S-MD 21 Z carbon steel self-drilling screws

Product data

General information

Material specification:
Carbon steel: case-hardened
Zinc coating: $\geqq$ 8 μm galvanized
with pressed-on flange.

Fastening tools
Screwdriver: Hilti ST 1800
Torque settings: 6–8
Drive without depth gauge.
Cut-out controlled by torque clutch.
Nut set driver: S-NSD 8
                             Item no. 308901
                             S-NSD 10
                             Item no. 308902

Stand-up tool with
screwdriver   Hilti SDT 25,
                             ST 1800
Torque settings: $\varnothing$ 6.3 = 8–10
Drive without depth gauge.
Cut-out controlled by torque clutch.
Bit holder: S-BH 435DT
                             Item no. 304415
Nut set driver: S-NSD 10 DT
                             Item no. 284485

Dimensions

Uses:
Fastening supporting decking sheets to steel framing.
Screw with pressed-on flange, particularly suitable for highly-stressed fastenings,
e.g. roofing sheets on insulated (built-up) roofs.
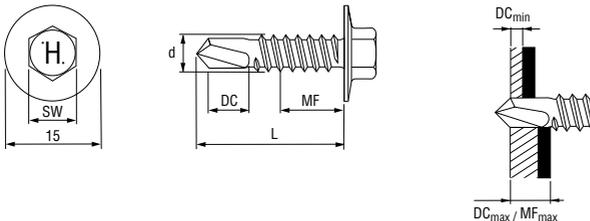
Applications

Examples
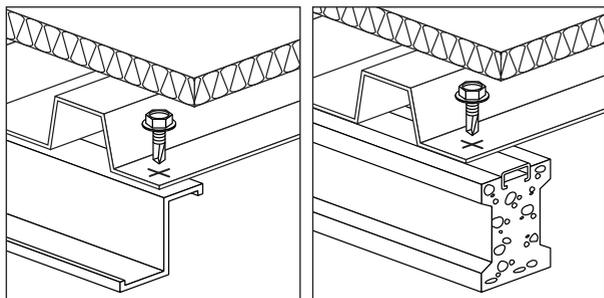
Load data

Design data

Drilling capacity Σt

max. 3.0 mm

Tightening torque (recommendation)

Screw in end-stop oriented

Total thickness Σ t_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)	
	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	2.20	2.20
0.75	2.20	3.80
0.88	2.20	4.20
1.00	2.20	4.20
1.13	2.20	4.20
1.25	2.20	4.20

	Tension force $N_{R,k}$ [kN]	
0.63	1.50	1.50
0.75	1.50	2.20
0.88	1.50	2.80
1.00	1.50	3.60
1.13	1.50	3.60
1.25	1.50	3.60

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	Head size AF	Package contents	Ordering designation	Item no.
1.2-3	15	5.5 x 25	8	500	S-MD 21 Z 5.5 x 25	**234588**