Gibus®
THE SUN FACTORY

USE AND MAINTENANCE MANUAL
DECLARATION OF QUALITY
DECLARATION OF WARRANTY
DECLARATION OF PERFORMANCE DoP

MODEL

TWIST

ISLAND VERSION, LEANING VERSION, WALL, SINGLE MODULE, COUPLED

CE | UKCA

ENG

MUT 077
Code 340391
Rev. 10
30/10/2022

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WARNING: carefully read all warnings and instructions in this manual and in the use and maintenance manual before carrying out any operation with the awning. Read in particular the chapter on safety.

Dear Customer,
thank you for choosing an awning by “Gibus”, we are pleased to deliver this manual in order to help you to use the product in the best possible way.

Please read carefully the recommendations described in the following pages and keep the manual at hand for the Gibus specialist who will be responsible for management and maintenance of the awning.

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IMPORTANT NOTE:
For the sake of simplicity, in this manual the product may be referred to as “pergola”, “awning” or “structure”.
The correct definition that identifies the product is “Drop Awning”, with a detailed description found in section 1.1 “Preliminary Information” and in Chapter 15 “Annexes”.

These instructions were translated from Italian (original language).

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CHAPTER 1: INTRODUCTION

1.1 PRELIMINARY INFORMATION

Do not destroy and change, if needed just supplement with inserts published by the manufacturer. This manual refers to the product:

Type of awning:	Bioclimatic Pergola, isolated or leaning against the wall, for outdoor use.
Models:	TWIST (ISLAND - LEANING VERSION - WALL)
Published:	Gibus S.p.A. via L. Einaudi, 35 - 35030 SACCOLONGO (PD) - ITALY http: www.gibus.it - e-mail: gibus@gibus.it
List of annexes:	Installation instructions - Motors and automatisms instructions - Delivery certificate.

Each operator and personnel in charge of the installation, adjustments, operation and maintenance of the Bioclimatic Pergola, must read very carefully this manual and observe the instructions given, the operator in charge of the installation and maintenance must also meet the qualification requirements for the use and maintenance of the Pergola.

IMPORTANT: The instruction manual is aimed at those who use the Bioclimatic Pergola, such as an installer, maintainer, owner or user and is the basis for the correct use and maintenance of the product. Addressed **to the installer** are the instructions for handling, unpacking, installation, adjustment and maintenance. Addressed **to the owner** are the instructions for proper use, maintenance and disposal, as well as the warranty. **This manual is an integral part of the product.** Keep it intact and in an easily accessible place for future reference and at hand for further consultation until the disposal of the Bioclimatic Pergola. In case of loss or destruction of the manual, the customer must request a new copy to his Retailer, providing the main data of the product and the destination of the new copy. When selling this manual must follow the Bioclimatic Pergola to its new destination. **The manual must always be available to the qualified installation, maintenance or control personnel for the necessary registration.** The Manufacturer reserves the right to update products and relevant manuals, with no obligation to update previous manuals.
This manual is the essential tool for maintaining the validity of the guarantee.

1.2 INSTRUCTIONS FOR USE

The instructions contained in this manual are intended for models:
- **TWIST ISLAND:** Bioclimatic self-supporting stand-alone pergola with cover formed of a brise soleil with swinging metal blades, available in single or multi-module, with coupling modules.
- **TWIST LEANING VERSION:** Bioclimatic wall-leaning pergola with cover formed of a brise soleil with swinging metal blades, available in single or multi-module, with coupling modules.
- **TWIST WALL:** bioclimatic pergola applied to walls with cover formed of a brise soleil with swinging metal blades, available in single module.

The instruction manual must be read and used in the following way:
- Read this manual carefully, and consider it an integral part of the Pergola;
- The instruction manual must be readily available for use by staff in charge of running and maintenance;
- Keep the manual for the entire service life of the Pergola;
- In case of sale deliver the manual to the new owner of the Pergola;
- Use the manual in such a way not to damage its content;
- In no case remove, tear or re-write any part of the manual;
- Keep the manual in a place protected from moisture and heat;
- If the manual is lost or partially damaged and then its complete content can no long be read, it is advisable to request a new manual to the manufacturer.

In the following pages pay close attention to the following symbols and their meaning. Their function is to highlight essential information such as:

WARNING: DANGER TO THE OPERATOR/USER In reference to dangerous situations that can occur with the use (including installation and maintenance) of the Pergola. Failure to comply with these messages may endanger the safety of persons and the product.

WARNING: In reference to dangerous situations that may occur due to the PRESENCE OF ELECTRICAL VOLTAGE. Failure to comply with these messages may endanger the safety of persons and the integrity of the product.

WARNING: In reference to dangerous situations that can occur with the use of the Pergola to prevent damage to objects and the Pergola itself.

IMPORTANT: Useful information and tips to be observed to ensure proper use and preservation of the Pergola. Failure to observe these messages can affect the integrity and / or resistance of the product.

1.3 REGULATIONS AND SELF-CERTIFICATION DOCUMENTATION

1.3.1 With reference to CE marking

This User's Manual was prepared in accordance as indicated in EN 13561 and and with section 1.7.4 of Annex 1 to Directive 2006/42/EC taking into account the normal use of the Pergola in order to inform, together with other instructions for use affixed to the pergola itself or in the installation instructions, the operators / users on residual risks that the products presents.
The Bioclimatic Pergola complies with the "Construction products regulations - CPR 305/2011" and the requirements given in the Annex ZA of the EN 13561, "assessment and inspection system for performance continuity type 4" (System 4).
If it is installed properly, it has a resistance to wind as shown in the technical data table in section 4, according to the size, in each case greater or equal than those required by the Class 4 of the UNI EN 13561 rule on "External awnings - Performance requirements including safety".
This Technical Classification ensures resistance to a wind that carries a maximum pressure rating of 170 [N/m^2] (Newton/m^2) similar to an wind insisting on the awning with a maximum speed of 60 [km / h] corresponding to the 7th level of the Beaufort Scale. The resistance to wind load was evaluated according to criteria related to those required by the UNI EN 13561 and UNI EN 1932 rules and from the technical standards in force, with the necessary safety margins.
The Pergola complies as well as the relevant parts of the Machinery Directive 2006/42/EC. The CE Mark together with wind resistance characteristics according to UNI EN 13561 and the self-certification document (Declaration of Performance DoP) are included in APPENDIX 0 and APPENDIX 1 on the last pages of this manual. The original Declaration of Performance DoP issued by the manufacturer is kept by Gibus S.p.A.

1.3.2 With reference to UKCA marking

This User's Manual was prepared according to EN 13561 and the "Supply of Machinery (Safety) Regulations 2008" taking into account the normal use of the awning and in order to inform the users/operators and provide them with the instructions to install the awning itself and warn users about the residual risks.
The awning complies with the relevant parts of "The Construction Products (Amendment etc.) (EU Exit) Regulations 2020" and offers, if it is properly installed, a resistance to a wind load as much as the resistance required by Class 4 of the EN 13561 rule on "External blinds" Performance requirements including safety".
The compliance with this Technical Classification ensures resistance to a wind that carries the maximum pressure rating of 170 [N/m^2] (Newton/m^2) similar to a wind against the awning with a maximum speed of 60 [km/h] corresponding to the 7th level of the Beaufort Scale. The resistance to wind load was evaluated according to criteria required by the UNI EN 13561 and UNI EN 1932 rules, with the necessary safety margins.
The awning complies the requirements in Annex ZA of the same EN 13561 regulations, where there is an "assessment and inspection system for performance continuity of type 4" (System 4).
The engine driven awning also complies with the relevant parts of the "Supply of Machinery (Safety) Regulations 2008".
The UKCA Marking as well as the wind resistance characteristics according to UNI EN 13561 and the self-certification document ("Declaration of Performance DoP") are included in the ANNEX 2 and ANNEX 3 attached to the last pages of this manual. The original of the "Declaration of Performance DoP" prepared by the manufacturer is filed at Gibus S.p.A.

1.4 RESPONSIBILITY

Gibus SpA is not liable and has no obligations for any accidents to persons or property, which may occur due to:
- Failure to follow the instructions in this manual regarding the installation, use and maintenance of the Pergola;
- Violent actions or mishandling in the installation, use and maintenance of the Pergola;
- Changes made to the Pergola without the prior written permission by Gibus SpA;
- Incidents in any case arising beyond the normal and correct use of the Pergola.

In any case, if the user thinks the cause of the incident is a defect of the Pergola, he will have to prove that the damage has been a consequence of such a “defect”.

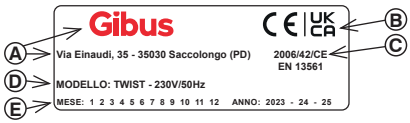
WARNING: For maintenance or repair to always use only original spare parts. Gibus SpA declines all responsibility for damages that may occur for non-compliance with the above instructions. The Pergola is guaranteed according to the contractual arrangement prepared at the time of sale. The warranty is in any case deemed void if the rules and instructions for use and maintenance contained in this manual were not followed.

Quick or careless preparation leads to improvisation, which is the cause of many accidents. Before starting the installation work and before commissioning of the Pergola, carefully read and observe the following tips:
- Program all operation with the utmost care;
- Be well aware of where and how it is provided for the use and maintenance of the Pergola;
- Strictly follow all warnings relating to special dangers listed in this manual;
- The maintainer must always have at hand the instruction manual;
- A constant and careful preventive maintenance will always ensure a high level of operating safety of the Pergola. Never postpone needed repairs and have them carried out only by qualified personnel, and use only original spare parts.

1.5 IDENTIFICATION OF THE PRODUCT AND TECHNICAL NAMEPLATE

Each model is identified by the adhesive technical nameplate showing the CE marking sign and contains the following data:

A Name and address of the registered office of the manufacturer.
B CE marking and/or UKCA marking.
C No of the European rule.
D Model of the awning and specifications.
E Year of manufacture.



Each Gibus awning and pergola is unique, individually recognisable and traceable due to the Gibus trademark 3D hologram with a unique alphanumeric serial number. All Gibus products are supplied with the hologram (see back cover). The hologram is applied near the CE marking.

CHAPTER 2: SAFETY REQUIREMENTS

The manufacturer is not liable for malfunctions and damage if the Pergola:
- Is used for purposes other than those for which it is intended to;
- Is not operated and maintained in accordance with the instructions specified in this manual;
- Is not subject to regular maintenance, as prescribed, or non-original spare parts are used for replacement.

IMPORTANT: For any doubt or unintended use, consult the authorized dealer or the manufacturer before installation.

2.1 PURPOSE AND INTENDED USES OF THE PERGOLA

The Bioclimatic Pergola was designed and made for protection from the sun and rain and it is meant to be used in civil constructions, residential and commercial buildings and other facilities for the community.
The Bioclimatic Pergola is not able to withstand snow load. Therefore should it snow, the blades must be placed vertically (open) before the snow settles on them.
It is advisable to use the snow sensor, temperature sensor combined with the rain sensor, to detect snow and prevent it depositing.
In all cases, do not stand under or near the pergola if any snow has deposited on it (*). Any other use is considered improper and inadequate and releases the manufacturer from all liability for any damage caused to persons or property.
The Bioclimatic Pergola offers, if properly installed, a resistance to wind load greater or equal than those required by the Class 4 of UNI EN 13561. It is therefore recommended the exposure to a wind exerting a maximum pressure of 170 Newton/sqm, corresponding to the load of a continuous wind speed not exceeding 60 km/h.
It is strictly required, for the sake of safety, to open the swinging metal blades vertically before the given limit is reached (even though the pergola offers much higher wind resistance depending on its size).

(*) The TWIST structure is designed to withstand a static load from deposited snow of at least 50 kg/m^2 (without wind).

CAUTION: for safety reasons the brise soleil blades on the pergola must be placed vertically in case of wind exceeding the recommended maximum exposure, very strong rain, hail, snow and ice; it is very dangerous to leave blades placed horizontally in these cases, it can cause injury to persons and damage to property. Do not stand under or near the pergola if any snow has deposited on it.

(**) In the event of ice, it might be difficult to open the blades if they are in a horizontal position (i.e. closed).

IMPORTANT: In order to use the Pergola for purposes other than those described above, a specific permission given by the manufacturer is required. Failure to follow the conditions for proper use, voids any warranty given by the manufacturer.

2.2 USE ENVIRONMENT

The Pergola was designed and built to be used outside. It offers adequate protection of the electrical parts to water infiltration. The motors and the control units provides a degree of protection against moisture equal to at least **IP44**.

CAUTION: the engines cannot be used in atmospheres posing risk of explosion.

The Pergola can also be used outdoors or away from the wall of a building (intended use), provided that the system is degree of protection **IP55**.
It needs a 230V/50Hz power supply. Install an upstream electrical switch suitable to 230V/50Hz with magnetothermal and differential functions (see paragraph 6.2. “ELECTRIC CONNECTION”). The electrical switch should be placed in a protected position, in an easy to reach position, high from the ground and away from dangerous areas.

ATTENTION!: Corrosion resistance is not guaranteed in the event of immersion or sprays with salt water (sea storms, etc.). Also, with intense exposure to salty fog, incrustations or bubbles could appear in the connections or aluminium profiles and oxide or rust could appear on the stainless steel brackets. These conditions are not covered by warranty.

CAUTION: No person should install or place ladders or other fixed objects in such a way as to obstruct the movement of the blades.

2.3 OPTIONAL SAFETY DEVICES

Wind sensor: The wind sensor detects the wind speed. It has the highest priority among the sensors. If the alarm is active, the control unit moves the slats at 30% of the opening.
The device does not perform any command during the status of alarm and it resumes its normal operation when the alarm is not active anymore. The alarm is off when the sensor detects for 60 seconds a speed lower than the set threshold.
Alarm priority: HIGH.
The default sensor is ENABLED.

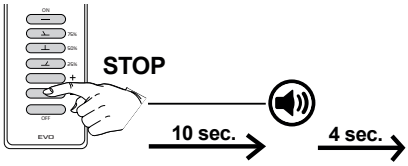
Wind sensor threshold: With DIP SWITCH 1, 2 and 3 it is possible to set the wind speed alarm threshold (Km/h):

DIP 1	DIP 2	DIP 3	Km/h
OFF	OFF	OFF	40
OFF	OFF	ON	45
OFF	ON	OFF	50
OFF	ON	ON	55
ON	OFF	OFF	60
ON	OFF	ON	65
ON	ON	OFF	70
ON	ON	ON	75

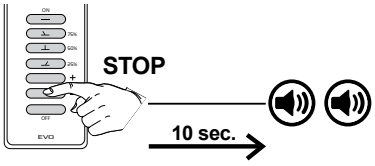
Rain sensor:
When the sensor detects the rain and the alarm is activated, the device positions the slats of the pergola in closed position. The device doesn’t perform any command during the status of alarm. The alarm is off when the sensor doesn’t detect the presence of the rain for 20 seconds. By default the sensor is activated. Alarm priority: LOW.
Functioning of the system AFTER the rain alarm (Water draining):
Once the rain alarm is off, for the next 6 hours, as soon as a ctommand of automatic movement sent by transmitter is received, the control unit will move the slats to 33%, to allow the water draining. For 4 minutes the control unit will perform just hold-to-run commands, switching off the alarm status.

Activation/Deactivation of the rain sensor using a transmitter:
In order to perform this procedure at least one transmitter must be memorized (par. 6.2), and it must be performed when the system is stopped. By default the sensor is activated.

Activation: Press for 10 sec. the button "STOP" of transmitter. The buzzer emits for 4 sec. a continuous sound.

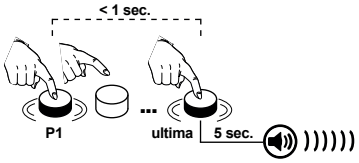


Deactivation: Press for 10 sec. the button "STOP" of transmitter. The buzzer emits 2 beeps.

