



SOLARCHITECTURE
building solutions



Grosspeter Tower



Address

Grosspeterstrasse 25 & 44, 4052 Basel, Switzerland



Location

47°32'43" N | 7°36'08" E



Altitude

273 MAMSL

With the support of



SWISSOLAR 

SUPSI

ETH zürich

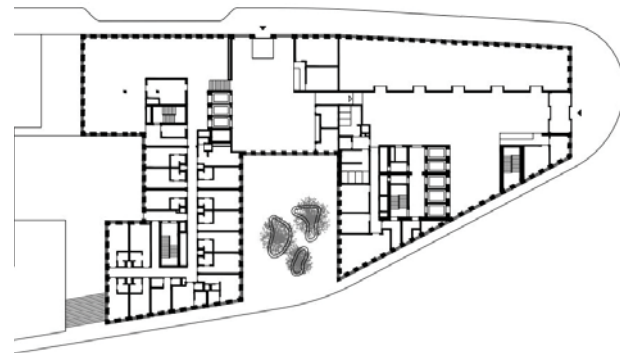


The solar Skycraper

Grosspeter Tower's height and architecture makes it one of the city's most striking buildings. Its shape comes from the concept of two interlocking volumes, which present themselves in a different form from every angle. The project provides for mixed-use with offices and a hotel, according to the "core and shell" principle, with a basic fit-out and a tenant fit-out. The very stringent quality requirements in the building's overall concept also result in an excellent eco-efficient footprint. A borehole heat exchanger array provides the heat-pump system and cooling unit with geothermal energy. Photovoltaic surfaces are integrated into the façade and on the roof. With his sober elegance, Grosspeter Tower is an example for the successful symbiosis of solar technique and architecture.



View of the indoor space.



The building was designed following the core (staircases and installation shafts) and shell (building envelope) principle.

Energy

Active solar surface	770 m ²	4800 m ²
Active solar surface ratio	<75 %	<50 %
Peak power	100 kWp	440 kWp
Building skin application	Flat roof	Cold facade
Storage	–	n/a

Energy production

252,000

kWh (roof & facades)

Source: Solaragentur,
Solar Preis Publikation 2017

Self-consumption

0%



Building characteristics

Building typology

Administrative and commercial (mix.)

Construction type

New

Year of construction

2017

Energy reference surface

20,300 m²

Energy index

44.5 kWh/m²a (heat., cooling, electricity)

Energy labelling

-



The roof photovoltaic installation has a power capacity of 100 kWp.

BIPV module

Product

Customized BIPV CGIS module M-PCSXXX with StoVentec ARTline Invisible

Manufacturer

Nice solar energy & Sto AG

Cell technology

CGIS

Power

n/a

Front glass type/customization

No coloured print, but structured front glass (Albarino -T)

Dimensions

450 different sized (average dim. 1.4 m²)

Specific power

110 Wp/m²

Specific weight

32 kg/m²



Building skin

Roof

Application

Standard modules are laid on a metallic support system

Description

Flat roof insulated with 16 – 24 cm of mineral wool

U value

0.12 - 0.18 W/m²K

Fastening system

Aluminum stands

Other

–

Facade

Application

PV cladding integrated in a cold facade

Description

Concrete walls insulated with 20 cm of mineral wool

U value

0.18 W/m²K

Fastening system

Continuous fixing system (aluminium tracks)

Other

Prefabricated concrete and steel frame construction

Glass surface

Application

Windows

Description

Triple glazing with aluminium frame

U value

0.91-0.97 W/m²K

g value

n/a

Other

Venetian blinds, perforated



The building is close to the main transport axes.



Costs	Parties involved	Awards & recognitions
Costs of the building 120,000,000 CHF Price per m³ n/a	Owner PSP Real Estate AG Architect Burkhardt + Partner AG lead architect A. Kaufmann Construction management Dietziker Partner Baumanagement AG Photovoltaic Installer Planeco GmbH Photovoltaic consultant Energiebüro AG Facade installer Hevron SA Photo Adriano Biondo	Awards Schweizer Solarpreis 2018- New buildings <hr/> Bavarian Architecture Award for building integrated solar technology 2017 <hr/> Prixforix 2018, Award for the most attractive facade In CH (3rd prize) <hr/> Sun Faktor 5-Jury Prize 2018 <hr/> Publications TEC21 Nr. 24–25 June 2017 <hr/> Other Please refers also to Burkhardt+Partner AG online project description: www.burckhardtpartner.com/en/projects/detail/projekte/show/Projekte/new-office-and-hotel-building-grosspeter .



The view from the city landscape.

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