

EL

ΔΗΛΩΣΗ ΕΠΙΔΟΣΕΩΝ

σύμφωνα με το Παράρτημα III του κανονισμού (ΕΕ) αριθ. 305/2011 (Κανονισμός Προϊόντων Δομικών Κατασκευών)

Αυτοδιάτρητες βίδες στερέωσης Hilti S-MD Z, S-MD C
αριθ. Hilti-SF-DoP-001

- Μοναδικός κωδικός ταυτοποίησης του τύπου του προϊόντος:** Αυτοδιάτρητες βίδες Hilti S-MD Z, S-MD C
- Τύπος, αριθμός παρτίδας ή σειράς ή οποιοδήποτε άλλο στοιχείο το οποίο επιτρέπει την ταυτοποίηση του προϊόντος δομικών κατασκευών, σύμφωνα με το Άρθρο 11(4):** Ο τύπος και ο αριθμός παρτίδας αναγράφονται στη συσκευασία
- Προβλεπόμενη χρήση ή χρήσεις του προϊόντος δομικών κατασκευών, σύμφωνα με την ισχύουσα εναρμονισμένη τεχνική προδιαγραφή, όπως προβλέπεται από τον κατασκευαστή:**

Γενικός τύπος και χρήση	Αυτοδιάτρητες βίδες στερέωσης για μεταλλικά στοιχεία και φύλλα
Καλυπτόμενη διάσταση προϊόντος	Διάμετρος βίδας 4,2 mm, 4,8 mm, 5,5 mm και 6,3 mm
Υλικό βάσης και στερεούμενο υλικό	Χάλυβας σύμφωνα με τα EN 10025-1 και EN 10346
Υλικό στοιχείου στερέωσης	Γαλβανισμένος ή επιστρωμένος, επιφανειακά σκληρυμμένος χάλυβας σύμφωνα με το EN 10084
Φόρτιση	Στατική και σχεδόν στατική (φορτία ανέμου)

- Όνομα, εμπορική επωνυμία ή κατατεθέν εμπορικό σήμα και διεύθυνση επικοινωνίας του κατασκευαστή, όπως προβλέπεται στο άρθρο 11 παράγραφος (5):** Hilti Aktiengesellschaft, Business Unit Direct Fastening, 9494 Schaan, Fürstentum Liechtenstein
- Όπου εφαρμόζεται, όνομα και διεύθυνση επικοινωνίας του εξουσιοδοτημένου αντιπροσώπου, η εντολή του οποίου καλύπτει τα καθήκοντα που προβλέπονται στο άρθρο 12 παράγραφος 2:** δεν εφαρμόζεται
- Σύστημα ή συστήματα αξιολόγησης και επαλήθευσης σταθερότητας επιδόσεων προϊόντος δομικών κατασκευών, όπως ορίζεται στο Παράρτημα V:** Σύστημα 2+
- Σε περίπτωση δήλωσης απόδοσης σχετικά με προϊόν του τομέα δομικών κατασκευών που καλύπτεται από εναρμονισμένο πρότυπο:** δ.ε.

- Σε περίπτωση δήλωσης επιδόσεων σχετικά με προϊόν δομικών κατασκευών για το οποίο έχει εκδοθεί ευρωπαϊκή τεχνική αξιολόγηση:**
Βάσει της ETA-10/0182 που εκδόθηκε με το EEA 330046-01-0602. Ο κοινοποιημένος οργανισμός MPA-Karlsruhe 0769 εκτέλεσε τα καθήκοντα εξωτερικού φορέα υπό το σύστημα 2+ και εξέδωσε το πιστοποιητικό συμμόρφωσης του συστήματος ελέγχου εργοστασιακής παραγωγής.

9. Δηλωθείσα(-ες) επίδοση(-εις):

Ουσιώδες χαρακτηριστικό	Επίδοση	Εναρμονισμένη τεχνική προδιαγραφή
Χαρακτηριστική εφελκυστική αντοχή $N_{R,k}$	Παράρτημα 1 - 20 ETA-10/0182 (Παράρτημα 10 - 29)	ETA-10/0182 EEA 330046-01-0602
Χαρακτηριστική διατμητική αντοχή $V_{R,k}$		
Τύποι σύνδεσης		
Όρια εφαρμογής		
Αντίδραση σε φωτιά	A1	

- Η απόδοση του προϊόντος που προσδιορίζεται στα σημεία 1 και 2 συμμορφώνεται με την δηλωθείσα απόδοση στο σημείο 9. Η παρούσα δήλωση απόδοσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή που προσδιορίζεται στο σημείο 4.**

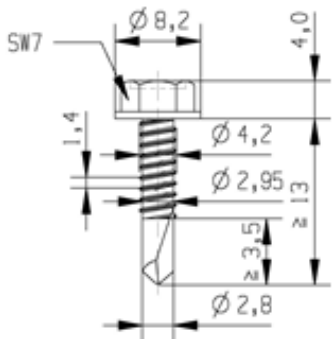
Υπογράφεται για λογαριασμό και εκ μέρους του κατασκευαστή από:

Lars Taenzer
Επικεφαλής Επιχειρησιακής Μονάδας Απευθείας Στερέωσης

Pierre Hohmeier
Επικεφαλής Ποιότητας Στερέωση με Βίδες

Hilti Aktiengesellschaft, Schaan, 03.05.2019


Annex 1:
ETA-10/0182, Annex 10



Material:
Fastener: carbon steel, case hardened and galvanized or coated
Washer: none
Component I: S280GD, S320GD - EN 10346
Component II: S280GD, S320GD - EN 10346
S235 - EN 10025-1

Drilling capacity: $\Sigma t_i \leq 2,50$ mm

Timber substructures:
no performance determined



t [mm]	t _i [mm]								
	0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00	
V_{0,5} [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—
	0,63	1,50	—	2,00	—	2,50	—	2,60	ac
	0,75	1,70	—	2,10	—	2,80	—	3,00	—
	0,88	1,80	—	2,20	—	2,80	—	3,30	—
	1,00	1,90	—	2,40	—	3,00	—	3,60	—
	1,13	1,90	—	2,40	—	3,00	—	3,60	—
	1,25	1,90	—	2,40	—	3,00	—	3,60	—
	1,50	1,90	—	2,40	—	3,00	—	3,60	—
	1,75	1,90	—	2,40	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—
N_{0,5} [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—
	0,63	0,90	—	1,20	—	1,40	—	1,40	ac
	0,75	0,90	—	1,20	—	1,40	—	1,70	—
	0,88	0,90	—	1,20	—	1,40	—	1,90	—
	1,00	0,90	—	1,20	—	1,40	—	1,90	—
	1,13	0,90	—	1,20	—	1,40	—	1,90	—
	1,25	0,90	—	1,20	—	1,40	—	1,90	—
	1,50	0,90	—	1,20	—	1,40	—	1,90	—
	1,75	0,90	—	1,20	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—
M_{0,5} [Nm]	$\Sigma t_i \leq 1,25$ mm: 2 Nm				$\Sigma t_i > 1,25$ mm: 4 Nm				

No additional regulations.

