	.072 .072	1/4 1/4	#4-40 #4-40	5/64 5/64
Z12-3-H Z12-4-H Z12-5-H	.312 .375 .437	.218 .218 .218	1/8 1/8 1/8	.086 .086 .086	9/32 9/32 9/32	#6-32 #6-32 #6-32	5/64 5/64 5/64
Z12-6-H Z12-7-H Z12-8-H	.406 .468 .531	.250 .250 .250	5/32 5/32 5/32	.114 .114 .114	5/16 5/16 5/16	#8-32 #8-32 #8-32	3/32 3/32 3/32
Z12-9-H Z12-10-H	.531 .593	.312 .312	3/16 3/16	.136 .136	3/8 3/8	#10-32 #10-32	1/8 1/8

See index for hex wrenches.

THREAD	STYLE	MATERIAL
#4-40 TO 10-32 UNC-2A	KNURLED HEAD	303 STAINLESS STEEL

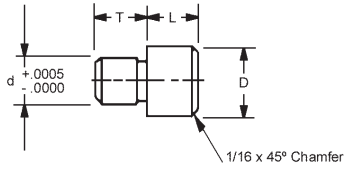
KNURLED HEAD STOCK NO.	L	M	H	E	D	THREAD UN-2A
Z12-1-K Z12-2-K	.281 .343	.187 .187	1/8 1/8	.072 .072	1/4 1/4	#4-40 #4-40
Z12-3-K Z12-4-K Z12-5-K	.312 .375 .437	.218 .218 .218	1/8 1/8 1/8	.086 .086 .086	9/32 9/32 9/32	#6-32 #6-32 #6-32
Z12-6-K Z12-7-K Z12-8-K	.406 .468 .531	.250 .250 .250	5/32 5/32 5/32	.114 .114 .114	5/16 5/16 5/16	#8-32 #8-32 #8-32
Z12-9-K Z12-10-K	.531 .593	.312 .312	3/16 3/16	.136 .136	3/8 3/8	#10-32 #10-32



# PRECISION JIG BUTTONS

## MATERIAL

416 STAINLESS STEEL  
HARDENED ROCKWELL C28-32



STOCK NO.	L	T	D	d
PM-1	1/4	1/4	3/8	.1875
PM-2	3/8	1/4	3/8	.1875
PM-3	1/2	1/4	3/8	.1875
PM-4	1/4	5/16	1/2	.2500
PM-5	3/8	5/16	1/2	.2500
PM-6	1/2	5/16	1/2	.3125
PM-7	3/4	5/16	1/2	.3125
PM-8	1	5/16	1/2	.3125



# THUMB SCREWS

THREAD	STYLE	MATERIAL
#4-40 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

STOCK NO.	THREAD	A	B	C	D	L
PQC-1 PQC-2 PQC-3 PQC-4 PQC-5	#4-40 UNC-2A	5/16	11/64	9/32	.112	1/4 5/16 3/8 1/2 5/8

THREAD	STYLE	MATERIAL
#6-32 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

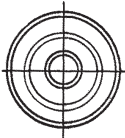
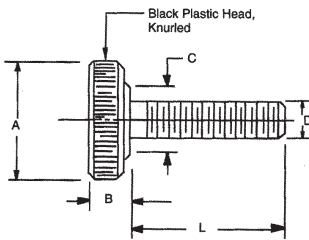
STOCK NO.	THREAD	A	B	C	D	L
PQC-6 PQC-7 PQC-8 PQC-9 PQC-10	#6-32 UNC-2A	3/8	3/16	21/64	.138	5/16 3/8 1/2 5/8 3/4

THREAD	STYLE	MATERIAL
#8-32 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

STOCK NO.	THREAD	A	B	C	D	L
PQC-11 PQC-12 PQC-13 PQC-14 PQC-15	#8-32 UNC-2A	1/2	7/32	3/8	.164	3/8 1/2 5/8 3/4 1

THREAD	STYLE	MATERIAL
#10-24 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

STOCK NO.	THREAD	A	B	C	D	L
PQC-16 PQC-17 PQC-18 PQC-19 PQC-20	#10-24 UNC-2A	5/8	1/4	27/64	.190	3/8 1/2 5/8 3/4 1



Other sizes, special lengths and non-stainless screws available on request.

# THUMB SCREWS

THREAD	STYLE	MATERIAL
10-32 UNF-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

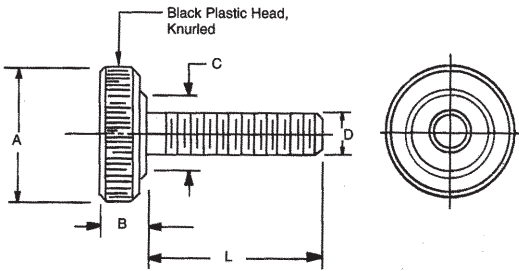
STOCK NO.	THREAD	A	B	C	D	L
PQC-21	#10-32 UNF-2A	5/8	1/4	27/64	.190	3/8
PQC-22						1/2
PQC-23						5/8
PQC-24						3/4
PQC-25						1

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

STOCK NO.	THREAD	A	B	C	D	L
PQC-26	#1/4-20 UNC-2A	3/4	5/16	1/2	.250	3/8
PQC-27						1/2
PQC-28						5/8
PQC-29						3/4
PQC-30						1

THREAD	STYLE	MATERIAL
1/4-20 UNC-2A	PLASTIC HEAD, KNURLED	303 STAINLESS STEEL WITH BLACK PLASTIC HEAD

STOCK NO.	THREAD	A	B	C	D	L
PQC-31	#1/4-20 UNC-2A	1	5/16	1/2	.250	3/8
PQC-32						1/2
PQC-33						5/8
PQC-34						3/4
PQC-35						1



Other sizes, special lengths and non-stainless screws available on request.

# THUMB SCREWS

THREAD	STYLE	MATERIAL
#4-40 UNC-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

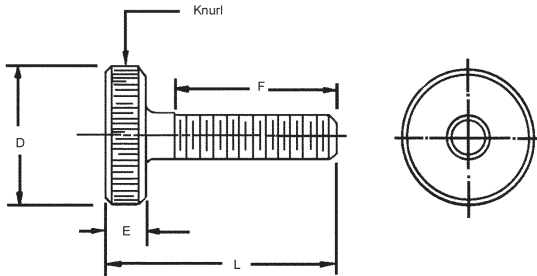
416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F	E
PQ-1	PQ-1-3	#4-40 UNC-2A	1/4	1/2	5/16	1/8
PQ-2	PQ-2-3		1/4	1	7/16	1/2
PQ-3	PQ-3-3		1/4	1-1/4	5/8	1/2
PQ-4 - PQ-5	- PQ-4-3 PQ-5-3	#4-40 UNC-2A	3/8	1/2	5/16	1/8
			3/8	1/2	5/16	1/8
			3/8	5/8	7/16	1/8

THREAD	STYLE	MATERIAL
#6-32 UNC-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F	E
PQ-6	PQ-6-3	#6-32 UNC-2A	1/4	1	7/16	1/2
PQ-7	PQ-7-3		1/4	1-1/4	5/8	1/2
PQ-8	PQ-8-3		1/4	1-1/2	13/16	1/2
PQ-9 PQ-10	PQ-9-3 PQ-10-3	#6-32 UNC-2A	3/8	1/2	5/16	1/8
			3/8	5/8	3/8	1/8

THREAD	STYLE	MATERIAL
#8-32 UNC-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

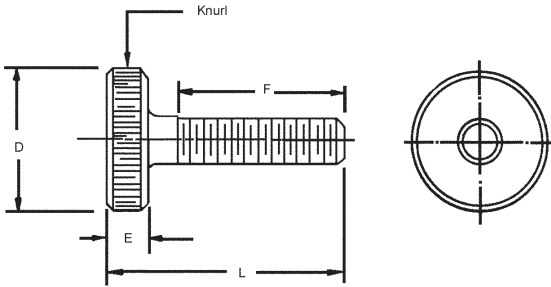
416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F	E
PQ-11	PQ-11-3	#8-32 UNC-2A	1/4	1	7/16	1/2
PQ-12	PQ-12-3		1/4	1-1/4	5/8	1/2
PQ-13	PQ-13-3		1/4	1-1/2	13/16	1/2
PQ-14 PQ-15	PQ-14-3 PQ-15-3	#8-32 UNC-2A	3/8	1/2	5/16	1/8
			3/8	5/8	3/8	1/8



# THUMB SCREWS

THREAD	STYLE	MATERIAL
#10-24 UNC-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F	E
PQ-16	PQ-16-3	#10-24 UNC-2A	3/8	11/16	7/16	3/16
PQ-17	PQ-17-3		3/8	15/16	5/8	3/16
PQ-18	PQ-18-3		3/8	1-3/16	13/16	3/16
PQ-19	PQ-19-3		3/8	1-7/16	1	3/16
PQ-20	PQ-20-3	#10-24 UNC-2A	1/2	15/16	5/8	3/16
PQ-21	PQ-21-3		1/2	1-3/16	13/16	3/16
PQ-22	PQ-22-3		1/2	1-7/16	1	3/16
PQ-23	PQ-23-3		1/2	1-11/16	1-1/4	3/16
PQ-24	PQ-24-3	#10-24 UNC-2A	3/4	15/16	5/8	3/16
PQ-25	PQ-25-3		3/4	1-3/16	13/16	3/16
PQ-26	PQ-26-3		3/4	1-7/16	1	3/16
PQ-27	PQ-27-3		3/4	1-11/16	1-1/4	3/16



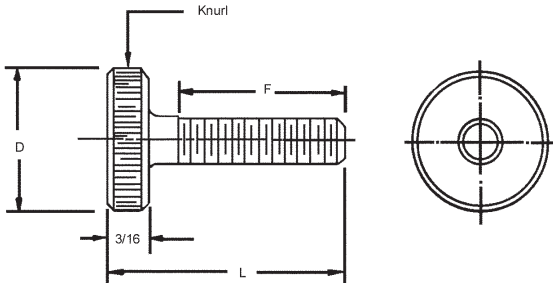
# THUMB SCREWS

THREAD	STYLE	MATERIAL
#10-32 UNF-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F
PQ-28 PQ-29 PQ-30 PQ-31	PQ-28-3 PQ-29-3 PQ-30-3 PQ-31-3	#10-32 UNF-2A	3/8	11/16 15/16 1-3/16 1-7/16	7/16 5/8 13/16 1
PQ-32 PQ-33 PQ-34 PQ-35	PQ-32-3 PQ-33-3 PQ-34-3 PQ-35-3	#10-32 UNF-2A	1/2	15/16 1-3/16 1-7/16 1-11/16	5/8 13/16 1 1-1/4
PQ-36 PQ-37 PQ-38 PQ-39	PQ-36-3 PQ-37-3 PQ-38-3 PQ-39-3	#10-32 UNF-2A	3/4	15/16 1-3/16 1-7/16 1-11/16	5/8 13/16 1 1-1/4

THREAD	STYLE	MATERIAL
#1/4-20 UNC-2A	KNURLED	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32

416 STAINLESS STEEL STOCK NO.	303 STAINLESS STEEL STOCK NO.	THREAD	D	L	F
PQ-40 PQ-41 PQ-42 PQ-43 PQ-44	PQ-40-3 PQ-41-3 PQ-42-3 PQ-43-3 PQ-44-3	1/4-20 UNC-2A	3/4	15/16 1-3/16 1-7/16 1-11/16 2-3/16	5/8 13/16 1 1-1/4 1-5/8
PQ-45 PQ-46 PQ-47 PQ-48 PQ-49	PQ-45-3 PQ-46-3 PQ-47-3 PQ-48-3 PQ-49-3	1/4-20 UNC-2A	1	15/16 1-3/16 1-7/16 1-11/16 2-3/16	5/8 13/16 1 1-1/4 1-5/8



# THUMB SCREWS

THREAD	STYLE	MATERIAL
#4-40 UNC-2A	KNURLED SOCKET HEAD	303 STAINLESS STEEL

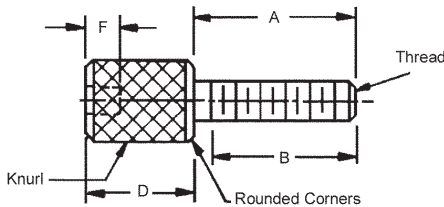
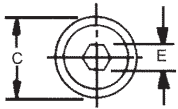
STOCK NO.	THREAD	A	C	D	B	E	F
PQH-1 PQH-2	#4-40 UNC-2A	1/2 3/4	1/4	1/2	7/16 5/8	5/64	1/16
PQH-3 PQH-4	#4-40 UNC-2A	1/2 3/4	5/16	1/2	7/16 5/8	3/32	5/64
PQH-5 PQH-6	#4-40 UNC-2A	3/8 1/2	3/8	1/2	5/16 7/16	1/8	3/32

THREAD	STYLE	MATERIAL
#6-32 UNC-2A	KNURLED SOCKET HEAD	303 STAINLESS STEEL

STOCK NO.	THREAD	A	C	D	B	E	F
PQH-7 PQH-8 PQH-9	#6-32 UNC-2A	1/2 3/4 1	1/4	1/2	7/16 5/8 13/16	5/64	1/16
PQH-10 PQH-11 PQH-12	#6-32 UNC-2A	1/2 3/4 1	5/16	1/2	7/16 5/8 13/16	3/32	5/64
PQH-13 PQH-14	#6-32 UNC-2A	3/8 1/2	3/8	1/2	5/16 3/8	1/8	3/32

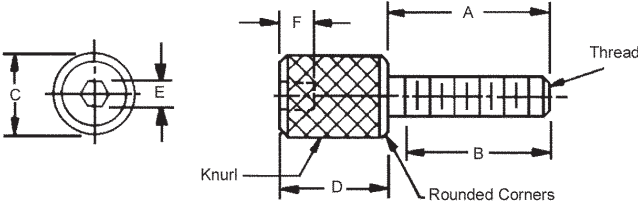
THREAD	STYLE	MATERIAL
#8-32 UNC-2A	KNURLED SOCKET HEAD	303 STAINLESS STEEL

STOCK NO.	THREAD	A	C	D	B	E	F
PQH-15 PQH-16 PQH-17	#8-32 UNC-2A	1/2 3/4 1	1/4	1/2	7/16 5/8 13/16	5/64	1/16
PQH-18 PQH-19 PQH-20	#8-32 UNC-2A	1/2 3/4 1	5/16	1/2	7/16 5/8 13/16	3/32	5/64
PQH-21 PQH-22	#8-32 UNC-2A	3/8 1/2	3/8	1/2	5/16 3/8	1/8	3/32



