VERTICAL AWNINGS

Technology 2024

Excerpt from price list

moveIT

Product configurator

Advantages

- Easiest employee training due to the possible and allowed selection of a product
- Saves time and costs
- Reduction of time-consuming product training through selection options and standard storage
- Graphic support in the course of the configuration
- Printed price lists are no longer required
- Products and prices are always up to date
- Ongoing checking of products for feasibility due to comprehensive integrated checks; in this way products that are technically not feasible are excluded
- Orders are immediately digitally forwarded to HELLA, the completion of forms is no longer necessary and thus no transmission errors can occur and manual input is not required
- Tailor-made interfaces to industrial systems
- Data exchange via XML OpenTrans possible

Configuration of the HELLA products

- Powerful product configurator for sun protection products
- All HELLA products are available in the system
- Safe and guided product data recording for offers and orders
- List price and purchase conditions are stored for our customers, so that the correct customer-specific stored purchase price and thus the margin for our customer is immediately visible at any time.
- A professional offer is immediately available at the push of a button and can be forwarded to the customer

Available systems

moveIT@ISS+

- Advanced possibilities for dealers of sun protection products with own customer management
- Management of own articles
- Digital ordering directly from HELLA
- Products are offline available at the customer

moveIT@WEB as interface to SBH realised

- Integrated directly in the industry-sector-specific software from SBH
- Offer preparation and order management directly from within SBH
- Digital ordering directly from HELLA

moveIT@EASY

- WEB solution for small dealers of sun protection products
- Easiest offer preparation and digital ordering directly from HELLA
- No software installation

General information

Vertical awnings and TOP FOAM add-on elements are made to measure. Returns, changes or exchanges are not possible. Subject to technical modifications. Color deviations between plastic parts and coated surfaces depend on the material or manufacturing process and cannot be ruled out; the same applies for spare part reorders in anodized colors.

Notes on production tolerances

HELLA products are custom-made. Returns, changes or exchanges are not possible. Subject to technical modifications.

Please note that despite millimetre-precise production, tolerances can be found on the finished product. These tolerances refer to the cutting dimensions and not to the finished dimensions of the curtains.

Ordering dimension [mm]	Tolerance [mm]
≤2000	±1.5
≤4000	±2
≤5000	±3
≤6000	±5

Important information for your order of TOP FOAM screen protect top box

- Always indicate complete element dimensions only (window with top-mounted box).
- Width = complete width finished element (usually the outer dimension of the window frame)
- Height = overall height finished element = height of the window frame + box height
- Your finished elements are manufactured based on these dimensions.
- Please observe the required length of the guide rails in accordance with your outer window sill or your lower window frame connection.
- If no special information concerning the length of the guide rails is stated in the order, it is assumed to be lower edge window frame = lower edge guide rail.
- If a guide rail slope is desired, the slope is added starting from this point.
- If the installation situation is not certain yet at the time the order is made, we recommend the indication of a cutting tolerance so that you can adapt the guide rails to the situation.

Plastering the box

The box end profile is not intended for plastering. According to the guideline, plastering strips must be placed on the profile noses on site to prevent development of cracks and thus the ingress of water.

See guideline Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation (date of issue 2021, 3rd edition).

Assessment of the product features

Our vertical awnings are state-of-the-art, therefore the following guidelines of IVRSA (Industrievereinigung Rollladen-Sonnenschutz-Automation e.V. [Industrial association for roller shutters-sun protection-automation registered association]):

- Guidelines for the evaluation of product features of awnings
- Guidelines for the evaluation of ready-made awning covers
- Guideline - wind loads for the construction of closures and awnings in the retracted condition
- Guideline for cleaning and maintaining awning covers
- Recommendations for use of wind for vertical awnings whose fabric is guided in lateral rails

See homepage **https://ivrsa.de/technische_unterlagen/**

(Source: IVRSA.de)

New IVRSA guideline on side seam guided vertical awnings

The IVRSA has published a new guideline for side seam guided vertical awnings.
This guideline was newly created or extracted and separated from the general guideline on awnings, as this product group is becoming increasingly important.

(Source: IVRSA.de)

Definition RAL-Installation

In practice, the term RAL installation means that the window connection joint as well as the window installation are "carried out in conformity with the standards".

For most craftsmen and constructors this term is a synonym for the correct window installation according to the **state-of-the-art**. Simply said, this standard describes that with regard to the moisture diffusion the joints on the inside (inside the room) must be designed in such a way that they are less permeable to air and water than the ones on the outside. This must also be guaranteed for **extended periods of time**. This means, that the window seal must absorb possible movements between the window and the wall or the roller shutter box, which may occur due to elongation, thermal stress, vibrations or wind.

In detail, companies with the quality label must meet the following requirements:

- Complement of the system description with connection examples that are evaluated by the "ift Rosenheim"
- Appointment of a person in charge of the installation that participates in workshops about the installation as well as an intensive in-house training of the fitters
- External monitoring of the installation at a construction site that was selected by the "ift Rosenheim" as well as object-specific construction documentation with installation details
- Use of suitable and tested materials for further education
- Control and documentation of the quality of work carried out by the head of the installation staff on site, including a randomized control and documentation of the building project
- Verification of the quality controls within the framework of the external monitoring through the "ift Rosenheim"

(Source: Planning and design guidelines for the installation of windows and doors in new buildings and rehabilitation projects)

General information

Definition GEG (Buildings Energy Act)

The **Buildings Energy Act (GEG)** is part of the German economic administrative law. The regulation dictates structural standard requirements for efficient **business energy requirements** of their **building** or **building project** to the builders. The GEG applies to all heated and cooled buildings or building parts.

Roller shutter boxes are mentioned under outer wall in the reference table in line 1.1. **The U-value of 0.28 W/(m²K) indicated there, however, is not to be understood as a requirement for the U-value of the roller shutter box, but the entire wall structure including the roller shutter box must meet this U-value.**
Reference values are no requirements for individual components!
The roller shutter boxes are included, i.e. the roller shutter box surface is not separately considered in the calculation.
As before, the requirements of the currently applicable DIN 4108-2, the Building Rules List, and the DIN 4108 supplementary sheet 2 must be met.

Thus, the planner can use the simplified calculation method with the reduced lump factor ΔU_{WB} = 0.05 W/m²K for the determination of the energy demand, provided that all other thermal bridges present on the construction correspond to the currently applicable DIN 4108 supplementary sheet 2.

Processing guidelines for top-mounted boxes

1. Higher **temperature-related linear expansions** must be allowed for with dark-colored guide rails and roller shutter profiles.

2. With the exception of plastic profiles in white, grey, light grey and beige, we **cannot give any guarantee** for the color and form stability of plastic profiles that are not provided with a surface protection.

3. We recommend to use a **bottom strengthening profile** for split elements with a width above 2000 mm. This must be screwed shear-resistantly to the window frame.

4. **If the curtain of the selected element has more than 20 kg, an additional fixing device has to be provided for the top-mounted box.**
   If the element width exceeds 1600 mm, we recommend to **fix the box every 800 mm to the lintel**, to increase the stability of the complete element (window or door with box) when it is built-in.

5. **Profiles with protective coating** can be used up to a height of 1800 m above sea level and to the north of the 46th parallel (in Europe, incl. Austria and Switzerland). To the south of the 46th parallel the use is limited.

6. The inspection cover is part of the top-mounted box and must be removable without damage.

7. The connections to the building must be carried out in accordance with the **requirements of the structural physics**.

Plaster guidelines

The current plaster guidelines and technical guidelines, such as DIN V18550:2005-04 or the recommendations of the Association of Plasterers, apply. Place the reinforcement fabric over the entire roller shutter box and make sure that the fabric overlaps in the joint area by at least 10 cm. Embed an additional reinforcement made of reinforcement fabric diagonally over the box and into the soffit edges.
The box end profile is used to attach / glue on the plastering strip and should not be plastered on directly. => Guidelines “Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation” (date of issue 02/ 2021, 3rd edition)

Tips for plastering EPS:

- Protect the product from moisture during construction or storage
- Cover the boxes with materials that are impervious to light
- Do not use transparent foils, because this can cause the EPS to melt due to the possible lens effect.
- Plastering of the EPS within 2-3 months
- For certain installation situations, cover the top of the box located outdoors (do not use transparent foil!).

HELLA recommends carrying out the plastering work on the EPS within 2-3 months, depending on the local conditions and the prevailing season. Otherwise, apply a suitable rendering base from an ETICS manufacturer to the polystyrene surface for protection. If the polystyrene component has already yellowed due to UV exposure as a result of the delayed construction process, this floury substance must be removed without residue in accordance with the processing guidelines of the ETICS manufacturers and plastering work must be started immediately.

General note regarding plaster joints

These specifications and recommendations are based on the following guidelines:
Germany:
Guidelines for the connection to windows and roller shutter-, outdoor blind box with plaster, thermal insulation composite system and drywall installation. (Date of issue 2021, 3rd edition)
Austria:
Processing guidelines for thermal insulation composite systems VAR 2019 (1st edition, January 2019)
Guidelines for the connection to windows, sun protection and facade. (1st edition, 2017)
Guidelines for the installation of window sills in thermal insulation composite systems and plastered facades as well as in curtain facades (3rd edition, 2015-08)

Definition insect screen

In the guideline “Product characteristics insect screen” provided by the IVRSA Industrial Association / Professional Association Sun Protection Technology, the insect screen is defined as follows:

The insect screen fabric can be lowered, rolled up or pushed shut, if required. To ensure the rolling up, the lowering or the pushing shut, the product may not close completely resulting in a - small - gap between the insect screen fabric and the guide groove towards the adjacent building parts or structure. The often used sealing brushes improve the sealing, but provide only small space for the motions of the gauze. Primarily an insect screen has the function to prevent flying insects from entering the interior. This works best with so called hymenopterans, which due to their filigrane physique can not crawl through the eventually available sealing brush. Bugs, firebugs, woodlouses, spiders and other crawlers can not be kept off completely, because they can enter through the spaces between gauze, sealing brushes or gaps. A 100% protection, quasi the creation of an insect-free interior, can therefore not be guaranteed with moveable insect screens. This may also happen with fixed elements like clamping frames or sliding units, but only via the brushes used. As a basic principle, all elements should be planned and designed in such a way, that there is no unprotected gap towards the structure, through which the insect might enter. But it must be stated, that it is not possible to create a 100% insect-free interior, even if the elements are provided with brushes.

Lifespan class according to DIN EN 13659

HELLA products are designed for a particularly long service life. They fulfil service life class 2 or 3 as standard. Our motor-driven HELLA outdoor blinds/Venetian blinds and roller shutters fulfil the highest service life class (class 3). According to DIN EN 13659, 10,000 cycles of extension/retraction and 20,000 cycles of turning are required. In practice, this corresponds to a service life of 15 years with two cycles per day. This means that our products and technical features meet the highest quality requirements.

Mounting of the products.

The screw material defined in the standard for the respective mounting base is an exemplary recommendation of HELLA, as long as no special requirements, such as ETA certificates, are demanded. Generally already during the planning stage, but before the installation at the latest, it must be checked, if the defined mounting material is suitable of the installation. The processing instructions from the fixing material manufacturer must be observed.

Corrosion

HELLA products achieve the corrosion classes described in the respective product standard. However, under extreme conditions (e.g. near the coast), corrosion of exposed stainless steel, powder-coated, chrome-plated or galvanised components may occur.

Compliance with the coating specification does not guarantee reliable prevention of filiform corrosion at profile and cut edges. Especially under the following conditions, filiform corrosion cannot be excluded:

- On the coast or in regions close to the coast, up to approx. 75 kilometres from the coast.
- In special places with aggressive atmospheres (indoor swimming pools, airports, railway stations)
- Near industrial plants with chemical air pollution
- Near exhaust systems or roads with heavy traffic (de-icing salt)

Products in the area of escape routes

Sun protection systems without special equipment must not be installed in the area of escape routes, as they cannot be raised in the event of a power failure, for example, and block escape routes.

There is an IVRSA guideline “Sun protection in escape routes” with recommendations. In principle, there are no clear specifications for the installation of sun protection in escape routes.

The planning of an escape route (including the second escape route) must always be coordinated and approved by the planner responsible for the building with the relevant authorities.

Planning information

The illustrations in this documentation are general recommendations which depict the installation situations schematically. The illustrations do not release anyone form the obligation to check individually, if his project is implementable and complete. Surrounding structures are depicted only schematically.

All allowances and assumptions have to be adapted to local conditions. Plaster or connection of the reinforcement of the base board to the insulation / wall has to be carried out according to the standards and directives by the client.

Wind resistance

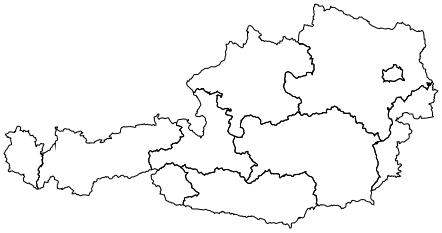
Wind resistance classes and operating classes according to EN 13659

Obligatory application since 01.04.2006

Since 01/04/2006 the outer ends must carry a CE marking pursuant to EN 13659. The following criteria must be observed!

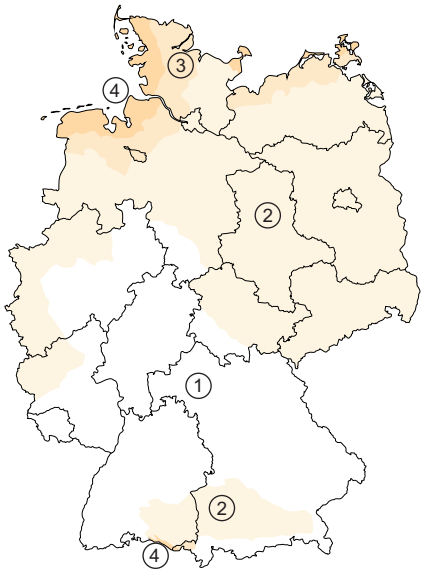
The Federal Association for Roller Shutter & Sun Protection Devices has elaborated the ift guideline that specifies, what wind resistance class is required for which case of application. This guideline "Application recommendation for exterior blinds and shutters" subdivides the federal territory in wind load zones (1) and terrain categories (2). As a result of this zoning, the relevant wind load zone and terrain category can be determined easily via the location of the building. The installation height (3) of the exterior blinds and shutters specifies the third necessary parameter.

1. Determining the wind load zones



Wind load zones in Austria

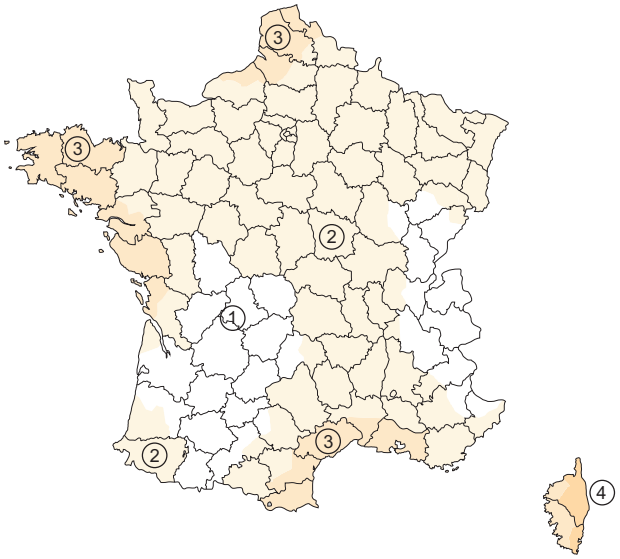
In Austria a calculation of the wind load according to the ÖNORM EN 1991-1-4, ÖNORM B 1991-1-4 must be carried out for each location!



Wind load zones in Germany

- Wind load zone 1 with 22.5 m/s
- Wind load zone 2 with 25.0 m/s
- Wind load zone 3 with 27.5 m/s
- Wind load zone 4 with 30.0 m/s

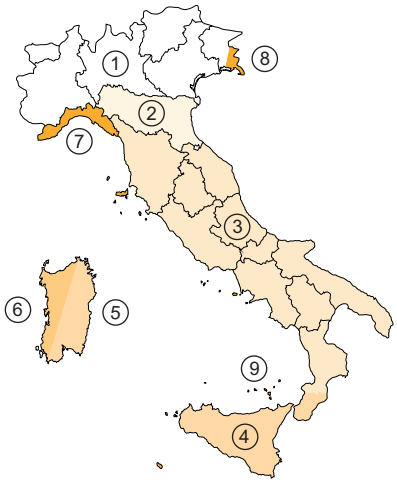
Source: DIN 1055-4:2005-3, DIN EN 1991-1-4/NA



Wind load zones in France

- Wind load zone 1 with 22.0 m/s
- Wind load zone 2 with 24.0 m/s
- Wind load zone 3 with 26.0 m/s
- Wind load zone 4 with 28.0 m/s

Source: Choix des classes de résistance au vent des fermetures (DTU 34.2, NF EN 1991-4/NA)



Wind load zones in Italy

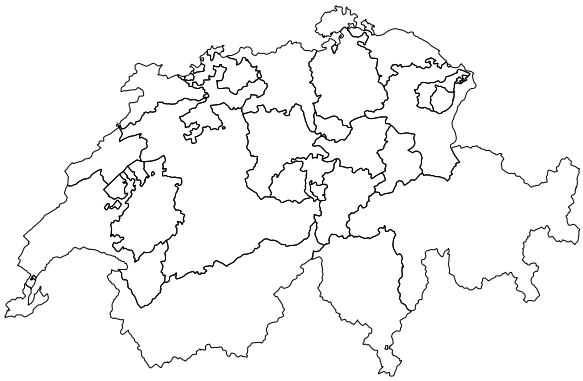
Zone	Description	$V_{b,0}$ [m/s]	a_0 [m]
①	Aosta Valley, Piedmont, Lombardy, Trentino-Alto Adige, Veneto, Friuli (with the exception of Trieste)	25	1000
②	Emilia Romagna	25	750
③	Tuscany, the Marches, Umbria, Latium, the Abruzzi, Molise, Apulia, Campania, Basilicata, Calabria (with the exception of Reggio Calabria)	27	500
④	Sicily and Reggio Calabria	28	500
⑤	East of Sardinia (from Cape Teulada to the isle Maddalena)	28	750
⑥	West of Sardinia (from Cape Teulada to the isle Maddalena)	28	500
⑦	Liguria	28	1000
⑧	Province of Trieste	30	1500
⑨	Isles (with the exception of Sicily and Sardinia) and the open sea	31	500

Source: www.madosoft.it
(CNR-DT 207-2008)

Note:

For regions above 1500 m sea level, specifications regarding the climatic conditions and the location must be made.

$V_{b,0}$ [m/s]	Wind speed
a_0 [m]	Sea level



Wind load zones in Switzerland

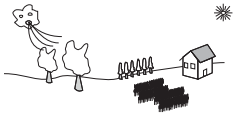
For Switzerland, the VSR information sheet (Vertical Systems Reseller) regarding the influence of the wind resistance on sun and weather protection systems and the standard SIA 261 stated therein applies.

For other countries the values must be requested separately from the local weather services!

Wind resistance

Wind resistance classes and operating classes according to EN 13659

2. Determining the terrain category

Terrain category I High seas, lakes with at least 5 km of free space downwind, plain country without obstacles	
Terrain category II Terrain with hedges, several farm buildings, houses or trees, e.g. agricultural area	
Terrain category III Suburbs, industrial zones or areas zoned for economic activities, forests	
Terrain category IV Urban areas, whereas buildings with an average height of more than 15 m are built on at least 15% of the area.	

Source: DIN 1055-4:2005-3

3. Installation height

The following table of the ift guideline gives the recommended wind resistance class on the basis of the installation height:

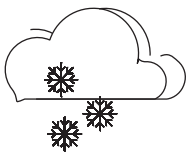
Terrain category	Installation height of the exterior blinds and shutters in an average range of 0-8 m Wind load zone				Installation height of the exterior blinds and shutters in an average range of >8-20 m Wind load zone				Installation height of the exterior blinds and shutters in an average range of >20-100 m Wind load zone			
	1	2	3	4	1	2	3	4	1	2	3	4
I	3	4	4	4	4	4	5	5	4	5	5	6
II	3	3	4	4	3	4	4	5	4	5	5	5
III	2	3	3	4	3	3	4	4	4	5	5	5
IV	2	3	3	3	3	3	3	4	4	4	4	5

The minimum class regarding the application recommendations is the wind resistance class 2. This does not mean, that products with the classes 0 and 1 may not be applied.

To ensure the highest possible quality standard, a product of the appropriate wind resistance class is to be recommended.

Operating forces

In accordance with EN 13659 our products meet the requirements of the guidelines for maximum allowable operating forces.



Operability in case of frost

Vertical awnings must not be operated in case of icing. First the units must be freed from snow and ice to make them viable. We do not accept responsibility for damage to the sun protection device, that results from the operation of a frozen unit.

Recommendation: If control devices are used, turn off the automatic control device during winter and check that the unit has been freed from snow and ice before it is operated manually.

Wind Force according to Beaufort (Beaufort Scale)

The English Admiral Sir Francis Beaufort /1774-1857) elaborated the Beaufort scale in 1806.
With the help of this scale it is possible to estimate the wind force on the basis of the effects of the wind. The scale ranges from wind force 0 (still air) to 12 (hurricane).

The positioning and the number of wind warning devices used are decisive for the relevant selection for the wind speed suitable for the object; especially the building geometry and the building location must be considered.

Wind force (degrees acc. to Beaufort)	Description	Average wind speed in a height of 10 m above open country		Dynamic pressure	Effect of the wind in the interior land
		m/s	km/h	[Pa]	
0	still air	**0-0.2**	**<1**	0	Smoke raises vertically
1	slight draught	**0.3-1.5**	**1-5**	0-1	The draught of the smoke shows the wind direction
2	light breeze	**1.6-3.3**	**6-11**	2-6	Wind is noticeable in the face, leaves and vanes are moving
3	gentle breeze, light wind	**3.4-5.4**	**12-19**	7-18	Wind moves thin twigs and stretches pennants
4	moderate breeze, moderate wind	**5.5-7.9**	**20-28**	19-39	Wind moves twigs and thin branches, whirls up dust and loose paper
5	fresh breeze, fresh wind	**8-10.7**	**29-38**	40-72	Smaller deciduous trees start to sway, white crests are formed on lakes
6	strong wind	**10.8-13.8**	**39-49**	73-119	Strong branches sway, it is difficult to hold an umbrella, telegraph cables sough in the wind
7	near gale	**13.9-17.1**	**50-61**	120-183	Resistance felt when walking against the wind, whole trees in motion
8	stormy wind	**17.2-20.7**	**62-74**	184-268	Branches break off from the trees, walking outside is difficult
9	storm	**20.8-24.4**	**75-88**	269-373	Branches break off from trees, houses are damaged slightly (tiles or smoke hatches were lifted from the roof)
10	heavy storm	**24.5-28.4**	**89-102**	374-505	Trees are broken off by the wind, buildings are damaged to a greater extent
11	violent storm	**28.5-32.6**	**103-117**	506-665	Trees are uprooted by the wind, widespread storm damages
12	hurricane	**from 32.7**	**from 118**	666-853	Heavy devastations

Source: ift Rosenheim

Vertical awnings

Wind resistance classes pursuant to EN 13561:2004+A1:2008	Dynamic pressure [Pa]
0	<40
1	40
2	70
3	110
4	170
5	270
6	400

Wind resistance

Wind limit recommendations for textile vertical awnings without side seam guiding

Design	Facade awning Vertical awning		Markisolette (with sloping projection unit)		Drop-arm awning	
	[bft]	[m/s]	[bft]	[m/s]	[bft]	[m/s]
Guide rail directly (standard clearance) on façade	5	8-10				
Cable/rod guiding directly (standard clearance) on façade	4-5	6-8				
Guide rail on façade clearance 30 - 100 cm	4	6	4	6	4	6
Cable/rod guiding on facade Distance 30 - 100 cm	4	6				
Guide rail on polygonal façade	4	6				
Cable/rod guiding on polygonal facade	4	6				
Guide rail in the soffit	5	8-10	5	8-10	5	8-10
Cable/rod guiding in the soffit	4-5	6-8				

Source: Professional Association Roller Shutter, technical guideline TR 106 External blinds and shutters, wind impacts, issue June 2014

Recommendations of operation for side seam guided, textile vertical awnings according to IVRSA

Wind resistance - side seam guided units:

The side seam guidance for textile, vertical front-mounted blinds ensures a higher wind stability.
Due to the guidance via zip fastener directly into the rail, these blinds withstand higher wind speeds than conventional front-mounted blinds or facade awnings.

DIN EN 13561:

The HELLA vertical awnings with side seam guidance are defined according to CE and are in accordance with DIN EN 13561.
Wind resistance: Class 3-6 - in connection with the regulation - VO (EU) 2019/1188

Wind resistance class*	Vertical awnings - side seam guided VM07/SM07/PM07 Weight [m^2]
6	≤ 5
5	> 5-8
4	> 8-12
3	> 12-18

* The values correspond to the permissible load with completely extended curtain.
The installation must be made directly on the ground and result in a connection that is closed all around.

The wind classes according to DIN EN 13561 do not allow to draw conclusions as regards the usability (extending/retracting/in-between positions) with real wind loads. The requirements that must be met to fulfil the performance requirements are based on static loads and do not observe the dynamic effects of recurrent occurring loads (turbulences), which the cover and the frame are exposed to in the field. Therefore the static pressure can not be used to specify the fastening of the awnings to the building.

Also the subfloor/the distance to the facade/the height/the corner situation influence the maximum possible wind speed and are not considered in the standard (DIN EN 1932:2013-09 External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria) although these influencing factors have a significant influence on the wind resistance of the product.

In the following application recommendations the wind speeds are specified in m/s.

The wind speeds used in the following table only apply with closed windows and if there is no corner situation. Also the positioning and the number of wind warning devices used are decisive for the relevant selection for the wind speed suitable for the object; especially the building geometry and the building location must be considered.

We recommend the use of wind warning systems in combination with the appropriate control devices to retract the sun protection devices with predefined wind forces after a set time delay.
The tables below list the wind limit values for side seam guided, textile vertical awnings as defined by the IVRSA (Industrievereinigung Rolladen-Sonnenschutz-Automation e.V.). The unit should be retracted, when the lower limit value is reached.

Horizontal units, arc-shaped units do not meet the application criteria.

Recommendations of operation for side seam guided, textile vertical awnings according to IVRSA

Table applies for side seam guided units (VM07, SM07, PM07)*

Height [mm] \ Width [mm]	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000
1000	24	24	24	24	21	21	21	21	21	17	17
1500	24	24	24	21	21	17	17	17	17	17	17
2000	24	24	21	21	17	17	13	13	13	13	13
2500	24	21	21	17	17	13	13	13	13	13	13
3000	24	21	17	17	13	13	13	13	13	13	10
3500	21	17	17	13	13	13	13	13	10	10	10
4000	21	17	13	13	13	13	13	10	10	10	10
4500	21	17	13	13	13	13	10	10	10	10	10
5000	21	17	13	13	13	10	10	10	10	10	10
5500	21	17	13	13	13	10	10	10	10	10	10
6000	21	17	13	13	10	10	10	10	10	10	10

Maximum speed to move the curtain, specified in m/s (extending a d retracting the curtain completely)

Steps				
24	21	17	13	10

The table only applies, if the distance from the cover to the glass surface is < 100 mm.

Source: IVRSA (Industrievereinigung Rolladen-Sonnenschutz-Automation e.V.)

* see small box sizes regarding the remark at the end of the page

In the following case the values given in the table can not be increased:

- With soffit installation the tabular value can be increased to the next higher tabular value (e.g. from 10 to 13) (maximum value 24 m/s) up to a maximum width of 3000 mm and a maximum height of 3000 mm.

In the following cases the values given in the table must be redued:

- If the distance between the cover and the glass surface is > 100 mm ≤ 200 mm, the tabular value must be reduced by 2 levels (e.g. from 24 m/s to 17 m/s)
- If the distance between the cover and the glass surface is > 200 mm ≤ 300 mm, the tabular value must be reduced by 3 levels (e.g. from 24 m/s to 13 m/s)

The table can not be used with larger distances and self-supporting units.

Note:

Based on in-house wind tests, HELLA recommends observing the following information in addition to the official recommendations of the IVRSA:

- For the smaller box types Q85, Q100, E100 and H100, the downward movement to max. 11 m/s (~40 km/h) is only possible to a limited extent due to the lower weight of the drop profile. The full functionality of the systems above the limit value is therefore restricted. A wind monitor is recommended to avoid damage to the installation.

Structural-physical parameters

Fire prevention

The TOP FOAM is made of expanded polystyrene (HBCD-free) with a gross density of 30kg/m³. This material is specified in fire protection class B1 acc. to DIN 4102 or E acc. to EN 13501. Depending on the design option, the side of the box facing towards the interior of the room is plastered and therefore classified as non-inflammable.

Noise insulation

No standardized testing methods exist to determine the emissions for manually operated lift tape or crank handle drives (during operation). Therefore it is not possible to give concrete values to the designer, which would enable him in advance to determine the occurring immission in a room in need of protection.
The airborne noise insulation values given in the table “Structural-physical parameters” solely refer to the pure top-mounted box without any sound emissions, which may be caused by operations at the box.
Recommendation: Coordination between professional designer and contractor is recommended to determine on a case-by-case basis the measures (e.g. installation-specific boundary conditions) required to keep the entering of emissions into the building as low as possible.
Source: Information to DIN 4109-1:2018 Sound insulation in above-ground construction - Part 1: Minimum requirements (IVRSA = Industrievereinigung Rollladen - Sonnenschutz - Automation = Industrial Association Roller Shutters - Sun Protection - Automation)

Sound insulation in building construction

There is currently no recognised test method for power-operated closures/awnings to determine the emission according to “DIN 4109-1:2018 Sound insulation in building construction”. Due to this, it is not possible to provide the planner with concrete values for the respective sun shading system with which he can determine the occurring immission in the room requiring protection in advance by means of a transfer function.

For support - until a recognised test method exists - the IVRSA provides a leaflet for sun protection in connection with sound insulation in building construction. See homepage www.ivrsa.de under “technical documents”. Leaflet: Information to DIN 4109-1:2018 Sound insulation in above-ground construction - Part 1: Minimum requirements.

Box type	Thermotechnical characteristics					Noise insulation values	
	Box		Installation situation			Box	
	U_{sb} [W/(m²K)]	f_{Rsi}	Wall structure	Ψ [W/(mK)]	f_{Rsi}	R_w [dB] Curtain top	R_w [dB] Curtain top
TOP FOAM screen protect							
screen protect 260/300	0.38	0.80	Monolithic brickwork, image 250	0.09	0.80	44	42
			Externally insulated brickwork, image 253	0.10	0.80	44	42
screen protect 300/300	0.32	0.79	Monolithic brickwork, image 250	0.09	0.79		
			Externally insulated brickwork, image 253	0.08	0.79		
screen protect 365/300	0.27	0.79	Monolithic brickwork, image 250	0.11	0.80	45	44
			Externally insulated brickwork, image 253	0.07	0.78	45	44
screen protect 425/300	0.26	0.78	Monolithic brickwork, image 250	0.13	0.79		
			Externally insulated brickwork, image 253	0.06	0.79		
screen protect 260/250	0.40	0.80	Monolithic brickwork, image 250	0.10	0.80	43	42
			Externally insulated brickwork, image 253	0.10	0.80	43	42
screen protect 300/250	0.34	0.79	Monolithic brickwork, image 250	0.13	0.80	46	42
			Externally insulated brickwork, image 253	0.09	0.80	46	
screen protect 365/250	0.30	0.79	Monolithic brickwork, image 250	0.15	0.80	45	43
			Externally insulated brickwork, image 253	0.08	0.80	45	43
screen protect 425/250	0.28	0.79	Monolithic brickwork, image 250	0.14	0.80		
			Externally insulated brickwork, image 253	0.09	0.80		
TOP FOAM screen protect .S							
screen protect .S 243/300	0.38	0.80	Core-insulated brickwork, image 256	0.07	0.78		
			Timber construction, image 259	0.11	0.79		
screen protect .S 283/300	0.32	0.79	Core-insulated brickwork, image 256	0.05	0.79		
			Timber construction, image 259	0.10	0.81		
screen protect .S 348/300	0.27	0.79	Core-insulated brickwork, image 256	0.05	0.79		
			Timber construction, image 259	0.09	0.81		
screen protect .S 243/250	0.40	0.80	Core-insulated brickwork, image 256	0.07	0.79		
			Timber construction, image 259	0.10	0.79		
screen protect .S 283/250	0.34	0.79	Core-insulated brickwork, image 256	0.05	0.79		
			Timber construction, image 259	0.10	0.79		
screen protect .S 348/250	0.30	0.79	Core-insulated brickwork, image 256	0.06	0.79		
			Timber construction, image 259	0.09	0.79		

Note:
The test reports are available on request.
Image standard as per test report.

Explanations

R_w	Rated sound reduction index
U_{sb}	Thermal transfer coefficient
Ψ [in other words: psi]	linear thermal transfer coefficient - Example: installation situation in a monolithic outer wall
f_{Rsi}	Temperature factor at the most unfavourable position – transition area between window and box

Standard colors

General

For powder-coated aluminium parts the colors of the brochure “HELLA Color worlds” are available.

Notes:

- With anodized units the visible parts made of cast aluminium are powder coated in an anodising look.
- With anodized units there are longer delivery times (delivery time on request or as per order confirmation).
- As described in standard DIN 17611, slight color differences cannot be avoided with anodized parts. These color deviations are attributable to admissible dispersions depending on the material and processing. Under some circumstances this effect may also occur within one order.

Coating quality

We coat the surfaces in facade quality according to the guidelines of the Gütegemeinschaft für Stückgutbeschichtung (= Quality Control Association for the Coating of Building Components; GSB-Premium).
Regarding color shade and brightness our colors may differ from the original colors of the color charts RAL 840-HR and RAL 841-GL due to different production techniques.

Due to weathering, a natural influence on the color and the gloss level will occur within the warranty period, which, because of its very slow and constant process, do not negatively affect the visual appearance and is therefore not a fault of the product.
The compliance with the coating specifications does not ensure the prevention of filiform corrosion at profile and cutting edges, especially in chloride-containing environments like maritime regions or regions near the coast. Especially under the following conditions, filiform corrosion cannot be excluded:

- On the coast or in regions close to the coast, up to approx. 75 kilometres from the coast.
- In special places with aggressive atmospheres (indoor swimming pools, airports, railway stations)
- Near industrial plants with chemical air pollution
- Near exhaust systems or roads with heavy traffic (de-icing salt)

Changeover of powder numbers IGP series 58 to series 56

IGP Pulvertechnik AG informs that the powder coating series 58 will be changed to the new, more sustainable series 56. According to IGP, the surface quality of the 58 can be guaranteed with the 56 series. The changeover has already begun, will take place in several phases and should be completed by 03/31/2025. Depending on delivery availability, the previous series 58 will therefore still be used or the subsequent new series 56.

Information from the IGP:

Tested quality

The extensive pilot tests with IGP- DURA®one 56 in industrial operation show that the new product series guarantees excellent processing reliability in all phases of the coating process, as well as attractive surfaces, smooth or textured (identical to series 58). The excellent over baking stability and high gloss stability at different baking temperatures are convincing in all tests. This ensures smooth transition to the new powder coating generation "Highly reactive powder coating series IGP-DURA®one 56".

Standard colors

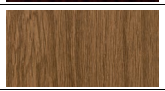
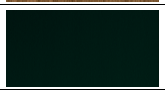
Standard colors for powder-coated aluminium parts

Color designation			Surface quality		
			Silk gloss	matt	matt, fine texture
Anthracite-grey	RAL 7016		●	●	●
Normal white	RAL 9016		●	●	●
White-aluminium	RAL 9006		●	●	●
Grey-aluminium	RAL 9007		●	●	●
Sepia brown	RAL 8014		●	●	●
Moss-green	RAL 6005		●	●	●
Pearl white	RAL 1013		●	●	●
Light grey	RAL 7035		●	●	●
Granite grey	RAL 7012		●	●	●
Slate grey	RAL 7015		●	●	●
Graphite grey	RAL 7024		●	●	●
Grey-brown	RAL 8019		●	●	●
Bronze	VSR 0780		●		
Beige	0003		●		
Dark beige	VSR 0110		●		
Purple red	VSR 0330		●		
Clay brown	RAL 8003		●		
Anthracite iron mica	DB 703			●	●
Marrone 04 Metallic	DM 1000				●
Sparkling Iron Effect	DM 1001				●
Jet black	RAL 9005			●	●

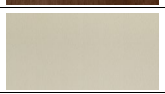
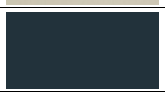
Color designation			Surface quality		
			Silk gloss	matt	matt, fine texture
Colors in anodized look (powder-coated):					
Natural colored anodized	C0PB			●	
Bronze anodized	C33PB			●	
Dark bronze anodised	C34PB			●	

Standard colors

Overview of décors for TOP FOAM attachment system

Color no.	HELLA designation		Application	Renolit		Hornschuch	
				Color no.	Description	Color no.	Description
11	Mahogany 13		Hornschuch	2097 013-167	Mahogany	436-2085	tp sapeli
13	Walnut		Hornschuch	2178 007-167	Walnut	436-2048	tp staufer oak mocca
16	Bog oak		Hornschuch	2052 089-167	Oak medium	436-2007	tp montana Oak tobacco
181*	Black brown		Hornschuch	8518 05-167	Black brown	436-5071	tp black brown
19	Light oak		Renolit	3156 003-167	Rustic oak	not available	-
21	Silver-grey		Hornschuch	7155 05-167	Silver-grey	436-5049	tp silver-grey
22	Ruby red		Renolit	3081 05-167	Dark red	436-5013	tp ruby red
25	Dark oak		Renolit	2140 006-167	Bog oak	not available	-
26	Oregon 4		Renolit	1192 001-167	Oregon 4	not available	-
27	Mountain oak		Hornschuch	2052 090-167	Mountain oak	426-2005	tp montana Oak natural
28	Oak-maron		Hornschuch	3167 004-167	Oak dark	426-2046	tp Vermont Oak sepia
29	Office oak		Renolit	3167 011-167	Oak natural	not available	-
30	Mahogany 21		Hornschuch	2065 021-167	Mahogany	436-2001	tp Cherry mahogany
31	Tobacco oak		Renolit	3167 002-168	Light oak	not available	-
32	Dark green		Hornschuch	6125 05-167	Fir green	436-5021	tp Fir green
33	Salamander-douglas fir		Hornschuch	3152 009-167	Douglas fir	426-2022	tp Aningeria golden brown
34	Winter douglas fir		Renolit	3069 037-167	Winter douglas fir	not available	-

* Color no. 181 is the successor décor foil of color no. 18. This change became necessary due to a change at the upstream supplier. Color number 18 has expired and is no longer available.

Color no.	HELLA designation		Application	Renolit		Hornschuch	
				Color no.	Description	Color no.	Description
35	Rustic oak		Hornschuch	3149 008-167	Rustic oak	426-2012	tp Oak sepia
36	Chocolate brown		Hornschuch	8875 05-167	Chocolate brown	426-5011	tp Chocolate brown
38	Moss-green		Hornschuch	6005 05-167	Moss-green	426-5014	tp Leaf green
39	Brilliant blue		Hornschuch	5007 05-167	Brilliant blue	425-5026	tp Brilliant blue
40	Chestnut		Hornschuch	8099 05-167	Chestnut brown	425-5025	tp Maroon brown
44	Bog oak		Renolit	2140 005-167	Oak grey	not available	-
45	Golden Oak		Hornschuch	2178 001-167	Golden Oak	436-2036	tp Staufer oak colonial
46	Oregon 3		Hornschuch	2115 008-167	Oregon 3	425-2053	tp Oregon
47	Mountain pine		Hornschuch	3069 041-167	Mountain pine	436-2009	tp Oregon pine natural
51	Black Cherry		Renolit	3202 001	Black Cherry	436-2032	tp Cherry Piedmont
52	Siena Rosso		Cova	49233	Siena Rosso	not available	-
53	Siena Noche		Cova	49237	Siena Noce	not available	-
54	Quartz grey plane		Renolit	7039 05-083	Quartz grey plane	not available	-
55	Quartz grey		Renolit	7039 05-167	Quartz grey	not available	-
67	Montana/Sierra		Cova	49197	Montana/Sierra	not available	-
68	Indian/Nevada		Cova	49198	Indian/Nevada	not available	-
69	Canadian/Nogal T		Cova	49195	Canadian/Toscana	not available	-
89	Cream white		Hornschuch	1379-05-167	Cream white	456-5015	tp Beige
92	Anthracite-grey		Hornschuch	7016 05-167	Anthracite-grey	436-5003	tp Anthracite-grey

Standard colors

Overview of décors for TOP FOAM attachment system

Color no.	HELLA designation		Application	Renolit		Hornschuch	
				Color no.	Description	Color no.	Description
93	Steel blue		Hornschuch	5150 05-167	Steel blue	436-5006	tp Steel blue
94	Pure white		Hornschuch	9152-05-168	White pebbled	456-5053	Old white
130	Birch rose		Hornschuch	not available	-	436 3031	Birch Rose
131	Basalt grey Sand structure		Hornschuch	not available	-	436 7048	tp basalt grey SFTN
132	Anthracite grey Sand structure		Hornschuch	not available	-	436 7003	tp anthracite-grey SFTN
133	Aluminium grey		Hornschuch	not available	-	436-1001	tp metbrush aluminium
134	Grey Sand structure		Hornschuch	not available	-	436-7049	tp titanium SFTN
135	Walnut terra		Hornschuch	not available	-	436-3059	tp walnut terra
136	Walnut amaretto		Hornschuch	not available	-	436-3058	tp walnut amaretto
140	Basalt grey plane		Renolit	7012 05-083	Basalt grey plain foil	not available	-
141	Anthracite-grey plane		Renolit	7016 05-083	Anthracite-grey plain foil	not available	-
142	Silver grey plane		Renolit	7155 05-083	Silver-grey plain foil	not available	-
143	Alux DB703		Hornschuch	not available	-	436-1014	Alux DB703
144	Slate grey plane		Renolit	7015 05-083	Slate grey plane	not available	-
145	Anthracite-grey plane 2		Renolit	7016 05-809700	Anthracite-grey plane 2	not available	-
150	Basalt grey structure		Renolit	7012 05-167	Granite grey	not available	-
151	Anthracite-grey ulti-matt		Renolit	02.20.71.000001-504700	Anthracite-grey ulti-matt	not available	-
152	Black ulti-matt		Renolit	02.20.01.000002-504700	Black ulti-matt	not available	-
153	Anthracite grey Aludec		Hornschuch	not available	-	470-6003	anthracite grey mattex
154	DB 703 Aludec		Hornschuch	not available	-	470-1014	DB 703 mattex

Things to know about the cover

Printing on covers

Please ask for our template catalogue concerning the appropriate data forms, if covers shall be labelled. This is available in the download section of the HELLA website.

The data form required by us depending on the application, can be taken from this. A cost-effective labelling of your cover can be carried out with this exact data formats only. If the data are not available in the requested form, or if the data must be processed or if a rework is required, we will invoice this service on an hourly basis.

Note:
Printing on cloths only possible up to max. width 3 m.

Appearance of the awning covers

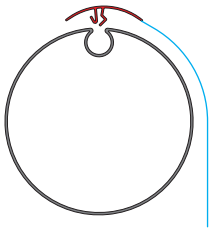
Wave or crease formation in the marginal area of the guide rails are construction related with zipper-guided covers and cannot be avoided as cover and zipper lie on top of each other and cover different paths during winding.
As a result of this, the cover is folded several times over the circumference on the edge during winding. This can be observed as a "wave" or even a "kink" upon unwinding.

This increasingly occurs with SOLTIS covers or rigid covers.

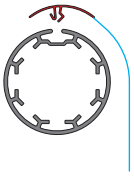
This is state of the art, which is why the directive for the evaluation of ready-made awning covers (version 01/2018) applies (see chapter "Evaluation of product features").

Cover connection roller tube

Clip keder



Clip keder
(Art. No. 15100008)



Clip keder
(Art. No. 15100008)

Cover connection front rail

Hemstitch

Keder PVC rod
ø5.3 mm white
(Art. No. 14700008)

Hemstitch

Keder PVC pipe
ø4.2 mm black
(Art. No. 14700009)

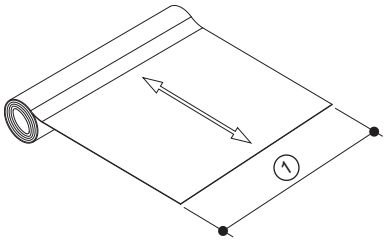
With SOLTIS:
Keder PVC rod
ø5.3 mm white
(Art. No. 14700008)

Cover manufacture

	Type of finishing		Fabric direction			Lateral seam		Cover connection	
			Transverse	Longitudinal					
			with/without seam	with seam	without seam	not SSG	SSG	Roller tube	Front rail
Glass fibre screen	**welding**	**o**	**o**	-	Width dependent	Without	spot-welded	Clip keder	Hemstitch
Acrylic standard, Lumera	**sewing**	**o**	**o** (SSG)	o (not SSG)	Width dependent	sewed	sewed	Clip keder	Hemstitch
	glueing	**+**				glued	glued		
Polyester shiny	**sewing**	**-**							
	glueing	**o**	**o** (SSG)	o (not SSG)	Width dependent	glued	glued	Clip keder	Hemstitch
Polyester PVC-coated	**welding**	**o**	**o**	-	Width dependent	Without	spot-welded	Clip keder	Hemstitch
Polyester PVC free (Twilight)	**sewing**	**o**	**o** (SSG)	o (not SSG)	-	sewed	sewed	Clip keder	Hemstitch
	welding	**-**							

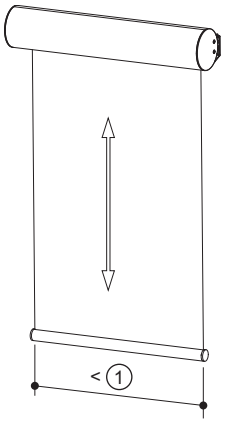
Legend

SSG side seam guided
o Standard
\+ Optional without surcharge
\- not possible
① Roll width

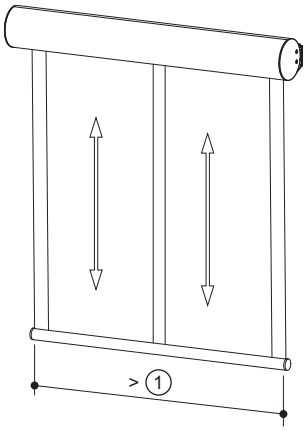


Fabric direction

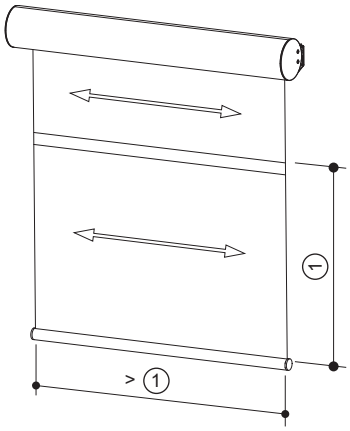
<u>Longitudinal finishing</u>
without seam:
Cover width < roll width



<u>Longitudinal finishing</u>
with seam and side hem:
Cover width > roll width



<u>Transverse finishing</u>
with/without seam, without side hem:
Cover width > roll width



<u>Processing instructions:</u>

Depending on the ordering dimensions and the cover selected, it is determined during the finishing process, if the cover is finished with vertical or transverse seams. If within an order transverse seams are required, it depends on the ordering height of the units as well as on the availability of the web width, if transverse seams are provided or not. If transverse seams can not be avoided, all covers within this order are provided with transverse seams. Please note: If you want to re-order units or covers, it is necessary to enter the original order number on your new order, so that the finishing is carried out in the same way like the earlier order. Otherwise visual differences may appear.

Additional notes:

- Acrylic fabrics with stripes and side seam guided design can not be produced with transverse seams and are therefore not possible. The maximum width of a cover with vertical seams is 1.20 m.
- Glassfibre fabrics and polyester fabrics with PVC coating are hot cut at the cutting edges.

Cover types

Glass fibre fabric

HELLA:

G-Screen

Material: Glass fibre fabric, PVC coated
Thickness of the material: 0.73 mm
Basis weight: approx. 515 g/m²
Tensile strength: approx. 375/310 daN/5 cm
Openness coefficient: 5%
Light fastness: min. 7-8
Cover can be labelled: yes (upon request)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Fabric width*: 2000/2500/2900/3200 millimeters

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Copaco:

Serge 600 (5%)

Material: Glass fibre fabric, PVC coated
Thickness of the material: 0.74 mm
Basis weight: approx. 525 g/m²
Tensile strength: approx. 295/195 daN/5 cm
Openness coefficient: 5%
Light fastness: min. 7-8
Cover webs can be glued: no
Cover to be labelled: suitable to only a limited extent (please contact us)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Fabric width*: 1600/1900/2200/2500/2700/3200/3500 mm

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colors!

Serge 600 (1%)

Material: Glass fibre cover, PVC-coated
Thickness of the material: 0.80 mm
Basis weight: approx. 620 g/m²
Tensile strength: approx. 321/277 daN/5 cm
Openness coefficient: 1%
Light fastness: min. 7 - 8
Cover webs can be glued: no
Cover to be labelled: suitable to only a limited extent (please contact us)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Cover width*: 2700 mm

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colors!

Mermet:

SATINÉ 5500

Material: Glass fibre fabric, PVC coated
Thickness of the material: 0.75 mm
Basis weight: approx. 520 g/m²
Tensile strength: approx. 170/170 daN/5 cm
Openness coefficient: 4%
Light fastness: min. 7
Cover webs can be glued: no
Cover can be labelled: yes
Flammability DIN 4102-1 B1 (additional classifications see collection)
Fabric width*: 2000/2500/2850/3200 millimeters

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colors!

NATTÉ 4503

Material: Glass fibre cover, PVC coated
Thickness of the material: 053 mm
Basis weight: approx. 560 g/m²
Tensile strength: approx. 220/200 daN/5 cm
Openness coefficient: 3%
Light fastness: min. 7
Cover webs can be glued: no
Cover can be labelled: yes
Flammability DIN 4102-1 B1 (additional classifications see collection)
Fabric width: 2500, 3200 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

SATINÉ 5500 LowE (for indoor use only)

Material: Glass fibre cover, PVC coated
Thickness of the material: 0.65 mm
Basis weight: approx. 520 g/m²
Tensile strength: approx. 170/170 daN/5 cm
Openness coefficient: 3%
Cover webs can be glued: no
Cover to be labelled: no
Flammability DIN 4102-1 B1 (additional classifications see collection)
Fabric width: 2400 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Polyester- PVC-coated

Serge Ferrari:

SOLTIS Perform 92

Material: polyester, PVC-coated
Thickness of the material: 0.45 mm
Basis weight: approx. 420 g/m²
Tensile strength: approx. 312/210 daN/5 cm
Openness coefficient: 3%
Cover webs weldable: yes
Cover to be labelled: yes (surcharge!)
Flammability: Austrian Standard (ÖNORM) B-3800-1 B1 DIN 4102-1 B1
Cover width*: 1770/2670 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)
* ... not available for all colors!

SOLTIS Harmony 88

Material: Backing fabric Polyester, PVC-coated
Thickness of the material: 0.45 mm
Basis weight: approx. 360 g/m²
Tensile strength: approx. 145/145 daN/5 cm
Openness coefficient: 8%
Cover webs can be glued: no
Cover to be labelled: yes (surcharge!)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Fabric width*: 1770/2670 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)
* ... not available for all colors!

SOLTIS Horizon 86

Material: polyester, PVC-coated
Thickness of the material: 0.43 mm
Basis weight: approx. 380 g/m²
Tensile strength: approx. 230/160 daN/5 cm
Openness coefficient: 14%
Cover webs weldable: yes
Cover to be labelled: yes (surcharge!)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Cover width*: 1770/2670 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)
* ... not available for all colors!

SOLTIS Lounge 96

Material: polyester, PVC-coated
Thickness of the material: 0.45 mm
Basis weight: 400 g/m²
Openness coefficient: 4%
Tensile strength: approx. 230/230 daN/5 cm
Cover webs weldable: yes
Cover to be labelled: yes (surcharge!)
Cover width: 2670 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

SOLTIS Veozip

Material: polyester, PVC-coated
Thickness of the material: 0.90 mm
Basis weight: approx. 600 g/m²
Tensile strength: approx. 250/170 daN/5 cm
Opening factor: ca. 5%
Cover webs weldable: yes
Cover to be labelled: yes (surcharge)
Flammability: M1 (see collection for other classifications), B1/DIN 4102-1, Euro class B-x2,d0
Fabric width: 2900/3200 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

SOLTIS Master 99 (for indoor use only)

Material: Backing fabric Polyester, PVC-coated
Thickness of the material: 0.32 mm
Basis weight: approx. 290 g/m²
Tensile strength: approx. 160/170 daN/5 cm
Openness coefficient 3%
Cover webs can be glued: no
Cover to be labelled: yes (surcharge!)
Flammability: DIN 4102-1 B1 (additional classifications see collection)
Fabric width*: 1770/2670 mm

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colors!

Cover types

Polyester- PVC-coated

DICKSON:

Sunworker

Material: Backing fabric Polyester, PVC-coated	**Cover webs can be glued:** no
Thickness of the material: 0.42 mm	**Cover to be labelled:** yes (surcharge!)
Basis weight: approx. 320 g/m²	**Flammability** DIN 4102-1 B1 (additional classifications see collection)
Tensile strength: approx. 220/150 daN/5 cm	
Openness coefficient: 6%	**Fabric width*:** 1500/3000 mm

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colors!

Polyester - free of PVC

SATTLER:

Twilight Comfort

Material: Polyester fabric, free of PVC	**Cover webs can be glued:** no
Thickness of the material: 0.55 mm	**Cover to be labelled:** no
Basis weight: approx. 235 g/m²	**Flammability:** No manufacturer's data
Tensile strength: approx. 160/70 daN/5 cm	**Fabric width:** 3000 mm
Light fastness: min. 6-7	

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Twilight 297 PEARL

Material: Polyester cover, free of PVC	**Cover webs can be glued:** no
Thickness of the material: 0.50 mm	**Cover to be labelled:** no
Basis weight: approx. 330 g/m²	**Flammability:** DIN 4102-1 B1 (additional classifications see collection)
Tensile strength approx. 155/105 daN/5 cm	
Light fastness min. 6-7	**Cover width*:** 1800/2600 mm

ATTENTION! From a certain size upwards transverse seams can exist. (production related)
* ... not available for all colours!

Polyester

Parà:

Polyester (Norm 370 XL, Starlight)

Material: Polyester	**Water proofing:** mark 100
Thickness of the material: 0.44 mm	**Light fastness:** min. 7
Basis weight: approx. 300 g/m²	**Cover webs can be glued:** yes (Standard)
Tensile strength: approx. 210/140 daN/5 cm	**Cover to be labelled:** no
Water resistance: approx. 300 mm WS	**Cover width:** 1200 mm

RECYCELD Polyester (TEMPOTEST STARLIGHT blue)

Material: 85% RECYCELD PET / 15% PET	**Water proofing:** mark 100
Thickness of the material: 0.44 mm	**Light fastness:** min. 7
Basis weight: approx. 290 g/m²	**Cover webs can be glued:** yes (Standard)
Tensile strength: approx. 280/140 daN/5 cm	**Cover to be labelled:** no
Water resistance: approx. 380 mm WS	**Cover width:** 1200 mm

Insect protection fabric - protect

Phifer:

InsectScreen

Material: vinyl-coated polyester fabric	**Opening factor:** ca. 45 %
Thickness of the material: 0.60 mm	**Fabric width:** up to 3500 mm
Basis weight: 230 g/m²	**Color:** black

Blackout fabric (Blackout)

Mermet:

SATINÉ 21154

Material: Glass fibre fabric, PVC coated	**Cover webs can be glued:** no
Thickness of the material: 0.75 mm	**Cover can be labelled:** yes
Basis weight: approx. 710 g/m²	**Flammability** NF P 92-503 – M1 (additional classifications see collection)
Tensile strength: approx. 225/1900 daN/5 cm	
Light fastness: min. 8	**Fabric width:** 2100 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Serge Ferrari:

SOLTIS Opaque B92

Material: Backing fabric Polyester, PVC-coated	**Cover webs can be glued:** no
Thickness of the material: 0.60 mm	**Cover to be labelled:** yes (surcharge!)
Basis weight: approx. 650 g/m²	**Flammability:** DIN 4102 B1 (additional classifications see collection)
Tensile strength: approx. 330/220 daN/5 cm	**Fabric width:** 1700 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

SOLTIS Opaque B702

Material: Backing fabric Polyester, PVC-coated	**Cover webs can be glued:** no
Thickness of the material: 0.60 mm	**Cover to be labelled:** yes (surcharge!)
Basis weight: approx. 750 g/m²	**Flammability:** DIN 4102-1 B1 (additional classifications see collection)
Tensile strength: approx. 280/280 daN/5 cm	**Fabric width:** 1770 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

DICKSON:

Sunworker Opaque

Material: Backing fabric Polyester, PVC-coated	**Cover webs can be glued:** no
Thickness of the material: 0.49 mm	**Cover to be labelled:** no
Basis weight: approx. 510 g/m²	**Flammability** DIN 4102-1 B1 (additional classifications see collection)
Tensile strength: approx. 245/160 daN/5 cm	**Fabric width:** 1450 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Copaco:

Serge 600 lunar

Material: Glass fibre fabric, PVC coated	**Cover webs can be glued:** no
Thickness of the material: 0.73 mm	**Cover to be labelled:** no
Basis weight: approx. 678 g/m²	**Flammability** NF P 92-503 – M1 (additional classifications see collection)
Tensile strength: approx. 225/1900 daN/5 cm	
Light fastness: min. 7	**Fabric width:** 2100 mm

ATTENTION! From a certain size upwards transverse seams can exist. (due to manufacturing)

Cover types

Acrylic

Acrylic fabric (standard 320, standard 30A, standard 364, Urban Design)

Material: Acrylic fibre	**Water proofing:** mark 100
Thickness of the material: 0.53 mm	**Light fastness:** min. 7
Basis weight: approx. 285 g/m²	**Cover webs can be glued:** yes
Tensile strength: approx. 145/85 daN/5 cm	**Cover to be labelled:** yes (surcharge!)
Water resistance: approx. 350 mm WS	**Fabric width:** 1200 mm

Acrylic Lumera

Material: Acrylic fabric (CBA)	**Water proofing:** mark 100
Thickness of the material: 0.53 mm	**Light fastness:** min. 7
Basis weight: approx. 290 g/m²	**Cover webs can be glued:** yes
Tensile strength: approx. 160/120 daN/5 cm	**Cover to be labelled:** yes (surcharge!)
Water resistance: approx. 460 mm WS	**Fabric width:** 1200 mm

Comment:

The stated prices are subject to technical clarification concerning the feasibility (box size, limit sizes) and necessities of transverse seams!

Colors as per current, applicable collection.
Longer delivery times must be considered depending on the color and the cover width!

Legend

WS	Water column
B1	Of low flammability

Limit sizes

Front-mounted awning protect

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Q85	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	5	500	2500	2100
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	7	500	2500	2800
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	4	500	2000	2100
	InsectScreen	5	500	2500	2100
Q100 E100 *	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
Q115 E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	4000	4000
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3000
	InsectScreen	12	500	4000	3000
Q130 E130 R130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	5000	4500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	5000	4500
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	5000	3000
Q150	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	18	500	6000	6000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	15	500	5000	6000
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	12	500	4500	4000
	InsectScreen	18	500	6000	3000

Legend

KG Box size

* Motor only

Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.

Front-mounted awning cable

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Q85	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	5	500	2500	2100
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker SOLTIS Master 99	7,5	500	2500	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	5	500	2500	2100
	Acrylic fabric Acrylic Lumera, polyester fabric - no lateral seam (hot cut)	3	500	1250	2700
Q100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	7,5	500	3000	2500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker SOLTIS Master 99	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	2500	2800
	Acrylic fabric Acrylic Lumera, polyester fabric - no lateral seam (hot cut)	3,7	500	1250	3000

Legend

KG Box size

Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.
- VM03 Cable coupled max. 2 units. Q85 max. 5000 mm (max. 12 m^2) and Q100 max. 6000 mm (max. 15 m^2)

Limit sizes

Recess awning protect

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
H100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
H115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4000
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3500
	InsectScreen	12	500	3500	3000
H130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4500
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	3500	3000

Legend

KG Box size

Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.

Basic awning cable

	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Exterior use	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl)	9	500	5000	3000
	SOLTIS Veozip	9	500	4000	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	9	500	5000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	2500	2800
Interior use	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl)	20	500	5000	4000
	SOLTIS Veozip	16	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	20	500	5000	4000
	SOLTIS Master 99/Feel 99 LowE Mermet (SATINÉ 5500 LowE)	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	12	500	4000	3000

Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side for external mounting: on the left or right side (seen from the outside).
- Specification of the drive side for external mounting: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.
- BM03 coupled max. 2 installations up to 10000 mm width possible with one drive. (max. 18 m^2 outdoor application, max. 40 m^2 indoor application)

Concealed awning protect

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
E100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3500
	InsectScreen	12	500	3500	3000
E130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	4000	4000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	4000	3000

Concealed awning cable

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	9	500	3000	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	3000	3000

TOP FOAM screen protect

KG	Cover	Max. surface [m²]	min.height [mm]	Max. width [mm]	Max. height [mm]
250 300	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (Satine 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3000

Legend

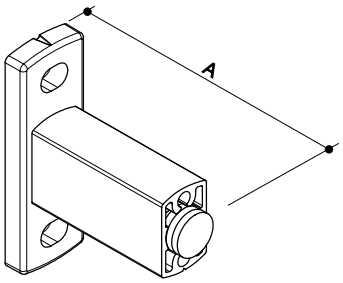
KG Box size

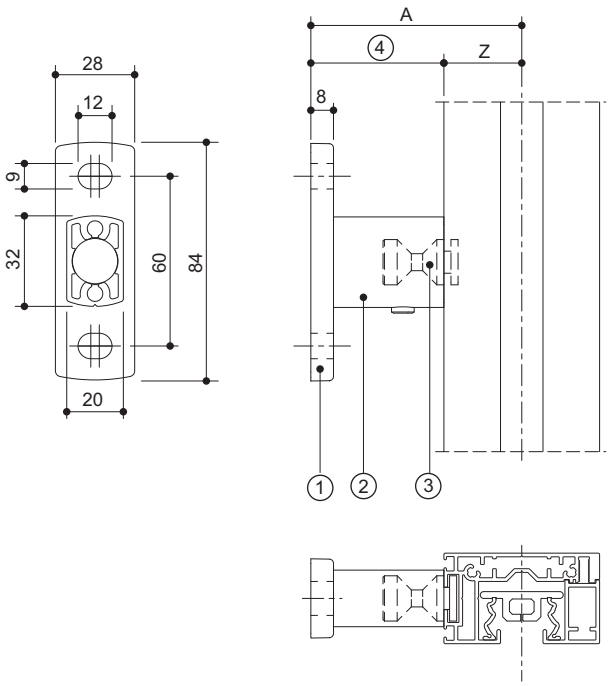
Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)

Spacers for guide rails

Fixed spacer





Fixed spacer with small base plate

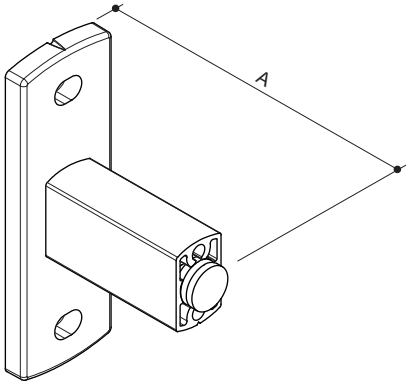
FB2x

Spacer profile made of extruded aluminium; dimensions 32x20 mm.
Base plate made of die-cast aluminium; dimensions 84x28x8 mm.
Fixing of the spacer to the guide rail using a galvanised steel clamping cone.
A noise insulating board at the rear side is optionally available.

Legend

A	Dimension A (mounting surface up to the axis of the guide rail) [mm]
z	Dimension from the spacer up to dimension A
①	Small base plate
②	Distance profile 32
③	Clamping cone
④	Spacer length = A - z

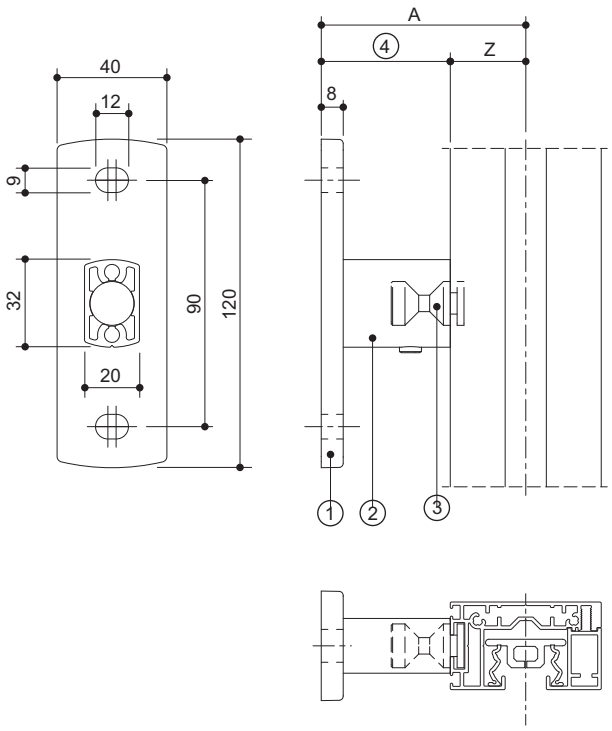
z = 21 mm (for FS 32x49 mm/FS 44x49 mm)
z = 28 mm (for FS 32x55 mm)



Fixed spacer with large base plate

FB3x

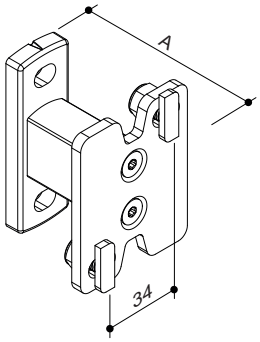
Spacer profile made of extruded aluminium; dimensions 32x20 mm.
Base plate large made of die-cast aluminium; dimensions 120x40x8 mm.
Fixing of the spacer to the guide rail using a galvanised steel clamping cone.
With thermal insulation composite system or pre-assembled M8 threaded bolt.
A noise insulating board at the rear side is optionally available.



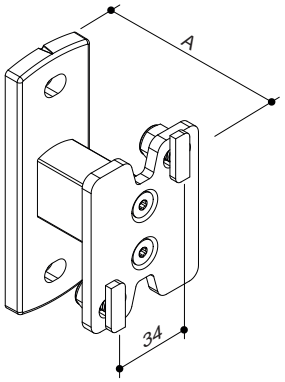
Legend

A	Dimension A (mounting surface up to the axis of the guide rail) [mm]
z	Dimension from the spacer up to dimension A
①	Large base plate
②	Distance profile 32
③	Clamping cone
④	Spacer length = A - z

z = 21 mm (for FS 32x49 mm/FS 44x49 mm)
z = 28 mm (for FS 32x55 mm)



Spacer dix for combination
34 mm with small base plate
VM07.
FK20



Spacer dix for combination
34 mm with large base plate
VM07.
FK30

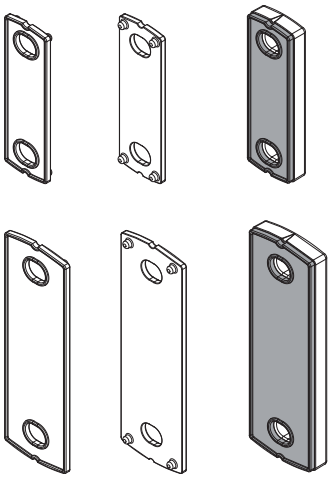
Spacers for guide rails

Standard dimension A for spacer

Model	Box type	Left roller		Right roller		max. A
		Standard	min. A	Standard	min. A	
VM07	Q85	75	65	70		150
	Q100	75	65	85		150
	E100	75	70	85		150
	Q115 / E115	75	70	100		150
	Q130 / E130	75	70	115		150
	Q150	75	70	135		150
	R130	75	70	-		150

Model	Box type	Left roller		Right roller		max. A
		Standard	min. A	Standard	min. A	
SM07	H100	75	70	85		150
	H115	75	70	100		150
	H130	75	70	115		150

Noise insulating boards for spacers



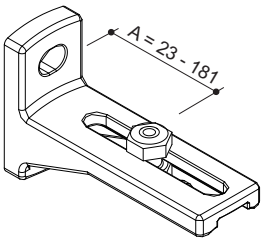
Noise insulating board

- for small base plate
- for large base plate

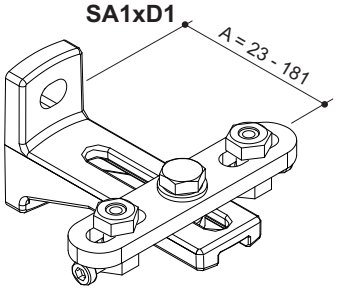
Tensioning elements for cable guidings

Strainer clamp

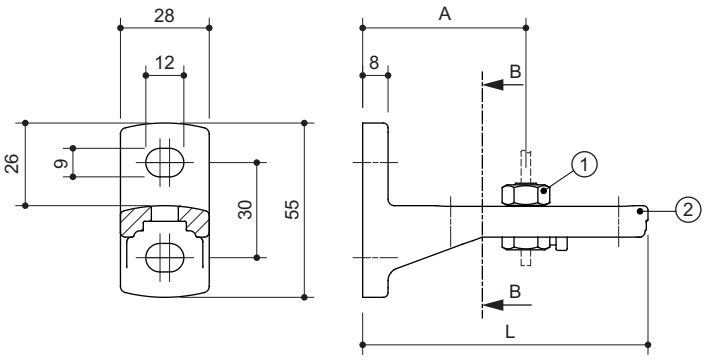
SA1xM1

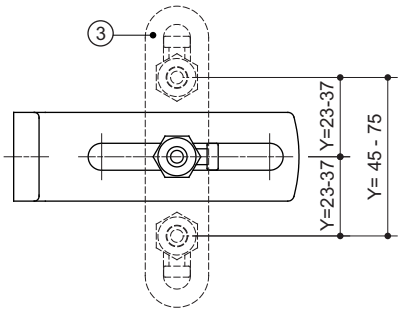


SA1xD1



B-B





Strainer clamp

SA1xx1

Strainer clamp in centre – SA1xM1
Double strainer clamp – SA1xD1

Strainer clamp made of die-cast aluminium; strainer bolt - cable tensioning and transversely mounted board made of aluminium.
A noise insulating board at the rear side is optionally available.

Range of adjustment of the strainer clamp:

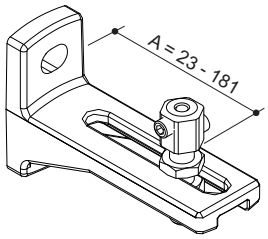
Dimension A [mm]	Length of the strainer clamp [mm]
23-40	60
41-77	90
78-122	135
123-181	190

Legend

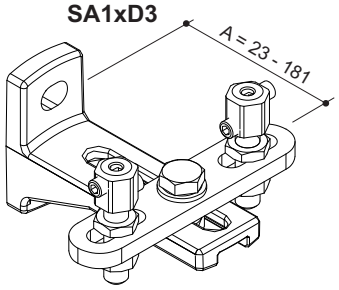
A Dimension A (mounting surface up to cable axis) [mm]
L Length of the strainer clamp [mm]
Y Dimension Y (distance between cable axis - cable axis) [mm]
① Strainer bolt - cable tensioning
② Strainer clamp
③ Transversely mounted board

Strainer clamp with threaded fitting M8

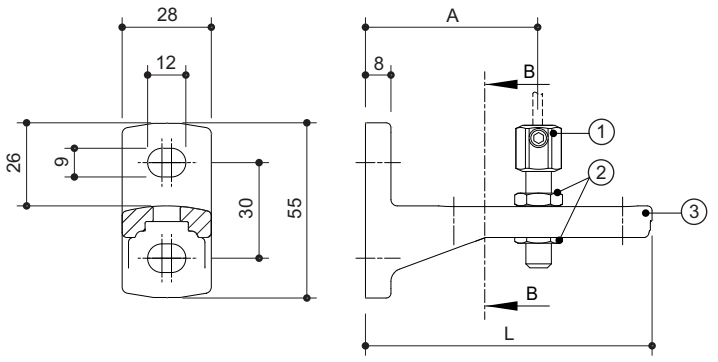
SA1xM3

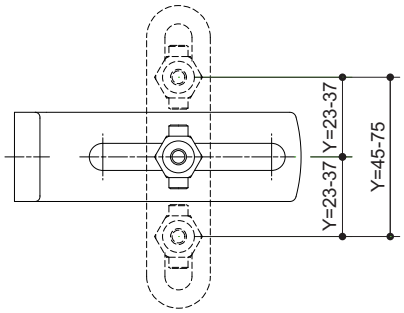


SA1xD3



B-B





Strainer clamp with threaded fitting M8

SA1xx3

Strainer clamp in centre - SA1xM3

Double strainer clamp - SA1xD3

Strainer clamp made of die-cast aluminium; threaded fitting M8 and hexagon nut made of stainless steel; transversely mounted board made of aluminium.
A noise insulating board at the rear side is optionally available.

