# PRODUCT DATA SHEET ANGLE-BRACKET SCREW A4

## PRODUCT DESCRIPTION

The Eurotec A4 angle-bracket screw (ABS) has been specially designed for connections between sheet steel and wood. The splitting effect in the wood is reduced by the geometry of the screw tip. In addition, the screw is characterised, among other things, by the smooth shank that sits directly beneath its head which allows for the transfer of shear loads. Thanks to the material (A4 stainless steel) used, this angle-bracket screw is particularly suitable for outdoor applications, as it is rust and acid resistant even in areas located directly on the coast or with high levels of air pollution. Furthermore, the screws can withstand tannin-containing woods.

## APPLICATIONS

- Suitable for use classes 1 to 3 in accordance with DIN EN 1995 – Eurocode 5 A4: (CRCIII/C5/T5) Suitable for heavily polluted urban and industrial areas and at distances < 0.25 km from coastlines.
- Suitable for woods rich in tannins and saline atmospheres when used in engineered timber constructions
- Rust resistant and acid-resistant under certain circumstances
- Good resistance to moderately aggressive, non-chlorous environments

## MATERIAL

- Austenitic stainless steel A4 1.4401

EDELSTAHL Rostfrei | CRC III | C5 | T5

## CERTIFICATION

- **Application pending:** European Technical Assessment ETA-11/0024 Self-tapping screws as wood connectors

ETA CE
Europ. Techn. Bewertung
European Technical Assessment
ETA-11/0024





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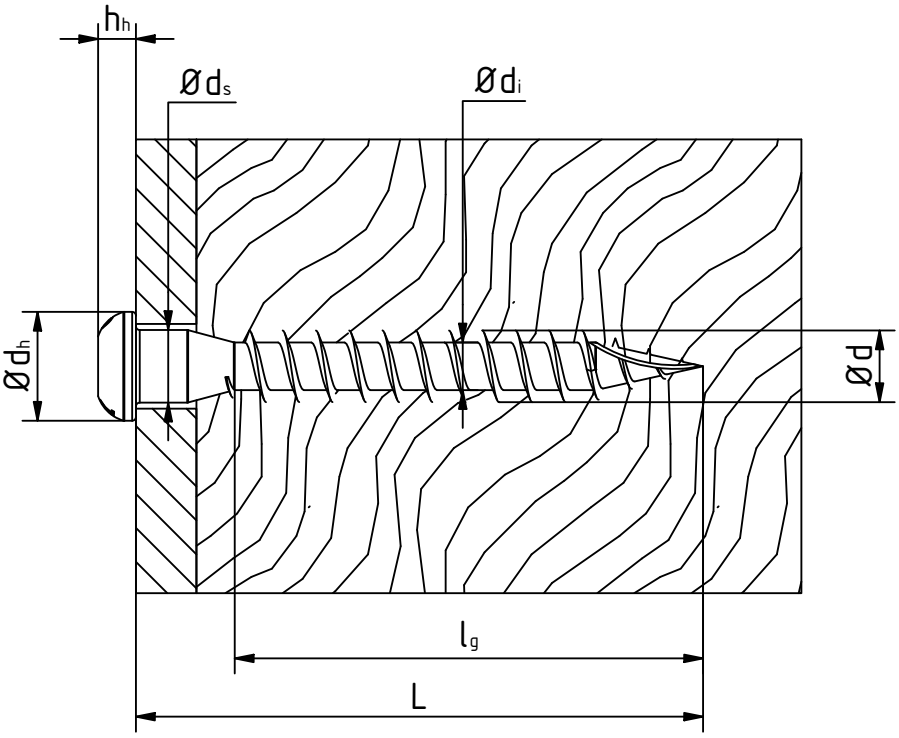
## TECHNICAL INFORMATION




Side view

| ABS A4 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Nominal-Ø | Head-Ø | Root-Ø | Shaft-Ø | Head height | Head shape | char. tensile capacity[1)] | char. yield moment[1)] | char. withdrawal parameter[1)] | char. torsional strength[1)] |
| d [mm] | $d_h$ [mm] | $d_i$ [mm] | $d_s$ [mm] | $h_h$ [mm] | – | $f_{tens,k}$ [kN] | $M_{y,k}$ [Nm] | $f_{ax,k}$ [N/mm²] | $f_{tor,k}$ [Nm] |
| 5,0 | 7,2 | 3,15 | 4,8 | 2,5 | ZK | 4,3 | 3,1 | 12,1 | 3,4 |

[1)] The values have been taken from ETA 11/0024 and DoP-ETA110024-05-2017. We cannot guarantee that there are no typographical or printing errors and therefore recommend that you check the documents mentioned above.





