



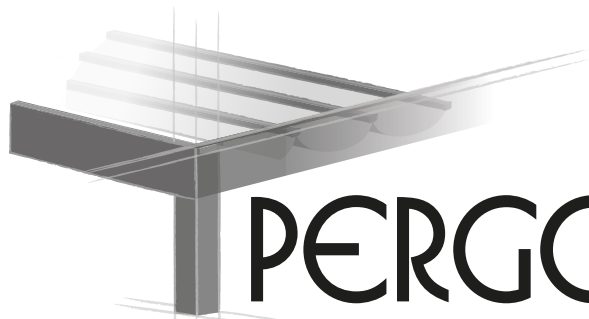
TECHNICAL SHEET
PERGOSTAR DESIGN

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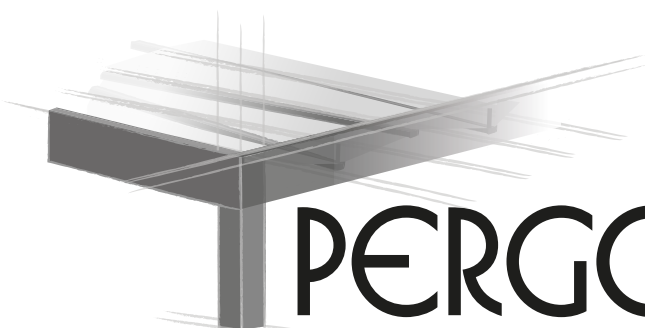


PERGOSTAR

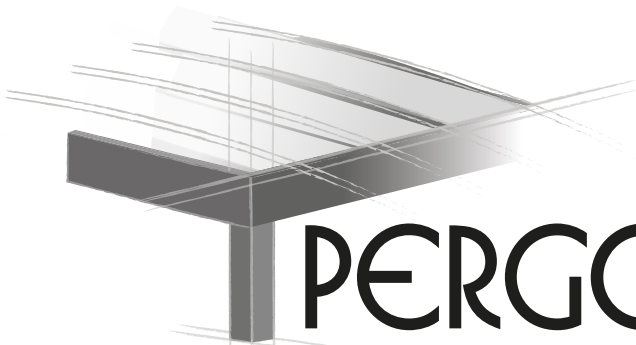
DESIGN



PERGOSTAR
DESIGN WAVY



PERGOSTAR
DESIGN TENSIONED



PERGOSTAR
DESIGN ARCHED

PERGOSTAR DESIGN

TECHNICAL SHEET

INDEX

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Pergostar Design, as its name suggests, is the ideal choice for top designers looking to outfit luxury hotels, restaurants, and mansions designed by the world's best architects. This pergola is supported by large posts to bear the heavy weight of the perimeter frame, which is made from tall aluminum profiles. These are necessary to conceal all the mechanisms and part of the structure, resulting in a powerful, clean, and minimalist design.

The retractable roof is made from high-gauge slats, slightly curved to channel water into the side gutters within the perimeter frame. This option comes in two variations:

Arched: the slats are curved and form a tunnel when extended.

Tense: the slats are straight but angled to create a stretched Roman-style effect, allowing water to drain into the perimeter frame.

The Design option allows for the installation of perimeter enclosures using tempered glass, such as our Flexiglass and Slidinglass, or a sealed curtain like our Flexizipp. The posts, slats, and perimeter gutters can be illuminated with spotlights, warm LED strips, or RGB lighting.

CHARACTERISTICS

Structure made of aluminum profiles 6063-T5 or 6063-T6

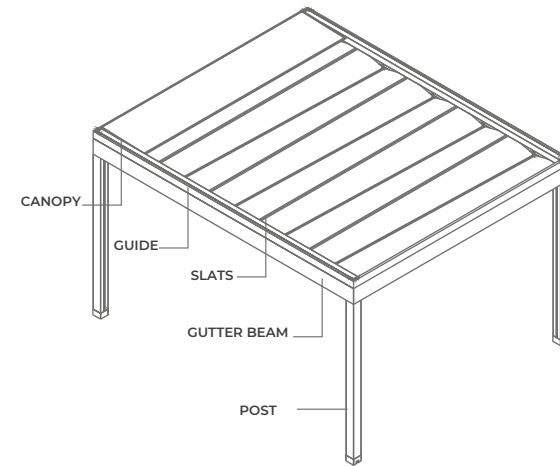
Lacquered finish with electrostatic powder coating or anodized

Stainless steel screws and fasteners

Default slope of 15%, minimum slope of 10%, and maximum slope of 25%

Can cover up to 162 m² in the triple module configuration

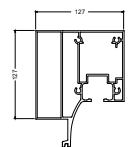
Resistant to winds up to grade 9 on the Beaufort scale: 80 km/h with 6063 T5 alloy and 95 km/h with 6063 T6 alloy



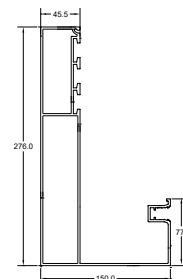
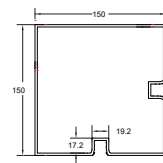
PROFILE MAIN

GUTTER BEAM

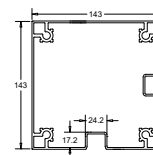
GUIDES



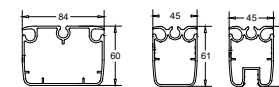
POST



CORE-POST



SLATS

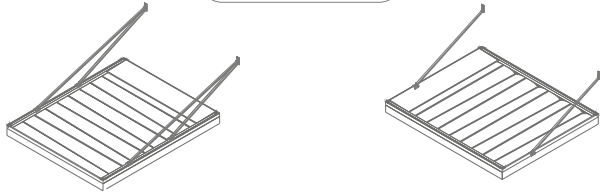


IMPORTANT NOTICE

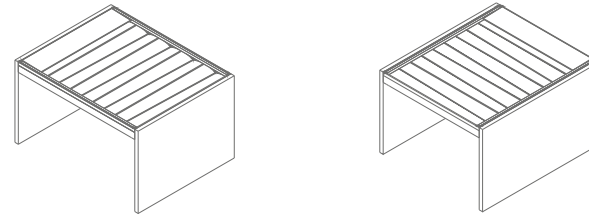
OUR PRODUCTS ARE PATENTED, AND SOME SYSTEMS ARE CURRENTLY UNDER PATENT APPLICATION.

TYPES OF INSTALLATION

WITH TIE RODS



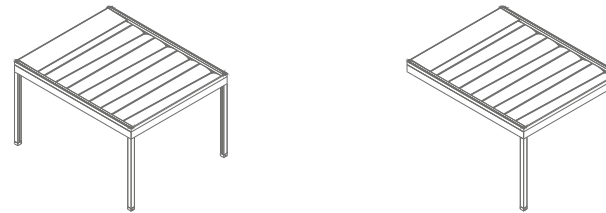
BETWEEN WALLS



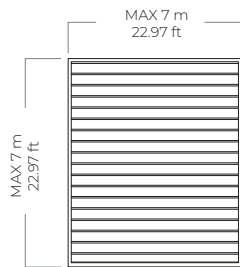
WITH POST



SELF-SUPPORTING



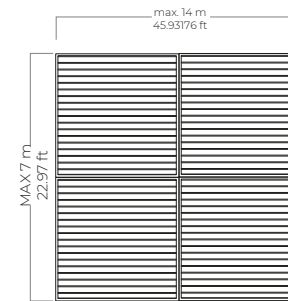
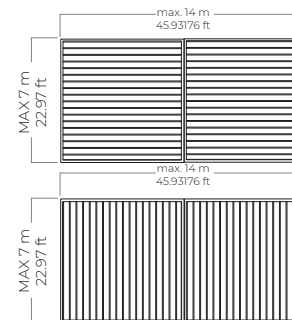
DIMENSIONS

