Operating and maintenance instructions

WAREMA sun sail Sonea
S70

*Der SonnenLicht**Manager***

To be handed over to the operator.
Please keep for future use.

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Table of contents

1 Introduction ... 3
1.1 Information on safety ... 3
1.2 Information on the target group and application of these instructions ... 3
1.3 Explanation of signal words ... 3
1.4 Basic safety instructions ... 3
2 Product information ... 5
2.1 Intended use ... 5
2.2 Parts description ... 6
2.3 Electric drive data ... 6
2.4 Wind resistance ... 7
2.5 Rain - inclination angle ... 7
3 Operation ... 7
3.1 Product with height adjustment ... 7
3.2 Product with motor ... 8
3.3 Incorrect operation ... 9
4 Installing the protective cover ... 10
5 Service ... 12
5.1 Cleaning, care and inspection activities ... 12
5.2 Maintenance ... 18
5.3 Repair ... 19
5.4 Wear parts ... 19
5.5 What you should know about awning fabrics ... 19
6 Dismantling/disposal ... 21
7 Troubleshooting ... 22

1 Introduction

1.1 Information on safety

It is important to follow these instructions in the interest of personal safety. Failure to comply with these instructions when operating the product may result in personal injury and/or property damage. Failure to comply with these instructions relieves WAREMA of liability.

Warnings are marked in the instructions with this symbol or a similar symbol.

- Read through the product instructions before use.
- Observe the safety, operating and maintenance instructions.
- Include these instructions when passing the product on to a new owner.
- Keep the instructions for use until you dispose of the product.

1.2 Information on the target group and application of these instructions

Target group

These instructions are directed at people who operate, care for and/or maintain the product.

The activities listed in the "Maintenance" chapter are only permitted to be executed by a qualified specialist.

Contents

These instructions are an integral part of the following product:
sun sail Sonea S70

The instructions contain important information on the operation, care and maintenance of this item. They describe how to operate products with WAREMA standard drives. Other drives and special solutions are not dealt with.

Permissible activities

Performing tasks on the product that are not described in these instructions is not permissible. No other alterations, additions, conversions or maintenance work is to be carried out on the product other than as described in these instructions without the written approval of WAREMA.

1.3 Explanation of signal words

DANGER
Identifies an imminent danger that may result in death or serious injury.

WARNING
Identifies a potential danger that may result in death or serious injury.

CAUTION
Identifies a potential danger that may result in light injury.

NOTICE
Identifies a potential situation that may result in product or property damage.

1.4 Basic safety instructions

The safety instructions and warnings described here are intended to safeguard your health and to protect the product. These instructions must be read carefully and followed.

Damage resulting from inappropriate use or the failure to follow these instructions is not covered by the warranty. Liability will not be accepted for secondary damage.

General operation

The operation of a faulty product may injure persons and/or damage adjacent parts.

- ▶ Only operate the product if it is in technically perfect condition.
- ▶ If the product makes unusual noises or movements, stop using it immediately and inform a qualified specialist.

Possible risk during operation

Incorrect operation can result in personal injury. The movements of the product can lead to crushing of the limbs.

- ▶ While the product is moving, do not reach between the moving parts.
- ▶ Do not reach into openings on the product while operating the product.

Monitoring duty during operation

Failure to monitor the product while it is moving may result in personal injury and property damage.

- ▶ Keep people and animals out of the projection area.
- ▶ Remove obstacles from the projection area.

Operation in the event of a power supply interruption

An electrically-operated product cannot be operated without power. A extended product may be subjected to impermissible loads when bad weather fronts pass over or during power failures. This may also result in serious personal injury and/or damage to the product.

- ▶ In windy areas with frequent power failures, manual emergency operation or an emergency power supply should be considered

Accessing the operating element (electrically operated product)

The operating element is not intended for children to use. Children are unable to recognize the danger associated with the product. Persons can become injured from careless use.

- ▶ Do not allow children to play with the locally installed control system or operating element.
- ▶ The hand-held transmitter must be kept out of the reach of children.

Operation in wind

The product is only able to withstand the loads associated with the specified wind speed limits. Special precautions must be taken if a bad weather front is approaching. Even when using a control, sudden strong gusts of wind can damage the product, e.g. , after the control has triggered the move command to raise the product to the upper limit position.

- ▶ The product must be retracted if the wind speed limits are exceeded (see wind resistance chapter in these instructions).
- ▶ When a bad weather front is approaching, retract the product by hand immediately.
- ▶ All other movements of the product must be prevented while the wind speed limit is exceeded.

Operation in wet weather

Moisture promotes wrinkling and waffling and causes impairment of the fabric.

- ▶ Once the rain has stopped, fabric that has become wet should be extended so that it can dry.

Operation in icy conditions/winter (general procedure)

The operation of the product with temperatures around or below the freezing point can lead to malfunctions and/or damage to property in the case of unfavourable installation and building situations. After an impact with condensation water, rain or snow the product can freeze up with low temperatures.

- ▶ Before operation the product must be freed from snow and ice in order to make it operable.
- ▶ The operation of the product while iced over is forbidden.

Operation in winter (product with control system)

Products operated by a control system may start moving at any time and without prior notice. After an impact with condensation water, rain or snow the product can freeze up with low temperatures. Operation of the product may cause damage.

▶ When using a control system without an ice alarm, the automatic control mode should be switched off in winter.

Special features of fabric

Fabrics can become electrically charged. Contact with people or objects may result in an electrostatic discharge from charged fabric.

