

Leistungserklärung

Nr.: 1 - 009 - 100200 - 2018/03

DE



1.) Eindeutiger Kenncode des Produkttyps:  
EJOT Befestigungsschrauben JT4

2.) Verwendungszweck:  
Befestigungsschrauben für Bauteile und Bleche aus Metall

3.) Hersteller:  
EJOT Baubefestigungen GmbH, In der Stockwiese 35, 57334 Bad Laasphe

4.) System zur Bewertung und Überprüfung der Leistungsbeständigkeit:  
System 2+

5.) Europäisches Bewertungsdokument EAD 330046-01-0602  
Europäisch Technische Bewertung: ETA-10/0200  
Technische Bewertungsstelle: DIBt - Deutsches Institut für Bautechnik, Berlin  
Notifizierte Stelle: 769 - KIT Versuchsanstalt für Stahl, Holz und Steine

6.) Erklärte Leitung(en):  
a) Mechanische Festigkeit und Standsicherheit (BWR 1) und Sicherheit bei der Nutzung (BWR 4)

| Wesentliche Merkmale                                                                   | Leistungswerte    |
|----------------------------------------------------------------------------------------|-------------------|
| Querkraftbeanspruchbarkeit der Verbindung                                              | Siehe Anhang 1-12 |
| Zugbeanspruchbarkeit der Verbindung                                                    | Siehe Anhang 1-12 |
| Bemessungsbeanspruchbarkeit im Fall der Kombination von Zug-/Querkraften (Interaktion) | Siehe Anhang 1-12 |
| Überprüfung der Verformungskapazität im Fall von temperaturbedingten Zwängungskraften  | NPD               |
| Haltbarkeit                                                                            | NPD               |
|                                                                                        |                   |
|                                                                                        |                   |
|                                                                                        |                   |
|                                                                                        |                   |
|                                                                                        |                   |

# Leistungserklärung

Nr.: 1 - 009 - 100200 - 2018/03

DE



| b) Brandschutz (BWR 2) |                |
|------------------------|----------------|
| Wesentliche Merkmale   | Leistungswerte |
| Brandverhalten         | A1             |
|                        |                |
|                        |                |

| c) Hygiene, Gesundheit und Umweltschutz (BWR 3) |                |
|-------------------------------------------------|----------------|
| Wesentliche Merkmale                            | Leistungswerte |
|                                                 |                |

| d) Schallschutz (BWR 5) |                |
|-------------------------|----------------|
| Wesentliche Merkmale    | Leistungswerte |
|                         |                |

| e) Energieeinsparung und Wärmeschutz (BWR 6) |                |
|----------------------------------------------|----------------|
| Wesentliche Merkmale                         | Leistungswerte |
|                                              |                |
|                                              |                |
|                                              |                |

| f) Nachhaltige Nutzung der natürlichen Ressourcen (BWR 7) |                |
|-----------------------------------------------------------|----------------|
| Wesentliche Merkmale                                      | Leistungswerte |
|                                                           |                |

Die Leistung des vorstehenden Produkts entspricht der erklärten Leistung/den erklärten Leistungen. Für die Erstellung der Leistungserklärung im Einklang mit der Verordnung (EU) Nr. 305/2011 ist allein der oben genannte Hersteller verantwortlich.

Unterzeichnet für den Hersteller und im Namen des Herstellers von:

Dr. Jens Weber  
(Name)

Bad Laasphe, 23.03.2018  
(Ort und Datum der Ausstellung)

(Unterschrift)

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Materials:</b></p> <p><b>Fastener:</b> stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p><b>Washer:</b> stainless steel (A2/A4) – EN ISO 3506<br/>with vulcanised EPDM seal</p> <p><b>Component I:</b> aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p><b>Component II:</b> timber – EN 14081</p> <p><b>Drilling capacity:</b> <math>\Sigma t_i \leq 2,00 \text{ mm}</math></p> <p><b>Timber substructures:</b><br/>performance determined with</p> <p><math>M_{y,Rk} = 5,990 \text{ Nm}</math><br/><math>f_{ax,k} = 9,800 \text{ N/mm}^2</math> for <math>l_{ef} \geq 20 \text{ mm}</math></p> |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

