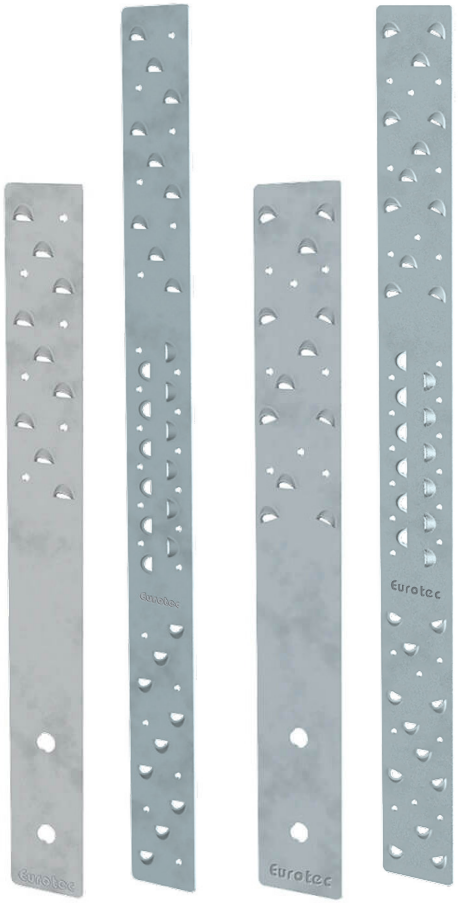
Product data sheet – Tension Straps

Product description

Tension Straps HH60, HH70, HB60, HB70

The tension straps are straps for absorbing tensile forces and tensile and shearing forces developed for modern timber construction. Due to the special holes for anchoring in wood at a 45° angle, installation isn't just especially quick; it's very efficient too thanks to the maximum utilisation of the screw tensile capacity. The tension straps are used in timber frame and solid timber construction.



Material

- S250 construction steel

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 also absorb shearing forces

Approval

ETA
CE
Europ. Techn. Bewertung
European Technical Assessment
ETA-19/0020

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Product table

Zuglaschen				
Art. no.	Product name	Dimensions [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

Instructions for use

The HH60 and HH70 tension straps are multi-storey connectors capable of integrating the suspended ceiling into the connection. Measuring 60 mm wide, 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. The HH70 and HB70 tension straps each have two holes (ø 5 mm) for a 90° screw connection. In addition, the HH70 pull strap is suitable for a ceiling thickness of up to 260 mm and the HH60 pull strap for a ceiling thickness of up to 240 mm.

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

Detailed installation instructions for the tension straps can be found from page 10 onwards.

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Static values

Tension Straps HH60

Load direction F1								
Wood/Wood	Fixing in the sole plate and solid timber ceiling							Steel
	Connectors							
	Paneltwistec CH		Anchor nails			ABS		
Dimensions [mm]	5 x 120	4 x 40	4 x 50	4 x 60	5 x 40	5 x 50	5 x 60	S250
Number [n] per Page	9		6			6		
Char. tensile capacity [KN]	27	8,1	9,4	9,8	8,5	10	10,1	28,5

The load-bearing capacities were determined based on 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 EC5 must be complied with

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Tension Straps HB60

Load direction F1												
Wood/concrete	Fixing in the support							Fixing in concrete (uncracked)				Stahl
	Connectors											
	Paneltwistec CH	Anchor nails			ABS			Rock concrete screw		Bolt anchor		
Dimensions [mm]	5 x 120	4 x 40	4 x 50	4 x 60	5 x 40	5 x 50	5 x 60	Ø 12,5	Ø 12,5	Ø 12	Ø 12	S250
Number [n] per Page	9		6			6		1	2	1	2	
Char. tensile capacity [KN]	27	8,2	9,4	9,8	8,5	10	10,1	35	70	12,6	25,2	28,5

The load-bearing capacities were determined based on 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 EC5 must be complied with
Boundary bearing force according to EC3: Fb, Rk ø 14 mm = 93.75 kN

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Tension Straps HH70

Load direction F1								
Wood/Wood	Fixing in the sole plate and solid timber ceiling							Steel
	Connectors							
	Paneltwistec CH		Anchor nails			ABS		
Dimensions [mm]	5 x 120	4 x 40	4 x 50	4 x 60	5 x 40	5 x 50	5 x 60	S250
Number [n] per Page	14		8			8		
Char. tensile capacity [KN]	40,2	10,5	12,2	12,7	11,1	13	13,1	37,4

The load-bearing capacities were determined based on 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 EC5 must be complied with