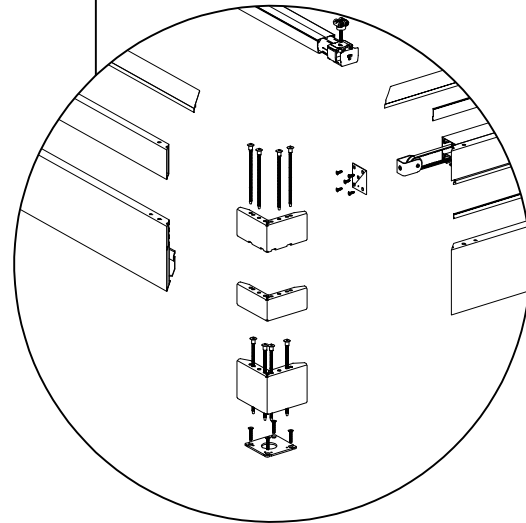
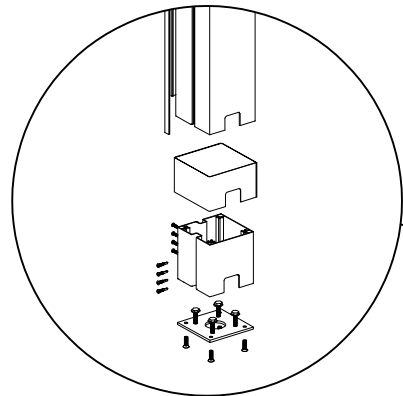
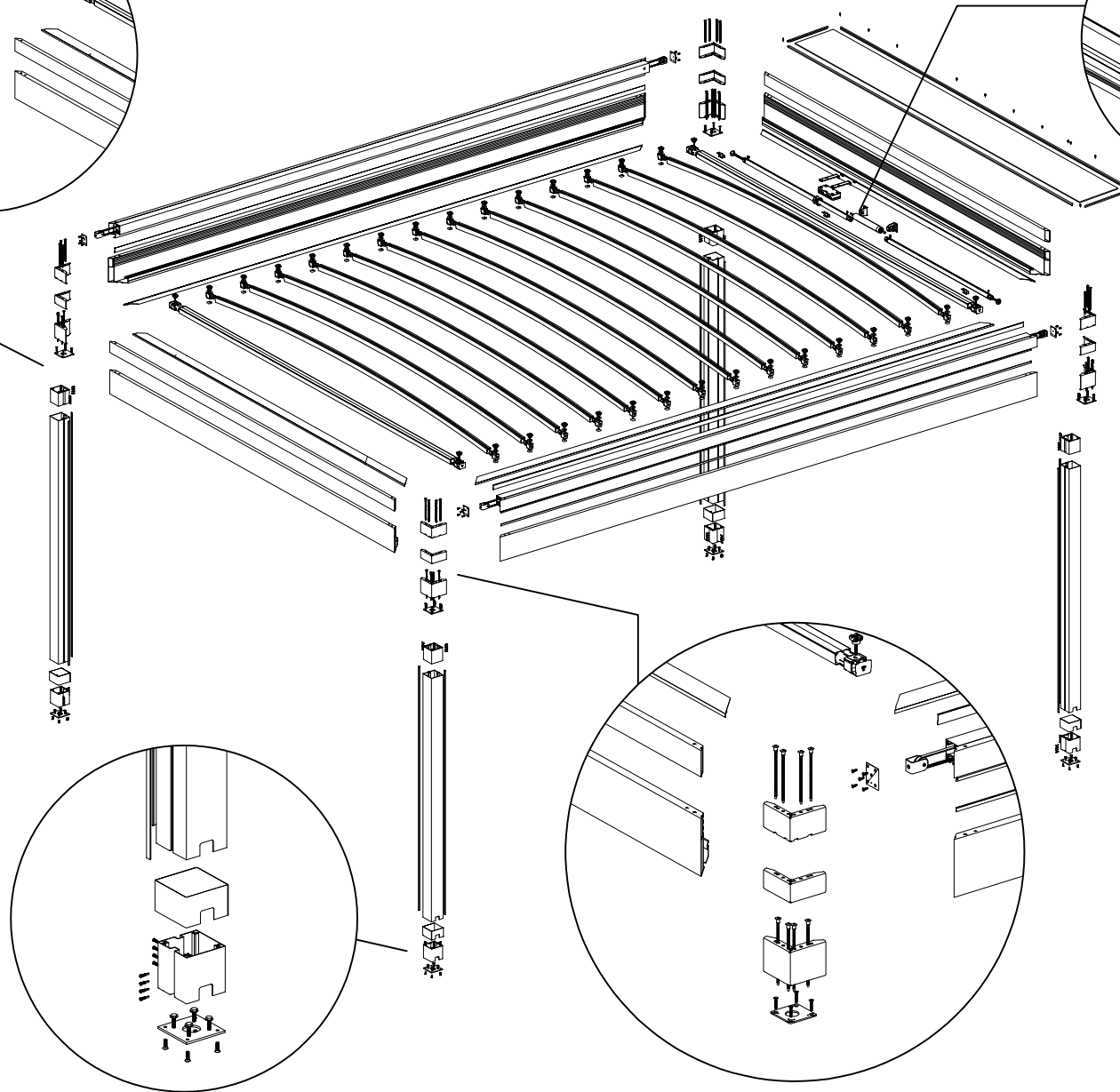
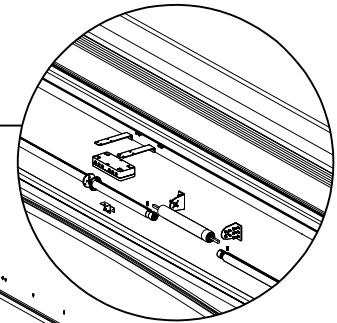
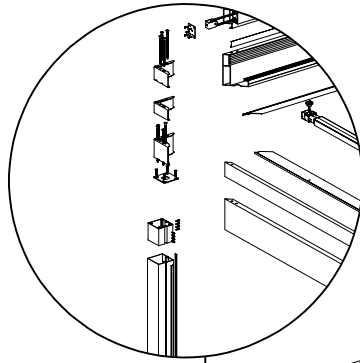


	LINE	PROJECTION
	SINGLE	
	39.3701 = 275.59 in	39.3701 = 275.59 in

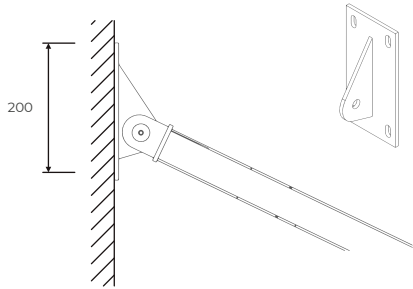
Our standard product withstands winds of up to 80 km/h at its maximum extension (275.59 in x 177.17 in in single wavy and tensioned configuration) or (275.59 in x 275.59 in in single arched configuration).

MODULATIONS

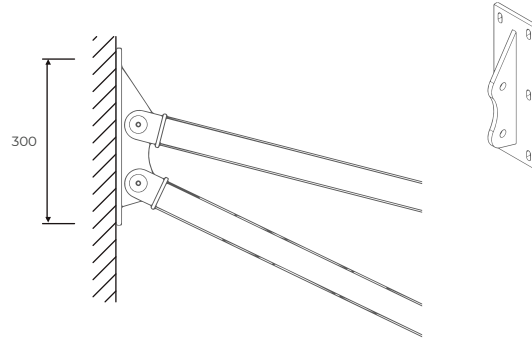




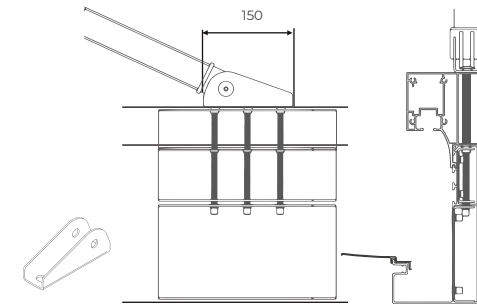
DOUBLE TIE ROD WALL MOUNTING



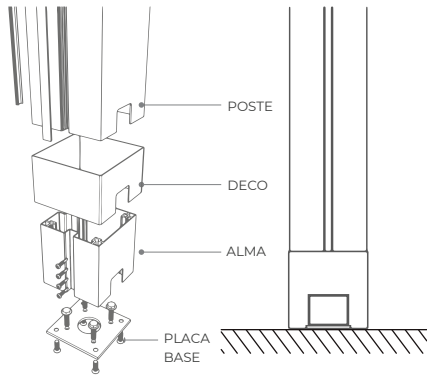
LATERAL TIE ROD TO STRUCTURE MOUNTING



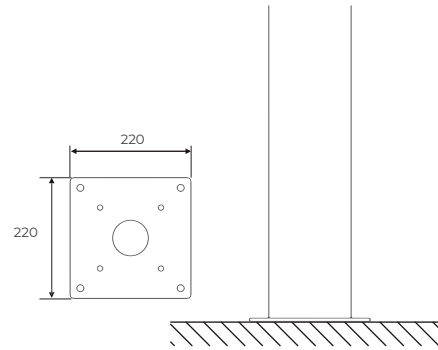
LATERAL TIE ROD TO STRUCTURE MOUNTING



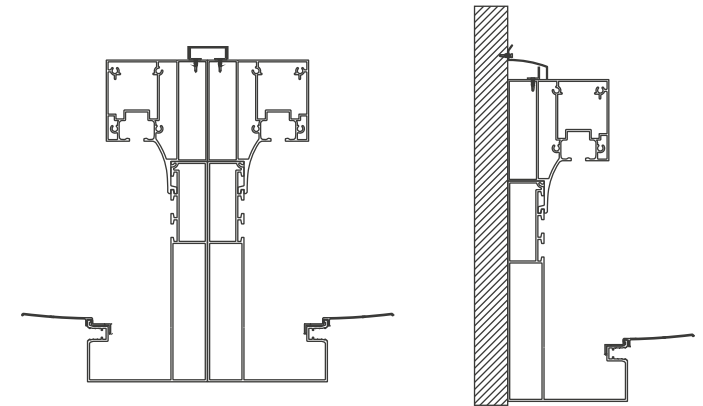
POST-TO-GROUND MOUNTING - LEVELING ANCHOR