Range of adjustment of the strainer clamp:

Dimension A [mm]	Length of the strainer clamp [mm]
23-40	60
41-77	90
78-122	135
123-181	190

Legend

A Dimension A (mounting surface up to cable axis) [mm]

L Length of the strainer clamp [mm]

Y Dimension Y (distance between cable axis - cable axis) [mm]

① Threaded fitting M8

② Hexagon nut

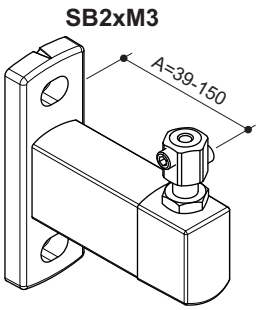
③ Strainer clamp

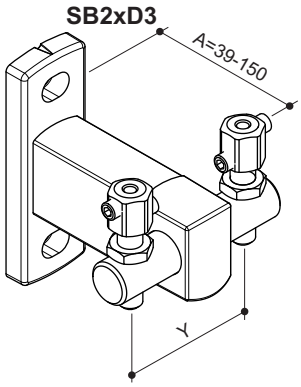
④ Transversely mounted board

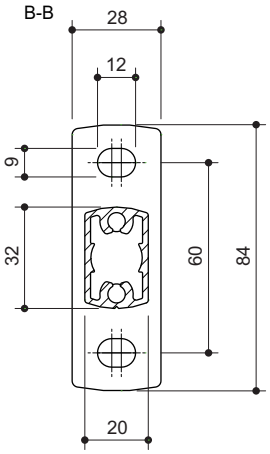
Tensioning elements for cable guidings

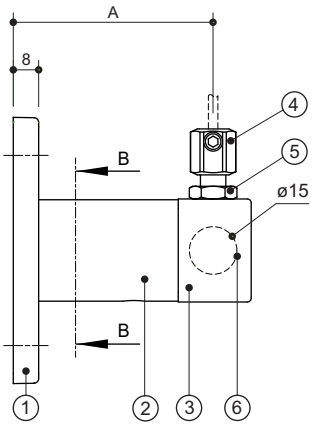
Tensioning brackets with small base plate

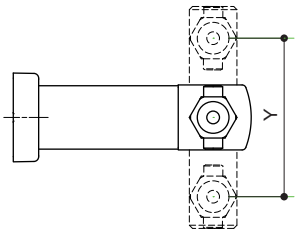
small base plate











Tensioning bracket with small base plate

SB2xx3

Tensioning bracket in centre - SB2xM3

Double tensioning bracket - SB2xD3

Spacer profile made of extruded aluminium; dimensions 32x20 mm.
Base plate made of die-cast aluminium; dimensions 84x28x8 mm.
Tensioning device made of die-cast aluminium.
Threaded fitting M8, hexagon nut and cross bolt made of stainless steel.
A noise insulating board at the rear side is optionally available.

Legend

A	Dimension A (mounting surface up to cable axis) [mm]
Y	Dimension Y (distance between cable axis - cable axis) [mm]
①	Small base plate
②	Distance profile 32
③	Tensioning device
④	Threaded fitting M8
⑤	Hexagon nut
⑥	Cross bolt

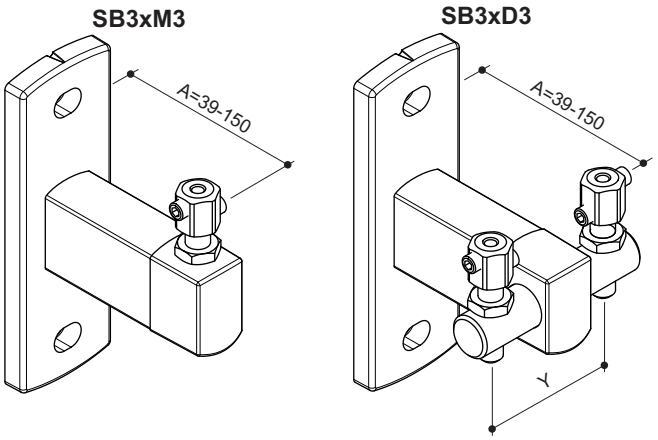
Notes

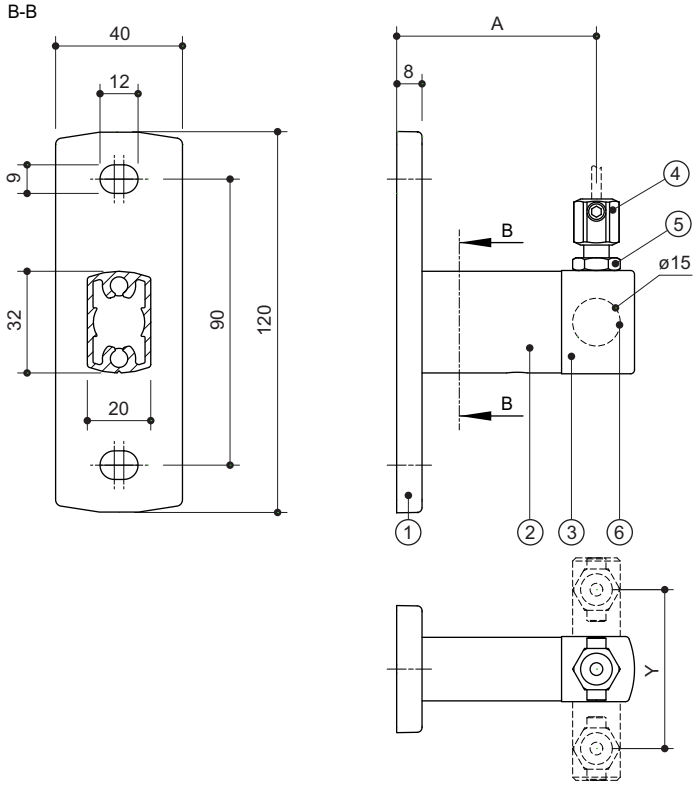
- The minimum dimension A is 39 mm.
- The maximum dimension A is 150 mm.

Y = 50 mm (for VM03 / PM03)

Y = 42 mm (for BM03)

Tensioning bracket with large base plate





Tensioning bracket with large base plate

SB3xx3

Tensioning bracket in centre - SB3xM3

Double tensioning bracket - SB3xD3

Spacer profile made of extruded aluminium; dimensions 32x20 mm.
Base plate made of die-cast aluminium; dimensions 120x40x8 mm.
Tensioning device made of die-cast aluminium.
Threaded fitting M8, hexagon nut and cross bolt made of stainless steel.
A noise insulating board at the rear side is optionally available.

Legend

A Dimension A (mounting surface up to cable axis) [mm]

Y Dimension Y (distance between cable axis - cable axis) [mm]

① Large base plate

② Distance profile 32

③ Tensioning device

④ Threaded fitting M8

⑤ Hexagon nut

⑥ Cross bolt

Notes:

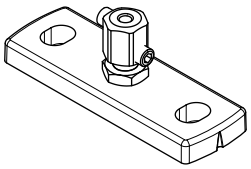
- The minimum dimension A is 39 mm.
- The maximum dimension A is 150 mm.

Y = 50 mm (for VM03 / PM03)

Y = 42 mm (for BM03)

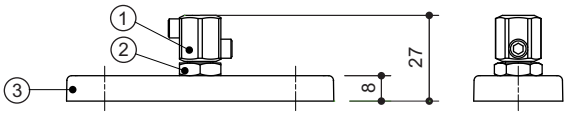
Tensioning elements for cable guidings

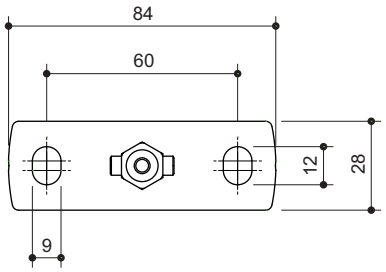
Tensioning shoes

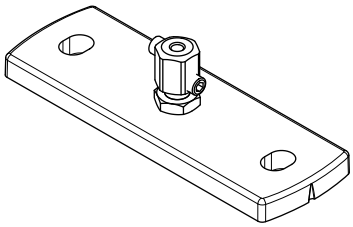


Tensioning shoe with small base plate
SC2xM3

Base plate made of die-cast aluminium; dimensions 84x28x8 mm.
Tensioning shoe made of aluminium.
Threaded fitting M8 and hexagon nut made of stainless steel.
A noise insulating board at the rear side is optionally available.

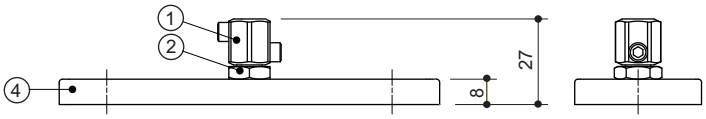


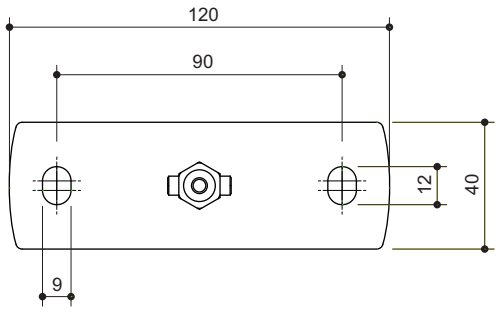




Tensioning shoe with large base plate
SC3xM3

Base plate made of die-cast aluminium; dimensions 120x40x8 mm.
Tensioning shoe made of aluminium.
Threaded fitting M8 and hexagon nut made of stainless steel.
A noise insulating board at the rear side is optionally available.





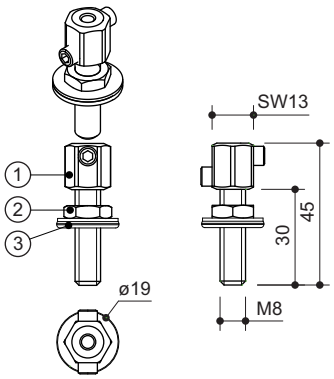
Legend

① Threaded fitting M8
② Hexagon nut
③ Small base plate
④ Large base plate

Notes:

- Tensioning shoe with strainer bolt - cable not feasible.

Threaded fitting M8 – screwed (tensioning clamped)



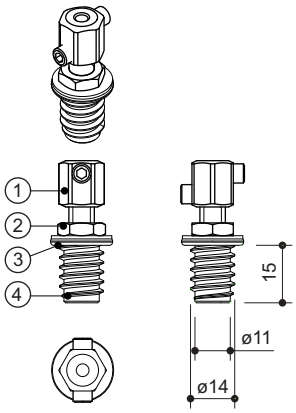
Threaded fitting M8 - screwed

SD00G3

Threaded fitting M8 and hexagon nut made of stainless steel. Sealing washer made of stainless steel with EPDM sealing.

Notes:

- At the top the stainless steel wire cable is press-fitted to the clamping shell made of stainless steel, and at the bottom it is **clamped** with threaded pins in the threaded fitting.
- The minimum screwing-in depth for threaded fitting M8 with steel/aluminium is 12 mm.

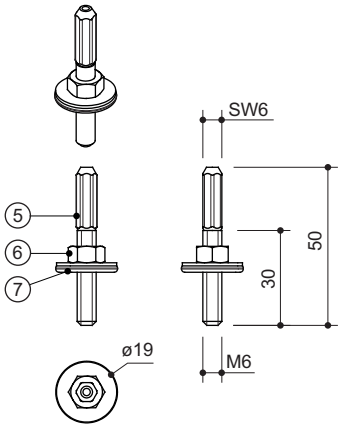


Clamping screw with threaded fitting M8 - screwed

SE00G3

Threaded fitting M8, screwed insert M8 and hexagon nut made of stainless steel. Sealing washer made of stainless steel with EPDM sealing.

Threaded fitting M6 – press-fitted (tensioning fix press-fitted)



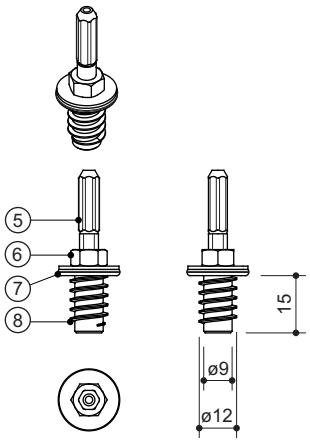
Threaded fitting M6 - press-fitted

SD00G4

Threaded fitting M6 and hexagon nut made of stainless steel. Sealing washer made of stainless steel with EPDM sealing.

Notes:

- At the bottom the stainless steel wire cable is **fix press-fitted** to the threaded fitting and at the top to the clamping shell made of stainless steel. Please specify the type of stainless steel wire and the length L with your order!
- The minimum screwing-in depth for threaded fitting M6 with steel/aluminium is 9 mm.
- Threaded fitting M6 only available in combination with double spring clip.



Clamping screw with threaded fitting M6 - press-fitted

SE00G4

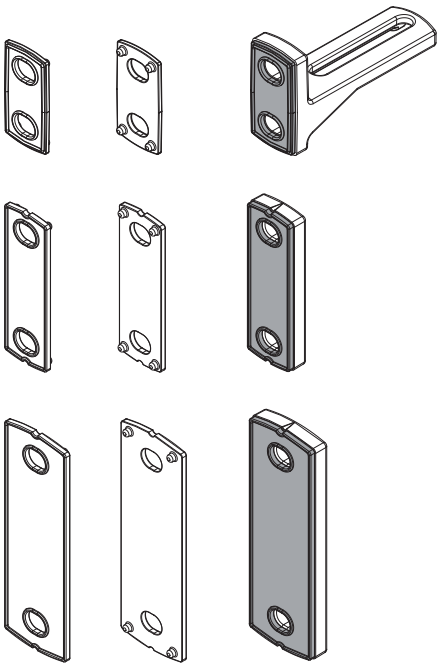
Threaded fitting M6, screwed insert M6 and hexagon nut made of stainless steel. Sealing washer made of stainless steel with EPDM sealing.

Legend

①	Threaded fitting M8	⑤	Threaded fitting M6
②	Hexagon nut M8	⑥	Hexagon nut M6
③	Sealing disc ø8x19	⑦	Sealing disc ø6x19
④	Screwed insert M8	⑧	Screwed insert M6

Tensioning elements for cable guidings

Noise insulating boards for cable guidings

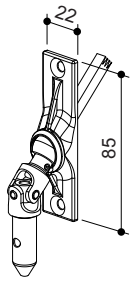


Noise insulating board

- for strainer clamp
- for small base plate
- for large base plate

Crank handle drive

Front-mounted awning protect/front-mounted awning cable - box size 85/100

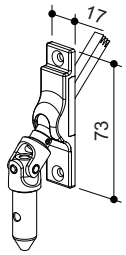


Spherical bearing inclined by 45° up to 50°

Universal joint made of steel, shiny nickel-plated, with base plate 22x85 mm made of zinc die-cast, shiny nickel-plated

with square 6x6x500 mm
(standard)

11150214

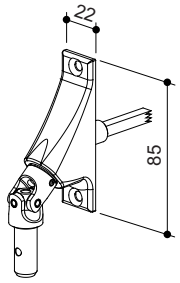


Spherical bearing inclined by 45° up to 55°

Universal joint made of steel, shiny nickel-plated, with base plate 17x73 mm made of zinc die-cast, shiny nickel-plated

with square 6x6x500 mm

11150210

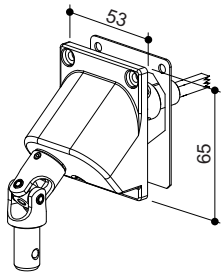


Spherical bearing horizontal -5° up to 46°

Universal joint made of steel, shiny nickel-plated, with base plate 22x85 mm made of zinc die-cast, shiny nickel-plated

with square 6x6x500 mm

11150215



Spherical bearing horizontal 0° up to 46°

Universal joint made of aluminium, anodised with base plate 53x65 mm made of plastic in white color with sealing made of cellular rubber and 22.5 mm lateral offset

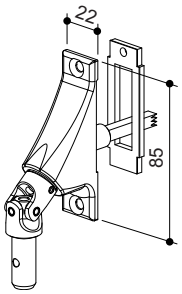
with square 6x6x343 mm

11150217 left
11150218 right

The design on the left side is shown. The design on the right side is mirror-reversed.

Crank handle drive

Front-mounted awning protect/front-mounted awning cable - box size 85/100



Spherical bearing horizontal 0° up to 46°

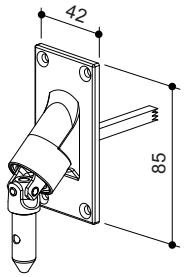
Universal joint made of aluminium, anodised with base plate 22x85 mm made of zinc die-cast, shiny nickel-plated, with sealing made of cellular rubber

with square 6x6x500 mm

Note:

This bearing meets the requirements for air permeability of the Federal Association for Roller Shutter & Sun Protection Devices registered association 53177 Bonn (the testing has been carried out in accordance with DIN EN 12114).

11150010

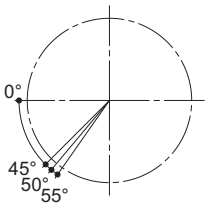


Spherical bearing horizontal/inclined
-5° up to 46°

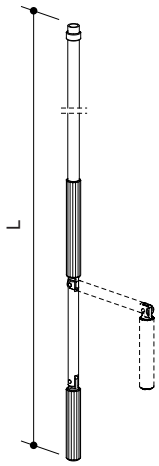
Universal joint made of steel, bright nickel-plated, with base plate 42x85 mm made of zinc die-cast, in white color **(standard for wall installation)**

with square 6x6x500 mm

11150011



Operative range of the bearing



Crank rod standard

Art. no.	Crank handle length L [mm]
11200011	800
11200001	1000
11200002	1100
11200003	1200
11200012	1300
11200004	1400
11200005	1500
11200006	1600
11200007	1800
11200008	2800
	Special length

Note:

Special lengths are made to measure according to order.

Crank rod removable with crank handle funnel

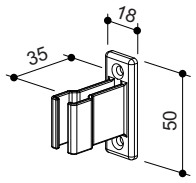
The crank rod is equipped with a crank handle funnel. This is hooked into the spherical bearing that is provided with a dowel pin.

Design without crank rod

for operation with crank handle funnel

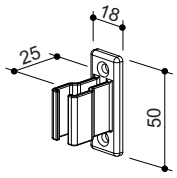
Crank handle drive

Front-mounted awning protect/front-mounted awning cable - box size 85/100



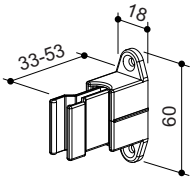
Crank holder 35 mm
made of plastic, colors: white and grey

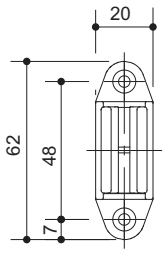
11300203
Standard for joint bearing 90°

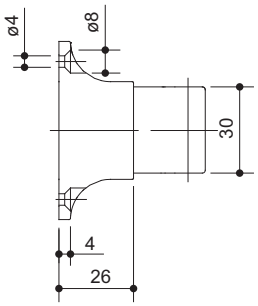


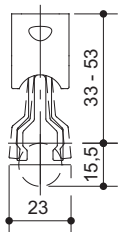
Crank holder 25 mm
made of plastic, colors: white and grey

11300003
Standard for joint bearing 45°





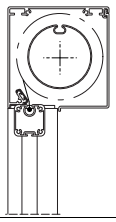
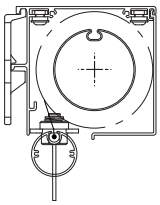
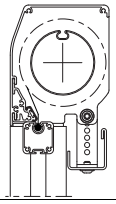
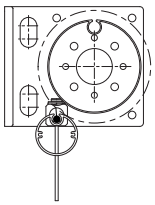
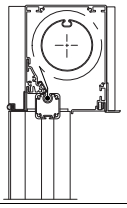
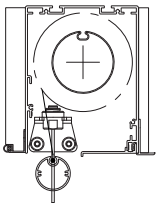
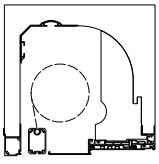




Crank holder adjustable
adjustable in 6 stages from 33 mm to 53 mm. Made of plastic, colors: white and grey

11300004

Model overview

Type designation	Image	Model
Front-mounted awning protect		VM07
Front-mounted awning cable		VM03
Recess awning protect		SM07
Recess awning cable		BM03.
Concealed awning protect		PM07
Concealed awning cable		PM03
TOP FOAM screen protect		TOPFOAM

Type designation	Image	Model
ISD E– swing frame single		ISDE
IST E– slide frame simple		ISTE
ISPL18 – pleated insect screen		ISPL18
IS13 – insect roller screen		IS13
Fall protection		ABST

Note: Further insect screen types see price list "Insect screen".

WINDOW AND FACADE

Window and facade



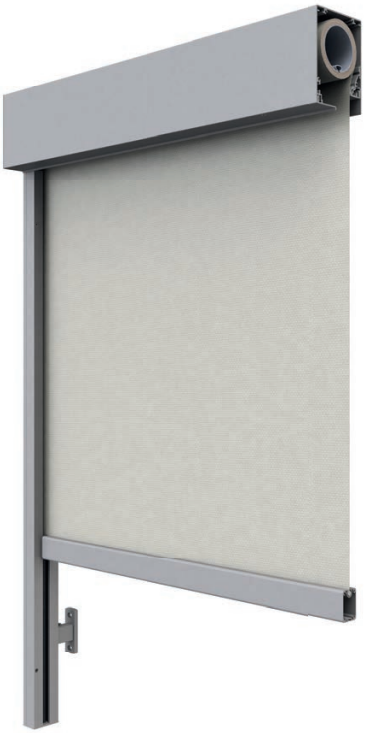

Front-mounted awnings consist of extruded boxes, which are mounted in front of small windows or on large façades. As a rule, they are mounted directly or with spacers with side-lined cloths and are therefore particularly suitable for wind-exposed locations. Alternatively, the awnings are also available equipped with cable guides.

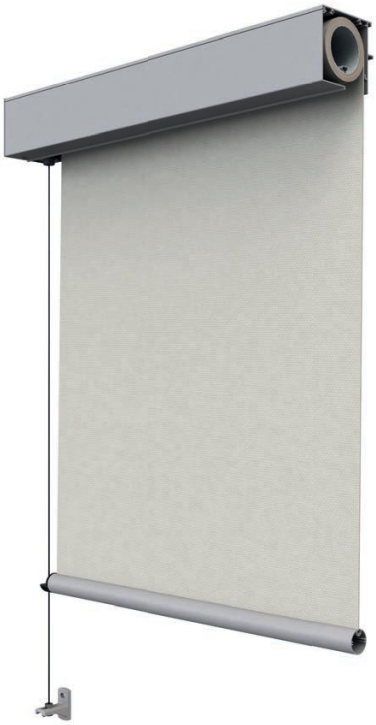
Supplementary equipment options include insect screens or, for floor-to-ceiling window elements, fall protection with glass, grids or bars.

Overview

Front-mounted awnings

Front-mounted awnings consist of extruded boxes that are mounted in front of small windows or on large façades. As a rule, they are mounted with spacers with side-guided cloths and are therefore particularly suitable for wind-exposed locations. Alternatively, the awnings are also available with cable guides.





Front-mounted awning protect

This variant uses a two-piece extruded box. It is possible to fix the guide rails directly or with the help of spacers. The side seam guided covers are especially suitable for wind-exposed locations.

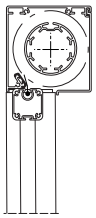
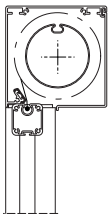
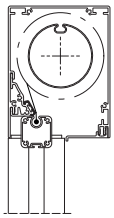
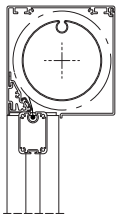
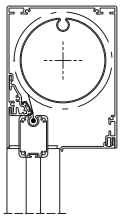
- Self-supporting, simple assembly
- Square box (Q85, Q100, Q115, Q130, Q150)
- Rectangular box (E100, E115, E130)
- Round box (R130)

Front-mounted awning cable guided

With particularly small box, this design can be easily installed in any window soffit with box brackets. The spring integrated in the box keeps the cables under tension at all times.

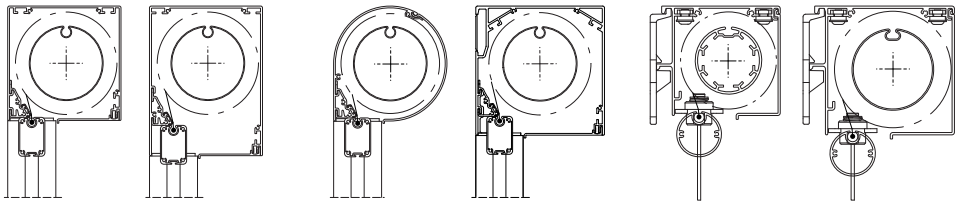
- Easy mounting with variable box beam
- Square box (Q85,Q100)
- Up to 3 m wide and 3 m high
- Spring bracing concealed and integrated in the box

Type overview

	Front-mounted awning protect				
Models according to box form and size	Q85.	Q100	E100	Q115	E115
					
Max. width [mm]*					
Single unit	2500	3500	3500	4000	4000
Linked	-	-	-	-	-
Max. height [mm]*					
	2800	3500	3500	4000	4000
Max. surface [m²]*					
Single unit	7	12	12	12	12
Linked	-	-	-	-	-
Drive system					
Crank handle	+	+	-	-	-
Motor	o	o	o	o	o
Motor cable 3 m without plug	o	o	o	o	o
Motor cable 0.5 m with plug	+	+	+	+	+
Installation					
With space towards the facade	+	+	+	+	+
Without space (direct installation)	o	o	o	o	o
Guide rails					
Single guide rail 44x49 (crank handle drive)	o	o	-	-	-
Single guide rail 32x49	o	o	-	-	-
Single guide rail 32x55	-	-	o	o	o
Guide rail 32x97	-	-	+	-	-
Guide rail 32x115	-	-	-	-	+
Guide rail 32x130	-	-	-	-	-
Tensioning elements					
Strainer clamp	-	-	-	-	-
Tensioning bracket	-	-	-	-	-
Tensioning shoe (floor)	-	-	-	-	-
Box					
Inspection opening	at the front	at the front	at the bottom	at the front	at the bottom
Box lengthening	+	+	+	+	+
Mitre	+	+	+	+	+
Rear insulation of the box	-	-	-	-	-

Legend

o Standard design
\+ optional - in some cases for a surcharge
\- not possible
* Limit sizes depend on the fabric type (see limit size tables)

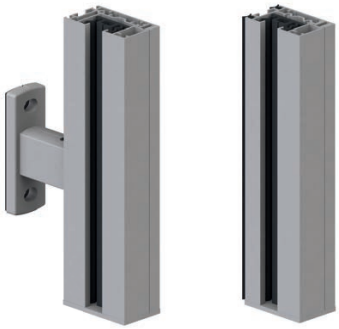
	Front-mounted awning protect				Front-mounted awning cable	
Models according to box form and size	Q130.	E130	R130	Q150	Q85	Q100
						
Max. width [mm]*						
Single unit	5000	5000	5000	6000	2500	3000
Linked	-	-	-		5000	6000
Max. height [mm]*						
	4500	4500	4500	6000	3000	3000
Max. surface [m²]*						
Single unit	12	12	12	18	7.5	9
Linked	-	-	-		12	15
Drive system						
Crank handle	-	-	-	-	+	+
Motor	o	o	o	o	o	o
Motor cable 3 m without plug	o	o	+	o	o	o
Motor cable 0.5 m with plug	+	+	+	+	+	+
Installation						
With space towards the facade	+	+	+	+	o	o
Without space (direct installation)	o	o	o	o	-	-
Guide rails						
Single guide rail 44x49 (crank handle drive)	-	-	-	-	-	-
Single guide rail 32x49	-	-	-	-	-	-
Single guide rail 32x55	o	o	o	o	-	-
Guide rail 32x97	-	-	-	-	-	-
Guide rail 32x115	-	-	-	-	-	-
Guide rail 32x130	-	+	-	-	-	-
Tensioning elements						
Strainer clamp	-	-	-	-	o	o
Tensioning bracket	-	-	-	-	+	+
Tensioning shoe (floor)	-	-	-	-	+	+
Box						
Inspection opening	at the bottom	at the bottom	at the front	at the bottom	at the front	at the front
Box lengthening	+	+	+	-	+	+
Mitre	+	+	+	-	+	+
Rear insulation of the box	-	-	-	-	-	-

Legend

o Standard design
\+ optional - in some cases for a surcharge
\- not possible
* Limit sizes depend on the fabric type (see limit size tables)

Front-mounted awning protect

Front-mounted awning protect with side seam guiding



- It is possible to fix the guide rails directly or with the help of spacers.
- The side seam guided covers are especially suitable for wind-exposed locations.
- Keder damper effective over the entire height of the guide rail.

- Integrated cover unwinding profile with plastic cover for perfect cover entry into the guide rail.

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Q85	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	5	500	2500	2100
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	7	500	2500	2800
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	4	500	2000	2100
	InsectScreen	5	500	2500	2100
Q100 E100 *	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
Q115 E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	4000	4000
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3000
	InsectScreen	12	500	4000	3000

Legend

KG Box size

* Motor only

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Q130 E130 R130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	5000	4500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	5000	4500
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	5000	3000
Q150	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	18	500	6000	6000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	15	500	5000	6000
	SOLTIS Opaque B92/Opaque B702, SOLTIS Master 99 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	12	500	4500	4000
	InsectScreen	18	500	6000	3000

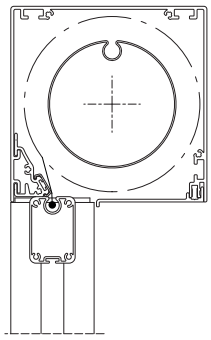
Legend

KG Box size

Notes:

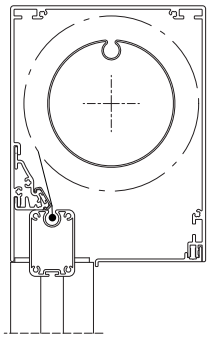
- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.

Box forms and box sizes



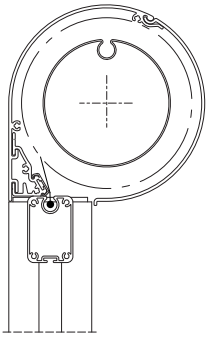
Angular design

Q85
Q100
Q115
Q130
Q150



Square design

E100
E115
E130



Round design

R130

Scope of delivery

- square designed box
- Guide rail with end caps and piping for side seam guide (without spacer)
- Motor drive 230V, with 3 m cable without Hirschmann connector/cable socket
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip side seam guided
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

- Rectangular or round box shapes
- Spacers for guide rails
- Alternatively deep guide rails for the rectangular boxes
- all-mounted radio transmitter / Hand-held radio transmitter
- Crank handle drive (for Q85 / Q100)
- Insect screen fabric side seam guided with motor
- Blackout version with blackout fabric and sealing brushes
- Solar drive (for E100, E115, E130)
- Emergency crank handle motor (for Q130)
- Sensors
- Integrated fall protection
- Large selection of alternative fabrics according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Blackout
- For large surfaces
- Wind-stable sun protection
- Energy saving
- Slim and inconspicuous box shape
- Transparency to the outside due to screen fabric
- Large selection of designs as a design element

Front-mounted awning protect

Technical product description

Box size 85/100

Box

Dimension

Q85	85x85 mm
Q100	100x100 mm
E100	100x130 mm

Material	Extruded aluminium
Surface	powder-coated
Profile	2-part

Description

- Box with galvanised side covers made of steel fitted onto the guide rail.
- The powder-coated aluminium side part and the outer edge of the guide rail cover the side cover flushly.

Front rail

square profile

Box Q85 / Q100 / E100

Material	Extruded aluminium
Dimension	35x31 mm

Description

- With inserted weighting steel.
- Laterally guided in the guide rails with plastic gliders.

Roller tube

Box Q85

Material	Extruded aluminium
Dimension	ø52 mm

Box Q100 / E100

Material	galvanised steel tube
Dimension	ø63 mm

Description

- Both ends of the roller tube are equipped with adapters made of plastic with which a tapering of the roller tube is achieved. Herewith it is possible to correct the thicker ends of the rolled up zip fastener. An inspection is possible via a spring-loaded telescopic roller cap.

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

Guide rails

Box Q85 / Q100

Material	Extruded aluminium
Dimension	32x49 mm (with crank handle 44x49 mm)
Profile	2-part

Box E 100

Material	Extruded aluminium
Dimension	32x55 mm
Profile	2-part

Optional:

- deep guide rail 32x97 mm

Description

- The inner guiding consists of a black co-extruded plastic profile with full-length buffer lips made of foamed material. The zippener which is provided at the cover, is inserted into this plastic profile and kept sliding. The lower end caps of the guide rails are made of powder-coated aluminium sheet steel and can be used up to a diagonal guide rail cut of 5°.
- Installation of the guide rail directly to the window frame or laterally in the soffit.
- Optionally, an installation with spacers up to a distance of max. 150 mm is possible with fixed spacers.

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	not possible

Description

- Special protective function for the curtain in the Down-direction, and blocking detection in the Up-direction to protect the cover (exception box Q85 blocking detection only up-/down-direction)
- with torque switch-off for the upper end position
- Thermo protective switch to prevent overheating
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Crank handle drive

Only for box Q85 and Q100

Description

- Worm-wheel gear with gear reduction 4:1
- Crank handle exit diagonally or horizontally
- With bearing, powder-coated crank rod, folding handle and crank holder
- Optionally with removable crank handle with crank handle funnel or eyelet

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

Fasteners, mounting material

All screwed connections, fixings and connections are made of stainless steel A2.

Front-mounted awning protect

Technical product description

Box size 115/130/150

Box

Dimension

Q115	115x115 mm
E115	115x150 mm
Q130	130x130 mm
E130	130x170 mm
R130	130x130 mm
Q150	150x150 mm

Material	Extruded aluminium
Surface	powder-coated
Profile	2-part

Description

- Box with galvanised headers made of steel fitted onto the guide rail.
- The powder-coated aluminium side part and the outer edge of the guide rail cover the side cover flushly.

Front rail

square profile

Boxes Q115 / Q130 / E115 / E130 / R130

Material	Extruded aluminium
Dimension	30x44 mm

Description

- With inserted weighting steel.
- Laterally guided in the guide rails with plastic gliders.
- Optionally with 20 mm sealing brush at extra cost (with insect screen fabric standard without extra cost)

Roller tube

Box Q115 / Q130 / E115 / E130 / R130

Material	galvanised steel tube
Dimension	ø85 mm

Box Q150

Material	galvanised steel tube
Dimension	up to 3 m: ø85 mm >3 m: ø100 mm

Description

- Both ends of the roller tube are equipped with adapters made of plastic with which a tapering of the roller tube is achieved. Herewith it is possible to correct the thicker ends of the rolled up zip fastener. An inspection is possible via a spring-loaded telescopic roller cap.

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

For the Q150 box size, different roller tubes are also used depending on the width (WW 3000 mm roller tube diameter 85, WW >3000 mm roller tube diameter 100).

Guide rails

For all box dimensions

Material	Extruded aluminium
Dimension	32x55 mm
Profile	2-part

Optional:

- for E115: deep guide rail 32x115 mm
- for E130: deep guide rail 32x130 mm

Description

- The inner guiding consists of a black co-extruded plastic profile with full-length buffer lips made of foamed material. The zippener which is provided at the cover, is inserted into this plastic profile and kept sliding. The lower end caps of the guide rails are made of powder-coated aluminium sheet steel and can be used up to a diagonal guide rail cut of 5°.
- Installation of the guide rail directly to the window frame or laterally in the soffit.
- Optionally, an installation with spacers up to a distance of max. 150 mm is possible with fixed spacers.

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	not possible

Description

- Special protective function for the curtain in the Down-direction, and blocking detection in the Up-direction to protect the cover
- with torque switch-off for the upper end position
- Thermo protective switch to prevent overheating
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

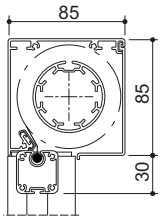
Fasteners, mounting material

All screwed connections, fixings and connections are made of stainless steel A2.

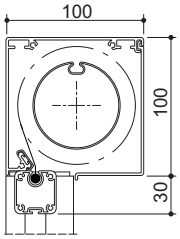
Front-mounted awning protect

Box dimensions

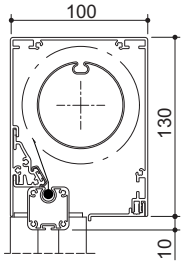
Q85.



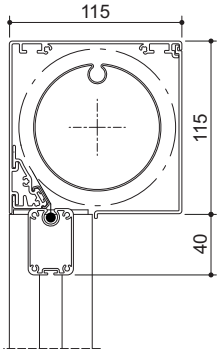
Q100



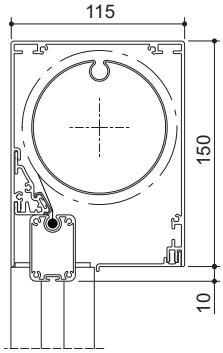
E100



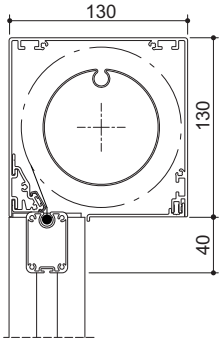
Q115



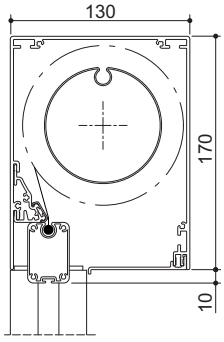
E115



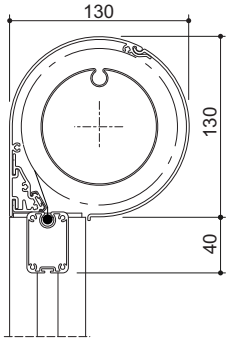
Q130



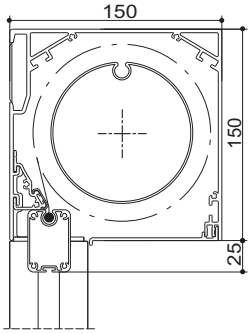
E130



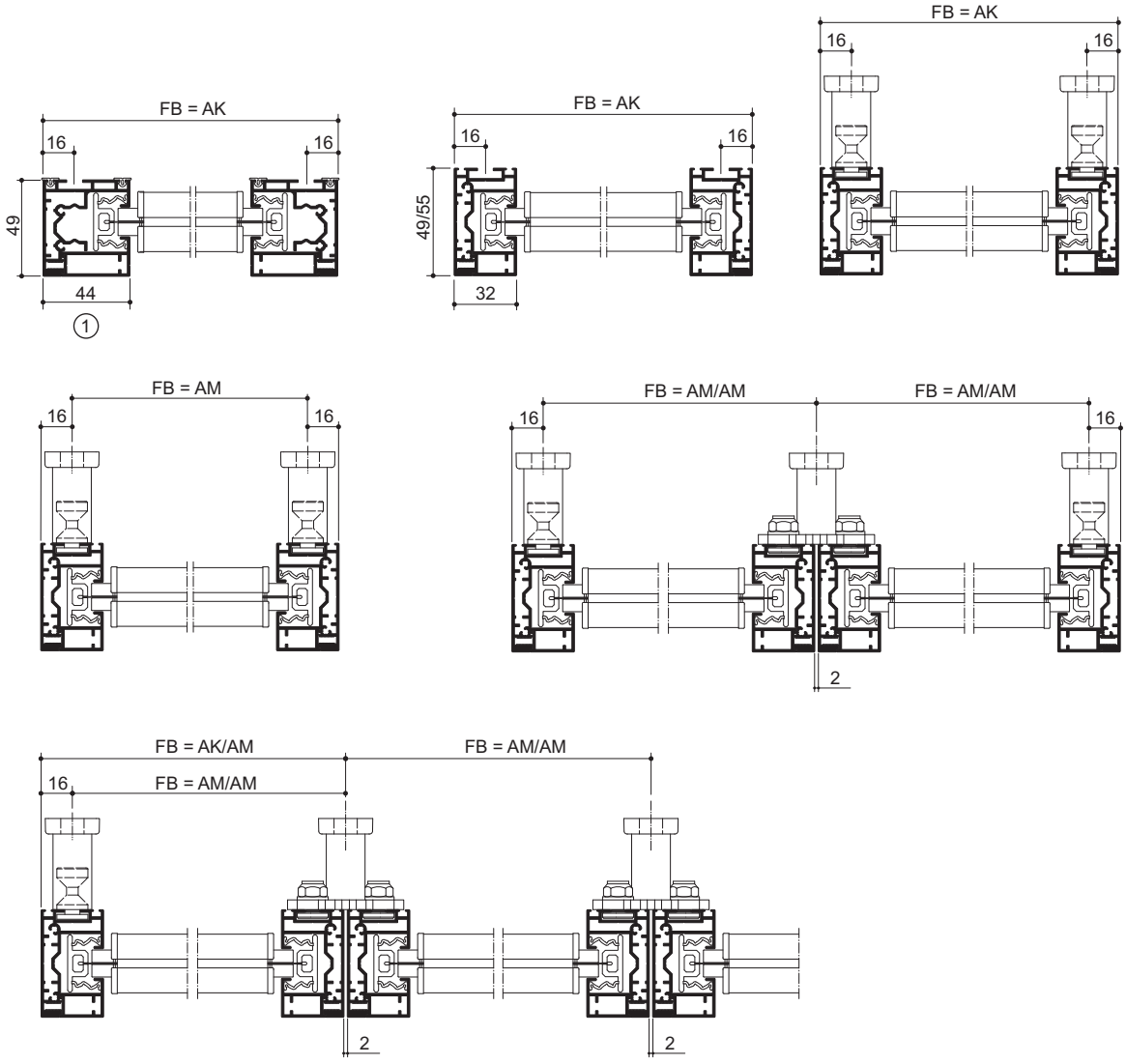
R130



Q150



Dimensioning definition for complete width (= ordering width)



Legend

FB = AK	Complete width = outer edge of the guide rail
FB = AM	Complete width = dimension between axes
FB	Complete width = ordering width

Notes:

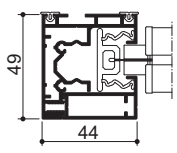
- Complete width optionally outer edge of the guiding (AK) or dimension between axes (AM)
- Complete width always dimension between axes with combination

Legend

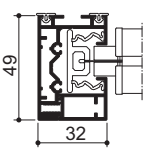
① Guide rail for crank handle drive

Overview guide rails

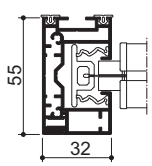
Crank handle
Q85/Q100



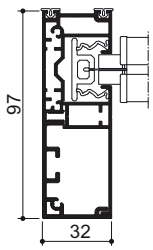
Motor
Q85/Q100



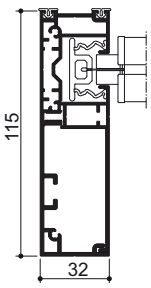
Motor
Q115/130/150
E100/115/130, R130



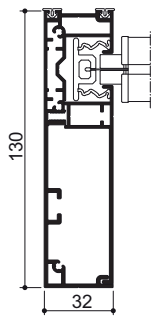
Motor
E100.



Motor
E115.

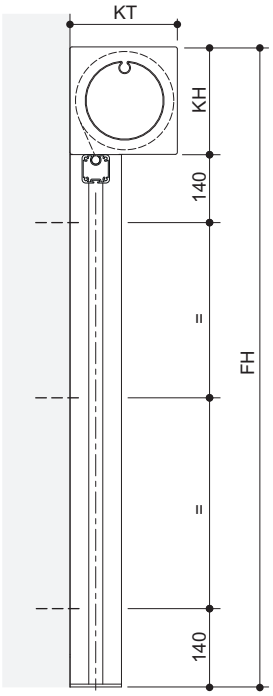


Motor
E130.

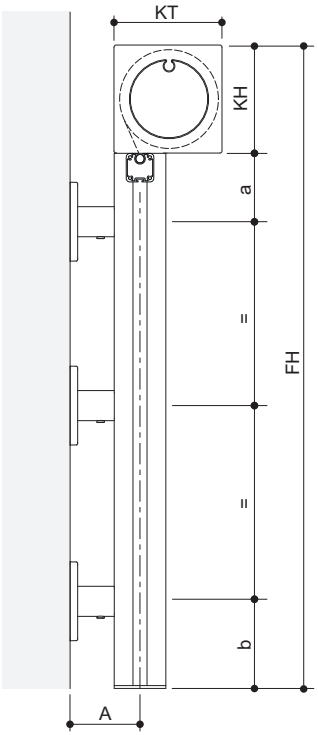


Front-mounted awning protect

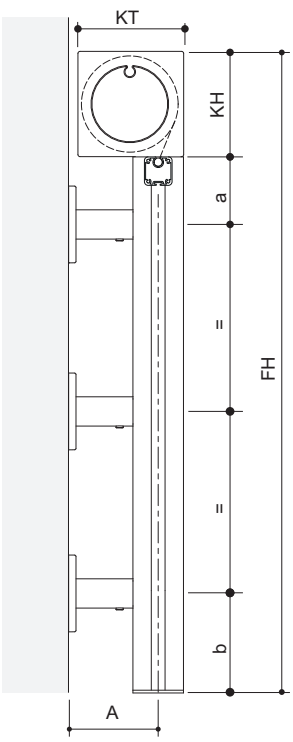
Installation options and dimension definition



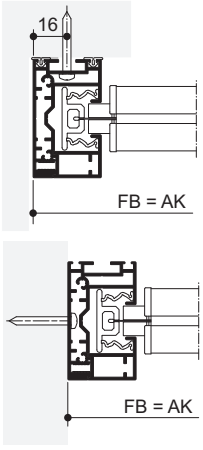
Direct installation - left roller



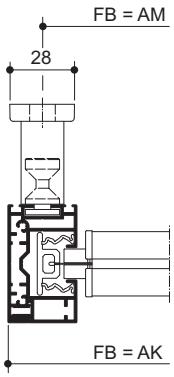
Installation with spacers – left roller
(Not with crank handle drive)



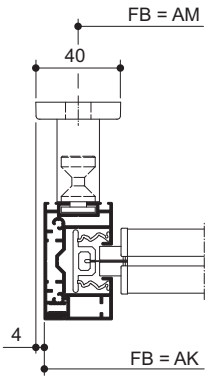
Installation with spacers - right roller
(Not with crank handle drive)



Direct installation
from the front or side in the soffit



Spacers for guide rails



Guide rail spacer with large base plate

Attention:
With the spacer with the large base plate (40 mm) the lateral excess length of 4 mm must be considered!

Space between the spacers [mm]				Number of spacers with complete height [mm]					
a		b		Number per guide rail					
min.	max.	min.	max.	2	3	4	5	6	7
100	200	80	200	≤ 2000	2001-3000	3001-4000	4001-5000	5001-6000	> 6000
Box size Q150									
100	100	80	100	≤ 2000	1501-2500	2501-3500	3501-4500	4501-6000	> 6000

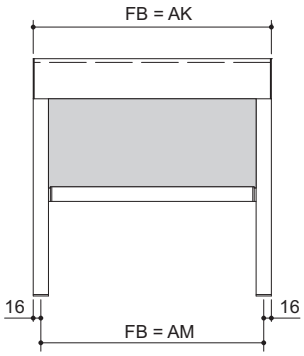
Number of mounting holes with guide rail length [mm]						
2	3	4	5	6	7	8
≤ 1200	1201-2000	2001-2900	2901-3800	3801-4700	4701-5600	5601-6500

Legend

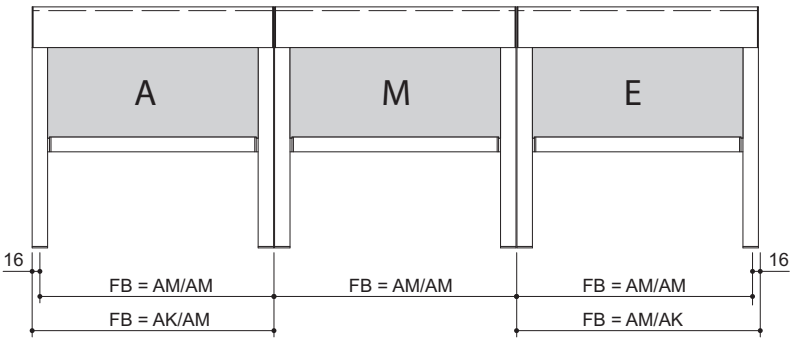
FB=AK	Complete width = outer edge of the guide rail	FH	Complete height
FB=AM	Complete width = dimension between axes	A	Distance dimension (max. 150 mm)
KT	Box depth	a	Spacer position from the bottom
KH	Box height	b	Spacer position from the bottom

Combinations and dimensioning definition

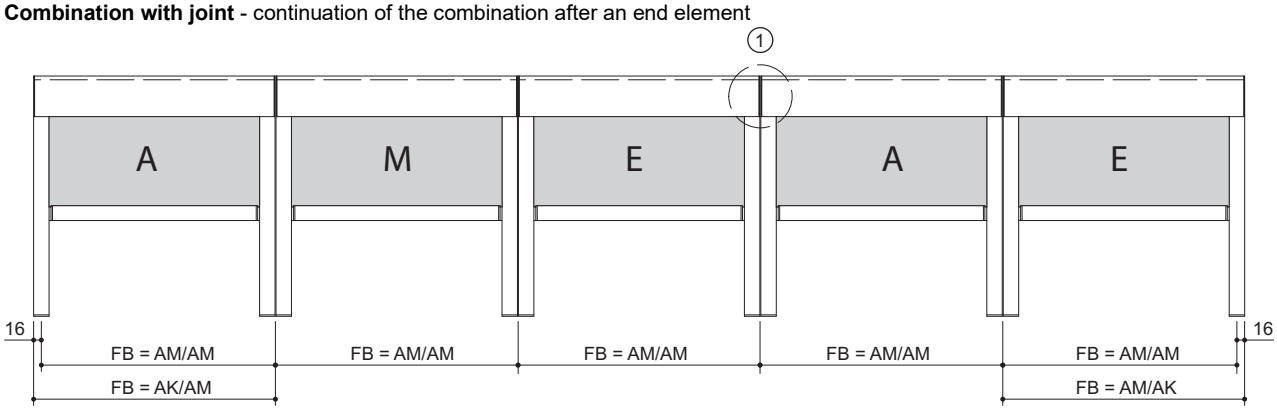
Single unit



Combination in 3 parts - box split



Combination with joint - continuation of the combination after an end element



Legend

FB = AK	Complete width = outer edge of the guide rail	A	Combination start
FB = AM	Complete width = dimension between axes	M	Combination middle
FB = AK/AM	Complete width = outer edge guide rail/dimension between axes	E	Combination end
FB	Complete width = ordering width	①	Joint - continuation of the combination after an end element (only specification of the dimension between axes possible)

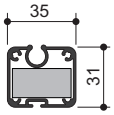
Notes:

- no coupling possible
- Combinations box always split

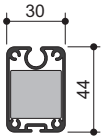
Standard dimension A for spacer

Model	Box type	Left roller		Right roller		max. A
		Standard	min. A	Standard	min. A	
VM07	Q85	75	65	70		150
	Q100	75	65	85		150
	E100	75	70	85		150
	Q115 / E115	75	70	100		150
	Q130 / E130	75	70	115		150
	Q150	75	70	135		150
	R130	75	70	-		150

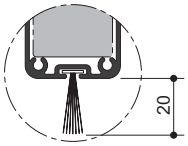
Front rail



Q85/Q100/E100



Q115/Q130/Q150, E115/E130, R130

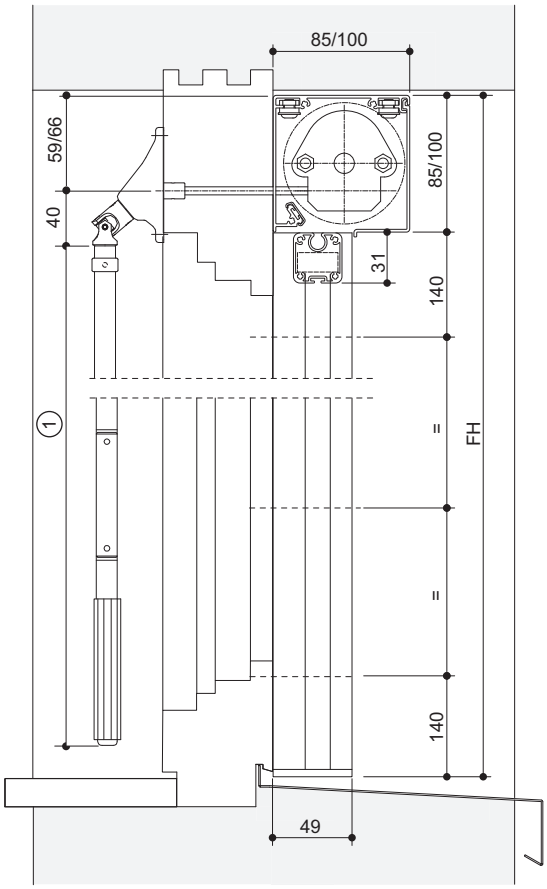


- For insect screen standard
- Without insect screen optional against surcharge

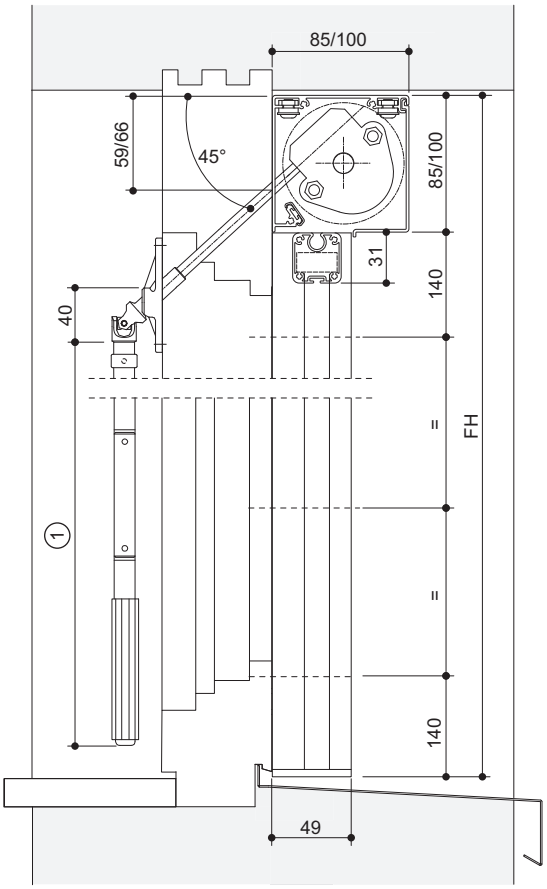
Front-mounted awning protect

Crank handle drive

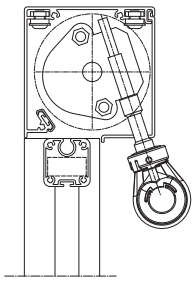
Only for Q85 / Q100

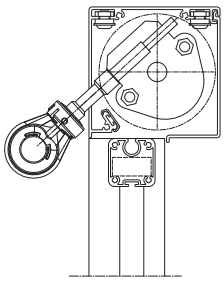


Direct installation - crank handle horizontal

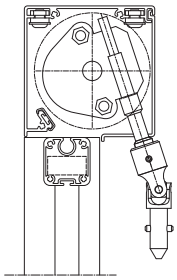


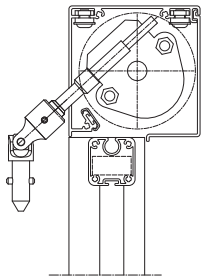
Direct installation - crank handle diagonal



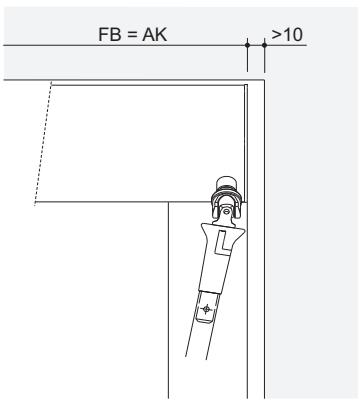


with eyelet/crank handle funnel at the front removable

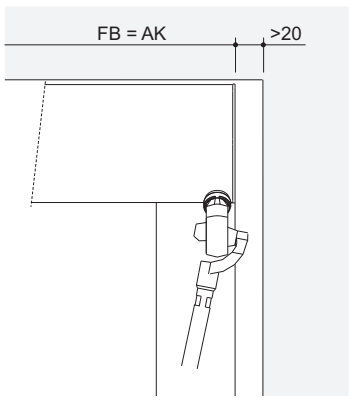




with eyelet/crank handle funnel at the rear removable



Design crank handle funnel - front view



Design eyelet - front view

Legend

FB = AK	Complete width = outer edge of the guide rail
FH	Complete height
①	Crank handle length

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Front-mounted awnings protect	
							Q85	Q100/115/130 E100/115/130
Somfy	LS Mars 40	mechanical		Wire-bound	16	Round Head	+	
	Sunea 40 io	mechatronical		Remote control	16	Round Head	+	
	OREA WT 50 RH	mechatronical		Wire-bound	17	Round Head		+
	MAESTRA+ 50 io RH	mechatronical	x	Remote control	17	Round Head		+
	Sunea io solar	mechatronical	x	Remote control	18	Round Head		+ (E100/115/130)
	LT50 NHK	mechanical		Wire-bound	17			+ (Q130)
elero	SunTop S	mechatronical		Wire-bound	17	Round Head	o	
	SunTop S - 868	mechatronical		Remote control	17	Round Head	+	
	SunTop/Z RH	mechatronical	x	Wire-bound	23	Round Head		o
	SunTop/Z RH - 868	mechatronical	x	Remote control	23	Round Head		+

Cable designs

Cable length	Cable end	pluggable with motor head*	Front-mounted awnings protect	
			Q85	Q100/115/130 E100/115/130
3 m	without Hirschmann connector	yes	o	o
0.5 m	with Hirschmann connector	yes	+	+
Special length	with/without Hirschmann connector	yes	+	+
Cable lengthening**	without Hirschmann connector	no		+ (E)

* with the drives LS Mars 40 and Sunea io 40, the cable is wired permanently with the drive (not pluggable)

** if the Hirschmann plug connection is stored in the box

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Legend

o	Standard
+	Optional

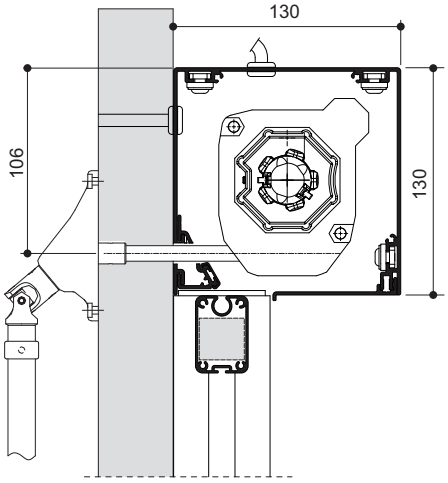
Front-mounted awning protect

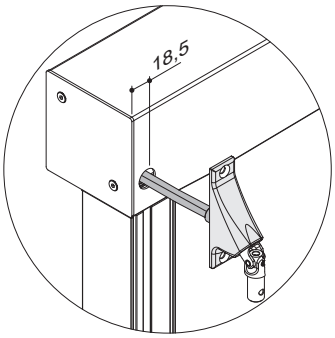
Motor drive with emergency crank handle

For the 2nd escape route with the front-mounted awning protect, there is now the option of using an emergency crank handle drive. As described in the IVRSA guideline, the use of this solution must always be agreed upon with the person responsible for fire protection in the building project by the customer himself at his own responsibility.

Description of the design:

The Somfy LT50-NHK drive (see Fig. 1) can only be used with the front-mounted awning protect (VM07) and box size Q130. The gear has a gear reduction of 1:27. Larger guide rails (55x45mm) are required, which can only be used for direct mounting. The end positions of the mechanical drive are set using push buttons. The setting differs according to the operating sides (see Figs. 3 and 4)





Limit sizes

KG	Drive system	Max. surface [m²]	Min. width [mm]	Max. width [mm]	Max. height [mm]
Q130	Somfy LT50-NHK	7,5	790	2500	3000

NHK operating side right

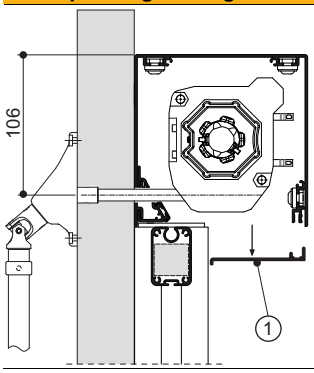


Fig. 2 Dismantling the inspection cover

On the right operating side, remove the inspection cover to set the end positions.

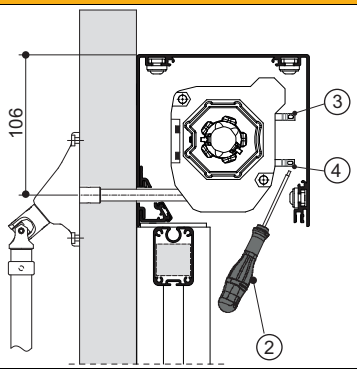


Fig. 3 End position setting for operating side right

The end position is set by “pulling” on the adjustment aids with a slotted screwdriver.

Legend

① Inspection cover
② Slotted screwdriver
③ Adjustment aid upper end position
④ Adjustment aid lower end position

NHK operating side left

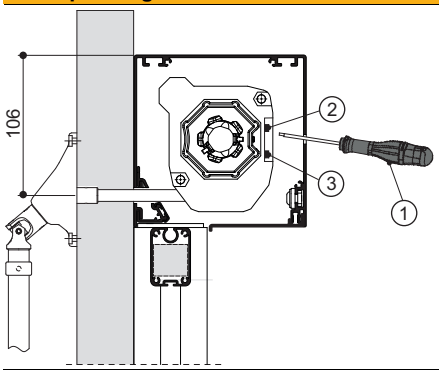


Fig. 4 End position setting for operating side left

The end position is set via the borehole on the front panel of the box.

guide rail

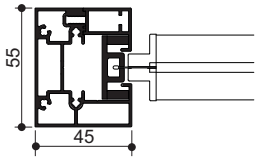


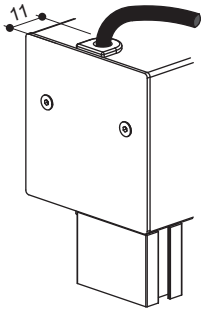
Fig. 5 Guide rail 55x45 mm

Legend

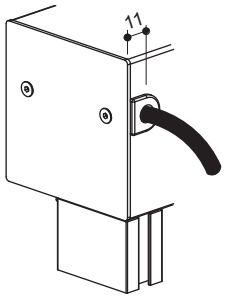
① Slotted screwdriver
② yellow push button for lower end position
③ white push button for upper end position

Front-mounted awning protect

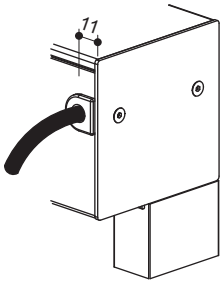
Motor drive - cable exits



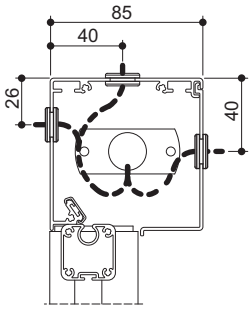
Cable exit towards the top



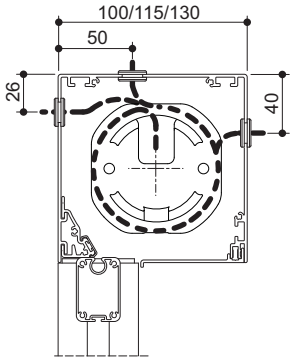
Cable exit towards the rear



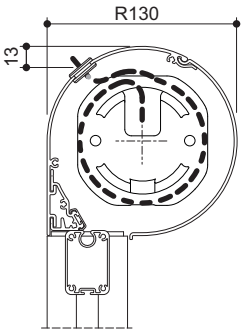
Cable exit towards the front



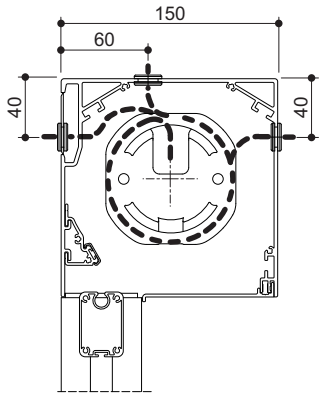
Box detail VM protect
Q85



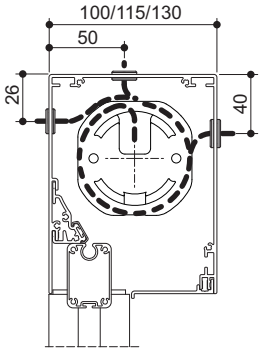
Box detail VM protect
Q100 / Q115 / Q130



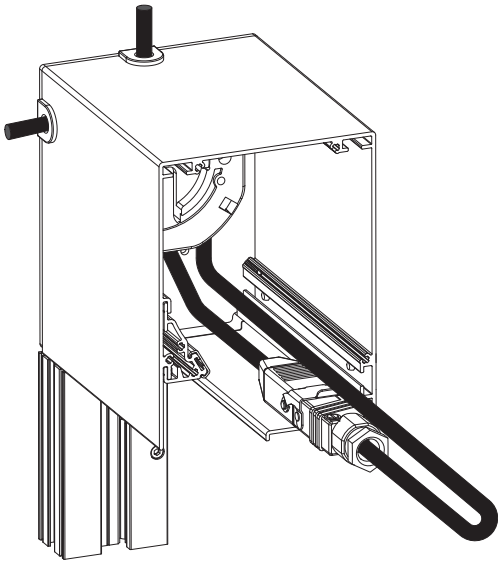
Box detail VM protect
R130



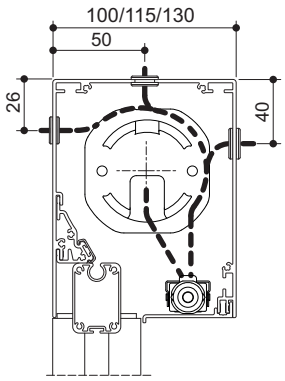
Box detail VM protect
Q150



Box detail VM protect
E100 / E115 / E130



Hirschmann connector stored in the box and cable lengthening towards the outside

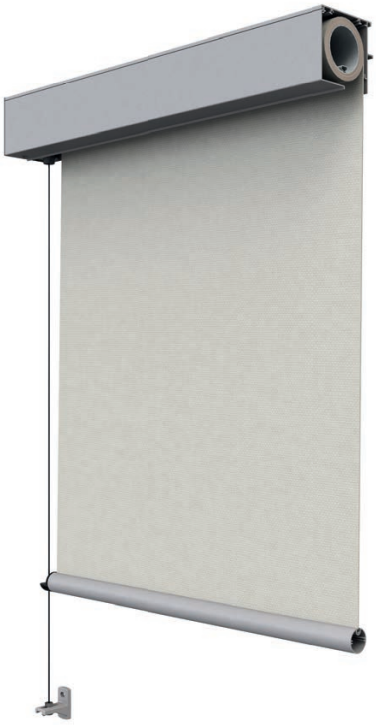


Box detail VM protect
E100 / E115 / E130
Hirschmann connector stored in the box and cable lengthening towards the outside

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Front-mounted awning cable

Front-mounted awning with cable guiding



- Two square box sizes Q85/Q100 available.
- Cover guidance by cable-guided drop profile.
- Wire cable is always kept under tension by spring integrated in the box.

- Wire cables secured by tensioning brackets.
- Large selection of other tensioning brackets and floor cable holders.

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Q85	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	5	500	2500	2100
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker SOLTIS Master 99	7,5	500	2500	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	5	500	2500	2100
	Acrylic fabric Acrylic Lumera, polyester fabric - no lateral seam (hot cut)	3	500	1250	2700
Q100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	7,5	500	3000	2500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker SOLTIS Master 99	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	2500	2800
	Acrylic fabric Acrylic Lumera, polyester fabric - no lateral seam (hot cut)	3,7	500	1250	3000

Legend

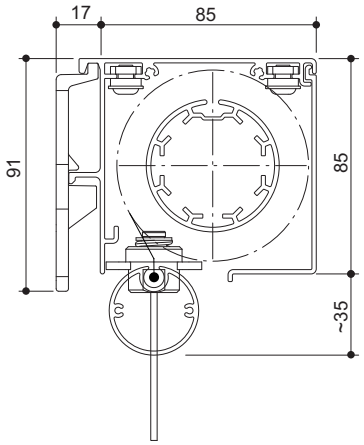
KG Box size

Notes:

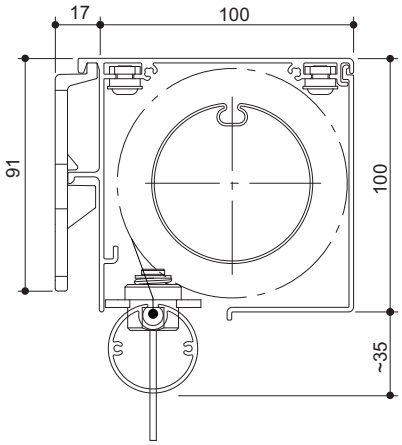
- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)

Box forms and box sizes

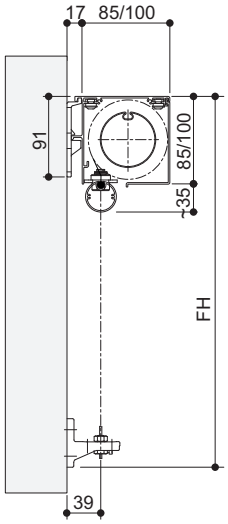
Q85.



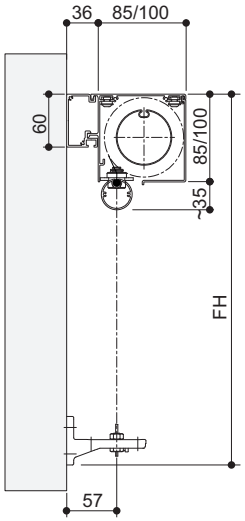
Q100



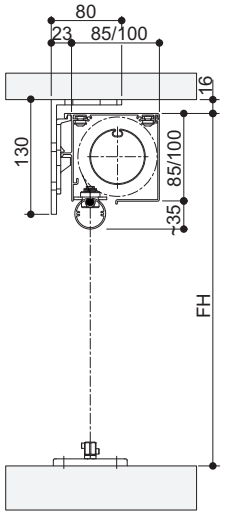
Types of installation



Installation with box bracket



Installation with installation profile



Installation with ceiling bracket

Legend

FH	Complete height

Scope of delivery

- Square box with integrated spring for wire cable (Q85/Q100)
- Box bracket
- Cable guide with strainer clamp
- Motor drive 230V, with 3 m cable without Hirschmann connector/cable socket
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

- Box mounting profile continuous or ceiling girder possible
- Large selection of other tensioning brackets and floor cable holders
- Wall-mounted radio transmitter / Hand-held radio transmitter
- Crank handle drive for Q85 / Q100
- Two systems can be coupled
- Large selection of alternative covers according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Energy saving
- Unobtrusive due to cable guides
- Simple assembly by means of box bracket
- Slim and inconspicuous box shape
- Transparency to the outside due to screen fabric
- Large selection of designs as a design element

Front-mounted awning cable

Technical product description

Box

Dimension

Q85	85x85 mm
Q100	100x100 mm

Material	Extruded aluminium
Surface	powder-coated
Profile	2-part

Description

- Installation of the box via the rear box top board, in connection with box bracket or installation profile, that also serves to store the Hirschmann connector

Front rail

Round profile

Material	Extruded aluminium
Dimension	ø35 mm

Description

- With pushed-in weighting steel and plastic end caps
- Laterally guided via the guiding cables

Roller tube

Box Q85

Material	Extruded aluminium
Dimension	ø52 mm

Box Q100

Material	galvanised steel tube
Dimension	ø63 mm

Description

- An inspection is possible via a spring-loaded telescopic roller cap

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

Cable guiding, strainer clamp

Wire cable

Material	Polyamide-sheathed stainless steel cable
Dimension	ø2,5 mm

Description

- At the lower end, the wire cable is fixed via strainer clamps or tensioning brackets with clamping screws
- Cable holders provided at the bottom are optionally available
- In the upper area, the wire cable is optimally kept under tension via a press-fitted wire cable bushing and a spring integrated in the box

Strainer clamp

Material	Aluminium
Adjusting range	23-181 mm

Options

- Tensioning shoes for the fixing to the bottom
- Tensioning brackets with an adjusting range of 39-150mm
- Threaded fitting M8 or M6

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	possible

Description

- Installed in the drive shaft with integrated limit switches for the upper and lower end position
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Crank handle drive

Only for box Q85 and Q100

Description

- Worm-wheel gear with gear reduction 4:1
- Crank handle exit diagonally or horizontally
- With bearing, powder-coated crank rod, folding handle and crank holder
- Optionally with removable crank handle with crank handle funnel or eyelet

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

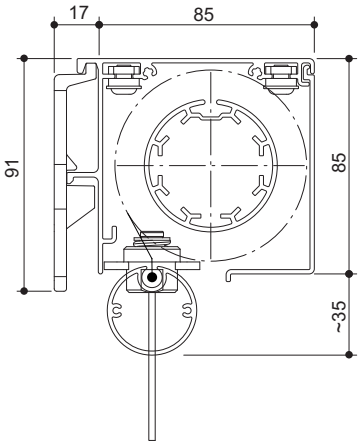
Fasteners, mounting material

All screwed connections, fixings and connections are made of stainless steel A2.

