



INSTYTUT TECHNIKI BUDOWLANEJ



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European Technical Assessment

ETA-12/0580
of 27/06/2023



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

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

Manufacturing plants

1. Simpson Strong-Tie Etanco P.S.A.
ul. Olsztyńska 30
11-130 Orneta, Poland
2. Zakład 1
3. Zakład 2
4. Zakład 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 15/07/2020

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

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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 | | 52 – 56 |
| 27 | GT12 5,5 x L | galvanized carbon steel | 57 – 62 |
| 28 | GTR12 5,5 x L | galvanized carbon steel with additional ceramic coating | 63 – 70 |
| 29 | GT12 FH 5,5 x L | galvanized carbon steel | 71 |
| 30 | GTX12 5,5 x L | stainless steel (bi-metal) | 72 – 74 |
| 31 | GTR16 6,3 x L | galvanized carbon steel with additional ceramic coating | 75 – 79 |

Table 1

| No. | Screw | Material | Annex |
|-----|---------------|---|---------|
| 32 | GTR20 6,3 x L | galvanized carbon steel with additional ceramic coating | 80 – 84 |
| 33 | GTR25 6,3 x L | | 85 – 89 |
| 34 | GTA 6,5 x L | galvanized carbon steel | 90 |
| 35 | GTB 6,3 x L | | 91 |
| 36 | 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 EN ISO 12944-2 are made of stainless steel.

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

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

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

3.1 Performance of the product

3.1.1 Mechanical resistance and stability (BWR 1)

The characteristic values of the shear resistance of connections and tension resistance of connections with the fasteners are given in 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.

3.2 Methods used for the assessment

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

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

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

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

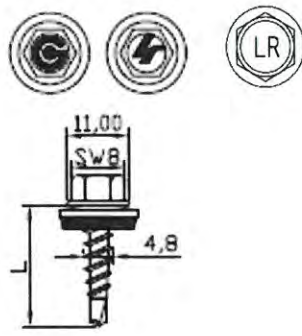
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

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

Issued in Warsaw on 27/06/2023 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> |  |
|--|---|

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

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

G, 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 G 4,8 x 20 with hexagon head and sealing washer Ø14

Annex 1
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| | |
|---|--|
| <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> <hr/> <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> | |
|---|--|

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

G, 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 G 4,8 x L with hexagon head and sealing washer Ø14

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| | |
|--|--|
| <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> <hr/> <p>Timber substructures</p> <p>No performance assessed</p> | |
|--|--|

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

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

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 GTF02 4,8 x 20 with hexagon head and sealing washer Ø14

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| | |
|---|--|
| <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> | |
|---|--|

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

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

G, 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 GTF02 4,8 x 20 (FS) with hexagon head and sealing washer $\varnothing 14$

Annex 4
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| | |
|--|---------------------------|
| <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> <hr/> <p>Timber substructures</p> <p>No performance assessed</p> | <p>TDRX-20/25</p> |
|--|---------------------------|

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

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

G, 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 GTF02P 4,8 x 20 with oval head and sealing washer Ø14

Annex 5
 of European
 Technical Assessment
 ETA-12/0580

| | |
|--|--|
| <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: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$</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> | |

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

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 GTF2 4,8 x L with hexagon head and sealing washer Ø14

Annex 6
 of European
 Technical Assessment
 ETA-12/0580

| | |
|---|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE1022 quenched, tempered and galvanized (9 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 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>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 12,500 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p> | |
|---|--|

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

| | |
|--|---|
| <p>G, 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 7 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTF2 4,8 x L (FS) with hexagon head and sealing washer Ø14</p> | |

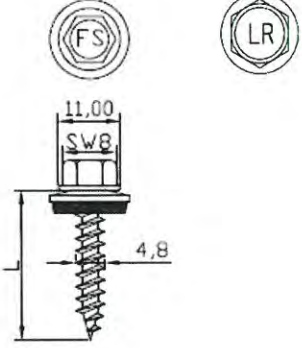
| | |
|---|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10326</p> <p>Component II: structural timber – EN 14081</p> <hr/> <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> | |
|---|--|

| $t_{N,II}$ [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 |

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 GTFS 4,8 x L with hexagon head and sealing washer Ø14

Annex 8
 of European
 Technical Assessment
 ETA-12/0580

| <p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (9 μm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10326</p> <p>Component II: structural timber – EN 14081</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|------|------|------|------|------|------|-----------------------|-----------------------|-------------|------|--|--|--|--|--|--|--|--|-----------------------------------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|-----------------------------------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|------|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|--|
| <p>Drilling capacity: $\Sigma t_i \leq 2 \times 0,75 \text{ mm}$</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Timber substructures</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>For timber substructures performance assessed with:</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>$M_{y,Rk} = 4,390 \text{ Nm}$ $f_{ax,k} = 17,708 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>0,50</th> <th>0,55</th> <th>0,63</th> <th>0,75</th> <th>0,88</th> <th>1,00</th> <th>1,13</th> <th>1,25</th> <th>Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="8">3 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>0,80</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,40</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,40</td> </tr> <tr> <td>0,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>1,40</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>2,78</td> </tr> <tr> <td>0,55</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>2,78</td> </tr> <tr> <td>0,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>0,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4,51</td> </tr> <tr> <td>0,88</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> | $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 | $M_{t,nom}$ | 3 Nm | | | | | | | | | $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | — | — | — | — | — | — | — | 0,80 | 0,55 | — | — | — | — | — | — | — | 1,40 | 0,63 | — | — | — | — | — | — | — | 1,40 | 0,75 | — | — | — | — | — | — | — | 1,40 | 0,88 | — | — | — | — | — | — | — | — | 1,00 | — | — | — | — | — | — | — | — | 1,13 | — | — | — | — | — | — | — | — | 1,25 | — | — | — | — | — | — | — | — | 1,50 | — | — | — | — | — | — | — | — | 1,75 | — | — | — | — | — | — | — | — | 2,00 | — | — | — | — | — | — | — | — | — | $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | — | — | — | — | — | — | — | 2,78 | 0,55 | — | — | — | — | — | — | — | 2,78 | 0,63 | — | — | — | — | — | — | — | 4,51 | 0,75 | — | — | — | — | — | — | — | 4,51 | 0,88 | — | — | — | — | — | — | — | — | 1,00 | — | — | — | — | — | — | — | — | 1,13 | — | — | — | — | — | — | — | — | 1,25 | — | — | — | — | — | — | — | — | 1,50 | — | — | — | — | — | — | — | — | 1,75 | — | — | — | — | — | — | — | — | 2,00 | — | — | — | — | — | — | — | — | — | |
| $t_{N,II}$ [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 Fastening screws for metal members and sheetings</p> | | <p>Annex 9 of European Technical Assessment ETA-12/0580</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Self-drilling screw GTFS 4,8 x L (FS) with hexagon head and sealing washer $\varnothing 14$</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: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$</p> <p>Timber substructures</p> <p>No performance assessed</p> | |
|--|--|

