

S-MD 51 Z 6.3xL carbon steel self-drilling screw

Product data

General information

Material specification:

Carbon steel: case-hardened
 Zinc coating: $\geq 8 \mu\text{m}$ galvanized
 with reduced-diameter drill point and fitted
 EPDM sealing washer $\varnothing 16 \text{ mm}$.
 Coloured screws available on request.

Fastening tools:

Screwdriver: Hilti ST2500,
 Hilti ST1800
 Drive using depth
 gauge set: Item no. 304611
 Nut set driver
 S-NSD $\frac{3}{8}''$: Item no. 308905

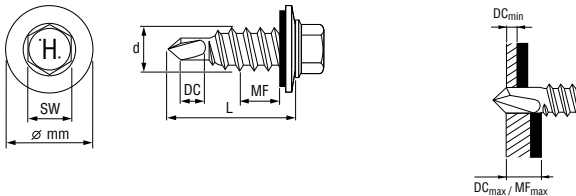
Approvals:



Dimensions

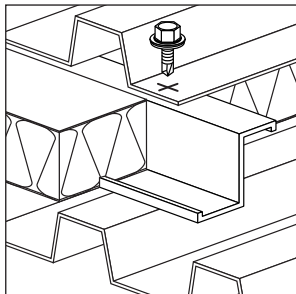
Uses:

Fastening sheet steel to thin steel sections and liner trays.



Applications

Examples



Load data

Design data

Drilling capacity Σt

max. 3.00 mm

Tightening torque (recommendation)

Screw in end-stop oriented

Total thickness Σt_i :	up to 1,25 mm	up to 3,00 mm
Tightening torque:	4 Nm	8 Nm

Component II steel with t_{II} [mm] S280GD or S320GD (DIN EN 10326)

0.63 0.75 0.88 1.00 1.13 1.25 1.50 2.00

Component I

steel with t_I [mm]
S280GD or S320GD
(DIN EN 10326)

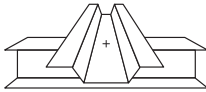
Shear force $V_{R,k}$ [kN]

0.63	1.60	2.10	2.70	3.30	3.30ac	3.30ac	3.30ac	3.30ac
0.75	1.60	2.10	2.70	3.30	4.10	4.20ac	4.20ac	4.20*
0.88	1.70	2.20	2.80	3.40	4.10	4.40	5.20ac	5.20*
1.00	1.80	2.40	3.00	3.50	4.10	4.60	5.80	6.30*
1.13	1.80	2.40	3.00	3.50	4.20	4.80	6.20	–
1.25	1.80	2.40	3.00	3.60	4.20	5.00	6.50	–
1.50	2.00	2.60	3.30	4.00	4.80	5.50	7.20	–
1.75	2.00	2.60	3.30	4.00	–	–	–	–
2.00	2.00	2.60	3.30	4.00	–	–	–	–

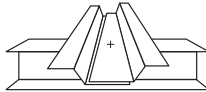
Tension force $N_{R,k}$ [kN]

0.50	0.49	0.65	0.81	0.97	1.13ac	1.30ac	1.67ac	1.73ac
0.55	0.61	0.82	1.02	1.23	1.43ac	1.64ac	2.11ac	2.18ac
0.63	0.90	1.20	1.50	1.80	2.10ac	2.40ac	3.10ac	3.20ac
0.75	0.90	1.20	1.50	1.80	2.10	2.40ac	3.10ac	4.00*
0.88	0.90	1.20	1.50	1.80	2.10	2.40	3.10ac	4.60*
1.00	0.90	1.20	1.50	1.80	2.10	2.40	3.10	4.60*
1.13	0.90	1.20	1.50	1.80	2.10	2.40	3.10	–
1.25	0.90	1.20	1.50	1.80	2.10	2.40	3.10	–
1.50	0.90	1.20	1.50	1.80	2.10	2.40	3.10	–

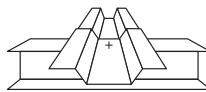
1.75	0.90	1.20	1.50	1.80	-	-	-	-
2.00	0.90	1.20	1.50	1.80	-	-	-	-



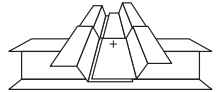
(a)
single



(b)
side lap



(c)
end overlap



(d)
side lap and end overlap

Safety factors according to EN 1993-1-3 and CUAP 06.02/07

	Tension	Shear
Partial safety concept		
Partial safety factor	$\gamma_M = 1.33$	$\gamma_M = 1.33$
Influence of cyclic loading	$\alpha_{cyclic} = 1.0$	- / -
Design load	$N_{Rd} = 1.0 \cdot N_{Rk} / 1.33$	$V_{Rd} = V_{Rk} / 1.33$
Global safety concept		
Global safety factor *	$\gamma_{GLOB} = 2.0$	$\gamma_{GLOB} = 2.0$
Recommended load	$N_{rec} = 1.0 \cdot N_{Rk} / 2.0$	$V_{rec} = V_{Rk} / 2.0$

* Note: The global safety factor of 2.0 includes a partial safety factor of $\gamma_F = 1.5$ for wind load. For other loads safety factors should be applied in accordance with the appropriate standards.

Screw selection

Screw program

Drilling thickness DC mm	Fastening thickness MF max. mm	Dimensions (dxL) mm	Sealing washer \varnothing mm	Head size AF	Package contents	Ordering designation	Item no.
1.2-3	4	6.3x19	16	$\frac{3}{8}$ "	500	S-MD51Z 6.3x19	219034