

# PRODUCT DATA SHEET

## TENSION STRAPS

### PRODUCT DESCRIPTION

**TENSION STRAPS:** HH60, HH70, HB60, HB70

The tension straps are straps specially developed for modern timber construction. They are used to **absorb tensile forces** as well as tensile and shearing forces. Due to the **special holes** for anchoring in wood at a **45° angle**, installation is not only very quick; it is also **very efficient** thanks to maximum utilisation of the screw tensile capacity. The tension straps are used in timber frame and solid timber construction.

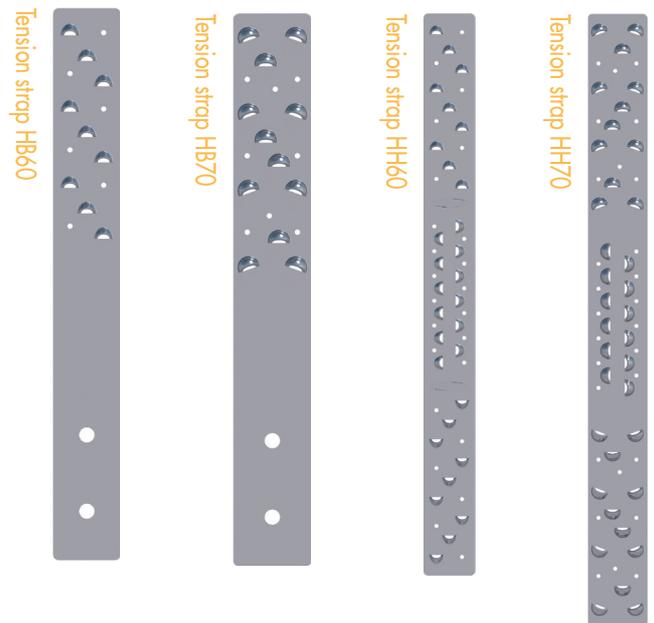


### ADVANTAGES

- Many different areas of use
- For installation in wood and concrete
- Very high tensile capacity thanks to a new fixing concept
- Fewer connectors required
- HH60 and HH70 tension straps can also absorb shearing forces

### MATERIAL

- S250 galvanised



### IMAGES OF APPLICATIONS



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## PRODUCT TABLE

Art. no.	Designation	Dimensions <sup>1)</sup> [mm]	Material	PU
954096	Tension strap HH60	680 x 60 x 3	S250	1
954095	Tension strap HB60	506 x 60 x 3	S250	1
954098	Tension strap HH70	740 x 70 x 3	S250	1
954097	Tension strap HB70	506 x 70 x 3	S250	1

<sup>1)</sup>Length x width x material thickness

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### INSTRUCTIONS FOR USE

The HH60 and HH70 tension straps are multi-storey connectors capable of integrating the suspended ceiling into the connection. With a width of 60 mm, the HH60 tension strap is perfect for conventional timber frame construction, while the 70 mm-wide HH70 tension strap was specifically developed for solid timber construction (CLT, cross laminated timber). The minimum wood width for the tension straps is 60 mm (HH60) and 120 mm (HH70). Anchoring in wood is carried out using 5 x 120 mm countersunk-head screws at an angle of 45°. A non-positive connection is created between the screw head and tension strap thanks to the specifically designed holes, which can also be used as screw guides.

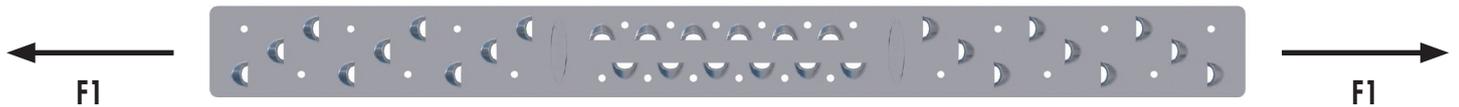
Both the HH70 and HB70 tension straps have two holes (ø 5 mm) for a 90° screw connection. In addition, the HH70 tension strap is suitable for ceiling thicknesses of up to 260 mm while the HH60 tension strap is suitable for ceiling thicknesses of up to 240 mm.

Anchoring in concrete is carried out via the holes (ø 14 mm) provided for this purpose with our rock-concrete screw or bolt anchors.

