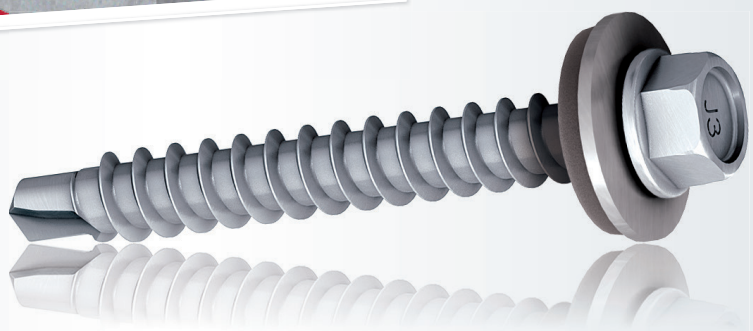


# EJOT® SUPER-SAPHIR
# self-drilling screw JT3-2-6.5

Fastening profiled steel and aluminium sheet,
sandwich panels and roofing sheet to timber substructure

EJOT®

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## EJOT® SUPER-SAPHIR self-drilling screw JT3-2-6.5

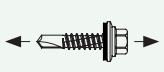
| Length [mm] | For sandwich panels [mm] | Clamp thickness [mm] | PU | Price/100 [EUR] | Order description | Article number |
|---|---|---|---|---|---|---|
| **Sealing washer E16, Ø 16 mm** | | | | | | |
| 40 | - | - | 200 | | JT3-2-6.5x40-E16 | 3 594 011 321 |
| 50 | - | - | 250 | | JT3-2-6.5x50-E16 | 3 598 811 321 |
| 65 | - | 0 - 15 | 250 | | JT3-2-6.5x65-E16 | 3 598 911 321 |
| 80 | - | 0 - 30 | 200 | | JT3-2-6.5x80-E16 | 3 598 011 321 |
| 100 | 20 - 45 | 16 - 50 | 200 | | JT3-2-6.5x100-E16 | 3 598 111 321 |
| 120 | 40 - 65 | 36 - 70 | 100 | | JT3-2-6.5x120-E16 | 3 598 311 321 |
| 140 | 60 - 85 | 56 - 90 | 100 | | JT3-2-6.5x140-E16 | 3 598 511 321 |
| 160 | 80 - 105 | 76 - 110 | 100 | | JT3-2-6.5x160-E16 | 3 598 711 321 |
| 180 | 100 - 125 | 96 - 130 | 100 | | JT3-2-6.5x180-E16 | 3 598 211 321 |
| 200 | 120 - 145 | 116 - 150 | 100 | | JT3-2-6.5x200-E16 | 3 599 011 321 |
| 220 | 140 - 165 | 136 - 170 | 100 | | JT3-2-6.5x220-E16 | 3 599 111 321 |
| 240 | 160 - 185 | 156 - 190 | 100 | | JT3-2-6.5x240-E16 | 3 599 211 321 |
| 260 | 180 - 205 | 176 - 210 | 100 | | JT3-2-6.5x260-E16 | 3 599 311 321 |
| 280 | 200 - 225 | 196 - 230 | 100 | | JT3-2-6.5x280-E16 | 3 599 511 321 |
| 300 | 220 - 245 | 216 - 250 | 100 | | JT3-2-6.5x300-E16 | 3 599 611 321 |
| **Sealing washer E22, Ø 22 mm** | | | | | | |
| 40 | - | - | 250 | | JT3-2-6.5x40-E22 | 3 594 013 321 |
| 50 | - | - | 250 | | JT3-2-6.5x50-E22 | 3 598 813 321 |
| 65 | - | 0 - 15 | 250 | | JT3-2-6.5x65-E22 | 3 598 913 321 |
| 80 | - | 0 - 30 | 100 | | JT3-2-6.5x80-E22 | 3 598 013 321 |
| 100 | 20 - 45 | 16 - 50 | 100 | | JT3-2-6.5x100-E22 | 3 598 113 321 |
| 120 | 40 - 65 | 36 - 70 | 100 | | JT3-2-6.5x120-E22 | 3 598 313 321 |
| 140 | 60 - 85 | 56 - 90 | 100 | | JT3-2-6.5x140-E22 | 3 598 513 321 |
| 160 | 80 - 105 | 76 - 110 | 100 | | JT3-2-6.5x160-E22 | 3 598 713 321 |
| 180 | 100 - 125 | 96 - 130 | 100 | | JT3-2-6.5x180-E22 | 3 598 213 321 |
| 200 | 120 - 145 | 116 - 150 | 100 | | JT3-2-6.5x200-E22 | 3 599 013 321 |
| 220 | 140 - 165 | 136 - 170 | 50 | | JT3-2-6.5x220-E22 | 3 599 113 321 |
| 240 | 160 - 185 | 156 - 190 | 50 | | JT3-2-6.5x240-E22 | 3 599 213 321 |
| 260 | 180 - 205 | 176 - 210 | 100 | | JT3-2-6.5x260-E22 | 3 599 313 321 |
| 280 | 200 - 225 | 196 - 230 | 100 | | JT3-2-6.5x280-E22 | 3 599 513 321 |
| 300 | 220 - 245 | 216 - 250 | 100 | | JT3-2-6.5x300-E22 | 3 599 613 321 |

