

technical  
and commercial  
**dossier**

The Acristalia  
**Pergola**

---

**bioclimatic** pergola

**acristalia**



technical  
and commercial  
**dossier**



where you want to be

# Index

- p. 4 **Learn about our pergola**
  - Introduction **to the concepts**
  - Operation **of the pergola**
  - Rubber seals **and brush seals**
  - Adjustable **slats**
- p. 8 **Follow the standards**
  - Quality **report**
- p. 9 **Installation options**
  - Maximum **dimensions and possible configurations**
- p. 10 **Technical characteristics**
  - Integrated **solutions**
- p. 13 **Cross-sections of profiles**
  - General **measurements**
- p. 14 **Complements and accessories**
  - Additional **advantages**
- p. 16 **Installation with Acristalia glazing systems**
  - Combine it **with Standard and Basic Pro series**
  - Combine it **with Tandem series**
  - Combine it **with Basic Pro and Railing series**
- p. 19 **Installation of vertical ZIP awnings**
  - Finishes **and dimensions**

# Learn about our pergola

## Introduction to the concepts

This bioclimatic pergola with a minimalist design was created **to enjoy outdoor living, combining two advantages: protection and well-being.** In this simple way, we offer you a fully customizable space.



The functional system of **adjustable slats allow you to enjoy outdoor living all year** round by regulating the desired microclimate in a natural way.



The flow of water in case of rain or cleaning is expelled by means of beams and pillars. **The motor and wiring are fully integrated into the structure, remaining hidden and protected.**



Yo can enjoy even more your outdoor space by combining the bioclimatic pergola with our glazing systems **and awnings for perimetral closure.**



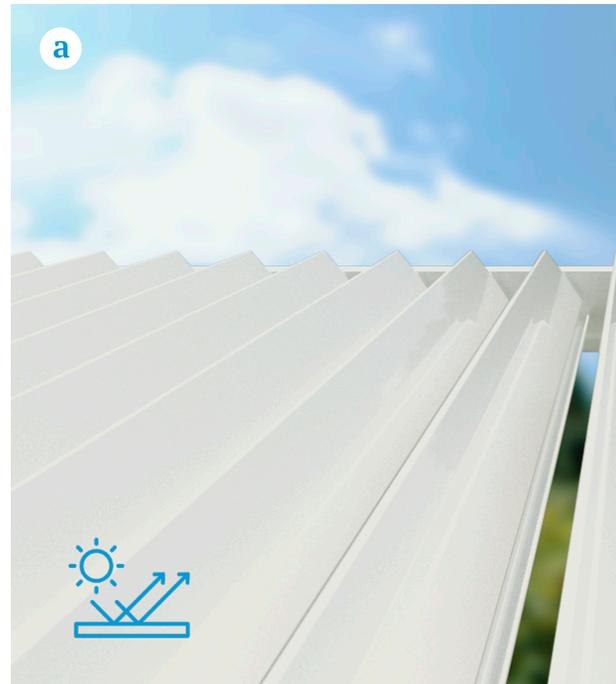
We supply a pre-assembled and machined system for **quick and easy installation without building work.** All fasteners are concealed to take care of the aesthetics.



**There are a variety of accessories and complements available** (lighting, heating, sound system and automatic sensores) which may be controlled through WiFi or Bluetooth.



**The RAL colour chart** allows you to customize the pergola. Yo can match colours by choosing one colour for the structure and slats caps and another colour for slats or design your entire pergola in the same colour.



## Operation of the pergola

### a. Sun protection

Adjustable motorized slats provide total protection against the solar radiation at any time of day.

### b. Ventilation

It permits rotate the slats to create an air flow favored by the convection effect, down- up, that naturally regulates the temperature.

### c. Rain protection

When the slats are closed the rainwater is channelled through the integrated drainage system in beams and pillars.



## Rubber seals and brush seals

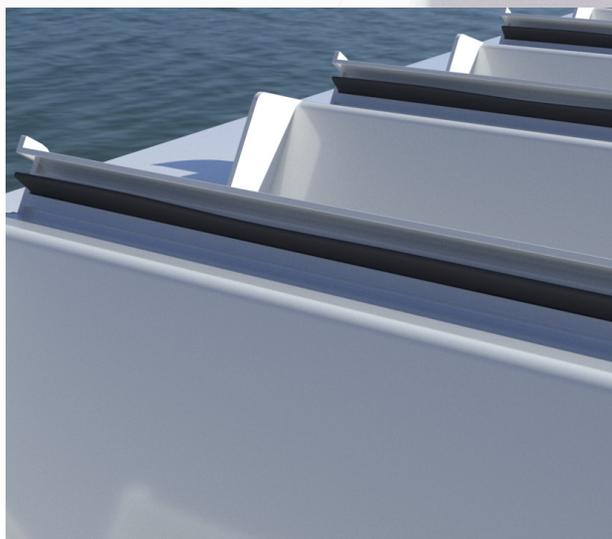
The system is prepared for all kinds of weather situations. **The rubber and brush seals ensure the perimeter sealing and the insulation** between the slats safeguarding users well-being.



### Waterproof system

The slats contain a rubber seal that **improves the waterproofing of the pergola**, as the seal does not allow water to run into the joints between the slat.

At the same time, **it reduces the noise that occurs between slats due to the vibration caused by the action of the wind.**



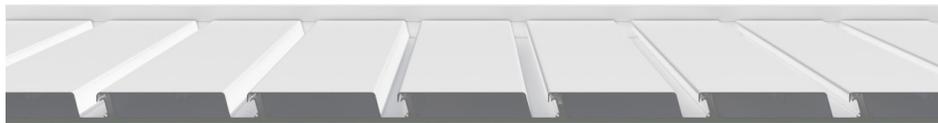
### Perimeter sealing

A registered system that **acts against sideways rain and that also does not allow direct light and/or reflected light to pass through the joints between the slats, or between the slats and the frame.**

This system helps to avoid a possible noise caused by the friction of the frame with the slats and the movement caused by the action of wind.