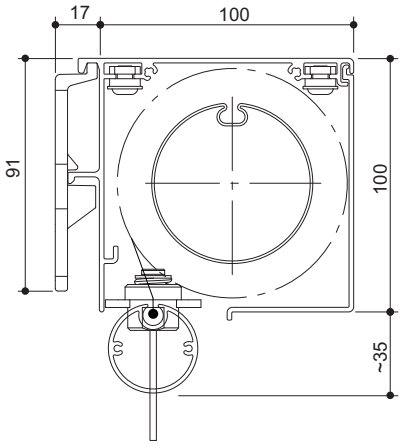
Front-mounted awning cable

Box dimensions

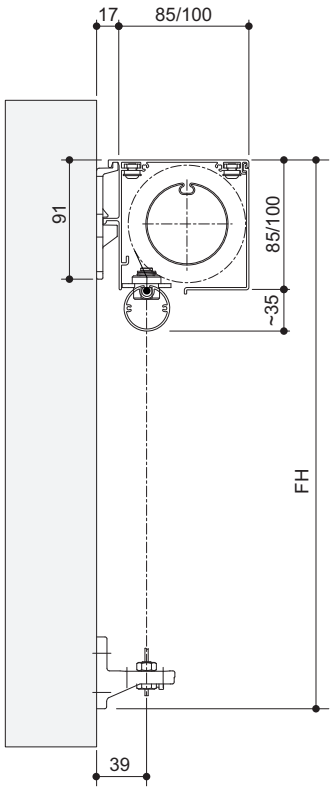
Q85.



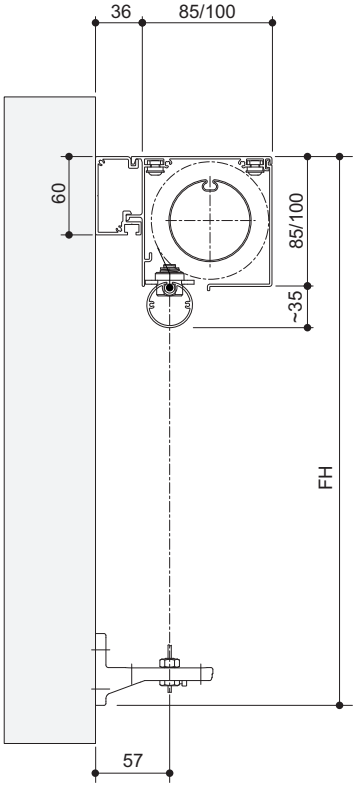
Q100



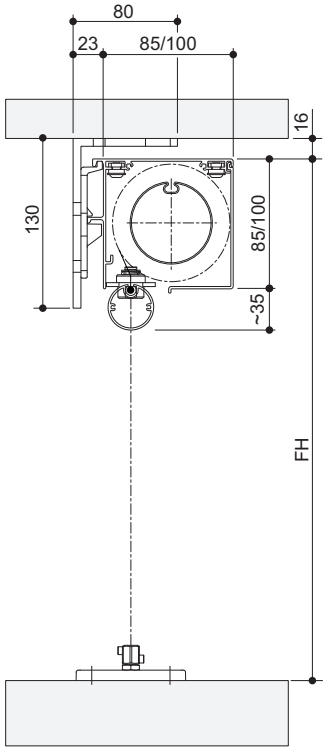
Installation options and dimension definition



Installation with box bracket



Installation with installation profile



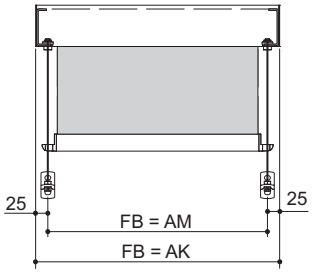
Installation with ceiling bracket

Legend

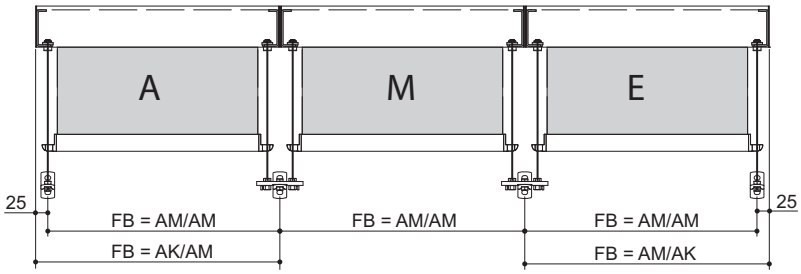
FH Complete height

Combinations and dimensioning definition

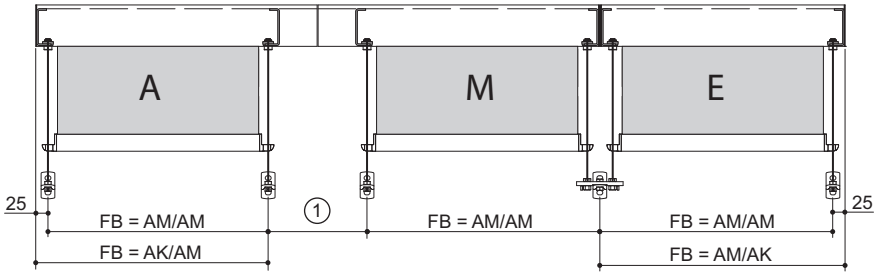
Single unit



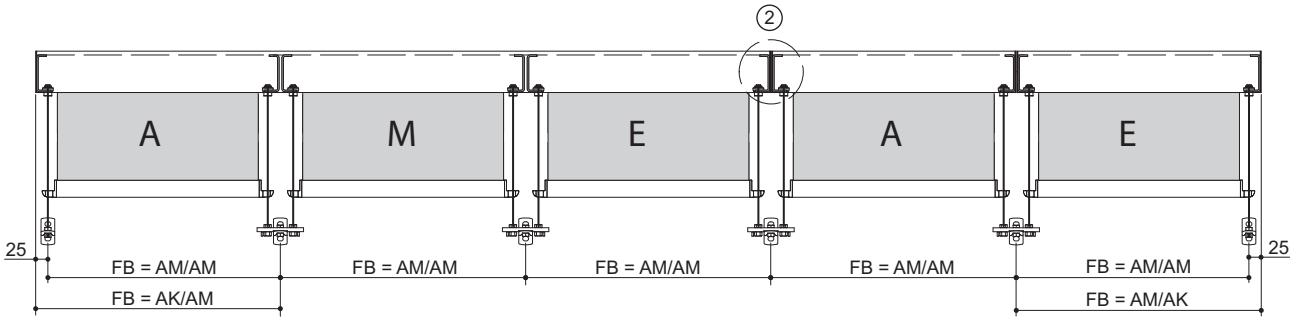
Combination in 3 parts - box split or full-length



Combination in 3 parts with in-between box - box split or full-length



Combination with joint -continuation of the combination after 3 elements

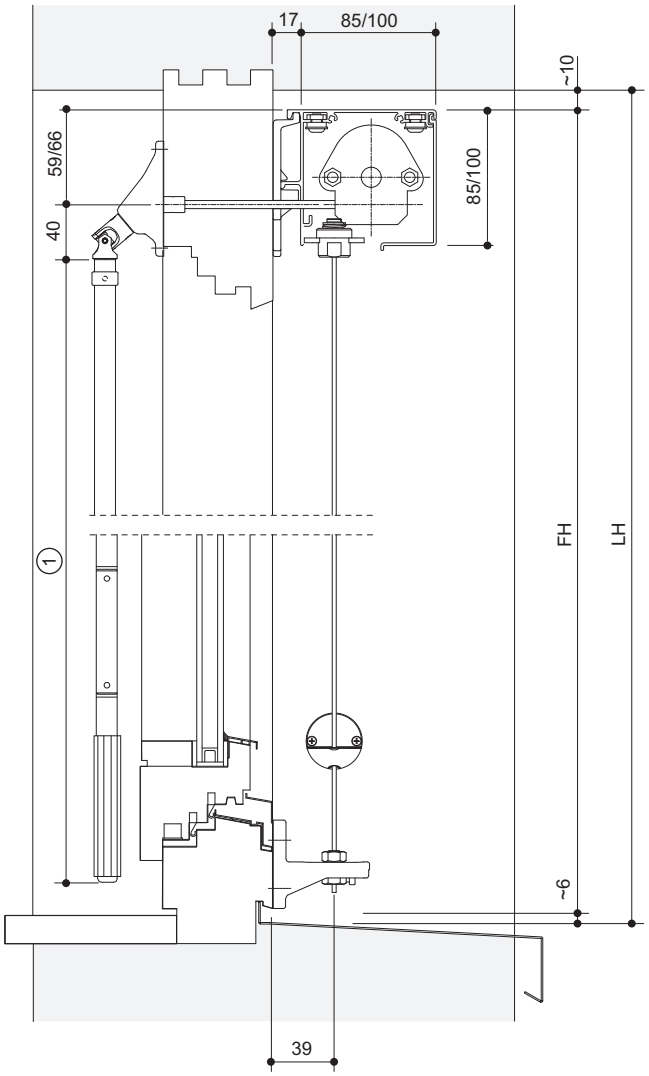


Legend

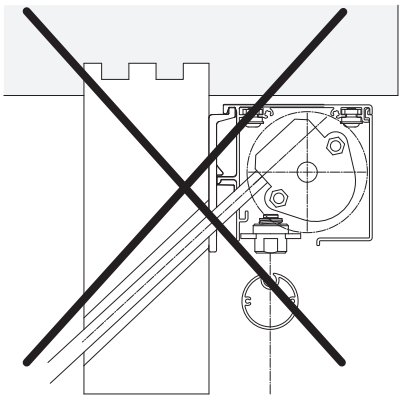
FB = AK	Complete width = outer edge of the box	A	Combination start
FB = AM	Complete width = dimension between axes of the cable holder	M	Combination middle
FB = AK/AM	Complete width = outer edge of the box/dimension between axes of the double cable holder	E	Combination end
FB	Complete width = ordering width	①	Spacer
		②	Joint - continuation of the combination after an end element (only specification of the dimension between axes possible)

Front-mounted awning cable

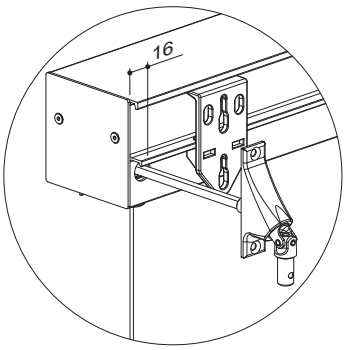
Crank handle drive



Design Crank handle drive horizontal



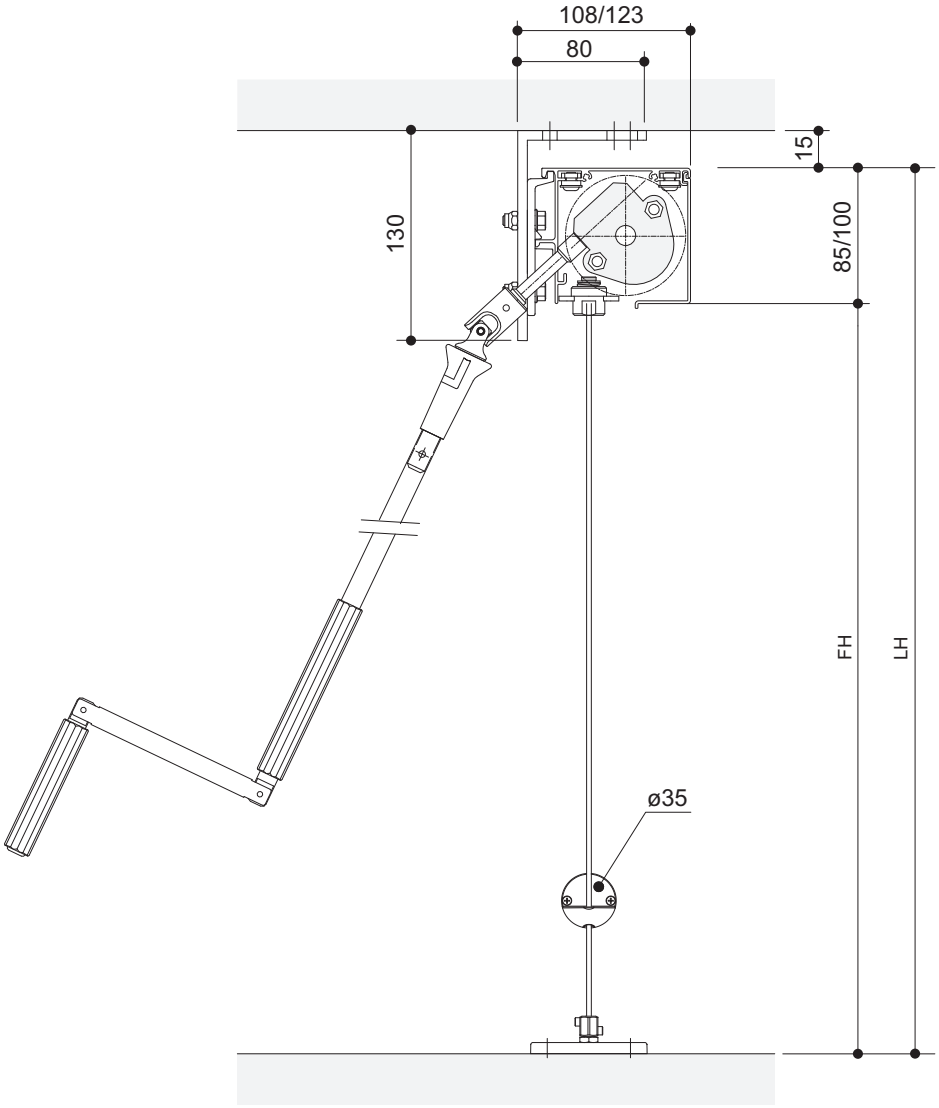
A “diagonal” cable duct is not possible, because the duct boring is not hidden by the box and is therefore visible.



Detail crank handle exit

Legend

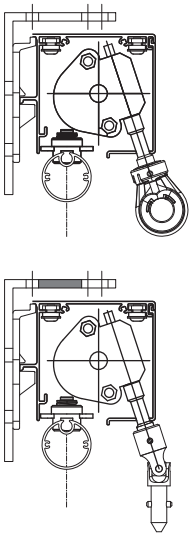
FH	Complete height
LH	Clear height
①	Crank handle length



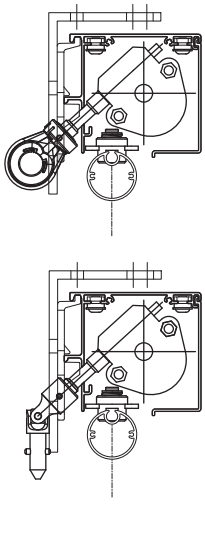
Legend

FH	Complete height
LH	Clear height
FB = AK	Complete width = outer edge of the box

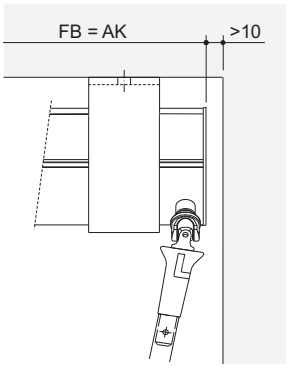
Design Crank handle drive with funnel at the rear side



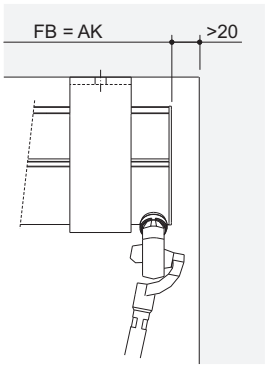
with eyelet/crank handle funnel at the front removable



with eyelet/crank handle funnel at the rear removable



Design crank handle funnel - front view



Design eyelet - front view

Front-mounted awning cable

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Front-mounted awnings cable	
							Q85	Q100
Somfy	LS Mars 40	mechanical		Wire-bound	16	Round Head	+	
	Sunea 40 io	mechatronical		Remote control	16	Round Head	+	
	LT Ariane	mechanical		Wire-bound	17	Sternkopf		+
	Sunea 50 io	mechatronical		Remote control	17	Sternkopf		+
elero	SunTop S	mechatronical		Wire-bound	17	Round Head	o	
	SunTop S - 868	mechatronical		Remote control	17	Round Head	+	
	SunTop M SH	mechatronical		Wire-bound	23	Sternkopf		o
	SunTop M SH - 868	mechatronical		Remote control	23	Sternkopf		+

Cable designs

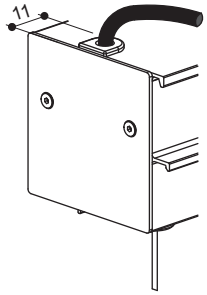
Cable length	Cable end	pluggable with motor head*	Front-mounted awnings cable	
			Q85	Q100
3 m	without Hirschmann connector	yes	o	o
0.5 m	with Hirschmann connector	yes	+	+
Special length	with/without Hirschmann connector	yes	+	+

* with the drives LS Mars 40 and Sunea io 40, the cable is wired permanently with the drive (not pluggable)

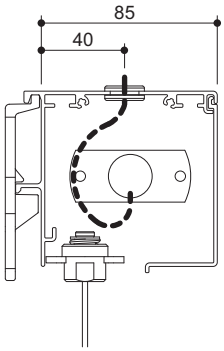
Legend

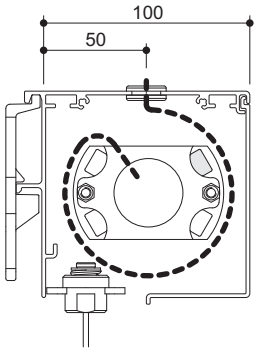
o	Standard
+	Optional

Motor drive - cable exits



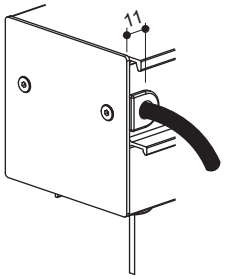
Cable exit towards the top



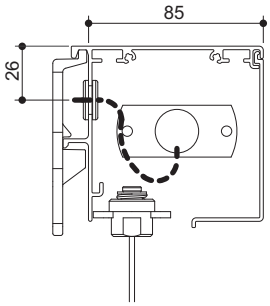


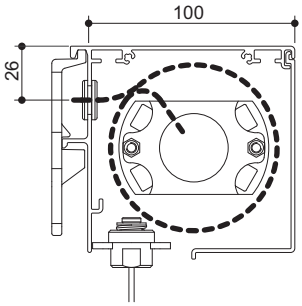
Box detail VW cable - cable exit towards the top

Q85 **Q100**



Cable exit towards the rear





Box detail VW cable - cable exit towards the rear

Q85 **Q100**

BUILD AND RENOVATE

Build and Renovate




Especially for on-site manholes, there are the side-lined cantilever manhole awnings, which are simply mounted on the guides and inserted from below into the planned or existing manhole and thus disappear inconspicuously. As an alternative to the wind-stable rail-guided shaft awnings, cable-guided variants can also be selected.

Flush-mounted awnings are completely plastered over with a plaster base applied to the front and can therefore be perfectly integrated into the wall in new buildings or renovations. Even the guide rails can be integrated laterally into the plastered reveal and the incidence of light is then optimally reduced with a wind-stable side seam guide.

Overview

Recess awnings

Recess awning protect

This side-hem model with self-supported, extruded half-cassettes is ideally suited for integration into on-site recesses.

- Self-supporting, simple installation in on-site recesses
- Three box sizes, half box ,(H100, H115, H130)
- Up to 3,5 m wide and 4,5 m high
- Stowage of the plug-in coupling in the inspection cover
- Cable reserve for a revision of the roller tube
- Fully plasterable guide rails (in combination with deep guide rail)

Basic awning cable-guided

The cable guided classic offers a simple bracket installation of the awning in the recess on site. Thanks to the spring-loaded cable guiding, the covers are always properly tensioned and provide perfect and unobtrusive heat protection.

- Easy mounting with angles (116x50)
- Up to 5 m wide and 3 m high
- Crank handle or motor drive

Concealed awnings

Concealed awning protect

The design stands for side-hem guided systems with plaster base plates on the box. This model is perfect for integration into plaster façades and can be reached from below for revision at any time. Optionally, the boxes can be back-insulated to save energy.

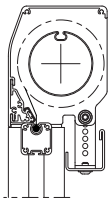
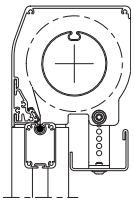
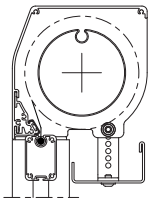
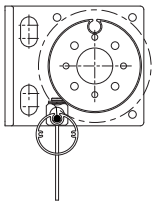
- Rectangular boxes (E100, E115, E130)
- Up to 4 m wide and 4 m high
- Fully plasterable guide rails (in combination with deep guide rail)
- 20/30/40 mm rear insulation with EPS possible
- Impermeable to driving rain due to sealing profiles at the rear of the box and in the guide rails

Concealed awning cable-guided

This concealed awning is specially designed for insulated plaster façades. Thanks to the easy-to-install box system with plaster supports, it integrates inconspicuously into the façade. Optimum insulation behind the box saves energy at the same time.

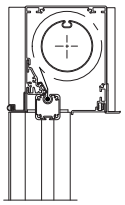
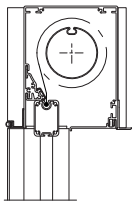
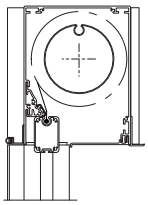
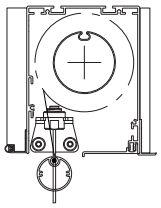
- Easy mounting with angles or directly
- Rectangular box (E115)
- Up to 3 m wide and 3 m high

Type overview

	Recess awning protect			Basic awning cable
Models according to box form and size	H100.	H115	H130	
				
Max. width [mm]*				
Single unit	3500	3500	3500	5000
Linked	-	-	-	10000
Max. height [mm]*				
	3500	4000	4500	3000
Max. surface [m²]*				
Single unit	12	12	12	9
Linked	-	-	-	18
Drive system				
Crank handle	-	-	-	+
Motor	o	o	o	o
Motor cable 3 m without plug	o	o	o	o
Motor cable 0.5 m with plug	+	+	+	+
Installation				
With space towards the facade	+	+	+	-
Without space (direct installation)	o	o	o	o
Guide rails				
Single guide rail 44x49 (crank handle drive)	-	-	-	-
Single guide rail 32x49	-	-	-	-
Single guide rail 32x55	o	o	o	-
Guide rail 32x97	+	-	-	-
Guide rail 32x115	-	+	-	-
Guide rail 32x130	-	-	+	-
Tensioning elements				
Strainer clamp	-	-	-	o
Tensioning bracket	-	-	-	+
Tensioning shoe (floor)	-	-	-	+
Box				
Inspection opening	at the bottom	at the bottom	at the bottom	-
Box lengthening	-	-	-	-
Mitre	-	-	-	-
Rear insulation of the box	-	-	-	-

Legend

o Standard design
\+ optional - in some cases for a surcharge
\- not possible
* Limit sizes depend on the fabric type (see limit size tables)

	Concealed awning protect			Concealed awning cable
Models according to box form and size	E100.	E115	E130	E115
				
Max. width [mm]*				
Single unit	3500	3500	4000	3000
Linked	-	-	-	-
Max. height [mm]*				
	3500	4000	4000	3000
Max. surface [m²]*				
Single unit	12	12	12	9
Linked	-	-	-	-
Drive system				
Crank handle	-	-	-	-
Motor	o	o	o	o
Motor cable 3 m without plug	o	o	o	o
Motor cable 0.5 m with plug	+	+	+	+
Installation				
With space towards the façade	-	-	-	-
Without space (direct installation)	o	o	o	o
Guide rails				
Single guide rail 44x49 (crank handle drive)	-	-	-	-
Single guide rail 32x49	-	-	-	-
Single guide rail 32x55	o	o	o	-
Guide rail 32x97	+	-	-	-
Guide rail 32x115	-	+	-	-
Guide rail 32x130	-	-	+	-
Tensioning elements				
Strainer clamp	-	-	-	o
Tensioning bracket	-	-	-	+
Tensioning shoe (floor)	-	-	-	+
Box				
Inspection opening	at the bottom	at the bottom	at the bottom	at the bottom
Box lengthening	+	+	+	-
Mitre	+	+	+	-
Rear insulation of the box	+	+	+	+

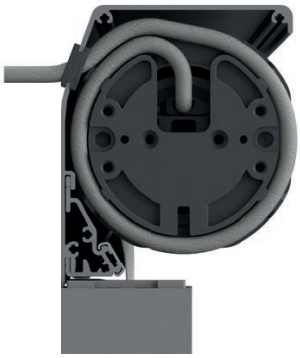
Legend

o Standard design
\+ optional - in some cases for a surcharge
\- not possible
* Limit sizes depend on the fabric type (see limit size tables)

Recess awning protect

Recess awning protect with side seam guiding

- Self-supporting shaft installation with half-box
- Optional inspection cover for shaft covering and cable stowage.
- It is possible to fix the guide rails directly or with the help of spacers. Alternatively deep guide rails available.
- The height of the inspection cover is adjustable



- Cable reserve in the box for a revision of the motor

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
H100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
H115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4000
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3500
	InsectScreen	12	500	3500	3000
H130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4500
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4500
	SOLTIS Opaque B92/OpaqueB702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	3500	3000

Legend

KG Box size

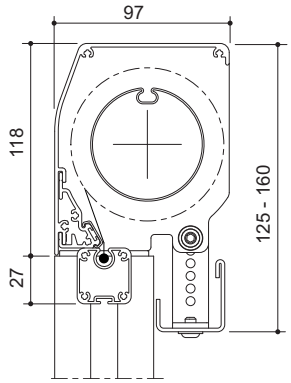
Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)

Box forms and box sizes

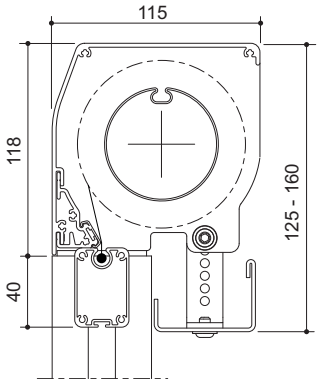
Half-box

H100.



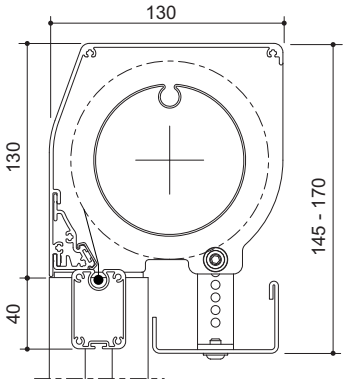
Half-box

H115

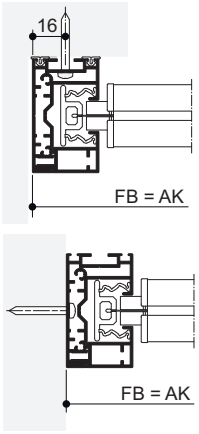


Half-box

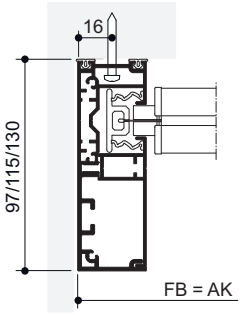
H130



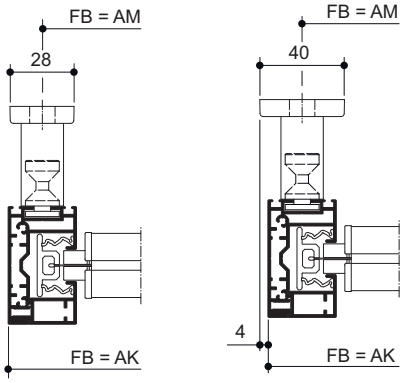
Guide rails



Direct installation



Direct installation with deep guide rail



Spacers for guide rails

Legend

FB = AK Complete width = outer edge of the guide rail

FB = AM Complete width = dimension between axes

Scope of delivery

- Half-cassette self-supporting clipped onto the guide rails
- Guide rail with end caps and piping for side seam guide (without spacer)
- Motor drive 230V, with 3 m cable without Hirschmann connector/cable socket
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip side seam guided
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

- inspection cover for shaft covering and cable stowage
- Spacers for guide rails
- Alternatively deep guide rails
- Wall-mounted radio transmitter / Hand-held radio transmitter
- Large selection of alternative fabrics according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Blackout
- Wind-stable sun protection
- Energy saving
- Self-supporting installation in on-site shaft without additional fastening
- Transparency to the outside due to screen fabric
- Large selection of designs as a design element

Recess awning protect

Technical product description

Box

Dimension

H100	97x118 mm
H115	115x118 mm
H130	130x130 mm

Material	Extruded aluminium
Surface	powder-coated
Profile	1-part

Description

- Box with galvanised side covers made of steel fitted onto the guide rail.

Front rail

square profile

Box H100

Material	Extruded aluminium
Dimension	35x31 mm

Box H115 / H130

Material	Extruded aluminium
Dimension	30x44 mm

Description

- With inserted weighting steel.
- Laterally guided in the guide rails with plastic gliders.
- Optionally with 20 mm sealing brush at extra cost (with insect screen fabric standard without extra cost)

Roller tube

Box H100 / H115

Material	galvanised steel tube
Dimension	ø63 mm

Box H130

Material	galvanised steel tube
Dimension	ø85 mm

Description

- Both ends of the roller tube are equipped with adapters made of plastic with which a tapering of the roller tube is achieved. Herewith it is possible to correct the thicker ends of the rolled up zip fastener. An inspection is possible via a spring-loaded telescopic roller cap.

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

Guide rails

Box H100 / H115 / H130

Material	Extruded aluminium
Dimension	32x55 mm
Profile	2-part

Optional:

- deep guide rail 32x97 mm
- deep guide rail 32x115 mm
- deep guide rail 32x130 mm

Description

- The inner guiding consists of a black co-extruded plastic profile with full-length buffer lips made of foamed material. The zippener which is provided at the cover, is inserted into this plastic profile and kept sliding. The lower end caps of the guide rails are made of powder-coated aluminium sheet steel and can be used up to a diagonal guide rail cut of 5°.
- Installation of the guide rail directly to the window frame or laterally in the soffit.
- Optionally, an installation with spacers up to a distance of max. 150 mm is possible with fixed spacers.

Inspection cover

Description

- Optional available inspection cover made of canted aluminium sheet steel.
- The height is adjustable to fit the recess dimension on site.
- Suitable to store the cable and the connector in the box.

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	not possible

Description

- Special protective function for the curtain in the Down-direction, and blocking detection in the Up-direction to protect the cover
- with torque switch-off for the upper end position
- Thermo protective switch to prevent overheating
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

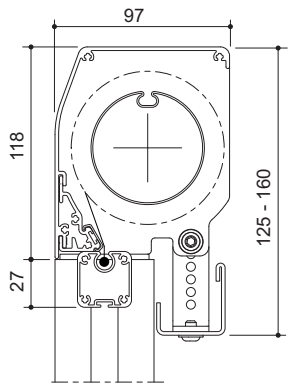
Fasteners, mounting material

All screwed connections, fixings and connections are made of stainless steel A2.

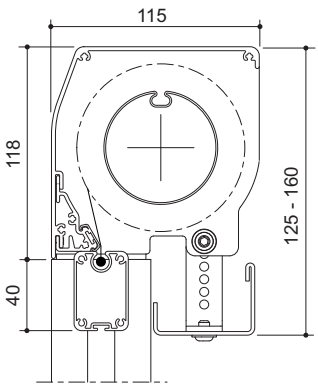
Recess awning protect

Box dimensions

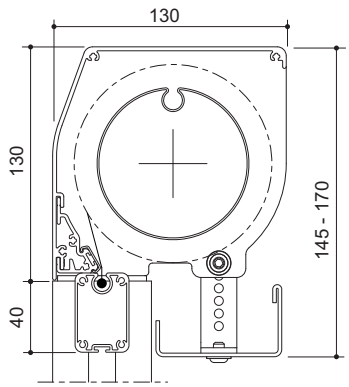
H100.



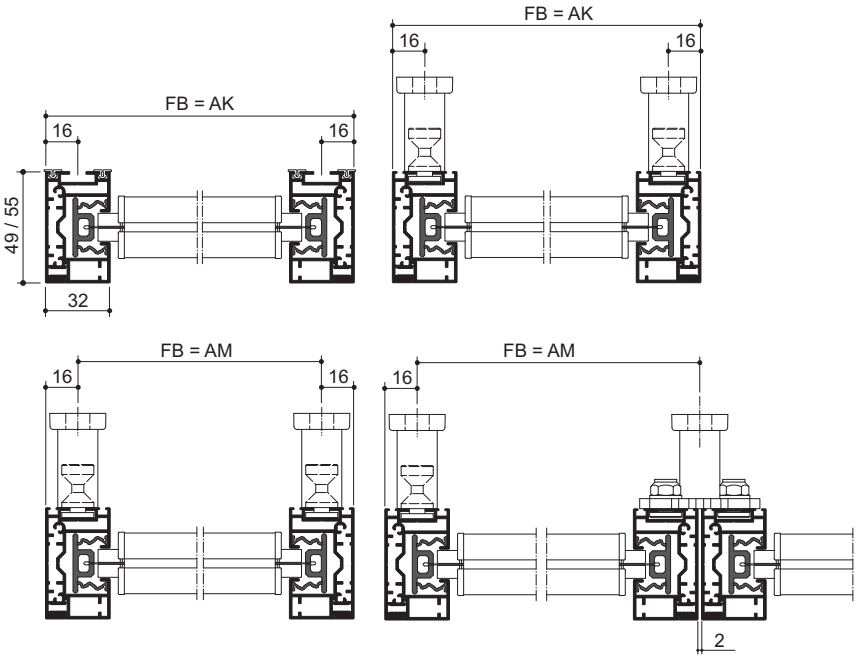
H115

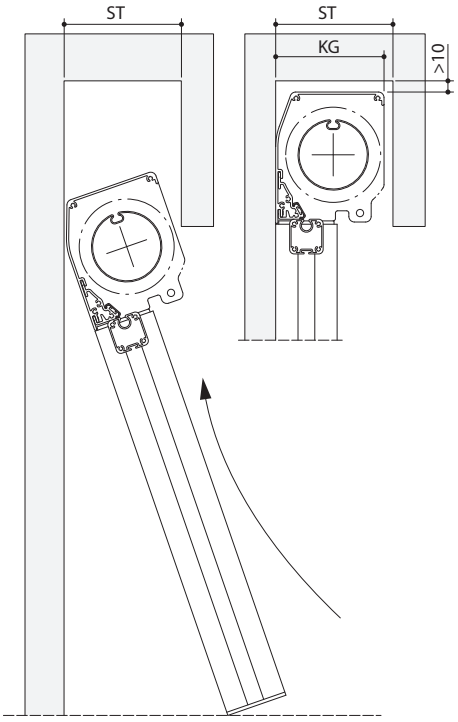


H130



Dimensioning definition for complete width (= ordering width)





Legend

FB = AK	Complete width = outer edge of the guide rail
FB = AM	Complete width = dimension between axes
FB	Complete width = ordering width
ST	Recess depth
KG	Box size

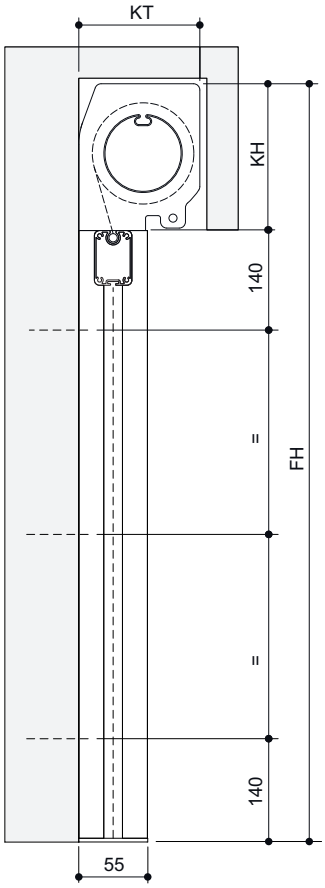
Notes:

- Complete width optionally outer edge of the guiding (AK) or dimension between axes (AM)
- Complete width always dimension between axes with combination

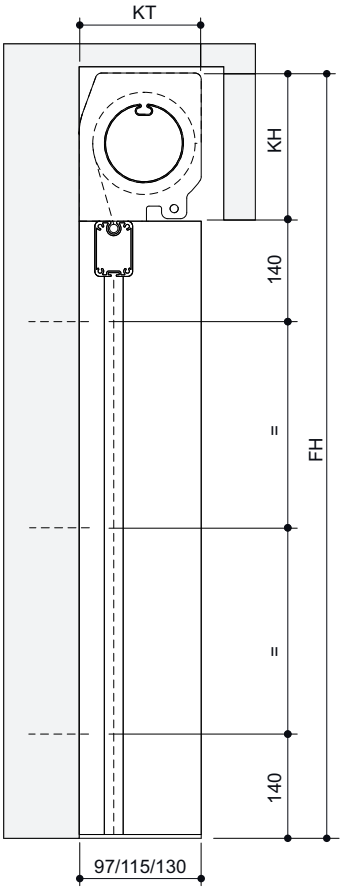
Minimum shaft depths ST

- **Box size 100**
  Guide rail 32x55 = 105 mm
  Guide rail 32x97 = 115 mm
- **Box size 115**
  Guide rail 32x55 = 125 mm
  Guide rail 32x115 = 135 mm
- **Box size 130**
  Guide rail 32x55 = 140 mm
  Guide rail 32x130 = 150 mm

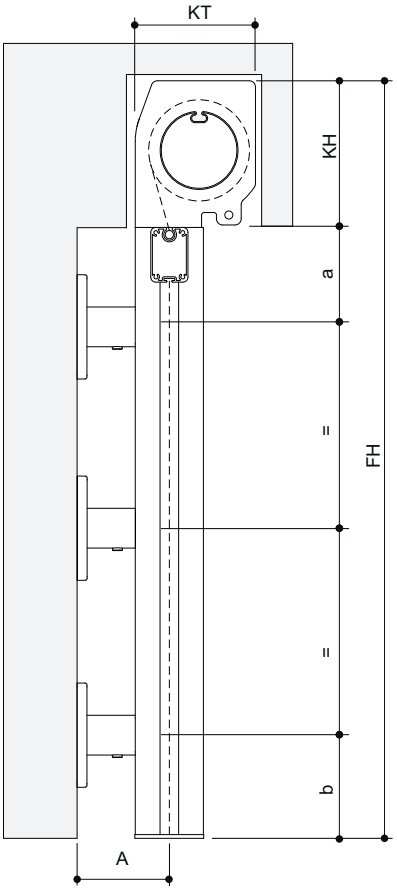
Installation options and dimension definition



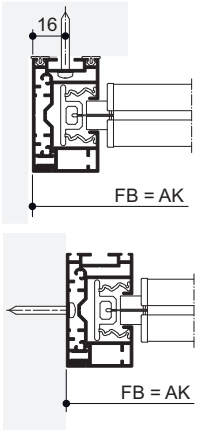
Direct installation



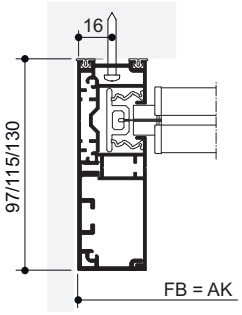
Installation with deep guide rail



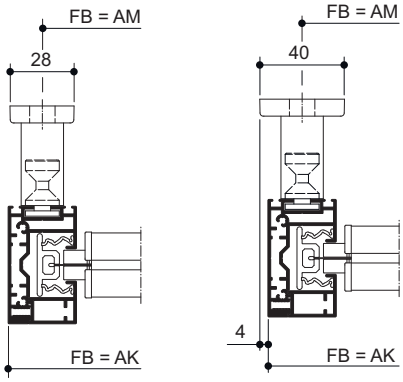
Installation with spacers



Direct installation
from the front or side in the soffit



Direct installation with deep guide rail



Spacers for guide rails

Space between the spacers [mm]				Number of spacers with complete height [mm]			
a		b		Number per guide rail			
min.	max.	min.	max.	2	3	4	5
100	200	80	200	≤ 2000	2001-3000	3001-4000	4001-5000

Number of mounting holes with guide rail length [mm]				
2	3	4	5	6
≤ 1200	1201-2000	2001-2900	2901-3800	3801-4700

Attention:
With the spacer with the large base plate (40 mm) the lateral excess length of 4 mm must be considered!

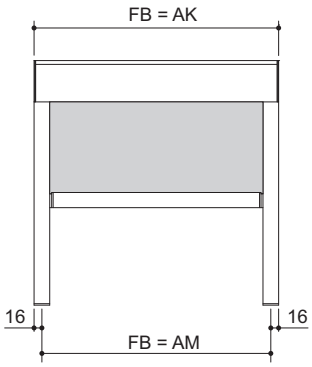
Legend

FB=AK	Complete width = outer edge of the guide rail
KT	Box depth
KH	Box height
FH	Complete height
A	Distance dimension (max. 150 mm)
a	Spacer position from the top
b	Spacer position from the bottom

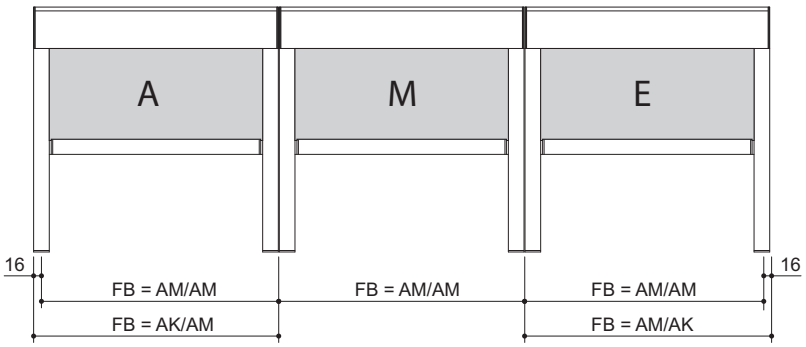
Recess awning protect

Combinations and dimensioning definition

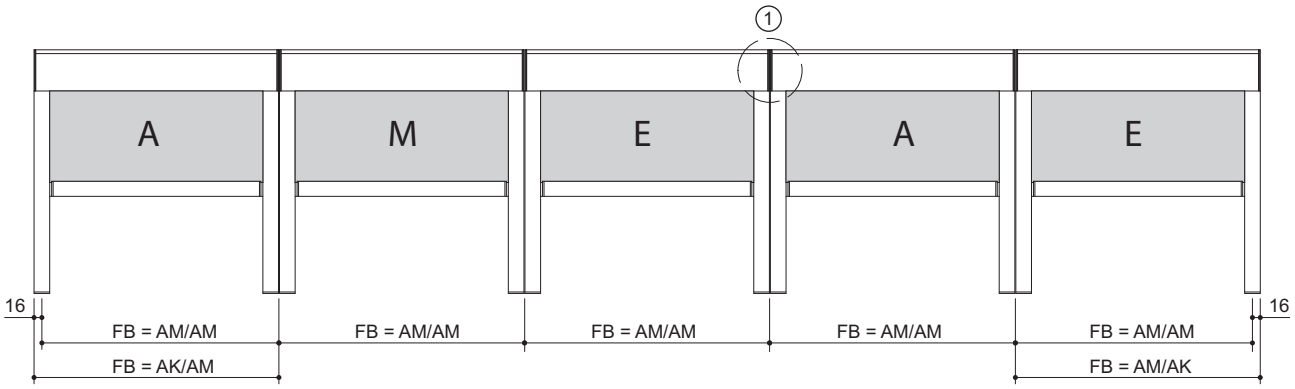
Single unit



Combination in 3 parts - box split



Combination with joint - continuation of the combination after an end element



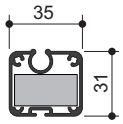
Legend

FB = AK	Complete width = outer edge of the guide rail	A	Combination start
FB = AM	Complete width = dimension between axes	M	Combination middle
FB = AK/AM	Complete width = outer edge guide rail/dimension between axes	E	Combination end
FB	Complete width = ordering width	①	Joint - continuation of the combination after an end element (only specification of the dimension between axes possible)

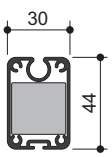
Standard dimension A for spacer

Model	Box type	Left roller		Right roller		max. A
		Standard	min. A	Standard	min. A	
SM07	H100	75	70	85		150
	H115	75	70	100		150
	H130	75	70	115		150

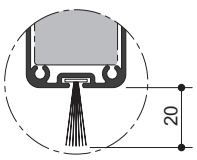
Front rail



H100.



H115/H130



- For insect screen standard
- Without insect screen optional against surcharge

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Recess awnings protect H100/115/130
Somfy	OREA WT 50 RH	mechatronical		Wire-bound	17	Round Head	+
	MAESTRA+ 50 io RH	mechatronical	x	Remote control	17	Round Head	+
elero	SunTop/Z RH	mechatronical	x	Wire-bound	23	Round Head	o
	SunTop/Z RH - 868	mechatronical	x	Remote control	23	Round Head	+

Cable designs

Cable length	Cable end	pluggable with motor head	Recess awnings protect H100/115/130
3 m	without Hirschmann connector	yes	o
0.5 m	with Hirschmann connector	yes	+
Special length	with/without Hirschmann connector	yes	+
Cable lengthening*	without Hirschmann connector	no	+

* ... if the Hirschmann plug connection is stored in the box

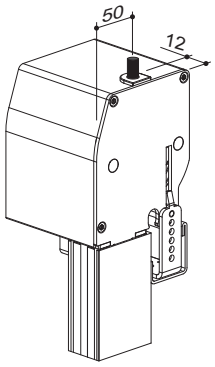
Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Legend

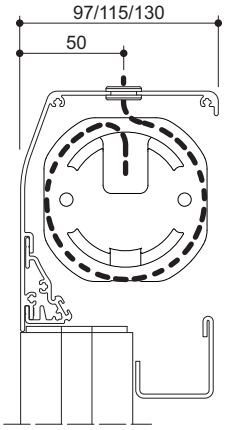
o	Standard
+	Optional

Recess awning protect

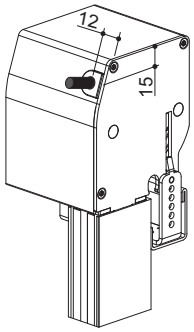
Motor drive - cable exits



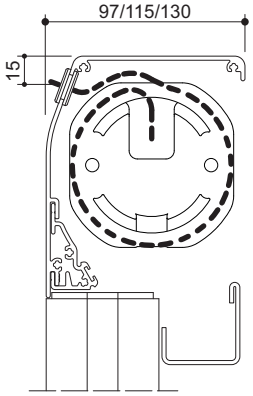
Cable exit towards the top



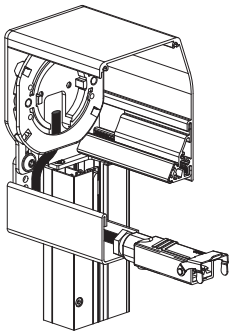
Box detail SM protect - cable exit towards the top
H100 / H115 / H130



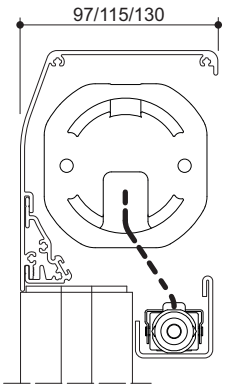
Cable exit towards the rear



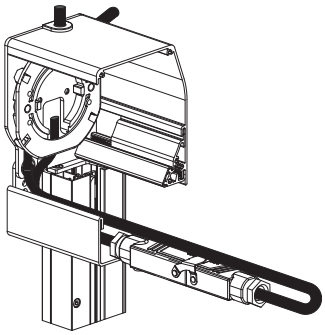
Box detail SM protect - cable exit towards the rear
H100 / H115 / H130



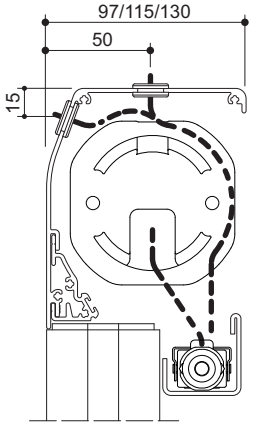
Hirschmann connector in the inspection cover



Box detail SM protect
H100 / H115 / H130
Hirschmann connector in the inspection cover



Hirschmann connector stored in the inspection cover and cable lengthening towards the outside



Box detail SM protect
H100 / H115 / H130
Hirschmann connector stored in the inspection cover and cable lengthening towards the outside

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Basic awning cable

Recess awning with cable guiding

- Mounting angle for roller tube in case of wall or ceiling installation
- Cover guidance by cable-guided drop profile
- Wire cables are always kept under tension by a spring integrated in the mounting bracket.

- Wire cables secured by cable holders.
- Large selection of tensioning brackets and floor cable holders.

Limit sizes

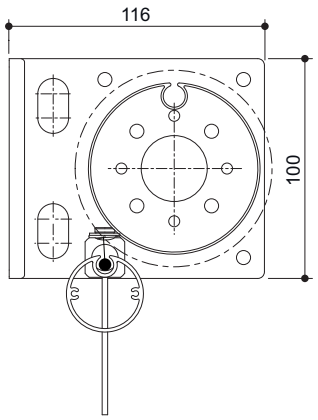
	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
Exterior use	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl)	9	500	5000	3000
	SOLTIS Veozip	9	500	4000	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	9	500	5000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	2500	2800
Interior use	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl)	20	500	5000	4000
	SOLTIS Veozip	16	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	20	500	5000	4000
	SOLTIS Master 99/Feel 99 LowE Mermet (SATINÉ 5500 LowE)	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	12	500	4000	3000

Notes:

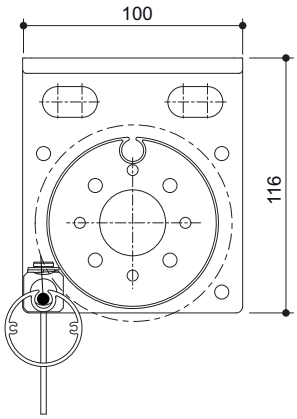
- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side for external mounting: on the left or right side (seen from the outside).
- Specification of the drive side for external mounting: on the left or right side (seen from the inside)
- Minimum width with crank handle drive 400 mm.

Angle dimension

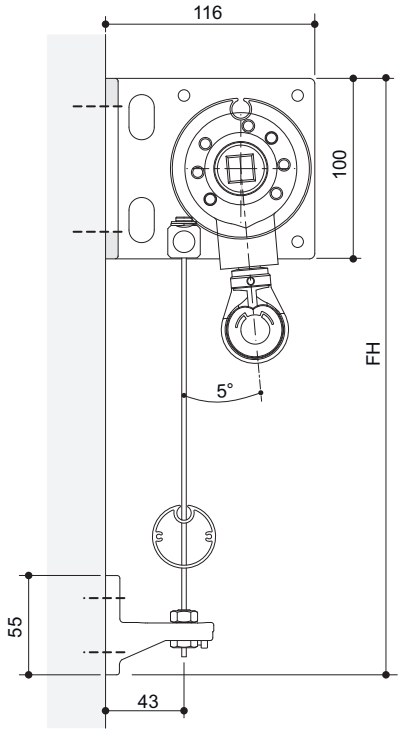
Wall installation



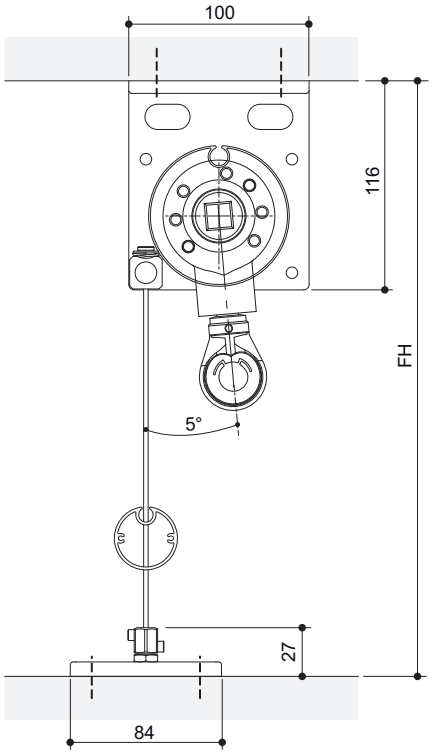
Ceiling installation



Types of installation



Installation of the bracket towards the back



Installation of the bracket towards the top

Legend

FH Complete height

Scope of delivery

- Roller tube with mounting brackets
- Cable guide with tensioning bracket and integrated spring
- Motor drive 230V, incl. 0.4 m cable with Hirschmann connector or 3 m without Hirschmann connector
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world.

Supplementary equipment

- Further tensioning brackets and floor cable holders
- Wall-mounted radio transmitter / Hand-held radio transmitter
- Crank drive with eyelets and removable crank handle
- Two systems can be coupled
- Large selection of alternative covers according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Energy saving
- Unobtrusive in the shaft due to cable guides
- Transparency to the outside due to screen fabric
- Large selection of designs as a design element
- Also suitable for indoor use for larger areas

Basic awning cable

Technical product description

Mounting bracket

Material	Die-cast aluminium
Dimension	50x116 mm

Description

- can be used for horizontal or vertical installation

Front rail

Round profile

Material	Extruded aluminium
Dimension	ø35 mm

Description

- With pushed-in weighting steel and plastic end caps
- Laterally guided via the guiding cables

Roller tube

Material	galvanised steel tube
Dimension	ø78 mm (partly ø85 mm)

Description

- Grooved shaft made of sendzimir-galvanised sheet steel with roller capsule made of plastic.

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

Cable guiding, strainer clamp

Wire cable

Material	Polyamide-sheathed stainless steel cable
Dimension	ø2,5 mm

Description

- At the lower end, the wire cable is fixed via strainer clamps or tensioning brackets with clamping screws
- Cable holders provided at the bottom are optionally available
- In the upper area, the wire cable is optimally kept under tension via a press-fitted wire cable bushing and a spring provided at the mounting bracket

Strainer clamp

Material	Aluminium
Adjusting range	23-181 mm

Options

- Tensioning shoes for the fixing to the bottom
- Tensioning brackets with an adjusting range of 39-150mm
- Threaded fitting M8 or M6

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	possible

Description

- Installed in the drive shaft with integrated limit switches for the upper and lower end position
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Crank handle drive

Description

- Bevel gear unit with gear reduction 3:1 without limit stop
- Alternatively (for a surcharge): Bevel gear unit 4.4:1 with variable limit stop adjustable from the outside
- Operation via crank rod with ball hook
- Crank handle lengths 1200, 1400 or 1800 mm

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

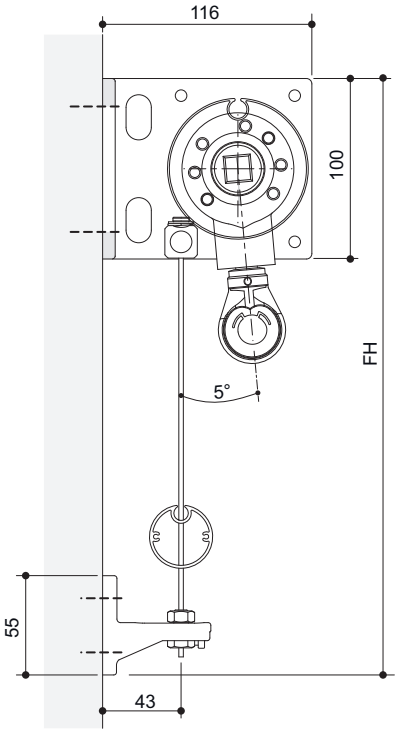
- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

Fasteners, mounting material

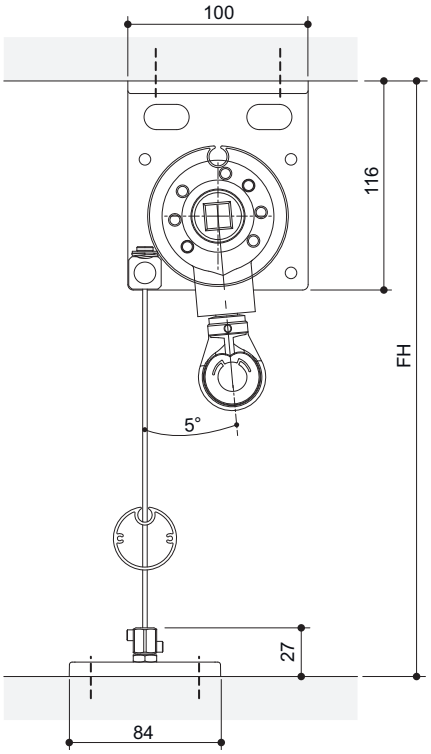
All screwed connections, fixings and connections are made of stainless steel A2.

Basic awning cable

Installation options and dimension definition



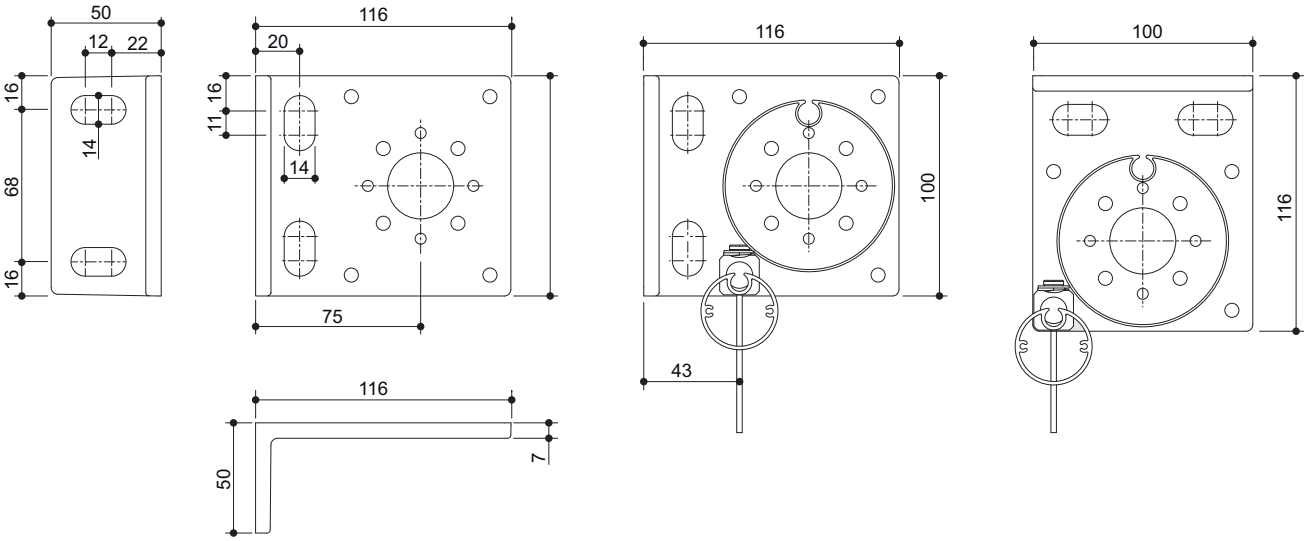
Installation of the bracket towards the back



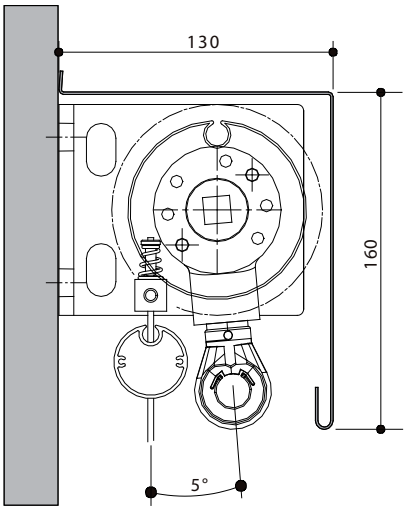
Installation of the bracket towards the top

Legend

FH Complete height



Mounting bracket with cable holder

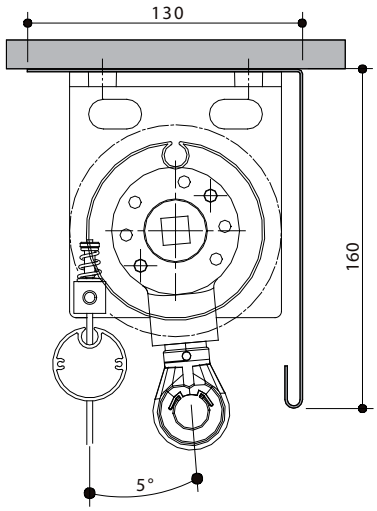


Horizontal installation:

Mounting bracket mounted towards the back.
With crank handle drive:
Gear output 5° forward-facing.

Rain shelter:
(On demand)

The rain shelter is reinforced with additional mounting links.

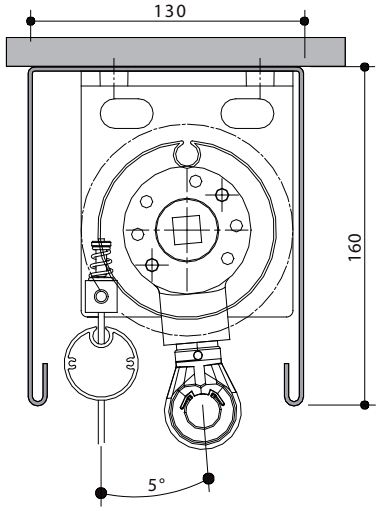


Vertical installation:

Mounting bracket mounted towards the top.
With crank handle drive:
Gear output 5° forward-facing.

Rain shelter:
(On demand)

The rain shelter is reinforced with additional mounting links.



Vertical installation:

Mounting bracket mounted towards the top.
With crank handle drive:
Gear output 5° forward-facing.

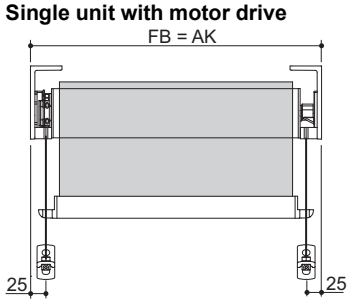
Rain shelter:
Full box:
(On demand)

The rain shelter is reinforced with additional mounting links.

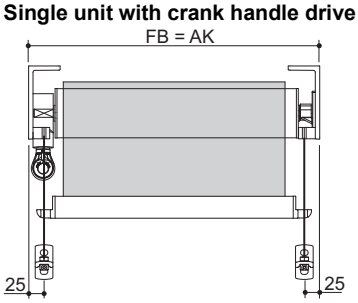
Basic awning cable

Combinations and dimensioning definition

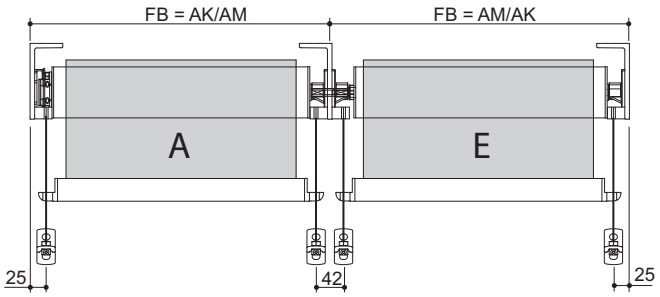
Single unit with motor drive



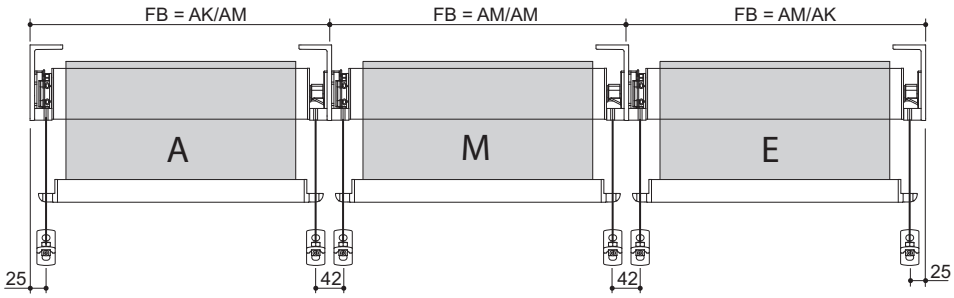
Single unit with crank handle drive



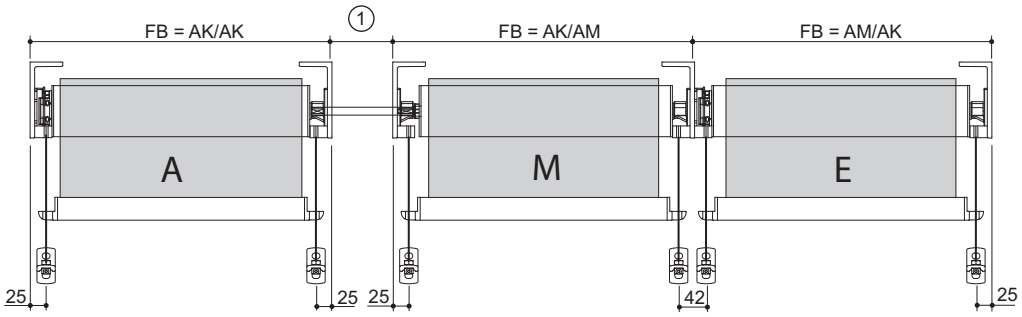
Combination **2-part** linked



Combination 3-part



Combination in 3 parts with spacer - linked



Legend

FB = AK	Complete width = outer edge of the mounting bracket	A	Combination start
FB = AK/AM	Complete width = outer edge of the mounting bracket/dimension between axes of the mounting bracket	M	Combination middle
FB	Complete width = ordering width	E	Combination end
		①	Spacer

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Recess awning cable
Somfy	HiPro LT 50	mechanical		Wire-bound	17	Sternkopf	+
	Sunea 50 io	mechatronical		Remote control	17	Sternkopf	+
elero	SunTop M	mechatronical		Wire-bound	23	Sternkopf	o
	SunTop M - 868	mechatronical		Remote control	23	Sternkopf	+

Cable designs

Cable length	Cable end	pluggable with motor head	Recess awning cable
3 m	without Hirschmann connector	yes	o
0.5 m	with Hirschmann connector	yes	+
Special length	with/without Hirschmann connector	yes	+

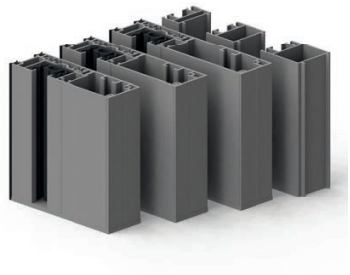
Legend

o	Standard
+	Optional

Concealed awning protect

Concealed awning protect with side seam guiding

- Rectangular extruded box with plaster base fitted onto the guides.
- Guide rails mounted directly
- The side seam guided covers are especially suitable for wind-exposed locations.
- Inspection possible through the inspection opening.



- Fully plasterable guide rails with end caps adapted to the box depth.
- With sealing profile for driving rain-proof installation.

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
E100	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	10	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	7	500	3000	3000
	InsectScreen	10	500	3500	3000
E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	4000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3500
	InsectScreen	12	500	3500	3000
E130	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	4000	4000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	4000	4000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	4000
	InsectScreen	12	500	4000	3000

Legend

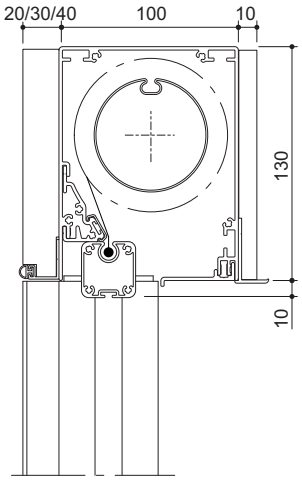
KG Box size

Notes:

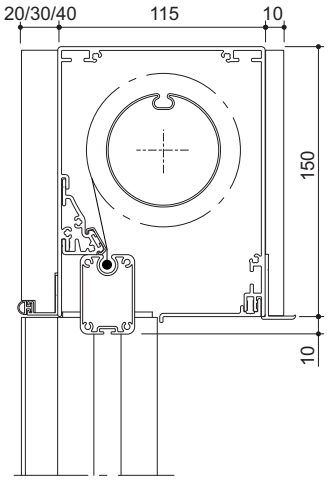
- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)

Box forms and box sizes

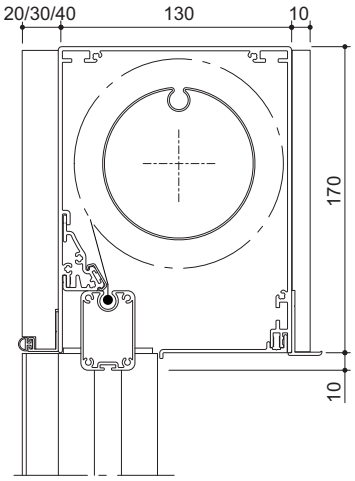
Square design
E100.



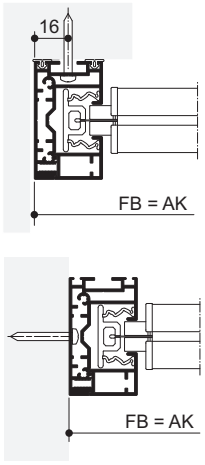
Square design
E115



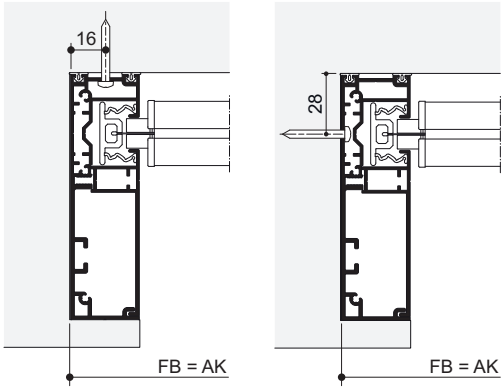
Square design
E130



Guide rails



Direct installation



Direct installation with deep guide rail

Scope of delivery

- rectangular box in three sizes with plaster base and 7 mm plaster nose
- Guide rail for direct installation with end caps (without spacers)
- Motor drive 230V, with 3 m cable without Hirschmann connector/cable socket
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip side seam guided
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

- Rear insulation with EPS in 20, 30 or 40 mm with sealing profile on the box
- Adapter 20, 30 or 40 mm for guide rails with box insulation
- Mitre
- Box lengthening
- deep guide rails per box size
- Various profile noses up to 47 mm in length
- Wall-mounted radio transmitter/Hand-held radio transmitter
- Integrated fall protection
- Large selection of alternative fabrics according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Blackout
- Wind-stable sun protection
- Energy saving
- Integrated in the plastered façade
- Transparency to the outside due to screen fabric
- Large selection of designs as a design element

Concealed awning protect

Technical product description

Box

Dimension

E100	100x130 mm
E115	115x150 mm
E130	130x170 mm
Material	Extruded aluminium
Surface	powder-coated
Profile	2-part

Description

- Box is fitted onto the guide rail with galvanised side covers made of steel
- Box with plaster base board 10 mm and with available plaster flanges 7, 15, 27, 37, 47 mm

Optional:

- Box insulation on the rear side with 20 mm, 30 mm or 40 mm EPS

Front rail

square profile

Box E100

Material	Extruded aluminium
Dimension	35x31 mm

Box E115 / E130

Material	Extruded aluminium
Dimension	30x44 mm

Description

- With inserted weighting steel.
- Laterally guided in the guide rails with plastic gliders.
- Optionally with 20 mm sealing brush at extra cost (with insect screen fabric standard without extra cost)

Roller tube

Box E100 / E115

Material	galvanised steel tube
Dimension	ø63 mm

Box E130

Material	galvanised steel tube
Dimension	ø85 mm

Description

- Both ends of the roller tube are equipped with adapters made of plastic with which a tapering of the roller tube is achieved. Herewith it is possible to correct the thicker ends of the rolled up zip fastener. An inspection is possible via a spring-loaded telescopic roller cap.

Note:

Due to the different roller tube diameters, the running speeds of the systems differ and therefore, when combining different box sizes, the height of the drop profiles is offset when the systems are moved up and down.

