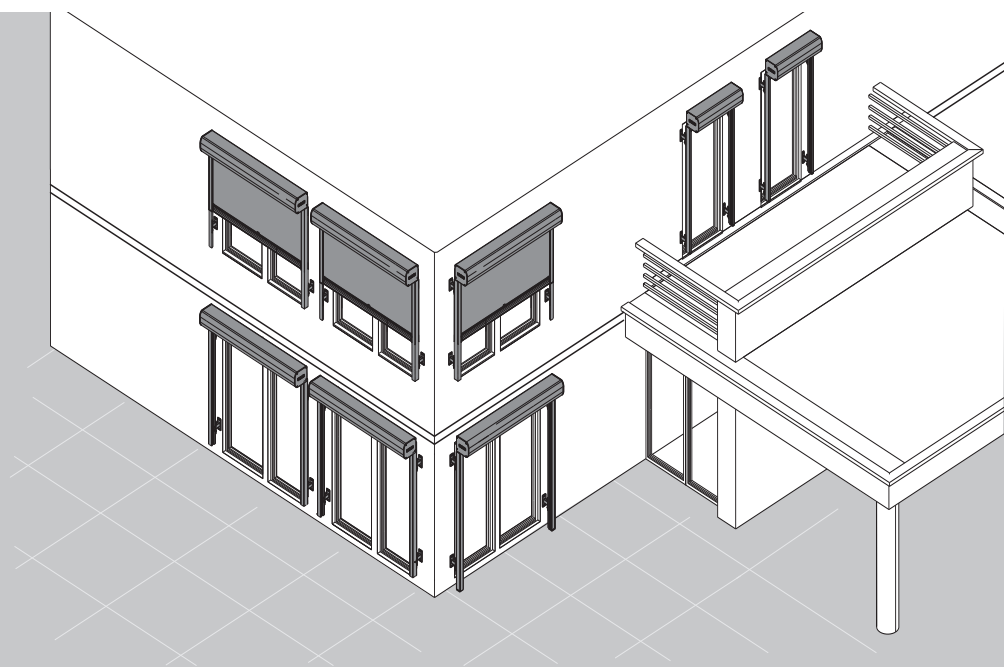


Operating instructions

Vertical awning

VENTOSOL VS5200 | VM720/3

UNIVERSAL US3910



Read the operating instructions before starting any work!

Keep for future use!

STOBAG North America Corporation
1445 Norjohn Ct Burlington
ON L7L 0E6 Canada
Tel. +1 905 564 6111
Fax +1 905 564 3512

info.northamerica@stobag.com

Information regarding the operating instructions

This manual contains important information for using vertical awnings. Read the manual in its entirety before operating the vertical awning in order to prevent potential injury or damage.

The illustrations in this manual are for the purpose of general understanding and may differ from the actual design.

Additional documents

The following documents are applicable when using optional accessories:

- Operating instructions for the remote control
- Operating instructions for the wind sensor
- Operating instructions for the rain and sun sensor

Copyright

All contents of this manual are the intellectual property of the manufacturer (STOBAG AG) and are subject to copyright protection. In case of infringement, the manufacturer reserves the right to pursue legal action.

Limitations of liability

The manufacturer assumes no liability for damages in the following cases:

- Failure to follow this manual
- Unauthorized installation and connection
- Failure to observe wind load limits
- Unintended use
- Technical changes
- Any damage caused by the use of unsuitable cleaning agents

Customer service

STOBAG North America Corporation

1445 Norjohn Ct Burlington

ON L7L OE6 Canada

Tel. +1 905 564 6111

info.northamerica@stobag.com

Contents

1 Safety	6
1.1 Intended use	6
1.2 Unintended use	6
1.3 Explanation of symbols	8
1.4 Safety instructions	9
2 Getting to know vertical awnings	12
2.1 Overview of product types	12
2.2 Component assemblies	16
2.3 Vertical awning operating modes	20
2.4 Key facts about awning fabric panels	21
3 Operating vertical awnings	22
3.1 Operation safety instructions	22
3.2 Operation	24
3.3 Optional operating modes	26
3.4 After rain or snow	27
4 Caring for vertical awnings	28
4.1 Cleaning coated components	30
4.2 Cleaning fabric components	31
4.3 Cleaning the guide rails	32
4.4 Cleaning the rope guide	32
4.5 Special types of soiling	33
4.6 Fabric coating (only acrylic fabric)	35
5 Maintaining vertical awnings	36
5.1 Maintenance schedule	37
6 Identifying and fixing malfunctions	38
7 Disassembly and disposal	40
8 Technical data	41

1 Safety

1.1 Intended use

Vertical awnings (VENTOSOL and UNIVERSAL) are used for vertical shading for elements such as windows, glass facades and pavilions, balcony railings, terraces and glass roofs. Vertical awnings are exclusively used to provide shade and sun protection.

In order to reduce the risk of an electric shock, the operator must ensure that the power supply is secured with a waterproof socket or that the power supply is permanently connected to a waterproof connection box that is compliant with 314.15 of the National Electricity Code NFPA 70.

Intended use also includes compliance with all information specified in this manual. Any use or other use that goes beyond the specified intended use is deemed as improper use.

1.2 Unintended use

Improper use of the vertical awning can lead to dangerous situations and damage.

- Do not connect, lean against, drill, glue on or attach anything to the vertical awning or make any other technical changes to it.
- Only have it connected to the power supply by a licensed electrician and secure it with its own fuse.
- Never operate the awning against obstacles.
- Never use abrasive, corrosive or aggressive cleaning agents on any components of the vertical awning.
- Never allow children to operate the vertical awning unattended.
- The remote control must be kept out of the reach of children.
- Never use during a storm.

Children

The vertical awning may be used by children aged 9 years and over and by persons with reduced physical, sensory or mental abilities or lack of experience and knowledge if they are supervised or instructed in the safe use of the vertical awning and they understand potential hazards.

Ensure the following:

- Children must not climb on or hang from the vertical awning at any time.
- The remote control must be kept out of the reach of children.