## Adjustable **slats**

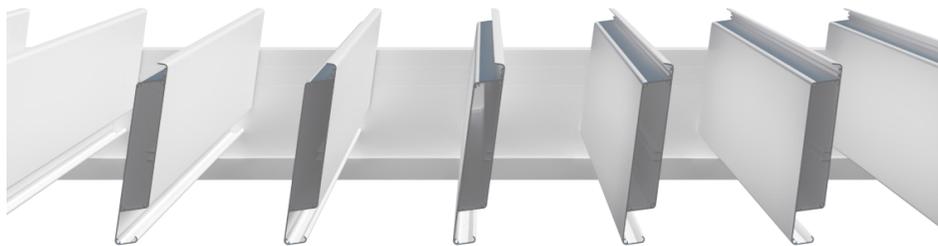
The biggest characteristic advantage of this pergola is its system of **adjustable and motorized slats, which rotate from 0° to 135°**. This mechanism allows to memorize slats positions and control the degree of opening by remote control or mobile device.



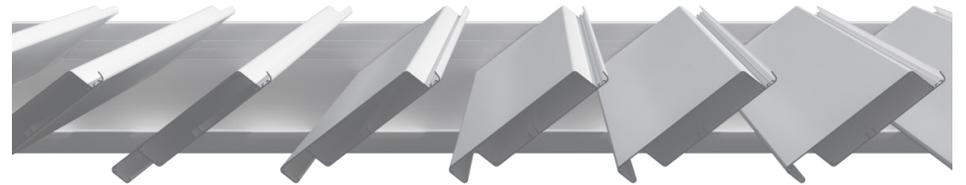
0°



35°



95°



135°

## Following the standards

### Quality report

Acrsitalia manufactures all its products under strict quality controls that are regularized and specified under the quality management system **according to the standard UNE-EN ISO 9001:2015** and guarantees that all the materials used in the manufacture of its products are of first quality complying with the following regulations: **Aluminium with CE marking** according to the new European Construction Products Regulation (EU) 305/2011 and the harmonized standard UNE-EN 15088:2006: Aluminium products and aluminium alloys for structural applications. In addition, it complies with quality standards for surface treatment of profiles (Qualicoat, Qualand and Qualideco).

**Warranty on aluminium profiles material**, in terms of purity and possible corrosion caused by impurities and encrustations during the manufacture, according to EN 15088:2016, EN 755-9:2016.

**Warranty on aluminium deformations**, own ones or derived from lack or shortage of tempering of the profiles.

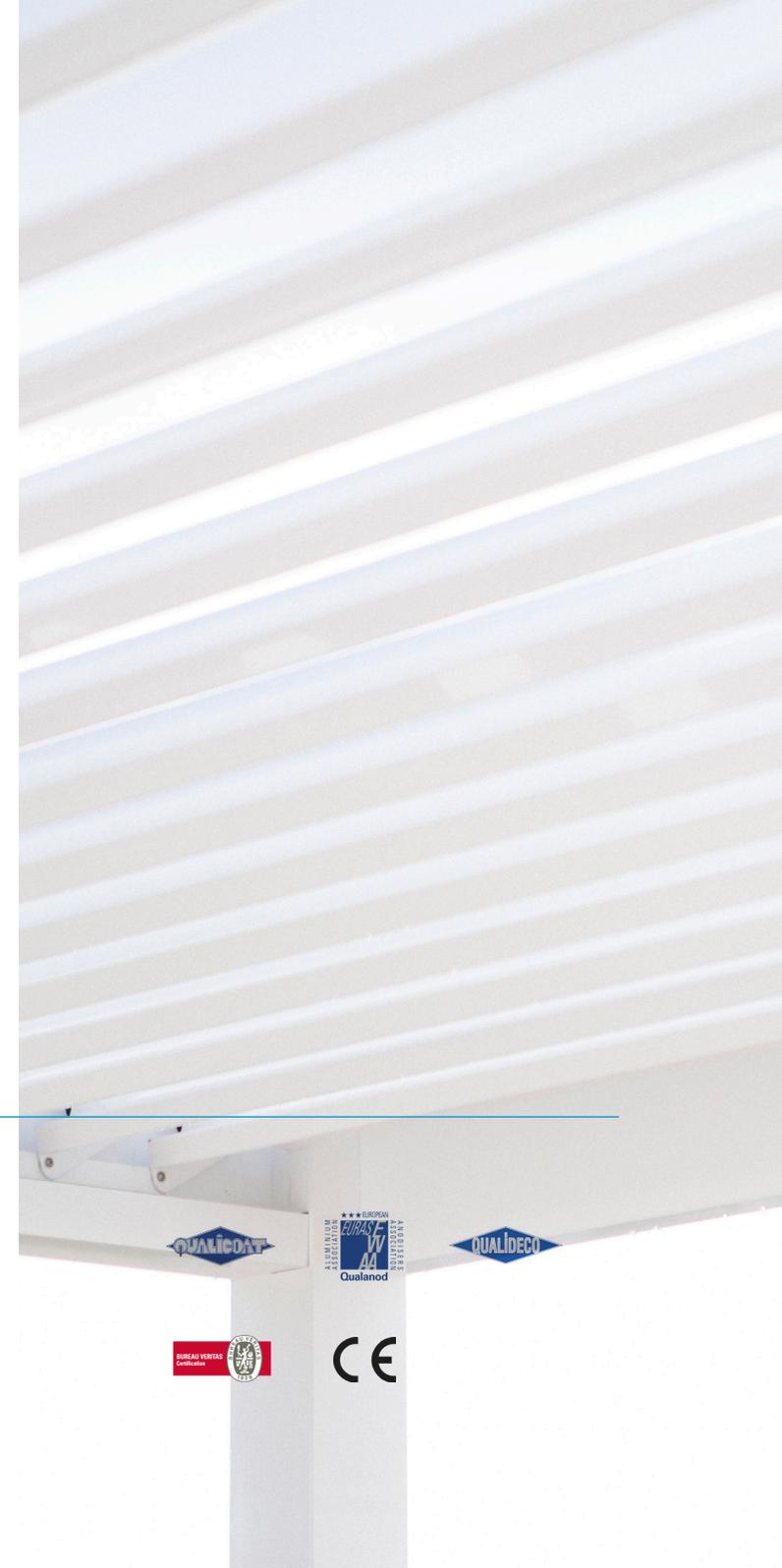
**Warranty on finishes, lacquers and anodized** as stipulated by the European quality labels Qualicoat, Qualanod, Qualideco, approved by the Ministry of Development of the Spanish Government for surface treatments with powder. These treatments ensure a uniform ageing of the colours with no patches and unusual discolorations.