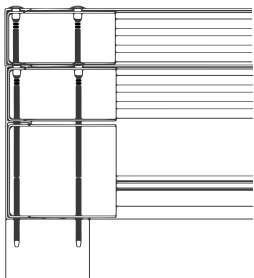
POST-TO-GROUND MOUNTING - STANDARD PLATE



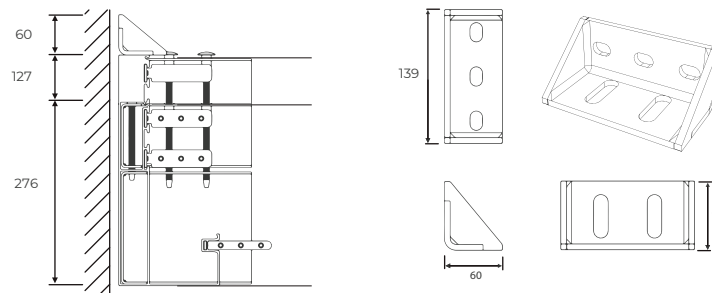
GUTTER JOINT FLAP - WALL FLAP



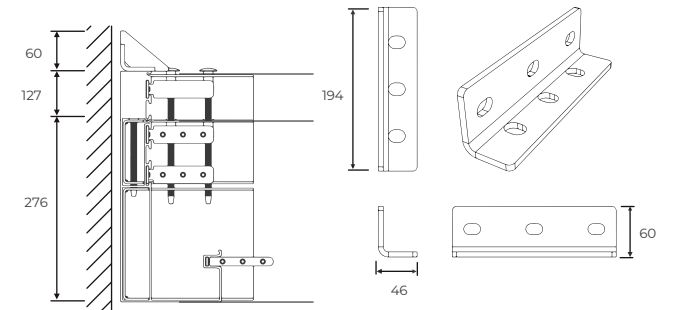
POST TO STRUCTURE MOUNTING



CORNER BRACKET MOUNTING FROM STRUCTURE TO WALL



INTERMEDIATE MOUNTING FROM STRUCTURE TO WALL



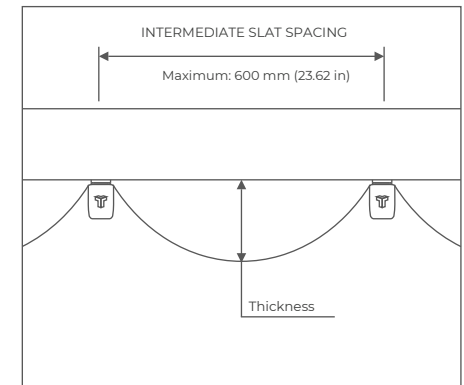
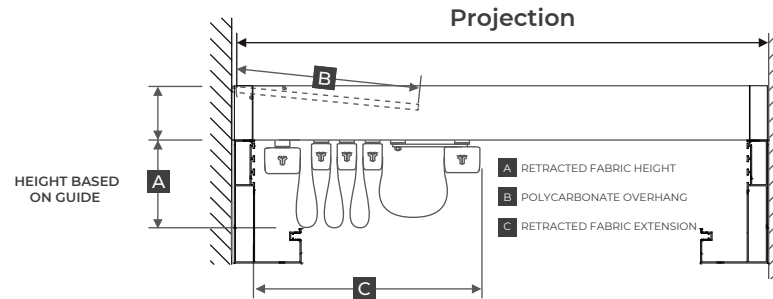
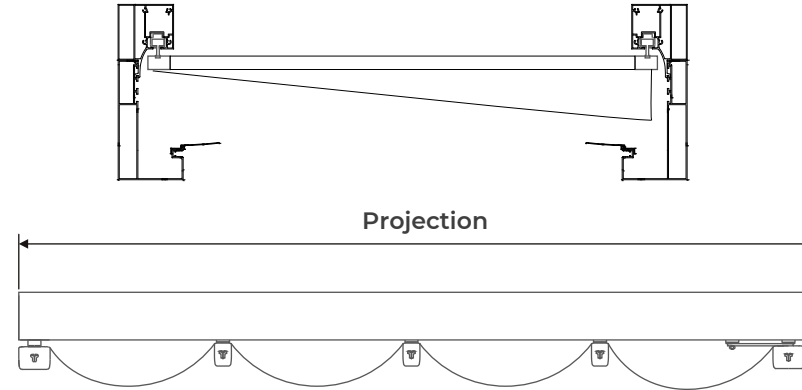
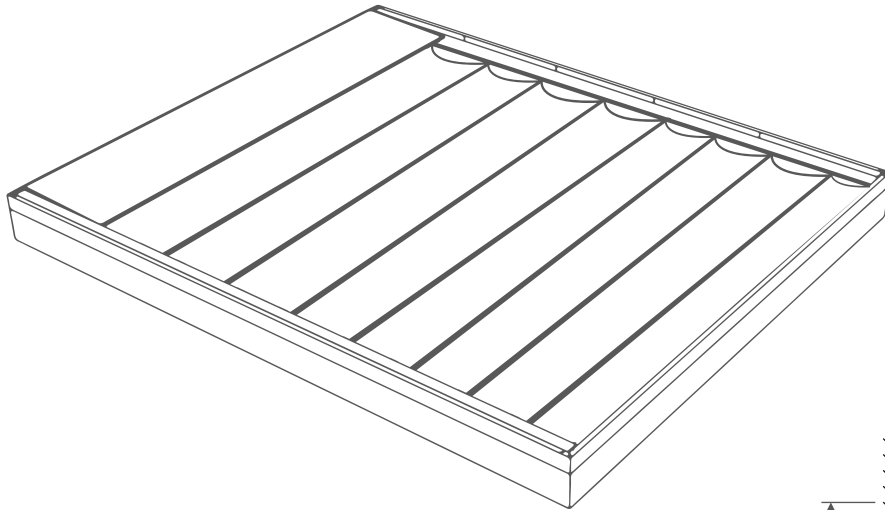
PERGOSTAR DESIGN

WAVY

SINGLE-SLOPE FABRIC

Tensioned on one side and loose on the other.

Curved trapezoidal fabrication
(Water discharge lateral der. o izq.)