Guide rails

Box E100 / E115 / E130

Material	Extruded aluminium
Dimension	32x55 mm
Profile	2-part

Optional:

- deep guide rail 32x97 mm
- deep guide rail 32x115 mm
- deep guide rail 32x130 mm
- Extruded guide rail adapter for distancing of the guide rails with 20 mm, 30 mm or 40 mm

Description

- The inner guiding consists of a black co-extruded plastic profile with full-length buffer lips made of foamed material. The zippener which is provided at the cover, is inserted into this plastic profile and kept sliding. The lower end caps of the guide rails are made of powder-coated aluminium sheet steel and can be used up to a diagonal guide rail cut of 5°.
- Installation of the guide rail directly to the window frame or laterally in the soffit.
- Optionally, an installation with spacers up to a distance of max. 150 mm is possible with fixed spacers.

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	not possible

Description

- Special protective function for the curtain in the Down-direction, and blocking detection in the Up-direction to protect the cover
- with torque switch-off for the upper end position
- Thermo protective switch to prevent overheating
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

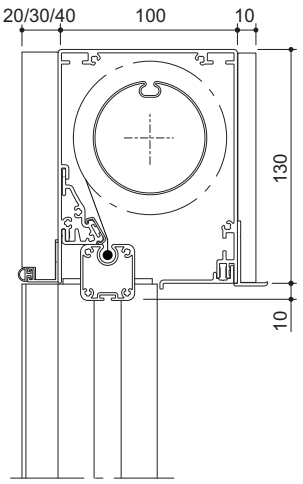
Fasteners, mounting material

All screwed connections, fixings and connections are made of stainless steel A2.

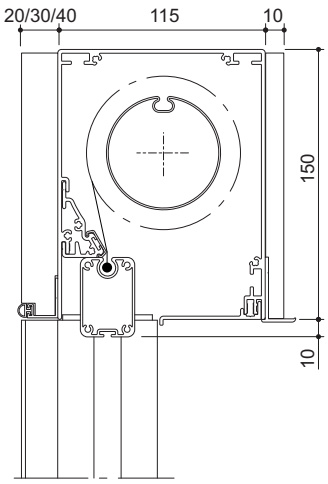
Concealed awning protect

Box dimensions

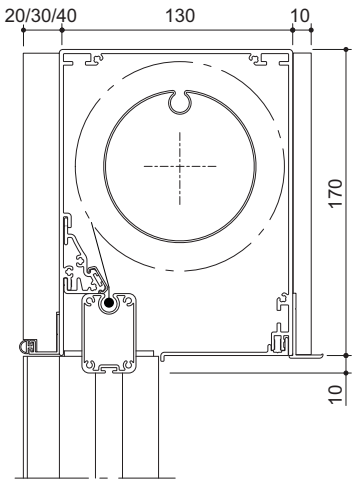
E100.



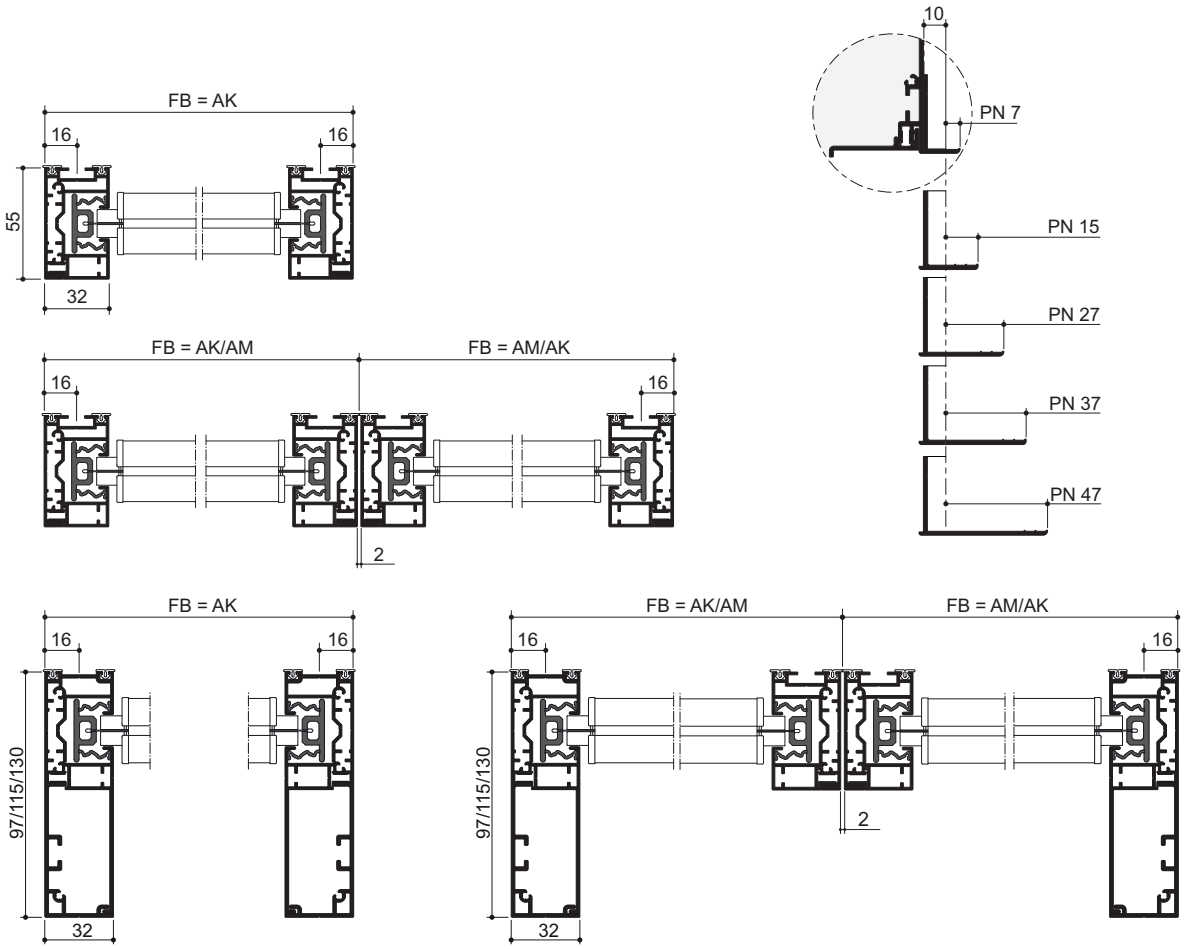
E115



E130



Dimensioning definition for complete width (= ordering width)



Legend

FB = AK	Complete width = outer edge of the guide rail
FB = AM	Complete width = dimension between axes
PN	Plaster flange

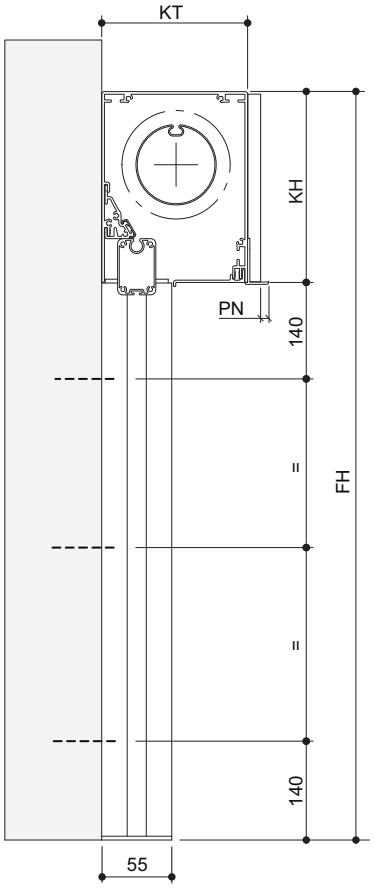
Notes:

The box end profile is available in 5 different leg lengths (17, 25, 37, 47 and 57 mm). In conjunction with a plaster base board of 10 mm, this means a profile nose of 7, 15, 27, 37 and 47 mm.

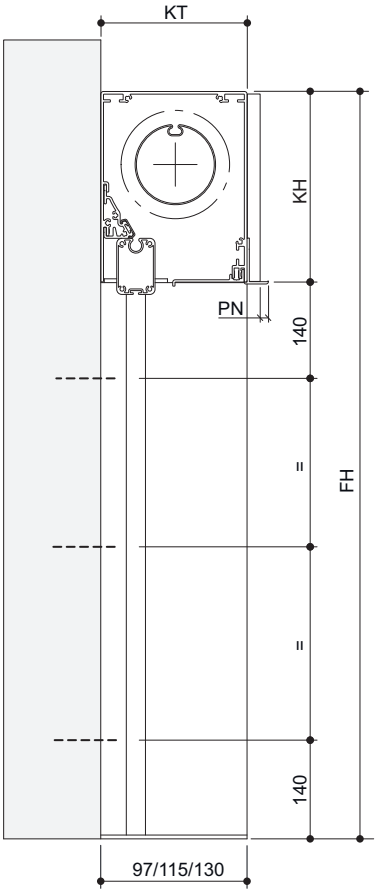
The box end profile is not intended for plastering. According to the guideline, plastering strips must be placed on the profile noses on site to prevent development of cracks and thus the ingress of water.

See guideline Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation (date of issue 2021, 3rd edition).

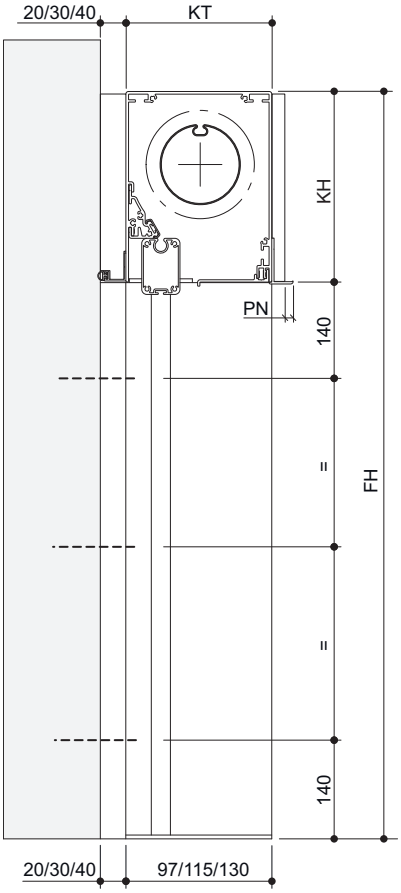
Installation options and dimension definition



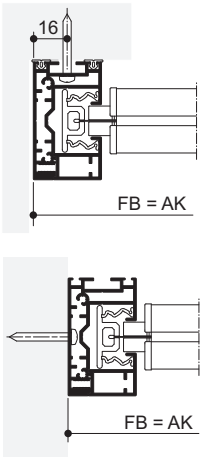
Direct installation



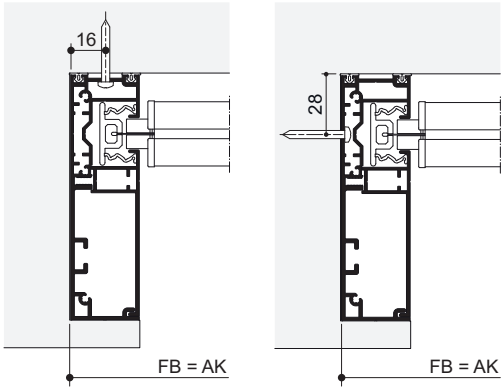
Installation with deep guide rail



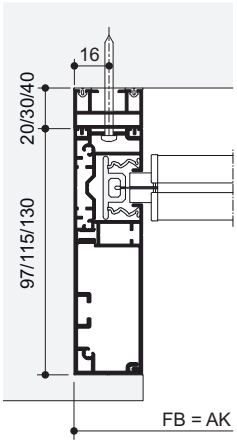
Installation with deep guide rail and insulation on the rear side



Direct installation from the front or side in the soffit



Direct installation with deep guide rail from the front or side in the soffit



Durect installation with deep guide rail and insulation on the rear side

Number of mounting holes with guide rail length [mm]				
2	**3**	**4**	**5**	**6**
≤ 1200	1201-2000	2001-2900	2901-3800	3801-4700

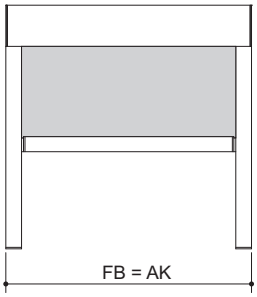
Legend

FB = AK Complete width = outer edge of the guide rail
FH Complete height
KT Box depth
KH Box height
PN Plaster flange

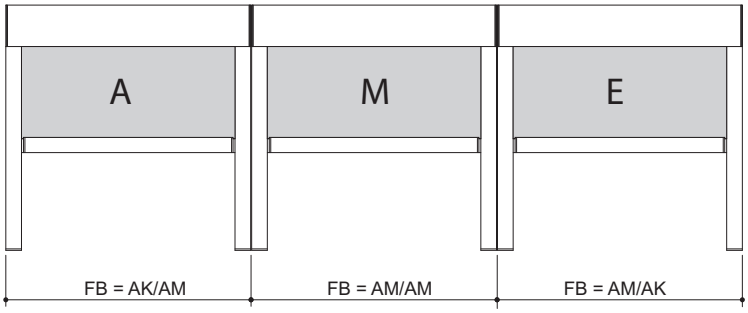
Concealed awning protect

Combinations and dimensioning definition

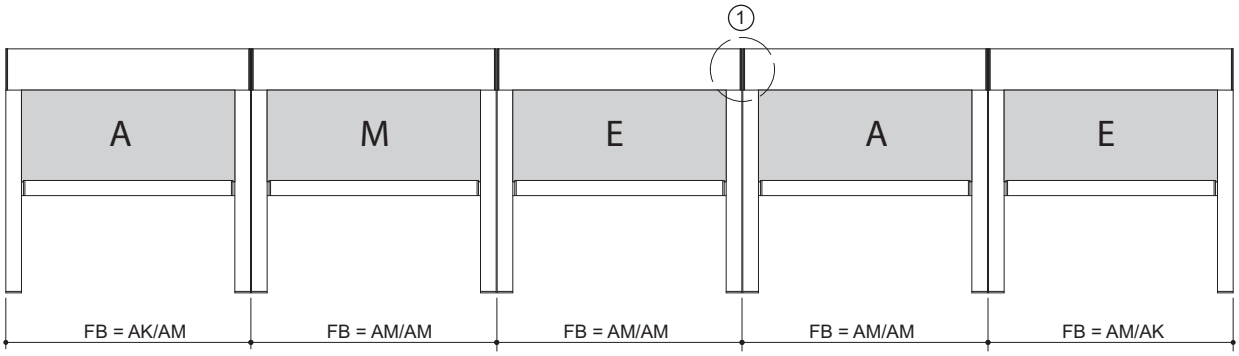
Single unit



Combination in 3 parts - box split



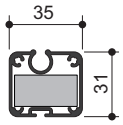
Combination with joint - continuation of the combination after an end element



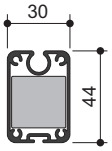
Legend

FB = AK	Complete width = outer edge of the guide rail	A	Combination start
FB = AM	Complete width = dimension between axes	M	Combination middle
FB = AK/AM	Complete width = outer edge guide rail/dimension between axes	E	Combination end
FB	Complete width = ordering width	①	Joint - continuation of the combination after an end element (only specification of the dimension between axes possible)

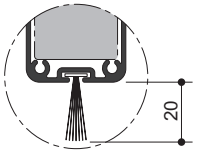
Front rail



E100.



E115/E130



- For insect screen standard
- Without insect screen optional against surcharge

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Concealed awnings protect E100/115/130
Somfy	OREA WT 50 RH	mechatronical		Wire-bound	17	Round Head	+
	MAESTRA+ 50 io RH	mechatronical	x	Remote control	17	Round Head	+
elero	SunTop/Z RH	mechatronical	x	Wire-bound	23	Round Head	o
	SunTop/Z RH - 868	mechatronical	x	Remote control	23	Round Head	+

Cable designs

Cable length	Cable end	pluggable with motor head	Concealed awnings protect E100/115/130
3 m	without Hirschmann connector	yes	o
0.5 m	with Hirschmann connector	yes	+
Special length	with/without Hirschmann connector	yes	+
Cable lengthening*	without Hirschmann connector	no	+

* ... if the Hirschmann plug connection is stored in the box

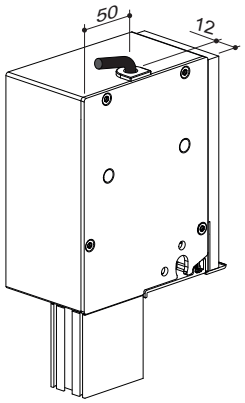
Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Legend

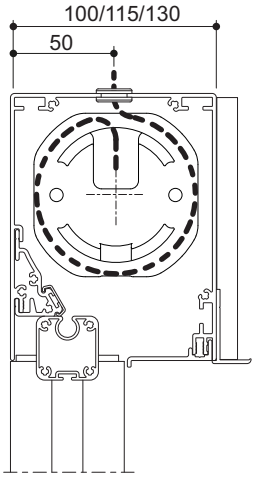
o	Standard
+	Optional

Concealed awning protect

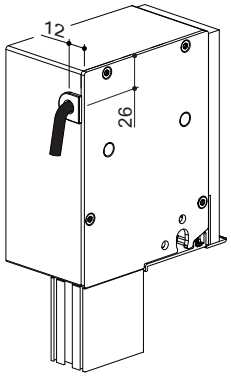
Motor drive - cable exits



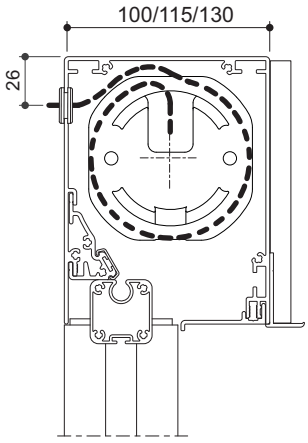
Cable exit towards the top



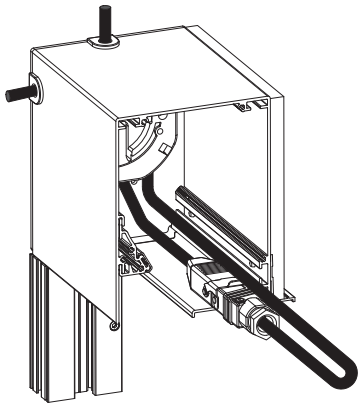
Box detail PM protect - cable exit towards the top
E100 / E115 / E130



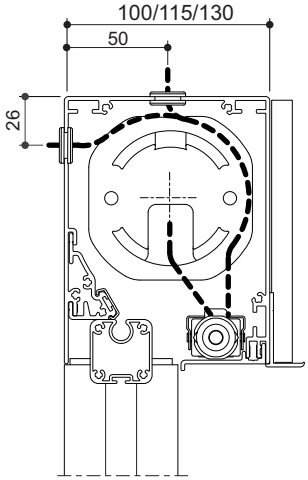
Cable exit towards the rear



Box detail PM protect - cable exit towards the rear
E100 / E115 / E130



Hirschmann connector stored in the box and cable lengthening towards the outside

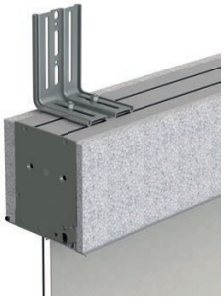


Box detail PM protect
E100 / E115 / E130
Hirschmann connector stored in the box and cable lengthening towards the outside

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

Concealed awning cable

Concealed awning with cable guiding



- Extruded rectangular box with plaster base and optional insulation
- Grooves on top of box for variable angle position on box
- Alternatively direct mounting from the front through the box (without angle)
- Box with sealing profile for driving rain-proof installation

- Wire cables secured by tensioning bracket and tensioned in box by spring
- Large selection of other tensioning brackets and floor cable holders.

Limit sizes

KG	Cover	Max. surface [m²]	Min. height [mm]	Max. width [mm]	Max. height [mm]
E115	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (SATINÉ 5500, Natte 4503) Acrylic fabric, polyester fabric, Twilight (Comfort and Pearl) SOLTIS Veozip	9	500	3000	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	9	500	3000	3000
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	6	500	3000	3000

Legend

KG Box size

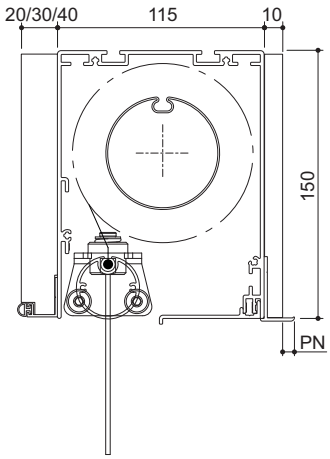
Notes:

- Minimum width with motor drive 790 mm (smaller dimensions depending on the box size and type of drive are available upon request).
- Specification of the drive side: on the left or right side (seen from the inside)

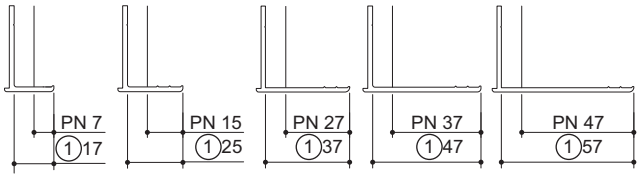
Box forms and box sizes

Square design

E115.



Box end profile



Legend

PN Profile nose

① Box end profile

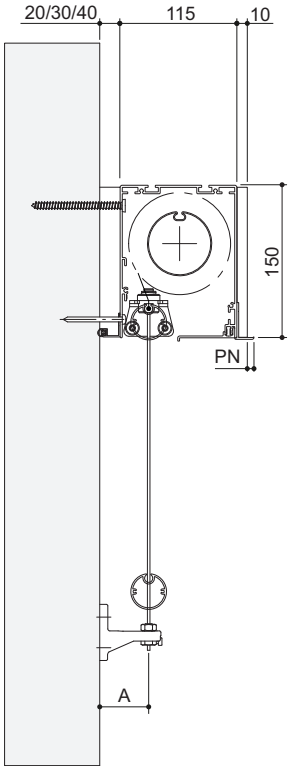
Notes:

The box end profile is available in 5 different leg lengths (17, 25, 37, 47 and 57 mm). In conjunction with a plaster base board of 10 mm, this means a profile nose of 7, 15, 27, 37 and 47 mm.

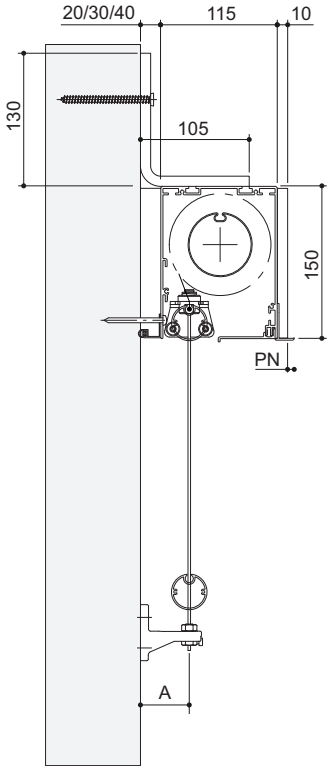
The box end profile is not intended for plastering. According to the guideline, plastering strips must be placed on the profile noses on site to prevent development of cracks and thus the ingress of water.

See guideline Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation (date of issue 2021, 3rd edition).

Types of installation



Installation directly through the box



Installation with a mounting bracket

Scope of delivery

- rectangular box 115x150 mm with plaster base and 7 mm plaster nose
- Cable guide with strainer clamp
- Motor drive 230V, with 3 m cable without Hirschmann connector/cable socket
- Cover glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 or SOLTIS Veozip
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

- Box optionally as direct mounting from the front through the box or with additional box angle on the box
- Rear insulation with EPS in 20, 30 or 40 mm with sealing profile on the box
- Various profile noses up to 47 mm in length
- Wall-mounted radio transmitter/Hand-held radio transmitter
- Large selection of alternative fabrics according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Blackout
- Transparency to the outside
- Integrated in the plastered façade
- Unobtrusive due to cable guide and flush mounting
- Large selection of designs as a design element

Concealed awning cable

Technical product description

Box

Dimension

E115	115x150 mm

Material	Extruded aluminium
Surface	powder-coated
Profile	2-part

Description

- Box with plaster base board 10 mm and with available plaster flanges 7, 15, 27, 37, 47 mm
- Due to lateral friezes 15 mm, the inspection cover can be removed and the inspection of the roller tube towards the bottom is possible in the plastered condition.
- An installation with brackets via the groove profile on the upper side of the box is possible.
- It is possible to screw the box directly via duct borings in the front side.
- When the awning is retracted, the end rail is discreetly hidden

Optional:

- Box insulation on the rear side with 20 mm, 30 mm or 40 mm EPS

Front rail

Round profile

Material	Extruded aluminium
Dimension	ø35 mm

Description

- With pushed-in weighting steel and plastic end caps
- Laterally guided via the guiding cables

Roller tube

Box E115

Material	galvanised steel tube
Dimension	ø63 mm

Description

- Grooved shaft made of sendzimir-galvanised sheet steel with roller capsule made of plastic.

Cable guiding, strainer clamp

Wire cable

Material	Polyamide-sheathed stainless steel cable
Dimension	ø2,5 mm

Description

- At the lower end, the wire cable is fixed via strainer clamps or tensioning brackets with clamping screws
- Cable holders provided at the bottom are optionally available
- In the upper area, the wire cable is optimally kept under tension via a press-fitted wire cable bushing and a spring integrated in the box

Strainer clamp

Material	Aluminium
Adjusting range	23-181 mm

Options

- Tensioning shoes for the fixing to the bottom
- Tensioning brackets with an adjusting range of 39-150mm
- Threaded fitting M8 or M6

Motor drive

Electric motor

Motor	Electric motor 230 V AC, 50 Hz, IP 44
Installation	discreetly hidden in the drive shaft
Linkage	possible

Description

- Installed in the drive shaft with integrated limit switches for the upper and lower end position
- As a standard with 3 m cable without Hirschmann connector
- For a surcharge 0.5 m cable with Hirschmann connector (STAS 3 with circlip, wired at the motor) and Hirschmann cable socket (STAK 3) for on-site connection
- Optionally available with integrated radio receiver

Cover

PVC-coated glass fibre fabric

Weight	approx. 525 g/m²
Openness coefficient	approx. 5 %
Fire class	B1 - according to DIN4102-1

Description

- Design selection according to the HELLA collection
- Optional fabric types as per documents

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds" for a surcharge

Fasteners, mounting material

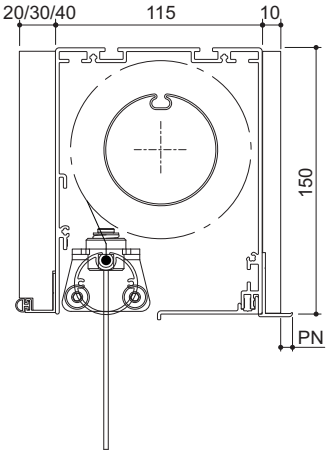
All screwed connections, fixings and connections are made of stainless steel A2.

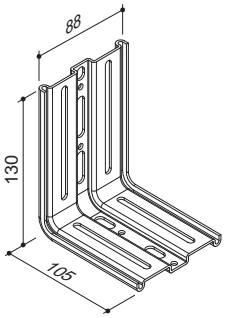
Concealed awning cable

Box dimensions

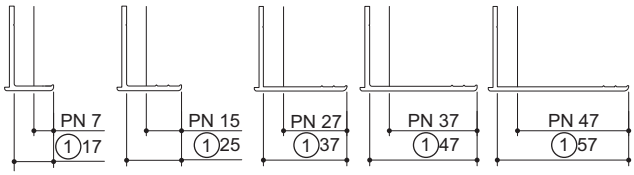
Square design

E115.





Box end profile



Legend

PN Profile nose

① Box end profile

Notes:

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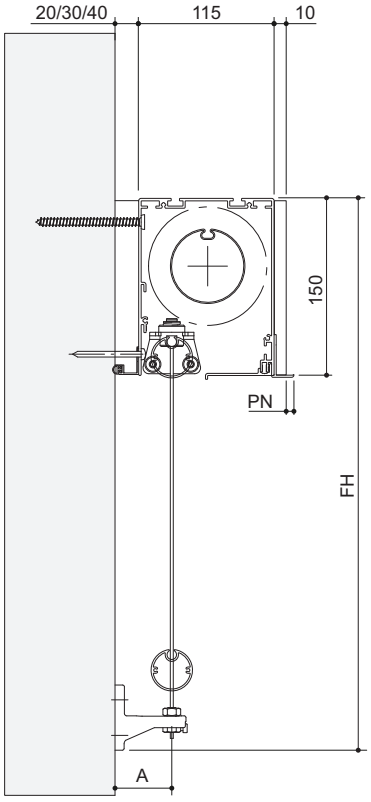
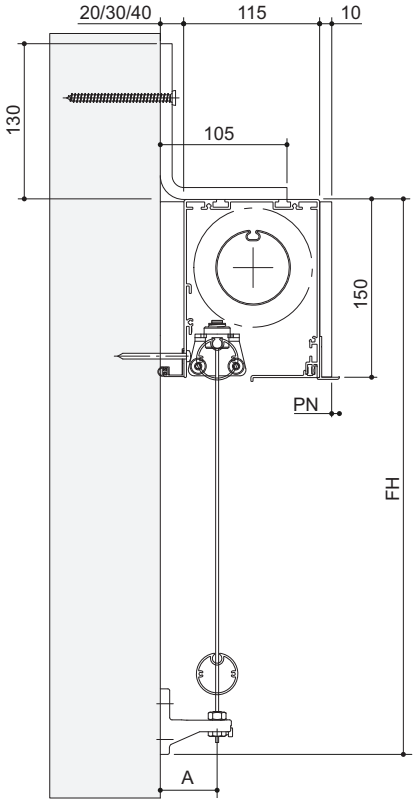
Installation options and dimension definition



Direct installation through the box



Installation with mounting bracket

Legend

FH Complete height

PN Plaster flange

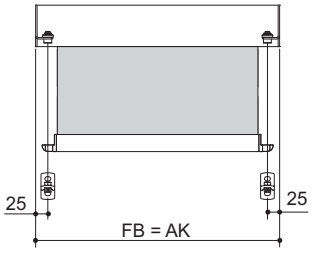
A Dimension A (mounting surface up to cable axis) [mm]

Note:

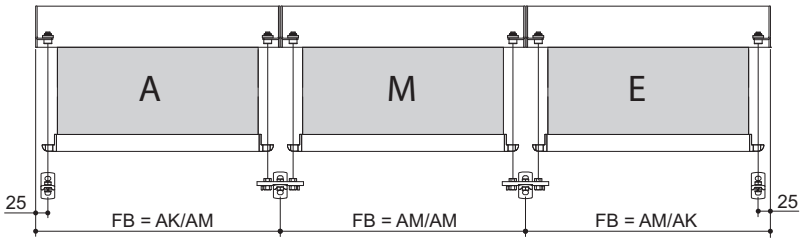
Separate delivery of drive shaft with fabric for subsequent installation after box fixing on site.

Combinations and dimensioning definition

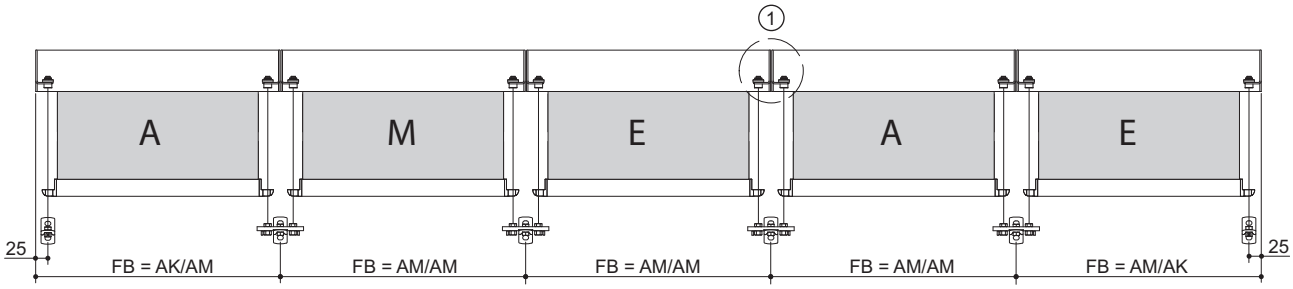
Single unit



Combination in 3 parts - box split



Combination with joint -continuation of the combination after 3 elements



Legend

FB = AK	Complete width = outer edge of the box	A	Combination start
FB = AK/AM	Complete width = outer edge of the box/dimension between axes of the double cable holder	M	Combination middle
FB	Complete width = ordering width	E	Combination end
		①	Joint - continuation of the combination after an end element (only specification of the dimension between axes possible)

Concealed awning cable

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	Concealed awnings cable E115
Somfy	HiPro LT 50	mechanical		Wire-bound	17	Sternkopf	+
	Sunea 50 io	mechatronical		Remote control	17	Sternkopf	+
elero	SunTop M	mechatronical		Wire-bound	23	Sternkopf	o
	SunTop M - 868	mechatronical		Remote control	23	Sternkopf	+

Cable designs

Cable length	Cable end	pluggable with motor head	Concealed awnings cable Q85
3 m	without Hirschmann connector	yes	o
0.5 m	with Hirschmann connector	yes	+
Special length	with/without Hirschmann connector	yes	+
Cable lengthening*	without Hirschmann connector	no	+

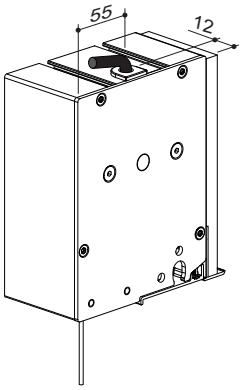
* ... if the Hirschmann plug connection is stored in the box

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

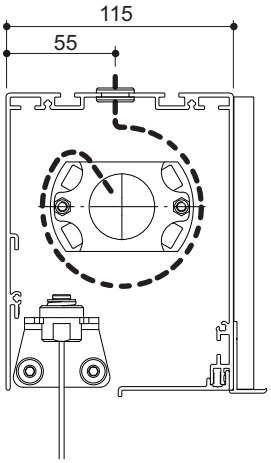
Legend

o	Standard
+	Optional

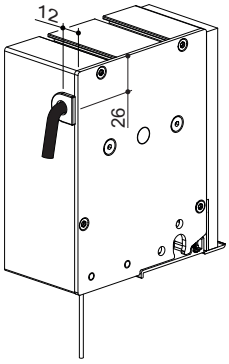
Motor drive - cable exits



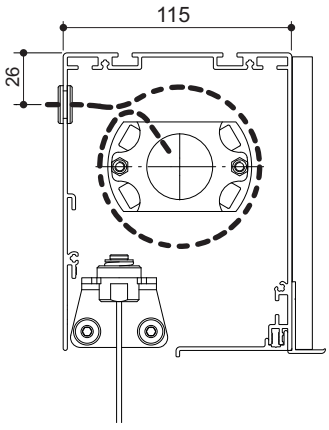
Cable exit towards the top



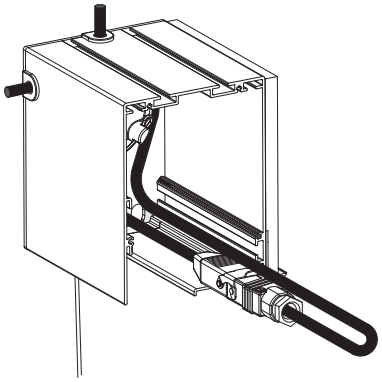
Box detail PM cable - cable exit towards the top
E115.



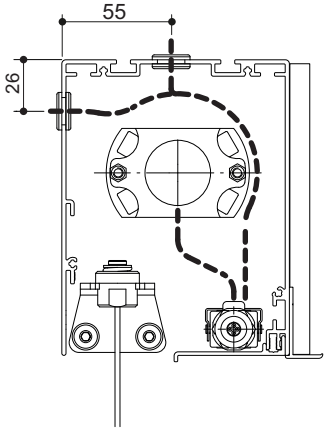
Cable exit towards the rear



Box detail PM cable - cable exit towards the rear
E115



Hirschmann connector stored in the box and cable lengthening towards the outside

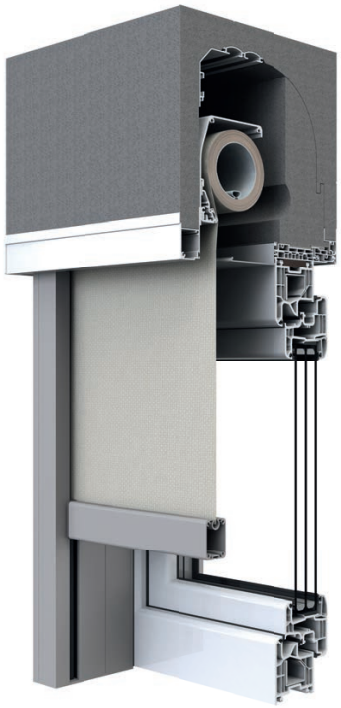


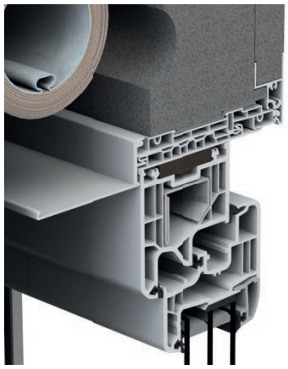
Box detail PM cable
E115
Hirschmann connector stored in the box and cable lengthening towards the outside

Attention: The open end of the cable lengthening is led out of the box and serves as direct connection to the facade, without additional plug-in connection. A subsequent inspection can then only be carried out through the inspection opening when the system is mounted!

TOP FOAM screen protect

TOP FOAM screen protect with side seam guiding





- Easy-to-fit top-mounted made of EPS with universal or window-specific clip adapters.

- Stable mounting profile integrated in the box for fixing the factory-preassembled vertical awning protect

Limit sizes

	Max. width [mm]*	Max. height [mm]*	Max. surface [m²]*	Drive system
TOP FOAM screen protect	3500	3500	12	Motor

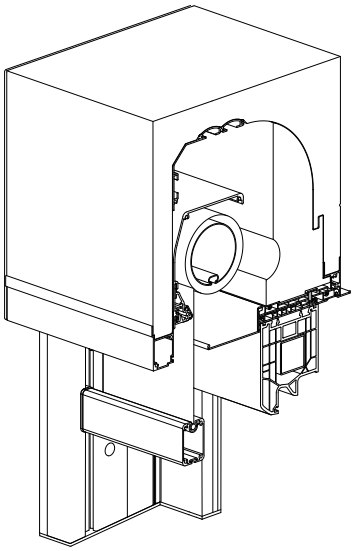
* Observe restrictions as per limit size tables in the relevant chapters.

KG	Cover	Max. surface [m²]	min.height [mm]	Max. width [mm]	Max. height [mm]
250 300	Glass fibre fabric HELLA G-Screen, Copaco (Serge 600 5%, 1%) Glass fibre fabric Mermet (Satine 5500, Natte 4503) Acrylic fabric (only plain design), Twilight (Comfort and Pearl) SOLTIS Veozip	12	500	3500	3000
	SOLTIS Perform 92/Horizon 86/Harmony 88/Lounge 96, Sunworker	12	500	3500	3500
	SOLTIS Opaque B92/Opaque B702 Mermet (SATINÉ 21154) Copaco (Serge 600 lunar), Sunworker Opaque	9	500	3000	3000

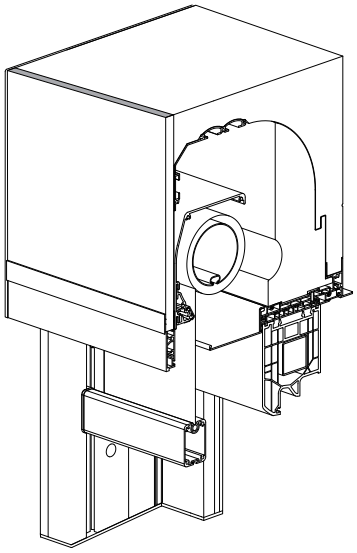
Minimum width	Without radio	With radio	Speed [r.p.m]	Min. width [mm]	Motor head
elero short drive	x	x	14	650	Round Head
elero	x	x	23	720	Round Head
Somfy	x	x	17	860	Round Head

Attention: no linkage feasible

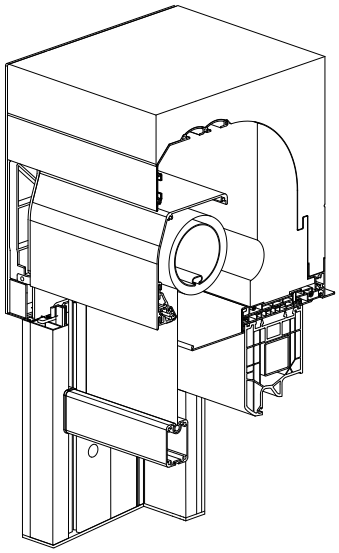
Box forms and box sizes



TOP FOAM screen protect



TOP FOAM screen protect .S
with box top board on a PUR/PIR rigid foam basis



TOP FOAM screen protect.S
without front skirt

Comment:
The S-design describes the top-mounted box with front box top board made of PUR/PIR rigid foam.

TOP FOAM screen protect

Box sizes	260/250	300/250	365/250	425/250	260/300	300/300	365/300	425/300	KT/KH
Box depth	260	300	365	425	260	300	365	425	variable
Box height	250	250	250	250	300	300	300	300	variable

TOP FOAM screen protect .S

Box sizes	243/250	283/250	348/250	243/300	283/300	348/300	KT/KH
Box depth	243	283	348	243	283	348	variable
Box height	250	250	250	300	300	300	variable

Legend

KT Box depth variable, KTmin: 260, KTmax: 500
KH Box height variable, KHmin: 250 or 300, KHmax: 299 or 360

Scope of delivery

- Box elements TOP FOAM
- Box heights 250 and 300 mm
- Box depths 260 and 300 mm
- Deep guide rail with end caps and piping for side seam guide Motor drive 230V, with 3 m cable without Hirschmann connector/coupling
- Cover SOLTIS Veozip or glass-fibre fabric HELLA G-Screen, Serge 600 (5%) or SATINÉ 5500 side seam guided
- Weighted drop profile
- Freely selectable profile colors from the HELLA color world

Supplementary equipment

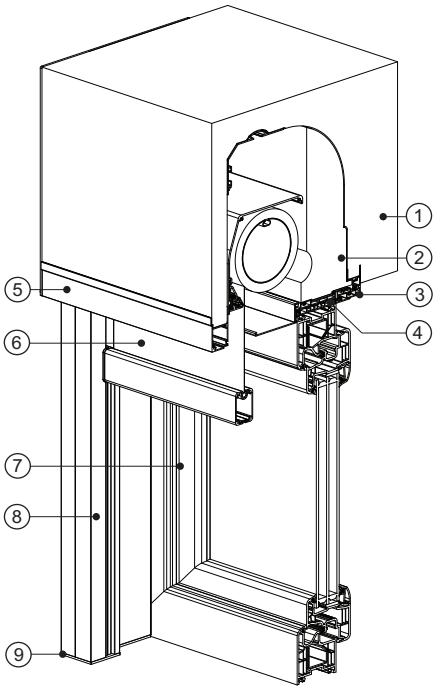
- Box depth 365/425 mm
- Variable box size
- Box for clinker design
- Bottom side of the lintel provided with a cover panel
- Wall-mounted radio transmitter/Hand-held radio transmitter
- Window-specific clip adapters
- different box end profiles
- additional possibilities to fix the box
- Bottom strengthening profile
- Statics bracket
- Fan cut-out
- Fan Aereco and Siegenia
- Integrated fall protection
- Large selection of alternative fabrics according to collection

Benefits of the product

- Heat protection
- Sight screen
- Glare protection
- Blackout
- Wind-stable sun protection
- Energy saving
- Integrated into façade
- Transparency to the outside due to screen fabric
- Design element through large selection of designs
- Tests for sound insulation, airtightness and thermal insulation

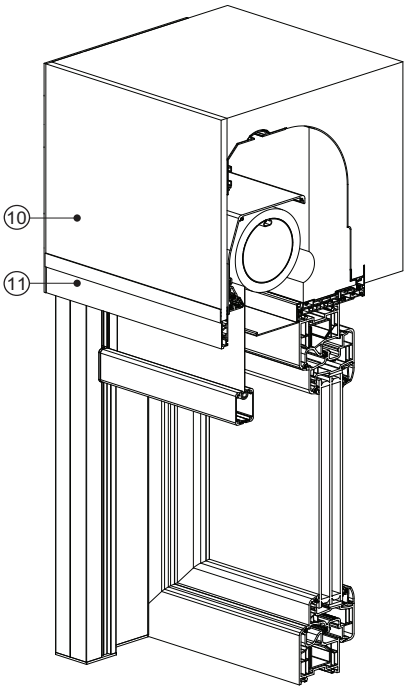
TOP FOAM screen protect

Type overview



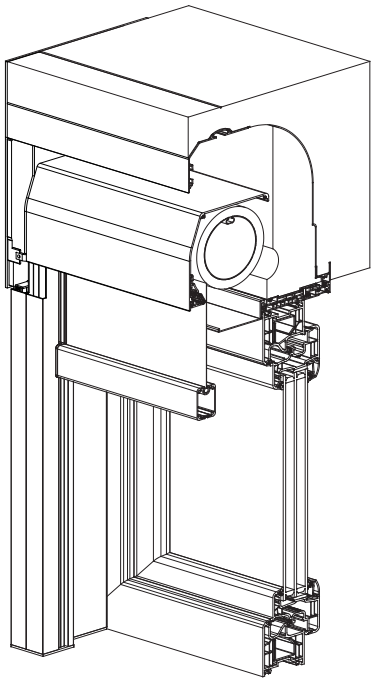
TOP FOAM screen protect

- Monolithic brickwork
- Thermal insulation composite system



TOP FOAM screen protect .S

- Clinker facade
- Timber construction
- Thermal insulation composite system



TOP FOAM screen protect .S without front skirt

- Clinker facade

Legend

①	Box insulating body screen protect/screen protect .S	⑦	Window element
②	Insulation profile	⑧	2-part guide rail
③	Box end rail 0 mm inside, aluminium	⑨	End cap for guide rail
④	Floor base profile and adapter profile	⑩	Box top board on a PUR/PIR rigid foam basis, 10 mm
⑤	Box end profile outside, aluminium	⑪	Box end profile outside, narrow
⑥	Textile shading		

Technical product description

Top-mounted box

Box casing	made of expanded, non-shrink polystyrene EPS 032
Insulation elements	made of expanded polystyrene EPS 032

- inflammability class in accordance with Austrian standard (ÖNORM) B 3800 or DIN 4102 of at least B1- low flammability (all cladding and insulation elements)
- Top-mounted elements with integrated recess to incorporate textile blinds
- Connection to the window via a clips profile and lateral fastening handles made of 2 mm thick galvanised sheet steel
- Plaster beads made of extruded aluminium, screwed to the side cover
- Plastic headers
- **screen protect:**
  Front top board made of EPS 032, 27 mm with consistent plaster adhesion
- **screen protect .S:**
  Front top board on a PUR/PIR rigid foam basis, 10 mm

Box sizes

screen protect	260/300, 300/300, 365/300, 425/300, 260/250, 300/250, 365/250, 425/250
screen protect .S	243/300, 283/300, 348/300, 243/250, 283/250, 348/250

- .S-design with box top board made of PUR/PIR rigid foam for clinker façades/façades with thermal insulation composite system

Box 100

Dimensions: 97x118 mm

Material	Extruded aluminium
Details	Fixed with headers to the guide rails; extruded aluminium profile as front covering

Roller tube

Material	Sendzimir galvanised steel
Box 100	ø63x0,9 mm

- Both ends of the roller tube are equipped with adapters made of plastic with which a tapering of the roller tube is achieved. Herewith it is possible to correct the thicker ends of the rolled up zip fastener

Floor bracket profile

Material	Made of rigid PVC extruded (as a result no pulling out of shape or swelling of the profiles)

- The hollow chamber structure ensures a high stability and, due to the insulating air cushions, supports the insulating effect.
- The floor bracket profile with brush is designed as window rabbet and serves as holding fixture for the adapter profile
- additional insulation elements made of expanded polystyrene EPS 032 ensure a significantly better insulation effect of the box

Guide rails

Material	In three parts, made of extruded aluminium

- the plastic guidance of the cover is integrated in the removable part of the guide rail
- The plastic guidance consists of a black co-extruded plastic profile with full-length buffer lips made of foamed material. The zip which is provided at the cover, is inserted into this plastic profile and kept sliding. The lower end caps of the guide rails are made of powder-coated aluminium sheet steel and can be used up to a diagonal guide rail cut of 5°.

Front rail

Dimension 30x44 mm

with pushed-in weighting steel laterally guided in the guide rails with plastic gliders

Motor drive

Motor	Tubular motor with 230V operating voltage, 50 Hz, protective system IP 44. Capacity (W) matched to the size of the unit

- Noise emission level <=70dB(A) according to EN ISO 12100-2:2003.
- built into the primary shaft, with torque switch-off for the upper end position
- a programming cable is required to adjust the end positions. Optionally available with integrated radio receiver.

Cover

- **Glass fibre fabric:**
  PVC coated, flame-retardant, with high transparency and view to the outside
- **Polyester fabric - PVC coated:**
  PVC-coated, high resistance to tearing, flame resistant, dirt repelling, with high light and thermal protection
- **Blackout fabric (Blackout):**
  Polyester fabric or glass fibre fabric PVC coated with darkening layer
- **Polyester fabric - free of PVC:**
  PVC-free with high light and thermal protection
- **Acrylic fabric:**
  100% branded acrylic fabric, light- and weather-resistant, dirt and oil repelling, water repelling as well as resistant to tearing and rotting

With all covers, a continuous zip fastener is welded onto the entire lateral height of the cover. This guarantees a precise guiding of the cover in the guide rail.

Note: See chapter "Cover types" for technical values of the covers.

Colors

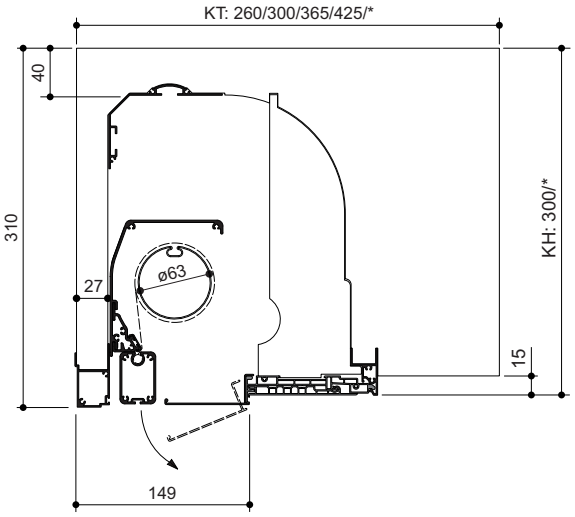
powder-coated aluminium parts

Color	in standard colors without surcharge
Special colors	as per "HELLA Color worlds" for a surcharge

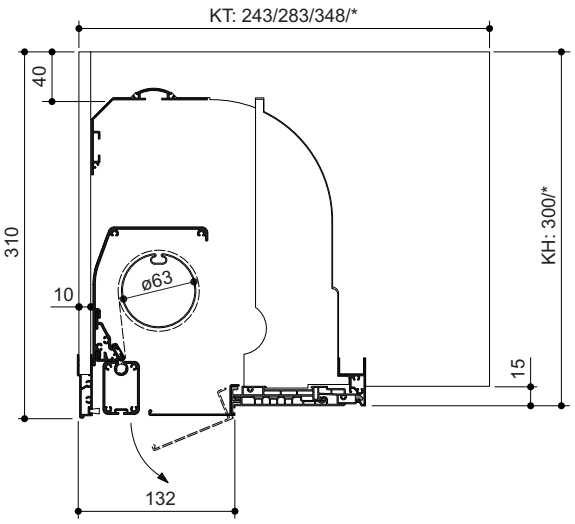
TOP FOAM screen protect

Design options:

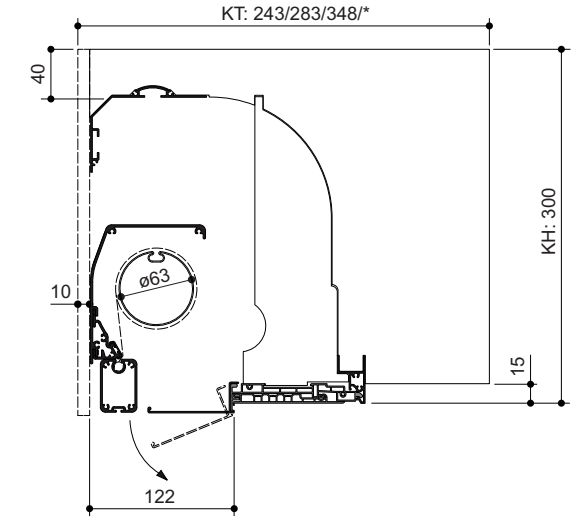
TOP FOAM screen protect - Box height 300



TOP FOAM screen protect .S - box height 300 with front skirt



TOP FOAM screen protect .S - box size 300 without front skirt



Box
Box casing made of expanded polystyrene EPS 032 with especially high stability.

Plaster beads
The plaster beads are made of extruded aluminium and screwed to the cheek. Standard without plaster flange.

Side covers
made of plastic and provided to fasten the inspection cover.

Insulation elements
Made of expanded polystyrene EPS 032 for an optimum thermal insulation in the area of the junction of the box with the window and in the area of the inspection cover.

Box dimensions
Depth x height on the inside

screen protect

- Dimension 260x300 mm
- 300x300 mm
- 365x300 mm
- 425x300 mm
- KTxKH variable
- KTmin: 260, KTmax: 500
- KHmin: 300, KHmax: 360

screen protect .S

- Dimension 243x300 mm
- 283x300 mm
- 348x300 mm
- KTxKH variable
- KTmin: 243, KTmax: 500
- KHmin: 300, KHmax: 360

Note:

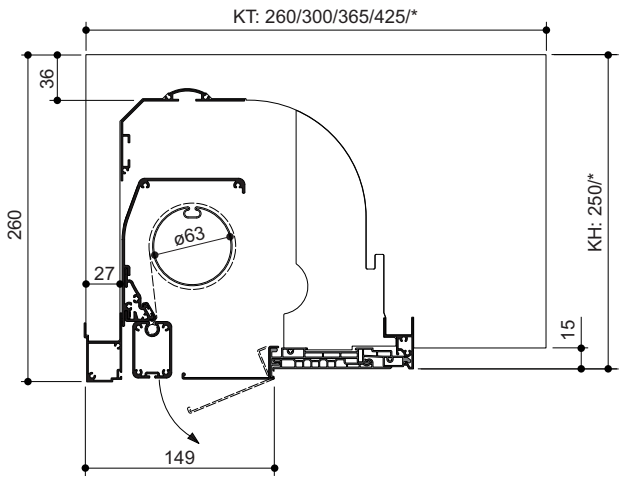
For version “without front skirt” the .S-box depth is 10mm shorter.

Window frame thickness
max. 92 mm

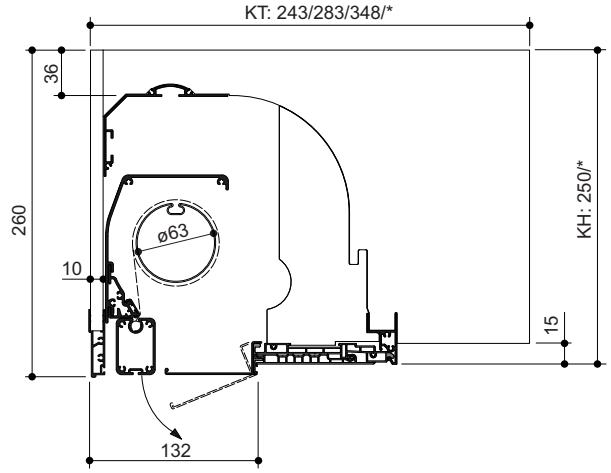
Legend

KT Box depth
KH Box height
* Box depth/box height variable

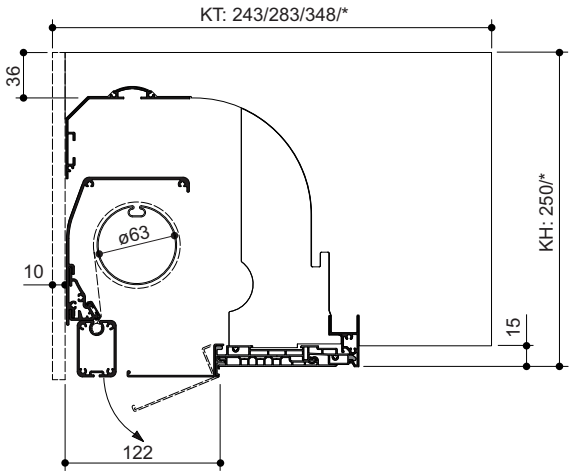
TOP FOAM screen protect - Box height 250



TOP FOAM screen protect .S - box size 250 with front skirt



TOP FOAM screen protect .S - box size 250 without front skirt



Box
Box casing made of expanded polystyrene EPS 032 with especially high stability.

Plaster beads
The plaster beads are made of extruded aluminium and screwed to the cheek. Standard without plaster flange.

Side covers
made of plastic and provided to fasten the inspection cover.

Insulation elements
Made of expanded polystyrene EPS 032 for an optimum thermal insulation in the area of the junction of the box with the window and in the area of the inspection cover.

Box dimensions
Depth x height on the inside

screen protect
- Dimension 260x250 mm
- 300x250 mm
- 365x250 mm
- 425x250 mm
- KTxKH variable
- KTmin: 260, KTmax: 500
- KHmin: 250, KHmax: 299

screen protect .S
- Dimension 243x250 mm
- 283x250 mm
- 348x250 mm
- KTxKH variable
- KTmin: 243, KTmax: 500
- KHmin: 250, KHmax: 299

Note:
For version “without front skirt” the .S-box depth is 10mm shorter.

Window frame thickness
max. 92 mm

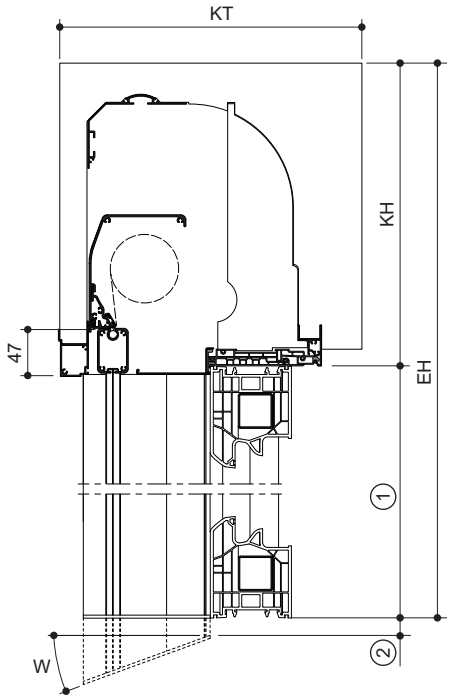
Legend

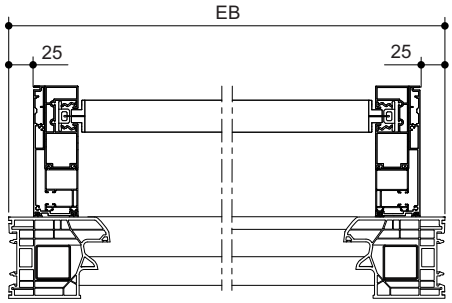
KT Box depth
KH Box height
* Box depth/box height variable

TOP FOAM screen protect

Taking of measurements

General





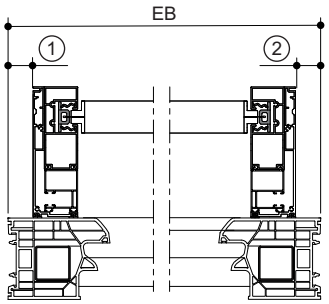
Determination of dimensions
The dimensions are determined via the dimensions of the elements. The element height can also be determined via the height of the window frame.
Element height = window frame height + box height

Attention:
The external guide rail is always designed with an offset entry guide of at least 25 mm. Please refer to the following page for additional details regarding offset mounted guide rails. A guide rail lengthening lengthens the guide rail, but not the element height. An insulation of the ceiling due to variable box size KT/KH can increase the element height. The designs excess length of the box and mitre cut extend the box dimensions, but not the complete element width.

Legend

EB	Element width = window frame width
EH	Element height
KT	Box depth
KH	Box height
W	Specification diagonal cut in degrees
①	Window frame height
②	Guide rail lengthening

Guide rail offset

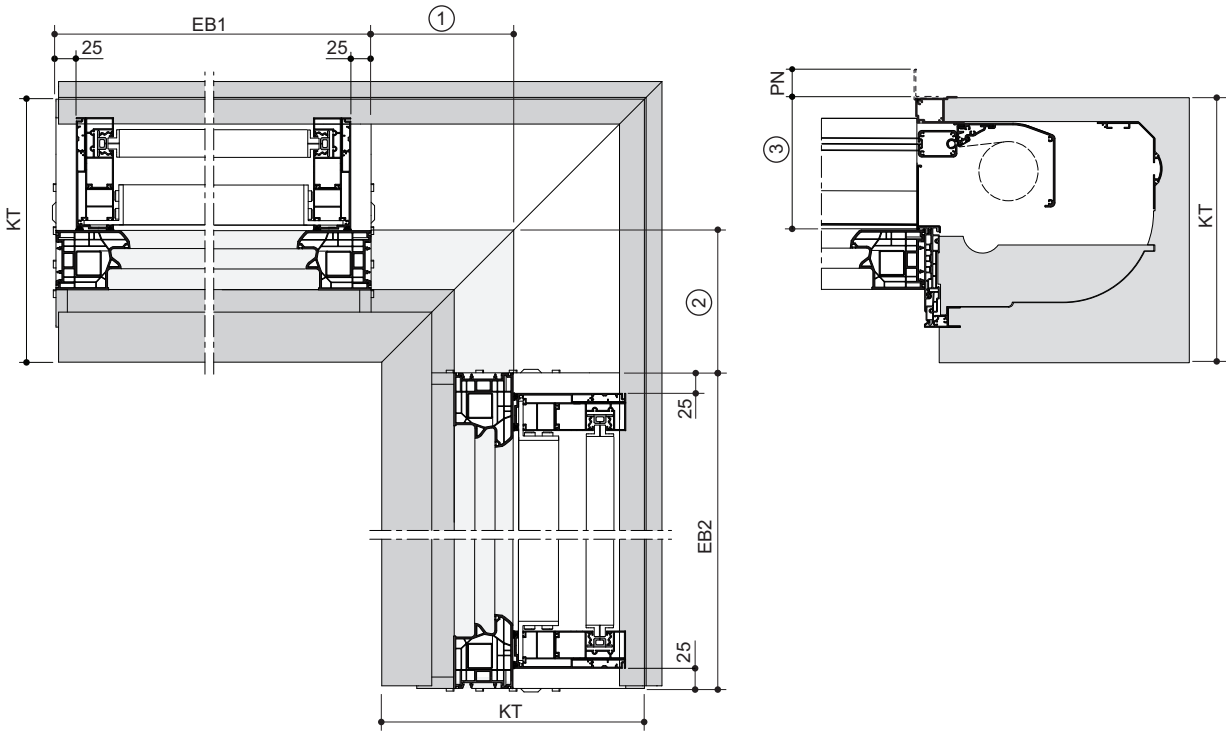


An offset guide rail makes the insulation of the window frame possible. The minimum dimension of 25 mm must be observed with external guide rails. For each element the guide rail can be mounted offset on the left side, on the right side or on both sides.

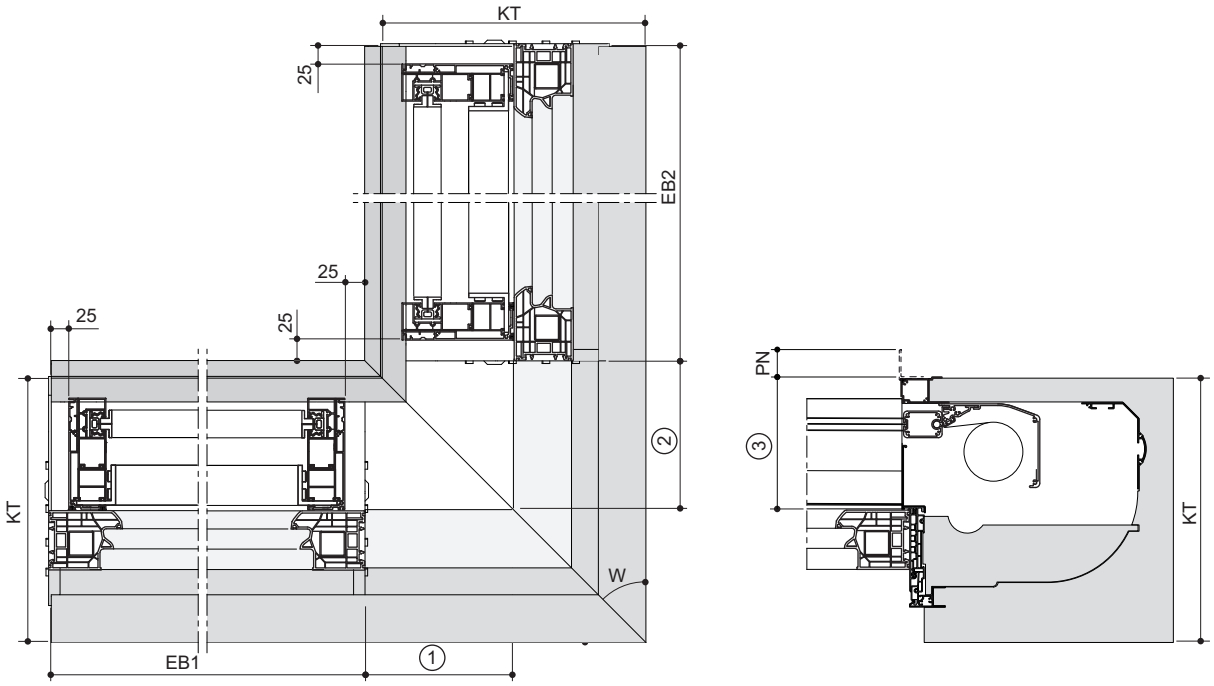
Legend

EB	Element width
①	Guide rail offset on the left side Standard 25 mm
②	Guide rail offset on the right side Standard 25 mm

Mitre cut - outer corner



Mitre cut - inner corner



Legend

EB	Element width
KT	Box depth
W	Mitre angle
PN	Plaster flange (optional)

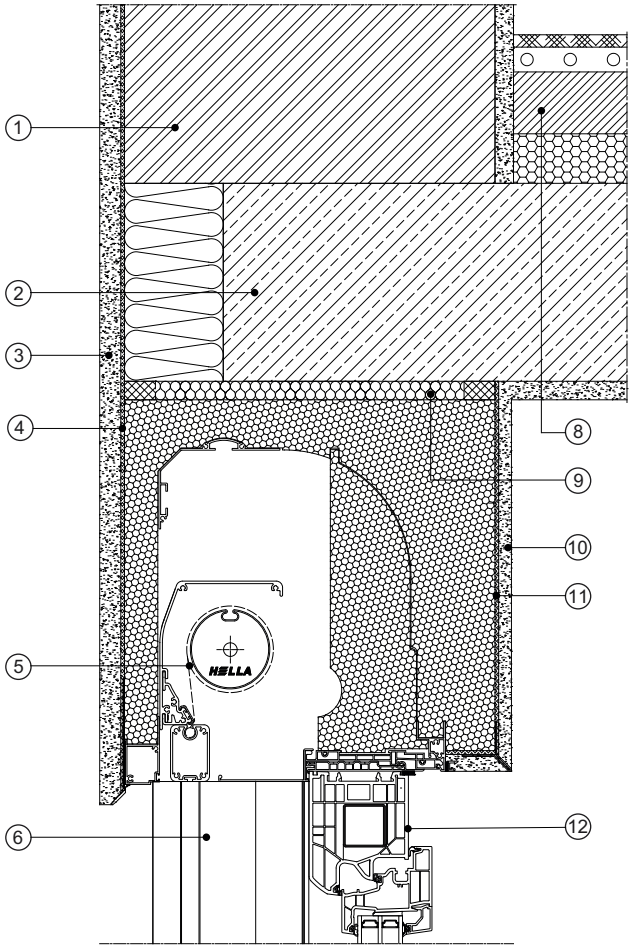
① Mitre lengthening on the right side: at 90° outer mitre ≥ 105 mm
② Mitre lengthening on the left side: at 90° inner mitre ≥ 132 mm
③ Window position from outside of box
- 148 for standard box
- 131 for .S box
- 121 for .S box without front skirt

Note:
The mitre area must be covered (provided by the client).

TOP FOAM screen protect

Installation situation for different wall constructions

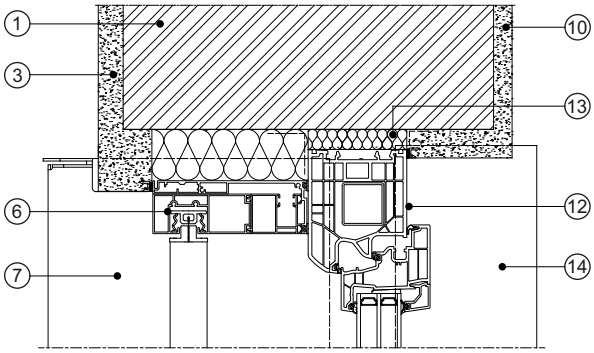
Wall structure
Monolithic brickwork for windows with floor-to-ceiling element height



Legend

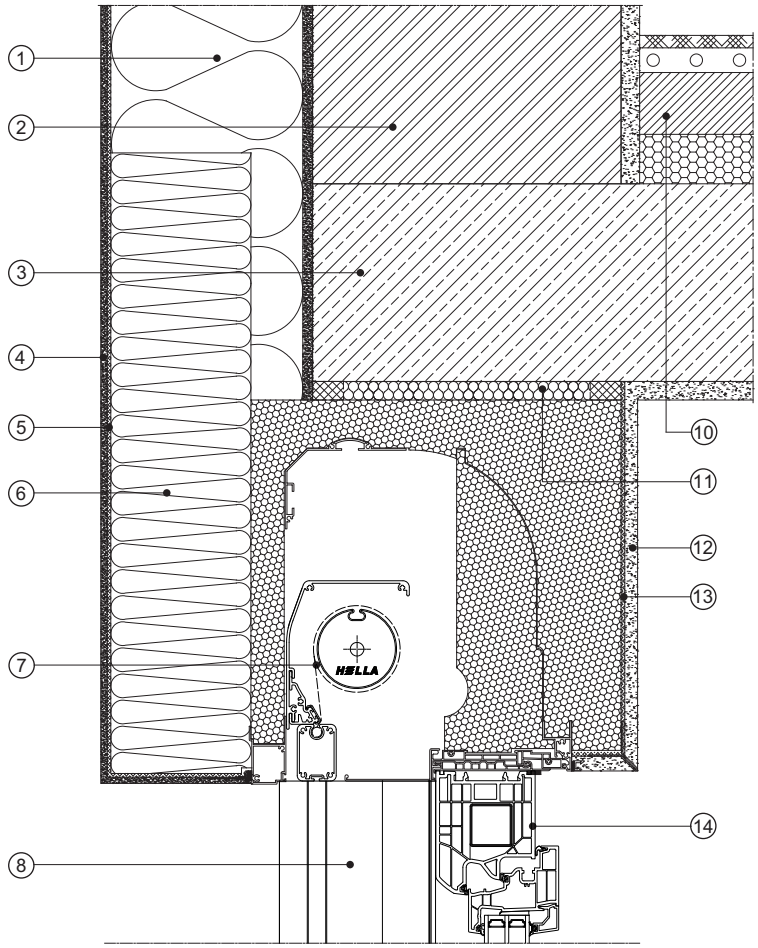
① Brickwork
② Reinforced concrete ceiling with ceiling face insulation
③ External rendering
④ Reinforcement on the outside
⑤ TOP FOAM screen protect 300/300
⑥ Guide rail
⑦ Aluminium window sill system, 2-part
⑧ Floor construction
⑨ Connection joint
Providing the functional levels analogue to the window connection joint
⑩ Interior wall finish
⑪ Reinforcement on the inside
⑫ Blind frame
⑬ Connection joint
⑭ Window sill on the inside

with frame insulation



This presentation is only a general, suggested design concept. Design and surrounding structures are depicted only schematically. The detail does not release anyone from the responsibility to individually check the completeness and applicability, as well as the required execution planning, detailed planning and installation planning. The correct applicability of the depicted details must be checked in due consideration of the object-specific circumstances. The generally acknowledged rules of technology as well as the specifications from product specification sheets, processing guidelines and product accreditations must be observed.