### Certificates

All our products are subject to strict quality controls, tests and trials. **We are working to make Acrsitalia synonymous of safety and confidence.**

You can find all the documentation you need on our website [acrsitalia.com](http://acrsitalia.com). **We explain you everything because the knowledge is power!**



# Installation options

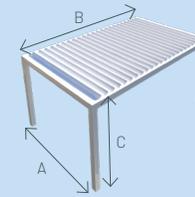
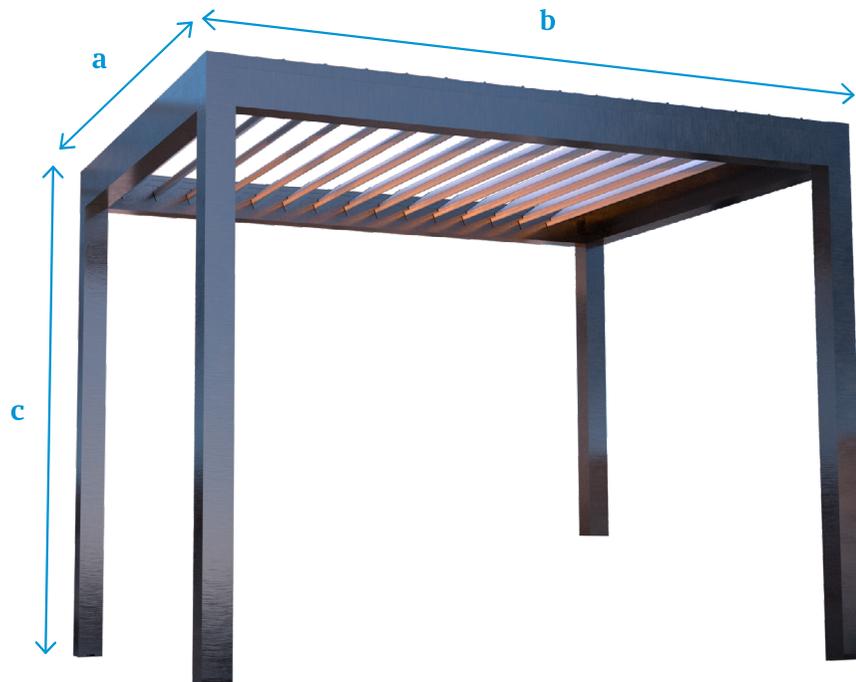
## Maximum dimensions and possible configurations

Our pergola has multiple mounting combinations **adapted to the different areas**. Free-standing, wall-mounted, duplex systems able to create comfortable and functional spaces.



### Dimensions

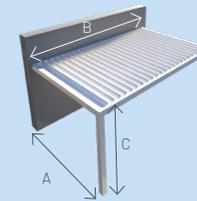
- a. Maximum width 4200 mm
- b. Maximum length 6200 mm
- c. Maximum height 3500 mm



#### 1. Free-standing

Base module supported by 4 pillars.

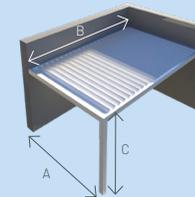
- A. Maximum width 4200 mm
- B. Maximum length 6200 mm
- C. Maximum height 3500 mm



#### 2. Wall-mounted

Combines the supporting by pillars and the wall fastening.

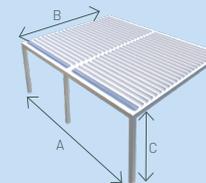
- A. Maximum width 4200 mm
- B. Maximum length 6200 mm
- C. Maximum height 3500 mm



#### 3. Wall-mounted (from both sides)

Combines the supporting by pillars and the wall fastening.

- A. Maximum width 4200 mm
- B. Maximum length 6200 mm
- C. Maximum height 3500 mm



#### 4. Duplex

Two joined pergolas to increase the maximum width.

- A. Max. distance between pillars 4200 mm
- B. Maximum length 6200 mm
- C. Maximum height 3500 mm

## Technical characteristics

### Integrated solutions

These are the most outstanding features of the system which make **its functionality and aesthetics adapted to the needs of our customers**. Below we detail all components that make up this compact and solid structure.

