

DA

YDEEVNEERKLÆRING

i henhold til bilag III i Europa-Parlamentets og Rådets forordning (EU) nr. 305/2011 (Byggevareforordning)

Hilti sandwichpanelskruer S-CD C
Nr. Hilti-SF-DoP-010

1. Varetypens unikke identifikationskode: Hilti sandwichpanelskruer S-CD C

2. Type-, parti- eller serienummer eller anden form for angivelse, hvormed byggevaren kan identificeres som krævet i henhold til artikel 11, stk. 4: Type og parti fremgår af emballagen

3. Byggevarens tilsigtede anvendelse eller anvendelser i overensstemmelse med den gældende harmoniserede tekniske specifikation, som påtænkt af fabrikanten:

Generisk type og anvendelse	Selvborende fastgørelsesskruer til sandwichpaneler
Omfattet produktstørrelse	Skruediameter 5,5 mm
Grundmateriale og fastgjort materiale	Stål i henhold til EN 10025-1 og EN 10346
Fastgørelsesmateriale	Kulstofstål, kuffert med indsætningsstål og belagt
Belastning	Statisk og kvasistatisk (vindbelastning)

4. Fabrikantens navn, registrerede firmabetegnelse eller registrerede varemærke og kontaktadresse som krævet i henhold til artikel 11, stk. 5: Hilti Aktiengesellschaft, Business Unit Direct Fastening, 9494 Schaan, Fyrstedømmet Liechtenstein

5. I givet fald navn og kontaktadresse på den bemyndigede repræsentant, hvis mandat omfatter opgaverne i artikel 12, stk. 2: ikke anvendelig

6. Systemet eller systemerne til vurdering og kontrol af konstansen af byggevarens ydeevne, jf. bilag V: System 2+

7. Hvis ydeevnedeklarationen vedrører en byggevare, der er omfattet af en harmoniseret standard: ikke anvendelig

8. Hvis ydeevnedeklarationen vedrører en byggevare, for hvilken der er udstedt en europæisk teknisk vurdering: Deutsches Institut für Bautechnik (DIBt) har udstedt ETA-13/0179 på grundlag af EAD 330047-01-0602. Det bemyndigede organ MPA-Karlsruhe 0769 har udført tredjepartsopgaver under system 2+ og har udstedt overensstemmelsescertifikatet for produktionsstyringen 0769-CPR-VAS-00705.

9. Deklareret ydeevne/deklarerede ydeevner:

Vigtige egenskaber	Ydeevne	Harmoniseret teknisk specifikation
Karakteristisk trækstyrkemodstand $N_{R,k}$	Bilag 1-8 ETA-13/0179 (bilag 4-7, 12-15)	ETA 13/0179 EAD 330047-01-0602
Karakteristisk snitmodstand $V_{R,k}$		
Maks. tilladt skruehovedforskydning u		
Applikationsgrænser		
Reaktion ved brand	A1	

10. Ydeevnen for den byggevare, der er anført i pkt. 1 og 2, er i overensstemmelse med den erklærede ydeevne i pkt. 9. Denne præstationserklæring udstedes alene på den fabrikants ansvar, som anført i pkt. 4.

Underskrevet for fabrikanten og på dennes vegne af:

Lars Taenzer
Forretningsansvarlig Direct Fastening

Pierre Hohmeier
Kvalitetsansvarlig Screw Fastening

Hilti Aktiengesellschaft, Schaan, 01.05.2019

Annex 1:
ETA-13/0179, Annex 4

	Material: Fastener: carbon steel, case hardened and coated Washer: aluminium alloy EN AW-5754 - EN 485 Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346 Component II: S235, S275, S355, S420 - EN 10025-1, S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346																																																																																																																																																																																																																																																																																		
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Annex 2:
ETA-13/0179, Annex 5

