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Authorised and notified according
to Article 29 of the Regulation (EU)
No 305/2011 of the European
Parliament and of the Council of 9
March 2011

MEMBER OF EOTA



European Technical Assessment ETA-22/0870 of 2023/01/06

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the
construction product:

EJOT Fastening Screws JT and JF for metal cladding
panels

Product family to which the
above construction product
belongs:

Fastening screws for metal members and sheeting

Manufacturer:

EJOT SE & Co. KG
Market Unit Construction
In der Stockwiese 35
DE-57334 Bad Laasphe
Telephone: +49 2751 529-0
www.ejot.de/bau

Manufacturing plant:

EJOT Production Plants

This European Technical
Assessment contains:

14 pages including 9 annexes which form an integral
part of the document

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

EAD 330046-01-0602 – Fastening screws for metal
members and sheeting

This version replaces:

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product

The EJOT fastening screws JT and JF for metal cladding panels, are self-drilling screws as listed in Table 1. bimetal combination of austenitic stainless with drill bits made of carbon steel.

The fastening screws for metal members and sheeting and the corresponding connections are subject to tension and/or shear forces. Samples of fastenings screws for metal members and sheeting are shown in Figure 1.

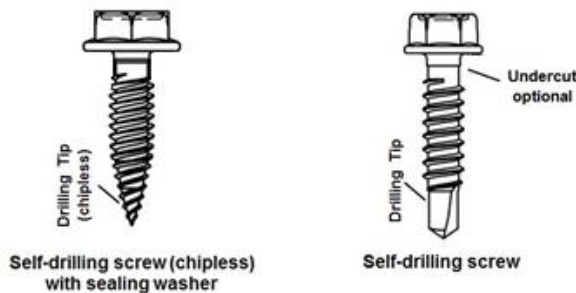


Figure 1: Fastening screws for metal members and sheeting

The components identified in Table 1 have the geometrical characteristics defined in the Annexes and are factory produced by different manufacturing plants.

Annex	Fastening screw	Component I	Component II
4	JT3-LT-2s-Plus-5.5xL JT6-LT-2s-Plus-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$ $R_m \geq 245 \text{ N/mm}^2$	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$ $R_m \geq 245 \text{ N/mm}^2$
5	JT3-LT-2s-Plus-5.5xL JT6-LT-2s-Plus-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$ $R_m \geq 245 \text{ N/mm}^2$	S280GD to S350GD
6	JF3-LT-2s-5.5xL JF6-LT-2s-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$
7	JF3-LT-2s-5.5xL JF6-LT-2s-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$	S280GD to S350GD
8	JF3-LT-2-5.5xL JF6-LT-2-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$
9	JF3-LT-2-5.5xL JF6-LT-2-5.5xL	Aluminium $R_m \geq 165 \text{ N/mm}^2$ $R_m \geq 215 \text{ N/mm}^2$	S280GD to S350GD

Table 1: Fastening screws included in this ETA.

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

The EJOT fastening screws are intended to be used for fastening metal members and sheeting to metal supporting structures.

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 metal members.

The intended use comprises fastening screws for metal members and sheeting and connections for indoor and outdoor applications. Fastening screws which are intended to be used in external environments with $\geq \text{C2}$ corrosion according to the standard EN ISO 12944-2 are made of stainless steel. Furthermore the intended use comprises connections with predominantly static loads (e.g. wind loads, dead loads).

The fastening screws for metal members and sheeting are not intended for re-use.

The field of application of the screws is shown in Table 1. The corresponding sheet thicknesses are shown in the annexes.

The installation should be carried out according to the ETA holder's specifications, using the specific kit components, manufactured by suppliers of the ETA holder and carried out by appropriately qualified staff with supervision of the technical responsible of the site.

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of at least 25 years, that the conditions lay down for the installation, packaging, transport and storage as well as appropriate use, maintenance and repair are met.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer but are to be regarded only as a means for choosing the right product 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.

