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European Technical Assessment

**ETA-12/0580
of 25/06/2018**

General part

Technical Assessment Body issuing the European Technical Assessment

Instytut Techniki Budowlanej

Trade name of the construction product

G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2

Product family to which the construction product belongs

Fastening screws for metal members and sheeting

Manufacturer

ETANCO Sp. z o.o.
Al. Jana Pawła II 1
PL 81-345 Gdynia
Poland

Manufacturing plants

1. ETANCO Sp. z o.o.
ul. Olsztyńska 30
PL 11-130 Orneta, Poland
2. Plant 1
3. Plant 2
4. Plant 3

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 17/12/2012
ETA-12/0140 issued on 30/06/2016

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Specific Part

1. Technical description of the product

The fastening screws G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZF 02 and GTZ F2 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 4,8 x 20	galvanized carbon steel	1
2	G 4,8 x L		2
3	GTF02 4,8 x 20		3
4	GTF02 4,8 x 20 (FS)		4
5	GTF02P 4,8 x 20		5
6	GTF2 4,8 x L		6
7	GTF2 4,8 x L (FS)		7
8	GTFS 4,8 x L		8
9	GTFS 4,8 x L (FS)		9
10	GTXF02 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	GTF P 4,8 x L		13
14	GT02 4,8 x 20		14 – 16
15	GT03 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		80 – 84
33	GTR25 6,3 x L	galvanized carbon steel with additional ceramic coating	85 – 89
34	GTA 6,5 x L	galvanized carbon steel	90
35	GTB 6,3 x L		91
36	GTR 02	galvanized carbon steel with additional ceramic coating	92 – 94
37	GTZ F02	stainless steel	95 – 98
38	GTZ F2		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 which are intended to be used in external environments with \geq C2 corrosion according to the standard 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. Performances 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 Annex 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 on the basis of its listing in that decision.

3.1.3. Hygiene, health and the environment (BWR 3)

Regarding the dangerous substances, there may be requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.2. Methods used for the assessment

The assessment of the mechanical fasteners for the declared intended use has been made in accordance with the 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).

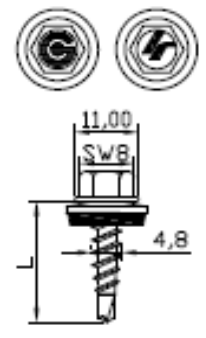
5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at the 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 25/06/2018 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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 1</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw G 4,8 x 20 with hexagon head and sealing washer \varnothing14 mm</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 10326</p> <p>Component II: structural timber – EN 14081</p> <hr/> <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>	
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$t_{N,II} [\text{mm}]$	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								—
$V_{R,k} [\text{kN}]$ 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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 2</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw G 4,8 x L with hexagon head and sealing washer Ø14 mm</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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	—	—	/
	0,55	1,11	1,11	1,11	1,11	1,11	—	—	
	0,63	1,11	1,11	1,45	1,45	1,45	—	—	
	0,75	1,11	1,11	1,45	1,49	1,49	—	—	
	0,88	1,11	1,11	1,45	1,49	1,49	—	—	
	1,00	1,11	1,11	1,45	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	—	—	/
	0,55	0,48	0,48	0,48	0,48	0,48	—	—	
	0,63	0,48	0,48	0,78	0,78	0,78	—	—	
	0,75	0,48	0,48	0,78	0,91	0,91	—	—	
	0,88	0,48	0,48	0,78	0,91	1,30	—	—	
	1,00	0,48	0,48	0,78	0,91	1,30	—	—	
	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%


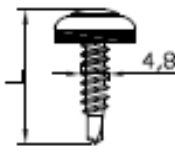
<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 3</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTF02 4,8 x 20 with hexagon head and sealing washer Ø14 mm</p>	

<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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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 \varnothing14 mm</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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	<p>TORX-20/25</p>  
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 5</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTF02P 4,8 x 20 with oval head and sealing washer Ø14 mm</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 10326</p> <p>Component II: structural timber – EN 14081</p> <p>Drilling capacity: $\sum t_i \leq 2 \times 1,00 \text{ mm}$</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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 6</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTF2 4,8 x L with hexagon head and sealing washer Ø14 mm</p>	

<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 10326</p> <p>Component II: structural timber – EN 14081</p> <p>Drilling capacity: $\sum t_i \leq 2 \times 1,00 \text{ mm}$</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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>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 mm</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 10326</p> <p>Component II: structural timber – EN 14081</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,75 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$ $f_{ax,k} = 17,708 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 8</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTFS 4,8 x L with hexagon head and sealing washer Ø14 mm</p>	

