

S-MD 01 S / S-MD 03 S / S-MD 05 S stainless steel self-drilling screw

Product data

General Information

Material specification:

made from A2 (AISI 304) material,
with hardened carbon steel drill point and
thread start.

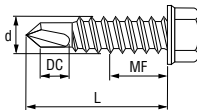
Fastening tools

Screwdriver:	Hilti ST1800
Torque settings:	
S-MD01S Ø 4.8	3– 5
S-MD01S / S-MD01LS /	
S-MD03S Ø 5.5	6– 8
S-MD03S Ø 6.3	8–10
S-MD05S Ø 5.5	8–10
Drive without depth gauge.	
Cut-out controlled by torque clutch.	
Nut set driver S-NSD 8:	Item no. 308901

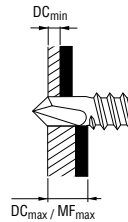
Dimensions

Uses:

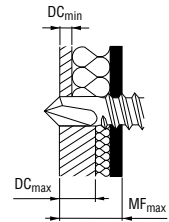
Fastening steel sections and sheet steel to steel framing, with or without insulating material.



without insulation

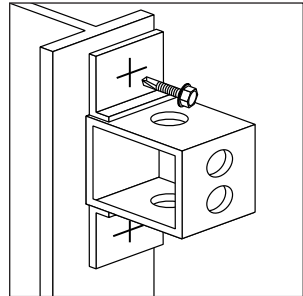
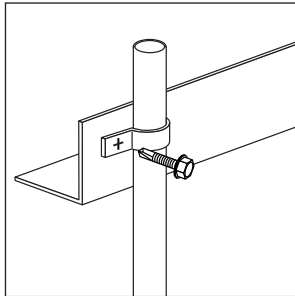
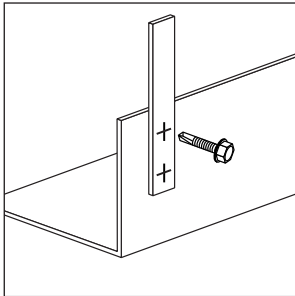
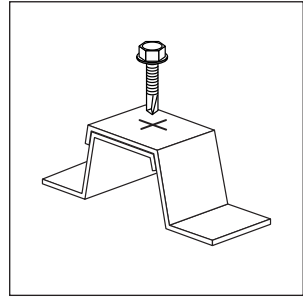
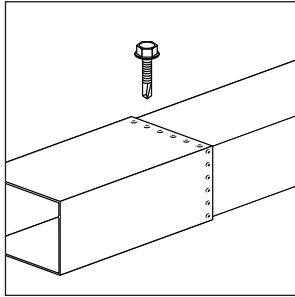
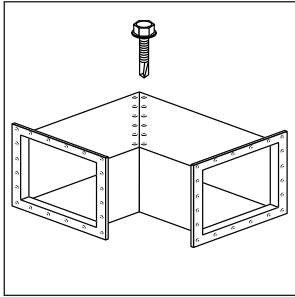


with insulation



Applications

Examples



Load data
Design data
Drilling capacity Σt

max. 2.00 mm

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
------	------	------	------	------	------

Component I steel with t_I [mm]

 S280GD or S320GD
 (DIN EN 10326)

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

	0.90	0.90	0.90	0.90	0.90	0.90
0.63	0.90	0.90	0.90	0.90	0.90	0.90
0.75	0.90	1.60	1.60	1.60	–	–
0.88	0.90	1.60	2.20	2.20	–	–
1.00	0.90	1.60	2.20	2.80	–	–
1.13	0.90	1.60	2.20	2.80	–	–
1.25	0.90	1.60	–	–	–	–

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

	0.80	0.80	0.80	0.80	0.80	0.80
0.63	0.80	0.80	0.80	0.80	0.80	0.80
0.75	1.00	1.00	1.00	1.00	1.00	1.00
0.88	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.10	1.40	1.40	1.40	1.40	1.40
1.13	1.10	1.40	1.40	1.40	1.40	1.40
1.25	1.10	1.80	1.80	2.00	2.00	2.00

Load data

Design data

Drilling capacity Σt

max. 4,00 mm

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

2x0.63 2x0.75 2x0.88 2x1.00 2x1.13 2x1.25 2x1.50

Component I steel with t_i [mm]

S280GD or S320GD

(DIN EN 10326)

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

0.63	2.10	2.10	2.10	2.10	–	–	–
0.75	2.10	3.00	3.00	3.00	–	–	–
0.88	2.10	3.00	3.10	3.10	–	–	–
1.00	2.10	3.00	3.10	3.20	–	–	–
1.13	2.10	3.00	3.10	–	–	–	–
1.25	2.10	3.00	–	–	–	–	–
1.50	2.10	–	–	–	–	–	–