# THUMB SCREWS

THREAD	STYLE	MATERIAL
#10-24 UNC-2A #10-32 UNF-2A	KNURLLED SOCKET HEAD	303 STAINLESS STEEL OR 416 STAINLESS STEEL HARDENED RC 26-32



STOCK NO.	THREAD	A	C	D	B	E	F
PQH-23	#10-24 UNC-2A	1/2	5/16	3/16	7/16	3/32	5/64
PQH-24		3/4			5/8		
PQH-25		1			13/16		
PQH-26		1-1/4			1		
PQH-27	#10-24 UNC-2A	1/2	3/8	1/2	7/16	1/8	3/32
PQH-28		3/4			5/8		
PQH-29		1			13/16		
PQH-30		1-1/4			1		
PQH-31	#10-32 UNF-2A	1/2	5/16	3/16	7/16	3/32	5/64
PQH-32		3/4			5/8		
PQH-33		1			13/16		
PQH-34		1-1/4			1		
PQH-35	#10-32 UNF-2A	1/2	3/8	1/2	7/16	1/8	3/32
PQH-36		3/4			5/8		
PQH-37		1			13/16		
PQH-38		1-1/4			1		

F

# THUMB NUTS

THREAD	STYLE	MATERIAL
#4-40 UNC-2B	KNURLED	303 STAINLESS STEEL

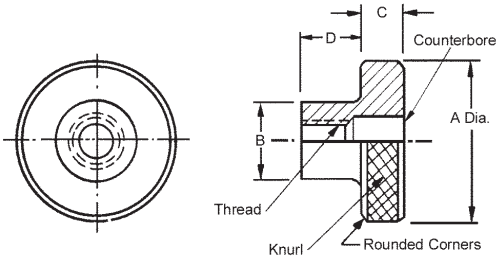
STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-1	#4-40 UNC-2B	1/2	1/4	1/8	1/4	1/8	1/8
PD1-2		1/2			1/2	1/8	3/8
PD1-3		3/4			1/4	1/8	1/8
PD1-4		3/4			1/2	1/8	3/8

THREAD	STYLE	MATERIAL
#6-32 UNC-2B	KNURLED	303 STAINLESS STEEL

STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-5	#6-32 UNC-2B	1/2	1/4	1/8	1/4	#26	3/32
PD1-6		1/2			1/2	#26	11/32
PD1-7		3/4			1/4	#26	3/32
PD1-8		3/4			1/2	#26	11/32

THREAD	STYLE	MATERIAL
#8-32 UNC-2B	KNURLED	303 STAINLESS STEEL

STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-9	#8-32 UNC-2B	1/2	5/16	1/8	1/4	-	-
PD1-10		1/2			1/2	#15	1/4
PD1-11		3/4			1/4	#15	-
PD1-12		3/4			1/2	#15	1/4





# THUMB NUTS

THREAD	STYLE	MATERIAL
#10-24 UNC-2B	KNURLED	303 STAINLESS STEEL

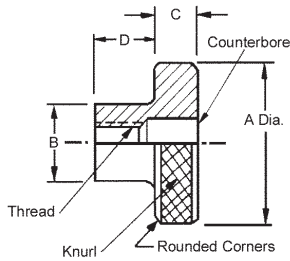
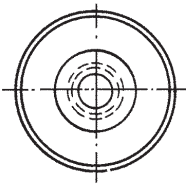
STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-13	#10-24 UNC-2B	1/2	3/8	3/16	1/4	-	-
PD1-14		1/2			1/2	13/64	1/4
PD1-15		1			1/4	-	-
PD1-16		1			1/2	13/64	1/4

THREAD	STYLE	MATERIAL
#10-32 UNF-2B	KNURLED	303 STAINLESS STEEL

STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-17	#10-32 UNF-2B	1/2	3/8	3/16	1/4	-	-
PD1-18		1/2			1/2	13/64	1/4
PD1-19		1			-	-	-
PD1-20		1			1/2	13/64	1/4

THREAD	STYLE	MATERIAL
#1/4-20 UNC-2B	KNURLED	303 STAINLESS STEEL

STOCK NO.	THREAD	A	B	C	D	COUNTERBORE	
						DIA.	DEEP
PD1-21	1/4-20 UNC-2B	3/4	1/2	1/4	1/4	-	-
PD1-22		3/4			1/2	17/64	1/4
PD1-23		1			1/4	-	-
PD1-24		1			1/2	17/64	1/4
PD1-25		1			3/4	17/64	1/2



F

# THREADED STUDS

THREAD	STYLE	MATERIAL
#6-32	DOUBLE ENDED	303 STAINLESS STEEL

STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-1	1	#6-32	7/32	1/2	.138 DIA.
PV-2	1-1/4			5/8	
PV-30	1-1/2			3/4	
PV-3	1-3/4			3/4	
PV-4	2			3/4	

THREAD	STYLE	MATERIAL
#8-32	DOUBLE ENDED	303 STAINLESS STEEL

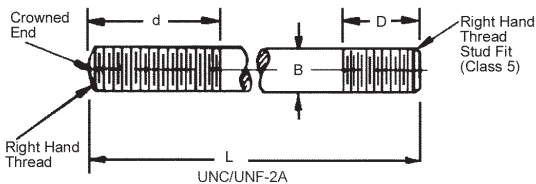
STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-5	1	#8-32	7/32	1/2	.164 DIA.
PV-6	1-1/4			5/8	
PV-7	1-1/2			3/4	
PV-8	1-3/4			3/4	
PV-9	2			3/4	

THREAD	STYLE	MATERIAL
#10-24	DOUBLE ENDED	303 STAINLESS STEEL

STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-10	1	#10-24	7/32	1/2	.190 DIA.
PV-11	1-1/4			5/8	
PV-12	1-1/2			3/4	
PV-13	1-3/4			3/4	
PV-31	2			3/4	

THREAD	STYLE	MATERIAL
#10-32	DOUBLE ENDED	303 STAINLESS STEEL

STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-14	1	#10-32	7/32	1/2	.190 DIA.
PV-15	1-1/4			5/8	
PV-16	1-1/2			3/4	
PV-17	1-3/4			3/4	
PV-18	2			3/4	



# THREADED STUDS

THREAD	STYLE	MATERIAL
1/4-20	DOUBLE ENDED	303 STAINLESS STEEL

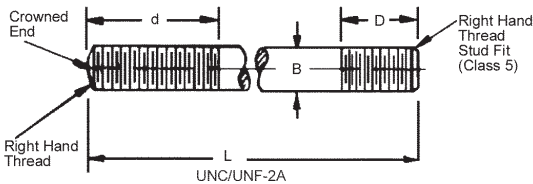
STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-19	1-1/4	1/4-20	9/32	5/8	.250 DIA.
PV-20	1-1/2			5/8	
PV-21	1-3/4			3/4	
PV-22	2			3/4	
PV-23	2-1/2			3/4	
PV-24	1			1	

THREAD	STYLE	MATERIAL
5/16-18	DOUBLE ENDED	303 STAINLESS STEEL

STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-25	1-1/2	5/16-18	11/32	5/8	.312 DIA.
PV-26	2			1	
PV-27	2-1/2			1-1/4	
PV-28	1			1-3/8	
PV-32	3-1/2			1-1/2	
PV-29	4			1-1/2	

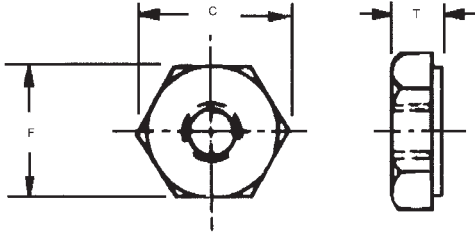
THREAD	STYLE	MATERIAL
3/8-16	DOUBLE ENDED	303 STAINLESS STEEL

STOCK NO.	L	THREAD SIZE BOTH ENDS	D	d	B
PV-33	1-5/8	3/8-16	11/32	3/4	.375 DIA.
PV-34	2			1	
PV-35	2-1/2			1-1/4	
PV-36	1			1-3/8	
PV-37	3-1/2			1-1/2	
PV-38	4			1-1/2	



# HEX NUTS

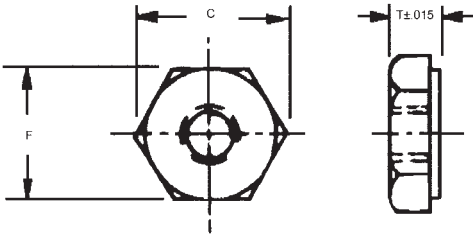
SCREW SIZE	MATERIAL
#000 TO 1/4-20	STAINLESS STEEL TYPE 18-8



SCREW STOCK NO.	SIZE UN-2B	T	C (Ref.)	F
Y5-000	#000-120	3/64	7/64	3/32
Y5-00	#00-96	3/64	7/64	3/32
Y5-0	#0-80	3/64	3/16	5/32
Y5-164	#1-64	3/64	3/16	5/32
Y5-1	#1-72	3/64	3/16	5/32
Y5-2	#2-56	1/16	7/32	3/16
Y5-4	#4-40	3/32	9/32	1/4
Y5-6	#6-32	7/64	23/64	5/16
Y5-8	#8-32	1/8	25/64	11/32
Y5-11	#10-24	1/8	7/16	3/8
Y5-10	#10-32	1/8	7/16	3/8
Y5-12	1/4-20	3/16	1/2	7/16

SCREW STOCK NO.	SIZE UN-2B	T	C (Ref.)	F
Y5-23	1/4-28	3/16	1/2	7/16
Y5-13	5/16-18	17/64	37/64	1/2
Y5-14	5/16-24	17/64	37/64	1/2
Y5-15	3/8-16	21/64	41/64	9/16
Y5-16	3/8-24	21/64	41/64	9/16
Y5-24	3/8-32	3/32	41/64	9/16
Y5-17	1/2-13	7/16	7/8	55/64
Y5-18	1/2-20	7/16	55/64	3/4
Y5-19	5/8-11	35/64	1-5/64	15/16
Y5-20	5/8-18	35/64	1-5/64	15/16
Y5-21	3/4-10	41/64	1-17/64	1-1/8
Y5-22	3/4-16	41/64	1-17/64	1-1/8

SCREW SIZE	MATERIAL
#2-56 TO 5/16-24	MOLDED NYLON - WHITE



SCREW STOCK NO.	THREAD SIZE	T	C (Ref.)	F
Z5-N-2	#2-56	.066	.217	3/16
Z5-N-1	#4-40	.098	.289	1/4
Z5-N-3	#6-32	.114	.361	5/16
Z5-N-5	#8-32	.130	.397	11/32
Z5-N-7	#10-24	.130	.433	3/8
Z5-N-9	#10-32	.130	.433	3/8
Z5-N-11	1/4-20	.226	.505	7/16
Z5-N-12	5/16-18	.273	.577	1/2
Z5-N-13	5/16-24	.293	.577	1/2

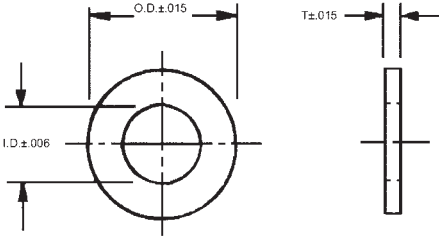
SOLD IN PACKAGES OF 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT	NO. OF PIECES
KIT-Z5	HEX NUTS, WASHERS, LOCK WASHERS, STAINLESS STEEL #0 TO #10	1800
KIT-Z11N	NYLON PAN HEAD SCREW KIT	480
KIT-Z9N	NYLON SOCKET HEAD SCREW KIT	480
KIT-Z6N	NYLON FLAT HEAD SCREW KIT	480
	ASSORTED SIZES WITH NUTS AND WASHERS #4 TO 1/4"	480

# WASHERS

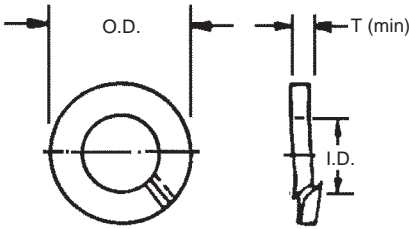
SCREW SIZE	MATERIAL	TYPE
#4 TO 1/4	MOLDED NYLON - WHITE	PLAIN



STOCK NO.	SCREW SIZE	OUTSIDE DIA.	I.D.	T
Z4-N-1	# 4	.281	.115	.047
Z4-N-3	# 6	.312	.140	.047
Z4-N-5	# 8	.375	.170	.062
Z4-N-7	# 10	.437	.200	.062
Z4-N-9	1/4	.562	.260	.062

SOLD IN PACKAGES OF 10.

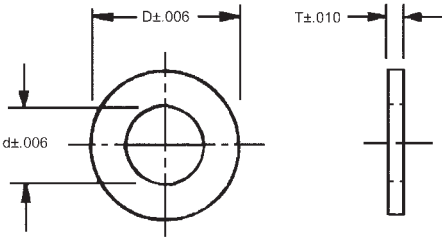
SCREW SIZE	MATERIAL	TYPE
#0 TO 1/2	STAINLESS STEEL TYPE 18-8	SPLIT LOCK



STOCK NO.	SCREW SIZE	I.D. (min)	I.D. (max)	O.D. (max)	T (min)
Z3-0	#0	.063	.069	.130	.015
Z3-1	#1	.069	.075	.150	.015
Z3-2	#2	.088	.094	.172	.020
Z3-4	#4	.114	.120	.209	.025
Z3-6	#6	.141	.148	.250	.031
Z3-8	#8	.167	.174	.293	.040
Z3-10	#10	.193	.200	.334	.047
Z3-12	1/4	.252	.260	.487	.062
Z3-13	5/16	.314	.322	.583	.078
Z3-14	3/8	.377	.385	.680	.094
Z3-15	1/2	.502	.512	.869	.125

SOLD IN PACKAGES OF 10.

