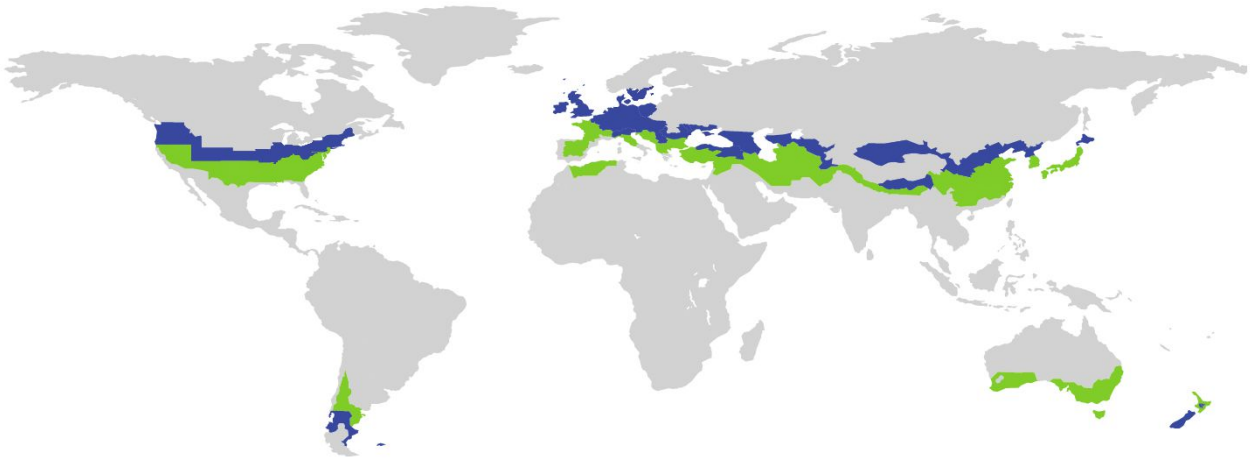
CERTIFICATE

Certified Passive House Component

ID: 1903cc03 valid until 31. December 2025

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category	**Column connection**
Manufacturer	**Armatherm Thermal Bridging Solutions** **BD2 1QN Bradford** **UNITED KINGDOM**
Product name	**Armatherm 500-320 & 500-490**

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

Hygiene criterion

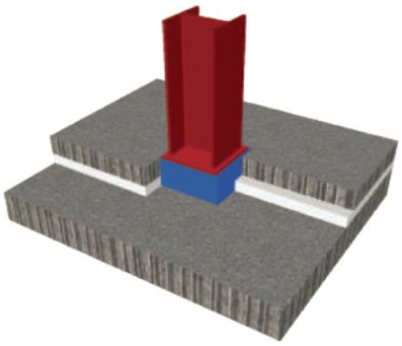
Temperaturefactor of opaque junctions

$f_{Rsi=0,25m^2K/W} \geq$ **0.86**

Energy criterion

The thermal bridge coefficient is

$X \leq X_{Max}$



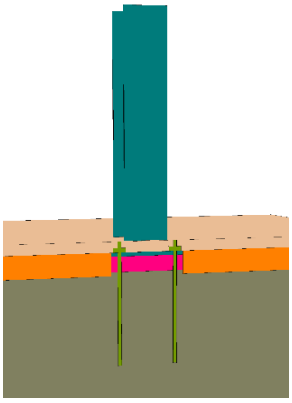
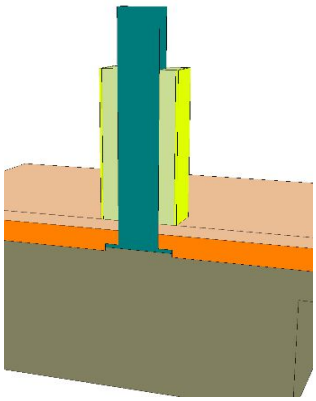
cool, temperate climate

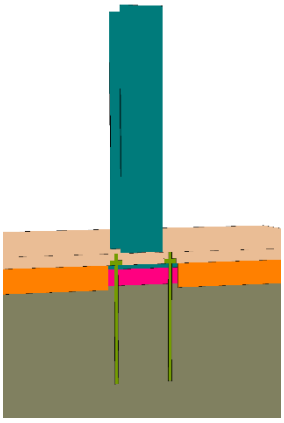
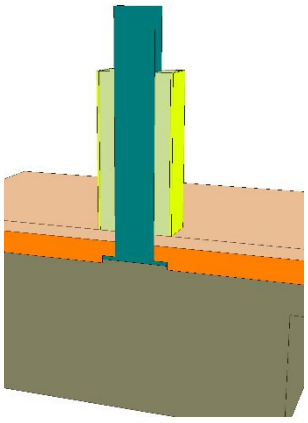
CERTIFIED COMPONENT

Passive House Institute

Armatherm Thermal Bridging Solutions
BD2 1QN Bradford UNITED KINGDOM
01274 591115 | www.armatherm.com

Determined values

Armatherm 500-320	Steel column (HEB 260)	Reference flank-insulation
	Heat transfer coefficient floor slab **0.246 W/(m²K)** Thermal bridge coefficient X (5 cm) **0.3725 W/K** Thermal bridge coefficient X (10 cm) **0.2603 W/K** Thermal bridge coefficient X_{Max} reference flank-insulation **0.5754 W/K** Thermal bridge coefficient without thermal separation **0.8607 W/K**	

Armatherm 500-490	Steel column (HEB 260)	Reference flank-insulation
	Heat transfer coefficient floor slab **0.246 W/(m²K)** Thermal bridge coefficient X (5 cm) **0.4033 W/K** Thermal bridge coefficient X (10 cm) **0.2848 W/K** Thermal bridge coefficient X_{Max} reference flank-insulation **0.5754 W/K** Thermal bridge coefficient without thermal separation **0.8607 W/K**	

Application and explanatory notes
The Armatherm 500 column base thermal seperation 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 with a base plate and four anchoring bolts. Smaller columns result in a reduced thermal bridge. The corresponding thermal bridges for a 50 mm and 100 mm seperating element can be found in the table above. A minimum thickness of 50 mm is required in order to ensure sufficient interior 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"