



Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments



European Technical Assessment

ETA-13/0179 of 1 September 2017

English translation prepared by DIBt - Original version in German language

General Part

Deutsches Institut für Bautechnik
S-CD, S-MP, S-CDW
Fastening screws for sandwich panels
Hilti AG Feldkircherstraße 100 9494 Schaan FÜRSTENTUM LIECHTENSTEIN
Hilti AG, Plant 1683 Hilti AG, Plant 7855 Hilti AG, Plant 4330 Hilti AG, Plant 6522
36 pages including 29 annexes which form an integral part of this assessment
EAD 330047-01-0602 ("Fastening Screws for Sandwich Panels")
ETA-13/0179 issued on 25 April 2013

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Specific Part

1 Technical description of the product

The products are fastening screws for sandwich panels (self-drilling and self-tapping screws) made of steel (listed in Table 1). The fastening screws for sandwich panels are completed with a metallic washer and an EPDM sealing washer. The fastening screws for sandwich panels are made of austenitic stainless steel or galvanised/painted/coated carbon steel or a bimetal combination with drill bits made of hardened carbon steel. The fastening screws for sandwich panels and the corresponding connections are subject to tension and/or shear forces. Samples of fastening screws for sandwich panels are shown in Figure 1.

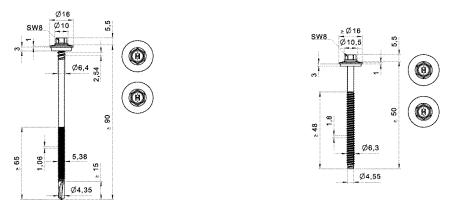


Figure 1: Fastening screws for sandwich panels (exemplary)

The components and the system setup of the product are given in Annexes (4-29).

Annex	Product	Component I	Component II	Description
4	Hilti S-CDH 53 C 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Carbon steel, w/o supporting thread, with hexagon head and sealing washer Ø16 mm
5	Hilti S-CDH 63 C 5,5 x L Hilti S-CDH 73 C 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Carbon steel, w/o supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
6	Hilti S-CD 53 C 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Carbon steel, with supporting thread, with hexagon head and sealing washer Ø16 mm
7	Hilti S-CD 63 C 5,5 x L Hilti S-CD 73 C 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Carbon steel, with supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
8	Hilti S-CDH 53 S 5,5 x L Hilti S-CDH 53 SS 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø16 mm



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Table 1 (continued)

Annex	Product	Component I	Component II	Description
9	Hilti S-CDH 63 S 5,5 x L Hilti S-CDH 63 SS 5,5 x L Hilti S-CDH 73 S 5,5 x L Hilti S-CDH 73 SS 5,5 x L	Steel ≤ S450G	Steel ≤ S450GD ≤ S420	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
10	Hilti S-CD 53 S 5,5 x L Hilti S-CD 53 SS 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø16 mm
11	Hilti S-CD 63 S 5,5 x L Hilti S-CD 63 SS 5,5 x L Hilti S-CD 73 S 5,5 x L Hilti S-CD 73 SS 5,5 x L	Steel ≤ S450GD	Steel ≤ S450GD ≤ S420	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
12	Hilti S-CDH 55 C 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Carbon steel, w/o supporting thread, with hexagon head and sealing washer Ø16 mm
13	Hilti S-CDH 65 C 5,5 x L Hilti S-CDH 75 C 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Carbon steel, w/o supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
14	Hilti S-CD 55 C 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Carbon steel, with supporting thread, with hexagon head and sealing washer Ø16 mm
15	Hilti S-CD 65 C 5,5 x L Hilti S-CD 75 C 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Carbon steel, with supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
16	Hilti S-CDH 55 S 5,5 x L Hilti S-CDH 55 SS 5,5 x L	Steel ≤ S350GD	Steel ≤ S320GD ≤ S235	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø16 mm
17	Hilti S-CDH 65 S 5,5 x L Hilti S-CDH 65 SS 5,5 x L Hilti S-CDH 75 S 5,5 x L Hilti S-CDH 75 SS 5,5 x L	Steel ≤ S350GD	Steel ≤ S320GD ≤ S235	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
18	Hilti S-CD 55 S 5,5 x L Hilti S-CD 55 SS 5,5 x L	Steel ≤ S350GD	Steel ≤ S320GD ≤ S235	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø16 mm
19	Hilti S-CD 65 S 5,5 x L Hilti S-CD 65 SS 5,5 x L Hilti S-CD 75 S 5,5 x L Hilti S-CD 75 SS 5,5 x L	Steel ≤ S350GD	Steel ≤ S320GD ≤ S235	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
20	Hilti S-CDH 55 GS 5,5 x L Hilti S-CDH 55 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø16 mm



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Table 1 (continued)

Table 1 (continued)			
Annex	Product	Component I	Component II	Description
21	Hilti S-CDH 65 GS 5,5 x L Hilti S-CDH 65 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø19 mm
22	Hilti S-CDH 75 GS 5,5 x L Hilti S-CDH 75 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø22 mm
23	Hilti S-CD 55 GS 5,5 x L Hilti S-CD 55 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø16 mm
24	Hilti S-CD 65 GS 5,5 x L Hilti S-CD 65 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø19 mm
25	Hilti S-CD 75 GS 5,5 x L Hilti S-CD 75 GSS 5,5 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø22 mm
26	Hilti S-CDW 51 S 6,5 x L Hilti S-CDW 51 SS 6,5 x L	Steel ≤ S320GD	Structural Timber	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø16 mm
27	Hilti S-CDW 61 S 6,5 x L Hilti S-CDW 61 SS 6,5 x L Hilti S-CDW 71 S 6,5 x L Hilti S-CDW 71 SS 6,5 x L	Steel ≤ S320GD	Structural Timber	Stainless steel A2 and A4, with supporting thread, with hexagon head and sealing washer Ø19 mm and Ø22 mm
28	Hilti S-MP 52 S 6,3 x L Hilti S-MP 52 SS 6,3 x L Hilti S-MP 62 S 6,3 x L Hilti S-MP 62 SS 6,3 x L Hilti S-MP 72 S 6,3 x L Hilti S-MP 72 SS 6,3 x L	Steel ≤ S350GD	Steel ≤ S320GD ≤ S235	Self tapping, Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø16 mm, Ø19 mm and Ø22 mm
29	Hilti S-MP 54 S 6,3 x L Hilti S-MP 54 SS 6,3 x L Hilti S-MP 64 S 6,3 x L Hilti S-MP 64 SS 6,3 x L Hilti S-MP 74 S 6,3 x L Hilti S-MP 74 SS 6,3 x L	Steel ≤ S350GD	Steel ≤ S350GD ≤ S355	Self tapping, Stainless steel A2 and A4, w/o supporting thread, with hexagon head and sealing washer Ø16 mm, Ø19 mm and Ø22 mm



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2 Specification of the intended use in accordance with the applicable European Assessment Document

In accordance with the applicable EAD the fastening screws are intended to be used for fastening sandwich panels to metal or timber substructures. The sandwich panel can either be used as wall or roof cladding or as load bearing wall and roof element. The intended use comprises fastening screws for sandwich panels and connections for indoor and outdoor applications. Fastening screws which are intended to be used in external environments with \geq C2 corrosion according to the standard EN ISO 12944-2 are made of stainless steel. Furthermore the intended use comprises connections with predominantly static loads (e.g. wind loads, dead loads). The fastening screws are not intended for re-use.

The performances given in Section 3 are only valid if the fastening screws for sandwich panels are used in compliance with the specifications and conditions given in Annexes (1-29).

The assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the fastening screws for sandwich panels of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

Essential characteristic	Performance
Shear Resistance of the Connection	see Annexes 2-3 and 4-29
Tension Resistance of the Connection	see Annexes 2-3 and 4-29
Design Resistance in case of combined Tension and Shear Forces (interaction)	see Annexes 2-3 and 4-29
Bending Capacity in case of Thermal Expansion of the outer face of Sandwich Panels	see Annexes 2 and 4-29
Durability	No performance assessed

3.1 Mechanical resistance and stability (BWR 1)

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1 in accordance with Commission Decision 96/603/EC (as amended)



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4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 330047-01-0602, the applicable European legal act is Commission Decision 98/214/EC, amended by 2001/596/EC.

The system to be applied is: 2+

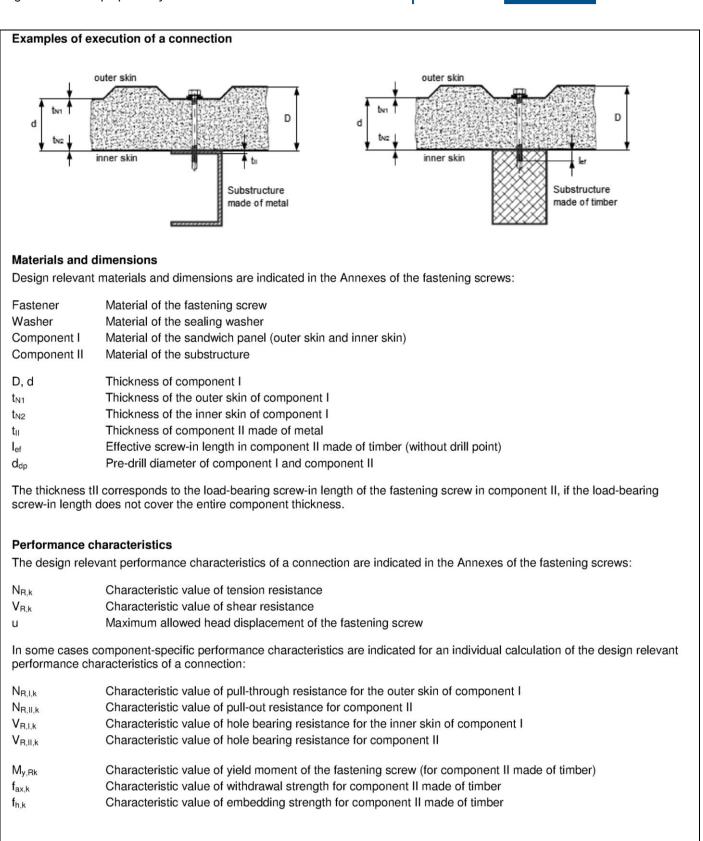
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 1 September 2017 by Deutsches Institut für Bautechnik

Dr.-Ing. Lars Eckfeldt p. p. Head of Department *beglaubigt:* Jensky



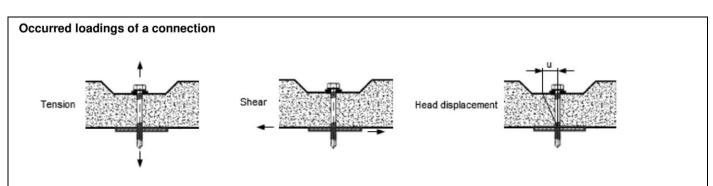


Fastening screws for sandwich panels

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Design values

The design values of tension and shear resistance of a connection have to be determined as follows:

$$N_{R,d} = \frac{N_{R,k}}{\gamma_M} \qquad \qquad V_{R,d} = \frac{V_{R,k}}{\gamma_M}$$

 N_{R,d}
 Design value of tension resistance

 V_{R,d}
 Design value of shear resistance

 v_M
 Partial safety factor

The recommended partial safety factor γ_M is 1.33, provided no partial safety factor is given in national regulations or national Annexes to Eurocode 3.