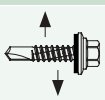
### Application area
- Fastening profiled steel and aluminium sheet, sandwich panels and roofing sheet to timber substructure

### Properties
- A2 stainless steel with hardened drill point
- Stainless steel sealing washer
- Pre-assembled sealing washer

| Technical Data | |
|---|---|
| Drilling capacity $t_I + t_{II}$ | 2.0 mm |
| Drive | Hexagon AF8 |
| Ø screw | 6.5 mm |



| Minimum tensile strength | |
|---|---|
|  | |
| Ø mm | kN |
| 6.5 | 13.0 |

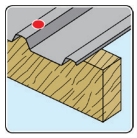
| Minimum shear strength | |
|---|---|
|  | |
| Ø mm | kN |
| 6.5 | 10.0 |

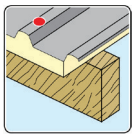

AF8

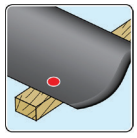
J3

EPD

Rost frei







ETA CE

**Approval**
ETA-10/0200
ETA-13/0177

**Cross reference**
Accessories
ORKAN storm washers
Self-tapping screw JA3-6.5
Metal screwdriver SCS 6.3
Metal screwdriver SCS 6.3-SH2

**Note**
See relevant annexes of European technical approvals at the following pages.

Please download complete European technical approvals at our website:

www.ejot.es

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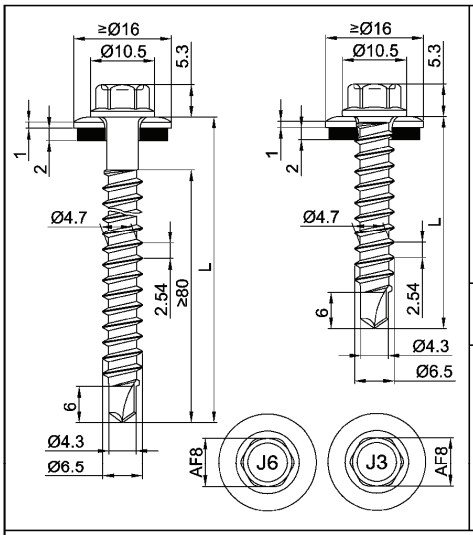
Teléfono: +34 916 300 822 – Fax: +34 911 383 815 – info@ejot.es – www.ejot.es

Deutsches Institut für Bautechnik DIBt




Materials

Fastener: stainless steel (1.4301 / 1.4567) - EN 10088,
stainless steel (1.4404 / 1.4578) - EN 10088

