Window awnings

Sun shading – individually designed.
Window awnings
Sun shading –
individually designed.

As a manufacturer of sun shading systems, WAREMA produces pioneering solutions that are technically superior and also designed to meet the individual needs of your property, thereby improving the energy balance of your building, the value of your property and enhancing your own quality of life.

This brochure provides an initial overview, allowing you to find your way around the wide and varied choice of window awnings and their individual fields of application.
The right products
for your dream house
First-class quality management and excellent innovative strength have made WAREMA the market leader in the sun shading sector and its products stand out thanks to their exceptional durability, enjoying very high regard in the industry.

WAREMA offers builders a range of different options for both internal and external sun shading systems - both existing products as well as customised solutions. WAREMA can guarantee a complete professional service, as well as advice and information about its products that take into account current energy saving directives and recent developments in standards for the building sector.

Of course WAREMA has a responsibility not only to its customers, but also to the environment. That is why we check all materials for quality as well as recyclability.
Sun shading from A to Z.

External venetian blinds
- Facade external venetian blinds
- Metal system venetian blinds
- Window system venetian blinds
- Front-mounted external venetian blinds
- Top-mounted external venetian blinds for new buildings
- Asymmetrical external venetian blinds
- FIX slat system
- Wind-stable external venetian blinds
- Light control venetian blinds

Roller shutters
- Front-mounted roller shutters
- Top-mounted roller shutters
- Top-mounted roller shutters for new buildings
- Renovation roller shutters
- Asymmetrical roller shutters
- Security roller shutters

Patio awnings
- Folding arm awnings
- Cassette awnings
- Conservatory awnings
- Side screens
- Dutch awnings

Patio roofs

Sun sails
Unattractive and boring purpose-built buildings are a thing of the past – floor to ceiling glazed facades and special shapes have become a matter of course in modern architecture. The desire for individual style within our own four walls is constantly growing. This new diversity also demands a similar diversity of sun shading systems. WAREMA offers a perfect, individual solution for every architectural style – for inside and outside.

**Internal sun shading**

Venetian blinds · Vertical louvre blinds · Roller blinds
Pleated blinds · Panel curtains · Sun shading for roof windows

**Insect screens**

Fixed frames · Swivel frames
Sliding frames · Roller blinds
Light well covers

**Blackout blinds**

Vertical blackout blinds
Horizontal blackout blinds
ZIP blackout blinds

**Window awnings**

Window awnings with ZIP guiding · Vertical awnings
Facade awnings · Drop arm awnings · Markisolettes

**Control systems**

Radio remote controls · Wisotronic dialog · Quatronic dialog
Sensors · WAREMA climatronic® · LonWorks® technology
KNX technology
The OPTI SYSTEM

External sun shading
External WAREMA sun shading reduces the incidence of light and optimises the use of solar energy. The principle is simple: Depending on time of day or year more or less sunlight is allowed in and the system uses more or less of the possible solar energy gain.

Internal sun shading
The internal WAREMA product provides additional anti-glare protection all year round, reduces cold loss through the glazing and therefore provides comfort and high convenience. Visual privacy or vision to the outside can be individually adjusted. High-quality material and a varied colour palette give any room an individual style.

Intelligent control
WAREMA control system create best possible room climate and ensure demand-oriented solar energy gain. This is ensured by optimised incidence of light, adjusted to the current weather situation. And all this around the clock.
Best possible sun shading systems and distinct energy savings are an interesting aspect for any current home owner. The WAREMA OPTI SYSTEM offers the ideal room climate – comfortable cool in summer and cosy warm in winter. Fully automatic with maximum comfort. With existing thermal insulation glazing the combination of external adjustable sun shading, internal anti-glare protection and an intelligent control saves up to 40 percent energy costs.

Further information can be found under www.warema.de/optisystem

Summer daytime
On a hot summer day the sun has to be mostly shut out in order for the building to remain comfortably cool. The external sun shading reduces the incidence of light and allows glare-free working.