Risk of damage to the product

An additional load can damage the product and/or cause it to detach from its mount.

▶ Do not hold onto the product or lean any objects against it.

2 Product information

2.1 Intended use

The following details apply to the following product: sun sail Sonea S70

The product is an external sun shading system that may be used for summer thermal protection and glare control. The product is free-standing or attached to one or more buildings and is used to shade courtyards and outdoor sitting areas used for private or commercial purposes.

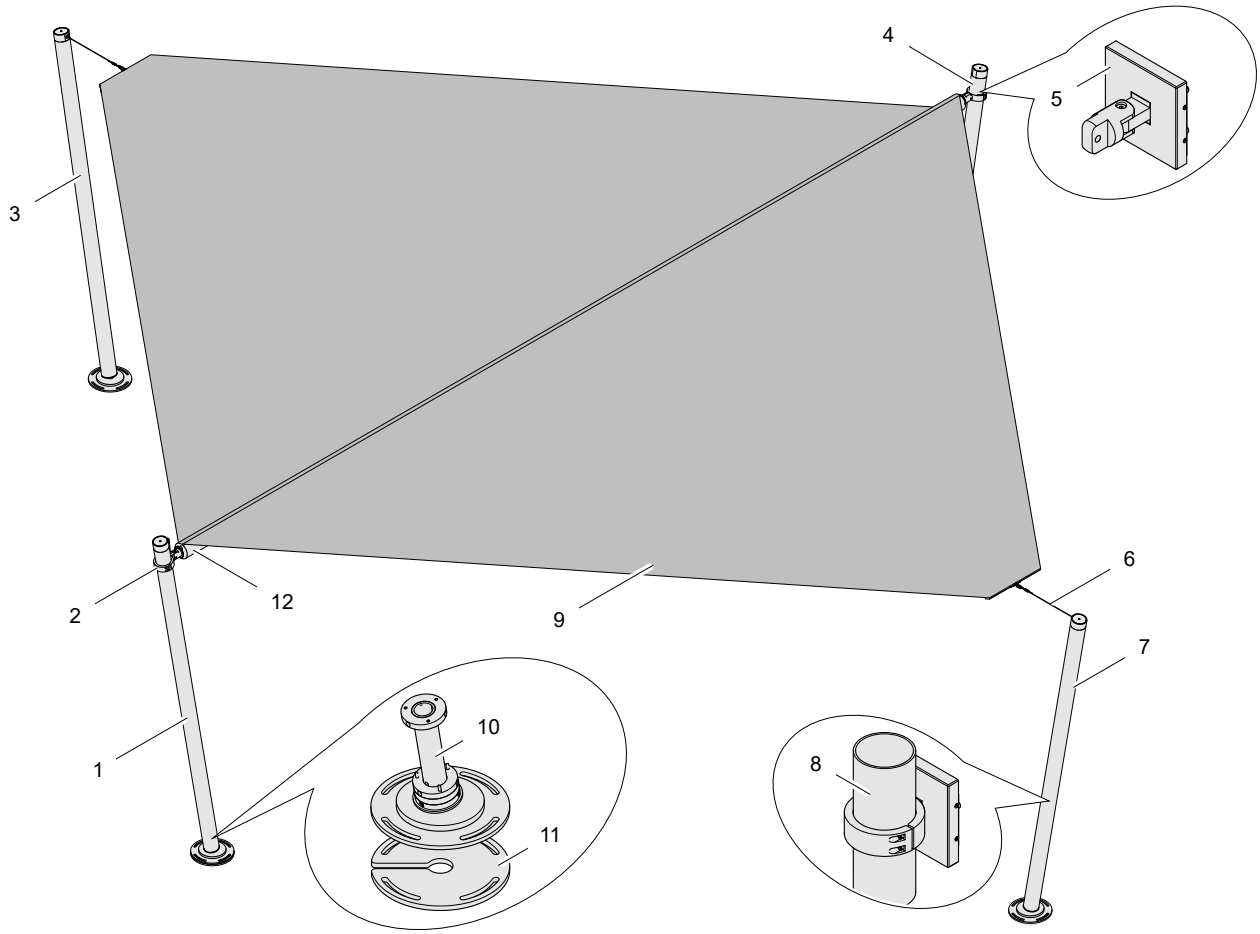
The product is intended to be used to protect against the sun, not the rain.

Inappropriate use may result in serious hazards.

Additional loads on the product in the form of hanging objects or guy ropes could damage the product or cause it to become detached from the wall and are therefore not permitted. WAREMA will not be liable for any ensuing damage.

The intended use also includes observing these instructions and adhering to the service requirements they describe.

2.2 Parts description



1	Drive-end pole for on-site connection	7	Right pole (with integrated spring mechanism)
2	Pole attachment	8	Optional wall console (instead of base plate with pin)
3	Left pole (with integrated spring mechanism)	9	Fabric
4	Non-drive-end pole	10	Base plate with pin and attachments
5	Optional wall console (instead of pole)	11	Base plate for cable inlet (only needed for drive end in combination with base plate with pin)
6	Traction cable	12	Fabric shaft with integrated motor

Fig. 1: Parts overview of the Sonea S70 sun sail

2.3 Electric drive data

Parameter	Value
Current consumption [A]	1.27
Rated voltage	230 V/50 Hz
Degree of protection	IP 44
Short-term operation (S2)	10 min
Emissions sound pressure level	LpA ≤ 70 dB(A)*

* The sound pressure level LpA in a standard installation of the product on a test stand is ≤ 70 dB(A). This value may vary depending on the specific installation.

