

EN

DECLARATION OF PERFORMANCE

according to Annex III of the Regulation (EU) Nr. 305/2011 (Construction Products Regulation)

 Hilti Self tapping fastening screws for metal members, sheeting and sandwich panels S-MP S(S)
 No. Hilti-SF-DoP-006

1. **Unique identification code of the product-type:** Hilti Self tapping screws S-MP S(S)
2. **Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):** Type and Lot-Number displayed on the packaging
3. **Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:**

Generic type and use	Self tapping fastening screws for metal members, sheeting and sandwich panels
Product size covered	Screw diameter 6.3 mm and 6.5 mm
Base and fastened material	Steel according to EN 10025-1 and EN 10346, Aluminum alloy according to EN 485 / EN 573, Structural timber according to EN 14081
Fastener material	Stainless steel according to EN ISO 3506
Loading	Static and quasi static (wind loading)

4. **Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):** Hilti Aktiengesellschaft, Business Unit Direct Fastening, 9494 Schaan, Fürstentum Liechtenstein
5. **Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):** n.a.
6. **System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:** System 2+
7. **In case of the declaration of performance concerning a construction product covered by a harmonized standard:** n.a.
8. **In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:** On the basis of EAD 330046-01-0602 issued ETA-18/0880 and on the basis of EAD 330047-01-0602 issued ETA-13/0179. The notified body MPA-Karlsruhe 0769 performed third party tasks under system 2+ and issued the certificate of conformity of the production control.

9. Declared performance:

Essential characteristic	Performance	Harmonized technical specification
Characteristic tension resistance $N_{R,k}$	Annex 1 - 6 ETA-18/0880 (Annex 70 - 73) ETA-13/0179 (Annex 28 - 29)	ETA-18/0880
Characteristic shear resistance $V_{R,k}$		EAD 330047-01-0602
Max. allowed screw head displacement u		ETA-13/0179
Application limits		EAD 330047-01-0602
Reaction to fire	A1	

10. **The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.**



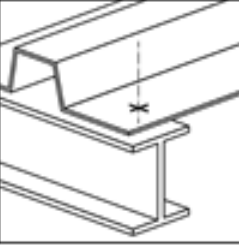
Signed for and on behalf of the manufacturer by:

Lars Taenzer
 Head of Business Unit Direct Fastening

Pierre Hohmeier
 Head of Quality Screw Fastening

Hilti Aktiengesellschaft, Schaan, 03.05.2019

Annex 1:
ETA-18/0880, Annex 70

<p>Application range:</p>  <p>Stahl / Steel Steel S280GD to S320GD</p> <p>Component I: $t_i = 0,50$ to 2,00 mm</p> <p>Component II: $t_{ii} = 1,25$ to 30,00 mm</p>  <p>Stahl / Steel Steel S235 Steel S280GD to S320GD</p>	<p>Typical application:</p> 	<p>Fastener:</p> <p>S-MP 52 S(S) 6,3 x L S-MP 62 S(S) 6,3 x L S-MP 72 S(S) 6,3 x L</p> <p>Washer: $\varnothing 16$ / $\varnothing 19$ / $\varnothing 22$</p>
<p>Predrill diameters d_{pe} see table below</p> <p>Performance for timber substructures not determined</p>		


