



INSTYTUT TECHNIKI BUDOWLANEJ



Member of



www.eota.eu

European Technical Assessment

**ETA-12/0580
of 23/07/2025**



General Part

Technical Assessment Body issuing the European Technical Assessment

Instytut Techniki Budowlanej

Trade name of the construction product

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2

Product family to which the construction product belongs

Fastening screws for metal members and sheeting

Manufacturer

Simpson Strong-Tie Etanco P.S.A.
Al. Jana Pawła II 1
81-345 Gdynia, Poland

Manufacturing plants

1. Simpson Strong-Tie Etanco P.S.A.
ul. Olsztyńska 30
11-130 Orneta, Poland
2. Plant 1
3. Plant 2
4. Plant 3
5. Plant 6
6. Plant 7
7. Plant 8

This European Technical Assessment contains

105 pages including 100 Annexes which form an integral part of this Assessment

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

European Assessment Document (EAD)
330046-01-0602 "Fastening screws for metal members and sheeting"

This version replaces

ETA-12/0580 issued on 27/06/2023



This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

Specific Part

1 Technical description of the product

The fastening screws G / LR, GTFO2, GTFO2P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2 and GTZF2 are listed in Table 1. The fastening screws are partly supplied with a metallic washers and an EPDM sealing rings. For details see the Annexes 1 to 99.

The fastening screw and the corresponding connections are subject to tension and shear forces.

Table 1

No.	Screw	Material	Annex
1	G / LR 4,8 x 20	galvanized carbon steel	1
2	G / LR 4,8 x L		2
3	GTFO2 4,8 x 20		3
4	GTFO2 4,8 x 20 (FS)		4
5	GTFO2P 4,8 x 20		5
6	GTF2 4,8 x L		6
7	GTF2 4,8 x L (FS)		7
8	GTF5 4,8 x L		8
9	GTF5 4,8 x L (FS)		9
10	GTXFO2 4,8 x 20	stainless steel (bi-metal)	10
11	GTXF2 4,8 x L		11
12	GTF HD 6,4 x L	galvanized carbon steel	12
13	GTFP 4,8 x L		13
14	GTO2 4,8 x 20		14 – 16
15	GTO3 FH 6,3 x 22		17
16	GT3 4,8 x L		18 – 20
17	GTR3 4,8 x L	galvanized carbon steel with additional ceramic coating	21 – 25
18	GTX3 4,8 x L	stainless steel (bi-metal)	26 – 28
19	GTX3 AL 5,5 x L		29 – 31
20	GT5 5,5 x L	galvanized carbon steel	32 – 35
21	GTR5 5,5 x L	galvanized carbon steel with additional ceramic coating	36 – 40
22	GT5 FH 5,5 x L	galvanized carbon steel	41
23	GTX5 5,5 x L	stainless steel (bi-metal)	42 – 44
24	GT6 6,3 x L	galvanized carbon steel	45, 46
25	GT8 5,5 x L		47 – 51
26	GTR8 5,5 x L	galvanized carbon steel with additional ceramic coating	52 – 56
27	GT12 5,5 x L	galvanized carbon steel	57 – 62
28	GTR12 5,5 x L	galvanized carbon steel with additional ceramic coating	63 – 70
29	GT12 FH 5,5 x L	galvanized carbon steel	71
30	GTX12 5,5 x L	stainless steel (bi-metal)	72 – 74
31	GTR16 6,3 x L	galvanized carbon steel with additional ceramic coating	75 – 79

Table 1

No.	Screw	Material	Annex
32	GTR20 6,3 x L	galvanized carbon steel with additional ceramic coating	80 – 84
33	GTR25 6,3 x L		85 – 89
34	GTA 6,5 x L	galvanized carbon steel	90
35	GTB 6,3 x L		91
36	GTRO2	galvanized carbon steel with additional ceramic coating	92 – 94
37	GTZFO2	stainless steel	95 – 98
38	GTZF2		99

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

The fastening screws are intended to be used for fastening metal sheeting to metal or timber supporting substructures. For details see the Annexes 1 to 99. The component to be fastened is component I and the supporting structure is component II. The sheeting can either be used as wall or roof cladding or as load bearing wall and roof element. The fastening screws can also be used for the fastening of any other thin gauge steel members.

The intended use comprises fastening screws and connections for indoor and outdoor applications. Fastening screws are intended to be used in external environments with \geq C2 corrosion according to EN ISO 12944-2 are made of stainless steel.

Furthermore the intended use comprises connections with predominantly static loads (e.g. wind loads, dead loads).

The provisions made in this European Technical Assessment are based on an assumed working life of the fasteners of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

3.1 Performance of the product

3.1.1 Mechanical resistance and stability (BWR 1)

The characteristic values of the shear resistance of connections and tension resistance of connections with the fasteners are given in Annexes 1 to 99. The values were determined by tests according to EAD 330046-01-0602.

The design values shall be determined according to Annex 100 and EAD 330046-01-0602.

For the corrosion protection the rules given in EN 1993-1-3, EN 1993-1-4 and EN 1999-1-4 shall be taken into account. Fastening screw which are made of stainless steel are intended to be used in external environments \geq C2 corrosion according to the standard EN ISO 12944-2.

3.1.2 Safety in case of fire (BWR 2)

The fastening screws are considered to satisfy the requirements of performance class A1 of reaction to fire, in accordance with the provisions of the EC Decision 96/603/EC (as amended) without the need for testing.

3.2 Methods used for the assessment

The assessment has been made in accordance with EAD 330046-01-0602.

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

According to Decision 1998/214/EC, amended by 2001/596/EC, of the European Commission the system 2+ of assessment and verification of constancy of performance applies (see Annex V to regulation (EU) No 305/2011).

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

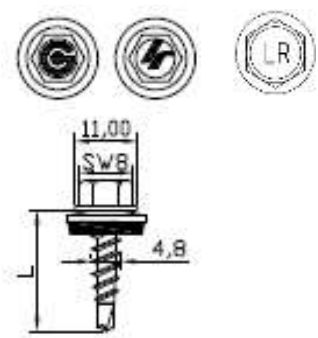
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 23/07/2025 by Instytut Techniki Budowlanej



Anna Panek, MSc
Deputy Director of ITB

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (20 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, \text{nom}}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,55	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,63	1,11	1,11	1,45	1,45	1,45	1,45	—	—
	0,75	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	0,88	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,00	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,55	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,63	0,48	0,48	0,78	0,78	0,78	0,78	—	—
	0,75	0,48	0,48	0,78	0,91	0,91	0,91	—	—
	0,88	0,48	0,48	0,78	0,91	1,30	1,30	—	—
	1,00	0,48	0,48	0,78	0,91	1,30	1,61	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw G / LR 4,8 x 20 with hexagon head and sealing washer Ø14

Annex 1
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (20 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$ $f_{ax,k} = 12,500 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	
---	--

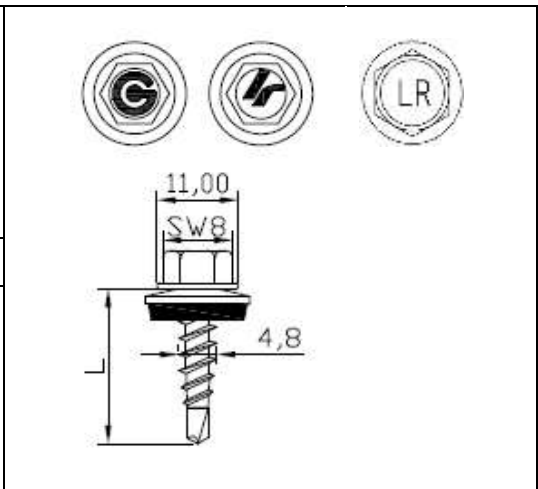
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	1,11
	0,55	—	—	—	—	—	—	—	1,11
	0,63	—	—	—	—	—	—	—	1,45
	0,75	—	—	—	—	—	—	—	1,49
	0,88	—	—	—	—	—	—	—	1,49
	1,00	—	—	—	—	—	—	—	1,49
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78
	0,55	—	—	—	—	—	—	—	2,78
	0,63	—	—	—	—	—	—	—	4,51
	0,75	—	—	—	—	—	—	—	4,51
	0,88	—	—	—	—	—	—	—	4,51
	1,00	—	—	—	—	—	—	—	4,51
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>	<p>Annex 2 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw G / LR 4,8 x L with hexagon head and sealing washer Ø14</p>	

Materials
 Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (12 µm)
 Washer: EPDM sealing washer with metal top made of carbon steel
 Component I: S280GD, S320GD or S350GD – EN 10346
 Component II: S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$

Timber substructures
 No performance assessed



$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,55	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,63	1,11	1,11	1,45	1,45	1,45	1,45	—	—
	0,75	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	0,88	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,00	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,55	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,63	0,48	0,48	0,78	0,78	0,78	0,78	—	—
	0,75	0,48	0,48	0,78	0,91	0,91	0,91	—	—
	0,88	0,48	0,48	0,78	0,91	1,30	1,30	—	—
	1,00	0,48	0,48	0,78	0,91	1,30	1,61	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTF02 4,8 x 20 with hexagon head and sealing washer Ø14


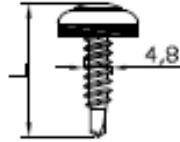
Annex 3
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (9 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,55	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,63	1,11	1,11	1,45	1,45	1,45	1,45	—	—
	0,75	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	0,88	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,00	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,55	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,63	0,48	0,48	0,78	0,78	0,78	0,78	—	—
	0,75	0,48	0,48	0,78	0,91	0,91	0,91	—	—
	0,88	0,48	0,48	0,78	0,91	1,30	1,30	—	—
	1,00	0,48	0,48	0,78	0,91	1,30	1,61	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 4</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTF02 4,8 x 20 (FS) with hexagon head and sealing washer Ø14</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (20 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>No performance assessed</p>	<p>TDRX-20/25</p>  
--	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,55	1,11	1,11	1,11	1,11	1,11	1,11	—	—
	0,63	1,11	1,11	1,45	1,45	1,45	1,45	—	—
	0,75	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	0,88	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,00	1,11	1,11	1,45	1,49	1,49	1,49	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,55	0,48	0,48	0,48	0,48	0,48	0,48	—	—
	0,63	0,48	0,48	0,78	0,78	0,78	0,78	—	—
	0,75	0,48	0,48	0,78	0,91	0,91	0,91	—	—
	0,88	0,48	0,48	0,78	0,91	1,30	1,30	—	—
	1,00	0,48	0,48	0,78	0,91	1,30	1,61	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTF02P 4,8 x 20 with oval head and sealing washer $\varnothing 14$

Annex 5
of European
Technical Assessment
ETA-12/0580

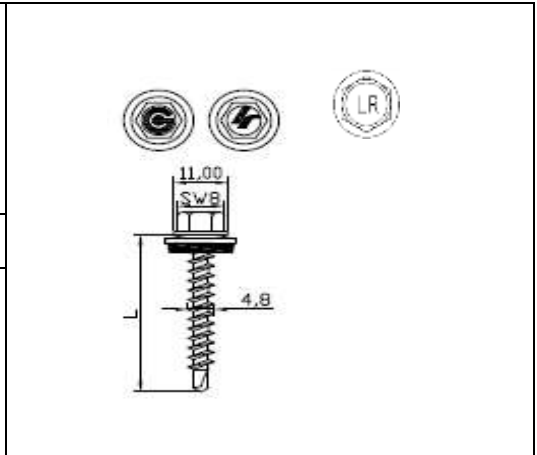
Materials	
Fastener:	carbon steel – SAE1022 quenched, tempered and galvanized (12 µm)
Washer:	EPDM sealing washer with metal top made of carbon steel
Component I:	S280GD, S320GD or S350GD – EN 10346
Component II:	structural timber – EN 14081

Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$

Timber substructures

For timber substructures performance assessed with:

$M_{y,Rk} = 4,390 \text{ Nm}$
 $f_{ax,k} = 12,500 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$

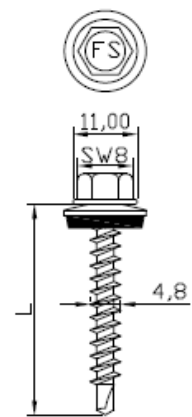


$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	1,11
	0,55	—	—	—	—	—	—	—	1,11
	0,63	—	—	—	—	—	—	—	1,45
	0,75	—	—	—	—	—	—	—	1,49
	0,88	—	—	—	—	—	—	—	1,49
	1,00	—	—	—	—	—	—	—	1,49
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78
	0,55	—	—	—	—	—	—	—	2,78
	0,63	—	—	—	—	—	—	—	4,51
	0,75	—	—	—	—	—	—	—	4,51
	0,88	—	—	—	—	—	—	—	4,51
	1,00	—	—	—	—	—	—	—	4,51
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTF2 4,8 x L with hexagon head and sealing washer Ø14

Annex 6
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE1022 quenched, tempered and galvanized (9 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p>																																																																																																																																																																																																																																					
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 12,500 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>																																																																																																																																																																																																																																					
<table border="1"> <thead> <tr> <th>$t_{N,II} [\text{mm}]$</th> <th>0,50</th> <th>0,55</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>Wood class $\geq \text{C24}$</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="8">3 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,11</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,11</td> </tr> <tr> <td>0,63</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,45</td> </tr> <tr> <td>0,75</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,49</td> </tr> <tr> <td>0,88</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,49</td> </tr> <tr> <td>1,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,49</td> </tr> <tr> <td>1,13</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>—</td><td>—</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> </tr> <tr> <td rowspan="10">$N_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>2,78</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>2,78</td> </tr> <tr> <td>0,63</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>0,75</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>0,88</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>1,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>1,13</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>—</td><td>—</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> </tr> </tbody> </table>										$t_{N,II} [\text{mm}]$	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class $\geq \text{C24}$	$M_{t,nom}$	3 Nm									$V_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$	0,50	—	—	—	—	—	—	—	1,11	0,55	—	—	—	—	—	—	—	1,11	0,63	—	—	—	—	—	—	—	1,45	0,75	—	—	—	—	—	—	—	1,49	0,88	—	—	—	—	—	—	—	1,49	1,00	—	—	—	—	—	—	—	1,49	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	$N_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$	0,50	—	—	—	—	—	—	—	2,78	0,55	—	—	—	—	—	—	—	2,78	0,63	—	—	—	—	—	—	—	4,51	0,75	—	—	—	—	—	—	—	4,51	0,88	—	—	—	—	—	—	—	4,51	1,00	—	—	—	—	—	—	—	4,51	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—
$t_{N,II} [\text{mm}]$	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class $\geq \text{C24}$																																																																																																																																																																																																																												
$M_{t,nom}$	3 Nm																																																																																																																																																																																																																																				
$V_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$	0,50	—	—	—	—	—	—	—	1,11																																																																																																																																																																																																																												
	0,55	—	—	—	—	—	—	—	1,11																																																																																																																																																																																																																												
	0,63	—	—	—	—	—	—	—	1,45																																																																																																																																																																																																																												
	0,75	—	—	—	—	—	—	—	1,49																																																																																																																																																																																																																												
	0,88	—	—	—	—	—	—	—	1,49																																																																																																																																																																																																																												
	1,00	—	—	—	—	—	—	—	1,49																																																																																																																																																																																																																												
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																													
$N_{R,k} [\text{kN}]$ for $t_{N,I} [\text{mm}]$	0,50	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																												
	0,55	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																												
	0,63	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																												
	0,75	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																												
	0,88	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																												
	1,00	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																												
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																												
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																													
<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>									<p>Annex 7</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																																												
<p>Self-drilling screw GTF2 4,8 x L (FS) with hexagon head and sealing washer Ø14</p>																																																																																																																																																																																																																																					

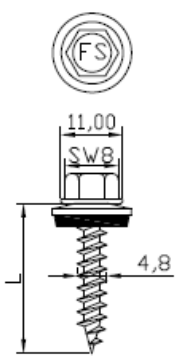
<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p>	
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,75 \text{ mm}$</p>	
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 17,708 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,80
	0,55	—	—	—	—	—	—	—	1,40
	0,63	—	—	—	—	—	—	—	1,40
	0,75	—	—	—	—	—	—	—	1,40
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78
	0,55	—	—	—	—	—	—	—	2,78
	0,63	—	—	—	—	—	—	—	4,51
	0,75	—	—	—	—	—	—	—	4,51
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTFS 4,8 x L with hexagon head and sealing washer Ø14

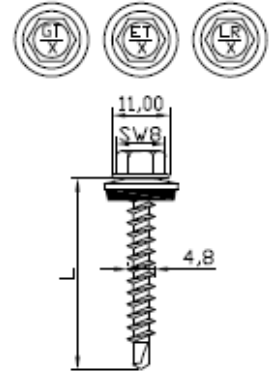
Annex 8
of European
Technical Assessment
ETA-12/0580


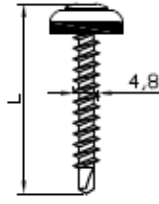
<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (9 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p>																																																																																																																																																																																																																														
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,75 \text{ mm}$</p>																																																																																																																																																																																																																														
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 17,708 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>																																																																																																																																																																																																																														
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>0,50</th> <th>0,55</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>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">3 Nm</td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>0,80</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,40</td> </tr> <tr> <td>0,63</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,40</td> </tr> <tr> <td>0,75</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>1,40</td> </tr> <tr> <td>0,88</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>—</td><td>—</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> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>2,78</td> </tr> <tr> <td>0,55</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>2,78</td> </tr> <tr> <td>0,63</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>0,75</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>4,51</td> </tr> <tr> <td>0,88</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>—</td><td>—</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> </tr> </tbody> </table>	$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24	$M_{t,nom}$	3 Nm									$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,80	0,55	—	—	—	—	—	—	—	1,40	0,63	—	—	—	—	—	—	—	1,40	0,75	—	—	—	—	—	—	—	1,40	0,88	—	—	—	—	—	—	—	—	1,00	—	—	—	—	—	—	—	—	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78	0,55	—	—	—	—	—	—	—	2,78	0,63	—	—	—	—	—	—	—	4,51	0,75	—	—	—	—	—	—	—	4,51	0,88	—	—	—	—	—	—	—	—	1,00	—	—	—	—	—	—	—	—	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	<p>G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 9</p> <p>of European Technical Assessment ETA-12/0580</p>
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24																																																																																																																																																																																																																					
$M_{t,nom}$	3 Nm																																																																																																																																																																																																																													
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,80																																																																																																																																																																																																																					
	0,55	—	—	—	—	—	—	—	1,40																																																																																																																																																																																																																					
	0,63	—	—	—	—	—	—	—	1,40																																																																																																																																																																																																																					
	0,75	—	—	—	—	—	—	—	1,40																																																																																																																																																																																																																					
	0,88	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																						
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																					
	0,55	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																					
	0,63	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																					
	0,75	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																					
	0,88	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																					
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																						
<p>Self-drilling screw GTFS 4,8 x L (FS) with hexagon head and sealing washer $\varnothing 14$</p>																																																																																																																																																																																																																														