SCREW SIZE	MATERIAL	TYPE
#000 TO 1/2	STAINLESS STEEL TYPE 18-8	PLAIN

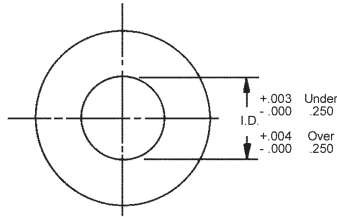
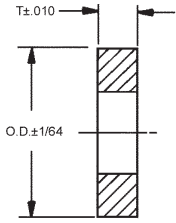


STOCK NO.	SCREW SIZE	D	d	T
Z4-000	#000	.090	.040	.012
Z4-00	#00	.108	.053	.015
Z4-0	#0	.156	.062	.020
Z4-1	#1	.187	.078	.020
Z4-2	#2	.187	.089	.031
Z4-4	#4	.312	.125	.031
Z4-6	#6	.375	.149	.031
Z4-8	#8	.375	.174	.031
Z4-10	#10	.438	.203	.063
Z4-12	1/4	.500	.265	.063
Z4-13	5/16	.562	.328	.063
Z4-14	3/8	.625	.390	.063
Z4-15	1/2	.750	.516	.093

SOLD IN PACKAGES OF 10.

# WASHERS

SCREW SIZE	MATERIAL	TYPE
#4 TO 3/8	303 STAINLESS STEEL	PLAIN

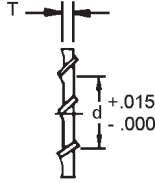
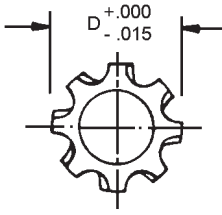


STOCK NO.	SCREW SIZE	I.D.	O.D.	T
PC5-1	#4	.116	1/4	1/16
PC5-2	#6	.144	5/16	1/16
PC5-3	#8	.169	3/8	1/16
PC5-4	#10	.196	7/16	5/64
PC5-5	1/4	.257	1/2	5/64
PC5-6	5/16	.323	5/8	3/32
PC5-7	3/8	.386	3/4	3/32

SOLD IN PACKAGES OF 10.

# LOCK WASHERS

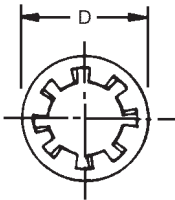
THREAD	STYLE	MATERIAL
#4 TO 1/2	EXTERNAL TOOTH	410 STAINLESS STEEL



STOCK NO.	THREAD	D	d	T
Z1-4	#4	.255	.120	.015
Z1-6	#6	.317	.146	.018
Z1-8	#8	.381	.173	.020
Z1-10	#10	.406	.200	.022
Z1-25	1/4	.506	.260	.025
Z1-31	5/16	.601	.326	.030
Z1-37	3/8	.695	.390	.035
Z1-50	1/2	.898	.530	.040

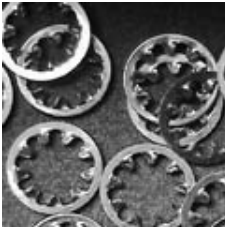
SOLD IN PACKAGES OF 10.

THREAD	STYLE	MATERIAL
#2 TO 1/2	INTERNAL TOOTH	410 STAINLESS STEEL



STOCK NO.	THREAD	D	d	T
Z2-2	#2	.185	.093	.013
Z2-4	#4	.265	.120	.015
Z2-6	#6	.288	.146	.018
Z2-8	#8	.336	.173	.020
Z2-10	#10	.381	.200	.022
Z2-25	1/4	.478	.260	.025
Z2-31	5/16	.607	.326	.030
Z2-37	3/8	.692	.390	.035
Z2-50	1/2	.883	.530	.090

SOLD IN PACKAGES OF 10.



## Also available

STOCK NO.	DESCRIPTION OF KIT	NO. OF PIECES
KIT-Z2	LOCK WASHER KIT, ASSORTED SIZES, STAINLESS STEEL, INTERNAL AND EXTERNAL TOOTH	480

# THRUST WASHERS AND DISKS

SHAFT SIZE	TYPE	MATERIAL
1/8 TO 1-1/4	PLAIN HARDENED GROUND	410 STAINLESS STEEL RC 38-42 OR 1080 CARBON STEEL RC 61-63

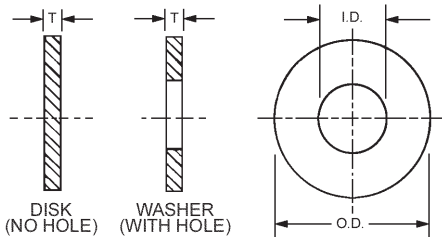
410 STAINLESS STEEL STOCK NO.	CARBON STEEL STOCK NO.	I.D.	O.D.	T	SHAFT SIZE
CD1-1-SS	CD1-1	0.128" - 0.133"	0.430" - 0.437"	.050	1/8
CD1-2-SS	CD1-2	0.191" - 0.195"	0.492" - 0.499"	.050	3/16
CD1-3-SS	CD1-3	0.253" - 0.258"	0.555" - 0.562"	.050 ±.002	1/4
CD1-4-SS	CD1-4	0.316" - 0.321"	0.617" - 0.624"	.050	5/16
CD1-5-SS	CD1-5	0.378" - 0.383"	0.805" - 0.812"	.062	3/8
CD1-6-SS	CD1-6	0.503" - 0.508"	0.930" - 0.937"	.062	1/2
CD1-7-SS	CD1-7	0.628" - 0.635"	1.115" - 1.124"	.093 ±.003	5/8
CD1-8-SS	CD1-8	0.753" - 0.760"	1.240" - 1.249"	.093	3/4
CD1-9-SS	CD1-9	1.003" - 1.012"	1.613" - 1.624"	.125 ±.005	1
CD1-10-SS	CD1-10	1.253" - 1.262"	1.863" - 1.874"	.125	1-1/4

SHAFT SIZE	TYPE	MATERIAL
3/16 TO 1-1/4	PLAIN PLASTIC THRUST	NYLON AND TEFLON

NYLON STOCK NO.	TEFLON® STOCK NO.	I.D. +.010 -.005	O.D. ±1/64	T ±.005	SHAFT SIZE
CD7-3	CD8-3	.188	3/4	.062	3/16
CD7-4	CD8-4	.250	5/8	.093	1/4
CD7-5	CD8-5	.500	13/16	.093	1/2
CD7-9	CD8-9	.562	1	.093	9/16
CD7-10	CD8-10	.625	1-1/16	.093	5/8
CD7-12	CD8-12	.750	1-1/8	.093	3/4
CD7-14	CD8-14	.875	2-1/8	.093	7/8
CD7-20	CD8-20	1.250	2-1/16	.093	1-1/4

SHAFT SIZE	TYPE	MATERIAL
1/8 TO 1/2	PLAIN DISK AND WASHER	BRONZE (OIL-IMPREGNATED) OR TOOL STEEL

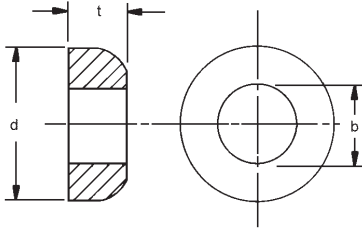
BRONZE OIL-IMPREGNATED		TOOL STEEL		WASHER I.D. +.004 -.000	O.D. BRONZE +0.000 -0.004	O.D. TOOL STEEL +0.008 -0.004	±.002 T	SHAFT SIZE
DISK	WASHER	DISK	WASHER					
STOCK NO.	STOCK NO.	STOCK NO.	STOCK NO.					
CD2-1	CD3-1	CD4-1	CD5-1	.128	.372	.252	.062	1/8
CD2-2	CD3-2	CD4-2	CD5-2	.190	.497	.377	.062	3/16
CD2-3	CD3-3	CD4-3	CD5-3	.253	.622	.502	.062	1/4
CD2-4	CD3-4	CD4-4	CD5-4	.316	.747	.627	.093	5/16
CD2-5	CD3-5	CD4-5	CD5-5	.378	.872	.752	.125	3/8
CD2-6	CD3-6	CD4-6	CD5-6	.503	1.127	1.002	.187	1/2





# SWIVEL WASHERS

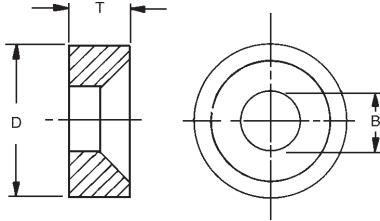
SCREW SIZE	TYPE	MATERIAL
#4 TO 3/8	MALE	303 STAINLESS STEEL MACHINED



STOCK NO.	SCREW SIZE	d	b	t	ASSEMBLED HEIGHT
PC6-1	#4	9/32	.116	1/8	13/64
PC6-2	#6	9/32	.144	1/8	13/64
PC6-3	#8	5/16	.169	1/8	13/64
PC6-4	#10	3/8	.196	5/32	15/64
PC6-5	1/4	7/16	.257	3/16	17/64
PC6-6	5/16	1/2	.323	3/16	21/64
PC6-7	3/8	5/8	.386	1/4	25/64

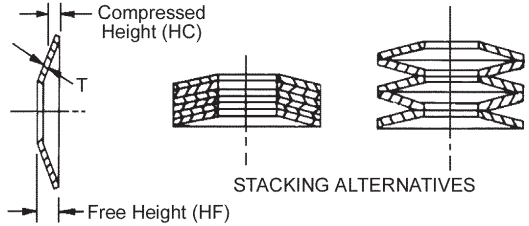
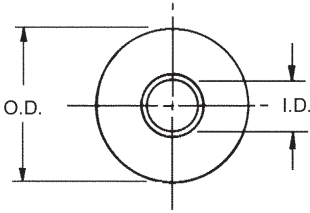
TYPE	MATERIAL
FEMALE	303 STAINLESS STEEL MACHINED

STOCK NO.	D	B	T	ASSEMBLED HEIGHT
PC7-1	3/8	5/32	1/8	13/64
PC7-2	3/8	11/64	1/8	13/64
PC7-3	3/8	3/16	1/8	13/64
PC7-4	7/16	7/32	1/8	15/64
PC7-5	1/2	9/32	5/32	17/64
PC7-6	9/16	11/32	3/16	21/64
PC7-7	11/16	13/32	1/4	25/64



# WASHERS

STYLE	SHAFT SIZE	MATERIAL
BELLEVILLE	3/32 TO 3/4	301 OR 302 STAINLESS STEEL *1095 CARBON STEEL

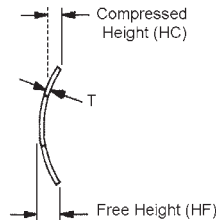
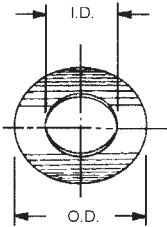


STOCK NO.	O.D. ±.010	I.D. +0.01 -0.000	T ±10%	HF (Ref.)	HC	FORCE TO COMPRESS TO HC ± 15%
ST-1	.187	.093	.010	.015	.012	15 LBS
ST-2	.250	.125	.013	.020	.017	26 LBS
ST-3	.312	.156	.016	.025	.021	41 LBS
ST-4	.375	.190	.020	.030	.025	60 LBS
ST-5	.500	.255	.025	.038	.031	95 LBS
ST-6	.625	.317	.032	.048	.040	145 LBS
ST-7	.750	.380	.040	.059	.049	235 LBS
ST-8	1.000	.505	.050	.075	.062	340 LBS
ST-9	1.250	.630	.062	.092	.077	475 LBS
ST-10*	1.500	.750	.072	.107	.089	660 LBS



Sold in packages of 10.

STYLE	SHAFT SIZE	MATERIAL
CURVED	3/32 TO 3/4	301 OR 302 STAINLESS STEEL *1095 CARBON STEEL



STOCK NO.	SCREW OR ROD SIZE	HOLE SIZE	O.D. ±.010	I.D. † +.010 -0.000	HF (Ref.)	T ±10%	HC	FORCE TO COMPRESS TO HC ± 15%
SU-1	#5	1/4	.245	.135	.034	.006	.020	2 LBS
SU-2	#6	9/32	.270	.148	.035	.007	.022	2 LBS
SU-3	#8	11/32	.322	.174	.042	.007	.025	3 LBS
SU-4	#10	3/8	.370	.200	.047	.009	.028	4 LBS
SU-5	#12	7/16	.423	.231	.053	.010	.032	5 LBS
SU-6	1/4	1/2	.490	.265	.063	.011	.034	7 LBS
SU-7*	9/32	9/16	.551	.296	.070	.012	.038	8 LBS
SU-8	5/16	5/8	.612	.327	.077	.013	.042	9 LBS
SU-9*	11/32	11/16	.672	.363	.081	.015	.047	11 LBS
SU-10	3/8	3/4	.735	.395	.086	.016	.050	12 LBS
SU-11*	7/16	7/8	.857	.462	.100	.018	.057	15 LBS
SU-12	1/2	1	.980	.525	.110	.021	.063	20 LBS

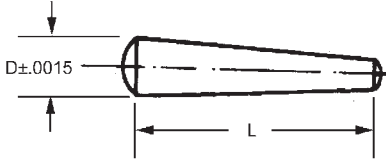


† I.D. Based in long axis providing free fit on normal screw.

Sold in packages of 10.

