



# ROLLER SHUTTERS

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@EASY

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

### 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



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# General information

Roller shutters are made to order. 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.

The drive side of a roller shutter is always determined by looking at it from the inside.

## 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

For the assessment of the product features of roller shutters, we recommend the guidelines of the Professional Association Roller Shutter + Sun Protection Devices (Bundesverband Rolläden + Sonnenschutz e.V.).

See homepage [www.rs-fachverband.de](http://www.rs-fachverband.de).



Guidelines for the assessment of product features of roller shutters. (Source: Professional Association Roller Shutter + Sun Protection Devices)

## Roller shutters

Based on EN 13659 , the guiding depth of the roller shutter curtain in the guide rails is set to 1% of the element width.

**On hot summer days a heat build-up can occur behind closed roller shutter curtains – distortion of plastic profiles (reaching the dimensional stability under heat  $\triangle$  heat distortion temperature by Vicat).**

**In order to prevent damage, the curtains must be opened so far that all light gaps are opened.**

**Thanks to rear ventilation, the distortion of the plastic profiles (roller shutter curtain) is reduced!**

With completely darkened rooms, it may happen that slight light reflections show from the inside over the entire surface of the individual roller shutter curtains. These light reflections are only visible from a reduced angle of view inside the individual roller shutter profile chambers. This phenomenon is called the polygon effect; i.e. a S-shaped standing of the complete roller shutter curtain surface inside the guide rails. This occurs, because a roller shutter profile requires space inside the guide rails to be raised or lowered. In other words: A roller shutter curtain is never positioned in an exact vertical position inside the guide rails. The polygon effect as well as the consequent light reflections are phenomena that cannot be influenced and thus no grounds for complaints.

Light reflections between the roller shutter rods and the guide rails are possible, especially if light colors for the roller shutter curtain and the guide rails are selected.

The grain of the roller shutter rods in wooden décor can be irregular.

For specific construction projects, the construction connections must be planned accordingly. Only schematic construction connections were sketched in the illustration. Adjoining trades are to be inserted in the coordination.

Both the roller shutter end rod and insect screen end rod are visible in the raised condition (they do not completely disappear in the box).

## 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/(m<sup>2</sup>K) 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  $\Delta U_{WB} = 0.05 \text{ W/m}^2\text{K}$  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 from 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

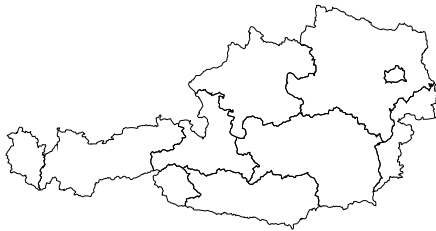
## Wind resistance classes and operating classes according to EN 13659

**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!

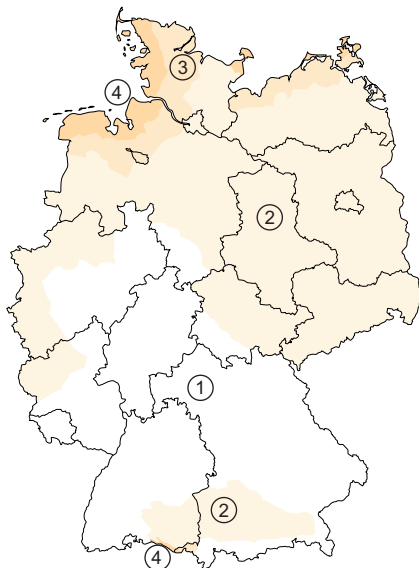
The Federal Association for Roller Shutter & Sun Protection Devices has elaborated the ift guideline that specifies, what wind resistance class is required for which case of application. This guideline "Application recommendation for exterior blinds and shutters" subdivides the federal territory in wind 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

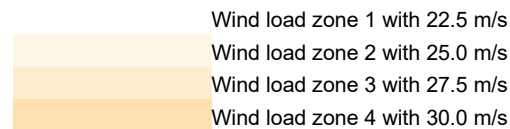


#### Wind load zones in Austria

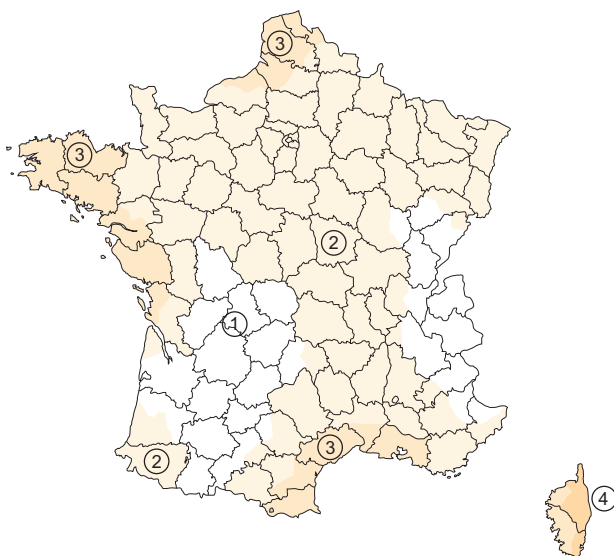
In Austria a calculation of the wind load according to the ÖNORM EN 1991-1-4, ÖNORM B 1991-1-4 must be carried out for each location!



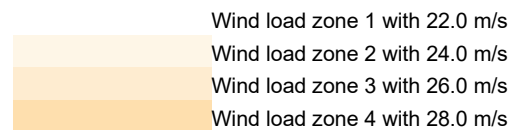
#### Wind load zones in Germany



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



#### Wind load zones in France



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 <sub>b,0</sub> [m/s]	a <sub>0</sub> [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](http://www.madosoft.it)  
(CNR-DT 207-2008)

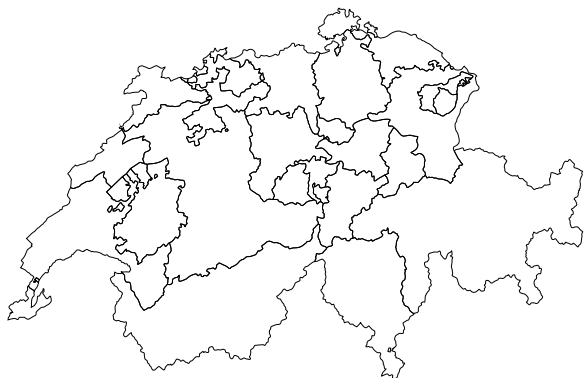
**Note:**

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

V<sub>b,0</sub> [m/s]      Wind speed  
a<sub>0</sub> [m]            Sea level

**Wind load zones in Switzerland**

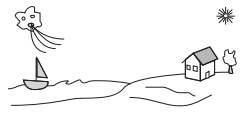
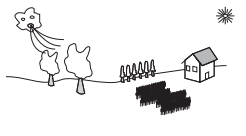

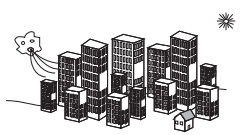
For Switzerland, the VSR information sheet (Vertical Systems Reseller) regarding the influence of the wind resistance on sun and weather protection systems and the standard SIA 261 stated therein applies.



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

# Wind resistance

## 2. Determining the terrain category

<b>Terrain category I</b> High seas, lakes with at least 5 km of free space downwind, plain country without obstacles	
<b>Terrain category II</b> Terrain with hedges, several farm buildings, houses or trees, e.g. agricultural area	
<b>Terrain category III</b> Suburbs, industrial zones or areas zoned for economic activities, forests	
<b>Terrain category IV</b> 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				Installation height of the exterior blinds and shutters in an average range of >8-20 m				Installation height of the exterior blinds and shutters in an average range of >20-100 m			
	Wind load zone				Wind load zone				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.

## Wind resistance according to EN 13659

### Wind resistances – Specification of wind resistance classes

Pursuant to EN 13659, a wind resistance class has to be specified for roller shutters. Seven (7) wind resistance classes (0 to 6) are defined for this purpose. Wind resistance class 0 is given, if the roller shutter does not meet the requirements of the wind resistance class 1, or if the wind resistance class has not been measured.

To determine the wind resistance classes, the roller shutter curtain will be exposed to the respective pressure as shown in the opposite table. This showed, that the 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.

It is possible that the wind resistance class may be improved by modifying the roller shutter profile or the guide rail.

Wind resistance class	Nominal test pressure p [N/m <sup>2</sup> ]	Safety test pressure 1.5 p [N/m <sup>2</sup> ]
0	<50	<75
1	50	75
2	70	100
3	100	150
4	170	250
5	270	400
6	400	600

### Operating forces

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

The following table lists the operating classes according to EN 13659.

Type of operation	Operating force in N	
	Class 1	Class 2
Crank handle	30	15
Lift tape	90	50

Source: EN 13659



### Operability in case of frost

Frozen roller shutters must not be operated. 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 ice and snow before it is operated manually.

# Wind resistance

## 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).

Wind force (degrees acc. to Beaufort)	Description	Average wind speed in a height of 10 m above open country		Dynamic pressure [Pa]	Effect of the wind in the interior land
		m/s	km/h		
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*

Wind resistance classes pursuant to EN 13659:2004+A1:2008	Dynamic pressure [Pa]
0	<50
1	50
2	70
3	100
4	170
5	270
6	400

# Structural-physical parameters

## Thermal protection

In the closed condition, a roller shutter forms an almost stagnant air layer towards the window. This insulating air layer reaches the maximum insulation effect with a distance of approx. 40 mm between the roller shutter curtain and the window pane as well as the best possible sealing to the outside. Thus, a roller shutter reduces the heating energy demand in the winter and helps to keep the rooms pleasingly cool in the summer.

With new windows (U-value 0.7 W/(m<sup>2</sup>K)) heat losses through the window can be reduced by approx. 15%, with older windows (U-value 1.4 W/(m<sup>2</sup>K) and larger) by even up to 30%.

Thanks to the additional thermal protection of a roller shutter the surface temperatures on the inside of the room increase, by which the well-being is increased in these rooms and the elimination of potential moisture problems is supported (renovation of an old building).

## Fire prevention

The TOP FOAM is made of expanded polystyrene (HBCD-free) with a gross density of 30kg/m<sup>3</sup>. 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

In addition to the insulating effect, the air layer between the roller shutter and the window offers damping properties against sound waves, provided that the distance between the roller shutter curtain and the window pane is more than 50 mm.

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](http://www.ivrsa.de) under "technical documents". Leaflet: Information to DIN 4109-1:2018 Sound insulation in above-ground construction - Part 1: Minimum requirements.

# Structural-physical parameters

Box type	Box		Thermotechnical characteristics			Noise insulation values	
	$U_{ob}$ [W/(m <sup>2</sup> K)]	$f_{Rsi}$	Installation situation Wall structure	$\Psi$ [W/(mK)]	$f_{Rsi}$	Box $R_w$ [dB] Roller shutter curtain up	Box $R_w$ [dB] Roller shutter curtain down
<b>TOP FOAM RvU</b>							
RvU 260/300	0.58	0.76	Monolithic brickwork, image 250	0.13	0.76	38	43
			Externally insulated brickwork, image 253	0.11	0.77		
RvU 300/300	0.46	0.75	Monolithic brickwork, image 250	0.12	0.75	40	45
			Externally insulated brickwork, image 253	0.09	0.76		
RvU 365/300	0.40	0.75	Monolithic brickwork, image 250	0.14	0.75	39	47
			Externally insulated brickwork, image 253	0.09	0.76		
RvU 425/300	0.38	0.75	Monolithic brickwork, image 250	0.15	0.75		
			Externally insulated brickwork, image 253	0.09	0.76		
RvU 260/250	0.67 (0.60)	0.72 (0.73)	Monolithic brickwork, image 250	0.13	0.73	43	44
			Externally insulated brickwork, image 253	0.12	0.74		
RvU 300/250	0.58 (0.52)	0.71 (0.73)	Monolithic brickwork, image 250	0.14	0.72	44	45
			Externally insulated brickwork, image 253	0.11	0.73		
RvU 365/250	0.54 (0.48)	0.71 (0.73)	Monolithic brickwork, image 250	0.16	0.72	43	45
			Externally insulated brickwork, image 253	0.11	0.73		
RvU 425/250	0.52 (0.46)	0.71 (0.73)	Monolithic brickwork, image 250	0.17	0.72		
			Externally insulated brickwork, image 253	0.11	0.72		
<b>TOP FOAM RvU.S</b>							
RvU.S 243/300	0.65	0.74	Core-insulated brickwork, image 256	0.12	0.75		
			Timber construction, image 259	0.15	0.76		
RvU.S 283/300	0.50	0.74	Core-insulated brickwork, image 256	0.09	0.75		
			Timber construction, image 259	0.11	0.76		
RvU.S 348/300	0.43	0.74	Core-insulated brickwork, image 256	0.09	0.75		
			Timber construction, image 259	0.12	0.75		
RvU.S 243/250	0.73 (0.64)	0.71 (0.72)	Core-insulated brickwork, image 256	0.12	0.72		
			Timber construction, image 259	0.15	0.74		
RvU.S 283/250	0.63 (0.56)	0.70 (0.72)	Core-insulated brickwork, image 256	0.11	0.72		
			Timber construction, image 259	0.14	0.73		
RvU.S 348/250	0.58 (0.51)	0.70 (0.72)	Core-insulated brickwork, image 256	0.11	0.72		
			Timber construction, image 259	0.14	0.72		

Box type	Thermotechnical characteristics					Noise insulation values	
	Box		Installation situation			Box	
	$U_{sb}$ [W/(m <sup>2</sup> K)]	$f_{Rsi}$	Wall structure	$\Psi$ [W/(mK)]	$f_{Rsi}$	$R_w$ [dB] Roller shutter curtain up	$R_w$ [dB] Roller shutter curtain down
<b>TOP FOAM RvA</b>							
RvA 260/300	0.58	0.79	Monolithic brickwork, image 250	0.13	0.80	42	47
			Externally insulated brickwork, image 253	0.15	0.80		
RvA 300/300	0.41	0.79	Monolithic brickwork, image 250	0.12	0.79	43	50
			Externally insulated brickwork, image 253	0.10	0.80		
RvA 365/300	0.33	0.78	Monolithic brickwork, image 250	0.13	0.79	43	49
			Externally insulated brickwork, image 253	0.09	0.79		
RvA 425/300	0.30	0.78	Monolithic brickwork, image 250	0.14	0.79		
			Externally insulated brickwork, image 253	0.08	0.79		
RvA 260/250	0.55	0.79	Monolithic brickwork, image 250	0.12	0.79	49	52
			Externally insulated brickwork, image 253	0.13	0.79		
RvA 300/250	0.42	0.78	Monolithic brickwork, image 250	0.12	0.78	49	53
			Externally insulated brickwork, image 253	0.10	0.79		
RvA 365/250	0.36	0.77	Monolithic brickwork, image 250	0.13	0.78	49	52
			Externally insulated brickwork, image 253	0.09	0.78		
RvA 425/250	0.35	0.77	Monolithic brickwork, image 250	0.15	0.78		
			Externally insulated brickwork, image 253	0.08	0.78		
<b>TOP FOAM RvA.S</b>							
RvA.S 243/300	0.61	0.80	Core-insulated brickwork, image 256	0.12	0.80		
			Timber construction, image 259	0.16	0.80		
RvA.S 283/300	0.42	0.79	Core-insulated brickwork, image 256	0.08	0.79		
			Timber construction, image 259	0.12	0.79		
RvA.S 348/300	0.34	0.78	Core-insulated brickwork, image 256	0.07	0.79		
			Timber construction, image 259	0.11	0.79		
RvA.S 243/250	0.56	0.76	Core-insulated brickwork, image 256	0.10	0.79		
			Timber construction, image 259	0.14	0.79		
RvA.S 283/250	0.43	0.78	Core-insulated brickwork, image 256	0.08	0.78		
			Timber construction, image 259	0.12	0.78		
RvA.S 348/250	0.37	0.77	Core-insulated brickwork, image 256	0.08	0.78		
			Timber construction, image 259	0.11	0.78		

**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
- $\Psi$  [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

The colors from the "HELLA Color Worlds" brochure are available for guide rails, roller shutter boxes and end rods.

