

Drilling Capacity of Self Drilling Screws for Metal

GAUGE	DIAMETER (mm)	THREADS PER INCH (TPI)	MAX. DRILLING CAPACITY (mm)
6	3.5	20	2.3
8	4.2	18	2.5
10	4.8	16	3.5
10	4.8	24	4.5
12	5.5	14	4.5
12	5.5	24	5.3
12 (Series 500)	5.5	24	12.0
14	6.3	10	3.0
14	6.3	14	5.5
14	6.3	20	6.3

As metal properties may vary, the above values should only be used as a guide only.

Recommended Screw Driving Speeds

SCREW TYPE	GAUGE	SPEED (RPM)
Self Drilling Screws (Steel)	6, 8, 10	2500
	12 & 14	1800
	M8	1800
	Series 500	1800
Type 17 Screws (Timber)	6, 8, 10, 12, 14	1000
Chipboard Screws	8 & 10	1000
Needle Point (Steel)	7 & 8	2500
Needle Point (Timber)	7 & 8	1000
Thread Forming Screws	14	800 – 1000

Tri-Fixx recommend that an appropriate screw gun with depth gauge and clutch setting be used when installing self drilling screws. Tri-Fixx does not recommend the use of impact drivers to install self drilling screws.

Mechanical Properties of Self Drilling Screws for Metal

GAUGE	THREADS PER INCH (TPI)	MIN. AXIAL WITHDRAWAL FORCE (kN)	MIN. AXIAL STRENGTH (kN)	MIN. TORQUE FOR TORSIONAL STRENGTH (Nm)	SINGLE SHEAR STRENGTH (kN)
10	16	2.5	8.6	6.9	6.2
10	24	2.5	10.0	7.3	6.2
12	14	2.8	11.6	10.9	8.5
12	24	2.8	14.4	11.3	8.5
14	10	3.1	14.9	14.1	9.9
14	20	3.1	18.9	17.6	11.3

Values shown are ultimate loads not recommended working loads.
Minimum axial withdrawal force is based on 1.5mm metal thickness (G450-Z350).

Mechanical Properties of Type 17 Screws for Timber

GAUGE	THREADS PER INCH (TPI)	MIN. AXIAL WITHDRAWAL FORCE (kN)	MIN. AXIAL STRENGTH (kN)	MIN. TORQUE FOR TORSIONAL STRENGTH (Nm)
10	12	2.5	7.5	5.4
12	11	2.8	11.3	9.4
14	10	3.1	15	14.1

Values shown are ultimate loads not recommended working loads.
Minimum axial withdrawal force is based on F5 seasoned radiata pine.