

PRODUCT DATA SHEET

ANGLE-BRACKET SCREW ZK HARDWOOD

PRODUCT DESCRIPTION

The Eurotec angle-bracket screw (ABS) ZK Hardwood has been specially designed for connections between sheet steel and wood. Thanks to the special geometry of the screw tip and the screw's increased core diameter, the screw can be installed even in hardwoods LVL without the need for a pilot hole. 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.

APPLICATIONS

- Conditionally corrosion-resistant and suitable for use in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Not suitable for wood containing tannins
- Particularly suitable for installation in hardwood

MATERIAL

- Hardened carbon steel + blue galvanized
- Free of chromium (VI) oxide
- Good resistance to mechanical stresses



CERTIFICATION

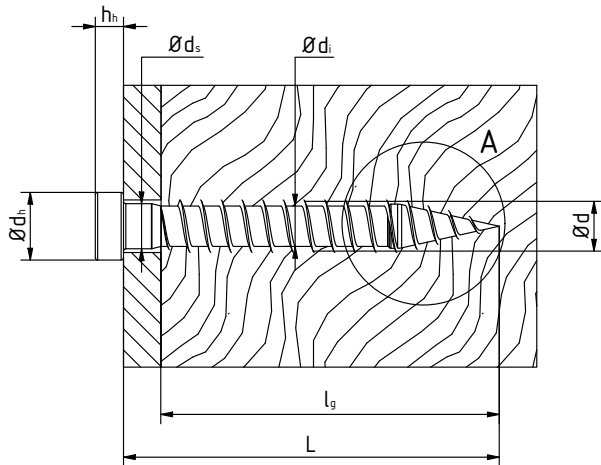
European Technical Assessment ETA-11/0024
Self-tapping screws as wood connectors



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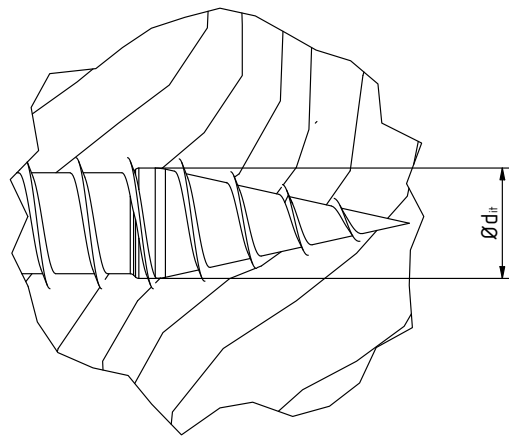
ANGLE-BRACKET SCREW ZK HARDWOOD

TECHNICAL INFORMATION



A

Side view



Side view

ABS ZK Hardwood									
Nominal-Ø	Head-Ø	Root-Ø	Root-Ø -mandrel tip	Shaft-Ø	Head height	Head shape	char. tensile capacity ¹⁾	char. yield moment ¹⁾	char. torsional strength ¹⁾
d [mm]	dh [mm]	di [mm]	di [mm]	ds [mm]	hh [mm]	—	f _{tens,k} [kN]	M _{y,k} [Nm]	f _{tor,k} [Nm]
5,6	7,2	4,3	4,7	4,8	3,0	ZK	14,0	13,0	13,0

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.