### 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 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			●	●

# Standard colors

## Standard colors for powder-coated aluminium parts

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

## Colors for roller shutter profiles

Color designation			Plastic profiles		Aluminium profiles				
			K37	K52	A37	AV42	A52	T37	S37
Beige	0003		●	●	●	●	●	●	●
Mahogany	0011				●				
Walnut	0044				●				
Dark beige	VSR 0110				●			●	●
Purple red	VSR 0330				●			●	●
Bronze	VSR 0780				●			●	●
Light ivory	RAL 1015				●	●			
Moss-green	RAL 6005				●			●	●
Light oak	6104		●*	●*	●				
Golden Oak	6105		●*	●*	●	●			
Anthracite grey	RAL 7016				●	●	●	●	●
Light grey	RAL 7035		●	●	●		●	●	●
Agate grey	RAL 7038		●	●	●	●	●		
Sepia brown	RAL 8014				●			●	●
Dark brown	RAL 8019				●				
White-aluminium	RAL 9006				●	●	●	●	●
Grey-aluminium	RAL 9007				●	●	●	●	●
Normal white	RAL 9016		●	●	●	●	●	●	●
Anthracite iron mica	DB 703				●	●	●	●	●
<b>On demand:</b>									
Special colors according to RAL								●	●

\* only limited color-fastness in case of extreme exposure to sunlight

- Color deviations due to different profile materials and color deviations from the RAL color shade may occur.

# Standard colors

## Colors for attachment parts of the end rods

Component	Color number							
End rod with sealing profile, angle end rod 2-part	RAL 9016	RAL 8019	-	RAL 7016	C0	C33	C34	Special color
Angle end rod 1-part	RAL 9016	-	RAL 9007	RAL 7016	C0	-	-	Special color
Lateral glider for angular end rod 1-part	white	anthracite-grey	grey	anthracite-grey	grey	anthracite grey	anthracite grey	According to special color definition
	white	Brown	grey	anthracite-grey	grey	Brown	Brown	According to special color definition
Limit stop								




## Overview of décors for TOP FOAM attachment system


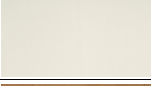


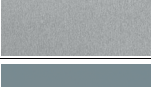
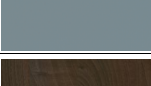







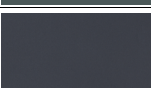


Color no.	HELLA designation		Application	Renolit		Hornschurch	
				Color no.	Description	Color no.	Description
11	Mahogany 13		Hornschurch	2097 013-167	Mahogany	436-2085	tp sapeli
13	Walnut		Hornschurch	2178 007-167	Walnut	436-2048	tp staufer oak mocca
16	Bog oak		Hornschurch	2052 089-167	Oak medium	436-2007	tp montana Oak tobacco
181*	Black brown		Hornschurch	8518 05-167	Black brown	436-5071	tp black brown
19	Light oak		Renolit	3156 003-167	Rustic oak	not available	-
21	Silver-grey		Hornschurch	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		Hornschurch	2052 090-167	Mountain oak	426-2005	tp montana Oak natural
28	Oak-maroon		Hornschurch	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		Hornschurch	2065 021-167	Mahogany	436-2001	tp Cherry mahogany
31	Tobacco oak		Renolit	3167 002-168	Light oak	not available	-
32	Dark green		Hornschurch	6125 05-167	Fir green	436-5021	tp Fir green
33	Salamander-douglas fir		Hornschurch	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.

# Standard colors

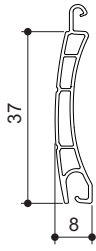
## Overview of décors for TOP FOAM attachment system

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 Stauffer 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

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

# Application sizes

## Type: K37



Double-walled plastic profile made of extruded, solid colored plastic (37x8 mm), with 2 grooves; the profiles are telescoped with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

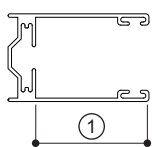
Number of rods:	27 per metre in height
Min. width:	400 mm
Max. width:	1800 mm
Max. surface:	3.1 m <sup>2</sup>
Weight:	3.6 kg/m <sup>2</sup> (without end rod)
Covering width:	37 mm

	Front roller shutter box size min. octagonal shaft				Built-in roller shutter winding diameter octagonal shaft		HELLA TRAV box size min. octagonal shaft		TOP FOAM box size min. octagonal shaft	
	40	40+IS	60	60+IS	40 <sup>2)</sup>	60 <sup>2)</sup>	60	60 <sup>3)</sup>	60	60+IS
1000	13	13XL	13	13XL	116	128	180/280	180/280	250	250
1100	13	13XL	13	13XL	116	128	180/280	180/280	250	250
1200	13	13XL	13	13XL	120	136	180/280	180/280	250	250
1300	13	13XL	13	16	120	136	180/280	180/280	250	250
1400	13	13XL	13	16	132	140	180/280	180/280	250	250
1500	13	16	16	16	132	140	180/280	180/280	250	250
1600	13	16	16	16	145	145	180/280	180/280	250	250
1700	16	16	16	16	145	145	180/280	180/280	250	250
1800	16	16	16	16XL	148	150	180/280	195/280	250	250
1900	16	16XL	16	16XL	148	150	180/280	195/280	250	250
2000	16	16XL	16	16XL	150	160	180/280	195/280	250	250
2100	16	16XL	16	16XL	158	160	180/280	195/280	250	250
2200	16	16XL	16	16XL	162	166	180/280	210/280	250	250
2300	16	16XL	16	16XL	162	166	180/280	210/280	250	250
2400	16	16XL	16	16XL	166	176	180/280	210/280	250	250
2500	16	16XL	16	16XL	166	176	195/280	210/280	250	250
2600	16		18		172	180	195/280	210/280	250	250
2800	18		18		172	180	195/280	210/280	300	300
3000	18		18		178	190	210/280		300	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails  
New footnote Intermediate sizes can be determined using the roller shutter calculator!

### Wind resistance classes as per EN 13659

Running channel depth	18 mm	25 mm	33 mm	41 mm
Wind resistance class	up to a width of [mm]			
6		700	700	700
5	700	1000	1000	1000
4	1000	1100	1200	1300
3	1200	1400	1500	1600
2	1400	1600	1600	1800
1	1500	1700	1800	
GR types	02, 33	01, 08, 15, 16, 17, 20, 21, 22, 23, 30, 32, 34, 35, 41, 43, 45, 56, 64, 69, 71, 73, 75, 77, 89, 90, 92	11	12



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.



## Tables to select a motor for roller shutter profile K37

Required torque [Nm] for motor drive with octagon steel shaft 40 mm

Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4
800	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5	5	6	6
1000	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	8
1200	2	2	3	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9
1400	2	2	3	3	4	5	5	6	6	6	7	8	8	9	9	10	10	11
1600	2	3	3	4	5	5	6	6	7	7	8	9	9	10	10	11	12	12
1800	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	13	
2000	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13			
2200	3	4	5	5	6	7	8	9	10	11	11	12	13					
2400	3	4	5	6	7	8	9	10	11	12	12	13						
2600	3	5	6	7	8	9	10	11	12	13								
2800	4	5	6	7	8	9	11	12	13									
3000	4	5	6	8	9	10	11	13										
3200	4	6	7	8	10	11	12	13										
3400	5	6	8	9	10	12	13											
3600	5	7	8	10	11	13												
3800	6	7	9	10	12	13												
4000	6	7	9	11	13													
				9 Nm		13 Nm												

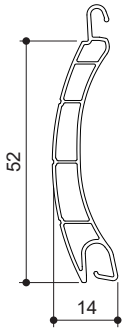
Required torque [Nm] for motor drive with octagon steel shaft 60 mm

Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	1	2	2	2	2	2	3	3	3	3	4	4	4	4	4	5	5
800	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	6	7
1000	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8	8	8	9
1200	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
1400	2	3	3	4	5	5	6	7	7	8	8	9	10	#	11	11	12	13
1600	3	3	4	5	5	6	7	8	8	9	10	10	11	12	12	13	14	15
1800	3	4	5	5	6	7	8	9	9	10	12	12	12	13	14	15	16	16
2000	3	4	5	6	7	8	9	9	10	11	13	13	14	15	16	17	18	18
2200	3	5	5	6	7	8	9	10	11	12	14	14	15	16	17	18	19	20
2400	4	5	6	7	8	9	10	11	12	14	16	16	17	18	19	20	21	22
2600	4	5	6	8	9	10	11	12	14	15	17	17	18	19	21	22	23	24
2800	4	6	7	8	9	11	12	13	15	16	18	18	20	21	22	24	25	26
3000	5	6	7	9	10	12	13	14	16	17	20	20	21	23	24	25	27	28
3200	5	6	8	9	11	12	14	15	17	18	21	21	23	24	26	27	29	30
3400	5	7	9	10	12	13	15	17	18	20	23	23	25	26	28	29	31	33
3600	6	7	9	11	12	14	16	18	19	21	24	24	26	28	30	31	33	35
3800	6	8	10	11	13	15	17	19	21	22	26	26	28	30	31	33	35	37
4000	6	8	10	12	14	16	18	20	22	24	28	28	30	32	34	35	37	39
	6 Nm		10 Nm		15 Nm		20 Nm						30 Nm					40 Nm

**Note:** An increase of the torque by +10% per linked element must be observed.  
 Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Type: K52



Double-walled plastic profile made of extruded, solid colored plastic (52x14 mm), with 3 grooves. Profiles are telescoped directly with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

Number of rods:	19 per metre in height
Min. width:	400 mm
Max. width:	2300 mm
Max. surface:	4.5 m <sup>2</sup>
Weight:	3.5 kg/m <sup>2</sup> (without end rod)
Covering width:	52 mm

	Front roller shutter box size min. octagonal shaft				Built-in roller shutter winding diameter octagonal shaft		HELLA TRAV box size min. octagonal shaft		TOP FOAM box size min. octagonal shaft	
	40	40+IS	60	60+IS	40 <sup>2)</sup>	60 <sup>2)</sup>	60	60 <sup>3)</sup>	60	60+IS
1000						138	180/280		250	250
1100						138	180/280		250	250
1200						156	180/280		250	250
1300						156	180/280		250	250
1400						156	180/280		250	250
1500						156	180/280		250	250
1600						176	195/280 <sup>4)</sup>		250	250
1700						176	195/280 <sup>4)</sup>		250	250
1800						176	195/280 <sup>4)</sup>		250	250
1900						176	195/280		250	250
2000						190	210/280		250	250
2100						190	210/280		250	250
2200						190	210/280		250	250
2300						195	210/280		250	250
2400						195			250	250
2500						210			250	250
2600						210			300	300
2800						216			300	
3000						216			300	

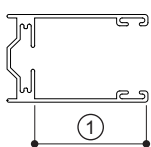
- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails
- 4) maximum height 210/230

### Wind resistance classes as per EN 13659

Running channel depth	25 mm
Wind resistance class	up to a width of [mm]
6	1100
5	1300
4	1500
3	1800
2	2200
1	2300

### GR types

36, 44, 46, 54, 57, 64, 70, 72, 74, 76, 91, 93



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.

## Tables to select a motor for roller shutter profile K52

Required torque [Nm] for motor drive with octagon steel shaft 60 mm

Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
800	2	2	2	3	3	3	4	4	4	5	5	6	6	6	7	7	7	8
1000	2	2	3	3	4	4	5	5	6	6	7	7	8	8	8	9	9	10
1200	2	3	3	4	5	5	6	6	7	7	8	9	9	10	10	11	11	12
1400	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14
1600	3	4	4	5	6	7	8	8	9	10	11	11	12	13	14	15	15	16
1800	3	4	5	6	7	8	8	9	10	11	12	13	14	15	16	16	17	18
2000	3	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2200	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	21	22	23
2400	4	5	7	8	9	10	12	13	14	15	16	18	19	20	21	23	24	25
2600	5	6	7	9	10	11	13	14	15	17	18	19	21	22	24	25	26	28
2800	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	27	29	30
3000	5	7	9	10	12	13	15	17	18	20	21	23	25	26	28	29	31	33
3200	6	7	9	11	13	14	16	18	20	21	23	25	27	28	30	32	34	35
3400	6	8	10	12	14	16	17	19	21	23	25	27	29	31	32	34	36	38
3600	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	
3800	7	9	11	13	16	18	20	22	24	26	29	31	33	35	37	39		
4000	7	10	12	14	17	19	21	24	26	28	31	33	35	37	40			

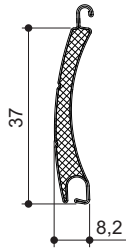
10 Nm | 15 Nm | 20 Nm | 30 Nm | 40 Nm

**Note:** An increase of the torque by +10% per linked element must be observed.

Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Type: A37



Double-walled, roll formed aluminium roller shutter profile with light gaps (37x8.2 mm), with 2 grooves; hollow space foamed with polyurethane. Outer surfaces coated with thick lacquer, profiles are telescoped with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

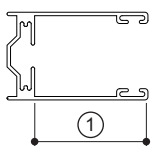
Number of rods:	27 per metre in height
Min. width:	400 mm
Max. width:	3000 mm
Max. surface:	7.5 m <sup>2</sup>
Weight:	2.6 kg/m <sup>2</sup> (without end rod)
Covering width:	37 mm

	Front roller shutter box size min. octagonal shaft				Built-in roller shutter winding diameter octagonal shaft		HELLA TRAV box size min. octagonal shaft		TOP FOAM box size min. octagonal shaft	
	40	40+IS	60	60+IS	40 <sup>2)</sup>	60 <sup>2)</sup>	60	60 <sup>3)</sup>	60	60+IS
1000	11	13XL	13	13XL	118	122	180/280	180/280	250	250
1100	13	13XL	13	13XL	118	122	180/280	180/280	250	250
1200	13	13XL	13	13XL	125	130	180/280	180/280	250	250
1300	13	13XL	13	13XL	125	130	180/280	180/280	250	250
1400	13	13XL	13	16	132	136	180/280	180/280	250	250
1500	13	13XL	13	16	132	136	180/280	180/280	250	250
1600	13	13XL	13	16	135	145	180/280	180/280	250	250
1700	13	13XL	16	16	135	145	180/280	180/280	250	250
1800	16	16	16	16	142	147	180/280	195/280	250	250
1900	16	16	16	16XL	142	147	180/280	195/280	250	250
2000	16	16XL	16	16XL	146	155	180/280	195/280	250	250
2100	16	16XL	16	16XL	146	155	180/280	195/280	250	250
2200	16	16XL	16	16XL	146	155	180/280	210/230	250	250
2300	16	16XL	16	16XL	153	155	180/280	210/230	250	250
2400	16	16XL	16	16XL	153	155	180/280	210/230	250	250
2500	16	16XL	16	16XL	165	167	180/280	210/230	250	250
2600	16		18		165	167	180/280	210/230	250	250
2800	16		18		165	167	180/280	210/230	250	
3000	18		18		178	180	195/280		250	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails

### Wind resistance classes as per EN 13659

Running channel depth	18 mm	25 mm	33 mm	41 mm
Wind resistance class	up to a width of [mm]			
6	1400	1500	1700	1800
5	1500	1800	2000	2100
4	1800	2200	2300	2800
3	2200	2600	2800	3000
2	2600	2900	3000	
1	2900	3000		
GR types	02, 33	01, 08, 15, 16, 17, 20, 21, 22, 23, 30, 32, 34, 35, 41, 43, 45, 56, 64, 69, 71, 73, 75, 77, 89, 90, 92	11	12



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.