Washer: stainless steel (1.4301) - EN 10088

Component I: S280GD - EN 10346

Component II: S235 - EN 10025-1
S280GD, S320GD or S350GD - EN 10346

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm

Timber substructures

performance determined with

$M_{y,Rk}$ = 9,742 Nm
$f_{ax,k}$ = 8,575 N/mm² for $l_{ef} \geq 26{,}0$ mm

| $t_{N,II}$ [mm] | | 0,63 | | 0,75 | | 0,88 | | 1,00 | | 1,13 | | 1,25 | | 1,50 | | 2,00 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{t,nom}$ | | 3 Nm | | | | | | | | | | | | | | — | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,63 | 1,30 | — | 1,30 | — | 1,30 | — | 1,30 | — | 1,30 | — | 1,30 | — | — | — | — | — | 1,30 |
| | 0,75 | 1,30 | — | 1,80 | — | 1,80 | — | 1,80 | — | 1,80 | — | 1,80 | — | — | — | — | — | 1,80 |
| | 0,88 | 1,30 | — | 1,80 | — | 2,60 | — | 2,60 | — | 2,60 | — | — | — | — | — | — | — | 2,60 |
| | 1,00 | 1,30 | — | 1,80 | — | 2,60 | — | 3,30 | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,13 | 1,30 | — | 1,80 | — | 2,60 | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,25 | 1,30 | — | 1,80 | — | — | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,50 | 1,30 | — | 1,80 | — | — | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,43 | — | 0,54 | — | 0,70 | — | 0,86 | — | 0,86 | — | 0,86 | — | 0,86 | — | — | — | 1,19 |
| | 0,55 | 0,55 | — | 0,68 | — | 0,89 | — | 1,09 | — | 1,09 | — | 1,09 | — | — | — | — | — | 1,50 |
| | 0,63 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | 1,60 | — | — | — | — | — | 2,20 |
| | 0,75 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | 1,60 | — | — | — | — | — | 2,80 |
| | 0,88 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | — | — | — | — | — | — | 3,50 |
| | 1,00 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | — | — | — | — | — | — | — | — | 4,20 |
| | 1,13 | 0,80 | — | 1,00 | — | 1,30 | — | — | — | — | — | — | — | — | — | — | — | 5,00 |
| | 1,25 | 0,80 | — | 1,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | 5,90 |
| | 1,50 | 0,80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 5,90 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

bearing resistance of component I

pull-through resistance of component I

The values listed above in dependence on the screw-in length $l_{ef}$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_a$ = 350 kg/m³). For other combinations of $k_{mod}$ and timber strength grades see section 4.2.2.

| Self drilling screw | |
|---|---|
| JT3-2-6,5 x L<br>JT6-2-6,5 x L<br>with hexagon head and sealing washer ≥ Ø16 mm | **Annex 64** |

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**ETA-10/0200 of 27 June 2013**

*English translation prepared by DIBt*

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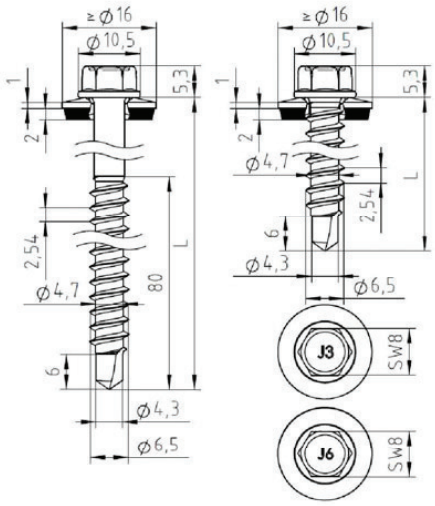


Materials

Fastener: stainless steel (1.4301 / 1.4567) – EN 10088
stainless steel (1.4401 / 1.4578) – EN 10088

Washer: stainless steel (1.4301) - EN 10088

Component I: S280GD – EN 10346

Component II: structural timber – EN 14081

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm

Timber substructures

performance determined with

$M_{y,Rk}$ = 9,742 Nm
$f_{ax,k}$ = 8,575 N/mm² for $l_{ef} \geq 26$ mm

| $l_g$ = | 32 | 38 | 42 | 48 | 52 | 58 | 62 | 68 | 72 | 78 | 82 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{t,nom}$ = | — | | | | | | | | | | | | |
| $V_{R,k}$ for $t_{N,I}$ = 0,50 | — | — | — | — | — | — | — | — | — | — | — | — | bearing resistance of component I |
| 0,55 | — | — | — | — | — | — | — | — | — | — | — | — | |
| 0,63 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| 0,75 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | |
| 0,88 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,60 | 2,60 | |
| 1,00 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 | |
| 1,13 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 | |
| 1,25 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 | |
| 1,50 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 | |
| 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | |
| 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | |
| $N_{R,k}$ for $t_{N,I}$ = 0,50 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | 1,19 | pull-trough resistance of component I |
| 0,55 | 1,30 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | 1,50 | |
| 0,63 | 1,30 | 1,56 | 1,81 | 2,06 | 2,20 | 2,20 | 2,20 | 2,20 | 2,20 | 2,20 | 2,20 | 2,20 | |
| 0,75 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,80 | 2,80 | 2,80 | 2,80 | 2,80 | 2,80 | |
| 0,88 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,50 | 3,50 | 3,50 | |
| 1,00 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 4,20 | |
| 1,13 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 5,00 | |
| 1,25 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 5,90 | |
| 1,50 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 5,90 | |
| 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | |
| 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | |

The values listed above in dependence on the screw-in length $l_g$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_k$ = 350 kg/m³). For other values of $k_{mod}$ and timber strength grades see section 4.2.2.

| **Self drilling screw** | |
|---|---|
| JT3-2-6,5 x L<br>JT6-2-6,5 x L<br>with hexagon head and sealing washer ≥ Ø 16 mm | **Annex 65** |

Z56764.13 8.06.02-186/12

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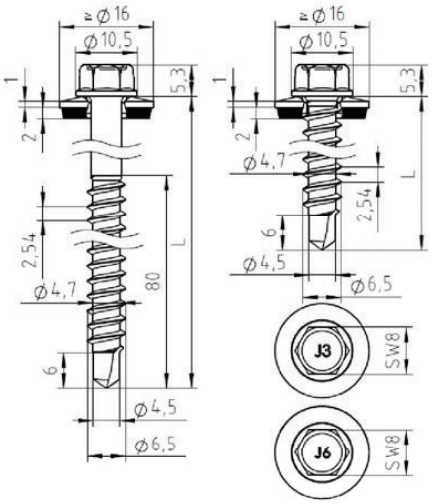


**Materials**

Fastener: stainless steel (1.4301 / 1.4567) – EN 10088
stainless steel (1.4401 / 1.4578) – EN 10088

Washer: stainless steel (1.4301) – EN 10088
with vulcanised EPDM seal

Component I: aluminium alloy
with $R_{m,min}$ = 165 N/mm² – EN 573

Component II: timber – EN 14081

**Drilling capacity** $\Sigma t_i \leq 2{,}00$ mm

**Timber substructures**

for timber substructures following performance were determined

$M_{y,k}$ = 9,742 Nm
$f_{ax,k}$ = 8,575 N/mm² for $l_{eff}$ ≥ 32,5 mm

| $l_g$ = | 33,00 | 36,00 | 39,00 | 42,00 | 45,00 | 48,00 | 51,00 | 54,00 | 60,00 | |
|---|---|---|---|---|---|---|---|---|---|---|
| $M_{t,nom}$ = | | | | | — | | | | | |
| $V_{R,k}$ for $t_{N,I}$ = 0,50 | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 - | 0,54 |
| 0,60 | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 - | 0,74 |
| 0,70 | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 - | 0,93 |
| 0,80 | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 - | 1,13 |
| 0,90 | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 - | 1,25 |
| 1,00 | 1,30 - | 1,37 - | 1,37 - | 1,37 - | 1,37 - | 1,37 - | 1,37 - | 1,37 - | 1,37 - | 1,37 |
| 1,20 | 1,30 - | 1,45 - | 1,60 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 |
| 1,50 | 1,30 - | 1,45 - | 1,60 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 |
| 2,00 | 1,30 - | 1,45 - | 1,60 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 - | 1,70 |
| $N_{R,II,k}$ = | 1,12 | 1,25 | 1,38 | 1,51 | 1,64 | 1,77 | 1,90 | 2,03 | 2,16 | |

failure of component I (bearing)

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.
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 kg / m³). For other values of $k_{mod}$ and strength classes see chapter 4.2.2
For $k_{mod}$ < 0,90: failure of component I see right column and failure of component II see chapter 4.2.2 with $f_{1,k} = 80 \cdot 10^{-6} \cdot \rho_k^2$ (load carrying class 3, $\rho_k$ in kg/m³, max. 500 kg/m³) and yield moment $M_{y,k}$ = 13830 Nmm.

