

## External venetian blinds



# Slat shapes

## Flat slats

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- Slat widths: 50, 60, 80, 100 and 150 mm
- Slat thickness: 0.45 mm
- Rail-guided, cable-guided



## Beaded slats

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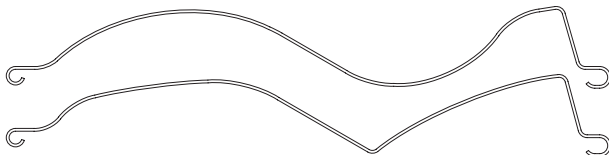
- Slat widths: 60 and 80 mm
- Slat thickness: 0.45 mm
- Rail-guided, cable-guided



## Dim-out slats

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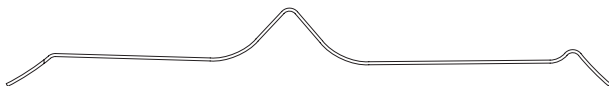
- Slat widths: 73 and 93 mm
- Slat thickness: 0.45 mm
- Rail-guided



## Genius slats

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- Slat widths: 50 and 80 mm
- Slat thickness: 0.27 mm / 0.45 mm
- Cable-guided, rail-guided, freely suspended



## Concave shaped slats

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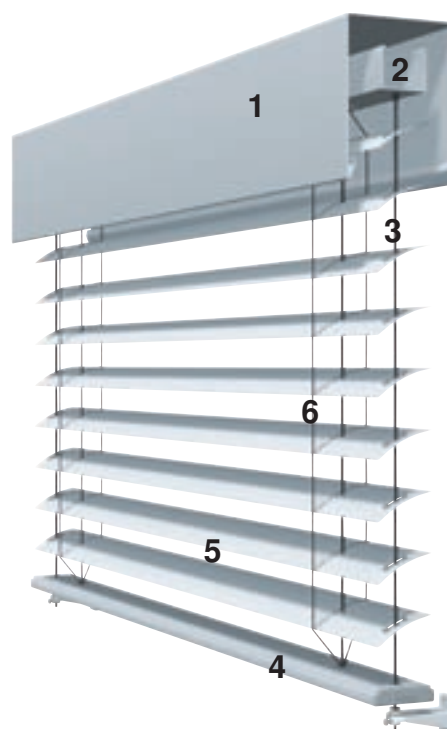
- Slat widths: 50, 60 and 80 mm
- Slat thickness: 0.24 mm / 0.45 mm / 0.53 mm
- Cable-guided, rail-guided, freely suspended



# Flat slats

## with cable guidance

Flat-slat venetian blinds with cable guidance appeal with their filigree design and low stack heights. We can supply this type with 60 mm, 80 mm or 100 mm wide slats.



**Type E 80 AF with U-shaped cover panel (BL.06)**

- 1 Cover panel
- 2 Top rail
- 3 Wind protection
- 4 Bottom rail
- 5 Wind protection
- 6 Lifting tape





### Cover panel

Made of folded material, available in many shapes and colours.

### Top rail

Top rail made of extruded aluminium. No roll-formed aluminium tape or galvanized steel tape: no corrosion, bending or twisting.

### Lifting tape

Lifting tape made of weather-proof material. With an unobtrusive width of only 6 mm, but extremely tear resistant.

### Slats

Slats without rolled beads, approx. 0.45 mm thick, made of highly flexible aluminium alloy with edge coating. Optionally, the perforations can be lined with plastic eyelets.

### Wind protection

Wind protection with plastic-coated steel cable running through holes punched in the slats and lower aluminium tension angles. To prevent any slackening of the corrosion-proof steel ropes by the weather, we use as standard a spring tension device which is mounted invisibly into the top rail.

### Bottom rail

The end rail consists of extruded aluminium profiles. The bore holes for the cable guidance have stainless steel eyelets.

### Motor

Maintenance-free central motor, protection class IP 54. The power of the motor is transmitted to 2 shaft outlets and is evenly spread even with coupled units. The central motors allow the installation of very narrow blinds.



Flat slats without eyelets



Flat slats with eyelets

Type	Individual unit				Coupled units			Slat width (mm)	Average weight (kg/m <sup>2</sup> )	Operation	
	Width min. (mm) <sup>1)</sup>	max (mm)	Height (mm)	Surface (m <sup>2</sup> )	Drive side (mm)	middle (mm)	Surface (m <sup>2</sup> )			Lift	Tilt
<b>C 60/80/100 AF</b>	450	5000	4000	13	7000	12000	13	60/80/100	2.3/2.4/2.5	Crank	
<b>E 60/80/100 AF</b>	600	5000	4000	20	7000	12000	32 – 35 <sup>2)</sup>	60/80/100	2.5/2.7/2.7	Switches	

1) The height should not exceed 1,590 mm within the minimum width range.

2) The indicated maximum surfaces depend on the individual height

# Flat slats

## with guide rail

External venetian blinds with flat slats and guide rails combine low stack heights with the opportunity to use venetian blinds as a structural façade element. In order to keep stack heights low, only every third slat is provided with guiding nipples. We can supply this type with 60 mm, 80 mm or 100 mm wide slats.



Type E 60 AF A6 with angled cover panel (BL. 01)

- 1 Cover panel
- 2 Top rail
- 3 Guiding nipples
- 4 Guide rails
- 5 Bottom rail
- 6 Slat
- 7 Lifting tape





### Cover panel

Made of folded material, available in many shapes and colours.

### Top rail

Top rail made of extruded aluminium. No roll-formed aluminium tape or galvanized steel tape: no corrosion, bending or twisting.

### Lifting tape

Lifting tape made of weather-proof material. With an unobtrusive width of only 6 mm, but extremely tear resistant.

### Slats

Slats without rolled beads, approx. 0.45 mm thick, made of highly flexible aluminium alloy with edge coating. Every third slat has with guiding nipples on both sides. Optionally, the perforations can be lined with plastic eyelets.

### Guiding nipples

Triple spot welded guiding nipples of fibreglass reinforced polyamide provide stability and flexibility.

### Guide rails

25 mm deep guide rails ensure flawless running of the slats even with temperature-related movements of the façade and the slats. For noise reduction, black plastic sealing strips are inserted in the guide rail. The guide rails make it possible to have external venetian blinds of a maximum width of up to 5000 mm.

### Bottom rail

The end is also made of extruded aluminium with black plastic end caps and a flexible rail guidance adaptor which prevents unhinging of the end rail. No blockages!

### Motor

Maintenance-free central motor, protection class IP 54. The power of the motor is transmitted to 2 shaft outlets and is evenly spread even with coupled units. The central motors allow the installation of very narrow blinds.



60 AF A6 with diam. 52 mm dia. round profile guide rails



100 AF A6 with 25 x 50 mm guide rail

Type	Individual unit				Coupled units				Average weight (kg/m <sup>2</sup> )
	Width min. (mm) <sup>1) 2)</sup>	max (mm)	Height (mm)	Surface (m <sup>2</sup> )	Drive side (mm)	middle (mm)	Surface <sup>3)</sup> (m <sup>2</sup> )	Number of curtains	
C 60/80/100 AF A6	450	5000	4000	13	7000	12000	13	5	2.4
E 60/80/100 AF A6	600	5000	4000	20	7000	12000	32 – 35	5	2.7

1) With narrow widths, there is a risk of the slats running asymmetrically.

2) Additional guiding cables are needed for a unit width exceeding 2,400 mm.

3) The indicated maximum surfaces depend on the individual height. Deviating dimensions are subject to individual clarification.

# External venetian blinds

## with beaded slats

External venetian blinds with rolled-beaded slats are the most common type of external venetian blinds. They combine high utility with robust technology. They are often used as a visualical feature of the façade design.