## Tables to select a motor for roller shutter profile A37

Required torque [Nm] for motor drive with octagon steel shaft 40 mm

Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	4
800	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5
1000	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5	5	6	6
1200	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7
1400	2	2	2	3	3	3	4	4	5	5	5	6	6	7	7	7	8	8
1600	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	9
1800	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
2000	2	3	3	4	4	5	5	6	7	7	8	8	9	9	10	11	11	12
2200	2	3	4	4	5	5	6	7	7	8	9	9	10	10	11	12	12	13
2400	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	
2600	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13			
2800	3	4	5	5	6	7	8	9	10	10	11	12	13					
3000	3	4	5	6	7	8	9	9	10	11	12	13						
3200	3	4	5	6	7	8	9	10	11	12	13							
3400	4	5	6	7	8	9	10	11	12	13								
3600	4	5	6	7	8	9	11	12	13									
3800	4	5	6	8	9	10	11	12										
4000	4	6	7	8	9	11	12	13										

4 Nm | 9 Nm | 13 Nm

Required torque [Nm] for motor drive with octagon steel shaft 60 mm

Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4
800	1	2	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
1000	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	6	7
1200	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8
1400	2	2	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9	10
1600	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	11	11
1800	2	3	3	4	5	5	6	6	7	8	8	9	9	10	11	11	12	12
2000	2	3	4	5	5	6	6	7	8	9	9	10	11	11	12	12	13	14
2200	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13	14	15	15
2400	3	4	5	5	6	7	8	9	9	10	11	12	13	13	14	15	16	17
2600	3	4	5	6	7	8	8	9	10	11	12	13	14	15	15	16	17	18
2800	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	19
3000	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
3200	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	20	21	23
3400	4	5	6	8	9	10	11	12	13	15	16	17	18	19	21	22	23	24
3600	4	6	7	8	9	11	12	13	14	16	17	18	19	21	22	23	24	26
3800	5	6	7	9	10	11	13	14	15	17	18	19	21	22	23	25	26	27
4000	5	6	8	9	11	12	13	15	16	18	19	21	22	23	25	26	28	29

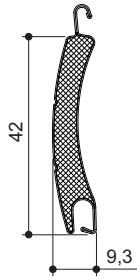
6 Nm | 10 Nm | 15 Nm | 20 Nm | 30 Nm

**Note:** An increase of the torque by +10% per linked element must be observed.  
Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!



# Application sizes

## Type: AV42



Double-walled, roll formed aluminium roller shutter profile with light gaps (42x9.3 mm), with 2 grooves; hollow space foamed with polyurethane. Outer surfaces coated with thick lacquer, profiles are telescoped with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

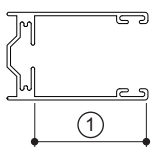
Number of rods:	24 per metre in height
Min. width:	400 mm
Max. width:	3500 mm
Max. surface:	8 m <sup>2</sup>
Weight:	2.90 kg/m <sup>2</sup> (without end rod)
Covering width:	42 mm

	Front roller shutter box size min. octagonal shaft				Built-in roller shutter winding diameter octagonal shaft		HELLA TRAV box size min. octagonal shaft		TOP FOAM box size min. octagonal shaft	
	40	40+IS	60	60+IS	40 <sup>2)</sup>	60 <sup>2)</sup>	60	60 <sup>3)</sup>	60	60+IS
1000	13	13XL	16	13XL	130	140	180/280	180/280	250	250
1100	13	13XL	16	16	130	140	180/280	180/280	250	250
1200	16	13XL	16	16	140	150	180/280	180/280	250	250
1300	16	16	16	16XI	140	150	180/280	180/280	250	250
1400	16	16XL	16	16XL	145	155	180/280	180/280	250	250
1500	16	16XL	16	16XL	145	155	180/280	195/280	250	250
1600	16	16XL	16	16XL	155	163	180/280	195/280	250	250
1700	16	16XL	16	16XL	155	163	180/280	195/280	250	250
1800	16	16XL	16	16XL	155	167	180/280	195/280	250	250
1900	16	16XL	16	20	155	167	180/280	210/230	250	250
2000	16	16XL	18	20	167	172	180/280	210/230	250	250
2100	18	16XL	18	20	167	172	180/280	210/230	250	250
2200	18	20	18	20	172	183	195/280 <sup>4)</sup>	210/280	250	250
2300	18	20	18	20	172	183	195/280	210/280	250	250
2400	18	20	18	20	180	185	195/280	210/280	250	250
2500	20	20	20	20	180	185	195/280	210/280	250	250
2600	20		20		180	185	195/280		250	250
2800	20		20		180	198	195/280		300	
3000	20		20		195	200	195/280		300	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails
- 4) maximum height 210/230

### Wind resistance classes as per EN 13659

Running channel width	18 mm	25 mm	33 mm	41 mm
Wind resistance class	up to a width of [mm]			
6	1700	1900	1900	2000
5	2100	2200	2300	2400
4	2600	2800	2900	3000
3	3400	3500	3500	3500
2	3500			
1				
GR types	02, 33	01, 08, 15, 16, 17, 20, 21, 22, 23, 30, 32, 34, 35, 41, 43, 45, 56, 64, 69, 71, 73, 75, 77, 89, 90, 92	11	12



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.

## Tables to select a motor for roller shutter profile AV42

Required torque [Nm] for motor drive with octagon steel shaft 40 mm

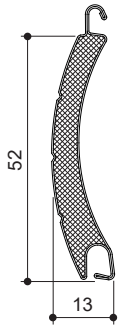
Height [mm]	Width [mm]																	
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
600	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4
800	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
1000	1	2	2	2	3	3	3	4	4	4	4	5	5	5	6	6	6	7
1200	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	8	8
1400	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	9
1600	2	2	3	3	4	5	5	5	6	6	7	8	8	9	9	9	10	11
1800	2	3	3	4	5	5	6	6	7	7	8	9	9	10	10	11	11	12
2000	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	13	13
2200	3	3	4	5	6	6	7	8	9	9	10	11	11	12	13			
2400	3	4	5	5	6	7	8	9	9	10	11	12	13	13				
2600	3	4	5	6	7	8	9	9	10	11	12	13						
2800	3	4	5	6	7	8	9	10	11	12	13							
3000	4	5	6	7	8	9	10	11	12	13								
3200	4	5	6	7	9	10	11	12	13									
3400	4 Nm	4	5	7	8	9	11	12	13									
3600		5	6	7	9	10	11	13										
3800		5	6	8	9	11	12	13										
4000		5	7	8	10	11	13											

**Note:** An increase of the torque by +10% per linked element must be observed.

Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Type: A52



Double-walled, roll formed aluminium roller shutter profile with light gaps (52x13 mm), with 3 grooves; hollow space foamed with polyurethane. Outer surfaces coated with thick lacquer, profiles are telescoped with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

Number of rods:	19 per metre in height
Min. width:	400 mm
Max. width:	4000 mm
Max. surface:	10 m <sup>2</sup>
Weight:	3 kg/m <sup>2</sup> (without end rod)
Covering width:	52 mm

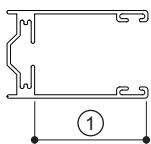
	Front roller shutter box size min. octagonal shaft				Built-in roller shutter winding diameter octagonal shaft		HELLA TRAV box size min. octagonal shaft		TOP FOAM box size min. octagonal shaft	
	40	40+IS	60	60+IS	40 <sup>2)</sup>	60 <sup>2)</sup>	60	60 <sup>3)</sup>	60	60+IS
1000						133	180/280		250	250
1100						133	180/280		250	250
1200						145	180/280		250	250
1300						145	180/280		250	250
1400						148	180/280		250	250
1500						148	180/280		250	250
1600						162	180/280		250	250
1700						162	180/280 <sup>4)</sup>		250	250
1800						165	195/280		250	250
1900						165	195/280		250	250
2000						173	195/280		250	250
2100						173	195/280		250	250
2200						173	195/280		250	250
2300						180	210/280		250	250
2400						180	210/280		250	250
2500						190	210/280		250	250
2600						190	210/280		250	300
2800						198			300	
3000						207			300	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails
- 4) maximum height 210/230

### Wind resistance classes as per EN 13659

Running channel depth	25 mm
Wind resistance class	up to a width of [mm]
6	2000
5	2400
4	2800
3	3400
2	3500
1	

GR types 36, 44, 46, 54, 57, 64, 70, 72, 74, 76, 91, 93



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.



## Tables to select a motor for roller shutter profile A52

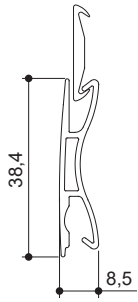
Required torque [Nm] for motor drive with octagon steel shaft 60 mm

Height [mm]	Width [mm]																		
	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	
600	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5	
800	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	
1000	2	2	3	3	3	4	4	5	5	5	6	6	7	7	7	8	8	9	
1200	2	2	3	3	4	5	5	5	6	6	7	8	8	8	9	9	10	11	
1400	2	3	3	4	5	5	6	6	7	8	8	9	9	10	11	11	12	12	
1600	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14	
1800	3	4	4	5	6	7	7	8	9	10	11	11	12	13	14	14	15	16	
2000	3	4	5	6	6	7	8	9	10	11	12	13	13	14	15	16	17	18	
2200	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	19	
2400	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	
2600	4	5	6	8	9	10	11	12	13	14	16	17	18	19	20	21	23	24	
2800	4	6	7	8	9	11	12	13	14	16	17	18	19	21	22	23	25	26	
3000	5	6	7	9	10	12	13	14	16	17	18	20	21	22	24	25	27	28	
3200	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	27	29	30	
3400	5	7	8	10	12	13	15	16	18	20	21	23	24	26	28	29	31	32	
3600	6	7	9	11	13	14	16	18	19	21	23	25	26	28	30	31	33	35	
3800	6	8	10	12	13	15	17	19	21	23	24	26	28	30	32	34	35	37	
4000	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	
	6 Nm	10 Nm		15 Nm		17 Nm		20 Nm			30 Nm					40 Nm			

**Note:** An increase of the torque by +10% per linked element must be observed.  
 Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Type: T37 (daylight roller shutter profile)



Double-walled, extruded aluminium roller shutter profile (38.4x8.5 mm), without grooves; outer surfaces powder-coated.

### Roller shutter intermediate profile

Extruded plastic profile made of PMMA with diffusion part (21.9x3.5 mm) The diffusion part causes a free of strips transport of the light into the interior of the room. In the lower part of the roller shutter curtain the profiles are provided with ventilation punchings. Inserted into the T37-profile as supporting profile. The blind is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

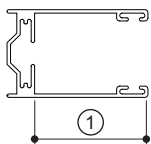
Number of rods:	27 per metre in height	Weight:	9 kg/m <sup>2</sup> (without end rod)
Min. width:	400 mm	Covering width:	38.4 mm
Max. width:	2500 mm		
Max. surface:	4.5 m <sup>2</sup>		

	Front roller shutter box size min. octagonal shaft		Built-in roller shutter winding diameter octagonal shaft	HELLA TRAV box size min. octagonal shaft	
	50	50+IS	50 <sup>2)</sup>	50	50 <sup>3)</sup>
1000	13	16	125	180/280	180/280
1100	16	16XL	125	180/280	180/280
1200	16	16XL	140	180/280	195/280
1300	16	16XL	140	180/280	195/280
1400	16	20	150	180/280	195/280
1500	16	20	150	180/280	210/230
1600	18	20	155	180/280	210/280
1700	18	20	155	195/280 <sup>4)</sup>	210/280
1800	18	20	175	195/280	210/280
1900	20	20	175	195/280	210/280
2000	20	20	180	195/280	
2100	20	20	180	195/280	
2200	20		185	210/280	
2300	20		185	210/280	
2400			197	210/280	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails
- 4) maximum height 210/230

### Wind resistance classes as per EN 13659

Running channel depth	18 mm	25 mm	33 mm	41 mm
<b>Wind resistance class</b>				
6	1800	2300	2400	2500
6	2200	2500	2500	
to 4	2500			
<b>GR types</b>	02, 33	01, 08, 15, 16, 17, 20, 21, 22, 23, 30, 32, 41, 43, 45, 56	11	12



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.

## Tables to select a motor for roller shutter profile T37

Required torque [Nm] for motor drive with Top-Safe shaft (aluminium)

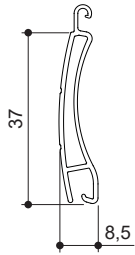
		600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000			
		Width [mm]																				
Height [mm]	6 Nm	600	2	2	3	3	4	5	5	6	6	7	8	8	9	9	9	10	11			
		800	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13	14	15	15		
		1000	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
		1200	4	5	7	8	9	10	11	13	14	15	16	18	19	20	21	22	24	25		
		1400	5	6	8	9	11	12	14	15	17	18	19	21	22	24	25	27	28	30		
		1600	6	7	9	11	12	14	16	18	19	21	23	24	26	28	29	31	33	35		
	10 Nm	1800	6	9	11	12	15	16	19	21	22	25	26	29	31	32	35	36	39			
		2000	7	10	12	14	17	19	21	23	26	28	30	33	35	37	40					
		2200	8	11	13	16	19	21	24	26	29	32	34	37	39							
		2400	9	12	15	18	21	24	27	29	32	35	38									
		2600	10	13	16	20	23	26	29	32	36	39										
		2800	11	15	18	22	25	29	32	36	39											
		3000	12	16	20	24	28	31	35	39												
		3200	13	17	22	26	30	34	39													
		3400	14	19	23	28	33	37														
		3600	15	20	25	30	35	40														
		15 Nm	3800	16	22	27	32	38														
4000	17		23	29	34	40																
		20 Nm	30 Nm			40 Nm																

**Note:** An increase of the torque by +10% per linked element must be observed.

Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Type: S37 (Top-Safe profile)



Double-walled, extruded high-strength aluminium roller shutter profile, foam-free, with light gaps (37x8.5 mm), with 2 grooves. Outer surfaces powder-coated.

Profiles are telescoped with a self-supporting connection. The light gaps are shaped like long holes that are punched into the connection piece. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

### Limit sizes

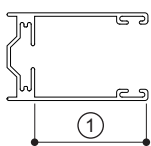
Number of rods:	27 per metre in height
Min. width:	400 mm
Max. width:	2500 mm
Max. surface:	6 m <sup>2</sup>
Weight:	7 kg/m <sup>2</sup> (without end rod)
Covering width:	37 mm

	Front roller shutter box size min. octagonal shaft		Built-in roller shutter winding diameter octagonal shaft	HELLA TRAV box size min. octagonal shaft	
	50	50+IS	50 <sup>2)</sup>	50	50 <sup>3)</sup>
1000	13	13XL	127	180/280	180/280
1100	13	13XL	127	180/280	180/280
1200	13	16	135	180/280	180/280
1300	13	16	135	180/280	180/280
1400	16	16	145	180/280	180/280
1500	16	16	145	180/280	180/280
1600	16	16XL	147	180/280	195/280
1700	16	16XL	147	180/280	195/280
1800	16	16XL	160	180/280	210/230
1900	16	16XL	160	180/280	210/230
2000	16	16XL	163	180/280	210/230
2100	18	16XL	163	195/280	210/230
2200	18	16XL	163	195/280 <sup>4)</sup>	210/280
2300	18	20	172	195/280	210/280
2400	18	20	172	195/280	210/280
2500	18	20	175	195/280	210/280
2600	18		175	195/280	
2800	18		190	195/280	
3000	20		190	210/280	

- 1) Element height including box for front-mounted roller shutter nova. Hanging height for built-in roller shutter Clear height for HELLA TRAV.
- 2) If the component is foreseen to be installed in a recess, an allowance of at least 30 mm must be observed.
- 3) More difficult installation with flush-mounted guide rails
- 4) maximum height 210/230

### Wind resistance classes as per EN 13659

Running channel depth	18 mm	25 mm	33 mm	41 mm
Wind resistance class				
6	1700	2200	2300	2500
5	2100	2500	2500	
4	2500			
3				
2				
1				
GR types	02, 33	01, 08, 15, 16, 17, 20, 21, 22, 23, 30, 32, 41, 43, 45, 56	11	12



- ① Running channel depth

### Comments:

- The maximum limit dimensions of the roller shutter profile are listed. These may differ when used in the various products and can be found in the product-specific chapters.
- Deviating channel depths must be rounded down to the next smaller size in the table.

