# TERRACE COVERING WITH A WATER AND SUN PROTECTION SCREEN FABRIC ROOF

## Manufacturer

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(You can omit the text highlighted in red according to your choice)

## Description

Lagune® is an aluminium terrace covering that anchors to a supporting construction and eventually a side wall on the left and/or right side. The screen fabric roof is windproof and water resistant, protects against sun and rain. Its support structure comprises of powder-coated extruded aluminium side channels and columns.

Thanks to the modular structure, the entire unit is easy to expand, even afterwards.

## Dimensions

Width: Minimum 1500 mm

 Maximum 12000 mm (3 roof parts, 3 supporting columns)

Depth: Minimum 1500 mm

 Maximum 6200 mm

Free passage height Maximum 2500 mm

Roof angle of inclination: Minimum 8°

 Maximum 19°

## System implementation

### Box:

* The fabric housing for the zenital sun protection is 300 mm deep and 250 mm high.
* This fabric housing consists of 5, aluminium-extruded profiles. The rear of the housing is a wall profile that ensures that the brackets are aligned correctly. This wall profile is placed against a rear structure over its entire length. Where the fabric goes into the housing, brushes have been provided both top and bottom along the entire length of the housing. That reduces the dirt, the wind and the noise.
* The sides of the fabric housing both have two aluminium side consoles that can serve as finishing.

### Front bar:

* Depending on the width/configuration of the Lagune, there are two types of front bars (with fabric housing).
	+ Small front bar: If all of the Front-section widths ≤ 4 m (depth 158 x height 190)
	+ Large front bar: If even one Front-section width > 4 m (depth 158 x height 230)
* Both types of front bars have a rear profile that is screwed into the gutter and a front profile that is hinged in the gutter. Those 3 profiles are made of extruded aluminium.
* When the front bar does not have a fabric roll, an extra aluminium profile is used, making the housing completely closed.
* The sides of the front bar at the gutter both have an aluminium side console, which serves as a finishing for the front bar. At the rear and front profile, the front bar is screwed between the columns.
* A drainage gutter is integrated into the front bar, which is also part of the basic structure, and a fabric roll can also be integrated.

### Fabric roller barrel:

* The roller barrel with fabric groove is made of ø135 mm galvanised steel with a wall thickness of ±3,9 mm.
* The fabric roller barrel has a recessed fabric groove to limit compression of the fabric strap.
* The end pieces are conical to compensate for the thicker ends of the zip.
* Also have a belt pulley to wind up.
* In the fabric tube there is a motor tube that is part of the tensioning system.
* Depending on the choice of the installation method, the fabric roll can be removed upwards or downwards:
	+ Installation method 4: Placeable/removable downwards
	+ Installation method 8: Placeable/removable upwards

### Screen fabric:

* All screen fabrics are in a single piece, unless the height is greater than the fabric roller tube's width.
* The screens are made-up horizontally.
* The vertical edges have zips, which ensure that the screen fabric fits wind tight into the side channels.
* The zipper is high-frequency welded, and always on the least visible side.
* Type Polyester Waterproof Rensonscreen
	+ Fire resistance M1
	+ Weight: ± 455 g/m²
	+ Thickness: 0.50 mm

### Side channels:

* The single side beams (height 130 x width 105 mm) are made of extruded aluminium. Those side beams are five-fold and self-bearing.
* The single side beams, which are used when they installation is being finished to be water-tight against a structure, are a little bit wider (high 130 x width 109 mm).
* The double side beams (height 130 x width 179 mm) are made of extruded aluminium. Those side beams are seven-fold and self-bearing.
* A hidden drainage gutter is provided in the side beams so that the rainwater that strikes the fabric can be drained via the bottom rail and the side beams into the drainage gutter.
* Those side beams combine with the trolleys to provide a level of mechanical security on the bottom rail.
* The side beams are equipped with tracks for the wheels of the trolleys of the bottom rail. That ensures that the bottom rail runs perfectly when it moves.
* On one side, the side beam is slid over the pin of the fabric roll and made fast. On the other side, the side beam is attached to the front bar.
* Each side channel has in internally integrated PVC side channel. The side channel itself includes two S-shaped neoprene rubbers running along the full length of the PVC side channel to block out wind gusts. The zip welded onto the screen fabric runs into those internal PVC side channels, and "holds" the screen firmly in place. When mounted correctly, there is enough tolerance between the screen fabric, aluminium side channels and the PVC side channels to guarantee smooth operation.

### Bottom bar:

* Is made of 1 extruded aluminium profile.
* Bottom bar dimensions: H 140 mm x D 73 mm.
* This aluminium profile has a trolley fixed on the lateral.
* The use of the zip-technology, combined with an unrivalled fabric tension, ensures that rain falling on the fabric simply drains away through concealed guide water channels.
* The bottom bar has a HPVC leaf catcher, which traps dirt and ensures the drainage channel does not become blocked.

### Tensioning system:

* The tensioning system comprises a continuously pre-tensioned belt.
* Torsion springs mounted in the motor tube provide the pre-tension.

The motor tube is located in the sun protection screen roof's fabric roller barrel.

* There is a belt disc on the left and right sides of the fabric roller barrel.

The belt starts from that belt disc and runs over the alignment wheel that guides it to the pulley and onto the bottom bar trolley.