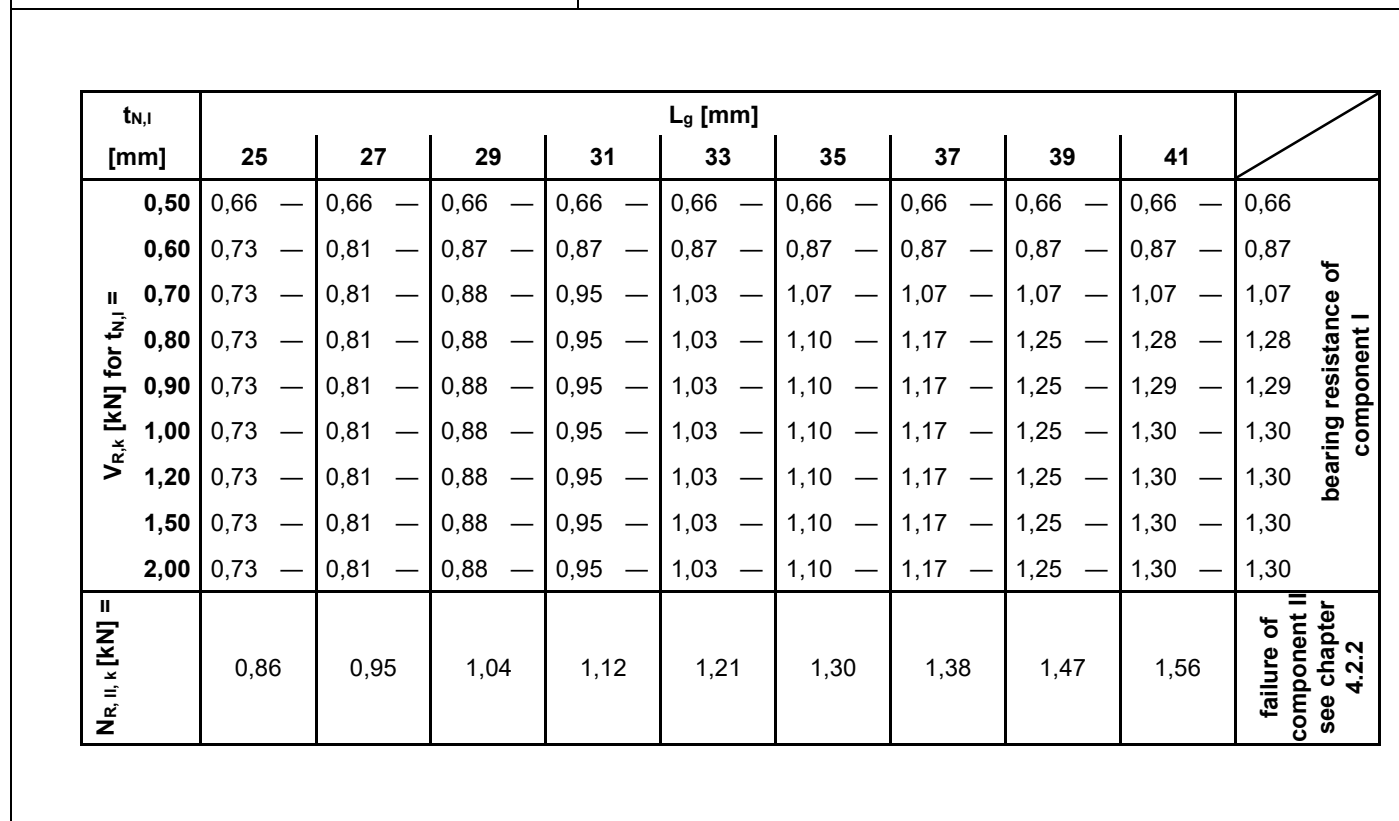
| $t_{N,i}$<br>[mm]              | $l_g$ [mm] |      |      |      |      |      |      |      |      |                                              |      |
|--------------------------------|------------|------|------|------|------|------|------|------|------|----------------------------------------------|------|
|                                | 25         | 27   | 29   | 31   | 33   | 35   | 37   | 39   | 41   |                                              |      |
| $V_{R,k}$ [kN] for $t_{N,i} =$ | 0,50       | —    | 0,50 | —    | 0,50 | —    | 0,50 | —    | 0,50 | —                                            | 0,50 |
|                                | 0,60       | —    | 0,66 | —    | 0,66 | —    | 0,66 | —    | 0,66 | —                                            | 0,66 |
|                                | 0,70       | —    | 0,81 | —    | 0,82 | —    | 0,82 | —    | 0,82 | —                                            | 0,82 |
|                                | 0,80       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 0,98 | —                                            | 0,98 |
|                                | 0,90       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 0,99 | —                                            | 0,99 |
|                                | 1,00       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 1,00 | —                                            | 1,00 |
|                                | 1,20       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 1,00 | —                                            | 1,00 |
|                                | 1,50       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 1,00 | —                                            | 1,00 |
|                                | 2,00       | —    | 0,81 | —    | 0,88 | —    | 0,95 | —    | 1,00 | —                                            | 1,00 |
| $N_{R, II, k}$ [kN] =          | 0,86       | 0,95 | 1,04 | 1,12 | 1,21 | 1,30 | 1,38 | 1,47 | 1,56 | failure of component II<br>see chapter 4.2.2 |      |

- 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.
- The values indicated above, depending on the screw depth  $l_g$  shall apply to  $k_{mod} = 0,90$  and the timber strength class C24 ( $\rho_k = 350 \text{ kg/m}^3$ ). For other values of  $k_{mod}$  and strength classes see chapter 4.2.2.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-(FR)-2-4,9xL, JT6-(FR)-2-4,9xL, JT4-(FR)-2-4,9xL,  
JT9-(FR)-2-4,9xL  
with sealing washer  $\geq \varnothing 11 \text{ mm}$

Annex 37



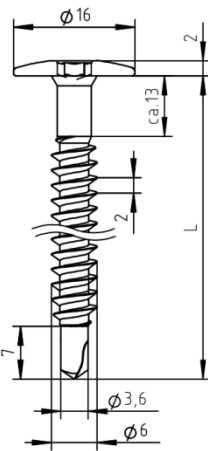
- Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.
- The values indicated above, depending on the screw depth  $l_g$  shall apply to  $k_{mod}=0,90$  and the timber strength class C24 ( $\rho_k = 350 \text{ kg/m}^3$ ). For other values of  $k_{mod}$  and strength classes see chapter 4.2.2.