# PINS

STYLE	MATERIALS
TAPER ANSI-B18.2-1978 (R1995)	303 STAINLESS STEEL



STOCK NO.	TAPER PIN NO.	D	L
CP3-20*	#9/0	.031	1/4
CP3-22*			3/8
CP3-21*	#8/0	.047	1/4
CP3-1*			3/8
CP3-2*			1/2
CP3-24	#7/0	.0625	3/8
CP3-3			7/16
CP3-4			1/2
CP3-25			9/16
CP3-26			5/8
CP3-27	#6/0	.078	7/16
CP3-5			1/2
CP3-6			9/16
CP3-28			5/8
CP3-29			3/4
CP3-7	#5/0	.094	9/16
CP3-8			5/8
CP3-32			3/4
CP3-33			7/8
CP3-34	#4/0	.109	5/8
CP3-35			3/4
CP3-36			7/8
CP3-37			1
CP3-9	#3/0	.125	5/8
CP3-10			3/4
CP3-38			7/8
CP3-39			1
CP3-11	#2/0	.141	3/4
CP3-40			7/8
CP3-12			1
CP3-41			1-1/4

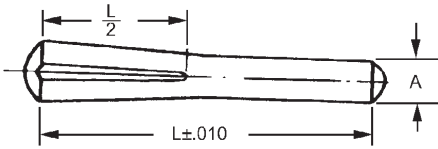
\* ANSI B18.8.2-1978 (R1989) Does not apply.  
Taper 1/4" per foot  
Sold in packages of 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-CP3	ASSORTED TAPER PIN KIT 240 PIECES

# PINS

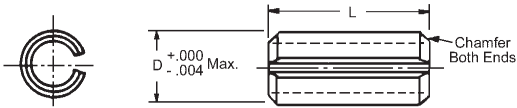
TYPE	MATERIALS
GROOVED HALF LENGTH TYPE B ANSI-B18.2-1978 (R1995)	303 STAINLESS STEEL



STOCK NO.	A	L	DRILL SIZE
CP4-1 CP4-2 CP4-17	.0469 +.0000 -.0010	3/8 1/2 5/8	3/64
CP4-3 CP4-4 CP4-18	.0625 +.0000 -.0010	3/8 1/2 5/8	1/16
CP4-5 CP4-6 CP4-22	.0781 +.0000 -.0010	3/8 1/2 5/8	5/64
CP4-7 CP4-8	.0938 +.0000 -.0010	3/8 1/2	3/32
CP4-23 CP4-24	.0938 +.0000 -.0010	5/8 3/4	3/32
CP4-25 CP4-9 CP4-10 CP4-26	.1250 +.0000 -.0020	1/2 5/8 3/4 1	1/8
CP4-27 CP4-28 CP4-11 CP4-12	.1563 +.0000 -.0020	1/2 5/8 3/4 1	5/32

Other sizes available on request.  
Sold in packages of 10.

TYPE	MATERIALS
ROLL OR SPRING	420 STAINLESS STEEL

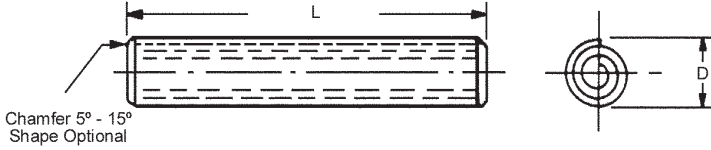


STOCK NO.	D	L (Inch)	DRILL SIZE	REF. SHAFT DIA.			
CP5-2 CP5-21 CP5-3	.069	1/4 5/16 3/8	1/16	3/16			
CP5-12 CP5-10 CP5-22 CP5-23		7/16 1/2 9/16 5/8					
CP5-4		.086			9/16	5/64	1/4
CP5-24 CP5-25		.103			3/8 7/16	3/32	1/4
CP5-26 CP5-5		.103			1/2 5/8	3/32	1/4
CP5-13 CP5-14 CP5-15	.135	3/8 7/16 1/2	1/8	3/8			
CP5-16 CP5-17 CP5-18 CP5-6		9/16 5/8 11/16 3/4					
CP5-7		.167			1	5/32	1/2

Sold in packages of 10.

# PINS

TYPE	MATERIALS
SPIRAL STANDARD DUTY	302 STAINLESS STEEL



STOCK NO.	D	L	DRILL SIZE	(REF.) SHAFT
CP6-17	.033 +.002 -.000	1/8	.031	3/32
CP6-18		3/16		
CP6-19		1/4		
CP6-20		5/16		
CP6-21		3/8		
CP6-23	.041 +.003 -.000	1/4	.039	1/8
CP6-24		5/16		
CP6-10		3/8		
CP6-25		7/16		
CP6-11		1/2		
CP6-26	.049 +.003 -.000	3/16	.047	1/8
CP6-27		1/4		
CP6-1		5/16		
CP6-29		3/8		
CP6-30		7/16		
CP6-31		1/2		
CP6-32	.054 +.003 -.000	3/16	.051	1/8
CP6-33		1/4		
CP6-34		5/16		
CP6-35		3/8		
CP6-36		7/16		
CP6-37		1/2		
CP6-38	.067 +.005 -.000	1/4	.061	3/16
CP6-39		5/16		
CP6-12		3/8		
CP6-2		7/16		
CP6-13		1/2		
CP6-41		9/16		
CP6-42		5/8		
CP6-3	.083 +.005 -.000	1/2	.077	1/4
CP6-43	.099 +.006 -.000	3/8	.093	1/4 & 5/16
CP6-44		7/16		
CP6-4		1/2		
CP6-15		9/16		
CP6-45		5/8		
CP6-46		11/16		
CP6-5	.114 +.006 -.000	3/4	.108	3/8
CP6-47	.124 +.005 -.000	3/8	.124	3/8 7/16 & 1/2
CP6-48		7/16		
CP6-49		1/2		
CP6-50		9/16		
CP6-51		5/8		
CP6-52		11/16		
CP6-53		3/4		
CP6-6		1		



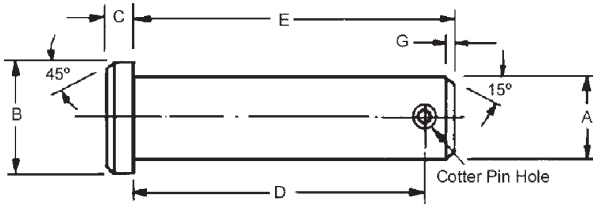
Sold in packages of 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-CP5	ASSORTED SIZES ROLL, TAPER, & DOWEL PINS - 530 PIECES

# PINS

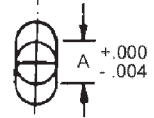
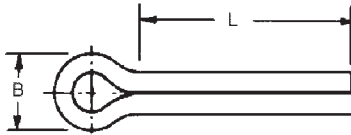
TYPE	MATERIALS
CLEVIS ANSI-B18-8.1-1972 (R 1983)	416 STAINLESS STEEL HARDENED ROCKWELL C28-32



STOCK NO.	A +.000 -.005	B	C	D +.000 -.020	E +.020 +.000	G	COTTER PIN HOLE H
CP2-1	.186	5/16	1/16	.504	19/32	3/64	5/64
CP2-2	.248	3/8	3/32	.692	51/64	3/64	5/64
CP2-3	.311	7/16	3/32	.832	31/32	1/16	7/64
CP2-4	.373	1/2	1/8	.958	1-1/16	1/16	7/64
CP2-5	.436	9/16	5/32	1.082	1-15/64	1/16	7/64
CP2-6	.496	5/8	5/32	1.223	1-27/64	5/64	9/64

TYPE	MATERIALS
COTTER ANSI-B18-8.1-1972 (R 1983)	STAINLESS STEEL

STOCK NO.	A	B MIN.	L (Inch)	HOLE SIZE
CP1-31	.032	1/16	3/8	3/64
CP1-32			1/2	
CP1-1			3/4	
CP1-34			1	
CP1-2	.048	3/32	1	1/16
CP1-35	.060	1/8	3/8	5/64
CP1-36			1/2	
CP1-37			3/4	
CP1-3			1	
CP1-9			1-1/2	
CP1-4	.076	5/32	1-1/4	3/32
CP1-10	.090	3/16	1/2	7/64
CP1-11			3/4	
CP1-12			1	
CP1-5			1-1/2	
CP1-14	.120	1/4	1/2	9/64
CP1-15			3/4	
CP1-16			1	
CP1-17			1-1/2	
CP1-7			2	
CP1-19	.150	5/16	3/4	11/64
CP1-20			1	
CP1-21			1-1/2	
CP1-22			2	
CP1-23	.176	3/8	1	13/64
CP1-24			1-1/2	
CP1-25			2	
CP1-26			2-1/2	
CP1-27	.225*	1/2	1-1/2	17/64
CP1-28			2	
CP1-29			2-1/2	



\* Tolerance is +.000/-0.005  
SOLD IN PACKAGES OF 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-CP1	COTTER PIN KIT, ASSORTED SIZES 3/8" TO 2" (280 PIECES)

# PINS

TYPE	DIAMETER SIZE	MATERIALS
DOWEL SOFT PINS	1/32 TO 5/32	303 STAINLESS STEEL (NOT HARDENED)

DIAMETER = d						B
(1/32") .0312 STOCK NO.	(1/16") .0625 STOCK NO.	(5/64") .0780 STOCK NO.	(3/32") .0937 STOCK NO.	(1/8") .1250 STOCK NO.	(5/32") .1561 STOCK NO.	
D11-1	D12-1	D18-1	D13-1	D14-1	-	3/32
D11-2	D12-2	D18-2	D13-2	D14-2	-	1/8
D11-3	D12-3	D18-3	D13-3	D14-3	-	5/32
D11-4	D12-4	D18-4	D13-4	D14-4	D15-4	3/16
D11-5	D12-5	-	D13-5	D14-5	-	7/32
D11-6	D12-6	D18-6	D13-6	D14-6	D15-6	1/4
D11-7	D12-7	D18-7	D13-7	D14-7	D15-7	5/16
D11-8	D12-8	D18-8	D13-8	D14-8	D15-8	3/8
D11-9	D12-9	-	D13-9	D14-9	D15-9	7/16
D11-10	D12-10	-	D13-10	D14-10	D15-10	1/2
D11-11	D12-11	-	D13-11	D14-11	D15-11	5/8
D11-12	D12-12	-	D13-12	D14-12	-	3/4
D11-13	D12-13	-	D13-13	D14-13	-	7/8
D11-14	D12-14	-	D13-14	D14-14	-	1

Sold in packages of 10.

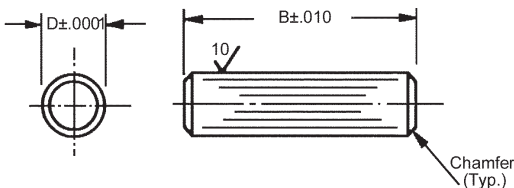
TYPE	DIAMETER SIZE	MATERIALS
DOWEL SOFT PINS	3/16 TO 1/2	303 STAINLESS STEEL (NOT HARDENED)

DIAMETER = d						B
(3/16") .1874 STOCK NO.	(7/32") .2186 STOCK NO.	(1/4") .2499 STOCK NO.	(5/16") .3124 STOCK NO.	(3/8") .3749 STOCK NO.	(1/2") .4999 STOCK NO.	
D16-6	-	-	-	-	-	1/4
D16-7	D19-7	-	-	-	-	5/16
D16-8	D19-8	D17-8	-	-	-	3/8
D16-9	D19-9	D17-9	D20-9	-	-	7/16
D16-10	D19-10	D17-10	D20-10	-	-	1/2
-	-	D17-20	D20-20	D21-20	-	9/16
D16-11	D19-11	D17-11	D20-11	D21-11	-	5/8
D16-12	D19-12	D17-12	D20-12	D21-12	D22-12	3/4
D16-13	D19-13	D17-13	D20-13	D21-13	D22-13	7/8
D16-14	D19-14	D17-14	D20-14	D21-14	D22-14	1
-	-	-	D20-15	D21-15	D22-15	1-1/4
-	-	-	-	D21-16	D22-16	1-1/2
-	-	-	-	-	D22-17	1-3/4
-	-	-	-	-	D22-18	2

Sold in packages of 10.

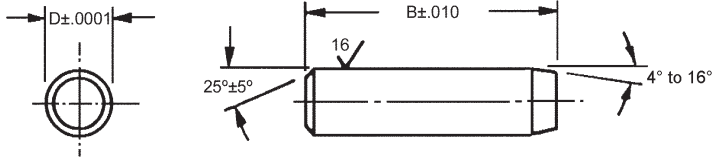
## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-D11	DOWEL PIN KIT, ASSORTED SIZES 1/32" TO 1/4" DIA. (135 PIECES)



# PINS

TYPE	DIAMETER SIZE	MATERIALS
DOWEL	1/16" TO 3/8"	416 STAINLESS STEEL ROCKWELL C36-42



Conforms to Mil. Standard MS16555.