Special conditions

If the component thickness t_{N1} , t_{N2} or t_{II} lies in between two indicated component thicknesses, the characteristic value may be calculated by linear interpolation.

For asymmetric components II made of metal (e.g. Z- or C-shaped profiles) with component thickness $t_{II} < 5$ mm, the characteristic value $N_{R,k}$ has to be reduced to 70%.

In case of combined loading by tension and shear forces the following interaction equation has to be taken into account:

$$\frac{N_{\text{S,d}}}{N_{\text{R,d}}} + \frac{V_{\text{S,d}}}{V_{\text{R,d}}} \leq 1,0$$

N_{S,d} V_{S,d} Design value of the applied tension forces Design value of the applied shear forces

Head displacement

The head displacement of the fastening screw as a result of thermal expansion of the outer skin of the sandwich panel may not exceed the maximum allowed head displacement of the fastening screw.

Installation conditions

The installation is carried out according to manufacturer's instruction.

The load-bearing screw-in length of the fastening screw specified by the manufacturer has to be taken into account.

The fastening screws have to be processed with suitable drill driver (e.g. cordless drill driver with depth stop). The use of impact wrench is not allowed.

The fastening screws have to be fixed rectangular to the surface of the component.

Component I and component II have to be in direct contact to each other. The use of compression resistant thermal insulation strips up to a thickness of 3 mm is allowed.

Design and installation

Fastening screws for sandwich panels

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Component II made of timber

The characteristic values of tension and shear resistance for other k_{mod} or p_k as indicated in the Annex of the fastening screw can be determined as follows:

$$N_{\text{R},k} = \min \left\{ \begin{array}{l} N_{\text{R},l,k} \\ N_{\text{R},ll,k} \ast k_{\text{mod}} \end{array} \right. \qquad \qquad V_{\text{R},k} = \min \left\{ \begin{array}{l} V_{\text{R},l,k} \\ V_{\text{R},ll,k} \ast k_{\text{mod}} \end{array} \right.$$

 $N_{\text{R},l,k}$ and $V_{\text{R},l,k}$ are given in the Annex of the fastening screw.

 $N_{R,II,k}$ is determined according to EN 1995-1-1:2004 + A1:2008, equation (8.40a), with $f_{ax,k}$ given in the Annex of the fastening screw.

 $V_{\text{R,II,k}}$ is determined according to EN 1995-1-1:2004 + A1:2008, equation (8.9), with $M_{y,\text{Rk}}$ given in the Annex of the fastening screw.

Fastening screws for sandwich panels



S	SW8 Ø16	5,5		Mate	erial:					
				carbon st		ardanad a	nd coated			
e										
•							•		- EN 485	
				Com	ponent I:				EN 10346	
				Com	ponent II:				10025-1	
									EN 10346	
		76								
1		N		Drilli	ng capacit	<u>y:</u> Σt _i	≤ 6,00 mm	ı		
~39		,36				- 4				
Â	-									
	Ø4.6	ω		no p	erformance	e determine	ed			
1		^								
1	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$									
			-	-	-	-	-		-	—
	-	-							-	—
										—
Ī	-									—
V _{R,k} [kN]										
V _{R,i}										—
	-									—
										_
	-						-		-	
	-									
						1				
z										
N _{R,k} [kN]						1				
R						1				
						1				
						1				
						1				
2						1				_
[mm] n						1				_
n [1				_
										_
		10,0	5,8	5,8		5,8		5,8	5,8	_
	N _{R,k,ll} [kN]	1,39	2,86	4,32	5,79	7,25	8,71	8,71	8,71	—

No additional regulations.

Self drilling screw

Hilti S-CDH 53 C 5,5 x L with hexagon head and sealing washer \emptyset 16 mm



	SW	8 <u>≥</u> Ø19 Ø12,5	5,5		Mate	<u>rial:</u>							
				\frown	Faste	ener:	carbon st	eel, case	hardened	and coate	d		
	~		Ţ		Wasł	Washer: aluminium alloy EN			I AW-5754	$\begin{array}{c c c c c c c c c c c c c c c c c c c $			
					Com	ponent I:					6		
					Com	ponent II:	S280GD,	S320GD,	S350GD,		6		
			<u>~</u> 76		Drillir	ng capacit	<u>γ:</u> Σt _i	≤ 6,00 mr	n				
	_{>} 39 1,8	Ø5,3	36		Timb	er substru	ctures:						
	4	Ø4,6	0		no pe	erformance	e determin	mined m]					
	t _N	₁₁ , t _{N2} , d, D [mm]	1,50	2,00	2,50	3,00	t _{II} [mm] 3,50	4 00	4.50	5.00	_		
		0,40	0,79	0,79	0,79	0,79	0,79				_		
		0,50	0,97	0,97	0,97	0,97	0,97	· ·		· ·	_		
	-	0,55	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	—		
	V _{R,k} [kN]	0,60	1,40	1,40	1,40	1,40	1,40				—		
	/R,k	0,63	1,53	1,53	1,53	1,53	1,53				—		
	-	0,75	2,05	2,05	2,05	2,05	2,05				—		
		0,88	2,29	2,29	2,29	2,29	2,29				—		
		1,00	2,51	2,51	2,51	2,51	2,51				_		
		0,40	1,39	1,53	1,53	1,53	1,53				—		
		0,50 0,55	1,39 1,39	1,79 2,20	1,79 2,20	1,79 2,20	1,79 2,20						
	N _{R,k} [kN]	0,60	1,39	2,20	2,20	2,20	2,20				_		
	۲, k	0,63	1,39	2,86	2,86	2,86	2,86				_		
	Ž	0,75	1,39	2,86	3,85	3,85	3,85				—		
		0,88	1,39	2,86	4,15	4,15	4,15				—		
		1,00	1,39	2,86	4,32	4,42	4,42				—		
		40	4,0	2,0	2,0	2,0	2,0						
		50	5,0	2,8	2,8	2,8	2,8				—		
	Ē	60	6,0	3,5	3,5	3,5	3,5				—		
	[mm] n	70	7,0	4,1	4,1	4,1	4,1				—		
		80 90	8,0 9,0	4,7 5,3	4,7 5,3	4,7 5,3	4,7 5,3				_		
		90 ≥ 100	9,0 10,0	5,3 5,8	5,3 5,8	5,3 5,8	5,3 5,8						
	-	≥ 100 N _{R,k,II} [kN]	1,39	2,86	4,32	5,8	7,25						
'	•	•rc,K,II L •••• J	.,00	2,00	1,92	0,10	,,20	•,,,,	0,11	•,, •		1	

No additional regulations.

Self drilling screw

Hilti S-CDH 63 C 5,5 x L Hilti S-CDH 73 C 5,5 x L with hexagon head and sealing washer ≥ Ø19 mm



SN	Ø16 Ø12,5	5,5		Mate	rial:					
- [Faste	ener	carbon st	eel case l	hardened a	and coated	ł
m		•								
Ī	Ē .								- LN 405	
	Ø6,40	D		Com	ponent I:				- EN 1034	6
				Com	ponent II:				10025-1	
									EN 1024	2
						3390GD,	3420GD,	3450GD -	- EN 1034	5
1		<u>-</u> 76								
Ī				<u>Drillir</u>	ng capacit	<u>y:</u> Σt _i	≤ 6,00 mr	n		
<u>-</u> 39 1,8	Ø5,:	36								
-35 1,8				$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$						
		4		no pe	erformance	e determin	ed	Alloy EN AW-5754 - EN 485320GD, S350GD, 420GD, S450GD - EN 10346, S355, S420 - EN 10025-1320GD, S350GD, 420GD, S450GD - EN 103466,00 mm6,00 mm $4,00$ $4,50$ $5,00$ $ 0,79$ $0,79$ $0,79$ $0,79$ $0,79$ $0,79$ $0,97$ $0,97$ $1,19$ $1,19$ $1,40$ $1,40$ $1,53$ $1,53$ $2,05$ $2,05$ $2,29$ $2,29$ $2,29$ $2,29$ $2,51$ $2,51$ $2,03$ $2,03$ $2,03$ $2,03$ $2,03$ $2,03$ $2,43$ $2,43$ $2,43$ $2,43$ $2,68$ $2,68$ $2,68$ $2,68$ $3,64$ $3,64$ $3,64$ $3,64$ $3,64$ $3,64$ $3,5$ $3,5$ $3,5$ $3,5$ $3,5$ $3,5$ $3,5$ $5,8$ $5,8$ $5,8$		
	Ø4,6	×.								
						4 [
τ _N	₁₁ , t _{N2} , d, D [mm]	1,50	2,00	2 50	3.00		4 00	4 50	5.00	ı _
	0,40	0,79	0,79		-		-	-		
	0,50	0,97	0,97		-					_
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	1,19		_
V _{R,k} [kN]	0,60	1,40	1,40	1,40	1,40	1,40	1,40	1,40	1,40	—
/R,k	0,63	1,53	1,53					-		—
-	0,75	2,05	2,05							—
	0,88	2,29	2,29							—
	1,00	2,51	2,51				-			_
	0,40 0,50	1,39 1,39	1,40 1,63							
	0,50 0,55	1,39	2,03							
×N]	0,60	1,39	2,03							
N _{R,k} [kN]	0,63	1,39	2,68							
Ž	0,75	1,39	2,86							_
	0,88	1,39	2,86	4,04	4,04	4,04	4,04	4,04		-
	1,00	1,39	2,86					-		—
	40	4,0	2,0							—
	50	5,0	2,8							-
Ē	60 70	6,0 7.0	3,5							
[mm] n	70 80	7,0 8,0	4,1 4,7							
-	90	9,0	5,3							
	≥ 100	10,0	5,8							
1	N _{R,k,II} [kN]	1,39	2,86							
							-			

No additional regulations.

Self drilling screw

 $\begin{array}{c} \mbox{Hilti S-CD 53 C 5,5 x L} \\ \mbox{with hexagon head and sealing washer \emptyset16 mm} \end{array}$



sv	N8 <u>≥</u> Ø19	2								
	Ø12,5	- 5,5		Mate	<u>rial:</u>					
, -				Faste	ener:	carbon st	eel, case l	nardened a	and coated	ł
en la contra de la				Wasł	ner:	aluminiun	n alloy EN	AW-5754	- EN 485	
	Ø6,40	<u>o</u>		Com	ponent I:	S280GD,	S320GD,	S350GD,		
	\$0,40	-	\bigcirc			S390GD,	S420GD,	S450GD -	EN 10346	6
				Com	ponent II:				10025-1	
									EN 10244	2
		6				5590GD,	3420GD,	3450GD -	EN 10340	
1		<u>-</u> 76								
				Drillir	ng capacit	<u>y:</u> Σt _i	≤ 6,00 mn	n		
	Ø5,	36								
39 1.8		50		Time	or outofru	aturaa				
· ^ ←					$ \begin{array}{cccccccccccccccccccccccccccccccccccc$					
	Ø4,6	×,		no pe	erformanc	e determin	ed			
•										
t,	_{N1} , t _{N2} , d, D					t _{II} [mm]				
	[mm]	1,50	2,00	2,50	3,00		4,00	4,50	5,00	—
	0,40	0,79	0,79	0,79			-			—
	0,50	0,97	0,97	0,97			-	-		—
Ξ	0,55	1,19	1,19	1,19	-					—
V _{R,k} [kN]	0,60	1,40	1,40							—
V _{R,I}	0,63	1,53	1,53							
	0,75 0,88	2,05 2,29	2,05 2,29							_
	0,88 1,00	2,29	2,29				-			
	0,40	1,39	1,53				-		-	
	0,50	1,39	1,79							
	0,55	1,39	2,20	2,20						
N _{R,k} [kN]	0,60	1,39	2,61	2,61						_
R,k	0,63	1,39	2,86	2,86	2,86	2,86	2,86	2,86	2,86	_
	0,75	1,39	2,86	3,85	3,85	3,85	3,85	3,85	3,85	—
	0,88	1,39	2,86	4,15						—
	1,00	1,39	2,86	4,32						—
	40	4,0	2,0							-
	50	5,0 6.0	2,8							
[mm] u	60 70	6,0 7,0	3,5 4,1							
- <u>-</u>	80	7,0 8,0	4,1							
	90	9,0	5,3							
	≥ 100	10,0	5,8							
	N _{R,k,II} [kN]	1,39	2,86	4,32						—
		1,00	2,00	4,52	0,10	1,20	0,71	0,71	0,71	

No additional regulations.