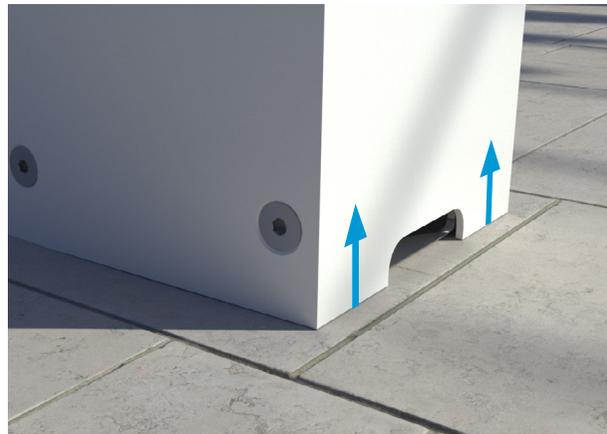
#### a. Invisible union of beams and pillars

Made almost in one piece. **The intersections between beams and pillars of the bioclimatic pergola are almost invisible**, helping thus to maintain the visual cleanliness of profiles and creating a sense of the structural continuity.



#### b. Pillars height adjustment system

The pillars are equipped with a control system that adjusts the slight slope of the pergola to avoid **water and humidity stagnation on the top of the structure**.



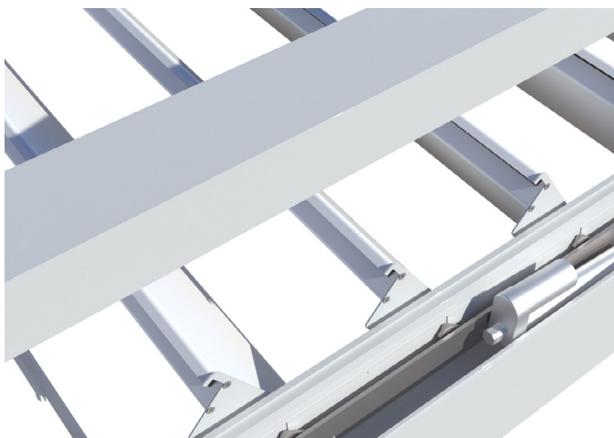
#### c. Integrated water channelling system

A special design of the slats **allows to channel rain water and humidity towards the side gutters** that require a minimum slope to drain.



**d. Motor and wiring: hidden, protected and accessible**

**Our bioclimatic pergola has only automatic operating system with IP 65 protection.** A motorization is discreetly hidden between slats and gutters, favouring aesthetics of the pergola.

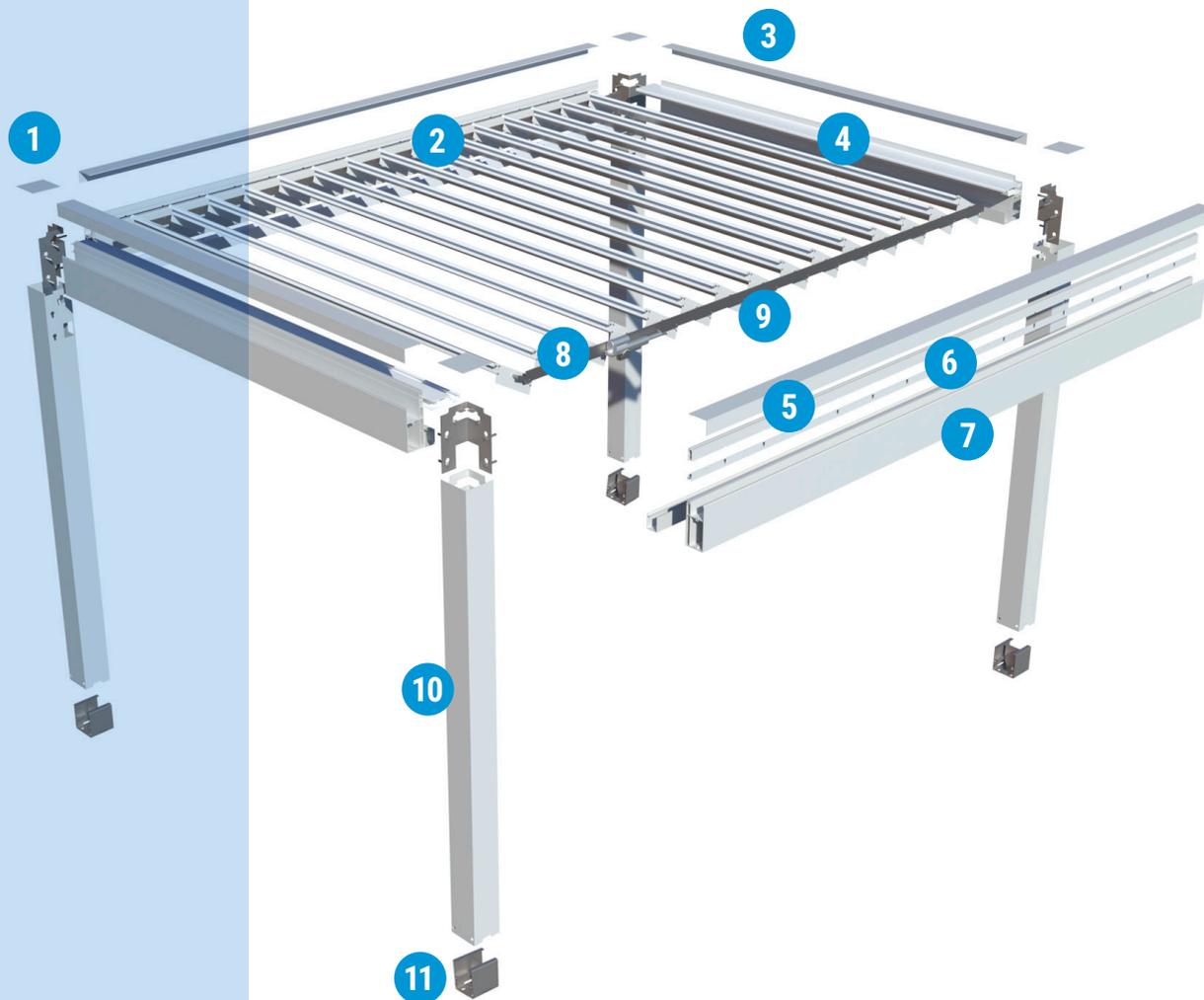


e. Positioning of parts

This image allows you to **visualize different components of the bioclimatic pergola in a clear and precise way.** Every single element makes up the structure that ensures the wellbeing and comfort.