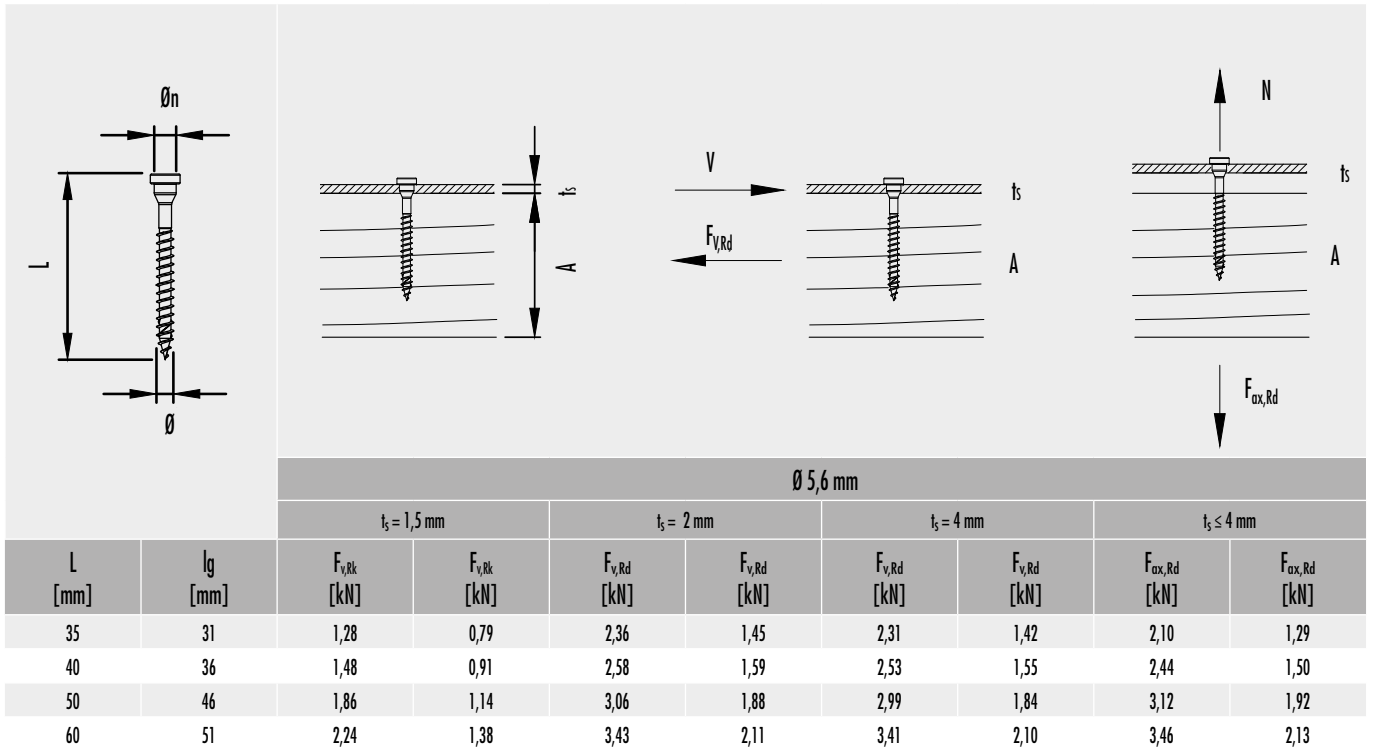
ABS ZK Hardwood			
char. withdrawal parameter ¹⁾ f _{ax,k} [N/mm ²]			
Softwood	Hardwood or softwood LVL	Pre-drilled hardwood LVL or FST	Non-predrilled hardwood LVL or FST
ρ _a = 350 kg/m ³	ρ _a = 500 kg/m ³	ρ _a = 730 kg/m ³	ρ _a = 730 kg/m ³
12,1	15,0	32,0	40,0

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ANGLE-BRACKET SCREW ZK HARDWOOD

LOAD CAPACITIES OF SCREWS WITH MINIMUM REQUIRED LENGTHS - SOLID WOOD, CLT BOARD



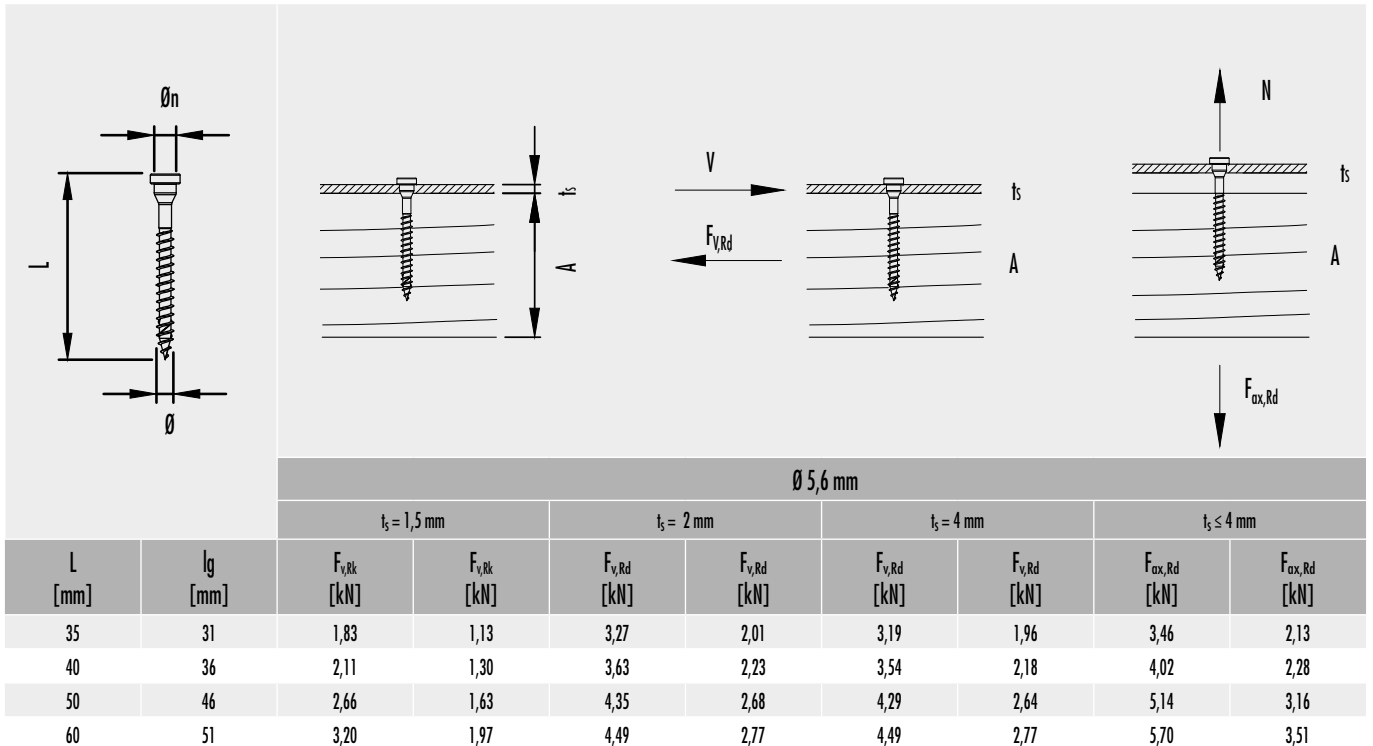
Calculated according to ETA-11/0024, considering non-predrilled holes and wood density $\rho_k = 350 \text{ kg/m}^3$. Design values FRd calculated considering $k_{mod} = 0,8$ and $\gamma_M = 1,3$. For different plate thicknesses, the shear capacities can be interpolated between thin and thick steel plates. L is the minimum screw length for achieving the respective load-carrying capacity.

