

Fastener Technical Performance Datasheet

Part no. HT130.2

This is a carbon steel self-drilling screw with two thread sections for securing insulated panels to cold rolled steel purlins.

Drilling Capability

Suitable for steel purlins from 1.2 – 3.5mm thick.

Fastener Material

Drill point and leading threads are produced from carbon steel which is subsequently heat treated to provide a hardened surface, which will drill through metal sheets and purlins.

Fastener Coatings

To provide protection for the carbon steel the entire fastener is coated with a 500hr salt spray tested finish in silver grey.

Corrosion Protection

The coating of the Self drilling screw is a vital factor in its useful lifespan. The anti-corrosion coating which protects the self-drilling screws will resist up to 500 hours in a salt spray test.

500 hr PLUS is a high technology coating, mainly

consisting of epoxy resin containing finely dispersed zinc and aluminium particles

Production Process

The pre-hardened screws are coated by a dip, spin, bake process with oven temperatures not exceeding 200°C.

This produces a multi-layered, scratch resistant coating.

The process is also environmentally sensitive as it does not use any contaminated waste product such as the Cr6 poison, unavoidable in certain galvanising/ electro plating processes.

The Selfdrillingscrews undergo two tests to determine the quality of the corrosion protection:

- **The Salt Spray Test (DIN 50021 SS)**

Used to test how long a screw can resist an aggressive salt spray environment before corroding.

- **The Kesternich Test (DIN 50018)**

Used to test how long a screw can resist an aggressive acid based industrial environment.





Please note that the following figures have been achieved under laboratory conditions and do not allow for any safety factors. Testing cannot take into consideration all possible combinations of screws and materials.


lasermet
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Torsional Strength						
	ISO No.ø (mm)	ISO No.6 3.5	ISO No.8 4.2	ISO No.10 4.8	ISO No.12 5.5	ISO No.14 6.3
	inch - lbs	25	42.5	84	130	150
	Nm	2.8	4.8	7.0	10.5	17.0

Pull-over Values (with 16mm washer)			
	Steel Thickness mm	lbs	kn
	0.63	1085	4.85
	0.75	1330	5.95
	1.00	1930	8.62
1.25	2195	9.79	

Pull-out Strength				
	Screw Style ¹	Drill-Point No.1		
	Steel Thickness mm	0.63	1.00	1.25
	LBS	190	360	495
	kN	0.85	1.60	2.19

Shear Strength						
	ISO No.ø (mm)	ISO No.6 3.5	ISO No.8 4.2	ISO No.10 4.8	ISO No.12 5.5	ISO No.14 6.3
	lbs	660	980	1400	1880	2760
	kN	2.93	4.36	6.28	8.36	12.27

Screw Style ²	Drill-Point No.2				
Steel Thickness mm	1.0	1.5	2.0	2.5	3.0
LBS	280	505	790	1080	1370
kN	1.25	2.25	3.50	4.80	6.10

Tensile Strength						
	ISO No.ø (mm)	ISO No.6 3.5	ISO No.8 4.2	ISO No.10 4.8	ISO No.12 5.5	ISO No.14 6.3
	lbs	1125	1570	2250	3158	3850
	kN	5.0	7.0	10.0	14.1	17.2

Screw Style ²	Drill-Point No.5	
Steel Thickness mm	5.0	6.0
LBS	2520	3360*
kN	11.21	15.0*

Recommended Drill Speed		
Recommended drill speed for screw guns under axial load		
Screw Diameter	Minimum	Maximum
up to ø 4.8	1800	2200
up to ø 5.5	1000	1600
up to ø 6.3	1000	1600

Screw Style	Timber Sub-structure		
ø Length	6.0 x 25mm	6.0 x 32mm	6.0 x 45mm
LBS	470	530	790
kN	2.10	2.35	3.52

Test results have been obtained in conjunction with St-37 steel by an independent test laboratory.

* Over 6mm limited due to Tensile Strength.

¹ Values refer to diameter 4.8mm.

² Values refer to diameter 5.5mm.