Summer night time
At the end of a hot summer day the building will have heated up. At night the control raises all existing sun shading components. This supports the building cooling down.

Winter daytime
On a cold winter day only the internal anti-glare protection is used. Due to the low sun the requirement on this are particularly high. Dark, absorbent colours ensure that a large quantity of solar energy can be used.

Winter night time
During the cold winter night the building has to be protected from heat loss. This requires all sun shading products to be lowered. The resulting air pockets between the individual components improve heat insulation.
Improve your energy efficiency with WAREMA sun shading systems.

**New Energy Saving Ordinance EnEV 2009**

The Energy Saving Ordinance (EnEV 2007) has been in force since 1 January 2007, and makes Energy Performance Certificates compulsory for new buildings and existing buildings. This Ordinance therefore necessitates disclosure of the permitted annual energy requirement for heating, hot water, ventilation and cooling of all properties.

The stricter 2009 Energy Saving Ordinance came into force on 1 October 2009, further reducing the upper limit of permitted energy consumption by 30% and increasing heat protection requirements by 15% compared with EnEV 2007.

It is imperative that cooling and heating loads, as well as the energy consumed for artificial light, are significantly reduced to comply with the new Energy Saving Ordinance - many of the requirements of EnEV 2009 can be met by systematically shading your property with WAREMA sun shading products. More detailed information is available on the following pages.
Around 40% of the energy requirement of a European home is used for lighting, heating, cooling and ventilation – half of it for heating alone! According to a recent study by the European Solar Shading Organisation (ES- SO), around 110 million tonnes of CO\textsubscript{2} could be saved in Central Europe alone with the efficient use of sun shading systems – a key issue in terms of the 2009 Energy Saving Ordinance (EnEV 2009) and its consequences for builders and home owners.

The increasing size of glazed and window facades provides greater surfaces for the sun to enter buildings - meaning that rooms heat up faster in summer and heat energy increasingly radiate outwards in winter. You can use WAREMA sun shading systems to reduce the outward radiation of heat, prevent your rooms from heating up and make the most of daylight, making artificial lighting unnecessary during the day.
Installation situations

There are a number of different installation situations for WAREMA window awnings depending on the wall structure. As not all awnings in the range are suitable for every installation situation, the following pages provide an overview of the various options for the different types of wall structures and the particular features of the WAREMA product range.

**Composite thermal insulation system**

*Available products:*
- Facade awnings
- Markisolettes
- Vertical awnings
- Window awnings with ZIP guiding
- Drop arm awnings

**Ventilated facade**

*Available products:*
- Facade awnings
- Markisolettes
- Vertical awnings
- Window awnings with ZIP guiding
- Drop arm awnings
Cavity wall with brick facing

Available products:
- Facade awnings
- Markisolettes
- Vertical awnings
- Window awnings with ZIP guiding
- Drop arm awnings
Installation situations

**Monolithic masonry wall**

**Available products:**
- Facade awnings
- Markisolettes
- Vertical awnings
- Window awnings with ZIP guiding
- Drop arm awnings

**Timber construction**

**Available products:**
- Facade awnings
- Markisolettes
- Vertical awnings
- Window awnings with ZIP guiding
- Drop arm awnings
Mullion/transom facade
Available products:
- Facade awnings
- Markisolettes
- Window awnings with ZIP guiding
Fields of application

With clever technology and unobtrusive design of WAREMA window awnings create comfortable shade and a pleasant indoor climate. The following pages give an overview of which awnings are suitable for which fields of application – according to our high quality standard: accurately fitted solutions for individual customer demands.

**Large areas**

**Available products:**
- Facade awnings
- Markisolettes
- Window awnings with ZIP guiding

**Sloped surfaces**

**Available products:**
- Facade awnings
Invisible integration into the facade (shaft installation)

Available products:
- Facade awnings
- Markisolettes
- Vertical awning
- Drop arm awnings

For small spaces

Available products:
- Vertical awnings
- Drop arm awnings
Fields of application

Anti-glare protection with vision to the outside
Available products:
- Drop arm awnings
- Markisolettes

Sun shading, visual privacy and anti-glare protection
Available products:
- Window awnings with ZIP guiding
- Facade awnings
- Vertical awnings
Wind-exposed locations

Available products:
■ Window awnings with ZIP guiding
Window awnings with ZIP guiding
the large wind-stable pro.