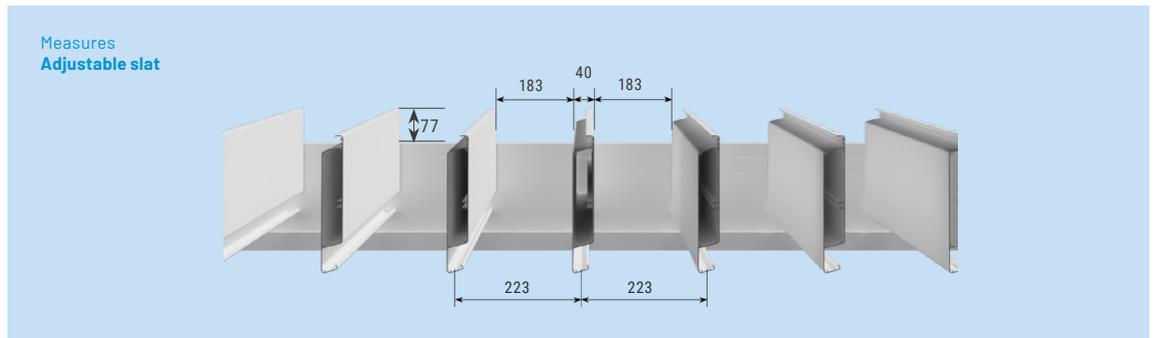
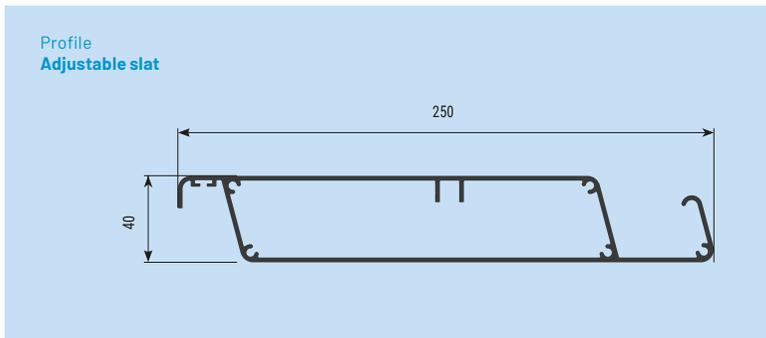
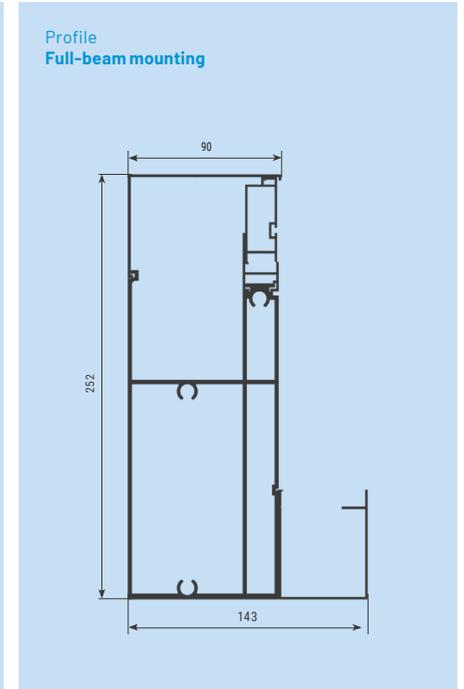
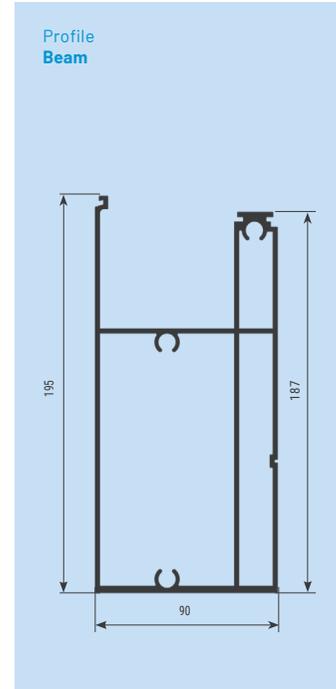
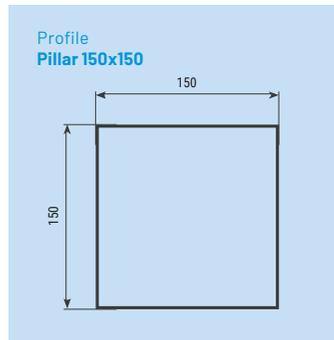
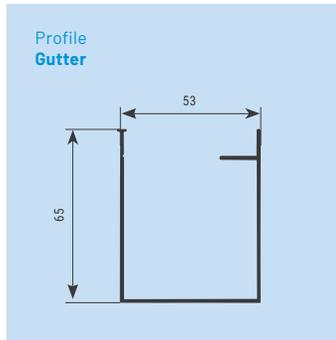
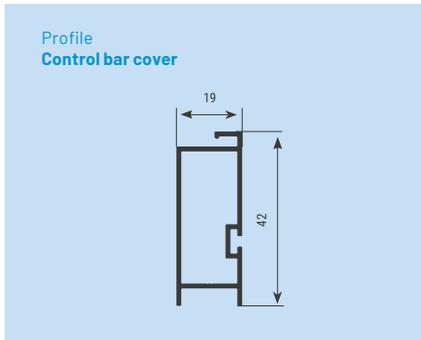
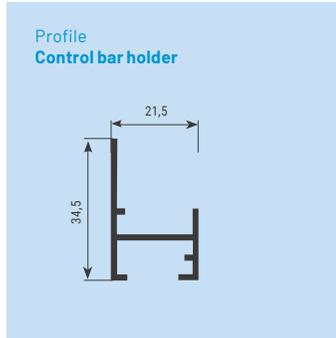
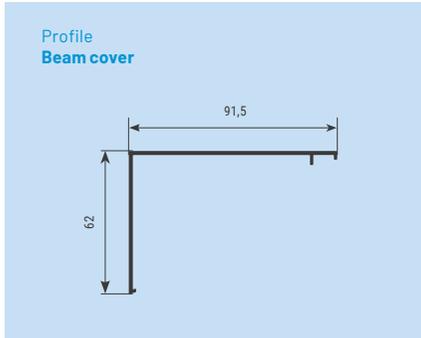
LEGEND