LINE IN (in)

THICKNESS	98.43	118.11	137.80	157.48	177.17	196.85	216.54	236.22	255.91	275.59
A	4.33	5.51	6.69	4.33	4.33	4.33	6.69	4.33	4.33	4.33
	10.24	11.02	12.20	10.24	10.24	10.24	12.20	10.24	10.24	10.24

2 guides

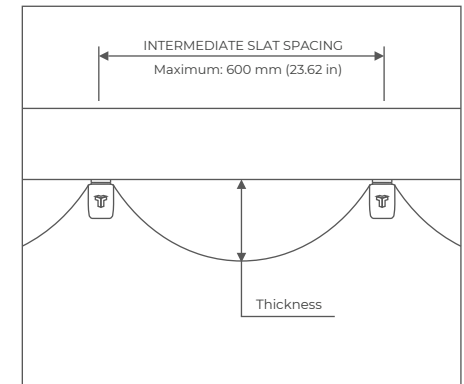
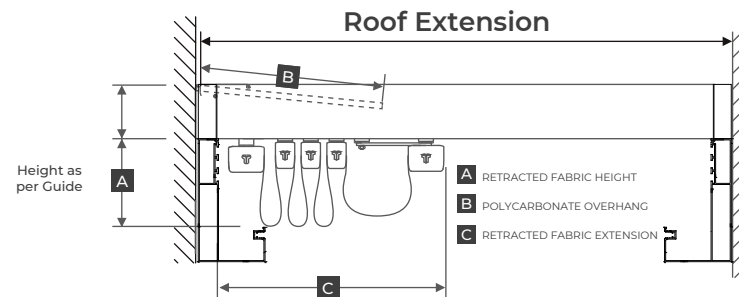
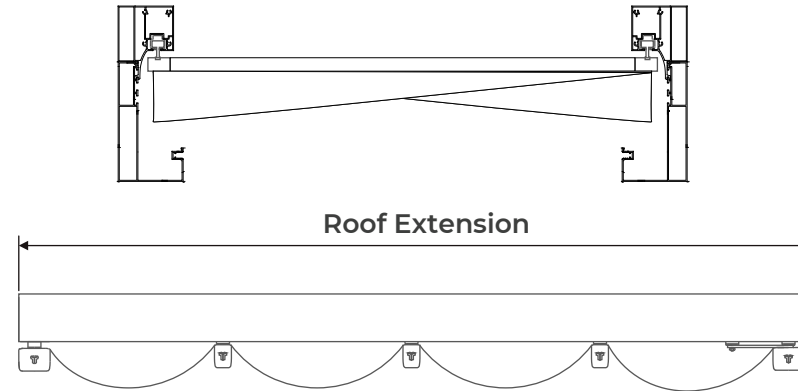
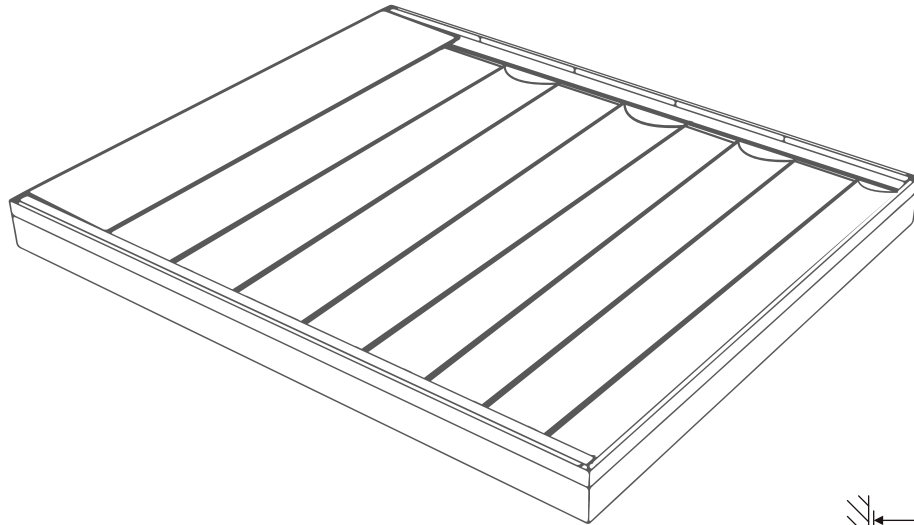
PERGOLA PROJECTION IN (in)

GUIDE	DESIGN					
ROOF	78.74	118.11	157.48	196.85	236.22	275.59
A	22.44	25.98	30.71	35.04	37.40	41.73
B	16.54	20.08	24.80	29.13	33.07	37.40

PRISMATIC FABRIC

Tensioned fabric at one end and loose at the other, arranged alternately.

Curved trapezoidal fabrication
(Water discharge lateral der. o izq.)



LINE IN (in)

THICKNESS	98.43	118.11	137.80	157.48	177.17	196.85	216.54	236.22	255.91	275.59
A	4.33	5.51	6.69	4.33	4.33	4.33	6.69	4.33	4.33	4.33
	10.24	11.02	12.20	10.24	10.24	10.24	12.20	10.24	10.24	10.24

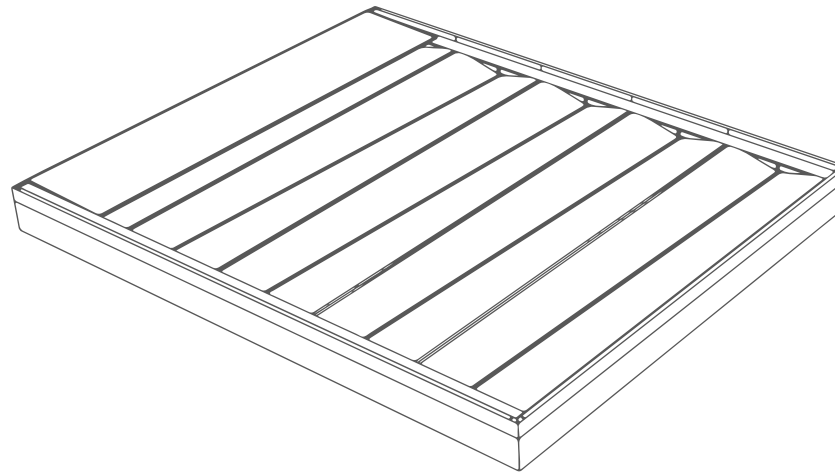
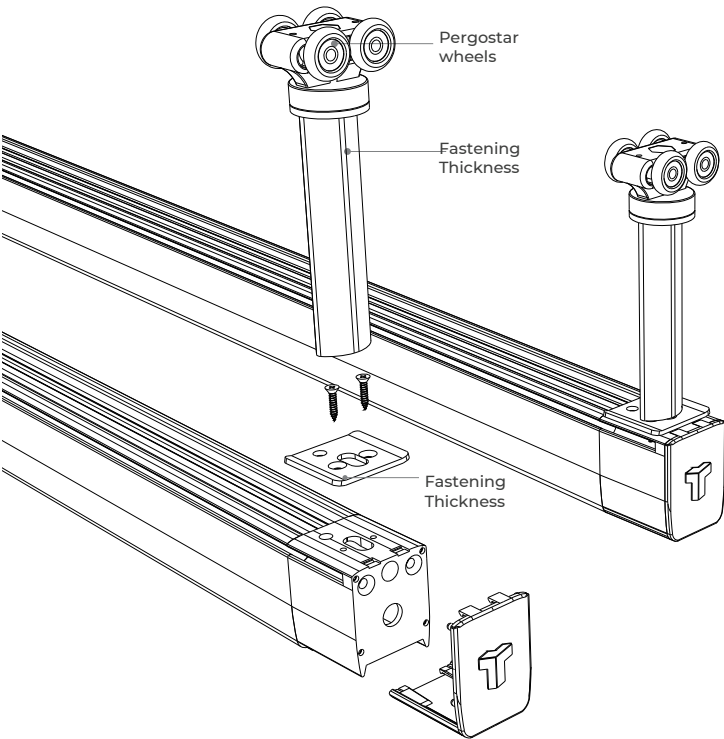
2 guides

PERGOLA PROJECTION IN (in)

GUIDE	DESIGN					
ROOF	78.74	118.11	157.48	196.85	236.22	275.59
A	22.44	25.98	30.71	35.04	37.40	41.73
B	16.54	20.08	24.80	29.13	33.07	37.40

PERGOSTAR DESIGN

TENSE

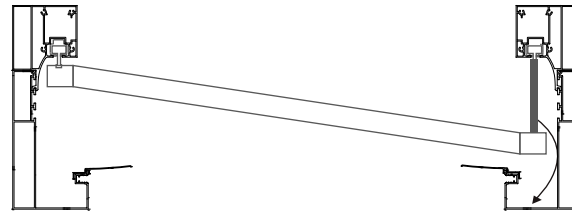


SINGLE-SLOPE FABRIC

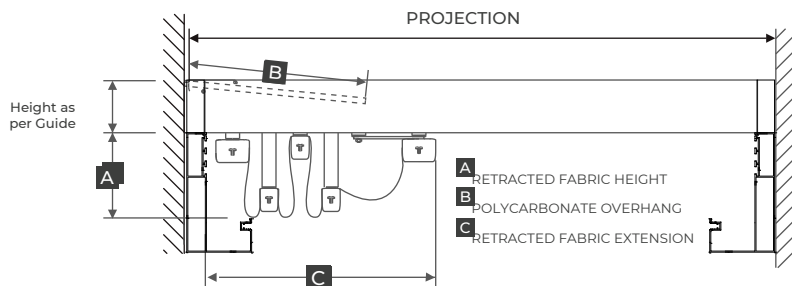
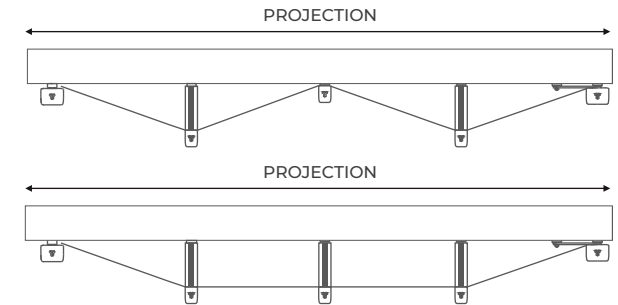
Tensioned fabric with slope on the slats of one side.