Characteristic	Assessment of characteristic
3.1 Mechanical resistance and stability (BWR 1)	
Shear resistance of the connection	See information in annex 4-9
Tension resistance of the connection	See information in annex 4-9
Design resistance in case of combined tension and shear forces (interaction)	Calculated according to equation in annex 2 with the combined tension and shear forces from annex 4-9.
Check of deformation capacity in case of constraining forces due to temperature	Not relevant. The fastening screws are intended for the use in slotted holes (component I) therefore no constraining forces can occur.
Durability	Not relevant. The fastening screws are made of stainless steel intended to be used in external environments with \geq C2 corrosion. EPDM Washer: No performance assessed.
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	The EJOT fastening screws are classified as Euroclass A1 in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364 on the basis of EC Decision 96/603/EC (as amended) without the need for further testing.
3.8 Methods of verification	
The product is fully covered by EAD EAD 330046-01-0602.	ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.
3.9 General aspects related to the fitness for use of the product.	
The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to	The EJOT fastening screws JT and JF for metal cladding panels are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

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

4.1 AVCP system

According to the decision 1998/214/ECEC of the European Commission, as amended by 2001/596/EC, the system(s) of assessment and verification of constancy of performance (see Annex III to Regulation (EU) No 305/2011) is 2+.

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD.

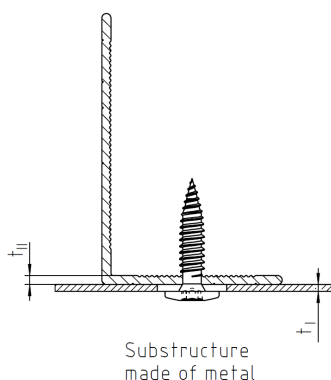
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2023-01-06 by



Thomas Bruun
Managing Director, ETA-Danmark

Examples of execution and connection



Materials and dimensions

Design relevant materials and dimensions are indicated in the annexes of the fastening screws:

Fastener	Material of the fastening screw
Washer	Material of the sealing washer
Component I	Material of the metal member and sheeting
Component II	Material of the supporting structure

$t_{N,I}$	Thickness of component I
$t_{N,II}$	Thickness of component II made of metal
d_{pd}	Pre-drill diameter of component I and II
$M_{t,nom}$	Tightening torque of the fastening screw

The thickness $t_{N,II}$ corresponds to the load-bearing screw-in length of the fastening screw in component II, if the load-bearing screw-in length does not cover the entire component thickness.

Performance characteristics

The design relevant

$N_{R,k}$	Characteristic value of tensile resistance
$V_{R,k}$	Characteristic value of shear resistance

In some cases component-specific performance characteristics are indicated for an individual calculation in the design relevant performance characteristics of a connection:

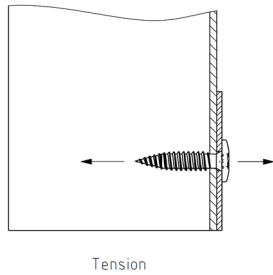
$N_{R,I,k}$	Characteristic value of pull-through resistance for component I
$N_{R,II,k}$	Characteristic value of pull-out resistance for component II
$V_{R,I,k}$	Characteristic value of bearing resistance for component I
$V_{R,II,k}$	Characteristic value of bearing resistance for component II

Fastening screws JT and JF for metal members

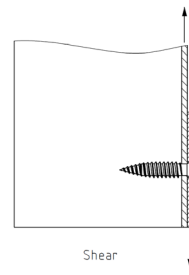
Terms and Explanations

Annex 1

Occurred loadings of a connection



Tension



Shear

Design values

The design values of tensile and shear resistance of a connection have to be determined as following:

- $N_{R,d}$ Design value of tensile resistance
- $V_{R,d}$ Design value of shear resistance
- γ_M Partial safety factor

The recommended partial safety factor γ_M is 1.33, provided no partial safety factor is given in national regulations or national Annexes to Eurocode 3.

Special conditions

If the component thickness $t_{N,I}$ or $t_{N,II}$ lies in between two indicated component thicknesses, the characteristic value may be calculated by linear interpolation.

For asymmetric components II made of metal (e.g. Z- or C-shaped profiles) with component thickness $t_{N,II} < 3$ mm, the characteristic value $N_{R,k}$ has to be reduced to 70%.