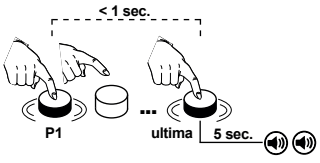


Temperature sensor:
The sensor detects the temperature that could cause the freezing of the pergola slats. If it is under 2°C the alarm is activated, then the control unit moves the slats at the 66% of the opening. The alarm is off when the temperature is over 3°C.
The control unit performs just hold-to-run commands during the status of alarm, and resumes its normal operation when the alarm is not active anymore. By default the sensor is deactivated. Alarm priority: MEDIUM.

Activation of snow configuration (possible only if the temperature sensor is connected): Press **7** times **P1** keeping pressed the **seventh** time for 5 sec. The buzzer emits 3 beeps.

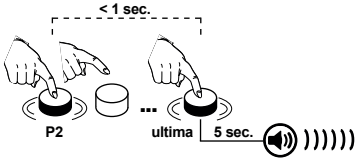


Deactivation of snow configuration: Press **7** times **P1** keeping pressed the **seventh** time for 5 sec. The buzzer emits a continuous sound.

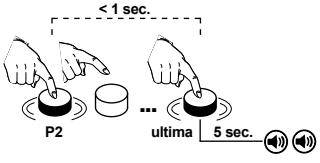


Snow condition (temperature sensor combined with rain sensor):
To manage the alarm related to the condition of snow it's necessary combine temperature sensor and rain sensor. The alarm is on when the temperature is under 2°C and the rain has been detected, then the control unit moves the slats at the 66% of the opening.
The alarm is off when the temperature is over 3°C or when there is no rain detection. The control unit performs just hold-to-run commands during the status of alarm, and resumes its normal operation when the alarm is not active anymore. By default the combination is deactivated.Alarm priority: MEDIUM.

Activation of snow configuration (possible only if the temperature sensor is connected): Press **7** times **P2** keeping pressed the **seventh** time for 5 sec. The buzzer emits 3 beeps.



Deactivation of snow configuration: Press **7** times **P2** keeping pressed the **seventh** time for 5 sec. The buzzer emits a continuous sound.



Snowmelt system in the blades:
The anti-snow module Gibus is a louvre heating patented system to prevent the build-up or the overaccumulation of snow on bioclimatic louvre roof. It allows to keep the louvres closed even in the event of snow. By default the snowmelt system is activated.

ATTENTION: If the rain sensor is deactivated, the anti-snow system does not work.

IMPORTANT!: for further information about the control unit of motors and sensors as well as for specific information, see the instructions supplied with the control unit and sensors.

2.4 USER AND INSTALLER REQUIREMENTS

The normal use of the Bioclimatic Pergola is allowed to everyone, except those younger than 12 years. The installation of the Bioclimatic Pergola and of the electrical system, the adjustment of the Pergola and the setting of the engines limit switch, as well as maintenance must be performed by qualified personnel only. The installation of the Pergola adjustments must be performed strictly in accordance with the manufacturer's instructions provided in this manual and especially following the attached Installation Instructions referred to in the pertinent sections of this manual (Chap. 6 and Chap. 7).

2.5 RECOMMENDATIONS

In the manual and especially in the attached Installation Instructions referred to in the pertinent sections of this manual (Chap. 6 and Chap. 7), are listed **all instructions** for proper handling, storage, installation, use and maintenance of the Pergola, in compliance with the product standards and the "Machinery Directive" and to avoid harm to people or damage to the Pergola itself. Are also given instructions to perform properly both dismantling and disposal.

WARNING: The installation of the Pergola and its electrical connection, are only to be carried out by specialized and authorized staff.
Any operation on the electrical system must be carried out by trained personnel only. For any doubt or unintended use, consult the manufacturer before installation.

WARNING: The installation of the Pergola must be carried out in accordance with the instructions in this manual. A different installation could result in hazardous situations. In this regard see the sections "SAFE INSTALLATION" and "INSTRUCTIONS FOR PROPER INSTALLATION" and the installation instructions attached to this manual and inside the package.

WARNING: You can not alter or modify the Pergola. Any changes or modifications made without proper authorization by the manufacturer, relieves the latter from any liability for any damage that may result and void the warranty.

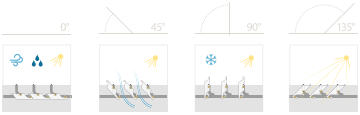
ATTENTION: it is strictly forbidden to carry out operations using open flames in the vicinity of the Pergola.

Recommendations to be taken in the presence of staff (only if staff is working under the structure):
- if the structure is installed as a stand-alone structure, assess the lighting hazard according to Law Decree 81/08 (in the Chapter III of Title III) by applying the technical reference regulations such as CEI EN 62305-2 (CEI 81-10/2).
- If the structure leans against an existing building, carry out the lighting hazard assessment again in accordance with Law Decree 81/08 (in chapter III of Title III) by applying the technical reference regulations such as CEI EN 62305-2 (CEI 81-10/2).

CHAPTER 3: TECHNICAL DESCRIPTION

The Bioclimatic Pergola of the ***TWIST*** line were designed and built according to the principles of constant innovation, impeccable workmanship and attention to the details of ***Gibus Total Quality***. A system of values designed to ensure complete customer satisfaction.
the ***TWIST ISLAND*** It is a bioclimatic pergola with an aluminium brise soleil, built in a special and dedicated self-supporting structure that is installed in a stand-alone way and isolated from any building.
For the ***TWIST LEANING VERSION*** the structure dedicated must be leaned against the wall of a building.
The cover is formed of swinging metal blades. When it is sunny, open the blades to provide the required shade for improved outdoor comfort and a natural airflow that carries the hot air upwards. When it rains the closed blades offer protection and carry the water to the gutters incorporated in the supporting structure. Two synchronized linear motors enable moving the blades by remote control.
The Bioclimatic Pergola is equipped with several patented systems to facilitate and speed up the installation work and improve the performance of the product:

Gibus Patent® ***Twist Motion***: a side holding system for the blades resting on a seal along the inside edge that provides isolation from the outside.



Gibus Patent® ***Side Seal***: a side holding system for the blades resting on a seal along the inside edge that provides isolation from the outside.

Gibus Patent® ***Quick Assembly***: Quick connection system of the supporting structure free from exposed fastening elements.

Gibus Patent® ***Snow Melt System***: heating system to prevent snow accumulation.

Gibus Patent® ***Safe Blades***: System for louvre motion control.

Gibus Patent® ***Blade Seal***: Blades sealing system.

Registered design.

3.1 STRUCTURAL AND MECHANICAL COMPONENTS

The Gibus bioclimatic pergola is formed of a self-supporting structure or attached to a wall, made from painted aluminium and with side guides attached to the self-supporting gutters, supporting legs measuring 150x150 mm, cover formed of adjustable swinging brise soleil blades.
The couplings include stainless steel brackets, painted extruded aluminium parts, stainless steel nuts and bolts. The movement drive system is on side guides with linear actuators, which are remotely controlled.
The guide profiles, adjustable blades, bearing structure beams are extruded Anticorodal EN AW 6060 UNI EN 573-03 UNI EN 755-2 that is then treated with anticorrosion phosphochromatisation painted with thermosetting polyester powder. The plastic components are melted in fiberglass and nylon plastic. Stainless steel screws.

ATTENTION!: Corrosion resistance is not guaranteed in the event of immersion or sprays with salt water (sea storms, etc.). Also, with intense exposure to salty fog, incrustations or bubbles could appear in the connections or aluminium profiles and oxide or rust could appear on the stainless steel brackets. These conditions are not covered by warranty.

3.2 ELECTRICAL COMPONENTS

The TWIST motors are compact 24VDC linear actuators. They have a maximum thrust or pull of 2000 (N), IP66 protection class. Run length: 250 mm, extractable pistons. Noise level: max. 58.5 dB (A), (rated voltage and without load, in compliance with EN IS0 3743-1 standard). Working temperature: -15°C to +55°C (in compliance with ISO 7176-9 standard). Endstops controlled by a dedicated electronic control unit.

CAUTION: the power supply group has an electrical insulation of Class II. Don't ground the structure with the following attentions:

WARNING: the vertical side awnings have tubular motors with electrical insulation levels lower than class II. The bioclimatic pergola must be grounded according to the diagram shown in the Installation Instructions.

WARNING: even if there are accessories and parts powered at 230V/50Hz with an electrical insulation level lower than class II (for example, the heaters or snow melters), the bioclimatic pergola must be grounded according to the diagram shown in the Installation Instructions.

Upstream a magnetothermal and differential switch must be installed with the characteristics defined in the table below. If there is more than one output line from the pergola, each single line must be protected. Provide power cables as defined in the table below.

IMPORTANT: The instructions specific for engines and controls are supplied upon delivery of the Bioclimatic Pergola. These instructions must be read, annexed to this manual and keep in good condition for any subsequent consultation.

TWIST Electric Features

Type	Bioclimatic pergola.		
Power supply	230 V (+10% +15%) 50Hz (*)		
Max. absorbed power	240 W (max. 1,5 A) for standard configuration modules (only blade movement). +max. 240 W with blade Led Spot +max. 240 W with perimeter Led Spot +max. 320 W with RYB leds +max. 750 W with antifreeze system Tot. max. 1800W (8,0 A) Refer to the labels on the outputs on each single line. For the other accessories (snowmelt system, audio system, side awnings and heaters) refer to the power levels defined in the catalogue.		
Insulation class	Class II (the structure must not be earthed) for standard configuration modules (blade movement and Spot White lights and with RYB). Class I (the structure must be earthed) for standard configuration modules (tubular motors).		
Connection mode	by IP68 Male/female connector.		
Power cable (supplied by the customer)	YOU NEED a double insulated cable. Provide a cable: H07RN-F type with minimum formation dependent on power		
For max power:	up to 2 kW	up to 3 kW	up to 5 kW
up to 30 m	3G 1,5 mm^2	3G 2,5 mm^2	3G 4,0 mm^2
up to 50 m	3G 2,5 mm^2	3G 4,0 mm^2	3G 10,0 mm^2
Upstream protection (supplied by the customer)	Magnetothermal switch and differential switch with intervention current 0,03 A. Type of differential protection: A (**).		
For max power:	up to 2 kW	up to 3 kW	up to 5 kW
Magnetothermal switch features:	2 10A poles Curve C	2 16A poles Curve C	2 25A poles Curve C
Protection against overvoltage	None (provide the electric board with a suitable SPD protection system).		
Operating temperature	-20°C / +55°C		
Degree of protection	IP 54		

"(*): Or different depending on the place of installation.
(**): If there is more than one output line from the pergola, each single line must be protected.
In the case of antifreeze system, the differential must have an intervention current of 0.01A (dedicated line).
In case of Schuko socket, the differential must be of the AC type and the intervention current of 0.03A."

3.3 ELECTRONIC COMPONENTS OF THE AWNING (OPTIONAL)

Upon optional request the Bioclimatic Pergola can be managed electronically **in its functions with control of the weather conditions.** In this case, the Bioclimatic Pergola can be fitted with additional electronic sensors for wind, rain, temperature, and snow (see paragraph 2.3 and 2.4). **The type of electronic component used on the Pergola is indicated in the product chart.**

CAUTION: Never set the wind speed above the wind resistance of the awning itself (maximum threshold recommended for TWIST brise soleil blades: 60 km/h).

IMPORTANT: The installation and maintenance instructions of the control units and sensors are attached to the control unit packages, which are delivered along with the Bioclimatic Pergola or placed in the accessory box. These instructions must be read, annexed to this manual and keep in good condition for any subsequent consultation.

3.4 NOISE LEVEL

The measured noise (sound pressure level) was less than 55 dB (A).

CHAPTER 4: TECHNICAL DATA

4.1 TYPE

TWIST ISLAND (Basic Module)

With 4 legs:
Width up to 500 cm
Projection up to 670 cm

With 6 legs:
Width up to 500 cm
Projection up to 750 cm

TWIST FRONTAL LEANING VERSION (Basic Module)

blades parallel to wall

With 2 legs:
Width up to 500 cm
Projection up to 670 cm

With 4 legs:
Width up to 500 cm
Projection up to 750 cm

TWIST LATERAL LEANING VERSION (Basic Module)

blades perpendicular to wall

With 2 legs:
Width up to 500 cm
Projection up to 670 cm

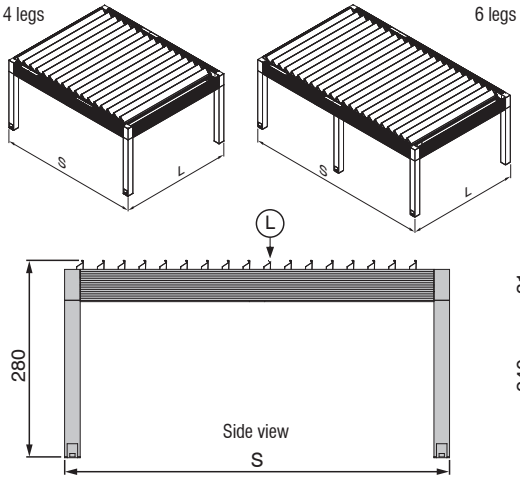
With 3 legs:
Width up to 500 cm
Projection up to 750 cm

TWIST WALL (Basic Module)

With 4 wall attachments:
Width up to 500 cm
Projection up to 670 cm

With 6 wall attachments:
Width up to 500 cm
Projection up to 750 cm

4.2 TWIST ISLAND



ISLAND - SINGLE MODULE
4 LEGS max. L x S 5.00 x 6.70
6 LEGS max. L x S 5.00 x 7.50

1 Module		WIDTH "L" (cm)													G	L
		200	225	250	275	300	325	350	375	400	425	450	475	500	n°	n°
		kg														
PROJECTION "S" (cm)	210	228	239	251	262	274	285	297	309	320	332	343	350	360	4	8
	230	239	251	264	276	288	299	313	323	338	350	362	370	380		9
	250	251	264	277	290	303	314	329	339	355	368	381	385	400		10
	270	263	276	290	304	318	331	345	356	372	386	400	405	420		11
	290	274	289	303	318	332	345	361	373	390	404	419	425	440		12
	310	286	301	316	331	347	360	377	390	407	423	438	445	460		13
	330	297	313	329	345	361	376	393	407	425	441	457	465	480		14
	350	309	326	342	359	376	391	409	424	442	459	476	485	500		15
	370	321	338	355	373	390	407	425	441	460	477	495	505	520		16
	390	332	350	369	387	405	422	441	458	477	495	514	525	540		17
	410	344	363	382	400	419	437	457	474	495	514	533	540	555		18
	430	355	375	395	414	434	453	473	491	512	532	552	560	575		19
	450	367	387	408	428	448	468	489	508	530	550	571	580	595		20
	470	379	400	421	442	463	484	505	525	547	568	589	595	615		21
	470	390	412	434	456	477	499	521	541	565	587	608	615	635		22
	510	402	424	447	470	492	515	537	558	582	605	627	635	655		23
	530	413	437	460	483	507	529	553	575	600	623	646	655	675		24
	550	425	449	473	497	521	545	569	592	617	641	665	670	695		25
	570	437	461	486	511	536	560	585	609	635	659	684	690	710		26
	590	448	474	499	525	550	576	601	626	652	678	703	710	735		27
	610	460	486	512	565	565	591	617	643	670	696	722	730	750		28
	630	500	527	554	581	608	635	662	688	716	743	770	775	790		29
	650	512	539	567	595	622	650	678	705	733	761	789	790	810		30
	670	523	552	580	609	637	665	694	722	751	779	808	810	830		31
	690	535	564	593	620	650	680	710	740	770	795	825	840	855	6	32
	710	545	576	605	635	665	695	725	755	785	810	840	855	875		33
	730	555	585	615	645	675	710	740	770	795	825	855	870	890		34
	750	565	595	625	655	685	720	750	785	810	835	865	885	905		35

Legend:
kg = Total pergola weight including the supporting structure and brise soleil blades.
G = Legs.
L = Brise soleil blades.