Type E 80 A6 with guide rail and U-shaped cover panel (BL. 06)

- 1 Cover panel
- 2 Top rail
- 3 Guiding nipples
- 4 Guide rails
- 5 Bottom rail
- 6 Safety eyelets
- 7 Lifting tape
- 8 Slat





### Cover panel

Made of folded material, available in many shapes and colours.

### Top rail

Top rail made of extruded aluminium. No roll-formed aluminium tape or galvanized steel tape: no corrosion, bending or twisting.

### Lifting tape

Lifting tape made of weather-proof material. With an unobtrusive width of only 6 mm, but extremely tear-resistant.

### Slats

Slat width of 60 or 80 mm, with rolled beads. All perforations in the slats have with plastic eyelets for perfect guiding of the lifting tapes and for fixing the webs of the Trevira tilting tape. This reduces abrasion of the tilting tape and stabilises the entire blind against wind.

### Guiding nipples

Triple spot welded guiding nipples of fibreglass-reinforced polyamide provide stability and flexibility.

### Guide rails

25 mm deep guide rails ensure flawless running of the slats even with temperature-related movements of the façade and the slats. For noise reduction, black plastic sealing strips are inserted in the guide rail. The guide rails make it possible to have external venetian blinds of a maximum width of up to 5000 mm.

### Bottom rail

The end is also made of extruded aluminium with black plastic end caps and a flexible rail guidance adaptor which prevents unhooking of the end rail. No blockages!

### Motor

Maintenance-free central motor, protection class IP 54. The power of the motor is transmitted to 2 shaft outlets and is evenly spread even with coupled units. The central motors allow the installation of very narrow blinds.



Triple spot-welded guiding nipples for type A6



Cable guidance for type E 60 A2



Tension cable perforations with plastic eyelets

Type	Individual unit				Coupled units			Slat width (mm)	Average weight (kg/m <sup>2</sup> )	Operation	
	Width min. (mm) <sup>1)</sup>	max (mm)	Height (mm)	Surface (m <sup>2</sup> )	Drive side (mm)	middle (mm)	Surface (m <sup>2</sup> )			Lift	Tilt
C 80/60 A2	450	5000	4000	12	7000	12000	12	80/60	2.8/2.7	Crank	
E 80/60 A2	600	5000	4000	20 <sup>2)</sup>	7000	12000	26 – 30 <sup>2)</sup>	80/60	3.1/3.0	Switches	
C 80/60 A6	450	5000	5000	12	7000	12000	12	80/60	2.8/2.7	Crank	
E 80/60 A6	600	5000	5000	25 <sup>2)</sup>	7000	12000	26 – 30 <sup>2)</sup>	80/60	3.1/3.0	Switches	

1) The height should not exceed 1,590 mm within the minimum width range.

2) The indicated maximum surfaces depend on the individual height

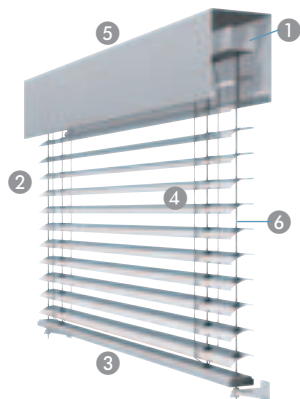


# Facade external venetian blind types E/C 60/80 A2

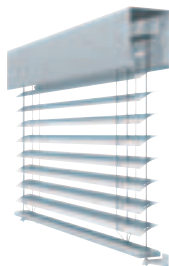
## Facade external venetian blind types E/C 60/80/100 AF

### Description

#### E/C 80 A2



#### E/C 80 AF



- ① **Top rail:** extruded aluminium profile
- ② **Slats:** Aluminium tape beaded on either side 60, 80 mm wide, or flat slats unbeaded 60, 80, 100 mm wide. Colour according to colour chart
- ③ **Bottom rail:** extruded rectangular profile, powder-coated, with black plastic end caps
- ④ **Tilting tape and lifting tape:** polyester, black
- ⑤ **Drive:** 230V centre motor
- ⑥ **Lateral guidance:** Black, polyamide-coated steel wire and aluminium tension cable holder

### Construction limit values

Type	Construction limit values							Number of blinds	Slat width [mm]	Average weight [kg/m <sup>2</sup> ] <sup>1)</sup>	Operation	
	Single units			Coupled units							Lift	Tilting
	Width [mm] <sup>4)</sup>		Height [mm]	Surface [m <sup>2</sup> ]	Width [mm]		Surface [m <sup>2</sup> ]					
min. <sup>2)</sup>	max.	lateral Drive			Central Drive							
E 60 A2	600	5,000	4,000	20	7,000	12,000	26-30 <sup>3)</sup>	5	60	3.0	Switch	
E 80 A2	600	5,000	4,000	20	7,000	12,000	26-30 <sup>3)</sup>	5	80	3.1	Switch	
E 60 AF	600	5,000	4,000	20	7,000	12,000	32-35 <sup>3)</sup>	5	60	2.5	Switch	
E 80 AF	600	5,000	4,000	20	7,000	12,000	32-35 <sup>3)</sup>	5	80	2.7	Switch	
E 100 AF	600	5,000	4,000	20	7,000	12,000	32-35 <sup>3)</sup>	5	100	2.7	Switch	
C 60 A2	450	5,000	4,000	12	7,000	12,000	12	5	60	2.7	Crank	
C 80 A2	450	5,000	4,000	12	7,000	12,000	12	5	80	2.8	Crank	
C 60 AF	450	5,000	4,000	13	7,000	12,000	13	5	60	2.3	Crank	
C 80 AF	450	5,000	4,000	13	7,000	12,000	13	5	80	2.4	Crank	
C 100 AF	450	5,000	4,000	13	7,000	12,000	13	5	100	2.5	Crank	

<sup>1)</sup> Cable strength of 450 N per tension cable.

<sup>2)</sup> Narrower slats may not run straight.

<sup>3)</sup> The indicated maximum surface areas depend on the individual height.

<sup>4)</sup> Width = slat size

# Facade external venetian blind types E/C 60/80 A2

## Facade external venetian blind types E/C 60/80/100 AF

### Description

#### Lateral guidance - wind protection

slat length	Cable guide
less than 3 m	2
over 3 m	3
over 4 m	4
over 5 m	5

#### Stack heights

Type	External venetian blind height [mm]													
	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200	3,400	3,600	3,800	4,000
E 60 A2	215	230	245	260	275	290	305	325	340	355	370	385	400	415
E 80 A2	195	205	220	230	245	255	270	280	295	305	320	330	345	355
E 60 AF (without eyelets)	150	157	163	170	175	180	187	193	200	207	213	220	225	230
E 80 AF (without eyelets)	138	142	145	150	155	160	165	170	173	177	180	185	190	195
E 100 AF (without eyelets)	135	140	145	148	152	155	160	165	170	175	178	182	185	190
E 60 AF (with eyelets)	155	160	170	175	185	190	195	205	210	220	225	230	240	245
E 80 AF (with eyelets)	145	150	155	160	165	170	175	182	188	195	200	205	210	215
E 100 AF (with eyelets)	140	145	150	155	160	165	170	175	180	185	190	195	200	205
C 60 A2	195	210	225	240	255	270	285	300	315	330	350	365	380	395
C 80 A2	175	185	200	210	220	235	245	260	270	285	295	310	320	335
C 60 AF (without eyelets)	130	137	143	150	155	160	167	173	180	187	193	200	205	210
C 80 AF (without eyelets))	115	120	125	130	135	140	145	150	153	157	160	165	170	175
C 100 AF (without eyelets)	115	120	125	128	132	135	140	145	150	155	158	162	165	170
C 60 AF (with eyelets)	135	140	150	155	165	170	175	185	190	200	205	210	220	225
C 80 AF (with eyelets)	125	130	135	140	145	150	155	162	168	175	180	185	190	195
C 100 AF (with eyelets)	120	125	130	135	140	145	150	155	160	165	170	175	180	185

Stack heights are approximate values; for technical reasons these may deviate above or below the actual dimensions.