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# TENSION STRAPS

## STATIC VALUES



## TENSION STRAP HH60

Load direction F1								
Wood/wood connection								
Leg connection 1	Panelwistec SK Ø 5 x 120 n=9	Anchor nails Ø 4 x 40 n=6	Anchor nails Ø 4 x 50 n=6	Anchor nails Ø 4 x 60 n=6	ABS Ø 5 x 40 n=6	ABS Ø 5 x 50 n=6	ABS Ø 5 x 60 n=6	Steel S250
Leg connection 2	Panelwistec SK Ø 5 x 120 n=9	Anchor nails Ø 4 x 40 n=6	Anchor nails Ø 4 x 50 n=6	Anchor nails Ø 4 x 60 n=6	ABS Ø 5 x 40 n=6	ABS Ø 5 x 50 n=6	ABS Ø 5 x 60 n=6	
Char. tensile load-bearing capacity [kN]	27	9.4	11	11.4	10.9	12	13.1	28.5

The load-bearing capacities were determined on the basis of ETA-19/0020. Characteristic load-bearing capacity in kN, wood strength class 350 kg/m³ char. gross density. The minimum distances between the connectors and the edges according to EC 5 must be observed.

Please note: verify the assumptions made. The stated values and the type and number of joining devices are based on preliminary measurements. Projects must be dimensioned exclusively by authorised persons in accordance with the State Building Code. As per LBaU, please contact a qualified structural engineer for a paid proof of stability. We will be happy to refer you to someone.

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## STATIC VALUES



## TENSION STRAP HB60

### Load direction F1

#### Wood/concrete connection

Connection Wood side	Paneltwistec SK Ø 5 x 120 n=9				Anchor nails Ø 4 x 40 n=6				Anchor nails Ø 4 x 50 n=6				Anchor nails Ø 4 x 60 n=6	
Connection Concrete side	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2
Char. shear load-bearing capacity [kN]	20.8*	20.8*	12.6	20.8*	9.3	9.3	9.3	9.3	11.0	11.0	11.0	11.0	11.4	11.4

### Load direction F1

#### Wood/concrete connection

Connection Wood side	Anchor nails Ø 4 x 60 n=6		ABS Ø 5 x 40 n=6				ABS Ø 5 x 50 n=6				ABS Ø 5 x 60 n=6			
Connection Concrete side	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2
Char. shear load-bearing capacity [kN]	11.4	11.4	10.9	10.9	10.9	10.9	12.0	12.0	12.0	12.0	13.1	13.1	12.6	13.1

\* Concrete edge breakout for cracked concrete

The load-bearing capacities were determined on the basis of ETA-19/0020. Characteristic load-bearing capacity in kN, wood strength class 350 kg/m³ char. gross density. The minimum distances between the connectors and the edges according to EC 5 must be observed.

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## TENSION STRAP HH70

Load direction F1								
Wood/wood connection								
Leg connection 1	Panelwister SK Ø 5 x 120 n=12	Anchor nails Ø 4 x 40 n=8	Anchor nails Ø 4 x 50 n=8	Anchor nails Ø 4 x 60 n=8	ABS Ø 5 x 40 n=8	ABS Ø 5 x 50 n=8	ABS Ø 5 x 60 n=8	Steel S250
Leg connection 2	Panelwister SK Ø 5 x 120 n=12	Anchor nails Ø 4 x 40 n=8	Anchor nails Ø 4 x 50 n=8	Anchor nails Ø 4 x 60 n=8	ABS Ø 5 x 40 n=8	ABS Ø 5 x 50 n=8	ABS Ø 5 x 60 n=8	
Char. tensile load-bearing capacity [kN]	35	12.5	14.7	15.2	17.1	18.2	19.4	37.4

The load-bearing capacities were determined on the basis of ETA-19/0020. Characteristic load-bearing capacity in kN, wood strength class 350 kg/m<sup>3</sup> char. gross density. The minimum distances between the connectors and the edges according to EC 5 must be observed.

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## TENSION STRAP HB70

### Load direction F1

#### Wood/concrete connection

Connection Wood side	Panelwistec SK Ø 5 x 120 n=12				Anchor nails Ø 4 x 40 n=8				Anchor nails Ø 4 x 50 n=8				Anchor nails Ø 4 x 60 n=8	
Connection Concrete side	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2
Char. shear load-bearing capacity [kN]	20.8*	20.8*	12.6	20.8*	12.5	12.5	12.5	12.5	14.7	14.7	12.6	14.7	15.2	15.2

### Load direction F1

#### Wood/concrete connection

Connection Wood side	Anchor nails Ø 4 x 60 n=8		ABS Ø 5 x 40 n=8				ABS Ø 5 x 50 n=8				ABS Ø 5 x 60 n=8			
Connection Concrete side	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2	Rock- concrete screw Ø 12.5 x 120 n=1	Rock- concrete screw Ø 12.5 x 120 n=2	Bolt anchor Ø 12 x 110 n=1	Bolt anchor Ø 12 x 110 n=2
Char. shear load-bearing capacity [kN]	12.6	15.2	17.2	17.1	12.6	17.1	18.2	18.2	12.6	18.2	19.0	19.0	12.6	19.0

\* Concrete edge breakout for cracked concrete

The load-bearing capacities were determined on the basis of ETA-19/0020. Characteristic load-bearing capacity in kN, wood strength class 350 kg/m³ char. gross density.