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p> <p>Component II: S235, S275, S355, S420 - EN 10025-1 S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p>																																																																																																																																																																																																																																																																																			
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<td>2,20</td> <td>2,20</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,39</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,39</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,39</td> <td>2,86</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>1,39</td> <td>2,86</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,39</td> <td>2,86</td> <td>4,32</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>—</td> </tr> <tr> <td rowspan="6">u [mm]</td> <td>40</td> <td>4,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>—</td> </tr> <tr> <td>50</td> <td>5,0</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>—</td> </tr> <tr> <td>60</td> <td>6,0</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>—</td> </tr> <tr> <td>70</td> <td>7,0</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>—</td> </tr> <tr> <td>80</td> <td>8,0</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>—</td> </tr> <tr> <td>90</td> <td>9,0</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>—</td> </tr> <tr> <td>≥ 100</td> <td>10,0</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>—</td> </tr> <tr> <td>$N_{R,k,II}$ [kN]</td> <td>1,39</td> <td>2,86</td> <td>4,32</td> <td>5,79</td> <td>7,25</td> <td>8,71</td> <td>8,71</td> <td>8,71</td> <td>—</td> <td></td> </tr> </tbody> </table>	t_{N1}, t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]											3,50	4,00	4,50	5,00	—		$V_{R,k}$ [kN]	0,40	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	—	0,50	0,97	0,97	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	1,19	1,19	—	0,60	1,40	1,40	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	1,53	1,53	—	0,75	2,05	2,05	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	2,29	2,29	—	1,00	2,51	2,51	2,51	2,51	2,51	2,51	2,51	2,51	—	$N_{R,k}$ [kN]	0,40	1,39	1,53	1,53	1,53	1,53	1,53	1,53	1,53	—	0,50	1,39	1,79	1,79	1,79	1,79	1,79	1,79	1,79	—	0,55	1,39	2,20	2,20	2,20	2,20	2,20	2,20	2,20	—	0,60	1,39	2,61	2,61	2,61	2,61	2,61	2,61	2,61	—	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	4,15	4,15	4,15	4,15	4,15	—	1,00	1,39	2,86	4,32	4,42	4,42	4,42	4,42	4,42	—	u [mm]	40	4,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	—	50	5,0	2,8	2,8	2,8	2,8	2,8	2,8	2,8	—	60	6,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	—	70	7,0	4,1	4,1	4,1	4,1	4,1	4,1	4,1	—	80	8,0	4,7	4,7	4,7	4,7	4,7	4,7	4,7	—	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	5,3	—	≥ 100	10,0	5,8	5,8	5,8	5,8	5,8	5,8	5,8	—	$N_{R,k,II}$ [kN]	1,39	2,86	4,32	5,79	7,25	8,71	8,71	8,71	—		<p>No additional regulations.</p>									
t_{N1}, t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]																																																																																																																																																																																																																																																																															
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	1,00	2,51	2,51	2,51	2,51	2,51	2,51	2,51	2,51	—																																																																																																																																																																																																																																																																										
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	0,50	1,39	1,79	1,79	1,79	1,79	1,79	1,79	1,79	—																																																																																																																																																																																																																																																																										
	0,55	1,39	2,20	2,20	2,20	2,20	2,20	2,20	2,20	—																																																																																																																																																																																																																																																																										
	0,60	1,39	2,61	2,61	2,61	2,61	2,61	2,61	2,61	—																																																																																																																																																																																																																																																																										
	0,63	1,39	2,86	2,86	2,86	2,86	2,86	2,86	2,86	—																																																																																																																																																																																																																																																																										
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	70	7,0	4,1	4,1	4,1	4,1	4,1	4,1	4,1	—																																																																																																																																																																																																																																																																										
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<p>Hilti S-CDH 63 C 5,5 x L Hilti S-CDH 73 C 5,5 x L with hexagon head and sealing washer $\geq \text{Ø}19$ mm</p>																																																																																																																																																																																																																																																																																				
Annex 5																																																																																																																																																																																																																																																																																				