1.3 Explanation of symbols

Safety instructions

Safety instructions are indicated by symbols in this manual. The safety instructions are represented by signal words that express the extent of the hazard.

⚠ DANGER



This symbol and signal word combination indicates a dangerous situation that can lead to death or serious injury if not avoided.

⚠ WARNING



This symbol and signal word combination indicates a dangerous situation that can lead to death or serious injury if not avoided.

⚠ CAUTION



This symbol and signal word combination indicates a dangerous situation that can result in non-serious or minor injuries if not avoided.

NOTICE

This signal word indicates important but non safety-relevant information, e.g. on material and environmental damage.

Tips and recommendations



This symbol indicates useful tips and recommendations as well as information for efficient and trouble-free operation.

Safety instructions in operating instructions

Safety instructions may refer to specific individual instructions for action. Such safety instructions are embedded in the instructions for action so that they do not interrupt the flow of reading when the action is taken. The signal words described above are used.

Example:

1. **⚠ CAUTION** **Danger of getting caught in the vertical awning!**

Only retract the vertical awning when the path of motion is clear.

1.4 Safety instructions

Electrical hazards



Risk of death due to electric current!

- **Have all work or repairs on the electric system or drive systems of the vertical awning carried out exclusively by a licensed electrician.**
- **In case of damage to electrical components or lines, immediately disconnect the power supply and arrange repair by a licensed electrician.**
- **Never bypass fuses.**
- **Keep moisture away from live components.**

Improperly carried out work on the vertical awning's electrical system can lead to accidents resulting in serious injuries and even death.

Static charges

⚠ WARNING



Risk of injury due to static charges on the cover!

- Always dissipate possible charges from the fabric by short contact with a non-conductive material.

The cover can become statically charged due to movement, low humidity or still-new cover fabric. Contact with the skin can lead to static discharges and thus possibly to consequential hazards such as falling from the ladder.

Low temperatures

NOTICE

Risk of damaging the vertical awning if operated at low temperatures!

- Before each use, make sure that the vertical awning is free of ice. If necessary, remove ice.

Operation of the vertical awning at low temperatures below 37 °F (3 °C) and/or icing can lead to damage to the awning cover or the drive.

Wind load

⚠ WARNING



Risk of accident due to strong winds!

- Do not use the vertical awning at wind speeds over 26 kn (49 km/h; wind speed class 3). At higher speeds, discontinue use.
- Retract the vertical awning in good time.

Use of the vertical awning at higher wind speeds than 26 kn (49 km/h) can lead to accidents and damage.

Wind resistance:

The vertical awning meets the wind resistance requirements of class 3 when extended.

1. In case of expected strong winds (> 26 kn/49 km/h), completely retract the vertical awning.

Wind load table

The following table provides an overview of wind strengths and their properties:

Class	Wind force (according to Beaufort)	Wind speeds (kn, km/h)	Impact
0	1 – 3	up to 10 kn (up to 19 km/h)	Leaves and thin branches move.
1	4	11 kn – 15 kn (20 km/h – 28 km/h)	Twigs and thin branches move, paper is lifted from the ground.
2	5	16 kn – 20 kn (29 km/h – 38 km/h)	Branches move. Small deciduous trees sway.
3	6	21 kn – 26 kn (39 km/h – 49 km/h)	Strong branches sway and umbrellas are hard to keep upright.
4	7	27 kn – 33 kn (50 km/h – 64 km/h)	Trees sway, strong resistance when walking against the wind.



When using an optional climate control system (e.g. wind sensor), present wind speeds are measured in real time and when a limit value is reached or exceeded, vertical awnings are automatically extended or retracted through a radio signal.

2 Getting to know vertical awnings

2.1 Overview of product types

Vertical awning Ventosol VS5200

Vertical awning VS5200 is used to shade windows and facades. In the standard variant, the vertical awning can be installed in a recess or on the wall and can optionally also be installed indirectly with fastening mounts. The zipper-like Soft Retaining System (SIR) ensures stable and taut awning fabric guidance that prevents flapping and is therefore quiet. The awning can be operated electrically or manually.

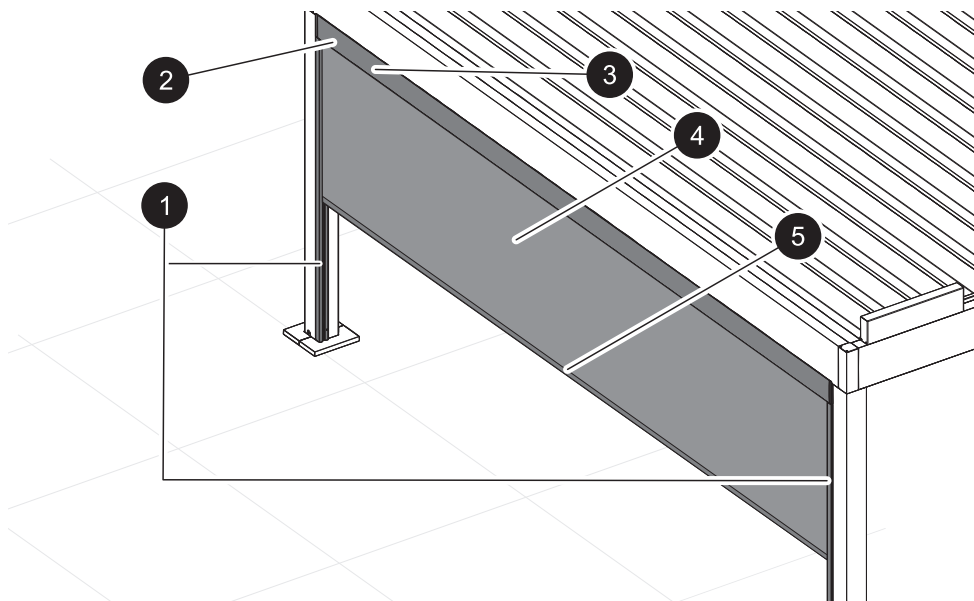


Fig. 1: Overview of vertical awning VENTOSOL VS5200

- | | |
|---------------------------------------------|-------------------|
| 1 Guide rails | 2 Fabric panel |
| 3 Drive (tubular motor in the fabric shaft) | 4 Box |
| 5 Side lid | 6 Fastening mount |

Vertical awning Ventosol VM720/3

The electrically powered vertical awning VM720/3 is used for the side and side and front shade of a pavilion or for wide window fronts up to a length of 23 ft (7 m). The vertical awning is integrated in the BAVONA and NYON pavilions and controlled by the remote control for the respective pavilion.