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,62	0,62	0,62	0,62	0,62	—	—	/
	0,55	0,62	0,62	0,62	0,62	0,62	—	—	
	0,63	0,62	0,62	1,13	1,13	1,13	—	—	
	0,75	0,62	0,62	1,13	1,46	1,46	—	—	
	0,88	0,62	0,62	1,13	1,46	1,46	—	—	
	1,00	0,62	0,62	1,13	1,46	1,46	—	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,49	0,49	0,49	0,49	0,49	—	—	/
	0,55	0,49	0,49	0,49	0,49	0,49	—	—	
	0,63	0,49	0,49	0,77	0,77	0,77	—	—	
	0,75	0,49	0,49	0,77	0,89	0,89	—	—	
	0,88	0,49	0,49	0,77	0,89	1,01	—	—	
	1,00	0,49	0,49	0,77	0,89	1,01	1,44	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—		
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%									

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 10</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTXFO2 4,8 x 20 with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p>																																																																																																																																																																																																																																
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p>																																																																																																																																																																																																																																
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 3,370 \text{ Nm}$</p> <p>$f_{ax,k} = 17,604 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>																																																																																																																																																																																																																																
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>0,50</th> <th>0,55</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>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">3 Nm</td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>0,62</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>0,62</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,13</td> </tr> <tr> <td>0,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,46</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,46</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,46</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</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>bearing resistance of component I</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>2,78</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>2,78</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>0,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</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>bearing resistance of component I</td> </tr> </tbody> </table>	$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24	$M_{t,nom}$	3 Nm									$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,62	0,55	—	—	—	—	—	—	—	0,62	0,63	—	—	—	—	—	—	—	1,13	0,75	—	—	—	—	—	—	—	1,46	0,88	—	—	—	—	—	—	—	1,46	1,00	—	—	—	—	—	—	—	1,46	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	bearing resistance of component I	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78	0,55	—	—	—	—	—	—	—	2,78	0,63	—	—	—	—	—	—	—	4,51	0,75	—	—	—	—	—	—	—	4,51	0,88	—	—	—	—	—	—	—	4,51	1,00	—	—	—	—	—	—	—	4,51	1,13	—	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	—	bearing resistance of component I	<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 11</p> <p>of European Technical Assessment ETA-12/0580</p>
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24																																																																																																																																																																																																																							
$M_{t,nom}$	3 Nm																																																																																																																																																																																																																															
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,62																																																																																																																																																																																																																							
	0,55	—	—	—	—	—	—	—	0,62																																																																																																																																																																																																																							
	0,63	—	—	—	—	—	—	—	1,13																																																																																																																																																																																																																							
	0,75	—	—	—	—	—	—	—	1,46																																																																																																																																																																																																																							
	0,88	—	—	—	—	—	—	—	1,46																																																																																																																																																																																																																							
	1,00	—	—	—	—	—	—	—	1,46																																																																																																																																																																																																																							
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I																																																																																																																																																																																																																							
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																							
	0,55	—	—	—	—	—	—	—	2,78																																																																																																																																																																																																																							
	0,63	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																							
	0,75	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																							
	0,88	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																							
	1,00	—	—	—	—	—	—	—	4,51																																																																																																																																																																																																																							
	1,13	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,25	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																							
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I																																																																																																																																																																																																																							
<p>Self-drilling screw GTXF2 4,8 x L with hexagon head and sealing washer $\varnothing 14$</p>																																																																																																																																																																																																																																

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (20 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346 or structural timber – EN 14081</p>	<p>TDRX-20/25</p>  
Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$	
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 15,168 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24	
$M_{t,nom}$	3 Nm									
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,21	1,21	1,21	1,21	1,21	1,21	—	—	1,08
	0,55	1,21	1,21	1,21	1,21	1,21	1,21	—	—	1,08
	0,63	1,21	1,21	1,42	1,42	1,42	1,42	—	—	1,08
	0,75	1,21	1,21	1,42	2,27	2,27	2,27	—	—	1,08
	0,88	1,21	1,21	1,42	2,27	2,67	2,67	—	—	1,08
	1,00	1,21	1,21	1,42	2,27	2,67	2,69	—	—	1,08
	1,13	—	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,62	0,62	0,62	0,62	0,62	0,62	—	—	2,97
	0,55	0,62	0,62	0,62	0,62	0,62	0,62	—	—	2,97
	0,63	0,62	0,62	0,80	0,80	0,80	0,80	—	—	3,93
	0,75	0,62	0,62	0,80	0,91	0,91	0,91	—	—	4,73
	0,88	0,62	0,62	0,80	0,91	1,23	1,23	—	—	4,73
	1,00	0,62	0,62	0,80	0,91	1,23	1,48	—	—	4,73
	1,13	—	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTFP 4,8 x L with oval head and sealing washer Ø14

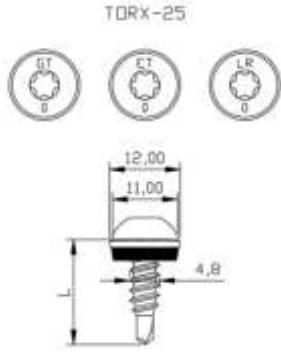
Annex 13
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
--	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,05	1,05	1,05	1,05	1,05	1,05	—	—
	0,55	1,05	1,05	1,05	1,05	1,05	1,05	—	—
	0,63	1,05	1,05	1,42	1,42	1,42	1,42	—	—
	0,75	1,05	1,05	1,42	2,02	2,02	2,02	—	—
	0,88	1,05	1,05	1,42	2,02	2,21	2,21	—	—
	1,00	1,05	1,05	1,42	2,02	2,21	2,53	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,55	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,63	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,75	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,88	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	1,00	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 14</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTO2 4,8 x 20 with hexagon or oval head</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24	
$M_{t,nom}$	3 Nm									
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,05	1,05	1,05	1,05	1,05	—	—	/	
	0,55	1,05	1,05	1,05	1,05	1,05	—	—		
	0,63	1,05	1,05	1,42	1,42	1,42	—	—		
	0,75	1,05	1,05	1,42	2,02	2,02	—	—		
	0,88	1,05	1,05	1,42	2,02	2,21	—	—		
	1,00	1,05	1,05	1,42	2,02	2,21	—	—		
	1,13	—	—	—	—	—	—	—		
	1,25	—	—	—	—	—	—	—		
	1,50	—	—	—	—	—	—	—		
	1,75	—	—	—	—	—	—	—		
	2,00	—	—	—	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,55	0,55	0,73	0,86	1,04	1,59	—		/
	0,55	0,55	0,55	0,73	0,86	1,04	1,59	—		
	0,63	0,55	0,55	0,73	0,86	1,04	1,59	—		
	0,75	0,55	0,55	0,73	0,86	1,04	1,59	—		
	0,88	0,55	0,55	0,73	0,86	1,04	1,59	—		
	1,00	0,55	0,55	0,73	0,86	1,04	1,59	—		
	1,13	—	—	—	—	—	—	—		
	1,25	—	—	—	—	—	—	—		
	1,50	—	—	—	—	—	—	—		
	1,75	—	—	—	—	—	—	—		
	2,00	—	—	—	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTO2 4,8 x 20
with oval head and sealing washer $\varnothing 12$

Annex 15
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

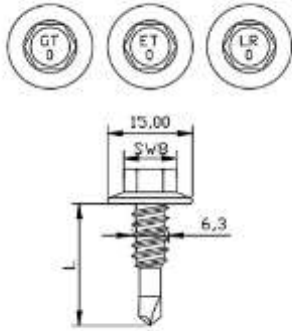
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,05	1,05	1,05	1,05	1,05	—	—	/
	0,55	1,05	1,05	1,05	1,05	1,05	—	—	
	0,63	1,05	1,05	1,42	1,42	1,42	—	—	
	0,75	1,05	1,05	1,42	2,02	2,02	—	—	
	0,88	1,05	1,05	1,42	2,02	2,21	—	—	
	1,00	1,05	1,05	1,42	2,02	2,21	—	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,55	0,55	0,73	0,86	1,04	1,59	—	/
	0,55	0,55	0,55	0,73	0,86	1,04	1,59	—	
	0,63	0,55	0,55	0,73	0,86	1,04	1,59	—	
	0,75	0,55	0,55	0,73	0,86	1,04	1,59	—	
	0,88	0,55	0,55	0,73	0,86	1,04	1,59	—	
	1,00	0,55	0,55	0,73	0,86	1,04	1,59	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTO2 4,8 x 20
 with hexagon head and sealing washer $\varnothing 14$

Annex 16
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: integrated collar</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>																																																																																																																																																																																																																																																														
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,25 \text{ mm}$</p>																																																																																																																																																																																																																																																														
<p>Timber substructure</p> <p>No performance assessed</p>																																																																																																																																																																																																																																																														
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>0,50</th> <th>0,55</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 colspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">4 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</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>0,55</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>0,63</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>1,88</td> <td>1,88</td> <td>1,88</td> <td>1,88</td> <td>1,88</td> <td></td> </tr> <tr> <td>0,75</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>2,92</td> <td>2,92</td> <td>2,92</td> <td>2,92</td> <td>2,92</td> <td></td> </tr> <tr> <td>0,88</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>2,92</td> <td>3,21</td> <td>3,21</td> <td>3,21</td> <td>3,21</td> <td></td> </tr> <tr> <td>1,00</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>2,92</td> <td>3,21</td> <td>3,66</td> <td>3,66</td> <td>3,66</td> <td></td> </tr> <tr> <td>1,13</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>2,92</td> <td>3,21</td> <td>3,66</td> <td>3,66</td> <td>3,66</td> <td></td> </tr> <tr> <td>1,25</td> <td>1,53</td> <td>1,53</td> <td>1,88</td> <td>2,92</td> <td>3,21</td> <td>3,66</td> <td>3,66</td> <td>3,66</td> <td></td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td></td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</td> <td>—</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="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>0,55</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>0,63</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>0,75</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>0,88</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>1,00</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>1,13</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>1,25</td> <td>0,53</td> <td>0,53</td> <td>0,69</td> <td>0,84</td> <td>1,02</td> <td>1,77</td> <td>1,77</td> <td>2,01</td> <td></td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td></td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</td> <td>—</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> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>											$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24		$M_{t,nom}$	4 Nm										$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,53	1,53	1,53	1,53	1,53	1,53	1,53	1,53		0,55	1,53	1,53	1,53	1,53	1,53	1,53	1,53	1,53		0,63	1,53	1,53	1,88	1,88	1,88	1,88	1,88	1,88		0,75	1,53	1,53	1,88	2,92	2,92	2,92	2,92	2,92		0,88	1,53	1,53	1,88	2,92	3,21	3,21	3,21	3,21		1,00	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66		1,13	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66		1,25	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66		1,50	—	—	—	—	—	—	—	—		1,75	—	—	—	—	—	—	—	—		2,00	—	—	—	—	—	—	—	—		$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		0,55	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		0,63	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		0,75	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		0,88	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		1,00	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		1,13	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		1,25	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01		1,50	—	—	—	—	—	—	—	—		1,75	—	—	—	—	—	—	—	—		2,00	—	—	—	—	—	—	—	—	
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24																																																																																																																																																																																																																																																					
$M_{t,nom}$	4 Nm																																																																																																																																																																																																																																																													
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,53	1,53	1,53	1,53	1,53	1,53	1,53	1,53																																																																																																																																																																																																																																																					
	0,55	1,53	1,53	1,53	1,53	1,53	1,53	1,53	1,53																																																																																																																																																																																																																																																					
	0,63	1,53	1,53	1,88	1,88	1,88	1,88	1,88	1,88																																																																																																																																																																																																																																																					
	0,75	1,53	1,53	1,88	2,92	2,92	2,92	2,92	2,92																																																																																																																																																																																																																																																					
	0,88	1,53	1,53	1,88	2,92	3,21	3,21	3,21	3,21																																																																																																																																																																																																																																																					
	1,00	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66																																																																																																																																																																																																																																																					
	1,13	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66																																																																																																																																																																																																																																																					
	1,25	1,53	1,53	1,88	2,92	3,21	3,66	3,66	3,66																																																																																																																																																																																																																																																					
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																					
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																					
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																						
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	0,55	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	0,63	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	0,75	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	0,88	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	1,00	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	1,13	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	1,25	0,53	0,53	0,69	0,84	1,02	1,77	1,77	2,01																																																																																																																																																																																																																																																					
	1,50	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																					
	1,75	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																					
2,00	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																																						
<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>										<p>Annex 17 of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																																																																				
<p>Self-drilling screw GTO3 FH 6,3 x 22 with hexagon head</p>																																																																																																																																																																																																																																																														

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
---	--

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	—	—	—	—	/
	0,55	0,51	0,51	0,51	—	—	—	—	
	0,63	0,76	0,76	0,76	—	—	—	—	
	0,75	0,84	0,84	0,84	—	—	—	—	
	0,88	0,78	0,78	0,78	—	—	—	—	
	1,00	0,94	0,94	0,94	—	—	—	—	
	1,13	0,94	0,94	0,94	—	—	—	—	
	1,25	0,94	0,94	0,94	—	—	—	—	
	1,50	0,94	0,94	0,94	—	—	—	—	
	1,75	0,94	0,94	—	—	—	—	—	
2,00	0,94	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT3 4,8 x L
 with hexagon or oval head

Annex 18
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
---	--

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—
	0,55	1,08	1,08	1,08	1,08	—	—	—	—
	0,63	1,38	1,38	1,38	1,38	—	—	—	—
	0,75	2,11	2,11	2,11	2,11	—	—	—	—
	0,88	2,29	2,29	2,29	2,29	—	—	—	—
	1,00	2,59	2,59	2,59	2,59	—	—	—	—
	1,13	2,59	2,59	2,59	—	—	—	—	—
	1,25	2,59	2,74	2,74	—	—	—	—	—
	1,50	2,59	2,74	3,41	—	—	—	—	—
	1,75	2,59	2,74	—	—	—	—	—	—
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	—
	0,55	0,51	0,51	0,51	0,51	—	—	—	—
	0,63	0,76	0,76	0,76	0,76	—	—	—	—
	0,75	0,84	0,84	0,84	0,84	—	—	—	—
	0,88	0,78	0,78	0,78	0,78	—	—	—	—
	1,00	0,94	0,94	0,94	0,94	—	—	—	—
	1,13	0,94	0,94	0,94	—	—	—	—	—
	1,25	0,94	0,94	0,94	—	—	—	—	—
	1,50	0,94	0,94	0,94	—	—	—	—	—
	1,75	0,94	0,94	—	—	—	—	—	—
2,00	0,94	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 19</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT3 4,8 x L with oval head and sealing washer $\varnothing 12$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 3,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,97	1,43	1,69	2,19	—	—	—	/
	0,55	0,97	1,43	1,69	2,19	—	—	—	
	0,63	0,97	1,43	1,69	2,76	—	—	—	
	0,75	0,97	1,43	1,69	2,76	—	—	—	
	0,88	0,97	1,43	1,69	2,76	—	—	—	
	1,00	0,97	1,43	1,69	2,76	—	—	—	
	1,13	0,97	1,43	1,69	—	—	—	—	
	1,25	0,97	1,43	1,69	—	—	—	—	
	1,50	0,97	1,43	1,69	—	—	—	—	
	1,75	0,97	1,43	—	—	—	—	—	
2,00	0,97	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT3 4,8 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 20
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
--	--

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	/
	0,55	0,51	0,51	0,51	0,51	—	—	—	
	0,63	0,76	0,76	0,76	0,76	—	—	—	
	0,75	0,84	0,84	0,84	0,84	—	—	—	
	0,88	0,78	0,78	0,78	0,78	—	—	—	
	1,00	0,94	0,94	0,94	0,94	—	—	—	
	1,13	0,94	0,94	0,94	—	—	—	—	
	1,25	0,94	0,94	0,94	—	—	—	—	
	1,50	0,94	0,94	0,94	—	—	—	—	
	1,75	0,94	0,94	—	—	—	—	—	
2,00	0,94	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR3 4,8 x L
 with hexagon or oval head

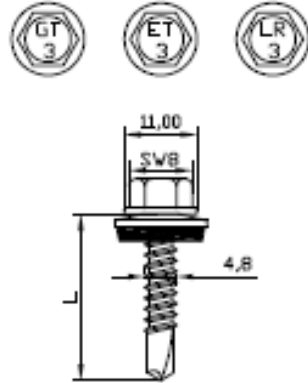
Annex 21
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
--	----------------

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	/
	0,55	0,51	0,51	0,51	0,51	—	—	—	
	0,63	0,76	0,76	0,76	0,76	—	—	—	
	0,75	0,84	0,84	0,84	0,84	—	—	—	
	0,88	0,78	0,78	0,78	0,78	—	—	—	
	1,00	0,94	0,94	0,94	0,94	—	—	—	
	1,13	0,94	0,94	0,94	—	—	—	—	
	1,25	0,94	0,94	0,94	—	—	—	—	
	1,50	0,94	0,94	0,94	—	—	—	—	
	1,75	0,94	0,94	—	—	—	—	—	
2,00	0,94	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 22</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR3 4,8 x L with oval head and sealing washer $\varnothing 12$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 3,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	—	—	—	—	/
	0,55	1,08	1,08	1,08	—	—	—	—	
	0,63	1,38	1,38	1,38	—	—	—	—	
	0,75	2,11	2,11	2,11	—	—	—	—	
	0,88	2,29	2,29	2,29	—	—	—	—	
	1,00	2,59	2,59	2,59	—	—	—	—	
	1,13	2,59	2,59	—	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,97	1,43	1,69	—	—	—	—	/
	0,55	0,97	1,43	1,69	—	—	—	—	
	0,63	0,97	1,43	1,69	—	—	—	—	
	0,75	0,97	1,43	1,69	—	—	—	—	
	0,88	0,97	1,43	1,69	—	—	—	—	
	1,00	0,97	1,43	1,69	—	—	—	—	
	1,13	0,97	1,43	1,69	—	—	—	—	
	1,25	0,97	1,43	1,69	—	—	—	—	
	1,50	0,97	1,43	1,69	—	—	—	—	
	1,75	0,97	1,43	—	—	—	—	—	
2,00	0,97	—	—	—	—	—	—	—	
<p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%</p> <p>If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>									

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR3 4,8 x L
 with hexagon head and steel sealing washer $\varnothing 14$

