

Self Drilling Screw Selection

Steel Metal Gauge

| Normal Gauge | Minimum Thickness (inches) | Mils | Maximum Design (inches) |
|--------------|----------------------------|------|-------------------------|
| 6 | 0.0163 | 16 | 0.0172 |
| 25 | 0.0179 | 18 | 0.0188 |
| 22 | 0.0269 | 27 | 0.0283 |
| 20 | 0.0329 | 33 | 0.0346 |
| 18 | 0.0428 | 43 | 0.0451 |
| 16 | 0.0538 | 54 | 0.0566 |
| 14 | 0.0677 | 68 | 0.0713 |
| 12 | 0.0966 | 97 | 0.1017 |
| 10 | 0.1180 | 118 | 0.1240 |

FOR SI: 1 inch = 25.4mm. 1 mil = 0.0254 mm.

- 1 - All dimensions are inches or mils, uncoated.
- 2 - U.S. standard gauge for uncoated hot- and cold-rolled sheets. Gauge numbers are only provided as a reference and should not be used to order, design or specify steel studs or joists.
- 3 - Minimum thickness of material delivered to the job site.
- 4 - Design thickness of steel studs / joists shall not exceed the minimum thickness divided by 0.95. Design thickness = Min. thickness / 0.95.
- 5 - Chart above as noted in ICBO AC 46 acceptance criteria

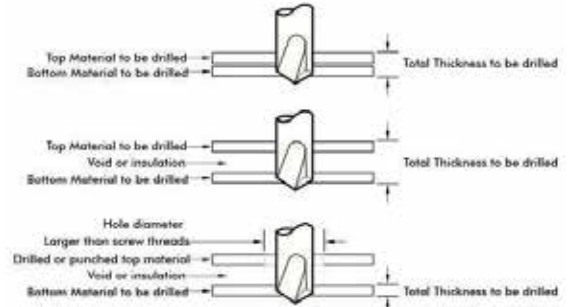
SCREW SIZE

| Normal Size | Basic Screw Diameter | Actual Size |
|-------------|----------------------|-------------|
| 0 | 0.0600 | • |
| 1 | 0.0730 | • |
| 2 | 0.0860 | • |
| 3 | 0.0990 | • |
| 4 | 0.1120 | • |
| 5 | 0.1250 | • |
| 6 | 0.1380 | • |
| 7 | 0.1510 | • |
| 8 | 0.1640 | • |
| 10 | 0.1900 | • |
| 12 | 0.2160 | • |
| 1/4 | 0.2500 | • |
| 5/16 | 0.3125 | • |
| 3/8 | 0.3750 | • |

Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

Self-Drilling Screw Selection Guide

Drill Point Selection



Drill Flute

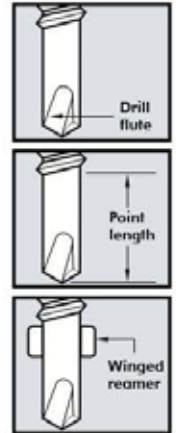
The length of the drill flute determines the metal thickness that can be drilled. The flute itself provides a channel for chip removal during drilling action. If it becomes completely imbedded in material, drill chips will be trapped in the flute and cutting action will cease. This will cause the point to burn up or break.

Point Length

The unthreaded section from the point to the first thread should be long enough to assure the drilling action is complete before the first thread engages the drilled metal. Screw threads advance at a rate of up to ten times faster than the drill flute can remove metal. All drilling therefore should be complete before threads begin to form.

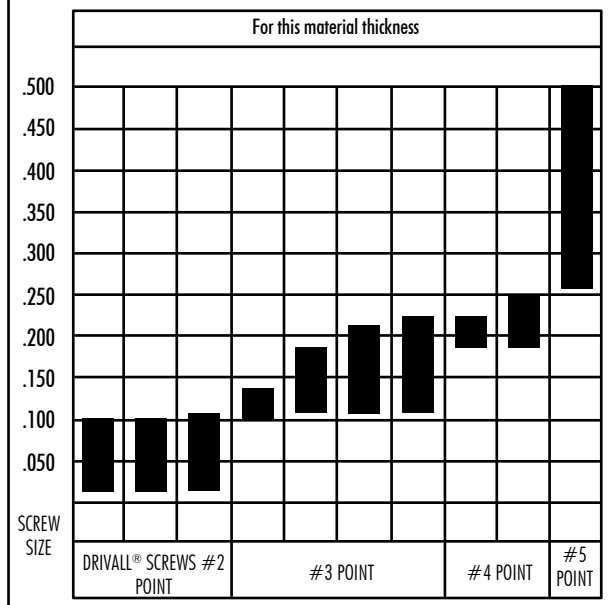
Drilling Through Wood To Metal

If your application calls for drilling through wood over 1/2" in thickness, a clearance hole is required. Select a fastener with break away wings for this type of job. The wings will ream a clearance hole and break-off when in contact with metal surface (minimum metal thickness .090") to be drilled.



Recommendations for Drilling Capacity

Material Thickness Recommendations



NOTE: MEETS OR EXCEEDS SAE J78 - TABLE 9.
TOTAL THICKNESS OF ALL STEEL INCLUDING ANY SPACING BETWEEN LAYERS