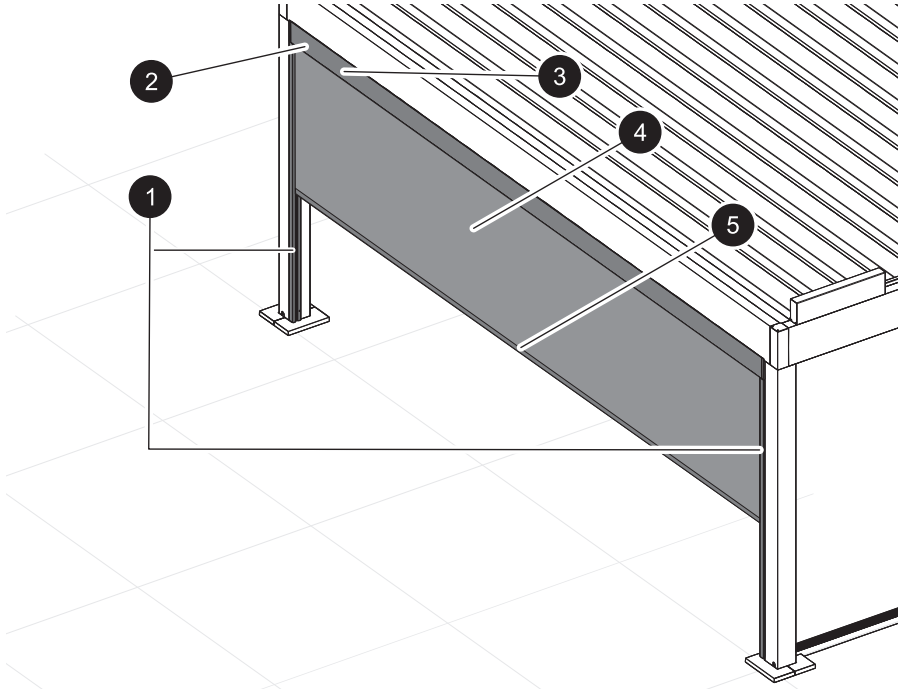


Fig. 2: Overview of vertical awning VENTOSOL VM720/3

- | | |
|--------------------|----------------|
| 1 Guide rails | 2 Box |
| 3 Drive system | 4 Fabric panel |
| 5 Drop-out profile | |

Vertical awning UNIVERSAL US3910

Vertical awning UNIVERSAL US3910 is used to shade windows and facades. The vertical awning can be mounted to the wall or ceiling. The rope guide with spring chuck brackets are designed as wall, floor or recess installations and their function is to keep the fabric panel taut as it moves. The awning can be operated electrically or manually. Up to three vertical awnings can be combined with each other and operated together.

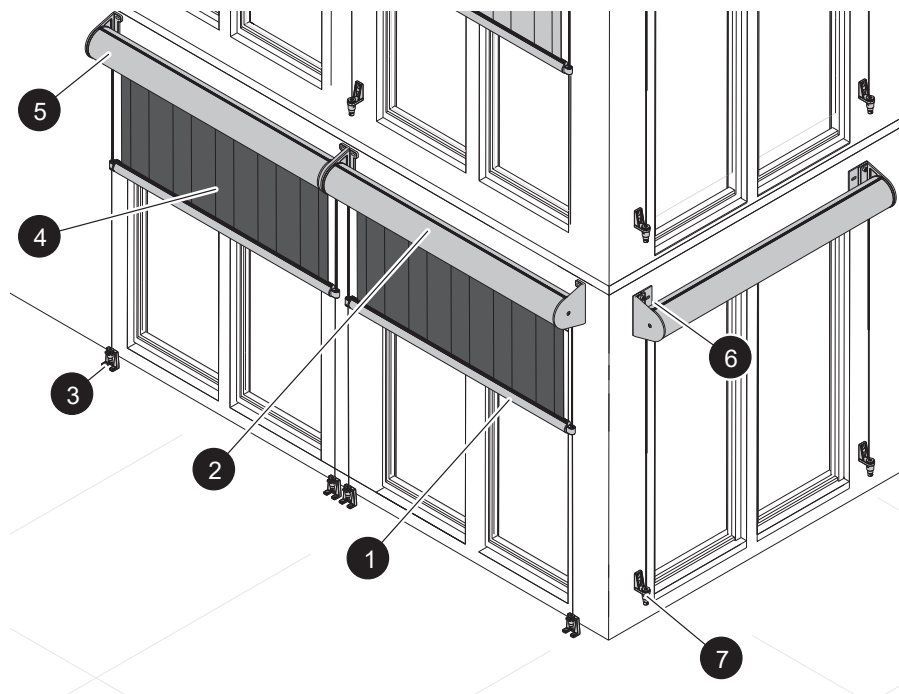
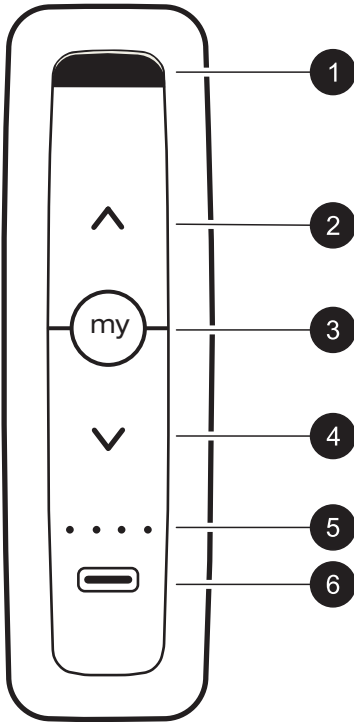


Fig. 3: Overview of vertical awning UNIVERSAL US3910

- | | |
|--------------------------------------------------------------------------|---------------------------------------|
| 1 Drop profile | 2 Box |
| 3 Rope guide bracket with spring chuck
(floor installation) | 4 Fabric panel |
| 5 Drive (tubular motor in the fabric shaft) | 6 Wall bracket with support extension |
| 7 Rope guide bracket with spring chuck
(wall and recess installation) | |

Remote control overview



- 1 Handle for hanging the remote control
- 2 UP operating button: Retract.
- 3 MY Operating button: Stops the moving fabric panel. Moves the fabric panel to the programmed position.
- 4 DOWN operating button: Extend.
- 5 Channel selection diodes
- 6 Operating button: Channel selection button.

