

Certificate

Certified Passive House Component

for arctic climate, valid until 31.12.2018

Passive House Institute
Dr. Wolfgang Feist
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GERMANY

Category: **Attic staircase**
Manufacturer: **WIPPRO Wipplinger Ges.m.b.H & Co.KG**
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 Ψ [W/(mK)] have been determined:

	Wooden- beam ceiling	Concrete-ceiling	Concrete-ceiling with frame
Thermal bridge coefficient Ψ [W/(mK)]	0.04	0.08	0.05
$U_{D,installed}$ [W/(m²K)]	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.

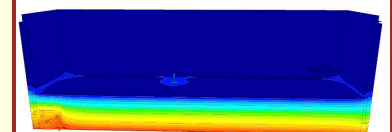
Please ask the manufacturer for a detailed report containing all calculations and results.

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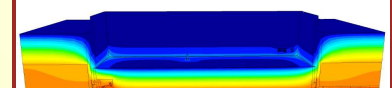
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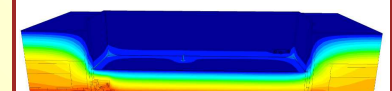
Representation of the Passive House Attic Stairs



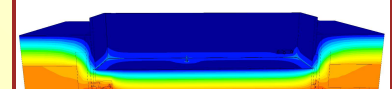
Isothermal map of the Passive House Attic Stairs



Isothermal map installation in concrete ceiling



Isothermal map installation in wooden-beam ceiling



Isothermal map installation in concrete ceiling with installation frame

arctic climate



CERTIFIED COMPONENT

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