**External venetian blinds with work setting:** Stack is 7 mm higher if the bracket (article no. 551012) is required for installation to the ceiling or lintel.

# Asymmetrical external venetian blinds

## for asymmetrical windows.

WAREMA asymmetrical external venetian blinds provide ideal protection from the sun even with angled windows and, thanks to their clever mechanism, are ideal for use with angles of from 5° to 45°. They match the other styles of WAREMA external venetian blinds perfectly, thereby allowing you to create a coordinated appearance. You may also wish to opt for the benefits of a solar drive.

### Product benefits

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- Visually match all other styles of WAREMA external venetian blinds
- Suitable for use with all asymmetrical windows with angles of from 5° to 45°

### Features

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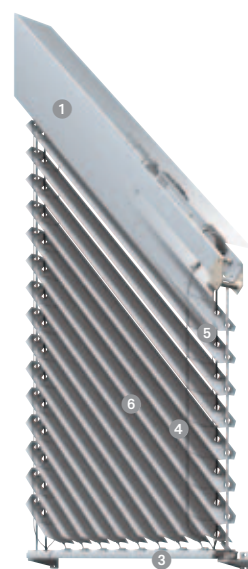
- Construction limit values:
  - Max. width: 1820-2510 mm
  - Max. height: 3900 mm
  - Max. surface area: 7 m<sup>2</sup>
- Slats: Flat slats 80 mm
- Drives: 230 V central motor, solar drive

### Installation situation

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- Mullion-transom facades/Conservatories
- In front of facades
- In the reveal
- Rear-ventilated facades
- Double skin facades



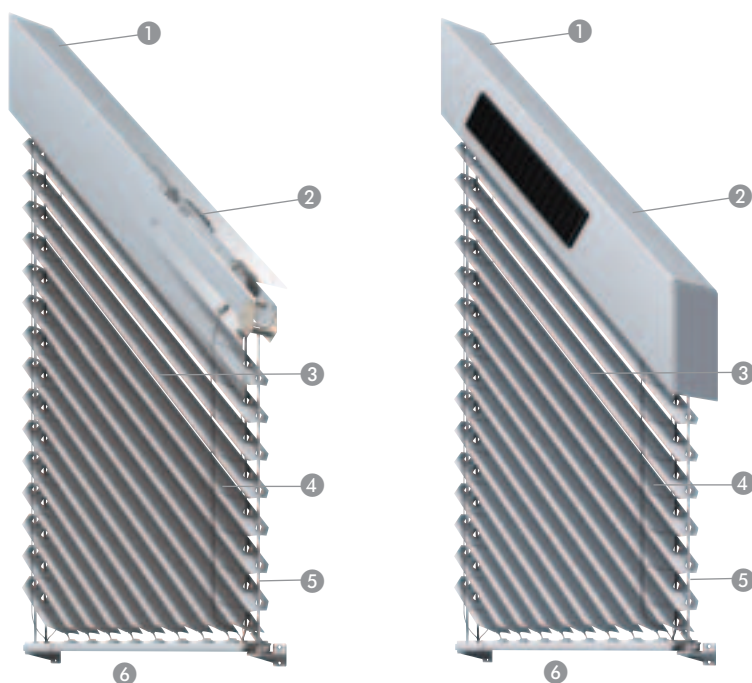


**Asymmetrical external venetian blind E 80 AF SR with flat slats and special lateral guidance for asymmetrical window angles from 5° to 45°**

- ① Box
- ② Lateral guidance
- ③ Bottom rail
- ④ Lifting tape
- ⑤ Tilting tape
- ⑥ Slats

# E 80 AF SR asymmetrical external venetian blinds

## Description



- ① **Top rail:** extruded aluminium profile
- ② **230V middle motor,** with optional solar drive
- ③ **Slats:** unbeaded, 80 mm wide aluminium tape with black plastic eyelets. Colour according to table
- ④ **Tilting tape and lifting tape:** polyester, black
- ⑤ **Lateral guidance:** 6 mm stainless steel spoke and aluminium tension cable holder.  
Alternatively: polyamide-coated stainless steel cable, 3.3 mm in diameter, with spring tensioning device and aluminium tension cable holder
- ⑥ **Telescopic bottom rail:** extruded aluminium profile, powder-coated, with black plastic end caps

## Construction limit values

Type	Inclination of the top rail <sup>1)</sup>	Construction limit values				Surface [m <sup>2</sup> ]	Slat width [mm]	Operation
		Width [mm]		min. height short side (a) [mm]	max. height long side (c) [mm]			
		min. (B)	max. (B)					
E 80 AF SR	5° – 45°	700 at 45°	1,820 at 45°	180	3,900	7	80	Switch
E 80 AF SR	5° – 45°	750 at 5°	2,510 at 5°	180	3,900	7	80	Switch

<sup>1)</sup> The maximum and minimum widths depend on the angle of inclination of the top rail. Blind surface area = (a+b)/2xb

## Construction limit values for solar drive

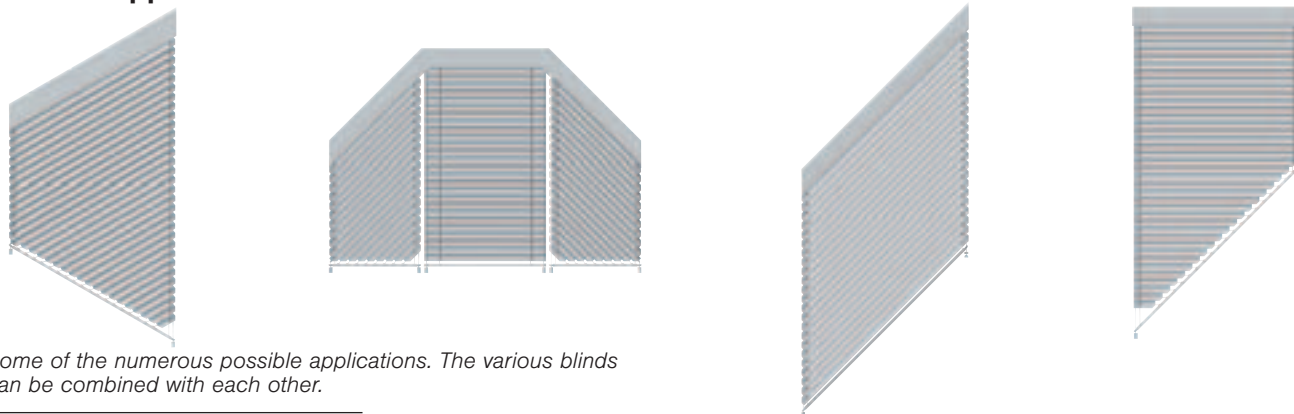
	Width [mm] <sup>1)</sup> min.	Height [mm] max.	Surface area [m <sup>2</sup> ] max.
1-piece solar panel	750	2,600	2.5
2-piece solar panel	1,300	2,600	5.0

<sup>1)</sup> Maximum width according to the table for construction limit values with 230 V motor

Width indication = axial dimension of the lateral guidance. The lateral guidance is indented 20 mm.

The solar panel is generally provided unassembled for asymmetrical external venetian blinds. When installing the solar panel on a gable roof with overhang, we generally recommend installation at a location without shading, overhanging roofs or similar obstacles.

## Possible applications



Some of the numerous possible applications. The various blinds can be combined with each other.

Only available in Germany, Austria and Switzerland

# E 80 AF SR asymmetrical external venetian blinds

## Description

### Top rail

59 mm wide, 51 mm high, from 1.5 mm thick extruded aluminium, without surface treatment. Tilt rod manufactured from galvanised square steel tube. Maintenance-free, teflon-containing, encased bearings with tilting reel and tape reel made of plastic. Segment tilting to prevent the slats from tilting of their own accord.