Annex 23
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

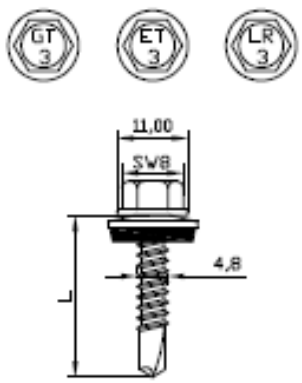
$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—
	0,55	1,08	1,08	1,08	1,08	—	—	—	—
	0,63	1,38	1,38	1,38	1,38	—	—	—	—
	0,75	2,11	2,11	2,11	2,11	—	—	—	—
	0,88	2,29	2,29	2,29	2,29	—	—	—	—
	1,00	2,59	2,59	2,59	2,59	—	—	—	—
	1,13	2,59	2,59	2,59	—	—	—	—	—
	1,25	2,59	2,74	2,74	—	—	—	—	—
	1,50	2,59	2,74	3,41	—	—	—	—	—
	1,75	2,59	2,74	—	—	—	—	—	—
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,97	1,43	1,69	2,19	—	—	—	—
	0,55	0,97	1,43	1,69	2,19	—	—	—	—
	0,63	0,97	1,43	1,69	2,76	—	—	—	—
	0,75	0,97	1,43	1,69	2,76	—	—	—	—
	0,88	0,97	1,43	1,69	2,76	—	—	—	—
	1,00	0,97	1,43	1,69	2,76	—	—	—	—
	1,13	0,97	1,43	1,69	—	—	—	—	—
	1,25	0,97	1,43	1,69	—	—	—	—	—
	1,50	0,97	1,43	1,69	—	—	—	—	—
	1,75	0,97	1,43	—	—	—	—	—	—
2,00	0,97	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR3 4,8 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 24
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
---	---

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
	2,00	2,59	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,97	1,43	1,69	2,19	—	—	—	/
	0,55	0,97	1,43	1,69	2,19	—	—	—	
	0,63	0,97	1,43	1,69	2,76	—	—	—	
	0,75	0,97	1,43	1,69	2,76	—	—	—	
	0,88	0,97	1,43	1,69	2,76	—	—	—	
	1,00	0,97	1,43	1,69	2,76	—	—	—	
	1,13	0,97	1,43	1,69	—	—	—	—	
	1,25	0,97	1,43	1,69	—	—	—	—	
	1,50	0,97	1,43	1,69	—	—	—	—	
	1,75	0,97	1,43	—	—	—	—	—	
	2,00	0,97	—	—	—	—	—	—	
<p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%</p> <p>If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>									

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR3 4,8 x L
with hexagon head and sealing washer $\varnothing 14$

Annex 25
of European
Technical Assessment
ETA-12/0580

Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346	
Drilling capacity: $\Sigma ti \leq 3,00$ mm	
Timber substructure No performance assessed	

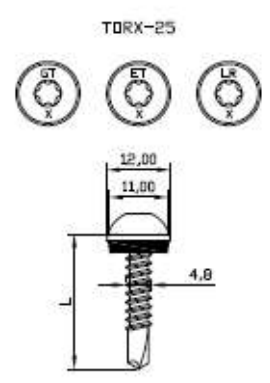
$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	
	0,55	0,51	0,51	0,51	0,51	—	—	—	
	0,63	0,76	0,76	0,76	0,76	—	—	—	
	0,75	0,84	0,84	0,84	0,84	—	—	—	
	0,88	0,78	0,78	0,78	0,78	—	—	—	
	1,00	0,94	0,94	0,94	0,94	—	—	—	
	1,13	0,94	0,94	0,94	—	—	—	—	
	1,25	0,94	0,94	0,94	—	—	—	—	
	1,50	0,94	0,94	0,94	—	—	—	—	
	1,75	0,94	0,94	—	—	—	—	—	
2,00	0,94	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX3 4,8 x L
 with hexagon or oval head

Annex 26
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>																																																																																																																																																																																																																																					
<p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p>																																																																																																																																																																																																																																					
<p>Timber substructure</p> <p>No performance assessed</p>																																																																																																																																																																																																																																					
		<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>1,00</th> <th>1,25</th> <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>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">3 Nm</td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,38</td> <td>1,38</td> <td>1,38</td> <td>1,38</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>2,11</td> <td>2,11</td> <td>2,11</td> <td>2,11</td> <td>—</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>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>2,59</td> <td>2,74</td> <td>2,74</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>2,59</td> <td>2,74</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>2,59</td> <td>2,74</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,51</td> <td>0,51</td> <td>0,51</td> <td>0,51</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>0,51</td> <td>0,51</td> <td>0,51</td> <td>0,51</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>0,76</td> <td>0,76</td> <td>0,76</td> <td>0,76</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>0,84</td> <td>0,84</td> <td>0,84</td> <td>0,84</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>0,78</td> <td>0,78</td> <td>0,78</td> <td>0,78</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>0,94</td> <td>0,94</td> <td>0,94</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>0,94</td> <td>0,94</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>0,94</td> <td>0,94</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>0,94</td> <td>0,94</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>0,94</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>0,94</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>								$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24	$M_{t,nom}$	3 Nm									$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—	0,55	1,08	1,08	1,08	1,08	—	—	—	—	0,63	1,38	1,38	1,38	1,38	—	—	—	—	0,75	2,11	2,11	2,11	2,11	—	—	—	—	0,88	2,29	2,29	2,29	2,29	—	—	—	—	1,00	2,59	2,59	2,59	2,59	—	—	—	—	1,13	2,59	2,59	2,59	—	—	—	—	—	1,25	2,59	2,74	2,74	—	—	—	—	—	1,50	2,59	2,74	3,41	—	—	—	—	—	1,75	2,59	2,74	—	—	—	—	—	—	2,00	2,59	—	—	—	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	—	0,55	0,51	0,51	0,51	0,51	—	—	—	—	0,63	0,76	0,76	0,76	0,76	—	—	—	—	0,75	0,84	0,84	0,84	0,84	—	—	—	—	0,88	0,78	0,78	0,78	0,78	—	—	—	—	1,00	0,94	0,94	0,94	0,94	—	—	—	—	1,13	0,94	0,94	0,94	—	—	—	—	—	1,25	0,94	0,94	0,94	—	—	—	—	—	1,50	0,94	0,94	0,94	—	—	—	—	—	1,75	0,94	0,94	—	—	—	—	—	—	2,00	0,94	—	—	—	—	—	—	—
$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24																																																																																																																																																																																																																												
$M_{t,nom}$	3 Nm																																																																																																																																																																																																																																				
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—																																																																																																																																																																																																																												
	0,55	1,08	1,08	1,08	1,08	—	—	—	—																																																																																																																																																																																																																												
	0,63	1,38	1,38	1,38	1,38	—	—	—	—																																																																																																																																																																																																																												
	0,75	2,11	2,11	2,11	2,11	—	—	—	—																																																																																																																																																																																																																												
	0,88	2,29	2,29	2,29	2,29	—	—	—	—																																																																																																																																																																																																																												
	1,00	2,59	2,59	2,59	2,59	—	—	—	—																																																																																																																																																																																																																												
	1,13	2,59	2,59	2,59	—	—	—	—	—																																																																																																																																																																																																																												
	1,25	2,59	2,74	2,74	—	—	—	—	—																																																																																																																																																																																																																												
	1,50	2,59	2,74	3,41	—	—	—	—	—																																																																																																																																																																																																																												
	1,75	2,59	2,74	—	—	—	—	—	—																																																																																																																																																																																																																												
2,00	2,59	—	—	—	—	—	—	—																																																																																																																																																																																																																													
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,51	0,51	0,51	—	—	—	—																																																																																																																																																																																																																												
	0,55	0,51	0,51	0,51	0,51	—	—	—	—																																																																																																																																																																																																																												
	0,63	0,76	0,76	0,76	0,76	—	—	—	—																																																																																																																																																																																																																												
	0,75	0,84	0,84	0,84	0,84	—	—	—	—																																																																																																																																																																																																																												
	0,88	0,78	0,78	0,78	0,78	—	—	—	—																																																																																																																																																																																																																												
	1,00	0,94	0,94	0,94	0,94	—	—	—	—																																																																																																																																																																																																																												
	1,13	0,94	0,94	0,94	—	—	—	—	—																																																																																																																																																																																																																												
	1,25	0,94	0,94	0,94	—	—	—	—	—																																																																																																																																																																																																																												
	1,50	0,94	0,94	0,94	—	—	—	—	—																																																																																																																																																																																																																												
	1,75	0,94	0,94	—	—	—	—	—	—																																																																																																																																																																																																																												
2,00	0,94	—	—	—	—	—	—	—																																																																																																																																																																																																																													
<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>		<p>Annex 27</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																																																			
<p>Self-drilling screw GTX3 4,8 x L with oval head and sealing washer $\varnothing 12$</p>																																																																																																																																																																																																																																					

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—
	0,55	1,08	1,08	1,08	1,08	—	—	—	—
	0,63	1,38	1,38	1,38	1,38	—	—	—	—
	0,75	2,11	2,11	2,11	2,11	—	—	—	—
	0,88	2,29	2,29	2,29	2,29	—	—	—	—
	1,00	2,59	2,59	2,59	2,59	—	—	—	—
	1,13	2,59	2,59	2,59	—	—	—	—	—
	1,25	2,59	2,74	2,74	—	—	—	—	—
	1,50	2,59	2,74	3,41	—	—	—	—	—
	1,75	2,59	2,74	—	—	—	—	—	—
2,00	2,59	—	—	—	—	—	—	—	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,02	1,24	1,69	2,19	—	—	—	—
	0,55	1,02	1,24	1,69	2,19	—	—	—	—
	0,63	1,02	1,24	1,69	2,52	—	—	—	—
	0,75	1,02	1,24	1,69	2,52	—	—	—	—
	0,88	1,02	1,24	1,69	2,52	—	—	—	—
	1,00	1,02	1,24	1,69	2,52	—	—	—	—
	1,13	1,02	1,24	1,69	—	—	—	—	—
	1,25	1,02	1,24	1,69	—	—	—	—	—
	1,50	1,02	1,24	1,69	—	—	—	—	—
	1,75	1,02	1,24	—	—	—	—	—	—
2,00	1,02	—	—	—	—	—	—	—	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

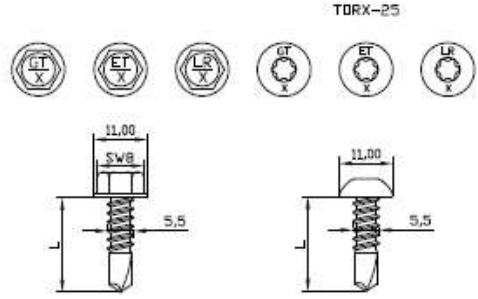
Self-drilling screw GTX3 4,8 x L
 with hexagon head and stainless steel sealing washer $\varnothing 14$

Annex 28
 of European
 Technical Assessment
 ETA-12/0580

Materials
 Fastener: stainless steel – SAE 304, Bi-metal
 Washer: -
 Component I: S280GD, S320GD or S350GD – EN 10346
 Component II: S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 3,00$ mm

Timber substructure
 No performance assessed



$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
	2,00	2,59	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	—	—	
	0,55	0,61	0,61	0,61	0,61	—	—	—	
	0,63	0,90	0,90	0,90	0,90	—	—	—	
	0,75	0,96	0,99	0,99	0,99	—	—	—	
	0,88	0,96	0,99	0,99	0,99	—	—	—	
	1,00	0,96	1,13	1,13	1,13	—	—	—	
	1,13	0,96	1,13	1,13	—	—	—	—	
	1,25	0,96	1,13	1,13	—	—	—	—	
	1,50	0,96	1,13	1,13	—	—	—	—	
	1,75	0,96	1,13	—	—	—	—	—	
	2,00	0,96	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX3 AL 5,5 x L
 with hexagon or oval head

Annex 29
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
---	----------------

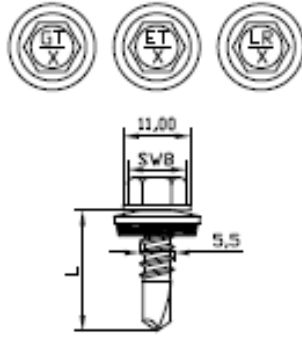
$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	/
	0,55	1,08	1,08	1,08	1,08	—	—	—	
	0,63	1,38	1,38	1,38	1,38	—	—	—	
	0,75	2,11	2,11	2,11	2,11	—	—	—	
	0,88	2,29	2,29	2,29	2,29	—	—	—	
	1,00	2,59	2,59	2,59	2,59	—	—	—	
	1,13	2,59	2,59	2,59	—	—	—	—	
	1,25	2,59	2,74	2,74	—	—	—	—	
	1,50	2,59	2,74	3,41	—	—	—	—	
	1,75	2,59	2,74	—	—	—	—	—	
2,00	2,59	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	—	—	—	—	/
	0,55	0,61	0,61	0,61	—	—	—	—	
	0,63	0,90	0,90	0,90	—	—	—	—	
	0,75	0,96	0,99	0,99	—	—	—	—	
	0,88	0,96	0,99	0,99	—	—	—	—	
	1,00	0,96	1,13	1,13	—	—	—	—	
	1,13	0,96	1,13	1,13	—	—	—	—	
	1,25	0,96	1,13	1,13	—	—	—	—	
	1,50	0,96	1,13	1,13	—	—	—	—	
	1,75	0,96	1,13	—	—	—	—	—	
2,00	0,96	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX3 AL 5,5 x L
 with oval head and stainless sealing washer $\varnothing 12$

Annex 30
 of European
 Technical Assessment
 ETA-12/0580

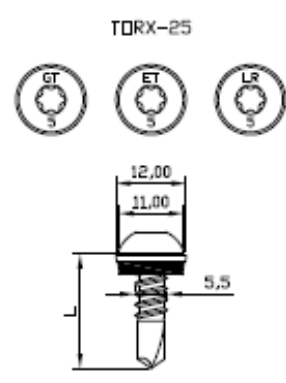
<p>Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: EPDM sealing washer with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <p>Timber substructure No performance assessed</p>																																																																																																																																																																																																																																												
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>1,00</th> <th>1,25</th> <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 colspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">3 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>1,08</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,38</td> <td>1,38</td> <td>1,38</td> <td>1,38</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>2,11</td> <td>2,11</td> <td>2,11</td> <td>2,11</td> <td>—</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>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,59</td> <td>2,59</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>2,59</td> <td>2,74</td> <td>2,74</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>2,59</td> <td>2,74</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>2,59</td> <td>2,74</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>2,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,78</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,78</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,78</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>2,78</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>0,96</td> <td>1,42</td> <td>1,85</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>0,96</td> <td>1,42</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>0,96</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>											$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24		$M_{t,nom}$	3 Nm										$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—	/	0,55	1,08	1,08	1,08	1,08	—	—	—	—	0,63	1,38	1,38	1,38	1,38	—	—	—	—	0,75	2,11	2,11	2,11	2,11	—	—	—	—	0,88	2,29	2,29	2,29	2,29	—	—	—	—	1,00	2,59	2,59	2,59	2,59	—	—	—	—	1,13	2,59	2,59	2,59	—	—	—	—	—	1,25	2,59	2,74	2,74	—	—	—	—	—	1,50	2,59	2,74	3,41	—	—	—	—	—	1,75	2,59	2,74	—	—	—	—	—	—	2,00	2,59	—	—	—	—	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,96	1,42	1,85	2,63	—	—	—	—	/	0,55	0,96	1,42	1,85	2,63	—	—	—	—	0,63	0,96	1,42	1,85	2,78	—	—	—	—	0,75	0,96	1,42	1,85	2,78	—	—	—	—	0,88	0,96	1,42	1,85	2,78	—	—	—	—	1,00	0,96	1,42	1,85	2,78	—	—	—	—	1,13	0,96	1,42	1,85	—	—	—	—	—	1,25	0,96	1,42	1,85	—	—	—	—	—	1,50	0,96	1,42	1,85	—	—	—	—	—	1,75	0,96	1,42	—	—	—	—	—	—	2,00	0,96	—	—	—	—	—	—	—	—
$t_{N,II}$ [mm]	1,00	1,25	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24																																																																																																																																																																																																																																			
$M_{t,nom}$	3 Nm																																																																																																																																																																																																																																											
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,08	1,08	1,08	1,08	—	—	—	—	/																																																																																																																																																																																																																																		
	0,55	1,08	1,08	1,08	1,08	—	—	—	—																																																																																																																																																																																																																																			
	0,63	1,38	1,38	1,38	1,38	—	—	—	—																																																																																																																																																																																																																																			
	0,75	2,11	2,11	2,11	2,11	—	—	—	—																																																																																																																																																																																																																																			
	0,88	2,29	2,29	2,29	2,29	—	—	—	—																																																																																																																																																																																																																																			
	1,00	2,59	2,59	2,59	2,59	—	—	—	—																																																																																																																																																																																																																																			
	1,13	2,59	2,59	2,59	—	—	—	—	—																																																																																																																																																																																																																																			
	1,25	2,59	2,74	2,74	—	—	—	—	—																																																																																																																																																																																																																																			
	1,50	2,59	2,74	3,41	—	—	—	—	—																																																																																																																																																																																																																																			
	1,75	2,59	2,74	—	—	—	—	—	—																																																																																																																																																																																																																																			
2,00	2,59	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																			
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,96	1,42	1,85	2,63	—	—	—	—	/																																																																																																																																																																																																																																		
	0,55	0,96	1,42	1,85	2,63	—	—	—	—																																																																																																																																																																																																																																			
	0,63	0,96	1,42	1,85	2,78	—	—	—	—																																																																																																																																																																																																																																			
	0,75	0,96	1,42	1,85	2,78	—	—	—	—																																																																																																																																																																																																																																			
	0,88	0,96	1,42	1,85	2,78	—	—	—	—																																																																																																																																																																																																																																			
	1,00	0,96	1,42	1,85	2,78	—	—	—	—																																																																																																																																																																																																																																			
	1,13	0,96	1,42	1,85	—	—	—	—	—																																																																																																																																																																																																																																			
	1,25	0,96	1,42	1,85	—	—	—	—	—																																																																																																																																																																																																																																			
	1,50	0,96	1,42	1,85	—	—	—	—	—																																																																																																																																																																																																																																			
	1,75	0,96	1,42	—	—	—	—	—	—																																																																																																																																																																																																																																			
2,00	0,96	—	—	—	—	—	—	—	—																																																																																																																																																																																																																																			
<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>										<p>Annex 31 of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																																																		
<p>Self-drilling screw GTX3 AL 5,5 x L with hexagon head and stainless steel sealing washer $\varnothing 14$</p>																																																																																																																																																																																																																																												

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma ti \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
--	----------------