Self drilling screw

Hilti S-MD 01 Z 4,2 x L
Hilti S-MD 01 C 4,2 x L
with hexagon head

Annex 10

Annex 2:
ETA-10/0182, Annex 11

	Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088 Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1																																																																																																																																																																																																																																																																						
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<table border="1"> <thead> <tr> <th>t [mm]</th> <th colspan="8">t_1 [mm]</th> </tr> <tr> <th></th> <th>0,63</th> <th>0,75</th> <th>0,88</th> <th>1,00</th> <th>1,13</th> <th>1,25</th> <th>1,50</th> <th>2,00</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="11">$V_{k,s}$ [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>3,10 ac</td> </tr> <tr> <td>0,75</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>3,80 a</td> </tr> <tr> <td>0,88</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>4,00 —</td> </tr> <tr> <td>1,00</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>4,40 —</td> </tr> <tr> <td>1,13</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>4,40 —</td> </tr> <tr> <td>1,25</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>4,40 —</td> </tr> <tr> <td>1,50</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>2,40</td><td>—</td><td>3,00</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>1,40</td><td>—</td><td>1,80</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="11">$N_{k,s}$ [kN]</td> <td>0,50</td><td>0,49</td><td>—</td><td>0,65</td><td>—</td><td>0,76</td><td>—</td><td>0,92</td><td>—</td><td>1,03 ac</td> </tr> <tr> <td>0,55</td><td>0,61</td><td>—</td><td>0,82</td><td>—</td><td>0,95</td><td>—</td><td>1,16</td><td>—</td><td>1,30 ac</td> </tr> <tr> <td>0,63</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>1,90 ac</td> </tr> <tr> <td>0,75</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>2,20 a</td> </tr> <tr> <td>0,88</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>2,20 —</td> </tr> <tr> <td>1,00</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>2,20 —</td> </tr> <tr> <td>1,13</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>2,20 —</td> </tr> <tr> <td>1,25</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>2,20 —</td> </tr> <tr> <td>1,50</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>1,40</td><td>—</td><td>1,70</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>0,90</td><td>—</td><td>1,20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>$M_{t,adm}$ [Nm]</td> <td colspan="5">$\Sigma t \leq 1,25$ mm: 2 Nm</td> <td colspan="5">$\Sigma t > 1,25$ mm: 4 Nm</td> </tr> </tbody> </table>											t [mm]	t_1 [mm]									0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00			$V_{k,s}$ [kN]	0,50	—	—	—	—	—	—	—	—	—	0,55	—	—	—	—	—	—	—	—	—	0,63	1,40	—	1,80	—	2,40	—	3,00	—	3,10 ac	0,75	1,40	—	1,80	—	2,40	—	3,00	—	3,80 a	0,88	1,40	—	1,80	—	2,40	—	3,00	—	4,00 —	1,00	1,40	—	1,80	—	2,40	—	3,00	—	4,40 —	1,13	1,40	—	1,80	—	2,40	—	3,00	—	4,40 —	1,25	1,40	—	1,80	—	2,40	—	3,00	—	4,40 —	1,50	1,40	—	1,80	—	2,40	—	3,00	—	—	1,75	1,40	—	1,80	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	—	$N_{k,s}$ [kN]	0,50	0,49	—	0,65	—	0,76	—	0,92	—	1,03 ac	0,55	0,61	—	0,82	—	0,95	—	1,16	—	1,30 ac	0,63	0,90	—	1,20	—	1,40	—	1,70	—	1,90 ac	0,75	0,90	—	1,20	—	1,40	—	1,70	—	2,20 a	0,88	0,90	—	1,20	—	1,40	—	1,70	—	2,20 —	1,00	0,90	—	1,20	—	1,40	—	1,70	—	2,20 —	1,13	0,90	—	1,20	—	1,40	—	1,70	—	2,20 —	1,25	0,90	—	1,20	—	1,40	—	1,70	—	2,20 —	1,50	0,90	—	1,20	—	1,40	—	1,70	—	—	1,75	0,90	—	1,20	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	—	$M_{t,adm}$ [Nm]	$\Sigma t \leq 1,25$ mm: 2 Nm					$\Sigma t > 1,25$ mm: 4 Nm				
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Hilti S-MD 51 Z 4,2 x L Hilti S-MD 51 C 4,2 x L with hexagon head and sealing washer $\geq \phi 16$ mm																																																																																																																																																																																																																																																																							

Annex 3:
ETA-10/0182, Annex 12

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD - EN 10346</p> <p>Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1</p>																																																																																																																																																																																																																																																							
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Annex 4:
ETA-10/0182, Annex 13

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088</p> <p>Component I: S280GD, S320GD - EN 10346</p> <p>Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1</p>																																																																																																																																																																																																																																																																				
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Hilti S-MD 51 Z 4,8 x L Hilti S-MD 51 C 4,8 x L with hexagon head and sealing washer $\geq \text{Ø}16 \text{ mm}$								Annex 13																																																																																																																																																																																																																																																													

Annex 5:
ETA-10/0182, Annex 14

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD - EN 10346</p> <p>Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1</p>																																																																																																																																																																																																																																																																																																																																										
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	<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																																																																																										
<table border="1"> <thead> <tr> <th rowspan="2">t [mm]</th> <th colspan="10">t_i [mm]</th> </tr> <tr> <th>0,63</th> <th>0,75</th> <th>0,88</th> <th>1,00</th> <th>1,13</th> <th>1,25</th> <th>1,50</th> <th>2,00</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="10">V_{0,x} [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,50</td><td>1,80</td><td>2,00</td><td>2,10</td><td>2,30</td><td>2,40</td><td>2,60</td><td>ac</td><td>2,60</td><td>ac</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>1,80</td><td>2,00</td><td>2,50</td><td>2,90</td><td>3,40</td><td>3,80</td><td>3,80</td><td>ac</td><td>3,80</td><td>a</td><td>—</td><td>—</td> </tr> <tr> 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[kN]	0,50	—	—	—	—	—	—	—	—	—	—	—	—	0,55	—	—	—	—	—	—	—	—	—	—	—	—	0,63	0,90	1,20	1,50	1,70	1,70	1,70	1,70	ac	1,70	ac	—	—	0,75	0,90	1,20	1,50	1,80	2,10	2,30	2,30	ac	2,30	a	—	—	0,88	0,90	1,20	1,50	1,80	2,10	2,40	2,90	—	2,90	—	—	—	1,00	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—	3,50	—	—	—	1,13	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—	—	—	—	—	1,25	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—	—	—	—	—	1,50	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—	—	—	—	—	1,75	0,90	1,20	1,50	1,80	2,10	2,40	—	—	—	—	—	—	2,00	0,90	1,20	1,50	1,80	—	—	—	—	—	—	—	—	M _{0,25m} [Nm]	$\Sigma t \leq 1,25$ mm: 3 Nm					$\Sigma t > 1,25$ mm: 6 Nm					
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Hilti S-MD 01 Z 5,5 x L Hilti S-MD 01 C 5,5 x L with hexagon head																																																																																																																																																																																																																																																																																																																																											

Annex 6:
ETA-10/0182, Annex 15

	Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088 Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1																																																																																																																																																																																																																																											
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Annex 7:
ETA-10/0182, Annex 16