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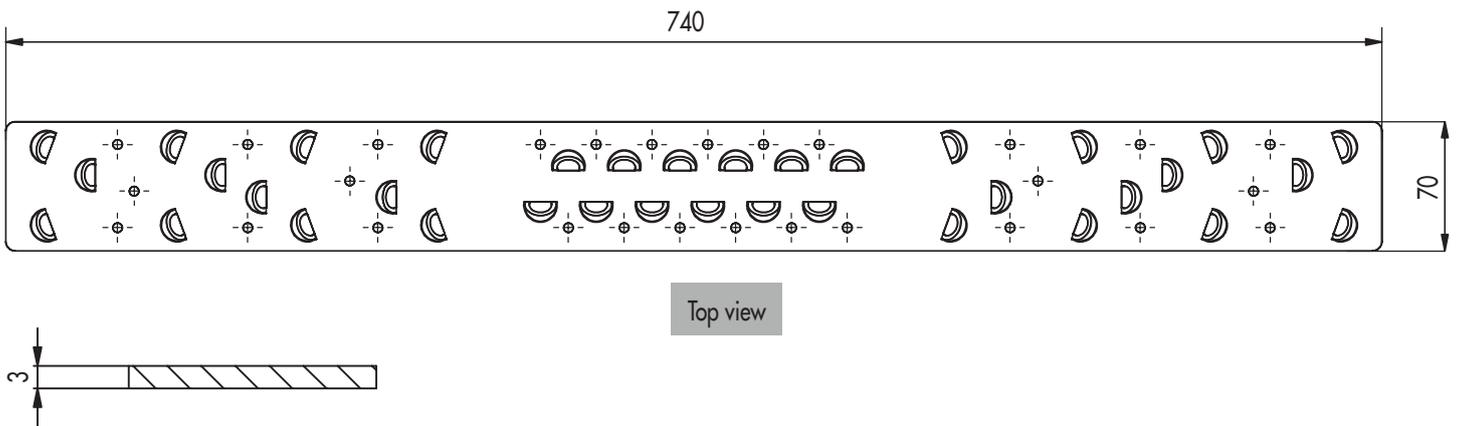
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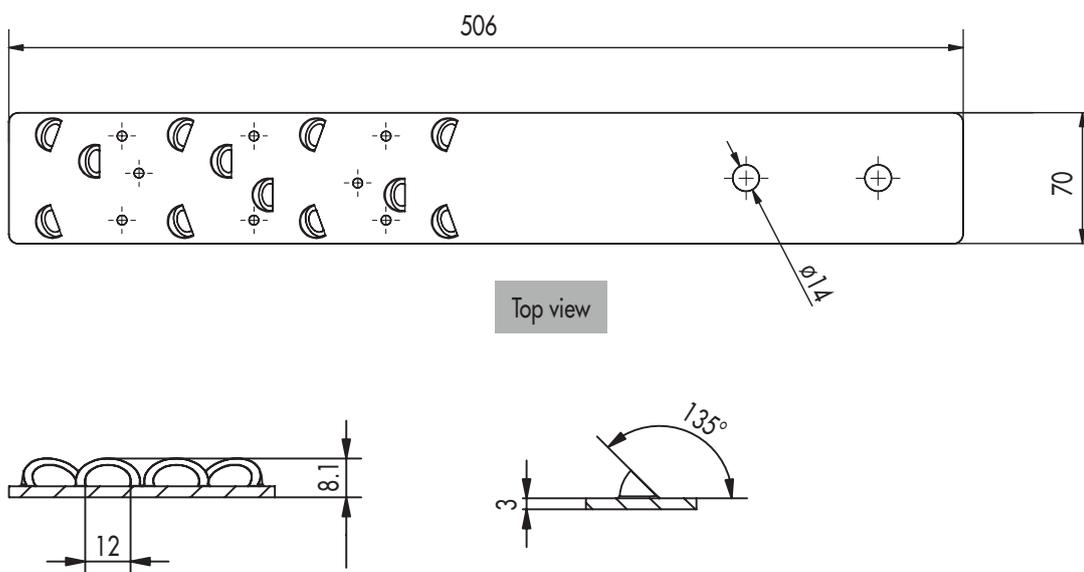
# TENSION STRAPS