**Self-drilling screw**

JT3-2-6,5xL JT6-2-6,5xL
With hexagon head and seal washer ≥ ∅ 16,0 mm

**Annex 66**

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**ETA-10/0200 of 27 June 2013**

*English translation prepared by DIBt*

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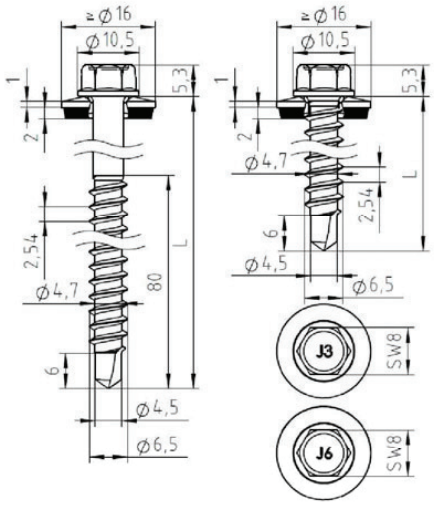


Materials

Fastener: stainless steel (1.4301 / 1.4567) – EN 10088
stainless steel (1.4401 / 1.4578) – EN 10088

Washer: stainless steel (1.4301) – EN 10088
with vulcanised EPDM seal

Component I: aluminium alloy
with $R_{m,min}$ = 215 N/mm² – EN 573

Component II: timber – EN 14081

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm

Timber substructures

for timber substructures following performance were determined

$M_{y,k}$ = 9,742 Nm
$f_{ax,k}$ = 8,575 N/mm² for $l_{eff}$ ≥ 32,5 mm

| $l_g$ – | 33,00 | 36,00 | 39,00 | 42,00 | 45,00 | 48,00 | 51,00 | 54,00 | 60,00 | |
|---|---|---|---|---|---|---|---|---|---|---|
| $M_{t,nom}$ = | | | | | — | | | | | |
| $V_{R,k}$ for $t_{N,I}$ = 0,50 | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 - | 0,70 |
| 0,60 | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 - | 0,96 |
| 0,70 | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 - | 1,21 |
| 0,80 | 1,30 - | 1,45 - | 1,47 - | 1,47 - | 1,47 - | 1,47 - | 1,47 - | 1,47 - | 1,47 - | 1,47 |
| 0,90 | 1,30 - | 1,45 - | 1,60 - | 1,63 - | 1,63 - | 1,63 - | 1,63 - | 1,63 - | 1,63 - | 1,63 |
| 1,00 | 1,30 - | 1,45 - | 1,60 - | 1,75 - | 1,78 - | 1,78 - | 1,78 - | 1,78 - | 1,78 - | 1,78 |
| 1,20 | 1,30 - | 1,45 - | 1,60 - | 1,75 - | 1,90 - | 2,05 - | 2,20 - | 2,22 - | 2,22 - | 2,22 |
| 1,50 | 1,30 - | 1,45 - | 1,60 - | 1,75 - | 1,90 - | 2,05 - | 2,20 - | 2,22 - | 2,22 - | 2,22 |
| 2,00 | 1,30 - | 1,45 - | 1,60 - | 1,75 - | 1,90 - | 2,05 - | 2,20 - | 2,22 - | 2,22 - | 2,22 |
| $N_{R,II,k}$ = | 1,12 | 1,25 | 1,38 | 1,51 | 1,64 | 1,77 | 1,90 | 2,03 | 2,16 | |

failure of component I (bearing)

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.
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 kg / m³). For other values of $k_{mod}$ and strength classes see chapter 4.2.2
For $k_{mod}$ < 0,90: failure of component I see right column and failure of component II see chapter 4.2.2 with $f_{1,k} = 80 \cdot 10^{-6} \cdot \rho_k^2$ (load carrying class 3, $\rho_k$ in kg/m³, max. 500 kg/m³) and yield moment $M_{y,k}$ = 13830 Nmm.

**Self-drilling screw**

JT3-2-6,5xL JT6-2-6,5xL
With hexagon head and seal washer ≥ Ø 16,0 mm

**Annex 67**

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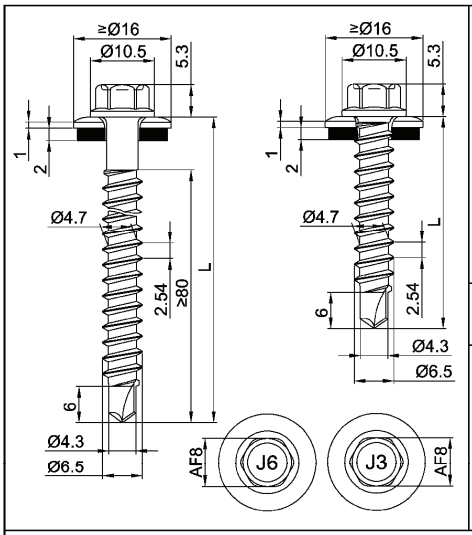
**ETA-10/0200 of 27 June 2013**