2.4 Wind resistance

NOTICE
Product damage from incorrect operation in wind!

The extended product is only able to withstand the loads associated with the permissible wind speed limits. The fabric may become damaged if the wind speed limit is exceeded.

- It is recommended to install a wind monitor.
- Set the wind monitor to the permissible value.
- If the maximum permitted wind speed is exceeded, retract the product.

The maximum permitted wind speed (wind speed limit) for the product when it is extended is: 10 m/s (Beaufort 5)

The wind speed of 10 m/s is defined as a fresh wind or breeze, i. e. small deciduous trees begin to sway and white caps form on lakes.

If the maximum permitted wind speed is exceeded, the product must be retracted.

2.5 Rain - inclination angle

The product is not intended to provide protection against the rain. At an inclination angle between at least 10° and maximum 45°, the water that briefly lands on the product can run off.

3 Operation

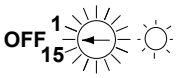
INFO

- Only operate the product if it is in technically perfect condition.
- Do not operate a product if it is damaged. Always contact the specialist dealer and protect the product against being operated as agreed with the specialist.

NOTICE
Product damage from incorrect setting of the weather station.

The sun sail cannot operate properly while the brightness sensor is switched on.

- The rotary switch for the brightness value must be turned to "OFF".



3.1 Product with height adjustment

INFO
It is recommended that the height adjustment only be activated when the sun sail is extended.

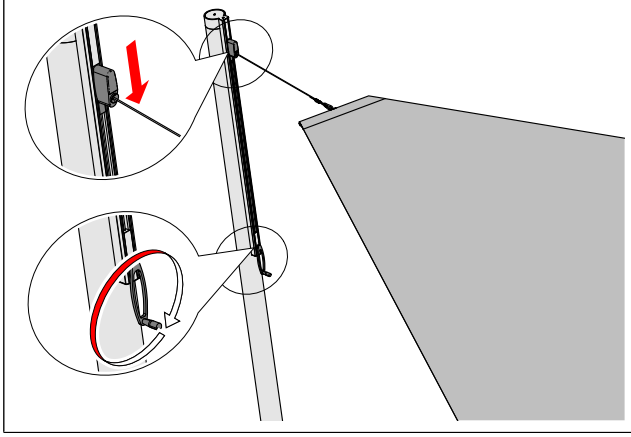
Do not retract the product **before**, the height adjustment is in the **upper position**.

Before retracting the product, the height adjustment **must** be cranked to the upper position.

CAUTION
Risk of injury from the cable in the field of view!

As soon as the height adjustment is cranked from the top position downward, the traction cable moves down. People moving around the pole may get caught in the traction cable.

- Inform people located in the vicinity of the product about the danger involved.

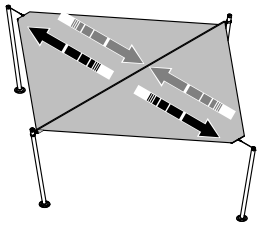
Height adjustment operation	
	■ Insert the crank in the height adjustment. ■ Turn the crank clockwise. Tip of the fabric moves downward.

3.2 Product with motor

CAUTION
Risk of crushing from failure to exercise care during operation.

Persons who are located within the projection area may be injured.

- Keep the path of the product clear of people.
- Keep children away from the operating elements.

Movement	
	■ Press the button on the hand-held transmitter. The product moves in the selected direction.

INFO
The product has an upper and lower limit position. The product automatically stops at this point.

The product can be stopped in any position.

Operation using a central control unit

NOTICE
Product damage from failure of the control unit!

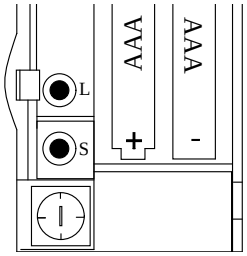
Under certain external conditions, such as a power failure or a malfunction, the control unit will not be functional. In this case, the control unit will not be able to operate the product and the product may be exposed to extreme loads caused by the weather conditions.

- Set the control to manual operation if you are going to be away for a long period.

INFO
of the motors used are not intended for continuous operation.

The integrated thermal protection switches the motor off after approx. 10 minutes. The product will be ready again for use after 10 to 15 minutes.

- Adjust the control unit in such a way that continuous operation of the motor is not possible.
- Follow the operating and installation instructions of the control unit.

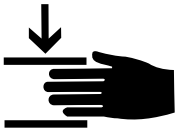
Switching off the brightness evaluation using the hand-held transmitter	
	■ Fully retract the sun sail. ■ Open the battery compartment on the hand-held transmitter. ■ Set the encoding switch ⚿ to "0". ■ Press and hold the "S" store button ◉ until the sun sail "waves". The brightness evaluation is now permanently deactivated. ■ Close the battery compartment.

3.3 Incorrect operation

Accessibility of the operating elements

- Never let children play with the operating elements of the product, such as the hand-held transmitter or switch.
- Keep the hand-held transmitter out of the reach of children.

Danger of crushing, shearing and entanglement

	■ While the product is moving, keep persons away from the product. ■ While the product is moving, do not reach between the moving parts. Products operated by means of a control unit may start moving at any time and without prior notice. Inform people, including children, who may be located in the vicinity of the product about the danger involved with the product to eliminate the risk.

