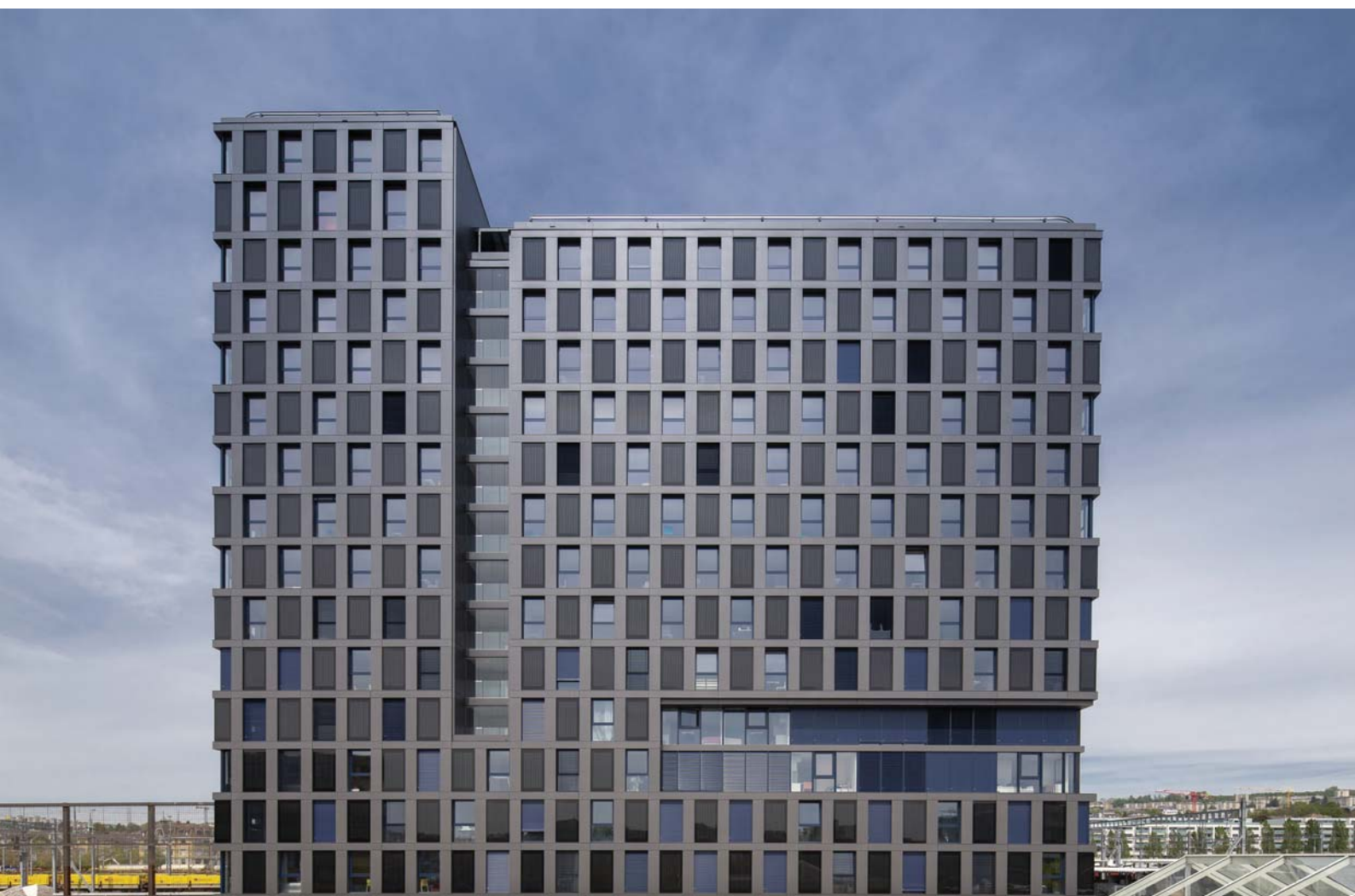




SOLARCHITECTURE
building solutions



Silo Blue



Address

Avenue du Silo 5, 1020 Renens, Switzerland



Location

46°32'03" N 6°35'08" E



Altitude

415 MAMSL

With the support of



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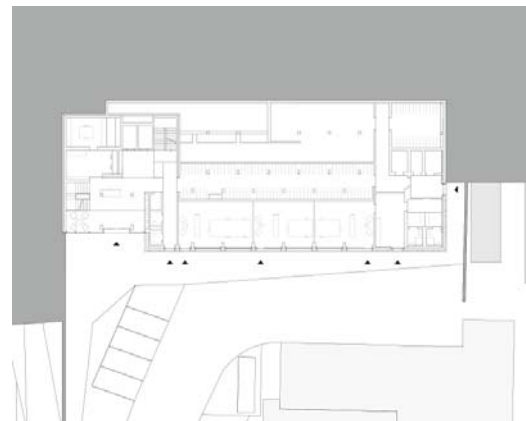
A sunny student residence

The construction area is regulated by a district plan that defines the spatial models: the height, width and depth of the building are given. For this reason, the architectural firm has placed the emphasis on a detailed work of the construction elements that have resulted in a new formal definition and therefore a strong identity to the building.