Self drilling screw

Hilti S-CD 63 C 5,5 x L Hilti S-CD 73 C 5,5 x L with hexagon head and sealing washer ≥ Ø19 mm



	Ø10,5	5.5			ener: ner: ponent I:	stainless S280GD S390GD	Steel (1.4 , S320GD , S420GD	4301, 1.44 4301) - EN 9, S350GD 9, S450GD	N 10088),) - EN 103	346
		-76		Com	ponent II:	S280GD	, S320GD	, S420 - E 9, S350GD 9, S450GD),	
				Drillir	ng capacit	<u>y:</u> Σt	_i ≤ 6,00 m	m		
1,8	Ø5,3	8		Timb	er substru	ictures:				
ø	⁶ 4,6 ~			no pe	erformanc	e determir	ned			
t.	_{N1} , t _{N2} , d, D			•		t _i [mm]				
~	[mm]	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0
	0,40	0,65	0,65	0,65	0,65	0,65	0,65	_		
	0,50	1,17	1,17	1,17	1,17	1,17	1,17	_	_	_
_	0,55	1,36	1,36	1,36	1,36	1,36	1,36	_	_	—
[kN	0,60	1,54	1,54	1,54	1,54	1,54	1,54	—	—	—
V _{R,k} [kN]	0,63	1,65	1,65	1,65	1,65	1,65	1,65	_	_	—
>	0,75	2,03	2,03	2,03	2,03	2,03	2,03	_	_	—
	0,88	2,40	2,40	2,40	2,40	2,40	2,40	—	—	—
	1,00	2,68	2,68	2,68	2,68	2,68	2,68	—	—	—
	0,40	—	—	_	—	-	_	—	—	—
	0,50	1,80	1,92	1,92	1,92	1,92	1,92	-	—	—
7	0,55	1,80	2,19	2,19	2,19	2,19	2,19	—	-	—
N _{R,k} [kN]	0,60	1,80	2,48	2,48	2,48	2,48	2,48	-	-	—
L R,k	0,63	1,80	2,65	2,65	2,65	2,65	2,65	-	-	—
-	0,75	1,80	2,80	3,57	3,57	3,57	3,57	-	-	—
	0,88	1,80	2,80	3,57	3,57	3,57	3,57	-	-	—
	1,00	1,80	2,80	3,57	3,57	3,57	3,57	—	—	—
	40	18,0	8,0	7,0	6,0	5,0	3,0	-	-	—
	50	22,0	10,5	9,0	7,5	6,5	4,3	-	-	—
-	60	26,0	13,0	11,0	9,0	8,0	5,5	-	-	—
	70	29,5	16,5	14,0	12,0	11,5	6,8	-	-	—
u u	80	33,0	20,0	17,5	15,0	14,0	8,0	-	-	—
[mm] n	100	33,0	20,0	17,5	15,0	14,0	10,0	-	-	—
um] u	400	33,0	20,0	17,5	15,0	14,0	12,0	_	_	—
um] u	120	00.0		175	15,0	14,0	14,0	I —	I —	I —
	120 ≥ 140 N _{R,k,II} [kN]	33,0 1,94	20,0 2,84	17,5 3,83	4,89	7,18	7,18			

If component t_{II} is made of steel grade higher than S235 or S280GD the values N_{R,k,II} may be increased by 8,3%.

Self drilling screw

Hilti S-CDH 53 S 5,5 x L Hilti S-CDH 53 SS 5,5 x L with hexagon head and sealing washer Ø16 mm



, - ,	<u>NI</u>	<u>_</u>		Faste	ener:	stainless	Steel (1.4	1301, 1.44	01, 1.457	1) - EN 1
		Å		Wasł	ner:	stainless	Steel (1.4	1301) - EN	10088 N	
'					ponent I:	S280GD	, S320GD , S420GD	, S350GD),	46
		Q		Com	ponent II:	S280GD	275, S355 , S320GD , S420GD	, S350GD),	
		<u>-</u> 76		Drillir	ng capacit	<u>y:</u> Σt	i ≤ 6,00 m	m		
1,8	Ø5,3	8		Timb	er substru	<u>ictures:</u>				
Ø4	,6 4 9			no pe	erformanc	e determir	ned			
t _{N1} ,	t _{N2} , d, D					t _{ii} [mm]				
	[mm]	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0
	0,40	0,65	0,65	0,65	0,65	0,65	0,65	-		—
	0,50	1,17	1,17	1,17	1,17	1,17	1,17	—	-	-
Ξ	0,55	1,36	1,36	1,36	1,36	1,36	1,36	-	-	-
¥.	0,60	1,54	1,54	1,54	1,54	1,54	1,54	—	-	-
V _{R,k} [kN]	0,63	1,65	1,65	1,65	1,65	1,65	1,65	—	-	-
	0,75	2,03	2,03	2,03	2,03	2,03	2,03	—	-	-
	0,88	2,40	2,40	2,40	2,40	2,40	2,40	—	-	-
	1,00	2,68	2,68	2,68	2,68	2,68	2,68	_		
	0,40	1.80	-	-		-	-	_	-	-
	0,50 0,55	1,80 1,80	2,60 2,80	2,60 3,00	2,60 3,00	2,60 3,00	2,60 3,00			
ľ.	0,55 0,60	1,80	2,80	3,00	3,00	3,00	3,00			
N _{R,k} [kN]	0,63	1,80	2,80	3,25	3,25	3,25	3,25			
R R	0,83	1,80	2,80	3,40	4,20	4,20	4,20	_		
	0,75	1,80	2,80	3,80	4,50	4,50	4,50			
	1,00	1,80	2,80	3,80	4,50	4,50	4,50	_	_	_
	40	18,0	8,0	7,0	6,0	5,0	3,0	_	<u> </u>	- 1
	50	22,0	10,5	9,0	7,5	6,5	4,3	_	_	l —
	60	26,0	13,0	11,0	9,0	8,0	5,5	_	_	_
Ξ	70	29,5	16,5	14,0	12,0	11,5	6,8	_	_	l —
n [mm]	80	33,0	20,0	17,5	15,0	14,0	8,0	_	_	_
n	100	33,0	20,0	17,5	15,0	14,0	10,0	—	_	I —
	120	33,0	20,0	17,5	15,0	14,0	12,0	—	_	_
	≥ 140	33,0	20,0	17,5	15,0	14,0	14,0	—	_	—
	_{t,k,ll} [kN]	1,94	2,84	3,83	4,89	7,18	7,18	_	—	—
N	(,K,II L									

If component t_{II} is made of steel grade higher than S235 or S280GD the values N_{R,k,II} may be increased by 8,3%.

Hilti S-CDH 63 S 5,5 x L Hilti S-CDH 63 SS 5,5 x L Hilti S-CDH 73 S 5,5 x L Hilti S-CDH 73 SS 5,5 x L

with hexagon head and sealing washer ≥ Ø19 mm



e					Faste Wasł			s Steel (1. s Steel (1.			571) - EN 1
	Ø6,4	1,8	(Com	Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 1034					
			(Com	ponent II:	S280GD	275, S359), S320GI), S420GI	D, S350G	D,	
1			AI		Drillir	ng capacit	<u>γ:</u> Σ	t _i ≤ 6,00 n	nm		
> 39	1,8	Ø5,38			<u>Timb</u>	er substru	<u>ictures:</u>				
	Ø4,6	- [∞]	<u> </u>		no pe	erformanc	e determi	ned			
	t _{N1} ,	t _{N2} , d, D					t _{ii} [mm]				
		[mm]	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0
		0,40	0,65	0,65	0,65	0,65	0,65	0,65	—	-	-
		0,50	1,17	1,17	1,17	1,17	1,17	1,17	—	-	-
	Ī	0,55	1,36	1,36	1,36	1,36	1,36	1,36	—	-	-
	V _{R,k} [kN]	0,60	1,54	1,54	1,54	1,54	1,54	1,54	_	-	-
	<pre>K</pre>	0,63	1,65	1,65	1,65	1,65	1,65	1,65	_	-	-
		0,75 0,88	2,03	2,03	2,03	2,03	2,03 2,40	2,03	_	-	-
		0,88 1,00	2,40 2,68	2,40 2,68	2,40 2,68	2,40 2,68	2,40	2,40 2,68			
		0,40	2,00	2,00	2,00	2,00	2,00	2,00			
		0,50	1,80	1,92	1,92	1,92	1,92	1,92			
		0,55	1,80	2,19	2,19	2,19	2,19	2,19		_	
	N _{R,k} [kN]	0,60	1,80	2,48	2,48	2,48	2,48	2,48	_	_	
	3,k [0,63	1,80	2,65	2,65	2,65	2,65	2,65	_	_	
	Ž	0,75	1,80	2,80	3,57	3,57	3,57	3,57	_	<u> </u>	
		0,88	1,80	2,80	3,57	3,57	3,57	3,57	—	_	
		1,00	1,80	2,80	3,57	3,57	3,57	3,57	_	_	
		40	18,0	8,0	7,0	6,0	5,0	3,0	—	—	
		50	22,0	10,5	9,0	7,5	6,5	4,3	—	—	
		60	26,0	13,0	11,0	9,0	8,0	5,5	—	-	-
	[uuu] n	70	29,5	16,5	14,0	12,0	11,5	6,8	—	-	-
	<u> </u>	80	33,0	20,0	17,5	15,0	14,0	8,0	—	-	-
		100	33,0	20,0	17,5	15,0	14,0	10,0	—	-	-
		120	33,0	20,0	17,5	15,0	14,0	12,0	—	-	-
		≥ 140	33,0	20,0	17,5	15,0	14,0	14,0			
		ε, _{κ,ΙΙ} [kN]	1,94	2,84	3,83	4,89	7,18	7,18	I —	_	

If component t_{II} is made of steel grade higher than S235 or S280GD the values N_{R,k,II} may be increased by 8,3%.