Wall structure
Brickwork with thermal insulation composite system for windows with floor-to-ceiling element height

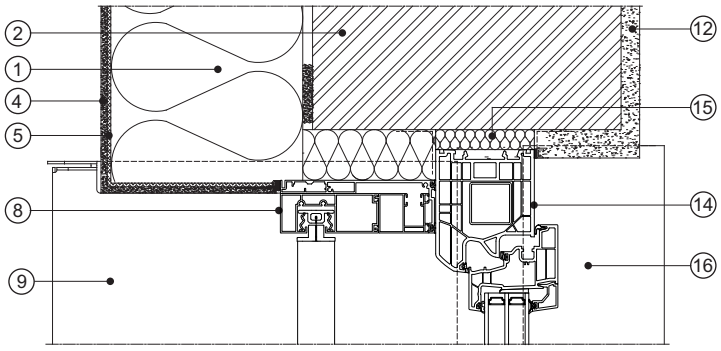


Legend

① Insulation
② Brickwork
③ Reinforced concrete ceiling
④ External rendering
⑤ Reinforcement on the outside
⑥ Insulation of the top-mounted box
- Thickness ≥ 40 mm
- laterally and at the top ≥ 200 mm overlapped

⑦ TOP FOAM screen protect 300/300
⑧ Guide rail
⑨ Aluminium window sill system, 2-part
⑩ Floor construction
⑪ Connection joint
Providing the functional levels analogue to the window connection joint
⑫ Interior wall finish
⑬ Reinforcement on the inside
⑭ Blind frame
⑮ Connection joint
⑯ Window sill on the inside

with frame insulation



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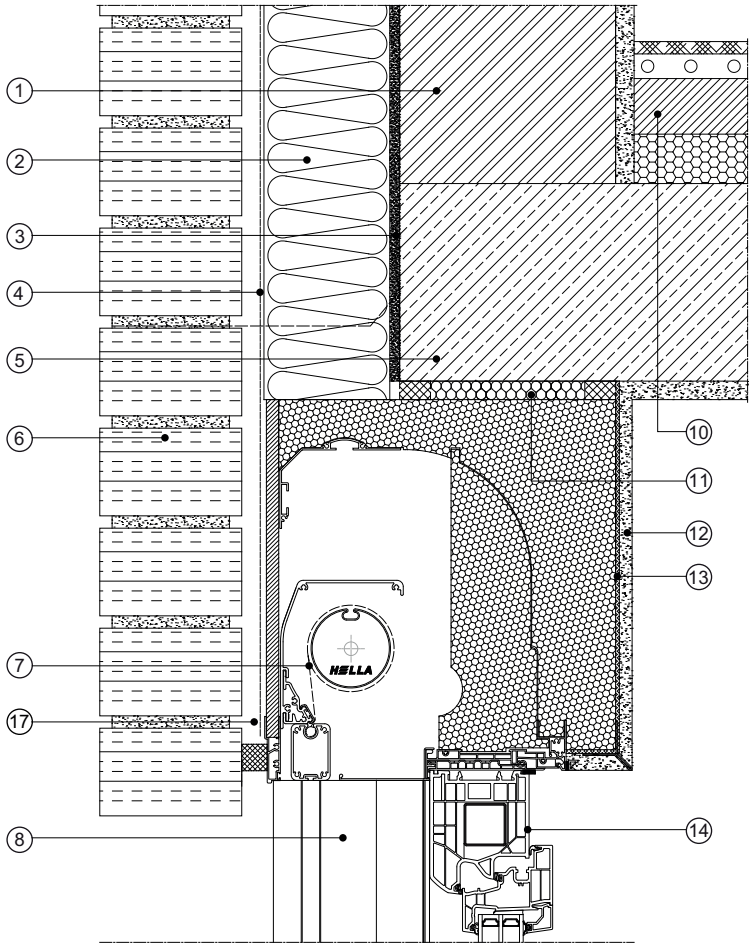
TOP FOAM screen protect

Installation situation for different wall constructions

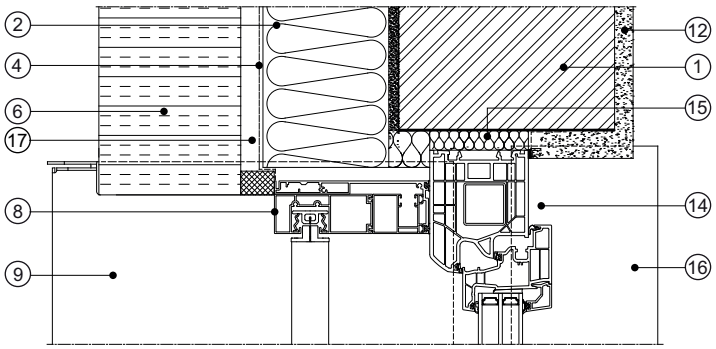
Wall structure
Core-insulated brickwork with clinker facade, rear-ventilated, for windows with floor-to-ceiling element height



Legend

① Brickwork
② Insulation
③ Sealing level
④ sealing level
⑤ Reinforced concrete ceiling
⑥ Clinker façade
⑦ TOP FOAM screen protect .S 283/300
⑧ Guide rail
⑨ Aluminium window sill system, 2-part
⑩ Floor construction
⑪ Connection joint
Providing the functional levels analogue to the window connection joint
⑫ Interior wall finish
⑬ Reinforcement on the inside
⑭ Blind frame
⑮ Connection joint
⑯ Window sill on the inside
⑰ Compriband (on-site)

with frame insulation



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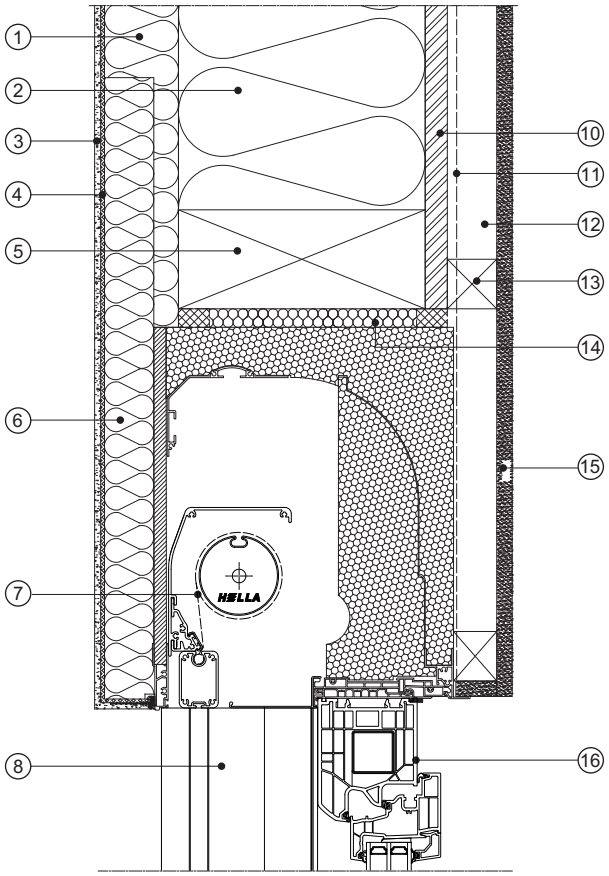
Wall structure
Wood frame construction with external rendering and installation level on the inside

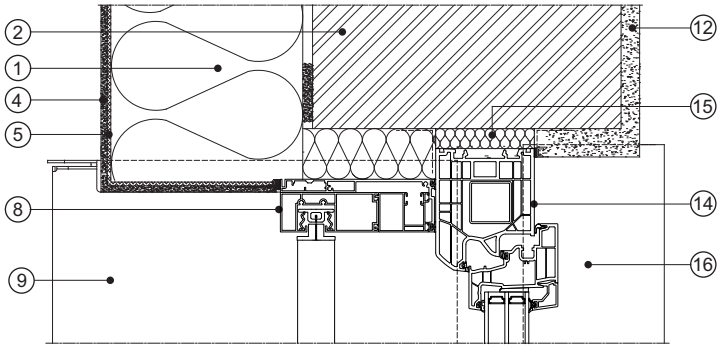


Legend

① Exterior insulation
② Core insulation
③ External rendering
④ Reinforcement
⑤ Nogging piece
⑥ Insulation of the top-mounted box
- Thickness ≥ 40 mm
- laterally and at the top ≥ 200 mm overlapped

⑦ TOP FOAM screen protect .S 243/300
⑧ Guide rail
⑨ Aluminium window sill system, 2-part
⑩ Wood-based material board
⑪ Vapour retarder/airtight level
⑫ Substructure on the inside
⑬ Substructure
⑭ Connection joint
Providing the functional levels analogue to the window connection joint
⑮ Interior panelling
⑯ Blind frame
⑰ Connection joint
⑱ Window sill on the inside

with frame insulation



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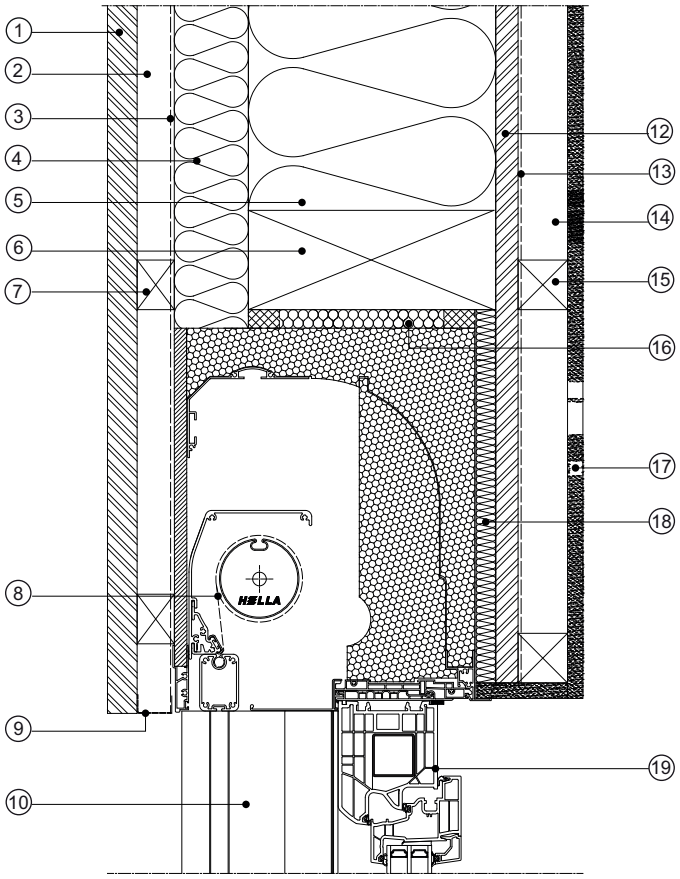
TOP FOAM screen protect

Installation situation for different wall constructions

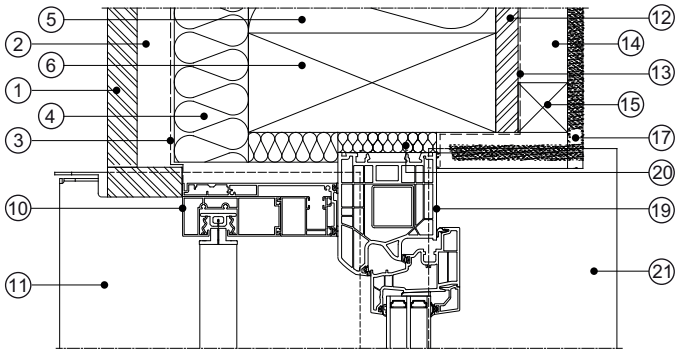
Wall structure
Wood frame construction with rear-ventilated curtain facade and installation level



Legend

① Exterior wall covering
② Rear ventilation level
③ Sealing level/draughtproof foil
④ Insulation
⑤ Core insulation
⑥ Nogging piece
⑦ Substructure on the outside
⑧ TOP FOAM screen protect .S 243/300
⑨ Ventilation grille
⑩ Guide rail
⑪ Aluminium window sill system, 2-part
⑫ Wood-based material board
⑬ Vapour retarder/airtight level
⑭ Installation level
⑮ Substructure on the inside
⑯ Connection joint
Providing the functional levels analogue to the window connection joint
⑰ Interior panelling
⑱ Insulation
⑲ Blind frame
⑳ Connection joint
㉑ Window sill on the inside

with frame insulation



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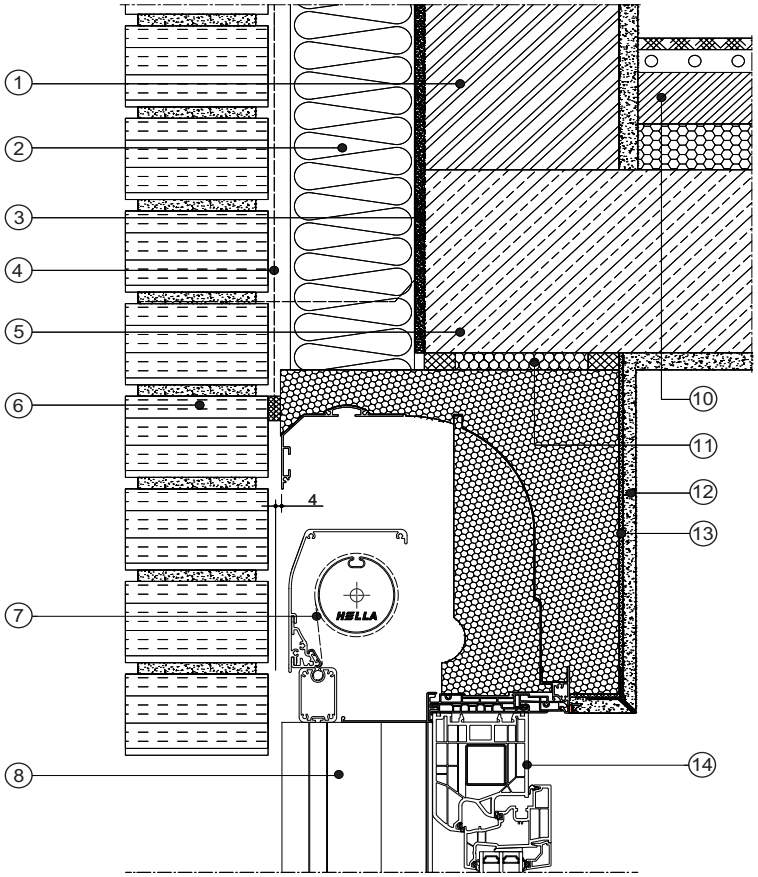
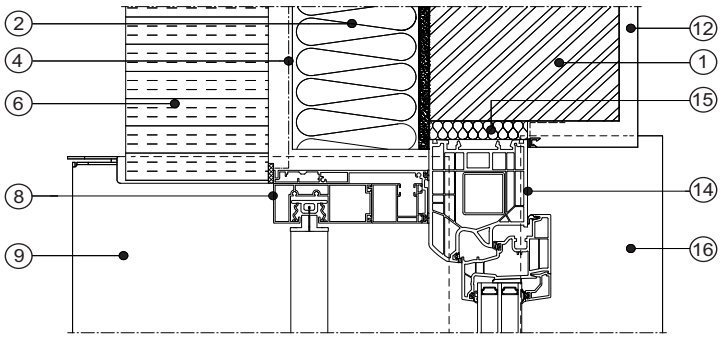
Wall structure
Core-insulated brickwork with clinker facade, rear-ventilated, for windows with floor-to-ceiling element height



Legend

① Brickwork
② Insulation
③ Sealing level
④ sealing level
⑤ Reinforced concrete ceiling
⑥ Clinker façade
⑦ TOP FOAM screen protect .S 283/300
⑧ Guide rail
⑨ Aluminium window sill system, 2-part
⑩ Floor construction
⑪ Connection joint
Providing the functional levels analogue to the window connection joint
⑫ Interior wall finish
⑬ Reinforcement on the inside
⑭ Blind frame
⑮ Connection joint
⑯ Window sill on the inside

with frame insulation



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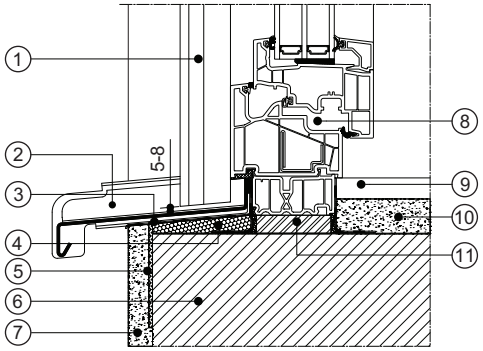
TOP FOAM screen protect

Installation situation for different wall constructions

The window sill system must ensure that the water can easily drain away towards the outside and that in this way no water runs behind the outer sealing level. Window sill systems can be designed with one or two water-bearing levels. If only one water-bearing sealing level is designed, no forces - e.g. occurring due to a linear expansion - may be transferred into the adjacent brickwork. For this purpose, multi-part and tested window sill systems must be used. For a technically correct installation and the timely coordination on-site, it is recommend to apply the current guidelines “Guidelines for the installation of window sills - 3rd edition 08-2015”.

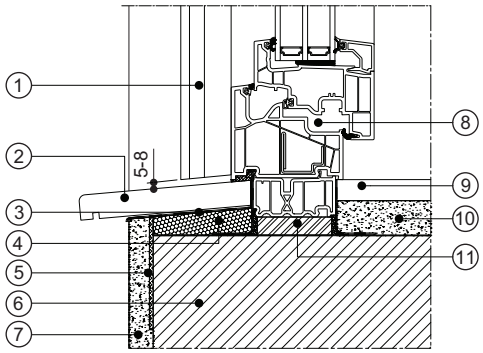
Window sill connection
Aluminium window sill



Legend

① Diagonal guide rail cut and guide rail lengthening
② Aluminium window sill system, in two parts, slope > 5° first water-bearing level
③ Sealing strip second water-bearing level
④ Insulation
⑤ Reinforcement, on the outside
⑥ Brickwork
⑦ External rendering
⑧ Window element
⑨ Interior window sill
⑩ Subconstruction/interior plaster
⑪ Connection joint

Window sill connection
Window sill made of stone



Legend

① Guide rail
② Window sill made of stone, in two parts, slope >°5 first water-bearing level
③ Sealing strip second water-bearing level
④ Insulation
⑤ Reinforcement, on the outside
⑥ Brickwork
⑦ External rendering
⑧ Window element
⑨ Interior window sill
⑩ Subconstruction/interior plaster
⑪ Connection joint

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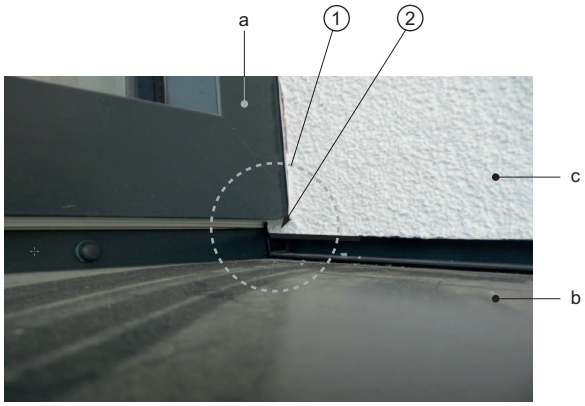


Source: Guidelines Window sill - Austrian Working Group Window Sill

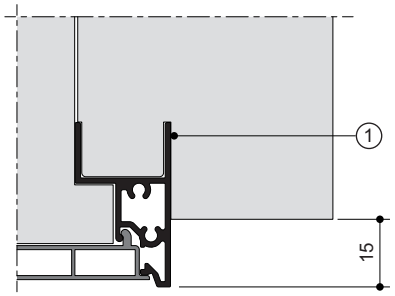
The term interface gap describes an opening, which always occurs at the cutting points of window frame (1), window sill with lateral sliding closures (b). soffit (c) and - if available - roller shutter guide rail in the corner area. Depending on the correct order of the structural works, the facade manufacturer, the window sill fitter or the fitter for the sun protection products is responsible for the correct sealing of the interface gap.

Legend

a	Blind frame
b	Lateral sliding closures
c	Soffit
①	Area of the interface gap
②	Professional closure of the interface gap

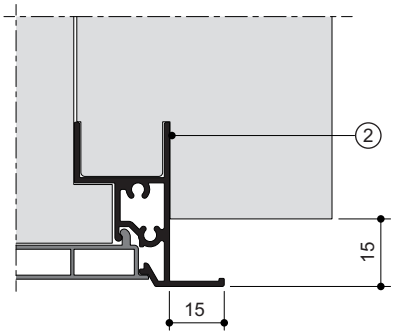
TOP FOAM screen protect

Box end profile inside



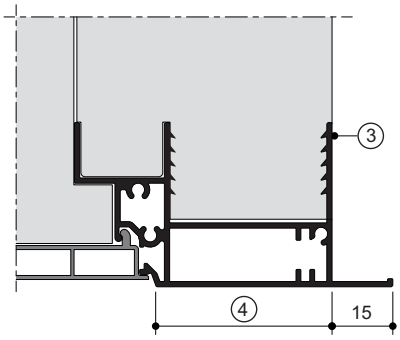
Box end profile inside
straight

Box end profile made of extruded aluminium with powder-coated visible surface For a plaster joint via plaster strip, if the bottom view of the lintel is plastered.



Box end profile inside
Plaster flange 15 mm

Box end profile made of extruded aluminium with powder-coated visible surface and plaster flange 15 mm. Ideal to mask joints between the panels with interior panelling in dry construction.



Box end profile inside
lintel bottom view with a cover panel, plaster flange 15 mm

Powder-coated lintel bottom view made of extruded aluminium and plaster flange 15 mm. No addition works are required at the lintel bottom view.

Legend

① Box end profile inside, straight
② Box end profile inside, plaster flange 15 mm
③ Box end profile inside, lintel bottom view with a cover panel, plaster flange 15 mm
④ Visible surface made of aluminium, powder-coated: Box depth 300 = 43 mm; box depth 365 = 108 mm

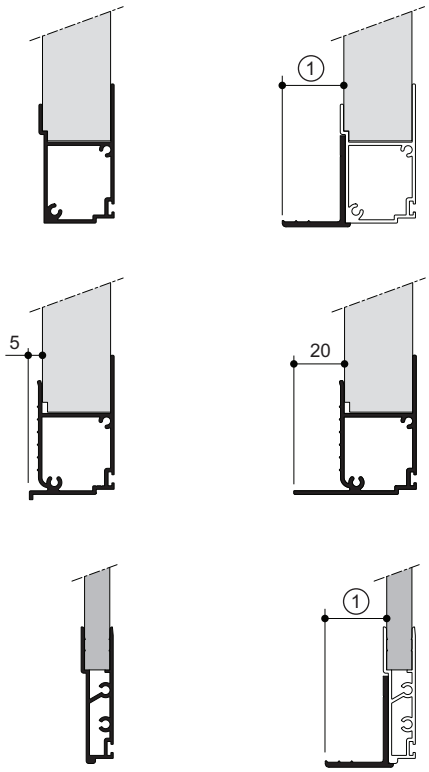
Design options

Box end profile	Box depth				
	260	300	365	425	variable
①	●	●	●	●	●
②	●	●	●	●	●
③	●	●	●	-	-

Note:

Please refer to the chapter “Installation details” for detailed information regarding the design and the surrounding structures.

Box end profile outside



Legend

① Plaster flange

TOP FOAM screen protect

- Standard with box end profile outside, 0 mm

On smooth aluminium surfaces, a clean plaster end bead can be provided with customary plaster sealing strips. For plaster sealing strips with adhesive tape it is necessary to test the adhesive on the mounting base.

For additional cases of application, the following plaster flange sizes are available:

- Box end profile outside, plaster flange 5 mm
- Box end profile outside, plaster flange 20 mm
- Box end profile outside, optional with plaster flanges: 15, 23, 35, 45, 55, 65, 75, 85, 95, 105, 115, 125, 135 or 145 mm

These serve for a direct plastering according to the current plaster guidelines and the fitting of plaster end bead profiles.
A powder-coated lower visible surface serves for a visually attractive closure.

TOP FOAM screen protect .S

- Standard with box end profile outside, 0 mm

On smooth aluminium surfaces, a clean plaster end bead can be provided with customary plaster sealing strips. For plaster sealing strips with adhesive tape it is necessary to test the adhesive on the mounting base.

For additional cases of application, the following plaster flange sizes are available:

- Box end profile outside, optional with plaster flanges: 15, 23, 35, 45, 55, 65, 75, 85, 95, 105, 115, 125, 135 or 145 mm

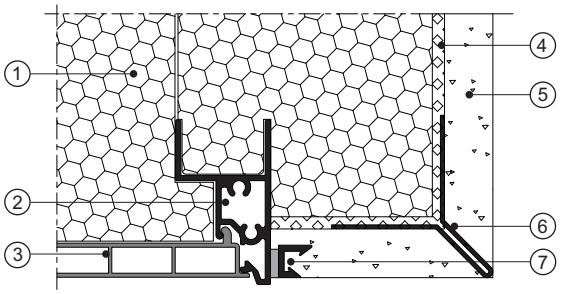
Plaster joint

The plaster joint towards the aluminium profile can be provided via customary plaster beads/slip-on profiles from divers system providers. Checking and use of the suitable plaster bead profile/slip-on profile must be decided on-site and has to be adapted to the structural conditions. The plaster flange must be laterally recessed/notched up to the ready plastered soffit surface and is not allowed to extend into the plaster.

TOP FOAM screen protect

Installation situation for different wall constructions

Lintel view from below on the inside
Plaster (standard)

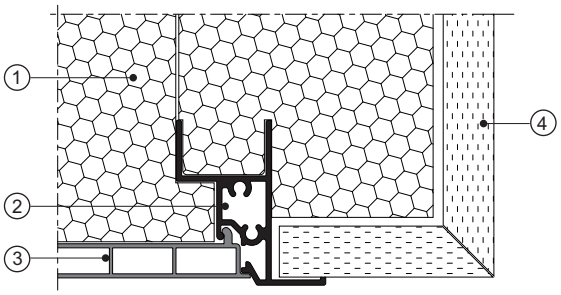


Connection to the box via plaster connection strip for a visually attractive plaster joint and to minimize the risk of plaster crack formation.

Legend

① TOP FOAM box insulation
② Box end profile straight
③ Inspection cover
④ Reinforcement
⑤ Interior wall finish
⑥ Plaster edge profile provided by the client
⑦ Plaster connection strip provided by the client

Lintel view from below on the inside
Gypsum board

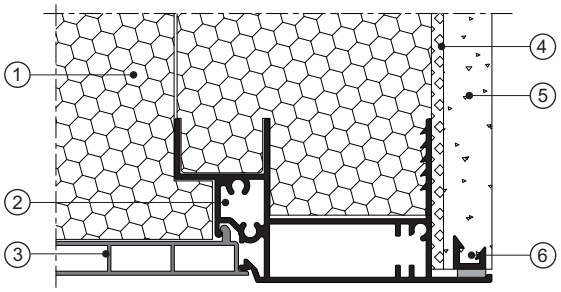


Connection joint between gypsum board and top-mounted box is hidden via a powder-coated aluminium tabs, 15 mm.

Legend

① TOP FOAM box insulation
② Box end profile with plaster flange 15 mm
③ Inspection cover
④ gypsum plasterboard

Lintel view from below on the inside
Aluminium

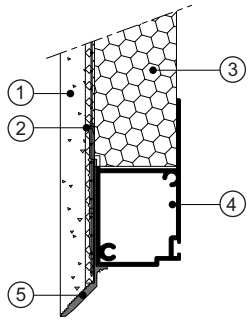


The powder-coated lintel bottom view made of extruded aluminium serves for a ready-made solution ex works. No plaster works are required at the lintel bottom view. The 15 mm thick plastered surface is enclosed by a customary plaster connection strip, which moreover minimizes the risk of plaster crack formation.

Legend

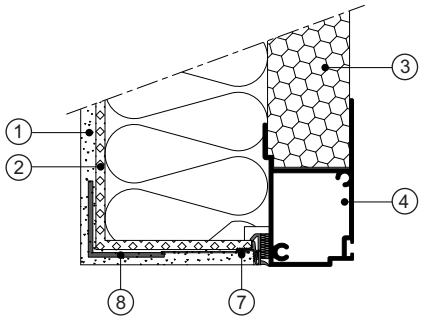
① TOP FOAM box insulation
② Box end profile with plaster flange 15 mm
③ Inspection cover
④ Reinforcement
⑤ Interior wall finish
⑥ Plaster connection strip provided by the client

Box end profile outside, 0 mm (Standard)
Monolithic brickwork



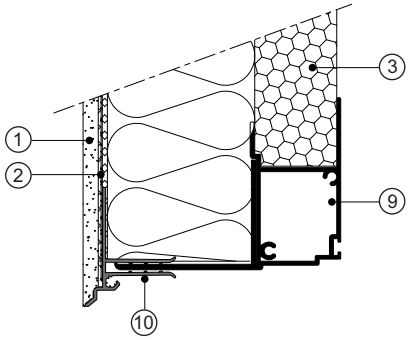
External plaster end bead via plaster bead with drip edge incorporated into the basic plaster.

Box end profile outside, 0 mm
Thermal insulation composite system with box insulation



External plaster joint via plaster bead for the exterior and formation of edges via edge profile.

Box end profile outside with lengthened plaster flange profile
Thermal insulation composite system with box insulation



Plaster end bead via slip-on profile with integrated drip edge. The extended, powder-coated profile soffit provides a finished and high-quality look.

Legend

① External rendering
② Reinforcement
③ TOP FOAM box insulation
④ Box end profile outside, straight
⑤ Plaster bead with drip edge
⑥ Plaster bead for the outside
⑦ Mesh corner angle
⑧ Box end profile on the outside with extended profile soffit
⑨ Slip-on profile with integrated drip edge

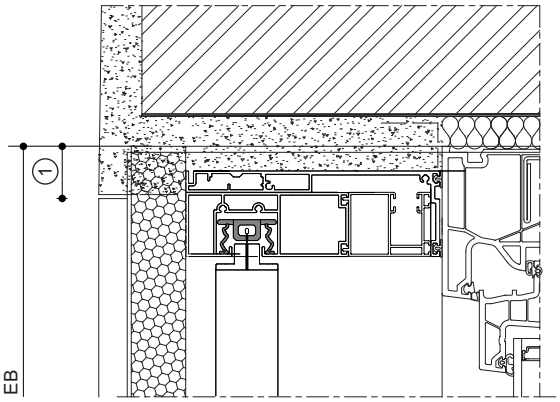
Notes:

The box end profile is not intended for plastering. According to the guideline, plastering strips must be placed on the profile noses on site to prevent development of cracks and thus the ingress of water.
See guideline Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation (date of issue 2021, 3rd edition).

TOP FOAM screen protect

Plaster connections with box end profiles

Dimension for recess area plaster flange variable



Recess area plaster flange

The plaster flange must be recessed on site at least up to the inner edge of the soffit plastering to prevent the water from entering at the side into the brickwork.

Legend

①	Recess area plaster flange
EB	Element width

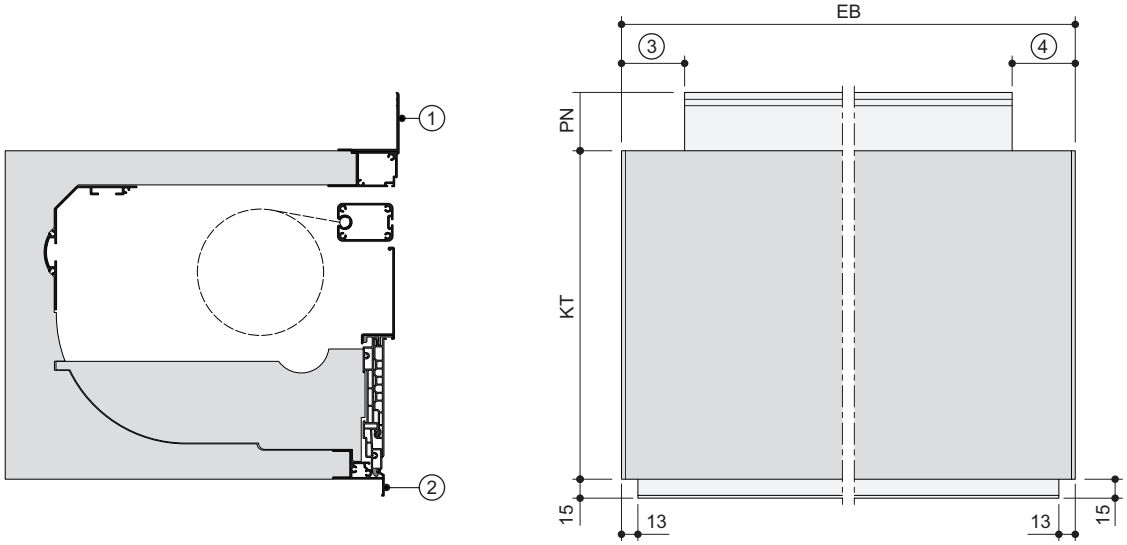
Recess area box end profile outside/inside

recess area box end profile outside

Optionally, the box end profile on the outside is recessed ex works to the desired dimension and can be specified for each side. Starting point for the dimensioning specification is the outer edge of the element width. The depth is the complete plaster flange depth. To calculate the correct dimension, a design of the installation situation is recommended. As a standard, the box end profile is not recessed.

Recess area box end profile inside

Optionally, the box end profile inside is recessed ex works with a fixed dimension of 13 mm from the outer edge of the element width. Design applicable for all box end profiles on the inside with a 15 mm plaster flange. As a standard, the box end profile is not recessed.



Box with recess area for box end profile on the outside and on the inside

Legend

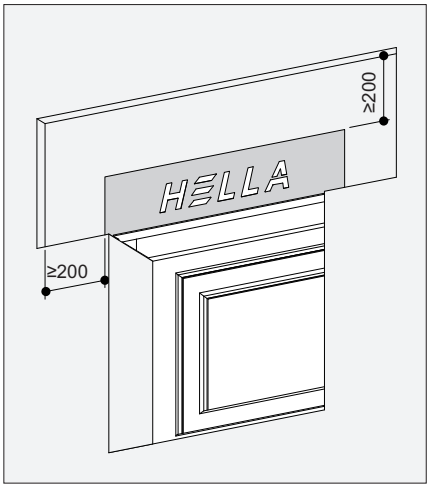
EB	Element width
KT	Box depth
PN	Plaster flange
①	Box end profile outside
②	Box end profile inside
③	Dimension of the recess area for the box end profile on the outside to the left
④	Dimension of the recess area for the box end profile on the outside to the right

Installation situation with thermal insulation composite system

Design of the plaster flange with thermal insulation composite systems

Depending on the box end profile, connection profiles are available, which are to be used in accordance with the information given by the system providers. If top boards are designed with a plaster flange facing towards the outside, the plaster flange may not extend to the finished façade.
(Source: Guidelines for connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation, date of issue 2021, 3rd revised edition)

Box insulation with thermal insulation composite system

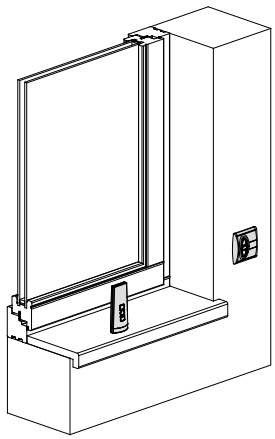


The box insulation must have a thickness of at least 40 mm and must on three sides overlap by at least 200 mm.

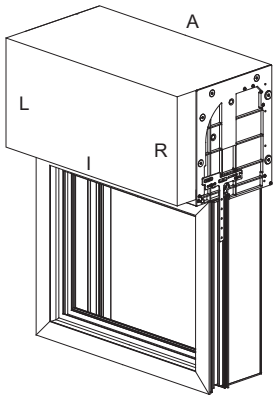
TOP FOAM screen protect

Motor drive

Motor drive



Definition drive side



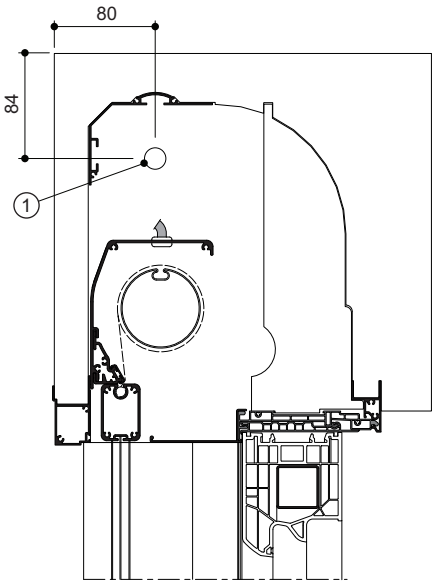
Individual element

The drive side determines whether the drive is installed in the left or right side cover of an element.

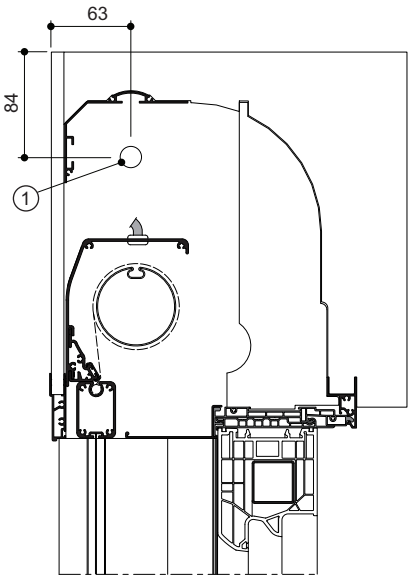
The primary view of the element is seen from the interior towards the exterior.

Legend

①	Element 1
②	Element 2
L	on the left side
R	On the right
I	inside
A	Outside



TOP FOAM screen protect



TOP FOAM screen protect .S

Operation
Opening and closing of the curtain by operating a switch or a hand-held radio transmitter or by programming an automatic device (e.g. time switch).

Motor cable exit
The motor cable is led laterally through the side cover.

Note:
If the box height differs from the standard box height, the difference must be added to the 84 mm.

Legend

① Opening for lateral cable exit

Motor drive

Motor use - tables

Motor type		End position detection	Obstacle detection	Activation	Speed [r.p.m.]	Motor head	TOP FOAM screen protect
Somfy	OREA WT 50 RH	mechatronical		Wire-bound	17	Round Head	+
	MAESTRA+ 50 io RH	mechatronical	x	Remote control	17	Round Head	+
elero	SunTop/Z RH	mechatronical	x	Wire-bound	23	Round Head	o
	SunTop/Z RH - 868	mechatronical	x	Remote control	23	Round Head	o
	RolTopK M RH	mechatronical		Wire-bound	14	Round Head	o

Cable designs

Depending on the drive type, the standard cable lengths differ as well as the optionally available cable lengths:

Cable length	Cable end	pluggable with motor head	TOP FOAM screen protect
3 m	without Hirschmann connector	yes	o
5 m	without Hirschmann connector	yes	+
10 m	without Hirschmann connector	yes	+

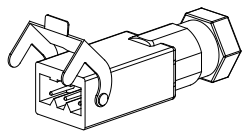
Notes:

- Motor end positions are not preset in the factory.
- Up to 300 mm of the motor cable are stowed in the box (pushed into the cable clamps of the motor bearing plate). This reserve enable an easy removal of the drive for maintenance purposes, even if the motor cable is permanently installed outside the box.

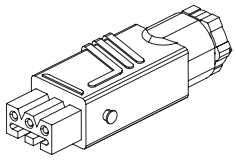
Legend

o	Standard
+	Optional

Hirschmann connector



STAS 3 connector with bracket



STAK 3 linkage

In order to make the motor cable pluggable, a Hirschmann plug connection can be ordered optionally.

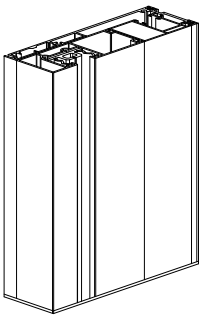
This meets the protection class IP 54:

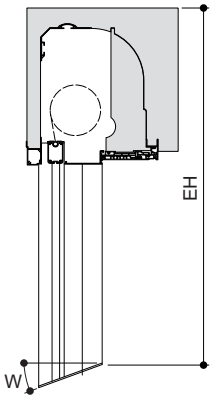
- Protection against dust in harmful quantity
- Complete protection against contact
- Protection against splashing water on all sides

The Hirschmann plug connection must be placed outside the box.

TOP FOAM screen protect

Guide rails

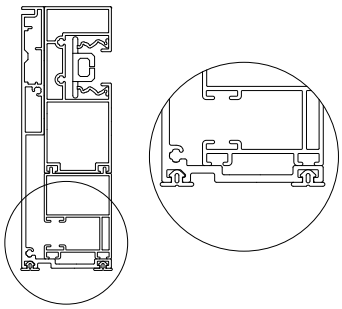




Diagonal cut and end cap
The end of the guide rail is always provided with an end cap. As a standard the end caps of the guide rails are designed with an inclination angle of 0°. To adjust the guide rail to the inclination angle of the window sill, the guide rails can be ordered with a diagonal cut of 1°-5°. The guide rail is always lengthened by the angular dimension.

Legend

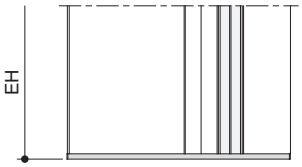
EH	Element height
W	Specification diagonal cut in degrees



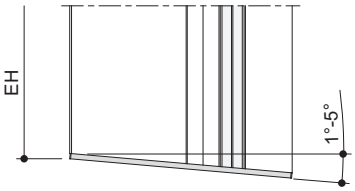
Guide rail impermeable to driving rain (standard)
Sealing profiles inserted into the guide rail serve for the sealing between the guide rail and the window frame.

Guide rail end as a standard with end cap

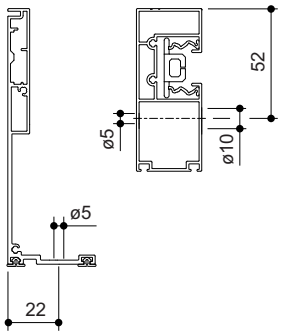
End cap straight design

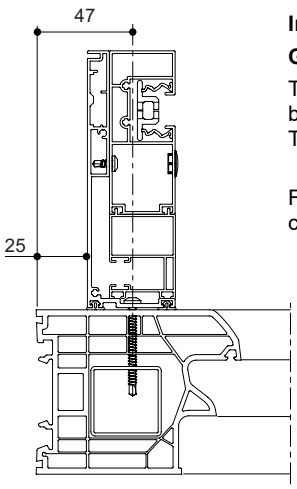


End cap 5°



Note:
If desired, the guide rails may be ordered without end caps.





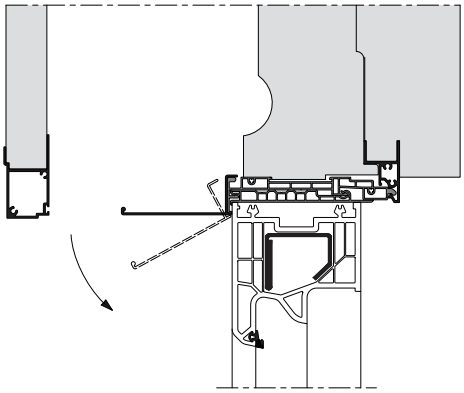
Installation of the guide rail, screwed from the front

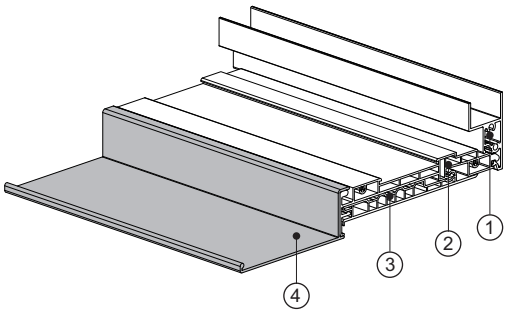
Guide rail type FUP

The base profile is fixed to the mounting base through the closest bar. An offset dimension of at least 25 mm must be observed. Then the guide profile is screwed to the base profile.

For an easy installation, a commercially available bit extension can be used.

Inspection





Inspection cover
Made of extruded aluminium 1.3 mm. The inspection cover is screwed laterally to the side cover.

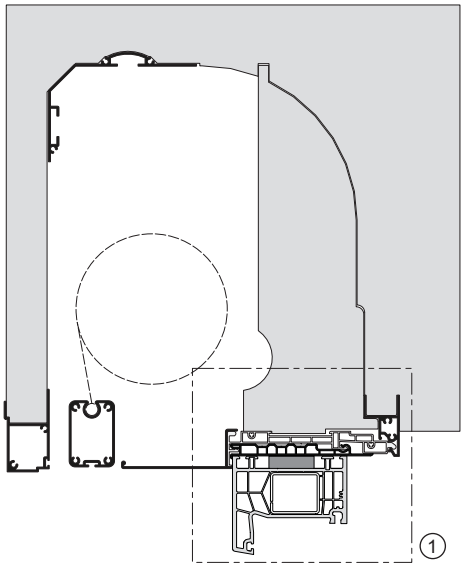
Maintenance
In the case of maintenance works, the guide rail has to be removed first. Then the screws can be loosened and the inspection cover can be removed.

Legend

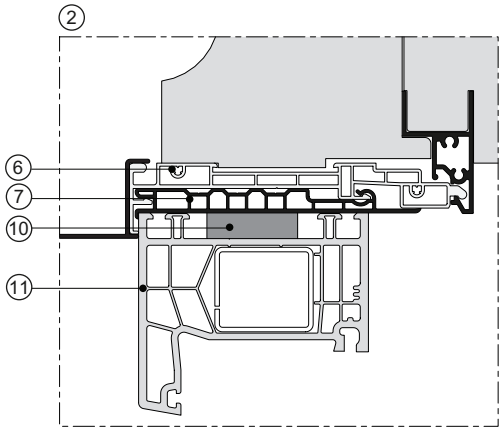
① Box end profile 0 mm, aluminium
② Floor bracket profile
③ Adapter profile universal
④ Inspection cover on the outside

TOP FOAM screen protect

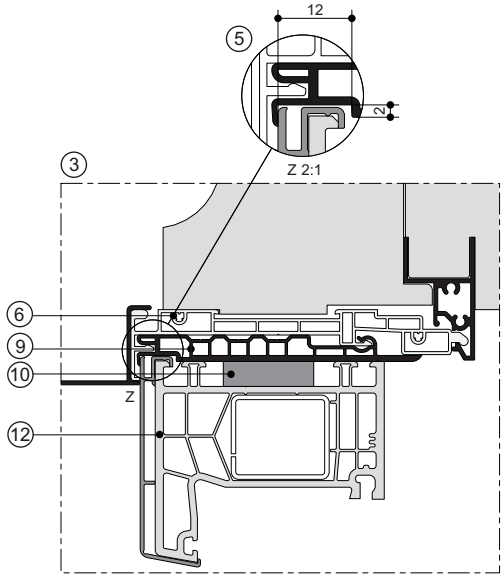
Clip technology



Clip technology
The connection between window and top-mounted box is provided via clips adapter, which serves for a solid connection. A sealing between the floor base profile and the clip adapter is no longer necessary.



Clip adapter universal
With window frames made of wood/wood-aluminium or another unknown plastic window system, the clip adapter universal is used. The clips adapter universal is fixed to the window frame. The smooth transition must be sealed in line with the connection joint. Than you can clip the window frame to the box.

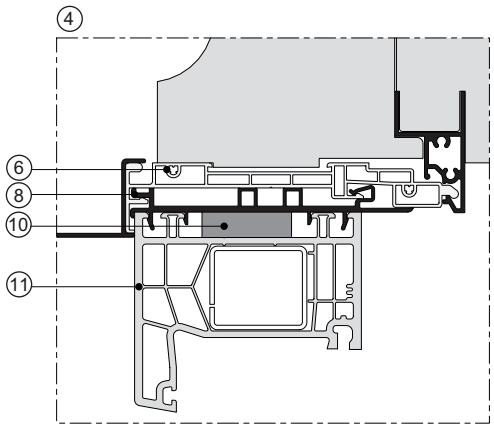


Universal clip adapter for frames with aluminium shells

For frames with an aluminium shell projecting upwards, the clip adapter universal aluminium shell is used. The clips adapter is fixed to the window frame. The smooth transition must be sealed in line with the connection joint. Than you can clip the window frame to the box.

Note:

A recess of
12x2 mm has been provided for the aluminium shell. Check in advance that the recess is large enough for the aluminium shell of the relevant frame.



Available clip adapter systems:

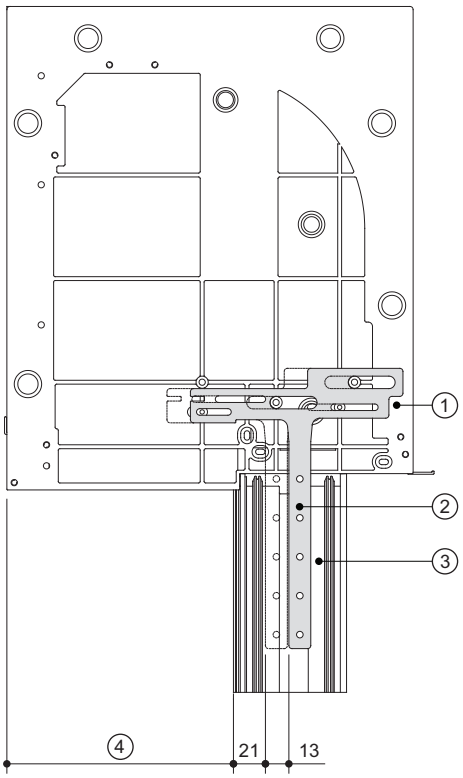
- Aluplast Ideal 7000/8000
- Gealan S600/S 9000
- Salamander 76
- Schüco Living 82 mm
- Veka SL 76
- Profine 76/88 (KBE, Trocal, Kömmerling)
- Veka SL 82

Clip adapter system
In the case of known plastic window systems, the corresponding clip adapters can be used. It matches the shape of the plastic window frame and therefore can clipped-on easily. Than you can clip the window frame to the box. Clip adapters are available for the most well-known window systems.

Legend

① Detailed view
② Detailed view with clip adapter universal
③ Detailed view with clip adapter universal, aluminium shell
④ Detailed view with clip adapter system
⑤ Recess in clip adapter for aluminium shell
⑥ Floor bracket profile
⑦ Clip adapter universal
⑧ Clip adapter system
⑨ Clip adapter universal, aluminium shell
⑩ Sealing in line with the connection joint is recommended
⑪ Blind frame
⑫ Top board frame with aluminium shell

Fastening handle



Standard fastening handle

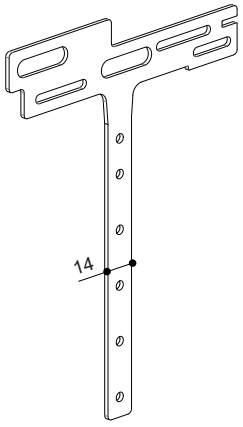
Fastening handle
The box is fixed to the window frame via the fastening handles made of galvanized sheet steel, 2 mm.

Due to the predefined boreholes in the fastening handle, it is possible to fasten various types of plastic, wooden and aluminium window frames. The fastening handle is clipped into the groove of the window and serves for an optimal stability when the window is built in. A crank of the fastening handle is allowed and facilitates the installation.

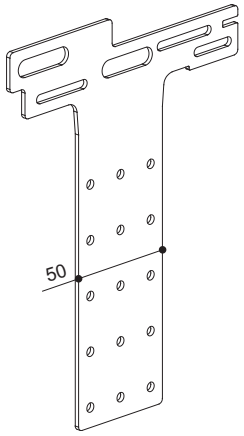
For positioning an adjustable range of 15 mm is available.

Legend

① Side cover
② Fastening handle
③ Blind frame
④ Distance from the front edge of the box to the window rabbet
screen protect: 149Mm mm / screen protect .S: 132 mm



Standard fastening handle



Fastening handle strengthened (optional)

Fastening handle strengthened (optional)
Especially recommended with linkages or with wooden windows with small groove in the frame profile.

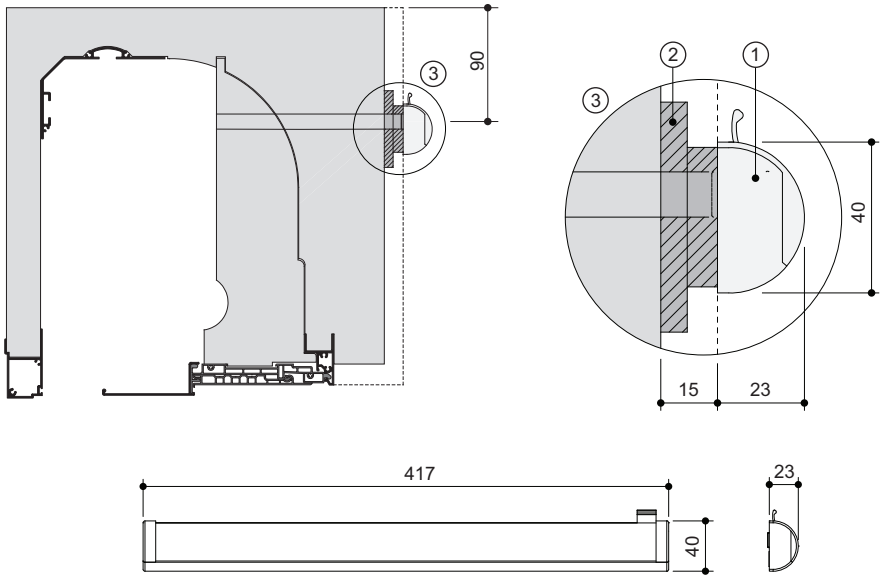
TOP FOAM screen protect

Window fan systems

General
A well-controlled, healthy indoor climate fulfils multiple tasks: It enhances not only the well-being and the productivity, but also protects the basic structure of the building against moisture and infestation with mould. To make sure that the ventilation of buildings convinces also under energy aspects, smart solutions are required. Because in this case the conventional airing by opening the window meets its limits Integrated window fans serve for a minimal user-independent airing to retain protection against moisture.

Siegenia AEROMAT midi (inlet air element)

The AEROMAT midi especially impresses with its intelligent structure with the double locking mechanism. But also the volumetric flow limitation by means of a valve convince. Thanks to its high airflow rate on the basis of the natural pressure difference and the effective noise insulation, the passive fan element enables a user-independent ventilation, which, however, meets the high demands in comfort. The AEROMAT midi is also perfectly suitable as after-flow opening for a central air escape.



Advantages

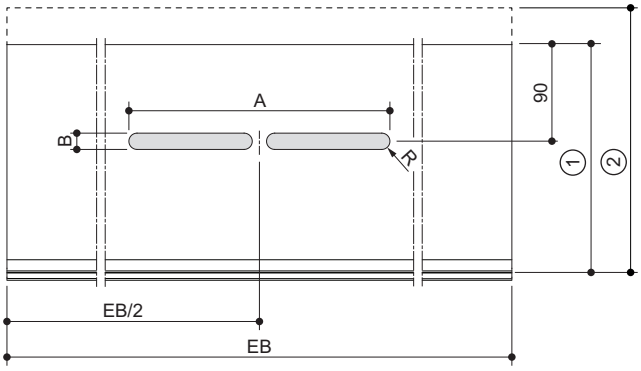
- Intelligent internal structure with double locking mechanism
- Volumetric flow limitation
- Visually attractive appearance due to discreetly hidden fastening screws
- Tool-free removal to clean the fan
- Installation frame with defined plaster angle and centring for easy installation

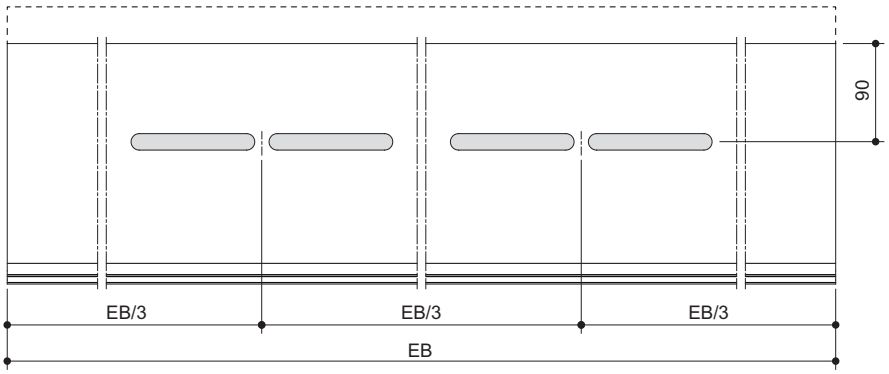
Legend

① Fan element Siegenia AEROMAT midi
② Box end profile 15 mm thick ex works on box
③ Detailed view

Notes:

- **Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.**
- The van element is fixed after plastering.
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between these two configuration options.
- All technical data are available in the data sheet.





Legend

① Box height
② Box height variable

Window ventilator system	A	B	R
Siegenia AEROMAT midi	386	12	6

Notes:

- **Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.**
- The van element is fixed after plastering.
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between these two configuration options.
- All technical data are available in the data sheet.

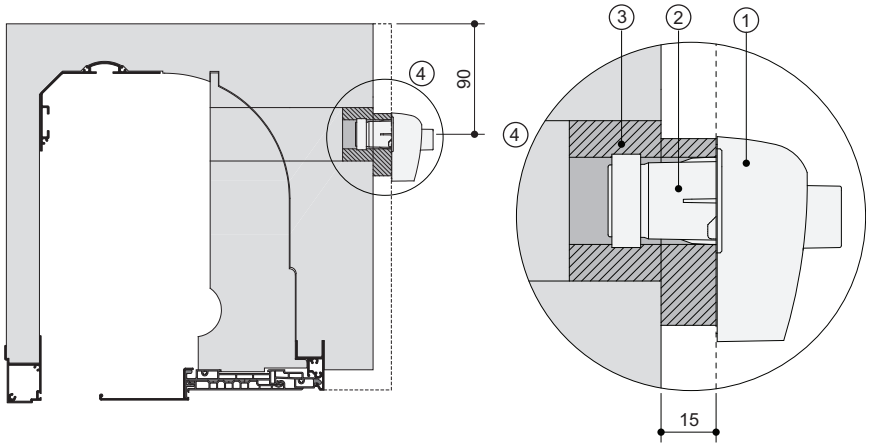
Ventilation slot
For window fan systems that are provided by the client, ventilation slots may be prepared in the top-mounted box. Please note, that we assume no responsibility for the correct selection or functionality of the window fan element when it is built in.

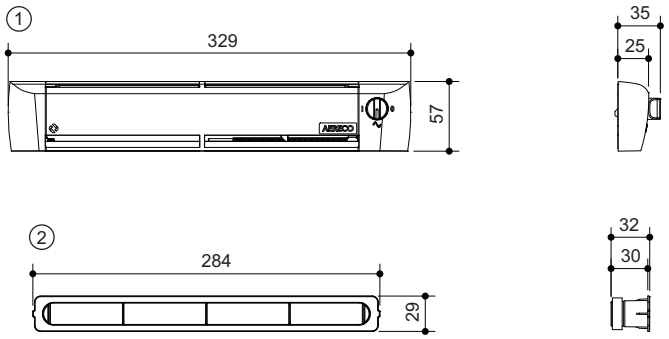
TOP FOAM screen protect

Window fan systems

Aereco ZUROH 110 (air inlet)

With its flat design and air channel the air inlet ZUROH 110 is perfectly suitable for use at the top-mounted box. The after-flow of air is provided via an opening, which is not visible for the resident. Thanks to the Aereco humidity sensor, the air volume flows are adjusted to the relative interior air humidity - automatically and without external auxiliary energy. Due to the use of the lever for opening and closing, the element can be opened or closed completely (basic ventilation).





Advantages

- Humidity sensor: adjusts the air volume flows to the relative air moisture
- With lever for opening and closing
- Vertical airflow for more living comfort
- Opening for the incoming airflow not visible for the resident
- Easy installation, screws are not visible
- Easy maintenance, no recalibration required, only cleaning
- Installation frame with defined plaster angle and centring for easy installation

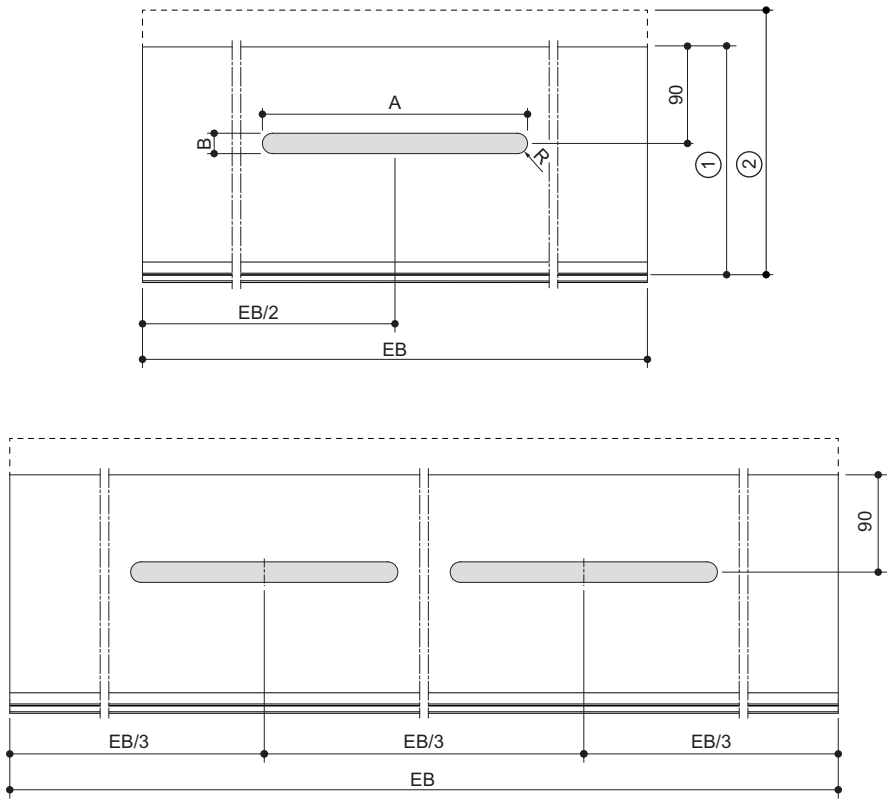
Legend

① Fan element Aereco ZUROH 110
② Air duct (included in the delivery)
③ Box end profile 15 mm thick, mounted to the box ex works
④ Detailed view

Notes:

- **Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.**
- The van element is fixed after plastering.
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between these two configuration options.
- All technical data are available in the data sheet.

Ventilation slot
For window fan systems that are provided by the client, ventilation slots may be prepared in the top-mounted box. Please note, that we assume no responsibility for the correct selection or functionality of the window fan element when it is built in.



Legend

① Box height
② Box height variable

Window ventilator system	A	B	R
Aereco ZUROH 110	255	20	10
Aereco ZUROH 110 with air duct ROLK	275	25	12.5
Aereco ZUROH 110 with metal duct ROMK	289	39	3

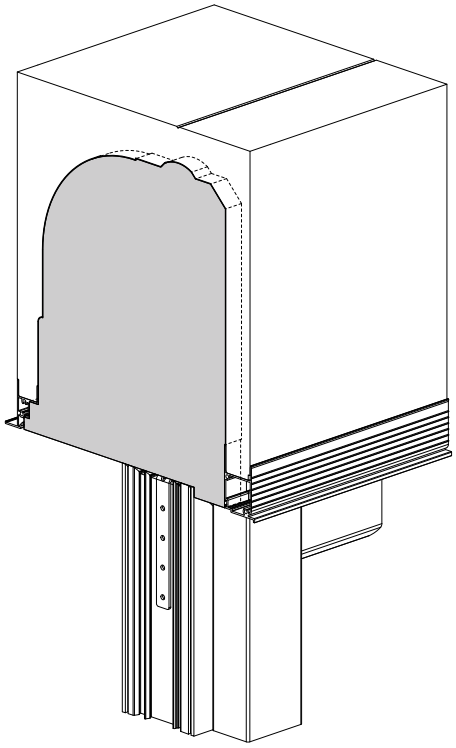
Notes

- **Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.**
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between these two configuration options.
- All technical data are available in the data sheet.
- The mounting of a window fan is not possible with inspection from the inside.

Ventilation slot
For window fan systems that are provided by the client, ventilation slots may be prepared in the top-mounted box. Please note, that we assume no responsibility for the correct selection or functionality of the window fan element when it is built in.

TOP FOAM screen protect

Exterior insulation for side cover

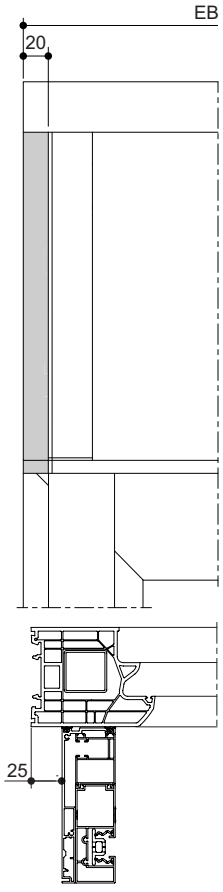


External side cover insulation
The external side cover insulation consists of polystyrene EPS 032 with a thickness of 20 mm.

If an external side cover insulation is provided, only the standard fastening handle (handle width 14 mm) may be used. Depending on the window frame profile, it must be cranked accordingly on-site.

The element width refers up to the outer edge of the box and includes the insulation of the side cover. The guide rails are additionally mounted offset by 20 mm per side (see chapter “Dimensioning specification”).

An external side cover insulation is possible with a box height of 250 and 300 mm.



The external insulation for the side cover is loosely enclosed in the delivery and must be mounted to the side cover after the installation of the box.

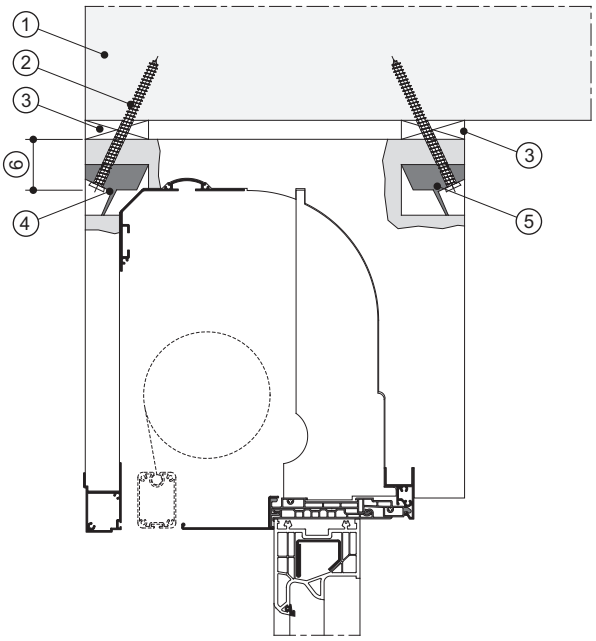
Legend

EB Element width

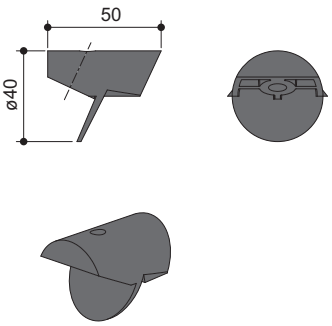
Note:

Usually easier to solve with a doubling! Otherwise a cranked handle is required, the straight handle is then bent while mounting.

Fixing of the box



Box fixing round, on the outside and on the inside screwed to a load-bearing and pressure-resistant mounting base.



Box fixing round

Legend

① Load-bearing mounting base, e.g. reinforced concrete ceiling
② Mounting material* (not included in the delivery)
③ Spacer blocks, pressure-resistant (not included in the delivery)
④ Box fixing round, made of plastic, on the outside
⑤ Box fixing round, made of plastic, on the inside
⑥ Box height 300: 40 mm
Box height 250: 36 mm

* If the mounting base is made of reinforced concrete, the fastening can be done via customary window frame screws (e.g.: WÜRTH AMO III, Type 3, 7.5x72 mm). Checking and use of the suitable mounting material must be decided on-site and has to be adapted to the structural conditions.

Depending on the width, box fastenings round are used in addition to the fastening handle.

The fastenings connect the box with the load-bearing mounting base. This results in a higher stability and the danger of crack formation when opening and closing the window is reduced. Herewith a “sagging” or “swinging back and forth” of the box when closing or opening the window is reduced.

The box fixing round consists of plastic and the corresponding dowels and screws, which are included in the delivery.

The box fastening round is permanently fixed to the box.

Advantages of the box fixing:

- Quick installation
- Significantly higher stability

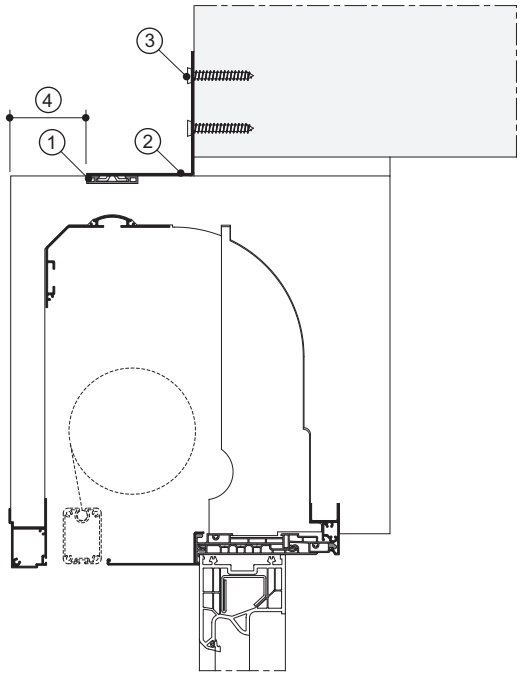
Number
Standard: see table (recommendation)
Optional: according to customer request

Element width [mm]	Number
800-1599	1
1600-2399	2
2400-3199	3
3200-3999	4
4000-4799	5
4800-5000	6

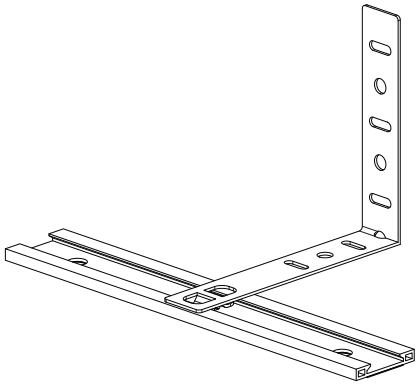
screen protect .S
No lintel mounting round, on the outside possible.

TOP FOAM screen protect

Fixing of the box



Box fixing on the outside via screw-in anchor for a simple connection with the box.



Screw-in anchor and connection profile when connected

Legend

① Connection profile
② Screw-in anchor
③ Mounting material* (not included in the delivery)
④ screen protect = 60 mm
screen protect .S = 43 mm

* If the mounting base is made of reinforced concrete, the fastening can be done via customary window frame screws (e.g.: WÜRTH AMO III, Type 3, 7.5x72 mm). Checking and use of the suitable mounting material must be decided on-site and has to be adapted to the structural conditions.

Fixing of the box with screw-in anchor on the outside
Depending on the width, one or more screw-in anchors are used in addition to the box fastening.

The fastenings connect the box in the exterior with the load-bearing mounting base. This results in a higher stability and the danger of crack formation when opening and closing the window is reduced. Herewith a “sagging” or “swinging back and forth” of the box when closing or opening the window is reduced.

This box fastening on the outside consists of an screw-in anchor (2 mm, steel sheet), the connection profile and the appropriate screws supplied.

It is possible to bend the screw-in anchor according to the installation situation/installation depth and/or cut it to length and fix it to the brickwork by using commercially available dowels (8 mm or 5 mm) and screws.

The connection profile is permanently fixed to the box.

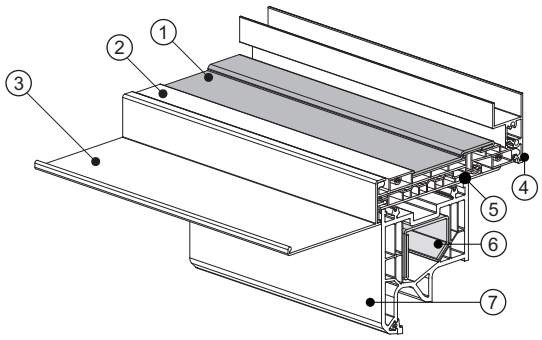
Advantages of the box fixing:

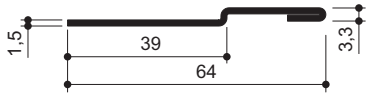
- Quick installation
- Flexible position
- Significantly higher stability

Number
Standard: see table (recommendation)
Optional: according to customer request

Element width [mm]	Number
to 800	0
800-1599	1
1600-2399	2
2400-3199	3
3200-3999	4
4000-4799	5
4800-5000	6

Bottom strengthening profile





Legend

① Bottom strengthening profile, 1.5 mm, galvanized
② Floor bracket profile
③ Inspection cover
④ Box end profile 0 mm, inside
⑤ Adapter profile
⑥ Window frame reinforcement
⑦ Blind frame

Bottom strengthening profile
We recommend to use a bottom strengthening profile for split elements with a width above 2000 mm. This must be screwed shear-resistantly to the window frame. In the case of occurring wind loads, the bending of the frame is minimized.