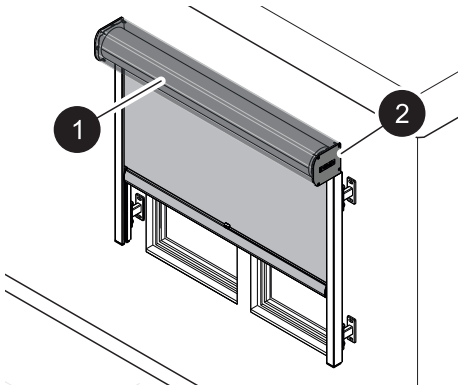
The vertical awning is controlled using the remote control. The remote control controls up to four products (e.g. multiple vertical awnings) on the facade or multiple products in up to four groups.

For more information, see: ↗ *“Remote control operating instructions”*

Fig. 4: Remote control

2.2 Component assemblies

Box

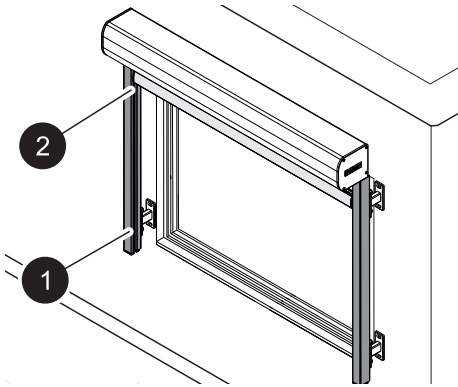


The box of the vertical awning (fig. 5/1) houses the awning fabric on the fabric shaft and the drive (electric motor). Depending on the box variant (angular or rounded), there are either side lids (fig. 5/2) on the box or a removable front cover.

- VS5200: one-piece box

Fig. 5: Box

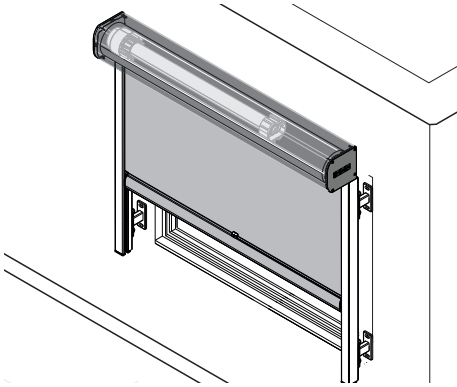
Guide rails (inner rail and outer rail)



The two-part guide rails made of powder-coated aluminum profiles (fig. 6/1) are installed in a recess, directly on the wall, or indirectly on the wall with fastening mounts. The SIR system guides the awning fabric in the inner guide rail like in a zipper (fig. 6/2). This keeps the awning fabric taut and straight.

Fig. 6: Guide rails

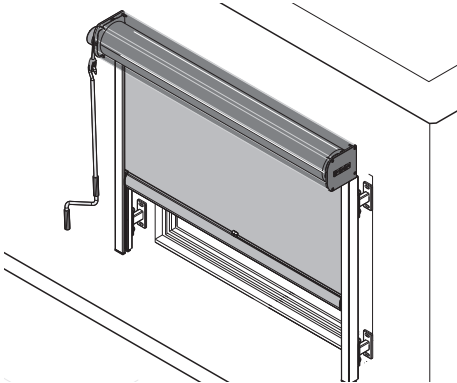
Tubular motor



The electric drive is a tubular motor and is located in the fabric shaft in the box of the vertical awning. The tubular motor drives the fabric shaft electrically. The tubular motor is controlled using the remote control. The tubular motor has an obstacle detection function that automatically stops travel if there is resistance on the travel path (up and down). The obstacle detection function protects people against injuries and the awning against damage.

Fig. 7: Drive system

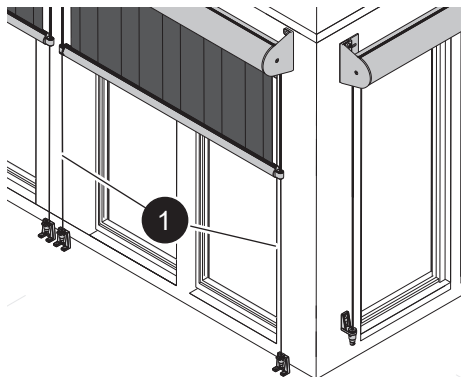
Gear and manual crank (optional)



Using a manual crank, a gear drives the fabric shaft and thereby moves the vertical awning's fabric panel. The manual crank is removable.

Fig. 8: Manual crank

Rope guide (only UNIVERSAL model)



The rope guide made of 3 mm steel rope (fig. 9/1) with threaded end pieces is fastened on both sides on the side lid at the top of the awning and the wall or floor bracket on the bottom. The spring chuck tensions the rope guide.

Fig. 9: Rope guide

Spring chuck with bracket (only UNIVERSAL model)

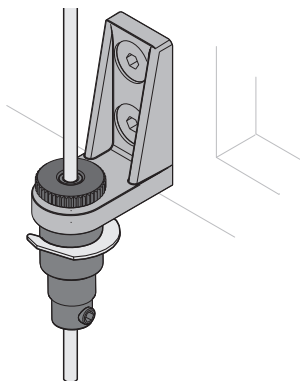


Fig. 10: Spring chuck with wall bracket

The spring chuck is a tensioning unit for the rope guide. The rope guide is connected to the floor or wall bracket via the spring chuck.