Hilti S-CD 53 S 5,5 x L Hilti S-CD 53 SS 5,5 x L with hexagon head and sealing washer Ø16 mm



с С	, ~ _	Ø10,5	5,5	\frown	<u>Mate</u> Faste		stainless	Steel (1.	4301, 1.44	401, 1.45	71) - EN 1	00	
	1		- /		Wash	ner:	stainless Steel (1.4301) - EN 10088						
	Ø6,4	10 0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,	(Com	Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346							
			9		Com	ponent II:	S280GD	, S320GE	5, S420 - E), S350GE), S450GE	D,			
	Å ↓		<u>></u> 76		Drillir	ng capacit	<u>y:</u> Σt	i ≤ 6,00 m	ım				
~39	1,8	Ø5,38	}		<u>Timb</u>	<u>er substru</u>	<u>ictures:</u>						
	Ø4,6	φ.			no pe	erformanc	e determir	ned					
		•											
		t _{N2} , d, D	1.50	2 00	2.50	1 2 00	t _{ii} [mm]	5 00			1 > 40.0		
	L	<u>mm]</u> 0,40	1,50 0,65	2,00 0,65	2,50 0,65	3,00 0,65	4,00 0,65	5,00 0,65	6,00	8,00	≥ 10,0		
		0,40	1,17	1,17	1,17	1,17	1,17	1,17					
	_	0,55	1,36	1,36	1,36	1,36	1,36	1,36	_	_	_		
	κΝ]	0,60	1,54	1,54	1,54	1,54	1,54	1,54	_	_	_		
	V _{R,k} [kN]	0,63	1,65	1,65	1,65	1,65	1,65	1,65	_	_	_		
	>	0,75	2,03	2,03	2,03	2,03	2,03	2,03	_	—	_		
		0,88	2,40	2,40	2,40	2,40	2,40	2,40	—	_	-		
		1,00	2,68	2,68	2,68	2,68	2,68	2,68	—	—	—		
		0,40	—	—	—	—	—	—	—	—	—	1	
		0,50	1,80	2,60	2,60	2,60	2,60	2,60	—	-	-		
	Ξ	0,55	1,80	2,80	3,00	3,00	3,00	3,00	-	-	-		
	í kl	0,60	1,80	2,80	3,25	3,25	3,25	3,25	-	-	-		
	N _{R,k} [kN]	0,63	1,80	2,80	3,40	3,40	3,40	3,40	-	-	-		
		0,75	1,80	2,80	3,80	4,20	4,20	4,20	—	-			
		0,88	1,80 1,80	2,80 2,80	3,80 3,80	4,50 4,50	4,50 4,50	4,50 4,50	_				
		1,00 40	1,80	2,80 8,0	7,0	4,50 6,0	4,50 5,0	4,50 3,0				\mathbf{I}	
		40 50	22,0	10,5	9,0	8,0 7,5	5,0 6,5	3,0 4,3					
		60	26,0	13,0	11,0	9,0	8,0	-,5 5,5	_				
	Έ	70	29,5	16,5	14,0	12,0	11,5	6,8	_	l _	_		
	n [mm]	80	33,0	20,0	17,5	15,0	14,0	8,0	_	_	_		
	э	100	33,0	20,0	17,5	15,0	14,0	10,0	_	_	_		
		120	33,0	20,0	17,5	15,0	14,0	12,0	_	_	_		
		≥ 140	33,0	20,0	17,5	15,0	14,0	14,0	_	_	_		
			1,94	2,84	3,83	4,89	7,18	7,18	_	_		1	
	N _{R.}	_{.k,ll} [kN]	1,04	_,	-,	- ,		,	1				

If component t_{ll} is made of steel grade higher than S235 or S280GD the values $N_{R,k,ll}$ may be increased by 8,3%.

Self drilling screw	
Hilti S-CD 63 S 5,5 x L	
Hilti S-CD 63 SS 5,5 x L	
Hilti S-CD 73 S 5,5 x L	
Hilti S-CD 73 SS 5,5 x L	
with hexagon head and sealing washer $\ge \emptyset$ 19 mm	



	SW c	Ø16 Ø12,5	≥98			ener:	aluminiur S280GD, S235, S2	eel, case n alloy EN S320GD, 75, S355 - S320GD,	AW-5754 S350GD - EN 1002	- EN 485 - EN 1034 5-1	6	
			6		Drillir	ng capacit	<u>y:</u> Σt _i	≤ 15,00 m	ım			
		Ø4,7	36			er substru erformance	<u>ctures:</u> e determin	ed				
	t _N	₁ , t _{N2} , d, D [mm]	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0	I —	I —	ı _	
		0,40	0,80	0,80	0,80	0,80	0,80	0,80	—	—	—	
		0,50	0,97	0,97	0,97	0,97	0,97	0,97	—	—	-	
	Ξ	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—	
	V _{R,k} [kN]	0,60	1,40	1,40	1,40	1,40	1,40	1,40	—	—	-	
	V _{R,k}	0,63	1,53	1,53	1,53	1,53	1,53	1,53	—	—	—	
		0,75	2,05	2,05	2,05	2,05	2,05	2,05	_	_	-	
		0,88 1,00	2,29 2,51	2,29 2,51	2,29 2,51	2,29 2,51	2,29 2,51	2,29 2,51		_	_	
ŀ		0,40	1,40	1,40	1,40	1,40	1,40	1,40				
		0,40	1,40	1,40	1,40	1,40	1,40	1,40				
	_	0,55	2,03	2,03	2,03	2,03	2,03	2,03	_	_	_	
	N _{R,k} [kN]	0,60	2,43	2,43	2,43	2,43	2,43	2,43	—	—	_	
	R,k	0,63	2,68	2,68	2,68	2,68	2,68	2,68	—	—	_	
	Z	0,75	3,64	3,64	3,64	3,64	3,64	3,64	—	—	_	
		0,88	4,04	4,04	4,04	4,04	4,04	4,04	—	—	—	
Ļ		1,00	4,41	4,41	4,41	4,41	4,41	4,41	—	—	—	
		40	2,0	2,0	2,0	2,0	2,0	2,0	—	—	-	
	_	50 60	3,0	3,0	3,0	3,0	3,0	3,0	—	_	-	
	[mm] n	60 70	4,0 4,7	4,0 4,7	4,0 4,7	4,0 4,7	4,0 4,7	4,0 4,7			_	
	u n	70 80	4,7 5,3	4,7 5,3	4,7 5,3	4,7 5,3	4,7 5,3	4,7 5,3				
	-	90	6,0	6,0	6,0	6,0	6,0	6,0	_	_		
		≥ 100	6,7	6,7	6,7	6,7	6,7	6,7	_	_	_	
ŀ	N	– 100 N _{R,k,II} [kN]	7,94	7,94	7,94	7,94	7,94	7,94		—		
L				1								·

No additional regulations.

Self drilling screw

Hilti S-CDH 55 C 5,5 x L with hexagon head and sealing washer \emptyset 16 mm

Annex 12

electronic copy of the eta by dibt: eta-13/0179



n	≥Ø19 Ø12,5	5,5			ener:	aluminiun S280GD, S235, S2	eel, case h n alloy EN S320GD, 75, S355 - S320GD,	AW-5754 S350GD - EN 10025	- EN 485 EN 10346 5-1	6
Ī		~ 98		Drillir	ng capacity	/: Σti	≤ 15,00 m	m		
	Ø5	,36					,			
51	1,81	·		Timb	er substru	ctures:				
	.			no pe	erformance	e determin	ed			
,	Ø4,7	<u>-</u> 17								
	t _{N1} , t _{N2} , d, D					t _{II} [mm]				
	[mm]	4,00	5,00	6,00	7,00	8,00	≥ 10,0	_	_	
	0,40 0,50	0,80 0,97	0,80 0,97	0,80 0,97	0,80 0,97	0,80 0,97	0,80 0,97			
	0 55	1,19	1,19	1,19	1,19	1,19	1,19			
V _{R.k} [kN]	0,60	1,40	1,40	1,40	1,40	1,40	1,40	_	_	_
L A	0,63	1,53	1,53	1,53	1,53	1,53	1,53	—	—	_
>	0,75	2,05	2,05	2,05	2,05	2,05	2,05	—	—	—
	0,88	2,29	2,29	2,29	2,29	2,29	2,29	—	—	—
	1,00	2,51	2,51	2,51	2,51	2,51	2,51		—	—
	0,40	1,53	1,53	1,53	1,53	1,53	1,53	—	—	—
	0,50	1,79	1,79	1,79	1,79	1,79	1,79	—	—	—
Ī	, 0,55	2,20	2,20	2,20	2,20	2,20	2,20	—	—	—
N _{R.k} [kN]	0,60	2,61	2,61	2,61	2,61	2,61	2,61	_	_	_
۲ ا	0,63 0,75	2,86 3,85	2,86 3,85	2,86 3,85	2,86 3,85	2,86 3,85	2,86 3,85			
	0,88	4,15	4,15	3,05 4,15	4,15	4,15	4,15			
	1,00	4,42	4,42	4,42	4,42	4,42	4,42	_	_	_
	40	2,0	2,0	2,0	2,0	2,0	2,0	—		—
	50	3,0	3,0	3,0	3,0	3,0	3,0	—		
2		4,0	4,0	4,0	4,0	4,0	4,0	—	—	—
[mm]	70	4,7	4,7	4,7	4,7	4,7	4,7	—	—	—
>		5,3	5,3	5,3	5,3	5,3	5,3	—	—	—
	90	6,0	6,0	6,0	6,0	6,0	6,0	—	—	—
	≥ 100	6,7	6,7	6,7	6,7	6,7	6,7	—	—	—
	N _{R,k,ll} [kN]	7,94	7,94	7,94	7,94	7,94	7,94	_	—	

No additional regulations.

Self drilling screw

Hilti S-CDH 65 C 5,5 x L Hilti S-CDH 75 C 5,5 x L with hexagon head and sealing washer ≥ Ø19 mm



n	SW8 Ø16 Ø12,5	90			ener:	aluminiur S280GD, S235, S2	eel, case n alloy EN S320GD, 75, S355 S320GD,	AW-5754 S350GD - EN 1002	- EN 485 - EN 1034 5-1	6	
		A1		Drillir	ng capacit	<u>y:</u> Σt _i	≤ 15,00 m	ım			
_ 21	Ø4,7	_			er substru erformance	e determin	ed				
	t _{N1} , t _{N2} , d, D [mm]	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0		I —	I —	
	0,40	0,80	0,80	0,80	0,80	0,80	0,80	_	_	_	1
	0,50	0,97	0,97	0,97	0,97	0,97	0,97	—	_	_	
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—	
	0,55 0,60 0,63 0,63	1,40	1,40	1,40	1,40	1,40	1,40	—	—	—	
	,¥ 0,63	1,53	1,53	1,53	1,53	1,53	1,53	—	—	—	
	0,75	2,05	2,05	2,05	2,05	2,05	2,05	—	—	—	
	0,88	2,29	2,29	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,51	2,51	2,51	2,51	2,51	2,51	_	—	—	4
	0,40	1,40 1,63	1,40 1,63	1,40 1,63	1,40 1,63	1,40 1,63	1,40 1,63	_	_		
	0,50 0,55	1,63 2,03	2,03	2,03	1,63 2,03	2,03	2,03				
	N 0,60	2,03	2,03	2,03	2,03	2,03	2,03				
	0,60 0,60 0,63	2,68	2,68	2,68	2,68	2,68	2,68	_	_	_	
	ž 0,75	3,64	3,64	3,64	3,64	3,64	3,64	_	_	_	
	0,88	4,04	4,04	4,04	4,04	4,04	4,04	—	—	—	
	1,00	4,41	4,41	4,41	4,41	4,41	4,41	—	—	—	
	40	2,0	2,0	2,0	2,0	2,0	2,0	_	—	—	1
	50	3,0	3,0	3,0	3,0	3,0	3,0	—	—	—	
	E 60	4,0	4,0	4,0	4,0	4,0	4,0	—	-	-	
	[60 70 n 80	4,7	4,7	4,7	4,7	4,7	4,7	—	-	-	
		5,3	5,3	5,3	5,3	5,3	5,3	—	-	-	
	90 > 100	6,0	6,0	6,0	6,0	6,0	6,0	—	—	—	1
\vdash	≥ 100	6,7 7,94	6,7 7,94	6,7 7,94	6,7 7,94	6,7 7,94	6,7 7,94				-
1	N _{R,k,ll} [kN]	7,94	7,94	7,94	7,94	7,94	7,94				1

No additional regulations.