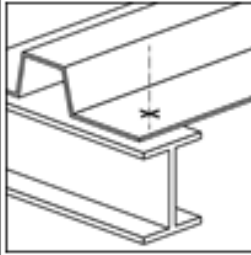

t_i [mm]	t_{ii} [mm]								
	1,25	1,50	2,00	3,00	4,00	6,00	$\geq 7,00$	—	
V_{Rk} [kN]	—	—	—	—	—	—	—	—	—
0,50	—	—	—	—	—	—	—	—	—
0,55	—	—	—	—	—	—	—	—	—
0,63	2,50 ac	2,70 ac	2,90 abcd	3,00 abcd	3,10 abcd	3,10 abcd	3,10 abcd	3,10 abcd	—
0,75	2,60 ac	3,10 ac	3,30 ac	3,60 ac	3,70 abcd	3,70 abcd	3,70 abcd	3,70 abcd	—
0,88	2,80 ac	3,20 ac	3,80 ac	4,10 ac	4,30 ac	4,40 ac	4,40 ac	4,40 ac	—
1,00	3,20 —	3,60 ac	4,10 ac	4,80 ac	4,90 ac	5,10 ac	5,10 ac	5,10 ac	—
1,13	3,40 —	4,00 —	4,60 ac	5,40 ac	5,60 ac	5,80 ac	5,80 ac	5,80 ac	—
1,25	3,60 —	4,20 —	5,00 ac	6,10 ac	6,30 ac	6,50 ac	6,50 ac	6,50 ac	—
1,50	3,70 —	4,40 —	5,70 —	6,80 —	7,10 —	7,30 —	7,30 —	7,30 —	—
1,75	3,70 —	4,70 —	6,20 —	7,60 —	7,70 —	8,10 —	8,10 —	8,10 —	—
2,00	5,00 —	6,30 —	7,90 —	8,30 —	8,40 —	9,40 —	9,40 —	9,40 —	—
$N_{t,k}$ [kN]	0,97 ac	1,35 ac	1,51 abcd	1,51 abcd	1,51 abcd	1,51 abcd	1,51 abcd	1,51 abcd	—
0,50	1,23 ac	1,71 ac	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	—
0,55	1,23 ac	1,71 ac	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	1,91 abcd	—
0,63	1,80 ac	2,50 ac	2,80 abcd	2,80 abcd	2,80 abcd	2,80 abcd	2,80 abcd	2,80 abcd	—
0,75	2,00 ac	2,60 ac	3,10 ac	3,60 ac	3,60 abcd	3,60 abcd	3,60 abcd	3,60 abcd	—
0,88	2,00 ac	2,70 ac	3,30 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	—
1,00	2,00 —	2,70 ac	3,40 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	—
1,13	2,00 —	2,70 —	3,60 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	—
1,25	2,00 —	2,70 —	3,60 ac	4,80 ac	4,90 ac	4,90 ac	4,90 ac	4,90 ac	—
1,50	2,00 —	2,70 —	3,60 —	5,60 —	5,90 —	5,90 —	5,90 —	5,90 —	—
1,75	2,00 —	2,70 —	3,60 —	5,80 —	6,90 —	7,10 —	7,10 —	7,10 —	—
2,00	2,00 —	2,70 —	3,60 —	6,00 —	7,30 —	7,60 —	7,60 —	7,60 —	—
$M_{t,nom}$ [Nm]	5 Nm								
d_{pe} [mm]	$t_{ii} \leq 1,50$ mm $d_{pe} = \varnothing 5,0$ mm		1,50 mm < $t_{ii} \leq 4,0$ mm $d_{pe} = \varnothing 5,3$ mm		4,0 mm < $t_{ii} < 7,0$ mm $d_{pe} = \varnothing 5,5$ mm		$t_{ii} \geq 7,0$ mm $d_{pe} = \varnothing 5,7$ mm		

Self tapping screw



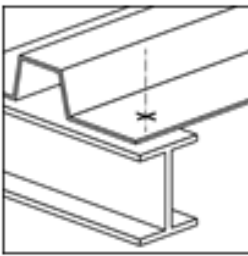
Hilti S-MP 52/62/72 S 6,3 x L / Hilti S-MP 52/62/72 SS 6,3 x L
with hexagon head and sealing washer $\geq \varnothing 16$ mm

