

Aesthetic
thermal performance
energy generation
pays for itself

Active ventilated façade systems



Architectural building skins combining basic functionalities as environment protection, thermal and acoustic performances with the generation free and clean energy for your building.

Depending on the application and based on many variables as safety, aesthetic, colour, glare/light reflection, energy performance, fixing system our team of engineers will work out a solution that meets your needs and expectations.

It is important, already in the early stage of the project, to pay attention to all details. The geographical data and building characteristics will be helpful in defining the mechanical properties of the glass while the details of the roof or façade may be useful to define the arrangement of the cells, define the electrical circuit as well as the position of the + & - outputs and how to pass the cables from one glass to another.

1 We combine color and energy efficiency to work out an architectural solution that meets your aesthetical, energy and functional requirements.

2 Discrete, efficient, seamless integrable and space-saving solution to generate energy using sunlight without compromising the basic functionalities of the facade.

3 Cost-effective solar façade with high energy yield thanks to the design and optimum rear ventilation and self-cleaning properties.

4 No investment in additional equipment or materials are needed for the installation.

5 Antiglare and antireflective front glass for more homogenous and aesthetical appearance.



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1. Glass specifications [regular and Bespoke]

The E-Activ ventilated façade system is a safety laminated glass composition with EVA and available in different colors and dimensions

Black Silver Bronze	Pre-selected color paints
Black: no ceramic silk print is applied Silver and Bronze: ceramic silk print is applied according to a specific pattern. Efficiency losses of around 15%	An unprecedent high degree of customization to reach specific aesthetic visual rendering with limited losses in efficiency.
Dimensions	up to 2000 mm x 5500 mm any shape
Junction Box	Back mounted type: easy access to connections for repair, intervention, and maintenance
Cell technology	monocrystalline Perc solar cells 158,75 x 158,75 mm thin film amorphous / organic cells
Connectors	Solarlok PV4 only for the connections of string cables to the cables coming out of the façade
Power output	Black 170 W/m ² Ceramic screen printing (Silver & Bronze): 145 W/m ² incurred losses due to the application of ceramic screen printing or color paint in front of the solar cells: Light grey: 35% Anthracite Grey: 25% White: 40% Terracotta red: 25% Light Blue: 12% Dark Blue: 20%
Maximum system voltage	1000 V DC
Tolerance nominal power	-5%+10%

2. Fixing system

The ideal support system to guarantee rear ventilation and high performance. The glass panels are mounted using wall brackets and Y-profiles at a distance from the building's outside wall.

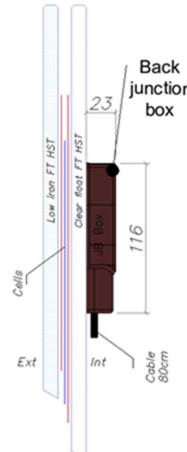
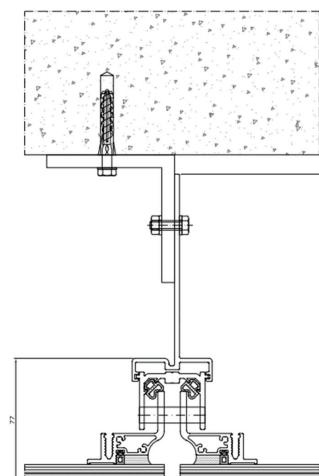
Besides the varied architectural possibilities, this system has considerable ecological and economic benefits:

 quick and easy cabling between glass panels

 energy-saving façade: The variable lengths of wall brackets make it possible to install with any desired thickness of insulation. Energy savings leads to minimisation of carbon dioxide discharge.

 Back ventilating the façade controls the humidity of the building and ensures an optimum climate inside

 The system guarantees sustainable construction through recycling the components that are used.



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3. Wiring and commissioning

The E-Activ ventilated façade system is supplied including the electrical installation up to the inverters. We therefore make an electrical study, supply system components up to the inverters, connect the glass units in series, complete the all wiring between the façade and the inverter room and arrange the commissioning of the DC-side of the system.



Inverters

Ideal inverter for small and large-scale commercial installations, delivering extraordinarily high yields with an efficiency of 98.4%. Highly flexible plant design.



4. System options and benefits

Safety	injury proof / safety laminated glass
Aesthetic	Hooks for hanging No wire or junction box are visible All edges are free

technical support

From the feasibility study throughout the tender to the execution of the project, you can count on our specialized and tailored technical support including:

- Module design and characterization to meet all relevant aesthetic and functional requirements as thermal performance, power output, color, glare and solar gain control, safety and junction box (edge, back, long or short side)
- Evaluation of the building integration system, static calculation and recommendations.
- Photovoltaic study, defining the numbers of arrays and strings, power outputs and energy yields calculation
- Electrical study, connections between the glass panels, sizing the inverters, cable cross section calculations, electrical safety equipment, wiring plan and schematics
- Project budget envelope, lead time estimation, recommendation for qualified façade maker or installer.
- Visit on the construction site at the beginning of the installation. Warning: the access to all connections and cables must remain unobstructed till the string voltage have been verified.

5. Certifications and Guarantees

Our all product range is certified as a functional photovoltaic element according to IEC61215 and IEC61730 class II with a periodic factory inspection and complied with the following building standards:

EN 12543-4
High temperature test,
humidity test with
condensation,
UV radiation test

EN 12150
Thermally
Toughened
Safety Glass

EN 12600
Safety laminated glass,
pendulum test,
classification 1B1

EN 14179
Thermally
Toughened Safety
Glass with
Heat Soak Test

EN 14449
Evaluation
of conformity
laminated Safety Glass

PHOTOVOLTAIC MODULE: The laminated glass unit will neither significantly delaminate nor substantially change its color for a period of 10 years. The product and its performances are guaranteed for applications up to 100°C

PERFORMANCE GUARANTEE: 90% of the initial nominal power for a period of 10 years and 80 % of the initial nominal power for a period of 25 years

SYSTEM: E-Activ warrants a proper functioning of the photovoltaic system for a period not exceeding two (2) years from the date of commissioning

INVERTERS: 10 years

OTHER SYSTEM COMPONENTS: 5 years