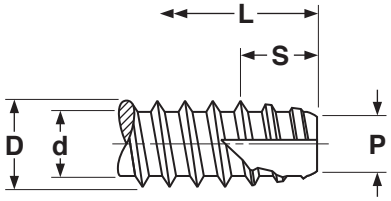
SELF- TAPPING SCREWS

Type 25 THREAD CUTTING



Threads For Thread Cutting Screws Type 25

ASME B18.6.3--2013

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

Description	A thread cutting screw with spaced threads, a blunt point, tapered entering threads, a single wide cutting edge, and a chip cavity.	
	Steel	***Stainless***
Applications/ Advantages	For molded or through holes in plastics and other soft materials. Provides excellent chip clearing capability.	18-8 stainless offers greater corrosion resistance than steel screws but have a more limited range of applications due to being a softer metal. 410 stainless is a harder metal but less corrosion-resistant than 18-8. When using any thread-cutting screw, the material in which the threads are cut should have a a lower hardness by 10-20 Rockwell hardness points.
Material	AISI 1016 - 1024 or equivalent steel.	18-8 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	Rockwell C45 minimum	-
Case Depth	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 10 diameter: .004 - .009 1/4" diameter and larger: .005 - .011	-
Hardness	**Core:** Rockwell C28 - 38 (after tempering)	**410**: Rockwell C38 - 46 (approx.) **18-8** Stainless: Rockwell B90 - C20 (approx.)
Plating	See Appendix-A for plating information.	