Operation in stormy weather

	The product must be retracted by hand before a bad weather front passes over, even if a control is being used. The control triggers a move command for the product if the set limit value is exceeded in order to move it to the protected upper limit position. If strong gusts of wind come up suddenly, the product is exposed to a larger load for which it was not designed for an indefinite period. The sun sail retracts automatically in a storm (controlled by the solar weather station). ■ Retract the product if the wind speed limit is exceeded. ■ When a bad weather front is approaching, retract the product by hand immediately. ■ All other movements by the product must be prevented under heightened wind loads. ■ Visually inspect the wind sensor for damage and ensure it is functioning properly. The wind sensor must be able to move freely.

Operation in wet weather

NOTICE
Deterioration of awning fabric due to moisture!

Moisture promotes wrinkling and waffling.

- Once the rain has stopped, awning fabric that has become wet should be extended so that it can dry.

	The product must be retracted by hand before a bad weather front passes over, even if a control is being used. - When a bad weather front is approaching, retract the product by hand immediately. - In the event of rain, retract and do not extend the product. - Once the rain has stopped, awning fabric that has become wet should be extended so that it can dry.

Operation in cold weather or winter

NOTICE
Product damage from forceful operation!

After an impact with condensation water, rain or snow, the product can freeze up at low temperatures.

- Do not use the product under icy conditions. The product may be used again after thawing.
- When using a control unit without an ice alarm, automatic operation should be deactivated in winter.

	- Do not operate the product in winter. - Pack the product into its protective cover when it is dry. - Switch off the automatic control in winter.

Dirt (such as leaves and foreign objects)

	- Immediately remove leaves and other foreign objects from the awning fabric and box. Leaves and other foreign objects can cause malfunctions and create the conditions necessary for microbial activity.

4 Installing the protective cover

NOTICE
Product damage from extending the product while the protective cover is mounted!

The protective cover prevents the product from extending.

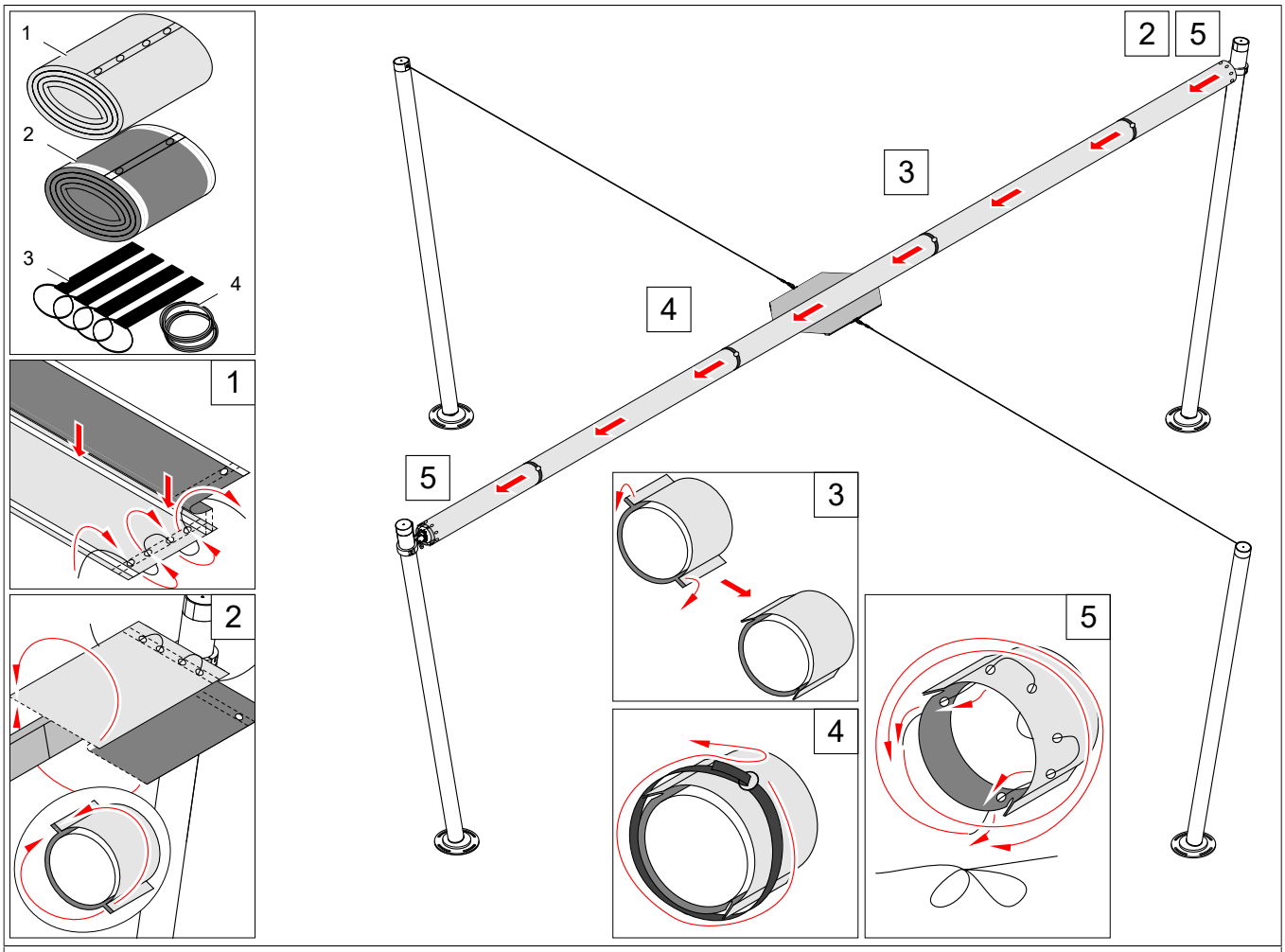
- Before installing the protective cover, disconnect the sun sail from the power supply or the control and protect it from being switched on again.