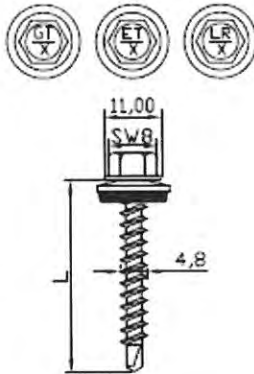
| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|------------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,II}$ [mm] | 0,50 | 0,62 | 0,62 | 0,62 | 0,62 | 0,62 | 0,62 | — | — |
| | 0,55 | 0,62 | 0,62 | 0,62 | 0,62 | 0,62 | 0,62 | — | — |
| | 0,63 | 0,62 | 0,62 | 1,13 | 1,13 | 1,13 | 1,13 | — | — |
| | 0,75 | 0,62 | 0,62 | 1,13 | 1,46 | 1,46 | 1,46 | — | — |
| | 0,88 | 0,62 | 0,62 | 1,13 | 1,46 | 1,46 | 1,46 | — | — |
| | 1,00 | 0,62 | 0,62 | 1,13 | 1,46 | 1,46 | 1,46 | — | — |
| | 1,13 | — | — | — | — | — | — | — | — |
| | 1,25 | — | — | — | — | — | — | — | — |
| | 1,50 | — | — | — | — | — | — | — | — |
| | 1,75 | — | — | — | — | — | — | — | — |
| 2,00 | — | — | — | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,II}$ [mm] | 0,50 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | — | — |
| | 0,55 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | 0,49 | — | — |
| | 0,63 | 0,49 | 0,49 | 0,77 | 0,77 | 0,77 | 0,77 | — | — |
| | 0,75 | 0,49 | 0,49 | 0,77 | 0,89 | 0,89 | 0,89 | — | — |
| | 0,88 | 0,49 | 0,49 | 0,77 | 0,89 | 1,01 | 1,01 | — | — |
| | 1,00 | 0,49 | 0,49 | 0,77 | 0,89 | 1,01 | 1,44 | — | — |
| | 1,13 | — | — | — | — | — | — | — | — |
| | 1,25 | — | — | — | — | — | — | — | — |
| | 1,50 | — | — | — | — | — | — | — | — |
| | 1,75 | — | — | — | — | — | — | — | — |
| 2,00 | — | — | — | — | — | — | — | — | |

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

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 $\varnothing 14$

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> |  |
| Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$ | |
| <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 3,370 \text{ Nm}$</p> <p>$f_{ax,k} = 17,604 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p> | |

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

G, 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 GTXF2 4,8 x L with hexagon head and sealing washer $\varnothing 14$

Annex 11
of European
Technical Assessment
ETA-12/0580


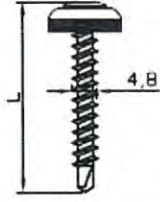
| | |
|--|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10326</p> <p>Component II: structural timber – EN 14081</p> <hr/> <p>Drilling capacity: $\Sigma ti \leq 2 \times 1,00 \text{ mm}$</p> <hr/> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 9,280 \text{ Nm}$</p> <p>$f_{ax,k} = 16,581 \text{ N/mm}^2$ 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 $\geq \text{C24}$ |
|---|------|------|------|------|------|------|------|------|------------------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k} \text{ [kN]}$ for $t_{N,I} \text{ [mm]}$ | 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 | — | — | — | — | — | — | — | — | |
| $N_{R,k} \text{ [kN]}$ for $t_{N,I} \text{ [mm]}$ | 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 | — | — | — | — | — | — | — | — | |

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 GTF HD 6,4 x L with hexagon head and sealing washer $\varnothing 16$

Annex 12
of European
Technical Assessment
ETA-12/0580

| | |
|--|---|
| <p>Materials</p> <p>Fastener: carbon steel – SAE1022, quenched, tempered and galvanized (20 µm)</p> <p>Washer: EPDM sealing washer with metal top made of aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10326</p> <p>Component II: S280GD, S320GD or S350GD – EN 10326 or structural timber – EN 14081</p> | <p>TORX-20/25</p>   |
| Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$ | |
| <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 4,390 \text{ Nm}$</p> <p>$f_{ax,k} = 15,168 \text{ N/mm}^2$ for $l_{ef} \geq 20 \text{ mm}$</p> | |

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

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

G, 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 $\varnothing 14$

Annex 13
of European
Technical Assessment
ETA-12/0580

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

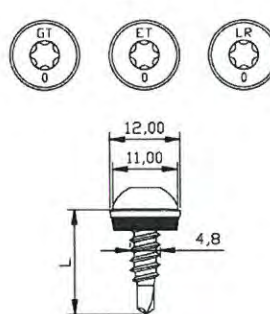
| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,05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

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

G, 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 hexagon or oval head

Annex 14
 of European
 Technical Assessment
 ETA-12/0580

| | |
|---|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> | <p>TORX-25</p>  |
| Drilling capacity: $\Sigma t_i \leq 2 \times 1,00 \text{ mm}$ | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | — | — | / |
| | 0,55 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | — | — | |
| | 0,63 | 1,05 | 1,05 | 1,42 | 1,42 | 1,42 | — | — | |
| | 0,75 | 1,05 | 1,05 | 1,42 | 2,02 | 2,02 | — | — | |
| | 0,88 | 1,05 | 1,05 | 1,42 | 2,02 | 2,21 | — | — | |
| | 1,00 | 1,05 | 1,05 | 1,42 | 2,02 | 2,21 | — | — | |
| | 1,13 | — | — | — | — | — | — | — | |
| | 1,25 | — | — | — | — | — | — | — | |
| | 1,50 | — | — | — | — | — | — | — | |
| | 1,75 | — | — | — | — | — | — | — | |
| 2,00 | — | — | — | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | / |
| | 0,55 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | |
| | 0,63 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | |
| | 0,75 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | |
| | 0,88 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | |
| | 1,00 | 0,55 | 0,55 | 0,73 | 0,86 | 1,04 | — | — | |
| | 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 oval head and sealing washer $\varnothing 12$

Annex 15
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: 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> | |