Annex 3:
ETA-13/0179, Annex 6

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p> <p>Component II: S235, S275, S355, S420 - EN 10025-1 S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p>																																																																																																																																																																																																																																																																																			
	<p>Drilling capacity: $\Sigma t_i \leq 6,00$ mm</p>																																																																																																																																																																																																																																																																																			
	<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th>t_{N1}, t_{N2}, d, D [mm]</th> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th colspan="5">t_{II} [mm]</th> <th></th> </tr> <tr> <th></th> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th>3,50</th> <th>4,00</th> <th>4,50</th> <th>5,00</th> <th>—</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="8">$V_{R,k}$ [kN]</td> <td>0,40</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>—</td> </tr> <tr> <td>0,63</td> 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t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]							1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	—		$V_{R,k}$ [kN]	0,40	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	—	0,50	0,97	0,97	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	1,19	1,19	—	0,60	1,40	1,40	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	1,53	1,53	—	0,75	2,05	2,05	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	2,29	2,29	—	1,00	2,51	2,51	2,51	2,51	2,51	2,51	2,51	2,51	—	$N_{R,k}$ [kN]	0,40	1,39	1,40	1,40	1,40	1,40	1,40	1,40	1,40	—	0,50	1,39	1,63	1,63	1,63	1,63	1,63	1,63	1,63	—	0,55	1,39	2,03	2,03	2,03	2,03	2,03	2,03	2,03	—	0,60	1,39	2,43	2,43	2,43	2,43	2,43	2,43	2,43	—	0,63	1,39	2,68	2,68	2,68	2,68	2,68	2,68	2,68	—	0,75	1,39	2,86	3,64	3,64	3,64	3,64	3,64	3,64	—	0,88	1,39	2,86	4,04	4,04	4,04	4,04	4,04	4,04	—	1,00	1,39	2,86	4,32	4,41	4,41	4,41	4,41	4,41	—	u [mm]	40	4,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	—	50	5,0	2,8	2,8	2,8	2,8	2,8	2,8	2,8	—	60	6,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	—	70	7,0	4,1	4,1	4,1	4,1	4,1	4,1	4,1	—	80	8,0	4,7	4,7	4,7	4,7	4,7	4,7	4,7	—	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	5,3	—	≥ 100	10,0	5,8	5,8	5,8	5,8	5,8	5,8	5,8	—	$N_{R,k,II}$ [kN]	1,39	2,86	4,32	5,79	7,25	8,71	8,71	8,71	—		<p>No additional regulations.</p>									
t_{N1}, t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]																																																																																																																																																																																																																																																																															
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Annex 6																																																																																																																																																																																																																																																																																				