Displacements in the facade planes and cuts in the volume allowed to give the building a slender shape, to define a composition with a “whole” and a lateral volume and, above all, to manage the duality of the project, located between the railway tracks on one side and the residential area on the other. Thus, in a simple volume, states of reading overlapped on each other, qualifying each front of the building emphasizing the verticality and offering openings in the landscape. In response to the building’s internal program, the facade is characterized by a regular metal mesh that defines the openings and gives the building its character. This mesh is sometimes complemented by windows and photovoltaic modules arranged alternately throughout the facade.



Building view.



Plan of the basement floor. The 15 floors of the building contain 276 studies, for the reception of 276 students in functional environment.

Energy

Active solar surface	139 m ²	926 m ²
Active solar surface ratio	10%	90%
Peak power	8.2 kWp	131.6 kWp
Building skin application	Flat roof	Cold facades
Storage	—	—

Energy production

90,000

kWh

Roof and facades,
source: Solarwall SA

Self-consumption

90%



Building characteristics

Building typology

Residential & administrative

Construction type

New

Year of construction

2018

Energy reference surface

10,043 m²

Energy index

58 kWh/m²a (heating and electricity)

Energy labelling

Minergie-P_VD-135-P



Interior view of main floor. On the ground floor there is a commercial / administrative area.

BIPV module

Product

Solarwall Mono C

Manufacturer

Gruppo STG

Cell technology

Mono-crystalline

Front glass type/customization

Tempered glass with partial ceramic print

Dimensions

1180 x 2310 mm (standard module)