TENSIONED ROOF

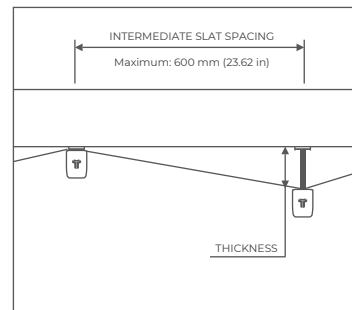
Thanks to the addition of our thickness profile, we can create a roof with multiple geometric variations, achieving a clean and tensioned fabric design.



Water discharge



- A** RETRACTED FABRIC HEIGHT
- B** POLYCARBONATE OVERHANG
- C** RETRACTED FABRIC EXTENSION



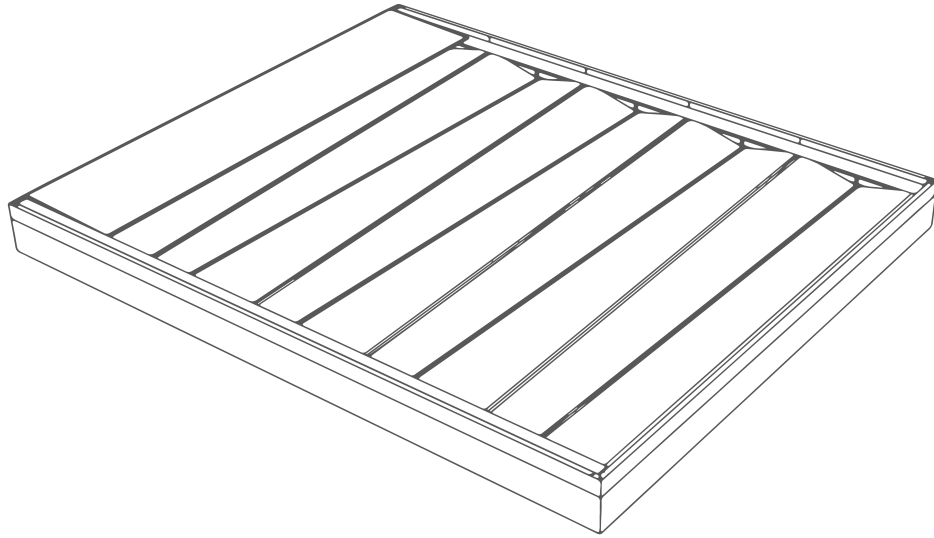
THICKNESS
A

	LINE IN (in)									
	98.43	118.11	137.80	157.48	177.17	196.85	216.54	236.22	255.91	275.59
	4.33	5.51	6.69	4.33	4.33	4.33	6.69	4.33	4.33	4.33
	10.24	11.02	12.20	10.24	10.24	10.24	12.20	10.24	10.24	10.24
	2 guides									

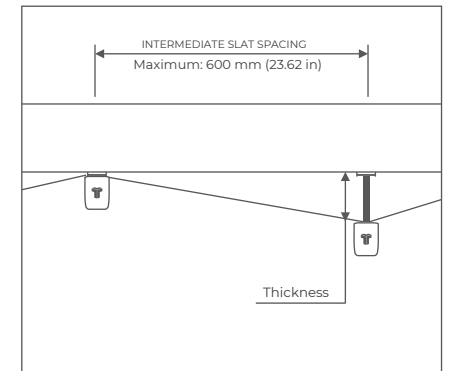
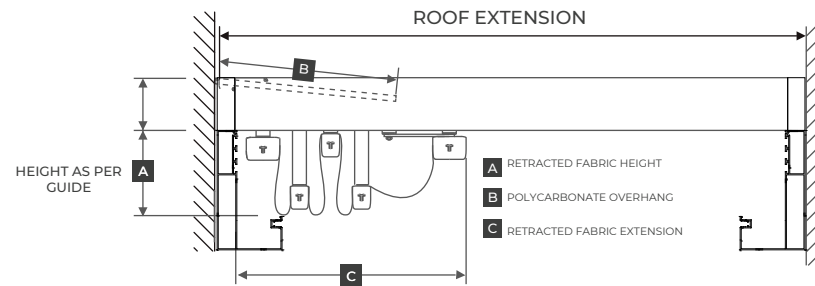
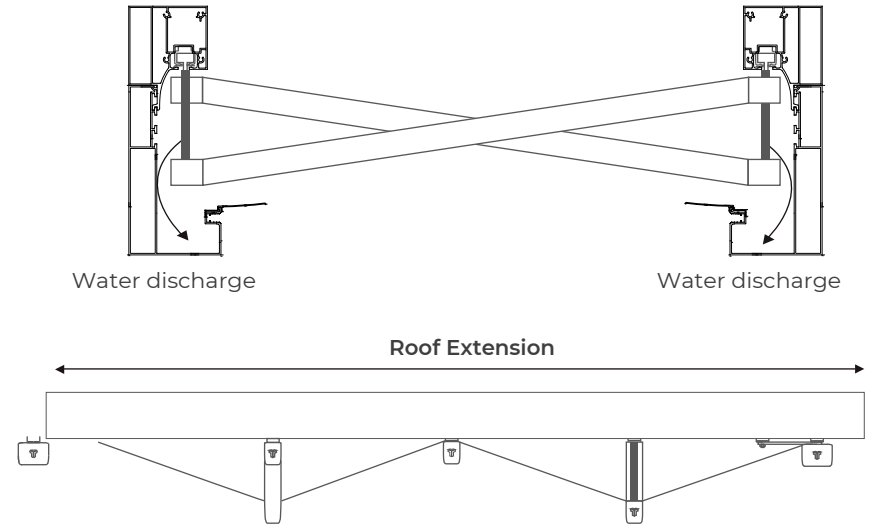
	PERGOLA PROJECTION IN (in)					
GUIDE	DESIGN					
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A	22.44	25.98	30.71	35.04	37.40	41.73
B	16.54	20.08	24.80	29.13	33.07	37.40

PRISMATIC FABRIC

Tensioned fabrics with slopes on alternating slats.



PRISMATIC ROOF



LINE IN (in)

THICKNESS	98.43	118.11	137.80	157.48	177.17	196.85	216.54	236.22	255.91	275.59
A	4.33	5.51	6.69	4.33	4.33	4.33	6.69	4.33	4.33	4.33
	10.24	11.02	12.20	10.24	10.24	10.24	12.20	10.24	10.24	10.24

2 guides

PERGOLA PROJECTION IN (in)

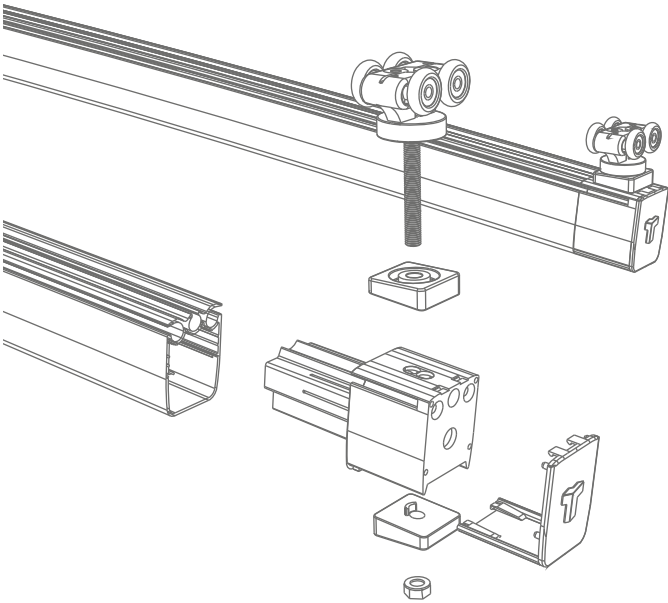
GUIDE	DESIGN					
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PERGOSTAR DESIGN