CAUTION
Risk of injury from falling off the climbing aid!

Climbing aids (e. g. ladders, scaffolding, etc.) may tip over if improperly erected.

- Position climbing aids on level and firm ground.
- Do not lean climbing aids against the product.

INFO
The protective cover should be installed by a qualified specialist if the sun sail will be out of use for a lengthy period (winter months).



1	Top part of protective cover (smooth)
2	Bottom of protective cover (perforated)
3	Hook-and-loop strips
4	Cords

Fig. 2: Installing the protective cover

- [1] On one side, connect the bottom part of the protective cover (2) with the top part of the protective cover (1). Thread the cords through the eyelets in the top part on both sides.
- [2] Place the protective cover around the fabric shaft and connect the open side.
- [3] Press the connecting points downward.
- [4] Secure the protective cover with the hook-and-loop strips (uniform spacing).
- [5] Tighten the cords on both sides so that the protective cover closes on the side. Then wrap the cords once around the fabric shaft and tie a bow.

5 Service

Use of the product in a manner that is not intended or failure to care for and check the product improperly render the product warranty from WAREMA void.

Proper and regular cleaning and maintenance and the exclusive use of original spare parts are essential for trouble-free operation and a long product service life.

INFO
When performing product maintenance or working in the immediate vicinity of the product, e. g. when cleaning windows, product movement must be prevented.

A monitored overriding locking mechanism must eliminate all possible operation.

WARNING
Risk of injury from operation of the product when it is out of sight!

The product may unexpectedly start moving during cleaning or maintenance.

- De-energise the product and secure it against being switched on again.

CAUTION
Risk of injury from falling off the climbing aid!

Climbing aids (e. g. ladders, scaffolding, etc.) may tip over if improperly erected.

- Position climbing aids on level and firm ground.
- Do not lean climbing aids against the product.

CAUTION
Risk of injury from falling!

There is a risk of falling during maintenance work.

- Take suitable safety precautions to prevent or arrest falls.

5.1 Cleaning, care and inspection activities

Over time, a film of dirt will form on the surfaces of sun shading products due to environmental influences.

Due to the effects of solar radiation, this soiling can become permanently burnt into or stuck to the surface coating. These factors reduce the value and may impair the proper functioning of the sun shading product.

To enhance the durability of the sun shading product, its surfaces should be cleaned regularly or **at least once a year.**

For awning fabrics, the necessary cleaning interval depends on the degree of soiling.

In certain ambient conditions, such as those found near industrial zones and close to heavy road traffic, the sea (salty air) or swimming pools (air with chlorine), more frequent cleaning may help to protect against surface damage caused by these conditions and against the heightened risk of corrosion.

INFO
The activities described in this section can be performed by the operator. It is important to abide by the interval of one year.

Purpose of cleaning and care

The benefit provided by regular and proper cleaning and care is that the value of the product is preserved and its service life extended. The purpose of repeatedly cleaning the product is to preserve the well-maintained appearance of both the building and the product.

Results of cleaning

NOTICE
Product damage from incorrect cleaning!

Incorrect cleaning procedures may result in damage to the product or product parts. Surfaces and textures may be permanently altered (e. g. scratches).

- Do not use high pressure washers, steam washers, abrasive sponges, abrasive cleansers, or aggressive cleaning agents or solvents such as alcohol or naphtha.
- Do not use chlorinated cleaning agents on or near the product.
- Do not wash the awning fabric in a washing machine or other similar equipment.
- Do not rub the awning fabric excessively with a hard brush/sponge or other hard objects. This may damage the surface.
- Do not retract the awning fabric if it is damp. This may cause moulding or spotting.

Under no circumstances will claims for damages arising from these cleaning instructions be honoured, since the effectiveness of these measures depends on a large number of factors that vary widely from case to case.

The effort required for cleaning and the cleaning results themselves depend on the degree of soiling. Surfaces that have been exposed to the influences of weather over many years but have not been cleaned are difficult, if not impossible, to restore to their original condition.

General information on cleaning

WARNING
Risk of injury from electric shock on a motorized product!

If a live component (e. g. motor) comes into contact with water, a short circuit may occur or electricity may flow.

- Keep water away from all live components.

Tip/recommendation

Using the WAREMA cleaning glove together with WAREMA cleaning agent concentrate for sun shading products is an ideal way to properly clean product surfaces.

For stainless steel poles, the non-woven cloth used in combination with standard cleaning and care products is suitable for stainless steel (V2A). When cleaning, it must be ensured that the non-woven is moved in the same direction as the grinding on the stainless steel pole finish. The non-woven is designed to remove rust bloom, other residue and small scratches from the surface. It creates a finish on the surface that matches the one created at the factory (same grain size).

The WAREMA cleaning agent for sun shading products can be used for metal and plastic surfaces and is certified by the GRM (Gütegemeinschaft Reinigung von Fassaden e.V.) (certification no. 142, 242, 342, 442, 542).

Concentrate



Cleaning glove



Non-woven cloth (included in scope of delivery of stainless steel poles)



To order, contact your WAREMA dealer.