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	—	—	/
	0,55	0,61	0,61	0,61	0,61	—	—	—	
	0,63	0,90	0,90	0,90	0,90	—	—	—	
	0,75	0,99	0,99	0,99	0,99	—	—	—	
	0,88	0,99	0,99	0,99	0,99	—	—	—	
	1,00	1,13	1,13	1,13	1,13	—	—	—	
	1,13	1,13	1,13	1,13	—	—	—	—	
	1,25	1,13	1,13	1,13	—	—	—	—	
	1,50	1,13	1,13	1,13	—	—	—	—	
	1,75	1,13	1,13	1,13	—	—	—	—	
2,00	1,13	1,13	1,13	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 32</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT5 5,5 x L with hexagon head or oval head</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	<p>TORX-25</p> 
Drilling capacity: $\Sigma t_i \leq 5,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	—	—	/
	0,55	0,61	0,61	0,61	0,61	—	—	—	
	0,63	0,90	0,90	0,90	0,90	—	—	—	
	0,75	0,99	0,99	0,99	0,99	—	—	—	
	0,88	0,99	0,99	0,99	0,99	—	—	—	
	1,00	1,13	1,13	1,13	1,13	—	—	—	
	1,13	1,13	1,13	1,13	—	—	—	—	
	1,25	1,13	1,13	1,13	—	—	—	—	
	1,50	1,13	1,13	1,13	—	—	—	—	
	1,75	1,13	1,13	1,13	—	—	—	—	
2,00	1,13	1,13	1,13	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT5 5,5 x L
with oval head and sealing washer $\varnothing 12$

Annex 33
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 5,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

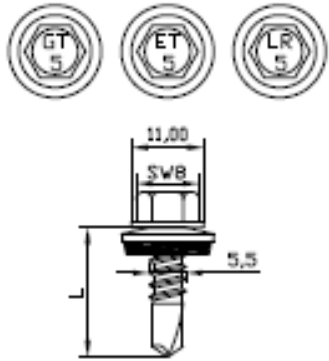
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,63	2,63	—	—	—	/
	0,55	1,78	2,55	2,63	2,63	—	—	—	
	0,63	1,78	2,55	3,59	3,59	—	—	—	
	0,75	1,78	2,55	4,13	4,13	—	—	—	
	0,88	1,78	2,55	4,14	4,14	—	—	—	
	1,00	1,78	2,55	4,71	4,71	—	—	—	
	1,13	1,78	2,55	4,71	—	—	—	—	
	1,25	1,78	2,55	4,71	—	—	—	—	
	1,50	1,78	2,55	4,71	—	—	—	—	
	1,75	1,78	2,55	4,71	—	—	—	—	
2,00	1,78	2,55	4,71	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 34
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 5,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	3,16	3,16	—	—	—	/
	0,55	1,78	2,55	3,16	3,16	—	—	—	
	0,63	1,78	2,55	3,63	3,63	—	—	—	
	0,75	1,78	2,55	4,17	4,17	—	—	—	
	0,88	1,78	2,55	4,18	4,18	—	—	—	
	1,00	1,78	2,55	4,75	4,75	—	—	—	
	1,13	1,78	2,55	4,75	—	—	—	—	
	1,25	1,78	2,55	4,75	—	—	—	—	
	1,50	1,78	2,55	4,75	—	—	—	—	
	1,75	1,78	2,55	4,75	—	—	—	—	
2,00	1,78	2,55	4,75	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT5 5,5 x L
with hexagon head and sealing washer $\varnothing 16$

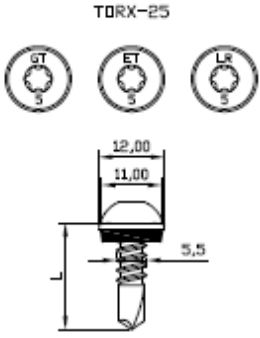
Annex 35
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,61	0,61	0,61	—	—	—	/
	0,55	0,51	0,61	0,61	0,61	—	—	—	
	0,63	0,90	0,90	0,90	0,90	—	—	—	
	0,75	0,99	0,99	0,99	0,99	—	—	—	
	0,88	0,99	0,99	0,99	0,99	—	—	—	
	1,00	1,13	1,13	1,13	1,13	—	—	—	
	1,13	1,13	1,13	1,13	—	—	—	—	
	1,25	1,13	1,13	1,13	—	—	—	—	
	1,50	1,13	1,13	1,13	—	—	—	—	
	1,75	1,13	1,13	1,13	—	—	—	—	
2,00	1,13	1,13	1,13	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 36</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR5 5,5 x L with hexagon or oval head</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>		<p>TORX-25</p> 																																																																																																																																																																																																							
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <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>8,00</th> <th>10,00</th> <th>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="8">5 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10"></td> </tr> <tr> <td>0,55</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,51</td> <td>0,61</td> <td>0,61</td> <td>0,61</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10"></td> </tr> <tr> <td>0,55</td> <td>0,51</td> <td>0,61</td> <td>0,61</td> <td>0,61</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>0,90</td> <td>0,90</td> <td>0,90</td> <td>0,90</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>		$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24	$M_{t,nom}$	5 Nm									$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—		0,55	1,25	1,25	1,25	1,25	—	—	—	0,63	1,18	1,18	1,18	1,18	—	—	—	0,75	1,70	1,70	1,70	1,70	—	—	—	0,88	2,07	2,07	2,07	2,07	—	—	—	1,00	2,32	2,32	2,32	2,32	—	—	—	1,13	2,32	2,32	2,32	—	—	—	—	1,25	3,41	3,41	3,41	—	—	—	—	1,50	3,41	3,41	3,41	—	—	—	—	1,75	3,41	3,41	3,41	—	—	—	—	2,00	3,41	3,41	3,41	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,61	0,61	0,61	—	—	—		0,55	0,51	0,61	0,61	0,61	—	—	—	0,63	0,90	0,90	0,90	0,90	—	—	—	0,75	0,99	0,99	0,99	0,99	—	—	—	0,88	0,99	0,99	0,99	0,99	—	—	—	1,00	1,13	1,13	1,13	1,13	—	—	—	1,13	1,13	1,13	1,13	—	—	—	—	1,25	1,13	1,13	1,13	—	—	—	—	1,50	1,13	1,13	1,13	—	—	—	—	1,75	1,13	1,13	1,13	—	—	—	—	2,00	1,13	1,13	1,13	—	—	—	—
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24																																																																																																																																																																																																
$M_{t,nom}$	5 Nm																																																																																																																																																																																																								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—																																																																																																																																																																																																	
	0,55	1,25	1,25	1,25	1,25	—	—	—																																																																																																																																																																																																	
	0,63	1,18	1,18	1,18	1,18	—	—	—																																																																																																																																																																																																	
	0,75	1,70	1,70	1,70	1,70	—	—	—																																																																																																																																																																																																	
	0,88	2,07	2,07	2,07	2,07	—	—	—																																																																																																																																																																																																	
	1,00	2,32	2,32	2,32	2,32	—	—	—																																																																																																																																																																																																	
	1,13	2,32	2,32	2,32	—	—	—	—																																																																																																																																																																																																	
	1,25	3,41	3,41	3,41	—	—	—	—																																																																																																																																																																																																	
	1,50	3,41	3,41	3,41	—	—	—	—																																																																																																																																																																																																	
	1,75	3,41	3,41	3,41	—	—	—	—																																																																																																																																																																																																	
2,00	3,41	3,41	3,41	—	—	—	—																																																																																																																																																																																																		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,51	0,61	0,61	0,61	—	—	—																																																																																																																																																																																																	
	0,55	0,51	0,61	0,61	0,61	—	—	—																																																																																																																																																																																																	
	0,63	0,90	0,90	0,90	0,90	—	—	—																																																																																																																																																																																																	
	0,75	0,99	0,99	0,99	0,99	—	—	—																																																																																																																																																																																																	
	0,88	0,99	0,99	0,99	0,99	—	—	—																																																																																																																																																																																																	
	1,00	1,13	1,13	1,13	1,13	—	—	—																																																																																																																																																																																																	
	1,13	1,13	1,13	1,13	—	—	—	—																																																																																																																																																																																																	
	1,25	1,13	1,13	1,13	—	—	—	—																																																																																																																																																																																																	
	1,50	1,13	1,13	1,13	—	—	—	—																																																																																																																																																																																																	
	1,75	1,13	1,13	1,13	—	—	—	—																																																																																																																																																																																																	
2,00	1,13	1,13	1,13	—	—	—	—																																																																																																																																																																																																		
<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>		<p>Annex 37</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																							
<p>Self-drilling screw GTR5 5,5 x L with oval head and sealing washer $\varnothing 12$</p>																																																																																																																																																																																																									

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

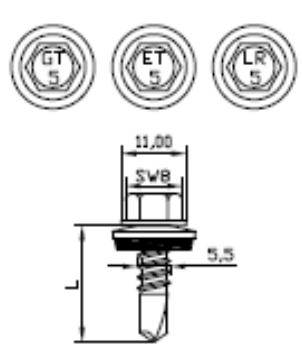
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
	2,00	3,41	3,41	3,41	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,63	2,63	—	—	—	/
	0,55	1,78	2,55	2,63	2,63	—	—	—	
	0,63	1,78	2,55	3,59	3,59	—	—	—	
	0,75	1,78	2,55	4,13	4,13	—	—	—	
	0,88	1,78	2,55	4,14	4,14	—	—	—	
	1,00	1,78	2,55	4,71	4,71	—	—	—	
	1,13	1,78	2,55	4,71	—	—	—	—	
	1,25	1,78	2,55	4,71	—	—	—	—	
	1,50	1,78	2,55	4,71	—	—	—	—	
	1,75	1,78	2,55	4,71	—	—	—	—	
	2,00	1,78	2,55	4,71	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 38
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p><u>Timber substructure</u></p> <p>No performance assessed</p>																																																																																																																																																																																																																																										
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;">$t_{N,II}$ [mm]</th> <th style="width: 10%;">1,50</th> <th style="width: 10%;">2,00</th> <th style="width: 10%;">3,00</th> <th style="width: 10%;">4,00</th> <th style="width: 10%;">5,00</th> <th style="width: 10%;">6,00</th> <th style="width: 10%;">8,00</th> <th style="width: 10%;">10,00</th> <th style="width: 10%;"></th> <th style="width: 10%;">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">5 Nm</td> <td></td> </tr> <tr> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td><td>1,25</td><td>1,25</td><td>1,25</td><td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td><td rowspan="10" style="text-align: center; vertical-align: middle;">/</td> </tr> <tr> <td>0,55</td><td>1,25</td><td>1,25</td><td>1,25</td><td>1,25</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,18</td><td>1,18</td><td>1,18</td><td>1,18</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>1,70</td><td>1,70</td><td>1,70</td><td>1,70</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,88</td><td>2,07</td><td>2,07</td><td>2,07</td><td>2,07</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>2,32</td><td>2,32</td><td>2,32</td><td>2,32</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>2,32</td><td>2,32</td><td>2,32</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>3,41</td><td>3,41</td><td>3,41</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>3,41</td><td>3,41</td><td>3,41</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>3,41</td><td>3,41</td><td>3,41</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>3,41</td><td>3,41</td><td>3,41</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td><td>1,78</td><td>2,55</td><td>2,63</td><td>2,63</td><td>—</td><td>—</td><td>—</td><td>—</td><td rowspan="10" style="text-align: center; vertical-align: middle;">/</td> </tr> <tr> <td>0,55</td><td>1,78</td><td>2,55</td><td>2,63</td><td>2,63</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,63</td><td>1,78</td><td>2,55</td><td>3,59</td><td>3,59</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,75</td><td>1,78</td><td>2,55</td><td>4,13</td><td>4,13</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>0,88</td><td>1,78</td><td>2,55</td><td>4,14</td><td>4,14</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,00</td><td>1,78</td><td>2,55</td><td>4,71</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,13</td><td>1,78</td><td>2,55</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,25</td><td>1,78</td><td>2,55</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,50</td><td>1,78</td><td>2,55</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>1,75</td><td>1,78</td><td>2,55</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> <tr> <td>2,00</td><td>1,78</td><td>2,55</td><td>4,71</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td> </tr> </tbody> </table> <p style="font-size: small; margin-top: 5px;">If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>											$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00		Wood class \geq C24	$M_{t,nom}$	5 Nm										$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	—	/	0,55	1,25	1,25	1,25	1,25	—	—	—	—	0,63	1,18	1,18	1,18	1,18	—	—	—	—	0,75	1,70	1,70	1,70	1,70	—	—	—	—	0,88	2,07	2,07	2,07	2,07	—	—	—	—	1,00	2,32	2,32	2,32	2,32	—	—	—	—	1,13	2,32	2,32	2,32	—	—	—	—	—	1,25	3,41	3,41	3,41	—	—	—	—	—	1,50	3,41	3,41	3,41	—	—	—	—	—	1,75	3,41	3,41	3,41	—	—	—	—	—	2,00	3,41	3,41	3,41	—	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,63	2,63	—	—	—	—	/	0,55	1,78	2,55	2,63	2,63	—	—	—	—	0,63	1,78	2,55	3,59	3,59	—	—	—	—	0,75	1,78	2,55	4,13	4,13	—	—	—	—	0,88	1,78	2,55	4,14	4,14	—	—	—	—	1,00	1,78	2,55	4,71	4,71	—	—	—	—	1,13	1,78	2,55	4,71	—	—	—	—	—	1,25	1,78	2,55	4,71	—	—	—	—	—	1,50	1,78	2,55	4,71	—	—	—	—	—	1,75	1,78	2,55	4,71	—	—	—	—	—	2,00	1,78	2,55	4,71	—	—	—	—	—
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00		Wood class \geq C24																																																																																																																																																																																																																																
$M_{t,nom}$	5 Nm																																																																																																																																																																																																																																									
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	—	/																																																																																																																																																																																																																																
	0,55	1,25	1,25	1,25	1,25	—	—	—	—																																																																																																																																																																																																																																	
	0,63	1,18	1,18	1,18	1,18	—	—	—	—																																																																																																																																																																																																																																	
	0,75	1,70	1,70	1,70	1,70	—	—	—	—																																																																																																																																																																																																																																	
	0,88	2,07	2,07	2,07	2,07	—	—	—	—																																																																																																																																																																																																																																	
	1,00	2,32	2,32	2,32	2,32	—	—	—	—																																																																																																																																																																																																																																	
	1,13	2,32	2,32	2,32	—	—	—	—	—																																																																																																																																																																																																																																	
	1,25	3,41	3,41	3,41	—	—	—	—	—																																																																																																																																																																																																																																	
	1,50	3,41	3,41	3,41	—	—	—	—	—																																																																																																																																																																																																																																	
	1,75	3,41	3,41	3,41	—	—	—	—	—																																																																																																																																																																																																																																	
2,00	3,41	3,41	3,41	—	—	—	—	—																																																																																																																																																																																																																																		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,63	2,63	—	—	—	—	/																																																																																																																																																																																																																																
	0,55	1,78	2,55	2,63	2,63	—	—	—	—																																																																																																																																																																																																																																	
	0,63	1,78	2,55	3,59	3,59	—	—	—	—																																																																																																																																																																																																																																	
	0,75	1,78	2,55	4,13	4,13	—	—	—	—																																																																																																																																																																																																																																	
	0,88	1,78	2,55	4,14	4,14	—	—	—	—																																																																																																																																																																																																																																	
	1,00	1,78	2,55	4,71	4,71	—	—	—	—																																																																																																																																																																																																																																	
	1,13	1,78	2,55	4,71	—	—	—	—	—																																																																																																																																																																																																																																	
	1,25	1,78	2,55	4,71	—	—	—	—	—																																																																																																																																																																																																																																	
	1,50	1,78	2,55	4,71	—	—	—	—	—																																																																																																																																																																																																																																	
	1,75	1,78	2,55	4,71	—	—	—	—	—																																																																																																																																																																																																																																	
2,00	1,78	2,55	4,71	—	—	—	—	—																																																																																																																																																																																																																																		
<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>										<p>Annex 39</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																																																
<p>Self-drilling screw GTR5 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>																																																																																																																																																																																																																																										

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p>	
<p>Timber substructure</p> <p>No performance assessed</p>	

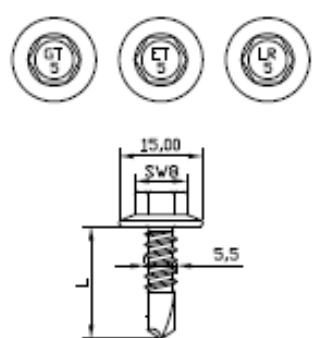
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,63	2,63	—	—	—	
	0,55	1,78	2,55	2,63	2,63	—	—	—	
	0,63	1,78	2,55	3,59	3,59	—	—	—	
	0,75	1,78	2,55	4,13	4,13	—	—	—	
	0,88	1,78	2,55	4,14	4,14	—	—	—	
	1,00	1,78	2,55	4,71	4,71	—	—	—	
	1,13	1,78	2,55	4,71	—	—	—	—	
	1,25	1,78	2,55	4,71	—	—	—	—	
	1,50	1,78	2,55	4,71	—	—	—	—	
	1,75	1,78	2,55	4,71	—	—	—	—	
2,00	1,78	2,55	4,71	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 40
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: integrated collar</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,78	2,55	2,76	2,76	—	—	—	/
	0,55	1,78	2,55	2,76	2,76	—	—	—	
	0,63	1,78	2,55	3,77	3,77	—	—	—	
	0,75	1,78	2,55	4,34	4,34	—	—	—	
	0,88	1,78	2,55	4,35	4,35	—	—	—	
	1,00	1,78	2,55	4,94	4,94	—	—	—	
	1,13	1,78	2,55	4,94	—	—	—	—	
	1,25	1,78	2,55	4,94	—	—	—	—	
	1,50	1,78	2,55	4,94	—	—	—	—	
	1,75	1,78	2,55	4,94	—	—	—	—	
2,00	1,78	2,55	4,94	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT5 FH 5,5 x L
with hexagon head

Annex 41
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
--	--

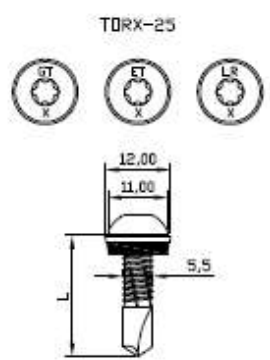
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	—	—	/
	0,55	0,61	0,61	0,61	0,61	—	—	—	
	0,63	0,90	0,90	0,90	0,90	—	—	—	
	0,75	0,99	0,99	0,99	0,99	—	—	—	
	0,88	0,99	0,99	0,99	0,99	—	—	—	
	1,00	1,13	1,13	1,13	1,13	—	—	—	
	1,13	1,13	1,13	1,13	—	—	—	—	
	1,25	1,13	1,13	1,13	—	—	—	—	
	1,50	1,13	1,13	1,13	—	—	—	—	
	1,75	1,13	1,13	1,13	—	—	—	—	
2,00	1,13	1,13	1,13	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX5 5,5 x L
 with hexagon or oval head