	<p>Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: none Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1</p>																																																																																																																																																																																																																																			
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	1,13	2,10	2,50	3,10	3,60	4,20	4,80	6,00	—																																																																																																																																																																																																																											
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	1,50	2,10	2,60	3,30	3,90	4,60	5,20	6,70	—																																																																																																																																																																																																																											
	1,75	2,10	2,60	3,30	3,90	4,60	5,20	—	—																																																																																																																																																																																																																											
	2,00	2,10	2,60	3,30	3,90	—	—	—	—																																																																																																																																																																																																																											
$N_{c,k}$ [kN]	0,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																											
	0,55	—	—	—	—	—	—	—	—																																																																																																																																																																																																																											
	0,63	0,90	1,20	1,50	1,80	1,90	1,90 ac	1,90 ac	1,90 ac																																																																																																																																																																																																																											
	0,75	0,90	1,20	1,50	1,80	2,10	2,40	2,40 ac	2,40 ac																																																																																																																																																																																																																											
	0,88	0,90	1,20	1,50	1,80	2,10	2,40	3,10	3,40 a																																																																																																																																																																																																																											
	1,00	0,90	1,20	1,50	1,80	2,10	2,40	3,10	4,30																																																																																																																																																																																																																											
	1,13	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—																																																																																																																																																																																																																											
	1,25	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—																																																																																																																																																																																																																											
	1,50	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—																																																																																																																																																																																																																											
	1,75	0,90	1,20	1,50	1,80	2,10	2,40	—	—																																																																																																																																																																																																																											
	2,00	0,90	1,20	1,50	1,80	—	—	—	—																																																																																																																																																																																																																											
$M_{t,perm}$ [Nm]	$\Sigma t_i \leq 1,25$ mm: 4 Nm				$\Sigma t_i > 1,25$ mm: 8 Nm																																																																																																																																																																																																																															
<p>No additional regulations.</p>																																																																																																																																																																																																																																				
<p style="text-align: center;">Self drilling screw</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"> Hilti S-MD 01 Z 6,3 x L Hilti S-MD 01 C 6,3 x L with hexagon head </td> <td style="text-align: center; vertical-align: middle;">Annex 16</td> </tr> </table>		Hilti S-MD 01 Z 6,3 x L Hilti S-MD 01 C 6,3 x L with hexagon head	Annex 16																																																																																																																																																																																																																																	
Hilti S-MD 01 Z 6,3 x L Hilti S-MD 01 C 6,3 x L with hexagon head	Annex 16																																																																																																																																																																																																																																			

Annex 8:
ETA-10/0182, Annex 17

Material:

Fastener: carbon steel, case hardened and galvanized or coated

Washer: carbon steel, galvanized or coated
stainless Steel (1.4301) - EN 10088

Component I: S280GD, S320GD - EN 10346

Component II: S280GD, S320GD - EN 10346
S235 - EN 10025-1

Drilling capacity: $\Sigma t \leq 3,00 \text{ mm}$

Timber substructures:
no performance determined

t [mm]	t _i [mm]							
	0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00
V _{0,5} [kN]	—	—	—	—	—	—	—	—
0,50	—	—	—	—	—	—	—	—
0,55	—	—	—	—	—	—	—	—
0,63	1,60	2,10	2,70	3,30	3,30 ac	3,30 ac	3,30 ac	3,30 ac
0,75	1,60	2,10	2,70	3,30	4,10	4,20 ac	4,20 ac	4,20 a
0,88	1,70	2,20	2,80	3,40	4,10	4,40	5,20 ac	5,20 a
1,00	1,80	2,40	3,00	3,50	4,10	4,60	5,80	6,30 a
1,13	1,80	2,40	3,00	3,50	4,20	4,80	6,20	—
1,25	1,80	2,40	3,00	3,60	4,20	5,00	6,50	—
1,50	2,00	2,60	3,30	4,00	4,80	5,50	7,20	—
1,75	2,00	2,60	3,30	4,00	4,80	5,50	—	—
2,00	2,00	2,60	3,30	4,00	—	—	—	—
N _{0,5} [kN]	0,49	0,65	0,81	0,97	1,13 ac	1,30 ac	1,67 ac	1,73 ac
0,50	0,61	0,82	1,02	1,23	1,43 ac	1,64 ac	2,11 ac	2,18 ac
0,55	—	—	—	—	—	—	—	—
0,63	0,90	1,20	1,50	1,80	2,10 ac	2,40 ac	3,10 ac	3,20 ac
0,75	0,90	1,20	1,50	1,80	2,10	2,40 ac	3,10 ac	4,00 a
0,88	0,90	1,20	1,50	1,80	2,10	2,40	3,10 ac	4,60 a
1,00	0,90	1,20	1,50	1,80	2,10	2,40	3,10	4,60 a
1,13	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—
1,25	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—
1,50	0,90	1,20	1,50	1,80	2,10	2,40	3,10	—
1,75	0,90	1,20	1,50	1,80	2,10	2,40	—	—
2,00	0,90	1,20	1,50	1,80	—	—	—	—
M _{nom} [Nm]	$\Sigma t \leq 1,25 \text{ mm}: 4 \text{ Nm}$				$\Sigma t > 1,25 \text{ mm}: 8 \text{ Nm}$			

No additional regulations.

Self drilling screw

Hilti S-MD 51 Z 6,3 x L
Hilti S-MD 51 C 6,3 x L
with hexagon head and sealing washer $\geq \varnothing 16 \text{ mm}$