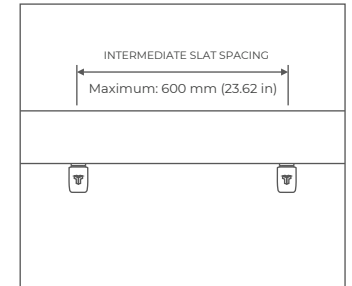
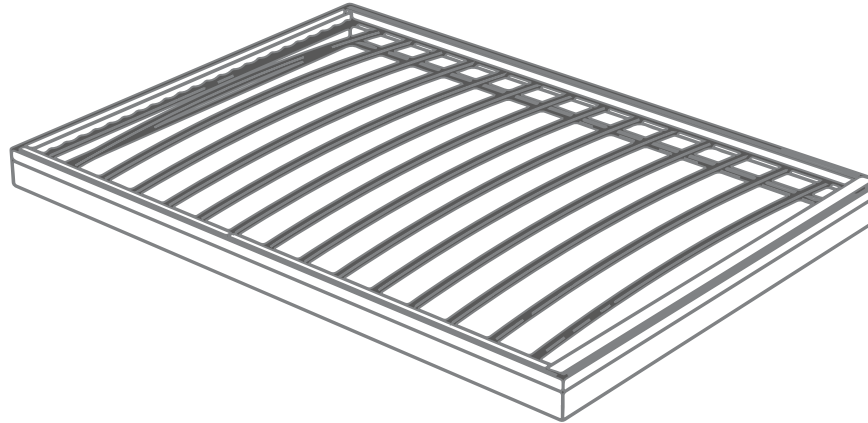
ARCHED

ARCHED FABRIC

Tensioned tunnel-type fabric

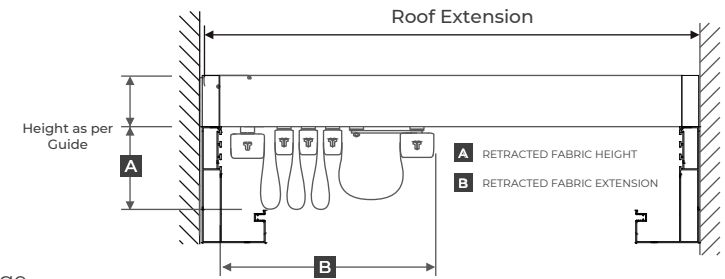
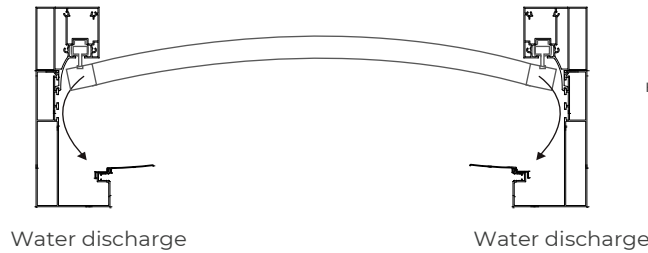


2 GUIDES



TENSIONED ROOF

Thanks to the addition of our thickness profile, we can create a roof with multiple geometric variations, achieving a clean and tensioned fabric design.



LINE IN (in)

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	10.24	11.02	12.20	10.24	10.24	10.24	12.20	10.24	10.24	10.24

2 GUIDES

PERGOLA PROJECTION IN (in)

GUIDE	DESIGN					
ROOF	78.74	118.11	157.48	196.85	236.22	275.59
B	16.54	20.08	24.80	29.13	33.07	37.40

ILUMINACIÓN Y MOTORIZACIÓN

PERGOSTAR DESIGN



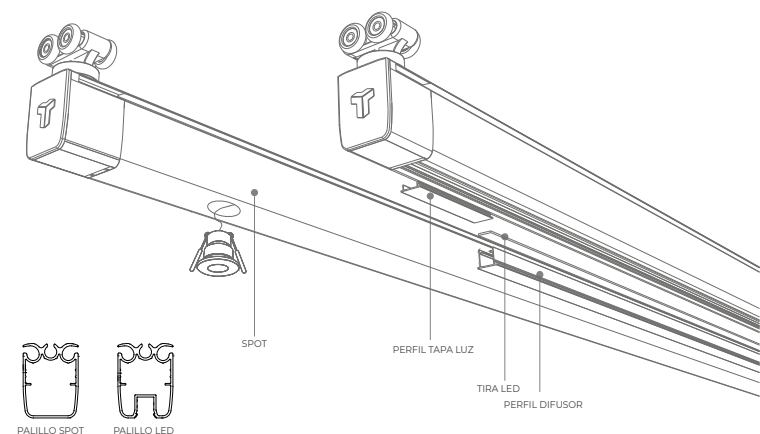
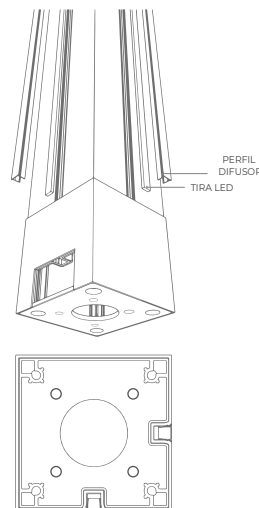


LIGHTING LED WHITE



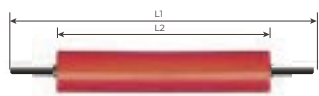
LIGHTING RGB - RGBW

Pergostar Design features an LED lighting system that can be installed in the slat profiles to illuminate the roof. This can be done using LED strips or spotlights. It can also be installed on the front and rear beams to achieve perimeter lighting, as well as on the posts. Thanks to the design of the translucent diffuser profile, continuous lines of light can be achieved, giving an elegant and modern finish. The lighting can be white or RGB, allowing the color of the light to be changed.



MOTOR

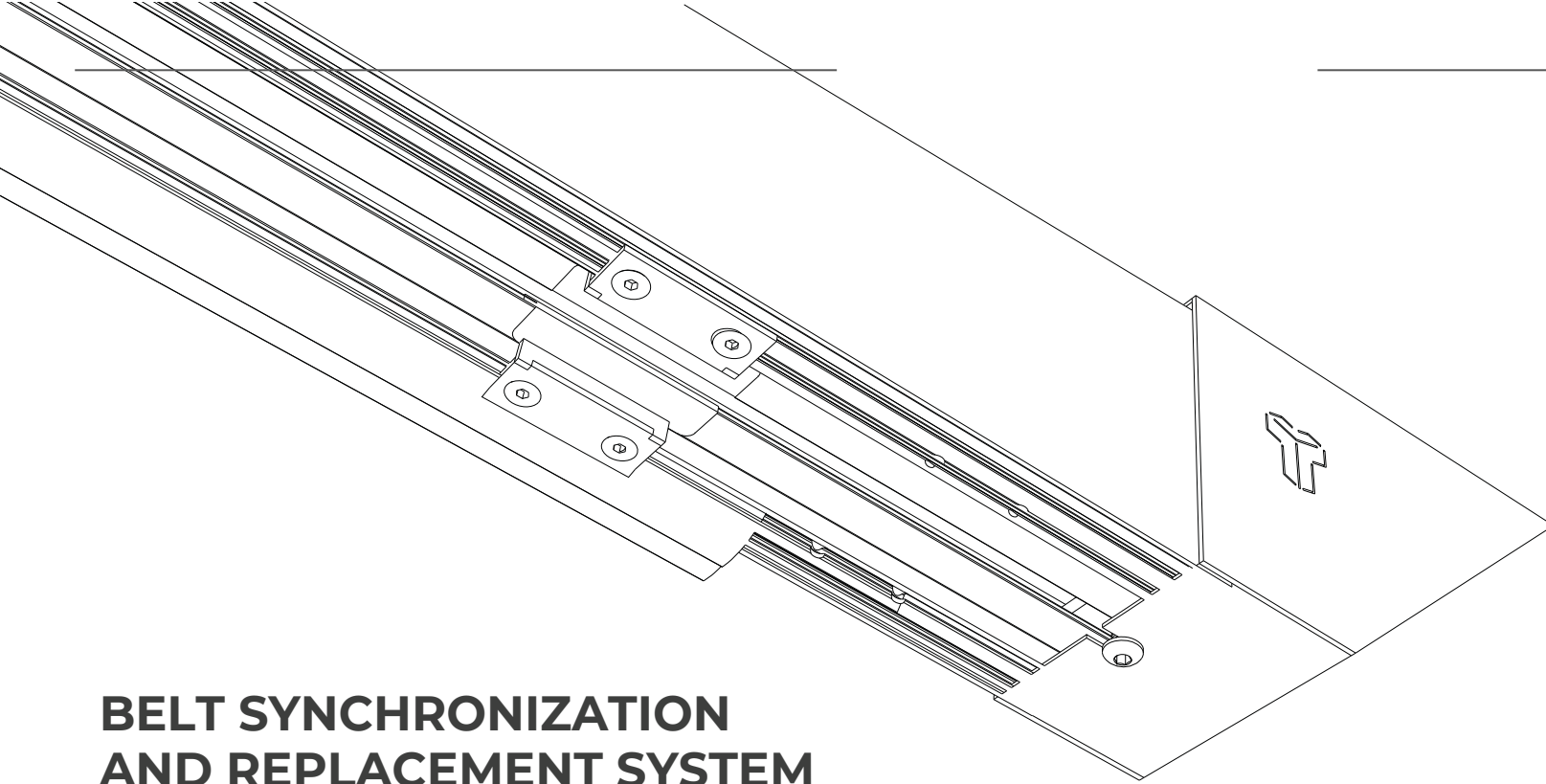
Our pergolas are equipped with an exclusive motor specially designed for the Toscana brand. This innovative system features dual transmission and torque shafts, ensuring constant and maximum tension on the fabric when extended. This advanced technology prevents any water pooling, delivering optimal performance and a flawless appearance.