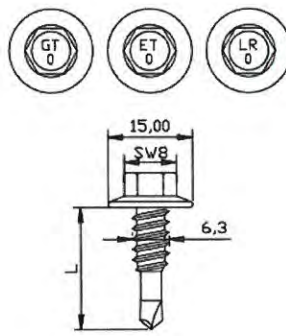
| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | — | — | / |
| | 0,55 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | — | — | |
| | 0,63 | 1,05 | 1,05 | 1,42 | 1,42 | 1,42 | — | — | |
| | 0,75 | 1,05 | 1,05 | 1,42 | 2,02 | 2,02 | — | — | |
| | 0,88 | 1,05 | 1,05 | 1,42 | 2,02 | 2,21 | — | — | |
| | 1,00 | 1,05 | 1,05 | 1,42 | 2,02 | 2,53 | — | — | |
| | 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 $\varnothing 14$

Annex 16
 of European
 Technical Assessment
 ETA-12/0580

| | |
|---|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: integrated collar</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> |  |
| <p>Drilling capacity: $\Sigma t_i \leq 2 \times 1,25$ mm</p> | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 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 | 2,01 |
| | 0,55 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 0,63 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 0,75 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 0,88 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 1,00 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 1,13 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 1,25 | 0,53 | 0,53 | 0,69 | 0,84 | 1,02 | 1,77 | 1,77 | 2,01 |
| | 1,50 | — | — | — | — | — | — | — | — |
| | 1,75 | — | — | — | — | — | — | — | — |
| 2,00 | — | — | — | — | — | — | — | — | |

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 GT03 FH 6,3 x 22
with hexagon head

Annex 17
of European
Technical Assessment
ETA-12/0580

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

| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08 | 1,08 | 1,08 | 1,08 | — | — | — | / |
| | 0,55 | 1,08 | 1,08 | 1,08 | 1,08 | — | — | — | |
| | 0,63 | 1,38 | 1,38 | 1,38 | 1,38 | — | — | — | |
| | 0,75 | 2,11 | 2,11 | 2,11 | 2,11 | — | — | — | |
| | 0,88 | 2,29 | 2,29 | 2,29 | 2,29 | — | — | — | |
| | 1,00 | 2,59 | 2,59 | 2,59 | 2,59 | — | — | — | |
| | 1,13 | 2,59 | 2,59 | 2,59 | — | — | — | — | |
| | 1,25 | 2,59 | 2,74 | 2,74 | — | — | — | — | |
| | 1,50 | 2,59 | 2,74 | 3,41 | — | — | — | — | |
| | 1,75 | 2,59 | 2,74 | — | — | — | — | — | |
| 2,00 | 2,59 | — | — | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,51 | 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> | <p>TORX-25</p> |
| Drilling capacity: $\Sigma ti \leq 3,00$ mm | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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

| | |
|--|--|
| <p>G, 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 19</p> <p>of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GT3 4,8 x L with oval head and sealing washer $\varnothing 12$</p> | |

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

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

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

G, 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 $\varnothing 14$

Annex 20
 of European
 Technical Assessment
 ETA-12/0580

| | |
|---|----------------|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma ti \leq 3,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | <p>TDRX-25</p> |
|---|----------------|

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

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

| | |
|--|--|
| <p>G, 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 21</p> <p>of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR3 4,8 x L with hexagon or oval head</p> | |

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

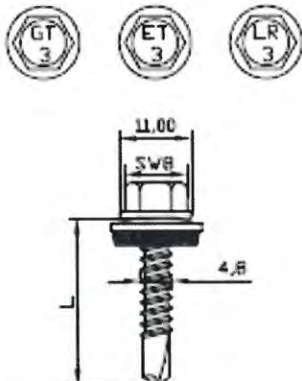
| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08 | 1,08 | 1,08 | — | — | — | — | / |
| | 0,55 | 1,08 | 1,08 | 1,08 | — | — | — | — | |
| | 0,63 | 1,38 | 1,38 | 1,38 | — | — | — | — | |
| | 0,75 | 2,11 | 2,11 | 2,11 | — | — | — | — | |
| | 0,88 | 2,29 | 2,29 | 2,29 | — | — | — | — | |
| | 1,00 | 2,59 | 2,59 | 2,59 | — | — | — | — | |
| | 1,13 | 2,59 | 2,59 | — | — | — | — | — | |
| | 1,25 | 2,59 | 2,74 | 2,74 | — | — | — | — | |
| | 1,50 | 2,59 | 2,74 | 3,41 | — | — | — | — | |
| | 1,75 | 2,59 | 2,74 | — | — | — | — | — | |
| 2,00 | 2,59 | — | — | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,51 | 0,51 | 0,51 | — | — | — | — | / |
| | 0,55 | 0,51 | 0,51 | 0,51 | — | — | — | — | |
| | 0,63 | 0,76 | 0,76 | 0,76 | — | — | — | — | |
| | 0,75 | 0,84 | 0,84 | 0,84 | — | — | — | — | |
| | 0,88 | 0,78 | 0,78 | 0,78 | — | — | — | — | |
| | 1,00 | 0,94 | 0,94 | 0,94 | — | — | — | — | |
| | 1,13 | 0,94 | 0,94 | — | — | — | — | — | |
| | 1,25 | 0,94 | 0,94 | — | — | — | — | — | |
| | 1,50 | 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 oval head and sealing washer $\varnothing 12$

Annex 22
 of European
 Technical Assessment
 ETA-12/0580

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

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

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 steel sealing washer $\varnothing 14$

Annex 23
of European
Technical Assessment
ETA-12/0580

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

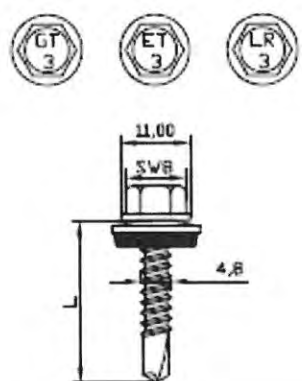
| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08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

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

G, 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 $\varnothing 14$

Annex 24
 of European
 Technical Assessment
 ETA-12/0580

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

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

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 | TDRX-25 |
| Drilling capacity: $\Sigma t_i \leq 3,00$ mm | |
| Timber substructure No performance assessed | |

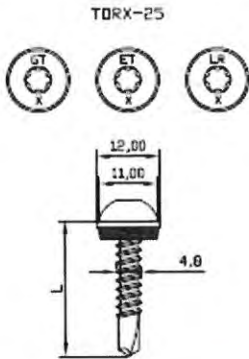
| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08 | 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