DIAMETER = d								B
(1/16") .0627 STOCK NO.	(3/32") .0940 STOCK NO.	(1/8") .1252 STOCK NO.	(5/32") .1564 STOCK NO.	(3/16") .1877 STOCK NO.	(1/4") .2502 STOCK NO.	(5/16") .3127 STOCK NO.	(3/8") .3752 STOCK NO.	
D23-1	D24-1	-	-	-	-	-	-	3/16
D23-2	D24-2	-	-	-	-	-	-	1/4
D23-15	D24-15	D25-15	-	-	-	-	-	5/16
D23-3	D24-3	D25-3	D26-3	D27-3	-	-	-	3/8
D23-17	D24-17	D25-17	D26-17	-	-	-	-	7/16
D23-4	D24-4	D25-4	D26-4	D27-4	D28-4	-	-	1/2
D23-5	D24-5	D25-5	D26-5	D27-5	D28-5	D29-5	-	5/8
D23-6	D24-6	D25-6	D26-6	D27-6	D28-6	D29-6	D30-6	3/4
D23-7	D24-7	D25-7	D26-7	-	-	-	-	7/8
D23-8	D24-8	D25-8	D26-8	D27-8	D28-8	D29-8	D30-8	1"
-	-	-	-	D27-9	D28-9	D29-9	D30-9	1-1/4
-	-	-	-	-	D28-10	D29-10	D30-10	1-1/2

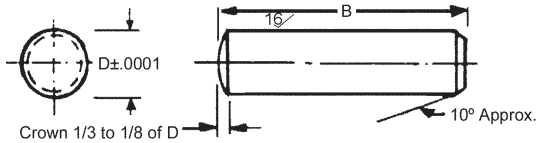


Sold in packages of 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-D23	DOWEL PIN KIT, ASSORTED SIZES 1/16" TO 3/8" DIA. (135 PIECES)

TYPE	DIAMETER SIZE	MATERIALS
DOWEL	1/16" TO 3/8"	CARBON STEEL CARBONIZED ROCKWELL C58-62 CASE DEPTH .010 TO .020



D=.0627 STOCK NO.	D=.0940 STOCK NO.	D=.1252 STOCK NO.	D=.1877 STOCK NO.	D=.2502 STOCK NO.	D=.3127 STOCK NO.	D=.3752 STOCK NO.	B (Inch)
D1-1	-	-	-	-	-	-	3/16
D1-2	D2-2	-	-	-	-	-	1/4
D1-3	D2-3	D3-3	-	-	-	-	3/8
D1-4	D2-4	D3-4	D4-4	D5-4	D6-4	D7-4	1/2
D1-5	D2-5	D3-5	D4-5	D5-5	D6-5	D7-5	5/8
D1-6	D2-6	D3-6	D4-6	D5-6	D6-6	D7-6	3/4
D1-7	D2-7	D3-7	D4-7	D5-7	D6-7	D7-7	7/8
D1-8	D2-8	D3-8	D4-8	D5-8	D6-8	D7-8	1
-	-	D3-9	D4-9	D5-9	D6-9	D7-9	1-1/4
-	D2-10	D3-10	D4-10	D5-10	D6-10	D7-10	1-1/2

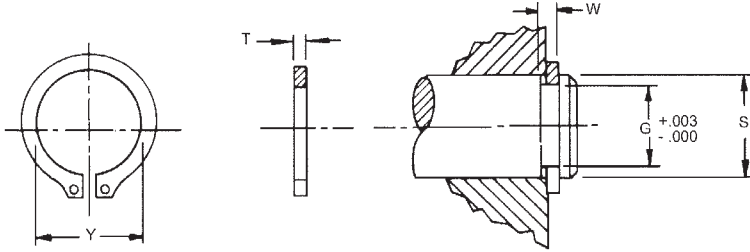


Sold in packages of 10.



# RETAINER RINGS

TYPE	MATERIALS
EXTERNAL LUG DESIGN	STAINLESS STEEL PH 15-7 MO (SS), CARBON STEEL PLATED (CP), BERYLLIUM COPPER (BC)



STOCK NO.	S SHAFT SIZE	G GROOVE DIA.	W GROOVE WIDTH	T	MATERIAL	Y RING I.D.	PLIERS
Q2-12	1/8	.117	.012	.010	BC	.112	S11-12P
Q2-15	5/32 & 4mm	.146	.012 +.002	.010	BC	.142	S11-12P
Q2-18	3/16	.175	.018 -.000	.015	BC	.168	S11-18P
Q2-23	6mm	.222	.018	.015	BC	.215	S11-18P
Q2-25	1/4	.230	.029	.025	SS	.225	S11-25P
Q2-31	5/16 & 8mm	.290	.029	.025	SS	.281	S11-25P
Q2-34	11/32	.321	.029	.025	SS	.309	S11-25P
Q2-37	3/8	.352	.029	.025	SS	.338	S11-25P
Q2-39	10mm	.369	.029	.025	SS	.354	S11-25P
Q2-50	1/2	.468	.039	.035	SS	.461	S11-25P
Q2-50-CP	1/2	.468	.039 +.003	.035 ±.002	CP	.461	S11-25P
Q2-62-P	5/8 & 16mm	.588	.039 -.000	.035	SS	.579	S11-25P
Q2-62-CP	5/8 & 16mm	.588	.039	.035	CP	.579	S11-25P
Q2-75	3/4 & 19mm	.704	.046	.042	SS	.693	S11-25P
Q2-87	7/8	.821	.046	.042	SS	.810	S11-25P
Q2-87-CP	7/8	.821	.046	.042	CP	.810	S11-25P
Q2-100	1	.940	.046	.042	SS	.925	S11-100P
Q2-112	1-1/8	1.059	.056	.050	SS	1.041	S11-100P
Q2-112-CP	1-1/8	1.059	.056	.050	CP	1.041	S11-100P
Q2-125	1-1/4 & 32mm	1.176	.056	.050	SS	1.156	S11-100P
Q2-125-CP	1-1/4 & 32mm	1.176	.056 +.004	.050 -.000	CP	1.156	S11-100P
Q2-156	1-9/16	1.468	.068	.062	SS	1.446	-
Q2-156-CP	1-9/16	1.468	.068	.062	CP	1.446	-
Q2-200-CP	2	1.886	.068	.062 ±.003	CP	1.850	-
Q2-237-CP	2-3/8	2.239	.086 +.005	.078	CP	2.197	-
Q2-300-CP	3	2.838	.103 -.000	.093	CP	2.775	-

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-Q2	RETAINER RINGS, STAINLESS STEEL, INTERNAL AND EXTERNAL, 1/8", 3/16" AND 1/4" SHAFTS (450 PIECES)



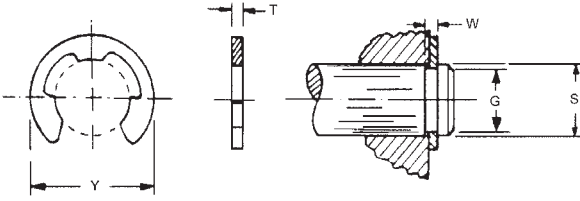
Sold in packages of 10.



Retainer Ring Pliers. Order separately.

# RETAINER RINGS

TYPE	MATERIALS
EXTERNAL SNAP ON DESIGN	STAINLESS STEEL PH 15-7 MO



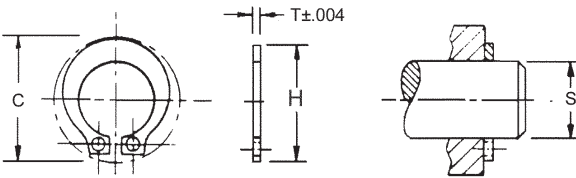
STOCK NO.	SHAFT SIZE S	GROOVE DIA. G	GROOVE WIDTH W	T RING THICKNESS	O.D. RING Y	APPLICATOR TOOL NO.
Q1-6	5/64 & 1/16	.052	.012	.010	.14	S10-6T
Q1-9	3/32	.074 +0.002	.018	.015	.19	S10-9T
Q1-12	1/8	.095 -0.000	.018	.015	.23	S10-12T
Q1-15	5/32 & 4mm	.116	.029	.025	.29	-
Q1-18	3/16	.147	.029	.025	.34	S10-18T
Q1-25	1/4	.210	.029	.025	.53	S10-25T
Q1-31	5/16 & 8mm	.250	.029	.025	.50	S10-31T
Q1-37	3/8	.303	.039	.035	.66	S10-37T
Q1-43	7/16 & 11mm	.343	.039	.035	.69	-
Q1-50	1/2	.396 +0.003	.046	.044	.80	S10-50T
Q1-62	5/8 & 16mm	.485 -0.000	.046	.044	.94	S10-62T
Q1-75	3/4 & 19mm	.580	.056	.050	1.12	S10-75T
Q1-87	7/8	.675	.056	.050	1.30	S10-87T
Q1-98	1	.835	.056	.050	1.50	S10-98T



Retainer Ring Pliers. Order separately.

Sold in packages of 20.

TYPE	MATERIALS
EXTERNAL POWER GRIP DESIGN	STAINLESS STEEL PH 15-7 MO AMS 5520



STOCK NO.	SHAFT SIZE S	T RING THICKNESS	H RING HEIGHT	CLEARANCE DIA. C	ASSEMBLY PLIER STOCK NO.
Q7-12	1/8	.025	.268	.33	S14-12P
Q7-15	5/32 & 4mm	.025	.307	.36	
Q7-18	3/16	.035	.364	.44	S14-25P
Q7-25	1/4	.035	.437	.49	
Q7-31	5/16 & 8mm	.042	.553	.68	S14-37P
Q7-37	3/8	.042	.620	.74	
Q7-43	7/16 & 11mm	.050	.701	.81	
Q7-50	1/2	.050	.768	.90	
Q7-62	5/8 & 16mm	.062	.948	1.06	
Q7-75	3/4 & 19mm	.062	1.115	1.32	

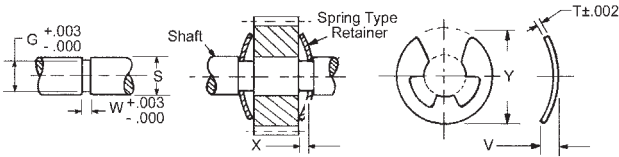


Retainer Ring Pliers. Order separately.

Sold in packages of 10.

# RETAINER RINGS

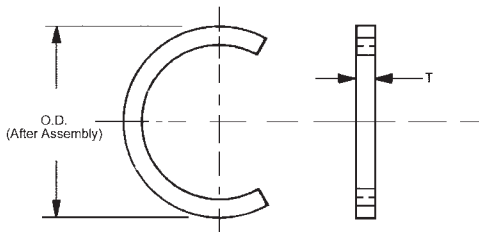
TYPE	MATERIALS
EXTERNAL BOWED SNAP ON DESIGN	STAINLESS STEEL PH 15-7 MO



STOCK NO.	S SHAFT SIZE	Y	T	V	X MAX. TAKE UP	W	G
Q3-12	1/8	.230	.010	.025	.013	.022	.095
Q3-18	3/16	.335	.015	.033	.015	.030	.147
Q3-25	1/4	.527	.025	.052	.024	.049	.210
Q3-31	5/16 & 8mm	.500	.025	.050	.022	.047	.250
Q3-37	3/8	.660	.035	.060	.022	.060	.303
Q3-50	1/2	.800	.042	.075	.030	.073	.396
Q3-62	5/8 & 16mm	.940	.042	.080	.035	.077	.485
Q3-75	3/4 & 19mm	1.000	.050	.088	.035	.085	.625
Q3-98	1	1.500	.050	.088	.035	.085	.835

Sold in packages of 10.

TYPE	MATERIALS
EXTERNAL DESIGN	CARBON STEEL OR STAINLESS STEEL

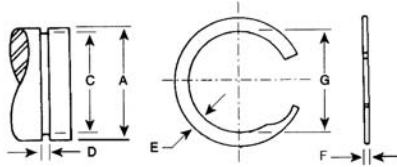


CARBON STEEL STOCK NO.	STAINLESS STEEL STOCK NO.	SHAFT SIZE	O.D.	T	GROOVE DIMENSIONS	
					WIDTH +.005 -.000	DIAMETER +.005 -.000
Q5-50-CP	Q5-50	1/2	.550	.035	.039	.468
Q5-62-CP	Q5-62	5/8	.673	.035	.039	.588
Q5-87-CP	Q5-87	7/8	.923	.042	.046	.821
Q5-112-CP	Q5-112	1-1/8	1.180	.050	.056	1.061
Q5-125-CP	Q5-125	1-1/4	1.301	.050	.056	1.176
Q5-156-CP	Q5-156	1-9/16	1.620	.062	.068	1.468
Q5-200-CP	-	2	2.040	.062	.068	1.886
Q5-237-CP	-	2-3/8	2.429	.078	.086	2.239

Sold in packages of 10.

# RETAINER RINGS

TYPE	MATERIALS
INTERNAL	302 STAINLESS STEEL



STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M
										*X	*CH	
	INCHES	MM.										
Q9-50	.500	12.7	.526	.030 <sup>+0.003</sup> -0.000	.025 ±.002	.532	.045	2,000	405	.015	.012	.41
Q9-51	.512	13.0	.538			.544		2,050	420			.42
Q9-53	.531	13.5	.557			.564		2,130	455			.44
Q9-56	.562	14.3	.588			.594		2,250	495			.46
Q9-59	.594	15.1	.619			.626		2,380	535			.49
Q9-62	.625	15.9	.651			.658		2,500	610			.52
Q9-65	.656	16.7	.682			.689		2,630	670			.55
Q9-68	.687	17.5	.713			.720		2,750	725			.58
Q9-71	.718	18.3	.744			.751		2,870	790			.61
Q9-75	.750	19.0	.782			.790		3,360	800			1.14
Q9-77	.777	19.7	.808	.036 <sup>+0.003</sup> -0.000	.031 ±.002	.817	.065	3,480	835	.024	.019	1.19
Q9-78	.781	19.8	.812			.821		3,500	840			1.20
Q9-81	.812	20.6	.843			.853 +.013		3,640	915			1.25
Q9-84	.843	21.4	.880			.889 -0.000		3,780	1,155			1.32
Q9-86	.866	22.0	.903			.913		3,880	1,250			1.35
Q9-87	.875	22.2	.912			.922		3,920	1,250			1.36
Q9-90	.906	22.9	.939			.949		4,060	1,335			1.41
Q9-93	.938	23.8	.975			.986		4,200	1,430			1.48
Q9-96	.968	24.4	1.015			1.025		4,340	1,950			2.11
Q9-98	.987	25.0	1.030			1.041		4,420	1,865			2.15
Q9-100	1.000	25.4	1.043	1.054	4,480	1,910	2.19					

\* For calculation of Groove Yield.