### Venetian blind brackets

Attachment of the top rail by means of a special quick-installation bracket for asymmetrical external venetian blinds. After mounting, the blind is permanently fixed in the bracket.

### Slats

80 mm wide, approx. 0.45 mm thick, concave-convex shape, manufactured from specially alloyed aluminium coated in light-resistant paint applied in a special, non-corroding stove enamelling process. Slats provided with special stamped cutouts for locking the tilting tape as well as black protective eyelets (to reduce abrasion) at the feedthroughs for lifting tape and wind protection. Enamel finish according to our latest colour chart.

The blind lowers with the slats closed and rises with the slats open.

All slats are either guided on both sides in the wind protection device, or on one side in the wind protection device and one side in the telescopic bottom rail.

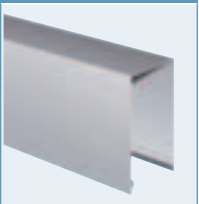
### Cover panel shapes

Cover panel heights correspond to the stack heights of the respective blind heights.

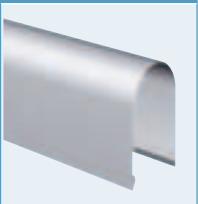
Angle-shaped cover panel SR.01



U-shaped protective cover panel SR.06



Round-shaped cover panel SR.09



### Tilting tape

Tilting tape, black polyester, heavy-duty customised design, with double webs.

Each slat is fixed to the upper web of the web cord.

### Lifting tapes

Made of special-coated black polyester.

### Telescopic end rail

Outer and inner profile made from extruded aluminium, outer profile 80 mm wide, approx. 21.5 mm high. The inner profile is guided in the outer profile via plastic bearings, which prevents the profiles from touching.

The lifting tapes and the outer web cords are accommodated in black plastic end caps. Additional web cords are flexibly integrated into plastic gliders, which ensures that web cord projections are kept as low as possible. Short slats are constantly guided in at least one of the profiles via plastic gliders and plastic nipples.

To create a homogenous visual appearance with other external venetian blinds the bottom rail does not swivel out when the slats are tilted.

### Wind protection

Provided by stainless steel circular rods, Ø 6 mm, alternatively provided by polyamide-coated steel wire cord, Ø 3.3 mm. The wind protection devices, which are mounted in the top rail, are guided through the stamped cutouts fitted with black protective eyelets in all slats and through the end caps of the bottom rail and are fixed to the window or to the wall by means of aluminium tension cable holders. If cable guide is provided by a steel wire cord, a spring tension mechanism with pressure spring and a tensioning device on the tension cable holder ensure optimal cable tension.

### Drive

230V middle motor, optional: solar drive with solar panel, battery-powered and remote control operation

### Surface treatment

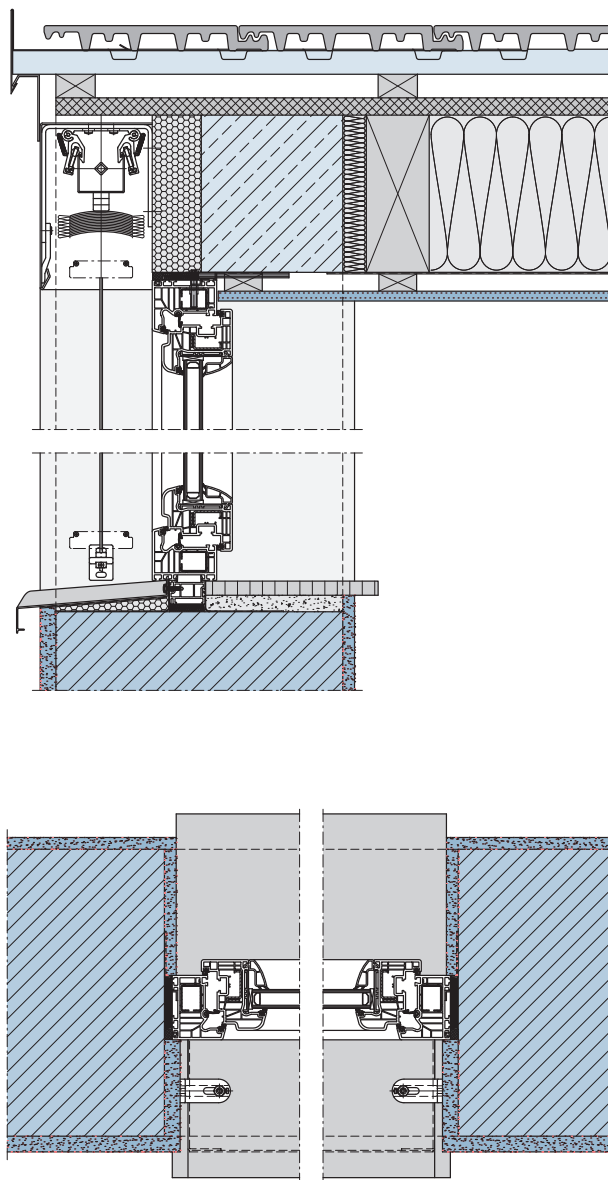
The bottom rails and tension cable holder are powder-coated.

#### Note:

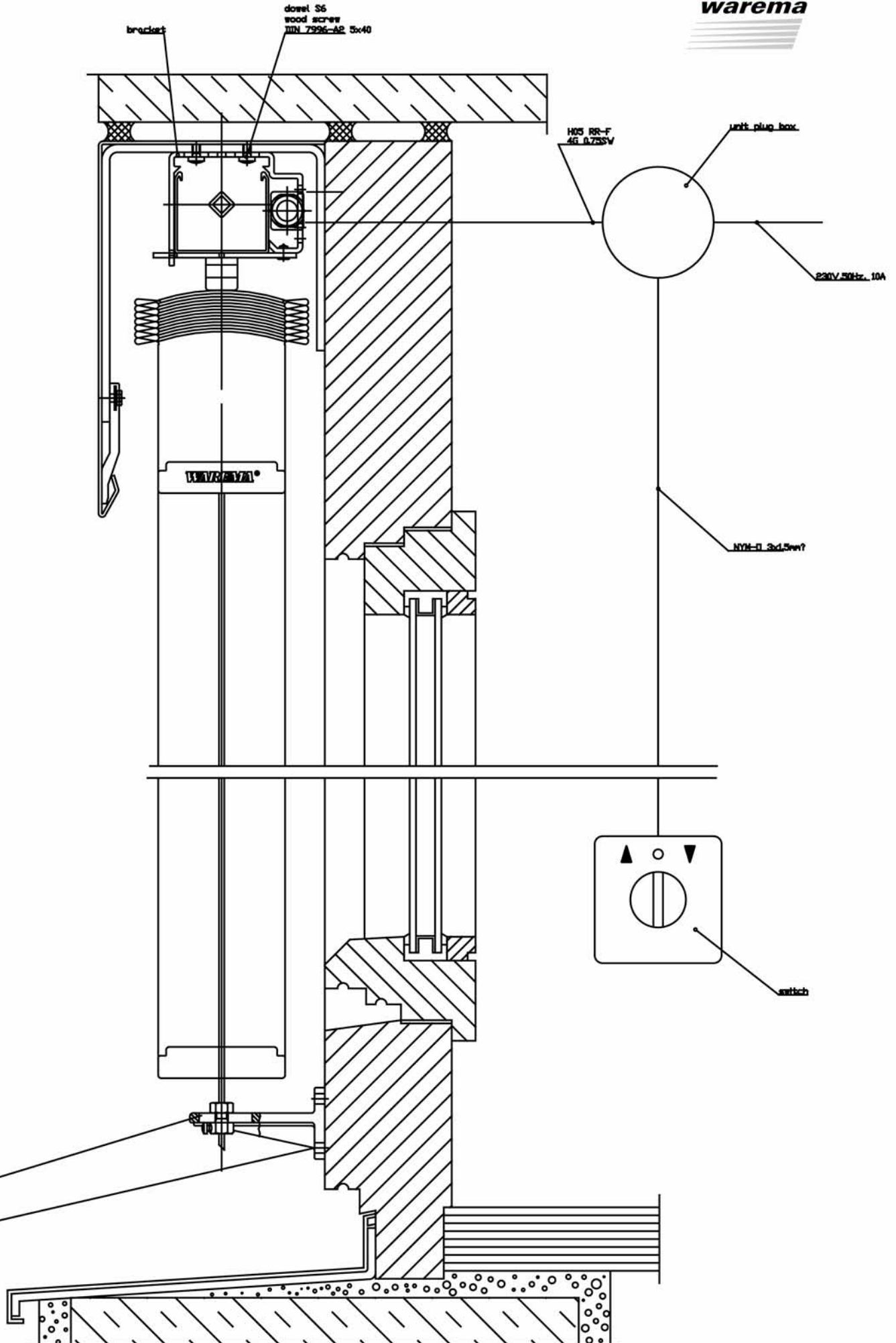
The aluminium parts (except the slats) are powder-coated according to the classic RAL colour chart. Colours DB 701, 702, 703, eight textured colours as per the WAREMA colour chart and C0 anodising are also available at no additional cost. Camouflage and luminous colours are not available.