Annex 26
 of European
 Technical Assessment
 ETA-12/0580

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

| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08 | 1,08 | 1,08 | 1,08 | — | — | — | — |
| | 0,55 | 1,08 | 1,08 | 1,08 | 1,08 | — | — | — | — |
| | 0,63 | 1,38 | 1,38 | 1,38 | 1,38 | — | — | — | — |
| | 0,75 | 2,11 | 2,11 | 2,11 | 2,11 | — | — | — | — |
| | 0,88 | 2,29 | 2,29 | 2,29 | 2,29 | — | — | — | — |
| | 1,00 | 2,59 | 2,59 | 2,59 | 2,59 | — | — | — | — |
| | 1,13 | 2,59 | 2,59 | 2,59 | — | — | — | — | — |
| | 1,25 | 2,59 | 2,74 | 2,74 | — | — | — | — | — |
| | 1,50 | 2,59 | 2,74 | 3,41 | — | — | — | — | — |
| | 1,75 | 2,59 | 2,74 | — | — | — | — | — | — |
| 2,00 | 2,59 | — | — | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,51 | 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 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: $\Sigma ti \leq 3,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|


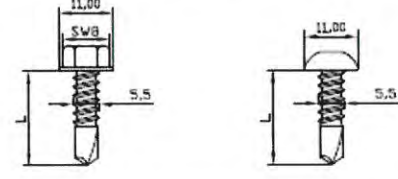
| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{L,norm}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 |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

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

G, 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 head and stainless steel sealing washer $\varnothing 14$

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| | |
|--|--|
| <p>Materials</p> <p>Fastener: stainless steel – SAE 304, Bi-metal</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> | <p>TORX-25</p>   |
| Drilling capacity: $\Sigma ti \leq 3,00$ mm | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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

G, 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 AL 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> | <p>TDRX-25</p> |
| <p>Drilling capacity: $\Sigma t_i \leq 3,00$ mm</p> | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |


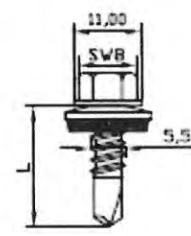
| $t_{N,II}$ [mm] | 1,00 | 1,25 | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,08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

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

G, 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 GTX3 AL 5,5 x L
 with oval head and stainless sealing washer $\varnothing 12$

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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> |   |
| Drilling capacity: $\Sigma ti \leq 3,00$ mm | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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 AL 5,5 x L
with hexagon head and stainless steel 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: -</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> |
|---|----------------|

| $t_{N,II}$ [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: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | <p>TDRX-25</p> |
|---|----------------|

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

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

G, 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 GT5 5,5 x L
 with oval head and sealing washer $\varnothing 12$

Annex 33
 of European
 Technical Assessment
 ETA-12/0580

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

| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | / |
| | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | |
| | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | |
| | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | |
| | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | |
| | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | |
| | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | |
| | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,78 | 2,55 | 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, 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 GT5 5,5 x L
 with hexagon head and sealing washer Ø14

Annex 34
 of European
 Technical Assessment
 ETA-12/0580

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

| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | / |
| | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | |
| | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | |
| | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | |
| | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | |
| | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | |
| | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | |
| | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,78 | 2,55 | 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: $\Sigma t_i \leq 5,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | <p>TDRX-25</p> |
|--|----------------|

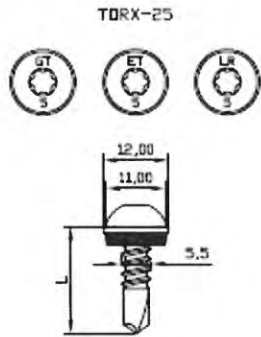
| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 |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

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 or oval head

Annex 36
 of European
 Technical Assessment
 ETA-12/0580

| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: 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>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|------|------|------|------|------|-------|-----------------------|-------|-----------------------|-------------|------|--|--|--|--|--|--|--|--|-----------------------------------|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|-----------------------------------|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|------|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|
| <table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>1,50</th> <th>2,00</th> <th>3,00</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>8,00</th> <th>10,00</th> <th rowspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{l,nom}$</td> <td colspan="8" style="text-align: center;">5 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,i}$ [mm]</td> <td>0,50</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,i}$ [mm]</td> <td>0,50</td> <td>0,51</td> <td>0,61</td> <td>0,61</td> <td>0,61</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>0,51</td> <td>0,61</td> <td>0,61</td> <td>0,61</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>0,90</td> <td>0,90</td> <td>0,90</td> <td>0,90</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>0,99</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>1,13</td> <td>1,13</td> <td>1,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> <p>If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p> | | $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 | $M_{l,nom}$ | 5 Nm | | | | | | | | | $V_{R,k}$ [kN] for $t_{N,i}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | / | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | $N_{R,k}$ [kN] for $t_{N,i}$ [mm] | 0,50 | 0,51 | 0,61 | 0,61 | 0,61 | — | — | — | / | 0,55 | 0,51 | 0,61 | 0,61 | 0,61 | — | — | — | 0,63 | 0,90 | 0,90 | 0,90 | 0,90 | — | — | — | 0,75 | 0,99 | 0,99 | 0,99 | 0,99 | — | — | — | 0,88 | 0,99 | 0,99 | 0,99 | 0,99 | — | — | — | 1,00 | 1,13 | 1,13 | 1,13 | 1,13 | — | — | — | 1,13 | 1,13 | 1,13 | 1,13 | — | — | — | — | 1,25 | 1,13 | 1,13 | 1,13 | — | — | — | — | 1,50 | 1,13 | 1,13 | 1,13 | — | — | — | — | 1,75 | 1,13 | 1,13 | 1,13 | — | — | — | — | 2,00 | 1,13 | 1,13 | 1,13 | — | — | — | — |
| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $M_{l,nom}$ | 5 Nm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,i}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $N_{R,k}$ [kN] for $t_{N,i}$ [mm] | 0,50 | 0,51 | 0,61 | 0,61 | 0,61 | — | — | — | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,55 | 0,51 | 0,61 | 0,61 | 0,61 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,63 | 0,90 | 0,90 | 0,90 | 0,90 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,75 | 0,99 | 0,99 | 0,99 | 0,99 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,88 | 0,99 | 0,99 | 0,99 | 0,99 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,00 | 1,13 | 1,13 | 1,13 | 1,13 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,13 | 1,13 | 1,13 | 1,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,25 | 1,13 | 1,13 | 1,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,50 | 1,13 | 1,13 | 1,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,75 | 1,13 | 1,13 | 1,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,00 | 1,13 | 1,13 | 1,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>G, 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 37 of European Technical Assessment ETA-12/0580</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Self-drilling screw GTR5 5,5 x L with oval head and sealing washer $\varnothing 12$</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

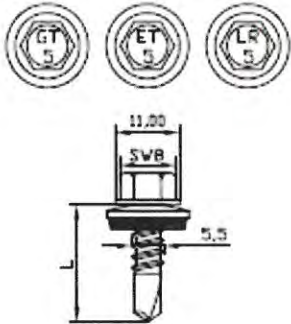
| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 |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