Self drilling screw

 $\begin{array}{c} \mbox{Hilti S-CD 55 C 5,5 x L} \\ \mbox{with hexagon head and sealing washer \emptyset16 mm} \end{array}$

Annex 14

electronic copy of the eta by dibt: eta-13/0179



	SW8	≥Ø19 Ø12,5	90 5,5			ener:	aluminiur S280GD, S235, S2	teel, case m alloy EN S320GD, 75, S355 S320GD,	AW-5754 S350GD - EN 1002	- EN 485 - EN 1034 5-1	6	
	•		~		Drillir	ng capacit	<u>y:</u> Σti	≤ 15,00 m	ım			
	>51 (),8 (),8					<u>er substru</u> erformance	e determin	ed				
		, t _{N2} , d, D [mm]	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0	I —	I — I	l <u> </u>	
		0,40	0,80	0,80	0,80	0,80	0,80	0,80	_	_		1
		0,50	0,97	0,97	0,97	0,97	0,97	0,97	—	—	—	
	-	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—	
	V _{R,k} [kN]	0,60	1,40	1,40	1,40	1,40	1,40	1,40	—	—	—	
	/ _{R,k}	0,63	1,53	1,53	1,53	1,53	1,53	1,53	—	—	—	
		0,75	2,05	2,05	2,05	2,05	2,05	2,05	—	—	—	
		0,88 1,00	2,29	2,29	2,29	2,29 2,51	2,29 2,51	2,29 2,51	—	_	_	
		0,40	2,51 1,53	2,51 1,53	2,51 1,53	1,53	1,53	1,53				
		0,40	1,79	1,79	1,79	1,79	1,79	1,79	_	_		
	_	0,55	2,20	2,20	2,20	2,20	2,20	2,20	_	_	_	
	N _{R,k} [kN]	0,60	2,61	2,61	2,61	2,61	2,61	2,61	—	—	—	
	NR, K	0,63	2,86	2,86	2,86	2,86	2,86	2,86	—	—	—	
	~	0,75	3,85	3,85	3,85	3,85	3,85	3,85	—	—	—	
		0,88	4,15	4,15	4,15	4,15	4,15	4,15	—	—	—	
╞		1,00	4,42	4,42	4,42	4,42	4,42	4,42 2,0				
		40 50	2,0 3,0	2,0 3,0	2,0 3,0	2,0 3,0	2,0 3,0	2,0 3,0				
	-	60	4,0	4,0	3,0 4,0	4,0	4,0	3,0 4,0				
	n[mm]	70	4,7	4,7	4,7	4,7	4,7	4,7	_	_		
] n	80	5,3	5,3	5,3	5,3	5,3	5,3	—	—	—	
		90	6,0	6,0	6,0	6,0	6,0	6,0	—	—	—	
		≥ 100	6,7	6,7	6,7	6,7	6,7	6,7	—	—	—	
	N _F	_{R,k,II} [kN]	7,94	7,94	7,94	7,94	7,94	7,94	—	—	—]

No additional regulations.

Self drilling screw

Hilti S-CD 65 C 5,5 x L Hilti S-CD 75 C 5,5 x L with hexagon head and sealing washer ≥ Ø19 mm



m	Ø16 SW8 Ø10,5	90		· · ·	ener:	stainless S280GD S235 - E	Steel (1.4 Steel (1.4 , S320GD N 10025- , S320GD	1301) - EN , S350GD 1	l 10088 - EN 103	1) - EN 10 46)088
~ ę2	90, 5,38 , Ø4,3	15		Timb	ng capacit er substru erformance	<u>ctures:</u> e determir	a ≤ 12,00 r ned	nm			
	t _{N1} , t _{N2} , d, D [mm]	3,00	4,00	5,00	6,00	t _{ii} [mm] 8,00	9,00	10,0	11,0	≥ 12,0	
	0,40	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99		1
	0,50	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	—	
5	o,55	1,62	1,62	1,62	1,62	1,62	1,62	1,62	1,62	—	
1	[N3] 0,60 N3] 0,60 N3] 20,63 N3] 20,75	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	—	
	אַיָּ 0,63	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	—	
	0,75	2,37	2,37	2,37	2,37	2,37	2,37	2,37	2,37	—	
	0,88	2,94	2,94	2,94	2,94	2,94	2,94	2,94	2,94	—	
	1,00 0,40	3,52	3,52	3,52	3,52	3,52	3,52	3,52	3,52		-
	0,50	1,96	1,96	1,96	1,96	1,96	1,96	1,96	1,96		
	0.55	2,25	2,25	2,25	2,25	2,25	2,25	2,25	2,25	_	
	Ny 0,60 ¥ 0,63	2,57	2,57	2,57	2,57	2,57	2,57	2,57	2,57	_	
	<u>.</u> 	2,76	2,76	2,76	2,76	2,76	2,76	2,76	2,76	—	
	Z 0,75	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49	—	
	0,88	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49	—	
	1,00	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49	—	1
	40	6,0	5,5	5,0	4,0	4,0	4,0	4,0	4,0	—	
	50	8,0	7,5	7,0	6,0	6,0	6,0	6,0	6,0	_	
- 7	60 E 70	10,0	9,5	9,0 11.0	8,0	8,0	8,0	8,0	8,0	—	
	₩ 70 ₩ 80	12,5 15,0	11,5 14,0	11,0 13,0	9,5 11,0	9,5 11,0	9,5 11,0	9,5 11,0	9,5 11,0	_	
7	<u> </u>	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
	120	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
	≥ 140	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0	_	
	N _{R,k,ll} [kN]	4,65	6,40	7,74	8,36	8,36	8,36	8,36	8,36		1
	N _{R,k,ii} [KN]	4,00	0,40	1,14	0,30	0,30	0,30	0,30	0,30	_	1

If component t_{N1} resp. t_{N2} is made of S320GD or S350GD the grey highlighted values may be increased by 8,3%. If component t_{II} is made of S275, S355, S320GD or S350GD the values $N_{R,k,II}$ may be increased by 8,3%.

Self drilling screw
Hilti S-CDH 55 S 5,5 x L Hilti S-CDH 55 SS 5,5 x L
with hexagon head and sealing washer Ø16 mm

electronic copy of the eta by dibt: eta-13/0179



e						<u>rial:</u> ener: her: ponent I: ponent II:	stainless S280GD S235 - E	Steel (1.4 , S320GD N 10025-	4301) - EN , S350GD	N 10088) - EN 103	1) - EN 10 46	0088
, 65		5,38 Ø4,38	15		Timb	ng capacit er substru erformance		i ≤ 12,00 ו ned	nm			
	t _{N1} , t _{N2} ,		2.00		5.00		t _{ii} [mm]			44.0		
	[mn	n] 0,40	3,00 0,99	4,00 0,99	5,00 0,99	6,00 0,99	8,00 0,99	9,00 0,99	10,0 0,99	11,0 0,99	≥ 12,0	
		0,40 0,50	1,46	1,46	0,99 1,46	1,46	1,46	1,46	1,46	1,46		
		0,55	1,62	1,62	1,62	1,62	1,62	1,62	1,62	1,62	_	
		0,60	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	_	
	Ţ, Ţ	0,63	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	_	
	>	0,75	2,37	2,37	2,37	2,37	2,37	2,37	2,37	2,37	 	
		0,88	2,94	2,94	2,94	2,94	2,94	2,94	2,94	2,94	_	
		1,00	3,52	3,52	3,52	3,52	3,52	3,52	3,52	3,52	_	
		0,40	_	—	_	—	—	_	—	_	—	1
		0,50	2,10	2,10	2,10	2,10	2,10	2,10	2,10	2,10		
	=	0,55	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50	—	
	N _{R,k} [kN]	0,60	2,75	2,75	2,75	2,75	2,75	2,75	2,75	2,75	—	
	L R,k	0,63	2,90	2,90	2,90	2,90	2,90	2,90	2,90	2,90	—	
		0,75	3,70	3,70	3,70	3,70	3,70	3,70	3,70	3,70	—	
		0,88	4,50	4,60	4,60	4,60	4,60	4,60	4,60	4,60	-	
		1,00	4,50	5,20	5,20	5,20	5,20	5,20	5,20	5,20	—	
		40	6,0	5,5	5,0	4,0	4,0	4,0	4,0	4,0	—	
		50	8,0	7,5	7,0	6,0	6,0	6,0	6,0	6,0	-	
	2	60 70	10,0	9,5	9,0	8,0	8,0	8,0	8,0	8,0	—	
	[mm] n	70	12,5	11,5	11,0	9,5	9,5	9,5	9,5	9,5	—	
] n	80	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
		100	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
		120	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
		2 140	15,0	14,0	13,0 7,74	11,0	11,0	11,0	11,0 8 36	11,0 8 36		
L	N _{R,k,ll} [KN]	4,65	6,40	1,14	8,36	8,36	8,36	8,36	8,36	—	J

If component t_{N1} resp. t_{N2} is made of S320GD or S350GD the grey highlighted values may be increased by 8,3%. If both components t_{N1} and t_{II} are made of S320GD or S350GD the values $N_{R,k}$ may be increased by 8,3%. If component t_{II} is made of S275, S355, S320GD or S350GD the values $N_{R,k,II}$ may be increased by 8,3%.

Self drilling screw	
Hilti S-CDH 65 S 5,5 x L	
Hilti S-CDH 65 SS 5,5 x L	
Hilti S-CDH 75 S 5,5 x L	
Hilti S-CDH 75 SS 5,5 x L	
with hexagon head and sealing washer $\geq \emptyset$ 19 mm	



sv 	Ø16 V8 Ø10	2,545,5			ener:	stainless S280GD S235 - E	Steel (1.4 , S320GD, N 10025-1	301, 1.44(301) - EN , S350GD - EN 1034	10088 - EN 1034		088		
65	80 ^{5,38}	۲۵ 20 10		Timb	$\label{eq:stable} \begin{array}{llllllllllllllllllllllllllllllllllll$								
t _N	1, t _{N2} , d, D	3,00	4,00	5,00	6,00	t _{ii} [mm] 8,00	9,00	10,0	11,0	≥ 12,0]		
	[mm] 0,40	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99				
	0,50	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	_			
	0,55	1,62	1,62	1,62	1,62	1,62	1,62	1,62	1,62	_			
V _{R,k} [kN]	0,60	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	—			
R,k	0,63	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	_			
>	0,75	2,37	2,37	2,37	2,37	2,37	2,37	2,37	2,37	—			
	0,88	2,94	2,94	2,94	2,94	2,94	2,94	2,94	2,94	—			
	1,00	3,52	3,52	3,52	3,52	3,52	3,52	3,52	3,52	_			
	0,40	_	—	_	—	—	—	—	—	_	1		
	0,50	1,96	1,96	1,96	1,96	1,96	1,96	1,96	1,96	—			
Ξ	0,55	2,25	2,25	2,25	2,25	2,25	2,25	2,25	2,25	-			
N _{R,k} [kN]	0,60	2,57	2,57	2,57	2,57	2,57	2,57	2,57	2,57	-			
N _{R,k}	0,63	2,76	2,76	2,76	2,76	2,76	2,76	2,76	2,76	-			
	0,75	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49	-			
	0,88	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49	-			
	1,00 40	3,49	3,49	3,49	3,49	3,49	3,49	3,49	3,49				
	40 50	6,0 8,0	5,5 7,5	5,0 7,0	4,0 6,0	4,0 6,0	4,0 6,0	4,0 6,0	4,0 6,0				
	50 60	8,0 10,0	9,5	7,0 9,0	8,0 8,0	8,0	8,0 8,0	8,0 8,0	8,0 8,0				
Ē	70	12,5	11,5	9,0 11,0	9,5	9,5	9,5	9,5	9,5				
[mm] n	80	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0	_			
п	100	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0	_			
	120	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0	_			
	≥ 140	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0	_			
1	N _{R,k,II} [kN]	4,65	6,40	7,74	8,36	8,36	8,36	8,36	8,36	_	1		

If component t_{N1} resp. t_{N2} is made of S320GD or S350GD the grey highlighted values may be increased by 8,3%. If component t_{II} is made of S275, S355, S320GD or S350GD the values $N_{R,k,II}$ may be increased by 8,3%.