## EJOT Fastening screws JT4

**Self-drilling screw JT3-(FR)-2-4,9xL, JT6-(FR)-2-4,9xL, JT4-(FR)-2-4,9xL,  
JT9-(FR)-2-4,9xL**

with sealing washer  $\geq \varnothing 11$  mm

Annex 38

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Materials:</b></p> <p><b>Fastener:</b> stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p><b>Washer:</b> none</p> <p><b>Component I:</b> aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p><b>Component II:</b> aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> |
|                                                                                   | <p><b>Drilling capacity:</b> <math>\Sigma t_i \leq 2,00 \text{ mm}</math></p>                                                                                                                                                                                                                                                                                            |
|                                                                                   | <p><b>Timber substructures:</b></p> <p>performance determined with</p> <p><math>M_{y,Rk} = 7,911 \text{ Nm}</math></p> <p><math>f_{ax,k} = 8,575 \text{ N/mm}^2</math> for <math>l_{ef} \geq 24 \text{ mm}</math></p> <p><math>f_{ax,k} = 9,800 \text{ N/mm}^2</math> for <math>l_{ef} \geq 28 \text{ mm}</math></p>                                                     |

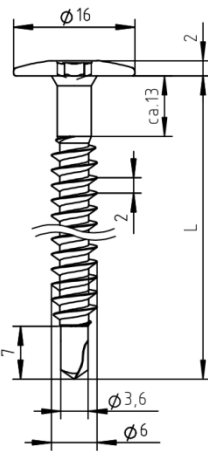
| $t_{N,II} =$                          | 0,80 | 0,90 | 1,00 | 1,20 | 1,50 | 2,00 |                                           |
|---------------------------------------|------|------|------|------|------|------|-------------------------------------------|
| $M_{t,nom} =$                         |      |      |      |      |      |      |                                           |
| $V_{R,k} [\text{kN}]$ for $t_{N,I} =$ |      |      |      |      |      |      |                                           |
| 0,40                                  | 0,29 | —    | 0,29 | —    | 0,29 | —    | 0,29                                      |
| 0,50                                  | 0,51 | —    | 0,61 | —    | 0,72 | —    | 0,81                                      |
| 0,60                                  | 0,56 | —    | 0,66 | —    | 0,75 | —    | 0,85                                      |
| 0,70                                  | 0,63 | —    | 0,72 | —    | 0,80 | —    | 0,89                                      |
| 0,80                                  | 0,72 | —    | 0,80 | —    | 0,88 | —    | 0,92                                      |
| 0,90                                  | 0,72 | —    | 0,90 | —    | 0,97 | —    | 0,97                                      |
| 1,00                                  | 0,72 | —    | 1,01 | —    | —    | —    | 1,00                                      |
| 1,20                                  | 0,72 | —    | —    | —    | —    | —    | 1,24                                      |
| 1,50                                  | —    | —    | —    | —    | —    | —    | 1,59                                      |
| $N_{R,II,k} [\text{kN}]$              | 0,50 | 0,58 | 0,68 | 0,86 | 1,18 | 1,81 | failure of component II see chapter 4.2.2 |

- 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.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-2-6,0xL - KD16, JT4-LT-2-6,0xL - KD16,  
JT9-LT-2-6,0xL - KD16

Annex 131

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Materials:</b></p> <p><b>Fastener:</b> stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p><b>Washer:</b> none</p> <p><b>Component I:</b> aluminium alloy<br/>with <math>R_{m,min} = 215 \text{ N/mm}^2</math> – EN 573</p> <p><b>Component II:</b> aluminium alloy<br/>with <math>R_{m,min} = 215 \text{ N/mm}^2</math> – EN 573</p> |
|                                                                                   | <p><b>Drilling capacity:</b> <math>\Sigma t_i \leq 2,00 \text{ mm}</math></p>                                                                                                                                                                                                                                                                                            |
|                                                                                   | <p><b>Timber substructures:</b></p> <p>performance determined with</p> <p><math>M_{y,Rk} = 7,911 \text{ Nm}</math></p> <p><math>f_{ax,k} = 8,575 \text{ N/mm}^2</math> for <math>l_{ef} \geq 24 \text{ mm}</math></p> <p><math>f_{ax,k} = 9,800 \text{ N/mm}^2</math> for <math>l_{ef} \geq 28 \text{ mm}</math></p>                                                     |

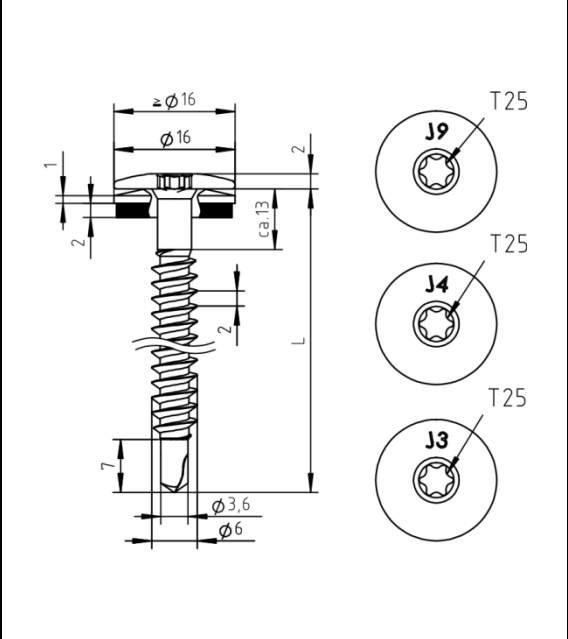
| $t_{N,II} =$                          | 0,80 | 0,90 | 1,00 | 1,20 | 1,50 | 2,00 |                                           |
|---------------------------------------|------|------|------|------|------|------|-------------------------------------------|
| $M_{t,nom} =$                         |      |      |      |      |      |      |                                           |
| $V_{R,k} [\text{kN}]$ for $t_{N,I} =$ |      |      |      |      |      |      |                                           |
| 0,40                                  | 0,38 | —    | 0,38 | —    | 0,38 | —    | 0,38                                      |
| 0,50                                  | 0,67 | —    | 0,73 | —    | 0,93 | —    | 1,05                                      |
| 0,60                                  | 0,73 | —    | 0,79 | —    | 0,98 | —    | 1,10                                      |
| 0,70                                  | 0,83 | —    | 0,88 | —    | 1,05 | —    | 1,15                                      |
| 0,80                                  | 0,94 | —    | 0,99 | —    | 1,14 | —    | 1,20                                      |
| 0,90                                  | 0,94 | —    | 1,12 | —    | 1,26 | —    | 1,25                                      |
| 1,00                                  | 0,94 | —    | 1,12 | —    | —    | —    | 1,30                                      |
| 1,20                                  | 0,94 | —    | —    | —    | —    | —    | 1,61                                      |
| 1,50                                  | —    | —    | —    | —    | —    | —    | 2,08                                      |
| $N_{R,II,k} [\text{kN}]$              | 0,64 | 0,75 | 0,87 | 1,12 | 1,53 | 2,33 | failure of component II see chapter 4.2.2 |