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

G, 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 GTR5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 38
 of European
 Technical Assessment
 ETA-12/0580

| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of stainless steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|------|------|------|------|------|------|-------|-----------------------|---|-----------------|------|------|------|------|------|------|------|-------|-----------------------|--|-------------|------|--|--|--|--|--|--|--|--|--|-----------------------------------|------|------|------|------|------|---|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|---|-----------------------------------|------|------|------|------|------|---|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|------|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|------|------|------|------|---|---|---|---|---|---|
| <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>1,50</th> <th>2,00</th> <th>3,00</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>8,00</th> <th>10,00</th> <th colspan="2">Wood class \geq C24</th> </tr> </thead> <tbody> <tr> <td>$M_{t,nom}$</td> <td colspan="9">5 Nm</td> <td></td> </tr> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>1,25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>1,18</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>1,70</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>2,07</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,32</td> <td>2,32</td> <td>2,32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>3,41</td> <td>3,41</td> <td>3,41</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,78</td> <td>2,55</td> <td>2,63</td> <td>2,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td rowspan="10" style="text-align: center;">/</td> </tr> <tr> <td>0,55</td> <td>1,78</td> <td>2,55</td> <td>2,63</td> <td>2,63</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,78</td> <td>2,55</td> <td>3,59</td> <td>3,59</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,78</td> <td>2,55</td> <td>4,13</td> <td>4,13</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>1,78</td> <td>2,55</td> <td>4,14</td> <td>4,14</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>1,78</td> <td>2,55</td> <td>4,71</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table> <p style="font-size: small;">If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3% If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%</p> | | | | | | | | | | | $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 | | $M_{t,nom}$ | 5 Nm | | | | | | | | | | $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | — | / | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | — | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | — | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | — | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | — | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | — | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | — | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | — | $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,78 | 2,55 | 2,63 | 2,63 | — | — | — | — | / | 0,55 | 1,78 | 2,55 | 2,63 | 2,63 | — | — | — | — | 0,63 | 1,78 | 2,55 | 3,59 | 3,59 | — | — | — | — | 0,75 | 1,78 | 2,55 | 4,13 | 4,13 | — | — | — | — | 0,88 | 1,78 | 2,55 | 4,14 | 4,14 | — | — | — | — | 1,00 | 1,78 | 2,55 | 4,71 | 4,71 | — | — | — | — | 1,13 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | 1,25 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | 1,50 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | 1,75 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | 2,00 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | — |
| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $M_{t,nom}$ | 5 Nm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | — | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,78 | 2,55 | 2,63 | 2,63 | — | — | — | — | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,55 | 1,78 | 2,55 | 2,63 | 2,63 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,63 | 1,78 | 2,55 | 3,59 | 3,59 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,75 | 1,78 | 2,55 | 4,13 | 4,13 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,88 | 1,78 | 2,55 | 4,14 | 4,14 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,00 | 1,78 | 2,55 | 4,71 | 4,71 | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,13 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,25 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,50 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1,75 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,00 | 1,78 | 2,55 | 4,71 | — | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>G, 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 39 of European Technical Assessment ETA-12/0580</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Self-drilling screw GTR5 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

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

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

G, 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 GTR5 5,5 x L
 with hexagon head and sealing washer $\varnothing 14$

Annex 40
 of European
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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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 5,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | |
|---|--|

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

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

G, 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 GT5 FH 5,5 x L
 with hexagon head

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| | |
|--|--|
| <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> | |
|--|--|

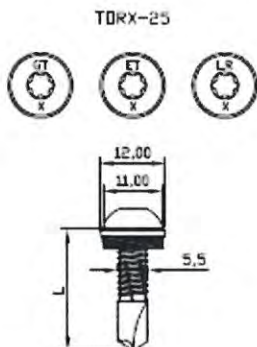
| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t, nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 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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| | |
|--|---|
| Materials Fastener: stainless steel – SAE 304, Bi-metal Washer: EPDM sealing washer with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 |  |
| Drilling capacity: $\Sigma t_i \leq 5,00$ mm | |
| Timber substructure No performance assessed | |

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

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

G, 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 oval head and sealing washer $\varnothing 12$

Annex 43
 of European
 Technical Assessment
 ETA-12/0580

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

| $t_{N,II}$ [mm] | 1,50 | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | / |
| | 0,55 | 1,25 | 1,25 | 1,25 | 1,25 | — | — | — | |
| | 0,63 | 1,18 | 1,18 | 1,18 | 1,18 | — | — | — | |
| | 0,75 | 1,70 | 1,70 | 1,70 | 1,70 | — | — | — | |
| | 0,88 | 2,07 | 2,07 | 2,07 | 2,07 | — | — | — | |
| | 1,00 | 2,32 | 2,32 | 2,32 | 2,32 | — | — | — | |
| | 1,13 | 2,32 | 2,32 | 2,32 | — | — | — | — | |
| | 1,25 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,50 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| | 1,75 | 3,41 | 3,41 | 3,41 | — | — | — | — | |
| 2,00 | 3,41 | 3,41 | 3,41 | — | — | — | — | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,44 | 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> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 6,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|

| $t_{N,II}$ [mm] | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|-------|-------|-----------------------|
| $M_{t,nom}$ | 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 Fastening screws for metal members and sheetings</p> | <p>Annex 45 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> | |
| <p>Drilling capacity: $\Sigma ti \leq 6,00$ 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 | |
|-----------------------------------|------|------|------|------|-------|-------|-----------------------|---|
| $M_{t,nom}$ | 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> <hr/> <p>Drilling capacity: $\Sigma ti \leq 8,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|

| $t_{N,II}$ [mm] | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,29 | 1,29 | 1,29 | 1,29 | 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 Fastening screws for metal members and sheetings</p> | <p>Annex 47 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GT8 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 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> | |
|---|--|

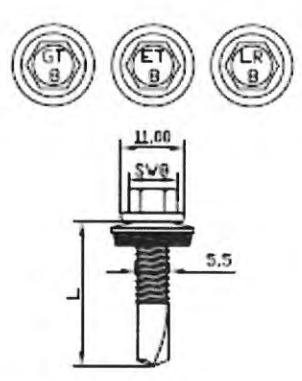
| $t_{N,II}$ [mm] | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,29 | 1,29 | 1,29 | 1,29 | 1,29 | — |
| | 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 $\varnothing 12$

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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: $\Sigma t_i \leq 8,00$ mm | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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

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

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

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 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: 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: $\Sigma t_i \leq 8,00$ mm</p> | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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