For further advice and technical questions regarding cleaning, please contact the Association of German Sun Shading Product Cleaners (Verband Deutscher Sonnenschutzreiniger e.V., www.vds-sonnenschutz.de).

Preparing for cleaning

- When cleaning the product, protect adjacent areas against soiling.

INFO
Cleaning will vary with the fabric quality and the type of coating (e. g. special coating such as aluminium vapour coating). Test the procedure in a less visible area first. If you have any questions, please contact your WAREMA dealer for further information.

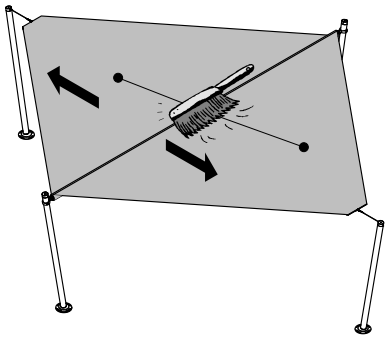
Aids required for cleaning:

- Whisk broom/brush (soft bristles)
- Vacuum cleaner (optional)
- Bucket
- Low-calcium water (recommendation)
- WAREMA cleaning agent for sun shading products (do not use on wood products)
- WAREMA cleaning glove
- Cotton cloth
- Additionally for awning fabric:
  - Rubber eraser (non-marking)
  - Adhesive tape
  - Mild detergent

INFO
Clean step-by-step from the rear to the front.

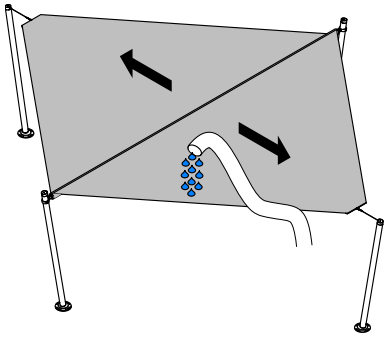
1 Awning fabric (as needed)
2 End rail (valance roller blind if present)
3 Pole (if present)

Performing preliminary cleaning



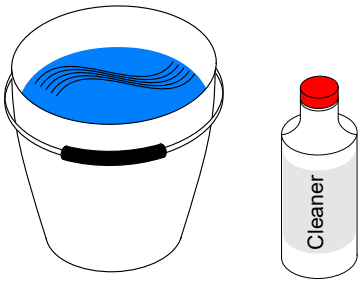
- Remove any loose soiling from the entire product (e. g. dust, leaves). A whisk broom/broom or vacuum cleaner can be used for this.
- Do not forget to clear the opening of the guide for the curtain.

or

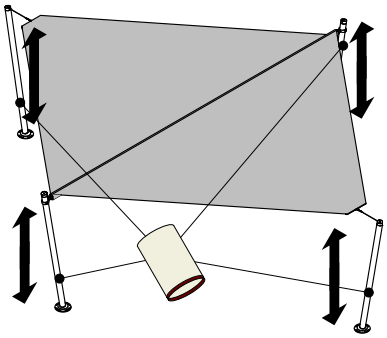


- If the product is installed outside (outdoors), you can also rinse off loose dirt with clear water at a low water pressure.
- Before you start, remove any objects that must not get wet.

Performing detailed cleaning

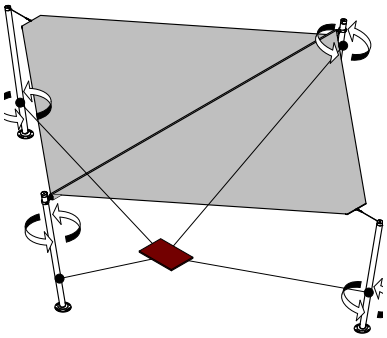


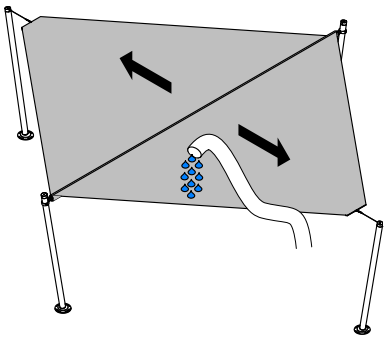
- Prepare a bucket with water and WAREMA cleaning agent for sun shading products. Note the dosing quantities specified by the cleaning agent manufacturer.
- Wet the WAREMA cleaning glove.



- Clean the product components with a wiping motion. Repeat the procedure as needed based on the degree of soiling.
- Special feature of stainless steel pole: Move the non-woven cloth in the same direction as the grinding on the pole finish.

Special feature of stainless steel pole:





- Remove the detached soiling before drying.

Cleaning the awning fabric without water

In some cases, smaller spots and isolated dirty streaks can be cleaned without water.

- Dab off/strip away soiling with adhesive tape.

  and/or
- Remove soiling with a non-marking rubber eraser (by applying light pressure).
- Remove soiling with a vacuum cleaner if necessary (on the low setting).

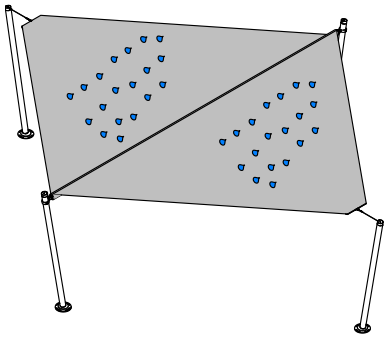
Cleaning the awning fabric with water

Soiling or crusting spread over a large area must only be removed when wet, in order to keep the dirt from being rubbed into the fibres and spaces between the fibres.