The tension of the rope guide can be adjusted using the knurled screw on the spring chuck.

Wind sensor (optional)

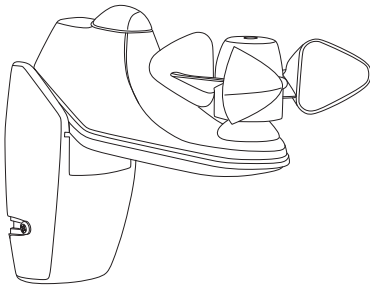


Fig. 11: Wind sensor

The wind sensor is a climate sensor with an integrated radio transmitter. The wind sensor is mounted on or in the immediate vicinity of the vertical awning and connected to the power supply. The wind sensor measures the wind speed in real time. If the measured value goes above or below a previously configured input limit value, the sensor transmits a radio signal to the receiver of the tubular motor of the vertical awning. The tubular motor then performs the corresponding action and retracts the fabric panel in case of high wind speeds.

Rain and sun sensor (optional)

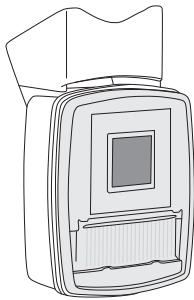


Fig. 12: Rain and sun sensor

The rain and sun sensor is a climate sensor with an integrated radio transmitter. The rain and sun sensor is mounted on or in the immediate vicinity of the vertical awning and is solar powered.

The rain and sun sensor measures precipitation and solar radiation in real time. If the measured value goes above or below a previously configured input limit value, the sensor transmits a radio signal to the receiver of the tubular motor of the vertical awning. The tubular motor then performs the corresponding action:

- Rain: Retract the vertical awning
- Sun: Extend the vertical awning

2.3 Vertical awning operating modes

Remote control

The vertical awning's fabric panel is operated using the remote control. For more information, see ↗ *“Operating vertical awnings with the remote control” on page 24.*

Manual crank

As an alternative to the remote control, the vertical awning fabric panel can also be operated manually with the manual crank. For more information, see ↗ *“Operating the vertical awning with the manual crank” on page 25.*

Automated sensor control (optional)

Automated sensor control of the awning can be controlled via configured sensor measurements (sun, wind and rain). If sensor values go above or below the pre-defined limit values, the sensor sends control commands to the drive via radio signals

2.4 Key facts about awning fabric panels

Fabrics such as the awning fabric may have certain production- or finish-related characteristics which may be perceived as defects by the user. The appearances listed below are for the information of users.

Fold and fold wrinkles

Folds and fold wrinkles are formed during the installation and the folding of the awning fabric. This can cause pigment displacement, especially with bright colors. These pigments can appear darker in the backlight and can be perceived as dirty streaks.

Rippling

Ripples in the awning cover are created in the hem, seam and web area by multiple layers and different winding thicknesses on the fabric shaft. This can cause ripple stresses (e.g. waffle-shaped or herringbone patterns).

Side panel stretching

Lengthening of the side panels can occur when rolling up the fabric panel if the seams and hems lie on top of each other, are pressed smoothly together and thus extend in length. This can cause the side seams to hang slightly.

3 Operating vertical awnings

3.1 Operation safety instructions

Wind load

WARNING



Risk of accident due to strong winds!

- Do not use the vertical awning at wind speeds over 26 kn (49 km/h). At higher speeds, discontinue use.
- Retract the fabric panel in good time.

Use of the vertical awning at higher wind speeds than 26 kn (49 km/h) can lead to accidents and damage.

Low temperatures

NOTICE

Risk of damaging the vertical awning if operated at low temperatures!

- Before each use, make sure that the vertical awning is free of ice. If necessary, remove ice.

Operation of the vertical awning at low temperatures below 37 °F (3 °C) and/or icing can lead to damage to the awning cover or the drive.

Mold growth and stains

NOTICE

Risk of mold growth and mold stains and fungi if the fabric panel is retracted in a wet or damp state!

- After rain or snow, let the fabric panel completely dry.
- They should not be rolled up for more than five days in a wet or damp state.

If a wet or damp fabric panel is retracted, mold formation and stains can occur after more than five days of the wet or damp fabric being rolled up. Over time this can result in fungal growth or moss growth.

Model variants and operating modes



Operating modes can vary depending on the vertical awning model.

The following models can be operated both electrically and manually.

- VS5200
- US3910




The following model can only be electrically controlled using the remote control for the pavilion in which it is installed or using its own remote control:

- VM720/3





3.2 Operation

Operating vertical awnings with the remote control



The operating buttons do not have a deadman switch. After pressing the respective UP (retract)  / DOWN (extend)  operating button, the fabric panel travels to the programmed end position. Alternatively, by pressing the MY  operating button, the fabric panel will automatically move to a pre-defined position or stop.

For more information on programming the MY  button, see the operating instructions for the remote control.

1. Ensure that the travel path of the fabric panel is clear.
2. Use the channel selection button  on the remote control to select the channel for the respective vertical awning.
→ *The diode of the selected channel flashes red.*
3. To extend the fabric panel of the vertical awning, press the DOWN  button.
→ *The fabric panel extends.*
4. To stop the moving fabric panel, press the MY  button.
→ *The fabric panel stops.*
5. Set any position for the fabric panel.
6. In order to retract the fabric panel of the vertical awning, press the UP  button.
→ *The fabric panel retracts.*



If the fabric panel bumps into an obstacle, the obstacle detection function stops travel. The movement can be resumed when the travel path of the fabric panel is clear.