Annex 17

Annex 9:
ETA-10/0182, Annex 18

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD, S350GD, S390GD - EN 10346</p> <p>Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1</p>																																																																																																																																																																																																																																																																																																											
	<p>Drilling capacity: $\Sigma t_i \leq 2,75$ mm</p>																																																																																																																																																																																																																																																																																																											
	<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																																																											
<table border="1"> <thead> <tr> <th rowspan="2">t [mm]</th> <th colspan="10">t_i [mm]</th> </tr> <tr> <th>0,40</th> <th>0,50</th> <th>0,63</th> <th>0,75</th> <th>0,88</th> <th>1,00</th> <th>1,13</th> <th>1,25</th> <th>1,50</th> <th>2,00</th> </tr> </thead> <tbody> <tr> <td rowspan="11">N_{0,2} [kN]</td> <td>0,40</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td><td>0,68</td> </tr> <tr> <td>0,50</td><td>0,68</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td><td>1,03</td> </tr> <tr> <td>0,55</td><td>0,68</td><td>1,03</td><td>1,23</td><td>1,23</td><td>1,23</td><td>1,23</td><td>1,23</td><td>1,23</td><td>1,23</td><td>1,23</td> </tr> <tr> <td>0,63</td><td>0,68</td><td>1,03</td><td>1,55</td><td>1,55</td><td>1,55</td><td>1,55</td><td>1,55</td><td>1,55</td><td>1,55</td><td>1,55</td> </tr> <tr> <td>0,75</td><td>0,68</td><td>1,03</td><td>1,55</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>2,03</td> </tr> <tr> <td>0,88</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,38</td><td>2,38</td><td>2,38</td><td>2,38</td><td>—</td> </tr> <tr> <td>1,00</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,71</td><td>2,71</td><td>2,71</td><td>2,71</td><td>—</td> </tr> <tr> <td>1,13</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,71</td><td>2,71</td><td>2,71</td><td>2,71</td><td>—</td> </tr> <tr> <td>1,25</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,71</td><td>2,71</td><td>2,71</td><td>2,71</td><td>—</td> </tr> <tr> <td>1,50</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,71</td><td>2,71</td><td>2,71</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>2,38</td><td>2,71</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>0,68</td><td>1,03</td><td>1,55</td><td>2,03</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="11">N_{0,5} [kN]</td> <td>0,40</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,04</td><td>1,04</td><td>1,04</td><td>1,04</td><td>1,04</td><td>1,04</td><td>1,04</td> </tr> <tr> <td>0,50</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,25</td><td>1,25</td><td>1,25</td><td>1,25</td><td>1,25</td><td>1,25</td> </tr> <tr> <td>0,55</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,33</td><td>1,33</td><td>1,33</td><td>1,33</td><td>1,33</td><td>1,33</td> </tr> <tr> <td>0,63</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</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> </tr> <tr> <td>0,75</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,00</td><td>2,00</td><td>2,00</td><td>2,00</td> </tr> <tr> <td>0,88</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,10</td><td>2,48</td><td>2,70</td><td>—</td> </tr> <tr> <td>1,00</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,10</td><td>2,48</td><td>2,70</td><td>—</td> </tr> <tr> <td>1,13</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,10</td><td>2,48</td><td>2,70</td><td>—</td> </tr> <tr> <td>1,25</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,10</td><td>2,48</td><td>2,70</td><td>—</td> </tr> <tr> <td>1,50</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>2,10</td><td>2,48</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>1,40</td><td>1,69</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>0,46</td><td>0,70</td><td>0,77</td><td>1,11</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>M_{0,05m} [Nm]</td> <td colspan="10"></td> </tr> </tbody> </table>	t [mm]	t _i [mm]										0,40	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00	N _{0,2} [kN]	0,40	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,50	0,68	1,03	1,03	1,03	1,03	1,03	1,03	1,03	1,03	1,03	0,55	0,68	1,03	1,23	1,23	1,23	1,23	1,23	1,23	1,23	1,23	0,63	0,68	1,03	1,55	1,55	1,55	1,55	1,55	1,55	1,55	1,55	0,75	0,68	1,03	1,55	2,03	2,03	2,03	2,03	2,03	2,03	2,03	0,88	0,68	1,03	1,55	2,03	2,38	2,38	2,38	2,38	2,38	—	1,00	0,68	1,03	1,55	2,03	2,38	2,71	2,71	2,71	2,71	—	1,13	0,68	1,03	1,55	2,03	2,38	2,71	2,71	2,71	2,71	—	1,25	0,68	1,03	1,55	2,03	2,38	2,71	2,71	2,71	2,71	—	1,50	0,68	1,03	1,55	2,03	2,38	2,71	2,71	2,71	—	—	1,75	0,68	1,03	1,55	2,03	2,38	2,71	—	—	—	—	2,00	0,68	1,03	1,55	2,03	—	—	—	—	—	—	N _{0,5} [kN]	0,40	0,46	0,70	0,77	1,04	1,04	1,04	1,04	1,04	1,04	1,04	0,50	0,46	0,70	0,77	1,11	1,25	1,25	1,25	1,25	1,25	1,25	0,55	0,46	0,70	0,77	1,11	1,33	1,33	1,33	1,33	1,33	1,33	0,63	0,46	0,70	0,77	1,11	1,40	1,40	1,40	1,40	1,40	1,40	0,75	0,46	0,70	0,77	1,11	1,40	1,69	2,00	2,00	2,00	2,00	0,88	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	2,70	—	1,00	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	2,70	—	1,13	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	2,70	—	1,25	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	2,70	—	1,50	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	—	—	1,75	0,46	0,70	0,77	1,11	1,40	1,69	—	—	—	—	2,00	0,46	0,70	0,77	1,11	—	—	—	—	—	—	M _{0,05m} [Nm]											<p>No additional regulations.</p>	
t [mm]		t _i [mm]																																																																																																																																																																																																																																																																																																										
	0,40	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00																																																																																																																																																																																																																																																																																																		
N _{0,2} [kN]	0,40	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68																																																																																																																																																																																																																																																																																																	
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	1,13	0,46	0,70	0,77	1,11	1,40	1,69	2,10	2,48	2,70	—																																																																																																																																																																																																																																																																																																	
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<p>Self drilling screw</p>		<p>Annex 18</p>																																																																																																																																																																																																																																																																																																										
<p>Hilti S-MD 01 LZ 4,8 x L Hilti S-MD 01 LC 4,8 x L with hexagon head</p>																																																																																																																																																																																																																																																																																																												

Annex 10:
ETA-10/0182, Annex 19

	Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: none Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1	
	Drilling capacity: $\Sigma t_i \leq 6,00$ mm	
	Timber substructures: no performance determined	

t_i [mm]	t_i [mm]									
	0,63	0,75	0,88	1,00	1,50	2,00	3,00	4,00	5,00	
V_{Rk} [kN]	0,50	—	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—	—
	0,63	1,29	—	1,29	—	1,74	—	2,30	—	2,70
	0,75	1,29	—	2,02	—	2,17	—	2,30	—	3,00
	0,88	1,29	—	2,02	—	2,34	—	2,80	—	3,50
	1,00	1,29	—	2,02	—	2,49	—	2,90	—	4,00
	1,13	1,29	—	2,02	—	2,49	—	3,50	—	4,80
	1,25	1,29	—	2,02	—	2,49	—	4,10	—	5,20
	1,50	1,29	—	2,02	—	2,49	—	5,20	—	6,00
	1,75	1,29	—	2,02	—	2,49	—	6,00	—	7,30
	2,00	1,29	—	2,02	—	2,49	—	6,00	—	7,30
N_{Rk} [kN]	0,50	—	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—	—
	0,63	0,81	—	0,88	—	1,24	—	1,80	—	1,80
	0,75	0,81	—	0,88	—	1,24	—	1,80	—	2,20
	0,88	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	1,00	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	1,13	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	1,25	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	1,50	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	1,75	0,81	—	0,88	—	1,24	—	1,80	—	2,40
	2,00	0,81	—	0,88	—	1,24	—	1,80	—	2,40
$N_{Rk,ilk}$ [kN]	0,81	0,88	1,07	1,24	1,80	2,40	4,10	4,10	4,10	
M_{lim} [Nm]	$\Sigma t \leq 2,15$ mm : 2 Nm					$\Sigma t > 2,15$ mm : 8 Nm				

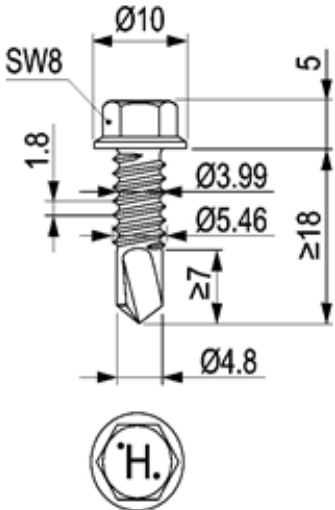
No additional regulations.

Self drilling screw	Annex 19
Hilti S-MD 03 Z 4,8 x L Hilti S-MD 03 C 4,8 x L with hexagon head	