- Remove any loose soiling from the awning fabric (do not brush off).
- Wet the awning fabric with clear water at a low water pressure.
- Add a 5-10% mild washing detergent to lukewarm water (max. 40 °C). Build up a lather by squeezing out a sponge several times.
- Apply the lather to the soiled locations and let it soak in for 15-20 minutes.
- Wet the awning fabric with clear water at a low water pressure.
- Repeat the procedure as needed based on the degree of soiling.

Drying the product

- extend the product into the lower limit position.



- Leave awning fabric that has become wet to air-dry.

INFO
To prevent scale marks from forming around dried water droplets, the surfaces of the product can be rubbed dry using a microfibre or cotton cloth.

Re-impregnating the awning fabric

INFO
The cleaning agent and fabric impregnation have opposing effects. By thoroughly rinsing off the cleaning agent with clear water, you can preserve the water-repellent property of the awning fabric for a longer time.

Every time the fabric is cleaned, the original protective function of the awning fabric is slightly diminished. Depending on the fabric type, a reimpregnation can renew the water-repellent effect and is therefore recommended.

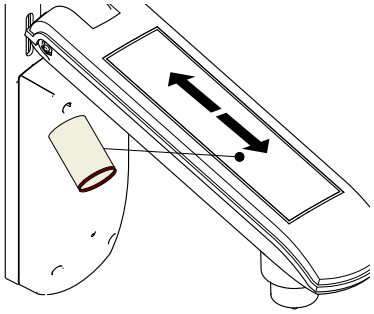
Only use impregnating agents that are suitable for fabrics.

Re-impregnation cannot restore the awning fabric to its original new condition.

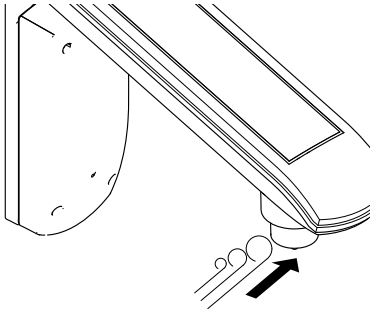
Cleaning the weather station (if available)

INFO
The weather station must be cleaned every three months to ensure the measured values are accurate and ensure operating safety and reliability.

Note the separate instructions for the weather station.



- Remove dirt from the transparent cover of the weather station. Use a damp cleaning glove for this purpose.



- Blow out the opening for the wind measurement. Do not introduce pointed objects.

Inspection activities/examine the product during cleaning

INFO
Wear and damage to the operating element or product as well as damage to the mounting substructure may impair the product and result in secondary damage.

If you should notice any irregularities during the visual check of the product, proceed as described below.

- Take the product out of service.
- Have any damage repaired by a qualified specialist.

- Check the product regularly for visible wear, damage and proper functioning (visual check).
- Check that the fixing of the supporting elements (e. g. consoles) is firmly connected to the structure (visual check).
- Check the traction cable for wear, e. g. fraying (visual check).
- Remove all foreign objects and any dirt from the product components .
- Check the charge status of the batteries of supplementary accessories, such as the hand-held radio transmitter and wind sensor, and replace if necessary.
- Over the winter, pack the retracted sun sail in its protective cover.

INFO
To ensure proper functioning and your continued enjoyment of the product, WAREMA recommends having it professionally maintained once a year.

Information on this can be obtained from your WAREMA contracting partner or at **www.warema.de/service**.

5.2 Maintenance

The maintenance tasks must only be performed by a qualified specialist. We recommend signing a service agreement.

Service is a preventative maintenance and contributes to keeping a product functional as long as possible.

It is recommended to service the product at least once a year.

WARNING
Risk of injury caused by irregular maintenance!

Operating safety may be seriously diminished, and the product may fail. People can be injured from contact with damaged parts.

- Have the product checked regularly by a qualified specialist for signs of wear and damage, e.g. to electrical lines.

CAUTION
Risk of injury from inadequate product knowledge!

Familiarity with the functions and design of the product is required to ensure that it can be worked on safely. Insufficient product knowledge can result in dangerous situations.

- Have service tasks performed by a qualified specialist.

- Check the product for visible wear and damage. If necessary, make a recommendation to the owner.
- Check the fixing of the bearing elements (e.g. consoles, guide elements) for a tight fit. If necessary, make a recommendation to the owner.
- Perform a functional check, and inspect the limit positions of the product. Adjust the limit positions if necessary (see the installation instructions and/or setting instructions).
- Check the mechanism of the height adjustment system for dirt and smooth operation.

5.3 Repair

CAUTION
Personal injury resulting from inappropriate repairs!

Familiarity with the functions and design of the product is required to ensure that it can be worked on safely. Insufficient product knowledge can result in dangerous situations.

- The product should only be repaired by a qualified specialist.

INFO
To ensure that your product continues to function properly, and to prevent the loss of its approved status, only use original spare parts.

To order, contact your WAREMA dealer.

5.4 Wear parts

Wear parts
▶ Cables

5.5 What you should know about awning fabrics

Technical fabrics may exhibit certain characteristics due to production and sizing that may appear to the operator to be "faults".