Annex 70

Annex 2:
ETA-18/0880, Annex 71

Application range:  Steel S280GD to S420GD Component I: $t_1 = 0,50$ to 2,00 mm Component II: $t_{II} = 1,25$ to 30,00 mm		Typical application: 	Fastener: S-MP 54 S(S) 6,3 x L S-MP 64 S(S) 6,3 x L S-MP 74 S(S) 6,3 x L Washer: $\varnothing 16$ / $\varnothing 19$ / $\varnothing 22$																																																																																																																																																																																																																																																																																																					
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<table border="1"> <thead> <tr> <th rowspan="2">t_1 [mm]</th> <th colspan="8">t_2 [mm]</th> <th colspan="2"></th> </tr> <tr> <th>1,25</th> <th>1,50</th> <th>2,00</th> <th>3,00</th> <th>4,00</th> <th>6,00</th> <th>$\geq 7,00$</th> <th>—</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="10">V_{Rk} [kN]</td> <td>0,50</td><td>1,65 ac</td><td>1,72 ac</td><td>1,78 abod</td><td>1,78 abod</td><td>1,78 abod</td><td>1,78 abod</td><td>1,78 abod</td><td>1,78 abod</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>2,08 ac</td><td>2,21 ac</td><td>2,34 abod</td><td>2,34 abod</td><td>2,34 abod</td><td>2,34 abod</td><td>2,34 abod</td><td>2,34 abod</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>2,50 ac</td><td>2,70 ac</td><td>2,90 abod</td><td>3,00 abod</td><td>3,10 abod</td><td>3,10 abod</td><td>3,10 abod</td><td>3,10 abod</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>2,60 ac</td><td>3,10 ac</td><td>3,30 ac</td><td>3,60 ac</td><td>3,70 abod</td><td>3,70 abod</td><td>3,70 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ac	3,10 ac	3,30 ac	3,60 ac	3,70 abod	3,70 abod	3,70 abod	3,70 abod	—	—	0,88	2,80 ac	3,20 ac	3,80 ac	4,10 ac	4,30 ac	4,40 ac	4,40 ac	4,40 ac	—	—	1,00	3,20 —	3,60 ac	4,10 ac	4,80 ac	4,90 ac	5,10 ac	5,10 ac	5,10 ac	—	—	1,13	3,40 —	4,00 —	4,60 ac	5,40 ac	5,60 ac	5,80 ac	5,80 ac	5,80 ac	—	—	1,25	3,60 —	4,20 —	5,00 ac	6,10 ac	6,30 ac	6,50 ac	6,50 ac	6,50 ac	—	—	1,50	3,70 —	4,40 —	5,70 —	6,80 —	7,10 —	7,30 —	7,30 —	7,30 —	—	—	1,75	3,70 —	4,70 —	6,20 —	7,60 —	7,70 —	8,10 —	8,10 —	8,10 —	—	—	2,00	5,00 —	6,30 —	7,90 —	8,30 —	8,40 —	9,40 —	9,40 —	9,40 —	—	—	N_{Rk} [kN]	0,50	0,97 ac	1,35 ac	1,51 abod	1,51 abod	1,51 abod	1,51 abod	1,51 abod	1,51 abod	—	—	0,55	1,23 ac	1,71 ac	1,91 abod	1,91 abod	1,91 abod	1,91 abod	1,91 abod	1,91 abod	—	—	0,63	1,80 ac	2,50 ac	2,80 abod	2,80 abod	2,80 abod	2,80 abod	2,80 abod	2,80 abod	—	—	0,75	2,00 ac	2,60 ac	3,10 ac	3,60 ac	3,60 abod	3,60 abod	3,60 abod	3,60 abod	—	—	0,88	2,00 ac	2,70 ac	3,30 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	—	—	1,00	2,00 —	2,70 ac	3,40 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	—	—	1,13	2,00 —	2,70 —	3,60 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	—	—	1,25	2,00 —	2,70 —	3,60 ac	4,80 ac	4,90 ac	4,90 ac	4,90 ac	4,90 ac	—	—	1,50	2,00 —	2,70 —	3,60 —	5,60 —	5,90 —	5,90 —	5,90 —	5,90 —	—	—	1,75	2,00 —	2,70 —	3,60 —	5,80 —	6,90 —	7,10 —	7,10 —	7,10 —	—	—	2,00	2,00 —	2,70 —	3,60 —	6,00 —	7,30 —	7,60 —	7,60 —	7,60 —	—	—	$M_{t, nom}$ [Nm]	5 Nm										d_{pr} [mm]	$t_2 \leq 1,50$ mm $d_{pr} = \varnothing 5,0$ mm		1,50 mm $< t_2 \leq 4,0$ mm $d_{pr} = \varnothing 5,3$ mm			4,0 mm $< t_2 < 7,0$ mm $d_{pr} = \varnothing 5,5$ mm		$t_2 \geq 7,0$ mm $d_{pr} = \varnothing 5,7$ mm		
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2,00	5,00 —	6,30 —	7,90 —	8,30 —	8,40 —	9,40 —	9,40 —	9,40 —	—	—																																																																																																																																																																																																																																																																																														
N_{Rk} [kN]	0,50	0,97 ac	1,35 ac	1,51 abod	1,51 abod	1,51 abod	1,51 abod	1,51 abod	1,51 abod	—	—																																																																																																																																																																																																																																																																																													
	0,55	1,23 ac	1,71 ac	1,91 abod	1,91 abod	1,91 abod	1,91 abod	1,91 abod	1,91 abod	—	—																																																																																																																																																																																																																																																																																													