	Rated Torque (Nm)	Rated Speed (Rpm)	Rated Current (A)	Rated Power (W)	Degree Of Protection (IP)	Maximum Limit Turn (turn)	Running Time (min)	Working Temperature (°C)	L1/L2 (mm)	
230V / 50Hz										
DV64E DV64E-2x25/26	2x25	26	2.22	490	IP44	∞	>4	-10°C-50°C	545/411	CE
120V / 60Hz										
DV64E DV64E-2x25/32	2x25	32	4.58	550	IP44	∞	>4	-10°C-50°C	545/411	

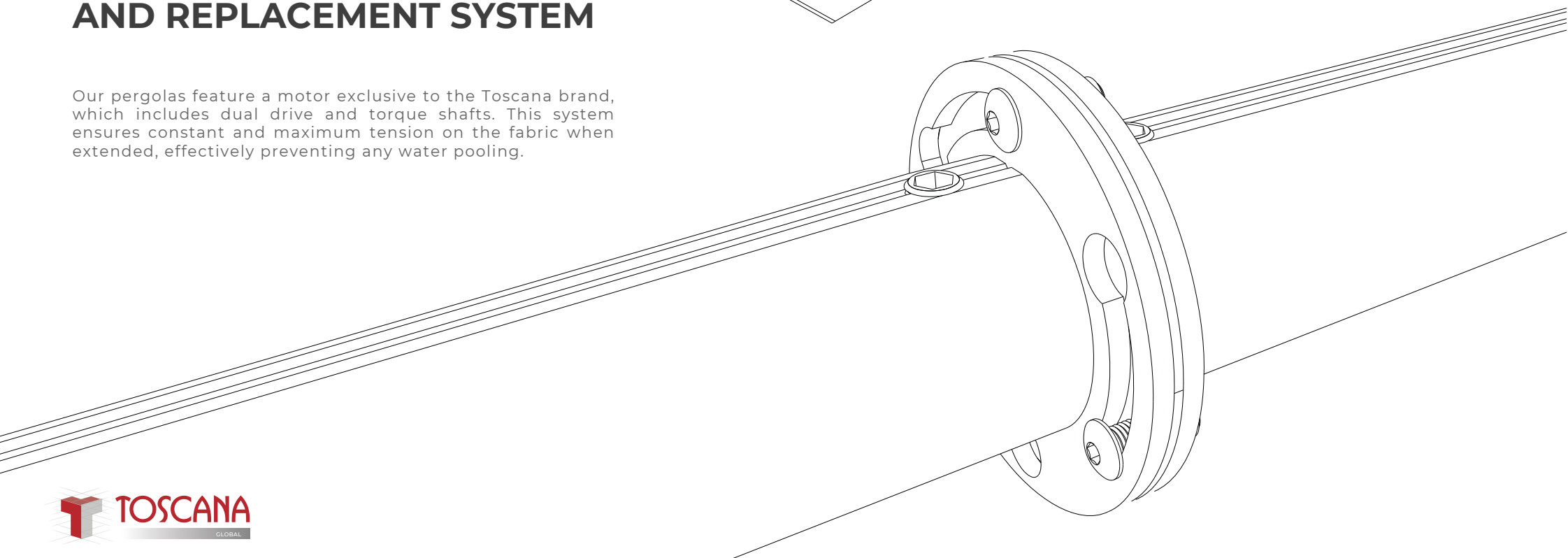


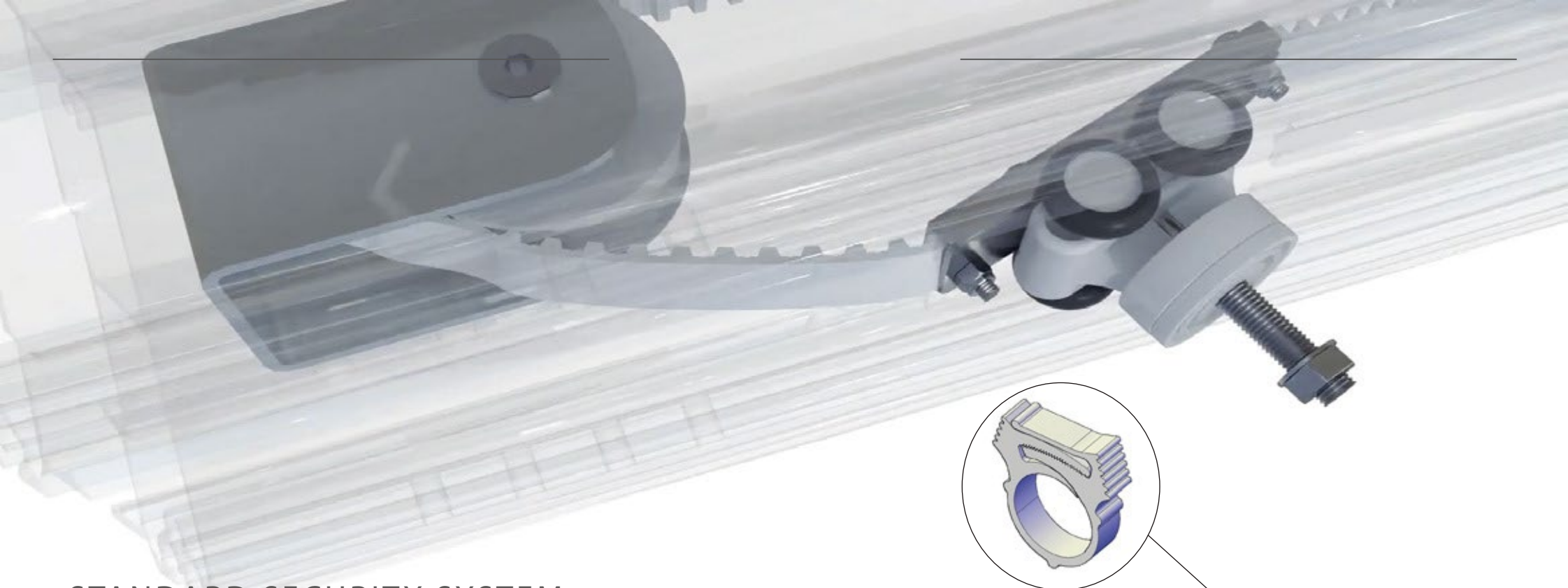
REMOTE CONTROL
Controls up to 15 motors, allows dimming, color changing, and the on/off control of up to 4 circuits.



BELT SYNCHRONIZATION AND REPLACEMENT SYSTEM

Our pergolas feature a motor exclusive to the Toscana brand, which includes dual drive and torque shafts. This system ensures constant and maximum tension on the fabric when extended, effectively preventing any water pooling.