IMPORTANT: For each size the load shown in the table is still greater or equal than the one provided by Class 4 - UNI EN 13561 / UNI EN 1932 (nominal load continuously distributed on the extended surface equal to approximately 17 [kg/m²] or 170 [N/m²]).

Indicative Maximum vertical load [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	4	9	900	610	460	370	310	250	170
310		14	850	600	430	345	290	220	150
410		19	800	580	400	300	250	190	130
510		24	550	400	320	280	200	160	110
610		29	350	250	210	170	130	110	90
670		32	250	200	180	140	110	90	70
710	6	34	800	650	400	300	220	170	150
750		36	700	600	370	260	190	170	130

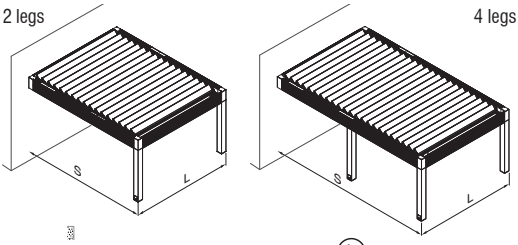
Snow load without wind [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	4	9	590	400	300	240	190	140	100
310		14	570	390	280	220	180	130	90
410		19	550	380	260	190	160	110	80
510		24	350	260	210	180	128	95	70
610		29	220	160	140	110	90	70	60
670		32	180	125	100	90	80	60	50
710	6	34	500	400	240	170	120	110	60
750		36	400	300	200	150	100	90	50

The values reported in the table on the right, show the snow load resistance when there is no wind. The pergola structure and cover are designed and certified to resist a deposited snow load (with no wind) that varies by size.
In case of snow, it is advised to the blades must be placed vertically (open) before the snow settles on them. Do not stand under or near the pergola if any snow has deposited on it.

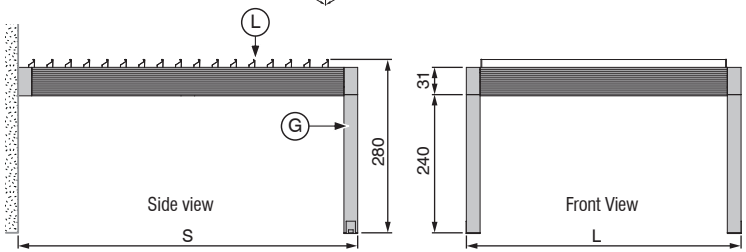
LEGEND - "BEAUFORT" WIND SCALE						
GRADE 12	GRADE 11	GRADE 10	GRADE 9	GRADE 8	GRADE 7	GRADE 6
Hurricane Force	Violent storm	Storm	Strong gale	Gale	High wind	High wind

Wind Resistance [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	4	9	250	190	155	122	100	80	70
250		11	235	180	151	120	95	76	67
290		13	220	175	147	115	90	72	64
330		15	210	170	143	111	85	68	61
370		17	200	165	138	107	80	65	58
410		19	190	155	130	100	75	62	55
450		21	175	145	120	95	70	58	52
490		23	155	133	110	90	66	55	50
530		25	140	122	100	85	62	52	47
570		27	130	110	91	75	58	49	44
610		29	120	100	82	65	54	46	42
630		30	110	90	75	55	50	43	40
670		32	90	75	55	45	40	35	32
630	6	30	131	131	100	85	62	52	45
670		32	120	120	95	75	58	49	42
710		34	110	110	88	65	54	45	35
750		36	100	90	75	55	50	40	32

4.3 TWIST FRONTAL LEANING VERSION



FRONTAL LEANING VERSION SINGLE MODULE
2 LEGS max. L x S 5.00 x 6.70
4 LEGS max. L x S 5.00 x 7.50



1 Module		WIDTH "L" (cm)													G	L
		200	225	250	275	300	325	350	375	400	425	450	475	500	n°	n°
		kg														
PROJECTION "S" (cm)	**210**	204	215	227	238	250	261	273	285	296	308	319	335	345	2	8
	230	215	227	240	252	264	275	289	299	314	326	338	355	365		9
	250	227	240	253	266	279	290	305	315	331	344	357	370	385		10
	270	239	252	266	280	294	307	321	332	348	362	376	390	405		11
	290	250	265	279	294	308	321	337	349	366	380	395	410	425		12
	310	262	277	292	307	323	336	353	366	383	399	414	430	445		13
	330	273	289	305	321	337	352	369	383	401	417	433	450	465		14
	350	285	302	318	335	352	367	385	400	418	435	452	470	485		15
	370	297	314	331	349	366	383	401	417	436	453	471	490	505		16
	390	308	326	345	363	381	398	417	434	453	471	490	510	525		17
	410	320	339	358	376	395	413	433	450	471	490	509	525	540		18
	430	331	351	371	390	410	429	449	467	488	508	528	545	560		19
	450	343	363	384	404	424	444	465	484	506	526	547	565	580		20
	470	355	376	397	418	439	460	481	501	523	544	565	580	600		21
	470	366	388	410	432	453	475	497	517	541	563	584	600	620		22
	510	378	400	423	446	468	491	513	534	558	581	603	620	640		23
	530	389	413	436	459	483	505	529	551	576	599	622	640	660		24
	550	401	425	449	473	497	521	545	568	593	617	641	655	680		25
	570	413	437	462	487	512	536	561	585	611	635	660	675	695		26
	590	424	450	475	501	526	552	577	602	628	654	679	695	720		27
	610	436	462	488	541	541	567	593	619	646	672	698	715	735		28
	630	476	503	530	557	584	611	638	664	692	719	746	760	775		29
	650	488	515	543	571	598	626	654	681	709	737	765	775	795		30
	670	499	528	556	585	613	641	670	698	727	755	784	795	815		31
	690	520	549	578	605	635	665	695	725	755	780	810	825	840	4	32
	710	530	561	590	620	650	680	710	740	770	795	825	840	860		33
	730	540	570	600	630	660	695	725	755	780	810	840	855	875		34
	750	550	580	610	640	670	705	735	770	795	820	850	870	890		35

Legend:
kg = Total pergola weight including the supporting structure and brise soleil blades.
G = Legs.
L = Brise soleil blades.

IMPORTANT: For each size the load shown in the table is still greater or equal than the one provided by Class 4 - UNI EN 13561 / UNI EN 1932 (nominal load continuously distributed on the extended surface equal to approximately 17 [kg/m²] or 170 [N/m²]).

Indicative Maximum vertical load [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	950	680	550	350	280	240	150
310		14	900	550	400	260	220	180	120
410		19	750	500	350	250	180	150	100
510		24	400	320	240	190	150	130	90
610		29	300	200	160	140	110	100	70
670		32	250	180	150	130	100	70	50
710	4	34	650	480	360	250	200	180	130
750		36	600	450	340	220	180	160	120

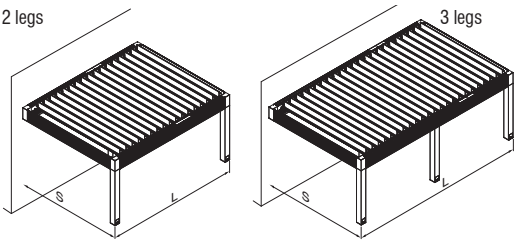
Snow load without wind [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	600	440	350	280	220	150	90
310		14	590	400	280	200	150	120	80
410		19	510	390	250	170	120	100	70
510		24	235	200	160	130	110	90	60
610		29	170	110	90	80	70	55	50
670		32	150	100	80	70	60	50	40
710	4	34	480	320	260	200	130	110	60
750		36	350	240	150	100	90	50	40

The values reported in the table on the right, show the snow load resistance when there is no wind. The pergola structure and cover are designed and certified to resist a deposited snow load (with no wind) that varies by size.
In case of snow, it is advised to the blades must be placed vertically (open) before the snow settles on them. Do not stand under or near the pergola if any snow has deposited on it.

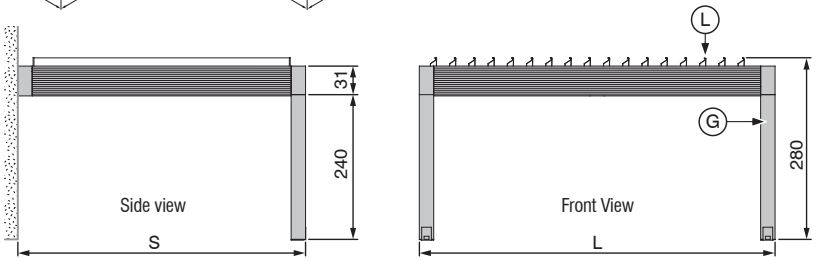
LEGEND - "BEAUFORT" WIND SCALE						
GRADE 12	GRADE 11	GRADE 10	GRADE 9	GRADE 8	GRADE 7	GRADE 6
Hurricane Force	Violent storm	Storm	Strong gale	Gale	High wind	High wind

Wind Resistance [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	230	190	160	125	100	76	65
250		11	220	180	155	120	95	75	60
290		13	220	180	150	120	95	72	55
330		15	215	175	145	115	90	70	50
370		17	215	175	140	115	85	65	45
410		19	210	170	135	110	80	60	42
450		21	205	170	135	110	76	55	38
490		23	200	145	125	100	70	50	35
530		25	182	130	115	90	65	46	35
570		27	163	127	105	80	60	43	33
610		29	146	121	95	70	55	40	32
630		30	129	110	90	62	50	36	31
670		32	100	90	62	50	36	31	28
630	4	30	142	131	91	65	50	42	44
670		32	131	123	90	62	45	38	35
710		34	119	116	88	60	45	35	32
750		36	100	90	60	45	40	33	28

4.4 TWIST LATERAL LEANING VERSION



LATERAL LEANING VERSION SINGLE MODULE
2 LEGS max. S x L 5.00 x 6.70
3 LEGS max. S x L 5.00 x 7.50



1 Module		WIDTH "L" (cm)													G	L
		200	225	250	275	300	325	350	375	400	425	450	475	500	n°	n°
		kg														
PROJECTION "S" (cm)	210	204	215	227	238	250	261	273	285	296	308	319	335	345	2	8
	230	215	227	240	252	264	275	289	299	314	326	338	355	365		9
	250	227	240	253	266	279	290	305	315	331	344	357	370	385		10
	270	239	252	266	280	294	307	321	332	348	362	376	390	405		11
	290	250	265	279	294	308	321	337	349	366	380	395	410	425		12
	310	262	277	292	307	323	336	353	366	383	399	414	430	445		13
	330	273	289	305	321	337	352	369	383	401	417	433	450	465		14
	350	285	302	318	335	352	367	385	400	418	435	452	470	485		15
	370	297	314	331	349	366	383	401	417	436	453	471	490	505		16
	390	308	326	345	363	381	398	417	434	453	471	490	510	525		17
	410	320	339	358	376	395	413	433	450	471	490	509	525	540		18
	430	331	351	371	390	410	429	449	467	488	508	528	545	560		19
	450	343	363	384	404	424	444	465	484	506	526	547	565	580		20
	470	355	376	397	418	439	460	481	501	523	544	565	580	600		21
	470	366	388	410	432	453	475	497	517	541	563	584	600	620		22
	510	378	400	423	446	468	491	513	534	558	581	603	620	640		23
	530	389	413	436	459	483	505	529	551	576	599	622	640	660		24
	550	401	425	449	473	497	521	545	568	593	617	641	655	680		25
	570	413	437	462	487	512	536	561	585	611	635	660	675	695		26
	590	424	450	475	501	526	552	577	602	628	654	679	695	720		27
	610	436	462	488	541	541	567	593	619	646	672	698	715	735		28
	630	476	503	530	557	584	611	638	664	692	719	746	760	775		29
	650	488	515	543	571	598	626	654	681	709	737	765	775	795		30
	670	499	528	556	585	613	641	670	698	727	755	784	795	815		31
	690	520	549	578	605	635	665	695	725	755	780	810	825	840	3	32
	710	530	561	590	620	650	680	710	740	770	795	825	840	860		33
	730	540	570	600	630	660	695	725	755	780	810	840	855	875		34
	750	550	580	610	640	670	705	735	770	795	820	850	870	890		35

Legend:
kg = Total pergola weight including the supporting structure and brise soleil blades.
G = Legs.
L = Brise soleil blades.

IMPORTANT: For each size the load shown in the table is still greater or equal than the one provided by Class 4 - UNI EN 13561 / UNI EN 1932 (nominal load continuously distributed on the extended surface equal to approximately 17 [kg/m²] or 170 [N/m²]).

Indicative Maximum vertical load [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	950	680	550	350	280	240	150
310		14	900	550	400	260	220	180	120
410		19	750	500	350	250	180	150	100
510		24	400	320	240	190	150	130	90
610		29	300	200	160	140	110	100	70
670		32	250	180	150	130	100	70	50
710	3	34	650	480	360	250	200	180	130
750		36	600	450	340	220	180	160	120

Snow load without wind [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	600	440	350	280	220	150	90
310		14	590	400	280	200	150	120	80
410		19	510	390	250	170	120	100	70
510		24	235	200	160	130	110	90	60
610		29	170	110	90	80	70	55	50
670		32	150	100	80	70	60	50	40
710	3	34	480	320	260	200	130	110	60
750		36	350	240	150	100	90	50	40

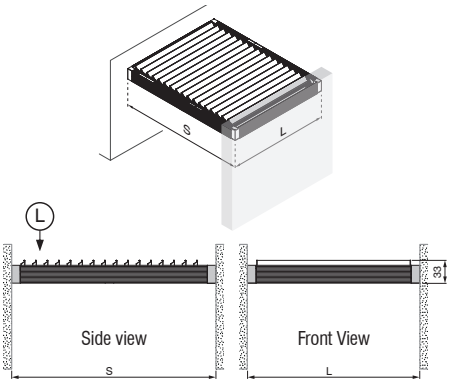
The values reported in the table on the right, show the snow load resistance when there is no wind. The pergola structure and cover are designed and certified to resist a deposited snow load (with no wind) that varies by size.
In case of snow, it is advised to the blades must be placed vertically (open) before the snow settles on them. Do not stand under or near the pergola if any snow has deposited on it.