Annex 42
 of European
 Technical Assessment
 ETA-12/0580

Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: EPDM sealing washer with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346	
Drilling capacity: $\Sigma t_i \leq 5,00$ mm	
Timber substructure No performance assessed	

$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	—
	0,55	1,25	1,25	1,25	1,25	—	—	—	—
	0,63	1,18	1,18	1,18	1,18	—	—	—	—
	0,75	1,70	1,70	1,70	1,70	—	—	—	—
	0,88	2,07	2,07	2,07	2,07	—	—	—	—
	1,00	2,32	2,32	2,32	2,32	—	—	—	—
	1,13	2,32	2,32	2,32	—	—	—	—	—
	1,25	3,41	3,41	3,41	—	—	—	—	—
	1,50	3,41	3,41	3,41	—	—	—	—	—
	1,75	3,41	3,41	3,41	—	—	—	—	—
2,00	3,41	3,41	3,41	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	—	—	—
	0,55	0,61	0,61	0,61	0,61	—	—	—	—
	0,63	0,90	0,90	0,90	0,90	—	—	—	—
	0,75	0,99	0,99	0,99	0,99	—	—	—	—
	0,88	0,99	0,99	0,99	0,99	—	—	—	—
	1,00	1,13	1,13	1,13	1,13	—	—	—	—
	1,13	1,13	1,13	1,13	—	—	—	—	—
	1,25	1,13	1,13	1,13	—	—	—	—	—
	1,50	1,13	1,13	1,13	—	—	—	—	—
	1,75	1,13	1,13	1,13	—	—	—	—	—
2,00	1,13	1,13	1,13	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX5 5,5 x L
 with oval head and sealing washer $\varnothing 12$

Annex 43
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma ti \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

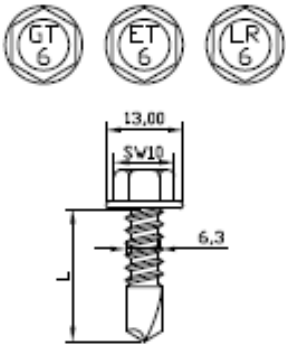
$t_{N,II}$ [mm]	1,50	2,00	3,00	4,00	5,00	6,00	8,00	10,00	Wood class \geq C24
$M_{t,nom}$	5 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,25	1,25	1,25	1,25	—	—	—	/
	0,55	1,25	1,25	1,25	1,25	—	—	—	
	0,63	1,18	1,18	1,18	1,18	—	—	—	
	0,75	1,70	1,70	1,70	1,70	—	—	—	
	0,88	2,07	2,07	2,07	2,07	—	—	—	
	1,00	2,32	2,32	2,32	2,32	—	—	—	
	1,13	2,32	2,32	2,32	—	—	—	—	
	1,25	3,41	3,41	3,41	—	—	—	—	
	1,50	3,41	3,41	3,41	—	—	—	—	
	1,75	3,41	3,41	3,41	—	—	—	—	
2,00	3,41	3,41	3,41	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,44	1,96	1,96	2,63	—	—	—	/
	0,55	1,44	1,96	1,96	2,63	—	—	—	
	0,63	1,44	1,96	1,96	3,59	—	—	—	
	0,75	1,44	1,96	1,96	4,13	—	—	—	
	0,88	1,44	1,96	1,96	4,14	—	—	—	
	1,00	1,44	1,96	1,96	4,71	—	—	—	
	1,13	1,44	1,96	1,96	—	—	—	—	
	1,25	1,44	1,96	1,96	—	—	—	—	
	1,50	1,44	1,96	1,96	—	—	—	—	
	1,75	1,44	1,96	1,96	—	—	—	—	
2,00	1,44	1,96	1,96	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 44
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: none</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 6,00$ mm</p>																																																																																																																																																																	
<p>Timber substructure</p> <p>No performance assessed</p>																																																																																																																																																																	
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>8,00</th> <th>10,00</th> <th>12,00</th> <th rowspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="6">3 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,33</td> <td>1,33</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>1,33</td> <td>1,33</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,48</td> <td>1,48</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>2,03</td> <td>2,03</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,44</td> <td>2,44</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,97</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>2,97</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td></td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,72</td> <td>0,72</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>0,72</td> <td>0,72</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,05</td> <td>1,05</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,16</td> <td>1,16</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>1,16</td> <td>1,16</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,32</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>1,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td></td> </tr> </tbody> </table>								$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24	$M_{t,nom}$	3 Nm							$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,33	1,33	—	—	—	/	0,55	1,33	1,33	—	—	—	0,63	1,48	1,48	—	—	—	0,75	2,03	2,03	—	—	—	0,88	2,44	2,44	—	—	—	1,00	2,97	2,97	—	—	—	1,13	2,97	—	—	—	—	1,25	2,97	—	—	—	—	1,50	2,97	—	—	—	—	1,75	2,97	—	—	—	—	2,00	2,97	—	—	—	—		$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,72	0,72	—	—	—	/	0,55	0,72	0,72	—	—	—	0,63	1,05	1,05	—	—	—	0,75	1,16	1,16	—	—	—	0,88	1,16	1,16	—	—	—	1,00	1,32	1,32	—	—	—	1,13	1,32	—	—	—	—	1,25	1,32	—	—	—	—	1,50	1,32	—	—	—	—	1,75	1,32	—	—	—	—	2,00	1,32	—	—	—	—	
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24																																																																																																																																																										
$M_{t,nom}$	3 Nm																																																																																																																																																																
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,33	1,33	—	—	—	/																																																																																																																																																										
	0,55	1,33	1,33	—	—	—																																																																																																																																																											
	0,63	1,48	1,48	—	—	—																																																																																																																																																											
	0,75	2,03	2,03	—	—	—																																																																																																																																																											
	0,88	2,44	2,44	—	—	—																																																																																																																																																											
	1,00	2,97	2,97	—	—	—																																																																																																																																																											
	1,13	2,97	—	—	—	—																																																																																																																																																											
	1,25	2,97	—	—	—	—																																																																																																																																																											
	1,50	2,97	—	—	—	—																																																																																																																																																											
	1,75	2,97	—	—	—	—																																																																																																																																																											
2,00	2,97	—	—	—	—																																																																																																																																																												
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,72	0,72	—	—	—	/																																																																																																																																																										
	0,55	0,72	0,72	—	—	—																																																																																																																																																											
	0,63	1,05	1,05	—	—	—																																																																																																																																																											
	0,75	1,16	1,16	—	—	—																																																																																																																																																											
	0,88	1,16	1,16	—	—	—																																																																																																																																																											
	1,00	1,32	1,32	—	—	—																																																																																																																																																											
	1,13	1,32	—	—	—	—																																																																																																																																																											
	1,25	1,32	—	—	—	—																																																																																																																																																											
	1,50	1,32	—	—	—	—																																																																																																																																																											
	1,75	1,32	—	—	—	—																																																																																																																																																											
2,00	1,32	—	—	—	—																																																																																																																																																												
<p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%</p> <p>If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>																																																																																																																																																																	
<p>G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>							<p>Annex 45</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																										
<p>Self-drilling screw GT6 6,3 x L with hexagon head</p>																																																																																																																																																																	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 6,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	6 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,33	1,33	—	—	—	/
	0,55	1,33	1,33	—	—	—	
	0,63	1,48	1,48	—	—	—	
	0,75	2,03	2,03	—	—	—	
	0,88	2,44	2,44	—	—	—	
	1,00	2,97	2,97	—	—	—	
	1,13	2,97	—	—	—	—	
	1,25	2,97	—	—	—	—	
	1,50	2,97	—	—	—	—	
	1,75	2,97	—	—	—	—	
2,00	2,97	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,31	3,31	—	—	—	
	0,55	3,31	3,31	—	—	—	
	0,63	3,74	3,74	—	—	—	
	0,75	4,85	4,85	—	—	—	
	0,88	5,49	5,49	—	—	—	
	1,00	6,66	6,66	—	—	—	
	1,13	6,66	—	—	—	—	
	1,25	6,66	—	—	—	—	
	1,50	6,66	—	—	—	—	
	1,75	6,66	—	—	—	—	
2,00	6,66	—	—	—	—		
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%							

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 46</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT6 6,3 x L with hexagon head and sealing washer $\varnothing 16$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p><u>Timber substructure</u></p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	/
	0,55	1,29	1,29	1,29	1,29	1,29	
	0,63	1,63	1,63	1,63	1,63	1,63	
	0,75	1,75	1,75	1,75	1,75	1,75	
	0,88	2,14	2,14	2,14	2,14	2,14	
	1,00	2,29	2,29	2,29	2,29	2,29	
	1,13	2,29	2,29	2,29	2,29	2,29	
	1,25	2,29	2,29	2,29	2,29	2,29	
	1,50	2,29	2,29	2,29	2,29	2,29	
	1,75	2,29	2,29	2,29	2,29	2,29	
2,00	2,29	2,29	2,29	2,29	2,29	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	/
	0,55	0,61	0,61	0,61	0,61	0,61	
	0,63	0,90	0,90	0,90	0,90	0,90	
	0,75	0,99	0,99	0,99	0,99	0,99	
	0,88	0,99	0,99	0,99	0,99	0,99	
	1,00	1,13	1,13	1,13	1,13	1,13	
	1,13	1,13	1,13	1,13	1,13	1,13	
	1,25	1,13	1,13	1,13	1,13	1,13	
	1,50	1,13	1,13	1,13	1,13	1,13	
	1,75	1,13	1,13	1,13	1,13	1,13	
2,00	1,13	1,13	1,13	1,13	1,13	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT8 5,5 x L
with hexagon or oval head

Annex 47
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

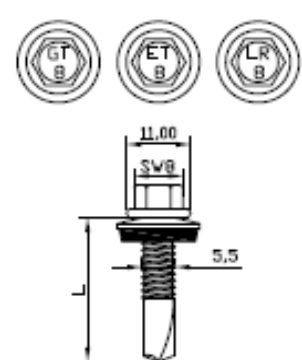
$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	—	/
	0,55	1,29	1,29	1,29	1,29	—	
	0,63	1,63	1,63	1,63	1,63	—	
	0,75	1,75	1,75	1,75	1,75	—	
	0,88	2,14	2,14	2,14	2,14	—	
	1,00	2,29	2,29	2,29	2,29	—	
	1,13	2,29	2,29	2,29	2,29	—	
	1,25	2,29	2,29	2,29	2,29	—	
	1,50	2,29	2,29	2,29	2,29	—	
	1,75	2,29	2,29	2,29	2,29	—	
2,00	2,29	2,29	2,29	2,29	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	—	/
	0,55	0,61	0,61	0,61	0,61	—	
	0,63	0,90	0,90	0,90	0,90	—	
	0,75	0,99	0,99	0,99	0,99	—	
	0,88	0,99	0,99	0,99	0,99	—	
	1,00	1,13	1,13	1,13	1,13	—	
	1,13	1,13	1,13	1,13	1,13	—	
	1,25	1,13	1,13	1,13	1,13	—	
	1,50	1,13	1,13	1,13	1,13	—	
	1,75	1,13	1,13	1,13	1,13	—	
2,00	1,13	1,13	1,13	1,13	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTFO2, GTFO2P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT8 5,5 x L
 with oval head and sealing washer $\varnothing 12$

Annex 48
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 8,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	—
	0,55	1,29	1,29	1,29	1,29	1,29	—
	0,63	1,63	1,63	1,63	1,63	1,63	—
	0,75	1,75	1,75	1,75	1,75	1,75	—
	0,88	2,14	2,14	2,14	2,14	2,14	—
	1,00	2,29	2,29	2,29	2,29	2,29	—
	1,13	2,29	2,29	2,29	2,29	2,29	—
	1,25	2,29	2,29	2,29	2,29	2,29	—
	1,50	2,29	2,29	2,29	2,29	2,29	—
	1,75	2,29	2,29	2,29	2,29	2,29	—
2,00	2,29	2,29	2,29	2,29	2,29	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	2,63	2,63	2,63	2,63	—
	0,55	2,57	2,63	2,63	2,63	2,63	—
	0,63	2,57	3,59	3,59	3,59	3,59	—
	0,75	2,57	4,13	4,13	4,13	4,13	—
	0,88	2,57	4,14	4,14	4,14	4,14	—
	1,00	2,57	4,71	4,71	4,71	4,71	—
	1,13	2,57	4,71	4,71	4,71	4,71	—
	1,25	2,57	4,71	4,71	4,71	4,71	—
	1,50	2,57	4,71	4,71	4,71	4,71	—
	1,75	2,57	4,71	4,71	4,71	4,71	—
2,00	2,57	4,71	4,71	4,71	4,71	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT8 5,5 x L
with hexagon head and sealing washer $\varnothing 14$

Annex 49
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
<p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p>	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	—	/
	0,55	1,29	1,29	1,29	1,29	—	
	0,63	1,63	1,63	1,63	1,63	—	
	0,75	1,75	1,75	1,75	1,75	—	
	0,88	2,14	2,14	2,14	2,14	—	
	1,00	2,29	2,29	2,29	2,29	—	
	1,13	2,29	2,29	2,29	2,29	—	
	1,25	2,29	2,29	2,29	2,29	—	
	1,50	2,29	2,29	2,29	2,29	—	
	1,75	2,29	2,29	2,29	2,29	—	
2,00	2,29	2,29	2,29	2,29	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	3,16	3,16	3,16	—	
	0,55	2,57	3,16	3,16	3,16	—	
	0,63	2,57	3,63	3,63	3,63	—	
	0,75	2,57	4,17	4,17	4,17	—	
	0,88	2,57	4,18	4,18	4,18	—	
	1,00	2,57	4,75	4,75	4,75	—	
	1,13	2,57	4,75	4,75	4,75	—	
	1,25	2,57	4,75	4,75	4,75	—	
	1,50	2,57	4,75	4,75	4,75	—	
	1,75	2,57	4,75	4,75	4,75	—	
2,00	2,57	4,75	4,75	4,75	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

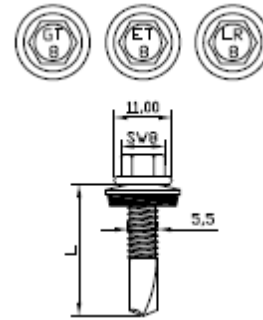
Self-drilling screw GT8 5,5 x L
 with hexagon head and sealing washer $\varnothing 16$

Annex 50
 of European
 Technical Assessment
 ETA-12/0580

Materials
 Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)
 Washer: EPDM sealing washer with metal top made of aluminum
 Component I: S280GD, S320GD or S350GD – EN 10346
 Component II: S235 – EN 10025-1
 S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 8,00$ mm

Timber substructure
 No performance assessed



$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	—
	0,55	1,29	1,29	1,29	1,29	1,29	—
	0,63	1,63	1,63	1,63	1,63	1,63	—
	0,75	1,75	1,75	1,75	1,75	1,75	—
	0,88	2,14	2,14	2,14	2,14	2,14	—
	1,00	2,29	2,29	2,29	2,29	2,29	—
	1,13	2,29	2,29	2,29	2,29	2,29	—
	1,25	2,29	2,29	2,29	2,29	2,29	—
	1,50	2,29	2,29	2,29	2,29	2,29	—
	1,75	2,29	2,29	2,29	2,29	2,29	—
2,00	2,29	2,29	2,29	2,29	2,29	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	2,63	2,63	2,63	2,63	—
	0,55	2,57	2,63	2,63	2,63	2,63	—
	0,63	2,57	3,59	3,59	3,59	3,59	—
	0,75	2,57	4,13	4,13	4,13	4,13	—
	0,88	2,57	4,14	4,14	4,14	4,14	—
	1,00	2,57	4,71	4,71	4,71	4,71	—
	1,13	2,57	4,71	4,71	4,71	4,71	—
	1,25	2,57	4,71	4,71	4,71	4,71	—
	1,50	2,57	4,71	4,71	4,71	4,71	—
	1,75	2,57	4,71	4,71	4,71	4,71	—
2,00	2,57	4,71	4,71	4,71	4,71	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT8 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 51
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	—
	0,55	1,29	1,29	1,29	1,29	1,29	—
	0,63	1,63	1,63	1,63	1,63	1,63	—
	0,75	1,75	1,75	1,75	1,75	1,75	—
	0,88	2,14	2,14	2,14	2,14	2,14	—
	1,00	2,29	2,29	2,29	2,29	2,29	—
	1,13	2,29	2,29	2,29	2,29	2,29	—
	1,25	2,29	2,29	2,29	2,29	2,29	—
	1,50	2,29	2,29	2,29	2,29	2,29	—
	1,75	2,29	2,29	2,29	2,29	2,29	—
2,00	2,29	2,29	2,29	2,29	2,29	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR8 5,5 x L
 with hexagon or oval head

Annex 52
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 8,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	—
	0,55	1,29	1,29	1,29	1,29	1,29	—
	0,63	1,63	1,63	1,63	1,63	1,63	—
	0,75	1,75	1,75	1,75	1,75	1,75	—
	0,88	2,14	2,14	2,14	2,14	2,14	—
	1,00	2,29	2,29	2,29	2,29	2,29	—
	1,13	2,29	2,29	2,29	2,29	2,29	—
	1,25	2,29	2,29	2,29	2,29	2,29	—
	1,50	2,29	2,29	2,29	2,29	2,29	—
	1,75	2,29	2,29	2,29	2,29	2,29	—
2,00	2,29	2,29	2,29	2,29	2,29	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	—	

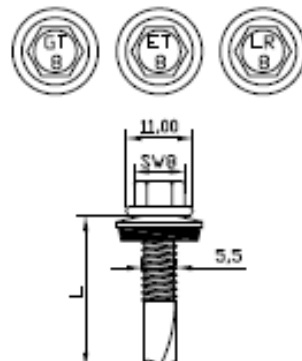
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 53</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR8 5,5 x L with oval head and sealing washer $\varnothing 12$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	/
	0,55	1,29	1,29	1,29	1,29	1,29	
	0,63	1,63	1,63	1,63	1,63	1,63	
	0,75	1,75	1,75	1,75	1,75	1,75	
	0,88	2,14	2,14	2,14	2,14	2,14	
	1,00	2,29	2,29	2,29	2,29	2,29	
	1,13	2,29	2,29	2,29	2,29	2,29	
	1,25	2,29	2,29	2,29	2,29	2,29	
	1,50	2,29	2,29	2,29	2,29	2,29	
	1,75	2,29	2,29	2,29	2,29	2,29	
2,00	2,29	2,29	2,29	2,29	2,29		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	2,63	2,63	2,63	2,63	/
	0,55	2,57	2,63	2,63	2,63	2,63	
	0,63	2,57	3,59	3,59	3,59	3,59	
	0,75	2,57	4,13	4,13	4,13	4,13	
	0,88	2,57	4,14	4,14	4,14	4,14	
	1,00	2,57	4,71	4,71	4,71	4,71	
	1,13	2,57	4,71	4,71	4,71	4,71	
	1,25	2,57	4,71	4,71	4,71	4,71	
	1,50	2,57	4,71	4,71	4,71	4,71	
	1,75	2,57	4,71	4,71	4,71	4,71	
2,00	2,57	4,71	4,71	4,71	4,71		
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%							