Annex 4:
ETA-13/0179, Annex 7

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p> <p>Component II: S235, S275, S355, S420 - EN 10025-1 S280GD, S320GD, S350GD, S390GD, S420GD, S450GD - EN 10346</p>																																																																																																																																																																																																																																																																																			
	<p>Drilling capacity: $\Sigma t_i \leq 6,00$ mm</p>																																																																																																																																																																																																																																																																																			
	<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th>t_{N1}, t_{N2}, d, D [mm]</th> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th colspan="5">t_{II} [mm]</th> <th></th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <th>3,50</th> <th>4,00</th> <th>4,50</th> <th>5,00</th> <th>—</th> <td></td> </tr> </thead> <tbody> <tr> <td rowspan="8">$V_{R,k}$ [kN]</td> <td>0,40</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>0,79</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>0,97</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>1,19</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>1,40</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,53</td> 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<td>2,20</td> <td>2,20</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,39</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>2,61</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,39</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>2,86</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,39</td> <td>2,86</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>3,85</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>1,39</td> <td>2,86</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>4,15</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,39</td> <td>2,86</td> <td>4,32</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>—</td> </tr> <tr> <td rowspan="6">u [mm]</td> <td>40</td> <td>4,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>2,0</td> <td>—</td> </tr> <tr> <td>50</td> <td>5,0</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>2,8</td> <td>—</td> </tr> <tr> <td>60</td> <td>6,0</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>3,5</td> <td>—</td> </tr> <tr> <td>70</td> <td>7,0</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>4,1</td> <td>—</td> </tr> <tr> <td>80</td> <td>8,0</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>4,7</td> <td>—</td> </tr> <tr> <td>90</td> <td>9,0</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>5,3</td> <td>—</td> </tr> <tr> <td>≥ 100</td> <td>10,0</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>5,8</td> <td>—</td> </tr> <tr> <td>$N_{R,k,II}$ [kN]</td> <td>1,39</td> <td>2,86</td> <td>4,32</td> <td>5,79</td> <td>7,25</td> <td>8,71</td> <td>8,71</td> <td>8,71</td> <td>—</td> <td></td> </tr> </tbody> </table>	t_{N1}, t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]											3,50	4,00	4,50	5,00	—		$V_{R,k}$ [kN]	0,40	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	—	0,50	0,97	0,97	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	1,19	1,19	—	0,60	1,40	1,40	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	1,53	1,53	—	0,75	2,05	2,05	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	2,29	2,29	—	1,00	2,51	2,51	2,51	2,51	2,51	2,51	2,51	2,51	—	$N_{R,k}$ [kN]	0,40	1,39	1,53	1,53	1,53	1,53	1,53	1,53	1,53	—	0,50	1,39	1,79	1,79	1,79	1,79	1,79	1,79	1,79	—	0,55	1,39	2,20	2,20	2,20	2,20	2,20	2,20	2,20	—	0,60	1,39	2,61	2,61	2,61	2,61	2,61	2,61	2,61	—	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	4,15	4,15	4,15	4,15	4,15	—	1,00	1,39	2,86	4,32	4,42	4,42	4,42	4,42	4,42	—	u [mm]	40	4,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	—	50	5,0	2,8	2,8	2,8	2,8	2,8	2,8	2,8	—	60	6,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	—	70	7,0	4,1	4,1	4,1	4,1	4,1	4,1	4,1	—	80	8,0	4,7	4,7	4,7	4,7	4,7	4,7	4,7	—	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	5,3	—	≥ 100	10,0	5,8	5,8	5,8	5,8	5,8	5,8	5,8	—	$N_{R,k,II}$ [kN]	1,39	2,86	4,32	5,79	7,25	8,71	8,71	8,71	—		<p>No additional regulations.</p>									
t_{N1}, t_{N2}, d, D [mm]	1,50	2,00	2,50	3,00	t_{II} [mm]																																																																																																																																																																																																																																																																															
					3,50	4,00	4,50	5,00	—																																																																																																																																																																																																																																																																											
$V_{R,k}$ [kN]	0,40	0,79	0,79	0,79	0,79	0,79	0,79	0,79	0,79	—																																																																																																																																																																																																																																																																										
	0,50	0,97	0,97	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	1,19	1,19	—																																																																																																																																																																																																																																																																										
	0,60	1,40	1,40	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	1,53	1,53	—																																																																																																																																																																																																																																																																										
	0,75	2,05	2,05	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	2,29	2,29	—																																																																																																																																																																																																																																																																										
	1,00	2,51	2,51	2,51	2,51	2,51	2,51	2,51	2,51	—																																																																																																																																																																																																																																																																										
$N_{R,k}$ [kN]	0,40	1,39	1,53	1,53	1,53	1,53	1,53	1,53	1,53	—																																																																																																																																																																																																																																																																										
	0,50	1,39	1,79	1,79	1,79	1,79	1,79	1,79	1,79	—																																																																																																																																																																																																																																																																										
	0,55	1,39	2,20	2,20	2,20	2,20	2,20	2,20	2,20	—																																																																																																																																																																																																																																																																										
	0,60	1,39	2,61	2,61	2,61	2,61	2,61	2,61	2,61	—																																																																																																																																																																																																																																																																										
	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	4,15	4,15	4,15	4,15	4,15	—																																																																																																																																																																																																																																																																										
	1,00	1,39	2,86	4,32	4,42	4,42	4,42	4,42	4,42	—																																																																																																																																																																																																																																																																										
u [mm]	40	4,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	—																																																																																																																																																																																																																																																																										
	50	5,0	2,8	2,8	2,8	2,8	2,8	2,8	2,8	—																																																																																																																																																																																																																																																																										
	60	6,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	—																																																																																																																																																																																																																																																																										
	70	7,0	4,1	4,1	4,1	4,1	4,1	4,1	4,1	—																																																																																																																																																																																																																																																																										
	80	8,0	4,7	4,7	4,7	4,7	4,7	4,7	4,7	—																																																																																																																																																																																																																																																																										
	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	5,3	—																																																																																																																																																																																																																																																																										
≥ 100	10,0	5,8	5,8	5,8	5,8	5,8	5,8	5,8	—																																																																																																																																																																																																																																																																											
$N_{R,k,II}$ [kN]	1,39	2,86	4,32	5,79	7,25	8,71	8,71	8,71	—																																																																																																																																																																																																																																																																											
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 $\geq \text{Ø}19$ mm																																																																																																																																																																																																																																																																																				
Annex 7																																																																																																																																																																																																																																																																																				

Annex 5:
ETA-13/0179, Annex 12

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD - EN 10346</p> <p>Component II: S235, S275, S355 - EN 10025-1 S280GD, S320GD, S350GD - EN 10346</p>									
	<p>Drilling capacity: $\Sigma t_i \leq 15,00$ mm</p>									
	<p>Timber substructures: no performance determined</p>									
	t_{N1}, t_{N2}, d, D [mm]	4,00	5,00	6,00	7,00	8,00	$\geq 10,0$	—	—	—
$V_{R,k}$ [kN]	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	—	—	—
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—
	0,60	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	—	—	—
$N_{R,k}$ [kN]	0,40	1,40	1,40	1,40	1,40	1,40	1,40	—	—	—
	0,50	1,63	1,63	1,63	1,63	1,63	1,63	—	—	—
	0,55	2,03	2,03	2,03	2,03	2,03	2,03	—	—	—
	0,60	2,43	2,43	2,43	2,43	2,43	2,43	—	—	—
	0,63	2,68	2,68	2,68	2,68	2,68	2,68	—	—	—
	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	—	—	—
u [mm]	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	—	—	—
	60	4,0	4,0	4,0	4,0	4,0	4,0	—	—	—
	70	4,7	4,7	4,7	4,7	4,7	4,7	—	—	—
	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	—	—	—
$N_{R,k,II}$ [kN]	7,94	7,94	7,94	7,94	7,94	7,94	7,94	—	—	—
No additional regulations.										
Self drilling screw										Annex 12
Hilti S-CDH 55 C 5,5 x L with hexagon head and sealing washer Ø16 mm										