LEGEND - "BEAUFORT" WIND SCALE						
GRADE 12	GRADE 11	GRADE 10	GRADE 9	GRADE 8	GRADE 7	GRADE 6
Hurricane Force	Violent storm	Storm	Strong gale	Gale	High wind	High wind

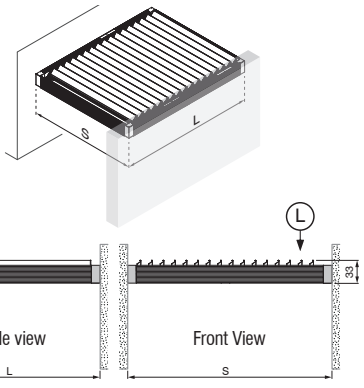
Wind Resistance [kg/m²]									
"S" \ "L"	G	L	200	250	300	350	400	450	500
210	2	9	230	190	160	125	100	76	65
250		11	220	180	155	120	95	75	60
290		13	220	180	150	120	95	72	55
330		15	215	175	145	115	90	70	50
370		17	215	175	140	115	85	65	45
410		19	210	170	135	110	80	60	42
450		21	205	170	135	110	76	55	38
490		23	200	145	125	100	70	50	35
530		25	182	130	115	90	65	46	35
570		27	163	127	105	80	60	43	33
610		29	146	121	95	70	55	40	32
630		30	129	110	90	62	50	36	31
670		32	100	90	62	50	36	31	28
630	3	30	142	131	91	65	50	42	44
670		32	131	123	90	62	45	38	35
710		34	119	116	88	60	45	35	32
750		36	100	90	60	45	40	33	28

4.5 TWIST WALL

FRONTAL LEANING VERSION
(4/6 wall attachments)



LATERAL LEANING VERSION
(4/6 wall attachments)



1 Module		WIDTH "L" (cm)													AP	L
		200	225	250	275	300	325	350	375	400	425	450	475	500	n°	n°
		kg														
PROJECTION "S" (cm)	**210**	178	189	201	212	224	235	247	259	270	282	293	320	330	4	9
	230	189	201	214	226	238	249	263	273	288	300	212	340	350		10
	250	201	214	227	240	253	264	279	289	305	318	331	355	370		11
	270	213	226	240	254	268	281	295	306	322	336	350	375	390		12
	290	224	239	253	268	282	295	311	323	340	354	369	395	410		13
	310	236	251	266	281	297	310	327	340	357	373	388	415	430		14
	330	247	263	279	295	311	326	343	357	375	391	407	435	450		15
	350	259	276	292	309	326	341	359	374	392	409	426	455	470		16
	370	271	288	305	323	340	357	375	391	410	427	445	475	490		17
	390	282	300	319	337	355	372	391	408	427	445	464	495	510		18
	410	294	313	332	350	369	387	407	424	445	464	483	510	525		19
	430	305	325	345	364	384	403	423	441	462	482	502	530	545		20
	450	317	337	358	378	398	418	439	458	480	500	521	550	565		21
	470	329	350	371	392	413	434	455	475	497	518	539	565	585		22
	470	340	362	384	406	427	449	471	491	515	537	558	585	605		23
	510	352	374	397	420	442	465	487	508	532	555	577	605	625		24
	530	363	387	410	433	457	479	503	525	550	573	596	625	645		25
	550	375	399	423	447	471	595	519	542	567	591	615	640	665		26
	570	387	411	436	461	486	510	535	559	585	609	634	660	680		27
	590	398	424	449	475	500	526	551	576	602	628	653	680	705		28
	610	410	436	462	515	515	541	567	593	620	646	672	700	720		29
	630	425	452	479	506	533	560	587	613	641	668	695	745	760		30
	650	437	464	492	520	547	575	603	630	658	686	714	760	780		31
	670	448	477	505	534	562	590	619	647	676	704	733	780	800		32
	690	490	519	548	575	605	635	665	695	725	750	780	795	810	6	33
	710	500	531	560	590	620	650	680	710	740	765	795	810	830		34
	730	510	540	570	600	630	665	695	725	750	780	810	825	845		35
	750	520	550	580	610	640	675	705	740	765	790	820	840	860		36

Legend:
kg = Total pergola weight including the supporting structure and brise soleil blades.
AP = Wall fixing.
L = Brise soleil blades.

IMPORTANT: For each size the load shown in the table is still greater or equal than the one provided by Class 4 - UNI EN 13561 / UNI EN 1932 (nominal load continuously distributed on the extended surface equal to approximately 17 [kg/m²] or 170 [N/m²]).

Indicative Maximum vertical load [kg/m²]									
"S" \ "L"	AP	L	200	250	300	350	400	450	500
210	4	9	900	610	460	370	310	250	170
310		14	850	600	430	345	290	220	150
410		19	800	580	400	300	250	190	130
510		24	550	400	320	280	200	160	110
610		29	350	250	210	170	130	110	90
670		32	250	200	180	140	110	90	70
710	6	34	800	650	400	300	220	170	150
750		36	700	600	370	260	190	170	130

Snow load without wind [kg/m²]									
"S" \ "L"	AP	L	200	250	300	350	400	450	500
210	4	9	590	400	300	240	190	140	100
310		14	570	390	280	220	180	130	90
410		19	550	380	260	190	160	110	80
510		24	350	260	210	180	128	95	70
610		29	220	160	140	110	90	70	60
670		32	180	125	100	90	80	60	50
710	6	34	500	400	240	170	120	110	60
750		36	400	300	200	150	100	90	50

The values reported in the table on the right, show the snow load resistance when there is no wind. The pergola structure and cover are designed and certified to resist a deposited snow load (with no wind) that varies by size.
In case of snow, it is advised to the blades must be placed vertically (open) before the snow settles on them. Do not stand under or near the pergola if any snow has deposited on it.

LEGEND - "BEAUFORT" WIND SCALE						
GRADE 12	GRADE 11	GRADE 10	GRADE 9	GRADE 8	GRADE 7	GRADE 6
Hurricane Force	Violent storm	Storm	Strong gale	Gale	High wind	High wind

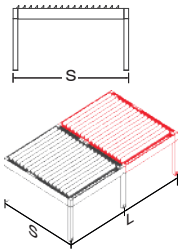
Wind Resistance [kg/m²]									
"S" \ "L"	AP	L	200	250	300	350	400	450	500
210	4	9	250	190	155	122	100	80	70
250		11	235	180	151	120	95	76	67
290		13	220	175	147	115	90	72	64
330		15	210	170	143	111	85	68	61
370		17	200	165	138	107	80	65	58
410		19	190	155	130	100	75	62	55
450		21	175	145	120	95	70	58	52
490		23	155	133	110	90	66	55	50
530		25	140	122	100	85	62	52	47
570		27	130	110	91	75	58	49	44
610		29	120	100	82	65	54	46	42
630		30	110	90	75	55	50	43	40
670		32	90	75	55	45	40	35	32
630	6	30	131	131	100	85	62	52	45
670		32	120	120	95	75	58	49	42
710		34	110	110	88	65	54	45	35
750		36	100	90	75	55	50	40	32

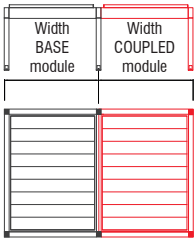
4.6 COUPLING MODULE

The coupling module enables multiplying the number of spans on the pergola, to form a continuous pergola. The coupled modules share the intermediate uprights.
The coupling units can be placed laterally or head on to the basic module; it is possible to couple one or more modules. The drawings shown below are just an example.

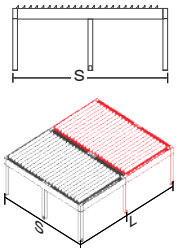
TWIST ISLAND WITH COUPLING MODULE TYPE 1 COUPLING

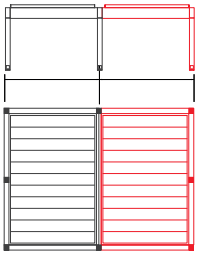
Up to 670 cm.





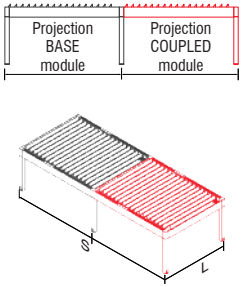
From 630 cm to 750 cm.



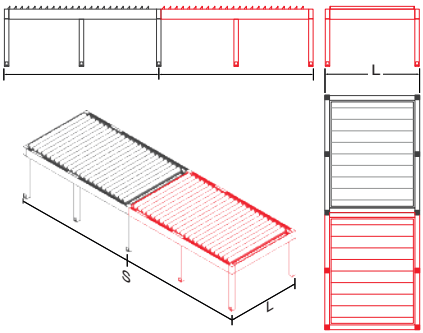


TWIST ISLAND WITH COUPLING MODULE TYPE 2 COUPLING

Up to 670 cm.

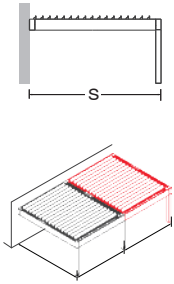


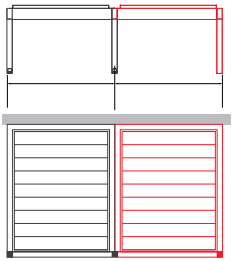
From 630 cm to 750 cm.



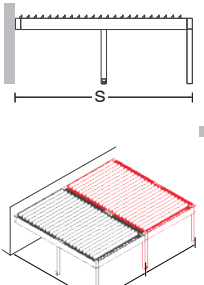
TWIST FRONTAL LEANING VERSION WITH COUPLING MODULE TYPE 1 COUPLING

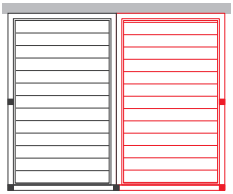
Up to 670 cm.





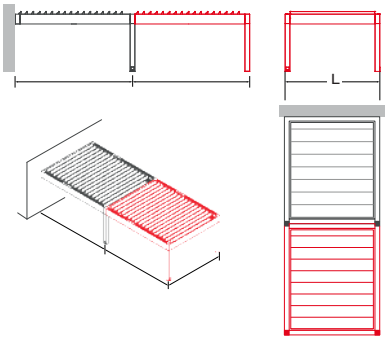
From 630 cm to 750 cm.



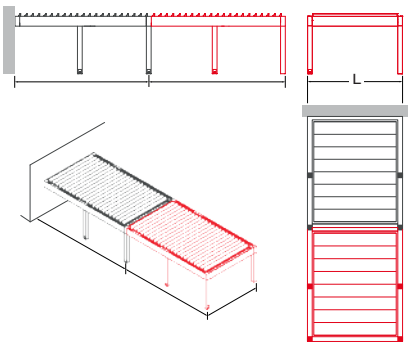


TWIST FRONTAL LEANING VERSION WITH COUPLING MODULE TYPE 2 COUPLING

Up to 670 cm.

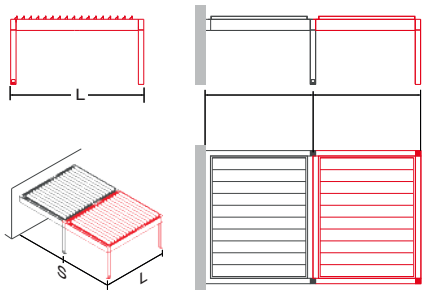


From 630 cm to 750 cm.

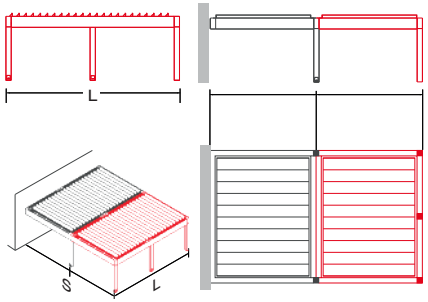


TWIST LATERAL LEANING VERSION WITH COUPLING MODULE TYPE 1 COUPLING

Up to 670 cm.

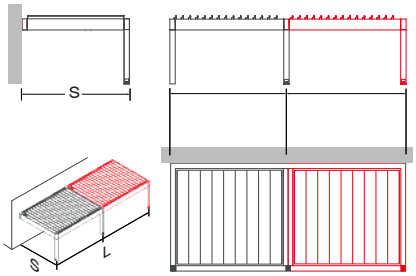


From 630 cm to 750 cm.

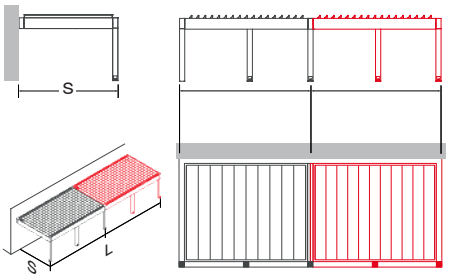


TWIST LATERAL LEANING VERSION WITH COUPLING MODULE TYPE 2 COUPLING

Up to 670 cm.



From 630 cm to 750 cm.



CHAPTER 5: PACKING, HANDLING AND TRANSPORTATION

The Bioclimatic Pergola is packed with Nylon film and polystyrene in double walled corrugated cardboard boxes with reinforced corners to protect the product and lock the parts in place during transport.The components are packed in several parcels given the size and weight of the product (see technical table Chap. 4). The weight of each package can be high, the result is the need for manual handling in two or more persons whenever the weight exceeds 25 kg.
In order to facilitate transport by operators, check the weight of the Pergola depending on its size shown in the tehcnical table on Chapter 4.

Product integrity must be preserved until delivery to the end customer.
For transportation to the customer's premises by the Retailer and / or Manufacturer, it is required prevent scratches to the structure Damage to the product caused by the dismantling of the awning and subsequent handling and / or transportation performed after installation, are not covered by warranty. To avoid hazardous situations observe the following safety requirements:

ATTENTION: Due to the size and weight of the Pergola and of each individual packaging, make sure that for handling a sufficient number of people is available, so that the weight to be loaded by each person is not more than 25 kg in the case of manual handling (in this regard, check the weight of the Pergola depending on its size in the technical tables on Chapter 4).

CAUTION: Do not store packages in an upright position, or leave them unattended in the area of installation if the Pergola is not yet installed; avoid leaving them unattended in the presence of children. Do not store the pergola in all or part of its packaging, outside in the case of bad weather (rain).

ATTENTION: Keep out of reach of children packaging materials, they can be a source of danger to them. In particular, the Nylon film with "bubble barrier effect" could be used so as to cause suffocation.

WARNING: If the Pergola is to be mounted on a higher surface than the ground, it is necessary to define and supervise the area during the ascent to the awning, so that no one stands at any time under the suspended load. Securely fasten the packages of the awning in order to prevent it from falling.

IMPORTANT: unpack using scissors with rounded tips in order not to damage aluminium painting, do not use cutters. The packaging material should be disposed of or recycled in accordance with the regulations in force in the Country of destination of the product.

CHAPTER 6: SAFE INSTALLATION

IMPORTANT: The installation must be performed in full compliance with the installation instructions and safety rules in force in mobile sites. Be especially careful when working at height.

The installation isn't usually performed directly by staff from ***Gibus S.p.A.*** but by installers appointed by the authorized dealer, buyer or customer. The client is responsible under the law to entrust the installation to an expert staff, complying to the installation rules listed in this manual. In particular follow the "Instructions for proper installation" in Chapter 7. At the time of installation arrange all the tools mentioned on the first pages of the "Installation Instructions - TWIST line". If installers are more than one, it is necessary to appoint an operations co-ordinator.

WARNING: Before use, check that the staging, scaffoldings, ladders and all personal protective equipment, especially when working at height (harnesses, safety belts, etc..), comply with the requirements of the current law on safety and are all in good conditions.

Operators must act in accordance with the safety instructions received. Use suitable sling devices and provided PPE.

6.1 MECHANICAL STRUCTURE

WARNING: Improper installation can result in bodily injury. Read and carefully follow the installation instructions (provided with this manual) to properly secure the structure, so avoiding any risk of falls. At the time of installation arrange all the tools mentioned on the first pages of the "Installation Instructions - TWIST line".

WARNING: Check the status of the structure's housing and fixing site before installing and anchoring the structure to the floor and wall plates.

WARNING: If during installation any structural failures of the seat is noticed (the absence of the requirements for anchors fixing or other) the installers are required to provide evidence of this condition to the customer and notify the failure of the housing site in the section "Installation Notes" on paragraph 14 of this manual. If the minimum requirements are not satisfied, use other technical solutions, such as preparing a suitable foundation plinth for each floor plate or use internal counter-brackets or chemical expansion bolts until the wall is suitable for the installation.

WARNING: the choice of anchors depends on the type and condition of the housing site.

The instructions on the installation are described in annex "Installation Instructions".

6.2 ELECTRICAL CONNECTIONS

WARNING: all electrical connections must be made only by professionally qualified and trained staff, with the power supply cut off (disconnected) and in accordance with the regulations in force. The product needs a 230V/50Hz power supply. The power pack on the bioclimatic pergolas has Class II electric insulation level for standard configuration modules: Blade movement and Spot White lights and RYB. **Therefore the structure must not be earthed.** However there is Class I electric insulation when the optionals and accessories are installed: side drop awnings, antifreeze system or heaters. In this case (Class I) **the structure must be earthed.**

WARNING: the vertical side awnings have tubular motors with electrical insulation levels lower than class II. The bioclimatic pergola must be grounded according to the diagram shown in the Installation Instructions.