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> | |
|--|--|

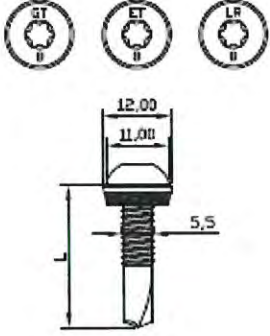
| $t_{N,II}$ [mm] | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,29 | 1,29 | 1,29 | 1,29 | 1,29 | / |
| | 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 GTR8 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> | <p>TDRX-25</p>  |
| <p>Drilling capacity: $\Sigma t_i \leq 8,00$ mm</p> | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

| $t_{N,II}$ [mm] | 2,00 | 3,00 | 4,00 | 5,00 | 6,00 | 8,00 | Wood class \geq C24 |
|------------------------------------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,II}$ [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 $t_{N,II}$ [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, 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 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: $\Sigma t_i \leq 8,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|---|--|

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

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

G, 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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| | |
|--|--|
| <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: $\Sigma t_i \leq 8,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|

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

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

| | |
|--|--|
| <p>G, 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 55 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR8 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p> | |

| | |
|---|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of 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> | |
|---|--|

| $t_{N,II}$ [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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| | |
|--|----------------|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | <p>TDRX-25</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%

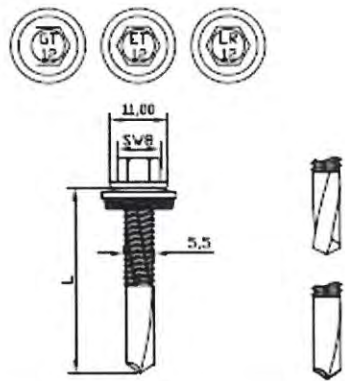
| | |
|--|--|
| <p>G, GTF02, GTF 02P, GTF2, GTF5, GTXF02, GTXF2, GTF HD, GTF P, GT02, GT03 FH, GT3, GTR3, GTX3, GTX3 AL, GT5, GTR5, GT5 FH, GTX5, GT6, GT8, GTR8, GT12, GTR12, GT12 FH, GTX12, GTR16, GTR20, GTR25 GTA, GTB, GTR 02, GTZ F02, GTZ F2 Fastening screws for metal members and sheetings</p> | <p>Annex 57 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%

| | |
|--|--|
| <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 58 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GT12 5,5 x L with oval head and sealing washer $\varnothing 12$</p> | |

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

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

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

G, 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 carbon steel 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> | |
| 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 $t_{N,II}$ [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 $t_{N,II}$ [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 GT12 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: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <hr/> <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> <hr/> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|

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

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

G, 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 $\varnothing 16$

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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 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 |
|-----------------------------------|------|------|------|------|-------|-------|-----------------------|
| $M_{t,norm}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,34 | 1,34 | 1,34 | 1,34 | 1,34 | — |
| | 0,55 | 1,34 | 1,34 | 1,34 | 1,34 | 1,34 | — |
| | 0,63 | 1,46 | 1,46 | 1,46 | 1,46 | 1,46 | — |
| | 0,75 | 1,93 | 1,93 | 1,93 | 1,93 | 1,93 | — |
| | 0,88 | 2,35 | 2,35 | 2,35 | 2,35 | 2,35 | — |
| | 1,00 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — |
| | 1,13 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — |
| | 1,25 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — |
| | 1,50 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — |
| | 1,75 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — |
| 2,00 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 3,16 | 3,16 | 3,16 | 3,16 | 3,16 | — |
| | 0,55 | 3,16 | 3,16 | 3,16 | 3,16 | 3,16 | — |
| | 0,63 | 3,63 | 3,63 | 3,63 | 3,63 | 3,63 | — |
| | 0,75 | 4,17 | 4,17 | 4,17 | 4,17 | 4,17 | — |
| | 0,88 | 4,18 | 4,18 | 4,18 | 4,18 | 4,18 | — |
| | 1,00 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,13 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,25 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,50 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,75 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| 2,00 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — | |

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

G, 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 $\varnothing 16$

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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: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|---|--|

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

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

| | |
|---|--|
| <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 63 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR12 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: $\Sigma t_i \leq 12,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|--|--|

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

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

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 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: $\Sigma t_i \leq 12,00$ 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%

| | |
|---|--|
| <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> | |
| 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 | 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, 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 $\varnothing 14$

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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 | — | / |
| | 0,55 | 1,34 | 1,34 | 1,34 | 1,34 | — | |
| | 0,63 | 1,46 | 1,46 | 1,46 | 1,46 | — | |
| | 0,75 | 1,93 | 1,93 | 1,93 | 1,93 | — | |
| | 0,88 | 2,35 | 2,35 | 2,35 | 2,35 | — | |
| | 1,00 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| | 1,13 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| | 1,25 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| | 1,50 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| | 1,75 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| 2,00 | 2,82 | 2,82 | 2,82 | 2,82 | 2,82 | — | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 2,63 | 2,63 | 2,63 | 2,63 | — | / |
| | 0,55 | 2,63 | 2,63 | 2,63 | 2,63 | — | |
| | 0,63 | 3,59 | 3,59 | 3,59 | 3,59 | — | |
| | 0,75 | 4,13 | 4,13 | 4,13 | 4,13 | — | |
| | 0,88 | 4,14 | 4,14 | 4,14 | 4,14 | — | |
| | 1,00 | 4,71 | 4,71 | 4,71 | 4,71 | — | |
| | 1,13 | 4,71 | 4,71 | 4,71 | 4,71 | — | |
| | 1,25 | 4,71 | 4,71 | 4,71 | 4,71 | — | |
| | 1,50 | 4,71 | 4,71 | 4,71 | 4,71 | — | |
| | 1,75 | 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 67</p> <p>of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR12 5,5 x L with hexagon head and sealing washer $\varnothing 14$</p> | |

| | |
|--|--|
| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered, galvanized, additional ceramic coating</p> <p>Washer: EPDM sealing washer with metal top made of carbon steel</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <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 | 3,16 | 3,16 | 3,16 | 3,16 | 3,16 | — |
| | 0,55 | 3,16 | 3,16 | 3,16 | 3,16 | 3,16 | — |
| | 0,63 | 3,63 | 3,63 | 3,63 | 3,63 | 3,63 | — |
| | 0,75 | 4,17 | 4,17 | 4,17 | 4,17 | 4,17 | — |
| | 0,88 | 4,18 | 4,18 | 4,18 | 4,18 | 4,18 | — |
| | 1,00 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,13 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,25 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,50 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| | 1,75 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — |
| 2,00 | 4,75 | 4,75 | 4,75 | 4,75 | 4,75 | — | |

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

G, 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 $\varnothing 16$

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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> | |
| 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 | 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, 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 $\varnothing 16$

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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> | |
|---|--|