# E 80 AF SR asymmetrical external venetian blinds

## Installation example



# Warema E80A2(cableguide)









# Slat colours

## External venetian blind slats are available in

- Up to 25 colours
- Up to 19 RAL shades
- Special colours (on request)
- Different colours on the front and rear (on request)
- Other aluminium parts are available in any colour from the RAL Classic colour chart. There may be differences between the colours of the slats and the powder-coated aluminium parts

Colour	RAL	RAL	NCS colour			Beaded slats, dim-out slats			Flat slats			
						C 80 A6/A2 E 80 A6/A2	C 73/93 A6 E 73/93 A6	C 60 A6/A2 E 60 A6/A2	C 80 AF E 80 AF	C 60 AF E 60 AF	C 100 AF E 100 AF	C/E 50 AF E 150 AF
Maize yellow	RAL 1006	RAL 1006	S1080-Y20R	720	●	●	●	●				
Oyster white	RAL 1013	RAL 1013			●	●	●	●				
Light ivory	RAL 1015	RAL 1015			●	●		●				
Purple red	RAL 3004	RAL 3004	S3560-R	330	●	●		●				
Ultramarine blue	RAL 5002	RAL 5002	S4350-R74B	906	●	●		●				
Azure blue	RAL 5009	RAL 5009	S5040-B	440	●	●		●				
Pigeon blue	RAL 5014	RAL 5014	S4030-R90B	903	●	●		●				
Turquoise blue	RAL 5018	RAL 5018	S3040-B40G	908	●	●		●				
Moss green	RAL 6005	RAL 6005	S7020-B90G	220	●	●		●				
Anthracite grey	RAL 7016	RAL 7016			●	●		●				
Light grey	RAL 7035	RAL 7035	S1502-G	904	●	●	●	●				
Dusty grey	RAL 7037	RAL 7037			●	●		●				
Agate grey	RAL 7038	RAL 7038	S3000-N	130	●	●	●	●				
Sepia brown	RAL 8014	RAL 8014	S8010-Y50R	071	●	●		●				
Grey white	RAL 9002	RAL 9002			●	●	●	●				
White aluminium	RAL 9006	RAL 9006		140	●	●	●	●	●	●	●	●
Grey aluminium	RAL 9007	RAL 9007			●	●	●	●	●	●	●	●
Metallic anthracite	DB 703	DB 703			●	●		●		●		
Pure white	RAL 9010	RAL 9010	S0502-Y	901	●	●	●	●		●	●	
Traffic white	RAL 9016	RAL 9016			●	●		●				
Beige	WAREMA colour	W 4708	S4010-Y50R	110	●	●		●				
Light beige	WAREMA colour	W 4800	S2010-Y30R	240	●	●		●				
Dark bronze	WAREMA colour	W 7329			●	●	●	●				
Terracotta	WAREMA colour	W 8120	S3560-Y80R	120	●	●		●				
Light bronze	WAREMA colour	W 8780		780	●	●		●				



All cover panels and guide rails are available in any colour from the RAL Classic colour chart.

# Selective external venetian blinds

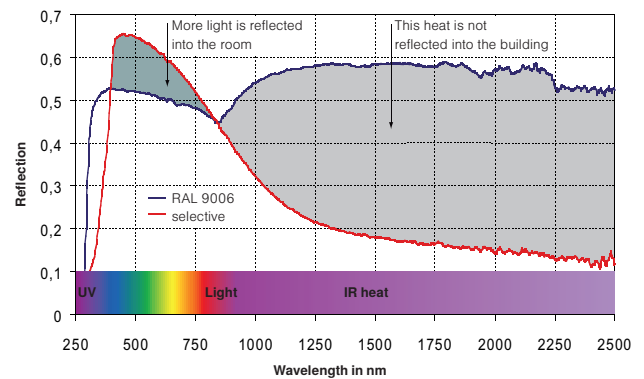
The use of slats with selective coating increases the entry of daylight into a building and reduces the incidence of energy. The slats also direct visible daylight into the inside of the building and a majority of the sun's heat remains outside of the window.

## Function

- Exclusively reflects visible light into the inside of the building
- The slats absorb ultraviolet and infrared radiation that is emitted as heat radiation outside of the building.

## Structure of the slats

A black, absorbent coating is first applied to the slat tape, while the second coating has a weather-resistant selective paint, in a colour similar to RAL 9006.



## Benefits

- Reduced energy consumption by lower power consumption for air conditioning and artificial lighting
- The selective coating directs approx. 30% more daylight and approx. 50% less heat into the building than external venetian blinds with similar slat colours.

# Tilting tapes

## Kevlar-reinforced tilting tapes and loop cords

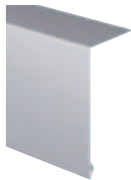
- WAREMA has been using tilting tapes with kevlar cores on all external venetian blinds since mid 2009 as the kevlar fibres reinforce the fabric tapes considerably, thereby improving slat closure and stack arrangement, thanks to more clearly defined folds.







# Cover panels



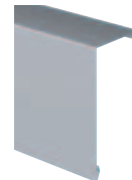
## **Cover panel BL 01**

- Angular cover panel, folded



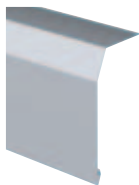
## **Cover panel BL 02**

- Angular cover panel, with upturn beam



## **Cover panel BL 03**

- Angular cover panel, folded with upturn beam



## **Cover panel BL 04**

- Angular cover panel, folded, sloped



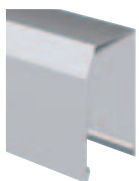
## **Cover panel BL 05**

- Gallery cover panel



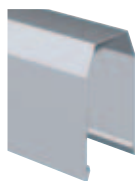
## **Cover panel BL 06**

- U-shaped cover panel, folded



## **Cover panel BL 07**

- U-shaped cover panel, sloped on one side



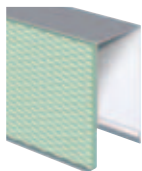
## **Cover panel BL 08**

- U-shaped cover panel, folded, angled on both sides



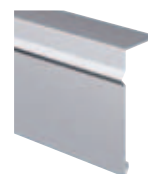
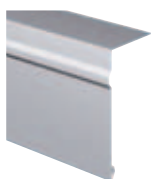
## **Cover panel BL 09**