Annex 11:
ETA-10/0182, Annex 20

	Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088 Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1																																																																																																																																																																																																																																																																																																																																									
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Timber substructures: no performance determined																																																																																																																																																																																																																																																																																																																																										
<table border="1"> <thead> <tr> <th rowspan="2">t [mm]</th> <th colspan="10">t_i [mm]</th> </tr> <tr> <th>1,50</th><th>2,00</th><th>3,00</th><th>4,00</th><th>5,00</th><th>6,00</th><th>—</th><th>—</th><th>—</th><th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="10">$V_{k,s}$ [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>2,40</td><td>ac</td><td>2,70</td><td>ac</td><td>2,70</td><td>ac</td><td>2,70</td><td>ac</td><td>2,70</td><td>ac</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>3,00</td><td>—</td><td>3,50</td><td>ac</td><td>3,90</td><td>ac</td><td>3,90</td><td>ac</td><td>3,90</td><td>ac</td><td>—</td><td>—</td> </tr> <tr> <td>0,88</td><td>3,40</td><td>—</td><td>4,10</td><td>—</td><td>5,40</td><td>—</td><td>5,40</td><td>—</td><td>5,40</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>3,70</td><td>—</td><td>4,70</td><td>—</td><td>6,60</td><td>—</td><td>6,60</td><td>—</td><td>6,60</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>4,00</td><td>—</td><td>5,00</td><td>—</td><td>6,70</td><td>—</td><td>6,70</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>4,40</td><td>—</td><td>5,30</td><td>—</td><td>6,80</td><td>—</td><td>6,80</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>4,90</td><td>—</td><td>5,60</td><td>—</td><td>6,90</td><td>—</td><td>6,90</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>4,90</td><td>—</td><td>5,60</td><td>—</td><td>6,90</td><td>—</td><td>6,90</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> 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<td>0,88</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>4,20</td><td>—</td><td>4,20</td><td>—</td><td>4,20</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>5,00</td><td>—</td><td>5,00</td><td>—</td><td>5,00</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>5,20</td><td>—</td><td>5,20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>5,20</td><td>—</td><td>5,20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>5,20</td><td>—</td><td>5,20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>1,70</td><td>—</td><td>2,70</td><td>—</td><td>5,20</td><td>—</td><td>5,20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> 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[kN]	0,50	0,92	ac	1,40	ac	1,40	ac	1,40	ac	1,40	ac	—	—	0,55	1,16	ac	1,77	ac	1,77	ac	1,77	ac	1,77	ac	—	—	0,63	1,70	ac	2,60	ac	2,60	ac	2,60	ac	2,60	ac	—	—	0,75	1,70	—	2,70	ac	3,30	ac	3,30	ac	3,30	ac	—	—	0,88	1,70	—	2,70	—	4,20	—	4,20	—	4,20	—	—	—	1,00	1,70	—	2,70	—	5,00	—	5,00	—	5,00	—	—	—	1,13	1,70	—	2,70	—	5,20	—	5,20	—	—	—	—	—	1,25	1,70	—	2,70	—	5,20	—	5,20	—	—	—	—	—	1,50	1,70	—	2,70	—	5,20	—	5,20	—	—	—	—	—	1,75	1,70	—	2,70	—	5,20	—	5,20	—	—	—	—	—	2,00	1,70	—	2,70	—	5,20	—	5,20	—	—	—	—	—	$M_{t,adm}$ [Nm]	$\Sigma t \leq 2,15$ mm: 2 Nm					$\Sigma t > 2,15$ mm: 6 Nm				
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Annex 12:
ETA-10/0182, Annex 21



Material:
Fastener: carbon steel, case hardened and galvanized or coated
Washer: none
Component I: S280GD, S320GD, S350GD, S390GD - EN 10346
Component II: S280GD, S320GD, S350GD, S390GD - EN 10346
S235, S275, S355 - EN 10025-1

Drilling capacity: $\Sigma t_i \leq 6,00$ mm

Timber substructures:
no performance determined

t_i [mm]	t_i [mm]									
	0,63	0,75	0,88	1,00	1,50	2,00	3,00	4,00	5,00	
V_{tix} [kN]	0,50	—	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—	—
	0,63	1,81	1,81	1,81	1,88	1,88	2,80 ac	2,80 ac	2,80 ac	2,80 ac
	0,75	1,81	1,88	1,88	2,08	2,08	3,70 ac	3,70 ac	3,70 ac	3,70 ac
	0,88	1,81	1,88	2,05	2,13	2,13	4,50	5,00 ac	5,00 ac	5,00 ac
	1,00	1,81	1,88	2,05	2,20	2,20	4,50	6,50 ac	6,50 ac	6,50 a
	1,13	1,81	1,88	2,05	2,20	2,76	4,90	7,00	7,90	—
	1,25	1,81	1,88	2,05	2,20	3,28	5,30	7,40	9,30	—
	1,50	1,81	1,88	2,05	2,20	4,36	6,20	8,30	9,50	—
	1,75	1,81	1,88	2,05	2,20	4,36	6,20	8,30	9,50	—
	2,00	1,81	1,88	2,05	2,20	4,36	7,80	9,40	9,50	—
N_{tix} [kN]	0,50	—	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—	—
	0,63	0,81	0,80	1,02	1,23	1,70	1,70 ac	1,70 ac	1,70 ac	1,70 ac
	0,75	0,81	0,80	1,02	1,23	2,15	2,20 ac	2,20 ac	2,20 ac	2,20 ac
	0,88	0,81	0,80	1,02	1,23	2,15	2,90	2,90 ac	2,90 ac	2,90 ac
	1,00	0,81	0,80	1,02	1,23	2,15	3,16	3,50	3,50 ac	3,50 a
	1,13	0,81	0,80	1,02	1,23	2,15	3,16	4,30	4,30	—
	1,25	0,81	0,80	1,02	1,23	2,15	3,16	5,10	5,10	—
	1,50	0,81	0,80	1,02	1,23	2,15	3,16	5,48	6,90	—
	1,75	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—
	2,00	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—
$N_{t,ilk}$ [kN]	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	8,20	
$M_{t,ilk}$ [Nm]	$\Sigma t_i \leq 3,00$ mm: 7 Nm					$\Sigma t_i > 3,00$ mm: 8 Nm				

No additional regulations.