WAREMA window awnings with ZIP guiding shade large glazed surfaces and are highly wind-stable as well. The guiding directly in the guide rail prevents light entering from the side. Another benefit: The particularly slender and narrow guide rail allows best possible integration of the sun shading system into the building facade – whether mounted directly or self-supporting.

Product benefits
- high wind stability up to a maximum wind speed of 25 m/s through side seam guiding over the entire length of the awning
- provides additional insect protection when mounted directly in the soffit
- no light entering between guide rail and curtain
- slender design with small dimensions for cover panels and rails

Features
- Construction limit values (depending on type):
  max. width: 4000 mm
  max. length: 4500 mm
- Guiding: laterally using ZIP guiding with guide rail
- Operation: motor, radio motor

Installation situations
- suitable for vertical glazing, windows in punched facades
- for large facades
- use in commercial and domestic buildings
- for new buildings, retrofitting and refurbishment
- with spacing to the facade or window frame, alternatively with direct mounting
- on the facade
- in the soffit

All information "Everything at a glance" page 46
Window awning with ZIP guiding F-FM

- Cover panel
- Fabric shaft
- Fabric
- Lateral guiding
- Guide rail brackets
- Drop profile
WAREMA vertical awnings offer a complete package for all vertical glass surfaces: unobtrusive, practical and individual. Particularly small cover panel dimensions and possible shaft installation turn it into an inconspicuous sun shading system. Cover panels in different shapes protect the awning fabric reliably from dirt and rain, even with facade installation. The slender cable or rail guidings allow visual integration into the building facade – for all types.

**Product benefits**
- Unobtrusive integration into the facade through especially small cover panel dimensions and possible shaft installation
- The closed cover panel protects the awning fabric reliably from dirt and rain, even with facade installation

**Features**
- Construction limit values (depending on type):
  - Max. width: 2800 mm
  - Max. length: 3000 mm
- Guiding: laterally using guide rails, tension cable
- Operation: motor, radio motor, crank

All information “Everything at a glance” page 46

**Installation situations**
- Suitable for vertical glazing and windows in punched facades
- Use in commercial and domestic buildings
- For new buildings, retrofitting and refurbishment
- With spacing to the facade or window frame, alternatively with direct mounting
- On the facade
- In the soffit
- In a shaft
Vertical awning 490

1. Cover panel
2. Fabric shaft
3. Fabric
4. Lateral guiding
5. Drop profile
WAREMA drop arm awnings offer twice the enjoyment: pleasant shade and vision to the outside. Whether with attractive cover panels for enhancing the facade or without cover panels for unobtrusive integration into the facade – drop arm awnings offer individual design freedom. Installation can optionally be carried out without boreholes: using clamping posts in the balcony area, giving the building a slightly southern flair.

Product benefits
- vision to the outside with simultaneous sun shading using the projection effect
- can also be used without fixing to the building, using clamping posts (balcony)

Features
- Construction limit values (depending on type):
  - max. width: 4000 mm
  - max. projection: 1600 mm
- Guiding: laterally using drop arm with gas pressure spring or torsion spring
- Projection angle: 90-135°
- Operation: motor, radio motor, crank
- Options: optionally available with valance

Installation situations
- suitable for vertical glazing and windows in punched facades
- use in commercial and domestic buildings
- for new buildings, retrofitting and refurbishment
- on the balcony using clamping posts
- on the facade
- in the soffit
- in a shaft

All information "Everything at a glance" page 46
Drop arm awning 350

1. Cover panel
2. Fabric shaft
3. Fabric
4. Drop arm
5. Drop profile
Through professional adaptation to the building facade WAREMA facade awnings offer efficient and flexible sun shading for large, vertical and slopes surfaces – even across several stories. Many versions of cover panels and guidings can be combined as you like – also in combination with markisolettes.