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Tension Straps HB70

Lastrichtung F1												
Wood/concrete	Fixing in the support							Fixing in concrete (uncracked)				Steel
	Connectors											
	Paneltwistec CH	Anchor nails			ABS			Rock concrete screw		Bolt anchor		
Dimensions [mm]	5 x 120	4 x 40	4 x 50	4 x 60	4 x 40	4 x 50	4 x 60	Ø 12,5	Ø 12,5	Ø 12	Ø 12	S250
Number [n] per Page	14		8			8		1	2	1	2	
Char. tensile capacity [KN]	40,2	10,5	12,2	12,7	11,1	13	13,1	35	70	12,6	25,2	37,4

The load-bearing capacities were determined based on 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 EC5 must be complied with
Boundary bearing force according to EC3: Fb, Rk ø 14 mm = 93.75 kN

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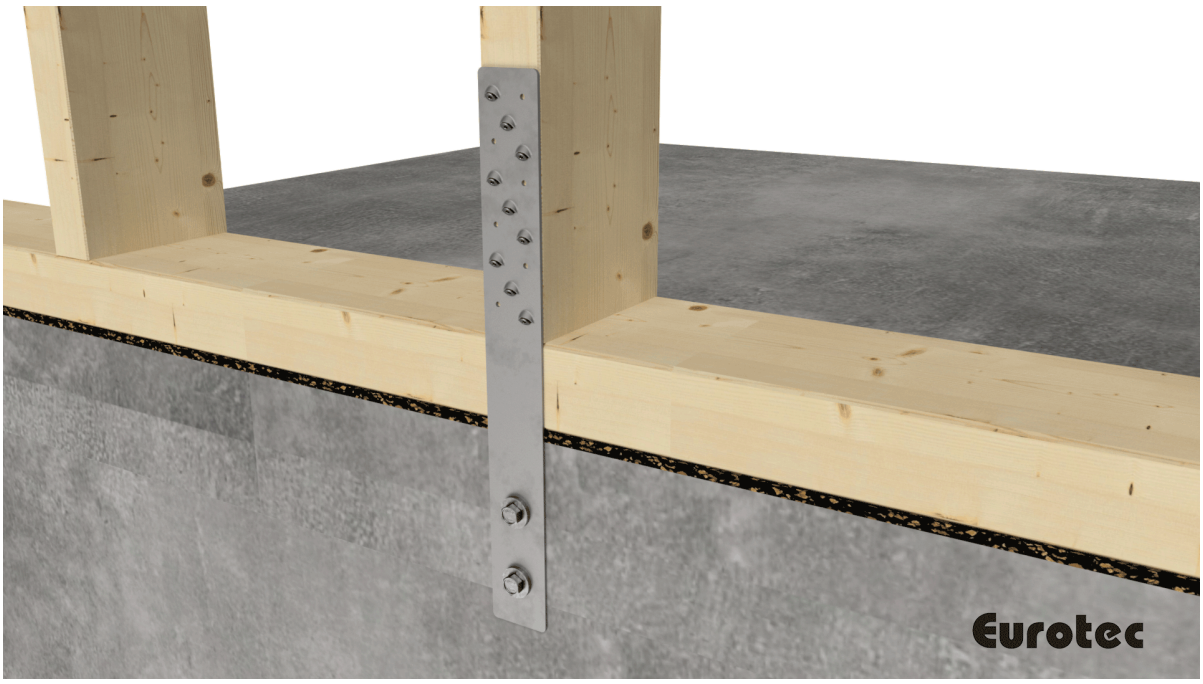
Application pictures



