

# **Explorer Hotel Kitzbühel**

by Camille Sifferlen / (1) 2019-06-17 11:56:39 / International / ⊚ 4100 / № EN



**Building Type**: Hotel, boarding house

Construction Year : 2016 Delivery year : 2016

Address 1 - street: A - 6380 6380 ST. JOHANN IN TIROL, Austria

Climate zone: [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area: 3 485 m<sup>2</sup>

Construction/refurbishment cost: 8 943 000 €

**Cost/m2**: 2566.14 €/m<sup>2</sup>

## Certifications :



# General information

Explorer Hotels are the first certified passive house hotels in Europe to be climate-neutral. Their innovative construction with their own photovoltaic system and good insulation are combined with a rigorous energy concept. Compared to hotels of the same size, this translates into energy savings of 70%. In order to promote local added value, for example, the restaurant is deliberately removed and sports and leisure activities are also implemented with regional partners. Located in various alpine sites in Germany and Austria, Explorer Hotels are the ideal base camps for an active start in the mountains. The trendy design rooms offer plenty of storage space and a comfortable lounge area with a view of the mountains. This environmentally and socially responsible approach nevertheless makes them affordable hotels with overnight stays starting at less than 40 euros per person (2019 figures).

### Photo credit

Explore hotels

## Stakeholders

### Contractor

Name: Explorer Hotel

# **Construction Manager**

Name: Rhomberg Bau GmbH

### Stakeholders

Function: Designer
Renn Architekten, Fischen

Function: Thermal consultancy agency

Herz & Lang GmbH

https://www.herz-lang.de/de/

Function: Structures calculist

HANEL Ingenieure

ZT DI Carlo Chiavistrelli

# Energy

# **Energy consumption**

Primary energy need: 172,00 kWhpe/m<sup>2</sup>.year

Calculation method: Other

Breakdown for energy consumption: Annual heating demand 15 kWh /(m2a) \*calculated according to PHPP

Heating load 17 W/m2

# Envelope performance

## More information :

Exterior wall Shingle facade

Internal plaster, reinforced concrete (200 mm), mineral fibre insulation (120 + 160 mm), timber substruture (24 mm), shingle facade U-value = 0.123 W/(m2K)

Basement floor / floor slab

Underground parking ceiling

Flooring, screed (40 mm), impact sound insultaion (35 mm), reinforced concrete ceiling (250 mm), mineral wool insulation board (160 mm), cementitious non-combustible wood wool multi-layer board (115 mm), rendering system

U-value = 0.147 W/(m2K)

Roof

Plasterboard (15 mm), static air layer (30 mm), OSB (18 mm), insulation between rafters (160 + 260 mm), roof boarding (18 mm) U-value = 0.092 W/(m2K)

Frame

Trocal, 88+

PVC-window, thermal bridge-free installation

U w-value = 0.74 W/(m2K)

Glazina

Triple thermal protection glazing U g-value = 0.53 W/(m2K)

g -value = 56 %

Indicator:

Air Tightness Value: 0,40

## Renewables & systems

## **Systems**

### Heating system:

- Urban network
- Water radiator
- Radiant ceiling

### Hot water system :

Urban network

### Cooling system:

Radiant ceiling

#### Ventilation system:

Double flow heat exchanger

#### Renewable systems:

Solar photovoltaic

### Other information on HVAC:

Ventilation

Rosenberg GmbH, Airbox T60-13R, Airbox T60-2013

Central comfort ventilation system with heat recovery (heat availability level about 82 %)

Airbox T60-13R - 5.200 m<sup>3</sup>/h Airbox T60-2013 - 10.500 m<sup>3</sup>/h

Heating installation

Renewable district heating (local biomass - combined heat and power station), heat distribution via radiators as well as panel heating and cooling

Domestic hot water

Renewable district heating (local biomass - combined heat and power station)

Large photovoltaic system, battery storage device with intelligent energy management system (, energy-efficient LED movement-sensitive lighting for all traffic areas

# **Products**

## **Product**

Airbox T60-13R

Rosenberg GmbH

 $\begin{tabular}{ll} $ $\mathbb{Z}^*$ https://www.rosenberg-gmbh.com/de/produktprogramm/kastenklimageraete/airbox-t60 \end{tabular}$ 

Product category: Génie climatique, électricité / Ventilation, rafraîchissement

Airbox T60-2013

Rosenberg GmbH

 ${\hbox{$\, \square$}}^{\blacksquare} \ https://www.rosenberg-gmbh.com/de/produktprogramm/kastenklimageraete/airbox-t60$ 

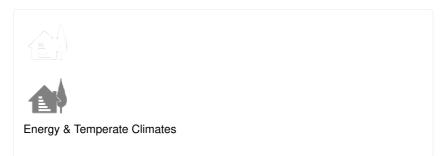
Product category: Génie climatique, électricité / Ventilation, rafraîchissement

# CONTEST

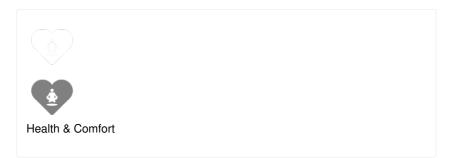
# Reasons for participating in the competition(s)

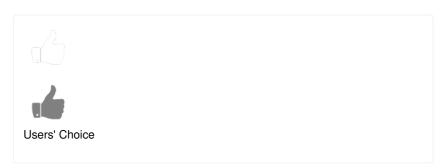
- first certified passive house hotels in Europe to be climate-neutral
- innovative construction with their own photovoltaic system
- energy savings of 70%
- environmentally and socially responsible approach nevertheless makes them affordable hotels

# **Building candidate in the category**











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