Operating the vertical awning with the manual crank

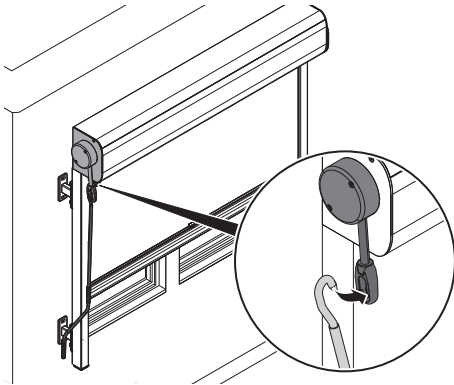


Fig. 13: Insert the manual crank

As an alternative to the electric motor, the fabric panel of the vertical awning (except type VM720/3) can be steplessly operated manually via the gear with the manual crank (fig. 13).

To operate the vertical awning fabric panel manually, proceed as follows:

1. Insert the manual crank in the crank slot (fig. 13).

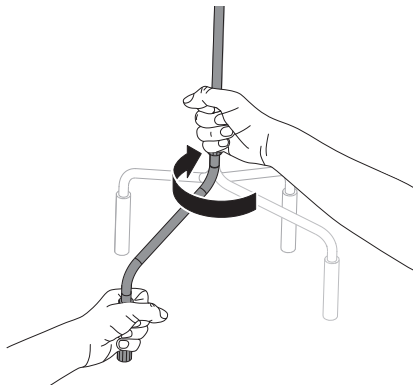


Fig. 14: Move the fabric panel

2. Turn the manual crank to the left to extend the fabric panel (open).

3. Turn the manual crank to the right to retract the fabric panel (close).

In exceptional cases, the rotational direction of the manual crank can be reversed.

3.3 Optional operating modes

Automated operation

A wide range of optional variants are available for automated activation and control via a climate control center (sun, wind, rain and temperature sensors) or building automation with one or more vertical awnings. Information on all variants is available from the manufacturer. The operation of the respective possible variant is always described in the respective operating instructions.

NOTICE

Risk of damage to the vertical awning due to unintended automatic travel of the awning fabric panel!

- **In case of a prolonged absence (holiday or weekend), completely retract the fabric panel and switch off automatic mode.**
- **Turn off automatic mode in winter and during stormy months.**

Unintended extension/retraction of the awning, for instance with frost/icing, can result in substantial property damage. Failure of automatic control is possible under extreme weather conditions (e.g. power outages, defects or very sudden storms).

3.4 After rain or snow

If the fabric panel is wet after a shower or snowfall, it must adequately dry. A wet or damp fabric panel may only be retracted for up to five days before it must be extended for drying.

NOTICE

Risk of mold growth and mold stains and fungi if the fabric panel is retracted in a wet or damp state!

- **After rain or snow, completely extend the fabric panel for drying.**
- **They should not be rolled up for more than five days in a wet or damp state.**

If a wet or damp fabric panel is retracted, mold formation and stains can occur after more than five days of the wet or damp fabric being rolled up. Over time this can result in fungal growth or moss growth.

4 Caring for vertical awnings

Proper, regular maintenance of the vertical awning as well as the use of original spare parts are essential for trouble-free operation and a long service life. The manufacturer recommends annual cleaning.

Unwanted automatic movement of the vertical awning

WARNING



Risk of injury due to unintentional automatic operation!

- Before all work on the vertical awning, always switch off the power using the fuse.
- Secure the fuse box against unauthorized insertion of fuses.

An optionally installed climate system (e.g. wind or rain and sun sensor) can cause the awning fabric panel to move automatically, which can lead to accidents resulting in serious injuries.

Falling

WARNING



Risk of accident due to elevated work!

- Before working on ladders and/or platforms, make sure that the ground is suitable, level, firm and stable.
- Never use chairs or tables as climbing aids.
- When working on ladders, always have them secured by another person.
- Ensure that ladders or platforms are completely intact and are of sufficiently elevated.
- Do not lean far out from an elevated position (ladder), turn on the ladder or climb onto facade elements or window sills.
- Wear non-slip shoes.

Careless work on ladders or platforms can result in falls leading to severe injuries.

Static charges

⚠ WARNING



Risk of injury due to static charges on the awning cover!

- Always dissipate possible charges from the awning fabric by short contact with a non-conductive material.

The fabric panel can become statically charged due to movement, low humidity or still-new cover fabric. Contact with the skin can lead to static discharges and thus possibly to consequential hazards such as falling from the ladder.

Improper cleaning

NOTICE

Property damage due to improper cleaning!

- Do not use a high-pressure cleaner for cleaning.
- Do not use abrasive detergents or abrasive sponges.
- Do not use corrosive or flammable cleaning agents.
- Do not use solvents such as alcohol or gasoline.
- Never hold onto the drop-out profile or the fabric panel while cleaning.

Improper cleaning can cause considerable damage to the vertical awning.

Mold growth and stains

NOTICE

Risk of mold growth and mold stains and fungi if the fabric panel is retracted in a wet or damp state!

- Allow the fabric panel to dry completely after wet cleaning.

If a wet or damp fabric panel is retracted, mold formation and stains can occur after more than five days of the wet or damp fabric being rolled up. Over time this can result in fungal growth or moss growth.

Environmental protection

NOTICE

For the sake of the environment, use only water-soluble and environmentally friendly detergents. Always observe the manufacturer's specifications.

4.1 Cleaning coated components

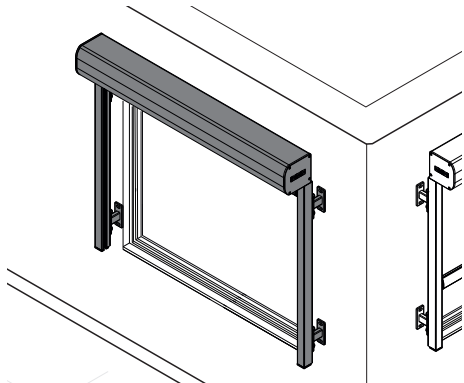


Fig. 15: Clean coated components

In order to remove general soiling from all coated components, proceed as follows:

1. Retract the fabric panel so that the drop panel is still visible ↪ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion (type VM 720/3) and thereby cut the power to the vertical awning. Secure the fuse against unauthorized switching on.
3. Sweep or blow off loose dirt.
4. Moisten the box and guide rails with clean water from a garden hose.
5. Clean or soak surfaces with warm water and mild, non-abrasive, environmentally friendly surface cleaner and a soft cloth.
6. If necessary, wash off dissolved soiling with clean water and rinse off cleaning agent completely.