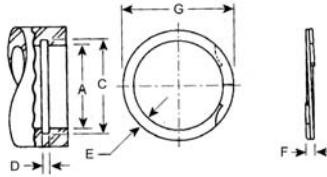
TYPE	MATERIALS
EXTERNAL	302 STAINLESS STEEL

STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M
										*X	*CH	
	INCHES	MM.										
Q11-50	.500	12.7	.474	.030 <sup>+0.003</sup> -0.000	.025 ±.002	.467	.045	2,000	550	.015	.012	.44
Q11-53	.531	13.5	.505			.498		2,130	640			.48
Q11-55	.551	14.0	.525			.518		2,210	700			.50
Q11-56	.532	14.3	.536			.529		2,250	730			.51
Q11-59	.594	15.1	.569			.561		2,380	740			.54
Q11-62	.625	15.9	.594			.585		2,500	970			.70
Q11-65	.656	16.7	.625			.617		2,630	1,020			.74
Q11-66	.669	17.0	.638			.629		2,680	1,040			.75
Q11-68	.687	17.5	.656			.647		2,750	1,060			.77
Q11-71	.718	18.3	.687			.679		2,870	1,110			.81
Q11-75	.750	19.0	.719	.036 <sup>+0.003</sup> -0.000	.031 ±.002	.710 +0.000	.065	3,360	1,100	.019	.015	1.27
Q11-78	.781	19.8	.750			.741 -0.013		3,500	1,210			1.32
Q11-81	.812	20.6	.781			.771		3,640	1,260			1.38
Q11-84	.843	21.4	.812			.803		3,780	1,310			1.43
Q11-87	.875	22.2	.838			.828		3,920	1,620			1.48
Q11-90	.906	23.0	.869			.860		4,060	1,680			1.53
Q11-93	.937	23.8	.900			.889		4,200	1,740			1.57
Q11-96	.968	24.4	.925			.916		5,180	2,080			2.26
Q11-98	.984	25.0	.941			.930		5,260	2,120			2.31
Q11-100	1.000	25.4	.957			1.000		5,350	2,150			2.34

\* For calculation of Groove Yield.

# RETAINER RINGS

TYPE	MATERIALS
INTERNAL	CARBON SPRING STEEL WITH OIL-DIP FINISH



STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M		
	INCHES	MM.								*X	*CH			
Q9-50C	.500	12.7	.526	.030 <sup>+0.03</sup> -0.000	.025 ±.002	.532	.045	2,000	405	.015	.012	.41		
Q9-51C	.512	13.0	.538			.544		2,050	420			.42		
Q9-53C	.531	13.5	.557			.564		2,130	455			.44		
Q9-56C	.562	14.3	.588			.594		2,250	495			.46		
Q9-59C	.594	15.1	.619			.626		2,380	535			.49		
Q9-62C	.625	15.9	.651			.658		2,500	610			.52		
Q9-65C	.656	16.7	.682			.689		2,630	670			.55		
Q9-68C	.687	17.5	.713			.720		2,750	725			.58		
Q9-71C	.718	18.3	.744			.751		2,870	790			.61		
Q9-75C	.750	19.0	.782			.790		3,360	800			1.14		
Q9-77C	.777	19.7	.808	.036 <sup>+0.03</sup> -0.000	.031 ±.002	.817	.065	3,480	835	.024	.019	1.19		
Q9-78C	.781	19.8	.812			.821		3,500	840			1.20		
Q9-81C	.812	20.6	.843			.853 +.013		3,640	915			1.25		
Q9-84C	.843	21.4	.880			.889 -0.000		3,780	1,155			1.32		
Q9-86C	.866	22.0	.903			.913		3,800	1,250			1.35		
Q9-87C	.875	22.2	.912			.922		3,920	1,250			1.36		
Q9-90C	.906	22.9	.939			.949		4,060	1,335			1.41		
Q9-93C	.938	23.8	.975			.986		4,200	1,430			1.48		
Q9-96C	.968	24.4	1.015			1.025		4,340	1,950			.025	.021	2.11
Q9-98C	.987	25.0	1.030			1.041		4,420	1,865			.026	.021	2.15
Q9-100C	1.000	25.4	1.043	.042 <sup>+0.03</sup> -0.000	.037 ±.002	1.054	.075	4,480	1,910	.026	.021	2.19		

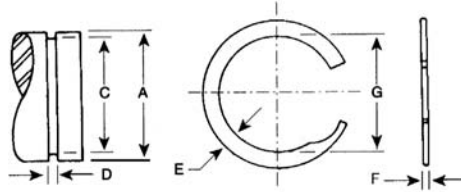
\* For calculation of Groove Yield.

TYPE	MATERIALS
EXTERNAL	CARBON SPRING STEEL WITH OIL-DIP FINISH

STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M
	INCHES	MM.								*X	*CH	
Q11-50C	.500	12.7	.474	.030 <sup>+0.03</sup> -0.000	.025 ±.002	.467	.045	2,000	550	.015	.012	.44
Q11-53C	.531	13.5	.505			.498		2,130	640			.48
Q11-55C	.551	14.0	.525			.518		2,210	700			.50
Q11-56C	.532	14.3	.536			.529		2,250	730			.51
Q11-59C	.594	15.1	.569			.561		2,380	740			.54
Q11-62C	.625	15.9	.594			.585		2,500	970			.70
Q11-65C	.656	16.7	.625			.617		2,630	1,020			.74
Q11-66C	.669	17.0	.638			.629		2,680	1,040			.75
Q11-68C	.687	17.5	.656			.647		2,750	1,060			.77
Q11-71C	.718	18.3	.687			.679		2,870	1,110			.81
Q11-75C	.750	19.0	.719	.710 +0.000	3,360	1,100	1.27					
Q11-78C	.781	19.8	.750	.741 -0.013	3,500	1,210	1.32					
Q11-81C	.812	20.6	.781	.771	3,640	1,260	1.38					
Q11-84C	.843	21.4	.812	.803	3,780	1,310	1.43					
Q11-87C	.875	22.2	.838	.828	3,920	1,620	1.48					
Q11-90C	.906	23.0	.869	.860	4,060	1,680	1.53					
Q11-93C	.937	23.8	.900	.889	4,200	1,740	1.57					
Q11-96C	.968	24.4	.925	.916	5,180	2,080	2.26					
Q11-98C	.984	25.0	.941	.930	5,260	2,120	2.31					
Q11-100C	1.000	25.4	.957	.042 <sup>+0.03</sup> -0.000	.037 ±.002	.946	.075	5,350	2,150	.026	.021	2.34

# RETAINER RINGS

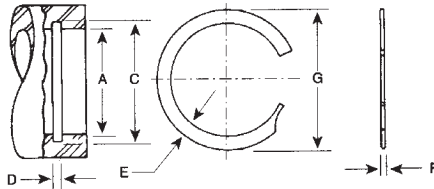
TYPE	MATERIALS
EXTERNAL	CARBON SPRING STEEL WITH OIL-DIP FINISH



STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M			
	INCHES	MM.								*X	*CH				
Q10-50	.500	12.7	.472	.022	.018 ±.0015	.467	.045	1,300	380	.007	.005	.32			
Q10-56	.562	14.3	.534	.022		.529		1,460	500			.36			
Q10-62	.625	15.9	.597 ±.002	.022 +.002 -.000		.591 +.013		1,630	630			.40			
Q10-68	.687	17.5	.659	.022		.652 -.000		1,790	770			.44			
Q10-75	.750	19.0	.772	.022		.715		1,950	940			.48			
Q10-81	.812	20.6	.770	.026	.021 ±.0015	.762	.065	2,460	1,330	.011	.008	.90			
Q10-87	.875	22.2	.833	.026 +.002		.825		2,660	1,590			.98			
Q10-93	.937	23.8	.895 ±.003	.026 -.000		.886		2,840	1,840			1.05			
Q10-100	1.000	25.4	.958	.026		.949		3,030	2,100			1.12			
Q10-106	1.062	27.0	1.018	.031		1.008 +.000 -.015		.088	3,500			1,820	.016	.012	1.94

\* For calculation of Groove Yield.

TYPE	MATERIALS
INTERNAL	CARBON SPRING STEEL WITH OIL-DIP FINISH

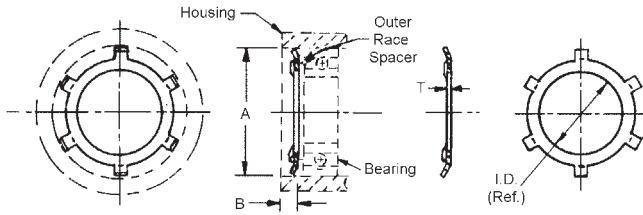


STOCK NO.	A HOUSING DIA.		C GROOVE DIA.	D GROOVE WIDTH	F RING THICKNESS	G RING OUTER DIA.	E RADIAL WALL	THRUST LOAD BASED ON RING SHEAR	THRUST LOAD BASED ON GROOVE YIELD (45,000 P.S.I.)	MAX. CORNER RADIUS OR CHAMFER		WEIGHT lbs./M					
	INCHES	MM.								*X	*CH						
Q8-50	.500	12.7	.528	.022 +.002 -.000	.018	.531	.045	1,300	530	.007	.005	.28					
Q8-56	.562	14.3	.590			.593		1,460	660			.33					
Q8-62	.625	15.9	.653 ±.002			.656 +.013		1,630	810			.37					
Q8-68	.687	17.5	.715			.719 -.000		1,790	960			.41					
Q8-75	.750	19.0	.779			.783		1,950	1,090			.46					
Q8-81	.812	20.6	.854	.026 +.002 -.000	±.0015	.862	.065	2,460	1,705	.011	.008	.82					
Q8-87	.875	22.2	.917			.926		2,660	1,840			.90					
Q8-93	.937	23.8	.979			.989		2,840	1,970			.97					
Q8-100	1.000	25.4	1.042 ±.003			1.052		3,030	2,100			1.04					
Q8-106	1.062	27.0	1.106 ±.004			.031		.025	1.117 +.015 -.000			.088	3,500	2,340	.016	.012	1.74

\* For calculation of Groove Yield.

# RETAINER RINGS

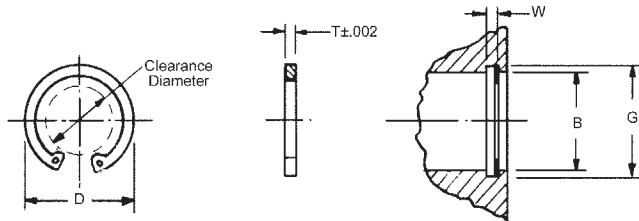
TYPE	HOUSING BORE SIZE	MATERIALS
BEARING INTERNAL PUSH IN DESIGN	3/8 TO 3	CARBON SPRING STEEL PLATED



STOCK NO.	A HOUSING	B MIN. END SPACE	T±.002	I.D. (REF. ONLY)
Q6-37-CP	3/8	.040	.010	3/16
Q6-50-CP	1/2	.060	.010	1/4
Q6-61-CP	5/8	.060	.010	3/8
Q6-82-CP	7/8	.080	.015	5/8
Q6-125-CP	1-1/4	.080	.015	15/16
Q6-156-CP	1-9/16	.080	.015	1-1/8
Q6-200-CP	2	.080	.015	1-9/16
Q6-237-CP	2-3/8	.100	.015	1-7/8
Q6-300-CP	3	.100	.015	2-1/4

Sold in packages of 10.

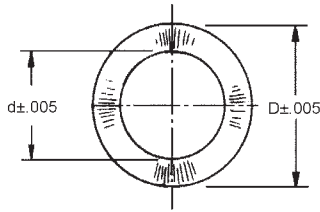
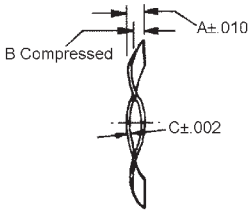
TYPE	HOUSING BORE SIZE	MATERIALS
INTERNAL LUG DESIGN	1/4 TO 1	PH15-7 STAINLESS STEEL



STOCK NO.	HOUSING BORE B	GROOVE DIA. G	GROOVE WIDTH W		RING THICKNESS T	FREE DIA. D	MAX. CLEAR. DIA.	PLIERS
Q4-25	1/4	.268	.020	±.002	.015	.280	.133	S13-25P
Q4-31	5/16	.330 ±.001	.020		.015	.346	.191	S13-25P
Q4-37	3/8	.397	.029	±.003	.025	.415	.226	S13-37P
Q4-50	1/2	.530	.039		.035	.548	.290	S13-37P
Q4-62	5/8	.665 ±.002	.039		.035	.694	.380	S13-37P
Q4-75	3/4	.796	.039		.035	.831	.490	S13-37P
Q4-87	7/8	.931	.046	±.004	.042	.971	.600	S13-37P
Q4-100	1	1.066 ±.003	.046		.042	1.111	.730	S13-37P
Q4-112	1-1/8	1.197 ±.004	.056		.050	1.249	.815	S13-37P

# SPRINGS

TYPE	MATERIALS
FOR OUTER RACE BALL BEARING PRE-LOAD	302 STAINLESS STEEL - SPRING TEMPERED



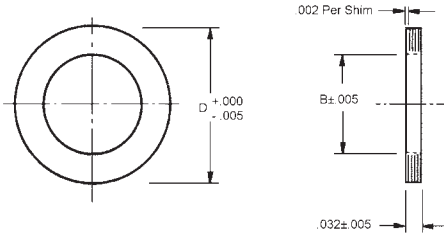
STOCK NO.	BEARING OUTSIDE DIA. (REF.)	D	d	A	B	C	LOAD IN (lbs.) TO DEFLECT TO B
SV-7	.375	.367	.265	.030	.015	.006	2-4
SV-8	.500	.492	.350	.035	.020	.007	3-5
SV-9	.625	.618	.440	.040	.025	.008	3-5
SV-4	.750	.734	.531	.050	.030	.009	4-7
SV-5	.875	.855	.650	.060	.030	.010	4-7
SV-6	1.125	1.102	.856	.075	.037	.012	9-13

Sold in packages of 10.  
D & d dimensions before loading.



# SPACERS

TYPE	SHAFT SIZE	MATERIALS
LAMINATED INNER RACE SHIM	1/8" TO 3/8"	BRASS - MIL-S-2249C COMP. 2 TYPE 1 CL.-1

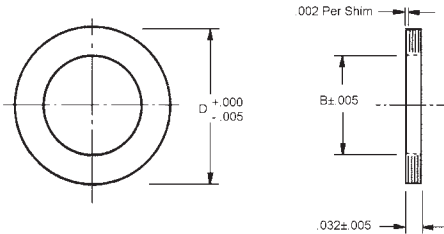


STOCK NO.	SHAFT SIZE	D	B
SS8-1	1/8	.234	.135
SS8-2	3/16	.375	.193
SS8-3	1/4	.500	.255
SS8-4	3/8	.625	.380

Sold in packages of 10.

