



THREAD ROLLING SCREWS

Nominal Screw Width	Screw Body Dimensions				Point
	Diameter of Circumscribing Circle		Measurement Across Center		Diameter of Circumscribing Circle
	Max	Min	Max	Min	Max
2-56	.0875	.0835	.0840	.0800	.070
3-48	.1010	.0970	.0970	.0930	.081
4-40	.1145	.1105	.1095	.1055	.090
5-40	.1275	.1235	.1225	.1185	.103
6-32	.1410	.1350	.1350	.1290	.111
8-32	.1670	.1610	.1610	.1550	.137
10-24	.1940	.1880	.1860	.1800	.153
10-32	.1930	.1870	.1870	.1810	.163
12-24	.2200	.2140	.2120	.2060	.179
1/4-20	.2550	.2490	.2450	.2390	.206
5/16-18	.3180	.3120	.307	.301	.264
3/8-16	.3810	.3750	.3685	.3625	.320
1/2-13	.5075	.5015	.4920	.4860	.432
Tolerance on Length	Nominal Screw Size	Nominal Screw Length			
		To 1/2" Incl.	Over 1/2" to 1" Incl.	Over 1" to 2" Incl.	Over 2"
	#2 - #12	+0, -.020	+0, -.030	+0, -.060	+0, -.090
1/4" - 1/2"	+0, -.030	+0, -.030	+0, -.060	+0, -.090	

Description	Trilobular thread rolling screw. As each lobe of the screw moves through the pilot hole in the nut material, it forms and work-hardens the nut thread metal, producing an uninterrupted grain flow.	
Applications/Advantages	For drilled, punched or cored holes in all ductile metals and punch extruded metals. Eliminates chips, requires low drive torque and provides excellent resistance to vibrational loosening.	
Material	<i>Steel</i> Steel thread rolling screws shall be made from cold-heading steel conforming to the following chemical composition <i>Carbon</i> : 0.13-0.27%; <i>Manganese</i> : 0.64-1.71%	<i>Stainless</i> 18-8: 18-8 stainless steel 410: 410 austenitic stainless steel
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.	410: Screws shall be annealed by heating to 1850 - 1950°F, held at least for 1/2 hr & rapid air- or oil-quenched: then reheated to 525°F min. for at least 1 hr & air cooled to provide the required mechanical properties.
Case	Rockwell C45 minimum	-
Case Depth	2-56 through 6-32 diameters: .002 - .007 8-32 through 12-24 diameters: .004 - .009 1/4-20 diameter & larger: .005 - .011	-
Core Hardness (after tempering)	Rockwell C28-38	18-8: Rockwell B90 - C20 410: Rockwell 038 - 42
Plating	Steel Taptite II screws are typically supplied zinc & waxed.	Stainless thread rolling screws are supplied passivated and waxed.