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 54</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR8 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 8,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	1,29	—
	0,55	1,29	1,29	1,29	1,29	1,29	—
	0,63	1,63	1,63	1,63	1,63	1,63	—
	0,75	1,75	1,75	1,75	1,75	1,75	—
	0,88	2,14	2,14	2,14	2,14	2,14	—
	1,00	2,29	2,29	2,29	2,29	2,29	—
	1,13	2,29	2,29	2,29	2,29	2,29	—
	1,25	2,29	2,29	2,29	2,29	2,29	—
	1,50	2,29	2,29	2,29	2,29	2,29	—
	1,75	2,29	2,29	2,29	2,29	2,29	—
2,00	2,29	2,29	2,29	2,29	2,29	2,29	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	2,63	2,63	2,63	2,63	—
	0,55	2,57	2,63	2,63	2,63	2,63	—
	0,63	2,57	3,59	3,59	3,59	3,59	—
	0,75	2,57	4,13	4,13	4,13	4,13	—
	0,88	2,57	4,14	4,14	4,14	4,14	—
	1,00	2,57	4,71	4,71	4,71	4,71	—
	1,13	2,57	4,71	4,71	4,71	4,71	—
	1,25	2,57	4,71	4,71	4,71	4,71	—
	1,50	2,57	4,71	4,71	4,71	4,71	—
	1,75	2,57	4,71	4,71	4,71	4,71	—
2,00	2,57	4,71	4,71	4,71	4,71	4,71	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR8 5,5 x L
with hexagon head and sealing washer $\varnothing 14$

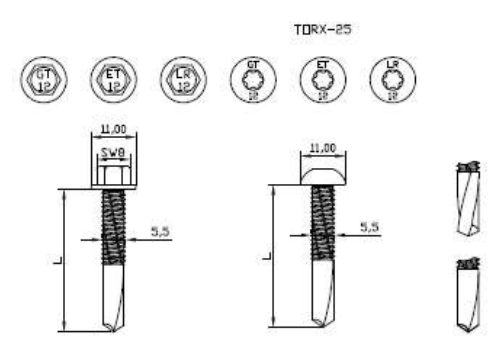
Annex 55
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 8,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	2,00	3,00	4,00	5,00	6,00	8,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,29	1,29	1,29	1,29	—	/
	0,55	1,29	1,29	1,29	1,29	—	
	0,63	1,63	1,63	1,63	1,63	—	
	0,75	1,75	1,75	1,75	1,75	—	
	0,88	2,14	2,14	2,14	2,14	—	
	1,00	2,29	2,29	2,29	2,29	—	
	1,13	2,29	2,29	2,29	2,29	—	
	1,25	2,29	2,29	2,29	2,29	—	
	1,50	2,29	2,29	2,29	2,29	—	
	1,75	2,29	2,29	2,29	2,29	—	
2,00	2,29	2,29	2,29	2,29	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,57	2,63	2,63	2,63	—	/
	0,55	2,57	2,63	2,63	2,63	—	
	0,63	2,57	3,59	3,59	3,59	—	
	0,75	2,57	4,13	4,13	4,13	—	
	0,88	2,57	4,14	4,14	4,14	—	
	1,00	2,57	4,71	4,71	4,71	—	
	1,13	2,57	4,71	4,71	4,71	—	
	1,25	2,57	4,71	4,71	4,71	—	
	1,50	2,57	4,71	4,71	4,71	—	
	1,75	2,57	4,71	4,71	4,71	—	
2,00	2,57	4,71	4,71	4,71	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 56</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR8 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	1,13	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTR02, GTZF02, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT12 5,5 x L
 with hexagon or oval head

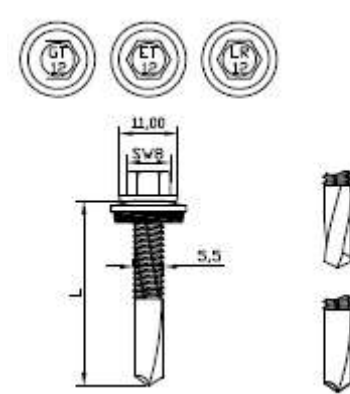
Annex 57
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	1,13	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 58</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT12 5,5 x L with oval head and sealing washer $\varnothing 12$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>																																																																																																																																																																															
<p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p>																																																																																																																																																																															
<p>Timber substructure</p> <p>No performance assessed</p>																																																																																																																																																																															
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>8,00</th> <th>10,00</th> <th>12,00</th> <th rowspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="6">5 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>2,63</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>3,59</td> <td>3,59</td> <td>3,59</td> <td>3,59</td> <td>3,59</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>4,13</td> <td>4,13</td> <td>4,13</td> <td>4,13</td> <td>4,13</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>4,14</td> <td>4,14</td> <td>4,14</td> <td>4,14</td> <td>4,14</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>4,71</td> <td>—</td> </tr> </tbody> </table>	$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24	$M_{t,nom}$	5 Nm							$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—	0,55	1,34	1,34	1,34	1,34	1,34	—	0,63	1,46	1,46	1,46	1,46	1,46	—	0,75	1,93	1,93	1,93	1,93	1,93	—	0,88	2,35	2,35	2,35	2,35	2,35	—	1,00	2,82	2,82	2,82	2,82	2,82	—	1,13	2,82	2,82	2,82	2,82	2,82	—	1,25	2,82	2,82	2,82	2,82	2,82	—	1,50	2,82	2,82	2,82	2,82	2,82	—	1,75	2,82	2,82	2,82	2,82	2,82	—	2,00	2,82	2,82	2,82	2,82	2,82	2,82	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	—	0,55	2,63	2,63	2,63	2,63	2,63	—	0,63	3,59	3,59	3,59	3,59	3,59	—	0,75	4,13	4,13	4,13	4,13	4,13	—	0,88	4,14	4,14	4,14	4,14	4,14	—	1,00	4,71	4,71	4,71	4,71	4,71	—	1,13	4,71	4,71	4,71	4,71	4,71	—	1,25	4,71	4,71	4,71	4,71	4,71	—	1,50	4,71	4,71	4,71	4,71	4,71	—	1,75	4,71	4,71	4,71	4,71	4,71	—	2,00	4,71	4,71	4,71	4,71	4,71	4,71	—	<p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%</p> <p>If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24																																																																																																																																																																								
$M_{t,nom}$	5 Nm																																																																																																																																																																														
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—																																																																																																																																																																								
	0,55	1,34	1,34	1,34	1,34	1,34	—																																																																																																																																																																								
	0,63	1,46	1,46	1,46	1,46	1,46	—																																																																																																																																																																								
	0,75	1,93	1,93	1,93	1,93	1,93	—																																																																																																																																																																								
	0,88	2,35	2,35	2,35	2,35	2,35	—																																																																																																																																																																								
	1,00	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
	1,13	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
	1,25	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
	1,50	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
	1,75	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—																																																																																																																																																																								
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	—																																																																																																																																																																								
	0,55	2,63	2,63	2,63	2,63	2,63	—																																																																																																																																																																								
	0,63	3,59	3,59	3,59	3,59	3,59	—																																																																																																																																																																								
	0,75	4,13	4,13	4,13	4,13	4,13	—																																																																																																																																																																								
	0,88	4,14	4,14	4,14	4,14	4,14	—																																																																																																																																																																								
	1,00	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
	1,13	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
	1,25	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
	1,50	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
	1,75	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
2,00	4,71	4,71	4,71	4,71	4,71	4,71	—																																																																																																																																																																								
<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTR02, GTZF02, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 59</p> <p>of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																														
<p>Self-drilling screw GT12 5,5 x L with hexagon head and carbon steel sealing washer $\varnothing 14$</p>																																																																																																																																																																															

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t, nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	—
	0,55	2,63	2,63	2,63	2,63	2,63	—
	0,63	3,59	3,59	3,59	3,59	3,59	—
	0,75	4,13	4,13	4,13	4,13	4,13	—
	0,88	4,14	4,14	4,14	4,14	4,14	—
	1,00	4,71	4,71	4,71	4,71	4,71	—
	1,13	4,71	4,71	4,71	4,71	4,71	—
	1,25	4,71	4,71	4,71	4,71	4,71	—
	1,50	4,71	4,71	4,71	4,71	4,71	—
	1,75	4,71	4,71	4,71	4,71	4,71	—
2,00	4,71	4,71	4,71	4,71	4,71	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 60</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT12 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,16	3,16	3,16	3,16	3,16	—
	0,55	3,16	3,16	3,16	3,16	3,16	—
	0,63	3,63	3,63	3,63	3,63	3,63	—
	0,75	4,17	4,17	4,17	4,17	4,17	—
	0,88	4,18	4,18	4,18	4,18	4,18	—
	1,00	4,75	4,75	4,75	4,75	4,75	—
	1,13	4,75	4,75	4,75	4,75	4,75	—
	1,25	4,75	4,75	4,75	4,75	4,75	—
	1,50	4,75	4,75	4,75	4,75	4,75	—
	1,75	4,75	4,75	4,75	4,75	4,75	—
2,00	4,75	4,75	4,75	4,75	4,75	4,75	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 61</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT12 5,5 x L with hexagon head and sealing washer $\varnothing 16$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 12,00$ mm	
Timber substructure	
No performance assessed	

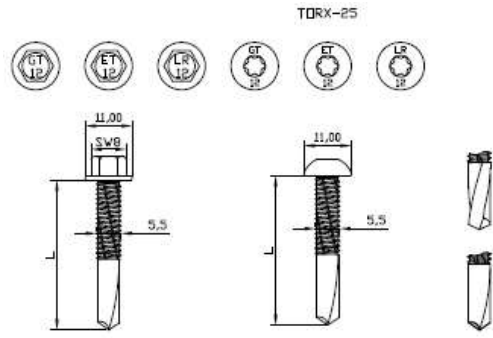
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	/
	0,55	1,34	1,34	1,34	1,34	1,34	
	0,63	1,46	1,46	1,46	1,46	1,46	
	0,75	1,93	1,93	1,93	1,93	1,93	
	0,88	2,35	2,35	2,35	2,35	2,35	
	1,00	2,82	2,82	2,82	2,82	2,82	
	1,13	2,82	2,82	2,82	2,82	2,82	
	1,25	2,82	2,82	2,82	2,82	2,82	
	1,50	2,82	2,82	2,82	2,82	2,82	
	1,75	2,82	2,82	2,82	2,82	2,82	
	2,00	2,82	2,82	2,82	2,82	2,82	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,16	3,16	3,16	3,16	3,16	
	0,55	3,16	3,16	3,16	3,16	3,16	
	0,63	3,63	3,63	3,63	3,63	3,63	
	0,75	4,17	4,17	4,17	4,17	4,17	
	0,88	4,18	4,18	4,18	4,18	4,18	
	1,00	4,75	4,75	4,75	4,75	4,75	
	1,13	4,75	4,75	4,75	4,75	4,75	
	1,25	4,75	4,75	4,75	4,75	4,75	
	1,50	4,75	4,75	4,75	4,75	4,75	
	1,75	4,75	4,75	4,75	4,75	4,75	
	2,00	4,75	4,75	4,75	4,75	4,75	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GT12 5,5 x L
 with hexagon head and sealing washer $\varnothing 16$

Annex 62
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 12,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	1,13	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
with hexagon or oval head

Annex 63
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	—	
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%							

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 64</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR12 5,5 x L with oval head and sealing washer $\varnothing 12$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	—
	0,55	2,63	2,63	2,63	2,63	2,63	—
	0,63	3,59	3,59	3,59	3,59	3,59	—
	0,75	4,13	4,13	4,13	4,13	4,13	—
	0,88	4,14	4,14	4,14	4,14	4,14	—
	1,00	4,71	4,71	4,71	4,71	4,71	—
	1,13	4,71	4,71	4,71	4,71	4,71	—
	1,25	4,71	4,71	4,71	4,71	4,71	—
	1,50	4,71	4,71	4,71	4,71	4,71	—
	1,75	4,71	4,71	4,71	4,71	4,71	—
2,00	4,71	4,71	4,71	4,71	4,71	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 65</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR12 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t, nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	—
	0,55	2,63	2,63	2,63	2,63	2,63	—
	0,63	3,59	3,59	3,59	3,59	3,59	—
	0,75	4,13	4,13	4,13	4,13	4,13	—
	0,88	4,14	4,14	4,14	4,14	4,14	—
	1,00	4,71	4,71	4,71	4,71	4,71	—
	1,13	4,71	4,71	4,71	4,71	4,71	—
	1,25	4,71	4,71	4,71	4,71	4,71	—
	1,50	4,71	4,71	4,71	4,71	4,71	—
	1,75	4,71	4,71	4,71	4,71	4,71	—
2,00	4,71	4,71	4,71	4,71	4,71	—	
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%							

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 66</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR12 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	/
	0,55	1,34	1,34	1,34	1,34	1,34	
	0,63	1,46	1,46	1,46	1,46	1,46	
	0,75	1,93	1,93	1,93	1,93	1,93	
	0,88	2,35	2,35	2,35	2,35	2,35	
	1,00	2,82	2,82	2,82	2,82	2,82	
	1,13	2,82	2,82	2,82	2,82	2,82	
	1,25	2,82	2,82	2,82	2,82	2,82	
	1,50	2,82	2,82	2,82	2,82	2,82	
	1,75	2,82	2,82	2,82	2,82	2,82	
2,00	2,82	2,82	2,82	2,82	2,82		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	
	0,55	2,63	2,63	2,63	2,63	2,63	
	0,63	3,59	3,59	3,59	3,59	3,59	
	0,75	4,13	4,13	4,13	4,13	4,13	
	0,88	4,14	4,14	4,14	4,14	4,14	
	1,00	4,71	4,71	4,71	4,71	4,71	
	1,13	4,71	4,71	4,71	4,71	4,71	
	1,25	4,71	4,71	4,71	4,71	4,71	
	1,50	4,71	4,71	4,71	4,71	4,71	
	1,75	4,71	4,71	4,71	4,71	4,71	
2,00	4,71	4,71	4,71	4,71	4,71		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 67</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR12 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 12,00$ mm	
<u>Timber substructure</u>	
No performance assessed	

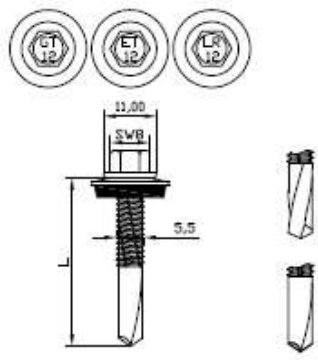
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	—	/
	0,55	1,34	1,34	1,34	1,34	—	
	0,63	1,46	1,46	1,46	1,46	—	
	0,75	1,93	1,93	1,93	1,93	—	
	0,88	2,35	2,35	2,35	2,35	—	
	1,00	2,82	2,82	2,82	2,82	—	
	1,13	2,82	2,82	2,82	2,82	—	
	1,25	2,82	2,82	2,82	2,82	—	
	1,50	2,82	2,82	2,82	2,82	—	
	1,75	2,82	2,82	2,82	2,82	—	
2,00	2,82	2,82	2,82	2,82	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,16	3,16	3,16	3,16	—	
	0,55	3,16	3,16	3,16	3,16	—	
	0,63	3,63	3,63	3,63	3,63	—	
	0,75	4,17	4,17	4,17	4,17	—	
	0,88	4,18	4,18	4,18	4,18	—	
	1,00	4,75	4,75	4,75	4,75	—	
	1,13	4,75	4,75	4,75	4,75	—	
	1,25	4,75	4,75	4,75	4,75	—	
	1,50	4,75	4,75	4,75	4,75	—	
	1,75	4,75	4,75	4,75	4,75	—	
2,00	4,75	4,75	4,75	4,75	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTR02, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
 with hexagon head and sealing washer $\varnothing 16$

Annex 68
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 12,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,16	3,16	3,16	3,16	3,16	—
	0,55	3,16	3,16	3,16	3,16	3,16	—
	0,63	3,63	3,63	3,63	3,63	3,63	—
	0,75	4,17	4,17	4,17	4,17	4,17	—
	0,88	4,18	4,18	4,18	4,18	4,18	—
	1,00	4,75	4,75	4,75	4,75	4,75	—
	1,13	4,75	4,75	4,75	4,75	4,75	—
	1,25	4,75	4,75	4,75	4,75	4,75	—
	1,50	4,75	4,75	4,75	4,75	4,75	—
	1,75	4,75	4,75	4,75	4,75	4,75	—
2,00	4,75	4,75	4,75	4,75	4,75	4,75	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
with hexagon head and sealing washer $\varnothing 16$

Annex 69
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 12,00$ mm	
<u>Timber substructure</u>	
No performance assessed	

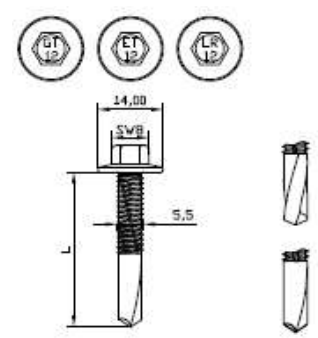
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	—	/
	0,55	1,34	1,34	1,34	1,34	—	
	0,63	1,46	1,46	1,46	1,46	—	
	0,75	1,93	1,93	1,93	1,93	—	
	0,88	2,35	2,35	2,35	2,35	—	
	1,00	2,82	2,82	2,82	2,82	—	
	1,13	2,82	2,82	2,82	2,82	—	
	1,25	2,82	2,82	2,82	2,82	—	
	1,50	2,82	2,82	2,82	2,82	—	
	1,75	2,82	2,82	2,82	2,82	—	
2,00	2,82	2,82	2,82	2,82	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,16	3,16	3,16	3,16	—	
	0,55	3,16	3,16	3,16	3,16	—	
	0,63	3,63	3,63	3,63	3,63	—	
	0,75	4,17	4,17	4,17	4,17	—	
	0,88	4,18	4,18	4,18	4,18	—	
	1,00	4,75	4,75	4,75	4,75	—	
	1,13	4,75	4,75	4,75	4,75	—	
	1,25	4,75	4,75	4,75	4,75	—	
	1,50	4,75	4,75	4,75	4,75	—	
	1,75	4,75	4,75	4,75	4,75	—	
2,00	4,75	4,75	4,75	4,75	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
 with hexagon head and sealing washer $\varnothing 16$