- 1 Pillar cap
- 2 Slat
- 3 Beam cover
- 4 Beam
- 5 Cover for the control bar holder
- 6 Control bar holder
- 7 Beam
- 8 Motor
- 9 Control bar
- 10 Pillar
- 11 Base



# Cross-sections profiles

General measures (mm)



## Complements and accessories

### Additional advantages

There are several options to complement the structure of our bioclimatic pergola. Here are **the basic accessories that allow to create a comfortable and cozy atmosphere.**



**Home automation.** In addition to included remote control system, **the DAISY system can be incorporated, upon request, to be controlled by smartphones and tablets** via Wi-Fi connection. This system is compatible with **Google Home and Alexa assistants.**



**Sensors.** These safety elements serve to protect the structure and its fastening elements against strong winds and rain. They realize automatic control of adjustable slats to improve the comfort and **to optimize the energy efficiency.** The meteorological sensors manage the movements of the slats in an autonomous way according to climatic and environment conditions.



where you want to be





**Lighting.** Built-in LED lights into the slats and LED RGB perimetral strips for ambient lighting: **a wide range of dimmable LED, monochromatic or coloured, designed to be integrated into the aluminium structure of the bioclimatic pergola.** All lights have the same colour temperature to ensure a homogeneous effect in the same ambient.



**Audio system.** Melody audio system allows to **play your favourite music from smartphones or tablets** via Bluetooth to create an ideal atmosphere.



**Heater.** Our pergola can be complemented by **electric radiant heaters of advanced infrared halogen quartz technology.** The heater can be controlled and regulated by a receiver integrated into home automation system.



**Plug.** Optional **230 V power outlet with protective cap and with IP45 protection built into the pillar** will allow you to power any device.



## Installation with Acristalia glazing systems

### Combine it with **Standard and Basic Pro series**

Explore the **possibilities of improving the bioclimatic pergola with our glass curtains of Standard and Basic Pro series**, adaptable and perfect for taking advantage of the open spaces in living and business areas and expand its versatility. Here are the features of our integrated glass systems:



where you want to be



#### Standard series

Up to **3 meters high**

Maximum panel width of **80 cm**

#### Embedded lower profile

Glass thickness of **6, 8, 10 and 12 mm**

#### Basic Pro series

Up to **2 meters high**

Maximum panel width of **70 cm**

#### Profiles with a minimalist design

Glass thickness of **6, 8 and 10 mm**

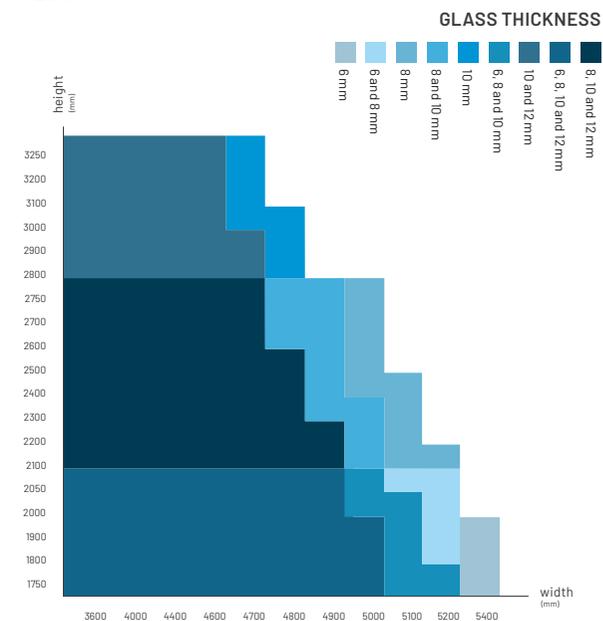


#### Orientative table of systems compatibility

Calculations were made considering the own weight of the pergola and glass curtains regardless other types of external loads. For specific cases, please contact our technical department.

The height difference between pergola and glass curtain is 252 mm. It means that if the height of pergola is 3000mm, the height of the compatible glass curtain should be 2748mm.

Calculation performed with a maximum slat length of 4200 mm.



This table defines the correct use of glass in systems installed on the perimeter of the bioclimatic pergola depending on its dimensions here exposed.