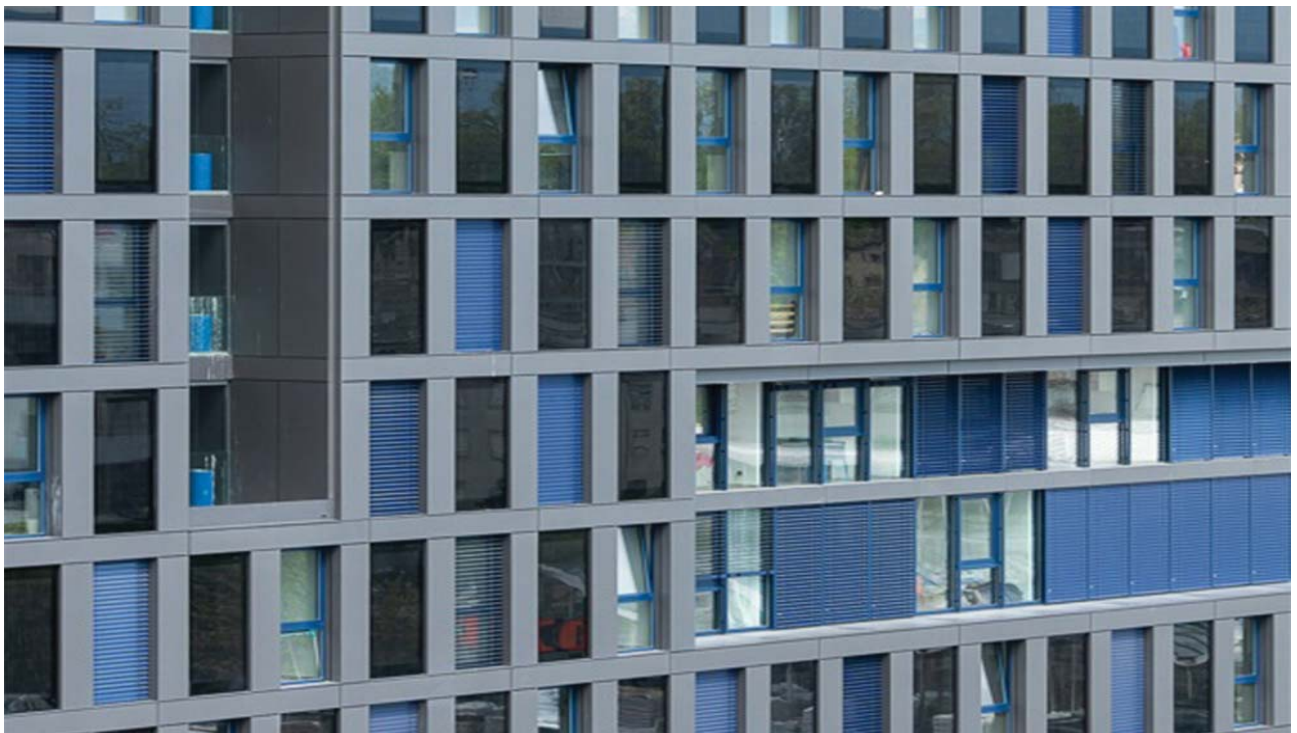
Specific power

125 Wp/m² (2/3 of the surf. is occupied by cells, 185 W/m² considering a full cell surf.)



Building skin

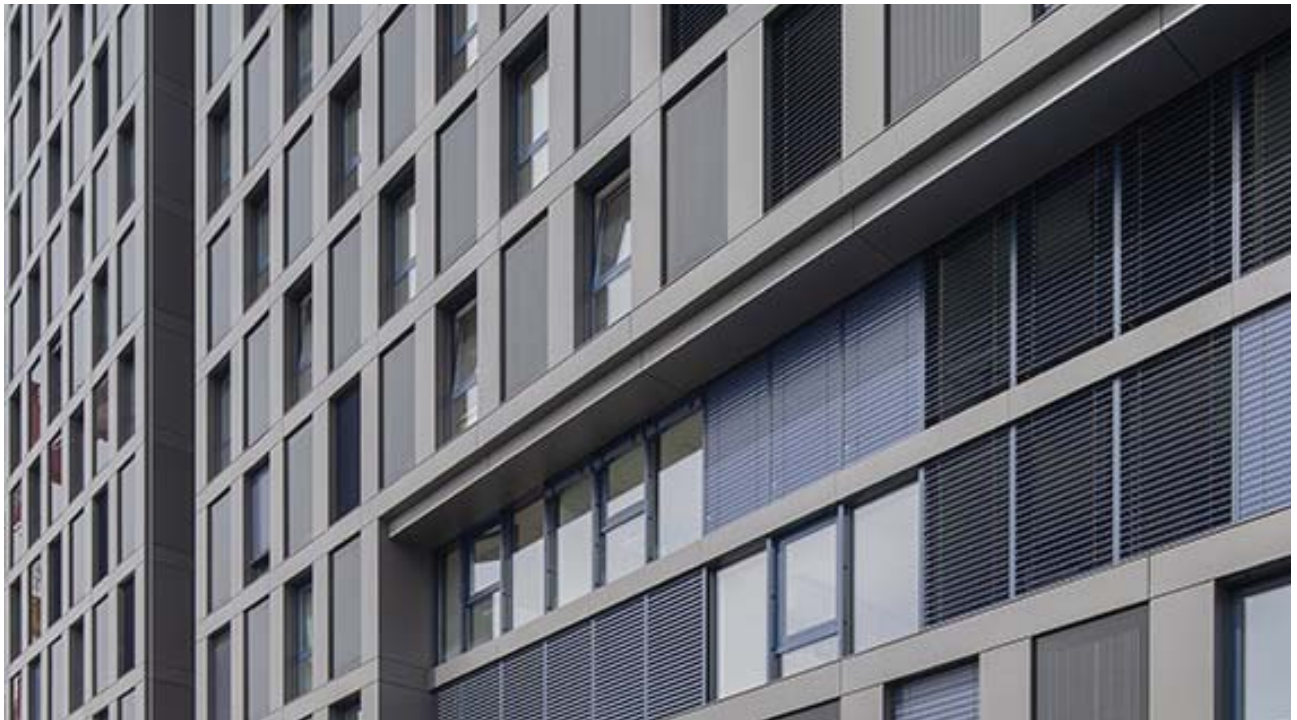
Roof	Facade	Glass surface
<p>Application Semi-transparent photo-voltaic pergola on the roof terrace.</p> <p>Description Flat roof roof insulated with 24 cm of insulation</p> <p>U value 0.09 W/m²K</p> <p>Fastening system n/a</p> <p>Other –</p>	<p>Application PV cladding integrated in a cold facade</p> <p>Description Concrete walls insulated with 24 cm of mineral wool</p> <p>U value 0.14 W/m²K</p> <p>Fastening system Structural glazing fixing system (aluminium backrails)</p> <p>Other –</p>	<p>Application Windows</p> <p>Description Triple glazing with metal frame</p> <p>U value 0.60 W/m²K</p> <p>G value n/a</p>



The uprights and stringcourses are made of thermo-lacquered dark grey aluminium sheet, with the recessed parts alternately occupied by aluminium frames or PV modules.



Costs	Parties involved	Awards & recognitions
Total cost of the building 25,000,000 CHF	Owner Proxiland Real Estate SA	Awards Schweizer Solarpreis 2018 - New building
Price per m³ Not available	Architect Epure Architecture et Urbanisme SA	Publications -
	Energy planner Energie Concept SA	
	Facade consultant BCS SA	
	Facade installer Progin SA Metal	
	Photovoltaic consultant Solarwall SA	
	Photo DMK Architecture Photo- graphy	



Details of the facade.

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