In case of combined loading by tensile and shear forces the following interaction equation has to be taken into account:

$$\frac{N_{S,d}}{N_{R,d}} + \frac{V_{S,d}}{V_{R,d}} \leq 1.0$$

- $N_{S,d}$ Design value of the applied tensile forces
- $V_{S,d}$ Design value of the applied shear forces

Installation conditions

The installation is carried out according to manufacturer's instruction.

The load-bearing screw-in length of the fastening screw specified by the manufacturer has to be taken into account.

The fastening screws have to be processed with suitable drill driver (e.g. cordless drill driver with depth control). The use of impact wrench is not allowed.

The fastening screws have to be fixed rectangular to the surface of the component.

Component I and component II have to be in direct contact to each other. The use of compression resistant thermal insulation strips up to a thickness of 3 mm is allowed.

Component I made of aluminium alloy

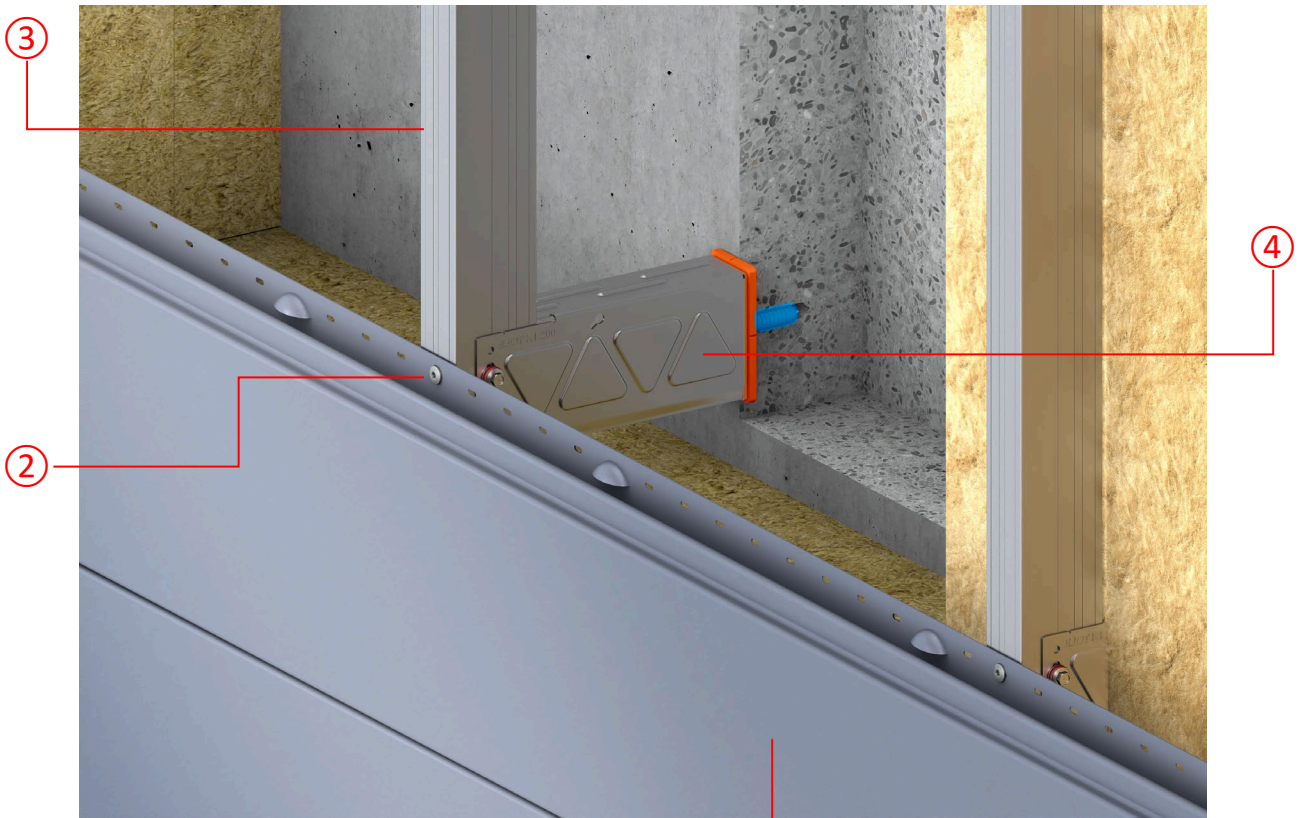
The characteristic value of tensile resistance is determined as follows:

$$N_{R,k} = \min \left\{ \begin{array}{l} N_{R,I,k} \\ N_{R,II,k} \end{array} \right.$$