	0,63	1,80 ac	2,50 ac	2,80 abod	2,80 abod	2,80 abod	2,80 abod	2,80 abod	2,80 abod	—	—																																																																																																																																																																																																																																																																																													
	0,75	2,00 ac	2,60 ac	3,10 ac	3,60 ac	3,60 abod	3,60 abod	3,60 abod	3,60 abod	—	—																																																																																																																																																																																																																																																																																													
	0,88	2,00 ac	2,70 ac	3,30 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	3,80 ac	—	—																																																																																																																																																																																																																																																																																													
	1,00	2,00 —	2,70 ac	3,40 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	4,00 ac	—	—																																																																																																																																																																																																																																																																																													
	1,13	2,00 —	2,70 —	3,60 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	4,40 ac	—	—																																																																																																																																																																																																																																																																																													
	1,25	2,00 —	2,70 —	3,60 ac	4,80 ac	4,90 ac	4,90 ac	4,90 ac	4,90 ac	—	—																																																																																																																																																																																																																																																																																													
	1,50	2,00 —	2,70 —	3,60 —	5,60 —	5,90 —	5,90 —	5,90 —	5,90 —	—	—																																																																																																																																																																																																																																																																																													
	1,75	2,00 —	2,70 —	3,60 —	5,80 —	6,90 —	7,10 —	7,10 —	7,10 —	—	—																																																																																																																																																																																																																																																																																													
2,00	2,00 —	2,70 —	3,60 —	6,00 —	7,30 —	7,60 —	7,60 —	7,60 —	—	—																																																																																																																																																																																																																																																																																														
$M_{t, nom}$ [Nm]	5 Nm																																																																																																																																																																																																																																																																																																							
d_{pr} [mm]	$t_2 \leq 1,50$ mm $d_{pr} = \varnothing 5,0$ mm		1,50 mm $< t_2 \leq 4,0$ mm $d_{pr} = \varnothing 5,3$ mm			4,0 mm $< t_2 < 7,0$ mm $d_{pr} = \varnothing 5,5$ mm		$t_2 \geq 7,0$ mm $d_{pr} = \varnothing 5,7$ mm																																																																																																																																																																																																																																																																																																
Self tapping screw										Annex 71																																																																																																																																																																																																																																																																																														
Hilti S-MP 54/64/74 S 6,3 x L / Hilti S-MP 54/64/74 SS 6,3 x L with hexagon head and sealing washer $\geq \varnothing 16$ mm																																																																																																																																																																																																																																																																																																								