- Round-shaped cover panel, folded



## **Cover panel BL 31**

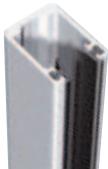
- U-shaped cover panel, folded, to accommodate baseboards
- Optional 8 mm polystyrene baseboard available



## **Cover panel, special version, with perforations, grooves or special folds**

- Available on request

# Guide rails



## Type 1, angled

- 25 x 18 mm
- Wall-mounted



## Type 2, angled

- 25 x 18 mm
- Fits on guide rail brackets



## Type 3, angled

- 50 x 18 mm
- Central guide rail to guide two blinds
- Fits on guide rail brackets



## Type 4, round

- Ø 32 mm
- Fits on guide rail brackets



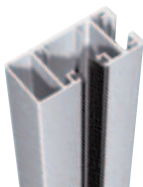
## Type 7, round

- Ø 52 mm
- For use with self-supporting external venetian blinds



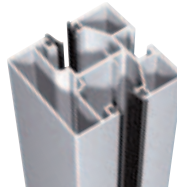
## Type 8, round

- Ø 52 mm
- Central guide rail to guide two blinds
- For use with self-supporting external venetian blinds



## Type 9, angled

- 25 x 50 mm
- For use with self-supporting external venetian blinds



## Type 10, angled

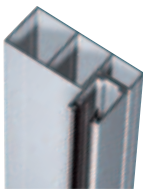
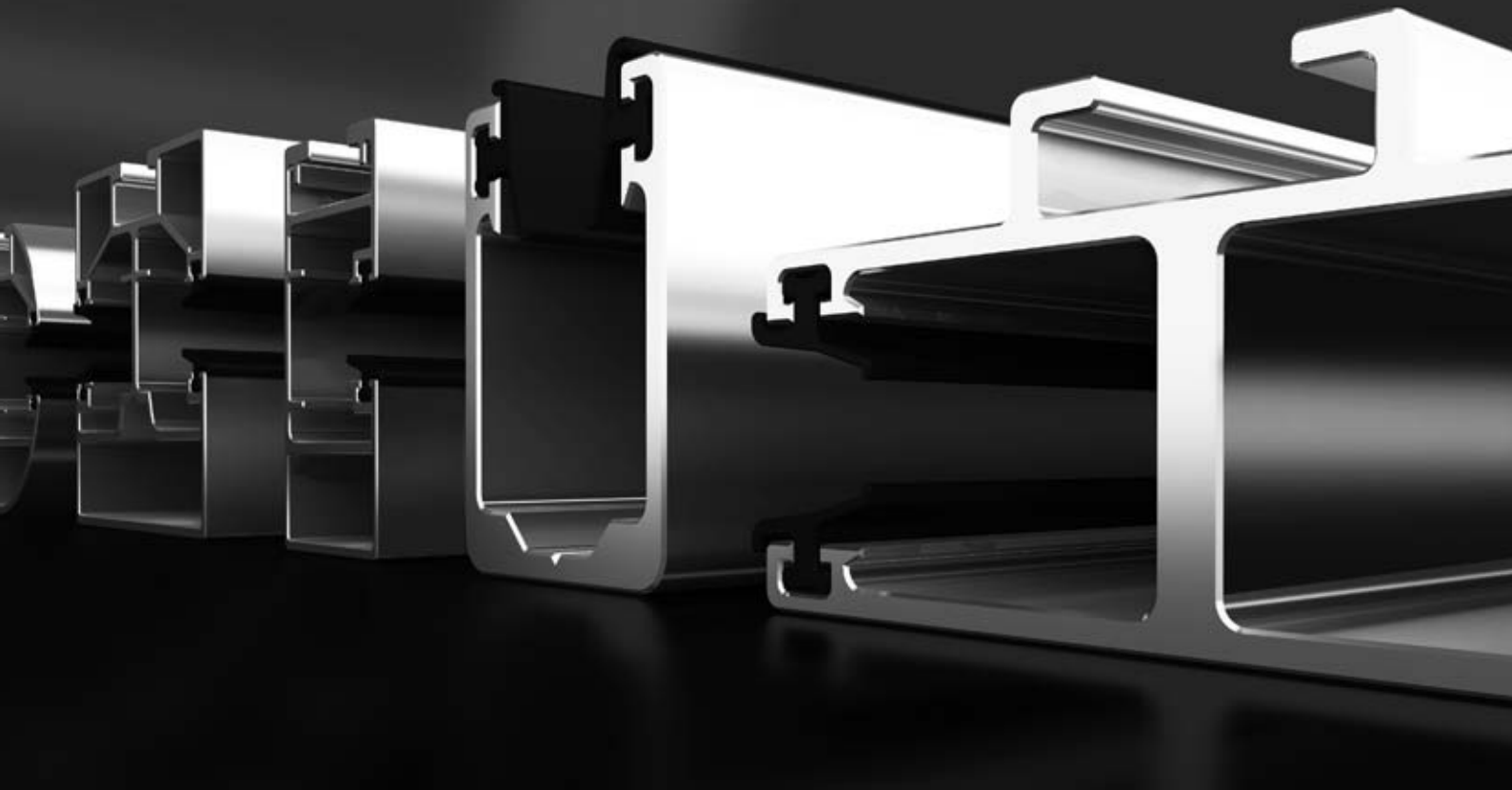
- 50 x 50 mm
- Central guide rail to guide two blinds
- For use with self-supporting external venetian blinds



## Fascia panel

- To reduce lateral incidence of light





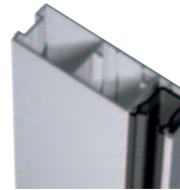
#### **FSCH 39-64**

- 39 x 64 mm
- Continuous fixing profile
- For use as a fascia panel to reduce the lateral incidence of light



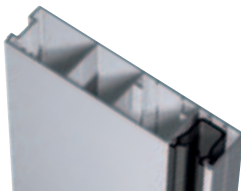
#### **FSCH 39-89**

- 39 x 89 mm
- Continuous fixing profile
- For use as a fascia panel to reduce the lateral incidence of light
- Insect screen can be retrofitted



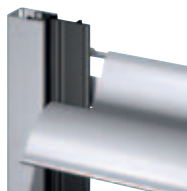
#### **FSCH 27-95**

- 27 x 95 mm
- Continuous fixing profile
- Front edge can be plastered in
- For use as a fascia panel to reduce the lateral incidence of light
- Insect screen can be retrofitted