Self drilling screw

Hilti S-MD 03 Z 5,5 x L
Hilti S-MD 03 C 5,5 x L
with hexagon head

Annex 21

Annex 13:
ETA-10/0182, Annex 22

	<p>Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: none Component I: S280GD, S320GD, S350GD, S390GD - EN 10346 Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1</p>																																																																																																																																																																																																																																																																																															
<p>Drilling capacity: $\Sigma t \leq 6,00$ mm</p>																																																																																																																																																																																																																																																																																																
<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																																																																																
<table border="1"> <thead> <tr> <th rowspan="2">t [mm]</th> <th colspan="10">t_0 [mm]</th> </tr> <tr> <th>0,63</th> <th>0,75</th> <th>0,88</th> <th>1,00</th> <th>1,50</th> <th>2,00</th> <th>3,00</th> <th>4,00</th> <th>5,00</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="12">$V_{0,2}$ [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,81</td><td>1,81</td><td>1,81</td><td>1,88</td><td>1,88</td><td>2,80 ac</td><td>2,80 ac</td><td>2,80 ac</td><td>2,80 ac</td><td>—</td> </tr> <tr> <td>0,75</td><td>1,81</td><td>1,88</td><td>1,88</td><td>2,06</td><td>2,06</td><td>3,70 ac</td><td>3,70 ac</td><td>3,70 ac</td><td>3,70 ac</td><td>—</td> </tr> <tr> <td>0,88</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,13</td><td>2,13</td><td>4,50 —</td><td>5,00 ac</td><td>5,00 ac</td><td>5,00 ac</td><td>—</td> </tr> <tr> <td>1,00</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>2,20</td><td>4,50 —</td><td>6,50 a</td><td>6,50 a</td><td>6,50 a</td><td>—</td> </tr> <tr> <td>1,13</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>2,78</td><td>4,90 —</td><td>7,00 —</td><td>7,90 —</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>3,28</td><td>5,30 —</td><td>7,40 —</td><td>9,30 —</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>4,38</td><td>6,20 —</td><td>8,30 —</td><td>9,50 —</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>4,38</td><td>6,20 —</td><td>8,30 —</td><td>9,50 —</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>1,81</td><td>1,88</td><td>2,05</td><td>2,20</td><td>4,38</td><td>7,80 —</td><td>9,40 —</td><td>9,50 —</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="12">$N_{0,2}$ [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>0,81</td><td>0,80</td><td>1,02 ac</td><td>1,23</td><td>2,15</td><td>3,11 ac</td><td>3,11 ac</td><td>3,11 ac</td><td>3,11 ac</td><td>—</td> </tr> <tr> <td>0,75</td><td>0,81</td><td>0,80</td><td>1,02 ac</td><td>1,23</td><td>2,15</td><td>3,16 ac</td><td>4,61 ac</td><td>4,61 ac</td><td>4,61 ac</td><td>—</td> </tr> <tr> <td>0,88</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48 ac</td><td>6,25 ac</td><td>6,25 ac</td><td>—</td> </tr> <tr> <td>1,00</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48 a</td><td>7,75 a</td><td>7,75 a</td><td>—</td> </tr> <tr> <td>1,13</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>0,81</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>—</td><td>—</td> </tr> <tr> <td>$N_{R,ilk}$ [kN]</td> <td>0,61</td><td>0,80</td><td>1,02</td><td>1,23</td><td>2,15</td><td>3,16</td><td>5,48</td><td>8,20</td><td>8,20</td><td>—</td> </tr> <tr> <td>$M_{t,0,20}$ [Nm]</td> <td colspan="5">$\Sigma t \leq 3,00$ mm: 7 Nm</td> <td colspan="5">$\Sigma t > 3,00$ mm: 8 Nm</td> </tr> </tbody> </table>		t [mm]	t_0 [mm]										0,63	0,75	0,88	1,00	1,50	2,00	3,00	4,00	5,00		$V_{0,2}$ [kN]	0,50	—	—	—	—	—	—	—	—	—	—	0,55	—	—	—	—	—	—	—	—	—	—	0,63	1,81	1,81	1,81	1,88	1,88	2,80 ac	2,80 ac	2,80 ac	2,80 ac	—	0,75	1,81	1,88	1,88	2,06	2,06	3,70 ac	3,70 ac	3,70 ac	3,70 ac	—	0,88	1,81	1,88	2,05	2,13	2,13	4,50 —	5,00 ac	5,00 ac	5,00 ac	—	1,00	1,81	1,88	2,05	2,20	2,20	4,50 —	6,50 a	6,50 a	6,50 a	—	1,13	1,81	1,88	2,05	2,20	2,78	4,90 —	7,00 —	7,90 —	—	—	1,25	1,81	1,88	2,05	2,20	3,28	5,30 —	7,40 —	9,30 —	—	—	1,50	1,81	1,88	2,05	2,20	4,38	6,20 —	8,30 —	9,50 —	—	—	1,75	1,81	1,88	2,05	2,20	4,38	6,20 —	8,30 —	9,50 —	—	—	2,00	1,81	1,88	2,05	2,20	4,38	7,80 —	9,40 —	9,50 —	—	—	$N_{0,2}$ [kN]	0,50	—	—	—	—	—	—	—	—	—	—	0,55	—	—	—	—	—	—	—	—	—	—	0,63	0,81	0,80	1,02 ac	1,23	2,15	3,11 ac	3,11 ac	3,11 ac	3,11 ac	—	0,75	0,81	0,80	1,02 ac	1,23	2,15	3,16 ac	4,61 ac	4,61 ac	4,61 ac	—	0,88	0,81	0,80	1,02	1,23	2,15	3,16	5,48 ac	6,25 ac	6,25 ac	—	1,00	0,81	0,80	1,02	1,23	2,15	3,16	5,48 a	7,75 a	7,75 a	—	1,13	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—	—	1,25	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—	—	1,50	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—	—	1,75	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—	—	2,00	0,81	0,80	1,02	1,23	2,15	3,16	5,48	8,20	—	—	$N_{R,ilk}$ [kN]	0,61	0,80	1,02	1,23	2,15	3,16	5,48	8,20	8,20	—	$M_{t,0,20}$ [Nm]	$\Sigma t \leq 3,00$ mm: 7 Nm					$\Sigma t > 3,00$ mm: 8 Nm				
t [mm]	t_0 [mm]																																																																																																																																																																																																																																																																																															
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	1,75	1,81	1,88	2,05	2,20	4,38	6,20 —	8,30 —	9,50 —	—	—																																																																																																																																																																																																																																																																																					
	2,00	1,81	1,88	2,05	2,20	4,38	7,80 —	9,40 —	9,50 —	—	—																																																																																																																																																																																																																																																																																					
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0,75		0,81	0,80	1,02 ac	1,23	2,15	3,16 ac	4,61 ac	4,61 ac	4,61 ac	—																																																																																																																																																																																																																																																																																					
0,88		0,81	0,80	1,02	1,23	2,15	3,16	5,48 ac	6,25 ac	6,25 ac	—																																																																																																																																																																																																																																																																																					
1,00		0,81	0,80	1,02	1,23	2,15	3,16	5,48 a	7,75 a	7,75 a	—																																																																																																																																																																																																																																																																																					
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$N_{R,ilk}$ [kN]		0,61	0,80	1,02	1,23	2,15	3,16	5,48	8,20	8,20	—																																																																																																																																																																																																																																																																																					
$M_{t,0,20}$ [Nm]	$\Sigma t \leq 3,00$ mm: 7 Nm					$\Sigma t > 3,00$ mm: 8 Nm																																																																																																																																																																																																																																																																																										
<p>No additional regulations.</p>																																																																																																																																																																																																																																																																																																
<p style="text-align: center;">Self drilling screw</p> <p style="text-align: center;">Hilti S-MD 23 Z 5,5 x L Hilti S-MD 23 C 5,5 x L with hexagon head with collar</p> <p style="text-align: right;">Annex 22</p>																																																																																																																																																																																																																																																																																																

Annex 14:
ETA-10/0182, Annex 23

Material:
Fastener: carbon steel, case hardened and galvanized or coated
Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088
Component I: S280GD, S320GD, S350GD, S390GD - EN 10346
Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1

Drilling capacity: $\Sigma t_i \leq 6,00$ mm

Timber substructures:
no performance determined

t_i [mm]	t_i [mm]							
	0,63	0,75	0,88	1,00	1,50	2,00	3,00	4,00
$V_{0,2}$ [kN]	0,50	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—
	0,63	—	—	—	—	—	3,10 ac	3,10 ac
	0,75	—	—	—	—	—	3,80 ac	3,80 ac
	0,88	—	—	—	—	—	4,80 —	4,80 ac
	1,00	—	—	—	—	—	5,30 —	5,40 —
	1,13	—	—	—	—	—	5,30 —	6,20 —
	1,25	—	—	—	—	—	5,30 —	7,60 —
	1,50	—	—	—	—	—	6,10 —	9,10 —
	1,75	—	—	—	—	—	6,10 —	9,10 —
2,00	—	—	—	—	—	7,80 —	9,70 —	
$N_{0,2}$ [kN]	0,50	0,61 —	0,80 —	1,02 —	1,23 —	1,73 —	1,73 ac	1,73 ac
	0,55	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	2,18 ac	2,18 ac
	0,63	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 ac	3,20 ac
	0,75	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 ac	3,90 ac
	0,88	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	4,80 ac
	1,00	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —
	1,13	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —
	1,25	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —
	1,50	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —
	1,75	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —
2,00	0,61 —	0,80 —	1,02 —	1,23 —	2,15 —	3,16 —	5,48 —	
$N_{0,1,k}$ [kN]	0,61	0,80	1,02	1,23	2,15	3,16	5,48	8,20
$M_{t,adm}$ [Nm]	$\Sigma t_i \leq 3,00$ mm: 7 Nm						$\Sigma t_i > 3,00$ mm: 8 Nm	

No additional regulations.