## Tables to select a motor for roller shutter profile S37

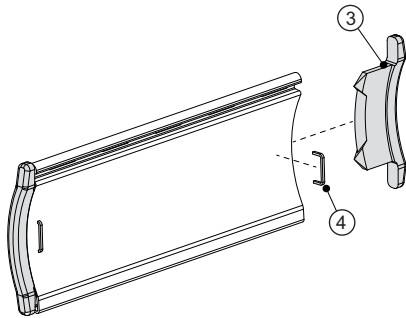
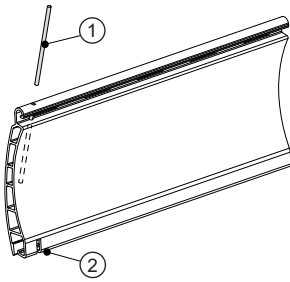
Required torque [Nm] for motor drive with Top-Safe shaft (aluminium)

		600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	
		Width [mm]																		
Height [mm]	6 Nm	600	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14
		800	3	4	5	6	6	7	8	9	10	11	12	12	13	14	15	16	17	17
		1000	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		1200	4	5	6	8	9	10	11	12	14	15	16	17	18	20	21	22	23	24
		1400	5	6	7	9	10	11	13	14	16	17	18	20	21	22	24	25	27	28
		1600	5	7	8	10	11	13	14	16	18	19	21	22	24	25	27	28	30	31
		1800	6	7	9	11	12	14	16	18	19	21	23	24	26	28	30	31	33	35
		2000	6	8	10	12	14	16	18	20	21	23	25	27	29	31	33	35	37	39
	10 Nm	2200	7	9	11	13	15	17	19	22	24	26	28	30	32	34	36	38		
		2400	7	10	12	14	17	19	21	23	26	28	30	33	35	37	40			
		2600	8	11	13	15	18	21	23	25	28	31	33	35	38					
		2800	9	11	14	17	19	22	25	28	30	33	36	38						
		3000	9	12	15	18	21	24	27	30	33	36	39							
		3200	10	13	16	19	23	26	29	32	35	38								
		3400	11	14	17	21	24	28	31	34	38									
		3600	11	15	18	22	26	29	33	36	40									
3800	12	16	20	23	27	31	35	39												
4000	13	17	21	25	29	33	37													

**Note:** An increase of the torque by +10% per linked element must be observed.  
 Tables serve as the basis for specifying the torque! The dimensional restrictions are shown in the limit size tables!

# Application sizes

## Locking of the curtain



All blinds are locked as standard. For PVC blinds, the individual roller shutter profiles are secured against lateral movement by means of a weft wire. For aluminium curtain, this is done by means of a locking piece

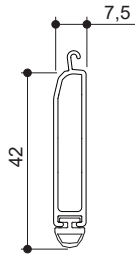
### Legend

- ① Weft wire for PVC curtain
- ② Opening for weft wire
- ③ Locking piece for aluminium curtain
- ④ Locking clamp for aluminium curtain (depending on the locking piece used)



# End rods

## General



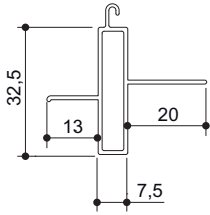
### End rod for small spacing

made of extruded aluminium, with sealing profile.  
with inserted weighting steel

Standard with profiles for small spacing

### Field of application

nova front-mounted roller shutter	●
Built-in roller shutter Roller shutter blind	●
Built-in roller shutter RvI and RvA	●
Built-in roller shutter in the HELLA TRAV	●
TOP FOAM	●



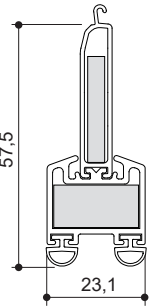
### End rod for small spacing

made of extruded aluminium with stop, lugs on both sides  
with inserted weighting steel

Can only be used with concealed drain without water caps!

### Field of application

nova front-mounted roller shutter	
Built-in roller shutter Roller shutter blind	●
Built-in roller shutter RvI and RvA	●
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	



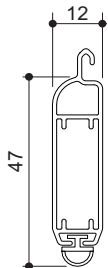
### Top-Safe end rod for running width small

made of extruded aluminium with slid-in strengthening  
profile and two continuous steel inserts

Available with model nova Top-Safe front-mounted roller  
shutter

### Field of application

nova front-mounted roller shutter	●
Built-in roller shutter Roller shutter blind	
Built-in roller shutter RvI and RvA	
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	



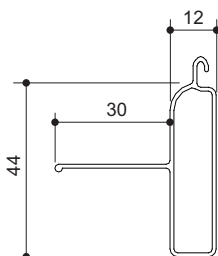
### End rod for large spacing

made of extruded aluminium, with sealing profile.  
with inserted weighting steel

Standard with profiles for large spacing

### Field of application

nova front-mounted roller shutter	
Built-in roller shutter Roller shutter blind	●
Built-in roller shutter RvI and RvA	●
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	●



### End rod for large spacing

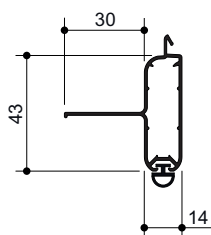
made of extruded aluminium with stop tab on one side  
with inserted weighting steel

Not recommended if guide rail is plastered in, as end rod  
cannot be replaced.

### Field of application

nova front-mounted roller shutter	
Built-in roller shutter Roller shutter blind	
Built-in roller shutter RvI and RvA	
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	●





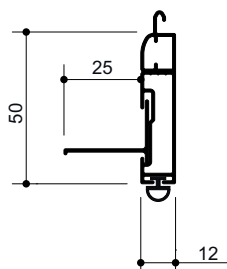
**End rod for large spacing**

made of extruded aluminium with stop tab on one side, with sealing profile with inserted weighting steel

Not recommended if guide rail is plastered in, as end rod cannot be removed.

**Field of application**

nova front-mounted roller shutter	
Built-in roller shutter Roller shutter blind	●
Built-in roller shutter RvI and RvA	●
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	

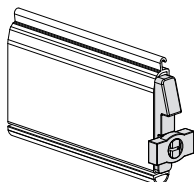


**End rod 2-part for running width large**

made of extruded aluminium with stop tab on one side, with sealing profile with inserted weighting steel

**Field of application**

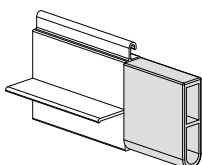
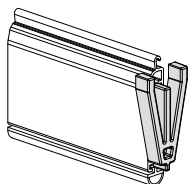
nova front-mounted roller shutter	
Built-in roller shutter Roller shutter blind	●
Built-in roller shutter RvI and RvA	●
Built-in roller shutter in the HELLA TRAV	
TOP FOAM	



**Stopper rotatable / concealed stop**

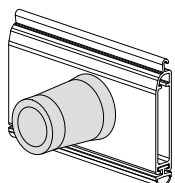
for end rod with sealing profile for small and large running widths

Standard with the nova front-mounted roller shutter. Optional for built-in roller shutters and TOP FOAM.



**End cap**

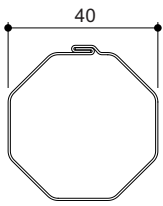
for end rod with stop tab.



**Limit stop**

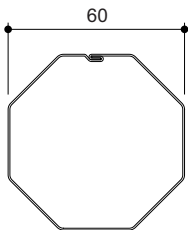
for end rod with sealing profile for small and large running widths. Length 20 mm, 28 mm or 40 mm.

# Shaft and suspension



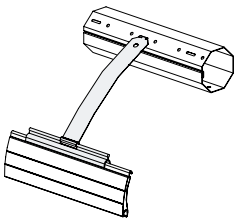
## Octagon shaft 40 mm

made of roll formed sheet steel, 0.6 mm



## Octagon shaft 60 mm

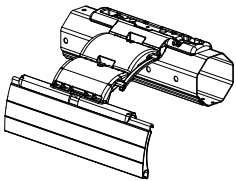
made of roll-formed sheet steel, 0.6 mm, or 1 mm



## Safety and fixing spring

made of sheet steel, plastic-coated

Standard for lift tape.

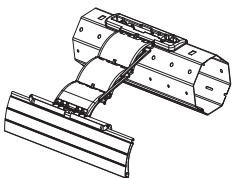


## Rigid shaft connection

from plastic, serves as lift-up protection with motor drives.

Standard with crank handle and motor drive.

The shaft connection is mounted by pushing it sideways into the rectangle punch holes of the octagonal tube










# Model overview

Type designation	Image	Model
nova front-mounted roller shutter extruded square-shaped		NOSQ NDSQ
nova front-mounted roller shutter, extruded, square design		NOSE NDSE
nova front-mounted roller shutter extruded round		NOSR NDSR
nova front-mounted roller shutter – Top-Safe		NOTE
nova front-mounted roller shutter – Plaster base element		NOSP NDSP

Type designation	Image	Model
Built-in roller shutter - right roller		NBRO
Built-in roller shutter – Left roller		ERO
TOP FOAM top-mounted roller shutter		TOPFOAM
Shaft roller shutters		SR01.

# Model overview

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

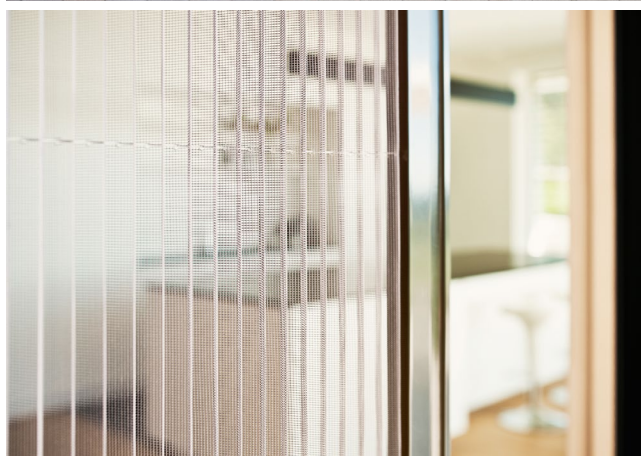
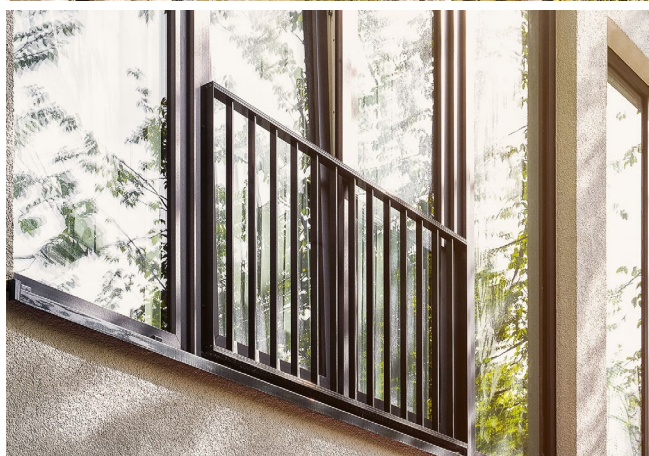
# WINDOW AND FACADE

# Window and facade



In the WINDOWS & FACADES chapter, all systems are presented that are mounted directly on the window and therefore require a visible box (fascia). These are elements that are mounted after the completion of the façade.





General

Window and facade

Front-mounting systems

Build and Renovate

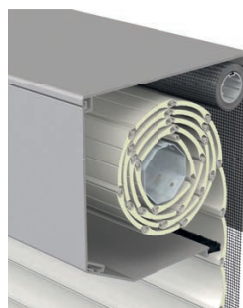
Front-mounting systems with plaster bases

Installation systems

Attachment systems

# nova front-mounted roller shutter

Roller shutter in the extruded aluminium box



The integrated insect screen roller blind made of weatherproof, plastic-coated fibreglass fabric offers reliable protection against insects.



Possibility of operation via self-sufficient energy supply with solar drive

## Limit sizes

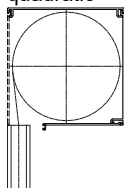
Profile type	Max. complete width [mm]	Min. complete width [mm]	Max. complete height [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	1800	400*	3000	3.1	3.6
A37	3000	400*	4000	7.5	2.6
AV42	3500	400*	3450	8.0	2.9
T37	2500	400*	2300	4.5	9.1
S37	2500	400*	3000	6.0	7.0

\* Depending on the drive system, the minimum complete width is higher than indicated in the table above:

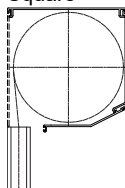
- 400 mm with crank handle
- 425 mm with short motor SW60
- 500 mm with belt
- 500 mm with solar drive RS100 Solar io SW60
- 535 mm with short motor SW40

## Box forms and box sizes

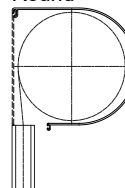
quadratic



Square



Round

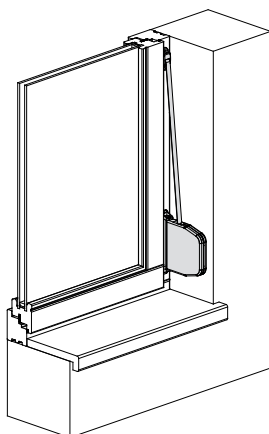


Box size	11	13	13XL	16	16XL	18	20
Box height [mm]	115	139	139	169	169	185	209
Box depth [mm]	115	139	159	169	186	185	209
Box depth round [mm]	122	150	167	177	193	193	219
quadratic	●	●	●	●	●	●	●
Square	●	●	●	●	●	●	●
Round	●	●	●	●	●	●	●

## Types of drives

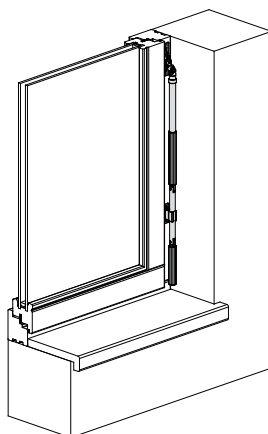
### Lift tape drive

with lift tape roll and swivelling take-up reel



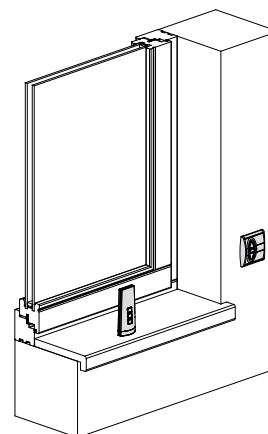
### Crank handle drive

with bevel gear unit, diagonal bearing, crank rod with folding handle and crank holder



### Motor drive Plug&Play

230V, incl. 3 m motor cable (2.6 m from side cover), without switch



#### Scope of delivery

- Roller shutter box extruded without rear panel with box shape square, square-shaped and round
- Drive belt drive, crank drive, motor drive
- Blind locked, end rod with weighting steel, seal, concealed stopper
- Guide rail 53x22 mm or 45x22mm with guide rail inserts
- Aluminium parts according to HELLA Color world
- Mounting material

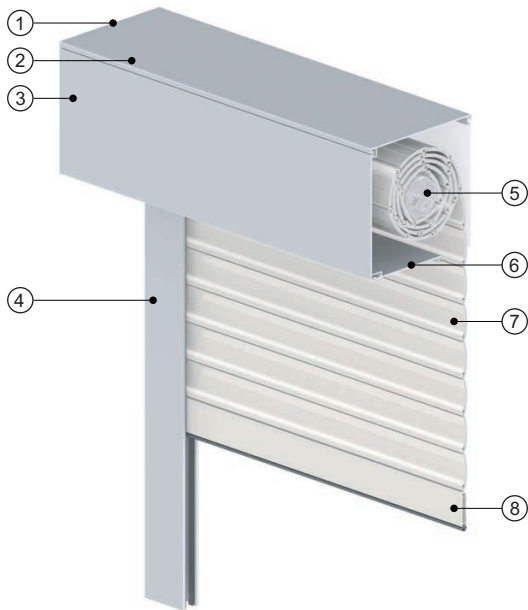
#### Supplementary equipment

- Integrated insect protection roller blind with run-up brake
- Box sealing brush
- Top board at the rear side extruded
- Roller shutter profile AV42, S37, T37
- Operation with radio motor
- Drive and control for second emergency route
- Solar operation
- Toggle catch with slidable lattice grate
- Variety of different guide rails

#### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design
- Insect screens
- High-quality construction elements guarantee a long lifespan and convenient operation

# nova front-mounted roller shutter



## Field of application and use

Energy saving front-mounted roller shutter for after installation in new and old buildings. The box is pushed onto the guide rail by means of the side part stays for a self-supporting installation.