- 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.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-2-6,0xL - KD16, JT4-LT-2-6,0xL - KD16,  
JT9-LT-2-6,0xL - KD16

Annex 132

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Materials:</b><br>Fastener: stainless steel (A2) – EN ISO 3506<br>stainless steel (A4) – EN ISO 3506<br>Washer: stainless steel (A2/A4) – EN ISO 3506<br>with vulcanised EPDM seal<br>Component I: aluminium alloy<br>with $R_{m,min} = 165 \text{ N/mm}^2$ – EN 573<br>Component II: aluminium alloy<br>with $R_{m,min} = 165 \text{ N/mm}^2$ – EN 573 |
|                                                                                   | Drilling capacity: $\Sigma t_i \leq 2,00 \text{ mm}$                                                                                                                                                                                                                                                                                                       |
|                                                                                   | <b>Timber substructures:</b><br>performance determined with<br>$M_{y,Rk} = 7,911 \text{ Nm}$<br>$f_{ax,k} = 8,575 \text{ N/mm}^2$ for $l_{ef} \geq 24 \text{ mm}$<br>$f_{ax,k} = 9,800 \text{ N/mm}^2$ for $l_{ef} \geq 28 \text{ mm}$                                                                                                                     |

| $t_{N,II} =$                          | 0,80 | 0,90 | 1,00 | 1,20 | 1,50 | 2,00 |                                           |
|---------------------------------------|------|------|------|------|------|------|-------------------------------------------|
| $M_{t,nom} =$                         |      |      |      |      |      |      |                                           |
| $V_{R,k} [\text{kN}]$ for $t_{N,I} =$ |      |      |      |      |      |      |                                           |
| 0,40                                  | 0,29 | —    | 0,29 | —    | 0,29 | —    | 0,29                                      |
| 0,50                                  | 0,69 | —    | 0,75 | —    | 0,81 | —    | 0,81                                      |
| 0,60                                  | 0,71 | —    | 0,78 | —    | 0,85 | —    | 0,85                                      |
| 0,70                                  | 0,74 | —    | 0,82 | —    | 0,89 | —    | 0,89                                      |
| 0,80                                  | 0,76 | —    | 0,85 | —    | 0,92 | —    | 0,92                                      |
| 0,90                                  | 0,81 | —    | 0,88 | —    | 0,97 | —    | 0,97                                      |
| 1,00                                  | 0,85 | —    | 0,93 | —    | 1,00 | —    | 1,00                                      |
| 1,20                                  | 0,94 | —    | —    | —    | —    | —    | 1,24                                      |
| 1,50                                  | —    | —    | —    | —    | —    | —    | 1,59                                      |
| $N_{R,II,k} [\text{kN}]$              | 0,50 | 0,58 | 0,68 | 0,86 | 1,18 | 1,81 | failure of component II see chapter 4.2.2 |

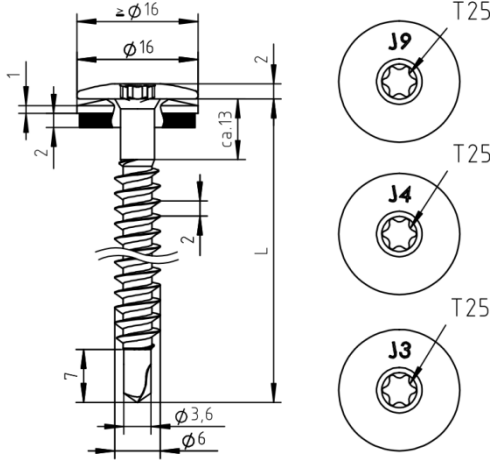
- Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-2-6,0xL - KD16, JT4-LT-2-6,0xL - KD16,  
JT9-LT-2-6,0xL - KD16