Annex 3:
ETA-18/0880, Annex 72


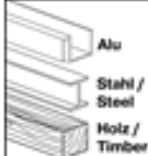
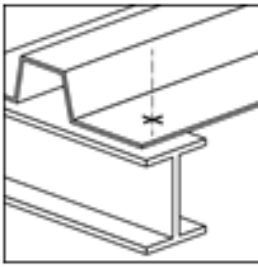
<p>Application range:</p>  <p>Stahl / Steel Steel S280GD to S320GD</p> <p>Component I: $t_1 = 0,50$ to $2,00$ mm</p> <p>Component II: $t_1 = 0,63$ to $3,00$ mm</p>  <p>Stahl / Steel Stahl S235 Steel S280GD to S320GD Holz / Timber Structural timber</p>	<p>Typical application:</p> 	<p>Fastener:</p> <p>S-MP 53 S(S) 6,5 x L S-MP 63 S(S) 6,5 x L S-MP 73 S(S) 6,5 x L</p> <p>Washer: $\varnothing 16$ / $\varnothing 19$ / $\varnothing 22$</p> <p>Predrill diameters d_{pd} see table below</p> <p>Performance for timber substructures determined with: $M_{y,Rk} = 0,742$ Nm $f_{t,Rk} = 8,575$ N/mm² for $l_{ef,min} = 26,0$ mm</p>
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t_1 [mm]	t_2 [mm]									$V_{t,Rk}$ N _{t,Rk}
	0,63	0,75	0,88	1,00	1,13	1,25	1,50	≥ 2,00		
0,50	—	—	—	—	—	—	—	—	—	—
0,55	—	—	—	—	—	—	—	—	—	—
0,63	1,30	1,50	1,80	2,00	ac	2,30	ac	2,90	ac	2,90
0,75	1,40	1,60	1,90	2,20	ac	2,50	ac	2,60	ac	3,10
0,88	1,50	1,70	2,00	2,30	ac	2,60	ac	2,80	ac	3,20
1,00	1,50	1,80	2,10	2,50	—	2,80	—	3,10	—	3,60
1,13	1,60	1,80	2,20	2,60	—	2,90	—	3,20	—	3,80
1,25	1,60	1,90	2,30	2,70	—	3,00	—	3,30	—	4,00
1,50	1,60	1,90	2,40	2,80	—	3,20	—	3,50	—	4,00
1,75	1,60	1,90	2,40	2,80	—	3,20	—	3,50	—	4,00
2,00	1,60	1,90	2,40	2,80	—	3,20	—	3,50	—	4,00
0,50	0,49	0,59	0,70	0,76	ac	0,86	ac	0,97	ac	1,13
0,55	0,61	0,75	0,89	0,95	ac	1,09	ac	1,23	ac	1,43
0,63	0,90	1,10	1,30	1,40	ac	1,60	ac	1,80	ac	2,10
0,75	0,90	1,10	1,30	1,40	ac	1,60	ac	1,80	ac	2,10
0,88	0,90	1,10	1,30	1,40	ac	1,60	ac	1,80	ac	2,10
1,00	0,90	1,10	1,30	1,40	—	1,60	—	1,80	—	2,20
1,13	1,00	1,20	1,40	1,50	—	1,70	—	1,90	—	2,30
1,25	1,00	1,20	1,40	1,50	—	1,70	—	1,90	—	2,30
1,50	1,00	1,20	1,40	1,50	—	1,70	—	1,90	—	2,30
1,75	1,00	1,20	1,40	1,50	—	1,70	—	1,90	—	2,30
2,00	1,00	1,20	1,40	1,50	—	1,70	—	1,90	—	2,30
$M_{t,nom}$ [Nm]	3 Nm					5 Nm				
d_{pd} [mm]	$t_1 \leq 0,75$ mm $d_{pd} = \varnothing 4,0$ mm			0,75 mm < $t_1 \leq 1,50$ mm $d_{pd} = \varnothing 4,5$ mm			$t_1 \geq 1,50$ mm $d_{pd} = \varnothing 5,0$ mm			

The values listed above in dependence on the screw-in length l_{ef} are valid for $k_{mod} = 0,90$ and timber strength grade C24 ($\rho_s = 350$ kg/m³). For other combinations of k_{mod} and timber strength grades see Annex 3.

Self tapping screw	Annex 72
Hilti S-MP 53/63/73 S 6,5 x L / Hilti S-MP 53/63/73 SS 6,5 x L with hexagon head and sealing washer $\geq \varnothing 16$ mm	

Annex 4:
ETA-18/0880, Annex 73

<p>Application range:</p>  Aluminium alloy with $R_m \geq 185 \text{ N/mm}^2$ <p>Component I: $t_1 = 0,50 \text{ to } 2,00 \text{ mm}$</p> <p>Component II: $t_{II} = 0,50 \text{ to } 3,00 \text{ mm}$</p>  Aluminium alloy with $R_m \geq 185 \text{ N/mm}^2$ Steel S280GD to S350GD Structural timber	<p>Typical application:</p> 	<p>Fastener:</p> <p>S-MP 53 S(S) 6,5 x L S-MP 63 S(S) 6,5 x L S-MP 73 S(S) 6,5 x L</p> <p>Washer: $\varnothing 16 / \varnothing 19 / \varnothing 22$</p>
<p>Predrill diameters d_{pd} see table below</p> <p>Performance for timber substructures determined with: $M_{y,PK} = 0,742 \text{ Nm}$ $f_{ax,k} = 8,575 \text{ N/mm}^2$ for $l_{w,min} = 26,0 \text{ mm}$</p>		