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Tension Straps HB70

Tension Straps HH60

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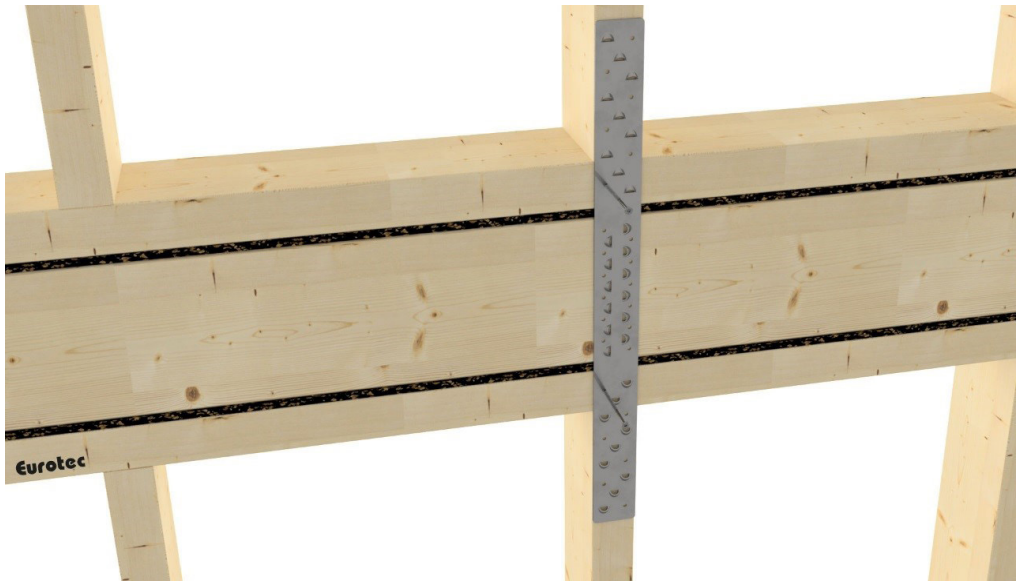
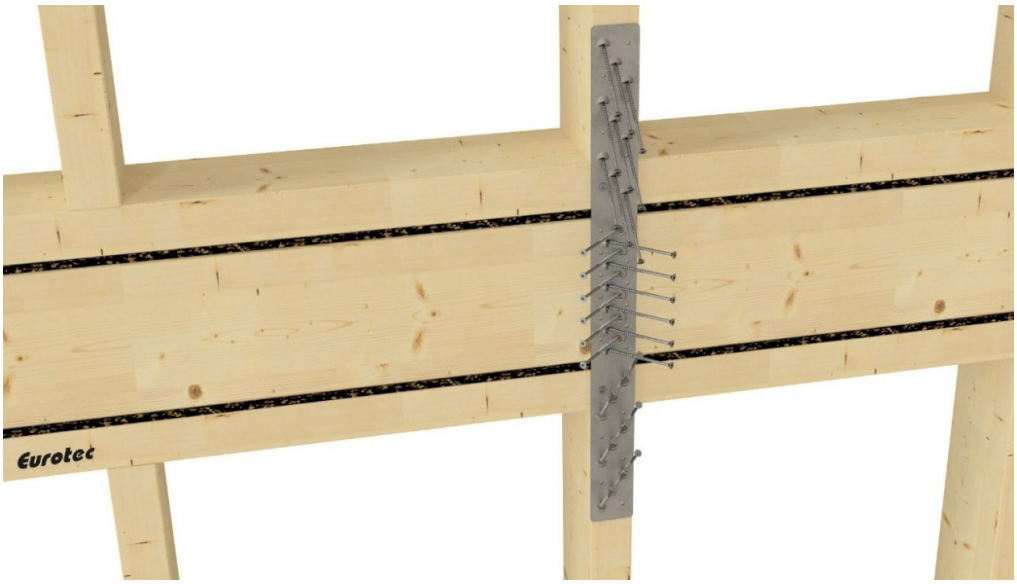
Installation instructions for the HH60 tension straps

Step 1: Use two screws at a 90° angle to fix the tension strap.



Step 2: Screw the tension straps through the openings provided for the 45° screw connection.



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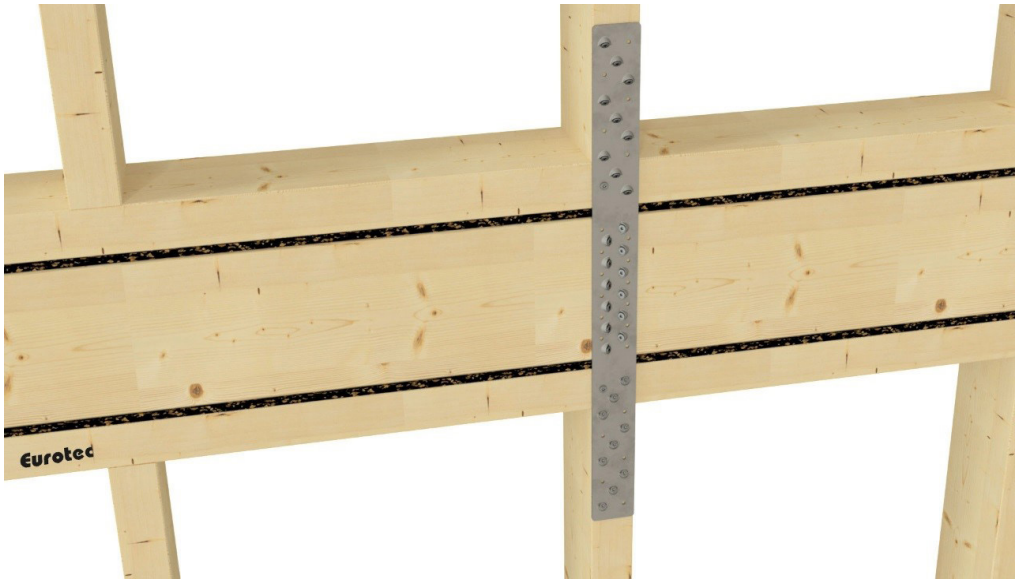
Step 3: Finished!