with sealing washer  $\geq \varnothing 16 \text{ mm}$

Annex 133

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Materials:</b><br><b>Fastener:</b> stainless steel (A2) – EN ISO 3506<br>stainless steel (A4) – EN ISO 3506<br><b>Washer:</b> stainless steel (A2/A4) – EN ISO 3506<br>with vulcanised EPDM seal<br><b>Component I:</b> aluminium alloy<br>with $R_{m,min} = 215 \text{ N/mm}^2$ – EN 573<br><b>Component II:</b> aluminium alloy<br>with $R_{m,min} = 215 \text{ N/mm}^2$ – EN 573 |
|                                                                                   | <b>Drilling capacity:</b> $\Sigma t_i \leq 2,00 \text{ mm}$                                                                                                                                                                                                                                                                                                                            |
|                                                                                   | <b>Timber substructures:</b><br>performance determined with<br>$M_{y,Rk} = 7,911 \text{ Nm}$<br>$f_{ax,k} = 8,575 \text{ N/mm}^2$ for $l_{ef} \geq 24 \text{ mm}$<br>$f_{ax,k} = 9,800 \text{ N/mm}^2$ for $l_{ef} \geq 28 \text{ mm}$                                                                                                                                                 |

| $t_{N,II} =$                   | 0,80 |      | 0,90 |      | 1,00 |      | 1,20 |      | 1,50 |      | 2,00 |   |                                           |      |                                   |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|---|-------------------------------------------|------|-----------------------------------|
| $M_{t,nom} =$                  |      |      |      |      |      |      |      |      |      |      |      |   |                                           |      |                                   |
| $V_{R,k}$ [kN] for $t_{N,I} =$ | 0,40 | 0,38 | —    | 0,38 | —    | 0,38 | —    | 0,38 | —    | 0,38 | —    | — | —                                         | 0,38 | bearing resistance of component I |
|                                | 0,50 | 0,90 | —    | 0,98 | —    | 1,05 | —    | 1,05 | —    | 1,05 | —    | — | —                                         | 1,05 |                                   |
|                                | 0,60 | 0,93 | —    | 1,02 | —    | 1,10 | —    | 1,10 | —    | —    | —    | — | —                                         | 1,10 |                                   |
|                                | 0,70 | 0,96 | —    | 1,07 | —    | 1,15 | —    | 1,15 | —    | —    | —    | — | —                                         | 1,15 |                                   |
|                                | 0,80 | 0,99 | —    | 1,11 | —    | 1,20 | —    | 1,20 | —    | —    | —    | — | —                                         | 1,20 |                                   |
|                                | 0,90 | 1,05 | —    | 1,15 | —    | 1,25 | —    | 1,25 | —    | —    | —    | — | —                                         | 1,25 |                                   |
|                                | 1,00 | 1,11 | —    | 1,21 | —    | 1,30 | —    | —    | —    | —    | —    | — | —                                         | 1,30 |                                   |
|                                | 1,20 | 1,23 | —    | —    | —    | —    | —    | —    | —    | —    | —    | — | —                                         | 1,61 |                                   |
|                                | 1,50 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | — | —                                         | 2,08 |                                   |
| $N_{R,II,k}$ [kN]              | 0,64 |      | 0,75 |      | 0,87 |      | 1,12 |      | 1,53 |      | 2,33 |   | failure of component II see chapter 4.2.2 |      |                                   |

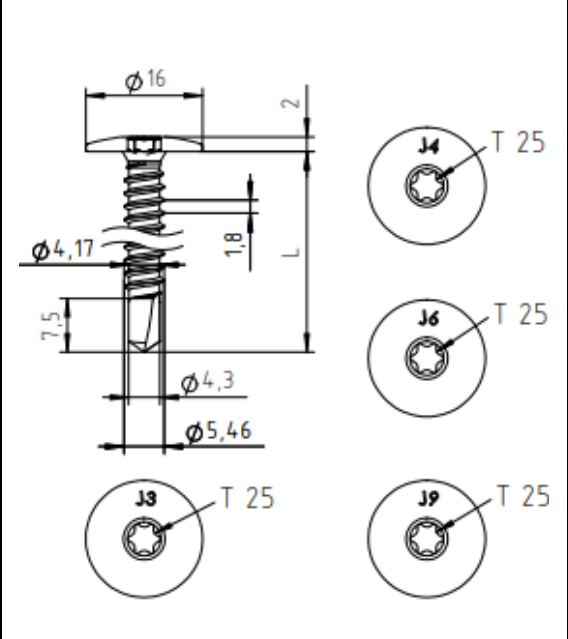
- Pull-through resistance of component I according to EN 1999-1-4, chapter 8.3.3.1 or specifications of the manufacturer of the aluminium structural sheeting.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-2-6,0xL - KD16, JT4-LT-2-6,0xL - KD16,  
 JT9-LT-2-6,0xL - KD16

with sealing washer  $\geq \varnothing 16 \text{ mm}$

Annex 134

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Materials:</b></p> <p>Fastener: stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p>Washer: none</p> <p>Component I: aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p>Component II: aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p>Drilling capacity: <math>\Sigma t_i \leq 5,00 \text{ mm}</math></p> <p><b>Timber substructures:</b><br/>no performance determined</p> |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