Self drilling screw	
Hilti S-CD 55 S 5,5 x L	
Hilti S-CD 55 SS 5,5 x L	
with hexagon head and sealing washer Ø16 mm	



SW m	≥ Ø19 Ø10	2,54 5,5 90 2,54 5,5			ener:	stainless S280GD, S235 - El	Steel (1.4 S320GD, N 10025-1	301, 1.44(301) - EN , S350GD - EN 1034	10088 - EN 1034		088
≥ 65	8 5,38 Ø Ø Ø Ø Ø	1 1 1 1 2		Timb	ng capacit er substru erformance		≤ 12,00 n ed	nm			
•		55									
t _N	₁ , t _{N2} , d, D [mm]	3,00	4,00	5,00	6,00	t _{ii} [mm] 8,00	9,00	10,0	11,0	≥ 12,0	
	0,40	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99		1
	0,50	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	—	
-	0,55	1,62	1,62	1,62	1,62	1,62	1,62	1,62	1,62		
V _{R,k} [kN]	0,60	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	—	
R,k	0,63	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	—	
>	0,75	2,37	2,37	2,37	2,37	2,37	2,37	2,37	2,37	—	
	0,88	2,94	2,94	2,94	2,94	2,94	2,94	2,94	2,94	—	
	1,00	3,52	3,52	3,52	3,52	3,52	3,52	3,52	3,52	—	
	0,40	—	—	—	_	—	_	—	—	—	1
	0,50	2,10	2,10	2,10	2,10	2,10	2,10	2,10	2,10	—	
7	0,55	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50	—	
N _{R,k} [kN]	0,60	2,75	2,75	2,75	2,75	2,75	2,75	2,75	2,75	—	
N _{R,k}	0,63	2,90	2,90	2,90	2,90	2,90	2,90	2,90	2,90	—	
-	0,75	3,70	3,70	3,70	3,70	3,70	3,70	3,70	3,70	—	
	0,88	4,50	4,60	4,60	4,60	4,60	4,60	4,60	4,60	_	
	1,00	4,50	5,20	5,20	5,20	5,20	5,20	5,20	5,20	—	
	40	6,0	5,5	5,0	4,0	4,0	4,0	4,0	4,0	_	
	50 60	8,0	7,5	7,0	6,0	6,0	6,0	6,0	6,0	_	
긑	60 70	10,0	9,5	9,0 11.0	8,0 9.5	8,0 9.5	8,0 9.5	8,0	8,0	_	
[mm] n	70 80	12,5 15,0	11,5	11,0 13,0	9,5 11,0	9,5 11,0	9,5 11,0	9,5 11,0	9,5 11,0		
n	80 100	15,0	14,0 14,0	13,0	11,0 11,0	11,0	11,0 11,0	11,0	11,0		
	120	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
	120 ≥ 140	15,0	14,0	13,0	11,0	11,0	11,0	11,0	11,0		
N	≥ 140 I _{R,k,II} [kN]	4,65	6,40	7,74	8,36	8,36	8,36	8,36	8,36		
N		4,05	0,40	7,74	0,30	0,30	0,30	0,30	0,30] [

If component t_{N1} resp. t_{N2} is made of S320GD or S350GD the grey highlighted values may be increased by 8,3%. If both components t_{N1} and t_{II} are made of S320GD or S350GD the values $N_{R,k}$ may be increased by 8,3%. If component t_{II} is made of S275, S355, S320GD or S350GD the values $N_{R,k,II}$ may be increased by 8,3%.

Self drilling screw	
Hilti S-CD 65 S 5,5 x L Hilti S-CD 65 SS 5,5 x L Hilti S-CD 75 S 5,5 x L Hilti S-CD 75 SS 5,5 x L with hexagon head and sealing washer ≥ Ø19 mm	Annex 19



	swi e	Ø 16 Ø 10,5	88 6,0			ener:	stainless S280GD, S235, S2	Steel (1.4 Steel (1.4 S320GD, 75, S355 S320GD,	301) - EN S350GD - - EN 1002	10088 - EN 1034 5-1	
		Ø5,	4		Drillin	ng capacity	<u>y:</u> Σt _i	≤ 15,00 m	ım		
	<u>>17</u>	8°.1.	,0			<u>er substru</u> erformance	<u>ctures:</u> e determin	ed			
	t _N	₁ , t _{N2} , d, D [mm]	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0	_	—	I _
		0,40	0,82	0,82	0,82	0,82	0,82	0,82	—	_	
		0,50	0,93	0,93	0,93	0,93	0,93	0,93	—	—	_
	_	0,55	1,12	1,12	1,12	1,12	1,12	1,12	—	—	_
	V _{R,k} [kN]	0,60	1,31	1,31	1,31	1,31	1,31	1,31	—	—	
	R,k	0,63	1,42	1,42	1,42	1,42	1,42	1,42	—	—	—
	>	0,75	1,88	1,88	1,88	1,88	1,88	1,88	—	—	
		0,88	2,33	2,33	2,33	2,33	2,33	2,33	—	—	-
		1,00	2,74	2,74	2,74	2,74	2,74	2,74	—	—	—
		0,40	1,46	1,46	1,46	1,46	1,46	1,46	—	—	
		0,50	1,89	1,89	1,89	1,89	1,89	1,89	—	—	
	ī	0,55	2,21	2,21	2,21	2,21	2,21	2,21	—	—	
	N _{R,k} [kN]	0,60 0,63	2,53 2,73	2,53 2,73	2,53 2,73	2,53 2,73	2,53 2,73	2,53 2,73	_	_	
	R	0,83	3,50	3,50	3,50	3,50	3,50	3,50			
		0,88	3,68	3,68	3,68	3,68	3,68	3,68	_	_	
		1,00	3,84	3,84	3,84	3,84	3,84	3,84	_	_	
		40	3,0	3,0	3,0	3,0	3,0	3,0	—	—	
		50	4,5	4,5	4,5	4,5	4,5	4,5	—	—	_
	Ē	60	6,0	6,0	6,0	6,0	6,0	6,0	—	—	—
	n [mm]	70	7,4	7,4	7,4	7,4	7,4	7,4	—	—	—
	n	80	8,8	8,8	8,8	8,8	8,8	8,8	—	—	—
		90	10,1	10,1	10,1	10,1	10,1	10,1	—	—	—
		≥ 100	11,5	11,5	11,5	11,5	11,5	11,5	—	—	—
ΙL	N	I _{R,k,II} [kN]	3,92	4,92	5,91	6,22	6,52	6,52	—	—	—

No additional regulations.

Self drilling screw

Hilti S-CDH 55 GS 5,5 x L Hilti S-CDH 55 GSS 5,5 x L with hexagon head and sealing washer Ø16 mm



	SW8	Ø19 Ø10,5	88			ener: ner: ponent I:	stainless S280GD S235, S2	Steel (1.4 Steel (1.4 , S320GD, 275, S355 , S320GD,	301) - EN S350GD - EN 1002	10088 - EN 1034 5-1	6	088	
	•	Ø,	4		Drillir	ng capacit	<u>γ:</u> Σt	i ≤ 15,00 m	nm				
	2(Timb	er substru	ictures.						
							e determin	ed					
	1	Ø5,	0			normanic							
	1 11	-0-											
[, t _{N2} , d, D	4.00	5,00	6,00								
		[mm] 0,40	4,00 0,82	0,82	0,82	7,00 0,82	8,00 0,82	≥ 10,0 0,82					
		0,50	0,93	1,12	1,30	1,30	1,30	1,30	_	_	_		
	-	0,55	1,12	1,28	1,44	1,44	1,44	1,44	—	—	—		
	V _{R,k} [kN]	0,60	1,31	1,45	1,58	1,58	1,58	1,58	—	—	—		
	/ _{R,k}	0,63	1,42	1,54	1,66	1,66	1,66	1,66	—	—	—		
	_	0,75	1,88	1,94	2,00	2,00	2,00	2,00	—	—	—		
		0,88	2,33	2,57	2,81	2,81	2,81	2,81	—	-	—		
		1,00	2,74	3,15	3,56	3,56	3,56	3,56	_	_	_		
		0,40 0,50	1,46 1,89	1,46 1,89	1,46 1,89	1,46 1,89	1,46 1,89	1,46 1,89	_				
		0,55	2,21	2,21	2,21	2,21	2,21	2,21	_	_	_		
	N _{R,k} [kN]	0,60	2,53	2,53	2,53	2,53	2,53	2,53	_	_	_		
	R,k [0,63	2,73	2,73	2,73	2,73	2,73	2,73	_	—	—		
	Z	0,75	3,50	3,50	3,50	3,50	3,50	3,50	—	—	—		
		0,88	3,68	3,68	3,68	3,68	3,68	3,68	—	—	—		
		1,00	3,84	3,84	3,84	3,84	3,84	3,84	—	—	—		
		40	3,0	3,0	3,0	3,0	3,0	3,0	—	—	—		
	_	50 60	4,5	4,5	4,5 6.0	4,5	4,5	4,5		-	—		
	n[mm]	60 70	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4					
	u] n	80	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8	8,8	7,4 8,8					
		90	10,1	10,1	10,1	10,1	10,1	10,1		_			
		≥ 100	11,5	11,5	11,5	11,5	11,5	11,5	_	_	_		
	N	 _{R,k,II} [kN]	3,92	4,92	5,91	6,22	6,52	6,52	—	—	—	1	
"	-					,		,				'	

No additional regulations.