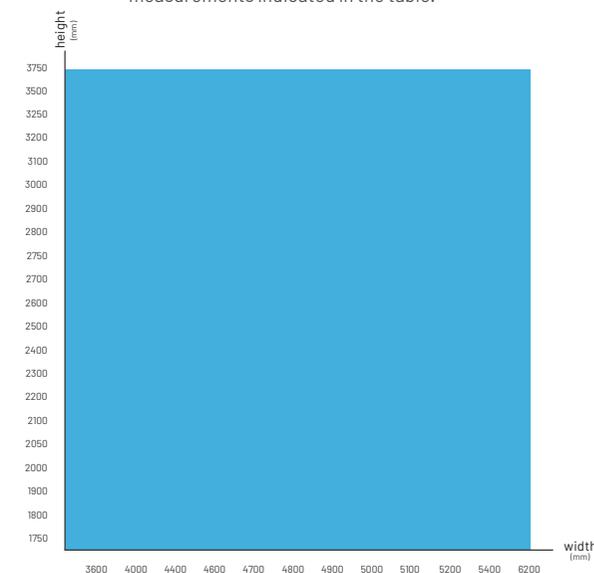
### Orientative table of systems compatibility

Calculations were made considering the own weight of the pergola and glass curtains regardless other types of external loads. For specific cases, please contact our technical department.

The height difference between pergola and glass curtain is 252 mm. It means that if the height of pergola is 3000 mm, the height of the compatible glass curtain should be 2748 mm.

Calculation performed with a maximum slat length of 4200 mm.

The Tandem series is compatible with all measurements indicated in the table.



This table defines the correct use of glass in systems installed on the perimeter of the bioclimatic pergola depending on its dimensions here exposed.

## Combine it with Tandem series

The sliding panoramic glass curtain of Tandem series offers a glass enclosure formula that combines design and comfort in an integral solution. In this case, glass panels move horizontally on stainless steel rails.



### Tandem series

## Combine it with **Basic Pro and Railing series**

The balustrade of Railing series is fully compatible with our glass curtain of Basic Pro series **offering all-in-one solution, functional, safe and easy to install.** This system allows you to maintain completely the panoramic views.



where you want to be



### Basic Pro series

Up to **2 meters high**

Maximum **panel width of 70 cm**

**Profiles with a minimalist design**

Glass thickness of **6, 8, and 10 mm**

### Railing series

Different glass thicknesses:  
**from 6+6 up to 12+12**

Compatible with **laminated or tempered laminated** glass

**Mounting options: embedded, top-mounted or side installation.**



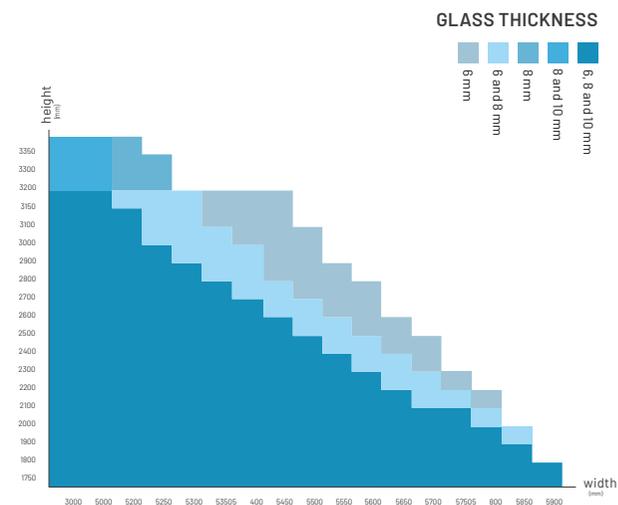
### Orientative table of systems compatibility

Calculations were made considering the own weight of the pergola and glass curtains regardless other types of external loads. For specific cases, please contact our technical department.

Calculations were made to define a compatibility with a glass balustrade of 1100mm height.

The height difference between pergola and glass curtain is 1350mm. It means that if the height of pergola is 3000mm, the height of the compatible glass curtain of Basic Pro series should be 1650mm.

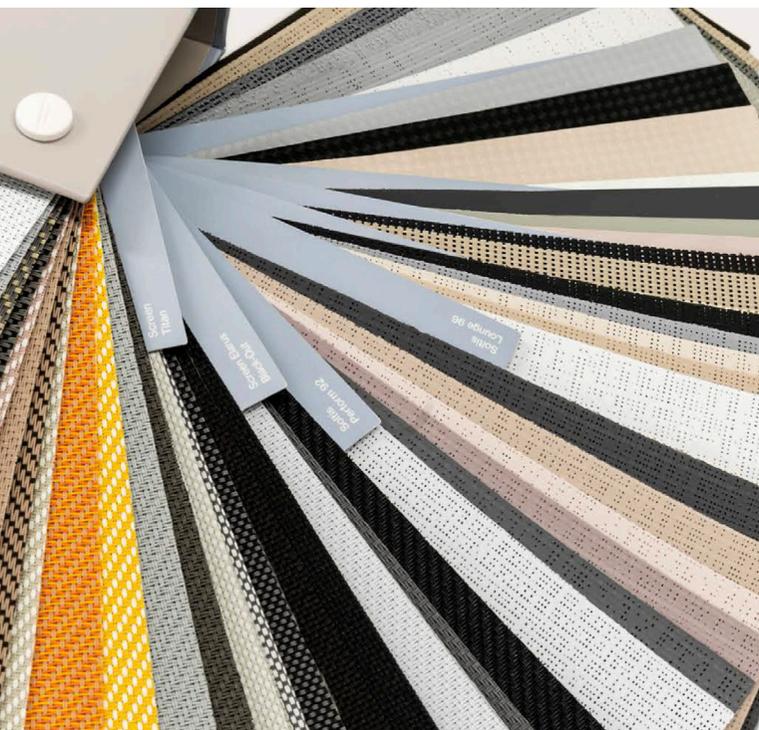
Calculation performed with a maximum slat length of 4200 mm.



# Installation of vertical ZIP awnings

## Finishes and dimensions

ZIP awnings are equipped with ZIP guidance system which provides greater wind resistance. In addition, a rolled fabric remains protected by a semi-box.



**Acrylic.** The system of mass **dyeing ensures that the colour remains intact** despite the passage of time and weathering.