### Product benefits
- for vertical, sloped and especially large areas
- combination with markisolettes possible
- large selection of cover panels and lateral guidings

### Features
- Construction limit values (depending on type):
  - max. width: 4000 mm
  - max. length: 5000 mm
- Guiding: laterally using guide rails, tension cable, guide rod
- Operation: motor, radio motor, crank

All information "Everything at a glance" page 46

### Installation situations
- suitable for large facades, also across several stories
- use in commercial and domestic buildings
- for new buildings, retrofitting and refurbishment
- with spacing to the facade or window frame
- on the facade
- in the soffit
- in a shaft
Facade awning 209

1. Cover panel
2. Fabric shaft
3. Fabric
4. Lateral guiding
5. Drop profile
WAREMA markisolettes are an attractive 2-in-1 concept for designing vertical facades: Highly efficient sun shading and good vision to the outside provide an interplay of light and shade. The upper section of the markisolette runs parallel to the window or the facade, the lower section can be projected variably. A harmonious combination with facade awnings is alternatively possible as well.

**Product benefits**
- vision to the outside with simultaneous sun shading through projection of the lower fabric section
- division between vertical and projected areas flexibly adjustable
- combination with certain facade awnings possible
- large selection of cover panels and lateral guidings

**Features**
- Construction limit values (depending on type):
  - max. width: 4000 mm
  - max. length: 3500 mm
- Guiding: laterally using guide rails, guide rod
- Operation: motor, radio motor, crank

All information "Everything at a glance" page 46

**Installation situations**
- suitable for vertical glazing and windows in punched facades
- use in commercial and domestic buildings
- for new buildings, retrofitting and refurbishment
- with spacing to the facade or window frame, alternatively with direct mounting
- on the facade
- in the soffit
- in a shaft
Markisolette 109

1. Cover panel
2. Fabric shaft
3. Fabric
4. Lateral guiding
5. Projection unit
6. Drop profile
7. Guide tube
The WAREMA colour ranges allow varied design options for the awnings – to suit individual tastes. The large selection of fabrics and colours can make any wish come true and will give any awning a truly unique touch.

The Exclusive Collection with a new design experience which harmonises with any surroundings – Metropolitan style for the city, Country style for the countryside and Ocean style for the seaside.
WAREMA awning fabrics unite first-class design and function down to the smallest detail. WAREMA awning fabrics are characterised by perfect protection against the sun, reliable repelling of dirt and water and impressive qualities.

**Acrylic fabrics**
- All acrylic fabrics are made of 100% branded acrylic fabric, they are tear-resistant, water-repellent, light-fast and weather-resistant as well as impregnated and dirt-repellent
- Acrylic Standard/Exclusive is available in many colours
- Acrylic All Weather is virtually fully water-repellent
- Acrylic Reflect with a metallic shimmer surface provides low transmission, high reflection and it is UV- and weather-proof
- Acrylic Perfora achieves high vision to the outside through evenly spaced fabric perforation

**Soltis 92**
- Carrier fabric made of highly tear-resistant polyester with PVC coating
- UV-resistant and dirt-resistant through surface treatment with acrylic varnish
- High tensile strength in chain and weft as well as high diagonal stability through coating and pre-tensioning
- Flame-resistant according to DIN 4102 B1

**Screen**
- Screen fabric made of PVC-coated glass fibre
- Heavy quality and reinforced edges using a thermoplastic process
- Fabric flame-resistant or self-extinguishing according to DIN 4102 B1

**Sunsilk FR**
- Polyester fabric with smooth weave structure on the outside
- Water-proof fabric through additional polyurethane coating on the inside
- Flame-resistant according to DIN 4102 B1

**Large-scale printing**
- Sunprint collection for outdoor advertising, sponsoring, private use
- Large-scale images as digital printing over the entire awning or a specific section
- Printing on white acrylic fabric with special surface treatment guarantees a photorealistic print result

**Treatment/connecting seams**
- Nano-based impregnation perfectly protects the fabrics from dirt
- All WAREMA fabrics are tested according to the "Öko-Tex Standard 100"
- Connecting seams and hems made with the particularly durable PFFE (Teflon) sewing thread TENARA®
- Connecting seams Soltis 92/Screen – seams and hems permanently bonded
Colours

The colours of the extensive WAREMA colour range provide a selection of frame colours which is harmoniously adapted to the selected fabric and the individual living style.

