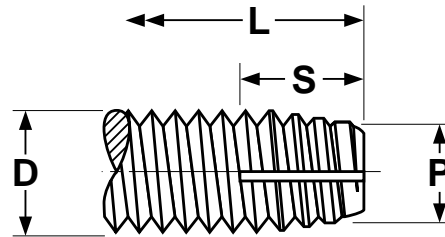


# Type-1

# Thread Cutting

# Self-Tapping Screws



## THREADS AND POINTS FOR TYPE 1 THREAD CUTTING SCREWS

ASME  
B18.6.4-1998

| Nominal Size<br>or Basic<br>Screw<br>Diameter | Threads<br>Per Inch | D                           |       | P                 | S                  |                                     |      |      | L  |                       |   |              | Minimum<br>Torsional<br>Strength,<br>lb.-in. |     |
|---|---------------------|-----------------------------|-------|-------------------|--------------------|-------------------------------------|------|------|--|-----------------------|---|--------------|--|-----|
|   |                     | Major<br>Diameter           |       | Point<br>Diameter | Point Taper Length |                                     |      |      | Determinant<br>Length for<br>Point Taper |                       | Minimum Practical<br>Nominal Screw<br>Lengths |              |  |     |
|   |                     | Max                         | Min   | Ref               | Max                | Min                                 | Max  | Min  | 90°<br>Heads                             | Csk<br>Heads          | 90°<br>Heads                                  | Csk<br>Heads |  |     |
| 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  |
| 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 |
| <b>Tolerance on Length</b>                    |                     | 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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| <b>Description</b>                         | A thread cutting screw with machine screw thread pitch, blunt point, tapered entering threads and a single cutting edge. |
| <b>Applications/<br/>Advantages</b>        | May be used in steel sheets, structural shapes, special alloy steels, cast iron, brass or plastics.                      |
| <b>Material</b>                            | AISI 1016 - 1024 or equivalent steel   |
| <b>Heat Treatment</b>                      | Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.                                      |
| <b>Surface Hardness</b>                    | Rockwell C45 minimum   |
| <b>Case Depth</b>                          | No. 4 thru 6 diameter: .002 - .007<br>No. 8 thru 10 diameter: .004 - .009<br>1/4" diameter and larger: .005 - .011       |
| <b>Core Hardness<br/>(after tempering)</b> | Rockwell C28 - 38  |
| <b>Plating</b>                             | See Appendix-A for plating information.  |