



SOLARCHITECTURE
building solutions



deltaROSSO



Address

Via Poeta F. Chiesa 30, 6833 Vacallo, Switzerland



Location

45°50'31.5" N | 9°01'46.4" E



Altitude

419 MAMSL

With the support of



SWISSOLAR 

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Rising from the past

deltaROSSO is a high-tech building designed to guarantee the full coverage of its energy needs.

The building, which houses both apartments and offices, consists of a new four-story structure resting on the two basement floors of the existing building, which serve as the foundation for the whole building. 203 photovoltaic modules and 13 solar thermal panels are integrated in the facade and on the south pane of the roof. The cladding system, characterized by external sheets of matt black glass, was designed and developed by the architect allowing to bring the same aesthetic characteristics to both the perimeter walls and the roof.



South-east facade.



Plan of the second and third floor.

Energy

Active solar surface	109 m ²	194 m ²
Active solar surface ratio	<25 %	<50 %
Peak power	17 kWp	30 kWp
Building skin application	Solar tiles	Cold facade
Storage	—	—

Energy production

48,850

kWh
(Roof & facades)

Self-consumption

73%



Building characteristics

Building typology

Residential and administrative

Construction type

New

Year of construction

2016

Energy reference surface

1,651 m²

Energy index

54 kWh/m²a (heating, electricity, cooling)

Energy labelling

Minergie-P (TI-143-P)



Interior view of the penthouse.

BIPV module

Product

Custom made – ISSOL – Vacallo – A

Manufacturer

ISSOL

Cell technology

Mono-crystalline

Cell colour

Matt black

Power

230 Wp

Front glass type/customization

PV cells laminated on a satin glass

Dimensions

1497x997x88 mm

Specific power

154 Wp/m²

Weight

33 Kg

Specific weight

22 Kg/m²



Building skin

Roof

Application

Solar tiles integrated in a pitched roof.

Description

Sloped concrete roof insulated with 18 cm of Polyurethane (PUR).

U value

0.14 W/m²K

Fastening system

Continuous fixing system (galvanized steel)

Other

–

Facade

Application

PV cladding integrated in cold facade

Description

Concrete walls insulated with 18 cm of Polyurethane (PUR).

U value

0.13 W/m²K

Fastening system

Continuous fixing system (galvanized steel)

Other

–

Glass surface

Application

Windows and skylights

Description

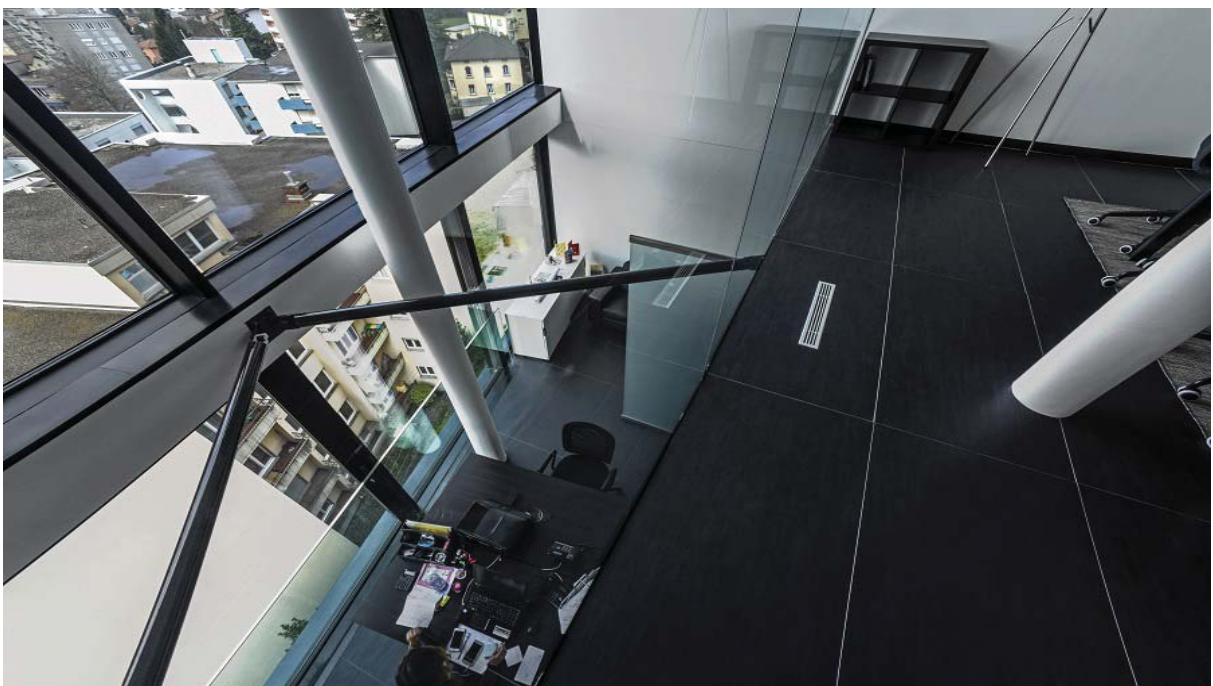
Triple glazing with aluminium frame

U value

0.80 W/m²K

g value

0.45



South west facade.



Costs	Parties involved	Awards & recognitions
Costs of the building Not available	Owner Stefano de Angelis & M. Mazza	Awards Schweizer Solarpreis 2019
Price per m³ Not available	Architect deltaZERO- S. De Angelis & M. Mazza	Migros Bank Special Solar Prize 2019 for multiple dwelling Plus Energy Buildings
	Photovoltaic Installer Greenkey Sagl	Publications Immobilien September 2018, Revidierte Kosten von Minergie
	Photo Luciano Carugo	



It is practically impossible to distinguish the active PV elements from the facade cladding.

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