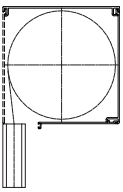
## Benefits of the product/product features

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Light regulation
- Façade design
- Insect screens

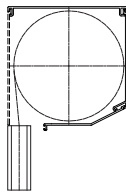
## Types of drives

- Lift tape
- Crank handle drive
- Motor drive

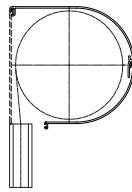
quadratic



Square



Round



## Legend

- ① Side cover
- ② Top board profile upper side
- ③ Top board profile front side
- ④ Guide rail with seal or brush inserts
- ⑤ Octagon steel shaft
- ⑥ Top board profile inspection cover with groove to insert the brush
- ⑦ Roller shutter curtain
- ⑧ End rod with sealing profile

## Technical product description

### Roller shutter box

#### quadratic/square

4-part: Top board profiles upper side, front side, inspection cover and rear side (optional)

Material Extruded aluminium

#### Round

3-part: Top board profiles upper side, inspection cover and rear side (optional)

Material Extruded aluminium

- Connected with stable hinge connection for revision purposes
- The box is closed with side covers made of cast aluminium

#### Box sizes

quadratic: Q11, Q13, Q13XL, Q16, Q16XL, Q18, Q20

square: V11, V13, V13XL, V16, V16XL, V18, V20

round: R11, R13, R13XL, R16, R16XL, R18, R20

### Guide rails

#### Standard dimension 53x22 mm

Material Extruded aluminium

Details with seal or brush inserts

- The mounting holes are closed with covering caps
- Additional guide rails see chapter "Accessories for guide rails"!

### Shaft

#### Octagon shaft 40x0.6 mm:

made of galvanised steel, standard with belt tension and crank handle drive; optional with motor drive

#### Octagon shaft 60x0.6 mm:

made of galvanized steel, standard for motor drive

### Drive system

#### Lift tape:

Width of the lift tape: 14 mm, made of polyester blended fabric, optionally available with lift tape gear 2:1 for larger curtain surfaces.

#### Crank handle drive:

Bevel gear unit with gear reduction 3:1 or 4:1 or worm-wheel gear with gear reduction 5.33:1 or 8:1, complete with bearing, powder-coated crank rod, folding handle and crank holder

#### Motor drive:

Plug-in drive built into the primary shaft, with protection device against unintentionally raising of the curtain and automatic limit stop

### Profiles

- **Profile K37:** double-walled plastic profile with light and ventilation slots, with 2 grooves, dimensions 37x8 mm, optionally locked
- **Profile A37:** double-walled, foamed aluminium profile with light and ventilation slots, with 2 grooves, dimensions 37x8.2 mm, locked
- **Profile AV42:** double-walled, foamed aluminium profile with light and ventilation slots, with 2 grooves, dimensions 42x9.3 mm, locked
- **Profile T37:** double-walled, extruded daylight profile, without grooves, dimensions 38.4x8.5 mm, intermediate profile made of translucent plastic, with ventilation slots, locked
- **Profile S37:** double-walled, extruded safety profile with light and ventilation slots, with 2 grooves, dimensions 37x8.5 mm, locked

### End rod

#### Dimensions 42x7.5 mm

Material Extruded aluminium

Details with inserted sealing profile; with hidden, rotating plastic stoppers

### Colors

#### powder-coated aluminium parts

Color in standard colors without surcharge

Special colors as per "HELLA Color worlds" for a surcharge

- Roller shutter profiles see chapter "Standard colors" or "Colors for roller shutter profiles"

### Insect screens

#### Roller blind:

Insect roller screen with spring balancer drive and run-up brake completely integrated in the box. With brush seals guided safely in the guide rails behind the roller shutter. Details see chapter "Accessories insect screen".

#### Frames:

clamping frame, swing frame or slide frame mounted behind the front-mounted roller shutter. Details see chapter "Accessories insect screen".

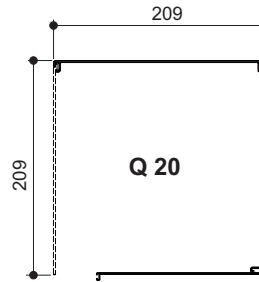
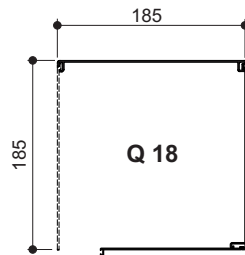
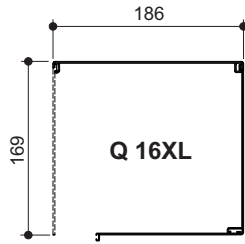
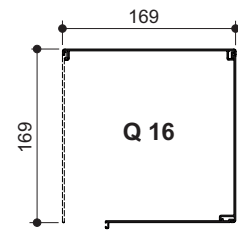
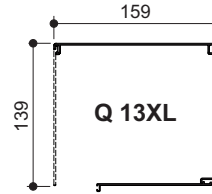
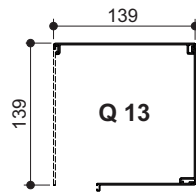
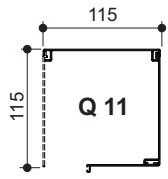
#### Pleated blind:

pleated insect screen mounted behind the front-mounted roller shutter. Details see chapter "Accessories insect screen".

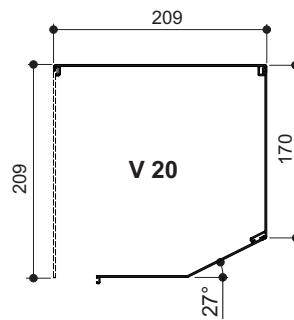
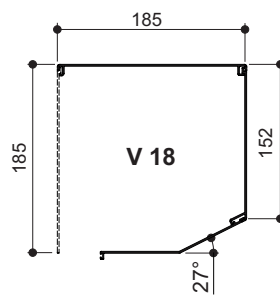
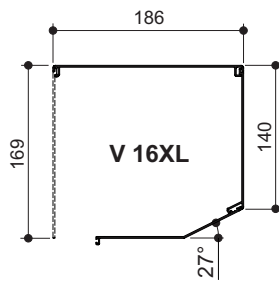
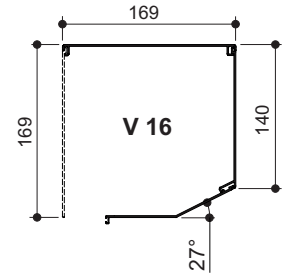
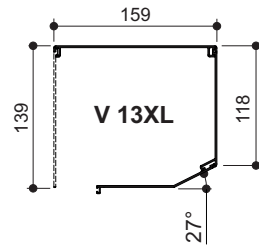
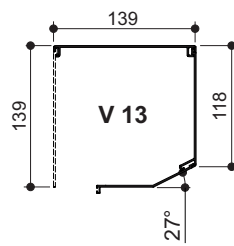
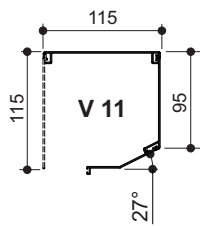


# nova front-mounted roller shutter

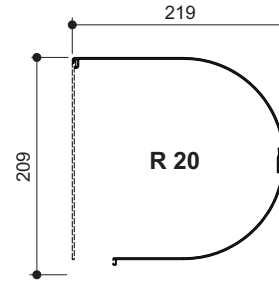
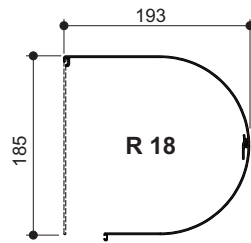
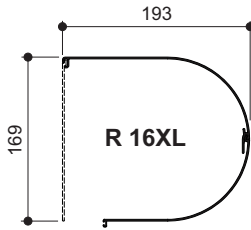
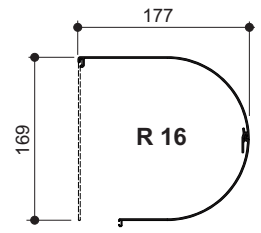
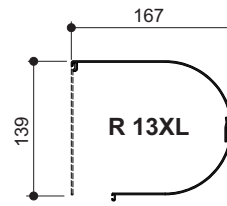
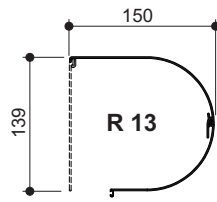
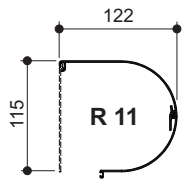
Type: quadratic



Type: square



**Type:round**



General

Window and façade

Front-mounting systems

Build and Renovate

Front-mounting systems with plaster bases

Installation systems

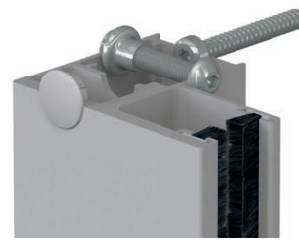
Attachment systems

# nova front-mounted roller shutters - Top-Safe

Roller shutter in extruded aluminium box with burglar resistance according to EN-13659



Extruded roller shutter profile and reinforced end rod with double neoprene and steel insert.



Reinforced security guide rail with safety device against removal.

## Limit sizes

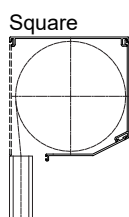
Profile type	Max. complete width [mm]	Min. complete width [mm]	Max. complete height [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
S37	2500	400*	3000	6	7.0

\* Depending on the drive system, the minimum complete width is higher than indicated in the table above:

- 550 mm with short motor TSW



## Box forms and box sizes

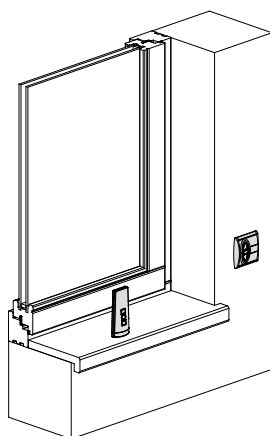


Box size	11	13	13XL	16	16XL	18	20
Box height [mm]	118	142		172		188	211
Box depth [mm]	120	144		174		190	214
Square	●	●		●		●	●

## Types of drives

### Motor drive Plug&Play

230V, incl. 3 m motor cable (2.6 m from side cover), without switch



#### Scope of delivery

- Extruded roller shutter box with rear panel and box disassembly lock
- Motor drive Plug&Play, 230V, incl. 3 m motor cable (2.6 m from side cover), without switch
- Curtain extruded locked
- End rod reinforced with double neoprene and steel insert, seal, concealed stopper
- Guide rail 56x43 mm reinforced with dismantling protection and guide rail inserts
- Shaft connection with continuous aluminum profiles with anti-lift function
- Stable extruded aluminum shaft
- Aluminium parts according to HELLA Color world
- Mounting material

#### Supplementary equipment

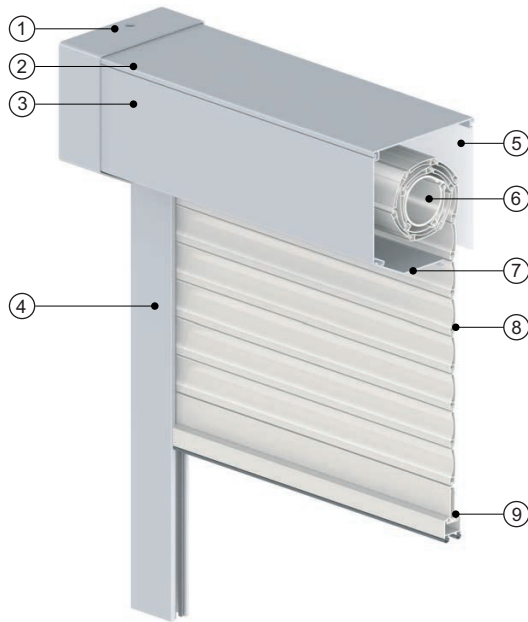
- Box sealing brush
- Operation via radio motor
- Drive and control for second escape route

#### Benefits of the product

- Burglar resistance
- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design
- Insect screens
- High-quality construction elements guarantee a long lifespan and convenient operation

# nova front-mounted roller shutters - Top-Safe

Roller shutter in extruded aluminium box with burglar resistance according to EN-13659



## Field of application and use

Burglary-resistant energy saving front-mounted roller shutter for after installation in new and old buildings. Reinforced design of the blind, end rod, guide rail, box and shaft with patent-registered lift-up protection. The fastening elements for the disassembly of the element cannot be accessed when the blind is closed.

## Benefits of the product / product features

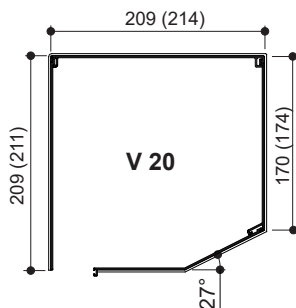
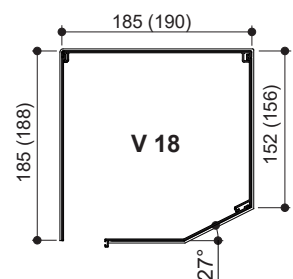
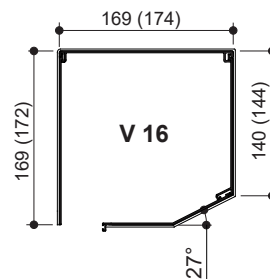
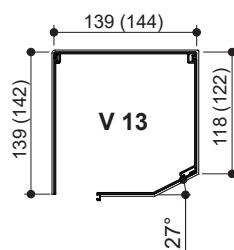
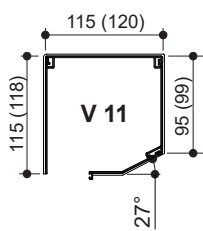
- Protection against burglary
- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design

## Types of drives

- Crank handle drive
- Motor drive

## Legend

- ① Box strengthening bracket
- ② Top board profile upper side
- ③ Top board profile front side
- ④ Guide rail with brush inserts and safety bolting
- ⑤ Top board profile rear side
- ⑥ Patented Top-Safe shaft with locking profiles
- ⑦ Top board profile inspection cover with groove to insert the brush
- ⑧ Safety profile
- ⑨ Safety end rod with continuous steel inserts



The dimensions in parentheses ( ) match the dimensions with a box strengthening bracket.