Annex 6:
ETA-13/0179, Annex 13

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD - EN 10346</p> <p>Component II: S235, S275, S355 - EN 10025-1 S280GD, S320GD, S350GD - EN 10346</p>									
	<p>Drilling capacity: $\Sigma t_i \leq 15,00$ mm</p>									
	<p>Timber substructures: no performance determined</p>									
	t_{N1}, t_{N2}, d, D [mm]	4,00	5,00	6,00	7,00	8,00	$\geq 10,0$	—	—	—
$V_{R,k}$ [kN]	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	—	—	—
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—
	0,60	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	—	—	—
$N_{R,k}$ [kN]	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	—	—	—
	0,55	2,20	2,20	2,20	2,20	2,20	2,20	—	—	—
	0,60	2,61	2,61	2,61	2,61	2,61	2,61	—	—	—
	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	—	—	—
u [mm]	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	—	—	—
	60	4,0	4,0	4,0	4,0	4,0	4,0	—	—	—
	70	4,7	4,7	4,7	4,7	4,7	4,7	—	—	—
	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	—	—	—
$N_{R,k,II}$ [kN]	7,94	7,94	7,94	7,94	7,94	7,94	7,94	—	—	—
No additional regulations.										
Self drilling screw										Annex 13
Hilti S-CDH 65 C 5,5 x L Hilti S-CDH 75 C 5,5 x L with hexagon head and sealing washer $\geq \text{Ø}19$ mm										

Annex 7:
ETA-13/0179, Annex 14

	<p>Material: Fastener: carbon steel, case hardened and coated Washer: aluminium alloy EN AW-5754 - EN 485 Component I: S280GD, S320GD, S350GD - EN 10346 Component II: S235, S275, S355 - EN 10025-1 S280GD, S320GD, S350GD - EN 10346</p>									
	<p>Drilling capacity: $\Sigma t_i \leq 15,00$ mm</p>									
	<p>Timber substructures: no performance determined</p>									
	t_{N1}, t_{N2}, d, D [mm]	4,00	5,00	6,00	7,00	8,00	$\geq 10,0$	—	—	—
$V_{R,k}$ [kN]	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	—	—	—
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—
	0,60	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	—	—	—
$N_{R,k}$ [kN]	0,40	1,40	1,40	1,40	1,40	1,40	1,40	—	—	—
	0,50	1,63	1,63	1,63	1,63	1,63	1,63	—	—	—
	0,55	2,03	2,03	2,03	2,03	2,03	2,03	—	—	—
	0,60	2,43	2,43	2,43	2,43	2,43	2,43	—	—	—
	0,63	2,68	2,68	2,68	2,68	2,68	2,68	—	—	—
	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	—	—	—
u [mm]	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	—	—	—
	60	4,0	4,0	4,0	4,0	4,0	4,0	—	—	—
	70	4,7	4,7	4,7	4,7	4,7	4,7	—	—	—
	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	—	—	—
$N_{R,k,II}$ [kN]	7,94	7,94	7,94	7,94	7,94	7,94	7,94	—	—	—
No additional regulations.										
Self drilling screw										Annex 14
Hilti S-CD 55 C 5,5 x L with hexagon head and sealing washer $\varnothing 16$ mm										