**Screen.** The Screen range or the new Screen Titán, Screen 2165 (in different opening factors), are widely used as a thermal protector and as a screen that **ensures excellent outward visibility or total darkening.**

**Soltis.** It is a range of composite fabrics designed for indoor and outdoor use. **High performance technical fabrics, perforated, waterproof and even opaque,** offer outward visibility, protection against heat and total privacy.

**PVC.** **Completely waterproof fabric** that supports intense rains and winds. This range is especially effective in humid areas.

bioclimatic pergola

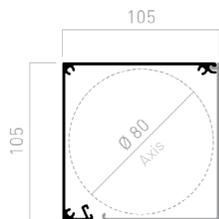


Interior section

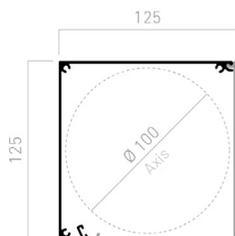


### Boxes according to measures

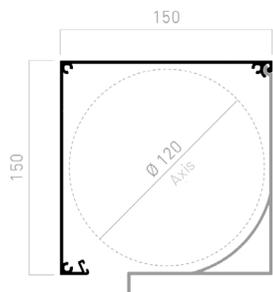
**Serie ZIP-105**  
Up to 4 meters  
wide



**Serie ZIP-125**  
Up to 5 meters  
wide

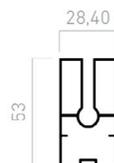


**Serie ZIP-150**  
Up to 6 meters  
wide

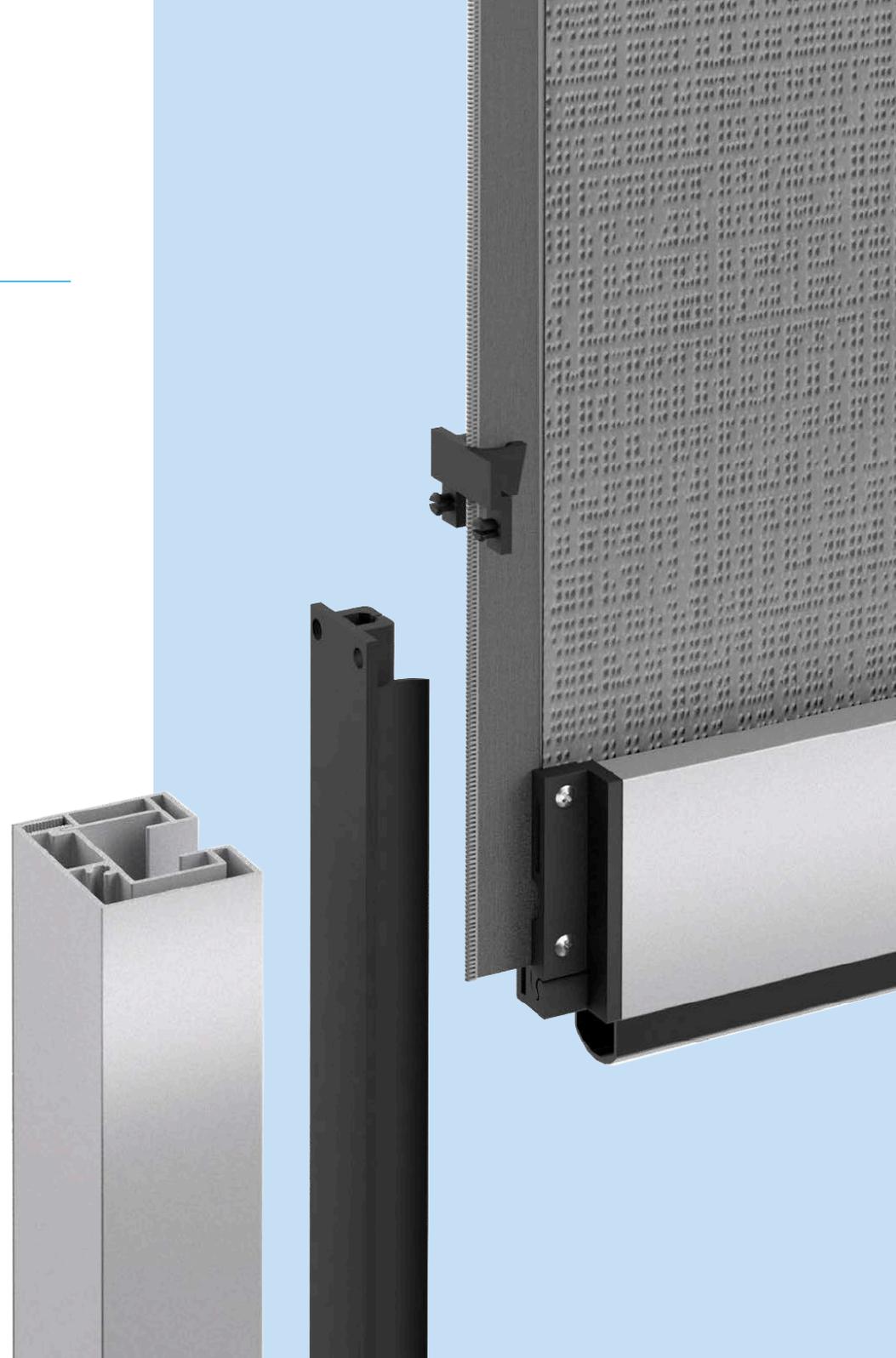
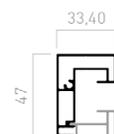


### Guide details

#### Awning terminal



#### Awning guide





technical  
and commercial  
**dossier**



where you want to be





Now  
it's **your**  
turn...

Tell us  
about **your**  
project!

acristalia.com  
t. 952 198 752