<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 10326</p> <p>Component II: structural timber – EN 14081</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,75 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$ $f_{ax,k} = 17,708 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	
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$t_{N,II}$ [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	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—
	1,00	—	—	—	—	—	—	—	—
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	pull-through resistance of component I

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 9</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTFS 4,8 x L (FS) with hexagon head and sealing washer $\varnothing 14 \text{ mm}$</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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	—	—	
	1,13	—	—	—	—	—	—	—	
	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTXF02 4,8 x 20 with hexagon head and sealing washer \varnothing 14 mm

Annex 10
 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 10326</p> <p>Component II: structural timber – EN 14081</p>	
<p>Drilling capacity: $\sum t_i \leq 2 \times 1,00 \text{ mm}$</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>	


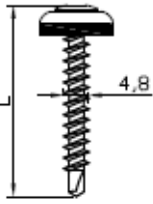
$t_{N,II} \text{ [mm]}$	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class \geq C24
$M_{t,nom}$	3 Nm								—
$V_{R,k} \text{ [kN]}$ for $t_{N,I} \text{ [mm]}$	0,50	—	—	—	—	—	—	—	0,62
	0,55	—	—	—	—	—	—	—	0,62
	0,63	—	—	—	—	—	—	—	1,13
	0,75	—	—	—	—	—	—	—	1,46
	0,88	—	—	—	—	—	—	—	1,46
	1,00	—	—	—	—	—	—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

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 11</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTXF2 4,8 x L with hexagon head and sealing washer $\varnothing 14 \text{ mm}$</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 10326</p> <p>Component II: structural timber – EN 14081</p> <p>Drilling capacity: $\sum t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 9,280 \text{ Nm}$ $f_{ax,k} = 16,581 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	
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$t_{N,II}$ [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_{Rk} [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	1,30
	0,55	—	—	—	—	—	—	—	1,30
	0,63	—	—	—	—	—	—	—	1,30
	0,75	—	—	—	—	—	—	—	1,30
	0,88	—	—	—	—	—	—	—	1,30
	1,00	—	—	—	—	—	—	—	1,30
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I
N_{Rk} [kN] for $t_{N,I}$ [mm]	0,50	—	—	—	—	—	—	—	3,75
	0,55	—	—	—	—	—	—	—	3,75
	0,63	—	—	—	—	—	—	—	4,04
	0,75	—	—	—	—	—	—	—	5,63
	0,88	—	—	—	—	—	—	—	5,63
	1,00	—	—	—	—	—	—	—	5,63
	1,13	—	—	—	—	—	—	—	—
	1,25	—	—	—	—	—	—	—	—
	1,50	—	—	—	—	—	—	—	—
	1,75	—	—	—	—	—	—	—	—
2,00	—	—	—	—	—	—	—	—	bearing resistance of component I

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 12 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTF HD 6,4 x L with hexagon head and sealing washer Ø16 mm</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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326 or 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>$M_{y,Rk} = 4,390 \text{ Nm}$ $f_{ax,k} = 15,168 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	<p>TDRx-20/25</p>  
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$t_{N,II} \text{ [mm]}$	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								—
$V_{R,k} \text{ [kN]}$ for $t_{N,I} \text{ [mm]}$	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	—	—	—	—	—	—	—	—	
$N_{R,k} \text{ [kN]}$ for $t_{N,I} \text{ [mm]}$	0,50	0,62	0,62	0,62	0,62	0,62	—	—	2,97
	0,55	0,62	0,62	0,62	0,62	0,62	—	—	2,97
	0,63	0,62	0,62	0,80	0,80	0,80	—	—	3,93
	0,75	0,62	0,62	0,80	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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

Annex 13
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 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> <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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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 GT02 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> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT02 4,8 x 20
 with oval head and sealing washer Ø12

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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT02 4,8 x 20
 with hexagon head and sealing washer Ø14

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>	
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$t_{N,II}$ [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	/
	0,55	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	
	0,75	1,53	1,53	1,88	2,92	2,92	2,92	2,92	
	0,88	1,53	1,53	1,88	2,92	3,21	3,21	3,21	
	1,00	1,53	1,53	1,88	2,92	3,21	3,66	3,66	
	1,13	1,53	1,53	1,88	2,92	3,21	3,66	3,66	
	1,25	1,53	1,53	1,88	2,92	3,21	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	/
	0,55	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	0,63	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	0,75	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	0,88	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	1,00	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	1,13	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	1,25	0,53	0,53	0,69	0,84	1,02	1,77	1,77	
	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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT03 FH 6,3 x 22
 with hexagon head

