

S-CD 65 S 5.5×L / S-CD 75 S 5.5×L 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 in the supporting member, 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

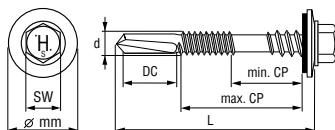
Approvals



Dimensions

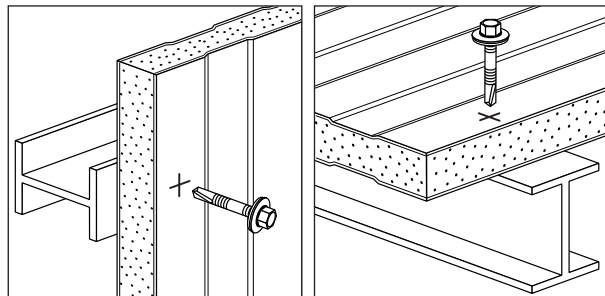
Uses:

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

Drilling capacity $\Sigma (t_{N2} + t_{II})$

max. ≤ 12.0 mm

Component II steel with t_{II} [mm]

S235J according to DIN EN 10025-2

S280GD or S320GD (DIN EN 10326)

3.00 4.00 5.00 6.00

Component I

Sheeting with t_{N1} or t_{N2} [mm]

S280GD or S320GD

(DIN EN 10326)

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

| | | | | |
|-------------|------|------|------|------|
| 0.50 | 1.30 | 1.30 | 1.30 | 1.30 |
| 0.55 | 1.50 | 1.50 | 1.50 | 1.50 |
| 0.63 | 1.80 | 1.80 | 1.80 | 1.80 |
| 0.75 | 2.30 | 2.30 | 2.30 | 2.30 |
| 0.88 | 2.90 | 2.90 | 2.90 | 2.90 |
| 1.00 | 3.50 | 3.50 | 3.50 | 3.50 |

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

| | | | | |
|-------------|--------------------|------|------|------|
| 0.50 | 2.10 | 2.10 | 2.10 | 2.10 |
| 0.55 | 2.50 | 2.50 | 2.50 | 2.50 |
| 0.63 | 2.90 | 2.90 | 2.90 | 2.90 |
| 0.75 | 3.70 | 3.70 | 3.70 | 3.70 |
| 0.88 | 4.50 ^{a)} | 4.60 | 4.60 | 4.60 |
| 1.00 | 4.50 ^{a)} | 5.20 | 5.20 | 5.20 |

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, except those marked with ^{a)}, can be increased by 8.3 %.

For t_{N1} and t_{II} made of S320GD all $N_{R,k}$ values can be increased by 8.3 %.

Max. screw head deflection u

 depending on the
sandwich panel thickness

[mm]

| | | | | |
|------|------|------|------|------|
| 40 | 6.0 | 5.5 | 5.0 | 4.0 |
| 50 | 8.0 | 7.5 | 7.0 | 6.0 |
| 60 | 10.0 | 9.5 | 9.0 | 8.0 |
| 70 | 12.5 | 11.5 | 11.0 | 9.5 |
| 80 | 15.0 | 14.0 | 13.0 | 11.0 |
| 100 | 15.0 | 14.0 | 13.0 | 11.0 |
| 120 | 15.0 | 14.0 | 13.0 | 11.0 |
| ≥140 | 15.0 | 14.0 | 13.0 | 11.0 |

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 ∅ mm | Head size AF | Package contents | Ordering designation | Item no. |
|--------------------------------|---|---------------------------|---------------------------|-----------------|---------------------|-------------------------|---------------|
| 3.5-12.0 | 22- 45 | 5.5x90 | 19 | 8 | 100 | S-CD65S 5.5x90 | 375250 |
| 3.5-12.0 | 32- 55 | 5.5x100 | 19 | 8 | 100 | S-CD65S 5.5x100 | 375251 |
| 3.5-12.0 | 42- 65 | 5.5x110 | 19 | 8 | 100 | S-CD65S 5.5x110 | 375252 |
| 3.5-12.0 | 62- 85 | 5.5x130 | 19 | 8 | 100 | S-CD65S 5.5x130 | 375253 |
| 3.5-12.0 | 82-105 | 5.5x150 | 19 | 8 | 100 | S-CD65S 5.5x150 | 375254 |
| 3.5-12.0 | 102-125 | 5.5x170 | 19 | 8 | 100 | S-CD65S 5.5x170 | 375255 |
| 3.5-12.0 | 122-145 | 5.5x190 | 19 | 8 | 100 | S-CD65S 5.5x190 | 284544 |
| 3.5-12.0 | 137-175 | 5.5x220 | 19 | 8 | 100 | S-CD65S 5.5x220 | 284545 |
| 3.5-12.0 | 22- 45 | 5.5x90 | 22 | 8 | 100 | S-CD75S 5.5x90 | 285650 |
| 3.5-12.0 | 32- 55 | 5.5x100 | 22 | 8 | 100 | S-CD75S 5.5x100 | 285651 |
| 3.5-12.0 | 42- 65 | 5.5x110 | 22 | 8 | 100 | S-CD75S 5.5x110 | 285652 |
| 3.5-12.0 | 62- 85 | 5.5x130 | 22 | 8 | 100 | S-CD75S 5.5x130 | 285653 |
| 3.5-12.0 | 82-105 | 5.5x150 | 22 | 8 | 100 | S-CD75S 5.5x150 | 285654 |
| 3.5-12.0 | 102-125 | 5.5x170 | 22 | 8 | 100 | S-CD75S 5.5x170 | 285655 |
| 3.5-12.0 | 122-145 | 5.5x190 | 22 | 8 | 100 | S-CD75S 5.5x190 | 285656 |
| 3.5-12.0 | 137-175 | 5.5x220 | 22 | 8 | 100 | S-CD75S 5.5x220 | 285657 |