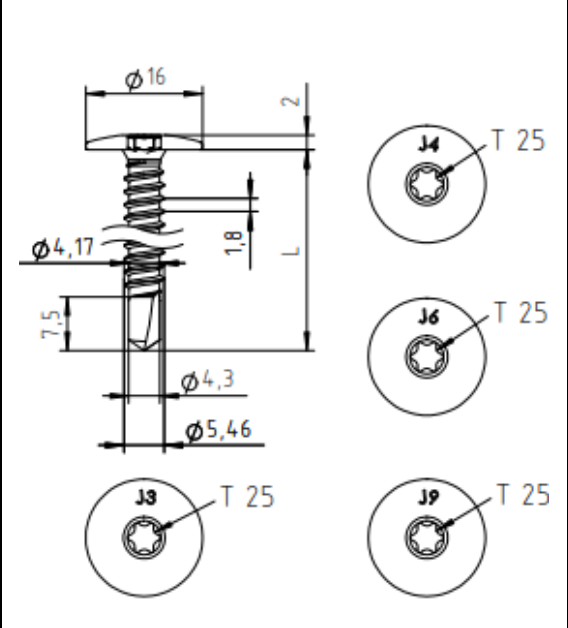
| $t_{N,II} [\text{mm}]$                       | 1,50   | 2,00   | 2,50   | 3,00   |
|----------------------------------------------|--------|--------|--------|--------|
| $M_{t,nom}$                                  | 2 Nm   |        |        |        |
| $V_{R,k} [\text{kN}] \text{ for } t_{N,I} =$ |        |        |        |        |
| 0,50                                         | 0,68 — | 0,68 — | 0,68 — | 0,68 — |
| 0,60                                         | 0,82 — | 0,82 — | 0,82 — | 0,82 — |
| 0,70                                         | 0,86 — | 0,95 — | 0,95 — | 0,95 — |
| 0,80                                         | 0,92 — | 1,09 — | 1,09 — | 1,09 — |
| 0,90                                         | 1,00 — | 1,15 — | 1,23 — | 1,23 — |
| 1,00                                         | 1,10 — | 1,23 — | 1,36 — | 1,36 — |
| 1,20                                         | 1,33 — | 1,43 — | 1,53 — | 1,63 — |
| 1,50                                         | 1,78 — | 1,84 — | 1,89 — | 1,95 — |
| 2,00                                         | 1,78 — | 2,72 — | 2,72 — | 2,72 — |
| $N_{R,II,k} [\text{kN}] =$                   | 0,69   | 1,07   | 1,61   | 2,15   |

- 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.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-3-5,5xL - KD16, JT4-LT-3-5,5xL - KD16,  
JT6-LT-3-5,5xL - KD16, JT9-LT-3-5,5xL - KD16

Annex 137

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Materials:</b></p> <p>Fastener: stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p>Washer: none</p> <p>Component I: aluminium alloy<br/>with <math>R_{m,min} = 215 \text{ N/mm}^2</math> – EN 573</p> <p>Component II: aluminium alloy<br/>with <math>R_{m,min} = 215 \text{ N/mm}^2</math> – EN 573</p> <p>Drilling capacity: <math>\Sigma t_i \leq 5,00 \text{ mm}</math></p> <p><b>Timber substructures:</b><br/>no performance determined</p> |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

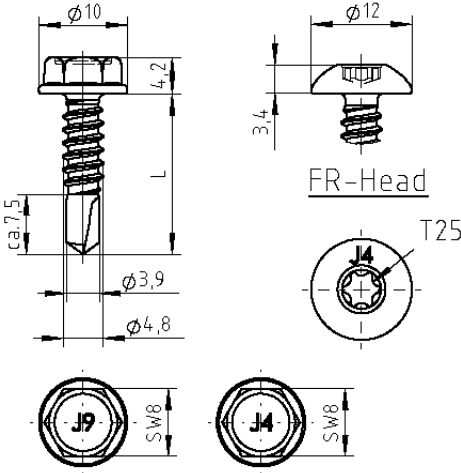
| $t_{N,II} [\text{mm}]$                       | 1,50   | 2,00   | 2,50   | 3,00   |
|----------------------------------------------|--------|--------|--------|--------|
| $M_{t,nom}$                                  | 2 Nm   |        |        |        |
| $V_{R,k} [\text{kN}] \text{ for } t_{N,I} =$ |        |        |        |        |
| 0,50                                         | 0,89 — | 0,89 — | 0,89 — | 0,89 — |
| 0,60                                         | 1,06 — | 1,06 — | 1,06 — | 1,06 — |
| 0,70                                         | 1,12 — | 1,24 — | 1,24 — | 1,24 — |
| 0,80                                         | 1,20 — | 1,42 — | 1,42 — | 1,42 — |
| 0,90                                         | 1,31 — | 1,50 — | 1,60 — | 1,60 — |
| 1,00                                         | 1,43 — | 1,60 — | 1,77 — | 1,77 — |
| 1,20                                         | 1,74 — | 1,87 — | 2,00 — | 2,13 — |
| 1,50                                         | 2,32 — | 2,39 — | 2,47 — | 2,55 — |
| 2,00                                         | 2,32 — | 3,55 — | 3,55 — | 3,55 — |
| $N_{R,II,k} [\text{kN}] =$                   | 0,90   | 1,40   | 2,10   | 2,80   |

- 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.

#### EJOT Fastening screws JT4

Self-drilling screw JT3-LT-3-5,5xL - KD16, JT4-LT-3-5,5xL - KD16,  
JT6-LT-3-5,5xL - KD16, JT9-LT-3-5,5xL - KD16

Annex 138

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Technical drawing of EJOT Fastening screws JT4 and JT9. The drawing shows side and top views of the screws. Dimensions include: head diameter 10mm, head height 4.2mm, shank diameter 3.9mm, outer diameter 4.8mm, and length L. The JT4 screw has a 3.4mm diameter hole in the head. The JT9 screw has a 4.2mm diameter hole in the head. The top view shows the J4 and J9 markings and the SW8 hex key size.</p> | <p><b>Materials:</b></p> <p>Fastener: stainless steel (A2) – EN ISO 3506<br/>stainless steel (A4) – EN ISO 3506</p> <p>Washer: none</p> <p>Component I: aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p>Component II: aluminium alloy<br/>with <math>R_{m,min} = 165 \text{ N/mm}^2</math> – EN 573</p> <p>Drilling capacity: <math>\Sigma t_i \leq 4,50 \text{ mm}</math></p> <p><b>Timber substructures:</b><br/>no performance determined</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