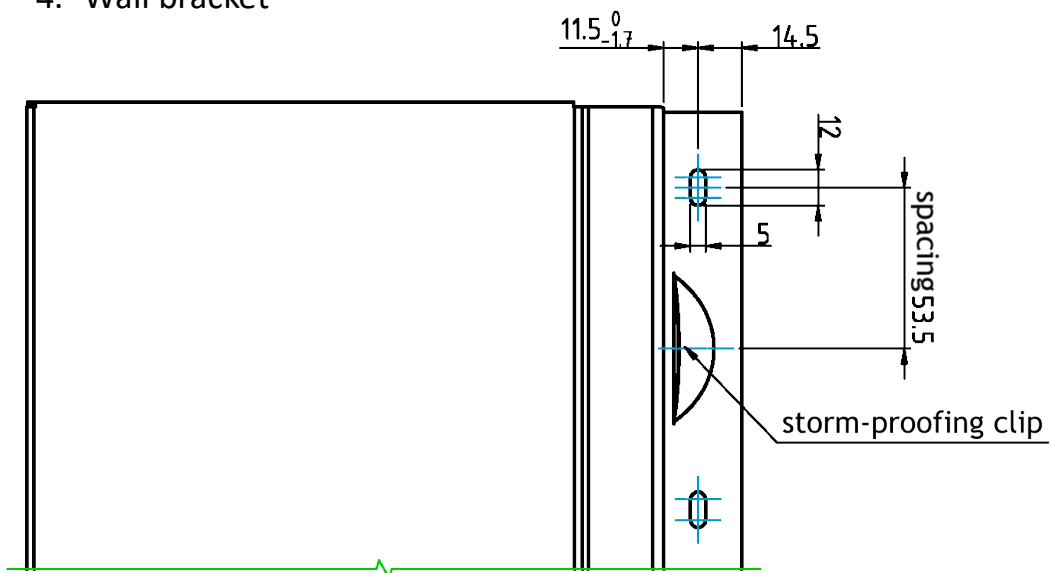
$N_{R,I,k}$ is determined according to EN 1999-1-4:2007 + AC:2009, equation (8.13).

$N_{R,II,k}$ is given in the Annex of the fastening screw.

Fastening screws JT and JF for metal members	Annex 2
Design and Installation	



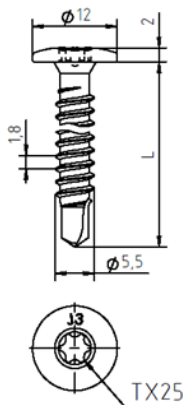
1. Siding
2. Fastening screw JT or JF
3. Subframe profile
4. Wall bracket



Fastening screws JT and JF for metal members

Examples of Execution

Annex 3



Materials:

Fastener stainless steel (CRC II) – DIN EN 1993-1-4
stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: aluminium – EN 573

Drilling capacity: $\sum t_i \leq 3.50$ mm

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12$ mm (slotted hole)

Component I and II $R_m \geq 165$ N/mm ²		$t_{N,II}$ [mm]					bearing resistance of component I
		1.00	1.20	1.50	1.80	2.00	
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	0.05
	0.80	0.08	0.08	0.08	0.08	0.08	0.08
	0.90	0.12	0.12	0.12	0.12	0.12	0.12
	1.00	0.15	0.15	0.15	0.15	0.15	0.15
	1.20	0.20	0.20	0.20	0.20	0.20	0.20
	1.50	0.25	0.25	0.25	0.25	0.25	0.25
$N_{R,II,k}$ [kN] =		0.56	0.73	0.91	1.18	1.36	