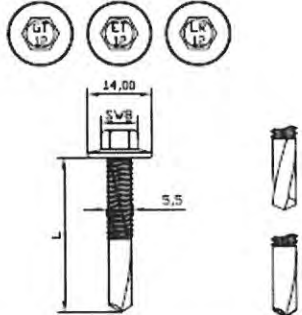
| $t_{N,II}$ [mm] | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|-------|-------|-----------------------|
| $M_{t,nom}$ | 5 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,34 | 1,34 | 1,34 | 1,34 | 1,34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

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

G, 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 $\varnothing 16$

Annex 70
 of European
 Technical Assessment
 ETA-12/0580

| <p>Materials</p> <p>Fastener: carbon steel – SAE 1022, quenched, tempered and galvanized (12 µm)</p> <p>Washer: integrated collar</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|------|------|------|-------|-------|--|------|------|------|------|-------|-------|-----------------------|-------------|------|--|--|--|--|--|-----------------------------------|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|--|-----------------------------------|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|------|------|------|------|------|------|---|--|
| <p>Drilling capacity: $\Sigma t_i \leq 12,00$ mm</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Timber substructure</p> <p>No performance assessed</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>$t_{N,II}$ [mm]</th> <th>4,00</th> <th>5,00</th> <th>6,00</th> <th>8,00</th> <th>10,00</th> <th>12,00</th> <th rowspan="2">Wood class \geq C24</th> </tr> <tr> <th>$M_{t,nom}$</th> <th colspan="6">5 Nm</th> </tr> </thead> <tbody> <tr> <td rowspan="10">$V_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>1,34</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>1,46</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>1,93</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>2,35</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>2,82</td> <td>—</td> <td></td> </tr> <tr> <td rowspan="10">$N_{R,k}$ [kN] for $t_{N,I}$ [mm]</td> <td>0,50</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>—</td> </tr> <tr> <td>0,55</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>3,08</td> <td>—</td> </tr> <tr> <td>0,63</td> <td>4,20</td> <td>4,20</td> <td>4,20</td> <td>4,20</td> <td>4,20</td> <td>—</td> </tr> <tr> <td>0,75</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>—</td> </tr> <tr> <td>0,88</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>4,84</td> <td>—</td> </tr> <tr> <td>1,00</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> </tr> <tr> <td>1,13</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> </tr> <tr> <td>1,25</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> </tr> <tr> <td>1,50</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> </tr> <tr> <td>1,75</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> </tr> <tr> <td>2,00</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>5,51</td> <td>—</td> <td></td> </tr> </tbody> </table> | | | | | | | $t_{N,II}$ [mm] | 4,00 | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | Wood class \geq C24 | $M_{t,nom}$ | 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 | — | |
| $t_{N,II}$ [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 | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <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 Fastening screws for metal members and sheetings</p> | | | | | | | <p>Annex 71 of European Technical Assessment ETA-12/0580</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Self-drilling screw GT12 FH 5,5 x L with hexagon head</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

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

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

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 GTX12 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: 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> | <p>TDRX-25</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, 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 GTX12 5,5 x L
with oval head and sealing washer $\varnothing 12$

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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: 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 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 $t_{N,II}$ [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 $t_{N,II}$ [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 Fastening screws for metal members and sheetings</p> | <p>Annex 75 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR16 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 or aluminum</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> | |
| Drilling capacity: $\Sigma t_i \leq 16,00$ mm | |
| Timber substructure | |
| No performance assessed | |

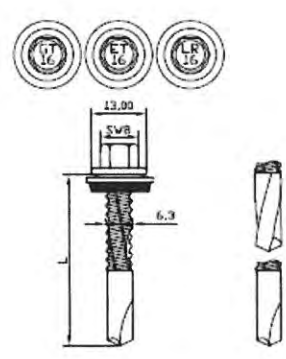
| $t_{N,II}$ [mm] | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|-------|-------|-------|-----------------------|
| $M_{t,nom}$ | 7 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,42 | 1,42 | 1,42 | 1,42 |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

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

G, 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 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> |  |
|---|---|

| $t_{N,II}$ [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%

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 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: $\Sigma t_i \leq 16,00$ 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%

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: -</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> <p>Drilling capacity: $\Sigma t_i \leq 20,00$ mm</p> <p>Timber substructure</p> <p>No performance assessed</p> | |
|---|--|

| $t_{N,II}$ [mm] | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|-------|-------|-------|-----------------------|
| $M_{t,nom}$ | 7 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,42 | 1,42 | 1,42 | 1,42 | 1,42 | — |
| | 0,55 | 1,42 | 1,42 | 1,42 | 1,42 | 1,42 | — |
| | 0,63 | 1,54 | 1,54 | 1,54 | 1,54 | 1,54 | — |
| | 0,75 | 2,10 | 2,10 | 2,10 | 2,10 | 2,10 | — |
| | 0,88 | 2,49 | 2,49 | 2,49 | 2,49 | 2,49 | — |
| | 1,00 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | — |
| | 1,13 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | — |
| | 1,25 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | — |
| | 1,50 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | — |
| | 1,75 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | — |
| 2,00 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | 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 GTR20 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</p> <p>Component I: S280GD, S320GD or S350GD – EN 10346</p> <p>Component II: S235 – EN 10025-1 S280GD, S320GD or S350GD – EN 10346</p> | |
| <p>Drilling capacity: $\Sigma t_i \leq 20,00$ mm</p> | |
| <p>Timber substructure</p> <p>No performance assessed</p> | |

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

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

G, 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> | |

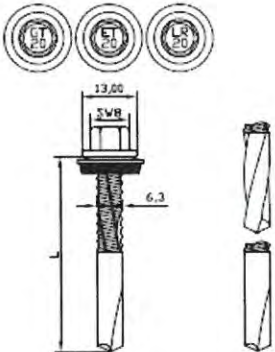
| $t_{N,II}$ [mm] | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|-------|-------|-------|-----------------------|
| $M_{t,nom}$ | 7 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,42 | 1,42 | 1,42 | 1,42 | 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 GTR20 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> |  |
| 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 | 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 GTR20 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 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: $\Sigma t_i \leq 20,00$ 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%

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 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: $\Sigma t_i \leq 25,00$ 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%

| | |
|--|--|
| <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 85 of European Technical Assessment ETA-12/0580</p> |
| <p>Self-drilling screw GTR25 6,3 x L with hexagon or oval head</p> | |

