

EN

## DECLARATION OF PERFORMANCE

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

Hilti Sandwich panel screws S-CD C  
No. Hilti-SF-DoP-010

- 1. Unique identification code of the product-type:** Hilti fastening screws for sandwich panels S-CD C
- 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-drilling fastening screws for sandwich panels
Product size covered	Screw diameter 5.5 mm
Base and fastened material	Steel according to EN 10025-1 and EN 10346
Fastener material	Carbon steel, case hardened and coated
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:** Deutsches Institut für Bautechnik (DIBt) issued ETA-13/0179 on the basis of EAD 330047-01-0602. The notified body MPA-Karlsruhe 0769 performed third party tasks under system 2+ and issued the certificate of conformity of the production control 0769-CPR-VAS-00705.

**9. Declared performance:**

Essential characteristic	Performance	Harmonized technical specification
Characteristic tension resistance $N_{R,k}$	Annex 1-8 ETA-13/0179 (Annex 4-7, 12-15)	ETA 13/0179 EAD 330047-01-0602
Characteristic shear resistance $V_{R,k}$		
Max. allowed screw head displacement $u$		
Application limits		
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, 01.05.2019

Annex 1:  
ETA-13/0179, Annex 4

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 6,00</math> mm</p>																																																																																																																																																																																																																																															
	<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																															
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</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> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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>—</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>—</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>—</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>—</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>1,53</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>2,05</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>2,29</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>2,51</td> <td>—</td> </tr> <tr> <td rowspan="8"><math>N_{R,k}</math> [kN]</td> <td>0,40</td> <td>1,39</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>0,50</td> <td>1,39</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,39</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,39</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,39</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,39</td> <td>2,86</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>1,39</td> <td>2,86</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,39</td> <td>2,86</td> <td>4,32</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>—</td> </tr> <tr> <td rowspan="6"><math>u</math> [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>—</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>—</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>—</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>—</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>—</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>—</td> </tr> <tr> <td><math>\geq 100</math></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>—</td> </tr> <tr> <td><math>N_{R,k,II}</math> [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> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [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	—	0,50	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	—	0,60	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	—	0,75	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	—	1,00	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	—	0,50	1,39	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	—	0,60	1,39	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	—	0,75	1,39	2,86	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	—	1,00	1,39	2,86	4,32	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	—	50	5,0	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	—	70	7,0	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	—	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	—	$\geq 100$	10,0	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	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	—																																																																																																																																																																																																																																							
	0,50	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	—																																																																																																																																																																																																																																							
	0,60	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	—																																																																																																																																																																																																																																							
	0,75	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	—																																																																																																																																																																																																																																							
	1,00	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	—																																																																																																																																																																																																																																							
	0,50	1,39	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	—																																																																																																																																																																																																																																							
	0,60	1,39	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	—																																																																																																																																																																																																																																							
	0,75	1,39	2,86	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	—																																																																																																																																																																																																																																							
	1,00	1,39	2,86	4,32	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	—																																																																																																																																																																																																																																							
	50	5,0	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	—																																																																																																																																																																																																																																							
	70	7,0	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	—																																																																																																																																																																																																																																							
	90	9,0	5,3	5,3	5,3	5,3	5,3	5,3	—																																																																																																																																																																																																																																							
$\geq 100$	10,0	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										Annex 4																																																																																																																																																																																																																																						
Hilti S-CDH 53 C 5,5 x L with hexagon head and sealing washer Ø16 mm																																																																																																																																																																																																																																																