Technical details
Bottom strengthening profile I_y = 4.17 cm^4

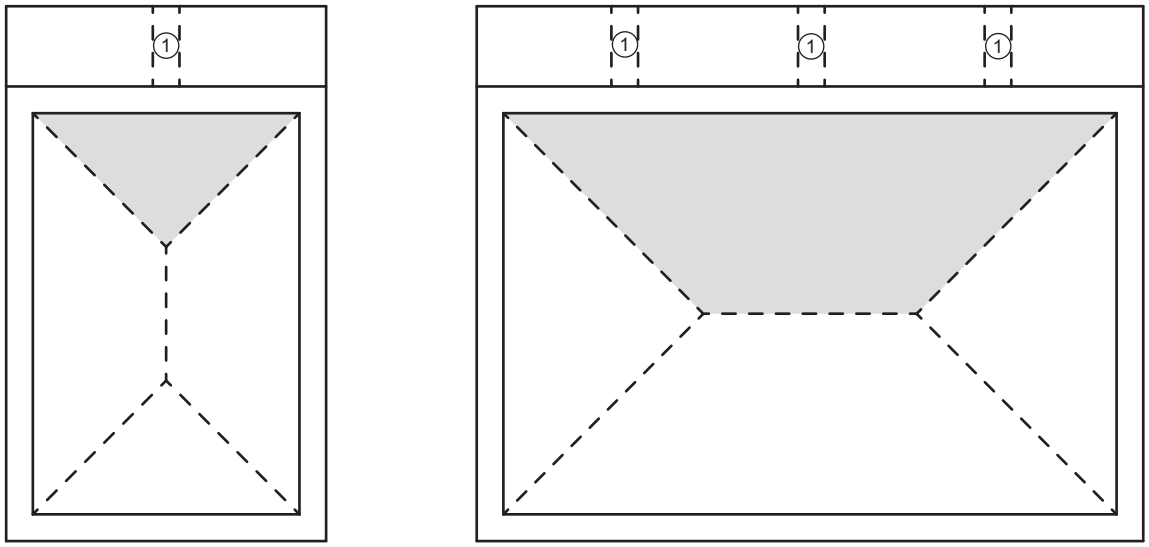
Window frame stabilization
If the option window frame stabilization is ordered, the box is always delivered with the bottom strengthening profile.

TOP FOAM screen protect

Window frame stabilization

If the window is provided with a top-mounted box, the upper window frame can not be fixed to the ceiling. In this case, a window frame stabilization is provided. The window frame stabilization consists of a multi-part statics bracket, which transfers the wind-load, which put pressure on the window frame, directly into the lintel or the ceiling.

The static brackets for the window frame stabilisation ensure the correct load transfer of the window frame towards the top via the top-mounted box into the lintel or the ceiling.
The brackets are only designed for the load-bearing capacity of the upper load triangle or load trapeze (grey-shaded). It is mandatory to screw the window frame laterally towards the outside.



Legend

① Window frame stabilisation

In this case it must be proofed, that the bending of the upper window frame is less than the maximum allowable bending. The bending of the window frame is specified in dependency on the test pressure.

A window element with top-mounted box can be tested according to DIN EN 12211 and be classified according to DIN EN 12210. According to the norm, the results can be transferred over to smaller elements.

Classification of windows with regard to the wind load resistance DIN EN 12210 Table 1

Test class	Test pressure [Pa]
1	400
2	800
3	1200
...	...

Classification of the relative frontal bending DIN EN 12210 Table 2

Test class	Relative frontal bending
A	< l/150
B	< l/200
C	< l/300

Example:

Class B3

Wind load resistance - Window frame bending l/200:	Class B
Wind load resistance - Test pressure 1200 Pa:	Class 3
Classification of the window element:	B3

In this case Class B3 means, that at a test pressure of 1200 Pa a maximum upper window frame bending of l/200 may not be exceeded. Important: The window must meet the requirements for the classification according to DIN EN 12210 too. The maximum bending of frame parts is limited to l/200 or max. 15 mm as given in the “Technical rules for the use of linear mounted glazing (TRLV)”. The minor value is decisive.

Which class a window must show at a given installation location? For this purpose the wind pressure that affects the window must be determined. This depends on a variety of factors such as installation height, installation location, form of the building, position of the windows in the building etc. The resultant wind pressure is calculated according to DIN EN 1991-1-4 (Eurocode 1).

This calculation of the affecting loads is the basic requirement for the dimensioning of the window, regardless whether the window is provided with a top-mounted box or not.

Note:

The **wind resistance according to EN 13659** defines the wind resistance classes for **roller shutters**. This wind capability depends mainly on the type of the roller shutter profile, the guide rail/the depth of the guide rail groove and the width of the roller shutter.

The **wind resistance according to DIN EN 12210** defines the wind resistance classes for **window elements with top-mounted boxes**. The classification regarding the wind resistance is classified in two classes: on the one hand the class of the maximum allowable window frame bending and on the other hand in classes, which result from the applied test pressure.

These two norms must be observed independently of each other!

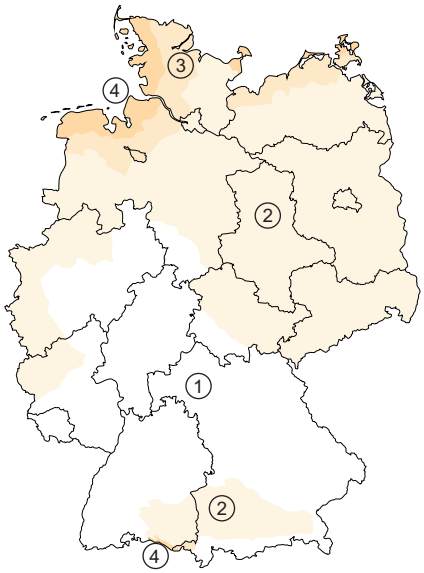
TOP FOAM screen protect

Window frame stabilization

The function of the window frame stabilization is the load transfer of the window towards the ceiling or the lintel. For the required number of statics brackets, the wind load zone (e.g. 2 or 3) of the local conditions must be determined and the building height must be known.

Classification of the window element

1. Determination of the wind load zone (example: Germany)



Wind load zones in Germany

Wind load zone 1 with 22.5 m/s
Wind load zone 2 with 25.0 m/s
Wind load zone 3 with 27.5 m/s
Wind load zone 4 with 30.0 m/s

Source: DIN 1055-4:2005-3, DIN EN 1991-1-4/NA

2. Determination of the wind intensity class for windows (DIN 18055:2014-11)

Building height	Wind zone	0-10 m	>10-18 m	>18-25 m
Interior land				
Resistance to wind loads according to DIN EN 14351-1	1	B2	B2	B3
	2	B2	B3	B3
	3	B3	B3	B4
	4	B3	B4	B4
Coasts and Baltic Sea islands				
Resistance to wind loads according to DIN EN 14351-1	2	B3	B3	B4
	3	B3	B4	B4
	4	B4	B4	B5

The classification of the window resulting from the above is a reference value only and serves already in the offer phase as help for the determination of the required number of statics brackets for the respective element. The final demands on the window are given by the client or the window fitter.

Recommended number of statics brackets depending on the element height and element width

Basis of the window and door norm
DIN EN 12210:2016

Calculation basis
Reinforcement in the window frame: Tube 30x30x1.5 I_y = 2.26 cm^4
Bottom strengthening profile I_y = 4.28 cm^4

Wind protection class B2

- Frame deflection < 1/200 of the window frame width
- Test pressure 800 Pa

Element height incl. box [mm] \ Element width [mm]	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
1000	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
1200	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
1400	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
1600	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2
1800	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2
2000	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2
2200	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2
2400	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2
2600	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2
2800	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2
3000	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2
3200	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2
3400	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2
3600	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3
3800	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3
4000	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3
4200	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3
4400	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3

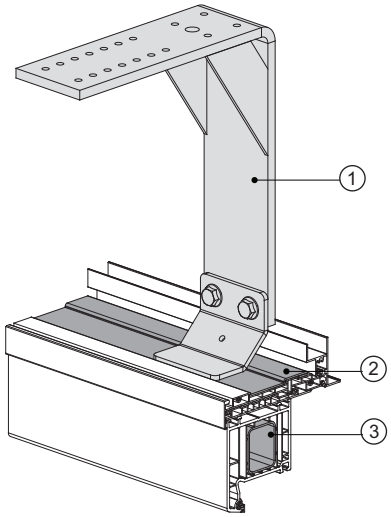
Wind protection class B3

- Frame deflection < 1/200 of the window frame width
- Test pressure 1200 Pa

Element height incl. box [mm] \ Element width [mm]	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
1000	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2
1200	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2
1400	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2
1600	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2
1800	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2
2000	0	0	0	0	0	1	1	1	2	2	2	2	2	2	2	3
2200	0	0	0	0	0	1	1	1	2	2	2	2	2	2	3	3
2400	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3
2600	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3
2800	0	0	0	0	0	1	1	1	2	2	2	2	3	3	3	4
3000	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
3200	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
3400	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
3600	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
3800	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
4000	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
4200	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4
4400	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4

TOP FOAM screen protect

Window frame stabilization



The window frame stabilization consists of a multi-part statics bracket, which transfers the wind-load, which put pressure on the window frame, directly into the lintel or the ceiling. Special insulation bodies and the geometry serve for the thermal separation of the statics bracket and for excellent heat-insulating characteristics despite the COMPACT design. The window frame stabilization is always used in combination with the bottom strengthening profile.

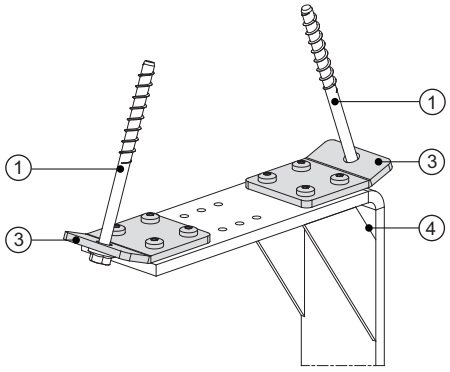
mounting material
The selection of the suitable installation type and the use of the suitable mounting material must be checked on-site and has to be adapted to the structural conditions.

Example - mounting base made of reinforced concrete
Fisher concrete screw ULTRACUT FBS II 8 x 130 80/65 US TX

Note:
The window frame stabilization is possible for the standard box heights 250 and 300 mm.
The statics bracket is already pre-mounted at the factory.

Legend

① Statics bracket (multiple parts)
② Bottom strengthening profile
③ Window frame reinforcement

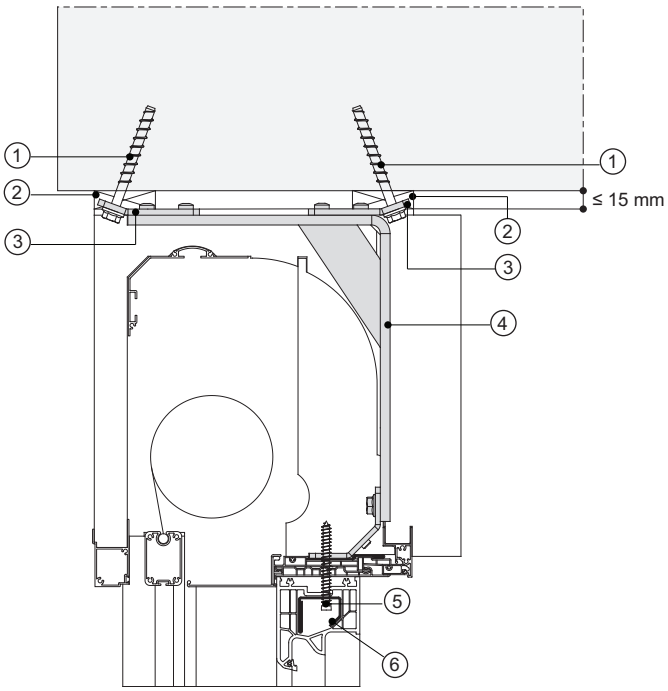


Mounting with fastening lugs

The connection of the window frame stabilization with the wall lintel or the reinforced concrete ceiling is provided via fastening lugs from the outside and from the inside.

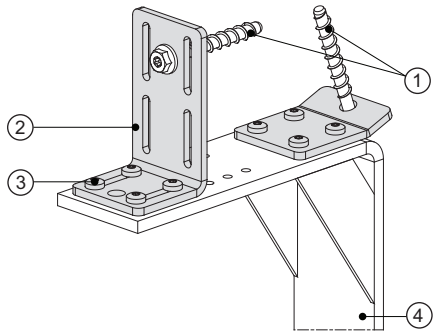
Connection to the window frame
To enable an optimum distribution of forces, the window frame must be screwed to the statics bracket using the appropriate mounting material.

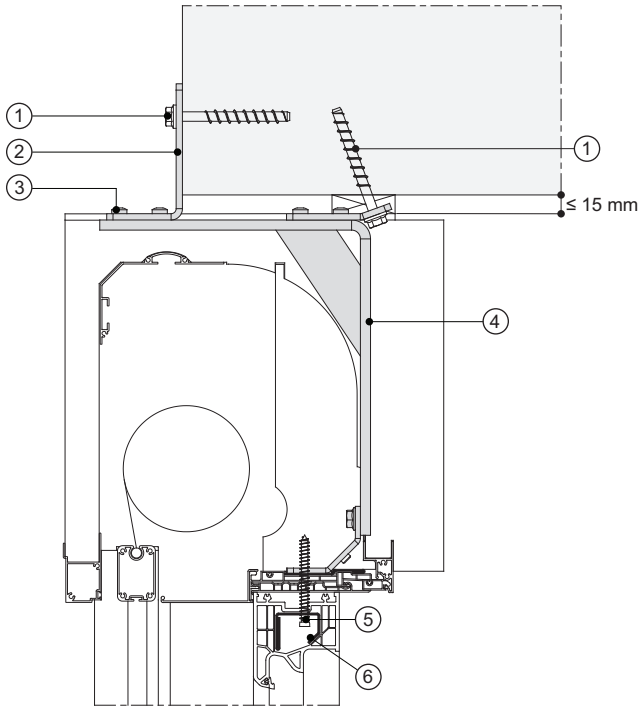
mounting material
The suitable mounting material must be checked on-site and has to be adapted to the structural conditions.



Legend

① Mounting material (not included in the delivery)
② Spacer blocks pressure-resistant (not included in the delivery)
③ Fastening lugs
④ Statics bracket
⑤ Mounting material, connection of the window frame to the box (not included in the delivery)
⑥ Window frame reinforcement





Mounting with mounting bracket and fastening lug

The connection of the window frame stabilization with the wall lintel or the reinforced concrete ceiling is provided via mounting brackets from the outside. Principally the mounting bracket is screwed to the statics brackets and the brickwork after the installation of the windows.

Connection to the window frame

To enable an optimum distribution of forces, the window frame must be screwed to the statics bracket using the appropriate mounting material.

mounting material

The suitable mounting material must be checked on-site and has to be adapted to the structural conditions.

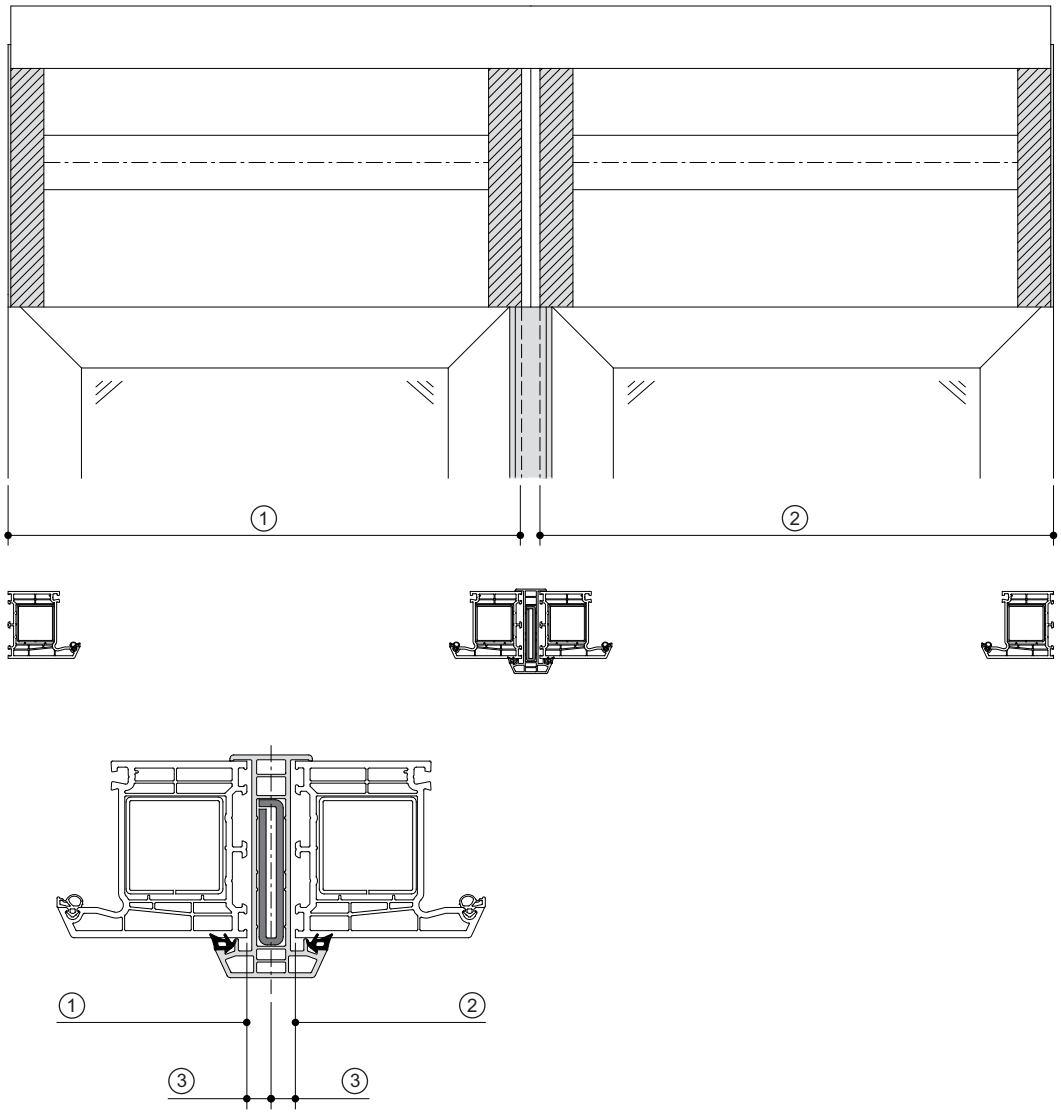
Legend

① Mounting material (not included in the delivery)
② Assembly bracket 108x60 mm (both lugs can be used for installation)
③ Self-tapping pan-head screw 6x16
④ Statics bracket
⑤ Mounting material, connection of the window frame to the box (not included in the delivery)
⑥ Window frame reinforcement

TOP FOAM screen protect

Recess for post

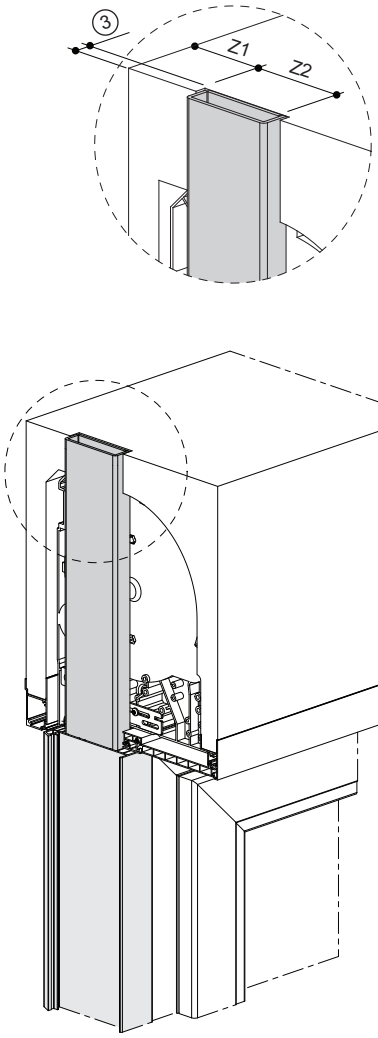
Often supporting or reinforcing posts between both window elements are used with statics window linkages. In this case a recess area can be provided at the box.



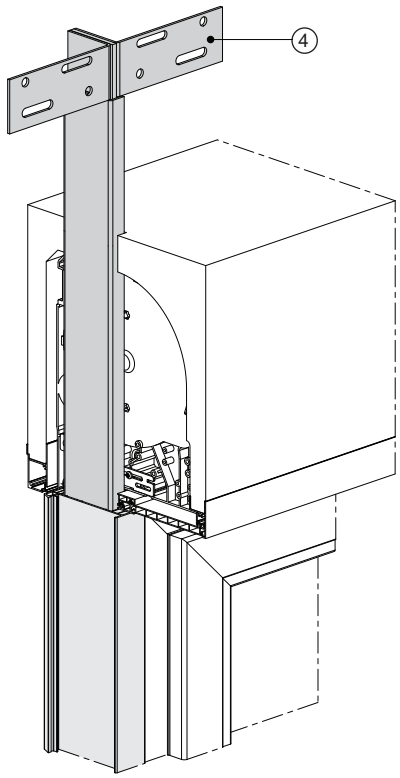
View: Detail with statics linkage element and steel insert

Legend

①	Order dimension Element width 1
②	Order dimension Element width 2
③	Excess length of the box



View: Detail recess area at the box



View: Detail with box connection to the brickwork

Legend

③	Excess length of the box
④	Example of a statics linkage element of the window
Z1	Offset dimension from the outer edge of the box Z2 ...
Z2	Depth of the recess area

TOP FOAM screen protect

Mounting material

Guide rails
The installation of the guide rails to the mounting base is provided via screw connection from the front. The mounting holes are closed with color-coordinated covering caps (ø10).

Guide rail installation, screwed

Guide rail types 92, 93

Mounting base	Mounting material	Dimensions
Wood	Pan head screw Assy AW20	4.5x35
Plastic	Pan-headed drilling screw DIN7504N AW20	4.2x38
Metal	Pan-headed drilling screw DIN7504N AW20	4.2x22
Aluminium shell	Pan-headed drilling screw DIN7504N AW20	4.8x50
all	Pan-headed drilling screw DIN7504N AW20	3.9x9.5
all	Covering cap	ø10.

Installation of the guide rail, screwed from the front

Mounting base	Mounting material	Dimensions
Wood	Pan head screw ASSY AW20	5.0x90
Metal	Countersunk screw with drillbit ASSY plus AW20	4.5x80
Plastic	Countersunk screw with drillbit ASSY plus AW20	5.0x90
all	Pan-headed drilling screw DIN7504N AW20	3.9x9.5

Box fixing
The installation of the box is provided via form-locked connecting clips. In addition the box is screwed laterally to the window frame via the fastening handle.

Fasteninghandle onto window frame

Mounting base	Mounting material	Art. no.
Wood	Pan head screw ASSY 4.0x35 AW20	80060057
Metal/plastic	Self drilling head screw DIN7504N 3.9x25 AW20	80030163

Fastening handle onto the box

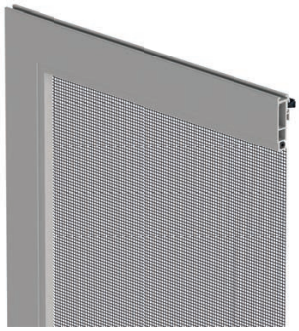
Mounting base	Mounting material	Art. no.
all	Self drilling head screw DIN7504N 3.9x13 AW20	80030033

Note:
The above-mentioned mounting material is an exemplary recommendation of the company HELLA, as long as no other special requirements, such as ETA certificates, are claimed. Generally already during the planning stage, but before the installation at the latest, it must be checked, if the defined mounting material is suitable of the installation.

INSECT SCREENS

Clamping frame

With the spring-loaded suspension bracket made of 8x1 mm thick stainless steel, the vast majority of mounting situations are covered.



Large selection of different insect screens.

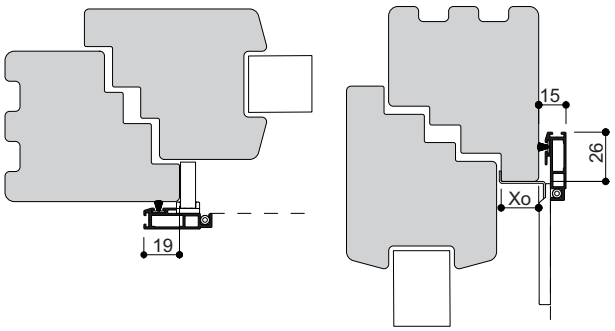
Limit sizes

Insect screen cover	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. side length without sash-bars [mm]
Standard	300	2300*	300	2300	1500
VistaScreen	300	2300*	300	2300	1500
Aluminium	300	2000*	300	2000	1300
Petable	300	2000*	300	2000	1300
Pollen screen	300	2000*	300	2000	1000

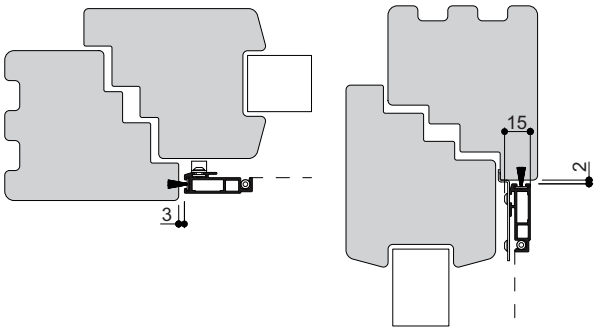
* With element widths exceeding 1500 mm the lateral handles often can not be reached by a person. Therefore two persons are required for hinging and unhinging. Maximum surface see price list.

Cross-section profile

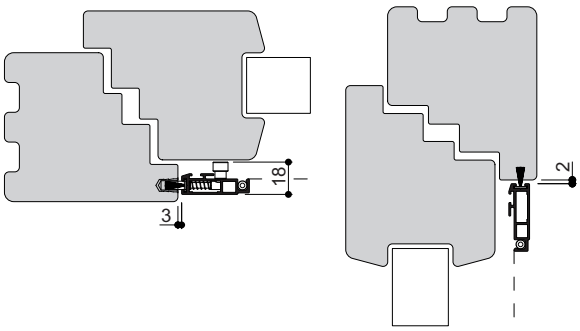
ISR A



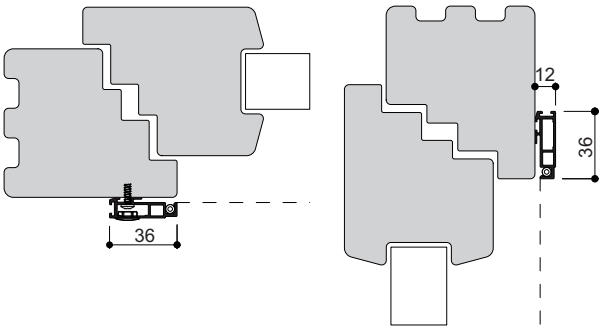
ISR B



ISR C



ISR D



Legend

X_O	Thickness of the window frame rabbet at the top

Scope of delivery

- Frame with rolled-in, plastic-sheathed fibreglass fabric
- Central sash bar for side lengths exceeding 1501 mm
- Brush sealings
- Operating and fastening elements
- Aluminium parts as per color definition "HELLA Color worlds"
- Mounting material

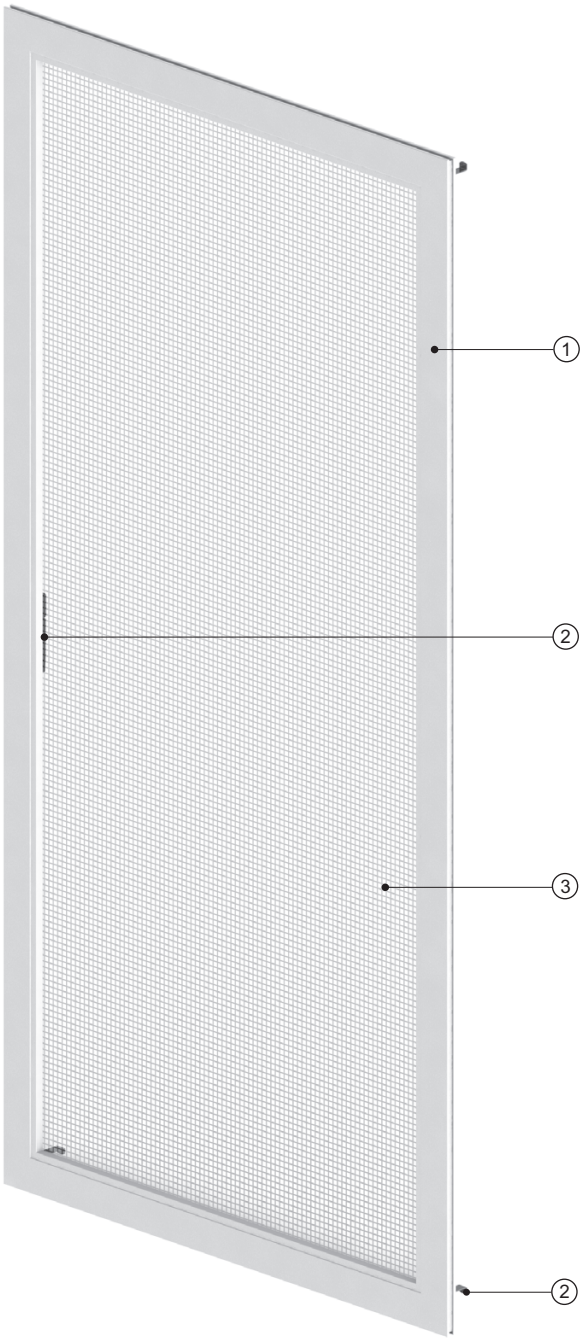
Supplementary equipment

- Additional sash bars
- Aluminium fabric
- Pollen screen fabric
- Insect screen mesh VistaScreen
- Pet fabric Petable

Benefits of the product

- Insect screens
- Comfort
- Health
- High-quality construction elements guarantee a long lifespan and convenient operation

Clamping frame



Field of application

All window types, can be integrated in front-mounted roller shutters or outdoor blinds.

Application

Insect screen frame optionally unhingeable for seasonal use or fixed for all-the-year use.

Benefits of the product

- Insect screens
- Pollen screen (optional)

Installation

Four types of installation can be selected:

- Suspension bracket spring-mounted
- Suspension bracket outside
- Spring pins
- Installation with screws

Legend

① Frame profile
② Operating and fastening elements (depending on the type of installation)
③ Insect screen cover

Technical product description

Frame

Material	Extruded aluminium
Dimension	36x11 mm
Color	Black

Description

- Corner detail with mitre cut and discreetly hidden corner joint made of aluminium (glued in place and press-fitted). Sealing brushes depending on the type of installation at the rear side or at the front, black colored

Insect screen cover

- Insect screen fabric made of fibreglass, plastic-sheathed, grey-colored
- Insect screen fabric made of aluminium, blank
- Pollen screen fabric made of polyester, black colored; prevents more than 90% of pollen of any kind from entering
- Insect screen fabric VistaScreen made of fibreglass, plastic-coated, black colored, improved light and air permeability compared with the standard fibreglass fabric
- Insect screen fabric Petable made of strengthened fibreglass, black colored, withstands pet claws.

Brushes (black)

ISR A

- optionally per side 6, 11 (Standard), 15 or 25 mm facing towards the inside; in addition optionally per side 6, 11, 15 or 25 mm on the face side facing towards the outside

ISR B/C

- optionally all around 11 (Standard), 15 or 25 mm

ISR D

- Standard without brush, optionally per side 6, 11, 15 or 25 mm facing towards the inside and/or on the face side facing towards the outside

Sash bar

Material	Extruded aluminium
Dimension	33x10 mm

Description

- Screwed to frame profile, use depends on insect screen fabric and frame dimensions

Hinged handle

Material	High-quality plastic
Color	Black

Installation

- Suspension bracket spring-mounted made of 8x1 mm thick stainless steel, brush sealing at the rear side
- Suspension bracket outside made of 8x1 mm thick stainless steel, brush sealing at the front side
- Spring pins shiny nickel-plated with operation from the inside, brush sealing at the front side
- Vertical frame profile can be screwed to the window frame from the outside (not hingeable)

Colors

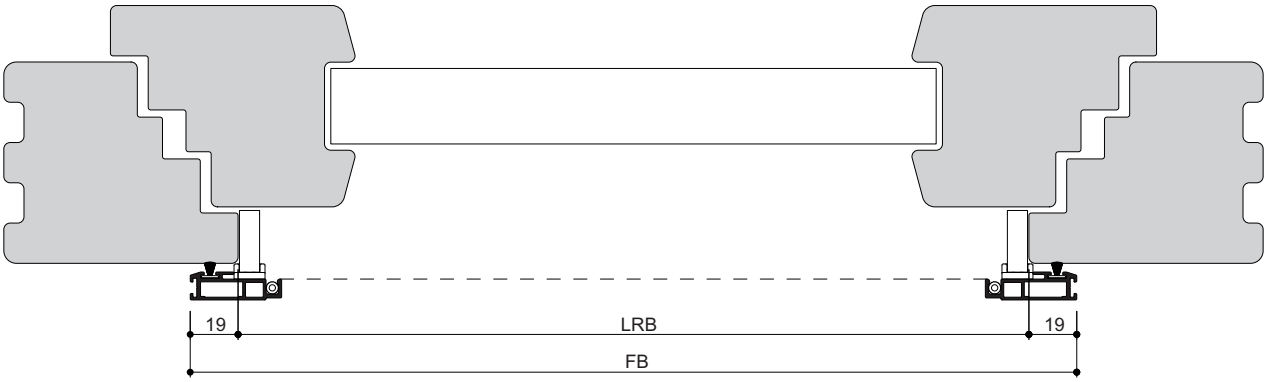
see Chapter Standard colors

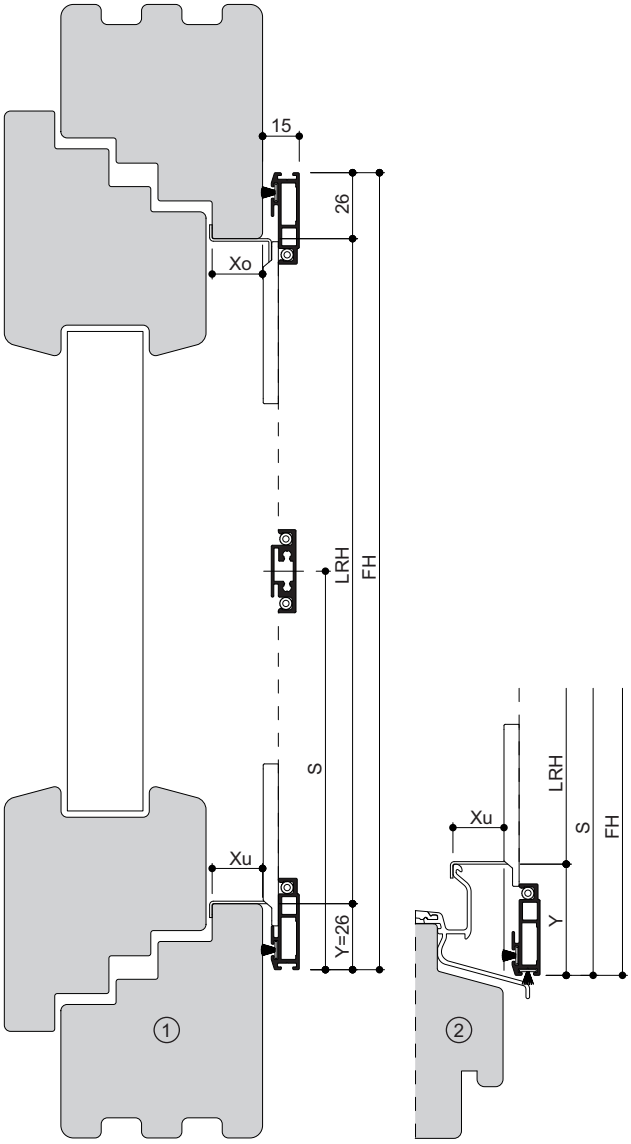
Special designs

on request

Clamping frame

Type: ISR A - suspension bracket spring-mounted





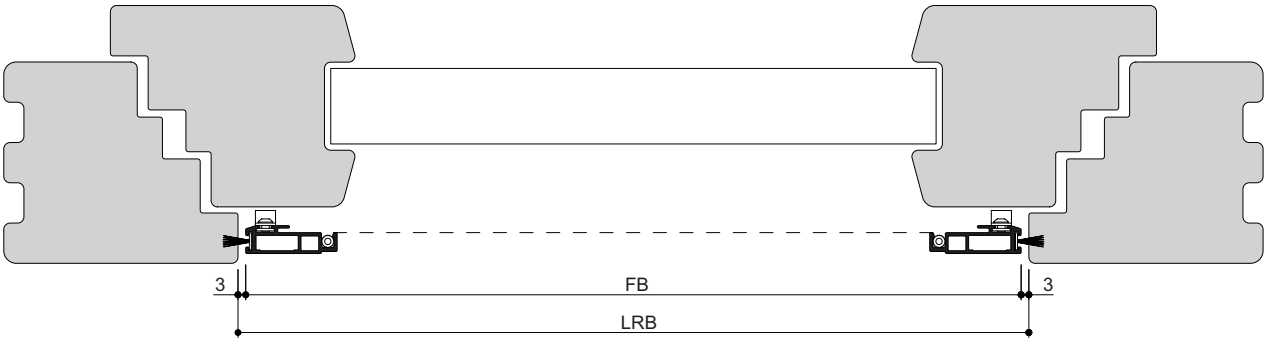
Notes:

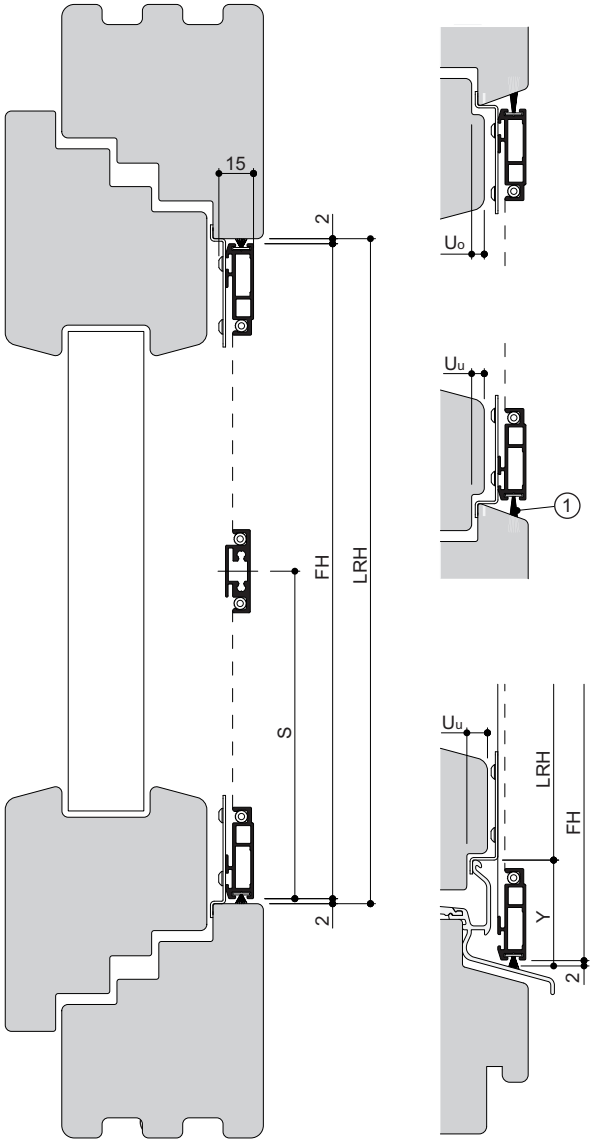
- Works with all types of windows
- Space required 15 mm in front of the window
- 10 mm space required above the frame for unhinging
- Sealing brushes inserted at the front side enlarge the final dimensions on the outside and must therefore be taken into account when specifying the dimensions:
  - 10 mm gap with 15 mm sealing brush
  - 20 mm gap with 25 mm sealing brush
- Via the final dimensions in your order, the lateral support surface of 19 mm can be reduced down to 12 mm, if required. If a brush on the face side is used for lateral sealing, the lateral support surface at the window can be reduced down to 0 m.

Legend

①	Window without weatherboard
②	Window with weatherboard and special brush 6 mm at the bottom on the face side
FB	Complete width (FB = LRB + 38)
FH	Complete height (FH = LRH + Y + 26)
LRB	Clear frame width of the window
LRH	Clear frame height of the window
S	Sash bar position
X_O	Thickness of the window frame rabbet at the top
X_U	Thickness of the window frame rabbet at the bottom
Y	Position of the suspension bracket at the bottom (standard 26 mm)

Type: ISR B - suspension bracket outside





Notes:

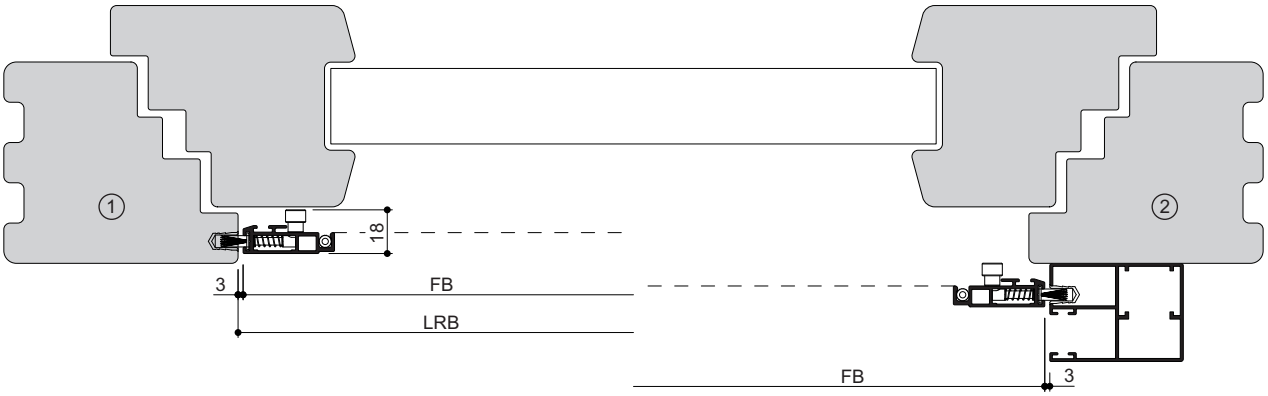
- Works with recessed and half recessed windows
- Space required 15 mm inside the window frame
- Window frame undrilled

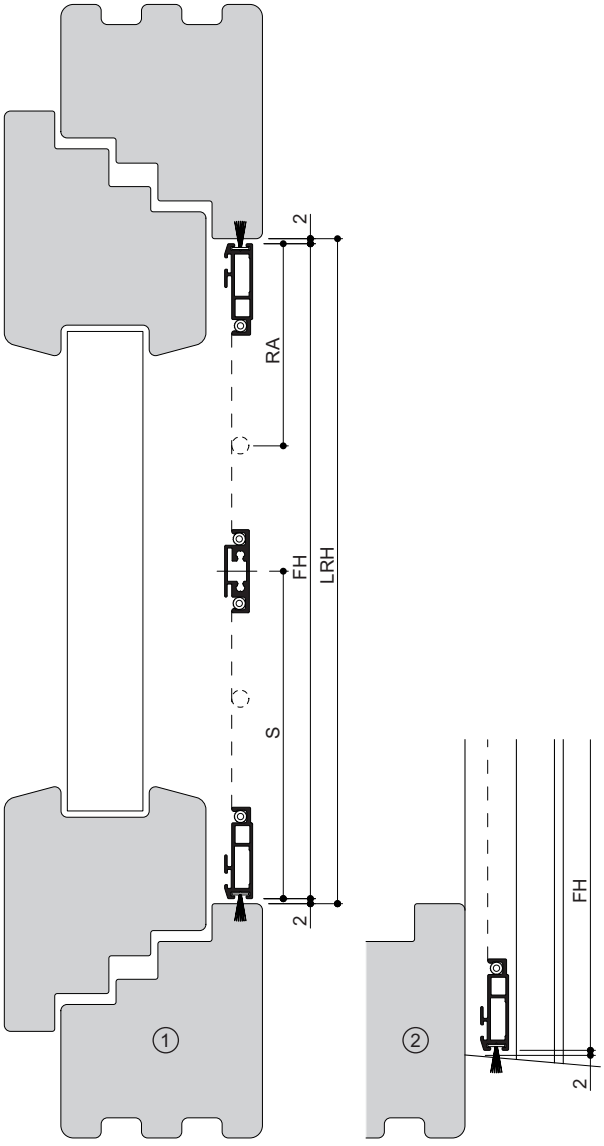
Legend

①	Special brush (15 or 25 mm) all around for windows with a large window frame slant as well as with a large protruding window wing
FB	Complete width (FB = LRB - 6)
FH	Complete height (FH = LRH - 4 + Y)
LRB	Clear frame width of the window
LRH	Clear frame height of the window
S	Sash bar position
Y	Position of the suspension bracket at the bottom (standard 0 mm)
Uo/Uu	Excess length of the window wing at the top/bottom ▪ 0-3 mm: Suspension bracket 5 mm ▪ 4-5 mm: Suspension bracket 7 mm ▪ 6-7 mm: Suspension bracket 9 mm ▪ 8-9 mm: Suspension bracket 11 mm ▪ 10-11 mm: Suspension bracket 13 mm ▪ 12-13 mm: Suspension bracket 15 mm

Clamping frame

Type: ISR C - spring pins





Notes:

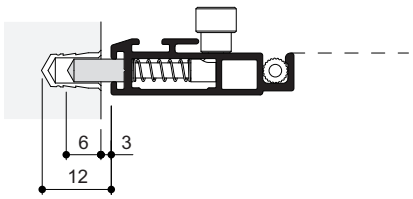
- Works with all types of windows
- Space required 18 mm inside the window frame with recessed windows or in front of the window with windows that are flush with the adjacent areas (installation in the guide rail)

Legend

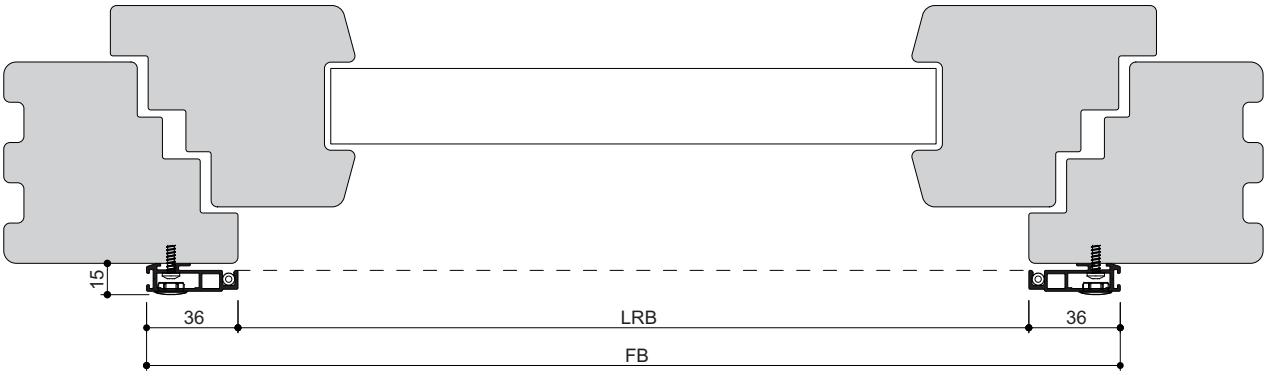
①	Installation inside the window frame rabbet
②	Installation in the guide rail
FB	Complete width (FB = LRB - 6)
FH	Complete height (FH = LRH- 4)
LRB	Clear frame width of the window
LRH	Clear frame height of the window
S	Sash bar position
RA	Distance from the edge

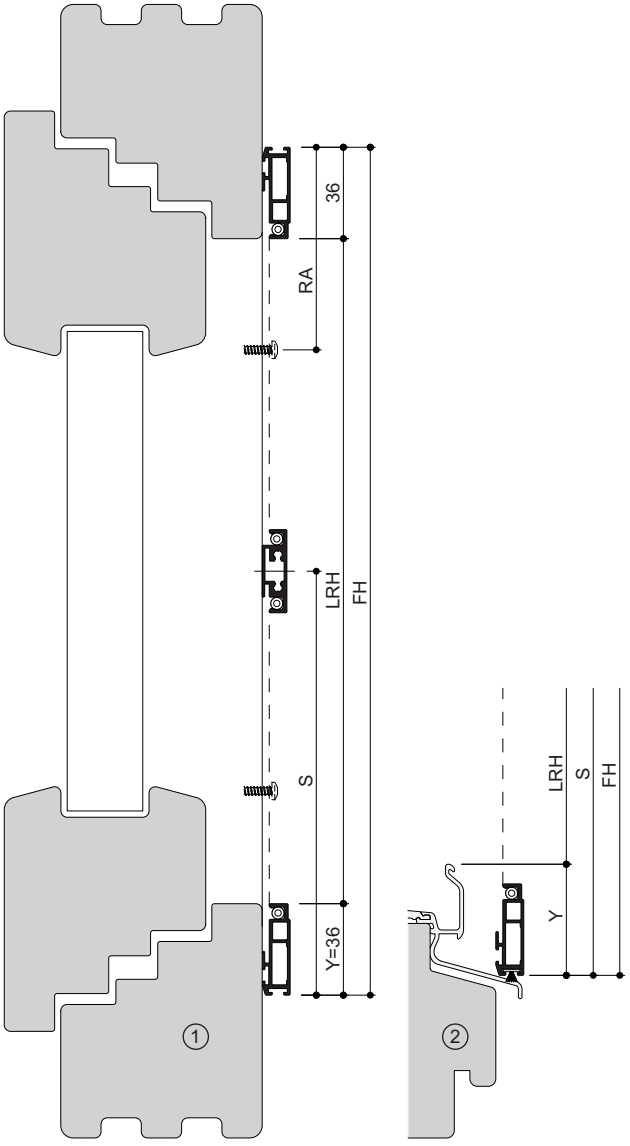
- 90 mm till frame height 599 mm
- 125 mm from frame height 600 mm

Detail spring pin



Type: ISR D - installation with screws





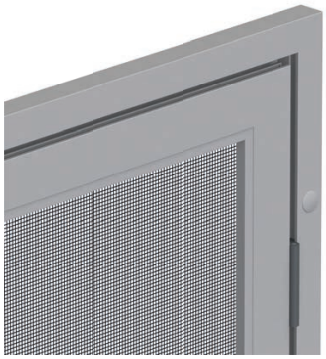
Notes:

- Works with all types of windows
- Space required 15 mm in front of the window
- Frame must be accessible from the outside
- As a standard without sealing brushes
- Sealing brushes inserted at the front side enlarge the final dimensions on the outside and must therefore be taken into account when specifying the dimensions:
  - 10 mm gap with 15 mm sealing brush
  - 20 mm gap with 25 mm sealing brush

Legend

①	Window without weatherboard
②	Window with weatherboard and special brush 6 mm at the bottom on the face side
FB	Complete width (FB = LRB + 72)
FH	Complete height (FH = LRH + Y + 36)
LRB	Clear frame width of the window
LRH	Clear frame height of the window
S	Sash bar position
Y	Protrusion of the frame at the bottom
RA	Distance from the edge ▪ 90 mm till frame height 599 mm ▪ 125 mm from frame height 600 mm

Swing frame



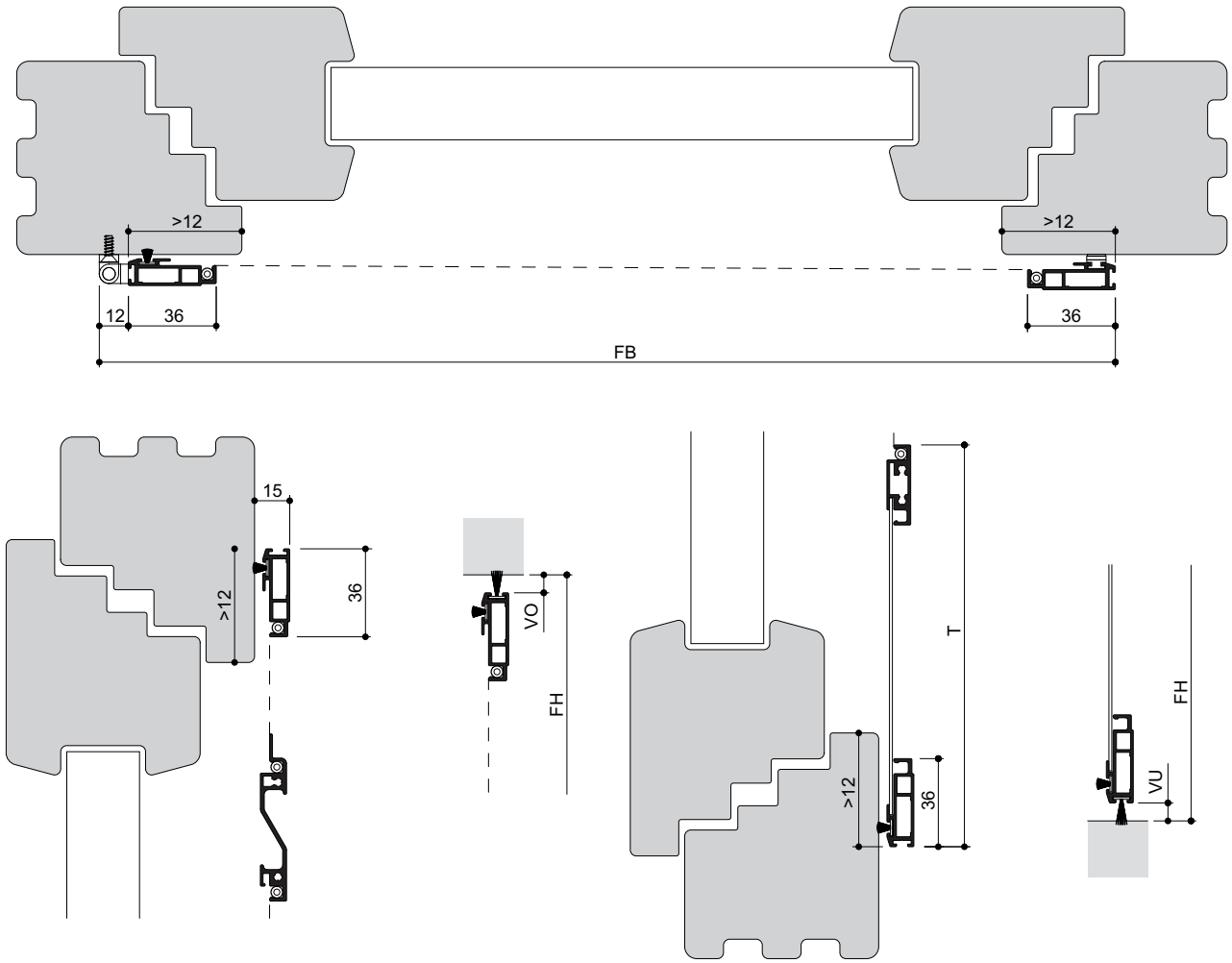
Mounting option with additional frame profile.

Optionally with step plate or integrated cat flap.

Limit sizes

Type	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. surface [m²]
ISD E	300	1500	500	2500	3
ISD Z - single-winged	500	1500	500	2500	3
ISD Z - double-winged	1000	3000	500	2500	6

Cross-section profile



Legend

FH	Complete height
FB	Complete width
T	Tread plate (optional) 156 mm, 301 mm with cat flap

Scope of delivery

- Frame with handle bar rolled-in and plastic-sheathed fibreglass fabric
- Brush sealings
- Hinges and magnetic profile
- Frame for design IDS Z
- Aluminium parts as per color definition "HELLA Color worlds"
- Mounting material

Supplementary equipment

- Loose spring lock/cable clamp
- Tread plate per unit
- Tread plate with 4-way cat flap
- Stainless steel tape instead of self-bonding magnetic profile
- Operating handle loosely enclosed
- Additional sash bars
- Aluminium fabric
- Pollen screen fabric
- Insect screen fabric VistaScreen
- Pet fabric Petable

Benefits of the product

- Insect screens
- Comfort
- Health
- High-quality construction elements guarantee a long lifespan and convenient operation

Swing frame

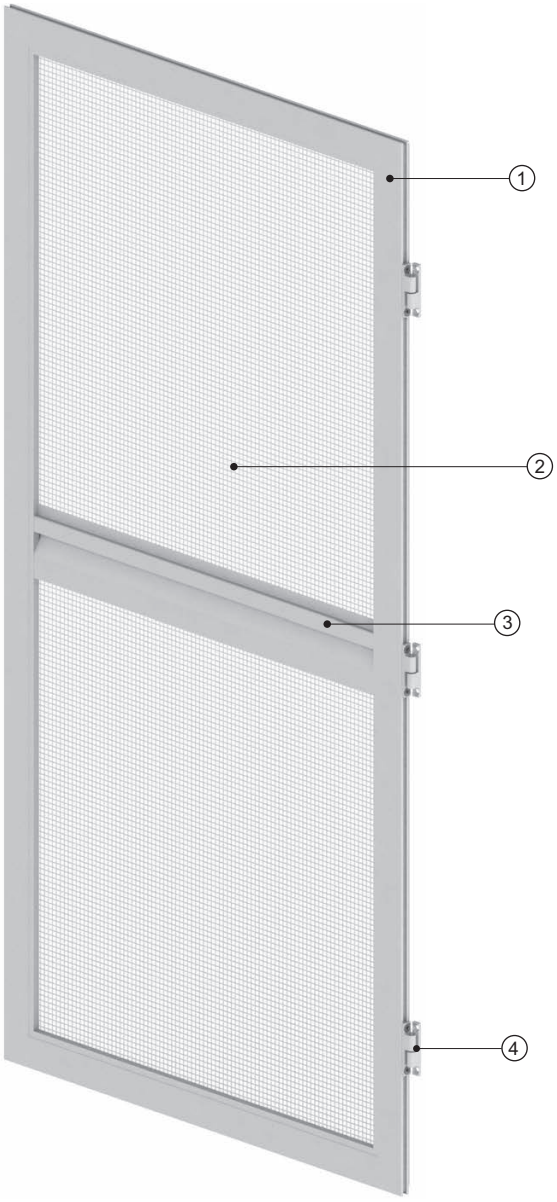
Application

Rotating insect screen frame for seasonal use

Benefits of the product

- Insect screens
- Pollen screen (optional)

ISD E



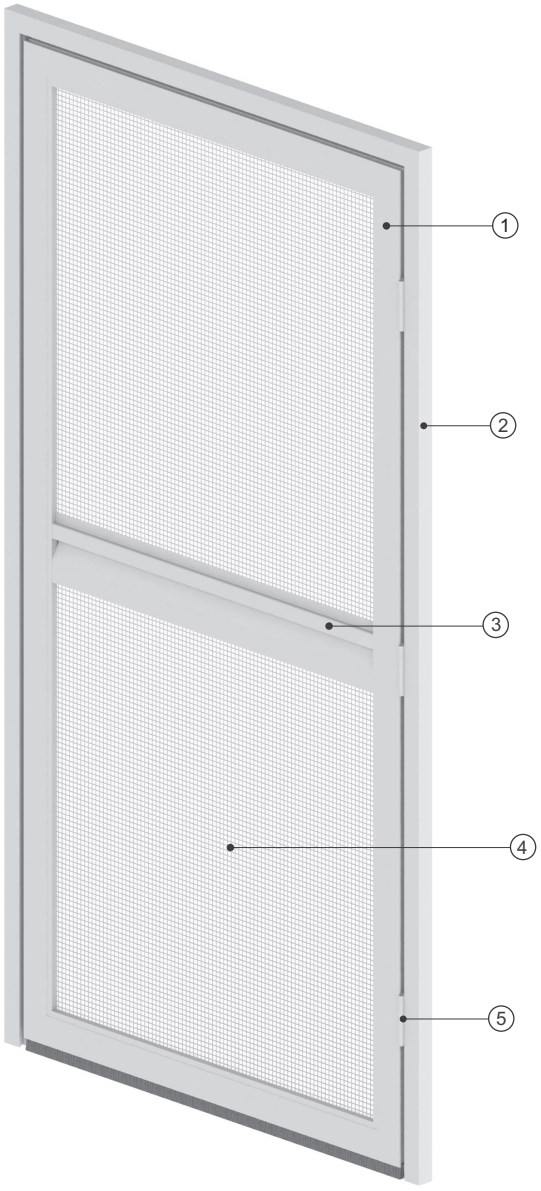
Field of application

All balcony and terrace doors without protruding fittings and handles

Legend

① Frame profile
② Insect screen fabric
③ Sash-bar profile with gripping groove on both sides
④ Hinge

ISD Z



Field of application

All balcony and terrace doors, can be integrated in front-mounted roller shutters or outdoor blinds

Legend

① Frame profile
② Frame profile
③ Sash-bar profile with gripping groove on both sides
④ Insect screen fabric
⑤ Hinge

Technical product description

Frame

Material	Extruded aluminium
Dimension	36x11 mm

Description

- With all-round brush sealing, corner detail with mitre cut and discreetly hidden corner joint made of aluminium (glued in place and press-fitted).

Frame

ISD Z

Material	Extruded aluminium
Dimension	39x18 mm

Description

- Corner detail with mitre cut and discreetly hidden corner joint made of aluminium (press-fitted).

Insect screen cover

- Insect screen fabric made of fibreglass, plastic-sheathed, grey-colored
- Insect screen fabric made of aluminium, blank
- Pollen screen fabric made of polyester, black colored; prevents more than 90% of pollen of any kind from entering
- Insect screen fabric VistaScreen made of fibreglass, plastic-coated, black colored, improved light and air permeability compared with the standard fibreglass fabric
- Insect screen fabric Petable made of strengthened fibreglass, black colored, withstands pet claws.

Sash bar

Material	Extruded aluminium
Dimension	69x11 mm

Description

- Screwed to frame profile, with grooves from both sides

Brushes (black)

ISD E

- optionally per side 6 (Standard), 11, 15 or 25 mm facing towards the inside; in addition optionally 15 or 25 mm on the face side facing towards the top and/or bottom

ISD Z single-winged

- 6 mm brush facing towards the inside between door frame and the frame of the door; if designed without door frame at the bottom, optionally without, 15 (Standard) or 25 mm brush on the face side facing towards the bottom and optionally without (Standard), 11, 15 or 25 mm brush facing towards the inside

ISD Z double-winged

- 6 mm brush facing towards the inside between frame of the door and door frame

Hinge

Material	Aluminium with stainless steel bolt pressed in on one side
Color	White, black or anodised

Description ISD Z

- Inserted an clamped in brush groove on frame and sash side

Tread plate (optional)

Material	Aluminium 1,2 mm

Description

- Powder-coated from both sides
- Optionally available in special height or with 4-way cat flap

Operating handle (optional)

Material	Plastic
Color	Black

Description

- Powder-coated from both sides
- Optionally available in special height or with 4-way cat flap

Spring lock (optional)

Material	Base plate made of aluminium
Color	White, black or anodised

Description

- Torsion spring made of stainless steel
- On the hinge-side at the top with right-hand door, on the hinge-side at the bottom with left-hand door

Installation

ISD E

- By means of three hinges and self-bonding magnetic tape at the window frame; optional: stainless steel tape screwed
- Can be unhinged without tools after the first installation

ISD Z

- Screwing of the frame to the door/window frame or laterally in the soffit
- Can be unhinged without tools after the first installation

Colors

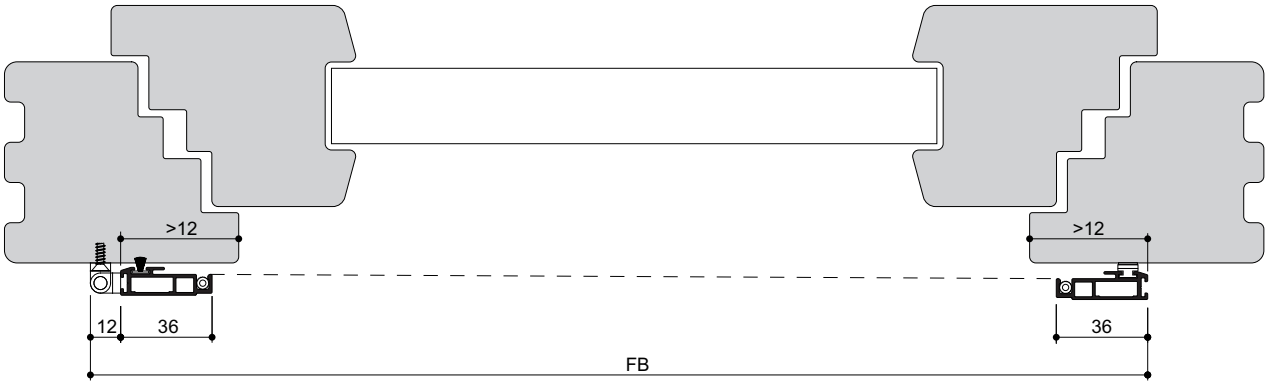
see Chapter Standard colors

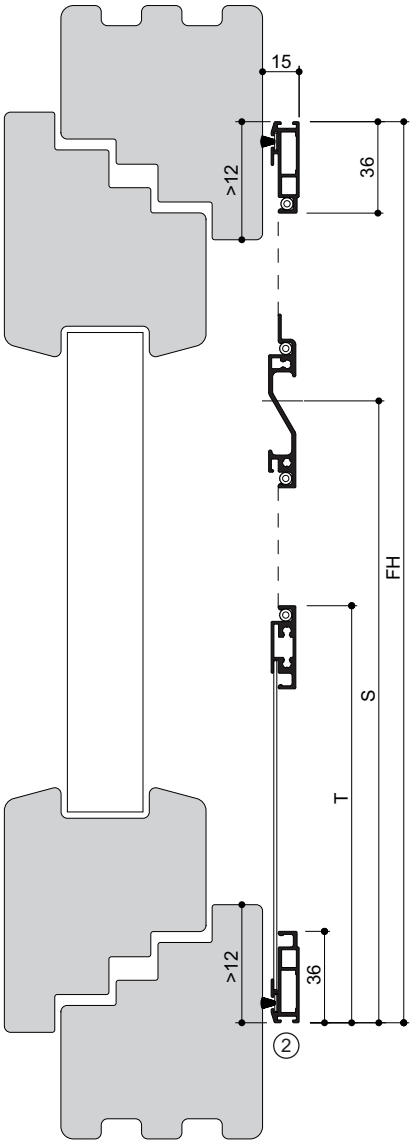
Special designs

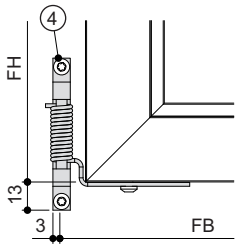
on request

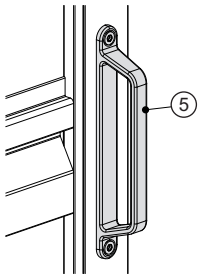
Swing frame

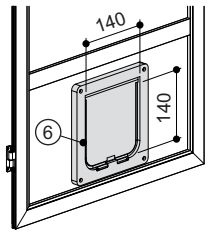
Type: ISD E

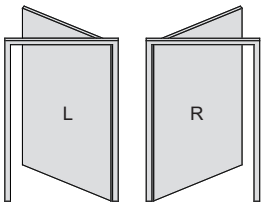












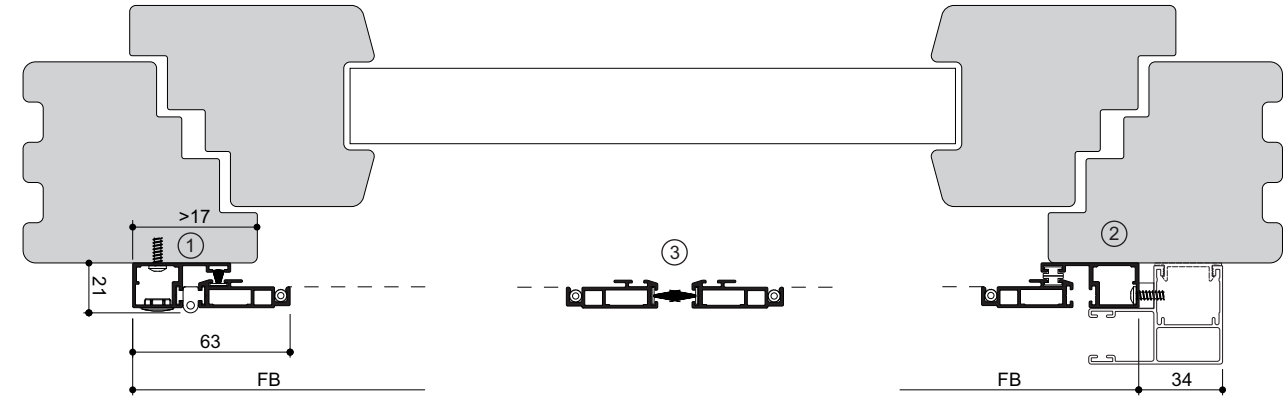
Notes:

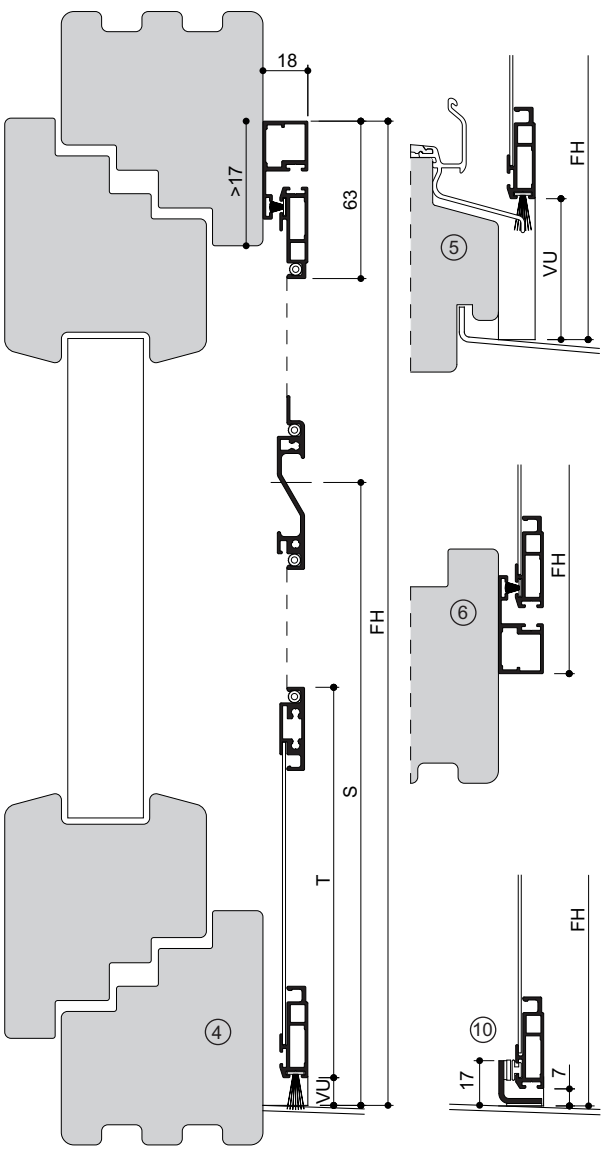
- For doors without protruding fittings and handles
- Space required 15 mm in front of the window
- 15 mm space required above for unhinging

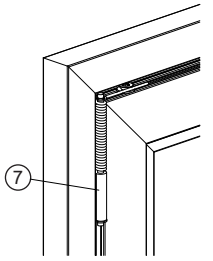
Legend

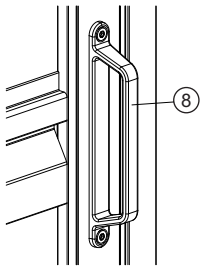
①	Self-bonding magnetic tape (standard) or screwed stainless steel tape (optional)
②	Sealing towards the inside (standard)
③	Special brush at the bottom side or at the face side
④	Spring lock (optional) additionally enlarges the width by 3 mm and the height by 13 mm
⑤	Operating handle (optional) enlarges by 25 mm
⑥	4-way cat flap (opened, closed, get in only, get out only enlarges by 8 mm
FB	Complete width (incl. hinge)
FH	Complete height
VO	Shortening at the top (10 mm with 15 mm brush or 20 mm with 25 mm brush)
VU	Shortening at the bottom (10 mm with 15 mm brush or 20 mm with 25 mm brush)
S	Sash-bar position (standard centred up to a complete height of 1800 mm and 1050 mm from a complete height of 1801 mm)
T	Tread plate (optional) 156 mm, 301 mm with cat flap
L	Left-hand door
R	Right-hand door

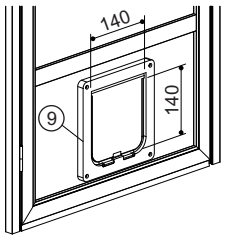
Type: ISD Z

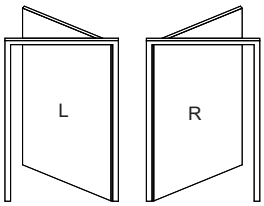










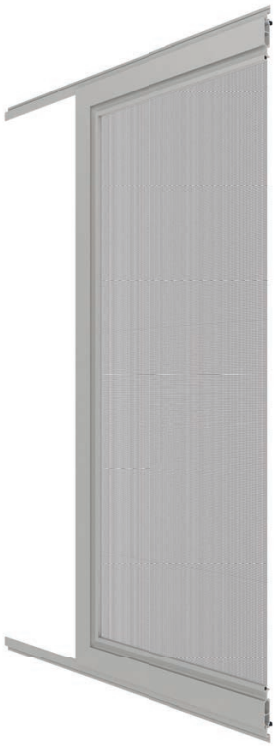


Note:
Space required 21 mm in front of the window

Legend

①	Installation from the front (standard)
②	Installation laterally (optional)
③	Double-winged design (optional)
④	Sealing at the bottom on the face side (standard)
⑤	Shortening at the bottom with weatherboard
⑥	Frame at the bottom (optional)
⑦	Spring lock (optional)
⑧	Operating handle (optional) enlarges by 25 mm
⑨	4-way cat flap (opened, closed, get in only, get out only enlarges by 8 mm
⑩	Stop bracket (standard with double-winged design)
FB	Complete width
FH	Complete height
S	Sash-bar position (standard centred up to a complete height of 1800 mm and 1050 mm from a complete height of 1801 mm)
T	Tread plate (optional) 156 mm, 301 mm with cat flap
L	Left-hand door
R	Right-hand door
VU	Shortening at the bottom (Standard 10 mm with 15 mm brush; 20 mm with 25 mm brush)

Slide frame



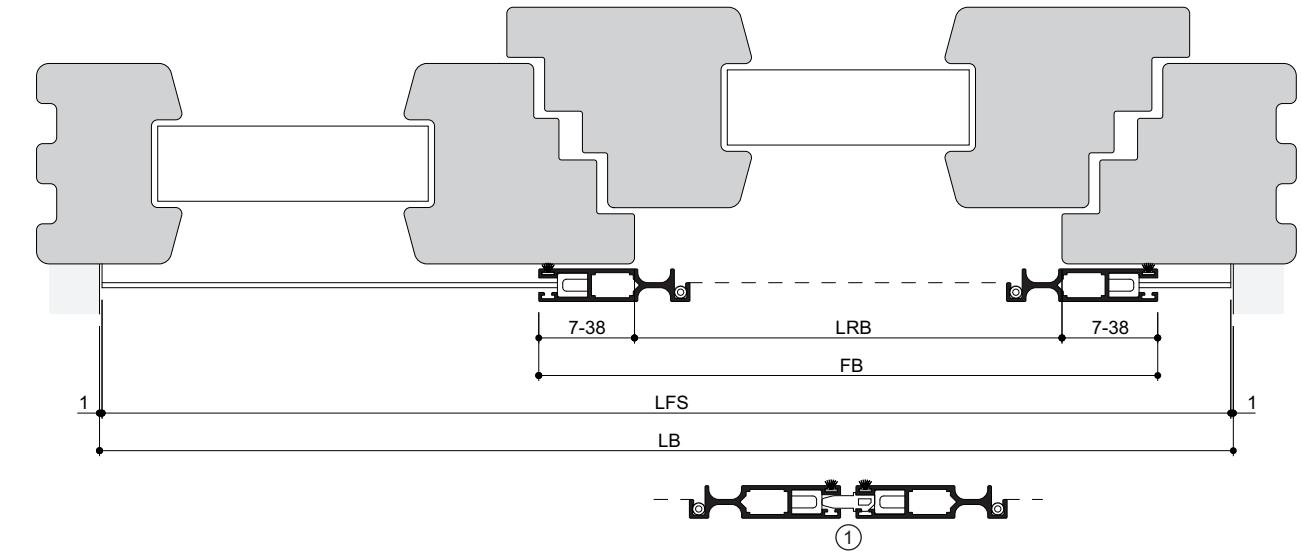
Mounting option with additional frame profile.