WARNING: even if there are accessories and parts powered at 230V/50Hz with an electrical insulation level lower than class II (for example antifreeze system or snowmelt system or heaters applied directly to the pergola), the bioclimatic pergola must be grounded according to the diagram shown in the Installation Instructions.

The final implementation of the electrical system must be strictly carried out by a qualified electrician. Also the technical choices carried out to implement the electrical connections fall within his competence. Below are the guidelines that should be carefully considered by the installer who will be charged with the costs of such operating decisions.
Instructions for qualified electrical installers:

IMPORTANT: The electrical system must be carried out according to UNI EN 60335-1, or subsequent, in force at the time of installation. The degree of protection of the electrical must be **at least IP55**. **Install an upstream electrical switch suitable to 230V/50Hz with magnetothermal and differential functions and the following features: Pole number: 2, bipolar magnetothermal switch, 10 A rated power, curve C, differential current 0.03A, A type.** The maximum absorbed power is always lower than 1 kW per module (4A) even equipped with all the accessories (actuators, LED lights, audio, excluding a snow melting system and heaters).

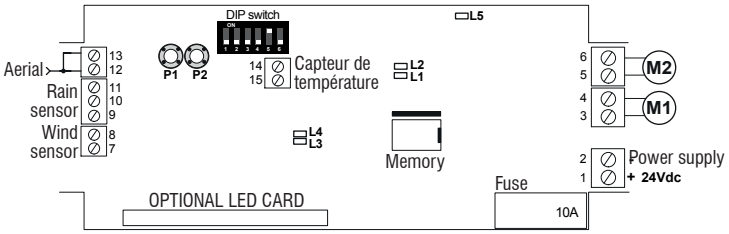
WARNING: The switch shall have at least an **IP54** degree of protection if mounted outside the area accessible to third parties, the degree of protection can be **IP40** if the switch is mounted inside or in areas not accessible to third parties. The switch must be fixed in a place from where the awning is visible, out of dangerous areas (moving parts) and at a height from the ground that complies with the regulations in force.

IMPORTANT!: Check that the mains voltage is 230 V - 50 Hz.
Standard equipment is meant to be connected to 230v/50Hz electrical mains; for the installation in countries with different features please specify the requirements when you place the order! **The connecting power cord should be protected by the sheath and provided by cable gland in the cases of crossing of conductive materials.**
YOU NEED: a double insulation cable. Provide a cable:
- up to 30 meters: H05RN-F type – at least 3G1.5 up to 30 m.
- up to 50 meters: H07RN-F type - 3G2.5 at least up to 50 m.
The values refer to a cable installed in a buried raceway.

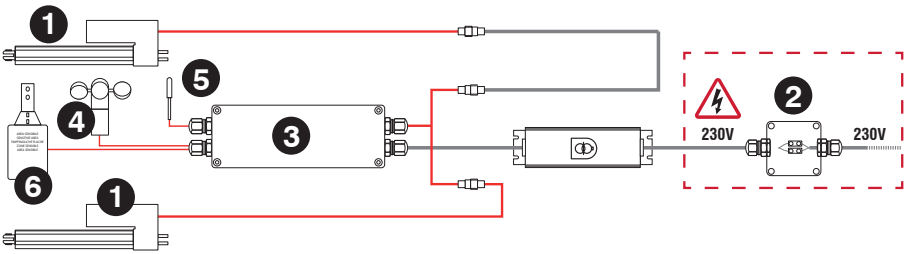
WARNING: if the Pergola is installed at a height from the walkable floor lowest than 2,30 m in its lowest travel point, **it is necessary to use the "man present" control.**

IMPORTANT!: The wiring diagrams and installation instructions for the use of electronic control units or coupling modules for several motors, are annexed to the control units themselves and should accompany this manual along with the installation instructions and be carefully stored for subsequent consultations. In the presence of these optional devices check on the wiring diagrams attached the type of button or switch to be used. The up and down indications depend on the mounting to the right or left of the awning.

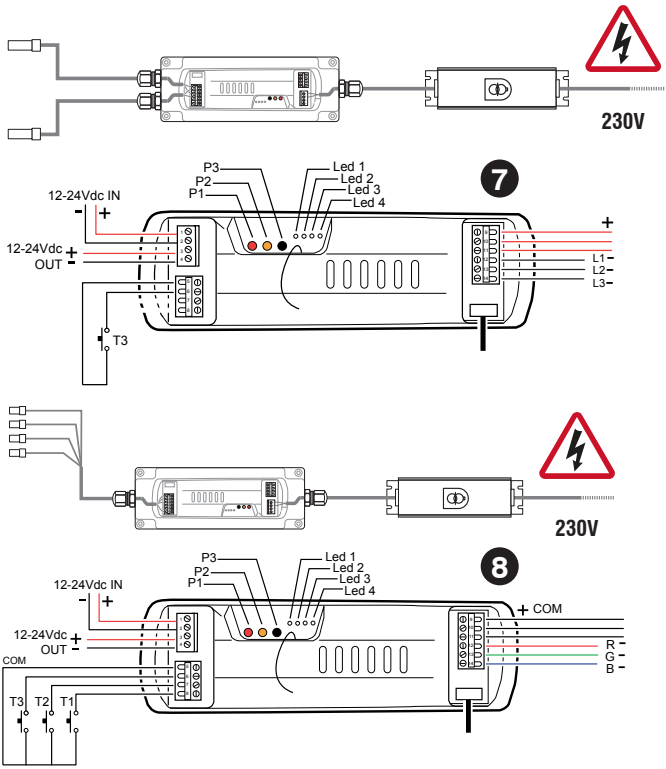
6.3 ELECTRICAL WIRING AND CONNECTIONS CONTROL UNIT TWIST



SIGNAL			
1	POWER SUPPLY (+24Vdc)	9	RAIN SENSOR (white, 12V)
2	POWER SUPPLY (GND)	10	RAIN SENSOR (blue, SIGNAL)
3	MOTOR (OPEN)	11	RAIN SENSOR (yellow, GND)
4	MOTOR (CLOSE)	12	RF AERIAL
5	MOTOR (OPEN)	13	GND AERIAL
6	MOTOR (CLOSE)	14	TEMPERATURE SENSOR (black)
7	WIND SENSOR (blue)	15	TEMPERATURE SENSOR (white)
8	WIND SENSOR (brown)		



DESCRIPTION OF MOTOR AND SENSOR WIRING COMPONENTS			
1	LINEAR ACTUATORS	4	WIND SENSOR
2	ELECTRIC BOX WITH EXTENSION	5	TEMPERATURE SENSOR
3	CONTROL UNIT WITH POWER PACK 6 RAIN SENSOR	6	RAIN SENSOR

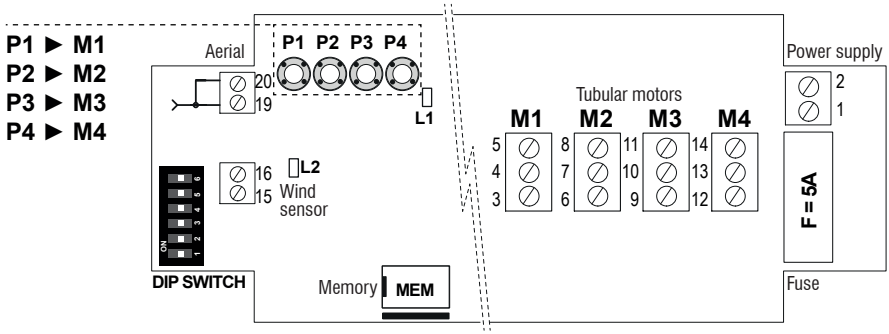


DESCRIPTION OF LIGHTING WIRING COMPONENTS			
7	CONTROL UNIT WITH POWER PACK FOR PERIMETER LEDS	8	CONTROL UNIT WITH POWER PACK FOR BRISE SOLEIL BLADE LEDS

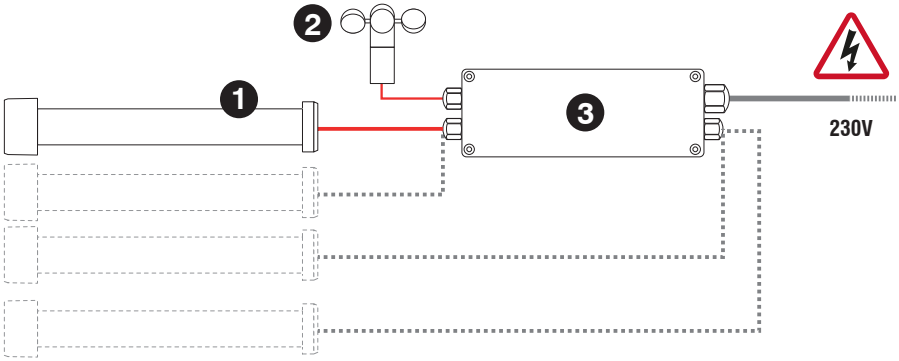
For further information about the control unit for the motors, sensors, lighting control unit, see the specific instructions enclosed with the control unit.

6.4 ELECTRICAL WIRING AND CONNECTIONS CONTROL UNIT OF SIDE DROP AWNINGS

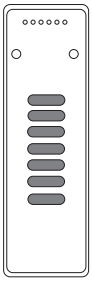
SIGNAL			
1	POWER SUPPLY 230 Vac (LIVE)	12	MOTOR 4 (CLOSE)
2	POWER SUPPLY 230 Vac (NEUTRAL)	13	MOTOR 4 COMMON
3	MOTOR 1 (CLOSE)	14	MOTOR 4 (OPEN)
4	MOTOR 1 COMMON	15	WIND SENSOR (blue)
5	MOTOR 1 (OPEN)	16	WIND SENSOR (brown)
6	MOTOR 2 (CLOSE)	19	RF AERIAL
7	MOTOR 2 COMMON	20	GND AERIAL
8	MOTOR 2 (OPEN)	L1	ON = POWER ON
9	MOTOR 3 (CLOSE)	L2	FLASHING = WIND ALARM
10	MOTOR 3 COMMON	P1-P4	PROGRAMMING BUTTONS
11	MOTOR 3 (OPEN)		



DESCRIPTION OF MOTOR AND SENSOR WIRING COMPONENTS	
1	TUBULAR MOTORS
2	WIND SENSOR
3	CONTROL UNIT OF SIDE DROP AWNINGS



6.5 RADIO CONTROL



The radio control is a multi-channel UHF (Ultra high frequency) band transmitter for private use, automatic opening, ON/OFF control or light dimming, etc. The transmitted signal provides the rolling code to guarantee secrecy. Carrier wave frequency: 868.3 MHz. Operating temperature: -10° +55°.
The 6 channel/42 position version is given as an example.

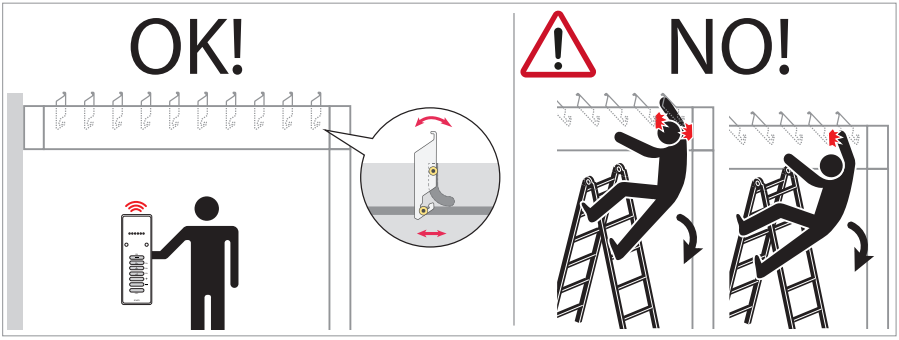
The transmitter is already matched to the motor control unit for the Bioclimatic Pergola. The motor control unit is stored in the transmitter channel/group 1.

CHAPTER 7: INSTRUCTIONS FOR PROPER INSTALLATION

WARNING: the operations for installation and start-up must be performed only by professionally qualified and trained staff, in accordance with the regulations in force.

IMPORTANT: To properly set up the Pergola, follow the "Installation Instructions" attached to this manual and included in the accessory box or in another part of the package.

WARNING: the adjustment must be made under safe conditions. There is a residual risk of crushing/shearing and trapping your fingers, hands or head; therefore, position yourself outside of the dangerous area.
In particular, in order to avoid the risk of crushing/shearing injuries, do not put any part of the body between the adjustable blades or between the adjustable blades and parts of the fixed housing structure (guttering, etc.). This is extremely important when blades are moving.



CAUTION: The installation includes always several motors with remote control. Follow the "Installation Instructions" attached to this manual or enclosed in the accessory box or part of the packaging.

IMPORTANT: after installation the declaration for proper installation must be compiled by the installer (Sec. 14 par. 1).

CHAPTER 8: OPERATION AND USE OF THE PERGOLA

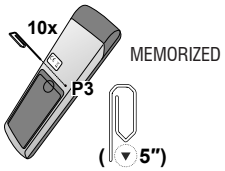
WARNING FOR THE USER: Pay attention to the signs placed in dangerous areas. Before operating the Pergola carefully read the Chap. 2 “SAFETY PRECAUTIONS” Use the Bioclimatic Pergola only as a protection against the sun, rain and for the purposes described in this manual (see chap. 2.1 “PURPOSE AND INTENDED USES OF THE PERGOLA”).

WARNING: Before operating the Bioclimatic pergola, check that there are no persons or objects that prevent the brise soleil blades from opening or closing (especially when snow is on the top of them).
Make sure there is nothing between the adjustable blades and the side gutters and blades. There could be a residual risk of crushing or trapping fingers (see the figure in Chapter 7).

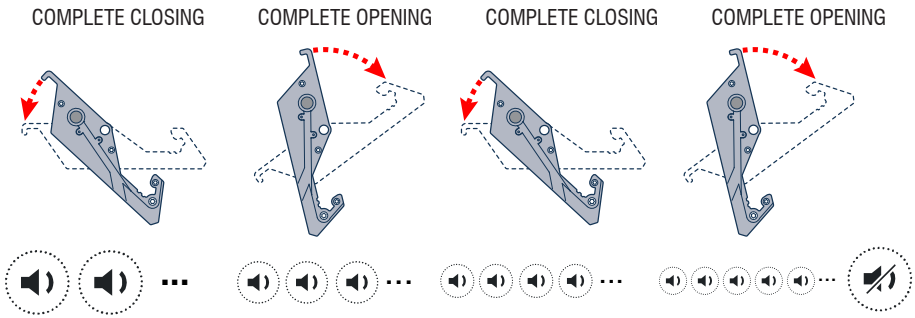
Follow the previous paragraph instructions of this manual and the attached Installation Instructions to commission the pergola.

The method to manage the motors and the transmitter (radio control) have been already set up at the factory. **After the electrical connection, match the limits from the transmitter without entering the control unit.**

To make self-learning of limit switches, position on the channel where the motors are stored (pressing the button over the transmitter already stored). Test the movement and the direction of the motors by pressing the buttons on under the transmitter. **Then keep pressed The P3 (posizioned behind the remote control) button pressed for 10″.**



THE BLADES WILL MAKE THE FOLLOWING MOVEMENTS:



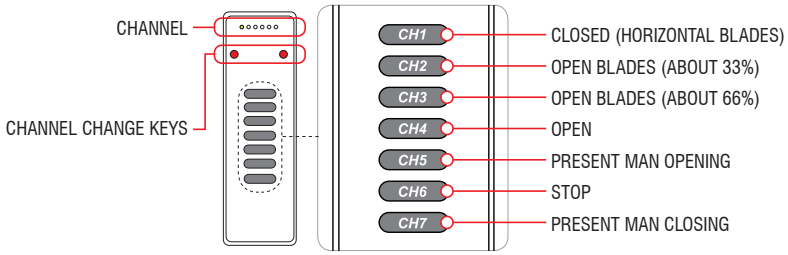
Wait for a few minutes and then the bioclimatic pergola is ready to be used.