Component I and II $R_m \geq 215$ N/mm ²		$t_{N,II}$ [mm]					bearing resistance of component I
		1.00	1.20	1.50	1.80	2.00	
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	0.05
	0.80	0.08	0.08	0.08	0.08	0.08	0.08
	0.90	0.12	0.12	0.12	0.12	0.12	0.12
	1.00	0.15	0.15	0.15	0.15	0.15	0.15
	1.20	0.20	0.20	0.20	0.20	0.20	0.20
	1.50	0.25	0.25	0.25	0.25	0.25	0.25
$N_{R,II,k}$ [kN] =		0.73	0.95	1.19	1.54	1.77	

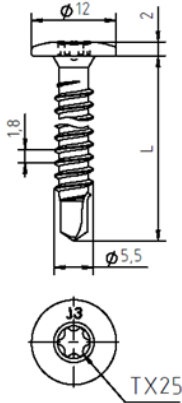
Component I and II $R_m \geq 245$ N/mm ²		$t_{N,II}$ [mm]					bearing resistance of component I
		1.00	1.20	1.50	1.80	2.00	
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	0.05
	0.80	0.08	0.08	0.08	0.08	0.08	0.08
	0.90	0.12	0.12	0.12	0.12	0.12	0.12
	1.00	0.15	0.15	0.15	0.15	0.15	0.15
	1.20	0.20	0.20	0.20	0.20	0.20	0.20
	1.50	0.25	0.25	0.25	0.25	0.25	0.25
$N_{R,II,k}$ [kN] =		0.81	1.08	1.31	1.74	2.02	

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JT3-LT-2s-Plus-5.5xL, JT6-LT-2s-Plus-5.5xL
with round head with TX-drive and free spin zone

Annex 4



Materials:

Fastener: stainless steel (CRC II) – DIN EN 1993-1-4
stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: S280GD to S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 3.50$ mm

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12$ mm (slotted hole)

Component I $R_m \geq 165$ N/mm ²	$t_{N,II}$ [mm]						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k}$ [kN] =	1.06	1.40	1.71	1.99	2.59		

Component I $R_m \geq 215$ N/mm ²	$t_{N,II}$ [mm]						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k}$ [kN] =	1.06	1.40	1.71	1.99	2.59		

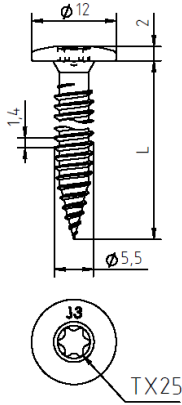
Component I $R_m \geq 245$ N/mm ²	$t_{N,II}$ [mm]						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k}$ [kN] =	1.06	1.40	1.71	1.99	2.59		

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JT3-LT-2s-Plus-5.5xL, JT6-LT-2s-Plus-5.5xL
with round head with TX-drive and free spin zone

Annex 5



Materials:

Fastener: stainless steel (CRC II) – DIN EN 1993-1-4
stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: aluminium – EN 573

Drilling capacity: $\sum t_i \leq 2.00$ mm

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12$ mm (slotted hole)

Component I and II $R_m \geq 165$ N/mm ²		$t_{N,II}$ [mm]				bearing resistance of component I
		1.00	1.20	1.50	2.00	
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05
	0.80	0.08	0.08	0.08	0.08	0.08
	0.90	0.12	0.12	0.12	0.12	0.12
	1.00	0.15	0.15	0.15	0.15	0.15
	1.20	0.20	0.20	0.20	0.20	0.20
1.50	0.25	0.25	0.25	0.25	0.25	0.25
$N_{R,II,k}$ [kN] =		0.91	1.13	1.63	1.63	

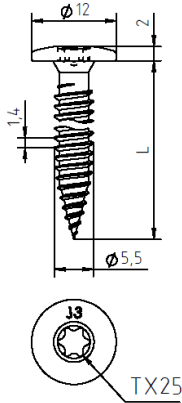
Component I and II $R_m \geq 215$ N/mm ²		$t_{N,II}$ [mm]				bearing resistance of component I
		1.00	1.20	1.50	2.00	
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05
	0.80	0.08	0.08	0.08	0.08	0.08
	0.90	0.12	0.12	0.12	0.12	0.12
	1.00	0.15	0.15	0.15	0.15	0.15
	1.20	0.20	0.20	0.20	0.20	0.20
1.50	0.25	0.25	0.25	0.25	0.25	0.25
$N_{R,II,k}$ [kN] =		1.18	1.47	2.12	2.12	