t_1 [mm]	Steel S280GD to S350GD						Al-Alloy, $R_m \geq 185 \text{ N/mm}^2$						V_{IKK} N_{IKK}	
	t_{II} [mm]						t_{II} [mm]							
	0,63	0,75	0,88	1,00	1,50	$\geq 2,00$	0,50	0,60	0,80	1,00	1,50	$\geq 2,00$		
V_{IKK} [kN]	0,50	1,23	1,23	1,23	1,23	1,23	—	—	—	—	—	—	1,23	
	0,60	1,30	1,30	1,30	1,30	1,30	—	—	—	—	—	—	1,30	
	0,70	1,38	1,38	1,38	1,38	1,38	—	—	—	—	—	—	1,38	
	0,80	1,48	1,48	1,48	1,48	1,48	0,50	0,50	0,50	0,50	0,50	0,50	1,48	
	0,90	1,59	1,59	1,59	1,59	1,59	0,50	0,50	0,50	0,50	0,50	0,50	1,59	
	1,00	1,72	1,79	1,87	1,94	1,94	1,94	0,50	0,71	1,15	1,59	1,59	1,59	1,94
	1,10	1,86	1,86	1,87	1,94	1,94	1,94	0,50	0,71	1,15	1,59	1,59	1,59	1,94
	1,20	2,02	2,02	2,02	2,02	2,02	2,02	0,50	0,71	1,15	1,59	1,59	1,59	2,02
	1,30	2,02	2,02	2,02	2,02	2,02	2,02	0,50	0,71	1,15	1,59	1,59	1,59	2,02
	1,90	2,02	2,02	2,02	2,02	2,02	2,02	0,50	0,71	1,15	1,59	1,59	1,59	2,02
2,00	2,02	2,02	2,02	2,02	2,02	4,04	0,50	0,71	1,15	1,59	1,59	3,26	4,04	
N_{IKK} [kN]	0,50	0,48	0,48	0,48	0,48	0,48	0,16	0,21	0,32	0,45	0,48	0,48	0,48	
	0,60	0,58	0,58	0,58	0,58	0,58	0,16	0,21	0,32	0,45	0,58	0,58	0,58	
	0,70	0,67	0,67	0,67	0,67	0,67	0,16	0,21	0,32	0,45	0,67	0,67	0,67	
	0,80	0,77	0,77	0,77	0,77	0,77	0,16	0,21	0,32	0,45	0,77	0,77	0,77	
	0,90	0,87	0,87	0,87	0,87	0,87	0,16	0,21	0,32	0,45	0,82	0,87	0,87	
	1,00	0,96	0,96	0,96	0,96	0,96	0,16	0,21	0,32	0,45	0,82	0,96	0,96	
	1,10	1,00	1,06	1,06	1,06	1,06	0,16	0,21	0,32	0,45	0,82	1,06	1,06	
	1,20	1,00	1,15	1,15	1,15	1,15	0,16	0,21	0,32	0,45	0,82	1,15	1,15	
	1,30	1,00	1,20	1,25	1,25	1,25	0,16	0,21	0,32	0,45	0,82	1,25	1,25	
	1,90	1,00	1,20	1,40	1,44	1,44	0,16	0,21	0,32	0,45	0,82	1,27	1,44	
2,00	1,00	1,20	1,40	1,44	1,44	0,16	0,21	0,32	0,45	0,82	1,27	1,44		
$M_{L,rem}$ [Nm]	3 Nm			5 Nm										
d_{pd} [mm]	$t_{II} \leq 0,75 \text{ mm}$ $d_{pd} = \varnothing 4,0 \text{ mm}$			$0,75 \text{ mm} < t_{II} \leq 1,50 \text{ mm}$ $d_{pd} = \varnothing 4,5 \text{ mm}$			$t_{II} \geq 1,50 \text{ mm}$ $d_{pd} = \varnothing 5,0 \text{ mm}$							

The grey highlighted values N_{IKK} may be increased by 9.0% when using the types "S-MP 6x" and by 17.3% when using the types "S-MP 7x". The values listed above in dependence on the screw-in length l_w are valid for $k_{mod} = 0,90$ and timber strength grade C24 ($\rho_s = 350 \text{ kg/m}^3$). For other combinations of k_{mod} and timber strength grades see Annex 3.

Self tapping screw	Annex 73
Hilti S-MP 53/63/73 S 6,5 x L / Hilti S-MP 53/63/73 SS 6,5 x L with hexagon head and sealing washer $\geq \varnothing 16 \text{ mm}$	

Annex 5:
ETA-13/0179, Annex 28

Material:
 Fastener: stainless Steel (1.4301, 1.4401, 1.4571) - EN 10088
 Washer: stainless Steel (1.4301 - EN 10088)
 Component I: S280GD, S320GD, S350GD - EN 10346
 Component II: S235 - EN 10025-1
 S280GD, S320GD - EN 10346