Annex 2:  
ETA-13/0179, Annex 5

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 6,00</math> mm</p>																																																																																																																																																																																																																																																																																																																																																																																
	<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																																																																																																																																																																
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th colspan="5"><math>t_i</math> [mm]</th> <th>3,50</th> <th>4,00</th> <th>4,50</th> <th>5,00</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [kN]</td> <td>0,40</td> <td>0,79</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>0,97</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,19</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,40</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,53</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>2,05</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,29</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,51</td> <td>—</td> </tr> <tr> <td rowspan="8"><math>N_{R,k}</math> [kN]</td> <td>0,40</td> <td>1,39</td> <td>1,53</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>1,39</td> <td>1,79</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,39</td> <td>2,20</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>1,39</td> <td>2,61</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,39</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>—</td> </tr> <tr> <td>0,88</td> <td>1,39</td> <td>2,86</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>4,42</td> <td>4,42</td> <td>4,42</td> <td>4,42</td> <td>—</td> </tr> <tr> <td rowspan="6"><math>u</math> [mm]</td> <td>40</td> <td>4,0</td> <td>2,0</td> <td>—</td> </tr> <tr> <td>50</td> <td>5,0</td> <td>2,8</td> <td>—</td> </tr> <tr> <td>60</td> <td>6,0</td> <td>3,5</td> <td>—</td> </tr> <tr> <td>70</td> <td>7,0</td> <td>4,1</td> <td>—</td> </tr> <tr> <td>80</td> <td>8,0</td> <td>4,7</td> <td>—</td> </tr> <tr> <td>90</td> <td>9,0</td> <td>5,3</td> <td>—</td> </tr> <tr> <td><math>\geq 100</math></td> <td>10,0</td> <td>5,8</td> <td>—</td> </tr> <tr> <td><math>N_{R,k,II}</math> [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>8,71</td> <td>8,71</td> <td>8,71</td> <td>8,71</td> <td>—</td> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [mm]	1,50	2,00	2,50	3,00	$t_i$ [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	0,79	0,79	0,79	0,79	—	0,50	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	—	0,55	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	5,3	5,3	5,3	5,3	—	$\geq 100$	10,0	5,8	5,8	5,8	5,8	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	8,71	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	$t_i$ [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	0,79	0,79	0,79	0,79	—																																																																																																																																																																																																																																																																																																																																																																			
	0,50	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	—																																																																																																																																																																																																																																																																																																																																																																			
	0,55	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	5,3	5,3	5,3	5,3	—																																																																																																																																																																																																																																																																																																																																																																			
$\geq 100$	10,0	5,8	5,8	5,8	5,8	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	8,71	8,71	8,71	8,71	—																																																																																																																																																																																																																																																																																																																																																																				
Self drilling screw																																																																																																																																																																																																																																																																																																																																																																																	
<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 <math>\geq \varnothing 19</math> mm</p>																																																																																																																																																																																																																																																																																																																																																																																	
Annex 5																																																																																																																																																																																																																																																																																																																																																																																	

Annex 3:  
ETA-13/0179, Annex 6

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 6,00</math> mm</p>																																																																																																																																																																																																																																																																																	
	<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2"><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th colspan="10"><math>t_i</math> [mm]</th> </tr> <tr> <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 colspan="2">—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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><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>1,53</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>2,05</td><td>2,05</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>2,29</td><td>2,29</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>2,51</td><td>2,51</td><td>—</td> </tr> <tr> <td rowspan="8"><math>N_{R,k}</math> [kN]</td> <td>0,40</td><td>1,39</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>0,50</td><td>1,39</td><td>1,63</td><td>1,63</td><td>1,63</td><td>1,63</td><td>1,63</td><td>1,63</td><td>1,63</td><td>—</td> </tr> <tr> <td>0,55</td><td>1,39</td><td>2,03</td><td>2,03</td><td>2,03</td><td>2,03</td><td>2,03</td><td>2,03</td><td>2,03</td><td>—</td> </tr> <tr> <td>0,60</td><td>1,39</td><td>2,43</td><td>2,43</td><td>2,43</td><td>2,43</td><td>2,43</td><td>2,43</td><td>2,43</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,39</td><td>2,68</td><td>2,68</td><td>2,68</td><td>2,68</td><td>2,68</td><td>2,68</td><td>2,68</td><td>—</td> </tr> <tr> <td>0,75</td><td>1,39</td><td>2,86</td><td>3,64</td><td>3,64</td><td>3,64</td><td>3,64</td><td>3,64</td><td>3,64</td><td>—</td> </tr> <tr> <td>0,88</td><td>1,39</td><td>2,86</td><td>4,04</td><td>4,04</td><td>4,04</td><td>4,04</td><td>4,04</td><td>4,04</td><td>—</td> </tr> <tr> <td>1,00</td><td>1,39</td><td>2,86</td><td>4,32</td><td>4,41</td><td>4,41</td><td>4,41</td><td>4,41</td><td>4,41</td><td>—</td> </tr> <tr> <td rowspan="6"><math>u</math> [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><math>\geq 100</math></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><math>N_{R,k,II}</math> [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> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [mm]	$t_i$ [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	—	$\geq 100$	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]		$t_i$ [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	—																																																																																																																																																																																																																																																																								
$\geq 100$	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 53 C 5,5 x L with hexagon head and sealing washer Ø16 mm																																																																																																																																																																																																																																																																																		
Annex 6																																																																																																																																																																																																																																																																																		