Annex 17
 of European
 Technical Assessment
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<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: $\Sigma ti \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT3 4,8 x L
 with oval head and sealing washer $\varnothing 12$

Annex 19
 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> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFs, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT3 4,8 x L
 with hexagon head and sealing washer Ø14

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<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>	<p style="text-align: center;">TORX-25</p>
<p>Drilling capacity: $\Sigma ti \leq 3,00$ 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	0,51	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, GTF02, GTF 02P, GTF2, GTFs, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR3 4,8 x L
 with oval head and sealing washer $\varnothing 12$

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<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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 23 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR3 4,8 x L with hexagon head and 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: 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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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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	0,51	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma ti \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
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$t_{N,II}$ [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>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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTX3 4,8 x L
with oval head and sealing washer $\varnothing 12$

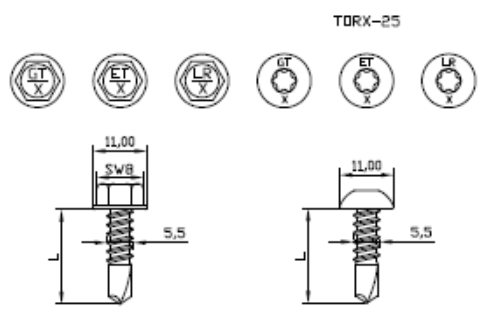
Annex 27
of European
Technical Assessment
ETA-12/0580

<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>	
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$t_{N,II}$ [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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 28</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX3 4,8 x L with hexagon head and stainless steel sealing washer $\varnothing 14$</p>	

<p>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</p>	<p style="text-align: center;">TORX-25</p> 
<p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p>	
<p>Timber substructure 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	0,61	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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 29 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX3 AL 5,5 x L with hexagon or oval head</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> <p>Drilling capacity: $\Sigma ti \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TORX-25</p>
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$t_{N,II}$ [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	—	—	—	—	—	—	—	
<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 30</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX3 AL 5,5 x L with oval head and stainless sealing washer $\varnothing 12$</p>	

<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>	
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$t_{N,II}$ [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	—	—	—	—	—	—	—	

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 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>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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> <hr/> <p>Drilling capacity: $\Sigma ti \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 33 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT5 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 or 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: $\Sigma ti \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 34</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT5 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: 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>	
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$t_{N,II}$ [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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 35 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT5 5,5 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: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma ti \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 36 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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
Drilling capacity: $\Sigma t_i \leq 5,00$ mm	
<u>Timber substructure</u>	
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	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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma ti \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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%									

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 41 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT5 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: 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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	<p>TDRX-25</p>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 43</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX5 5,5 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: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
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$t_{N,II}$ [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	—	—	—	—		

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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>	
Drilling capacity: $\Sigma t_i \leq 6,00$ 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
$M_{t,nom}$	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%

G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT6 6,3 x L
 with hexagon head and sealing washer $\varnothing 16$

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<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>	
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	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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</p> <p style="padding-left: 20px;">S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\sum t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT8 5,5 x L
 with oval head and sealing washer Ø12

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<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: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 49</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT8 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: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	3,16	3,16	3,16	3,16	—
	0,55	2,57	3,16	3,16	3,16	3,16	—
	0,63	2,57	3,63	3,63	3,63	3,63	—
	0,75	2,57	4,17	4,17	4,17	4,17	—
	0,88	2,57	4,18	4,18	4,18	4,18	—
	1,00	2,57	4,75	4,75	4,75	4,75	—
	1,13	2,57	4,75	4,75	4,75	4,75	—
	1,25	2,57	4,75	4,75	4,75	4,75	—
	1,50	2,57	4,75	4,75	4,75	4,75	—
	1,75	2,57	4,75	4,75	4,75	4,75	—
2,00	2,57	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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 50</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT8 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> <hr/> <p>Drilling capacity: $\sum t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 52</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR8 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: 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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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 of European
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<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: $\Sigma t_i \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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>	<p>TORX-25</p>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 57</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GT12 5,5 x L 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</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	
<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT12 5,5 x L
 with oval head and sealing washer $\varnothing 12$

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 of European
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<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: $\Sigma t_i \leq 12,00$ mm	
<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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>	
<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	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	—