Predrill diameter: see Table below

Timber substructures:
no performance determined

t_{N1}, t_{N2}, d, D [mm]	t_{II} [mm]									
	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0	
$V_{R,k}$ [kN]	0,40	0,86	0,86	0,86	0,86	0,86	0,86	0,86	0,86	0,86
	0,50	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
	0,60	1,85	1,85	1,85	1,85	1,85	1,85	1,85	1,85	1,85
	0,63	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
	0,88	3,20	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50
	1,00	3,20	3,50	3,50	3,50	3,50	3,50	3,50	3,50	3,50
$N_{R,k}$ [kN]	0,40	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
	0,60	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50	2,50
	0,63	2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80
	0,75	3,60	3,60	3,60	3,60	3,60	3,60	3,60	3,60	3,60
	0,88	3,60	4,10	4,40	4,40	4,40	4,40	4,40	4,40	4,40
	1,00	3,60	4,10	4,45	4,80	4,90	4,90	4,90	4,90	4,90
u [mm]	30	12,0	5,0	5,0	5,0	4,0	4,0	4,0	4,0	4,0
	40	13,5	7,0	7,0	7,0	5,0	5,0	5,0	4,5	4,5
	50	15,0	9,0	9,0	9,0	6,0	6,0	6,0	6,0	6,0
	60	17,5	11,0	11,0	11,0	7,0	7,0	7,0	7,0	7,0
	70	20,0	13,0	13,0	13,0	8,0	8,0	8,0	8,0	8,0
	80	22,5	14,5	14,5	14,5	9,0	9,0	9,0	9,0	9,0
≥ 100	22,5	14,5	14,5	14,5	9,0	9,0	9,0	9,0	9,0	
$N_{R,k,II}$ [kN]	—	—	—	—	—	—	—	—	—	—
d_{pd} [mm]	Ø5,0	Ø5,3			Ø5,5		Ø5,7			

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		Annex 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 with hexagon head and sealing washer ≥ Ø16 mm		

Annex 6:
ETA-13/0179, Annex 29

Material:
 Fastener: stainless Steel (1.4301, 1.4401, 1.4571) - EN 10088
 Washer: stainless Steel (1.4301) - EN 10088
 Component I: S280GD, S320GD, S350GD - EN 10346
 Component II: S235, S275, S355 - EN 10025-1
 S280GD, S320GD, S350GD - EN 10346

Predrill diameter: see Table below

Timber substructures:
no performance determined

t_{N1}, t_{N2}, d, D [mm]	t_{II} [mm]									
	1,50	2,00	2,50	3,00	4,00	5,00	6,00	8,00	≥ 10,0	
$V_{R,k}$ [kN]	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	1,54
	0,55	1,70	1,70	1,70	1,70	1,70	1,70	1,70	1,70	1,70
	0,60	1,83	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	1,90
	0,75	2,07	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	2,07
	1,00	2,07	2,07	2,07	2,07	2,07	2,07	2,07	2,07	2,07
$N_{R,k}$ [kN]	0,40	1,51	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	1,51
	0,55	1,59	1,91	1,91	1,91	1,91	1,91	1,91	1,91	1,91
	0,60	1,59	2,47	2,47	2,47	2,47	2,47	2,47	2,47	2,47
	0,63	1,59	2,80	2,80	2,80	2,80	2,80	2,80	2,80	2,80
	0,75	1,59	3,43	3,60	3,60	3,60	3,60	3,60	3,60	3,60
	0,88	1,59	3,43	3,80	3,80	3,80	3,80	3,80	3,80	3,80
	1,00	1,59	3,43	4,00	4,00	4,00	4,00	4,00	4,00	4,00
u [mm]	30	20,0	12,0	4,0	4,0	3,0	3,0	3,0	3,0	3,0
	40	25,0	13,5	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
	60	40,0	18,0	8,0	8,0	5,0	5,0	5,0	5,0	5,0
	70	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	40,0	30,0	15,0	15,0	8,5	8,5	8,5	8,5	8,5
	≥ 140	40,0	36,0	18,0	18,0	10,0	10,0	10,0	10,0	10,0
$N_{R,k,II}$ [kN]	1,59	3,43	4,63	5,82	8,23	8,23	8,23	8,23	8,23	
d_{pd} [mm]	Ø5,0	Ø5,3			Ø5,5		Ø5,7			

No additional regulations.

Self tapping screw

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
 with hexagon head and sealing washer $\geq \text{Ø}16$ mm

Annex 29