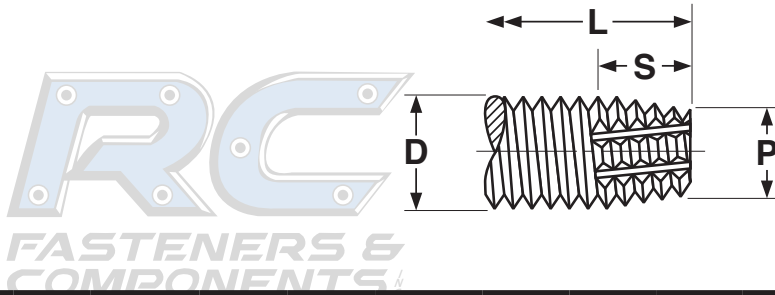


Self-Tapping Screws

Thread Cutting

Type F

FASTENERS & COMPONENTS



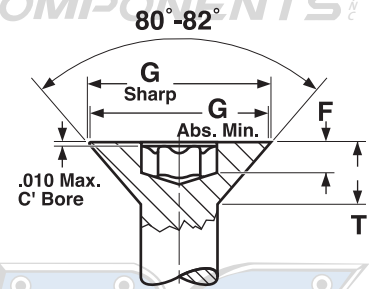
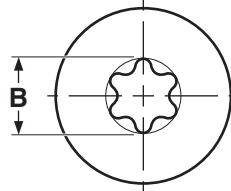
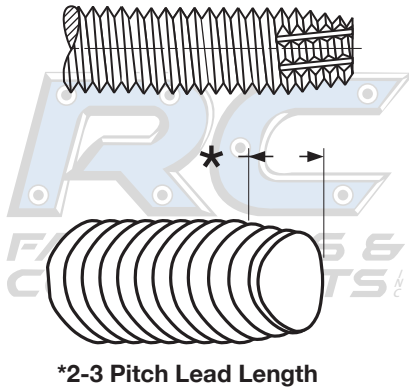
THREADS AND POINTS FOR TYPE-F THREAD CUTTING SCREWS

ASME
B18.6.3-2010

Nominal Size or Basic Screw Diameter	Threads Per Inch	D		P	S				L				Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)	
		Major Diameter		Point Diameter Ref	Point Taper Length				Determinant Length for Point Taper		Minimum Practical Screw Lengths			
		Max	Min		Short Screws		Long Screws		90° Heads	Csk Heads	90° Heads	Csk Heads		
					Max	Min	Max	Min						
2	.0860	56	.0860	.0813	.068	.062	.045	.080	.062	5/32	3/16	5/32	3/16	5
4	.1120	40	.1120	.1061	.087	.088	.062	.112	.088	7/32	1/4	3/16	1/4	13
5	.1250	40	.1250	.1191	.100	.088	.062	.112	.088	7/32	9/32	3/16	1/4	18
6	.1380	32	.1380	.1312	.107	.109	.078	.141	.109	1/4	5/16	1/4	5/16	23
8	.1640	32	.1640	.1571	.132	.109	.078	.141	.109	1/4	11/32	1/4	5/16	42
10	.1900	24	.1900	.1818	.148	.146	.104	.188	.146	11/32	7/16	5/16	13/32	56
10	.1900	32	.1900	.1831	.158	.109	.078	.141	.109	1/4	11/32	1/4	5/16	74
12	.2160	24	.2160	.2078	.174	.146	.104	.188	.146	11/32	7/16	5/16	13/32	93
1/4	.2500	20	.2500	.2408	.200	.175	.125	.225	.175	13/32	17/32	3/8	1/2	140
5/16	.3125	18	.3125	.3026	.257	.194	.139	.250	.194	15/32	19/32	7/16	9/16	306
3/8	.3750	16	.3750	.3643	.312	.219	.156	.281	.219	1/2	11/16	15/32	5/8	560
1/2	.5000	13	.5000	.4876	.423	.269	.192	.346	.269	5/8	25/32	19/32	3/4	1075

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
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Description	A thread cutting screw with machine screw thread pitch, blunt point, tapered entering threads and multiple cutting edges.
Applications/ Advantages	Steel thread-cutters are used in heavy gauge sheet metal, aluminum, zinc and lead die castings, cast iron, brass and plastic. Stainless screws offer additional resistance to corrosion, 18-8 moreso than 410. When using any thread-cutting screw, the material in which the threads are cut should have a lower hardness by at least 10 to 20 Rockwell hardness points.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: 410 martensitic stainless steel or 18-8 stainless steel.
Heat Treatment	410 Stainless: Screws shall be annealed by heating to 1850-1950°F, held at least for 1/2 hour and rapid air- or oil-quenched then reheating to 525°F minimum for at least 1 hour and air cooled to provide the required tensile, yield and hardness properties.
Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (steel)	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" diameter & larger: .005 - .011
Core Hardness	Steel (after tempering): Rockwell C28 - 38 410 Stainless: Rockwell C38 - 42; 18-8 Stainless: Rockwell B90 - C20
Plating	See Appendix-A for information on plating of steel thread cutting screws.



SIX-LOBE RECESS FLAT HEADS (FLOORBOARD)

ASME B18.6.3-2010

Nominal Size or Basic Screw Diameter	G		T	B	F		Drive Size	
	Head Diameter		Head Height	Recess Diameter	Gauge Penetration			
	Max	Min	Ref	Ref	Max	Min		
.6 (U-Cut)	.138	.279	.244	.059	.111	.028	.024	T10
8	.164	.312	.285	.100	.132	.051	.040	T15
10	.190	.362	.333	.116	.155	.065	.050	T20
12	.216	.412	.380	.132	.178	.070	.055	T25
1/4	.250	.477	.442	.153	.200	.090	.075	T30
5/16	.312	.597	.556	.191	.266	.105	.087	T40
3/8	.375	.717	.670	.230	.266	.135	.115	T40
1/2**	.500	.815	.765	.223	.352	.135	.120	T50

*#6 Undercut dimensions are not addressed within the ASME B18.6.3 standard.
 ** 1/2" diameter floorboard screws have a trilobular point, not a Type-F.

Description	A countersunk, six-lobe drive thread cutting screw with machine screw thread pitch, blunt point, tapered entering threads, and multiple cutting edges. Larger diameter sizes may also be supplied as a thread rolling screw rather than thread cutting. Floorboard screws are, by definition, available in much longer sizes than standard type-F screws.
Applications/ Advantages	Floorboard screws are specifically designed for installing wood floors into truck trailers.
Material	AISI 1016 - 1024 or equivalent steel
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	Rockwell C45 minimum
Case Depth	<i>No. 8 thru 12 diameter:</i> .004 - .009 <i>1/4" diameter & larger:</i> .005 - .011
Core Hardness (after tempering)	Rockwell C28 - 38
Thread Dimensions	<i>#8 thru 3/8" diameters:</i> Same as those for Type-F thread cutting screws. <i>1/2" diameter:</i> Same as those for a thread rolling screw.
Plating	See Appendix-A for information on the plating of floorboard screws.