- durability through excellent coating quality
- surface coating with chrome-free pre-treatment corresponds to the directive GSB AL 631
- colour selection within the RAL Classic colour chart according to WAREMA colour specification
- eight WAREMA structural colours feature a finely structured finish with a metallic appearance
- the fine surface structure lets water containing dirt particles roll off very easily

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<tr>
<th>Traffic white</th>
<th>Pearl light grey</th>
<th>Brown beige</th>
<th>Terra red</th>
<th>Sapphire blue</th>
<th>Light yellow</th>
<th>MS Steel blue*</th>
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<th>Purple violet</th>
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<th>Moss green</th>
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<th>Pearl gentian blue</th>
<th>Olive yellow</th>
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*MS = metallic structural colour

Colour variations are a result of the printing process.
Cover panels provide best possible protection of the retracted awning fabric. The large number of different shapes, materials and colours makes cover panels a design feature on the building facade.

**for facade awnings and markisolettes**
- large selection of aluminium and acrylic glass cover panels in different sizes
- closed, half-round, round or open towards the bottom

**for vertical awnings**
- aluminium cover panels in different sizes
- rectangular, round or closed on 4 or 3 sides

**for window awnings with ZIP guiding**
- aluminium cover panels
- rectangular or half-round

**for drop arm awnings**
- aluminium and acrylic glass cover panels
- closed cassette or half-round
Guide rods
- stainless steel guiding for visually enhancing any facade
- rod brackets in single or double version for facade awnings and markisolettes

Cable guiding
- for secure and especially slender guiding of the awnings
- different tension cable brackets available even for sophisticated installation situations
- spring tension device for best possible tension of the corrosion-resistant stranded steel wires
Lateral guiding

Guide rails for facade awnings and markisolettes
- c-shaped profile and round profile in different sizes
- fixed with guide rail brackets

Guide rails for facade awnings and markisolettes
- c-shaped profile and round profile in different sizes
- fixed with guide rail brackets

Guide rails for facade awnings and markisolettes
- c-shaped profile and round profile in different sizes
- fixed with guide rail brackets

Guide rails for vertical awnings
- c-shaped profile in different versions
- fixed from the front, with or without guide rail brackets

Guide rails for vertical awnings
- c-shaped profile in different versions
- fixed from the front, with or without guide rail brackets

Guide rails for window awnings with ZIP guiding
- c-shaped profile
- ZIP guiding in two-piece rail
- fixed with spacing or in the soffit

Guide rails for window awnings with ZIP guiding
- c-shaped profile
- ZIP guiding in two-piece rail
- fixed with spacing or in the soffit

Projection unit for markisolettes
- aluminium projection unit, also available in stainless steel (type 107)
- projection angle up to 150°
- steel pressure spring, optionally with gas pressure spring (type 101)

Guide rails for vertical awnings
- c-shaped profile in different versions
- fixed from the front, with or without guide rail brackets

Guide rails for vertical awnings
- c-shaped profile in different versions
- fixed from the front, with or without guide rail brackets

Guide rails for drop arm awnings
- with torsion spring or gas pressure spring for best possible fabric tension
- projection angle 90°-135°

Guide rails for drop arm awnings
- with torsion spring or gas pressure spring for best possible fabric tension
- projection angle 90°-135°

Guide rail brackets
- for mounting self-supporting facade awnings, markisolettes and window awnings with ZIP guiding

Guide rail brackets
- for mounting self-supporting facade awnings, markisolettes and window awnings with ZIP guiding
Operation

Motor-operated WAREMA window awnings are frequently used in new buildings and refurbishments. Whether tubular motor, radio motor or the manual crank drive – WAREMA offers a wide selection of operating options. We recommend using WAREMA control systems to go with the motor-operated models. These are specifically adapted for use with WAREMA awnings, they improve your well-being and guarantee a perfect indoor environment.