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

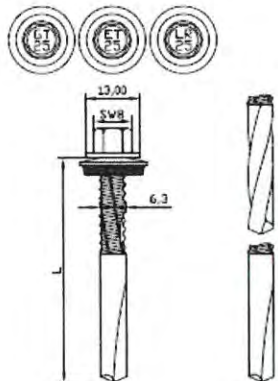
| $t_{N,II}$ [mm] | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|-------|-------|-------|-----------------------|
| $M_{t,nom}$ | 7 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,42 | 1,42 | 1,42 | 1,42 |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

| $t_{N,II}$ [mm] | 5,00 | 6,00 | 8,00 | 10,00 | 12,00 | 14,00 | Wood class \geq C24 |
|-----------------------------------|------|------|------|-------|-------|-------|-----------------------|
| $M_{t,nom}$ | 7 Nm | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 1,42 | 1,42 | 1,42 | 1,42 | 1,42 | |
| | 0,55 | 1,42 | 1,42 | 1,42 | 1,42 | 1,42 | |
| | 0,63 | 1,54 | 1,54 | 1,54 | 1,54 | 1,54 | |
| | 0,75 | 2,10 | 2,10 | 2,10 | 2,10 | 2,10 | |
| | 0,88 | 2,49 | 2,49 | 2,49 | 2,49 | 2,49 | |
| | 1,00 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| | 1,13 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| | 1,25 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| | 1,50 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| | 1,75 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| 2,00 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | 3,00 | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 2,53 | 2,53 | 3,31 | 3,31 | 3,31 | |
| | 0,55 | 2,53 | 2,53 | 3,31 | 3,31 | 3,31 | |
| | 0,63 | 2,53 | 2,53 | 3,74 | 3,74 | 3,74 | |
| | 0,75 | 2,53 | 2,53 | 4,85 | 4,85 | 4,85 | |
| | 0,88 | 2,53 | 2,53 | 5,50 | 5,50 | 5,50 | |
| | 1,00 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | |
| | 1,13 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | |
| | 1,25 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | |
| | 1,50 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | |
| | 1,75 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | |
| 2,00 | 2,53 | 2,53 | 6,37 | 6,37 | 6,37 | 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 $\varnothing 16$

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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: $\Sigma t_i \leq 25,00$ 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%

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 $\varnothing 16$

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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> | |
| Drilling capacity: $\Sigma t_i \leq 25,00$ mm | |
| Timber substructure | |
| No performance assessed | |

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

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

| | |
|--|--|
| <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 89 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 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> | |
| Drilling capacity: - | |
| <p>Timber substructure</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 6,500 \text{ Nm}$</p> <p>$f_{ax,k} = 23,027 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$</p> | |

| $t_{N,II}$ [mm] | 0,63 | 0,75 | 0,88 | 1,00 | 1,13 | 1,25 | 1,50 | 2,00 | Wood class \geq C24 | |
|-----------------------------------|--------|------|------|------|------|------|------|------|-----------------------|-----------------------------------|
| Drill \varnothing | 3,50 | 4,00 | 4,50 | 4,50 | 4,50 | 4,50 | 5,00 | 5,30 | | |
| $M_{t,nom}$ | 4,5 Nm | | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,63 | 0,75 | 0,75 | 0,75 | 0,75 | 0,75 | 0,75 | 0,75 | 0,75 | bearing resistance of component I |
| | 0,75 | 0,75 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | |
| | 0,88 | 0,75 | 0,95 | 1,32 | 1,32 | 1,32 | 1,32 | 1,32 | 1,32 | |
| | 1,00 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | 1,73 | 1,73 | 1,73 | |
| | 1,13 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | 1,73 | 1,73 | — | |
| | 1,25 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | 2,18 | 2,18 | — | |
| | 1,50 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | 2,18 | 2,18 | — | |
| | 1,75 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | 2,18 | — | — | |
| 2,00 | 0,75 | 0,95 | 1,32 | 1,73 | 1,73 | — | — | — | 2,18 | |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,63 | 0,96 | 1,07 | 1,07 | 1,50 | 1,50 | 1,66 | 2,12 | 2,18 | bearing resistance of component I |
| | 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 | — | — | — | 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, 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-tapping screw GTA 6,5 x L
 with hexagon head and sealing washer \varnothing 16

Annex 90
 of European
 Technical Assessment
 ETA-12/0580

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

| $t_{N,II}$ [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 Fastening screws for metal members and sheetings</p> | <p>Annex 91 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> | |
|--|--|

| $t_{N,II}$ [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, 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 $\varnothing 14 \text{ mm}$

Annex 92
 of European
 Technical Assessment
 ETA-12/0580

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

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

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

| | |
|--|--|
| <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> | |
|---|--|

| $t_{N,II}$ [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 $\varnothing 14 \text{ mm}$

Annex 94
 of European
 Technical Assessment
 ETA-12/0580

| | |
|--|--|
| <p>Materials</p> <p>Fastener: stainless steel – SAE 304</p> <p>Washer: -</p> <p>Component I: 1050A – EN 573-3</p> <p>Component II: 1050A – EN 573-3</p> <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> |
|--|--|

| $t_{N,II}$ [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 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> <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>TORX-25</p> |
|--|----------------|

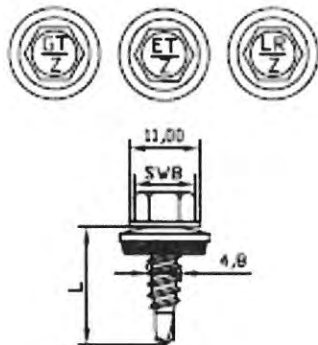
| $t_{N,II}$ [mm] | 0,50 | 0,55 | 0,63 | 0,70 | 0,88 | 1,00 | 1,13 | 1,25 | Wood class \geq C24 |
|-----------------------------------|------|------|------|------|------|------|------|------|-----------------------|
| $M_{t,nom}$ | 3 Nm | | | | | | | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,31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

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

G, 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 GTZ F02 4,8 x 20
 with oval head and sealing washer $\varnothing 12 \text{ mm}$

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| | |
|--|--|
| <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> |  |
| Drilling capacity: $\Sigma t_i \leq 2 \times 0,70 \text{ mm}$ | |
| Timber substructures | |
| No performance assessed | |

| $t_{N,II}$ [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> <hr/> <p>Timber substructures</p> <p>No performance assessed</p> | |
|---|--|

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

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

G, 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 mm

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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: $\Sigma ti \leq 2 \times 1,00$ mm</p> <hr/> <p>Timber substructures</p> <p>For timber substructures performance assessed with:</p> <p>$M_{y,Rk} = 3,370$ Nm</p> <p>$f_{ax,k} = 17,604$ N/mm² for $l_{ef} \geq 20$ mm</p> | |
|---|--|

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

G, 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 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_1 and not failure of the timber substructure is the relevant failure mode then $k_{mod} = 1,0$.

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

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

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

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

For Metal Substructures the following applies:

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

For Timber Substructures the following applies:

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

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

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

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

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

G, 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
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