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

0.63	1.60	1.60	1.60	1.60	1.60	1.60	1.60
0.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00
0.88	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1.00	2.00	2.20	2.20	3.10	3.10	3.10	3.10
1.13	2.00	2.20	2.20	3.10	3.10	3.10	3.10
1.25	2.00	2.20	2.20	3.10	3.10	4.30	4.30
1.50	2.00	2.20	2.20	3.10	3.10	4.30	4.80

Load data

Design data

Drilling capacity Σt

max. 6.0 mm

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

1.50	2.00	3.00
-------------	-------------	-------------

Component I steel with t_i [mm]

S280GD or S320GD
(DIN EN 10326)

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

0.63	–	2.30	2.30
0.75	–	2.30	3.00
0.88	–	2.30	3.00
1.00	–	4.80	–

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

0.63	1.50	1.50	1.50
0.75	1.70	2.00	2.00
0.88	1.70	2.00	2.00
1.00	1.70	2.60	3.20
1.13	1.70	2.60	3.20
1.25	1.70	2.60	4.60
1.50	1.70	2.60	4.60
2.00	1.70	2.60	4.60

Load data

Design data

Drilling capacity Σt

max. 6.00 mm

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

	1.50	2.00	3.00

Component I steel with t_I [mm]

S280GD or S320GD

(DIN EN 10326)

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

		2.40	2.40
0.63	–	2.40	2.40
0.75	–	2.40	3.50
0.88	–	2.40	3.50
1.00	–	3.90	–

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

	1.40	1.70	1.70
0.63	1.40	1.70	1.70
0.75	1.40	2.20	2.20
0.88	1.40	2.20	2.20
1.00	1.40	2.70	3.70
1.13	1.40	2.70	3.70
1.25	1.40	2.70	5.40
1.50	1.40	2.70	5.40
2.00	1.40	2.70	5.40

Load data
Design data
Drilling capacity Σt

max. 12.00 mm

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

4.00 6.00 8.00

Component I steel with t_i [mm]

S280GD or S320GD
(DIN EN 10326)

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

0.75	4.10	4.10	4.10
0.88	4.80	4.80	4.80
1.00	5.40	5.40	5.40
1.13	5.40	5.40	5.40
1.25	6.70	6.70	6.70

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

0.63	1.40	1.40	1.40
0.75	1.60	1.60	1.60
0.88	1.60	1.60	1.60
1.00	2.20	2.20	2.20
1.13	2.20	2.20	2.20
1.25	2.70	2.70	2.70
1.50	3.30	3.30	3.30
2.00	4.30	4.30	4.30

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	$\alpha_{\text{cyclic}} = 1.0$	- / -
Design load	$N_{Rd} = 1.0 \cdot N_{Rk} / 1.33$	$V_{Rd} = V_{Rk} / 1.33$
Global safety concept		
Global safety factor *	$\gamma_{\text{GLOB}} = 2.0$	$\gamma_{\text{GLOB}} = 2.0$
Recommended load	$N_{\text{rec}} = 1.0 \cdot N_{Rk} / 2.0$	$V_{\text{rec}} = V_{Rk} / 2.0$

* 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 program

Drilling thickness DC mm	Fastening thickness MF max. mm	Dimensions (dxL) mm	Head size AF	Package contents	Ordering designation	Item no.
1.25-2.0	9	4.8x22	8	500	S-MD01 S 4.8x22	285608
1.8-4	8	5.5x25	8	500	S-MD01 LS 5.5x25	285609
2.1-6.0	11	5.5x25	8	500	S-MD03 S 5.5x25	413408
2.1-6.0	18	5.5x32	8	250	S-MD03 S 5.5x32	413409
2.1-6.0	24	5.5x38	8	250	S-MD03 S 5.5x38	413410
2.1-6.0	36	5.5x50	8	250	S-MD03 S 5.5x50	413411
2.1-6.0	49	5.5x63	8	100	S-MD03 S 5.5x63	413412
2.1-6.0	10	6.3x25	8	500	S-MD03 S 6.3x25	413413
2.1-6.0	17	6.3x32	8	500	S-MD03 S 6.3x32	413414
4.6-15	15	5.5x45	8	250	S-MD05 S 5.5x45	285616
4.6-15	20	5.5x50	8	250	S-MD05 S 5.5x50	285617
4.6-15	33	5.5x63	8	100	S-MD05 S 5.5x63	285618
4.6-15	50	5.5x80	8	100	S-MD05 S 5.5x80	285619
4.6-15	70	5.5x100	8	100	S-MD05 S 5.5x100	285620