### Columns:

* The side channels are supported by 105 mm x 110 mm vertical aluminium columns.
* The shape of the column allows the side guides of the integrated Fixscreen® Front and Side to be integrated in an aesthetic manner.
* The column also forms the foundation for the integrated water drainage and the fixation of the mounting bases.

### Mounting bases:

* Columns are fixed to the ground using a visible, invisible or cast mounting base.
* The (possible) water drainage through the mounting bases always runs "away from the terrace".

### Fixation:

* All fixings (e.g. screws) are made of stainless steel and are virtually invisible.

### Colour:

* All visible aluminium profiles (box, side channels and bottom rail) are enamelled in textured RAL colour (60-80 µm).
* The end caps are made of cast aluminium and are painted in the same colour as the profiles.

### Control:

* Electric – operated by a 230 VAC tubular motor, without emergency manual operation.
* The connection is included in the sun protection fabric.
* Includes a cable with a UV resistant sheath
* The power supply and all cables should be part of the electrical package.

## Technical data:

### Maximum weight of snow load:

No warranty against snow load. The roof should be rolled in during snow

### Maximum wind speed when controlling the screen fabric:

50 km per hour

### Wind resistant up to:

120 km/h (with rolled out screen fabric)

Conforms to wind class 3

### Water drainage and precipitation rate:

The terrace covering can handle precipitation rate that corresponds to a rain shower with an intensity of 180 mm/u, which a maximum duration of 2 minutes. This type of heavy shower occurs on average every 15 year. (See the Belgian rain statistics: NBN B 52-011)

## Warranty

* Five years product warranty on the structure (covering all faults that could occur during normal domestic use and when there has been regular maintenance)
* Ten years warranty on the colour integrity of powder coating on the aluminium profiles
* Five years warranty on gloss (powder coating )
* Five years guarantee on operational electronics (Somfy® motors & automation)
* Five years warranty on the screen fabric collection.

## Options

### Integrated LED lighting:

* Integrated in the side channels.
* Basic profile: Aluminium, powder lacquer RAL all colours
* Cover strip: Plastic strip for uniform light diffusion
* LEDS: Minimal length = 2000 mm. Maximal length = 5000 mm (remaining space will be finished with an aluminium profile).
* Available in:
	+ Warm white light (+/-2800K/1700 lumen/m)
	+ Pure white light (+/- 5000K/1700 lumen/m)

### Loggia sliding panels

* Can be integrated in the SIDE of the terrace covering.
* Loggia sliding panels comprise 40 x 40, 40 x 55 or 40 x 70 mm powder coated aluminium frames, depending on the passage height. The 40 mm side is always facing towards the front
* This frame is filled in with:
	+ Square, aluminium, fixed blades
	+ Square, aluminium, rotatable blades
	+ Square, Western Cedar, fixed blades
	+ Square, Western Cedar, rotatable blades
	+ Glass fibre screen fabric
* The sliding panels are suspended in aluminium upper rails and slide in an aluminium bottom rail
* Operation is manual
* The system can handle height differences of up to 5 cm, using a flexible lower guide system
* See the specification text for Loggia sliding panels for a detailed product description

### Integrated Fixscreens Front

* It is possible to integrate vertical sun protection fabric screens in the terrace coverings with a passage height ≤ 2.5 m
* The frame profiles of the basic structure also form the box for the overhead sun protection
* The side channels are made of extruded aluminium They are 3-piece
* The stepped shape in both components allows you to screw the side channels easily and in the proper manner onto the columns
* See the specification text for Fixscreens for a detailed product description

### Integrated Fixscreens Side

* It is possible to integrate vertical sun protection fabric screens in the terrace coverings with a passage height ≤ 2.5 m
* The needed screen box is 145mm wide and 150 mm high.
* The box is covered by a profile that hinges in the base profile and that is demountable.
* The side channels are made of extruded aluminium They are 3-piece
* The stepped shape in both components allows you to screw the side channels easily and in the proper manner onto the columns
* See the specification text for Fixscreens for a detailed product description

### Glass wall

* You can build glass sliding panels into terrace coverings with up to 2600 mm passage height
* The glass profiles are made of powder-coated extruded aluminium
* The control is manual
* The glass sliding panels are supported at the bottom by an extruded aluminium rail that is finished with a corrosion resistant guide channel
* The glass is 10 mm thick safety-glass
* You can close the glass wall securely using a lock that you can open and close with a key from either side.

### Beam:

* You can equip the terrace covering with a Beam-
module, an aluminium housing that can house a heating element (Heat) and loudspeakers (Sound).
* Mountable on the inner side of the frame profile on the Span-side
* You can swing the module (stepless) through 30° for adjustment

### Heat:

* A heating element that you can integrate in the Beam-module
* The visible, corrugated plate is anodised in black
* Convection heat
* Power: 2600 W/Heat, Power rating = 12 A/Heat
* IP 65
* RTS control (exclusive receiver, remote and controls)

### Sound:

* "Flat Panel" type speakers that integrate into the Beam-module
* "Plane Wave" technology
* 25 W RMS, Flat Panel Speaker
* 50 W peak capacity, Flat Panel Speaker
* IP 65
* Connection: Connects to a tuner/amplifier using an audio cable

### Wind sensor kit:

* Capacity: Somfy Eolis RTS Wind sensor and extra accessories
* Action: The blades should be closed when wind speeds are > 50 km/hour, to conform to our warranty terms
* The wind sensor has priority over the rain sensor

## Norms

EN 13561