## DRAWINGS

### TENSION STRAP HH70



### TENSION STRAP HB70

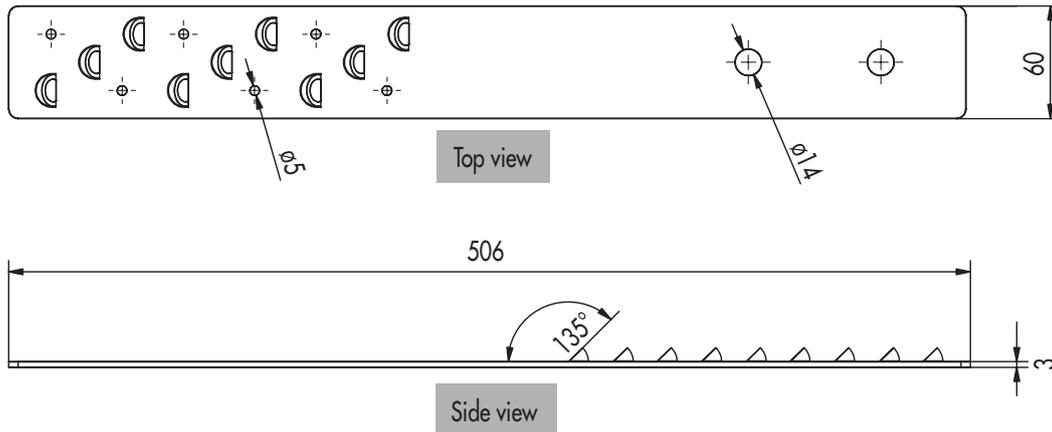


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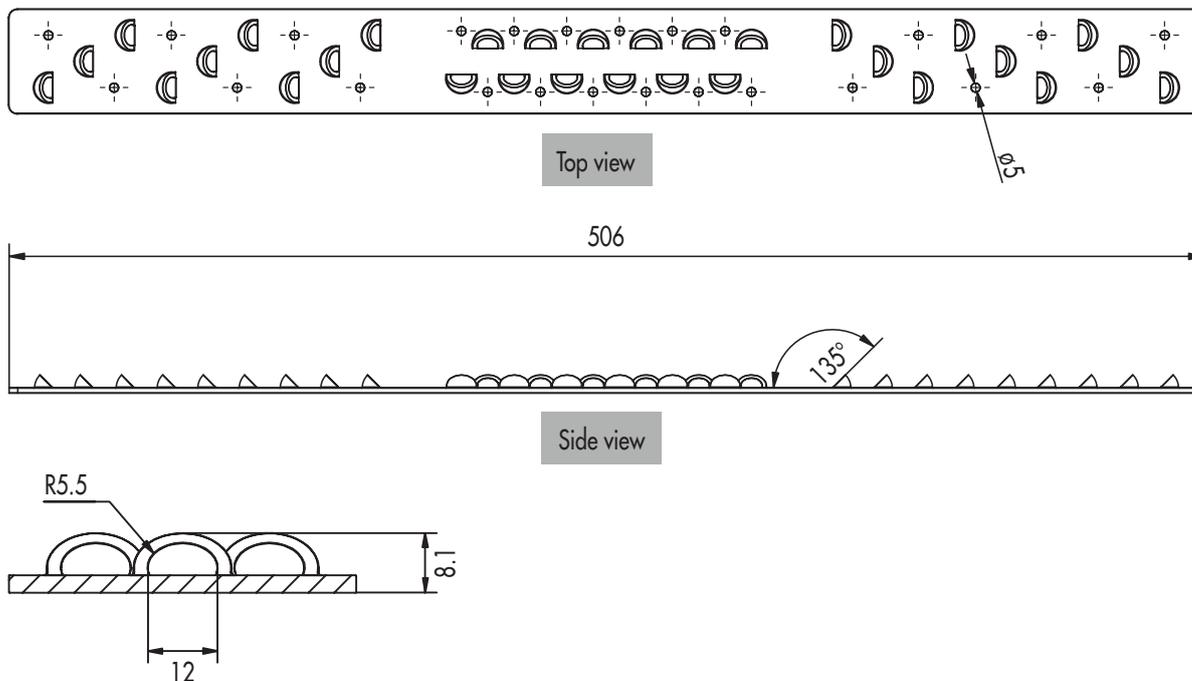
# TENSION STRAPS

## DRAWINGS

### TENSION STRAP HB60



### TENSION STRAP HB60



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).