## Technical product description

### Roller shutter box

4-part: Top board profiles upper side, front side, inspection cover and rear side (optional)

Material Extruded aluminium

Box width Max. 2500 mm

- Two patented box strengthening brackets made of galvanised and powder-coated steel protect the box against burglary.
- Connected with stable hinge connection for revision purposes
- The box is closed with side covers made of cast aluminium

#### Box sizes

square: V11, V13, V16, V18, V20

### Safety guide rails

Dimension 56x43 mm

Material Extruded aluminium

Details in reinforced design with brush inserts

- The installation screws are locked by means of additional safety boltings, which is why a disassembly of the guide rails with the closed roller shutter is ruled out
- The mounting holes are closed with covering caps.

### Top-Safe shaft

Round shaft Top-Safe  $\varnothing 52$

Material Extruded aluminium

Details forms together with the locking profiles the patented Top-Safe lock - lift-up protection.

### Drive system

#### Crank handle drive:

Worm-wheel gear with gear reduction 5.33:1 or 8:1, complete with bearing, powder-coated crank rod, folding handle and crank holder

#### Motor drive:

Plug-in drive built into the drive shaft, with adjustable limit stop

### Profiles

#### Profile S37

double-walled, extruded safety profile with light and ventilation slots, with 2 grooves, dimensions 37x8.5 mm, locked

### Top-Safe end rod

Dimension 58x23 mm

Material Extruded aluminium

Details with inserted strengthening profile; doubled steel insert and inserted sealing profiles; with hidden, rotating plastic stoppers

### Colors

#### powder-coated aluminium parts

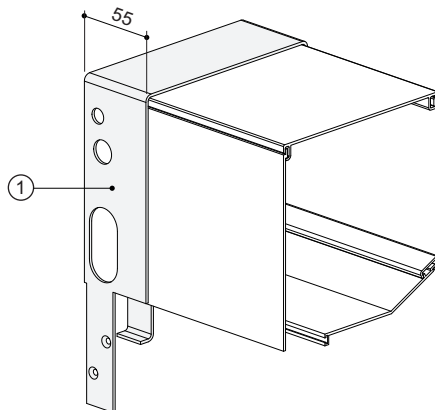
Color in standard colors without surcharge

Special colors as per "HELLA Color worlds" for a surcharge

- Roller shutter profiles see chapter "Standard colors" or "Colors for roller shutter profiles"

# nova front-mounted roller shutters - Top-Safe

## Box strengthening bracket

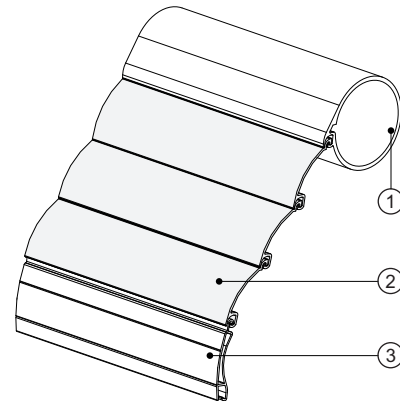


### Legend

- ① Box strengthening bracket, galvanised sheet steel 2 mm, lacquered

The box strengthening bracket encloses the complete box, thus no fittings are visible and the box is bolted together with the guide rails from the rear.

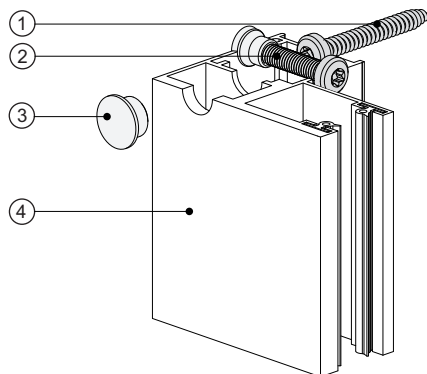
## Lift-up protection - Top-Safe locking device



### Legend

- ① Aluminium shaft  $\varnothing 51.6 \times 2.3$  mm, Top-Safe  
 ② Locking profiles, Top-Safe, locked  
 ③ Roller shutter profile S37, locked

## Safety screw connection

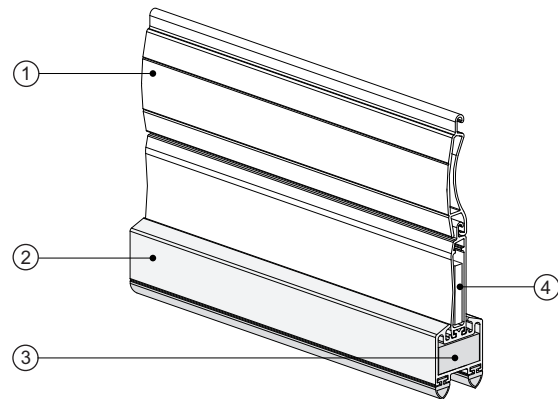


### Legend

- ① Mounting screw  
 ② Safety screw  
 ③ Covering cap  
 ④ Top-Safe guide rail (type 20)

The roller shutter is mounted onto the blind frame from the front. A safety screw that is attached across the installation direction disguises or avoids the loosening of the fixing screws from the outside and thus offers perfect protection against the undesired removal of the closed roller shutter.

## Safety roller shutter profile with reinforced end rod

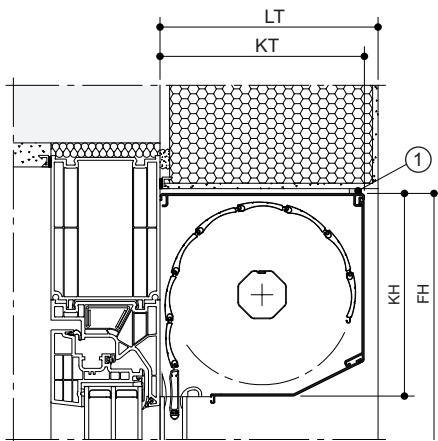


### Legend

- ① Roller shutter profile S37  
 ② Strengthening profile with steel insert  
 ③ Steel insert 10x20 mm  
 ④ Continuous weight: galvanised flat steel 25x4 mm



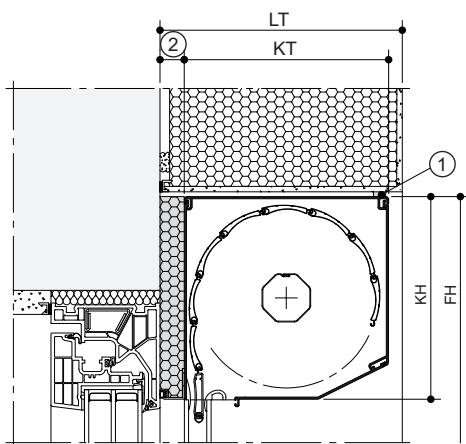
# nova front-mounted roller shutter



With the installation in the soffit it must be ensured that a **pre-compressed sealing tape** is installed between the box and the lintel jamb in order to rule out water seepage in this area.

Sealing tapes below can be optionally ordered (delivery in complete rolls only) and must be attached to the box upon installation:

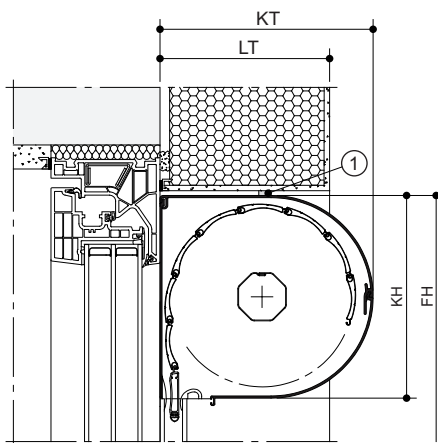
- **Joint 2-4 mm:** Sealing tape 15200010  
Width 10mm type BG1 – 11.5 m roll
- **Joint 5-9 mm:** Sealing tape 15200012  
Width 15 mm type BG1 – 5m roll



For non-insulated lintels, a **rear insulation** of the roller shutter box is recommended.

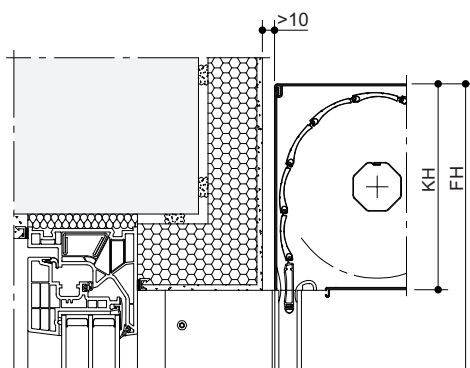
## Legend

- ① Pre-compressed sealing tape
- ② Rear insulation (20/40 mm)
- FH Complete height
- KH Box height
- KT Box depth
- LT Soffit depth



If the necessary **box depth should be larger than the present soffit depth**, a round box must be used in order to prevent waterlogging (snow).

For windows **without outer frame extension** it must be observed that the roller shutter box projects into the visual range of the window. With **extruded boxes**, a **rear top board** can therefore be ordered in a color differing from the box.



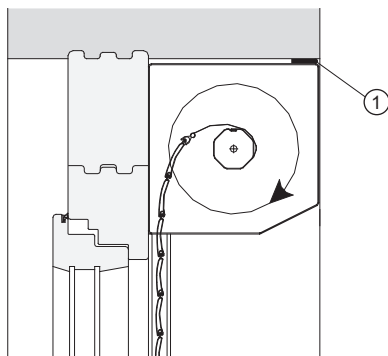
With the **facade installation** of a front-mounted roller shutter (upper side of the box is exposed to atmospheric conditions) it must be observed that the rear side of the box must be distanced at least 10 mm in order to avoid damage to the plaster due to waterlogging (snow).

This distancing can be achieved by means of guide rails with mounting flap.

## Attention:

- With the distanced installation it must be pointed out that there is an increased incidence of light in the closed condition.
- Should the window sill not suffice as the lower rabbet, the end caps or a guide rail extension with a stopper can be used.

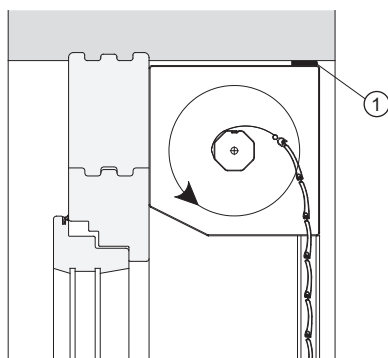
## Mounting methods for roller shutters



### Mounting as left-rolling element (standard)

The box projects away from the mounting base. The blind unwinds in the area of the mounting base.

The drive side of the roller shutter is seen from the rear of the box – inside the building.



### Mounting as right-rolling element

The box projects towards the mounting base. The curtain unwinds with a large distance to the mounting base or is roughly flush with the façade.

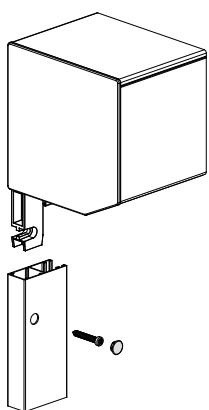
The drive side of the roller shutter is seen from the rear of the box – outside the building.

### Legend

- ① Sealing tape for sealing the connection joint

# nova front-mounted roller shutter

## Installation situation for different wall constructions



The installation is done by screwing the guide rails onto the mounting base from the front (standard). With the upper drilled hole, it is screwed down through the side cover strut, which is why the box cannot be lifted out of the guide rails in the installed condition. The mounting holes are closed by means of color-coordinated covering caps (ø10).

The guide rails can optionally be screwed laterally into the soffit. Then, however, screwing does no longer take place through the strut.

Position and number of the mounting holes, see chapter "Accessories guide rails".

### Installation from the front

Guide rails type 01, 02, 08, 11, 12, 15, 16, 17, 20, 22, 23, 25, 80, 81

Mounting base	Mounting material	Art.-No.
Wood	Pan head screw ASSY 4.5x35 AW20 galvanised	80060067_VZ
Wood/aluminium Plastic/aluminium	Self drilling head screw DIN7504N 4.8x50 AW25 galvanised	80030161_VZ
Plastic	Self drilling head screw DIN7504N 4.2x45 AW20 galvanised	80030185_VZ
Metal	Self drilling head screw DIN7504N 4.2x22 AW20 galvanised	80030178_VZ
Wall	Pan head screw ASSY 4.5x50 AW20 galvanised Dowel SX8	80060058_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x50 AW20 blank A2	80060058_VZ
<b>Insulation on the rear side 20 mm</b>		
Wood	Pan head screw ASSY 4.5x50 AW20 galvanised	80060058_VZ
Wood/aluminium Plastic/aluminium	Self drilling head screw DIN7504N 4.8x60 AW25 galvanised	80030186_VZ
Plastic	Self drilling head screw DIN7504N 4.8x50 AW25 galvanised	80030161_VZ
Metal	Self drilling head screw DIN7504N 4.8x50 AW25 galvanised	80030161_VZ
Wall	Pan head screw ASSY 4.5x70 AW20 galvanised Dowel SX8	80060068_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x70 AW20 blank A2	80060068_VZ
<b>Insulation on the rear side 40 mm</b>		
Wood	Pan head screw ASSY 4.5x70 AW20 galvanised	80060068_VZ
Wood/aluminium Plastic/aluminium	Countersunk screw with drill bit ASSY plus 4.5x80 AW20 galvanised	80060061_VZ
Plastic	Countersunk screw with drill bit ASSY plus 4.5x70 AW20 galvanised	80060084_VZ
Metal	Countersunk screw with drill bit ASSY plus 4.5x70 AW20 galvanised	80060084_VZ
Wall	Pan head screw ASSY 5.0x90 AW20 galvanised Dowel SX8	80060069_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x80 AW20 blank A2	80060060_VZ

### 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 for the installation.



Guide rails type 18, 19, 21

Mounting base	Mounting material	Art.-No.
Wood	Pan head screw ASSY 4.5x50 AW20 galvanised	80060058_VZ
Wood/aluminium Plastic/aluminium	Self drilling head screw DIN7504N 4.8x60 AW25 galvanised	80030186_VZ
Plastic	Self drilling head screw DIN7504N 4.8x60 AW25 galvanised	80030186_VZ
Metal	Self drilling head screw DIN7504N 4.2x45 AW20 galvanised	80030185_VZ
Wall	Pan head screw ASSY 4.5x70 AW20 galvanised Dowel SX8	80060068_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x70 AW20 blank A2	80060068
<b>Insulation on the rear side 20 mm</b>		
Wood	Pan head screw ASSY 4.5x70 AW20 galvanised	80060068_VZ
Wood/aluminium Plastic/aluminium	Countersunk screw with drill bit ASSY plus 4.5x80 AW20 galvanised	80060061_VZ
Plastic	Countersunk screw with drill bit ASSY plus 4.5x80 AW20 galvanised	80060061_VZ
Metal	Self drilling head screw DIN7504N 4.8x60 AW25 galvanised	80030186_VZ
Wall	Pan head screw ASSY 5.0x90 AW20 galvanised Dowel SX8	80060069_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x80 AW20 blank A2	80060060
<b>Insulation on the rear side 40 mm</b>		
Wood	Pan head screw ASSY 5.0x90 AW20 galvanised	80060069_VZ
Wood/aluminium Plastic/aluminium	Countersunk screw with drill bit ASSY 5.5x50 AW20 galvanised	80060062
Plastic	Countersunk screw with drill bit ASSY 5.5x50 AW20 galvanised	80060062
Metal	Countersunk screw with drill bit ASSY plus 4.5x80 AW20 galvanised	80060061_VZ
Wall	Countersunk screw with drill bit ASSY 5.5x50 AW20 galvanised Dowel SX8	80060062 83010007