Annex 70
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: integrated collar</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 12,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	/
	0,55	1,34	1,34	1,34	1,34	1,34	
	0,63	1,46	1,46	1,46	1,46	1,46	
	0,75	1,93	1,93	1,93	1,93	1,93	
	0,88	2,35	2,35	2,35	2,35	2,35	
	1,00	2,82	2,82	2,82	2,82	2,82	
	1,13	2,82	2,82	2,82	2,82	2,82	
	1,25	2,82	2,82	2,82	2,82	2,82	
	1,50	2,82	2,82	2,82	2,82	2,82	
	1,75	2,82	2,82	2,82	2,82	2,82	
2,00	2,82	2,82	2,82	2,82	2,82		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	3,08	3,08	3,08	3,08	3,08	/
	0,55	3,08	3,08	3,08	3,08	3,08	
	0,63	4,20	4,20	4,20	4,20	4,20	
	0,75	4,84	4,84	4,84	4,84	4,84	
	0,88	4,84	4,84	4,84	4,84	4,84	
	1,00	5,51	5,51	5,51	5,51	5,51	
	1,13	5,51	5,51	5,51	5,51	5,51	
	1,25	5,51	5,51	5,51	5,51	5,51	
	1,50	5,51	5,51	5,51	5,51	5,51	
	1,75	5,51	5,51	5,51	5,51	5,51	
2,00	5,51	5,51	5,51	5,51	5,51		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 71</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT12 FH 5,5 x L with hexagon head</p>	

<p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX12 5,5 x L
with hexagon or oval head

Annex 72
of European
Technical Assessment
ETA-12/0580

<p>Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: EPDM sealing washer with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 12,00$ mm	
Timber substructure No performance assessed	

$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	—
	0,55	1,34	1,34	1,34	1,34	1,34	—
	0,63	1,46	1,46	1,46	1,46	1,46	—
	0,75	1,93	1,93	1,93	1,93	1,93	—
	0,88	2,35	2,35	2,35	2,35	2,35	—
	1,00	2,82	2,82	2,82	2,82	2,82	—
	1,13	2,82	2,82	2,82	2,82	2,82	—
	1,25	2,82	2,82	2,82	2,82	2,82	—
	1,50	2,82	2,82	2,82	2,82	2,82	—
	1,75	2,82	2,82	2,82	2,82	2,82	—
2,00	2,82	2,82	2,82	2,82	2,82	2,82	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,61	0,61	0,61	0,61	0,61	—
	0,55	0,61	0,61	0,61	0,61	0,61	—
	0,63	0,90	0,90	0,90	0,90	0,90	—
	0,75	0,99	0,99	0,99	0,99	0,99	—
	0,88	0,99	0,99	0,99	0,99	0,99	—
	1,00	1,13	1,13	1,13	1,13	1,13	—
	1,13	1,13	1,13	1,13	1,13	1,13	—
	1,25	1,13	1,13	1,13	1,13	1,13	—
	1,50	1,13	1,13	1,13	1,13	1,13	—
	1,75	1,13	1,13	1,13	1,13	1,13	—
2,00	1,13	1,13	1,13	1,13	1,13	1,13	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>	<p>Annex 73 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX12 5,5 x L with oval head and sealing washer $\varnothing 12$</p>	

Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: EPDM sealing washer with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346	
Drilling capacity: $\Sigma t_i \leq 12,00$ mm	
Timber substructure No performance assessed	

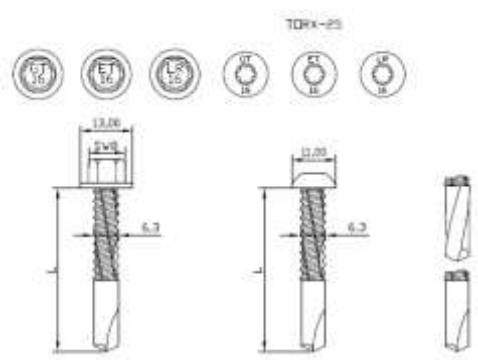
$t_{N,II}$ [mm]	4,00	5,00	6,00	8,00	10,00	12,00	Wood class \geq C24
$M_{t,nom}$	5 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,34	1,34	1,34	1,34	1,34	/
	0,55	1,34	1,34	1,34	1,34	1,34	
	0,63	1,46	1,46	1,46	1,46	1,46	
	0,75	1,93	1,93	1,93	1,93	1,93	
	0,88	2,35	2,35	2,35	2,35	2,35	
	1,00	2,82	2,82	2,82	2,82	2,82	
	1,13	2,82	2,82	2,82	2,82	2,82	
	1,25	2,82	2,82	2,82	2,82	2,82	
	1,50	2,82	2,82	2,82	2,82	2,82	
	1,75	2,82	2,82	2,82	2,82	2,82	
	2,00	2,82	2,82	2,82	2,82	2,82	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,63	2,63	2,63	2,63	2,63	/
	0,55	2,63	2,63	2,63	2,63	2,63	
	0,63	3,59	3,59	3,59	3,59	3,59	
	0,75	4,13	4,13	4,13	4,13	4,13	
	0,88	4,14	4,14	4,14	4,14	4,14	
	1,00	4,71	4,71	4,71	4,71	4,71	
	1,13	4,71	4,71	4,71	4,71	4,71	
	1,25	4,71	4,71	4,71	4,71	4,71	
	1,50	4,71	4,71	4,71	4,71	4,71	
	1,75	4,71	4,71	4,71	4,71	4,71	
	2,00	4,71	4,71	4,71	4,71	4,71	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTX12 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 74
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 16,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	—
	0,55	1,42	1,42	1,42	1,42	1,42	—
	0,63	1,54	1,54	1,54	1,54	1,54	—
	0,75	2,10	2,10	2,10	2,10	2,10	—
	0,88	2,49	2,49	2,49	2,49	2,49	—
	1,00	3,00	3,00	3,00	3,00	3,00	—
	1,13	3,00	3,00	3,00	3,00	3,00	—
	1,25	3,00	3,00	3,00	3,00	3,00	—
	1,50	3,00	3,00	3,00	3,00	3,00	—
	1,75	3,00	3,00	3,00	3,00	3,00	—
2,00	3,00	3,00	3,00	3,00	3,00	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	0,70	—
	0,55	0,70	0,70	0,70	0,70	0,70	—
	0,63	0,88	0,88	0,88	0,88	0,88	—
	0,75	1,21	1,21	1,21	1,21	1,21	—
	0,88	1,32	1,32	1,32	1,32	1,32	—
	1,00	1,60	1,60	1,60	1,60	1,60	—
	1,13	1,60	1,60	1,60	1,60	1,60	—
	1,25	1,60	1,60	1,60	1,60	1,60	—
	1,50	1,60	1,60	1,60	1,60	1,60	—
	1,75	1,60	1,60	1,60	1,60	1,60	—
2,00	1,60	1,60	1,60	1,60	1,60	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF2S, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR16 6,3 x L
with hexagon or oval head

Annex 75
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 16,00$ mm	
Timber substructure	
No performance assessed	

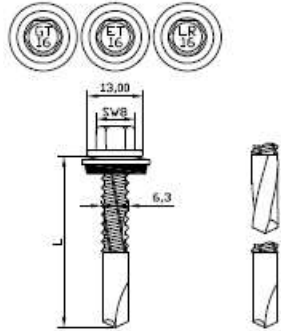
$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	—
	0,55	1,42	1,42	1,42	1,42	1,42	—
	0,63	1,54	1,54	1,54	1,54	1,54	—
	0,75	2,10	2,10	2,10	2,10	2,10	—
	0,88	2,49	2,49	2,49	2,49	2,49	—
	1,00	3,00	3,00	3,00	3,00	3,00	—
	1,13	3,00	3,00	3,00	3,00	3,00	—
	1,25	3,00	3,00	3,00	3,00	3,00	—
	1,50	3,00	3,00	3,00	3,00	3,00	—
	1,75	3,00	3,00	3,00	3,00	3,00	—
2,00	3,00	3,00	3,00	3,00	3,00	3,00	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	0,70	—
	0,55	0,70	0,70	0,70	0,70	0,70	—
	0,63	0,88	0,88	0,88	0,88	0,88	—
	0,75	1,21	1,21	1,21	1,21	1,21	—
	0,88	1,32	1,32	1,32	1,32	1,32	—
	1,00	1,60	1,60	1,60	1,60	1,60	—
	1,13	1,60	1,60	1,60	1,60	1,60	—
	1,25	1,60	1,60	1,60	1,60	1,60	—
	1,50	1,60	1,60	1,60	1,60	1,60	—
	1,75	1,60	1,60	1,60	1,60	1,60	—
2,00	1,60	1,60	1,60	1,60	1,60	1,60	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR16 6,3 x L
 with oval head and sealing washer $\varnothing 12$

Annex 76
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 16,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00	3,00	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR16 6,3 x L
with hexagon head and sealing washer $\varnothing 16$

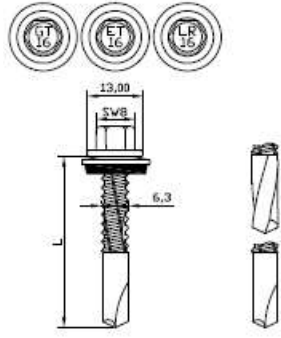
Annex 77
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 16,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	/
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTFO2, GTFO2P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 78</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR16 6,3 x L with hexagon head and sealing washer $\varnothing 16$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 16,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR16 6,3 x L
with hexagon head and sealing washer $\varnothing 16$

Annex 79
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 20,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

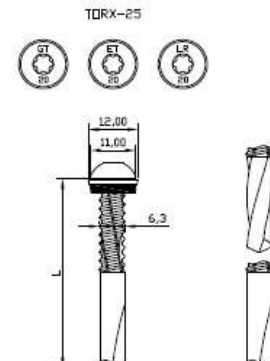
$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	—
	0,55	1,42	1,42	1,42	1,42	1,42	—
	0,63	1,54	1,54	1,54	1,54	1,54	—
	0,75	2,10	2,10	2,10	2,10	2,10	—
	0,88	2,49	2,49	2,49	2,49	2,49	—
	1,00	3,00	3,00	3,00	3,00	3,00	—
	1,13	3,00	3,00	3,00	3,00	3,00	—
	1,25	3,00	3,00	3,00	3,00	3,00	—
	1,50	3,00	3,00	3,00	3,00	3,00	—
	1,75	3,00	3,00	3,00	3,00	3,00	—
2,00	3,00	3,00	3,00	3,00	3,00	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	0,70	—
	0,55	0,70	0,70	0,70	0,70	0,70	—
	0,63	0,88	0,88	0,88	0,88	0,88	—
	0,75	1,21	1,21	1,21	1,21	1,21	—
	0,88	1,32	1,32	1,32	1,32	1,32	—
	1,00	1,60	1,60	1,60	1,60	1,60	—
	1,13	1,60	1,60	1,60	1,60	1,60	—
	1,25	1,60	1,60	1,60	1,60	1,60	—
	1,50	1,60	1,60	1,60	1,60	1,60	—
	1,75	1,60	1,60	1,60	1,60	1,60	—
2,00	1,60	1,60	1,60	1,60	1,60	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR20 6,3 x L
 with hexagon or oval head

Annex 80
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 20,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	—	/
	0,55	1,42	1,42	1,42	1,42	—	
	0,63	1,54	1,54	1,54	1,54	—	
	0,75	2,10	2,10	2,10	2,10	—	
	0,88	2,49	2,49	2,49	2,49	—	
	1,00	3,00	3,00	3,00	3,00	—	
	1,13	3,00	3,00	3,00	3,00	—	
	1,25	3,00	3,00	3,00	3,00	—	
	1,50	3,00	3,00	3,00	3,00	—	
	1,75	3,00	3,00	3,00	3,00	—	
2,00	3,00	3,00	3,00	3,00	—		
$N_{F,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	—	/
	0,55	0,70	0,70	0,70	0,70	—	
	0,63	0,88	0,88	0,88	0,88	—	
	0,75	1,21	1,21	1,21	1,21	—	
	0,88	1,32	1,32	1,32	1,32	—	
	1,00	1,60	1,60	1,60	1,60	—	
	1,13	1,60	1,60	1,60	1,60	—	
	1,25	1,60	1,60	1,60	1,60	—	
	1,50	1,60	1,60	1,60	1,60	—	
	1,75	1,60	1,60	1,60	1,60	—	
2,00	1,60	1,60	1,60	1,60	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR20 6,3 x L
with oval head and sealing washer $\varnothing 12$

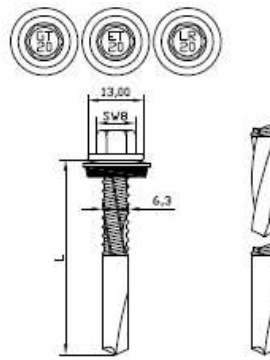
Annex 81
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 20,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	/
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 82</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR20 6,3 x L with hexagon head and sealing washer $\varnothing 16$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 20,00$ mm	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00	3,00	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR20 6,3 x L
with hexagon head and sealing washer $\varnothing 16$

Annex 83
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 20,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	/
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	/
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZF02, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>
<p>Self-drilling screw GTR20 6,3 x L with hexagon head and sealing washer \varnothing16</p>

Annex 84
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 25,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
---	--

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	—
	0,55	1,42	1,42	1,42	1,42	1,42	—
	0,63	1,54	1,54	1,54	1,54	1,54	—
	0,75	2,10	2,10	2,10	2,10	2,10	—
	0,88	2,49	2,49	2,49	2,49	2,49	—
	1,00	3,00	3,00	3,00	3,00	3,00	—
	1,13	3,00	3,00	3,00	3,00	3,00	—
	1,25	3,00	3,00	3,00	3,00	3,00	—
	1,50	3,00	3,00	3,00	3,00	3,00	—
	1,75	3,00	3,00	3,00	3,00	3,00	—
2,00	3,00	3,00	3,00	3,00	3,00	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	0,70	—
	0,55	0,70	0,70	0,70	0,70	0,70	—
	0,63	0,88	0,88	0,88	0,88	0,88	—
	0,75	1,21	1,21	1,21	1,21	1,21	—
	0,88	1,32	1,32	1,32	1,32	1,32	—
	1,00	1,60	1,60	1,60	1,60	1,60	—
	1,13	1,60	1,60	1,60	1,60	1,60	—
	1,25	1,60	1,60	1,60	1,60	1,60	—
	1,50	1,60	1,60	1,60	1,60	1,60	—
	1,75	1,60	1,60	1,60	1,60	1,60	—
2,00	1,60	1,60	1,60	1,60	1,60	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 85</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR25 6,3 x L with hexagon or oval head</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma ti \leq 25,00$ mm	
Timber substructure	
No performance assessed	

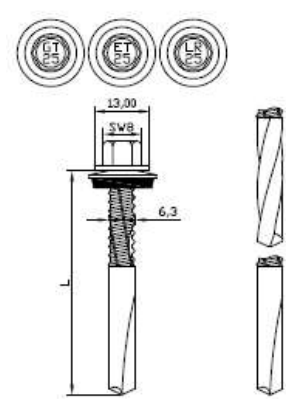
$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	—
	0,55	1,42	1,42	1,42	1,42	1,42	—
	0,63	1,54	1,54	1,54	1,54	1,54	—
	0,75	2,10	2,10	2,10	2,10	2,10	—
	0,88	2,49	2,49	2,49	2,49	2,49	—
	1,00	3,00	3,00	3,00	3,00	3,00	—
	1,13	3,00	3,00	3,00	3,00	3,00	—
	1,25	3,00	3,00	3,00	3,00	3,00	—
	1,50	3,00	3,00	3,00	3,00	3,00	—
	1,75	3,00	3,00	3,00	3,00	3,00	—
	2,00	3,00	3,00	3,00	3,00	3,00	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,70	0,70	0,70	0,70	0,70	—
	0,55	0,70	0,70	0,70	0,70	0,70	—
	0,63	0,88	0,88	0,88	0,88	0,88	—
	0,75	1,21	1,21	1,21	1,21	1,21	—
	0,88	1,32	1,32	1,32	1,32	1,32	—
	1,00	1,60	1,60	1,60	1,60	1,60	—
	1,13	1,60	1,60	1,60	1,60	1,60	—
	1,25	1,60	1,60	1,60	1,60	1,60	—
	1,50	1,60	1,60	1,60	1,60	1,60	—
	1,75	1,60	1,60	1,60	1,60	1,60	—
	2,00	1,60	1,60	1,60	1,60	1,60	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR25 6,3 x L
 with oval head and sealing washer $\varnothing 12$

Annex 86
 of European
 Technical Assessment
 ETA-12/0580

Materials Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating Washer: EPDM sealing washer with metal top made of carbon steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346	
Drilling capacity: $\Sigma t_i \leq 25,00$ mm	
Timber substructure No performance assessed	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
	2,00	3,00	3,00	3,00	3,00	3,00	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
	2,00	2,53	2,53	6,37	6,37	6,37	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTR25 6,3 x L
 with hexagon head and sealing washer $\varnothing 16$

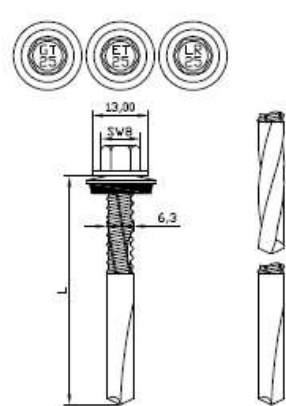
Annex 87
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 25,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	/
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00	3,00	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	/
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 88</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR25 6,3 x L with hexagon head and sealing washer \varnothing16</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: $\Sigma t_i \leq 25,00$ mm	
<p>Timber substructure</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24
$M_{t,nom}$	7 Nm						
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,42	1,42	1,42	1,42	1,42	
	0,55	1,42	1,42	1,42	1,42	1,42	
	0,63	1,54	1,54	1,54	1,54	1,54	
	0,75	2,10	2,10	2,10	2,10	2,10	
	0,88	2,49	2,49	2,49	2,49	2,49	
	1,00	3,00	3,00	3,00	3,00	3,00	
	1,13	3,00	3,00	3,00	3,00	3,00	
	1,25	3,00	3,00	3,00	3,00	3,00	
	1,50	3,00	3,00	3,00	3,00	3,00	
	1,75	3,00	3,00	3,00	3,00	3,00	
2,00	3,00	3,00	3,00	3,00	3,00	3,00	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	2,53	2,53	3,31	3,31	3,31	
	0,55	2,53	2,53	3,31	3,31	3,31	
	0,63	2,53	2,53	3,74	3,74	3,74	
	0,75	2,53	2,53	4,85	4,85	4,85	
	0,88	2,53	2,53	5,50	5,50	5,50	
	1,00	2,53	2,53	6,37	6,37	6,37	
	1,13	2,53	2,53	6,37	6,37	6,37	
	1,25	2,53	2,53	6,37	6,37	6,37	
	1,50	2,53	2,53	6,37	6,37	6,37	
	1,75	2,53	2,53	6,37	6,37	6,37	
2,00	2,53	2,53	6,37	6,37	6,37		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