The inner race spacer fits on shaft and pre-loads inner race of ball bearing.

TYPE	SHAFT SIZE	MATERIALS
LAMINATED OUTER RACE SHIM	1/8" TO 3/8"	BRASS - MIL-S-2249C COMP. 2 TYPE 1 CL.-1



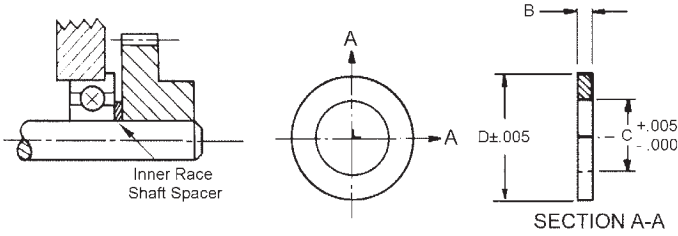
STOCK NO.	D	B
SS7-1	.370	.312
SS7-2	.498	.375
SS7-3	.623	.437
SS7-4	.873	.687

Sold in packages of 10.

The outer race spacer fits on shaft and pre-loads outer race of ball bearing.

# SHAFT SPACERS

TYPE	SHAFT SIZE	MATERIALS
INNER RACE SHAFT	5/64 TO 3/16	18-8 STAINLESS STEEL OR ANODIZED ALUMINUM



Sold in packages of 10.

STOCK NO.	C	D	B		
SS1-49	.078	.164	.002	±.001	
SS1-1			.004		
SS1-2			.006		
SS1-46			.008		
SS1-3			.010		
SS1-47	.093	.203	.012	±.002	
SS1-48			.014		
SS1-4			.016		
SS1-50			.002		±.001
SS1-5	.004				
SS1-6	.006				
SS1-43	.008				
SS1-7	.010				
SS1-44	.125	.187	.012	±.002	
SS1-45			.014		
SS1-8			.016		
SS1-51			.002		±.001
SS1-9	.004				
SS1-10	.006				
SS1-27	.008				
SS1-11	.010				
SS1-28	.187	.250	.012	±.002	
SS1-29			.014		
SS1-12			.016		
SS1-52			-		.002
SS1-18	-	.004			
SS1-19	-	.006			
SS1-36	-	.008			
SS1-20	-	.010			
SS1-37	.125	.187	.012	±.002	
SS1-38			.014		
SS1-21			.016		
SS1-22			-		.031
SS1-23	SS1-22-A	.063			
SS1-40	SS1-23-A	.094			
SS1-24	SS1-40-A	.125			
SS1-41	SS1-24-A	.188			
SS1-25	SS1-41-A	.250			
SS1-42	SS1-25-A	.375			
SS1-26	SS1-42-A	.500			
SS1-26	SS1-26-A	.187	.250	.031	
			.063		
			.094		
			.125		
			.188		
			.250		
			.375		
			.500		

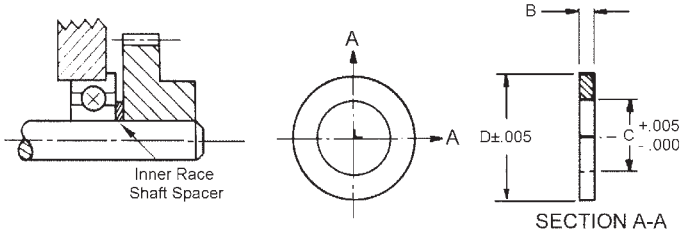
STAINLESS STOCK NO.	ALUMINUM STOCK NO.	C	D	B				
SS1-13	SS1-13-A	.125	.187	.031	±.003			
SS1-14	SS1-14-A			.063				
SS1-30	SS1-30-A			.094				
SS1-15	SS1-15-A			.125				
SS1-31	SS1-31-A			.188				
SS1-16	SS1-16-A			.250				
SS1-32	SS1-32-A			.375				
SS1-17	SS1-17-A			.500				
SS1-52	-			.187		.250	.002	±.001
SS1-18	-						.004	
SS1-19	-	.006						
SS1-36	-	.008						
SS1-20	-	.010						
SS1-37	-	.012	±.002					
SS1-38	-	.014						
SS1-21	-	.016						
SS1-22	SS1-22-A	.031			±.003			
SS1-23	SS1-23-A	.063						
SS1-40	SS1-40-A	.094						
SS1-24	SS1-24-A	.125						
SS1-41	SS1-41-A	.188						
SS1-25	SS1-25-A	.250						
SS1-42	SS1-42-A	.375						
SS1-26	SS1-26-A	.500						

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-SS1	STAINLESS STEEL SHAFT SPACERS, INNER RACE, 1/8, 3/16 AND 1/4" SHAFT SIZES (330 PIECES)

# SHAFT SPACERS

TYPE	SHAFT SIZE	MATERIALS
INNER RACE SHAFT	1/4 TO 1/2	18-8 STAINLESS STEEL OR ANODIZED ALUMINUM



STAINLESS STOCK NO.	ALUMINUM STOCK NO.	C	D	B	
SS2-66	-	.250	.375	.002	±.001
SS2-27	-			.004	
SS2-28	-			.006	
SS2-60	-			.008	±.002
SS2-29	-			.010	
SS2-61	-			.012	
SS2-62	-			.014	±.003
SS2-30	-			.016	
SS2-31	SS2-31-A			.031	
SS2-32	SS2-32-A			.063	
SS2-63	SS2-63-A	.094			
SS2-33	SS2-33-A	.125			
SS2-64	SS2-64-A	.188			
SS2-34	SS2-34-A	.250			
SS2-65	SS2-65-A	.375			
SS2-35	SS2-35-A	.500			
SS2-80	-	.313	.500	.002	±.001
SS2-81	-			.004	
SS2-82	-			.006	
SS2-83	-			.008	±.002
SS2-36	-			.010	
SS2-84	-			.012	
SS2-85	-			.014	±.003
SS2-37	-			.016	
SS2-38	-			.031	
SS2-39	-			.062	
SS2-40	-	.125			

STAINLESS STOCK NO.	ALUMINUM STOCK NO.	C	D	B	
SS2-67	-	.375	.562	.002	±.001
SS2-68	-			.004	
SS2-69	-			.006	
SS2-70	-			.008	±.002
SS2-41	-			.010	
SS2-71	-			.012	
SS2-72	-			.014	±.003
SS2-42	-			.016	
SS2-43	SS2-43-A			.031	
SS2-44	SS2-44-A			.063	
SS2-73	SS2-73-A	.094			
SS2-45	SS2-45-A	.125			
SS2-74	SS2-74-A	.188			
SS2-75	SS2-75-A	.250			
SS2-76	SS2-76-A	.375			
SS2-77	SS2-77-A	.500			
SS2-90	-	.500	.750	.002	±.001
SS2-91	-			.004	
SS2-92	-			.006	
SS2-93	-			.008	±.002
SS2-46	-			.010	
SS2-94	-			.012	
SS2-95	-			.014	±.003
SS2-47	-			.016	
SS2-48	-			.031	
SS2-49	-			.062	
SS2-50	-	.125			

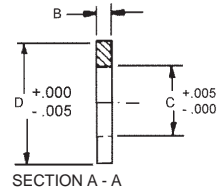
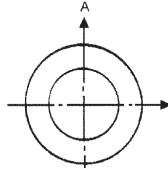
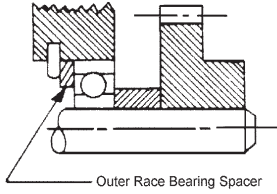
Sold in packages of 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-SS1	STAINLESS STEEL SHAFT SPACERS, INNER RACE, 1/8, 3/16 AND 1/4" SHAFT SIZES (330 PIECES)

# BEARING SPACERS

TYPE	SHAFT SIZE	MATERIALS
OUTER RACE	5/32 TO 1-1/8	18-8 STAINLESS STEEL OR ANODIZED ALUMINUM



STAINLESS STOCK NO.	ALUMINUM STOCK NO.	D	C	B	
SS3-51	-	.153	.088	.003	±.001
SS3-52	-			.005	
SS3-53	-			.007	
SS3-54	-			.010	±.002
SS3-55	-			.020	
SS3-56	-	.178	.123	.003	±.001
SS3-57	-			.005	
SS3-58	-			.007	
SS3-59	-			.010	±.002
SS3-60	-			.020	
SS3-50	-	.248	.167	.003	±.003
SS3-1	-			.005	
SS3-32	-			.007	
SS3-2	-			.010	
SS3-71	-			.020	
SS3-33	-	.310	.206	.003	±.001
SS3-3	-			.005	
SS3-34	-			.007	
SS3-4	-			.010	±.002
SS3-72	-			.020	
SS3-35	-	.373	.253	.003	±.001
SS3-5	-			.005	
SS3-36	-			.007	
SS3-6	-			.010	±.002
SS3-7	-			.020	
SS3-8	SS3-8-A			.032	±.003
SS3-9	SS3-9-A			.062	
SS3-10	SS3-10-A			.125	
SS3-41	SS3-41-A			.250	
SS3-42	SS3-42-A			.375	
SS3-43	SS3-43-A			.500	
SS3-37	-			.003	
SS3-11	-			.005	
SS3-38	-			.007	
SS3-12	-			.498	.378
SS3-13	-	.020			

STAINLESS STOCK NO.	ALUMINUM STOCK NO.	D	C	B			
SS3-14	SS3-14-A	.498	.378	.032	±.003		
SS3-15	SS3-15-A			.062			
SS3-16	SS3-16-A			.125			
SS3-44	SS3-44-A			.250	±.003		
SS3-45	SS3-45-A			.375			
SS3-46	SS3-46-A			.500			
SS3-39	-	.623	.503	.003	±.001		
SS3-17	-			.005			
SS3-40	-			.007			
SS3-18	-			.010	±.002		
SS3-19	-			.020			
SS3-20	SS3-20-A			.623	.503	.032	±.003
SS3-21	SS3-21-A	.062					
SS3-22	SS3-22-A	.125					
SS3-47	SS3-47-A	.250	±.003				
SS3-48	SS3-48-A	.375					
SS3-49	SS3-49-A	.500					
SS3-23	-	.685	.562	.016	±.02		
SS3-24	-			.032	±.003		
SS3-25	-			.062			
SS3-61	-	.873	.687	.003	±.001		
SS3-62	-			.005			
SS3-63	-			.007			
SS3-64	-			.010	±.002		
SS3-26	-			.016			
SS3-65	-			.020			
SS3-27	SS3-27-A			.873	.687	.032	±.003
SS3-28	SS3-28-A					.062	
SS3-67	SS3-67-A					.125	
SS3-68	SS3-68-A					.250	±.003
SS3-69	SS3-69-A	.375					
SS3-70	SS3-70-A	.500					
SS3-29	-	1.120	.937			.016	
SS3-30	-			.032	±.003		
SS3-31	-			.062			

Sold in packages of 10.

## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-SS1	STAINLESS STEEL SHAFT SPACERS, INNER RACE, 1/8, 3/16 AND 1/4" SHAFT SIZES (330 PIECES)

# BALLS

TYPE	DIAMETER	MATERIALS
HARDENED STEEL	1/16" TO 1/2"	ROCKWELL: C 58-65 440 STAINLESS STEEL C 60-67 52100 CHROME STEEL



Sold in packages of 10.

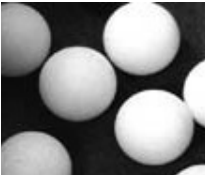
STAINLESS STEEL STOCK NO.	CHROME STEEL STOCK NO.	D DIA.
PT4-2	PT5-2	1/16
PT4-3	PT5-3	3/32
PT4-4	PT5-4	1/8
PT4-5	PT5-5	5/32
PT4-6	PT5-6	3/16
-	PT5-7	7/32
PT4-8	PT5-8	1/4
PT4-10	PT5-10	5/16
PT4-12	PT5-12	3/8
PT4-16	PT5-16	1/2

DIAMETER TOLERANCE:  
440 Stainless Steel, Grade #50±.0002  
52100 Chrome Steel, Grade #25±.0001

SPHERICITY TOLERANCE:  
440 Stainless Steel, Grade #50±.000050  
52100 Chrome Steel, Grade #25±.00025



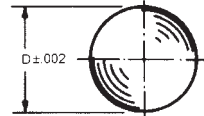
TYPE	DIAMETER	MATERIALS
PLASTIC	1/16" TO 1/2"	NYLON, POLYURETHANE, AND TEFLON



Sold in packages of 10.

NYLON STOCK NO.	POLYURETHANE STOCK NO.	TEFLON STOCK NO.	D DIA.
PT1-2	-	-	1/16
PT1-3	-	-	3/32
PT1-4	-	PT3-4	1/8
PT1-6	-	PT3-6	3/16
PT1-8	PT2-8	PT3-8	1/4
PT1-12	PT2-12	PT3-12	3/8
PT1-16	PT2-16	PT3-16	1/2

- Ideal for float, check, relief valves
- Non-corrosive, quiet running and self lubricating



TYPE	DIAMETER	MATERIALS
BRASS	1/8" TO 1/2"	BRASS HARDNESS 75-87 RB (TYP.)



Sold in packages of 10.

STOCK NO.	SIZE	DIAMETER D
PT9-4	1/8	.125
PT9-5	5/32	.15625
PT9-6	3/16	.1875
PT9-7	7/32	.21875
PT9-8	1/4	.250
PT9-9	9/32	.28125
PT9-10	5/16	.3125
PT9-11	11/32	.3437
PT9-12	3/8	.375
PT9-14	7/16	.4375
PT9-16	1/2	.500

CHARACTERISTICS  
Resistance to corrosion by water.  
Electrical conductivity.

**NOTE:** Other sizes available upon request.  
Brass surface finish 6-8 microfinish.



TYPE	DIAMETER	MATERIALS
TITANIUM	1/8" TO 3/8"	TITANIUM 6A4V ELI PER ASTM F136

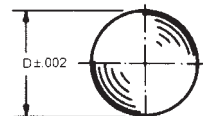


Sold in packages of 10.

