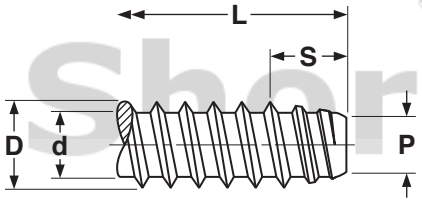
THREAD FORMING

Type B



THREADS FOR SELF-TAPPING SCREWS TYPE-B

ASME B18.6.3--2013

Nominal Size or Basic Screw Diameter		Threads Per Inch	D		d		P		S		L		Minimum Torsional Strength, lb.- in. (STEEL SCREWS ONLY)
			Major Diameter		Minor Diameter		Point Diameter		Point Taper Length		Minimum Practical Screw Length		
			Max	Min	Max	Min	Max	Min	Max	Min	90° Heads	Csk Heads	
2	.0860	32	.088	.082	.064	.060	.058	.054	.062	.047	5/32	3/16	4
3	.0990	28	.101	.095	.075	.071	.068	.064	.071	.054	3/16	7/32	9
4	.1120	24	.114	.108	.086	.082	.079	.074	.083	.063	3/16	1/4	13
5	.1250	20	.130	.123	.094	.090	.087	.082	.100	.075	7/32	9/32	18
6	.1380	20	.139	.132	.104	.099	.095	.089	.100	.075	1/4	9/32	24
7	.1510	19	.154	.147	.115	.109	.105	.099	.105	.079	1/4	5/16	30
8	.1640	18	.166	.159	.122	.116	.112	.106	.111	.083	9/32	11/32	39
10	.1900	16	.189	.182	.141	.135	.130	.123	.125	.094	5/16	3/8	56
12	.2160	14	.215	.208	.164	.157	.152	.145	.143	.107	11/32	7/16	88
1/4	.2500	14	.246	.237	.192	.185	.179	.171	.143	.107	3/8	1/2	142
5/16	.3125	12	.315	.306	.244	.236	.230	.222	.167	.125	15/32	19/32	290
3/8	.3750	12	.380	.371	.309	.299	.293	.285	.167	.125	17/32	11/16	590
Tolerance on Length			Up to 3/4 in., Incl.: -0.03				Over 3/4 to 1-1/2 in., Incl.: -0.05				Over 1-1/2 in.: -0.06		

Description	A thread forming tapping screw with spaced threads and a blunt point with incomplete entering threads.	
Applications/ Advantages	For molded or through holes in thin metal, non-ferrous castings, plastics or resin-filled plywood.	Stainless screws offer greater corrosion resistance than steel screws but have a more limited range of applications due to being a softer metal.
Material	**Steel**: AISI 1016 - 1024 or equivalent steel.	**Stainless**: 18-8 Stainless steel or 410 Stainless steel
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.	***410 SS:*** An ideal method of hardening 410 stainless screws is a bright hardening process, which typically involves a vacuum furnace. Another key factor affecting hardness is the chemistry of the fastener--most elements have maximum values but not minimums. This fact can contribute to hardness variance. 18-8 is only hardenable by cold-working.
Surface Hardness	**Steel**: Rockwell C45 minimum	-
Case Depth (steel only)	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011	-
Hardness	**Core: Steel**: Rockwell C28 - 38 (after tempering)	**410**: Rockwell C38 - 46 (approx.) **18-8** Stainless: Rockwell B90 - C20 (approx.)
Plating	See Appendix-A for plating information.	