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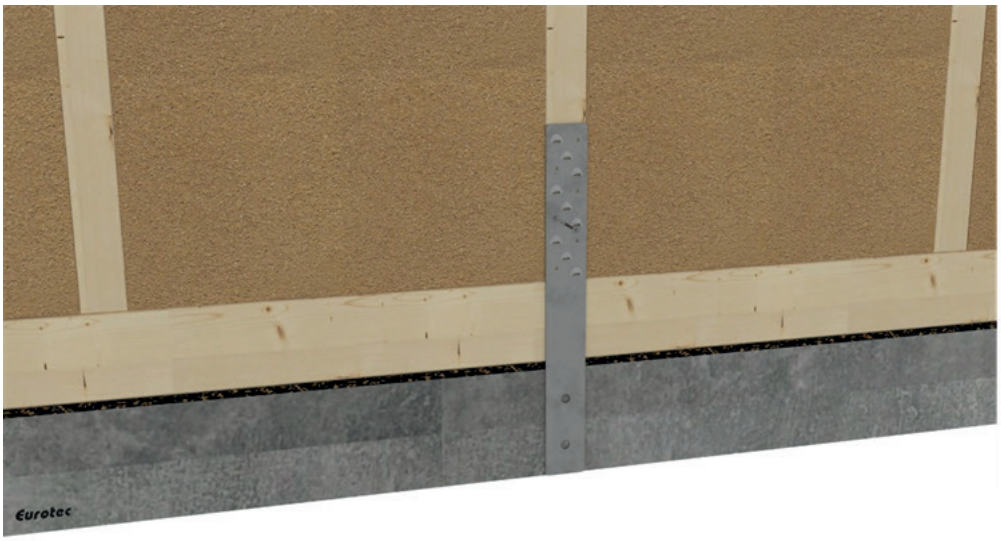
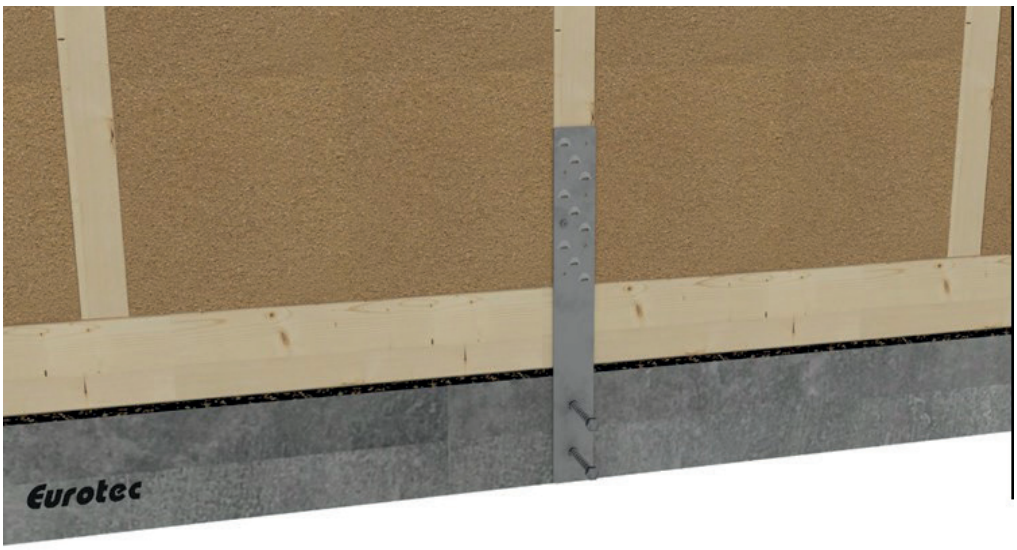
Installation instructions for the HB60 tension strap

Step 1: Use one screw at a 90° angle to fix the tension strap.