STOCK NO.	SIZE	DIAMETER D
PT8-4	1/8	.125
PT8-5	5/32	.15625
PT8-6	3/16	.1875
PT8-7	7/32	.21875
PT8-8	1/4	.250
PT8-10	5/16	.3125
PT8-12	3/8	.375

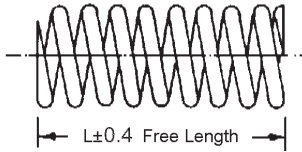
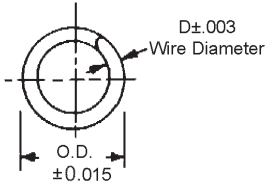
CHARACTERISTICS  
Exceptional anti-corrosive properties.  
Operates effectively under high temperatures.  
High level of tension/compression strength.

**NOTE:** Other sizes available upon request.



# SPRINGS

TYPE	STYLE	MATERIALS
COMPRESSION	RIGHT HAND - OPEN WOUND ENDS SQUARED	302 STAINLESS STEEL SPRING TEMPERED



K = Average Spring Rate lbs./in.  
Sold in packages of 10.

STOCK NO.	OUTSIDE DIA.	D	L	COILS	K ±10%	
SPR1-1	.057	.007	3/8	18	1.58	
SPR9-1		.008	1/4	13	4.41	
SPR9-2		.008	1/2	24	2.08	
SPR9-3	.088	.010	1/4	9	4.16	
SPR1-2		.010	1/2	17	1.91	
SPR9-5		.012	3/8	14	5.41	
SPR9-6		.012	3/4	24	2.66	
SPR9-7	.120	.016	1/4	7	14.57	
SPR9-8		.016	1/2	13	6.91	
SPR9-9		.018	3/8	10	14.91	
SPR1-3		.018	5/8	16	8.82	
SPR9-10		.018	3/4	19	7.08	
SPR9-11		.020	3/8	11	23.07	
SPR9-12		.020	3/4	20	10.99	
SPR9-13		.022	1/2	14	25.90	
SPR9-14		.022	1	27	12.24	
SPR9-15		.180	.018	1/2	8	5.58
SPR9-16			.018	1	14	2.66
SPR9-17			.020	1/2	8	8.08
SPR9-18			.020	1	15	3.83
SPR1-4			.022	1/2	8	11.82
SPR9-20	.022		1	16	5.41	
SPR9-21	.180	.024	1/2	9	15.74	
SPR9-22		.024	1	17	7.49	
SPR9-23		.026	1/2	9	22.32	
SPR9-24		.026	1	17	10.16	
SPR9-25		.029	3/4	14	21.49	
SPR9-26		.029	1-1/2	26	10.32	
SPR9-27		.032	3/4	14	34.40	
SPR9-28		.032	1 1/2	27	15.66	
SPR9-29	.240	.026	1/2	6	17.40	
SPR1-5		.026	5/8	8	10.57	
SPR9-30		.026	1	12	6.16	
SPR9-31		.035	1/2	8	40.40	
SPR9-32		.035	1	14	18.65	
SPR9-33		.038	3/4	10	38.40	
SPR9-34		.038	1-1/2	20	17.82	
SPR9-35		.040	1	14	32.48	
SPR9-36		.040	2	27	15.57	
SPR1-6		.300	.032	5/8	6	5.16
SPR1-7		.360	.042	7/8	8	21.24
SPR1-8	.420	.045	1	7	16.66	
SPR1-9	.480	.055	1-1/4	8	22.49	
SPR1-10	.600	.063	1-1/2	8	19.99	
SPR1-11	.720	.072	2	9	16.66	

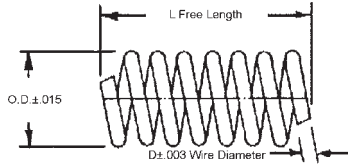
## Also available

STOCK NO.	DESCRIPTION OF KIT
KIT-SPR9	COMPRESSION SPRING KIT - ASSORTED SIZES .057 TO .240 DIAMETER TO 2" LONG (141 PIECES)

# SPRINGS

TYPE	LENGTHS	MATERIALS
EXPERIMENTAL	1-1/2 TO 2-1/2	302 STAINLESS STEEL SPRING TEMPERED

STOCK NO.	OUTSIDE DIA.	D	L	APPROX. NO. COILS	K ±10%
SPR7-1	.093	.016	1-1/2	32	5.98
SPR7-2	.125	.018	2	37	3.06
SPR7-7	.140	.016	11	17	3.32
SPR7-8	.172	.018	1-1/4	19	2.15
SPR7-3	.187	.023	2-1/2	37	2.26
SPR7-4	.250	.025	3	29	1.67
SPR7-9	.250	.023	1-1/2	22	1.59
SPR7-10	.328	.025	1-3/4	19	1.06
SPR7-11	.390	.032	2	16	2.11
SPR7-12	.468	.040	2-1/4	12	4.11
SPR7-13	.609	.047	2-1/2	15	2.43



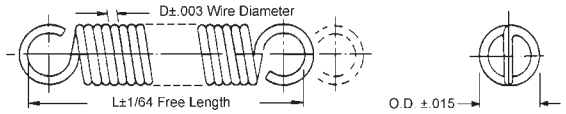
- Cut you own length
- Ends can be ground or looped

K = Average Spring Rate lbs./in.

Sold in packages of 10.

TYPE	LENGTHS	MATERIALS
EXTENSION - FULL TWIST LOOPS CLOSE WOUND	1/4" TO 5"	302 STAINLESS STEEL SPRING TEMPERED

STOCK NO.	OUTSIDE DIA.	D	L	K ± 10%
SPR10-1	.063	.008	1/4	1.7
SPR2-1	.063	.008	3/8	.9
SPR10-2	.063	.008	1/2	.6
SPR10-3	.093	.010	3/8	1.0
SPR2-2	.093	.012	1/2	1.7
SPR10-4	.093	.010	3/4	.3
SPR2-3	.120	.018	1	2.7
SPR10-5	.120	.016	3/4	2.5
SPR10-6	.120	.016	1-1/4	1.1
SPR10-7	.120	.020	3/4	6.9
SPR10-8	.120	.020	1-1/4	3.7
SPR2-4	.180	.026	1-1/4	4.2
SPR10-9	.180	.022	3/4	3.6
SPR10-10	.180	.022	1-1/4	1.7
SPR10-11	.180	.026	3/4	8.8
SPR10-13	.180	.031	3/4	22.5
SPR10-14	.180	.031	1-1/4	10.9
SPR2-5	.240	.031	1-1/2	3.5
SPR10-15	.240	.026	3/4	4.7
SPR10-16	.240	.026	1-1/4	1.7
SPR10-17	.240	.029	3/4	8.2
SPR10-18	.240	.029	1-1/4	3.2
SPR10-19	.240	.031	3/4	11.5
SPR10-20	.240	.031	1-1/4	4.4
SPR10-21	.240	.034	3/4	18.4
SPR10-22	.240	.034	1-1/4	7.4
SPR2-6	.360	.055	2	15.2
SPR10-27	.360	.031	1	2.7
SPR10-28	.360	.031	1-1/2	1.2
SPR10-29	.360	.037	1	6.6
SPR10-30	.360	.037	1-1/2	2.8
SPR10-31	.360	.045	1-1/4	11.3
SPR10-32	.360	.045	2	5.2
SPR10-33	.360	.055	1-1/4	32.2
SPR10-35	.500	.037	1-1/4	2.3
SPR10-36	.500	.037	2	.8
SPR2-7	.500	.055	2-1/2	4.2
SPR2-8	.650	.055	3	1.6
SPR2-9	.750	.063	4	1.4
SPR2-10	.580	.075	4-1/2	2.1
SPR2-11	1.000	.075	5	1.2

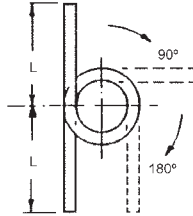
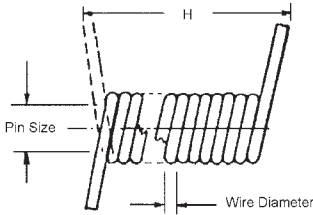


Sold in packages of 10.

F

# SPRINGS

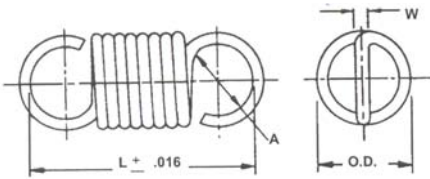
TYPE	LENGTHS	MATERIALS
TORSION LEFT HAND WOUND	1/2" TO 2"	STAINLESS STEEL



STOCK NO.	WIRE DIA.	OUTSIDE DIA.	L	PIN SIZE	H	TORQUE IN.LBS. @ 180
SPR3-1	.012	.166	.50	.109	.059	.047
SPR3-2	.015	.183	.75	.109	.075	.093
SPR3-3	.018	.216	.75	.140	.109	.140
SPR3-4	.021	.247	1.00	.156	.127	.218
SPR3-5	.025	.304	1.00	.203	.151	.375
SPR3-6	.030	.394	1.00	.250	.181	.625
SPR3-7	.035	.450	1.25	.281	.212	1.000
SPR3-8	.040	.518	2.00	.343	.242	1.375
SPR3-9	.048	.618	2.00	.406	.292	2.500

Special springs on request, send sketch.  
Right hand wound on request.  
Sold in packages of 10.

TYPE	LENGTHS	MATERIALS
ANTI-BACKLASH EXTENSION	3/8 TO 27/64	302 STAINLESS STEEL



Extension Spring



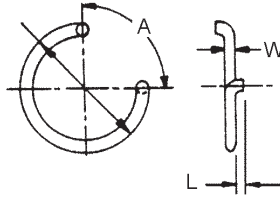
STOCK NO.	OUTSIDE DIA.	W	NO. OF COILS	L	A	K LBS./IN.
SPR5-1	.105	.008	19	.375	.11	0.3
SPR5-9	.120	.010	17	.375	.10	0.5
SPR5-2	.105	.012	13	.375	.10	2.5
SPR5-6	.120	.012	14	.375	.09	1.4
SPR5-5	.090	.012	20	.375	.07	2.6
SPR5-3	.105	.015	11	.375	.09	7.7
SPR5-10	.120	.015	11	.350	.09	5.0
SPR5-3-A	.120	.016	11	.426	.12	6.5
SPR5-11	.120	.018	9	.350	.09	14.0
SPR5-4	.105	.020	10	.375	.09	32.0

Sold in packages of 10.



# SPRINGS

TYPE	MATERIALS
ANTI-BACKLASH TORSION	302 STAINLESS STEEL

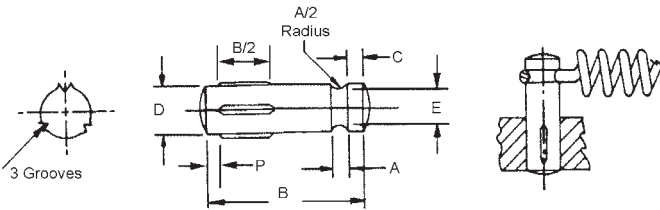


STOCK NO.	OUTSIDE DIA.	W	L	A	$\frac{K}{\text{LBS.-IN.}} \frac{360^\circ}{}$
SPR6-3	.37	.030	.045	90	7.6
SPR6-1	.51	.015	.045	90	0.3
SPR6-2	.51	.020	.045	90	1.0
SPR6-5	.53	.028	.045	90	4.0
SPR6-10	.55	.032	.045	90	6.3
SPR6-12	.62	.026	.031	135	2.5
SPR6-14	.65	.022	.045	135	1.3
SPR6-15	.65	.026	.045	135	2.4
SPR6-16	.72	.024	.031	135	1.5
SPR6-6	.81	.026	.062	135	2.0

Sold in packages of 10.

# SPRING POSTS

DIAMETER	MATERIALS
1/8" TO 1/4"	CARBON STEEL - ZINC PLATED QQ-Z325 TYPE 1-C1.3

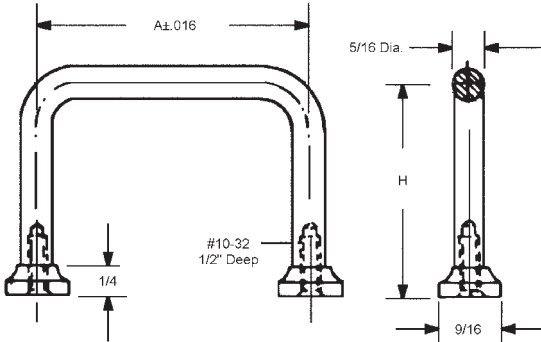


Sold in packages of 10.

STOCK NO.	D	A	B	E	C	CROWN RADIUS	CROWN HEIGHT	P
CL-1	1/8	1/16	1/2	.083	1/32	5/32	.013	1/32
CL-2	3/16	1/16	5/8	.125	3/64	1/4	.018	1/16
CL-3	1/4	3/32	3/4	.167	1/16	5/16	.026	1/16

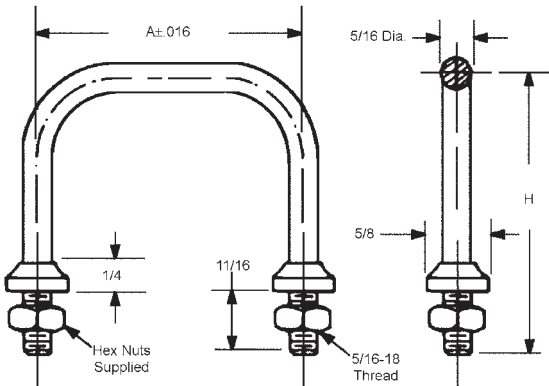
# CHASSIS HANDLES

TYPE	MATERIALS
TAP	303 STAINLESS STEEL



STOCK NO.	A	H
HA-1	3.000	1-1/2
HA-2	4.500	1-1/2
HA-3	5.500	1-5/8
HA-4	6.500	1-3/4

TYPE	MATERIALS
STUD	303 STAINLESS STEEL



STOCK NO.	A	H
HB-1	3.000	1-1/2
HB-2	4.500	1-1/2
HB-3	5.500	1-5/8
HB-4	6.500	1-3/4