**Installation laterally**

All guide rails

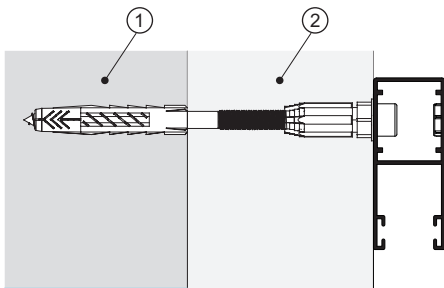
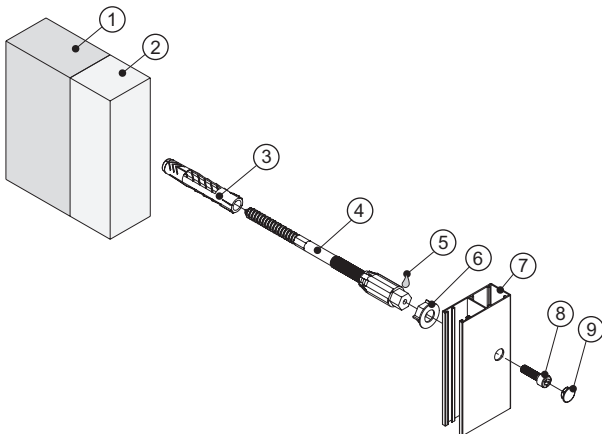
Mounting base	Mounting material	Art.-No.
Wood	Pan head screw ASSY 4.5x35 AW20 galvanised	80060067_VZ
Plastic	Self drilling head screw DIN7504N 4.2x45 AW20 galvanised	80030185_VZ
Metal	Self drilling head screw DIN7504N 4.2x22 AW20 galvanised	80030178_VZ
Wall	Pan head screw ASSY 4.5x50 AW20 galvanised Dowel SX8	80060058_VZ 83010007
Stainless steel screw	Pan head screw ASSY 4.5x50 AW20 blank 2	80060058

**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.

# nova front-mounted roller shutter

## Installation situation for different wall constructions



The Fischer Thermax ensures the thermal separation of component and mounting base. Herewith thermal bridges are avoided and heat losses are reduced. The Fischer Thermax 8 and 10 are suitable for insulation thicknesses from 45 mm to 240 mm.

The following Thermax are available:

Item description	ETICS thickness [mm]
Thermax 8x60 M6	45 to 60
Thermax 8x80 M6	61 to 80
Thermax 10x100 M6	81 to 100
Thermax 10x120 M6	101 to 120
Thermax 10x140 M6	121 to 140
Thermax 10x160 M6	141 to 160
Thermax 10x180 M6	161 to 180
Thermax 10x200 M6	181 to 200
Thermax 10x220 M6	201 to 220
Thermax 10x240 M6	221 to 240

The Thermax is suitable to fix the following components:

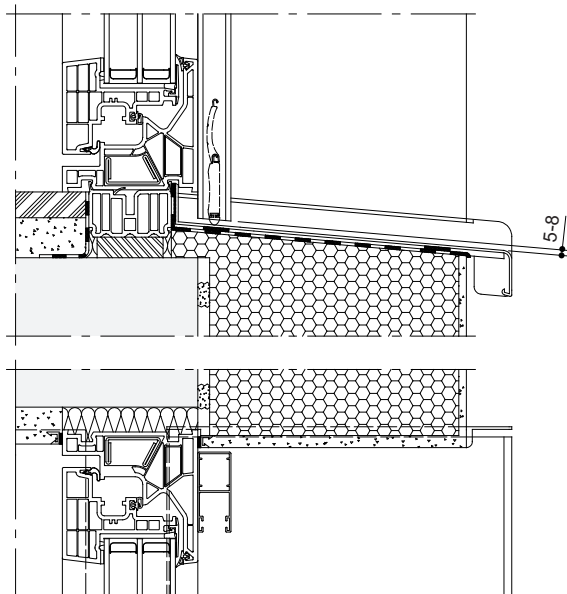
- Bracket mounting: Basic bracket large + Z-bracket
- Installation of the guide rails: Spacer with large base plate

### Legend

- ① Mounting base
- ② ETICS
- ③ Dowel UX10/UX12
- ④ Hanger bolt with thermal separator module
- ⑤ Sealing with construction silicone
- ⑥ Covering cap
- ⑦ Guide rail
- ⑧ Fillister head screw M6x22
- ⑨ Covering cap  $\varnothing 10$

## Window sill connection – guide rail surface mounted

### Aluminium window sill



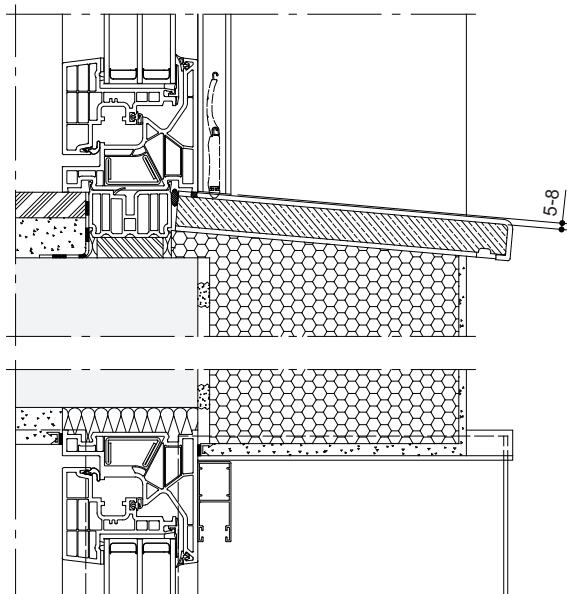
### Note

In order to prevent structural damage due to uncontrolled water seepage, it must be ensured that the outer edge of the guide rail is within the window sill connection.

### Order of installation:

1. Mounting the window sill
2. Completing the façade
3. Install front-mounted roller shutter with guide rails

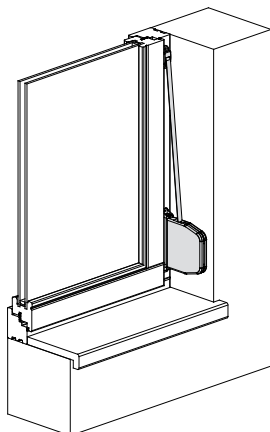
### Stone window sill



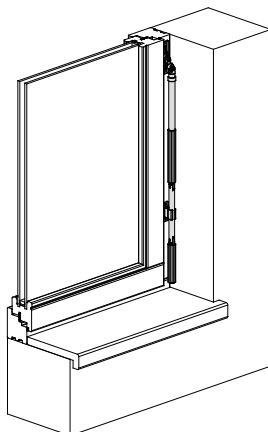
# nova front-mounted roller shutter

## General

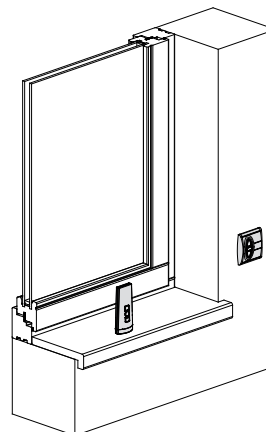
Lift tape



Crank handle drive



Motor drive

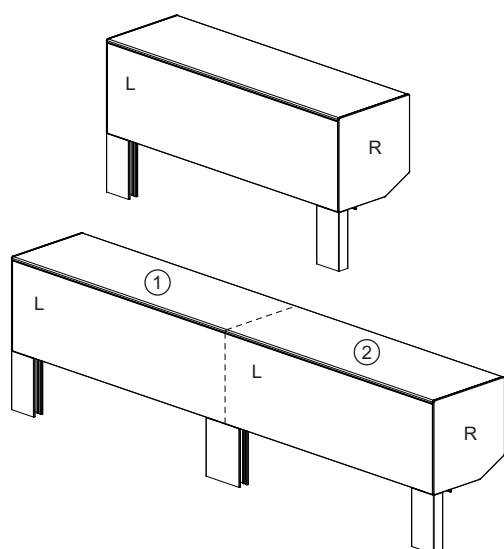


## Limit sizes

Drive system	Shaft	Min. complete width [mm]	Max. complete height [mm]	max. weight of the curtain [kg]
Lift tape	SW40.	500	2600	9 <sup>1)</sup> 15 <sup>1)</sup> with crank-operated take-up reel
Lift tape on the outside	SW40	500	2500	7
Lift tape gear	SW40.	500	2600	17
Crank handle	SW40	400		28
External crank handle	SW40.	400		11
Motor ø40	SW40	535		depending on the motor
Motor ø50	SW60, TSW	SW60: 425 TSW: 550		depending on the motor

1) According to EN 13659

## Definition drive side



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

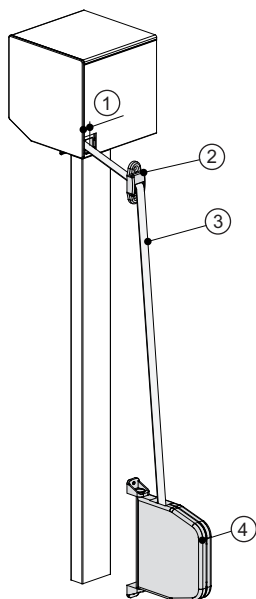
### Notes

- In the area of the double guide rail, the drive side can only be on the left (left side cover). With the displayed position 1, the drive side on the right is thus not feasible.
- Depending on the mounting as a left-rolling or right-rolling element (chapter Installation details) the drive side changes with unchanged viewing position

### Legend

- ① Element 1
- ② Element 2
- L on the left side
- R On the right

## Drive system Lift tape



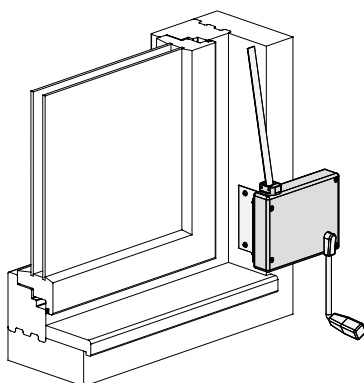
### Operation

Lifting and lowering the blind by pulling on the lift tape.

### Legend

- ① Exit -15 mm
- ② Lift tape roll
- ③ Lift tape 14 mm
- ④ Tape take-up reel

## Crank operated take-up reel

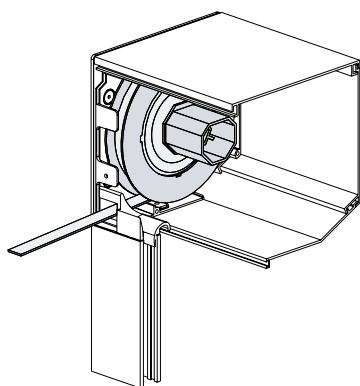


As per EN 13659, the maximum operating force of the lift tape / pull cord is 90N, which equals a maximum blind weight of 9 kg.

With the use of a crank-operated take-up reel, lift tape / pull cord elements can be realised with a blind weight of up to 15 kg.

The illustration shows a crank-operated take-up reel with mounting bracket.

## Lift tape gear



The lift tape gear (gear ratio 2:1) reduces the operating force at the lift tape by approx. 50%. Under consideration of the maximum operating force of 90N (EN 13659), elements with a blind weight of up to 17 kg can thus be built with a lift tape gear.

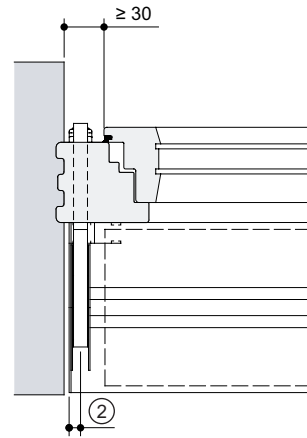
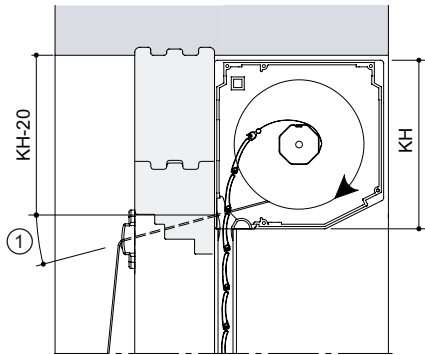
The lift tape gear works as of box size 16 and is feasible with all tape exits except with the exterior belt drive. The three screwing points are visible on the outside of the side cover and project 4 mm over the side cover edge.

When there is a plaster base element, rivet nuts are available for the side cover for fastening the gear. They jut out 6 mm over the side cover edge.

# nova front-mounted roller shutter

## Tape drive

### STD – Tape exit standard



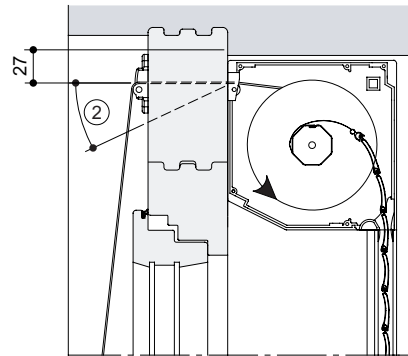
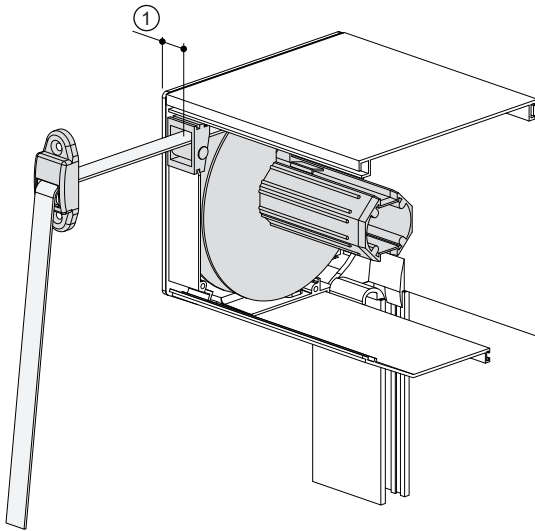
#### Legend

- ① Exit angle between 12° and 30°
- ② Exit -15 mm
- KH Box height

#### Notes

- Duct normal to the mounting base (top view).
- With excess length of the box on the drive side, the tape pulley is installed in the inner side cover.