*English translation prepared by DIBt*

Deutsches Institut für Bautechnik DIBt




Materials

Fastener: stainless steel (1.4301 / 1.4567) - EN 10088,
stainless steel (1.4404 / 1.4578) - EN 10088

Washer: stainless steel (1.4301) - EN 10088

Component I: S320GD or S350GD - EN 10346

Component II: S235 - EN 10025-1
S280GD, S320GD or S350GD - EN 10346

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm

Timber substructures

performance determined with

$M_{y,Rk}$ = 9,742 Nm
$f_{ax,k}$ = 8,575 N/mm² for $l_{ef} \geq 26{,}0$ mm

| $t_{N,II}$ [mm] | | 0,63 | | 0,75 | | 0,88 | | 1,00 | | 1,13 | | 1,25 | | 1,50 | | 2,00 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{t,nom}$ | | 3 Nm | | | | | | | | | | | | | | — | | |
| $V_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,63 | 1,30 | — | 1,40 | — | 1,40 | — | 1,40 | — | 1,40 | — | 1,40 | — | — | — | — | — | 1,40 |
| | 0,75 | 1,30 | — | 1,80 | — | 2,00 | — | 2,00 | — | 2,00 | — | 2,00 | — | — | — | — | — | 2,00 |
| | 0,88 | 1,30 | — | 1,80 | — | 2,60 | — | 2,60 | — | 2,80 | — | — | — | — | — | — | — | 2,80 |
| | 1,00 | 1,30 | — | 1,80 | — | 2,60 | — | 3,30 | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,13 | 1,30 | — | 1,80 | — | 2,60 | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,25 | 1,30 | — | 1,80 | — | — | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,50 | 1,30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 3,30 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| $N_{R,k}$ [kN] for $t_{N,I}$ [mm] | 0,50 | 0,43 | — | 0,54 | — | 0,70 | — | 0,86 | — | 0,86 | — | 0,86 | — | 0,86 | — | — | — | 1,30 |
| | 0,55 | 0,55 | — | 0,68 | — | 0,89 | — | 1,09 | — | 1,09 | — | 1,09 | — | — | — | — | — | 1,64 |
| | 0,63 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | 1,60 | — | — | — | — | — | 2,40 |
| | 0,75 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | 1,60 | — | — | — | — | — | 3,10 |
| | 0,88 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | 1,60 | — | — | — | — | — | — | — | 3,80 |
| | 1,00 | 0,80 | — | 1,00 | — | 1,30 | — | 1,60 | — | — | — | — | — | — | — | — | — | 4,60 |
| | 1,13 | 0,80 | — | 1,00 | — | 1,30 | — | — | — | — | — | — | — | — | — | — | — | 5,50 |
| | 1,25 | 0,80 | — | 1,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | 6,30 |
| | 1,50 | 0,80 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 6,30 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

bearing resistance of component I

pull-through resistance of component I

The values listed above in dependence on the screw-in length $l_{ef}$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_a$ = 350 kg/m³). For other combinations of $k_{mod}$ and timber strength grades see section 4.2.2.

| Self drilling screw | |
|---|---|
| JT3-2-6,5 x L<br>JT6-2-6,5 x L<br>with hexagon head and sealing washer ≥ Ø16 mm | **Annex 68** |



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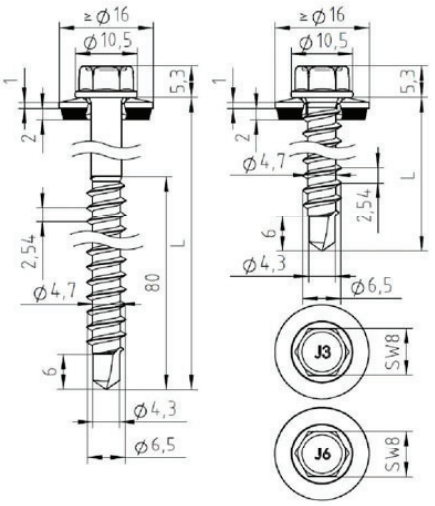
*English translation prepared by DIBt*

Deutsches Institut für Bautechnik




Materials

Fastener: stainless steel (1.4301 / 1.4567) – EN 10088
stainless steel (1.4401 / 1.4578) – EN 10088