IMPORTANT!: the wind and rain sensors, if any, have already been set up at the factory. Position them properly and set the thresholds according to the instructions given in the sensor boxes. For the other sensors, follow the specific installation instructions.

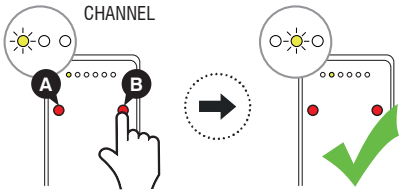
The bioclimatic pergola can be opened and closed using a portable or wall fixed remote control (see paragraph 6.3), the bioclimatic pergola must only be activated from a position that gives a full viewpoint of the blade movement.

IMPORTANT!: The characteristics and operation of the drive systems are described in the manuals herein attached, related to the engine, to the automatisms and commands required.

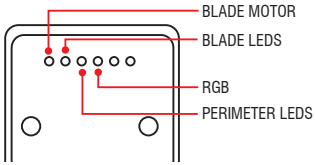
CHANNEL TRANSMITTER WITH PROGRAMMED CHANNEL FOR THE MOTOR
NOTE: The 6 channel/42 position version is given as an example



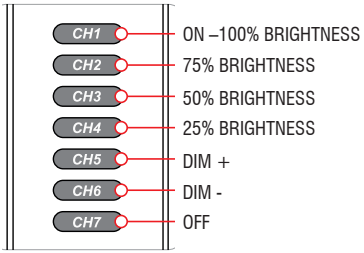
Press the keys to change channel "A" or "B" of the transmitter to switch from one channel to another.



If there are other accessories that can be controlled by the same remote control such as led spots on the slats, perimeter led spots or a led strip rgb, **each one of them is already matched to a channel/group at the factory (see the example):**



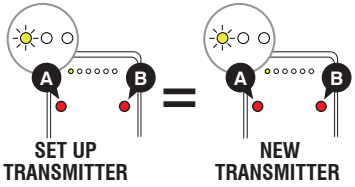
Position on the various channels and test their functioning (the example gives the functions of the transmitter with the channel programmed for the blade spot led):



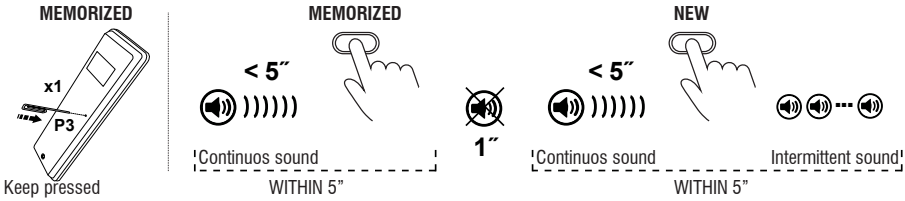
To switch on and off, and to operate the RGB lights, see the specific manual attached.

SET UP BY RADIO OF A NEW REMOTE CONTROL FROM AN ALREADY SET UP REMOTE CONTROL

ATTENTION: copy only one channel per time. Position on the channel to copy (using the keys "A" or "B") both on the set up transmitter and the new one:

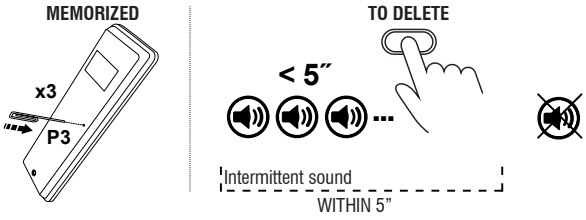


Press p3 of the transmitter already memorized and hold. The buzzer emits a continuous sound. Within 5″, press a key of the **set up transmitter**. The buzzer stops for 1 second and emits the sound again. Within 5″, press the button to memorize of the **new transmitter**. Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.



REMOTE DELETION OF A RADIO CODE

Press the button P3 of the memorized transmitter 3 times and hold. The buzzer emits a slow intermittent sound. Press a button relative to the code to be deleted within 5 seconds. Upon completion of deletion, the buzzer will stop.



For other functions and operations with the radio control, see the instructions attached and relevant to the specific transmitter and the control unit.

CAUTION: Direct the blades partially opened in the case of very strong rain, hail, strong wind, snow and ice; it is dangerous to leave the blades closed in these cases, it can cause injury to persons and damage to property.

IMPORTANT!: If something has blocked the opening or closing of the blades, continue the opening or closing with the "man present" command.

The Bioclimatic Pergola is recommended to be exposed to a maximum wind load equal to 170 Newton/m^2 corresponding to a continuous wind at a maximum speed of 60 Km/h according to the Beaufort scale. For safety reasons, it is advisable to partially open the blades before this limit is reached. If no sensor is installed, manually direct the blades if there is a strong wind.

ATTENTION: never perform repeated opening and closing operations with the engine, this could cause the motor to overheat, which could block it, and make it impossible to perform the necessary movements (in the case of strong wind or snow).

If the bioclimatic pergola's blades were closed and ice or snow have deposited on them, do not move the blades until all the snow has been removed or the ice has melted. Otherwise, the movements could be blocked and the components damaged.

IMPORTANT!: The operation with ice may damage the Bioclimatic Pergola! Do not operate the Bioclimatic Pergola before having first removed the snow and the ice formed.

IMPORTANT!: in the case of failures, turn to you dealer and if required only ask for Gibus original spare parts.

ATTENTION!: In the case of fault or when searching for faults, respect the safety measures. In particular when searching for or repairing any faults to the electric components, there is the risk or fatal electric shock. only qualified electricians must carry out the maintenance to the electrical parts.

CHAPTER 9: MAINTENANCE

Operations of **installation and initial start-up, adjustment and obligatory maintenance** should be performed only by qualified technical personnel and specialized for such tasks. **Contact the Technical Service Department of your Gibus dealer.**

IMPORTANT: it is compulsory to ask a Gibus technician for an extraordinary maintenance operation within the 2nd year from the installation of the pergola so that the warranty will also cover the 3rd year. A compulsory maintenance operation within the end of the 3rd year will extend the warranty to the 4th year and a compulsory maintenance in the 4th year will extend the warranty to the 5th year. If the maintenance operations are not carried out, the Gibus warranty will no longer be valid. Use original Gibus spare parts; otherwise, the warranty will be voided.

Compulsory maintenance required by the end of the 2nd year and the following maintenance operations for extending the warranty year after year must be carried out by a Gibus technician and must minimally include an **inspection of the correct blade movement, positioning of the endstops in opening and closing, making sure that the wind sensor is working if it is present and the conditions of the seals.**
Also check the recommendations in paragraph 9.2 titled “MAINTENANCE OF THE PERGOLA”, and those in the “Product Maintenance Technical Sheet” available in the reserved area of the www.gibus.it site. Also, the operations reported in the following paragraphs must be carried out by the owner or by a specialist **paying attention to the following warnings**:

ATTENTION: The operations of routine or unscheduled maintenance must be carried out safely, after cutting the power supply off. Before resume operating the Pergola carefully read the chap. 2 “SAFETY PRECAUTIONS”.

ATTENTION: pay attention to the safety directions given in Chapter 7 to avoid squeezing/cutting.

CAUTION: Cleaning with ladders, scaffolding or other is reserved for specialized personnel who must carry out the operations in accordance with current directives on safety and must use personal protective equipment such as safety harness with sling.

9.1 CLEANING THE BRISE SOLEIL BLADES

The brise soleil blades have to be opened to guarantee it works correctly and to maintain their attractive appearance by eliminating any dust or other materials that have deposited on them, thus delaying as much as possible the formation of permanent dirt. It is therefore advisable:

- **at least twice a year** (in spring before use during the summer season and in autumn before winter closure). Check the state of the blades, the guide grooves of the drive bar, the blade gutters and perimeter gutters. Remove any leaves, twigs, pines or anything else that may have deposited on them.
- **if necessary** clean the blades and the fabric by vacuuming the dust and using a damp sponge or cloth with lukewarm water and non-aggressive products.

- **non utilizzare solventi – ammoniaca – idrocarburi;**
- **fare asciugare with the blades placed vertically dopo la pulizia.**

In caso di dubbio rivolgersi al rivenditore.

9.2 MAINTENANCE OF THE PERGOLA

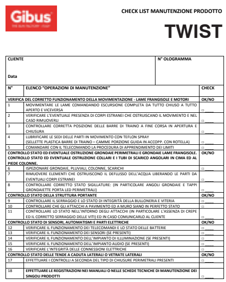
IMPORTANT: please open and close the awning periodically and check periodically the correct operation of the parts. Do not leave the product unused for long periods.

In order to keep the product in perfect operating conditions and safe proceed as follows:

- **Yearly** (or after any extreme weather events):
  - visually inspect the bearing structure;
  - inspection of the tightening and the integrity of bolts and nuts, as well as screws. Make sure that the ground and the wall fixing devices are in perfect condition. Check the condition of the floor around the fixing devices (in particular, make sure that there are no cracks and that the screws are properly tightened);
  - make sure that the gutters along the perimeter and the gutters of the brise soleil blades are clear of leaves or other debris. Remove the elements that prevent water from flowing out and lubricate the moving parts with a drop of Teflon spray, if necessary.
  - check the operation of the remote controls, the sensors and the lighting installation. Check the efficiency of the grounding.
  - clean the surface, if it is necessary, to remove dirt and dust. Clean the surface with a paper rag and a wet sponge as explained in the previous paragraph.

9.3 EXTRAORDINARY MAINTENANCE

For extraordinary Maintenance within the 2nd year from installation and in subsequent years (mandatory for extending the warranty) follow the other regulations found in the "Product Maintenance Check List".



CHECK LIST MANUTENZIONE PRODOTTO

TWIST

CLIENTE Data		N° OLOGRAMMA
N°	**ELENCO "OPERAZIONI DI MANUTENZIONE"**	**CHECK**
VERIFICA DEL CORRETTO FUNZIONAMENTO DELLA MOVIMENTAZIONE - LAME FRANGISOLE E MOTORI		**OK/NO**
1	MOVIMENTARE LE LAME COMANDANDO ESCURSIONE COMPLETA DA TUTTO CHIUSO A TUTTO APERTO E VICEVERSA	□ ____
2	VERIFICARE L'EVENTUALE PRESENZA DI CORPI ESTRANEI CHE OSTRUISCANO IL MOVIMENTO E NEL CASO RIMUOVERLI	□ ____
3	CONTROLLARE CORRETTA POSIZIONE DELLE BARRE DI TRAINO A FINE CORSA IN APERTURA E CHIUSURA	□ ____
4	LUBRIFICARE LE SEDI DELLE PARTI IN MOVIMENTO CON TEFLON SPRAY (SELLETTE PLASTICA BARRE DI TRAINO – CAMME PORZIONE GUIDA IN ACCOPP. CON ROTELLA)	□ ____
5	COMANDARE CON IL TELECOMANDO LA PROCEDURA DI APPRENDIMENTO DEI LIMITI	□ ____
CONTROLLO STATO ED EVENTUALE OSTRUZIONE GRONDAIE PERIMETRALI E GRONDAIE LAME FRANGISOLE. CONTROLLO STATO ED EVENTUALE OSTRUZIONE COLLARI E I TUBI DI SCARICO ANGOLARI IN CIMA ED AL PIEDE COLONNE.		**OK/NO**
6	ISPEZIONARE GRONDAIE, PLUVIALI, COLONNE, SCARICHI	□ ____
7	RIMUOVERE ELEMENTI CHE OSTRUISCONO IL DEFLUSSO DELL'ACQUA LIBERANDO LE PARTI DA EVENTUALI CORPI ESTRANEI	□ ____
8	CONTROLLARE CORRETTO STATO SIGILLATURE: (IN PARTICOLARE ANGOLI GRONDAIE E TAPPI GRONDAIETTE PORTA LED PERIMETRALI)	□ ____
CONTROLLO STATO DELLA STRUTTURA PORTANTE		**OK/NO**
9	CONTROLLARE IL SERRAGGIO E LO STATO DI INTEGRITÀ DELLA BULLONERIA E VITERIA	□ ____
10	CONTROLLARE CHE GLI ATTACCHI A PAVIMENTO ED A MURO SIANO IN PERFETTO STATO	□
11	CONTROLLARE LO STATO NELL'INTORNO DEGLI ATTACCHI (IN PARTICOLARE L'ASSENZA DI CREPE ED IL CORRETTO SERRAGGIO DELLE VITI) ED IN CASO COMUNICARLO AL CLIENTE	□ ____
CONTROLLO STATO DI SENSORI, AUTOMATISMI E PARTI ELETTRICHE		**OK/NO**
12	VERIFICARE IL FUNZIONAMENTO DEI TELECOMANDI E LO STATO DELLE BATTERIE	□ ____
13	VERIFICARE IL FUNZIONAMENTO DEI SENSORI (SE PRESENTI)	□ ____
14	VERIFICARE IL FUNZIONAMENTO DELL'IMPIANTO DI ILLUMINAZIONE (SE PRESENTI)	□ ____
15	VERIFICARE IL FUNZIONAMENTO DELL'IMPIANTO AUDIO (SE PRESENTI)	□ ____
16	VERIFICARE L'INTEGRITÀ DELLE CONNESSIONI ELETTRICHE	□ ____
CONTROLLO STATO DELLE TENDE A CADUTA LATERALI O VETRATE LATERALI		**OK/NO**
17	EFFETTUARE I CONTROLLI A SECONDA DEL TIPO DI CHIUSURE PERIMETRALI PRESENTI	□ ____
18	**EFFETTUARE LE REGISTRAZIONI NEI MANUALI O NELLE SCHEDE TECNICHE DI MANUTENZIONE DEI SINGOLI PRODOTTI**	□ ____

ATTENTION!: The maintenance work is to be carried out by qualified and trained personnel. Call for a Gibus specialised technician.

CHAPTER 10: DISMANTLING AND DISPOSAL

CAUTION: dismantling of the Pergola must be carried out by qualified and trained staff. Ask for a specialized Gibus technician at the Service Department.

CAUTION: dismantling of the Pergola must be carried out applying all the safety provisions as per installation: see chapter "SAFE INSTALLATION" and chapter "INSTRUCTIONS FOR PROPER INSTALLATION" with the help of the installation instructions.

RECOMENDATIONS FOR THE OPERATOR IN CHARGE OF DISMANTLING:
- the operations must be carried out with the brise soleil blades placed vertically;
- disconnect the power supply to the system;
- disconnect the system downstream the cut-off switch,
- disconnect the engine,
- disconnect the control units.

10.1 DISPOSAL OF THE PERGOLA

The Pergola is not built with materials considered hazardous. There are no special instructions for destruction or disposal. The components making up the Pergola are given in Chapter 3. Pay close attention to management of Waste Electrical and Electronic Equipment (WEEE directive).

IMPORTANT!: Follow the regulations in place at the time of disposal of the Pergola to dispose of the materials constituting it.

ATENTION: please note that for any detail of the Pergola to be separately disposed of, always refer to the current standards on the matter.

To dismantle the Pergola follow the regulations imposed by the laws in force in the country of use. Disconnect the Pergola from the power supply. Disassembly the individual components of the Pergola grouping them according to their composition. Then scrap in accordance with the laws in force in the country of use.