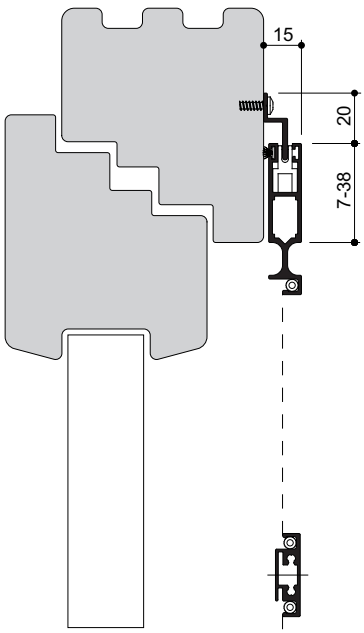
Smooth-running sliding frame due to concealed guide rollers.

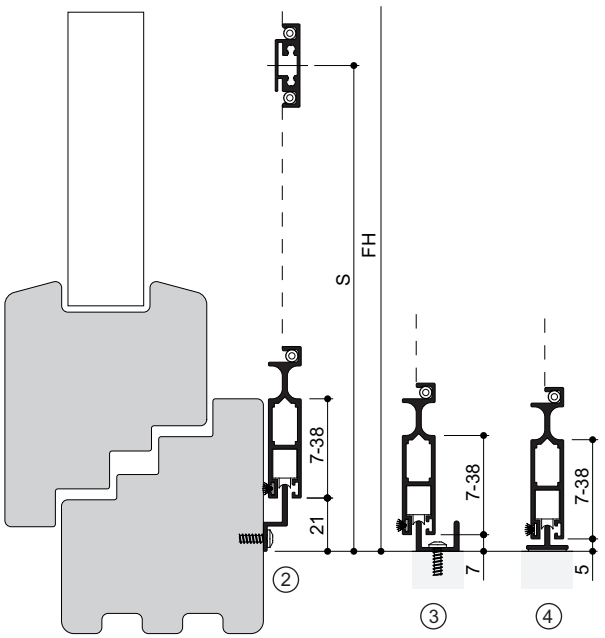
Limit sizes

Insect screen fabric	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. height without sash-bars [mm]
IST E					
Standard	600	2000	500	2500	2500
VistaScreen	600	1500	500	2500	2500
Aluminium	600	1500	500	2500	1500
Petable	600	1500	500	2500	1500
Pollen screen	600	1500	500	2500	1500
IST Z					
Standard	1200	4000	500	2500	2500
VistaScreen	1200	3000	500	2500	2500
Aluminium	1200	3000	500	2500	1500
Petable	1200	3000	500	2500	1500
Pollen screen	1200	3000	500	2500	1500

Cross-section profile







Legend

FH	Complete height
FB	Complete height
S	Sash bar position

①	Double-winged design (optional) with sealing profile in the middle
②	Z-shaped profile at the bottom for installation from the front
③	U-profile bottom for mounting downwards (Sloping mounting surface up to 10°)
④	T-shaped profile at the bottom for fastening via adhesive tape towards the bottom side

Scope of delivery

- Frame with handle bar rolled-in and plastic-sheathed fibreglass fabric
- Brush sealings
- Guide rollers and slide rails
- Frame for design IST Z
- Aluminium parts as per color definition "HELLA Color worlds"
- Mounting material

Supplementary equipment

- Additional sash bars
- Aluminium fabric
- Pollen screen fabric
- Insect screen mesh VistaScreen
- Pet fabric Petable

Benefits of the product

- Insect screens
- Comfort
- Health
- High-quality construction elements guarantee a long lifespan and convenient operation

Slide frame

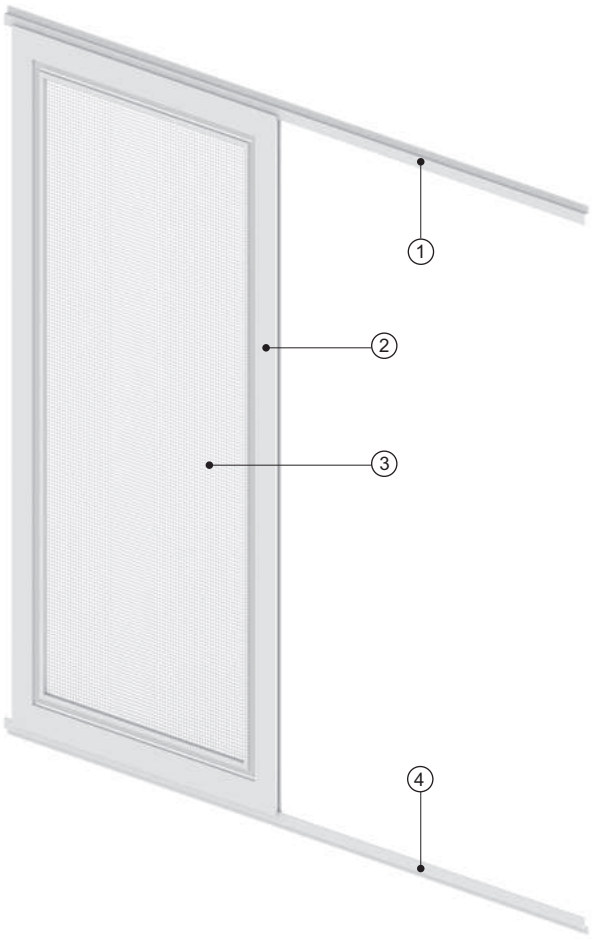
Application

Sliding insect screen frame for seasonal use

Benefits of the product

- Insect screens
- Pollen screen (optional)

IST E



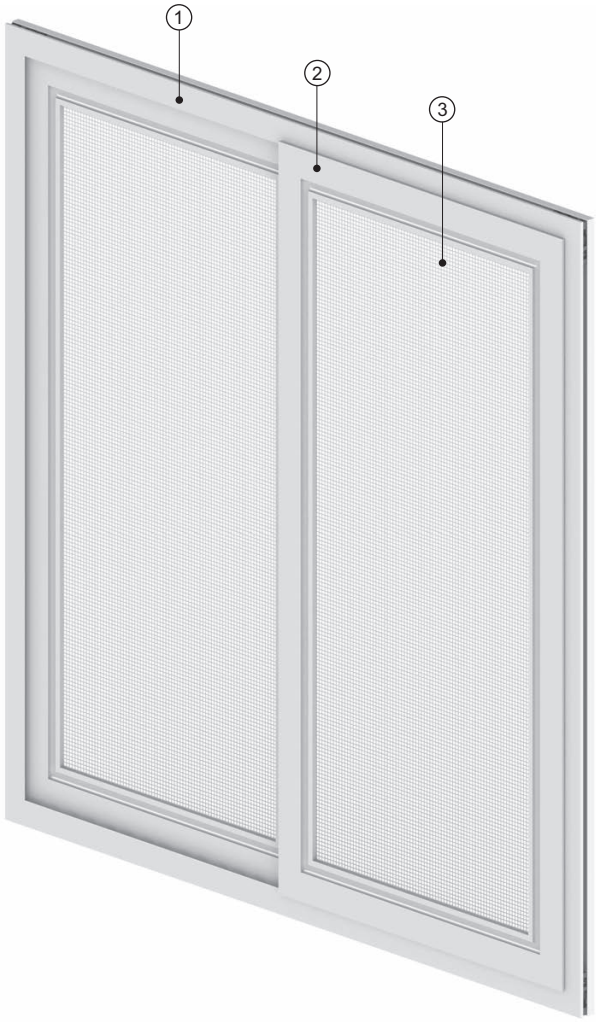
Field of application

Multi-winged balcony and terrace doors without protruding weatherboards, where the vertical frame profiles seal towards the door frame and middle transom, can be integrated into front-mounted roller shutters and outdoor blinds

Legend

① Slide rail at the top (Z-shaped profile)
② Frame profile with gripping groove on both sides
③ Insect screen fabric
④ Slide rail at the bottom (Z-, U- or T-shaped profile)

IST Z



Field of application

Multi-winged balcony and terrace doors; opening dimension up to the half element width at maximum; can be integrated into front-mounted roller shutters and outdoor blinds

Legend

① Frame profile
② Frame profile with gripping groove on both sides
③ Insect screen fabric

Technical product description

Frame

Material	Extruded aluminium
Dimension	60x13 mm

Description

- with all-round brush sealing, corner formation by mitre cut and hidden corner connector made of aluminium (glued and pressed in), optionally available in double-winged design

Insect screen cover

- Insect screen fabric made of fibreglass, plastic-sheathed, grey-colored
- Insect screen fabric made of aluminium, blank
- Pollen screen fabric made of polyester, black colored; prevents more than 90% of pollen of any kind from entering
- Insect screen fabric VistaScreen made of fibreglass, plastic-coated, black colored, improved light and air permeability compared with the standard fibreglass fabric
- Insect screen fabric Petable made of strengthened fibreglass, black colored, withstands pet claws.

Sash bar

Material	Extruded aluminium
Dimension	33x10 mm

Description

- ISD E: Screwed to frame profile, use depends on insect screen fabric and dimensions
- ISD Z: Screwed to frame profile; mandatory with aluminium mesh, otherwise optional

Brushes (black)

IST E

- optionally lateral 4, 6 (Standard), 9, 15 or 25 mm facing towards the inside; optionally at the top/bottom 4 (Standard), 6, 9, 15 or 25 mm facing towards the inside

IST Z

- 4 mm brush at the top and at the bottom facing towards te inside, 6 mm brush lateral facing towards the inside

Frame

IST Z

Material	Extruded aluminium
Dimension	25x35 mm

Description

- corner formation by mitre cut and hidden corner connector made of aluminium (clamped with threaded pins), U-shaped profile 17x12mm optionally as lower slide rail for installation towards the bottom

Slide rail at the top

IST E

Material	Extruded aluminium
Dimension	Z-shaped profile 27x10 mm

Description

- screwed from the front

Slide rail at the bottom

IST E

Material	Extruded aluminium

Description

- Z-shaped profile 27x10 mm screwed from the front
- U-shaped profile 17x12 mm screwed to the bottom
- T-shaped profile 17x10 mm glued to the bottom

Slide kit

- consisting of lifting protection as well as smoothly running rollers

Installation

IST E

- Screwing of the slide rails from the front to the door/window frame and to the bottom

IST Z

- Screwing of the guide rollers from the front to the door/window frame or to the top/bottom in the soffit

Colors

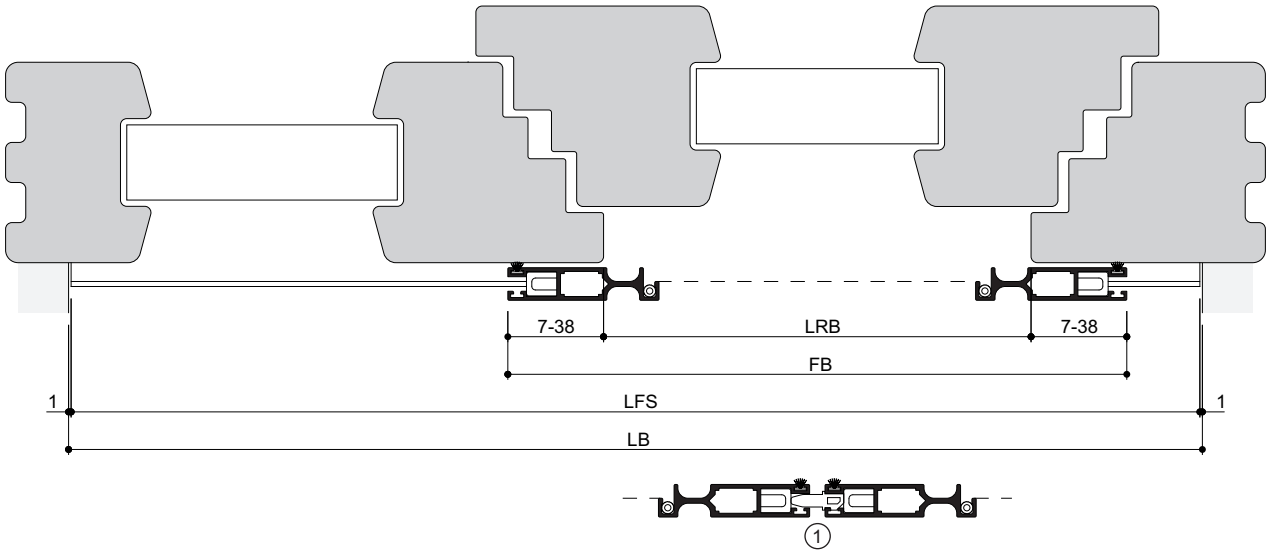
see Chapter Standard colors

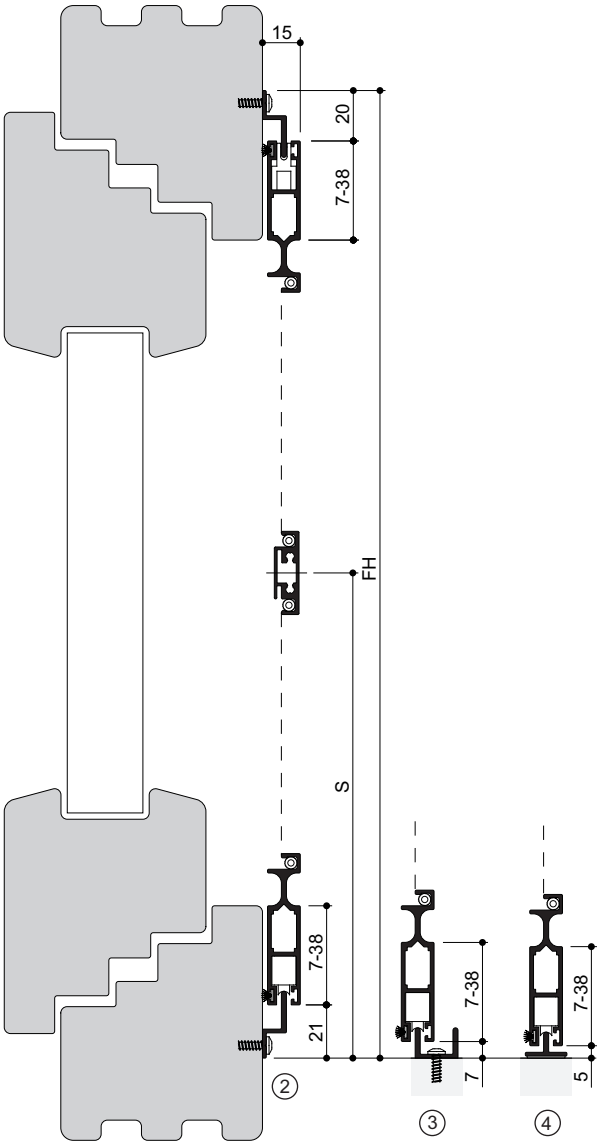
Special designs

on request

Slide frame

Type: IST E





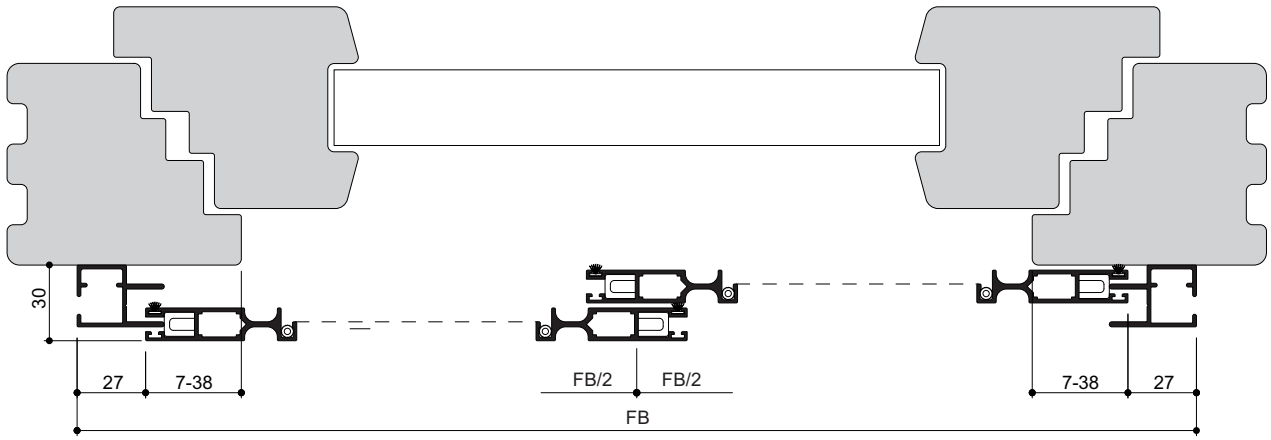
Notes:

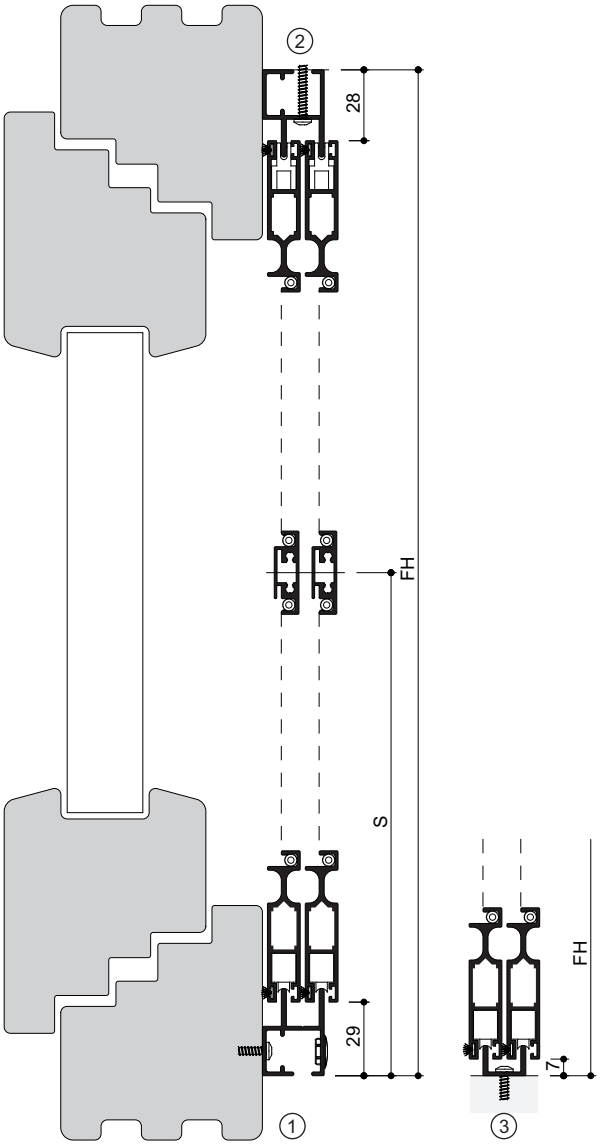
- If the size of the minimum contact surface is too small, the frame does not seal towards the window.
- If the size of the maximum contact surface is exceeded, the recessed grips to operate the frame profile are out of reach.

Legend

①	Double-winged design (optional) with sealing profile in the middle
②	Z-shaped profile at the bottom for installation from the front
③	U-shaped profile at the bottom for installation towards the bottom side (slant of the mountin base up to 10°)
④	T-shaped profile at the bottom for fastening via adhesive tape towards the bottom side
FB	Complete width
FH	Complete height (incl. slide rails)
LB	Clear width
LRB	Clear frame width of the window
S	Sash bar position
LFS	Length of the slide rails

Type: IST Z





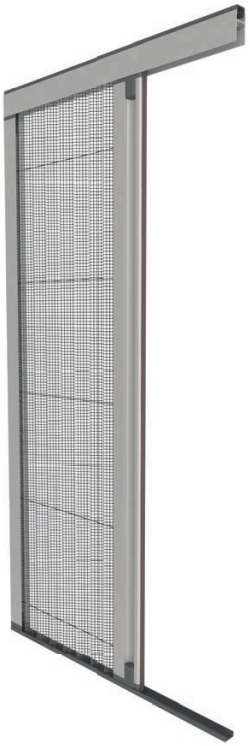
Notes:

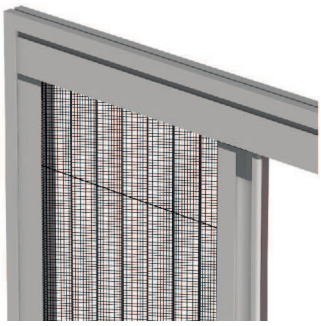
- If the size of the minimum contact surface is too small, the frame does not seal towards the window.
- If the size of the maximum lateral contact surface is exceeded, the recessed grips to operate the frame profile are out of reach.

Legend

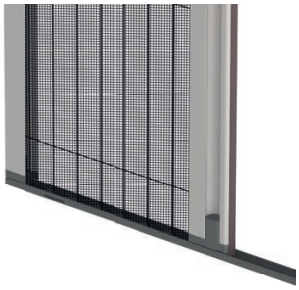
①	Screwing of the frame profile from the front (standard)
②	Screwing of the frame profile to the top/bottom in the soffit (optional)
③	U-shaped profile at the bottom for installation towards the bottom side
FB	Complete width
FH	Complete height
S	Sash bar position

Insect screen pleated blind





Alternatively with mounting frame with defined seal.



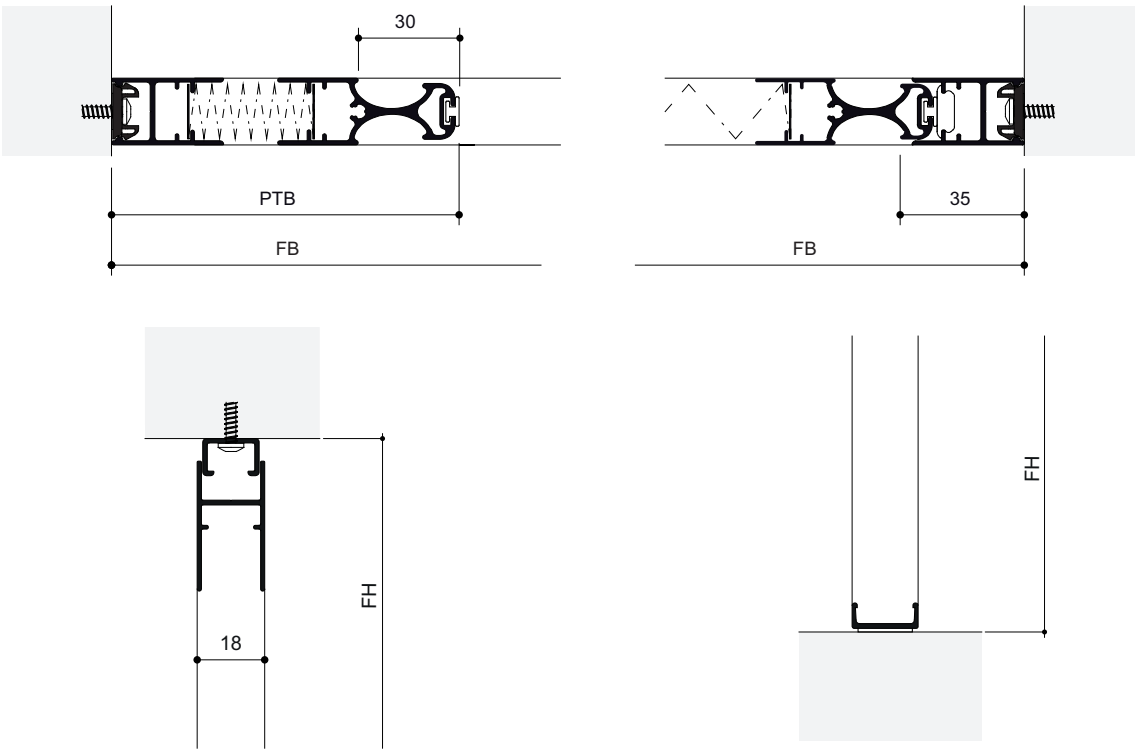
Pleated fabric enables high stability.

Limit sizes

Type	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]
ISPL18.	500	2200	850	2850

The limit sizes only apply for the pleated insect screen. If an installation frame is used, 15 mm per frame profile must be added to the limit sizes.

Cross-section profile



Legend

FB	Complete width
FH	Complete height
PTB	Stack width

Scope of delivery

- Plastic-coated, pleated fibreglass fabric
- Running rails
- Aluminium parts as per "HELLA Color worlds"
- Mounting material

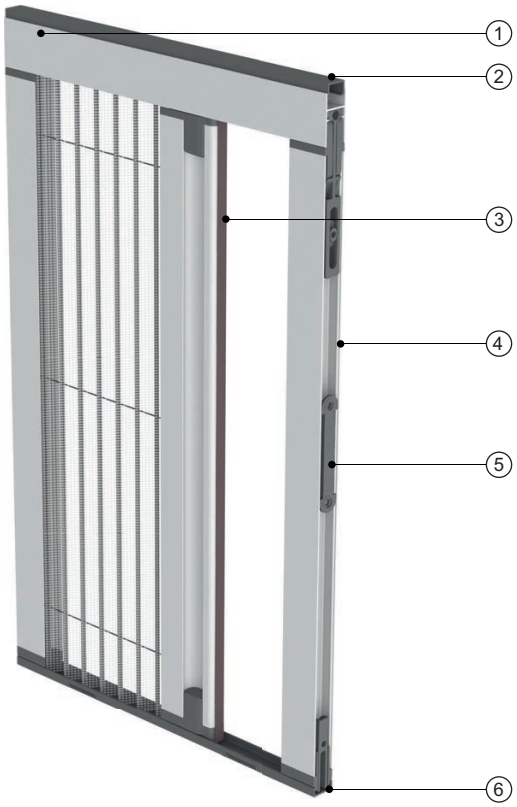
Supplementary equipment

- Installation frame screwed
- Installation frame glued
- Swivelling operating rod

Benefits of the product

- Insect screens
- Comfort
- Health
- The pleated insect screen is designed symmetrically to the operating level and can therefore been used for both opening directions.
- High-quality construction elements guarantee a long lifespan and convenient operation

Insect screen pleated blind



Field of application

All balcony and terrace doors, can be integrated in front-mounted roller shutters or outdoor blinds

Application

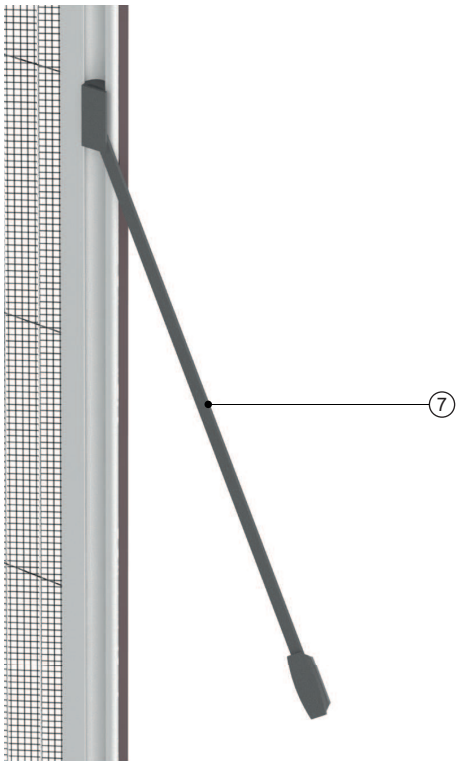
Pleated insect screen for seasonal use

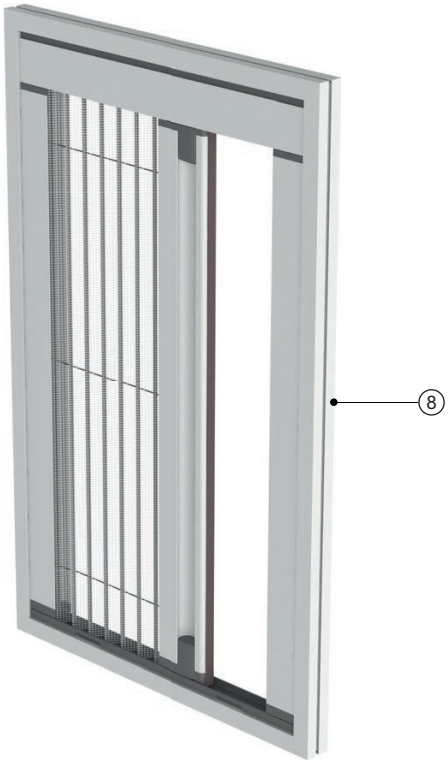
Benefits of the product

- Insect screens

Legend

① Slide rail at the top
② Installation profile at the top
③ Handle profile with magnetic profile
④ Wall profile with magnetic profile
⑤ Fastening clip for wall profile
⑥ Slide rail at the bottom with punchings for water drainage
⑦ Operating rod (optional)
⑧ Installation frame for installation from the front (can be selected for each side)





Technical product description

Slide rail at the top

Material	Extruded aluminium
Dimension	35x18 mm

Description

- Attached to mounting profile of extruded aluminium, dimension 15x10 mm

Slide rail at the bottom

Material	Extruded aluminium
Dimension	18x7 mm

Description

- Powder-coated in deep black 9005 incl. double-sided adhesive tape 16x1 mm

Grip profile

Material	Extruded aluminium
Dimension	48x18 mm

Description

- Operable via recessed grips on both sides, fixed in the closed position by means of retracted magnetic profile

Wall profile

Material	Extruded aluminium
Dimension	18x31 mm

Description

- On the hinge side with retracted magnet profile, in order to fix the closed position

Installation frame (optional)

Material	Extruded aluminium
Dimension	22x15 mm

Description

- for frontal installation onto the soffit, can be selected separately for each side, cut to mitre and sticked together using corner joints; the installation frame can either be fixed with screws or a double-sided adhesive tape

Insect screen fabric

- Pleated insect screen fabric made of plastic-sheathed fibreglass in black, guided via cords

Installation

- Laterally in the soffit or from the front using installation frames (optional)

Colors

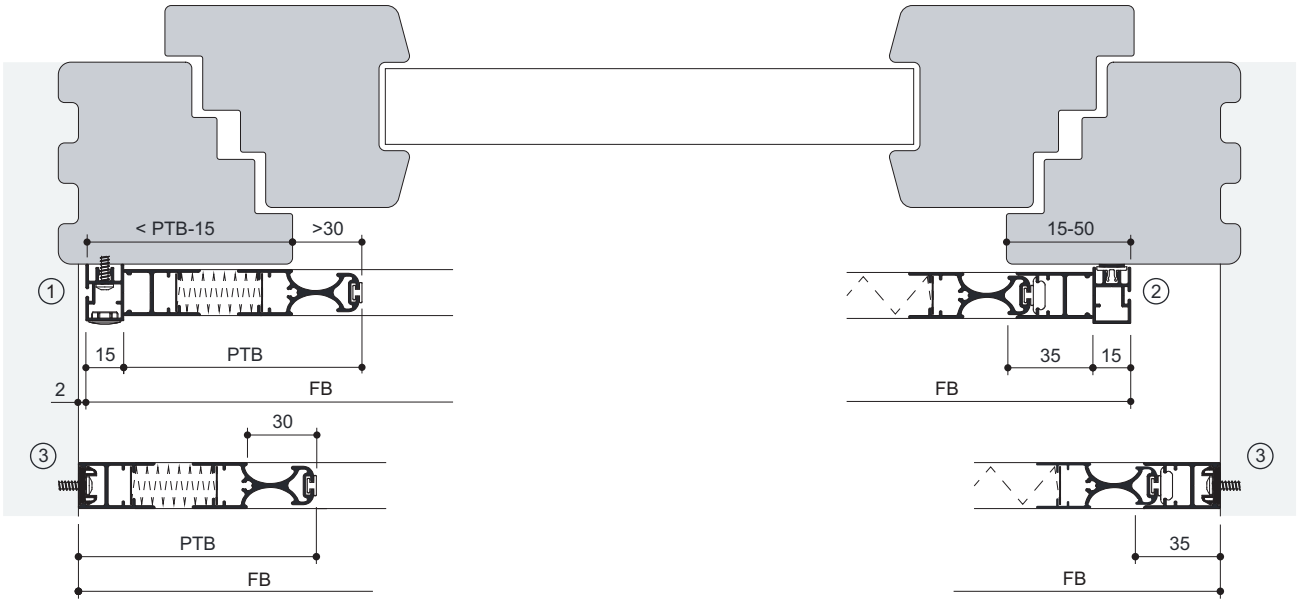
see Chapter Standard colors

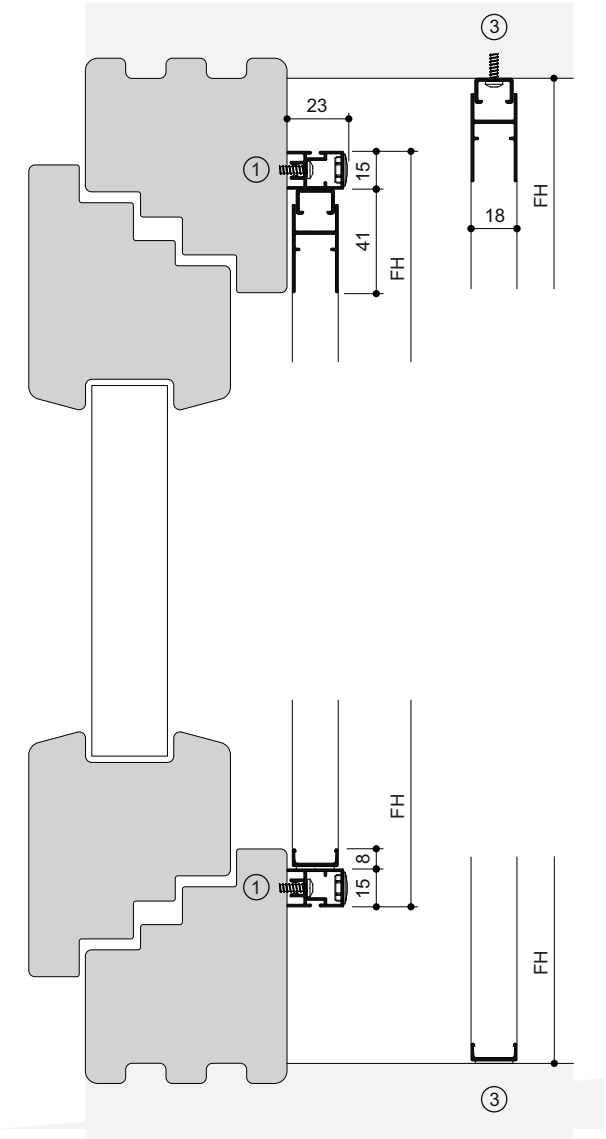
Special designs

No special designs possible!

Insect screen pleated blind

Type: ISPL18 - pleated insect screen 18 mm





Notes:

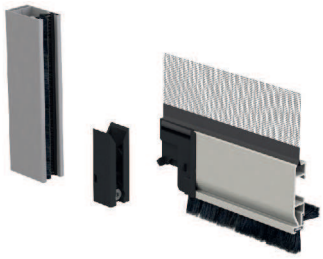
- The pleated insect screen is designed symmetrically to the operating level and can therefore been used for both opening directions.
- The side where to place the installation frame is changeable.
- To ensure that the recessed grips are accessible in each position, the complete width must be reduced accordingly.

Legend

①	Installation from the front with installation frame screwed
②	Installation from the front with installation frame glued
③	Installation towards the outside without installation frame
FB	Complete width
FH	Complete height
PTB	Stack width

- 92 mm with FB 500-1000 mm
- 102 mm with FB 1001-1300 mm
- 112 mm with FB 1301-1600 mm
- 121 mm with FB 1601-1900 mm
- 131 mm with FB 1901-2200 mm

Roller blind



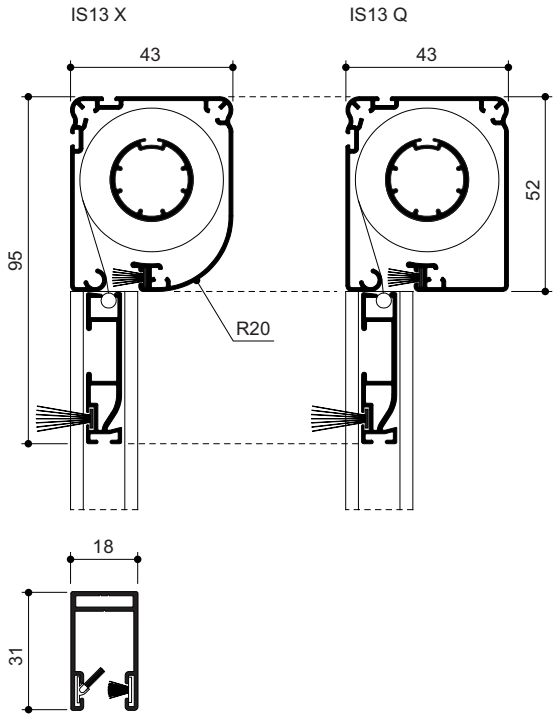
Easy-Click locking mechanism concealed in the guide rail.

The integrated brake ensures slow upward travel from the end bar, which minimizes noise and eliminates the risk of injury.

Limit sizes

Type	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. surface [m²]
IS13	500	2200	200	2800	4

Cross-section profile



Scope of delivery

- Insect screen cassette square or quarter round with box sealing brush
- Drive with spring balancer and brake system
- Guide rail with guide rail inserts and integrated Easy-Click locking system
- Plastic-coated fibreglass fabric
- Aluminium parts as per "HELLA Color worlds"
- Mounting material

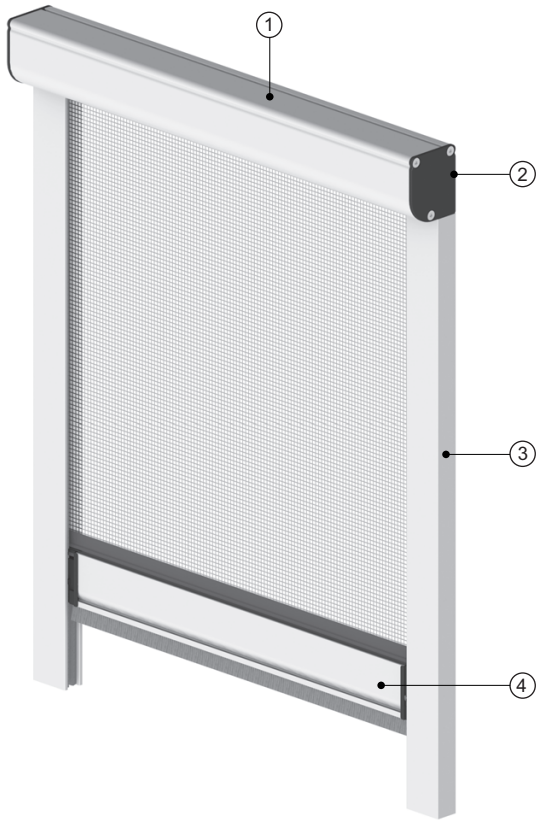
Supplementary equipment

- Inset type handle at the outside
- Stop at the top
- Insect screen mesh VistaScreen
- Cover SOLTIS Horizon 86/Perform 92

Benefits of the product

- Insect screens
- Comfort
- Health
- High-quality construction elements guarantee a long lifespan and convenient operation

Roller blind



Field of application

All window types

Application

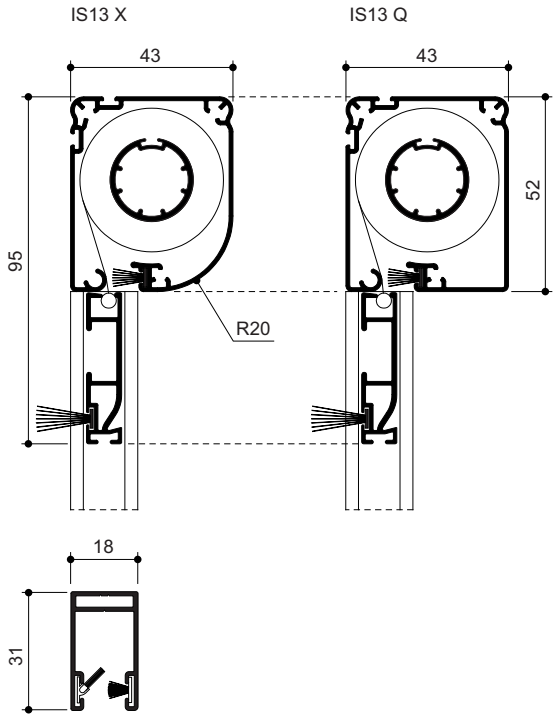
Rollable insect screen for seasonal use

Benefits of the product

- Insect screens
- Visual cover (optional)

Legend

①	Cassette profile 43x52 quarter round/quadratic
②	End cap quarter round/quadratic
③	Guide rail 31x18 mm
④	End rod
⑤	Diagonal brush in guide rail



Technical product description

Box

Material	Extruded aluminium
Dimension	43x52 mm
Box profile	quarter round or quadratic

Description

- Sealing via unwinding edges of the fabric at the rear side and inserted sealing brush at the front side.
- Plastic end caps with struts to be placed onto the guide rails.

Insect screen shaft

Material	Extruded aluminium
Dimension	ø23,2 mm

Guide rails

Material	Extruded aluminium
Dimension	31x18 mm

Description

- with slanted brush and opposite standard brush for fabric guidance

Drive system

Description

- via spring mechanics.
- The built-in brake provides for a slow raising of the roller screen.

End rod

Material	Extruded aluminium
Dimension	40x9 mm

Description

- Sealing via retracted brush seals
- Easy-Click locking system, incl. pull cord

Insect screen fabric

- Insect screen fabric made of fibreglass, plastic-sheathed, grey-colored
- Insect screen fabric VistaScreen made of fibreglass, plastic-coated, black colored, improved light and air permeability compared with the standard fibreglass fabric
- Cover SOLTIS Horizon 86 or SOLTIS Perform 91, colors according to current collection (**Attention:** max. width 1200 mm, max. height 1600 mm); cover shortened and not guided in the guide rail. Serves as view and glare protection, not as insect screen.

Installation

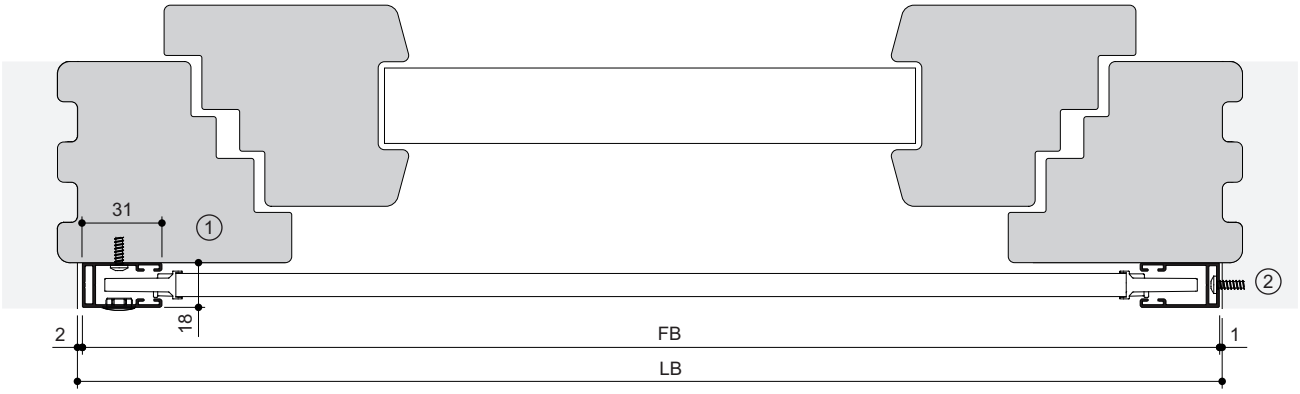
- From the front onto the window frame or lateral in the soffit

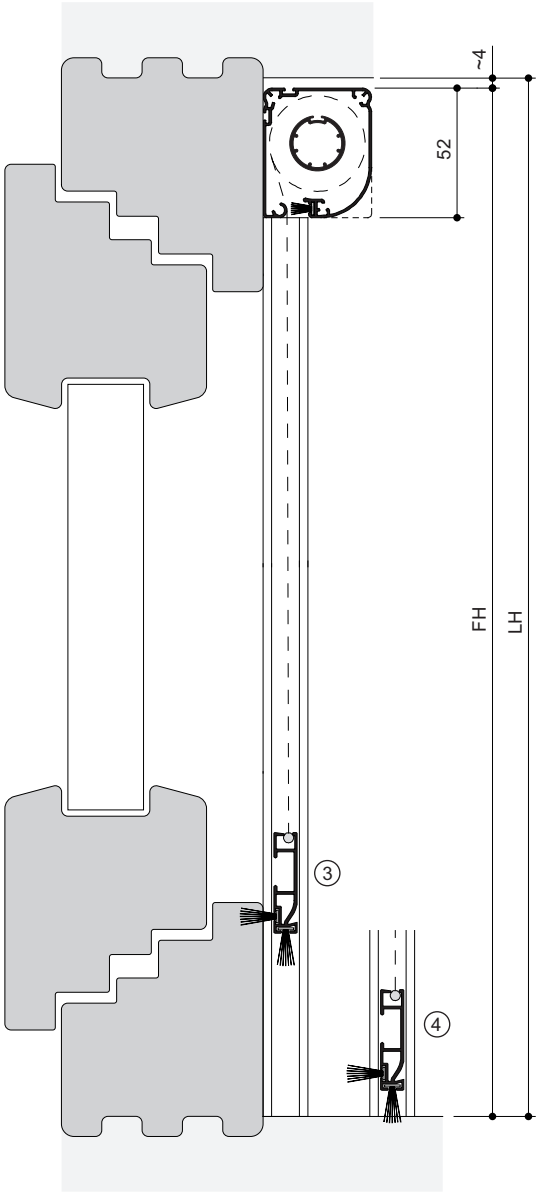
Colors

see Chapter Standard colors

Roller blind

Type: IS13 - X quarter round/Q quadratic



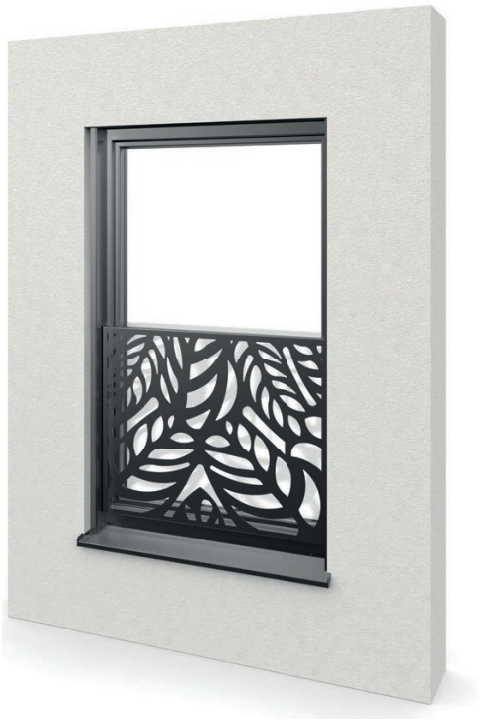


Legend

FB	Complete width
FH	Complete height
LB	Clear width
LH	Clear height
①	Installation from the front (standard)
②	Installation laterally (optional)
③	Sealing towards the inside
④	Sealing towards the bottom

FALL PROTECTION

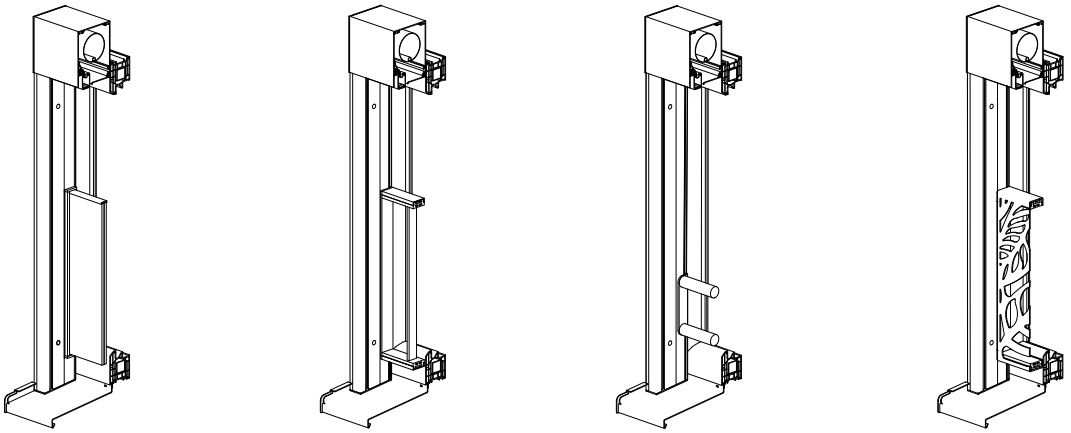
Fall protection



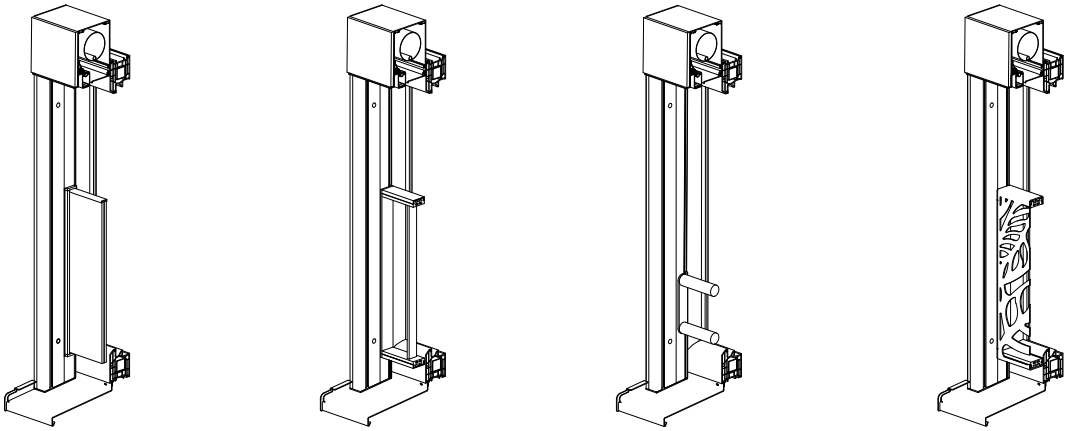
Universal rail enables lateral over-insulation of the window frame and has a very small distance to the fixing.

Possibility of integrating different types of fall protection, shown here with individual pattern plate.

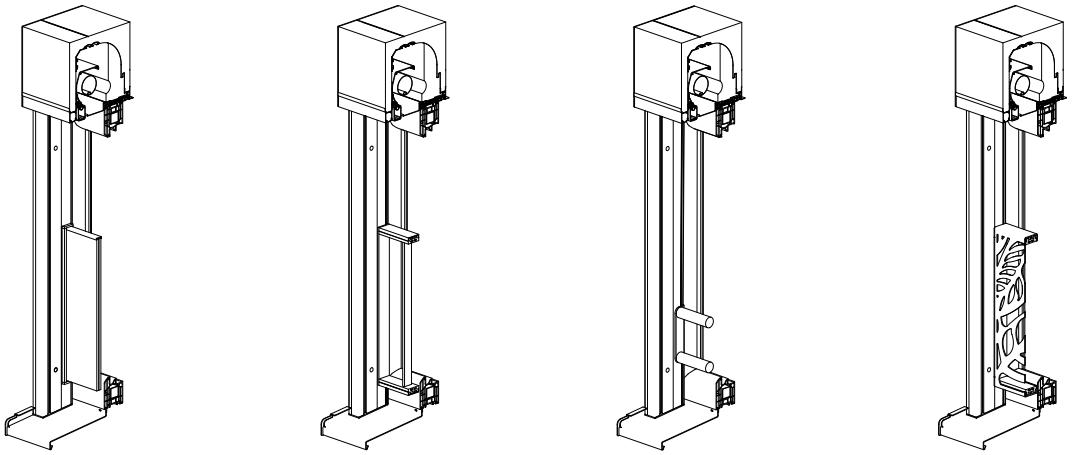
Combinations with front-mounted awnings



Combinations with plaster awnings



Combinations with TOP FOAM screen protect



Scope of delivery

- Guide rail prepared for various fall protection systems
- Aluminium parts freely selectable from the HELLA color range
- Certified mounting material according to requirements

Supplementary equipment

- Fall protection aluminium grille
- Steel mesh fall protection
- Safety barrier rod
- Fall protection panel with individual design

Benefits of the product

- Safety through tested systems
- Comfort
- Design element
- Clean, defined plaster connections
- High-quality construction elements guarantee a long lifespan

Fall protection

Limit sizes

Type: Fall protection grid and rods

Beam load [kN/m]	Maximum width in mm			
	Glass	Steel grid	Aluminium grid	Rods
0.5	see wind-load chart	2500	2500	2400
1	see wind-load chart	2000	1500	1700

Type: Glass fall protection

The glass dimensions required can be found in the order confirmation.

Permissible wind load in kN/m² depending on glass thickness and dimensions for a permissible beam load of 0.5 kN/m - private area

HAS min [mm] \ Glass width [mm]	600	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
200	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,25	3,75	3,25	2,75	2,25	2,00	1,75					
300	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,25	3,50	2,75	2,25	1,25	0,75	3,75	3,25	3,00	2,50	2,25	1,50	1,25	1,00	0,75	0,75
400	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,00	3,25	2,75	2,25	2,00	1,50	1,00	3,25	3,00	2,50	1,50	1,25	1,00	0,75	0,75
500	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,00	3,50	3,00	2,50	2,25	1,75	1,50	1,25	1,25	1,00	0,75	1,75	1,50	1,25	1,00	0,75	0,75
600	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,25	3,50	3,00	2,50	2,25	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,50	1,50	1,25	1,00	0,75
700	4,50	4,50	3,75	2,75	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	0,75	0,75	1,50	1,25	1,25	1,00	0,75	1,75	1,50	1,25	1,00	0,75
800	4,50	4,50	3,75	3,00	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,50	1,50	1,25	1,00	0,75	0,75	1,50	1,25	1,00	1,00
900	4,50	4,50	3,75	3,00	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,75	1,50	1,25	1,00	0,75	0,75	1,50	1,25	1,25	1,00
1000	4,50	4,50	3,75	3,00	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,75	1,50	1,25	1,00	1,00	0,75	1,50	1,50	1,25	1,00
1100	4,50	4,50	3,75	3,00	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,75	1,50	1,25	1,00	1,00	0,75	1,50	1,50	1,25	1,00
1200	4,50	4,50	3,75	3,00	2,25	1,75	2,50	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,75	1,50	1,25	1,00	1,00	0,75	1,50	1,50	1,25	1,00

Permissible wind load in kN/m² depending on glass thickness and dimensions for a permissible beam load of 1 kN/m - public area

HAS min [mm] \ Glass width [mm]	600	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
200	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,00	3,00	1,75						
300	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,25	3,50	2,75	2,25	1,25	2,50	2,50	2,00	1,25		
400	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,00	3,25	2,75	2,25	2,00	1,50	2,25	2,25	2,00	1,50
500	4,50	4,50	4,50	4,50	4,50	4,50	4,00	3,25	2,75	0,25	1,75	1,25	0,75	2,25	2,00	1,50	1,25	2,00	2,00
600	4,50	4,50	4,50	4,50	4,50	4,50	4,25	3,50	2,75	2,25	2,00	1,50	1,25	1,00	2,00	1,75	1,50	1,25	1,00
700	4,50	3,75	2,75	2,00	1,00	1,00	1,75	1,50	1,00	2,50	2,00	1,75	1,50	1,25	1,00	2,00	1,75	1,50	1,25
800	4,50	3,75	3,00	2,00	1,00	1,00	1,75	1,50	1,00	0,75	2,25	1,75	1,50	1,25	1,00	0,75	1,75	1,50	1,25
900	4,50	3,75	3,00	2,00	1,00	1,00	1,75	1,50	1,25	0,75	2,25	2,00	1,50	1,25	1,25	1,00	0,75	1,75	1,50
1000	4,50	3,75	3,00	2,25	1,25	1,25	2,00	1,50	1,25	1,00	0,75	2,00	1,75	1,50	1,25	1,00	0,75	1,75	1,50
1100	4,50	3,75	3,00	2,25	1,25	1,25	2,00	1,50	1,25	1,00	0,75	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,50
1200	4,50	3,75	3,00	2,25	1,25	1,25	2,00	1,50	1,25	1,00	0,75	2,00	1,75	1,50	1,25	1,00	1,00	0,75	1,50

Note:

The determination of the wind load required for each region can be seen in the technical part/fall protection.

Legend

	VSG10.
	VSG12
	VSG16
	VSG20
	VSG24

Design glass

Version art - individual pattern (upon request)

Design aluminium grid/steel grid

Design of the rods

Fall protection

Technical product description

Type: Steel grid

Material	Galvanized powder-coated steel
Dimension	Bar profile 40x10 mm
	Lateral bracket profiles 40x40x5 mm
	Mesh profiles 40x8 mm

Description

Welded frame construction made of steel profiles according to DIN EN 1090. Standardisation and technical specifications: Design for spar load up to 1.0 kN; static proof for spar load; type statics for public and private areas; proof of static live load according to DIN EN 1990; DIN EN 1991, DIN EN 1993-1 and Eurocode 3 EC 3.
The sufficient load-bearing capacity of the components/window frames existing on site with regard to impact load is assumed.
The height of the fall protection must be dimensioned according to the respective state building regulations. Depending on the state building code, an existing parapet with insufficient height counts as a step, which is why the fall protection must be dimensioned based on this step. In the case of a grid fall protection, the height of the fall protection must be increased by the height of the rail if the lower rail also counts as a step.

Type: Rods

Material	Extruded aluminium
Dimension	2 piece bar profile ø34 mm
	Lateral bracket profiles 45x40x5 mm

Description

Bolted frame construction made of extruded aluminium profiles. Aluminium balustrade for windows with low balustrade height. Standardisation and technical specifications: Design for spar load up to 1.0 kN; static proof for spar load; type statics for public and private areas; proof of static live load according to DIN EN 1990; DIN EN 1991, DIN EN 1993- 1.
The sufficient load-bearing capacity of the components/window frames existing on site with regard to impact load is assumed.
The height of the fall protection must be dimensioned according to the respective state building regulations. Depending on the state building code, an existing parapet with insufficient height counts as a step, which is why the fall protection must be dimensioned based on this step.

Type: Panels individual

Panels with art and individual design

Material	Canted and lasered aluminium sheet 3 mm
Dimension	Lateral bracket profiles 45x45x5 mm

Description

Bolted frame construction made of extruded aluminium profiles. Aluminium balustrade for windows with low balustrade height. Design for spar load up to 1.0 kN; static proof for spar load; type statics for public and private areas; proof of static live load according to DIN EN 1990; DIN EN 1991, DIN EN 1993- 1.
The sufficient load-bearing capacity of the components/window frames existing on site with regard to impact load and wind load is assumed.
The height of the fall protection must be dimensioned according to the respective state building regulations. Depending on the state building code, an existing parapet with insufficient height counts as a step, which is why the fall protection must be dimensioned based on this step. The height of the fall protection must be increased by the height of the rail if the lower rail also counts as a step.

Type: Aluminium grid

Material	Extruded aluminium
Dimension	Bar profile 45x20 mm
	Lateral bracket profiles 45x45x5 mm
	Mesh profiles 30x8 mm

Description

Bolted frame construction made of extruded aluminium profiles. Standardisation and technical specifications: Design for spar load up to 1.0 kN; static proof for spar load; type statics for public and private areas; proof of static live load according to DIN EN 1990; DIN EN 1991, DIN EN 1993- 1.
The sufficient load-bearing capacity of the components/window frames existing on site with regard to impact load is assumed.
The height of the fall protection must be dimensioned according to the respective state building regulations. Depending on the state building code, an existing parapet with insufficient height counts as a step, which is why the fall protection must be dimensioned based on this step. In the case of a grid fall protection, the height of the fall protection must be increased by the height of the rail if the lower rail also counts as a step.

Type: Glass

Glass (not included in the scope of delivery)

12,76 mm / 17,52 mm / 21,52 mm

Depending on requirements

Material	Laminated safety glass

Description

Standardisation and technical specifications: Design for spar load up to 1.0 kN; static proof for spar load; type statics for public and private areas; proof of static live load according to DIN EN 1990, DIN EN 1991, DIN EN 1993-1 and DIN 18008-4.
The sufficient load-bearing capacity of the components/window frames existing on site with regard to impact load and wind load is assumed.
The height of the fall protection must be dimensioned according to the respective state building regulations. Depending on the state building code, an existing parapet with insufficient height counts as a step, which is why the fall protection must be dimensioned based on this step.

Glass edge protection

Material	Extruded aluminium
Dimension	10mm height
	Profile width according to the glass thickness
Color	C0 anodised

Glass clamping profile

Material	Extruded aluminium
Dimension	45x32 mm for glass thickness 12.76 mm
	45x37 mm for glass thickness 17.52 mm
	45x41 mm for glass thickness 21.52 mm

Description

- Clamping profile including glazing rubber, screw material and end caps. Number of fixing holes depending on requirements

Guide rails

For front-mounted venetian blinds, vertical awnings and top-mounted elements

Material	Extruded aluminium
Dimension	125x43 mm
Profile	Multiple parts

Description

Base profile of the guide rail designed to be driving rain-proof with rear sealing profiles and lower end cap, sun and insect protection guide rails designed according to selection, position and number of holes for fastening elements according to requirements for fall protection.

For front mounted venetian blinds

Description

Through-holes in the roller shutter guide rail for frontal fastening of the fall protection in front of the roller shutter guide rail, position and number of holes for fastening elements designed according to the requirement for fall protection.

Surfaces

- Powder-coated aluminium parts in the standard colors without surcharge.
- Special colors according to the brochure "HELLA Color worlds” for a surcharge

Spacer pad for split fall protection

Material	Extruded aluminium
Dimension	45x5 mm
Profile	one-piece

Description

For split fall protection, an extruded aluminium profile in the same surface color is supplied as a spacer for the central fixing.

Fasteners, mounting material

Certified fasteners and mounting material made of A2 stainless steel.

Fall protection

General

The guide rail 125x43 mm enables the beautifully designed integration of the fall protection system of the company ABEL METALLSYSTEME (www.abelsystem.de) in combination with the corresponding sun protection element from HELLA.

The fall protection is available in different variant, offering individual design options:

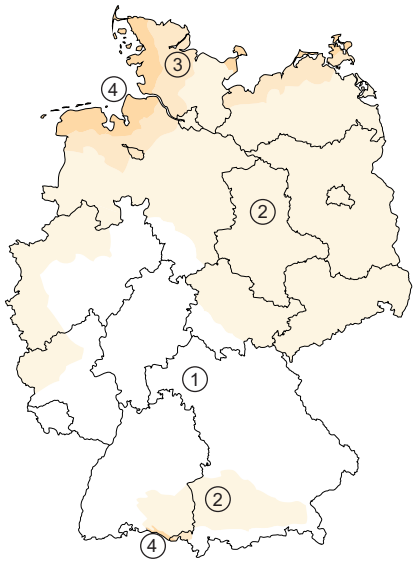
- Glass fall protection with laminated safety glass 12.76 mm, 17.52 mm or 21.52 mm
- Vertical railing fall protection made of steel or aluminium
- Fall protection in bar design to increase the existing parapet height
- Fall protection made of aluminium sheet steel with individual pattern (upon request)

The integrated fall protection is screwed through the guide rail to the window frame, therefore the guide rail has no static function regarding the fall protection.
The general building inspectorate test certificates and the type statics regarding fall protection systems are available in the download area.

To facilitate the installation, boreholes in the window frame should be provided ex works.

The required parapet height can be found in the respective state building codes and must be kept. Glass is not included in the delivery and must be provided by the customer.

The sufficient load-bearing capacity of the existing building components/window frames on-site is a precondition. Multi-part units upon request. According to the ETB Guidelines, tie-bar loads of 1kN/m must be observed for areas accessible to the public; in areas which are not accessible to the public tie-bar loads of 0.5kN/m are sufficient.



Assignment of wind zones as per administrative borders: www.dibt.de

Besides the above mentioned tie-bar loads, fall protection systems made of glass must withstand the occurring wind loads.

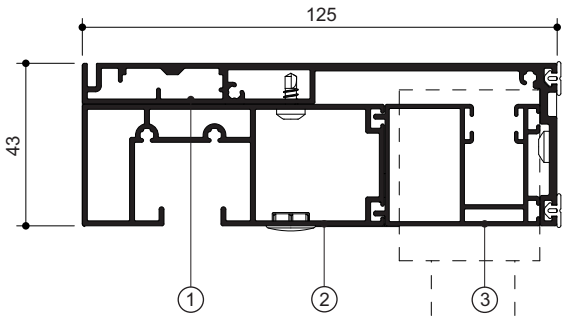
As explained in the chapter wind load, country-specific building regulations exist to determine the respective wind loads.

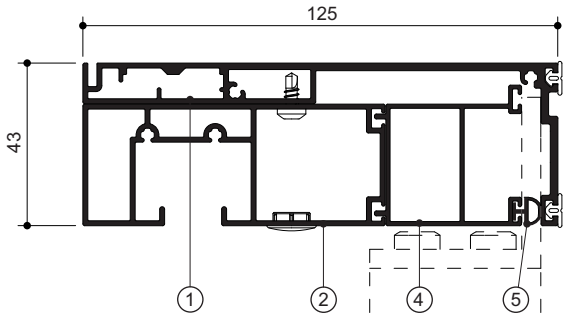
For Germany DIN EN 1991-1-4 applies, which includes the table below (simplified procedure to determine the wind load for building up to a height of 25 m):

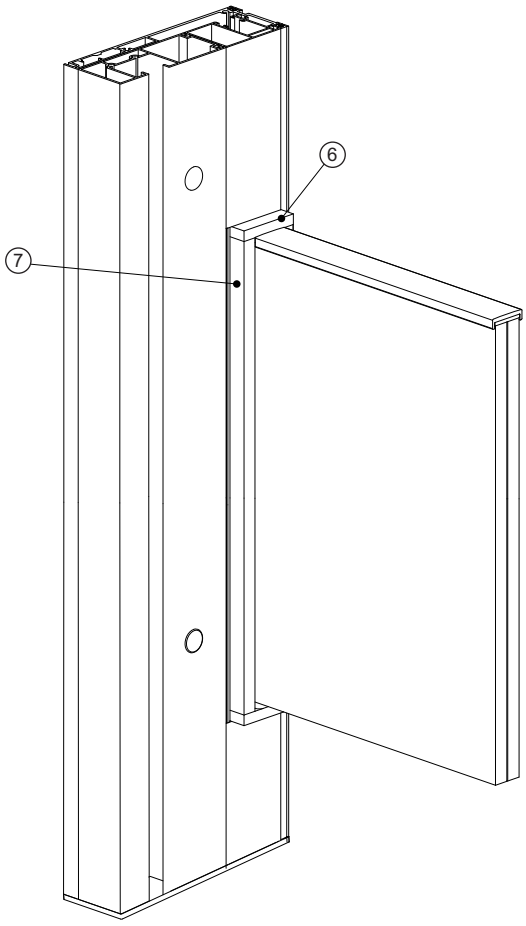
Speed pressure in kN/m²	up to 10 m	10-18 m	18-25 m
Zone 1 Interior land	0.5	0.65	0.75
Zone 2 Interior land	0.65	0.8	0.9
Zone 2 Coasts and Baltic Sea islands	0.85	1	1.1
Zone 3 Interior land	0.8	0.95	1.1
Zone 3 Coasts and Baltic Sea islands	1.05	1.2	1.3
Zone 4 Interior land	0.95	1.15	1.3
Zone 4 Coasts of the North Sea and the Baltic Sea / Baltic Sea islands	1.25	1.4	1.55
Zone 4 Baltic Sea islands	1.4		

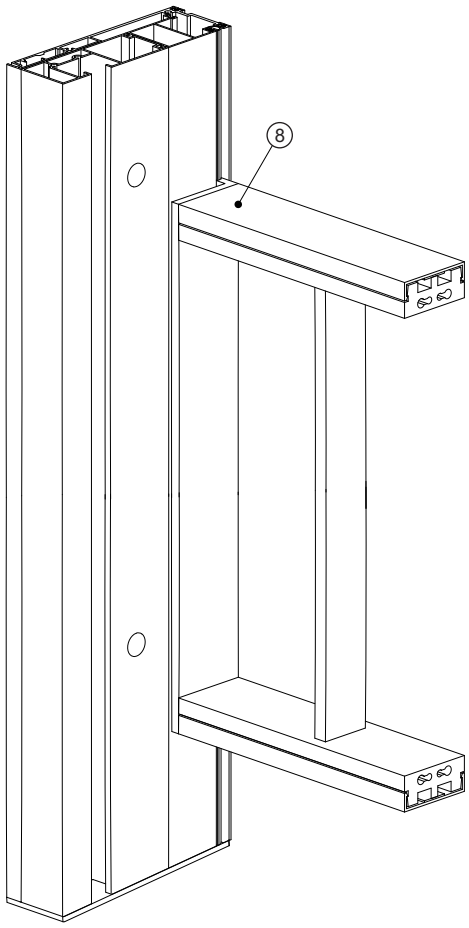
For other countries the values must be requested separately from the local weather services or taken from the window manufacturer!

The guide rail 125x43 mm consists of several profiles, which can be assembled depending on the type of sun protection.









