

## Explorer Hotel Kitzbühel

by Camille Sifferlen / 2019-06-17 11:56:39 / International / 4284 / EN



**Primary energy need :**

# 172 kWhpe/m<sup>2</sup>.year

(Calculation method : Other )

**ENERGY CONSUMPTION**

*Economical building* *Building*

< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

*Energy-intensive building*

**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.

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**Net Floor Area** : 3 485 m<sup>2</sup>  
**Construction/refurbishment cost** : 8 943 000 €  
**Number of Bedroom** : 100 Bedroom  
**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).

## See more details about this project

[https://passivehouse-database.org/index.php?lang=en#d\\_5025](https://passivehouse-database.org/index.php?lang=en#d_5025)

## Photo credit

Explore hotels

## Stakeholders

### Contractor

Name : Explorer Hotel

<https://www.explorer-hotels.com/en/>

### Construction Manager

Name : Rhomberg Bau GmbH

<https://www.rhomberg.com/de/referenzen/explorer-hotel-st-johann-i-tirol>

### Stakeholders

Function : Designer

Renn Architekten, Fischen

<https://renn-architekten.com/>

Function : Thermal consultancy agency

Herz & Lang GmbH

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

Function : Structures calculist

HANEL Ingenieure

ZT DI Carlo Chiavistrelli

<https://www.ib-hanel.at/>

## 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/(m<sup>2</sup>a) \*calculated according to PHPP

Heating load 17 W/m<sup>2</sup>

### Envelope performance

More information :

Exterior wall Shingle facade

Internal plaster, reinforced concrete (200 mm), mineral fibre insulation (120 + 160 mm), timber substructure (24 mm), shingle facade

U-value = 0.123 W/(m<sup>2</sup>K)

Basement floor / floor slab

Underground parking ceiling

Flooring, screed (40 mm), impact sound insulataion (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/(m<sup>2</sup>K)

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/(m<sup>2</sup>K)

Frame  
Trocal, 88+  
PVC-window, thermal bridge-free installation  
U w-value = 0.74 W/(m2K)

Glazing  
Triple thermal protection glazing  
U g-value = 0.53 W/(m2K)  
g -value = 56 %

Indicator : n50

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 m³/h

Airbox T60-2013 - 10.500 m³/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

<https://www.rosenberg-gmbh.com/de/produktprogramm/kastenklimageraete/airbox-t60>

Product category : Table 'c21\_germany.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '19'

Airbox T60-2013

Rosenberg GmbH

<https://www.rosenberg-gmbh.com/de/produktprogramm/kastenklimageraete/airbox-t60>

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## Costs

## 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



Energy & Temperate Climates



Health & Comfort



Users' Choice



