

# Certificate

## Certified Passive House Component

for arctic climate, valid until 31.12.2025

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
GERMANY

Category: **Attic staircase**  
 Manufacturer: **WIPPRO GmbH**  
**4191 Vorderweissenbach, AUSTRIA**  
 Product name: **KLIMATEC 160**

**This certificate was awarded based on the following criteria:**

A given component size of 1.40 m by 0.70 m results in:

$$U_D = 0.34 \text{ W/(m}^2\text{K)} \leq 0.60 \text{ W/(m}^2\text{K)}$$

Taking the installation situations into account, the component meets the following criterion.

$$U_{D,installed} \leq 0.60 \text{ W/(m}^2\text{K)}$$

Functional requirements of hygiene:

$$f_{Rsi} = 0,25 \text{ m}^2\text{K/W} \geq 0.80$$

Following thermal bridge coefficients  $\Psi$  [W/(mK)] have been determined:

	Wooden- beam ceiling	Concrete-ceiling	Concrete-ceiling with frame
<b>Thermal bridge coefficient <math>\Psi</math> [W/(mK)]</b>	0.04	0.08	0.05
<b><math>U_{D,installed}</math> [W/(m<sup>2</sup>K)]</b>	0.52	0.70	0.57

### Description

Attic stairs of wooden composite material. Trap door with insulation of extruded polystyrene ( $\lambda = 0.035 \text{ W/(mk)}$ ) and coating of sheet metal. 3 - level airtightness-sealing (EPDM, TPE) and surrounding insulation of mineral wool ( $\lambda = 0.035 \text{ W/(mk)}$ ). Installation in arctic climates requires installation frame for concrete-ceilings.

Please ask the manufacturer for a detailed report containing all calculations and results.

Representation of the Passive House Attic Stairs

Isothermal map of the Passive House Attic Stairs

Isothermal map installation in concrete ceiling

Isothermal map installation in wooden-beam ceiling

arctic climate