Annex 4:  
ETA-13/0179, Annex 7

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 6,00</math> mm</p>																																																																																																																																																																																																																																																																																			
<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																																																																				
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th colspan="5"><math>t_i</math> [mm]</th> <th>—</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></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"><math>V_{R,k}</math> [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> <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>1,53</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>2,05</td> <td>2,05</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>2,29</td> <td>2,29</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>2,51</td> <td>2,51</td> <td>—</td> </tr> <tr> <td rowspan="8"><math>N_{R,k}</math> [kN]</td> <td>0,40</td> <td>1,39</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>1,53</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>1,39</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>1,79</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,39</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>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"><math>u</math> [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><math>\geq 100</math></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><math>N_{R,k,II}</math> [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	$t_i$ [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	—	$\geq 100$	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	$t_i$ [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	—																																																																																																																																																																																																																																																																										
$\geq 100$	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 $\geq \varnothing 19$ mm																																																																																																																																																																																																																																																																																				
Annex 7																																																																																																																																																																																																																																																																																				

Annex 5:  
ETA-13/0179, Annex 12

	<p><u>Material:</u></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><u>Drilling capacity:</u> <math>\Sigma t_i \leq 15,00</math> mm</p>																																																																																																																																																																																																																																														
	<p><u>Timber substructures:</u></p> <p>no performance determined</p>																																																																																																																																																																																																																																														
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>7,00</th> <th>8,00</th> <th><math>\geq 10,0</math></th> <th>—</th> <th>—</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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>—</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>—</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>—</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>—</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>—</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>—</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>—</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>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="8"><math>N_{R,k}</math> [kN]</td> <td>0,40</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>0,50</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="7"><math>u</math> [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>—</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>—</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>—</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>—</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>—</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>—</td> <td>—</td> <td>—</td> </tr> <tr> <td><math>\geq 100</math></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><math>N_{R,k,II}</math> [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>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [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	—	—	—	0,50	0,97	0,97	0,97	0,97	0,97	—	—	—	0,55	1,19	1,19	1,19	1,19	1,19	—	—	—	0,60	1,40	1,40	1,40	1,40	1,40	—	—	—	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	—	—	—	$N_{R,k}$ [kN]	0,40	1,40	1,40	1,40	1,40	1,40	—	—	—	0,50	1,63	1,63	1,63	1,63	1,63	—	—	—	0,55	2,03	2,03	2,03	2,03	2,03	—	—	—	0,60	2,43	2,43	2,43	2,43	2,43	—	—	—	0,63	2,68	2,68	2,68	2,68	2,68	—	—	—	0,75	3,64	3,64	3,64	3,64	3,64	—	—	—	0,88	4,04	4,04	4,04	4,04	4,04	—	—	—	1,00	4,41	4,41	4,41	4,41	4,41	—	—	—	$u$ [mm]	40	2,0	2,0	2,0	2,0	2,0	—	—	—	50	3,0	3,0	3,0	3,0	3,0	—	—	—	60	4,0	4,0	4,0	4,0	4,0	—	—	—	70	4,7	4,7	4,7	4,7	4,7	—	—	—	80	5,3	5,3	5,3	5,3	5,3	—	—	—	90	6,0	6,0	6,0	6,0	6,0	—	—	—	$\geq 100$	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	—	—	—	<p>No additional regulations.</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	—	—	—																																																																																																																																																																																																																																						
	0,50	0,97	0,97	0,97	0,97	0,97	—	—	—																																																																																																																																																																																																																																						
	0,55	1,19	1,19	1,19	1,19	1,19	—	—	—																																																																																																																																																																																																																																						
	0,60	1,40	1,40	1,40	1,40	1,40	—	—	—																																																																																																																																																																																																																																						
	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	—	—	—																																																																																																																																																																																																																																						
$N_{R,k}$ [kN]	0,40	1,40	1,40	1,40	1,40	1,40	—	—	—																																																																																																																																																																																																																																						
	0,50	1,63	1,63	1,63	1,63	1,63	—	—	—																																																																																																																																																																																																																																						
	0,55	2,03	2,03	2,03	2,03	2,03	—	—	—																																																																																																																																																																																																																																						
	0,60	2,43	2,43	2,43	2,43	2,43	—	—	—																																																																																																																																																																																																																																						
	0,63	2,68	2,68	2,68	2,68	2,68	—	—	—																																																																																																																																																																																																																																						
	0,75	3,64	3,64	3,64	3,64	3,64	—	—	—																																																																																																																																																																																																																																						
	0,88	4,04	4,04	4,04	4,04	4,04	—	—	—																																																																																																																																																																																																																																						
	1,00	4,41	4,41	4,41	4,41	4,41	—	—	—																																																																																																																																																																																																																																						
$u$ [mm]	40	2,0	2,0	2,0	2,0	2,0	—	—	—																																																																																																																																																																																																																																						
	50	3,0	3,0	3,0	3,0	3,0	—	—	—																																																																																																																																																																																																																																						
	60	4,0	4,0	4,0	4,0	4,0	—	—	—																																																																																																																																																																																																																																						
	70	4,7	4,7	4,7	4,7	4,7	—	—	—																																																																																																																																																																																																																																						
	80	5,3	5,3	5,3	5,3	5,3	—	—	—																																																																																																																																																																																																																																						
	90	6,0	6,0	6,0	6,0	6,0	—	—	—																																																																																																																																																																																																																																						
	$\geq 100$	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	—	—	—																																																																																																																																																																																																																																						
Self drilling screw																																																																																																																																																																																																																																															
<p>Hilti S-CDH 55 C 5,5 x L with hexagon head and sealing washer <math>\varnothing 16</math> mm</p>								Annex 12																																																																																																																																																																																																																																							