Self drilling screw

Hilti S-MD 53 Z 5,5 x L
Hilti S-MD 53 C 5,5 x L
with hexagon head and sealing washer $\geq \phi 16$ mm

Annex 23

Annex 15:
ETA-10/0182, Annex 24

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD, S350GD, S390GD - EN 10346</p> <p>Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1</p>
	<p>Drilling capacity: $\Sigma t \leq 6,00$ mm</p>
<p>Timber substructures: no performance determined</p>	

t [mm]	t ₁ [mm]								
	1,00	1,50	2,00	2,50	3,00	4,00	5,00	6,00	
V _{0,3} [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—
	0,63	1,92	1,92	3,10	3,10	3,10	3,10	3,10	3,10
	0,75	2,07	2,07	4,20	4,20	4,20	4,20	4,20	4,20
	0,88	2,35	2,35	5,40	5,40	5,40	5,40	5,40	5,40
	1,00	2,60	2,60	5,60	5,60	6,60	6,60	6,60	6,60
	1,13	2,60	3,16	5,70	5,70	7,80	8,00	—	—
	1,25	2,60	3,68	5,90	5,90	9,00	9,56	—	—
	1,50	2,60	4,75	7,00	7,00	9,70	10,00	—	—
	1,75	2,60	4,75	7,00	7,00	9,70	10,00	—	—
	2,00	2,60	4,75	7,00	7,00	9,70	10,00	—	—
N _{0,3} [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—
	0,63	1,23	1,90	1,90	1,90	1,90	1,90	1,90	1,90
	0,75	1,23	2,46	2,80	2,80	2,80	2,80	2,80	2,80
	0,88	1,23	2,46	3,21	3,40	3,40	3,40	3,40	3,40
	1,00	1,23	2,46	3,21	4,30	4,30	4,30	4,30	4,30
	1,13	1,23	2,46	3,21	4,62	5,30	5,30	—	—
	1,25	1,23	2,46	3,21	4,62	6,03	6,40	—	—
	1,50	1,23	2,46	3,21	4,62	6,03	6,90	—	—
	1,75	1,23	2,46	3,21	4,62	6,03	6,90	—	—
	2,00	1,23	2,46	3,21	4,62	6,03	7,20	—	—
M _{nom} [Nm]	$\Sigma t \leq 3,00$ mm: 7 Nm				$\Sigma t > 3,00$ mm: 8 Nm				

No additional regulations.

Self drilling screw

Hilti S-MD 03 Z 6,3 x L
Hilti S-MD 03 C 6,3 x L
with hexagon head

Annex 24

Annex 16:
ETA-10/0182, Annex 25

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD, S350GD, S390GD - EN 10346</p> <p>Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1</p>																																																																																																																																																																																																																																											
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Hilti S-MD 23 Z 6,3 x L Hilti S-MD 23 C 6,3 x L with hexagon head with collar																																																																																																																																																																																																																																												

Annex 17:
ETA-10/0182, Annex 26

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088</p> <p>Component I: S280GD, S320GD, S350GD, S390GD - EN 10346</p> <p>Component II: S280GD, S320GD, S350GD, S390GD - EN 10346 S235, S275, S355 - EN 10025-1</p>																																																																																																																																																																																																																																																																				
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<table border="1"> <thead> <tr> <th rowspan="2">t_i [mm]</th> <th colspan="8">t_i [mm]</th> <th rowspan="2">—</th> </tr> <tr> <th>1,50</th> <th>2,00</th> <th>2,50</th> <th>3,00</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>—</th> </tr> </thead> <tbody> <tr> <td rowspan="11">$N_{t,x}$ [kN]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>—</td><td>3,00</td><td>ac</td><td>3,00</td><td>abcd</td><td>3,00</td><td>abcd</td><td>3,00</td><td>abcd</td> </tr> <tr> <td>0,75</td><td>—</td><td>3,80</td><td>ac</td><td>3,80</td><td>abcd</td><td>3,80</td><td>abcd</td><td>3,80</td><td>abcd</td> </tr> <tr> <td>0,88</td><td>—</td><td>4,80</td><td>—</td><td>4,80</td><td>ac</td><td>4,80</td><td>abc</td><td>4,80</td><td>abc</td> </tr> <tr> <td>1,00</td><td>—</td><td>5,10</td><td>—</td><td>5,10</td><td>ac</td><td>5,70</td><td>ac</td><td>5,70</td><td>ac</td> </tr> <tr> <td>1,13</td><td>—</td><td>5,50</td><td>—</td><td>5,50</td><td>ac</td><td>6,80</td><td>a</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>—</td><td>6,10</td><td>—</td><td>6,10</td><td>ac</td><td>7,90</td><td>a</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>—</td><td>6,40</td><td>—</td><td>6,40</td><td>—</td><td>9,00</td><td>a</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>—</td><td>6,40</td><td>—</td><td>6,40</td><td>—</td><td>9,00</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>—</td><td>7,80</td><td>—</td><td>7,80</td><td>—</td><td>10,00</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="11">$N_{t,x}$ [kN]</td> <td>0,50</td><td>—</td><td>1,78</td><td>ac</td><td>1,78</td><td>abcd</td><td>1,78</td><td>abcd</td><td>1,78</td><td>abcd</td> </tr> <tr> <td>0,55</td><td>—</td><td>2,25</td><td>ac</td><td>2,25</td><td>abcd</td><td>2,25</td><td>abcd</td><td>2,25</td><td>abcd</td> </tr> <tr> <td>0,63</td><td>—</td><td>3,21</td><td>ac</td><td>3,30</td><td>ac</td><td>3,30</td><td>abcd</td><td>3,30</td><td>abcd</td> </tr> <tr> <td>0,75</td><td>—</td><td>3,21</td><td>ac</td><td>4,00</td><td>ac</td><td>4,00</td><td>abcd</td><td>4,00</td><td>abcd</td> </tr> <tr> <td>0,88</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>4,80</td><td>ac</td><td>4,80</td><td>abc</td> </tr> <tr> <td>1,00</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>5,60</td><td>ac</td><td>5,60</td><td>ac</td> </tr> <tr> <td>1,13</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>6,03</td><td>ac</td><td>6,40</td><td>a</td> </tr> <tr> <td>1,25</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>6,03</td><td>ac</td><td>7,20</td><td>a</td> </tr> <tr> <td>1,50</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>6,03</td><td>—</td><td>7,20</td><td>a</td> </tr> <tr> <td>1,75</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>6,03</td><td>—</td><td>7,20</td><td>—</td> </tr> <tr> <td>2,00</td><td>—</td><td>3,21</td><td>—</td><td>4,62</td><td>—</td><td>6,03</td><td>—</td><td>7,20</td><td>—</td> </tr> <tr> <td>$M_{t,perm}$ [Nm]</td> <td colspan="5">$\Sigma t_i \leq 3,00$ mm: 7 Nm</td> <td colspan="5">$\Sigma t_i > 3,00$ mm: 8 Nm</td> </tr> </tbody> </table>											t_i [mm]	t_i [mm]								—	1,50	2,00	2,50	3,00	4,00	5,00	6,00	—	$N_{t,x}$ [kN]	0,50	—	—	—	—	—	—	—	—	—	0,55	—	—	—	—	—	—	—	—	—	0,63	—	3,00	ac	3,00	abcd	3,00	abcd	3,00	abcd	0,75	—	3,80	ac	3,80	abcd	3,80	abcd	3,80	abcd	0,88	—	4,80	—	4,80	ac	4,80	abc	4,80	abc	1,00	—	5,10	—	5,10	ac	5,70	ac	5,70	ac	1,13	—	5,50	—	5,50	ac	6,80	a	—	—	1,25	—	6,10	—	6,10	ac	7,90	a	—	—	1,50	—	6,40	—	6,40	—	9,00	a	—	—	1,75	—	6,40	—	6,40	—	9,00	—	—	—	2,00	—	7,80	—	7,80	—	10,00	—	—	—	$N_{t,x}$ [kN]	0,50	—	1,78	ac	1,78	abcd	1,78	abcd	1,78	abcd	0,55	—	2,25	ac	2,25	abcd	2,25	abcd	2,25	abcd	0,63	—	3,21	ac	3,30	ac	3,30	abcd	3,30	abcd	0,75	—	3,21	ac	4,00	ac	4,00	abcd	4,00	abcd	0,88	—	3,21	—	4,62	—	4,80	ac	4,80	abc	1,00	—	3,21	—	4,62	—	5,60	ac	5,60	ac	1,13	—	3,21	—	4,62	—	6,03	ac	6,40	a	1,25	—	3,21	—	4,62	—	6,03	ac	7,20	a	1,50	—	3,21	—	4,62	—	6,03	—	7,20	a	1,75	—	3,21	—	4,62	—	6,03	—	7,20	—	2,00	—	3,21	—	4,62	—	6,03	—	7,20	—	$M_{t,perm}$ [Nm]	$\Sigma t_i \leq 3,00$ mm: 7 Nm					$\Sigma t_i > 3,00$ mm: 8 Nm				
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<p>Hilti S-MD 53 Z 6,3 x L Hilti S-MD 53 C 6,3 x L with hexagon head and sealing washer $\geq \varnothing 16$ mm</p>																																																																																																																																																																																																																																																																					