Most significant materials making up the bioclimatic pergola awning:

Aluminum
Steel
Plastic

Electrical and electronic equipment and EEE equipment.
Under art. 14 of the 2012/19/EU DIRECTIVE OF THE EUROPEAN PARLIAMENT AND COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE), the crossed bin symbol **(on some of the parts and components of the product)** indicates that these parts and components are electrical or electronic products and must be collect-ed separately from other waste at the end of their useful life and not with mixed urban waste. This is to encourage correct recycling/disposal. Appropriate waste sorting for the subsequent recycling, treatment and environ-mentally compatible disposal of the disused electric and electronic equipment avoids nega-tive effects on the environment or human health and favours the re-use or recycling of the electric and electronic equipment's materials. The same symbol indicates electrical or electronic products for the "Waste Electrical and Electronic Equipment Regulations 2013".

CHAPTER 11: TROUBLESHOOTING

WARNING: in case of troubleshooting you must comply with the relevant safety requirements; in particular while searching for any faults or repairs of the power supply system, there is a risk of fatal electric shock. maintenance on electrical parts must be carried out by qualified personnel only.

WARNING: risk of crushing.
in particular, in order to avoid the risk of crushing/shearing injuries, do not put any part of the body between the adjustable blades or between the adjustable blades and parts of the fixed housing structure (guttering, etc.). This is extremely important when blades are moving.

The following table shows the solution to more common problems. In the presence of problems other than those listed contact the Service Department.

11.1 TABLE OF FAULTS AND DEFECTS

PROBLEMS	CAUSES	REMEDIES
The remote control does not respond to the controls.	The remote control isn't working.	Unlock it by pressing one of the top two small buttons (the buttons that are used for the selection of the group or the channel) for 10 seconds until the LEDs flash.
The motors are noisy.	Faulty motor.	Request technical assistance.
The motors do not move.	Incorrect wiring.	Check the electric circuit against the attached wiring diagrams.
	Faulty motor.	Check the motor and replace it if necessary.
	Remote batteries flat or faulty.	Change the batteries or the remote control.
The blades do not open perfectly horizontally or they do not complete the run (0°-135°).	Incorrectly regulated endstops.	Repeat the learning procedure and regulate the endstops.
	Something has fallen into the movement area and blocks the movement: side tracks, perimeter gutters, etc.	Check there are no pinecones, twigs, nests, pine needles or anything else and remove them.
The blades do not open from the closed position.	The resin has deposited on the perimeter seals or between the blades.	Clean and lubricate the seals.
	There is some ice between the blades.	Wait for the temperature is raise.
	The rain alarm is raised and it is raining.	Wait for the rain to stop and disactivate the rain sensor (procedure in chapter 2).
	The pergola is not power supplied.	Power supply the pergola.
	The remote control is not matched or the batteries are drained or it is broken.	Match the remote control or replace the batteries.
The blades are blocked in a different position from the required one.	Something has fallen into the movement area and blocks the movement: side tracks, perimeter gutters, etc.	Move the blades with the "man present" command and/or remove the foreign body that is blocking them.
After the opening control, the blades are in a partially opened position at about 33%.	Less than 6 hours have passed since the rain has stopped and the rain alarm is active.	Control the opening with the operator present or disable the rain sensor (chapter 2).
The blades are blocked in a partially opened position of about 33%, and don't move.	At least 60 seconds have passed from the detection of wind beyond the set threshold; the wind alarm is enabled.	Wait for the breeze decreases.
The blades are blocked in a partially blocked position of about 66%, and don't move.	The temperature is lower than 2°C and the alarm is enabled; if it is also raining and the snow sensor is enabled.	Control the displacement with the operator present.
The blades do not open when there is a strong wind.	Wind sensor sensitivity programmed for a too high limit.	Reprogram the anemometer limits.
	Anemometer incorrectly wired to the control unit.	Check the connections to the terminals.
	Faulty anemometer.	Replace the anemometer.
Malfunction not included among the above.		Check the specific instruction manuals for the control units attached to this manual, or contact the technical service centre.

CHAPTER 12: CONVENTIONAL WARRANTY UP TO THE FIFTH YEAR

For EU countries + Switzerland and the UK, Gibus S.p.a. offers the conventional guarantee pursuant to art. 135 - quinquies Legislative Decree 206/2005 - Consumer Code - and better explained in the following Articles. Gibus' conventional guarantee does not, in any way, prejudice the rights and remedies expressly provided for by the law in favor of the consumer exclusively towards the seller (see the following articles 2 and 3) ("Legal Guarantee" articles 128 et seq. of Legislative Decree No. 206/2005) for lack of conformity of the product.

Art.1 GIBUS PRODUCTS

Each GIBUS product has the characteristics described in the price list/sales catalog that is in force at the moment the order is received by Gibus S.p.A. The characteristics of the fabrics are described in the respective GIBUS samples.

Art.2 LEGAL GUARANTEE OF THE SELLER

The goods are guaranteed for a period of two years from the date of delivery for any lack of conformity existing at that time. The two-year legal guarantee can be enforced by the consumer exclusively against the seller pursuant to art. 133 Legislative Decree No. 206/2005.

Art.3 REMEDIES PROVIDED FOR BY THE LEGAL GUARANTEE (ART. 135-BIS OF LEGISLATIVE DECREE 206/2005)

In the event of a lack of conformity of the product sold, the consumer may request the seller either repair or replace the goods, provided that the chosen remedy is not impossible or, compared to the alternative remedy, does not impose disproportionate costs on the seller. Should the requested remedy be, pursuant to Article 135-bis of Legislative Decree no. 206/2005, impossible or excessively burdensome and entailing disproportionate costs for the seller, the consumer may request that the seller reduce the price or terminate the contract. The latter remedies may be also requested by the consumer from the seller in other cases specifically ruled by art. 135-bis of Legislative Decree 206/2005 to which reference is made. In any case, it is specified that, pursuant to art. 135-bis, paragraph 5, Legislative Decree 206/2005, a minor lack of conformity will not give the consumer the right to terminate the sales contract.

Art.4 CONVENTIONAL GUARANTEE

GIBUS S.p.A., with registered office in 35030 Saccolongo (PD) via Einaudi 35, offers the "consumer" as defined by art. 3, paragraph 1, letter a) of Legislative Decree 206/2005, the conventional product warranty starting from the 3rd year and up to and including the 5th year, starting from the date of purchase of the goods under the conditions specified below.

Art.5 OBJECT OF THE CONVENTIONAL GUARANTEE: EXTENSION OF THE DURATION

The Gibus conventional warranty covers the spare parts of the product on the condition that the mandatory maintenance is carried out by an authorized Gibus Dealer, with costs entirely borne by the consumer, of the Bioclimatic Pergolas, 90° Pergolas, Bioclimatic Pergolas with retractable roof (according to the instructions given in the "Use and Maintenance Manual" attached to the product), to be carried out by the end of the 2nd year from the date of installation and every year up to the 5th year. The warranty for the 3rd, 4th and 5th year consists only in the replacement of components recognized as defective by GIBUS S.p.A. and does not cover the costs of labor, travel, disassembly/assembly and transport that will be borne by the customer. The costs deriving from the right to call of the authorized Gibus Dealer will also be borne by the customer.

Art.6 LIMITS OF THE CONVENTIONAL GUARANTEE

The Gibus conventional guarantee covers the cost of spare parts in the following percentages:

- In the 3rd year, the Guarantee covers 60% of the value of the spare part determined by the price shown by Gibus on the sales invoice to the dealer or, if not specifically stated therein, by the price charged for the spare part at the time of sale to the dealer,
- In the 4th year, the Guarantee covers 50% of the value of the spare part determined by the price shown by Gibus on the sales invoice to the dealer, or, if not specifically stated therein, by the price charged for the spare part at the time of sale to the dealer;
- In the 5th year, the Guarantee covers 35% of the value of the spare part determined by the price shown by Gibus on the sales invoice to the dealer or, if not specifically stated therein, by the price charged for the spare part at the time of sale to the dealer;
  - The Cristal and the LEDs, if present, are excluded from the conventional guarantee.

Art.7 WITHOUT EXPENSES

The legal guarantee offered by the seller and the conventional guarantee by Gibus belong to the Customer free of charge. It is the customer's responsibility to prove that the guarantee is still valid by means of the delivery document issued by the seller or other similar document (i.e. receipt, cash receipt or similar) which shows the name of the seller and the date on which the delivery of the goods took place, as well as the evidence of the execution of the obligatory maintenance (i.e. receipt, cash receipt or similar which must be equal to a reasonable fee compared to the maintenance service) in the event the Customer has the "Conventional Guarantee".

Art.8 TERRITORIAL EXTENSION

The legal guarantee referred to in Legislative Decree 206/2005 is valid for Italy. In the EU countries, the legislation envisaged for each country applies to the legal guarantee for the sale of consumer goods. In any case, in EU countries, the seller must grant the consumer a minimum two-year guarantee. The GIBUS conventional guarantee in the terms specified in this agreement is valid in Italy, in EU countries, in Switzerland and in the UK. For extra EU countries, the legal and conventional guarantees are not effective.

Art.9 FURTHER CONDITIONS FOR THE VALIDITY OF THE CONVENTIONAL GUARANTEE

In order for the Gibus conventional guarantee to be considered valid and effective pursuant to this document, in addition to the above, all the following additional conditions must be met:

A. the permitted use and purposes of the product shall comply with the instructions given in the "Use and maintenance manual";
B. the rules of use and periodic maintenance shall comply with the instructions given in the "Use and maintenance manual";
C. the annual compulsory maintenance shall be carried out and proved up to the 5th year;
D. the installation and mandatory annual maintenance shall be carried out exclusively by an authorized GIBUS dealer; both installation and maintenance operations will be valid only if recorded in the "Use and Maintenance manual" and in the "Product Maintenance Check List";
E. the electrical and electronic parts (motor – automatic devices - switches) concerning the product shall be supplied by GIBUS; if electrical and electronic parts are not supplied by GIBUS or are tampered with, the guarantee will not be effective.

Each Gibus Product is unique, uniquely recognizable and traceable, thanks to a 3D Gibus-branded hologram that includes a unique alphanumeric serial number. The Gibus conventional guarantee will be recognized only if there is the Gibus hologram and "serial number" and after Gibus has checked for the compliance with the requirements and conditions set out in this chapter and in the "Use and maintenance manual" of the product.

Art.10 EXCLUSIONS

In addition to the other cases mentioned above, the conventional guarantee is not effective if the product is used for purposes other than those for which it is designed or in ways prohibited by the instructions given in the "Use and Maintenance Manual", which is attached to the product and delivered by the authorized seller; the conventional guarantee is also excluded if the product is used in any commercial, entrepreneurial or professional businesses, unless it is agreed upon differently.
Furthermore, the following is not covered by the conventional guarantee: non-conformities and/or defects due to negligence or carelessness in use (such as failure to comply with the instructions for the correct operation of the product), improper installation, installation or maintenance carried out by personnel who are not employed by an authorized Gibus Dealer or by personnel who are not expressly proven to be addressed by the authorized Dealer, as well as transport damage, or damage due to products or spare parts or components that are not recognized as defective by GIBUS S.p.A.
The conventional guarantee is not effective even in cases of improper use of the product if strong wind occurs beyond the limits indicated by the manufacturer, as well as heavy rain, hail, snow, ice and/or other atmospheric events, even combined, in the event of failure of the wall where the Pergola is fixed, and finally, in case of tampering with the product and use of non-original GIBUS spare parts and components.
The Conventional guarantee is not effective in the following cases:

- modification of any parts of the product during the installation or after the installation without the written authorization of GIBUS.
- installation of parts or components (including motors and automatic devices) not supplied by Gibus or not authorized in writing by Gibus.
- installation on the pergolas of side closures or windows or accessories made by other manufacturers, not present in the catalog and for which there is no written authorization from GIBUS S.p.a.
- installation on the pergolas of other pieces or components or side closures not authorized in writing by Gibus which, in Gibus's unquestionable judgment, may compromise the functioning and stability of the structure itself, its safety, its resistance to wind and atmospheric agents in general as well as the duration of the product.

For other specific exclusions from the guarantee, refer to the various chapters of the "Use and Maintenance Manual" attached to the product.

Art.11 RESPONSIBILITY OF THE MANUFACTURER

Gibus declines all responsibility for any damage that, directly or indirectly, could result to persons, property of the end user or third parties, as well as pets as a result of failure to comply with all the above requirements or those listed in the specific "Use and Maintenance Manual" and concerning, in particular, the warnings regarding the installation, use and maintenance of the product and in all other cases in which the aforementioned conventional guarantee is not effective.

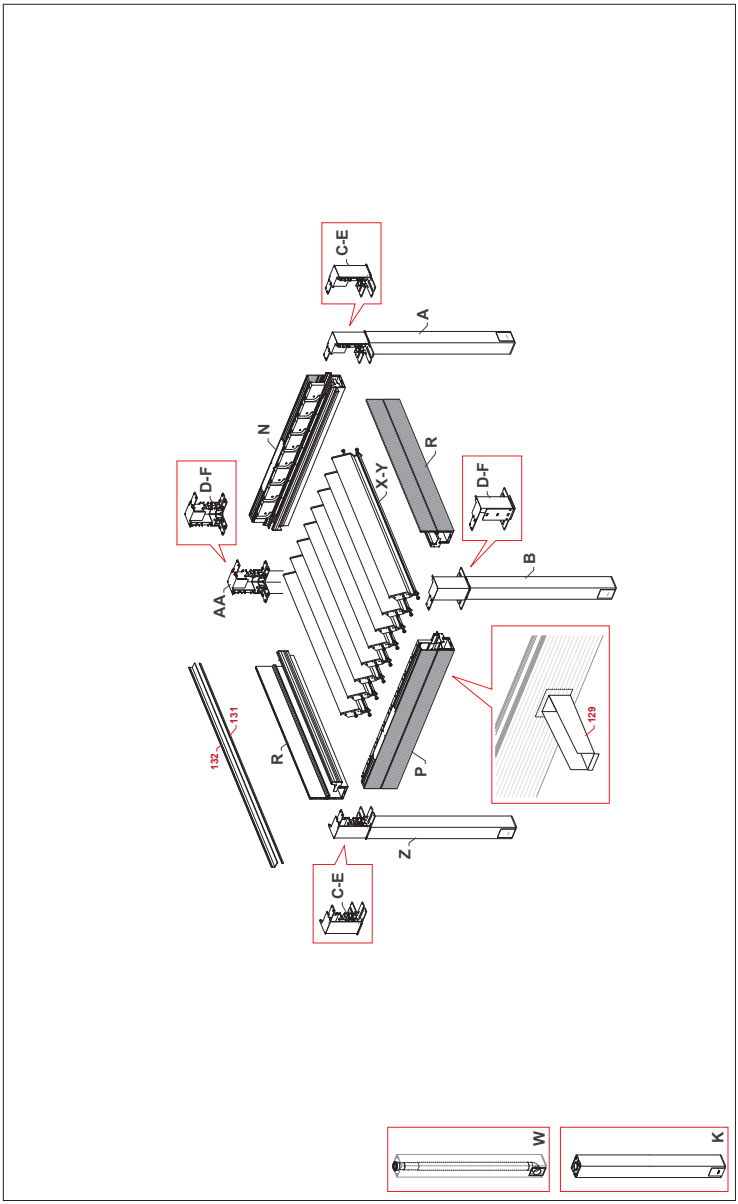
Art.12 FINAL REMARKS

The conventional guarantee is issued by GIBUS S.p.A. as also indicated in the "Use and Maintenance Manual" attached to each product that the authorized Gibus dealer shall handle to the customer and that the customer must demand.