Self drilling screw

Hilti S-CDH 65 GS 5,5 x L Hilti S-CDH 65 GSS 5,5 x L with hexagon head and sealing washer Ø19 mm



SW e	/8 Ø22 Ø10,5	88 6,0			ener:	stainless S280GD, S235, S2	Steel (1.4) Steel (1.4) S320GD, 75, S355 - S320GD,	301) - EN S350GD - EN 1002	10088 - EN 1034 5-1	
≥17	Ø5,	4		Timb	ng capacit er substru erformance		≤ 15,00 m ed	Im		
t	₁ , t _{N2} , d, D	4.00				t _{ii} [mm]				
	[mm] 0,40	4,00 0,82	5,00 0,82	6,00 0,82	7,00 0,82	8,00 0,82	≥ 10,0 0,82	_		
	0,40	0,93	1,12	1,30	1,30	1,30	1,30			
	0,55	1,12	1,28	1,44	1,44	1,44	1,44	_	_	_
V _{R,k} [kN]	0,60	1,31	1,45	1,58	1,58	1,58	1,58	_	_	_
3,k [0,63	1,42	1,54	1,66	1,66	1,66	1,66	_	_	_
2	0,75	1,88	1,94	2,00	2,00	2,00	2,00	_	_	_
	0,88	2,33	2,57	2,81	2,81	2,81	2,81	_	_	_
	1,00	2,74	3,15	3,56	3,56	3,56	3,56	—	—	_
	0,40	1,65	1,65	1,65	1,65	1,65	1,65		—	—
	0,50	1,77	1,77	1,77	1,77	1,77	1,77	—	-	-
	0,55	2,26	2,26	2,26	2,26	2,26	2,26	—	-	-
N _{R,k} [kN]	0,60	2,74	2,74	2,74	2,74	2,74	2,74	—	—	-
<pre>k</pre>	0,63	3,03	3,03	3,03	3,03	3,03	3,03	—	-	-
~	0,75	3,92	4,20	4,20	4,20	4,20	4,20	—	-	-
	0,88	3,92	4,32	4,32	4,32	4,32	4,32	—	_	-
	1,00	3,92	4,44	4,44	4,44	4,44	4,44	—	—	—
	40	3,0	3,0	3,0	3,0	3,0	3,0	—	_	
	50 60	4,5 6.0	4,5	4,5 6.0	4,5	4,5	4,5	—	_	
[mm] n	60 70	6,0 74	6,0 7 4	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7 4			
특	70 80	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8			
	80 90	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1			
	90 ≥ 100	11,5	11,5	11,5	11,5	11,5	11,5			
	≥ 100 N _{R,k,II} [kN]	3,92	4,92	5,91	6,22	6,52	6,52			
		0,02	1,02	0,01	<i><i>v</i>,<i>LL</i></i>	0,02	0,02			

No additional regulations.

Self drilling screw

Hilti S-CDH 75 GS 5,5 x L Hilti S-CDH 75 GSS 5,5 x L with hexagon head and sealing washer Ø22 mm



	SW8 Ø16 Ø10,5	0'9 4			ener:	stainless S280GD S235, S2	Steel (1.4 Steel (1.4 , S320GD, 275, S355 , S320GD,	301) - EN , S350GD - EN 1002	10088 - EN 1034 25-1	46	088
≥ 50		_		Timb	ng capacit er substru erformance		i ≤ 15,00 n ned	nm			
	t _{N1} , t _{N2} , d, D					t _{ii} [mm]					1
	[mm]	4,00	5,00	6,00	7,00	8,00	≥ 10,0	—	—	—	
	0,40	0,82	0,82	0,82	0,82	0,82	0,82	_	—		1
	0,50	0,93	0,93	0,93	0,93	0,93	0,93	—	—	—	
	5 0,55	1,12	1,12	1,12	1,12	1,12	1,12	—	—	—	
	(N) ×2 Ny 0,60 ×2 0,63 0,75	1,31	1,31	1,31	1,31	1,31	1,31	—	—	—	
	_ ∡ 0,63	1,42	1,42	1,42	1,42	1,42	1,42	—	—	—	
	> 0,75	1,88	1,88	1,88	1,88	1,88	1,88	—	—	—	
	0,88	2,33	2,33	2,33	2,33	2,33	2,33	—	—	—	
	1,00	2,74	2,74	2,74	2,74	2,74	2,74	—	—	—	
	0,40	1,46	1,46	1,46	1,46	1,46	1,46		_		1
	0,50	1,89	1,89	1,89	1,89	1,89	1,89	—	—	—	
	0,55	2,21	2,21	2,21	2,21	2,21	2,21	—	—	—	
	NY 0,60	2,53	2,53	2,53	2,53	2,53	2,53	—	—	—	
	[Nx] [×] [×] [×] [×] [×] [×] 0,63	2,73	2,73	2,73	2,73	2,73	2,73	—	—	—	
	Z 0,75	3,50	3,50	3,50	3,50	3,50	3,50	—	—	—	
	0,88	3,68	3,68	3,68	3,68	3,68	3,68	—	—	—	
	1,00	3,84	3,84	3,84	3,84	3,84	3,84	—			
	40	3,0	3,0	3,0	3,0	3,0	3,0	—	_	_	
	50	4,5	4,5	4,5	4,5	4,5	4,5	—	—	—	
	ਿ ⁶⁰	6,0	6,0	6,0	6,0	6,0	6,0	—	—	—	
	[60 또 70 ㅋ 80	7,4	7,4	7,4	7,4	7,4	7,4	—	—	—	
	•••	8,8	8,8	8,8	8,8	8,8	8,8	—	—	—	
	90	10,1	10,1	10,1	10,1	10,1	10,1	—	—	—	
	≥ 100	11,5	11,5	11,5	11,5	11,5	11,5	_			
	N _{R,k,II} [kN]	3,92	4,92	5,91	6,22	6,52	6,52		—		
		•			•						.

No additional regulations.

Self drilling screw

Hilti S-CD 55 GS 5,5 x L Hilti S-CD 55 GSS 5,5 x L with hexagon head and sealing washer Ø16 mm



	SW8	Ø19 Ø10,5 Ø6,	0'9			ener:	stainless S280GD S235, S2	Steel (1.4 Steel (1.4 , S320GD, 275, S355 , S320GD,	301) - EN S350GD - EN 1002	10088 - EN 1034 5-1	6	088
	<u>></u> 17	∞ • • • • • • • • • • • • • • • • • • •	_		Timb	ng capacit er substru erformance		i ≤ 15,00 m led	nm			
[, t _{N2} , d, D	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0		I		1
		[mm]								_		-
		0,40	0,82	0,82	0,82	0,82	0,82	0,82	_	_	_	
		0,50	0,93	1,12	1,30	1,30	1,30	1,30	_	_	_	
	z	0,55	1,12	1,28	1,44	1,44	1,44	1,44	_	—	_	
	Ĺ	0,60	1,31	1,45	1,58	1,58	1,58	1,58	_	—	_	
	V _{R,k} [kN]	0,63	1,42	1,54	1,66	1,66	1,66	1,66	—	—	—	
		0,75	1,88	1,94	2,00	2,00	2,00	2,00	—	—	—	
		0,88	2,33	2,57	2,81	2,81	2,81	2,81	—	—	—	
		1,00	2,74	3,15	3,56	3,56	3,56	3,56	_	_		.
		0,40	1,46	1,46	1,46	1,46	1,46	1,46	—	—		
		0,50	1,89	1,89	1,89	1,89	1,89	1,89	—	—	—	
	ī	0,55	2,21	2,21	2,21	2,21	2,21	2,21	—	—	—	
	N _{R,k} [kN]	0,60	2,53	2,53	2,53	2,53	2,53	2,53	—	—	—	
	NR,	0,63	2,73	2,73	2,73	2,73	2,73	2,73	—	-	—	
		0,75	3,50	3,50	3,50	3,50	3,50	3,50	—	—	—	
		0,88	3,68	3,68	3,68	3,68	3,68	3,68	—		_	
		1,00	3,84	3,84	3,84	3,84	3,84	3,84		—		
		40 50	3,0	3,0	3,0	3,0	3,0	3,0	—	_	_	
	_	50 60	4,5 6.0	4,5 6.0	4,5 6.0	4,5 6.0	4,5	4,5 6.0	_			
	n[mm]	60 70	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4	6,0 7,4	_			
	드	80	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8	7,4 8,8				
	_	80 90	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1	0,0 10,1				
			11,5	10,1	10,1	10,1	11,5		—	_	_	
		≥ 100	3,92		5,91	6,22	6,52	11,5 6,52				
l	N	_{R,k,II} [kN]	3,92	4,92	5,91	0,22	0,52	0,32	—	—		1

No additional regulations.

Self drilling screw

Hilti S-CD 65 GS 5,5 x L Hilti S-CD 65 GSS 5,5 x L with hexagon head and sealing washer Ø19 mm

Annex 24

electronic copy of the eta by dibt: eta-13/0179



	8W8	Ø22 Ø10,5	88			ener:	stainless S280GD S235, S2	Steel (1.4 Steel (1.4 , S320GD, 275, S355 , S320GD,	301) - EN S350GD - EN 1002	10088 - EN 1034 5-1	16	088
	<u>></u> 17	Ø5,-			Timb	ng capacit er substru erformance		i ≤ 15,00 m ned	nm			
		t _{N2} , d, D	4,00	5,00	6,00	7,00	t _{ii} [mm] 8,00	≥ 10,0		I	I	
		[mm] 0,40	0,82	0,82	0,82	0,82	0,82	0,82		_	_	
		0,40		1,12	0,82 1,30	0,82 1,30	1,30	1,30				
			0,93			-			_	_		
	V _{R,k} [kN]	0,55	1,12	1,28	1,44	1, 44	1,44	1,44	_	_	_	
	ž	0,60	1,31	1,45	1,58	1,58	1,58	1,58	_	_	_	
	V _{R,I}	0,63	1,42	1,54	1,66	1,66	1,66	1,66	_	_	_	
		0,75	1,88	1,94	2,00	2,00	2,00	2,00	—	—	—	
		0,88	2,33	2,57	2,81	2,81	2,81	2,81	_	—	—	
		1,00	2,74	3,15	3,56	3,56	3,56	3,56	_	_	_	
		0,40	1,65	1,65	1,65	1,65	1,65	1,65	—	—	—	
		0,50	1,77	1,77	1,77	1,77	1,77	1,77	—			
	Ī	0,55	2,26	2,26	2,26	2,26	2,26	2,26	—	_		
	N _{R,k} [kN]	0,60	2,74	2,74	2,74	2,74	2,74	2,74	—	_		
	N _{R,}	0,63 0,75	3,03	3,03	3,03	3,03	3,03	3,03	—	_		
		0,75 0,88	3,92 3,92	4,20 4,32	4,20 4,32	4,20 4,32	4,20 4,32	4,20 4,32	_	_		
		0,88 1,00	3,92	4,32 4,44	4,32 4,44	4,32 4,44	4,32	4,32 4,44				
		40	3,92	4,44 3,0	4,44 3,0	4,44 3,0	3,0	3,0				
		40 50	3,0 4,5	3,0 4,5	3,0 4,5	3,0 4,5	4,5	3,0 4,5				
	-	60	6,0	6,0	4,5 6,0	6,0	6,0	4,5 6,0				
	n[mm]	70	7, 4	7, 4	7, 4	0,0 7,4	7,4	7,4	_	_		
	n L	80	8,8	8,8	8,8	8,8	8,8	8,8		_		
		90	10,1	10,1	10,1	10,1	10,1	10,1	_	_		
		≥ 100	11,5	11,5	11,5	11,5	11,5	11,5	_	_		
	N	<u>الم الم الم الم الم الم الم الم الم الم </u>	3,92	4,92	5,91	6,22	6,52	6,52	_	_		
1	146	(,K,II - · · · ·	3,52	.,•2	-,	-,	3,52	-,				ı

No additional regulations.