Step 2: Anchor in the concrete through the ø 14 mm holes provided for this purpose.



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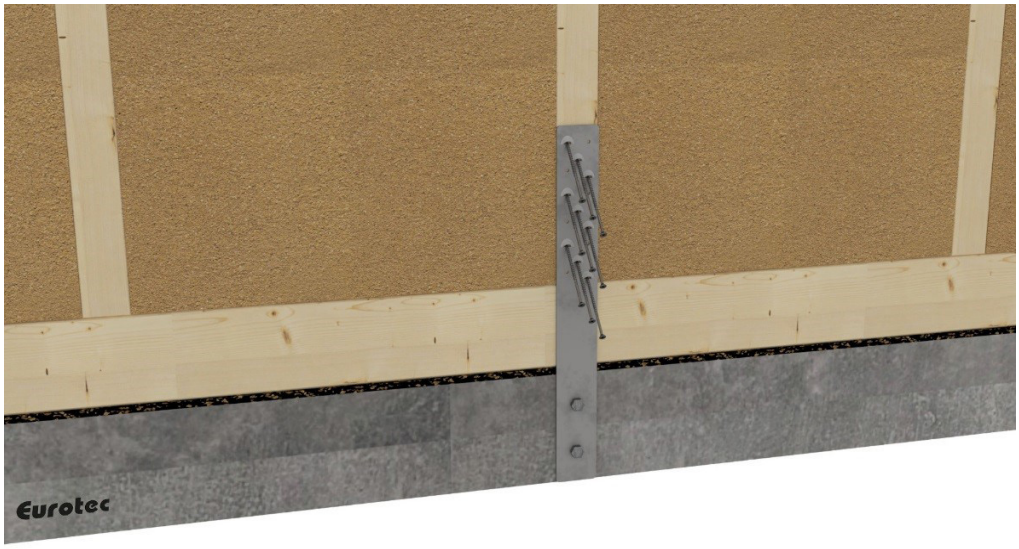
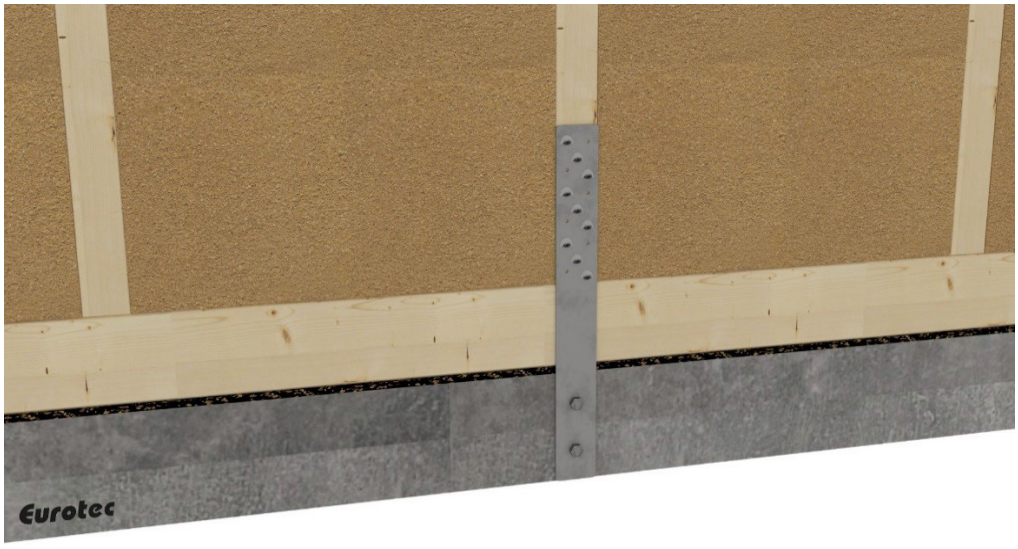
Step 3: Screw the tension strap through the openings provided for the 45° screw connection.



Step 4: Finished!



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Installation instructions for the HH70 tension strap

Step 1: Use two screws at a 90° angle on each side to fix the tension strap (middle holes).

Step 2: Screw the tension strap through the openings provided for the 45° screw connection.

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Step 3: Finished!

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Installation instructions for the HB70 tension strap

Step 1: Use two screws at a 90° angle to fix tension strap.

Step 2: Anchor in the concrete through the ø 14 mm holes provided for this purpose.

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Step 3: Screw the tension strap through the openings provided for the 45° screw connection.

Step 4: Finished!

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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