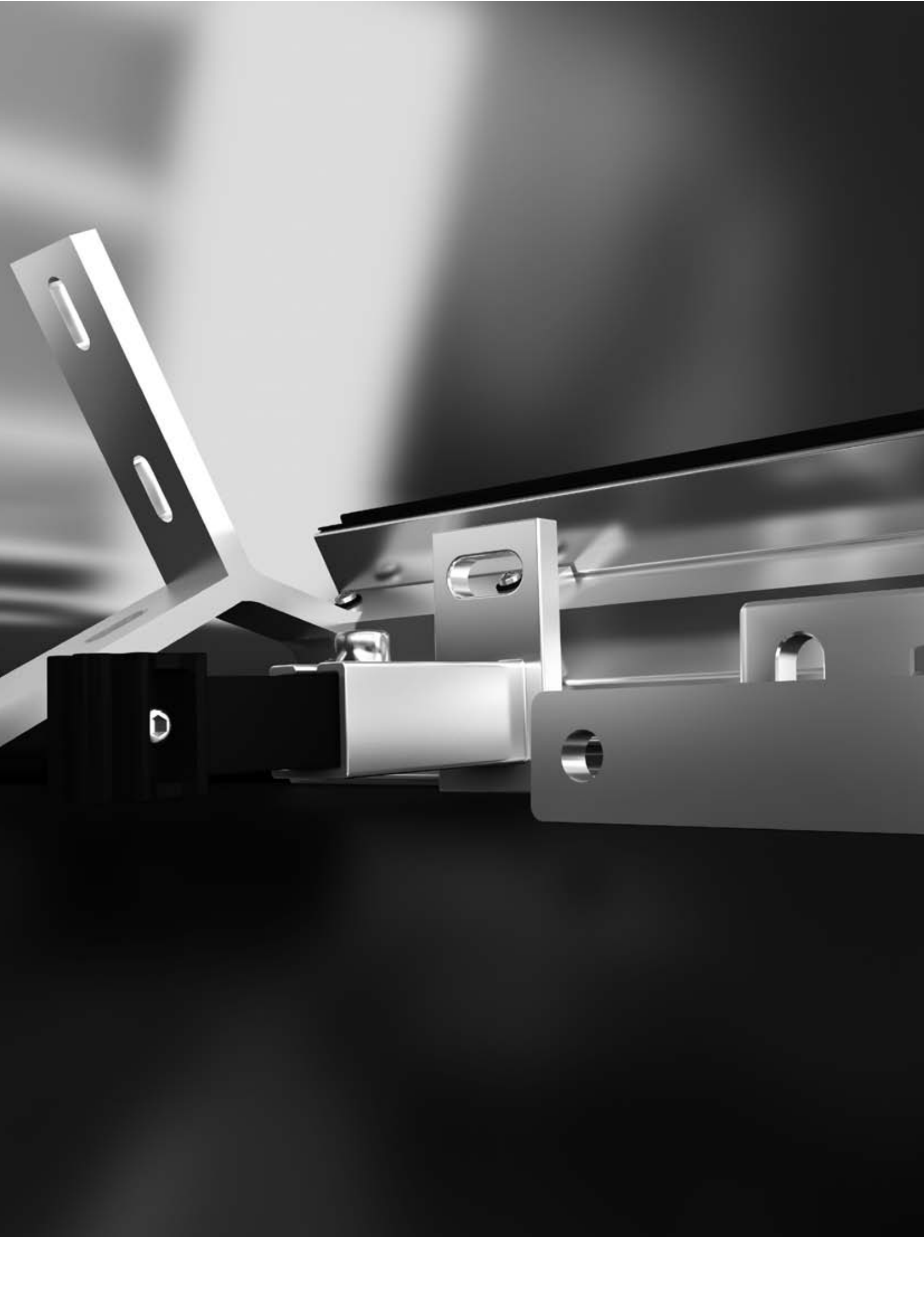
#### **FSCH 27-122**

- 27 x 122 mm
- Continuous fixing profile
- Front edge can be plastered in
- For use as a fascia panel to reduce the lateral incidence of light
- Insect screen can be retrofitted



#### **Light slit cover A5**

- To reduce the incidence of light between the slat and guide rail
- Only for use with 90 mm dim-out external venetian blinds
- For installation in the reveal



# Guide rail brackets



## H 1

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- Bracket for guide rail type 1, 2, 3, 4



## H 101

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- Bracket for guide rail type 7, 8, 9, 10



## Corner bracket version 1

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- Bracket for 90° external corner with 40 x 40 mm square tube and guide rail type 1

# Cable guidance



**Tension cable bracket**

■ Type S 01



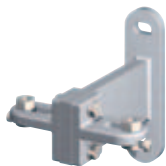
**Tension cable bracket**

■ Type SH 02 with cross plate



**Tension cable bracket for mullion-transom (MT) facades**

■ Type SF 21



**Tension cable bracket for mullion-transom (MT) facades**

■ Type SF 22



**Tension cable bracket for mullion-transom (MT) facades**

■ Type SG 21



**Tension cable bracket for mullion-transom (MT) facades**

■ Type SG 22



**Tension cable bracket for floors and window sills**

■ Type S 04



**Tension cable bracket for corner installations**

■ Version 1



**Tension cable bracket for corner installations**

■ Version 2



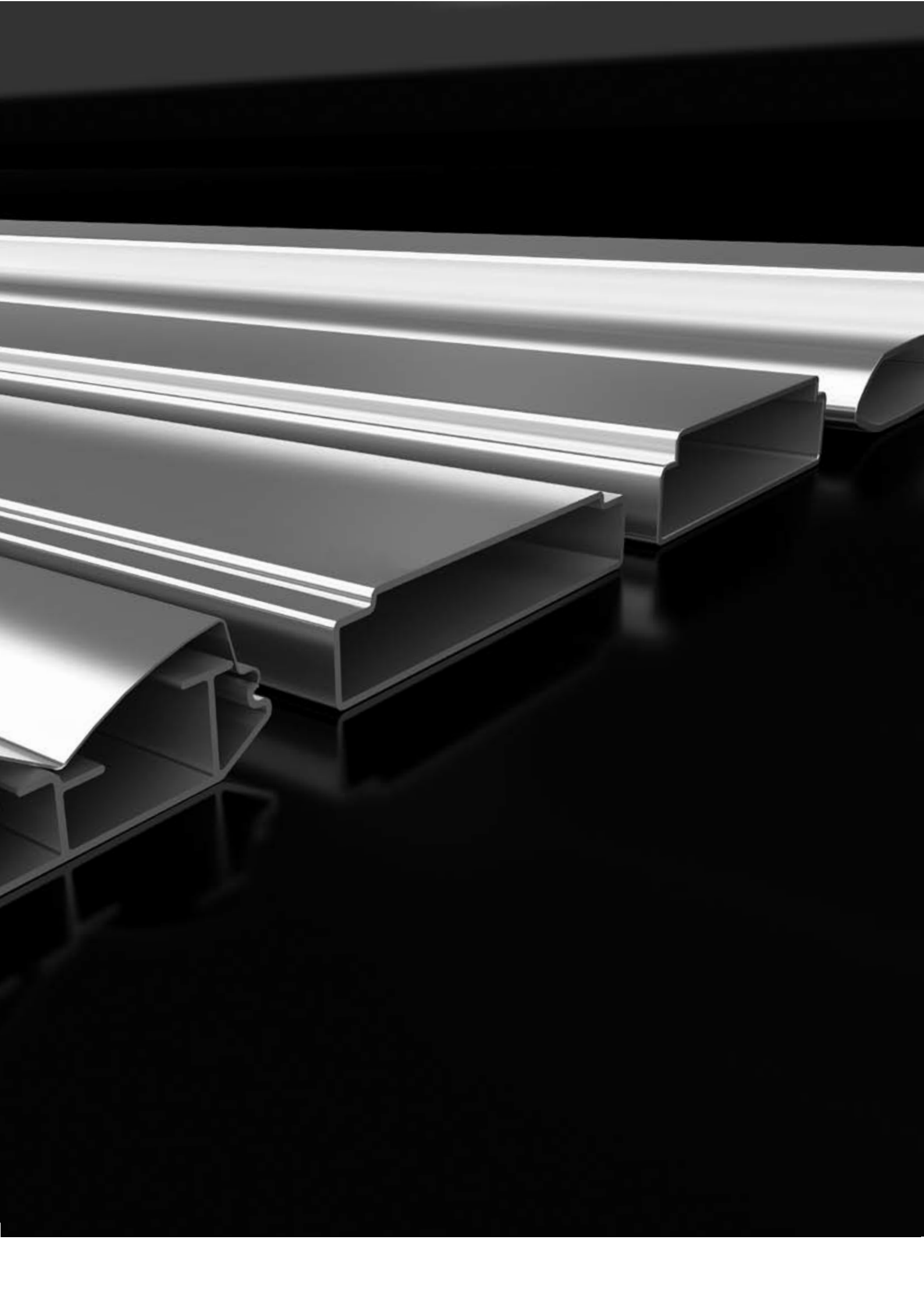
**Spring tension device**

To compensate for lengthwise extension of the tension cable, integrated "unobtrusively" into the top rail of the external venetian blind

