

# CERTIFICATE

Certified Passive House Component

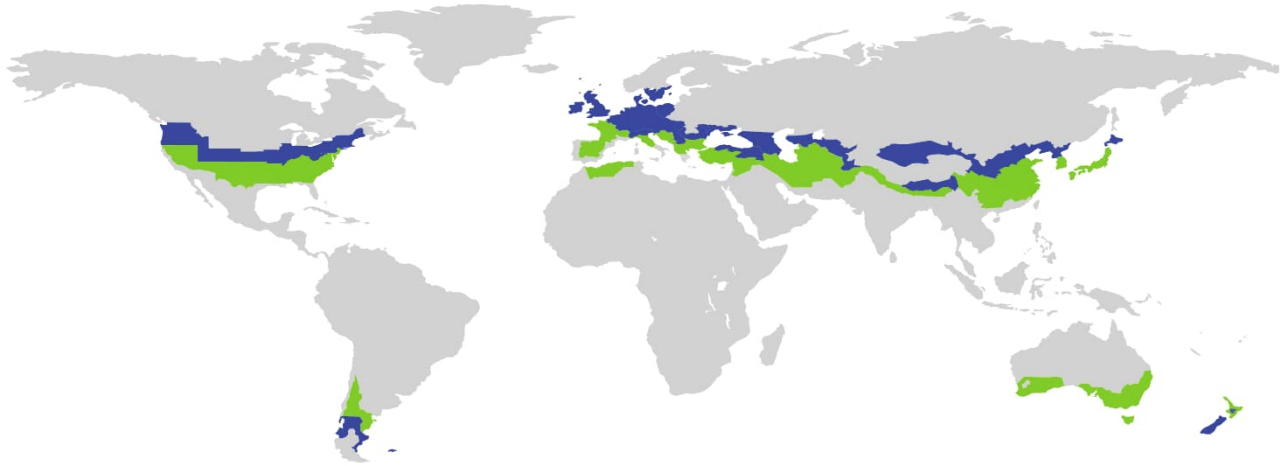
ID: 2293cc03 valid until 31. December 2025

Passive House Institute

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Category	<b>Column connection</b>
Manufacturer	<b>Farrat Isolevel Limited</b>
	<b>WA15 8HJ Altrincham</b>
	<b>UNITED KINGDOM</b>
Product name	<b>STRUKTRA TBF</b>

**This certificate was awarded based on the following criteria for the climate zone**

### Hygiene criterion

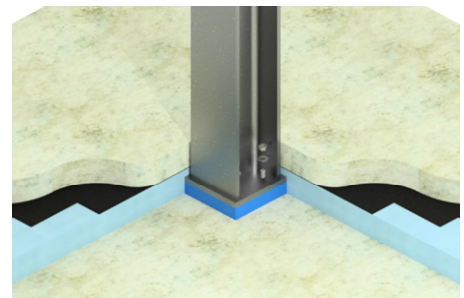
Temperature factor of opaque junctions

$$f_{R_{si}=0.25m^2K/W} \geq 0.86$$

### Energy criterion

The thermal bridge coefficient is

$$X \leq X_{Max}$$



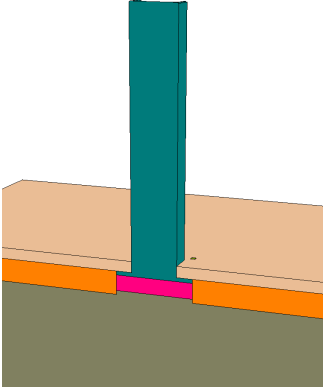
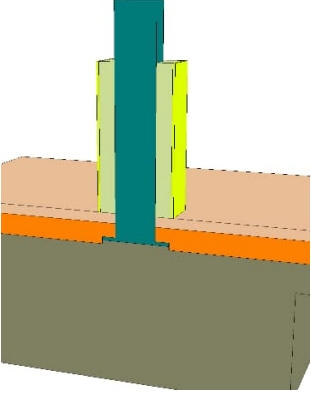
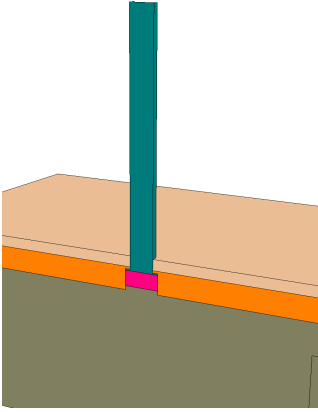
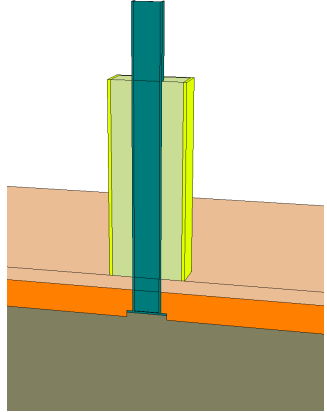
cool, temperate climate



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COMPONENT**

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## Determined values

STRUKTRA TBF	Steel column (HEB 260)	Reference flank-insulation
	Heat transfer coefficient floor slab	
	<b>0.246 W/(m²K)</b>	
	Thermal bridge coefficient X (5 cm)	
	<b>0.5197 W/K</b>	
	Thermal bridge coefficient X (10 cm)	
	<b>0.3928 W/K</b>	
Thermal bridge coefficient $X_{Max}$ reference flank-insulation	<b>0.5754 W/K</b>	
Thermal bridge coefficient without thermal separation	<b>0.8607 W/K</b>	
STRUKTRA TBF	Steel column (IPE 140)	Reference flank-insulation
	Heat transfer coefficient floor slab	
	<b>0.246 W/(m²K)</b>	
	Thermal bridge coefficient X (5 cm)	
	<b>0.1180 W/K</b>	
	Thermal bridge coefficient X (10 cm)	
	<b>0.0878 W/K</b>	
Thermal bridge coefficient $X_{Max}$ reference flank-insulation	<b>0.1595 W/K</b>	
Thermal bridge coefficient without thermal separation	<b>0.2052 W/K</b>	

### Application and explanatory notes

The STRUKTRA TBF structural thermal break elements reduce the thermal bridges of steel columns penetrating the insulation layer above a floor slab. The values have been determined for a HEB 260 steel column and an IPE 140 steel column with a base plate and four anchoring bolts. The corresponding thermal bridges for a 50 mm and 100 mm separating element can be found in the table above. For a HEB 260 steel column, a minimum thickness of 100 mm is required in order to ensure sufficient interior surface temperatures.

### Note

The maximum point thermal bridge loss coefficient ( $X_{Max}$ ) for column connection situations corresponds to the point thermal bridge loss coefficient of the same construction with flank insulation (1.00 m length, 10 cm insulation thickness all round, thermal conductivity 0.035 W/(mK) without thermal separation element.

Calculations and boundary conditions according to the criteria and algorithms "Certified Passive House Components - Column and wall connection, Version 1.1"