

S-CDW 61 S 6.5xL / S-CDW 71 S 6.5xL self-drilling screw

Product data

General information

Material specification:

made from A2 (AISI 304) material with fitted sealing washer \varnothing 19 or 22 mm.

Hardened drill point and thread start for trouble-free drilling and thread cutting, stainless steel section (threaded shank and head) for corrosion resistance.

Coloured screws available on request.

Fastening tools:

Screwdriver: Hilti ST 1800

Drive using depth

gauge set: Item no. 304611

Nut set driver S-NSD 8: Item no. 308901

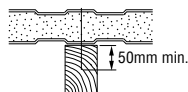
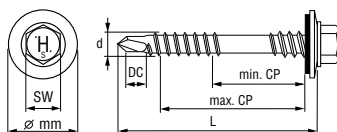
Approvals:



Dimensions

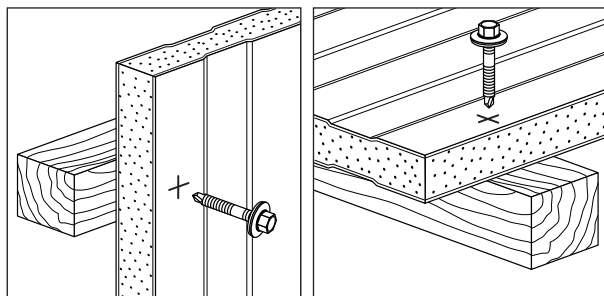
Uses:

The Hilti S-CD self-drilling screw features a threadless shank for relief of pressure on the sandwich panel (no denting) and a threaded section at the head for good sealing washer contact.



Applications

Examples



Load data

Design data

Screw-in depth l_{ef}

≥ 50 mm

Component II									
solid timber C24 (S10 according to DIN 4074-1)									
Sandwich panel thickness [mm]									
30	40	50	60	70	80	100	120	≥140	

Component I									
sheeting with t_{N1} or t_{N2} [mm]									
S280GD or S320GD									
(DIN EN 10326)									
	Shear force $V_{R,k}$ [kN]								
0.50	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
0.55	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
0.63	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
0.75	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
0.88	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
1.00	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
	Tension force $N_{R,k}$ [kN]								
0.50	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}	2.60 ^{a)}
0.55	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}	3.10 ^{a)}
0.63	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
0.75	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
0.88	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50

For t_{N2} made of S320GD all $V_{R,k}$ values can be increased by 8.3%.

For t_{N1} made of S320GD all $N_{R,k}$ values, marked with ^{a)}, can be increased by 8.3%.

Calculating the screw resistance in timber (Component II) according to timber standards.

Max. screw head deflection u									
[mm]	–	5.0	7.0	9.0	11.0	13.0	18.0	18.0	18.0

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 selection
Screw program

Drilling thickness DC mm	Sandwich panel thickness CP min.-max. in mm	Dimensions (dxL) mm	Sealing washer \varnothing mm	Head size AF	Package contents	Ordering designation	Item no.
≥50 mm timber	27– 47	6.5x100	19	8	100	S-CDW61 S 6.5x100	375256
≥50 mm timber	37– 57	6.5x110	19	8	100	S-CDW61 S 6.5x110	375257
≥50 mm timber	47– 67	6.5x120	19	8	100	S-CDW61 S 6.5x120	375258
≥50 mm timber	67– 87	6.5x140	19	8	100	S-CDW61 S 6.5x140	375259
≥50 mm timber	87–107	6.5x160	19	8	100	S-CDW61 S 6.5x160	375260
≥50 mm timber	107–127	6.5x180	19	8	100	S-CDW61 S 6.5x180	375261
≥50 mm timber	127–147	6.5x200	19	8	100	S-CDW61 S 6.5x200	284540
≥50 mm timber	147–167	6.5x220	19	8	100	S-CDW61 S 6.5x220	284541
≥50 mm timber	157–177	6.5x230	19	8	100	S-CDW61 S 6.5x230	284597
≥50 mm timber	27– 47	6.5x100	22	8	100	S-CDW71 S 6.5x100	285658
≥50 mm timber	37– 57	6.5x110	22	8	100	S-CDW71 S 6.5x110	285659
≥50 mm timber	47– 67	6.5x120	22	8	100	S-CDW71 S 6.5x120	285660
≥50 mm timber	67– 87	6.5x140	22	8	100	S-CDW71 S 6.5x140	285661
≥50 mm timber	87–107	6.5x160	22	8	100	S-CDW71 S 6.5x160	285662
≥50 mm timber	107–127	6.5x180	22	8	100	S-CDW71 S 6.5x180	285663
≥50 mm timber	127–147	6.5x200	22	8	100	S-CDW71 S 6.5x200	285664
≥50 mm timber	147–167	6.5x220	22	8	100	S-CDW71 S 6.5x220	285665
≥50 mm timber	157–177	6.5x230	22	8	100	S-CDW71 S 6.5x230	285666