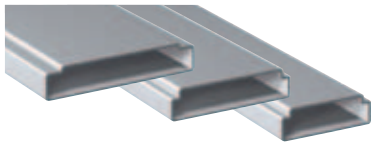


**Tension bracket, large**





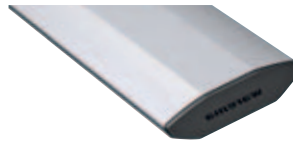
# Bottom rails



## Standard bottom rail

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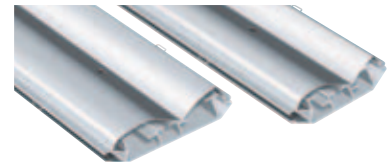
- Width x Height  
50/60/80/100/150 x 20 mm
- With plastic end caps
- To fit all slat shapes



## Design bottom rail

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- Bottom rail adapted to fit shape of slat
- Approx. 80 x 20 mm
- With plastic end caps
- Suitable for use with Design external venetian blinds



## Bottom rail for dim-out external venetian blinds

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- Flat, unobtrusive shape
- Approx. 73/93 x 15 mm
- With clip-on slat
- Tilts with the slats
- Flattened sides for smallest possible light gap between external venetian blind and window sill



## Special bottom rail

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- For flush installation of cover panel
- For use with facade external venetian blind type E 60/80 A6 and E 60/80 AF A6
- Cover panel sits on or between guide rails



## Daylight guiding bottom rail

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- Bottom rail adapted to fit shape of slat
- Approx. 60/80 x 25 mm
- With plastic end caps
- Fits daylight guiding venetian blinds 60L/80L

# Drives

WAREMA motorised external venetian blinds are used almost exclusively in new buildings and refurbishments: to enhance their efficiency, we would recommend the use of WAREMA control systems, which are specifically adapted for use with WAREMA external venetian blinds, improve your well-being and guarantee a perfect indoor environment.



## **Standard motor**

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- 230 V central motor
- Conveniently adjustable upper and lower limit switches



## **Comfort switch to protect against freezing**

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- With thermal protection switch
- Suitable for use with blinds of up to 8 m<sup>2</sup>
- The blind cannot be operated when iced-over and can therefore not be damaged



## **Motors for LONWorks technology**

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- Motors with SMI interface
- Motors with incremental encoders
- "Return" to slat angle position
- Slats adjusted according to the position of the sun



## **Noise-reduced top rail**

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- Minimises running noise
- Different models for inside and outside use



## **Solar**

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- Solar panel charges a storage battery while the sun shines
- External venetian blind can be operated by hand-held radio transmitter

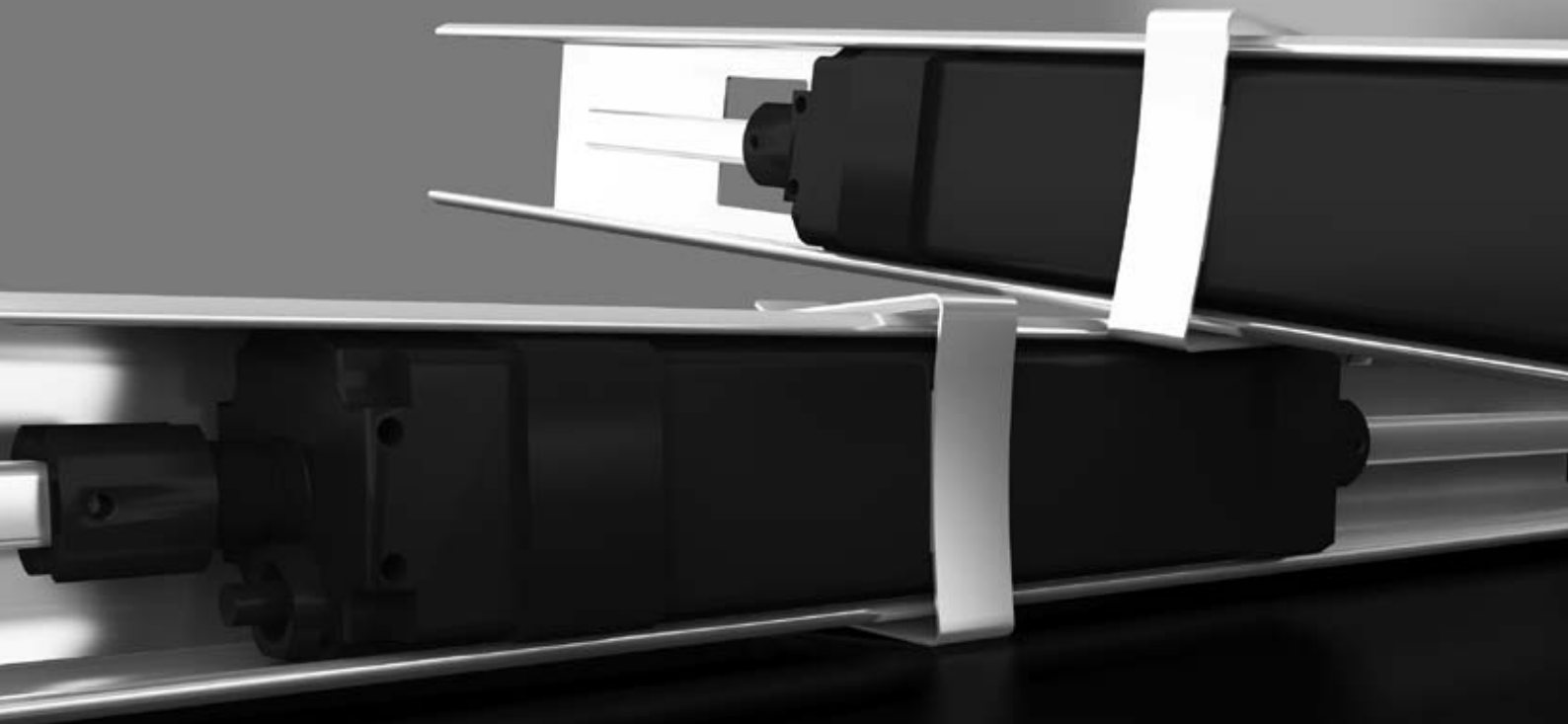


## **Battery-supported emergency retraction**

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- External venetian blind motor and battery-supported emergency drive with emergency controller
- Blind retracts in an instant
- Specially designed for emergency exits





#### **Motor with emergency crank handle**

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- For use in the event of malfunction or defective motor
- For use in the event of power failure



#### **Cord operation**

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- Only for use with external venetian blinds
- Pull and tilt cords raise and lower blind and tilt slats



#### **Crank drive**

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- Maintenance-free bevel gear
- Crank and crank rod used to raise and lower the blind and tilt the slats
- Thermal isolation, i.e. the drive mechanism of the pivot bearing is interrupted, thereby reducing conduction of heat



# Control systems



## **WAREMA climatronic®**

The WAREMA climatronic® is a complete solution for the control of all WAREMA products and additional systems, which, by coordinating the control of sun shading systems, ventilation, windows, heating, cooling and much more, reduces the building's energy consumption throughout the whole year.

## **Benefits**

- Reduced energy consumption at the same time as creating a pleasant living environment
- Integrated slat tracking, according to the position of the sun, for optimum glare control whilst providing maximum transparency towards the outside world
- Intuitive operation by multifunctional operating dial and self-explanatory menu guidance
- Manual operation and settings can be changed at any time

## **Control**

- By central control unit or weather station



# Control systems

## **WMS – WAREMA Mobile System**

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

## **Benefits**

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- All of the controllable sun shading products can be reached from any position in the house
- Optimum control by visual feedback of move commands performed
- Scene control for up to 8 different scenes
- Tap-proof radio transmission by 128-bit encrypted network
- Simple to program and start using a PC

## **Control**

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- By hand-held radio transmitter, central control unit or wind sensor









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