Self drilling screw

Hilti S-CD 75 GS 5,5 x L Hilti S-CD 75 GSS 5,5 x L with hexagon head and sealing washer Ø22 mm

Annex 25

electronic copy of the eta by dibt: eta-13/0179



SW8 Ø16 Ø10 55 Ø7,0 Ø7,0 Ø7,0	Material:Fastener:stainless Steel (1.4301, 1.4401, 1.4571) - EN 10088Washer:stainless Steel (1.4301) - EN 10088Component I:S280GD, S320GD - EN 10346Component II:Structural timber - EN 14081
5,54 2,54 2,54	<u>Drilling capacity:</u> Σt _i ≤ 2,00 mm
	Timber substructures:
2×	performance determined with
Ø4,35	M _{y,Rk} = 9,741 Nm f _{ax,k} = 10,769 N/mm² for l _{ef} ≥ 50,0 mm

	t _{N1} , t _{N2}			d, D [mm]							
	[mm]	30	40	50	60	70	80	100	120	≥ 140	
	0,40	0,62	0,62	0,62	0,62	0,62	0,62	0,62	0,62	0,62	
	0,50	0,98	0,98	0,98	0,98	0,98	0,98	0,98	0,98	0,98	
	0,55	1,15	1,15	1,15	1,15	1,15	1,15	1,15	1,15	1,15	
N <u>X</u>	0,60	1,37	1,37	1,37	1,37	1,37	1,37	1,37	1,37	1,37	
V _{R,k} [kN]	0,63	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	
>	0,75	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	
	0,88	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	
	1,00	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	
	0,40	_	_	_	—	_	_	_		—	
	0,50	1,72	1,72	1,72	1,72	1,72	1,72	1,72	1,72	1,72	
	0,55	1,96	1,96	1,96	1,96	1,96	1,96	1,96	1,96	1,96	
N _{R,k} [kN]	0,60	2,12	2,12	2,12	2,12	2,12	2,12	2,12	2,12	2,12	
R,k	0,63	2,21	2,21	2,21	2,21	2,21	2,21	2,21	2,21	2,21	
Z	0,75	2,73	2,73	2,73	2,73	2,73	2,73	2,73	2,73	2,73	
	0,88	3,32	3,32	3,32	3,32	3,32	3,32	3,32	3,32	3,32	
	1,00	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	
	u [mm]		5,0	7,0	9,0	11,0	13,0	18,0	18,0	18,0	
	N _{R,k,II} [kN]	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	

If component t_{N1} resp. t_{N2} is made of S320GD the grey highlighted values may be increased by 8,3%. The values listed above in dependence on the screw-in length l_{ef} and the values $N_{R,k,II}$ are valid for $k_{mod} = 0,90$ and timber strength grade C24 ($\rho_a = 350 \text{ kg/m}^3$). For other combinations of k_{mod} and timber strength grades see Annex 3.

Self drilling screw	
Hilti S-CDW 51 S 6,5 x L Hilti S-CDW 51 SS 6,5 x L with hexagon head and sealing washer Ø16 mm	Annex 26



<u>SW8</u> ≥ Ø19	
3 100 2,5 2,5 100 3 2,54	Material: Fastener: stainless Steel (1.4301, 1.4401, 1.4571) - EN 10088 Washer: stainless Steel (1.4301) - EN 10088 Component I: S280GD, S320GD - EN 10346 Component II: Structural timber - EN 14081
\$9 45 ×1	<u>Drilling capacity:</u> Σt _i ≤ 2,00 mm
	Timber substructures:
	performance determined with
Ø4,35	$M_{y,Rk} = 9,741 \text{ Nm} \\ f_{ax,k} = 10,769 \text{ N/mm}^2 \text{ for } I_{ef} \ge 50,0 \text{ mm}$

	t _{N1} , t _{N2}					d, D [mm]				
	[mm]	30	40	50	60	70	80	100	120	≥ 140
	0,40	0,62	0,62	0,62	0,62	0,62	0,62	0,62	0,62	0,62
	0,50	0,98	0,98	0,98	0,98	0,98	0,98	0,98	0,98	0,98
	0,55	1,15	1,15	1,15	1,15	1,15	1,15	1,15	1,15	1,15
L N	0,60	1,37	1,37	1,37	1,37	1,37	1,37	1,37	1,37	1,37
V _{R,k} [kN]	0,63	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50
>	0,75	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17
	0,88	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17
	1,00	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17	2,17
	0,40	—	_	_	—	—	—	_		—
	0,50	2,60	2,60	2,60	2,60	2,60	2,60	2,60	2,60	2,60
	0,55	3,10	3,10	3,10	3,10	3,10	3,10	3,10	3,10	3,10
N _{R,k} [kN]	0,60	3,35	3,35	3,35	3,35	3,35	3,35	3,35	3,35	3,35
R,k	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
	u [mm]	_	5,0	7,0	9,0	11,0	13,0	18,0	18,0	18,0
	N _{R,k,II} [kN]	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50

If component t_{N1} resp. t_{N2} is made of S320GD the grey highlighted values may be increased by 8,3%. The values listed above in dependence on the screw-in length l_{ef} and the values $N_{R,k,II}$ are valid for $k_{mod} = 0,90$ and timber strength grade C24 ($\rho_a = 350 \text{ kg/m}^3$). For other combinations of k_{mod} and timber strength grades see Annex 3.

Self drilling screw	
Hilti S-CDW 61 S 6,5 x L Hilti S-CDW 61 SS 6,5 x L Hilti S-CDW 71 S 6,5 x L Hilti S-CDW 71 SS 6,5 x L with hexagon head and sealing washer ≥ Ø19 mm	Annex 27



SW e	× Ø16 Ø10,5	-	5,5			ener:	stainless S280GD S235 - E	Steel (1.4 , S320GD N 10025-	4301 - EN 9, S350GD	10088) 9 - EN 103	1) - EN 10 46)088
> 48				Timb	rill diamete er substru erformance		ee Table b	elow				
	t_{N1}, t_{N2}, d, D						t _{ii} [mm]	5.00				
	[mm] 0,•	40	1,50 0,86	2,00 0,86	2,50 0,86	3,00 0,86	4,00 0,86	5,00 0,86	6,00 0,86	8,00 0,86	≥ 10,0 0,86	
	0,4		1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	
	0	55	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	
		60	1,85	1,85	1,85	1,85	1,85	1,85	1,85	1,85	1,85	
		63	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	
	> 0.	75	2,60	2,60	2,60	2,60	2,60	2,60	2,60	2,60	2,60	
	0,		3,20	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	
	-	00	3,20	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50	
		40	1,59	1,59	1,59	1,59	1,59	1,59	1,59	1,59	1,59	
	0,	50	1,88	1,88	1,88	1,88	1,88	1,88	1,88	1,88	1,88	
	0,	55	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	
	ν,ο ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0 ,0	60	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50	
	<u>ب</u> ۲ (۵,0	63	2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80	
	0,		3,60	3,60	3,60	3,60	3,60	3,60	3,60	3,60	3,60	
		88	3,60	4,10	4,40	4,40	4,40	4,40	4,40	4,40	4,40	
		00	3,60	4,10	4,45	4,80	4,90	4,90	4,90	4,90	4,90	1
		0	12,0	5,0	5,0	5,0	4,0	4,0	4,0	4,0	4,0	1
		0	13,5	7,0	7,0	7,0	5,0	5,0	5,0	4,5	4,5	
	E 5	0	15,0	9,0	9,0	9,0	6,0	6,0	6,0	6,0	6,0	
]	0	17,5	11,0	11,0	11,0	7,0	7,0	7,0	7,0	7,0	
	•	0	20,0	13,0	13,0	13,0	8,0	8,0	8,0	8,0	8,0	
		0	22,5	14,5	14,5	14,5	9,0	9,0	9,0	9,0	9,0	
	≥ 1		22,5	14,5	14,5	14,5	9,0	9,0	9,0	9,0	9,0	l
	N _{R,k,ll} [k]			—	—		—	—	—			l
	d _{pd} [mm	ן]	Ø5,0			Ø5,3			Ø5,5	Ø	5,7	l I

If component t_{N1} resp. t_{N2} is made of S320GD or S350GD the grey highlighted values may be increased by 8%.

Self tapping screw	
Hilti S-MP 52 S 6,3 x L Hilti S-MP 62 S 6,3 x L Hilti S-MP 62 S 6,3 x L Hilti S-MP 72 S 6,3 x L With hexagon head and sealing washer ≥ Ø16 mm	Annex 28



SW8	Ø 10,5	20 5,5			ener:	stainles S280GI S235, S	s Steel (1 s Steel (1 0, S320G 275, S35 0, S320G	.4301) - D, S3500 5 - EN 10	EN 1008 GD - EN 0025-1	10346	10088	
48	, - , x			Pred	rill diamet	<u>er:</u> s	ee Table	below				
Ø6,3 Ø4,55					<u>Timber substructures:</u> no performance determined							
	t _{N1} , t _{N2} , d, D)				t _{il} [mm]						
	[mm]	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0		
	0,40	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,14	1,14		
	0,50		1,54	1,54	1,54	1,54	1,54	1,54	1,54	1,54		
	0,55		1,70	1,70	1,70	1,70	1,70	1,70	1,70	1,70		
	0,55 0,60 ⁴ ¹ / ₂ 0,63		1,83	1,83	1,83	1,83	1,83	1,83	1,83	1,83		
	[₩] 0,63		1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90		
	0,75		2,07	2,07	2,07	2,07	2,07	2,07	2,07	2,07		
	0,88		2,07	2,07	2,07	2,07	2,07	2,07	2,07	2,07		
	1,00		2,07	2,07	2,07	2,07	2,07	2,07	2,07	2,07		
	0,40		1,51	1,51	1,51	1,51	1,51	1,51	1,51	1,51		
	0,50		1,51	1,51	1,51	1,51	1,51	1,51	1,51	1,51		
	2 0,55		1,91	1,91	1,91	1,91	1,91	1,91	1,91	1,91		
	U,55 NA 0,60 ^{XX} 0,63 N 0,75		2,47	2,47	2,47	2,47	2,47	2,47	2,47	2,47		
	0,63		2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80		
	0,75		3,43 3,43	3,60 3,80	3,60 3,80	3,60 3,80	3,60 3,80	3,60 3,80	3,60 3,80	3,60 3,80		
	1,00		3,43	3,80 4,00	3,80 4,00	4,00	3,80 4,00	3,80 4,00	4,00	4,00		
	30	20,0	12,0	4,00	4,00	3,0	3,0	3,0	3,0	3,0		
	40	25,0	13,5	4,0 5,0	5,0	3,5	3,5	3,5	3,5	3,5		
	50	33,0	15,5	6,5	6,5	4,0	4,0	4,0	4,0	4,0		
		40,0	18,0	8,0	8,0	5,0	5,0	5,0	5,0	5,0		
	[ш. 60 ш. 70 л 80	40,0	20,5	10,0	10,0	6,0	6,0	6,0	6,0	6,0		
	⊐ 80	40,0	24,0	12,0	12,0	6,5	6,5	6,5	6,5	6,5		
	100		30,0	15,0	15,0	8,5	8,5	8,5	8,5	8,5		
	120		36,0	18,0	18,0	10,0	10,0	10,0	10,0	10,0		
	≥ 140		40,0	21,0	21,0	11,5	11,5	11,5	11,5	11,5		
	N _{R,k,ll} [kN]	1,59	3,43	4,63	5,82	8,23	8,23	8,23	8,23	8,23		
	d _{pd} [mm]	Ø5,0		Ø	5,3		Ø	5 5	Ø	5,7		

No additional regulations.

Self tapping screw	
Hilti S-MP 54 S 6,3 x L Hilti S-MP 64 S 6,3 x L Hilti S-MP 64 S 6,3 x L Hilti S-MP 74 S 6,3 x L With hexagon head and sealing washer ≥ Ø16 mm	Annex 29