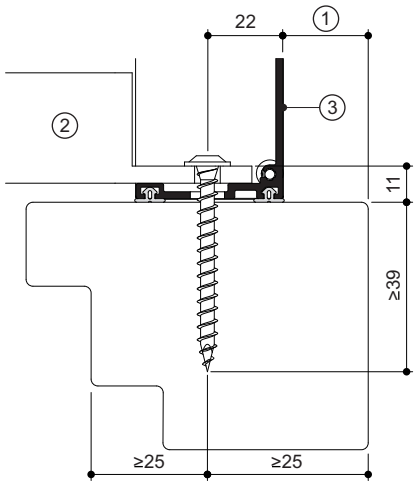
Legend

①	Base profile 125 x 43 mm with sealing profiles on the back and lower end cap, can be plastered at the front (11 mm), if the window sill forms a suitable trough underneath
②	Guide rail 32 x 80 mm, depending on the sun protection product roller shutter, external Venetian blind, or screen **Note:** The guide rail 32x80 mm is cannot be plastered but has to be demountable for the inspection of the fall protection.
③	Insect screen guide rail for insect screen above glass guard or as facing
④	Adapter profile for guardrails and bars
⑤	Sealing profile closes the 5 mm groove above and below the mounting lug of the fall protection and vertical railing
⑥	Glass holder
⑦	Lock of the opening in front of the glass holder VSG12 and VSG16 with sealing profile
⑧	Fall protection aluminium

Fall protection

Types of installation

Installation on wood window frame



Screw

80060104 Pan head wood screw with flange 6.0 x 60 mm TX30 blank A2

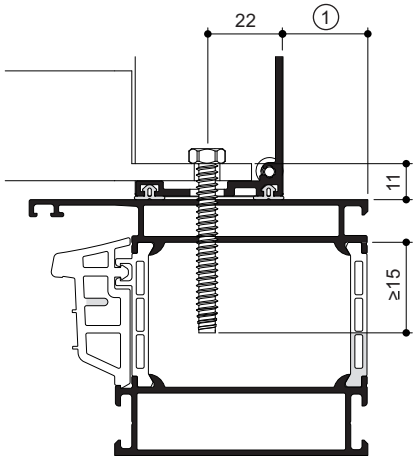
Notes:

- Pre-drill window with ø4 mm
- Extend drill hole in aluminium tray to ø7 mm, may be increased to maximal 10 mm.

Legend

① Offset dimension guide rail 25 mm with RvA
② Fall protection serves as an example
③ Guide rail Basic profile

Installation on aluminium window



Screw

Façade construction screw FABA type BZ SW3/8 blank A2

- Design short: 80160036 6.3x50 mm
- Design long: 80160037 6.3x64 mm

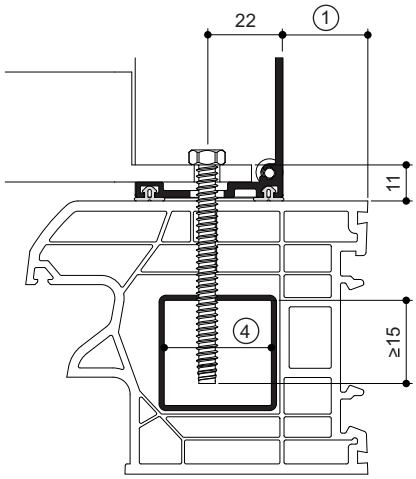
Notes:

- Pre-drill window with ø4.5 mm
- Minimum bar thickness 1x2 mm or 3.2 mm in total
- Tightening torque 5Nm

Legend

① Offset dimension guide rail 25 mm with RvA

Installation in steel core of plastic windows



Screw

Façade construction screw FABA type BZ SW3/8 blank A2

- Design short: 80160036 6.3x50 mm
- Design long: 80160037 6.3x64 mm

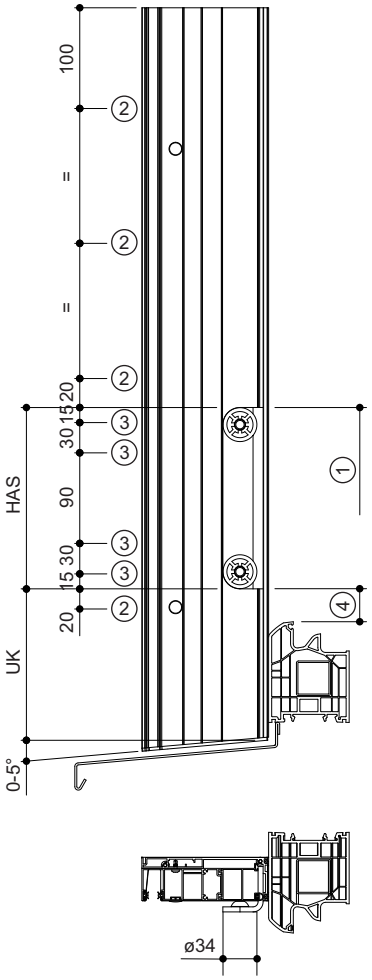
Notes:

- Pre-drill window
  - ø5mm with steel core thickness 1.5-2.4 mm
  - ø5,3mm with steel core thickness 2.5-5.3 mm
  - Extend drill hole in aluminium tray with ø7 mm
- Steel core thickness 1.5- 5.3mm, the steel core must not have any opening or welded joint in the mounting direction
- Tightening torque 5Nm

Legend

① Offset dimension guide rail 25mm with RvA
④ Permissible fixing area in steel core

Type: Bars to increase the existing parapet height

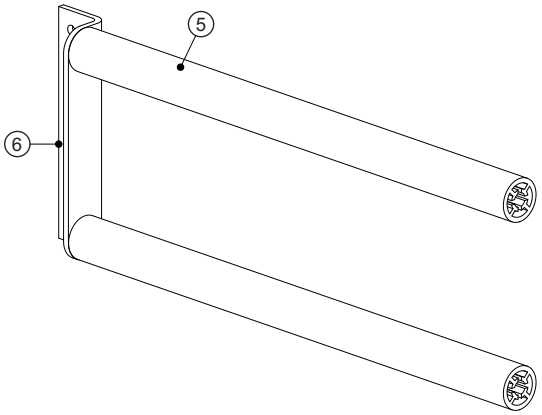


Design

- Aluminium parts screwed with A2-screws and powder-coated
- Maximum width
  - 2400 mm with tie-bar load 0.5kN/m
  - 1700 mm with tie-bar load 1kN/m

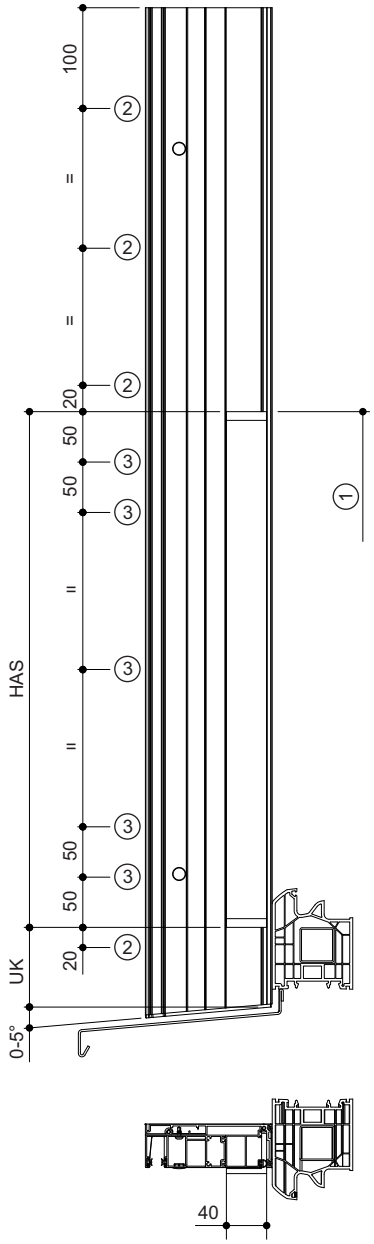
Legend

HAS	Height fall protection 180mm
UK	Position of lower edge of the fall protection 40-200 mm
①	Parapet height as per State Building Code
②	Fastening point guide rail ø5
③	Fastening point fall protection ø10
④	Distance beneath maximal 112 mm
⑤	ø34 mm round tubes extruded
⑥	45x40x5 mm mounting bracket canted with 4 mounting holes ø7.5



Fall protection

Type: Steel grid



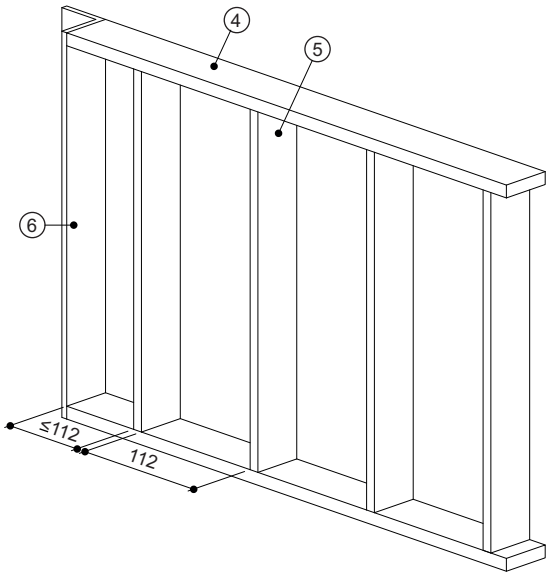
Design

- Steel profiles welded, galvanised and powder-coated
- Maximum width
  - 2500 mm with tie-bar load 0.5kN/m
  - 2000 mm with tie-bar load 1kN/m

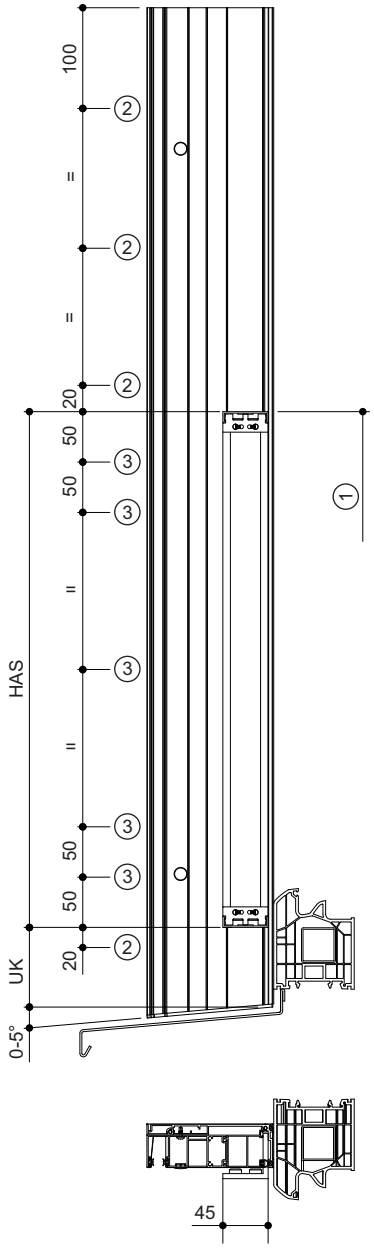
Legend

HAS	Height fall protection 500 500-1200mm
UK	Position of lower edge of the fall protection 40-200 mm
①	Parapet height as per State Building Code
②	Fastening point guide rail ø5
③	Fastening point fall protection ø10
④	40x10 mm flat steel as tie-bar
⑤	40x8 mm flat steel as vertical infill
⑥	40x40x5 mm mounting bracket laterally with 5 mounting holes ø7.5

The lower edge of the grid may only be positioned max. 120 mm above the window frame.



Type: Aluminium grid



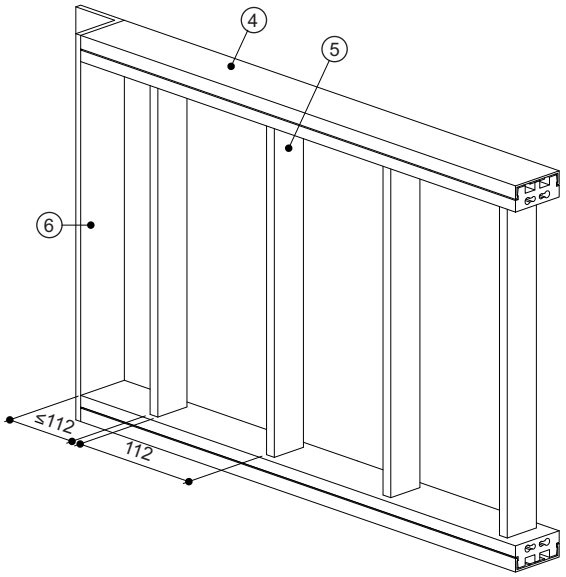
Design

- Aluminium profiles screwed with A2-screws and powder-coated
- Maximum width
  - 2500 mm with tie-bar load 0.5kN/m
  - 1500 mm with tie-bar load 1kN/m

Legend

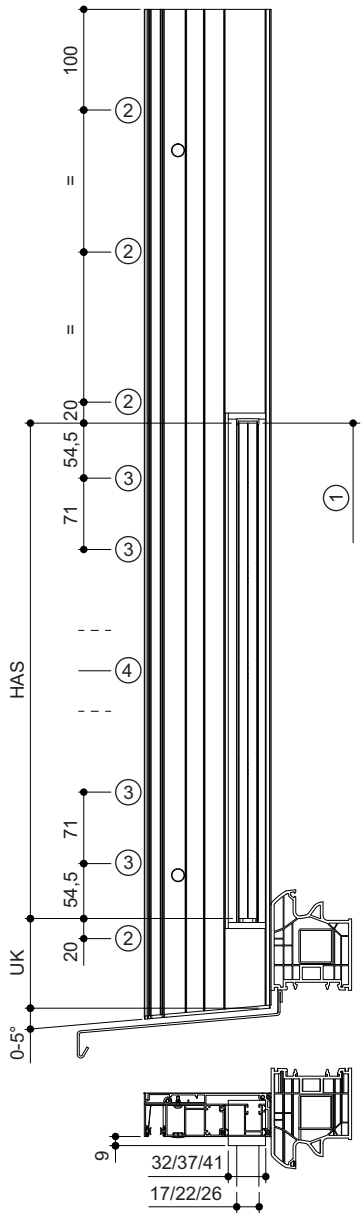
HAS	Height fall protection 500 500-1200mm
UK	Position of lower edge of the fall protection 40-200 mm
①	Parapet height as per State Building Code
②	Fastening point guide rail ø5
③	Fastening point fall protection ø10
④	45x20 mm tie-bars, 2-part, extruded
⑤	30x8 mm infill, extruded
⑥	45x45x5 mm mounting bracket laterally with 5 mounting holes ø7.5

The lower edge of the grid may only be positioned max. 120 mm above the window frame.



Fall protection

Type: Glass fall protection



The lower edge of the glass may only be positioned max. 112 mm above the window frame. If the distance between the lower edge of the glass and the window frame exceeds 30 mm, a glass edge protection for the bottom side must be ordered as well.

Integrable thickness of the laminated safety glass VSG

- VSG12: 12.76 mm (2x6 mm ESG; 0.76 mm PVB - foil)
- VSG16: 17.52 mm (2x8 mm ESG; 1.52 mm PVB - foil)
- VSG20: 21.52 mm (2x10 mm ESG; 1.52 mm PVB - foil)

Legend

HAS Height of the fall protection (glass height)

- 700-1200 mm with VSG 12
- 500-1200 mm with VSG 16 and VSG 20

UK Position of lower edge of the fall protection 40-200 mm

① Parapet height as per State Building Code

② Fastening point guide rail ø5

③ Fastening point fall protection ø10

④ Fastening point fall protection ø10

- 1x centred with HAS up to 1068 mm
- 2x centred with HAS from 1069 mm

⑤ Glass holder for VSG12/16/20 with end caps and 5 - 6 mounting holes ø7.5

⑥ Clamping strip with countersunk holes

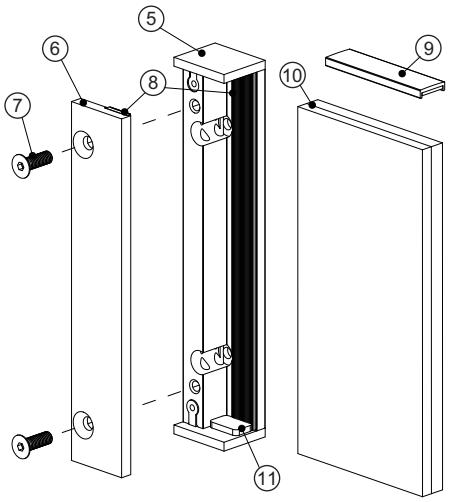
⑦ Countersunk screw M8x25 for clamping strip

⑧ Glazing rubber

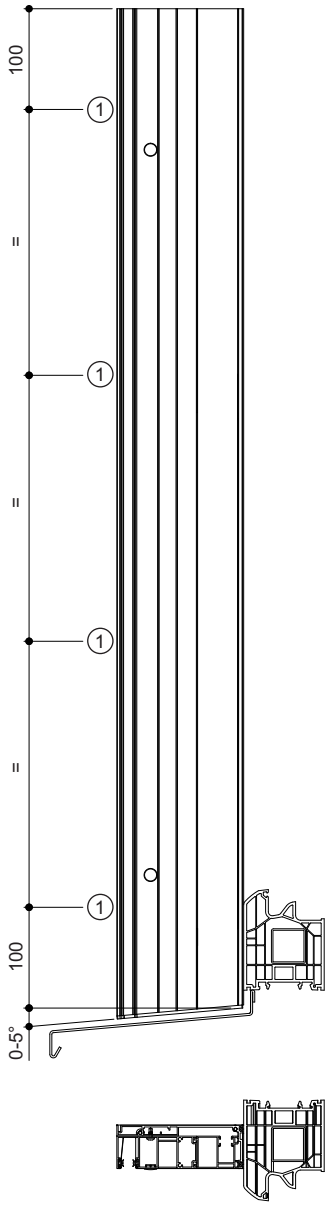
⑨ Glass edge protection C0 self-adhesive

⑩ VSG12/16/20 (not included in the delivery)

⑪ Rubber pad



Type: Guide rail 125x43 mm without fall protection



To ensure an homogeneous visual appearance, the guide rail 125x43 mm can optionally be ordered without fall protection.

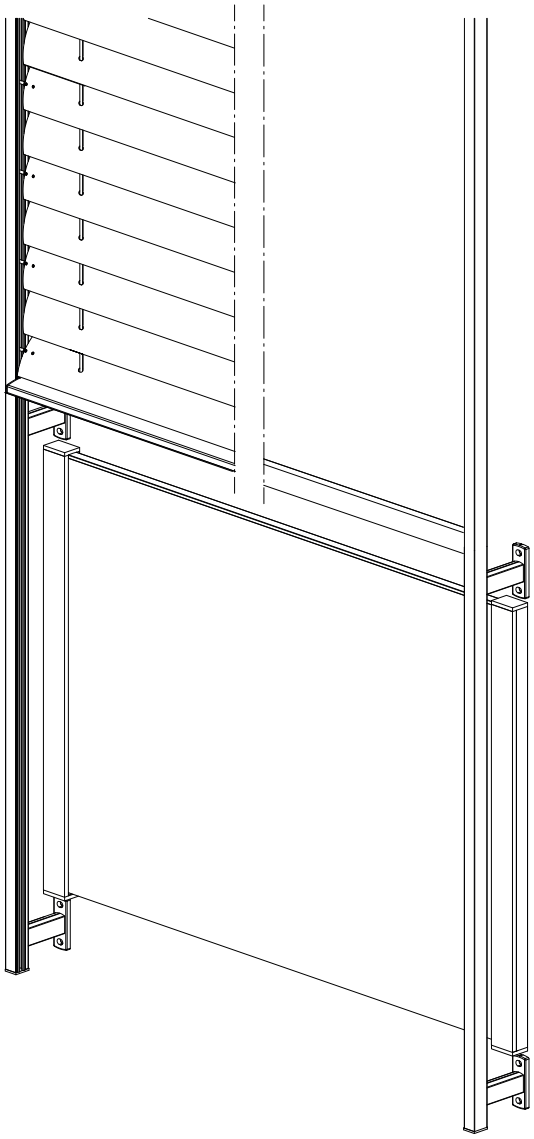
Legend

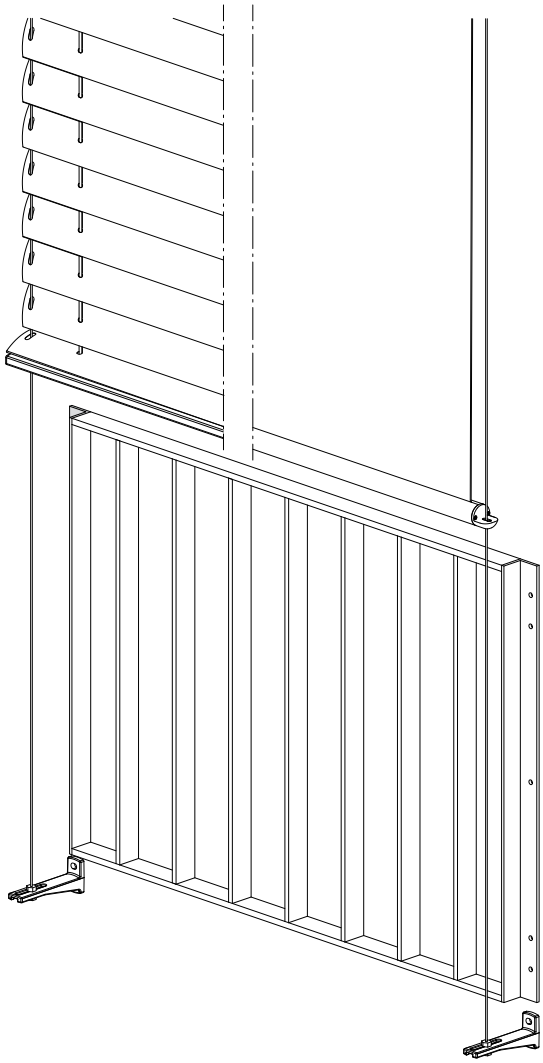
① Fastening point guide rail ø5

Fall protection

Type: Fall protection without FUP125

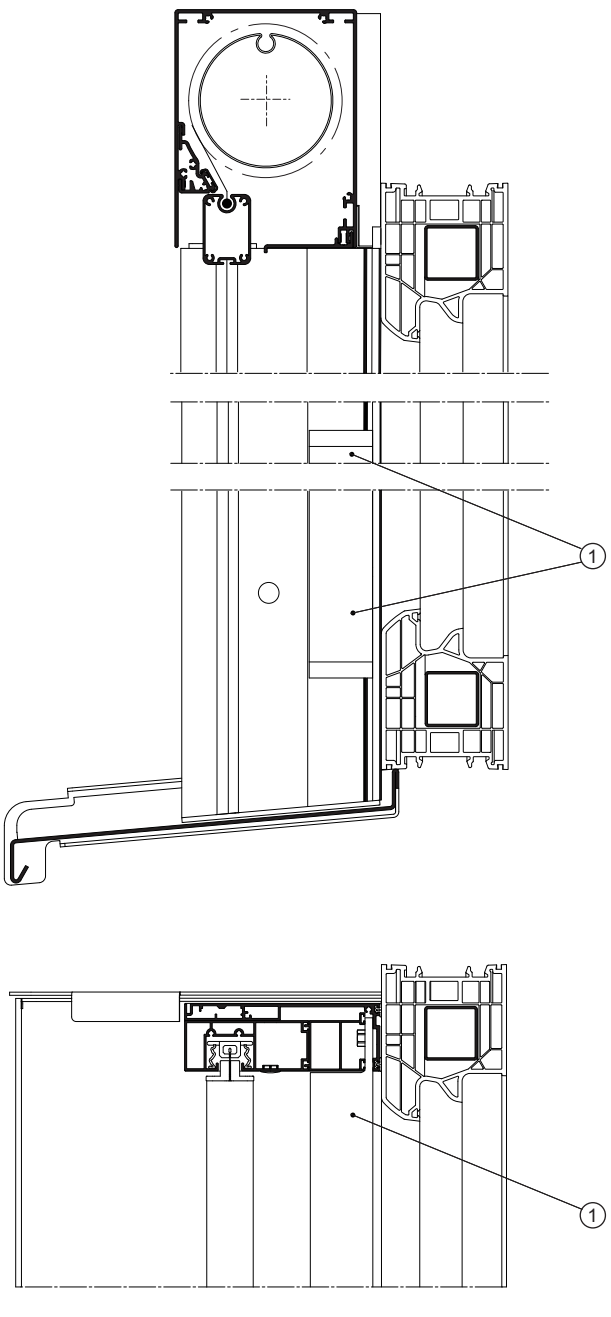
With outdoor blinds and vertical awnings with cable tensioning or guide rails, it is possible to create space for the fall protection being positioned behind by increasing the so-called A-dimension.



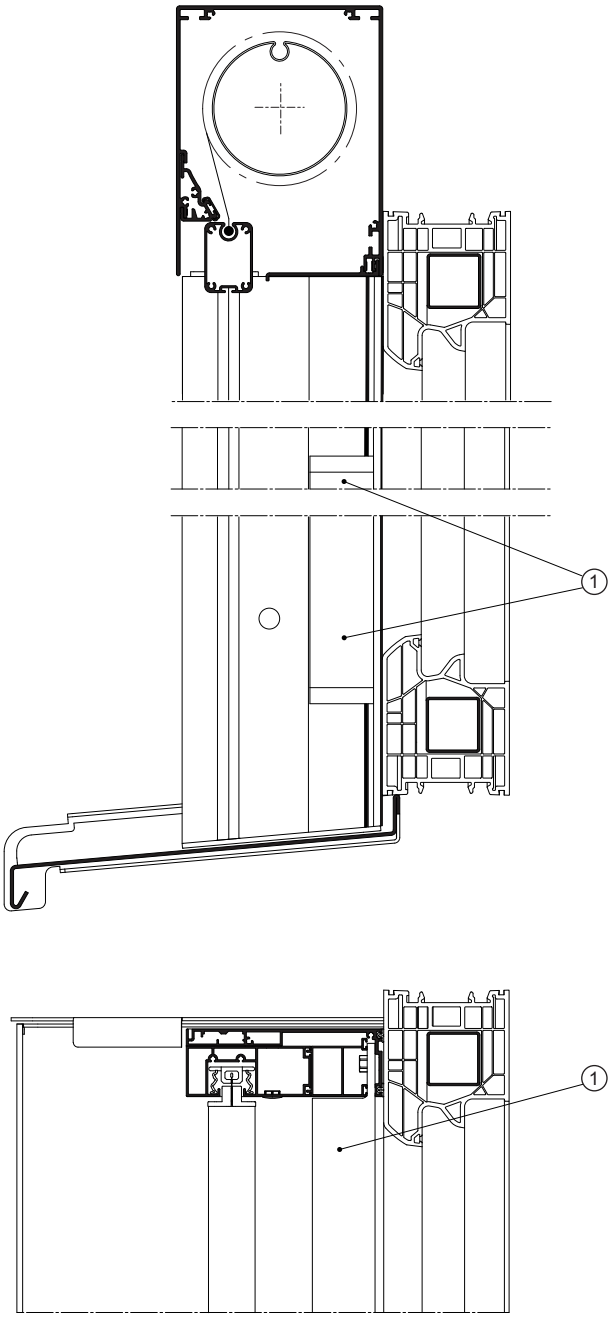


Front-mounted awnings protect

Box size E115



Box size E130



Legend

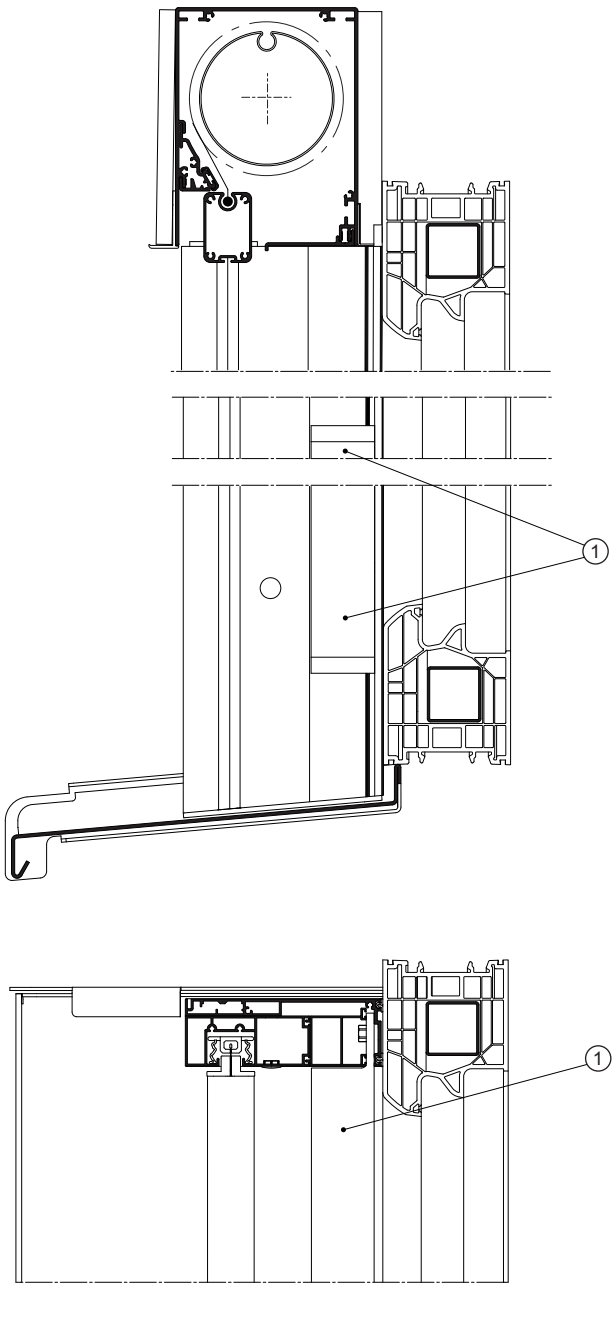
① Fall protection

- VM07 as right roller only possible with E115 or E130
- E115 always with insulation at the rear side
- E130 without insulation at the rear side

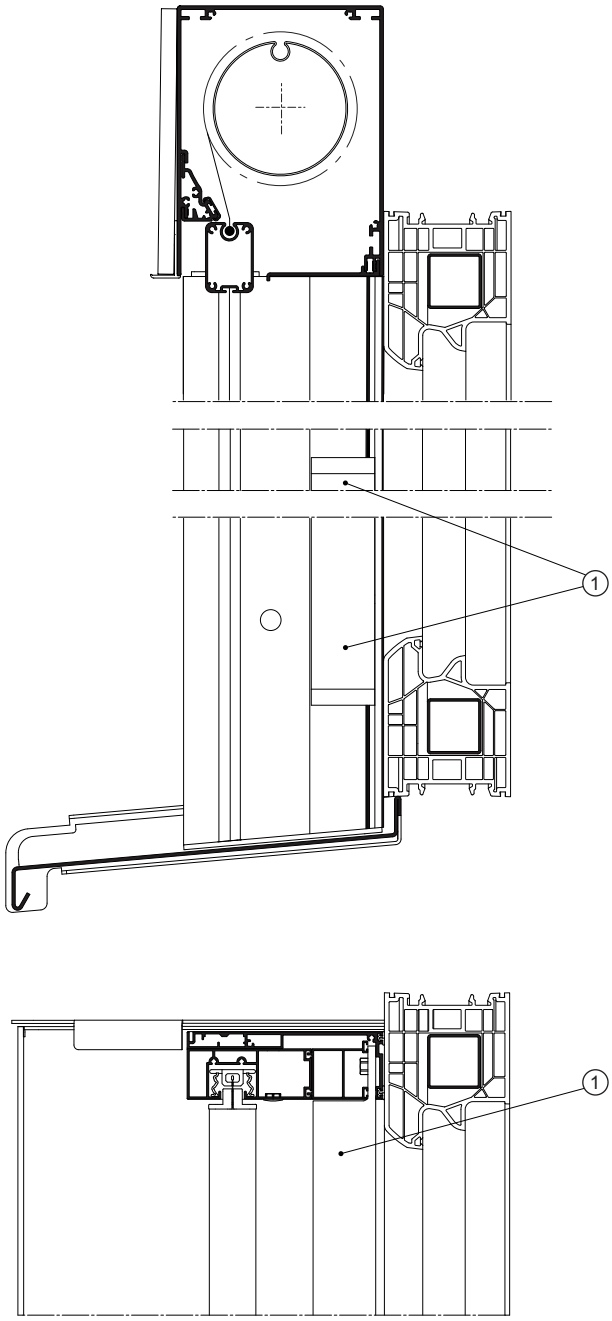
Fall protection

Concealed awnings

Box size E115



Box size E130

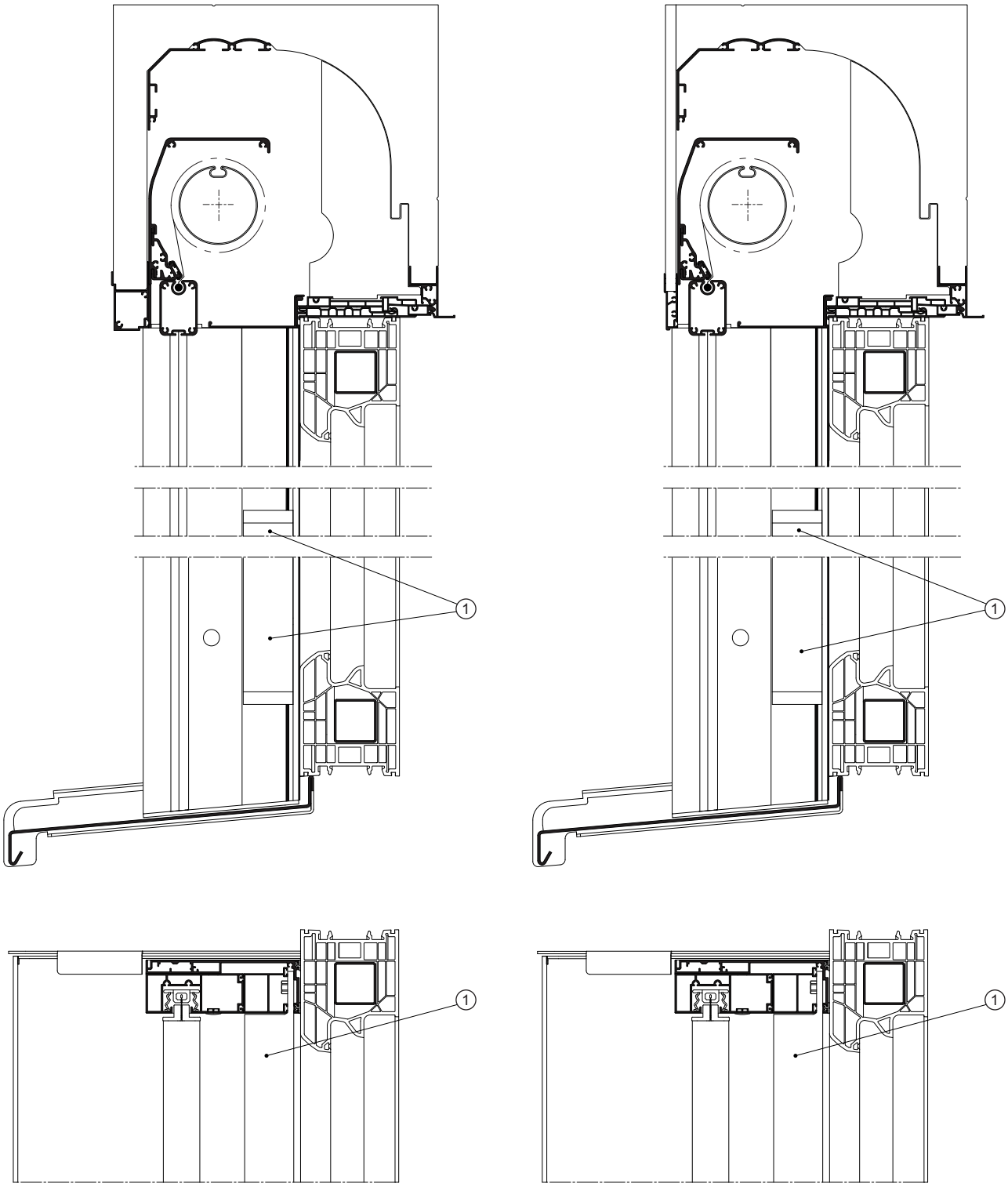


Legend

① Fall protection

- VM07 as right roller only possible with E115 or E130
- E115 always with insulation at the rear side
- E130 without insulation at the rear side

TOP FOAM screen protect



Legend

① Fall protection

- VM07 as right roller only possible with E115 or E130
- E115 always with insulation at the rear side
- E130 without insulation at the rear side

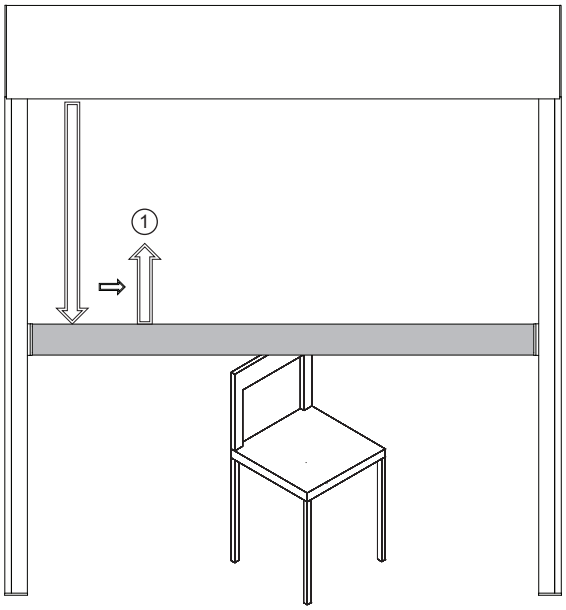
CONTROL DEVICES ACCESSORIES

Functionality obstacle detection

Motor drive

Operating principle Somfy Maestria+ 50 io

Obstacle detection in **down direction**:

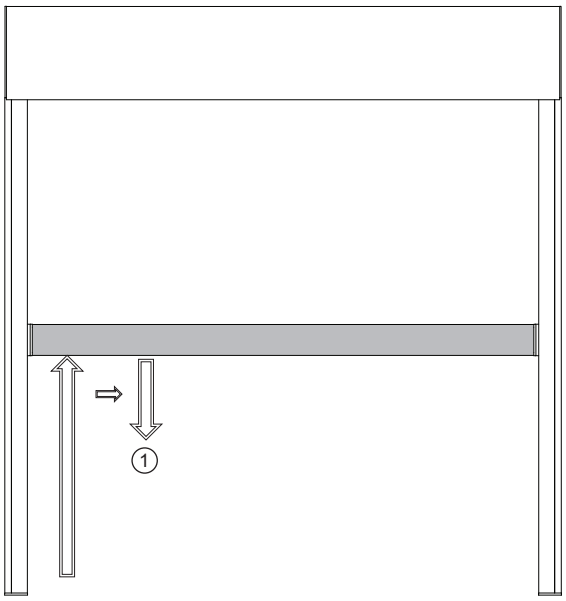


- System moves downwards
- Obstacle
- Unit stops and moves back half a drive rotation in order to relieve the obstacle
- Unit remains in this position

Notes:

- The obstacle detection is active during the entire downward movement.
- If the lower end position is set too low, it is treated like an obstacle.

Obstacle detection in the **up-direction**:



- Unit moves up
- Obstacle
- Unit stops and takes the load off
- Unit remains in this position

Notes:

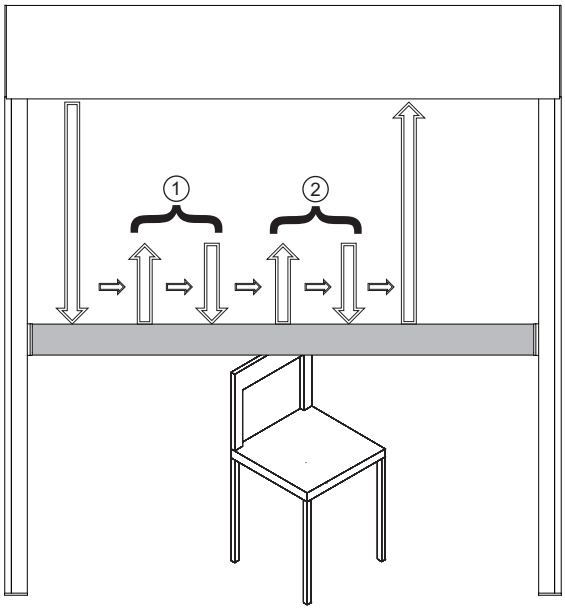
- A direct Up command is not admissible after that.
- The obstacle detection is active during the entire upward movement.

Legend

① STOP

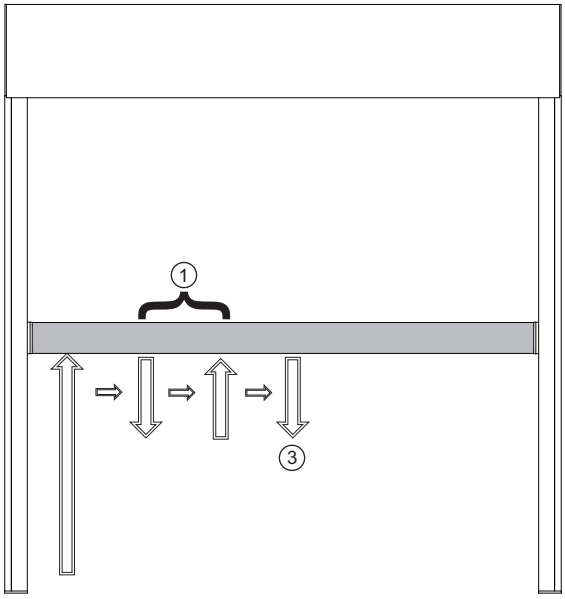
Operating principle of the elero drives

Obstacle detection in the **Down direction** (if the obstacle remains in place):



- System moves downwards
- Obstacle
- System stops and slightly moves back at a reduced speed
- System moves down again
- Obstacle still present
- System stops and slightly moves back at a reduced speed
- System moves down again
- Obstacle still present
- System stops and moves to the upper end position at a normal speed

Blocking detection in the **Up direction** (if the obstacle remains in place):



- Unit moves up
- Obstacle
- System stops and slightly moves back
- Unit moves up again
- Obstacle still present
- System stops and slightly moves back
- Unit remains in this position

Legend

① 1.Wiederholung
② 2.Wiederholung
③ STOP

Radio system HELLA ONYX SMART HOME

The ONYX.HOME control system was specially developed for the operation of sun protection products. Outdoor blinds/Venetian blinds, awnings, over-/under glass awnings, roller shutters, interior blinds, vertical blinds, as well as pergolas are conveniently controlled via smart phone, tablet, or automatically. The sun protection devices can be controlled by common push buttons or a hand-held radio transmitter.
All shading elements are displayed graphically in the free ONYX app. The position of the sun screen is already visible during control. All products can be visually marked with colors in the app. To facilitate the identification and operation, it is possible to assign a name to each individual blind.
The ONYX SMART HOME system works either only with the hand-held radio transmitter ONYX.CLICK or wall-mounted radio transmitter ONYX.SWITCH in "stand-alone mode" or with the Smart Home Control using the centre box ONYX.CENTER. Only if ONYX.CENTER is used, all shading elements can be controlled via the free ONYX app.

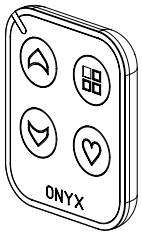
Stand-Alone System

- Easy configuration
- Live feedback at the hand-held radio transmitter
- Automatic functions individually adjustable for each shading element (wind/sun/rain)
- Automatic sun control on/off by a button combination on the radio hand-held or wall-mounted radio transmitter

Smart Home

- Easy configuration
- Live feedback on position and movement of the shading element via the app
- Automatic functions individually adjustable for each shading element (wind/sun/rain/time)
- Remote access via the smart phone app
- Security through transparent access control
- Support for Alexa voice control from Amazon, and compatible with Google Assistant and IFTTT
- Updateable (updates several times a year with new functions)
- Routing capability (radio commands are transmitted by the individual devices to increase the range)

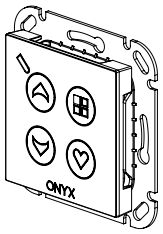
Radio transmitter



Hand-held radio transmitter ONYX.CLICK

to control one or more ONYX control device(s), with 5 channels, 5 devices per channel at a maximum; with ONYX.CENTER the number of devices per channel is not limited

50680501

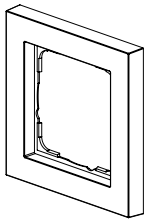


Wall-mounted radio transmitter ONYX.SWITCH

to control one or more ONYX control devices, with 5 channels, 5 devices per channel at a maximum; with ONYX.CENTER the number of devices per channel is not limited, without frame, compatible with all standard 55 frames

50680601

Accessories

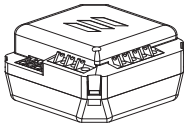


Plastic frame

suitable for wall-mounted radio transmitter ONYX.SWITCH
Available in white, grey and anthracite.

05140130

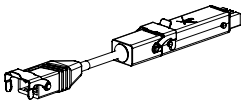
Receiver



Control device ONYX.NODE

is controlled via radio with hand-held radio transmitters and wall-mounted radio transmitters and/or Gateway only suitable for the interior, connecting a pushbutton is possible, necessary per drive

50680002

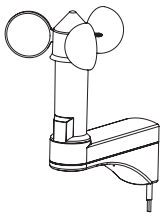


Adapter plug ONYX.CONNECTOR

is plugged between the power supply and the motor; is controlled via radio with hand-held radio transmitters and wall-mounted radio transmitters and/or Gateway, suitable for the exterior, necessary per drive

50680302

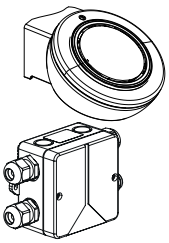
Sensors



Weather sensor ONYX.WEATHER

Weather sensor with wind and sun sensor; controls the entire sun protection unit automatically and weather-dependent

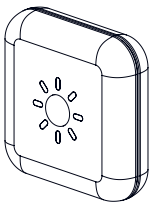
50680202



ONYX control unit with rain sensor

ONYX control unit (in surface box), controls the entire sun protection systems automatically and depending on precipitation, incl. external precipitation sensor.

05200114

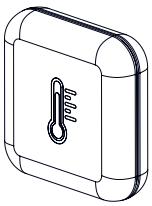


Radio, sun and brightness sensor ONYX.TAG sun

Sun and brightness sensor, controls the entire sun protection system automatically and depending on the brightness

Length x width x height: 40 x 40 x 12 mm

50680711 Black



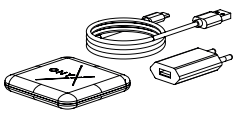
Radio, temperature and humidity sensor ONYX.TAG temperature

Temperature and humidity sensor, controls the entire sun protection system automatically and depending on the temperature/humidity

Length x width x height: 40 x 40 x 12 mm

50680721 Black

Central controls



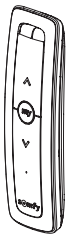
Gateway ONYX.CENTER

serves as interface between the smart phone and the individual control devices, forwards radio commands bi-directionally, also in combination with all other ONYX hand-held radio transmitters/wall-mounted radio transmitters

50680103

Radio system io – Somfy

Radio transmitter



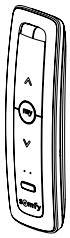
Hand-held radio transmitter Situo 1 io II

for manual control of one drive or several drives at the same time via radio

05140101_PURE Pure

Benefits of the product/product features

- Single, group or central control possible
- UP and DOWN buttons for opening and closing
- “my” button for stopping or calling up the adjustable sun/sight screen position
- Programming button at the back
- Status LED display
- Wireless/battery-operated
- Incl. magnetic wall bracket
- 1-channel hand-held radio transmitter



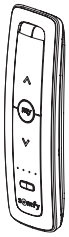
Hand-held radio transmitter Situo 1 A/M io II

to manually activate one or more io-products (io-drives or io-radio receivers) at the same time, switch for switching on/off the automatic control, 1-channel hand-held radio transmitter, unidirectional

05140127_PURE Pure

Benefits of the product/product features

- UP and DOWN buttons for opening and closing the selected product and for switching the light on/off.
- “my” button for stopping or calling up the adjustable sun/sight screen position
- Wireless/battery-operated
- Wall bracket for flexible installation



Hand-held radio transmitter Situo 5 io II

for the manual control of one drive or several drives, single, group or central control possible

05140102_PURE Pure

Benefits of the product/product features

- Single, group or central control possible
- UP and DOWN buttons for opening and closing
- “my” button for stopping or calling up the adjustable sun/sight screen position
- LEDs for transmission and battery status indication and channel selection
- “my” button for stopping or calling up the adjustable sun/sight screen position
- Wireless/battery-operated
- Incl. magnetic wall bracket
- 5-channel hand-held radio transmitter

Hand-held radio transmitter Situo 5 Variation A/M io II

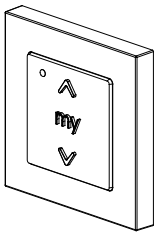
05140104_PURE Pure

Benefits of the product/product features

- Single, group or central control possible
- Scroll wheel for convenient and precise tilting of the slats
- UP and DOWN buttons for opening and closing
- "my" button for stopping or calling up the adjustable sun / sight screen position
- "Select" button and LED indication for channel selection
- Programming button at the back
- LED for transmission and battery status indication
- Wireless/battery-operated
- Incl. wall bracket
- 5-channel hand-held radio transmitter

Note:

For further color options see price list “Control devices”.



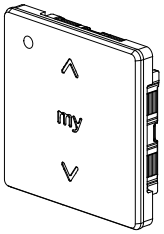
Wall-mounted radio transmitter Smoove Origin io with frame Pure

for manual control of one drive or several drives at the same time via radio

05140052_PURE Pure

Benefits of the product/product features

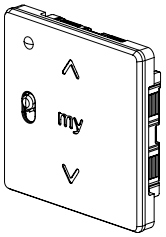
- Single, group or central control possible
- UP and DOWN buttons for opening and closing
- "my" button for stopping or calling up the adjustable sun / sight screen position
- Programming button at the back
- Mounting plate for easy and flexible wall installation, no flush-mounted box required
- Status LED display
- Wireless and battery-operated, thus minimum installation efforts
- 1-channel hand-held radio transmitter



Wall-mounted radio transmitter Smoove 1 IN io

manual control of one io radio drive/io radio receiver or multiple io radio drives/io radio receivers simultaneously by radio, without frame

05140056_PURE Pure

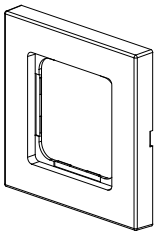


Wall-mounted radio transmitter Smoove A/M IN io Pure Shine

manual control of one io radio drive/io radio receiver or multiple io radio drives/io radio receivers simultaneously by radio, switch for turning the automatic mode on/off, without frame

05140065_PURE Pure

Accessories



Frame Smoove

suitable for all products by Smoove

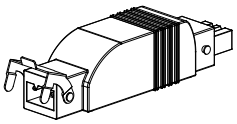
05140057_PURE	Pure
05140057_SILVERM	Silver Mat
05140057_BLACK	Black
05140057_WALNUT	Walnut
05140057_CHERRY	Cherry
05140057_AMBERB	Amber Bamboo
05140057_LIGHTB	Light Bamboo

Note:

For further color options see price list “Control devices”.

Radio system io – Somfy

Receiver



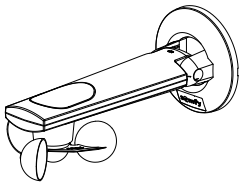
Radio receiver Screen Slim Receiver io

io radio receiver/transmitter (as adapter plug) for the io-activation of a drive

Length x width x height: 115 x 32 x 33 mm

05140034 Black

Sensors



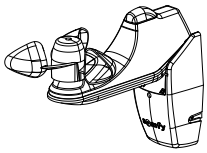
Radio-controlled wind sensor Eolis WireFree io

automatic (wind dependent) control of one io-drive or multiple io-drives via radio.

05200030

Benefits of the product / product features

- Reliable wind protection device in stylish, modern product design
- Solution for the facade without annoying cabling
- Easy and quick installation due to battery mode and wireless communication with the io-radio drive.
- A standard wind limit for all products can be set at the sensor.
- Display of the current limit

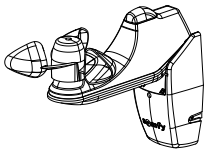


Radio-controlled wind sensor Eolis io 230V, rain option

automatic (wind dependent and optional rain dependent) control of one or more io-drives and io-receivers per radio, rain sensor only in combination with Ondeis 230 V

Width x height: 236 x 160 mm

05200009 Grey



Radio-controlled wind/sun sensor Soliris io 230 V, rain option

automatic (wind dependent, brightness dependent and optional rain dependent) control of one or more io-drives and io-receivers per radio, rain sensor only in combination with Ondeis 230 V

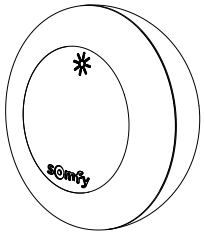
Width x height: 236 x 160 mm

05200113 Grey

Benefits of the product/product features

- Automatic sun function: Protects interiors from overheating and lets the outside brightness into the living area when there is little sunlight
- Wind Automatic: Protects awnings, screens and venetian blinds from wind damage
- Optional rain automatic in combination with Ondeis 230 V: Protects from rain and thereby extends the service life of the respective product.
- Two operational modes: Safety for the product by retracting it in the rain or comfort for the user by extending it in the rain.
- 230 V AC power supply is needed

Sensors



Bi-directional radio-controlled sun sensor Sunis WireFree II io

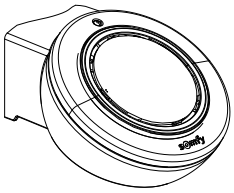
Automatic (lightness dependent) control of one io-drive or multiple io-drives via radio.

05200104

Benefits of the product / product features

- Battery-operated sensor for the facade without annoying cabling
- Easy, quick and flexible installation with separate wall holder
- Easy progarmming via one button at the sensor

Note: You can switch the automatic on or off via the A/M slide switch provided at the hand-held radio transmitter Situo 5 Variation A/M or at the wall-mounted radio transmitter Smoove A/M io.



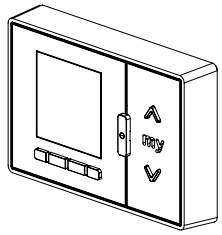
Precipitation sensor Ondeis

Sensor for rain

Length x width x height: 115 x 100 x 85 mm

05200035

Central controls



Radio-controlled timer switch Chronis io

Automatic (time dependent) and manual control of multiple io radio drives / io radio transmitters in one channel with up to 4 time commands per day

05200090

Benefits of the product / product features

- Large display with light blue backlight for maximum legibility.
- Direct access to the Mode Switching
  Mode ON: Radio-controlled timer switch is activated
  Mode OFF: manual activation of the products
  Mode Security switching for holidays: automatically changes the opening and closing times in a range from 0 to 30 minutes
- Individual opening and closing times for any day of the week individually programmable with up to 4 commands per day
- New Copy-Paste function, to conveniently add the times to other days.
- Display of a low battery and Indefinitely recording of the saved switching times, even in the case of a battery replacement

Radio system io – Somfy

Solar package

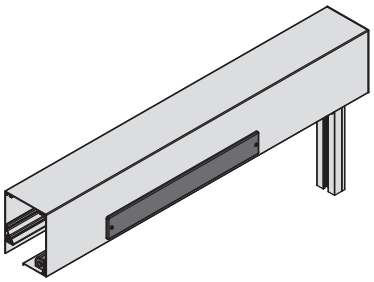
A solar package has been set up for VM07 and will be available from 1st May 2024.

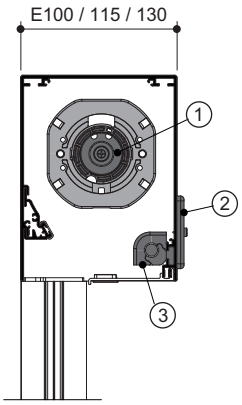
Description of the solar package:

The solar package consists of a solar panel, the battery and the Sunea io solar drive.
The radio remote control is not included in the package and has to be ordered separately.

Legend

① Sunea Solar Motor
② Solar panel
③ Battery





Limit sizes

KG	Drive system	Max. surface [m²]	Min. width [mm]	Max. width [mm]	Max. height [mm]
E100	Somfy Sunea io Solar	9	700	3000	3000
E115 E130	Somfy Sunea io Solar	10,5		3000	3500

Product definition and notes:

- Available for boxes E100/115/130.
- Minimum width: 700 mm
- Solar panel (500 mm wide) is always pre-assembled on the front side of the box at the factory.
- Battery installed behind the box front panel below the roller tube.
- The drive and solar panel are always installed on the left side, when viewed from the inside.
- Motor Somfy Sunea io Solar 6 Nm or 10 Nm up to maximum area of 10.5 m^2.
- Detection of obstacles in the up direction via torque detection, in the down direction with freewheel driver.
- Hand-held radio transmitter not included in the package, all io hand-held and wall-mounted radio transmitters compatible.

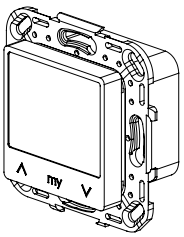
- Compatible io wind/sun sensor probably will be available from mid-2024.

Note:

Before commissioning, the motor must be connected to the Y-cable of the solar panel/battery. The inspection cover must be removed for this.

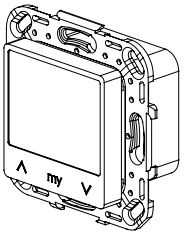
Wire-bound control components – Somfy

Switch



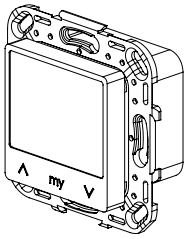
Programme time switch Chronis Smoove Uno S Pure with brightness control
(without frame)

05200098_PURE Pure



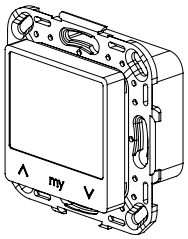
Programme time switch Chronis Smoove Uno IB+ with brightness control
for central control of multiple Smoove Uno IB+, without frame

05200099_PURE Pure



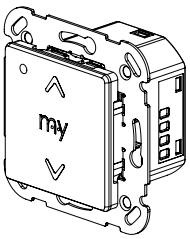
Programme timer Soliris Smoove Uno Pure
Programme timer for wind/sun sensor Soliris, automatic time, wind, rain, twilight and sun dependent control of one drive

05200101_PURE Pure



Programme timer Soliris Smoove IB+ Pure
Programme timer for wind/sun sensor Soliris, automatic lightness, time, wind, rain, twilight and sun dependent control; an additional Smoove Uno IB+ single drive control device is required per drive, without frame

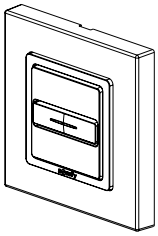
05200103_PURE Pure



Single drive control device Smoove Uno IB+ without frame
for manual control of a 230V drive for roller shutters, textile shading systems and Venetian blinds, without frame

05140083_PURE Pure

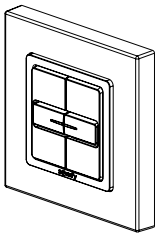
Note:
For further color options see price list “Control devices”.



Switch Smoove Uno frame

Switch Smoove Uno, for the direct activation of a motor, with frame

05120020 White

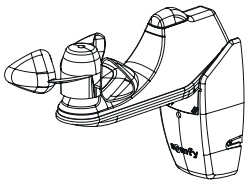


Switch Smoove Duo frame

Switch Smoove Duo, for the direct activation of two motors, with frame

05120021 White

Sensors



Wind/sun sensor Soliris

Wind/sun sensor for Soliris Smoove Uno Pure and Soliris Smoove IB+ Pure

EL040603

Radio system ProLine 2 – elero

Bidirectional radio system ProLine 2 – elero

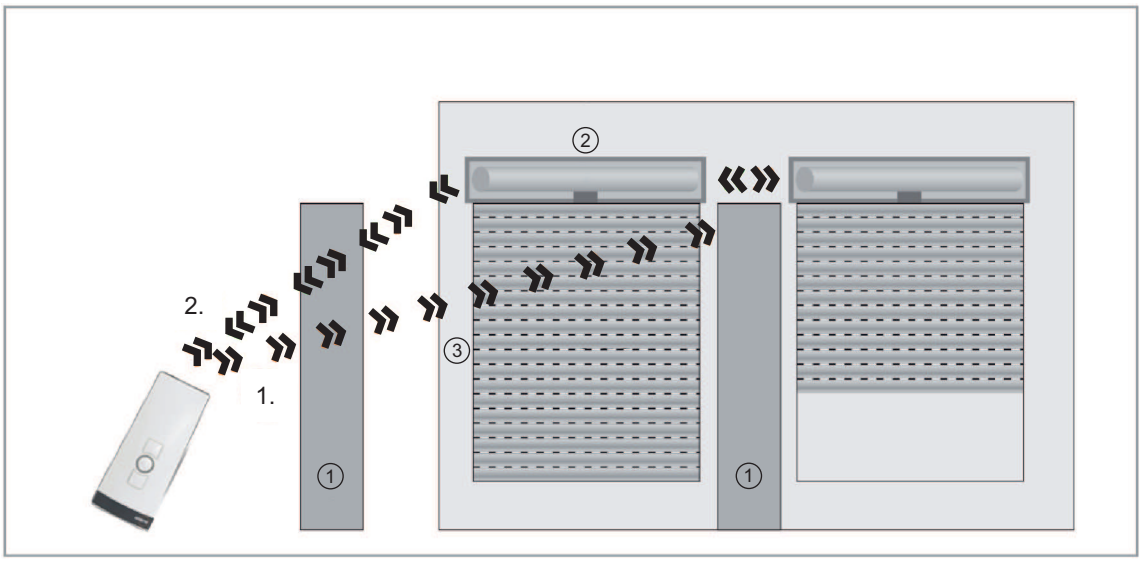
Compared to its predecessors, the new hand-held radio transmitter by elero provides you with an essential technical innovation: bidirectional wireless control. The characteristic of a bi-directional radio system is, that the transceiver (combination of transmitter and receiver) cannot only receive a signal, but can also transmit it. Compared to the previous uni-directional radio standard, this systems gives you two decisive advantages:

1. Direct return signal

The hand-held radio transmitter receives a return signal from the receiver showing the status of the signal processing. A look at the LED suffices: if the command has been executed successfully, the LED shows a green light. If, due to a malfunction of the receiver, the automatically repeated transmission failed, the status LED shows a red light.

2. More reliable and powerful with routing technology

The second major advantage of the bidirectional radio is the routing function – i.e. the automatic search of the radio signal for an alternative route should the direct connection be disturbed. Even obstacles or large distances do not disturb the signal transmission. Due to the routing (redirection) the signal reaches the radio receiver automatically. The radio signal is transmitted via an alternative route, this means via another bi-directional radio receiver (transceiver). The signal finds its way to the target device via five "hops" at maximum. Therewith the reliability of the complete radio control increases.



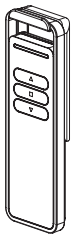
Further advantages of the bi-directional radio technology:

- Use of a licence-free 868 MHz band
- No interferences with DECT, WLAN and PMR systems
- Minor radio pollution (max. 10mW) due to few short radio transmissions

Legend

① Wall
② Receiver
③ Shading

Radio transmitter

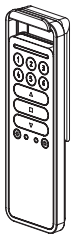


Hand-held radio transmitter MonoCom 1

05140116

Benefits of the product/product features

- 1-channel hand-held radio transmitter
- Large UP-STOP-DOWN buttons
- Status LED display
- Control via one or more receivers
- Commercially available batteries
- Learn button at the back
- ProLine 2 radio system - reliable feedback and real routing function
- Color: pure white
- Incl. wall bracket for optional installation to the wall

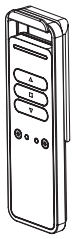


Hand-held radio transmitter VarioCom 6

05140119

Benefits of the product/product features

- 6-channel hand-held radio transmitter
- 1 central channel
- Status LED display
- Learn button at the back
- Channel display with 6 LEDs
- Commercially available batteries
- ProLine 2 radio system - reliable feedback and real routing function
- Color: pure white
- Incl. wall bracket for optional installation to the wall



Hand-held radio transmitter LumeroCom 1

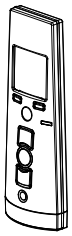
05140118

Benefits of the product/product features

- 1-channel hand-held radio transmitter with manual/automatic switchover
- Usable as single-, group- or central transmitter
- Uni- and bidirectional
- Large up-, stop- and down buttons
- Manual-/automatic switchover
- Color: pure white
- Reliable transmission via radio frequency 868 MHz
- ProLine 2 radio system - reliable feedback and real routing function
- Incl. wall bracket for optional installation to the wall

Radio system ProLine 2 – elero

Radio transmitter



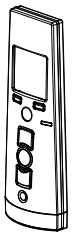
Hand-held radio transmitter with time function TempoTel 2-868

05140066

Field of application and use
10+1-channel hand-held radio transmitter for uni- and bidirectional radio systems with integrated time switch. The hand-held radio transmitter has an illuminated display menu navigation that is controlled via joystick. The menu is intuitively operated. Activating an astro- and holiday programme or a daily- or weekly control programme is possible. The TempoTel 2 is provided with 10 individual channels, two group channels and a central channel. An individual naming for each channel is possible. The display shows the current settings, e.g. which channel is selected. With the joystick and the menu buttons you can easily navigate through the menu shown in the display. Large UP, STOPP and DOWN buttons facilitate the intuitive operation. A lit ring makes the transmission commands and the feedback signals visible. The selection button serves for the switching-over from the automatic modus to the manual modus.

Benefits of the product / product features

- 10-channel hand-held radio transmitter
- 2 group channels + 1 central channel
- Status LED display
- Select button for manual/automatic switching with LED display and plain text display
- Learn button at the back
- Several languages can be selected with illuminated display
- Pre-set in the factory
- Convenient control and channel selection via joystick
- Astro programme worldwide adjustable
- Vacation programme
- Commercially available batteries
- Full downward compatibility to unidirectional elero-radio products
- Color: silver
- Incl. magnetic wall bracket



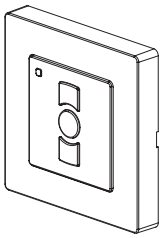
Hand-held radio transmitter MultiTel 2-868

05140067

Field of application and use
The MultiTel 2 is a purely bidirectional 15-channel hand-held radio transmitter for the control of roller shutter and sun protection units as well as heating systems. It offers configuration possibilities for up to five different groups. The completed commands are visualised by easily understandable display symbols and a LED display. In addition, the MultiTel 2 is provided with multiline text fields, which are freely editable – a real plus on operating comfort! Reliable transmission via radio frequency 868 MHz.

Benefits of the product / product features

- 15-channel hand-held radio transmitter
- 5 group channels + 1 central channel
- Status LED display
- Select button for manual/automatic switching with LED display and display symbols
- Learn button at the back
- Several languages can be selected with illuminated display
- Pre-set in the factory
- Convenient control and channel selection via joystick
- Commercially available batteries
- Color: silver
- Incl. magnetic wall bracket

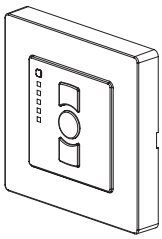


Wall-mounted radio transmitter MonoTec-868 1

05140121

Benefits of the product/product features

- 1-channel wall-mounted radio transmitter, bi-directional
- Push-button UP, STOP, DOWN/CLOSE, Teaching push-button P (rear side)
- Easy mounting with wall bracket
- Status LED to display the system status
- Commercially available coin cell
- Suitable for all common switch programmes (suitable adapter frames possible upon request)
  For the following switch programmes no adapter frame is required:
  Busch-Jaeger Duro 2000 SI and Busch-Jaeger Reflex SI
- Button for manual/automatic switching
- Color: pure white

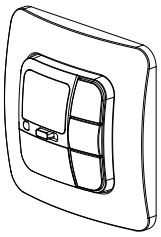


Wall-mounted radio transmitter QuinTec-868 5

05140122

Benefits of the product/product features

- 5-channel wall-mounted radio transmitter, bi-directional
- Push-button UP, STOP, DOWN/CLOSE, Teaching push-button P (rear side)
- Easy mounting with wall bracket
- Status LED to display the system status
- Commercially available coin cell
- Suitable for all common switch programmes (suitable adapter frames possible upon request)
  For the following switch programmes no adapter frame is required:
  Busch-Jaeger Duro 2000 SI and Busch-Jaeger Reflex SI
- Button for manual/automatic switching
- Color: pure white



Wall-mounted radio transmitter with time function AstroTec-868 bidi

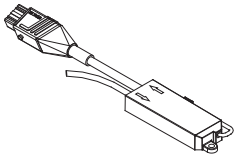
05140071

Field of application and use
The AstroTec-868 bidi is a wall-mounted radio transmitter for the exclusive use with bidirectional receivers. The integrated timer can be easily and conveniently operated via the push of a button. It can be used as individual, group or central control device and, due to its permanent adjustment to sunrise and sunset, it ensures the optimum opening and closing times over the course of the year. The AstroTec-868 bidi is factory-adjusted with the current date and time (CET) and automatically controls the drive at the astro-times (sunrise and sunset times). A manual operation of the AstroTec-868 bidi is possible at any time.

Benefits of the product / product features

- The clock is preset in the factory (date, time, switching times)
- Menu navigation in 15 languages
- Astro programme, worldwide adjustable
- Automatic switch to summer and standard time
- Vacation programme
- Light sensor can be connected (sun / twilight function)
- Intermediate position
- Ventilation or tilting position
- Manual/automatic switching
- Transmission control LED
- Commercially available batteries
- Color: alpine-white

Receiver

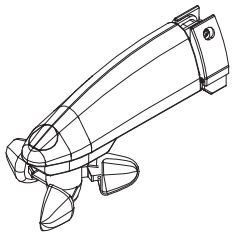


Radio receiver Combio III-868 RM
Radio receiver to controlling 230 V tubular drives

05140076

Radio system ProLine 2 – elero

Sensors



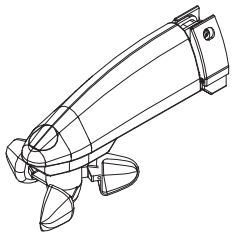
Radio sensor wireless for wind and sun Aero-868 AC Plus

05200048

Field of application and use
The Aero-868 Plus is a wireless-working sun / wind control. It is provided with large solar cells and therefore also suitable for venetian blinds and vertical awnings. The solar cells ensure a self-sustaining functioning of the device. The threshold values for the sun-/wind control are adjusted via a rotary switch that is provided at the bottom side of the Aero-868 Plus. The operating commands are transmitted via radio signal (868 MHz) to a radio-controlled drive or an external radio receiver, that is provided in the unit. The Aero-868 Plus works only in combination with the radio receivers of the elero radio system. A hand-held/wall-mounted radio transmitter is used to operate the unit manually.

Benefits of the product / product features

- Light and wind warning device for awnings, venetian blinds and vertical awnings
- Integrated photovoltaic cells
- No laying of cables necessary
- Various fixing possibilities
- Transparent housing
- Quick-start function
- Nominal value adjustable
- Various operating modes adjustable
- Uni- and bidirectional receivers can be controlled simultaneously
- Full downward compatibility to unidirectional elero-radio products



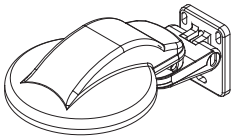
Radio sensor wireless for wind / light Aero-868 Plus

05200047

Field of application and use
The Aero-868 Plus is a wireless-working sun / wind control. It is provided with large solar cells and therefore also suitable for venetian blinds and vertical awnings. The solar cells ensure a self-sustaining functioning of the device. The threshold values for the sun-/wind control are adjusted via a rotary switch that is provided at the bottom side of the Aero-868 Plus. The operating commands are transmitted via radio signal (868 MHz) to a radio-controlled drive or an external radio receiver, that is provided in the unit. The Aero-868 Plus works only in combination with the radio receivers of the elero radio system. A hand-held/wall-mounted radio transmitter is used to operate the unit manually.

Benefits of the product / product features

- Light and wind warning device for awnings, venetian blinds and vertical awnings
- Integrated photovoltaic cells
- No laying of cables necessary
- Various fixing possibilities
- Transparent housing
- Quick-start function
- Nominal value adjustable
- Various operating modes adjustable
- Uni- and bidirectional receivers can be controlled simultaneously
- Full downward compatibility to unidirectional elero-radio products



Radio sensor for wind/light/rain Sensero-868 AC Plus

Electrically powered radio sensor for wind, light, and rain, transparent casing

05200046

Benefits of the product/product features

- Light / twilight and wind sensor
- Mains connection 230 V/50 Hz
- Transparent housing
- Threshold value adjustable
- Various operating modes adjustable
- Uni- and bidirectional receivers can be controlled simultaneously
- Full downward compatibility to unidirectional elero-radio products
- With additional precipitation sensor

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