Annex 8:
ETA-13/0179, Annex 15

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and coated</p> <p>Washer: aluminium alloy EN AW-5754 - EN 485</p> <p>Component I: S280GD, S320GD, S350GD - EN 10346</p> <p>Component II: S235, S275, S355 - EN 10025-1 S280GD, S320GD, S350GD - EN 10346</p>																																																																																																																																																																																																																																																																													
	<p>Drilling capacity: $\Sigma t_i \leq 15,00$ mm</p>																																																																																																																																																																																																																																																																													
	<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																													
<table border="1"> <thead> <tr> <th rowspan="2">t_{N1}, t_{N2}, d, D [mm]</th> <th colspan="6">t_{fi} [mm]</th> <th rowspan="2">—</th> <th rowspan="2">—</th> <th rowspan="2">—</th> </tr> <tr> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>7,00</th> <th>8,00</th> <th>$\geq 10,0$</th> </tr> </thead> <tbody> <tr> <td rowspan="8">$V_{R,k}$ [kN]</td> <td>0,40</td><td>0,80</td><td>0,80</td><td>0,80</td><td>0,80</td><td>0,80</td><td>0,80</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,50</td><td>0,97</td><td>0,97</td><td>0,97</td><td>0,97</td><td>0,97</td><td>0,97</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>1,19</td><td>1,19</td><td>1,19</td><td>1,19</td><td>1,19</td><td>1,19</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,60</td><td>1,40</td><td>1,40</td><td>1,40</td><td>1,40</td><td>1,40</td><td>1,40</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>2,05</td><td>2,05</td><td>2,05</td><td>2,05</td><td>2,05</td><td>2,05</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,88</td><td>2,29</td><td>2,29</td><td>2,29</td><td>2,29</td><td>2,29</td><td>2,29</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>2,51</td><td>2,51</td><td>2,51</td><td>2,51</td><td>2,51</td><td>2,51</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="8">$N_{R,k}$ [kN]</td> <td>0,40</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>1,53</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,50</td><td>1,79</td><td>1,79</td><td>1,79</td><td>1,79</td><td>1,79</td><td>1,79</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>2,20</td><td>2,20</td><td>2,20</td><td>2,20</td><td>2,20</td><td>2,20</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,60</td><td>2,61</td><td>2,61</td><td>2,61</td><td>2,61</td><td>2,61</td><td>2,61</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>2,86</td><td>2,86</td><td>2,86</td><td>2,86</td><td>2,86</td><td>2,86</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>3,85</td><td>3,85</td><td>3,85</td><td>3,85</td><td>3,85</td><td>3,85</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,88</td><td>4,15</td><td>4,15</td><td>4,15</td><td>4,15</td><td>4,15</td><td>4,15</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>4,42</td><td>4,42</td><td>4,42</td><td>4,42</td><td>4,42</td><td>4,42</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="6">u [mm]</td> <td>40</td><td>2,0</td><td>2,0</td><td>2,0</td><td>2,0</td><td>2,0</td><td>2,0</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>50</td><td>3,0</td><td>3,0</td><td>3,0</td><td>3,0</td><td>3,0</td><td>3,0</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>60</td><td>4,0</td><td>4,0</td><td>4,0</td><td>4,0</td><td>4,0</td><td>4,0</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>70</td><td>4,7</td><td>4,7</td><td>4,7</td><td>4,7</td><td>4,7</td><td>4,7</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>80</td><td>5,3</td><td>5,3</td><td>5,3</td><td>5,3</td><td>5,3</td><td>5,3</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>90</td><td>6,0</td><td>6,0</td><td>6,0</td><td>6,0</td><td>6,0</td><td>6,0</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>≥ 100</td><td>6,7</td><td>6,7</td><td>6,7</td><td>6,7</td><td>6,7</td><td>6,7</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>$N_{R,k,II}$ [kN]</td> <td>7,94</td><td>7,94</td><td>7,94</td><td>7,94</td><td>7,94</td><td>7,94</td><td>7,94</td><td>—</td><td>—</td><td>—</td> </tr> </tbody> </table>											t_{N1}, t_{N2}, d, D [mm]	t_{fi} [mm]						—	—	—	4,00	5,00	6,00	7,00	8,00	$\geq 10,0$	$V_{R,k}$ [kN]	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	—	—	—	0,55	1,19	1,19	1,19	1,19	1,19	1,19	—	—	—	0,60	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	—	—	—	$N_{R,k}$ [kN]	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	—	—	—	0,55	2,20	2,20	2,20	2,20	2,20	2,20	—	—	—	0,60	2,61	2,61	2,61	2,61	2,61	2,61	—	—	—	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	—	—	—	u [mm]	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	—	—	—	60	4,0	4,0	4,0	4,0	4,0	4,0	—	—	—	70	4,7	4,7	4,7	4,7	4,7	4,7	—	—	—	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	—	—	—	$N_{R,k,II}$ [kN]	7,94	7,94	7,94	7,94	7,94	7,94	7,94	—	—	—
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