Please note: These are planning aids. Projects must be calculated only by authorized persons.

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ANGLE-BRACKET SCREW ZK HARDWOOD

LOAD CAPACITIES OF SCREWS WITH MINIMUM REQUIRED LENGTHS - SOFTWOOD LVL OR HARDWOOD



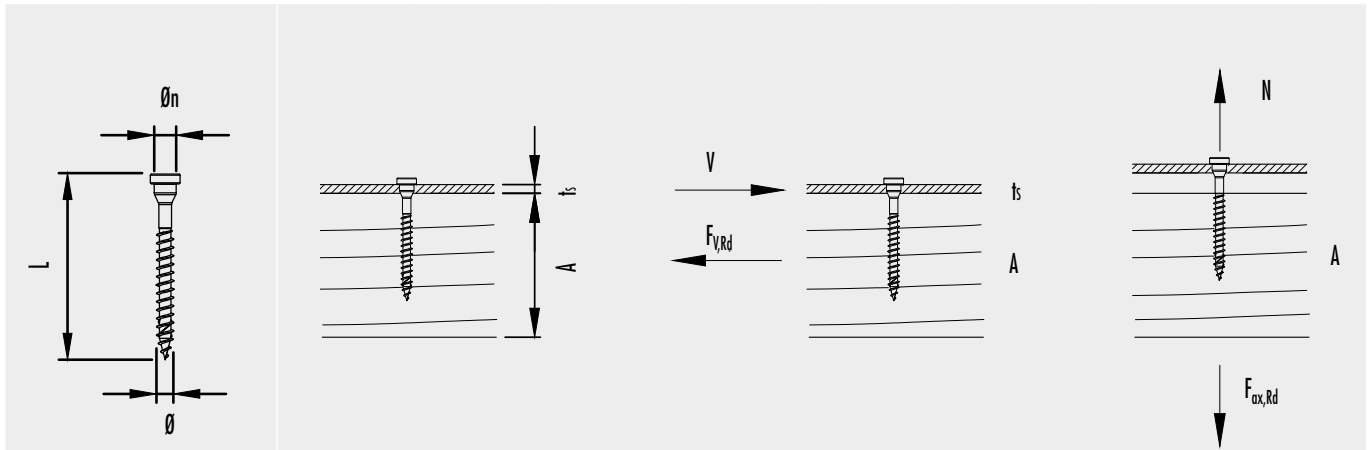
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ANGLE-BRACKET SCREW ZK HARDWOOD

LOAD CAPACITIES OF SCREWS WITH REQUIRED MINIMUM LENGTHS - BEECH LVL



		Ø 5,6 mm							
		ts = 1,5 mm		ts = 2 mm		ts = 4 mm		ts ≤ 4 mm	
L [mm]	lg [mm]	Fv,Rk [kN]	Fv,Rk [kN]	Fv,Rd [kN]	Fv,Rd [kN]	Fv,Rd [kN]	Fv,Rd [kN]	Fax,Rd [kN]	Fax,Rd [kN]
35	31	3,42	2,10	7,12	4,38	7,03	4,33	12,50	7,69
40	36	3,93	2,42	7,85	4,83	7,85	4,83	14,00	8,94
50	46	4,97	3,06	7,72	4,75	7,72	4,75	14,00	11,20
60	51	6,01	3,70	7,72	4,75	7,72	4,75	14,00	11,20

Calculated according to ETA-11/0024, considering non-predrilled holes and wood density $\rho_k = 350 \text{ kg/m}^3$. Design values FRd calculated considering $k_{mod} = 0,8$ and $\gamma_M = 1,3$. For different plate thicknesses, the shear capacities can be interpolated between thin and thick steel plates. L is the minimum screw length for achieving the respective load-carrying capacity.

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PRODUCT TABLE

ABS ZK Hardwood				
Art. no.	Dimension Ød x L [mm]	Drive	Thread length [mm]	PU
945383	5,0 x 35	TX20 •	31	250
945384	5,0 x 40	TX20 •	36	250
945385	5,0 x 50	TX20 •	46	250
945386	5,0 x 60	TX20 •	56	250
945387	5,5 x 70	TX20 •	61	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).