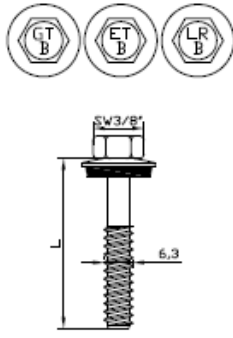
Self-drilling screw GTR25 6,3 x L
with hexagon head and sealing washer $\varnothing 16$

Annex 89
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346 or structural timber – EN 14081</p> <p>Drilling capacity: -</p> <p>Timber substructure</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 6,500 \text{ Nm}$</p> <p>$f_{ax,k} = 23,027 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$</p>	
--	--

$t_{N,II}$ [mm]	0,63	0,75	0,88	1,00	1,13	1,25	1,50	2,00	Wood class \geq C24		
Drill \varnothing	3,50	4,00	4,50	4,50	4,50	4,50	5,00	5,30			
$M_{t,nom}$	4,5 Nm										
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,63	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	bearing resistance of component I	
	0,75	0,75	0,95	0,95	0,95	0,95	0,95	0,95	0,95		
	0,88	0,75	0,95	1,32	1,32	1,32	1,32	1,32	1,32		
	1,00	0,75	0,95	1,32	1,73	1,73	1,73	1,73	1,73		
	1,13	0,75	0,95	1,32	1,73	1,73	1,73	1,73	—		
	1,25	0,75	0,95	1,32	1,73	1,73	2,18	2,18	—		
	1,50	0,75	0,95	1,32	1,73	1,73	2,18	2,18	—		
	1,75	0,75	0,95	1,32	1,73	1,73	2,18	—	—		
2,00	0,75	0,95	1,32	1,73	1,73	—	—	—	2,18		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,63	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18	3,74	bearing resistance of component I
	0,75	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18	4,85	
	0,88	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18	5,50	
	1,00	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18	6,66	
	1,13	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—	6,66	
	1,25	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—	6,66	
	1,50	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—	6,66	
	1,75	0,96	1,07	1,07	1,50	1,50	1,66	—	—	6,66	
2,00	0,96	1,07	1,07	1,50	1,50	—	—	—	6,66		
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%											

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 90</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-tapping screw GTA 6,5 x L with hexagon head and sealing washer \varnothing16</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	
Drilling capacity: -	
Timber substructure	
No performance assessed	

$t_{N,II}$ [mm]	3,00	4,00	5,00	6,00	8,00	10,00	12,00	14,00	Wood class \geq C24	
Drill \varnothing	5,30	5,30	5,30	5,50	5,70	5,70	5,70	5,70		
$M_{t,nom}$	4,5 Nm									
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,63	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	/
	0,75	0,75	0,95	0,95	0,95	0,95	0,95	0,95	0,95	
	0,88	0,75	0,95	1,32	1,32	1,32	1,32	1,32	1,32	
	1,00	0,75	0,95	1,32	1,73	1,73	1,73	1,73	1,73	
	1,13	0,75	0,95	1,32	1,73	1,73	1,73	1,73	—	
	1,25	0,75	0,95	1,32	1,73	1,73	2,18	2,18	—	
	1,50	0,75	0,95	1,32	1,73	1,73	2,18	2,18	—	
	1,75	0,75	0,95	1,32	1,73	1,73	2,18	—	—	
2,00	0,75	0,95	1,32	1,73	1,73	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,63	3,74	3,74	3,74	3,74	3,74	3,74	3,74	3,74	
	0,75	4,85	4,85	4,85	4,85	4,85	4,85	4,85	4,85	
	0,88	5,50	5,50	5,50	5,50	5,50	5,50	5,50	5,50	
	1,00	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66	
	1,13	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66	
	1,25	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66	
	1,50	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66	
	1,75	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66	
2,00	5,50	6,66	6,66	6,66	6,66	6,66	6,66	6,66		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-tapping screw GTB 6,3 x L
with hexagon head and sealing washer \varnothing 16

Annex 91
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized with additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
--	--

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,57	0,57	1,14	1,25	1,25	1,74	—	—
	0,55	—	—	1,14	1,25	1,25	1,74	—	—
	0,63	—	—	1,14	1,25	1,25	1,74	—	—
	0,75	—	—	—	1,25	1,25	1,74	—	—
	0,88	—	—	—	—	1,25	1,74	—	—
	1,00	—	—	—	—	—	1,74	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,49	0,49	0,93	1,06	1,07	1,44	—	—
	0,55	—	—	0,93	1,06	1,07	1,44	—	—
	0,63	—	—	0,93	1,06	1,07	1,44	—	—
	0,75	—	—	—	1,06	1,07	1,44	—	—
	0,88	—	—	—	—	1,07	1,44	—	—
	1,00	—	—	—	—	—	1,44	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
	2,00	—	—	—	—	—	—	—	—

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 92</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTRO2 4,8 x 20 with hexagon head and sealing washer $\varnothing 14 \text{ mm}$</p>	

<p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: right;">TDRX-25</p>
--	---

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	1,05	1,05	1,05	1,05	1,05	1,05	—	—
	0,55	1,05	1,05	1,05	1,05	1,05	1,05	—	—
	0,63	1,05	1,05	1,42	1,42	1,42	1,42	—	—
	0,75	1,05	1,05	1,42	2,02	2,02	2,02	—	—
	0,88	1,05	1,05	1,42	2,02	2,21	2,21	—	—
	1,00	1,05	1,05	1,42	2,02	2,21	2,53	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,55	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,63	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,75	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	0,88	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	1,00	0,55	0,55	0,73	0,86	1,04	1,59	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF0, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTRO2 4,8 x 20
 with hexagon or oval head

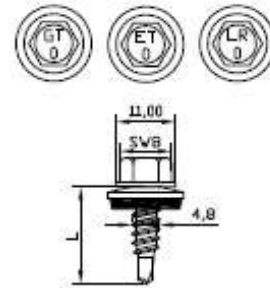
Annex 93
 of European
 Technical Assessment
 ETA-12/0580

Materials
 Fastener: carbon steel – SAE1022, quenched, tempered and galvanized with additional ceramic coating
 Washer: EPDM sealing washer with metal top made of stainless steel
 Component I: S280GD, S320GD or S350GD – EN 10346
 Component II: S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$

Timber substructures

No performance assessed



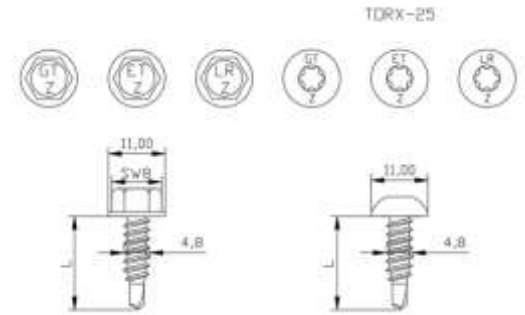
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,57	0,57	1,14	1,25	1,25	1,74	—	—
	0,55	—	—	1,14	1,25	1,25	1,74	—	—
	0,63	—	—	1,14	1,25	1,25	1,74	—	—
	0,75	—	—	—	1,25	1,25	1,74	—	—
	0,88	—	—	—	—	1,25	1,74	—	—
	1,00	—	—	—	—	—	1,74	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,49	0,49	0,93	1,06	1,07	1,44	—	—
	0,55	—	—	0,93	1,06	1,07	1,44	—	—
	0,63	—	—	0,93	1,06	1,07	1,44	—	—
	0,75	—	—	—	1,06	1,07	1,44	—	—
	0,88	—	—	—	—	1,07	1,44	—	—
	1,00	—	—	—	—	—	1,44	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTRO2 4,8 x 20
 with hexagon head and sealing washer $\varnothing 14 \text{ mm}$

Annex 94
 of European
 Technical Assessment
 ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: -</p> <p>Component I: 1050A – EN 573-3</p> <p>Component II: 1050A – EN 573-3</p>	
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$</p>	
<p>Timber substructures</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,70	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	—
	0,55	—	—	0,35	0,37	—	—	—	—
	0,63	—	—	0,35	0,37	—	—	—	—
	0,70	—	—	—	0,37	—	—	—	—
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	—
	0,55	—	—	0,35	0,37	—	—	—	—
	0,63	—	—	0,35	0,37	—	—	—	—
	0,70	—	—	—	0,37	—	—	—	—
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTZFO2 4,8 x 20
with hexagon or oval head

Annex 95
of European
Technical Assessment
ETA-12/0580

<p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: 1050A – EN 573-3</p> <p>Component II: 1050A – EN 573-3</p>	
<p>Drilling capacity: $\Sigma ti \leq 2 \times 0,70 \text{ mm}$</p>	
<p>Timber substructures</p> <p>No performance assessed</p>	

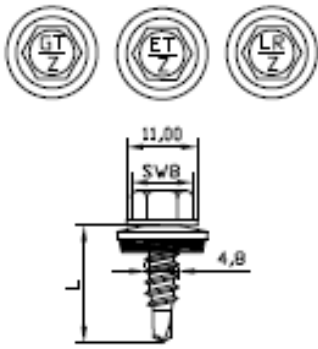
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,70	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t, nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	—
	0,55	—	—	0,35	0,37	—	—	—	—
	0,63	—	—	0,35	0,37	—	—	—	—
	0,70	—	—	—	0,37	—	—	—	—
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	—
	0,55	—	—	0,35	0,37	—	—	—	—
	0,63	—	—	0,35	0,37	—	—	—	—
	0,70	—	—	—	0,37	—	—	—	—
	0,88	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTZFO2 4,8 x 20
 with oval head and sealing washer \varnothing 12 mm

Annex 96
 of European
 Technical Assessment
 ETA-12/0580

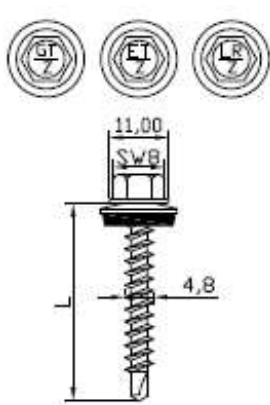
<p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: 1050A – EN 573-3</p> <p>Component II: 1050A – EN 573-3</p>																																																																																																																																																																																																									
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$</p>																																																																																																																																																																																																									
<p>Timber substructures</p> <p>No performance assessed</p>																																																																																																																																																																																																									
<table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>0,50</th> <th>0,55</th> <th>0,63</th> <th>0,70</th> <th>0,88</th> <th>1,00</th> <th>1,13</th> <th>1,25</th> <th>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">3 Nm</td> </tr> <tr> <td rowspan="11">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,31</td> <td>0,31</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="11" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,70</td> <td>—</td> <td>—</td> <td>—</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</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> </tr> <tr> <td rowspan="11">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>0,31</td> <td>0,31</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="11" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>0,35</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,70</td> <td>—</td> <td>—</td> <td>—</td> <td>0,37</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</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> </tr> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p>		$t_{N,II}$ [mm]	0,50	0,55	0,63	0,70	0,88	1,00	1,13	1,25	Wood class \geq C24	$M_{t,nom}$	3 Nm									$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/	0,55	—	—	0,35	0,37	—	—	—	0,63	—	—	0,35	0,37	—	—	—	0,70	—	—	—	0,37	—	—	—	0,88	—	—	—	—	—	—	—	1,00	—	—	—	—	—	—	—	1,13	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—	$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/	0,55	—	—	0,35	0,37	—	—	—	0,63	—	—	0,35	0,37	—	—	—	0,70	—	—	—	0,37	—	—	—	0,88	—	—	—	—	—	—	—	1,00	—	—	—	—	—	—	—	1,13	—	—	—	—	—	—	—	1,25	—	—	—	—	—	—	—	1,50	—	—	—	—	—	—	—	1,75	—	—	—	—	—	—	—	2,00	—	—	—	—	—	—	—
$t_{N,II}$ [mm]	0,50	0,55	0,63	0,70	0,88	1,00	1,13	1,25	Wood class \geq C24																																																																																																																																																																																																
$M_{t,nom}$	3 Nm																																																																																																																																																																																																								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/																																																																																																																																																																																																
	0,55	—	—	0,35	0,37	—	—	—																																																																																																																																																																																																	
	0,63	—	—	0,35	0,37	—	—	—																																																																																																																																																																																																	
	0,70	—	—	—	0,37	—	—	—																																																																																																																																																																																																	
	0,88	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,00	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,13	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,25	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,50	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,75	—	—	—	—	—	—	—																																																																																																																																																																																																	
	2,00	—	—	—	—	—	—	—																																																																																																																																																																																																	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/																																																																																																																																																																																																
	0,55	—	—	0,35	0,37	—	—	—																																																																																																																																																																																																	
	0,63	—	—	0,35	0,37	—	—	—																																																																																																																																																																																																	
	0,70	—	—	—	0,37	—	—	—																																																																																																																																																																																																	
	0,88	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,00	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,13	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,25	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,50	—	—	—	—	—	—	—																																																																																																																																																																																																	
	1,75	—	—	—	—	—	—	—																																																																																																																																																																																																	
	2,00	—	—	—	—	—	—	—																																																																																																																																																																																																	
<p>G / LR, GTF02, GTF02P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2 Fastening screws for metal members and sheetings</p>		<p>Annex 97 of European Technical Assessment ETA-12/0580</p>																																																																																																																																																																																																							
<p>Self-drilling screw GTZFO2 4,8 x 20 with hexagon head and sealing washer \varnothing14 mm</p>																																																																																																																																																																																																									

<p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: 1050A – EN 573-3</p> <p>Component II: 1050A – EN 573-3</p>	
<p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$</p>	
<p>Timber substructures</p> <p>No performance assessed</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,70	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/
	0,55	—	—	0,35	0,37	—	—	—	
	0,63	—	—	0,35	0,37	—	—	—	
	0,70	—	—	—	0,37	—	—	—	
	0,88	—	—	—	—	—	—	—	
	1,00	—	—	—	—	—	—	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—		
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	0,31	0,31	0,35	0,37	—	—	—	/
	0,55	—	—	0,35	0,37	—	—	—	
	0,63	—	—	0,35	0,37	—	—	—	
	0,70	—	—	—	0,37	—	—	—	
	0,88	—	—	—	—	—	—	—	
	1,00	—	—	—	—	—	—	—	
	1,13	—	—	—	—	—	—	—	
	1,25	—	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	
2,00	—	—	—	—	—	—	—		

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

<p>G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 98</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTZFO2 4,8 x 20 with hexagon head and sealing washer \varnothing14 mm</p>	

<p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: structural timber – EN 14081</p>	
Drilling capacity: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$	
<p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 3,370 \text{ Nm}$</p> <p>$f_{ax,k} = 17,604 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	

$t_{N,II}$ [mm]	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	0,62
	0,55	—	—	—	—	—	—	—	0,62
	0,63	—	—	—	—	—	—	—	1,13
	0,75	—	—	—	—	—	—	—	1,46
	0,88	—	—	—	—	—	—	—	1,46
	1,00	—	—	—	—	—	—	—	1,46
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	2,78
	0,55	—	—	—	—	—	—	—	2,78
	0,63	—	—	—	—	—	—	—	4,51
	0,75	—	—	—	—	—	—	—	4,51
	0,88	—	—	—	—	—	—	—	4,51
	1,00	—	—	—	—	—	—	—	4,51
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I

G / LR, GTF02, GTF02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings

Self-drilling screw GTZF2 4,8 x L with hexagon head and sealing washer $\varnothing 14 \text{ mm}$

Annex 99
of European
Technical Assessment
ETA-12/0580

Determination of design values

1. Determination of Design Shear Resistance

The determination of the design values of the shear resistance depends on the type of supporting substructure.

For Metal Substructures the following applies:

The design values $V_{R,d}$ of the shear resistance are the characteristic values of the shear resistance divided by the recommended partial safety factor $\gamma_M = 1,33$. The recommended partial safety factor γ_M should be used in cases where no value is given in national regulations of the Member State where the fastening screws are used.

For Timber Substructures the following applies:

The design values $V_{R,d}$ of the shear resistance are the characteristic values of the shear resistance multiplied by k_{mod} according to EN 1995-1-1, Table 3.1, and divided by the recommended partial safety factor $\gamma_M = 1,33$. If failure of the metal component with the thickness t_i and not failure of the timber substructure is the relevant failure mode then $k_{mod} = 1,0$.

The recommended partial safety factor γ_M should be used in cases where no value is given in national regulations of the Member State where the fastening screws are used.

2. Determination of Design Pull-through, Pull-out and Tension Resistance

The design values of the pull-through resistance are the characteristic values of the pull-through resistance divided by the recommended partial safety factor $\gamma_M = 1,33$. The recommended partial safety factor γ_M should be used in cases where no value is given in national regulations of the Member State where the fastening screws are used.

The determination of the design values of the pull-out resistance depends on the type of substructure.

For Metal Substructures the following applies:

The design values of the pull-out resistance are the characteristic values of the pull-out resistance divided by the recommended partial safety factor $\gamma_M = 1,33$. The recommended partial safety factor γ_M should be used in cases where no value is given in national regulations of the Member State where the fastening screws are used.

For Timber Substructures the following applies:

The design values of the pull-out resistance are the characteristic values of the pull-out resistance multiplied by k_{mod} according to EN 1995-1-1, Table 3.1, and divided by the recommended partial safety factor $\gamma_M = 1,33$.

The recommended partial safety factor γ_M should be used in cases where no value is given in national regulations of the Member State where the fastening screws are used.

The design tension resistance $N_{R,d}$ is the minimum value of the design values of either pull-through resistance or relevant pull-out resistance for the corresponding connection.

3. Design Resistance in case of combined Tension and Shear Forces (interaction)

In case of combined tension and shear forces the linear interaction formula according to EN 1993-1-3, section 8.3 (8) should be taken into account.

**G / LR, GTFO2, GTFO2P, GTF2, GTFS, GTXFO2, GTXF2, GTF HD, GTFP, GTO2, GTO3 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25, GTA, GTB, GTRO2, GTZFO2, GTZF2
Fastening screws for metal members and sheetings**

Annex 100
of European
Technical Assessment
ETA-12/0580

Determination of design values