The blemishes described below have no influence on the usability and durability of the awning fabric [excerpt from the Guideline for the Evaluation of Preassembled Awning Fabrics – published by the ITRS Industrieverband Technische Textilien Rollladen - Sonnenschutz e. V.]:

Wrinkles and folding lines

Wrinkles can be produced when the fabric is assembled (cut and sewn) and when it is folded. Surface effects (shifts in pigmentation) can occur in the wrinkles. When viewed against the light, these resemble dirty marks (especially on light-coloured fabric).

Chalk lines

These are light stripes of the impregnating material on the fabric surface. They result from handling the fabric during production and assembly of the units. Although the fabric is handled with special care, these effects cannot be fully avoided in dark fabrics.

Waviness in the seams and fabric panels

As the fabric is wound onto and off of the shaft, it is tightened more at the hems, seams and panels than between the seams. The resulting tension in the fabric can lead to waviness (e. g. waffle or fishbone patterns) that "digs" into the fabric. The waves are visible when the unit is open.

Waffling

Because of the production method, waffling may form under certain weather conditions and in certain fabric sizes. This effect is more visible in unfavourable lighting conditions. The formation of waffling is accelerated and enhanced through wetness (humidity, rain). If a fabric that has been "softened" in this way is retracted, waffling and wrinkles can become particularly pronounced.

Weave flaws

Spinning of the yarns as well as warping in the weaving mill and the weaving process itself is executed under tension. The yarn may break. This will lead to knots. Irregular thread thicknesses are seen as light areas or burls in the fabric.

6 Dismantling/disposal

CAUTION
Risk of injury due to incorrect dismantling!

A lack of appropriate knowledge when dismantling the product can lead to injuries and/or damage to the adjacent parts.

- Have the units dismantled by a qualified specialist.

Dismantling of the product must be undertaken by a qualified specialist. Ask WAREMA for any missing documents before commencing maintenance.

INFO
Electrically operated products contain integrated electrical or electronic components, such as the motor, control and lines. These components must be removed and disposed of separately from the product as described below (Disposal).

WARNING
Electric shock!

When working in the immediate vicinity of potentially live parts, such as electrical lines, contact may result in an electric shock.

- De-energise the product and secure it against being switched on again.

Disposal

Should the product no longer be required, ensure that it is disposed of correctly in accordance with the relevant regulations.

Components identified in this manner should not be disposed of with the household waste.

Products marked with the symbol must be handled as follows according to legal regulations:

- The electric and electronic components removed from the electrically operated product and other electrical devices belonging to the product must be disposed of separately from unsorted household waste.
- Used batteries that are not enclosed in the used device and lamps that can be removed from the used device without destroying it are to be disposed of separately.
- Distributors of electric devices or disposal operations are required to take back the devices at no charge.
- Deletion of personal data contained in the electric device before disposal is the responsibility of the owner/operator.

7 Troubleshooting

INFO

- Problems described here without reference to a qualified specialist or certified electrician may be resolved independently.
- All other problems listed must be handled by a qualified specialist or certified electrician.

Fault: The motor is not functioning.			
	Cause	**Remedy**	**Note**
	Active wind alarm: the sun sail was retracted automatically. The sun sail remains retracted for approx. 20 minutes (safety function). If an attempt is made to extend the sun sail, the sun sail waves briefly and stops.	Wait approx. 20 minutes and try again.	
	The thermal protection switch on the motor was triggered.	Wait 10 to 15 minutes and then try again.	If the motor is operated at frequent intervals, the thermal protection switch on the motor switches it off to prevent it from overheating. The motor will be ready to operate again after it has cooled down. This is not a fault.
	No voltage is applied.	Check the power supply fuse.	Have the check carried out by a certified electrician.
	The motor is faulty.	Replace the motor.	Have the motor replaced by a specialist firm.

Fault: the motor starts briefly, stops for approx. 2 seconds and then continues.			
	Cause	**Remedy**	**Note**
	The motor is in setting mode.	Readjust the motor limit positions.	Have the adjustment carried out by a qualified specialist.

Fault: the fabric does not fully extend or retract.			
	Cause	**Remedy**	**Note**
	The motor limit positions are incorrect.	Readjust the motor limit positions.	Have the adjustment carried out by a qualified specialist.
	The pretension of the spring-loaded shaft is too low.	Increase the pre-tension.	Have the adjustment carried out by a qualified specialist.

Fault: the sun sail does not retract under windy conditions.			
	Cause	**Remedy**	**Note**
	The wind sensor is faulty.	Replace the solar weather station.	Have the motor replaced by a specialist firm.
	The wind speed limit setting is incorrect.	Set the wind speed limit value.	Observe the separate instructions.

Fault: the fabric is not wound up neatly.			
	Cause	**Remedy**	**Note**
	The side hem is folded over and wound onto the shaft.	Extend the sun sail completely. Pull out the safety winding slightly by hand if necessary.	Have the adjustment carried out by a qualified specialist.

Fault: the height adjustment carriage automatically moves up slightly.			
	Cause	**Remedy**	**Note**
	The angle of the cable is too large.	Crank the height adjustment upward.	

Fault: the height adjustment carriage moves down slightly when the sail is extended.			
	Cause	**Remedy**	**Note**
	The angle of the cable is too small.	Move the height adjustment to the desired position after the sail moves.	

Fault: the height adjustment carriage changes its position in gusts of wind.			
	Cause	**Remedy**	**Note**
	The wind pushes the fabric up or down.	Change the height adjustment to the desired position after the gust of wind, or retract the sun sail if the wind persists.	The ability of the height adjustment to adjust in the presence of gusts of wind reduces extreme forces and protects the sail against damage.

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