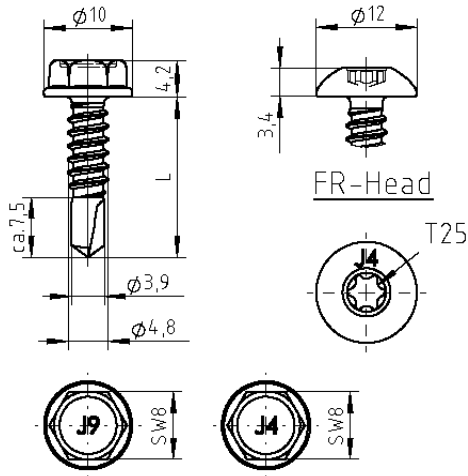
| $t_{N,II}$ [mm]                | 2,00    | 2,50    | 3,00    |
|--------------------------------|---------|---------|---------|
| $M_{t,nom}$                    | 2 Nm    |         |         |
| $V_{R,k}$ [kN] for $t_{N,I} =$ |         |         |         |
| 0,50                           | 0,67 ac | 0,67 ac | 0,67 ac |
| 0,60                           | 0,87 ac | 0,87 ac | 0,87 ac |
| 0,70                           | 1,06 ac | 1,06 ac | 1,06 ac |
| 0,80                           | 1,37 —  | 1,37 —  | 1,37 ac |
| 0,90                           | 1,67 —  | 1,67 —  | 1,67 a  |
| 1,00                           | 1,98 —  | 1,98 —  | 1,98 a  |
| 1,20                           | 2,21 —  | 2,41 —  | 2,60 a  |
| 1,50                           | 2,56 —  | 3,04 —  | 3,52 a  |
| 2,00                           | — —     | — —     | — —     |
| $N_{R,II,k}$ [kN] =            | 1,40    | 1,90    | 2,39    |

- 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.
- Component I and II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of shear force resistance  $V_{R,k}$  can be increased by 14%.
- Component II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of pull-out resistance  $N_{R,II,k}$  can be increased by 14%.

**EJOT Fastening screws JT4**

**Self-drilling screw JT4-(FR-)4-4,8xL, JT9-(FR-)4-4,8xL**

Annex 146

Materials:

Fastener: stainless steel (A2) – EN ISO 3506  
stainless steel (A4) – EN ISO 3506

Washer: none

Component I: aluminium alloy  
with  $R_{m,min} = 215 \text{ N/mm}^2$  – EN 573

Component II: aluminium alloy  
with  $R_{m,min} = 215 \text{ N/mm}^2$  – EN 573

Drilling capacity:  $\Sigma t_i \leq 4,50 \text{ mm}$

Timber substructures:

no performance determined

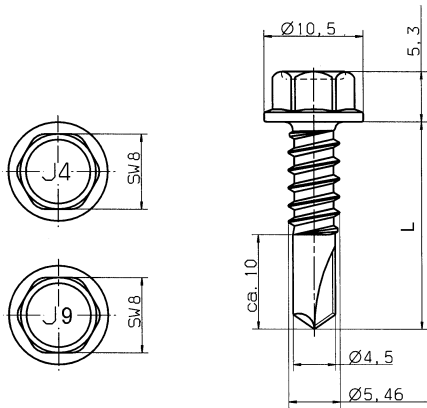
| $t_{N,II} [\text{mm}]$                | 2,00    | 2,50    | 3,00    |
|---------------------------------------|---------|---------|---------|
| $M_{t,nom}$                           | 2 Nm    |         |         |
| $V_{R,k} [\text{kN}]$ for $t_{N,I} =$ |         |         |         |
| 0,50                                  | 0,87 ac | 0,87 ac | 0,87 ac |
| 0,60                                  | 1,13 ac | 1,13 ac | 1,13 ac |
| 0,70                                  | 1,38 ac | 1,38 ac | 1,38 ac |
| 0,80                                  | 1,78 —  | 1,78 —  | 1,78 ac |
| 0,90                                  | 2,18 —  | 2,18 —  | 2,18 a  |
| 1,00                                  | 2,58 —  | 2,58 —  | 2,58 a  |
| 1,20                                  | 2,88 —  | 3,14 —  | 3,39 a  |
| 1,50                                  | 3,33 —  | 3,96 —  | 4,59 a  |
| 2,00                                  | — —     | — —     | — —     |
| $N_{R,II,k} [\text{kN}] =$            | 1,83    | 2,48    | 3,12    |

- 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.
- Component I and II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of shear force resistance  $V_{R,k}$  can be increased by 14%.
- Component II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of pull-out resistance  $N_{R,II,k}$  can be increased by 14%.