Tubular motor
- supply voltage 230 V AC
- adjustable limit switches switch off the motor in the upper and lower limit positions

Radio motor
- includes EWFS hand-held transmitter, 1 channel
- EWFS weather stations and other accessories optional, see p. 43

Crank drive
- bevel gear
- crank and crank rod used for raising and lowering
- thermal isolation, i.e. the drive mechanism of the pivot bearing is interrupted, reducing thermal conduction

Situations for use

WAREMA has the perfect solution for every requirement – from small central control units to multi-channel controls for residential and office buildings, right up to networked sun shading control systems and special controls for conservatories. The following table shows which system fulfils your requirements.

<table>
<thead>
<tr>
<th>Functions:</th>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation:</th>
<th>EWFS</th>
<th>WMS</th>
<th>Wisotronic</th>
<th>WAREMA climatronic®</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWFS hand-held transmitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EWFS wall-mounted transmitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EWFS timer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMS hand-held transmitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMS central transmitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Push button</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Control systems

WMS – WAREMA Mobile System
Radio systems are particularly beneficial with refurbishments, as no additional cabling is required. With the WAREMA Mobile System, the only components required are the transmitter and receiver. Users receive feedback about all move commands of their sun shading systems. Distant systems can also be reached by transmitting commands from receiver to receiver (routing function).

**Benefits**
- scene control for up to 32 different scenes
- commissioning and changing of limit values possible via PC
- move to individual comfort positions at the push of a button

**Functions**
In connection with the WMS weather stations the sun shading products can be controlled according to the different weather data.
- brightness, wind speed, outside temperature, precipitation, time, dusk/dawn

**Areas of application:**
- radio-control for different sun shading products and light

EWFS – standardised WAREMA radio system
The standardised WAREMA radio system offers you the opportunity to control the individual sun shading drive or light with a minimum amount of installation work. The uniform system allows for individual expansion of the control system and leaves room for retrofitting further components at any time. WAREMA supplies the appropriate EWFS solution for the different control requirements of any sun shading product. Awnings for example can be controlled with permanent mode.

**Benefits**
- complete product range for controlling sun shading products such as awnings, blinds, roller shutters or even radiant heaters
- switching and dimming of light possible
- move to an individual comfort position at the push of a button

**Functions**
In connection with the EWFS weather stations the sun shading products can be controlled according to the different weather data.
- brightness, wind speed, precipitation, time

**Areas of application:**
- radio-control of different sun shading products, light switching and dimming
WAREMA climatronic®
WAREMA climatronic® is a package solution for controlling sun shading, ventilation, windows, heating, cooling and many others in your conservatory or home.

Benefits
- reduction of energy consumption
- provides a comfortable room climate
- operating panel available in three colour variants, for perfect integration into any room design
- automatic overheating and anti-glare protection
- protects the sun shading system from weather damage

Functions
- intuitive operation with function wheel and self-explanatory menu guidance
- manual operation and change of settings possible any time
- visual privacy and cold protection through dawn/dusk control or timer

Areas of application
- control of sun shading, ventilation, windows, heating, cooling etc.

Wisotronic
The Wisotronic always adapts the position of internal and external sun shading systems perfectly to the weather situation. Whether conservatory, residential building or office building, the Wisotronic sun shading control automatically provides a pleasant room climate and comfortable living or work surroundings.