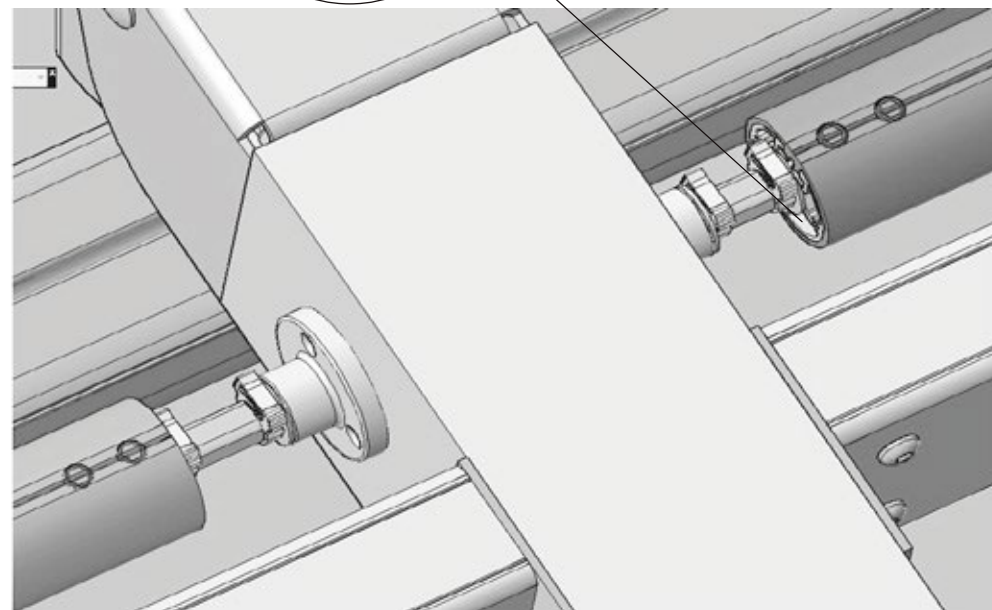


STANDARD SECURITY SYSTEM

The Pergostar Classic features a motor transmission shaft that functions as a fuse, preventing the belt from breaking by allowing the shaft to fracture first as a safety measure. Replacing a simple shaft costs only 5% of the value of a belt.

Our sophisticated mechanical system allows for belt replacement without lowering the slats, eliminating the need for one person per rail and simplifying the process to just one person per pergola, regardless of its size. Additionally, a safety clamp is used to secure the shaft and prevent movement of the transmission tube, avoiding disconnection due to vibration.

Our pergolas are equipped with an advanced electronic system located in the lower large slat, which detects any transmission issues caused by belt or shaft breakage and automatically stops the pergola to prevent collateral damage.





OPTIONAL SAFETY SYSTEM

In case of strong winds, if the pergola is equipped with a weather station, it will close automatically to prevent potential damage.

In the event of a fire, if equipped with a fire detector, the pergola and the curtains will close automatically.

If there is snowfall and the pergola is equipped with a snow sensor, it will close automatically if it is not heated and the temperature underneath does not exceed 15°C (59°F).

In the event of a prolonged power outage, our pergola can be equipped with a small 500-watt / 1000VA UPS protected in an IP65-rated box, hidden next to the motor, which allows for a single opening and closing operation. If full operation of the pergola is desired, a more powerful UPS (power to be calculated with an expert) can be installed on the pergola's electrical supply line, inside the building and outside the pergola due to its size.



TOSCANA DYNAMIC

To enjoy a great experience by giving the user control of multiple functions at their fingertips through their mobile device.

Advantages

Every Toscana pergola in the world can be controlled through Toscana Dynamic, providing the following functions:



CONTROL AND COMMAND DEVICES

The pergola can be controlled through:



TOSCANA DYNAMIC APP

Our app is available on Google Play Store and App Store for Android and iOS devices.



GOOGLE HOME AND ALEXA ASSISTANTS

Control the pergola using voice commands with Google Home and Amazon Alexa assistants.



REMOTE CONTROL

In case of an internet outage, the pergola can be operated using the remote control. A single remote can manage multiple Toscana Dynamic units.



BUTTON CONTROL

In the event of both internet and radio frequency failure, a physical button can be connected to open and close the pergola.



WEB (QR)

Allows full control of the pergola without the need to download the app on your mobile device or computer.



OTHER HOME AUTOMATION SYSTEMS

The Toscana Dynamic Smart Hub can be connected to any other home automation system available on the market.



LIGHTING

Up to 4 lighting channels can be managed for the pergola, allowing switching on/off, dimming, and color selection of W (white), RGB, RGBW lights, and spotlights.



SCENES

Create different scenarios by combining all pergola options, defining how, when, and for how long each element will operate.



VIDEO

You can connect any IP video camera and view it through our app.



INFRARED

Control any device within the pergola using our integrated infrared remote control — for example:

- Televisions
- Sound systems
- Air conditioners
- Heaters



INFRARED

You will be able to control the opening and closing of the entire pergola, as well as the perimeter enclosures, if the client so desires.



SENSORS

As a protection system, temperature and belt breakage sensors are included to help prevent mechanical failures that could damage the pergola. Optionally, clients may add specialized sensors to provide enhanced protection under extreme weather conditions:



Weather Station

Includes an anemometer, rain gauge, hygrometer, wind direction sensor, and is powered by a solar panel with a backup battery in case weather conditions prevent solar charging.



Smoke Detector

An alarm that detects the presence of smoke in the air and emits an acoustic signal warning of a fire hazard. Operates via RF (radio frequency).



Snow Sensor

Measures the snow accumulation height on the pergola in millimeters. Additionally, the app allows you to review a historical log showing how long the snow remained and when it fell.



PRODUCT RATING BASED ON PRECIPITATION

COLOR	INTENS.(mm/h)*	TYPE OF PRECIPITATION	PRODUCT RATING
Red	Greater than 250	Large hail	
Orange	Greater than 250	Torrential rain with hail	
Yellow	100 to 250	Torrential rain with possible hail	
Light Yellow	40 to 100	Very heavy to torrential rain	
Green	16 to 40	Heavy rain	✓
Light Green	6.5 to 16	Moderate rain	
Light Blue	1 to 2.5	Light rain	
Blue	2.5 to 6.5	Slight rain	
Dark Blue	0.4 to 1	Very slight rain	
Very Dark Blue	0.1 to 0.4	Trace of precipitation	

1 mm of precipitation is equivalent to 1 liter per square meter (1 l/m²).

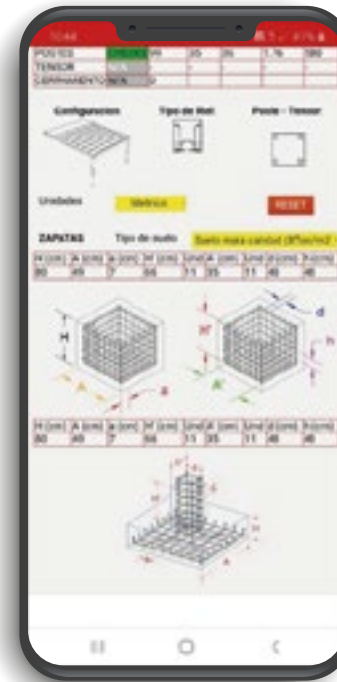
In case a weather station is available, if rainfall exceeds 40 mm/h, the pergola's gutter may overflow and cause flooding inside.

PRODUCT RATING ACCORDING TO WIND RESISTANCE

COLOR	WIND RESISTANCE ACCORDING TO STANDARD EN 13561	BEAUFORT SCALE	WIND	KM/H	PRODUCT RATING
Black	>6	12	Hurricane	118 +	
Purple	>6	11	Storm	103 / 117	
Red	>6	10	Gale	89 / 102	
Orange	6	9	Strong Gale	75 / 88	✓
Yellow	5	8	Near Gale	62 / 74	
Light Yellow	4	7	Strong Breeze	50 / 61	
Green	3	6	Moderate Breeze	39 / 49	
Light Green	2	5	Fresh Breeze	29 / 38	
Light Blue	1	4	Gentle Breeze	20 / 28	
Blue	0	3	Light Breeze	12 / 19	
Dark Blue	0	2	Light Air	6 / 11	
Very Dark Blue	0	1	Very Light Air	1 / 5	
Black	0	0	Calm	0 / 1	



With our Toscana Structure app, we can design and calculate the ideal pergola in minutes, based on the client's desired wind and snow loads. It also automatically provides the technical specifications for the concrete base required to anchor the posts to the ground.





SPATIO[®]
TERRAZA BIOCLIMÁTICA

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