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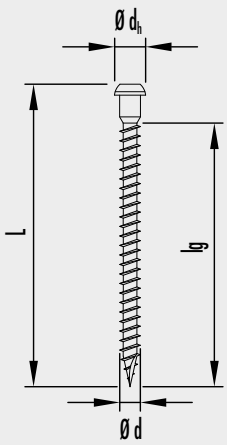
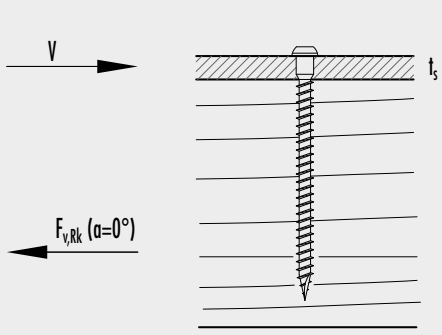
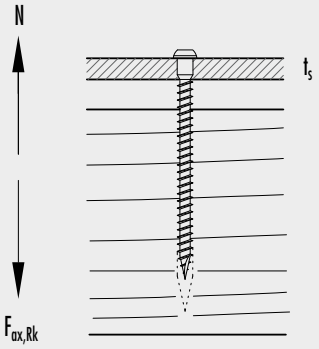
# PRODUCT DATA SHEET ANGLE-BRACKET SCREW A4

## LOAD CAPACITIES OF SCREWS WITH REQUIRED MINIMUM LENGTHS




| | | Ø 5 mm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | $t_s$ = 1,5 mm | | $t_s$ = 2 mm | | $t_s$ = 3 mm | | $t_s \geq 9$ mm | |
| L [mm] | lg [mm] | $F_{v,Rk}$ [kN] | $F_{v,Rd}$ [kN] | $F_{v,Rk}$ [kN] | $F_{v,Rd}$ [kN] | $F_{v,Rd}$ [kN] | $F_{v,Rd}$ [kN] | $F_{v,Rd}$ [kN] | $F_{v,Rd}$ [kN] |
| 35 | | 1,19 | 0,73 | 1,60 | 0,98 | 1,60 | 0,98 | 1,57 | 0,97 |
| 40 | | 1,32 | 0,81 | 1,67 | 1,03 | 1,67 | 1,03 | 1,88 | 1,16 |
| 50 | | 1,47 | 0,91 | 1,83 | 1,12 | 1,83 | 1,12 | 2,48 | 1,53 |
| 60 | | 1,62 | 1,00 | 1,98 | 1,22 | 1,98 | 1,22 | 3,09 | 1,90 |

Calculated according to ETA-11/0024, for an installation without pilot holes and with a wood density of $\rho_k$ = 350 kg/m³. The $F_{Rd}$ design values were calculated using $k_{mod}$ = 0.8 and $\gamma M$ = 1.3. For different sheet thicknesses, it is possible to interpolate the shear strength between thin and thick steel sheets.
A steel sheet thickness of ts ≥ 2.0 mm in accordance with ETA-11/0024 is considered thick sheet metal. L is the minimum screw length to achieve the respective load-bearing capacity.

Please consider the following: these are planning aids. Projects may only be calculated by authorised individuals.

## PRODUCT TABLE

| ABS A4 | | | | |
|---|---|---|---|---|
| Art. no. | Dimension Ø d x L [mm] | Drive | Thread length [mm] | PU |
| 945621 | 5,0 x 35 | TX20 | 26 | 250 |
| 945622 | 5,0 x 40 | TX20 | 31 | 250 |
| 945623 | 5,0 x 50 | TX20 | 41 | 250 |
| 945625 | 5,0 x 60 | TX20 | 51 | 250 |

If you are not familiar with how this product is used, and particularly with the product's intended use, please contact our Application Technology department (Technik@eurotec.team).





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