

THREAD CUTTING SCREWS

| Nominal Size or Basic Screw Diameter | | Threads Per Inch | D | | Р | | S | | | L | | | <u>M</u> inimum | |
|--|-------|---------------------|-------------------------|-------|-------------------|--------------------|------------------------|----------------|------|---------------------------|--------------|--------------------------|-----------------|---------------------------------|
| | | | Major Diameter | | Point Diameter | Point Taper Length | | | | Determinant Length for | | Minimum Practical | | |
| | | | | | | Short Screws | | Long Screws | | Point Taper | | Nominal Screw Lengths | | Torsional Strength, lbin. |
| | | | Max | Min | Ref | Max | Min | Max | Min | 90° Heads | Csk Heads | 90° Heads | Csk Heads | |
| 2 | .0860 | 56 | .086 | .0813 | .068 | .062 | .045 | .080 | .062 | 5/32 | 3/16 | 5/32 | 3/16 | |
| 4 | .1120 | 40 | .112 | .1061 | .087 | .088 | .062 | .112 | .088 | 7/32 | 1/4 | 3/16 | 1/4 | 13 |
| 6 | .1380 | 32 | .138 | .1312 | .107 | .109 | .078 | .141 | .109 | 1/4 | 5/16 | 1/4 | 5/16 | 23 |
| 8 | .1640 | 32 | .164 | .1571 | .132 | .109 | .078 | .141 | .109 | 1/4 | 11/32 | 1/4 | 5/16 | 42 |
| 10 | .1900 | 24 | .190 | .1818 | .148 | .146 | .104 | .188 | .146 | 11/32 | 7/16 | 5/16 | 13/32 | 56 |
| 10 | .1900 | 32 | .190 | .1831 | .158 | .109 | .078 | .141 | .109 | 1/4 | 11/32 | 1/4 | 5/16 | 74 |
| 12 | .2160 | 24 | .216 | .2078 | .174 | .146 | .104 | .188 | .146 | 11/32 | 7/16 | 5/16 | 13/32 | 93 |
| 1/4 | .2500 | 20 | .250 | .2408 | .200 | .175 | .125 | .225 | .175 | 13/32 | 17/32 | 3/8 | 1/2 | 140 |
| 5/16 | .3125 | 18 | .312 | .3026 | .257 | .194 | .139 | .250 | .194 | 15/32 | 19/32 | 7/16 | 9/16 | 306 |
| 3/8 | .3750 | 16 | .375 | .3643 | .312 | .219 | .156 | .281 | .219 | 1/2 | 11/16 | 15/32 | 5/8 | 560 |
| Tolerance on Length | | | Up to 3/4 in., Incl.: - | | | | Over 3/4 to 1-1/2 in., | | | Incl.: -0.05 | | Over 1-1/2 in. | | .: -0.06 |

| Description | A thread cutting screw with machine screw thread pitch, blunt point, tapered entering threads and a single cutting edge. | | | | | | |
|---------------------------------|--|--|--|--|--|--|--|
| Applications/ Advantages | May be used in steel sheets, structural shapes, special alloy steels, cast iron, brass or plastics. | | | | | | |
| 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 | No. 4 thru 6 diameter: .002007 No. 8 thru 10 diameter: .004009 1/4" diameter and larger: .005011 | | | | | | |
| Core Hardness (after tempering) | Rockwell C28 - 38 | | | | | | |
| Plating | See Appendix-A for plating information. | | | | | | |