**EJOT Fastening screws JT4**

**Self-drilling screw JT4-(FR-)4-4,8xL, JT9-(FR-)4-4,8xL**

Annex 147

**Materials:**

Fastener: stainless steel (A2) – EN ISO 3506  
stainless steel (A4) – EN ISO 3506

Washer: none

Component I: aluminium alloy  
with  $R_{m,min} = 165 \text{ N/mm}^2$  – EN 573

Component II: aluminium alloy  
with  $R_{m,min} = 165 \text{ N/mm}^2$  – EN 573

Drilling capacity:  $\Sigma t_i \leq 6,50 \text{ mm}$

**Timber substructures:**

no performance determined

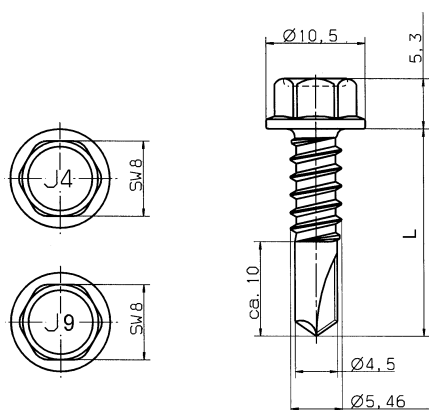
| $t_{N,II} [\text{mm}]$                | 2,00    | 2,50    | 3,00    | 4,00    | 5,00    |
|---------------------------------------|---------|---------|---------|---------|---------|
| $M_{t,nom}$                           | 2 Nm    |         |         |         |         |
| $V_{R,k} [\text{kN}]$ for $t_{N,I} =$ |         |         |         |         |         |
| 0,50                                  | 0,71 ac | 0,71 ac | 0,71 ac | 0,71 ac | 0,71 ac |
| 0,60                                  | 0,94 ac | 0,94 ac | 0,94 ac | 0,94 ac | 0,94 ac |
| 0,70                                  | 1,17 ac | 1,17 ac | 1,17 ac | 1,17 ac | 1,17 ac |
| 0,80                                  | 1,40 —  | 1,40 —  | 1,40 ac | 1,40 ac | 1,40 a  |
| 0,90                                  | 1,62 —  | 1,62 —  | 1,62 ac | 1,62 ac | 1,62 a  |
| 1,00                                  | 1,84 —  | 1,84 —  | 1,84 ac | 1,84 ac | 1,84 a  |
| 1,20                                  | 2,16 —  | 2,21 —  | 2,26 —  | 2,35 —  | 2,44 a  |
| 1,50                                  | 2,65 —  | 2,76 —  | 2,88 —  | 3,11 —  | 3,34 a  |
| 2,00                                  | 2,65 —  | 2,76 —  | 2,88 —  | 3,11 —  | — —     |
| $N_{R,II,k} [\text{kN}] =$            | 1,36    | 1,77    | 2,16    | 3,43    | 4,70    |

- 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.
- Component I and II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of shear force resistance  $V_{R,k}$  can be increased by 14%.
- Component II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of pull-out resistance  $N_{R,II,k}$  can be increased by 14%.

**EJOT Fastening screws JT4**

**Self-drilling screw JT4-6-5,5xL, JT9-6-5,5xL**

Annex 148

**Materials:**

Fastener: stainless steel (A2) – EN ISO 3506  
stainless steel (A4) – EN ISO 3506

Washer: none

Component I: aluminium alloy  
with  $R_{m,min} = 215 \text{ N/mm}^2$  – EN 573

Component II: aluminium alloy  
with  $R_{m,min} = 215 \text{ N/mm}^2$  – EN 573

Drilling capacity:  $\Sigma t_i \leq 6,50 \text{ mm}$

**Timber substructures:**

no performance determined

| $t_{n,II}$ [mm]                | 2,00 |      | 2,50 |      | 3,00 |      | 4,00 |      | 5,00 |      |    |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|----|
| $M_{t,nom}$                    | 2 Nm |      |      |      |      |      |      |      |      |      |    |
| $V_{R,k}$ [kN] for $t_{n,I} =$ | 0,50 | 0,93 | ac   | 0,93 | ac   | 0,93 | ac   | 0,93 | ac   | 0,93 | ac |
|                                | 0,60 | 1,23 | ac   | 1,23 | ac   | 1,23 | ac   | 1,23 | ac   | 1,23 | ac |
|                                | 0,70 | 1,53 | ac   | 1,53 | ac   | 1,53 | ac   | 1,53 | ac   | 1,53 | ac |
|                                | 0,80 | 1,82 | —    | 1,82 | —    | 1,82 | ac   | 1,82 | ac   | 1,82 | a  |
|                                | 0,90 | 2,11 | —    | 2,11 | —    | 2,11 | ac   | 2,11 | ac   | 2,11 | a  |
|                                | 1,00 | 2,40 | —    | 2,40 | —    | 2,40 | ac   | 2,40 | ac   | 2,40 | a  |
|                                | 1,20 | 2,82 | —    | 2,88 | —    | 2,94 | —    | 3,06 | —    | 3,18 | a  |
|                                | 1,50 | 3,45 | —    | 3,60 | —    | 3,75 | —    | 4,05 | —    | 4,35 | a  |
|                                | 2,00 | 3,45 | —    | 3,60 | —    | 3,75 | —    | 4,05 | —    | —    | —  |
| $N_{R,II,k}$ [kN] =            | 1,77 |      | 2,30 |      | 2,82 |      | 4,47 |      | 6,12 |      |    |

- 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.
- Component I and II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of shear force resistance  $V_{R,k}$  can be increased by 14%.
- Component II of aluminium with a tensile strength of  $R_m \geq 245 \text{ N/mm}^2$ : For  $R_m \geq 215 \text{ N/mm}^2$  the indicated values of pull-out resistance  $N_{R,II,k}$  can be increased by 14%.

**EJOT Fastening screws JT4**

**Self-drilling screw JT4-6-5,5xL, JT9-6-5,5xL**

Annex 149