Washer: stainless steel (1.4301) - EN 10088

Component I: S320GD or S350GD – EN 10346

Component II: structural timber – EN 14081

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm

Timber substructures

performance determined with

$M_{y,Rk}$ = 9,742 Nm

$f_{ax,k}$ = 8,575 N/mm² for $l_{ef} \geq 26$ mm

| | $l_g$ = | 32 | 38 | 42 | 48 | 52 | 58 | 62 | 68 | 72 | 78 | 82 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $M_{t,nom}$ = | — | | | | | | | | | | | |
| $V_{R,k}$ for $t_{N,I}$ = | 0,50 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,55 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 0,63 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 |
| | 0,75 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 |
| | 0,88 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 2,80 |
| | 1,00 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 |
| | 1,13 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 |
| | 1,25 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 |
| | 1,50 | 2,04 | 2,10 | 2,17 | 2,23 | 2,29 | 2,35 | 2,42 | 2,48 | 2,54 | 2,60 | 2,67 | 3,30 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — |
| $N_{R,k}$ for $t_{N,I}$ = | 0,50 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 |
| | 0,55 | 1,30 | 1,56 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 | 1,64 |
| | 0,63 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,40 | 2,40 | 2,40 | 2,40 | 2,40 | 2,40 | 2,40 |
| | 0,75 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,10 | 3,10 | 3,10 | 3,10 |
| | 0,88 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,80 | 3,80 |
| | 1,00 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 4,60 |
| | 1,13 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 5,50 |
| | 1,25 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 6,30 |
| | 1,50 | 1,30 | 1,56 | 1,81 | 2,06 | 2,31 | 2,56 | 2,81 | 3,06 | 3,31 | 3,56 | 3,81 | 6,30 |
| | 1,75 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2,00 | — | — | — | — | — | — | — | — | — | — | — | — |

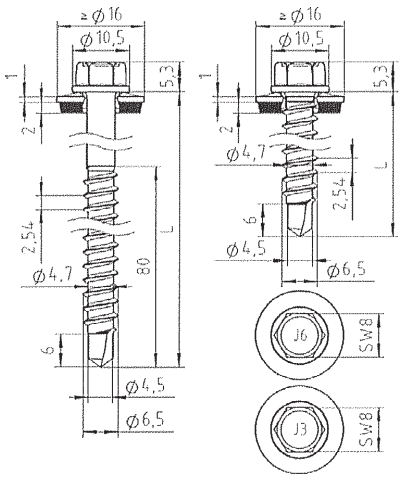
bearing resistance of component I

pull-trough resistance of component I

The values listed above in dependence on the screw-in length $l_g$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_k$ = 350 kg/m³). For other values of $k_{mod}$ and timber strength grades see section 4.2.2.

| **Self drilling screw** | |
|---|---|
| JT3-2-6,5 x L<br>JT6-2-6,5 x L<br>with hexagon head and sealing washer ≥ Ø 16 mm | **Annex 69** |

Z56764.13 8.06.02-186/12




Materials:

Fastener: stainless steel (1.4301) – EN 10088
stainless steel (1.4401) – EN 10088

Washer: stainless steel (1.4301) – EN 10088

Component I: S280GD – EN 10346

Component II: structural timber – EN 14081

Drilling capacity: $t_{N2} \leq 2{,}00$ mm

Timber supporting structures:

performance determined with

$M_{y,Rk}$ = 9,742 Nm
$f_{ax,k}$ = 11,810 N/mm² für $l_{ef} \geq 44$ mm

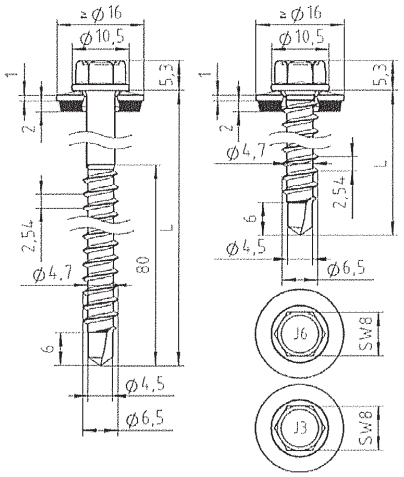
| $t_{N1}$, $t_{N2}$, d, D [mm] | | $l_g$ [mm] | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 | 53 | 56 | 59 | 62 | 65 | 68 | 71 | 74 | 77 | 80 | | |
| $V_{R,k}$ [kN] | 0,40 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | 1,03 | $V_{R,k,I}$ [kN] |
| | 0,50 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | 1,10 | |
| | 0,55 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | |
| | 0,63 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| | 0,75 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| | 0,88 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| | 1,00 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| $N_{R,k}$ [kN] | 0,40 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | 1,24 | $N_{R,k,I}$ [kN] |
| | 0,50 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | 1,80 | |
| | 0,55 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | |
| | 0,63 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | 2,50 | |
| | 0,75 | 3,04 | 3,25 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | 3,30 | |
| | 0,88 | 3,04 | 3,25 | 3,45 | 3,66 | 3,87 | 4,08 | 4,10 | 4,10 | 4,10 | 4,10 | 4,10 | 4,10 | |
| | 1,00 | 3,04 | 3,25 | 3,45 | 3,66 | 3,87 | 4,08 | 4,28 | 4,49 | 4,70 | 4,90 | 4,90 | 4,90 | |
| max u [mm] | 30 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | max u [mm] |
| | 40 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | |
| | 50 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | |
| | 60 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | |
| | 70 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | |
| | 80 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | |
| | 100 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| | 120 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| | ≥ 140 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| $M_{t,nom}$ [Nm] | | | | | | | | | | | | | | |

The values listed above in dependance on the screw-in lengh in length $l_g$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_k$ = 350 kg/m³). For other values of $k_{mod}$ and timber strength grades see section 4.2.2.

Self drilling screw

EJOT® JT3-2-6,5 x L EJOT® JT6-2-6,5 x L
with sealing wahser ≥ Ø 16 mm

Annex 14




Materials:

Fastener: stainless steel (1.4301) – EN 10088
stainless steel (1.4401) – EN 10088

Washer: stainless steel (1.4301) – EN 10088

Component I: S320GD or S350GD – EN 10346

Component II: structural timber – EN 14081

Drilling capacity: $t_{N2} \leq 2{,}00$ mm

Timber supporting structures:

performance determined with

$M_{y,Rk}$ = 9,742 Nm
$f_{ax,k}$ = 11,810 N/mm² für $l_{ef} \geq 44$ mm

| $t_{N1}$, $t_{N2}$, d, D [mm] | | $l_g$ [mm] | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 | 53 | 56 | 59 | 62 | 65 | 68 | 71 | 74 | 77 | 80 | | |
| $V_{R,k}$ [kN] | 0,40 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | 1,11 | $V_{R,k,I}$ [kN] |
| | 0,50 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | 1,20 | |
| | 0,55 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | 1,30 | |
| | 0,63 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | |
| | 0,75 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | |
| | 0,88 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | |
| | 1,00 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | 1,40 | |
| $N_{R,k}$ [kN] | 0,40 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | 1,35 | $N_{R,k,I}$ [kN] |
| | 0,50 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | 1,90 | |
| | 0,55 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | 2,00 | |
| | 0,63 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | 2,70 | |
| | 0,75 | 3,04 | 3,25 | 3,45 | 3,60 | 3,60 | 3,60 | 3,60 | 3,60 | 3,60 | 3,60 | 3,60 | 3,60 | |
| | 0,88 | 3,04 | 3,25 | 3,45 | 3,66 | 3,87 | 4,08 | 4,28 | 4,40 | 4,40 | 4,40 | 4,40 | 4,40 | |
| | 1,00 | 3,04 | 3,25 | 3,45 | 3,66 | 3,87 | 4,08 | 4,28 | 4,49 | 4,70 | 4,91 | 5,11 | 5,30 | |
| max u [mm] | 30 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | max u [mm] |
| | 40 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | 5,5 | |
| | 50 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | |
| | 60 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | 9,0 | |
| | 70 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | 11,5 | |
| | 80 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | 13,5 | |
| | 100 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| | 120 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| | ≥ 140 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 | |
| $M_{t,nom}$ [Nm] | | | | | | | | | | | | | | |

The values listed above in dependance on the screw-in lengh in length $l_g$ are valid for $k_{mod}$ = 0,90 and timber strength grade C24 ($\rho_k$ = 350 kg/m³). For other values of $k_{mod}$ and timber strength grades see section 4.2.2.

Self drilling screw

EJOT® JT3-2-6,5 x L EJOT® JT6-2-6,5 x L
with sealing wahser ≥ Ø 16 mm

Annex 15