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT12 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

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 of European
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<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>	
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$t_{N,II}$ [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%

<p>G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 61 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	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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GT12 5,5 x L
 with hexagon head and sealing washer Ø16

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<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 12,00$ mm	
<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	—

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 65 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>	
<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	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	—

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

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<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>	
<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	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR12 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

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<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: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 68</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 \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 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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings

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

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<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>	
<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	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 70</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 \varnothing16</p>	

<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> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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%

G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<p>Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p>	<p>TORX-25</p>
<p>Drilling capacity: $\Sigma ti \leq 12,00$ mm</p>	
<p>Timber substructure 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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 72 of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTX12 5,5 x L with hexagon or oval head</p>	

<p>Materials 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: 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 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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 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 \varnothing12</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: 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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 16,00$ 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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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	—	
$N_{R,k}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 16,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
<p>Drilling capacity: $\Sigma t_i \leq 16,00$ 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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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 \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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 16,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 80</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR20 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 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: $\Sigma t_i \leq 20,00$ 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	—	
$N_{R,k}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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>	
<p>Drilling capacity: $\Sigma ti \leq 20,00$ 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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p>	<p>Annex 83 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 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: $\Sigma t_i \leq 20,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 84</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 \varnothing16</p>	

<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: $\Sigma t_i \leq 25,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR25 6,3 x L
 with hexagon or oval head

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<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> <p>Drilling capacity: $\Sigma t_i \leq 25,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

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

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<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: $\Sigma t_i \leq 25,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 87</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 $\varnothing 16$</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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 25,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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 $\varnothing 16$</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: $\Sigma ti \leq 25,00$ 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	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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR25 6,3 x L
 with hexagon head and sealing washer Ø16

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<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>$M_{y,Rk} = 6,500 \text{ Nm}$ $f_{ax,k} = 23,027 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$</p>	
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$t_{N,II}$ [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 $t_{N,I}$	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 $t_{N,I}$	0,63	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18
	0,75	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18
	0,88	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18
	1,00	0,96	1,07	1,07	1,50	1,50	1,66	2,12	2,18
	1,13	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—
	1,25	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—
	1,50	0,96	1,07	1,07	1,50	1,50	1,66	2,12	—
	1,75	0,96	1,07	1,07	1,50	1,50	1,66	—	—
	2,00	0,96	1,07	1,07	1,50	1,50	—	—	—

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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</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> <p>Drilling capacity: -</p> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	0,95	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	
	1,00	0,75	0,95	1,32	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	
	0,75	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	
	1,00	5,50	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	
	1,25	5,50	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	
	1,75	5,50	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		
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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 91</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-tapping screw GTB 6,3 x L with hexagon head and sealing washer \varnothing16</p>	

<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 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\sum t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR 02 4,8 x 20
 with hexagon head and sealing washer \varnothing 14 mm

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<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: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 93</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTR 02 4,8 x 20 with hexagon or oval head</p>	

<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 stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326</p> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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	—	—	—	—	—	—	—	—	
<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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTR 02 4,8 x 20
 with hexagon head and sealing washer $\varnothing 14 \text{ mm}$

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<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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>No performance assessed</p>	<p style="text-align: center;">TORX-25</p>
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 95</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTZ F02 4,8 x 20 with hexagon or oval head</p>	

<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>TORX-25</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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 96</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTZ F02 4,8 x 20 with oval head and sealing washer \varnothing12 mm</p>	

<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> <hr/> <p>Drilling capacity: $\Sigma ti \leq 2 \times 0,70 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2</p> <p>Fastening screws for metal members and sheetings</p>	<p>Annex 97</p> <p>of European Technical Assessment ETA-12/0580</p>
<p>Self-drilling screw GTZ F02 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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p>	
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$t_{N,II}$ [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>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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTZ F02 4,8 x 20
 with hexagon head and sealing washer $\varnothing 14 \text{ mm}$

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 Technical Assessment
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<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 10326</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>$M_{y,Rk} = 3,370 \text{ Nm}$</p> <p>$f_{ax,k} = 17,604 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p>	
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$t_{N,II}$ [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, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Self-drilling screw GTZ F2 4,8 x L with hexagon head and sealing washer $\varnothing 14 \text{ mm}$

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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_f 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) or EN 1999-1-4, section 8.1 (7) should be taken into account.

G, GTF02, GTF 02P, GTF2, GTFS, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2
Fastening screws for metal members and sheetings

Determination of design values

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