Annex 6:  
ETA-13/0179, Annex 13

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 15,00</math> mm</p>																																																																																																																																																																																																																																																																						
	<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																																																						
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>7,00</th> <th>8,00</th> <th><math>\geq 10,0</math></th> <th>—</th> <th>—</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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"><math>N_{R,k}</math> [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="7"><math>u</math> [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><math>\geq 100</math></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><math>N_{R,k,II}</math> [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>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [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	—	—	—	$\geq 100$	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	—	—	—	<p>No additional regulations.</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	—	—	—																																																																																																																																																																																																																																																													
	$\geq 100$	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	—	—	—																																																																																																																																																																																																																																																														
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 $\geq \varnothing 19$ mm																																																																																																																																																																																																																																																																							

Annex 7:  
ETA-13/0179, Annex 14

	<p><u>Material:</u></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><u>Drilling capacity:</u> <math>\Sigma t_i \leq 15,00</math> mm</p>																																																																																																																																																																																																																																																														
<p><u>Timber substructures:</u></p> <p>no performance determined</p>																																																																																																																																																																																																																																																															
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>7,00</th> <th>8,00</th> <th><math>\geq 10,0</math></th> <th>—</th> <th>—</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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"><math>N_{R,k}</math> [kN]</td> <td>0,40</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> <td>—</td> <td>—</td> </tr> <tr> <td>0,50</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>1,63</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>2,03</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,60</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>2,43</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>2,68</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>3,64</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>4,04</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>4,41</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="6"><math>u</math> [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><math>\geq 100</math></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><math>N_{R,k,II}</math> [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]	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	—	—	—	$\geq 100$	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	—	—	—	
$t_{N1}, t_{N2}, d, D$ [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	—	—	—																																																																																																																																																																																																																																																					
$\geq 100$	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																																																																																																																																																																																																																																																															
Hilti S-CD 55 C 5,5 x L with hexagon head and sealing washer Ø16 mm								Annex 14																																																																																																																																																																																																																																																							

Annex 8:  
ETA-13/0179, Annex 15

	<p><b>Material:</b></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><b>Drilling capacity:</b> <math>\Sigma t_i \leq 15,00</math> mm</p>																																																																																																																																																																																																																																																												
	<p><b>Timber substructures:</b> no performance determined</p>																																																																																																																																																																																																																																																												
<table border="1"> <thead> <tr> <th><math>t_{N1}, t_{N2}, d, D</math> [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>7,00</th> <th>8,00</th> <th><math>\geq 10,0</math></th> <th>—</th> <th>—</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="8"><math>V_{R,k}</math> [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="7"><math>N_{R,k}</math> [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 rowspan="6"><math>u</math> [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><math>\geq 100</math></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><math>N_{R,k,II}</math> [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>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	$t_{N1}, t_{N2}, d, D$ [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	—	—	—	$u$ [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	—	—	—	$\geq 100$	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	—	—	—	<p>No additional regulations.</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	—	—	—																																																																																																																																																																																																																																																			
$u$ [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	—	—	—																																																																																																																																																																																																																																																			
$\geq 100$	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	—	—	—																																																																																																																																																																																																																																																				
Self drilling screw										Annex 15																																																																																																																																																																																																																																																			
Hilti S-CD 65 C 5,5 x L Hilti S-CD 75 C 5,5 x L with hexagon head and sealing washer $\geq \varnothing 19$ mm																																																																																																																																																																																																																																																													