4.2 Cleaning fabric components

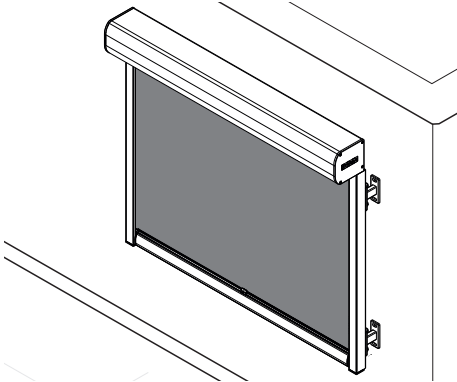


Fig. 16: Cleaning fabric components

In order to remove general soiling of the fabric panel, proceed as follows:

1. Put the awning fabric panel all the way down
↳ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion and thereby cut the power to the vertical awning. Secure the fuse against unauthorized switching on.
3. Carefully sweep or blow off loose, clinging dirt.
4. Erase any small stains with a colorless eraser.
5. Use a garden hose to moisten the awning fabric panel with clean water.
6. Carefully clean any soiling with mild soapy water using a soft brush or sponge.
7. If necessary, let the soapy water soak in a bit.
8. Wash off dissolved dirt with clean water and rinse off cleaning agent completely.
9. If necessary, repeat the cleaning process.
10. Let the awning fabric completely dry before retracting.

4.3 Cleaning the guide rails

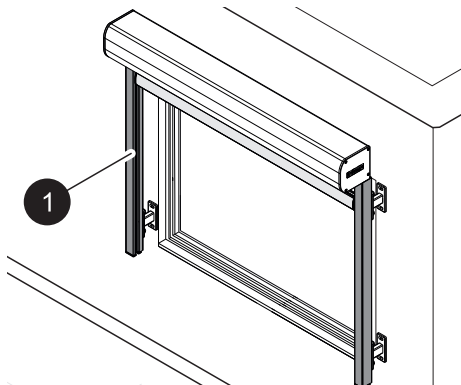


Fig. 17: Cleaning the guide rails

To clean the guide rails of the vertical awning, proceed as follows:

1. Completely retract the fabric panel ↪ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion (VM720/3) and thereby cut the power to the vertical awning. Secure the fuse against unauthorized switching on.
3. Remove loose leaves, twigs and similar.
4. Brush out or vacuum the guide rails (fig. 17/1).
5. Clean them with a moist sponge or soft brush.

4.4 Cleaning the rope guide

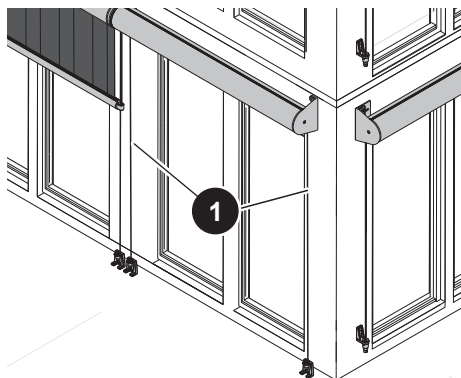


Fig. 18: Cleaning rope guides

To clean the rope guides of the vertical awning, proceed as follows:

1. Completely retract the fabric panel ↪ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning and thereby cut the power to the vertical awning. Secure the fuse against unauthorized switching on.
3. Remove loose leaves, twigs and similar
4. Brush off rope guides (fig. 18/1).
5. Clean the rope guides with a moist sponge or soft brush.

4.5 Special types of soiling

The following are types of soiling that require special cleaning instructions.

Pollen

NOTICE

Never remove pollen by rubbing. This can lead to stains and/or discoloration.

1. Blow off, sweep or wipe pollen from all coated components.
2. Put the awning fabric panel all the way down ↘ “3.2 Operation” on page 24.
3. Switch off the fuse of the vertical awning or pavilion and thereby cut the power to the vertical awning or pavilion. Secure the fuse against unauthorized switching on.
4. Carefully tap off or vacuum the pollen from all parts of the fabric with a vacuum cleaner with a upholstery brush attachment, or carefully lift it with adhesive tape.

Bird droppings (fresh)

NOTICE

Bird droppings in conjunction with UV radiation cause burns, damage coated surfaces and discolor fabric parts.

1. Put the awning fabric panel all the way down ↘ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion and thereby cut the power to the vertical awning or pavilion. Secure the fuse against unauthorized switching on.
3. Immediately pick up fresh bird droppings with a damp cloth.
4. Clean residues as usual ↘ “4 Caring for vertical awnings” on page 28.

Bird droppings (dried)

Dried bird droppings are difficult to remove. In order not to damage the vertical awning and its surfaces, proceed as follows:

1. Put the awning fabric panel all the way down ↪ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion and thereby cut the power to the vertical awning or pavilion. Secure the fuse against unauthorized switching on.
3. Carefully scrape off dried droppings.
4. Soften up and dissolve droppings with soapy water.
5. Pick up dissolved bird droppings with a soft cloth and wipe dry.
6. Clean residues as usual ↪ “4 Caring for vertical awnings” on page 28.

Mold and mold stains

NOTICE

Mold and mold stains can spread and lead to moss and fungal growth.

1. Put the awning fabric panel all the way down ↪ “3.2 Operation” on page 24.
2. Switch off the fuse of the vertical awning or pavilion and thereby cut the power to the vertical awning or pavilion. Secure the fuse against unauthorized switching on.
3. Wear protective gloves and goggles, if appropriate.
4. Prepare a cleaning mixture of vinegar and warm water with a 2: 1 ratio and put it in an ordinary spray bottle.
5. Spray the vinegar mixture onto the affected areas.
6. Let it soak in briefly and then rub it in with a cleaning rag.
7. Wipe down wet with a second cleaning rag.
8. Repeat the procedure multiple times as necessary.