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JF3-LT-2s-5.5xL, JF6-LT-2s-5.5xL
with round head with TX-drive and free spin zone

Annex 6



Materials:

Fastener: stainless steel (CRC II) – DIN EN 1993-1-4
 stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: S280GD to S350GD – EN 10346

Drilling capacity: $\sum t_i \leq 2 \times 0.88 \text{ mm}$

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12 \text{ mm}$ (slotted hole)

Component I $R_m \geq 165 \text{ N/mm}^2$	$t_{N,II} \text{ [mm]}$						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k} \text{ [kN]}$ for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k} \text{ [kN]} =$	1.07	1.14	1.32	1.44	1.80		

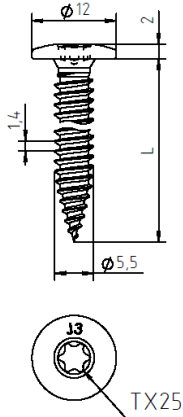
Component I $R_m \geq 215 \text{ N/mm}^2$	$t_{N,II} \text{ [mm]}$						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k} \text{ [kN]}$ for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k} \text{ [kN]} =$	1.07	1.14	1.32	1.44	1.80		

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JF3-LT-2s-5.5xL, JF6-LT-2s-5.5xL
 with round head with TX-drive and free spin zone

Annex 7



Materials:

Fastener: stainless steel (CRC II) – DIN EN 1993-1-4
stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: aluminium – EN 573

Drilling capacity: $\sum t_i \leq 2.00$ mm

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12$ mm (slotted hole)

Component I and II $R_m \geq 165$ N/mm ²	$t_{N,II}$ [mm]					
	1.00	1.20	1.50	2.00		
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	
$N_{R,II,k}$ [kN] =	0.91	1.13	1.63	1.63		

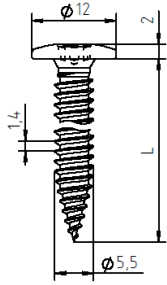
Component I and II $R_m \geq 215$ N/mm ²	$t_{N,II}$ [mm]					
	1.00	1.20	1.50	2.00		
$V_{R,k}$ [kN] for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	
$N_{R,II,k}$ [kN] =	1.18	1.47	2.12	2.12		

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JF3-LT-2-5.5xL, JF6-LT-2-5.5xL
with round head with TX-drive

Annex 8



Materials:

Fastener: stainless steel (CRC II) – DIN EN 1993-1-4
stainless steel (CRC III) – DIN EN 1993-1-4

Washer: none

Component I: aluminium – EN 573

Component II: S280GD to S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 2 \times 0.88 \text{ mm}$

Pre-drill diameter:

Component I: $d_{pd,I} = 5 \times 12 \text{ mm}$ (slotted hole)

Component I $R_m \geq 165 \text{ N/mm}^2$	$t_{N,II} \text{ [mm]}$						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k} \text{ [kN]}$ for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k} \text{ [kN]} =$	1.07	1.14	1.32	1.44	1.80		

Component I $R_m \geq 215 \text{ N/mm}^2$	$t_{N,II} \text{ [mm]}$						
	0.60	0.63	0.70	0.75	0.88		
$V_{R,k} \text{ [kN]}$ for $t_{N,I} =$ Component I slotted hole 5 x 12 mm	0.70	0.05	0.05	0.05	0.05	0.05	bearing resistance of component I
	0.80	0.08	0.08	0.08	0.08	0.08	
	0.90	0.12	0.12	0.12	0.12	0.12	
	1.00	0.15	0.15	0.15	0.15	0.15	
	1.20	0.20	0.20	0.20	0.20	0.20	
	1.50	0.25	0.25	0.25	0.25	0.25	
$N_{R,II,k} \text{ [kN]} =$	1.07	1.14	1.32	1.44	1.80		

– Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

Fastening screws JT and JF for metal members

Self-drilling screw
JF3-LT-2-5.5xL, JF6-LT-2-5.5xL
with round head with TX-drive

Annex 9