Annex 18:
ETA-10/0182, Annex 27

Material:
Fastener: carbon steel, case hardened and galvanized or coated
Washer: none
Component I: S280GD, S320GD - EN 10346
Component II: S280GD, S320GD - EN 10346
S235 - EN 10025-1

Drilling capacity: $\Sigma t_i \leq 15,00$ mm

Timber substructures:
no performance determined

t [mm]	t _i [mm]							
	2,00	3,00	4,00	6,00	8,00	10,0	12,0	≥ 14,0
V _{0,5} [kN]	—	—	—	—	—	—	—	—
0,50	—	—	—	—	—	—	—	—
0,55	—	—	—	—	—	—	—	—
0,63	—	—	2,49	2,49	2,49	2,49	2,49	2,49
0,75	—	—	3,04	3,04	3,04	3,04	3,04	3,04
0,88	—	—	3,87	3,87	3,87	3,87	3,87	3,87
1,00	—	—	4,91	4,91	4,91	4,91	4,91	4,91
1,13	—	—	6,24	6,24	6,24	6,24	6,24	6,24
1,25	—	—	7,69	7,69	7,69	7,69	7,69	7,69
1,50	—	—	7,69	7,69	7,69	7,69	7,69	7,69
1,75	—	—	7,69	7,69	7,69	7,69	7,69	7,69
2,00	—	—	7,69	7,69	7,69	7,69	7,69	7,69
N _{0,5} [kN]	—	—	—	—	—	—	—	—
0,50	—	—	—	—	—	—	—	—
0,55	—	—	—	—	—	—	—	—
0,63	—	—	2,50	2,50	2,50	2,50	2,50	2,50
0,75	—	—	2,99	2,99	2,99	2,99	2,99	2,99
0,88	—	—	3,50	3,50	3,50	3,50	3,50	3,50
1,00	—	—	3,99	3,99	3,99	3,99	3,99	3,99
1,13	—	—	4,50	4,50	4,50	4,50	4,50	4,50
1,25	—	—	4,97	4,97	4,97	4,97	4,97	4,97
1,50	—	—	5,99	5,99	5,99	5,99	5,99	5,99
1,75	—	—	6,95	6,95	6,95	6,95	6,95	6,95
2,00	—	—	7,96	7,96	7,96	7,96	7,96	7,96
M _{0,5} [Nm]	5 Nm							

No additional regulations.

Self drilling screw

Hilti S-MD 05 GZ 5,5 x L
Hilti S-MD 05 GC 5,5 x L
Hilti S-MD 05 Z 5,5 x L
Hilti S-MD 05 C 5,5 x L
with hexagon head

Annex 27

Annex 19:
ETA-10/0182, Annex 28

	<p>Material:</p> <p>Fastener: carbon steel, case hardened and galvanized or coated</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD - EN 10346</p> <p>Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1</p>																																																																																																																																																																																																																																									
	<p>Drilling capacity: $\Sigma t_i \leq 15,00$ mm</p>																																																																																																																																																																																																																																									
<p>Timber substructures: no performance determined</p>																																																																																																																																																																																																																																										
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Hilti S-MD 25 Z 5,5 x L Hilti S-MD 25 C 5,5 x L with hexagon head with collar							Annex 28																																																																																																																																																																																																																																			

Annex 20:
ETA-10/0182, Annex 29

	Material: Fastener: carbon steel, case hardened and galvanized or coated Washer: carbon steel, galvanized or coated stainless Steel (1.4301) - EN 10088 Component I: S280GD, S320GD - EN 10346 Component II: S280GD, S320GD - EN 10346 S235 - EN 10025-1
	Drilling capacity: $\Sigma t_i \leq 15,00$ mm Timber substructures: no performance determined

t [mm]	t_i [mm]								
	2,00	3,00	4,00	6,00	8,00	10,0	12,0	$\geq 14,0$	
$V_{e,x}$ [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	—	—	—	—	—	—
	0,63	—	—	2,49	2,49	2,49	2,49	2,49	2,49
	0,75	—	—	3,04	3,04	3,04	3,04	3,04	3,04
	0,88	—	—	3,87	3,87	3,87	3,87	3,87	3,87
	1,00	—	—	4,91	4,91	4,91	4,91	4,91	4,91
	1,13	—	—	6,24	6,24	6,24	6,24	6,24	—
	1,25	—	—	7,69	7,69	7,69	7,69	7,69	—
	1,50	—	—	7,69	7,69	7,69	7,69	7,69	—
	1,75	—	—	7,69	7,69	7,69	7,69	7,69	—
	2,00	—	—	7,69	7,69	7,69	7,69	7,69	—
$N_{e,x}$ [kN]	0,50	—	—	—	—	—	—	—	—
	0,55	—	—	2,32	2,32	2,32	2,32	2,32	2,32
	0,63	—	—	2,55	2,55	2,55	2,55	2,55	2,55
	0,75	—	—	3,02	3,02	3,02	3,02	3,02	3,02
	0,88	—	—	3,51	3,51	3,51	3,51	3,51	3,51
	1,00	—	—	4,00	4,00	4,00	4,00	4,00	4,00
	1,13	—	—	4,51	4,51	4,51	4,51	4,51	—
	1,25	—	—	4,99	4,99	4,99	4,99	4,99	—
	1,50	—	—	6,06	6,06	6,06	6,06	6,06	—
	1,75	—	—	7,09	7,09	7,09	7,09	7,09	—
	2,00	—	—	8,23	8,23	8,23	8,23	8,23	—
M_{nom} [Nm]	5 Nm								

No additional regulations.

Self drilling screw

Hilti S-MD 55 GZ 5,5 x L
 Hilti S-MD 55 GC 5,5 x L
 Hilti S-MD 55 Z 5,5 x L
 Hilti S-MD 55 C 5,5 x L
 with hexagon head and sealing washer $\geq \varnothing 16$ mm

Annex 29