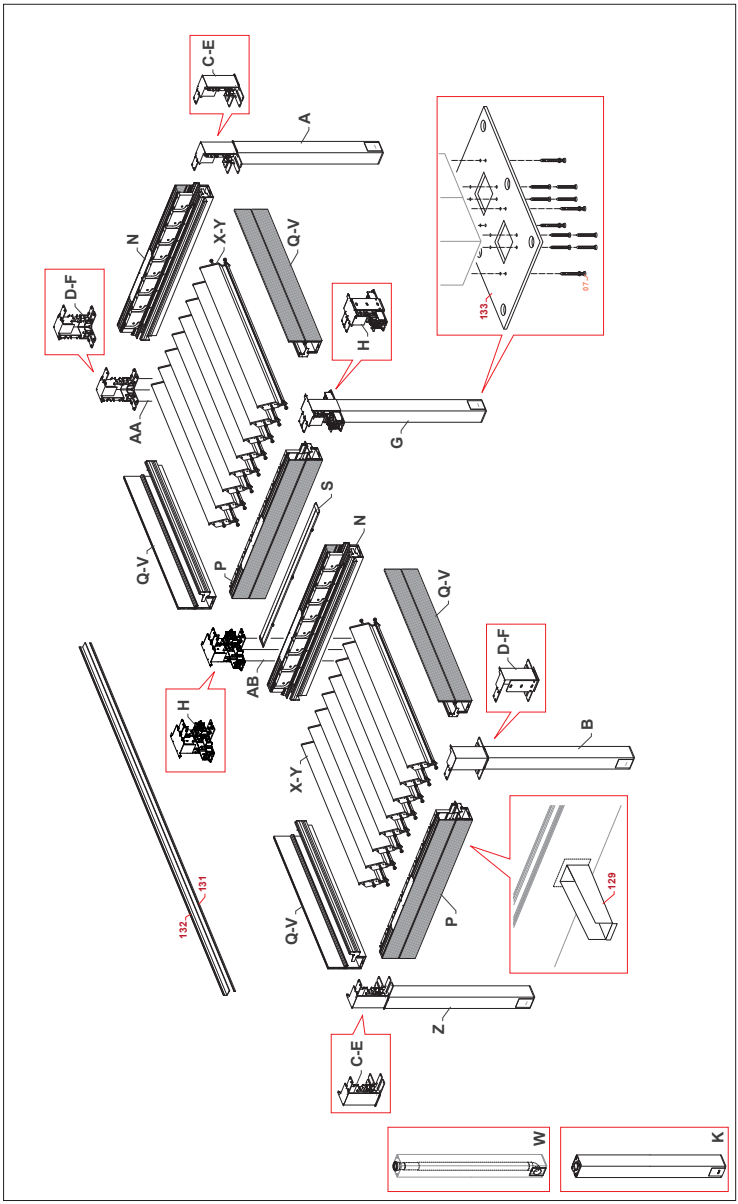
This warranty is issued by:
Gibus S.p.A.
via Einaudi 35 35030
Saccolongo (PD) - ITALY
For any dispute, is elected as the only jurisdiction that of Padua Italy.

CHAPTER 13: EXPLODED DRAWING OF *TWIST*

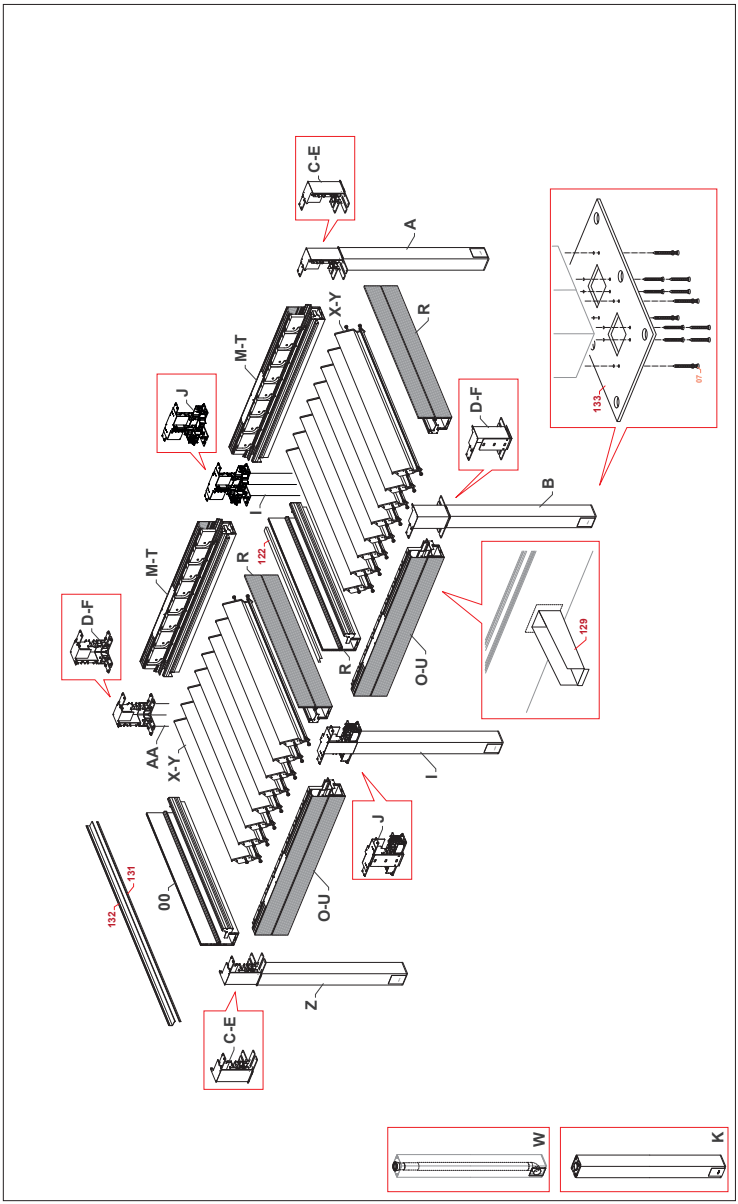
13.1 1 MODULE



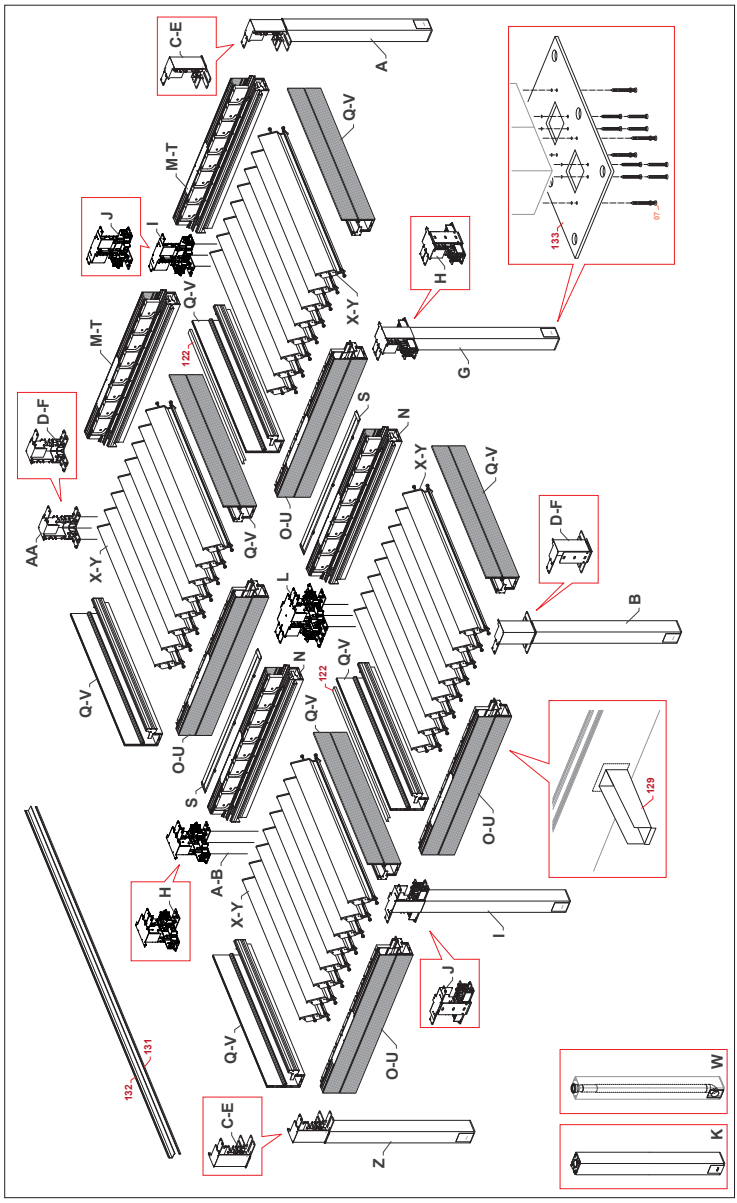
13.2 COUPLING MODULE TYPE 1



13.3 COUPLING MODULE TYPE 2



13.4 CROSS-SHAPED COUPLING



CHAPTER 14: TECHNICAL NOTES

14.1 DECLARATION OF INSTALLATION

DECLARATION OF INSTALLATION (to be filled by the installer)			
TWIST			
☐ ISLAND ☐ WALL ☐ FRONT LEANING ☐ SIDE LEANING		☐ 1 MODULE ☐ COUPLED	☐ OTHER
Size L: S:	**Fabric** Type: Colour:	**Motor** Type:	**Automations** Type:
The undersigned:		of the Company:	Reference:
as:		Address:	

Declares under his sole responsibility
- of having used the components contained in the packaging of the products by Gibus and additional products provided for by the Installation Instructions;
- of having checked the technical compliance of the housing site;
- of having carried out the installation through the instructions provided by the manufacturer in the Use and Maintenance Manual and in the Installation Instructions delivered with the packaged product;
- of having delivered to the customer these Use and Maintenance Manual with the Declaration of Performance DoP relevant to the regulations and European reference standards.

Installation: Installation Notes:	Date:	Stamp and signature Gibus technician:
Mandatory maintenance within the end of the 2nd year	Date:	Stamp and signature Gibus technician:
Mandatory maintenance within the end of the 3nd year	Date:	Stamp and signature Gibus technician:
Mandatory maintenance within the end of the 4nd year	Date:	Stamp and signature Gibus technician:
Mandatory maintenance within the end of the 5nd year	Date:	Stamp and signature Gibus technician:

IMPORTANT!: Extraordinary maintenance is compulsory and should be carried out by a Gibus specialized technician by the end of the second year from the awning's installation; this will extend the warranty up to the 3rd year from the installation date. Use Gibus original spare parts to keep the warranty valid. Accordingly, a compulsory maintenance operation within the end of the 3rd year from the installation date is to be required to the Gibus specialized technician and that will extend the warranty to the 4th year; a compulsory maintenance in the 4th year from the installation date will extend the warranty to the 5th year.

Mandatory Maintenance Notes:

ADDITIONAL Installation Notes:

ADDITIONAL Mandatory Maintenance Notes:

14.2 MAINTENANCE AND NOTE REGISTER

Date	Operation description (including components replacement)	Full name and signature specialized technician

NOTES:

Date	Operation description (including components replacement)	Full name and signature specialized technician

NOTES:

14.3 PRODUCTION NOTES

See the product sheet attached to the back cover.

CHAPTER 15: ANNEXES

ANNEX 0 - EC MARKING

Via Einaudi, 35 - 35030 Saccolongo (PD)
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EN 13561

Declaration of Performance no: **MUT 077-CPR-30-10-2022**
Bioclimatic Pergola with brise solei for external use
MODEL: Gibus® mod. TWIST
Wind resistance: **Technical class 4**
Total solar energy transmittance $_{gtot}$: **See the production specifications on the back cover**

ANNEX 1 - SELF-CERTIFICATION DOCUMENT (*)

PERFORMANCE DECLARATION no: MUT 077-CPR-15-03-2015

1. Unique identification code for the product-type: Gibus® mod. TWIST
2. Serial number: **see the HOLOGRAM on the back cover**
3. Designed use: **Bioclimatic Pergola with brise solei for external use**
4. Name and address of the manufacturer: **Gibus S.p.A. - Via Einaudi, 35 - 35030 Saccolongo**
   www.gibus.it - E-mail: gibus@gibus.it
6. Assessment and check system of constant performance: **System 4**
9. Performance declared in accordance with the **UNI EN 13561** harmonized standard:

Essential Characteristics	Declared performance					
Resistenza al vento	Class 4					
Solar factor g_{tot}	See the value in the product specifications on the back cover (**)					
	Class	0	1	2	3	4
according to EN 14501	g_{tot}	$g_{tot} >= 0,50$	$0,35 <= g_{tot} < 0,50$	$0,15 <= g_{tot} < 0,35$	$0,10 <= g_{tot} < 0,15$	$g_{tot} <= 0,1$

10. The performance of the unit given in the items 1 and 2 complies with the performance declared in the item 9. This performance declaration is issued under the manufacturer's sole responsibility as per item 4.

Saccolongo, 15/03/2015
Signed in the name of and on behalf of: Gianfranco Bellin
Chief Executive Officer

(*) IMPORTANT NOTE: the stated performance is only guaranteed if the installation of the product is carried out correctly by the authorized dealer. The latter is required to compile the "DECLARATION OF CORRECT INSTALLATION", which should be left with the final customer when installation is completed.

CHAPTER 15: ANNEXES

ANNEX 2 - UKCA MARKING

Gibus® THE SUN FACTORY

UK CA
EN 13561

Via Einaudi, 35 - 35030 Saccolongo (PD)
22

Declaration of Performance no: **MUT 077-CPR-30-10-2022**
Bioclimatic Pergola with brise solei for external use
MODEL: Gibus® mod. TWIST
Wind resistance: **Technical class 4**
Total solar energy transmittance $_{gtot}$: **See the production specifications on the back cover**

ANNEX 3 - SELF-CERTIFICATION DOCUMENT (*)

PERFORMANCE DECLARATION no: MUT 077-CPR-30-10-2022

1. Unique identification code for the product-type: Gibus® mod. TWIST
2. Serial number: **see the HOLOGRAM on the back cover**
3. Designed use: **Bioclimatic Pergola with brise solei for external use**
4. Name and address of the manufacturer: **Gibus S.p.A. - Via Einaudi, 35 - 35030 Saccolongo**
   www.gibus.it - E-mail: gibus@gibus.it
6. Assessment and check system of constant performance: **System 4**
9. Performance declared in accordance with the **UNI EN 13561** harmonized standard:

Essential Characteristics	Declared performance					
Resistenza al vento	Class 4					
Solar factor g_{tot}	See the value in the product specifications on the back cover (**)					
	Class	0	1	2	3	4
according to EN 14501	g_{tot}	$g_{tot} >= 0,50$	$0,35 <= g_{tot} < 0,50$	$0,15 <= g_{tot} < 0,35$	$0,10 <= g_{tot} < 0,15$	$g_{tot} <= 0,1$

10. The performance of the unit given in the items 1 and 2 complies with the performance declared in the item 9. This performance declaration is issued under the manufacturer's sole responsibility as per item 4.

Saccolongo, 30/10/2022
Signed in the name of and on behalf of: Gianfranco Bellin
Chief Executive Officer

(*) IMPORTANT NOTE: the stated performance is only guaranteed if the installation of the product is carried out correctly by the authorized dealer. The latter is required to compile the "DECLARATION OF CORRECT INSTALLATION", which should be left with the final customer when installation is completed.

Gibus S.p.A.
via Luigi Einaudi, 35
35030 Saccolongo (PD) - ITALY
www.gibus.it - gibus@gibus.it

HOLOGRAM

PRODUCT SHEET

(**) g_{tot} **value** referring to the indicated fabric awning positioned vertically in front of a glass window. The value corresponding to the specific application must be determined by taking all the specifications of the housing unit and the inclination of the fabric into account. The g_{tot} **Class** can be found in the corresponding table on the previous page.