Benefits
- intelligent control for different sun shading products and motor-operated windows
- independent control and monitoring of up to four channels or facades
- simultaneous operation of several sun shading products
- wind monitoring to protection against damage

Functions
In connection with the weather station multisense the sun shading products or motor-operated windows can be controlled according to the different weather data.
- brightness, wind speed, temperature, precipitation, time, dusk/dawn

Areas of application
- control of sun shading products and motor-operated windows
## Everything at a glance

<table>
<thead>
<tr>
<th>Feature/limit values</th>
<th>Window awnings ZIP</th>
<th>Vertical awnings</th>
<th>Drop arm awnings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V-FM</td>
<td>F-FM</td>
<td>470</td>
</tr>
<tr>
<td></td>
<td>490</td>
<td>499</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>350</td>
<td>340</td>
<td></td>
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<tr>
<td>max. width (mm)</td>
<td>4000</td>
<td>4000</td>
<td>2400</td>
</tr>
<tr>
<td>max. height/length (mm)</td>
<td>4500</td>
<td>4500</td>
<td>3000</td>
</tr>
<tr>
<td>max. projection angle</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Operation</td>
<td>motor, radio motor</td>
<td>crank</td>
<td>motor, radio motor, crank</td>
</tr>
<tr>
<td>Guiding</td>
<td>ZIP guiding</td>
<td>guide rail, cable</td>
<td>drop arm, gas pressure spring</td>
</tr>
<tr>
<td>Fixing</td>
<td>without spacing</td>
<td>with spacing</td>
<td>without spacing</td>
</tr>
<tr>
<td></td>
<td>with spacing</td>
<td>with spacing</td>
<td>with spacing</td>
</tr>
<tr>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Acrylic Standard/Exclusive</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Acrylic All Weather, Perfora, Reflect</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Screen</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Soltis 92</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Sunsilk FR</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Designs</td>
<td>according to WAREMA collection</td>
<td>according to WAREMA collection</td>
<td>according to WAREMA collection</td>
</tr>
<tr>
<td>Colours (aluminium parts)</td>
<td>according to WAREMA standard colour fan</td>
<td>according to WAREMA standard colour fan</td>
<td>RAL 9016, 9006 and 8016</td>
</tr>
<tr>
<td>Cover panels aluminium</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>acrylic glass</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Options</td>
<td>wind-stable up to 25 m/s</td>
<td>small component dimensions for optimum adaptation</td>
<td>sun shading and vision to outside, valance optional</td>
</tr>
<tr>
<td>Control systems</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

* depends on fabric  □ standard  □ optional – not possible
<table>
<thead>
<tr>
<th>Drop arm awnings</th>
<th>Facade awnings</th>
<th>Markisooltes</th>
</tr>
</thead>
<tbody>
<tr>
<td>330 310/314</td>
<td>201 207 209</td>
<td>101 107 108 109 150</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>4000 4000 4000 3000 2500 4000 3000 2500 2500 2500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>5000 3000 3000 3500 3000 3000 3000 2500 2500 2500</td>
</tr>
<tr>
<td>90° – 135°</td>
<td>- - - 150° 120° 145° 150° 150° 145°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>motor, radio motor, crank</th>
<th>crank</th>
<th>motor, radio motor, crank</th>
</tr>
</thead>
<tbody>
<tr>
<td>drop arm, gas pressure spring</td>
<td>drop arm, torsion spring</td>
<td>guide rail, cable, rod</td>
</tr>
<tr>
<td>guide rail, stainless steel rod</td>
<td>guide rail, cable, rod</td>
<td>guide rail</td>
</tr>
<tr>
<td>- - with spacing</td>
<td>with spacing</td>
<td>without spacing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>according to WAREMA collection</th>
<th>according to WAREMA collection</th>
<th>according to WAREMA collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAL 9016</td>
<td>according to WAREMA standard colour fan</td>
<td>according to WAREMA standard colour fan</td>
</tr>
<tr>
<td>- -</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>sun shading and vision to outside, valance clamping posts (type 314)</td>
<td>sun shading for large and sloped areas</td>
<td>sun shading and vision to outside – also for large areas</td>
</tr>
<tr>
<td>- -</td>
<td>- -</td>
<td>- -</td>
</tr>
</tbody>
</table>