Tree resin

NOTICE

Risk of damage due to removal of tree resin!

- **Proceed very carefully with all cleaning agents.**
- **Use only solvent-free cleaning agents.**
- **Test the cleaning agent in an inconspicuous place beforehand.**
- **Always observe and follow the manufacturer's specifications.**

Tree resin is not water soluble and requires sharp, alkaline cleaning agents that cause permanent damage to fabrics or coated surfaces.

4.6 Fabric coating (only acrylic fabric)

Acrylic fabric panels have a protective coating. This makes cleaning the fabric easier because the protective layer keeps soiling from penetrating. The coating can lose its protective effect after five to ten years, however.

The acrylic fabric panel can be coated after this period. Due to the variety of coating products and materials, the manufacturer does not recommend a particular product. In choosing a product, it is important to ensure that it is compatible with the particular fabric.

You can either handle it yourself or contact the manufacturer for referral to a retailer for fabric replacement.

Environmental protection

NOTICE

For the sake of the environment, use only water-soluble and environmentally coating products. Always observe the manufacturer's specifications.

5 Maintaining vertical awnings

Safety instructions for maintenance

WARNING



Risk of injury due to improperly carried out maintenance work!

- Before all work, shut down the vertical awning and disconnect it from the power supply.
- When working on ladders, always have them secured by another person.
- Do not lean far out from an elevated position (ladder), turn on the ladder or climb onto facade elements or window sills.
- Wear non-slip shoes.
- After completing maintenance work, remove all tools and aids.

Careless work on ladders or platforms can result in falls leading to severe injuries.

NOTICE

Risk of damage due to non-compliance with maintenance intervals!

- Perform cleaning and testing according to interval.
- Have all repair work carried out exclusively by a specialist company.

Failure to maintain maintenance intervals can lead to increased wear and thus damage.

5.1 Maintenance schedule

Interval	Work
After inclement weather events like storms, extremely strong winds, heavy snowfall or hail	Check the entire awning for damage such tears, breakage or similar and service as necessary.
every 3 months	Check the fabric panel for tears at the edges and other types of damage and repair as necessary.
	Check the seams of the fabric panel for thread breakage, unraveling, tears and fraying and repair as necessary.
every 6 months	Check that the protective covers on the screws are present.
annually	Cleaning ↪ <i>“4 Caring for vertical awnings” on page 28.</i>
	Check the screws and tighten as necessary.
	Check the battery of the remote control ↪ <i>“Remote control operating instructions.”</i>

6 Identifying and fixing malfunctions

Error Description	Cause	Cause/solution
The fabric panel doesn't move	Battery in the remote control empty	Replace battery ↳ "Remote control operating instructions."
	Wrong channel selected on remote control	Select the corresponding channel with channel selection button.
	Power supply disrupted	Have malfunction rectified by licensed electrician.
	Drive defective	Have drive replaced by personnel authorized by the manufacturer.
	Guide rails or rope guide of the fabric panel soiled	Clean the guide rails ↳ "4.3 Cleaning the guide rails" on page 32.
Fabric panel sputters when moving	Guide rails or rope guide soiled	Cleaning the guide rails ↳ "4.3 Cleaning the guide rails" on page 32.
	SIR (Soft Retaining System) damaged	Have repair carried out by manufacturer-authorized personnel.
	Fabric panel twisted	Have repair carried out by manufacturer-authorized personnel.
Loud drive noises	Gear soiled or motor defective.	Have repair carried out by manufacturer-authorized personnel.
End positions are not reached	Fabric panel twisted	Have repair carried out by manufacturer-authorized personnel.
	Guide rails of the awning fabric panel soiled	Cleaning the guide rails ↳ "4.3 Cleaning the guide rails" on page 32.
Fabric panel stops during travel to end position	Guide rails soiled	Cleaning the guide rails ↳ "4.3 Cleaning the guide rails" on page 32.
	Excessive wind triggered the obstacle detection function and stopped movement.	Wait until the wind subsides.
	Obstacle during extension/retraction	Remove obstacle.

Error Description	Cause	Cause/solution
Motor not running	Defective motor	If appropriate, use the manual crank until the malfunction is resolved.
		Replace motor by authorized personnel of the manufacturer.
	Thermal protection triggered	Wait 20 minutes, until thermal protection is inactive.

7 Disassembly and disposal

Improper disassembly

⚠ WARNING



Risk of injury due to improper disassembly!

- Disassembly work may only be carried out by personnel authorized and commissioned by the manufacturer.

Improper disassembly increases the risk of injury due to high, bulky and heavy components.

Disposal

NOTICE

Danger to the environment due to improper disposal!

- Collect plastics, metals, cables, batteries, awning fabrics, glass as well as electrical and electronic components separately.
- Collect plastics, metals, cables, batteries, awning materials, glass and electrical and electronic components and recycle them in accordance with local regulations.
- In case of doubt, obtain information from the local authorities or special disposal companies.

Batteries

NOTICE

Environmental hazard due to improper disposal of batteries!

- Dispose of batteries only in accordance with national regulations.

In case of doubt, obtain information from the local authorities or special disposal companies.

8 Technical data

Data for electric drive VENTOSOL VS5200, VM720/3 and UNIVERSAL US3910

Display	Value
Voltage	120 V/60 Hz
Current consumption	max. 2.1 A
Power consumption	max. 252 W
Protection class	IP 44
Continuous operation, motor	4 Min.

Data for remote control

Display	Value
Protection type	IP44
Battery	3 V (type CR 2430)
Channels	5
Frequency	433.42 MHz

Dimensions

Vertical awning	Width, min./max.	Length, min./max.	Fabric area, max.
VENTOSOL			
VS5200	33/197" (840/5000 mm)	20/197" (500/5000 mm)	86 ft ² (8 m ²)
VM720/3	34/276" (850/7000 mm)	20/118" (500/3000 mm)	–
UNIVERSAL			
US3910	16/178" (400/4500 mm)	16/1158" (400/4000 mm)	–