### V – Tape exit front



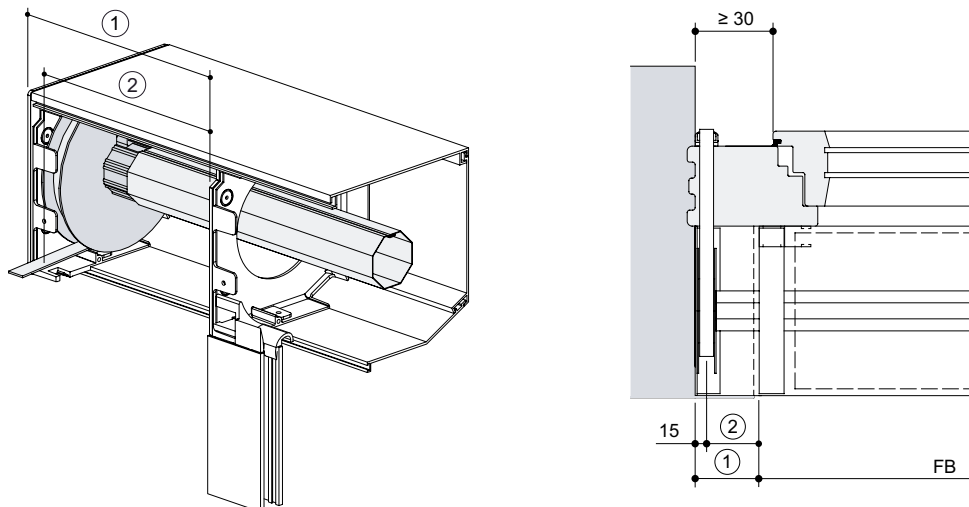
#### Notes

- With installation as right-rolling element.
- Not feasible with round box, roll-formed top boards as well as plaster base elements.

#### Legend

- ① Exit -15 mm
- ② Emersion angle from 0° to 45°

## KÜ – Tape exit in excess length of the box



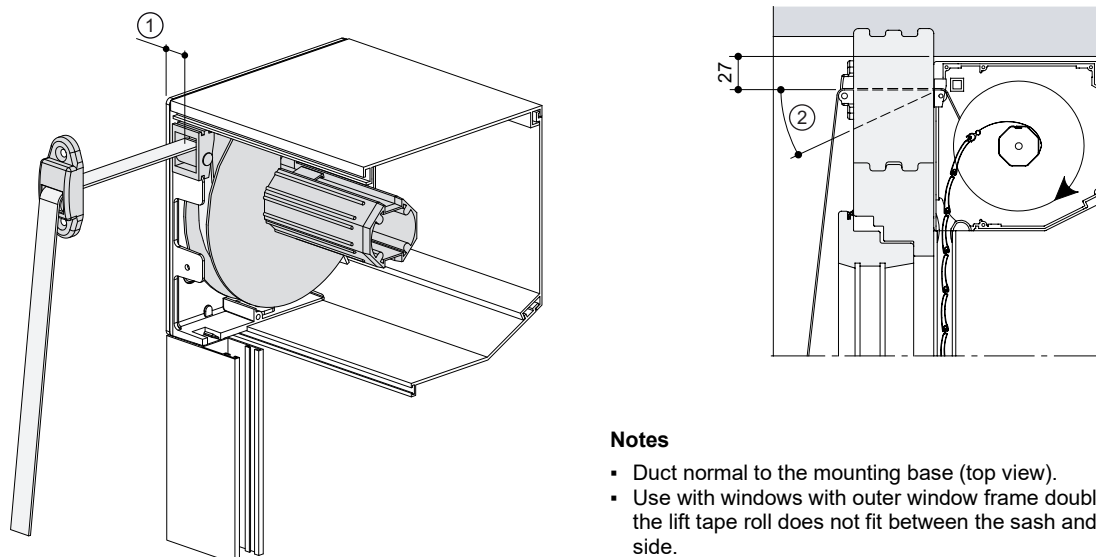
### Legend

- ① Excess length of the box (28-215 mm)
- ② Exit excess length of the box -15 mm (13-200 mm)
- FB Complete width

### Notes

- Duct normal to the mounting base (top view).
- Excess length of the box visible on the outside, recommended on both sides for optical reasons.
- Not feasible with plaster base elements as the shaft cannot be removed via the inspection cover.

## O – Tape exit top



### Legend

- ① Exit -15 mm
- ② Immersion angle from 0° to 45°

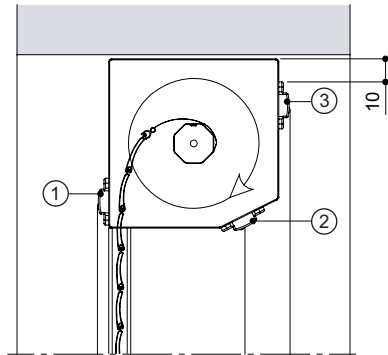
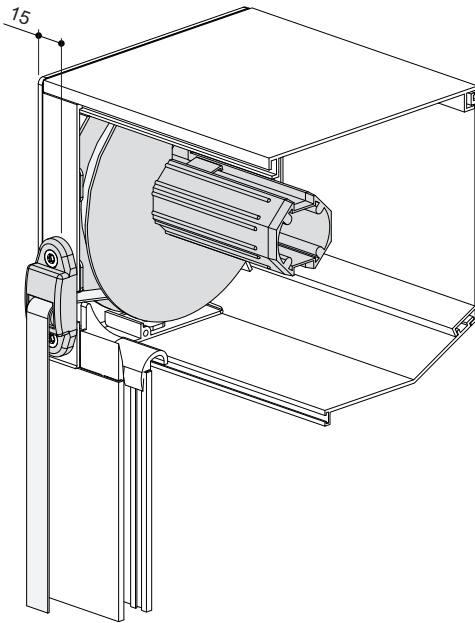
### Notes

- Duct normal to the mounting base (top view).
- Use with windows with outer window frame doubling, with which the lift tape roll does not fit between the sash and soffit at the side.
- Observe place for tape take-up reel (if necessary, use screwable take-up reel or crank-operated take-up reel).

# nova front-mounted roller shutter

## Tape drive

### X – Direct installation of the lift tape roll on the box



#### Legend

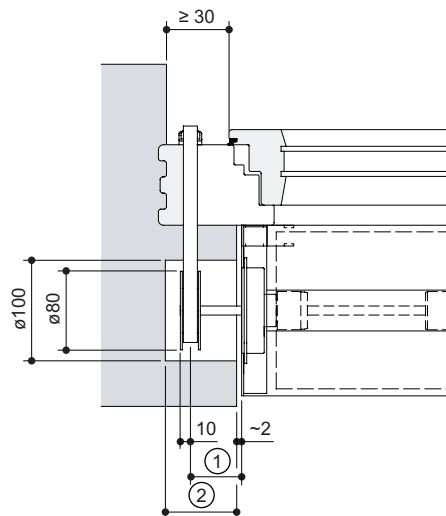
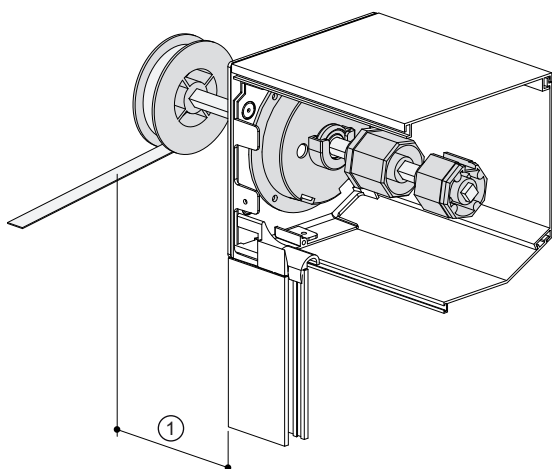
- ① Exit type 2
- ② Exit type 4
  - Starting from KG16
  - Box shape V
- ③ Exit type 5
  - Starting from KG13
  - Box shapes V+Q
  - Not with plaster base elements

#### Note

If necessary, the tape take-up reel can also be screwed onto the guide rail.



**AG – Exterior tape pulley**



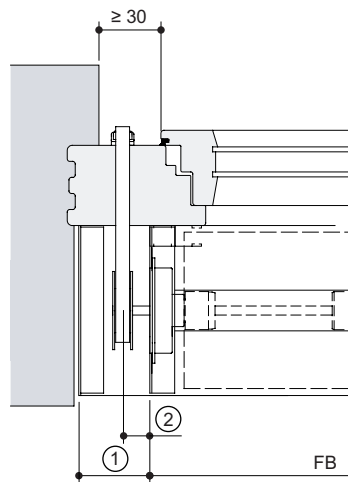
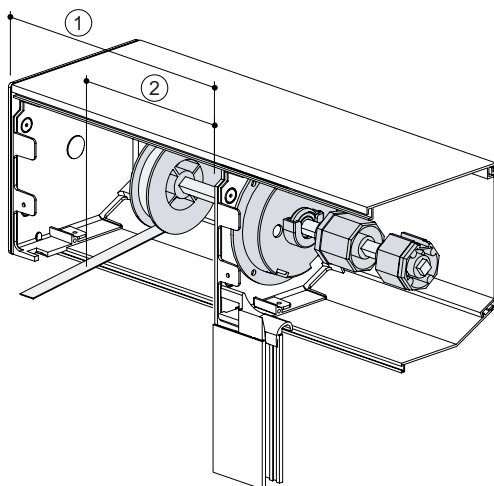
**Legend**

- ① Exit adjustable from 12 to 70 mm
- ② Depth of the chase = Exit + 20 mm

**Notes**

- Duct normal to the mounting base (top view)
- Duct inclination from 0-45°
- Maximum complete height 2500 mm
- Maximum weight of the roller shutter curtain 7 kg

**AG – Exterior tape pulley in the excess length of the box**



**Legend**

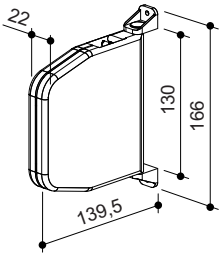
- ① Excess length of the box of 28 to 215 mm, however, at least exit +15 mm
- ② Exit adjustable from 12 to 70 mm
- FB Complete width

**Notes**

- Duct normal to the mounting base (top view)
- Duct inclination from 0-45°
- Maximum complete height 2500 mm
- Maximum weight of the roller shutter curtain 7 kg

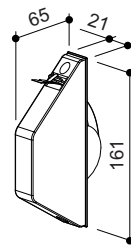
# nova front-mounted roller shutter

## Accessories



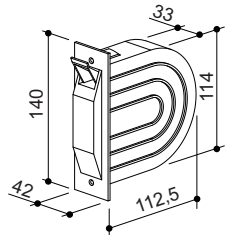
**Tape take-up reel swivelling without retraction aid**  
Plastic housing, available in the colors white and brown; the housing must be opened to fit the tape

**02600229**



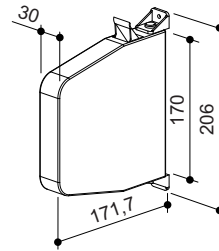
**Tape take-up reel can be semi flush-mounted**  
Plastic housing available in the colors white and brown, recess dimensions 18x60x110 mm

**02600226**



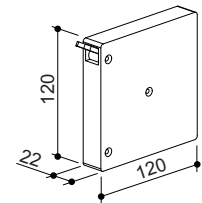
**Tape take-up reel can be flush-mounted**  
Housing made of plastic, cover available in the color white, dimensions of the recess 33x113x128 mm

**02610212**



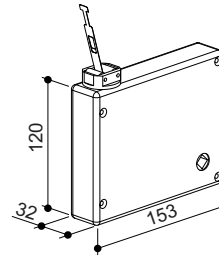
**Tape take-up reel for belt tension gear**  
Standard with belt tension gear, plastic housing available in the colors white and brown

**02610202**



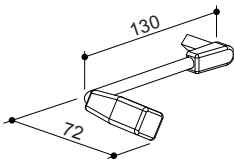
**Tape take-up reel can be screwed on**  
Plastic housing in white color

**02610208**



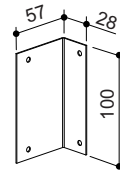
**Crank-operated take-up reel tape**  
Plastic housing available in the colors white and brown, crank is necessary for crank-operated take-up reel 02610243

**02610241**



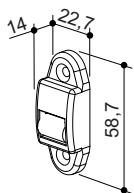
**Crank for crank-operated take-up reel**  
Crank radius 130 mm, for crank-operated take-up reel

**02610243**



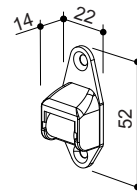
**Screw-on bracket**  
Aluminium bracket available in the colors RAL 9016 and 8019, fixing accessories for tape take-up reel

**02610201**



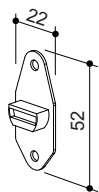
**Tape guidance with cover**  
Standard tape guide roll with brush, plastic housing available in the colors white and brown

**02610240**



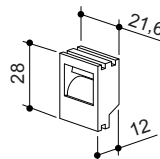
**Tape guidance with guide roll König**  
Plastic housing in the colors white and black, with steel pulley provided with a needle bearing and a sealing brush

**02610203**



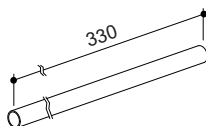
**Seal for tape guidance**  
Sealing unit for tape guidance with guide roll König, for a through-bearing of the tape according to ENEV, plastic plate available in the colors white and black

**02610220**



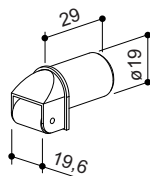
**Tape guidance can be inserted in the side cover**  
Plastic roll in plastic housing with brush, for direct installation in the side cover

**02610218**



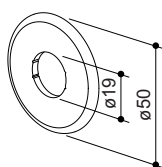
**Round tube 19 mm, plastic**  
Plastic tube for wall duct, inner diameter 19 mm, outer diameter 21 mm, length 330 mm, special length up to 1000 mm, ideal in combination with a pluggable tape guidance 02610233

**02610210**



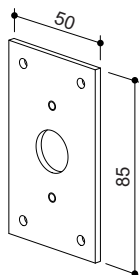
**Tape guidance can be inserted**  
black plastic roll in a white plastic housing, for wall duct

**02610233**



**Covering cap 14 mm**  
3 mm thick plastic pulley, for pluggable tape guidance 02610233

**02610209**

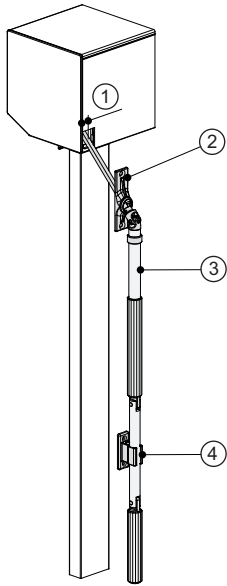


**Mounting plate 50x85x3**  
Aluminium plate available in the colors RAL 9016 and blank, accessory for tape guidance with guide roll König, for installation on brickwork

**02610204**

# nova front-mounted roller shutter

## Drive system crank handle



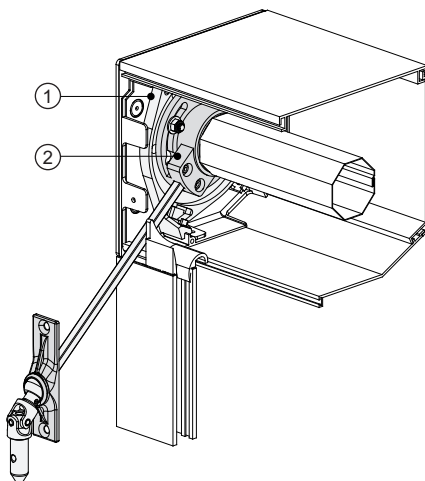
### Operation

Lifting and lowering the blind by turning the crank rod.

### Legend

- ① Exit - 16 mm
- ② Joint bearing
- ③ Crank rod with folding handle and fastening clip
- ④ Crank holder

## Bearing plate



Except for the exterior gear and the centrally built-in gear, all crank handle gears are screwed onto the bearing plate, which is why there are no screws visible at the outside of the side cover.

Due to the screw connection over the elongated holes, the exit angle can still be slightly adjusted by means of a square bearing (ca.  $\pm 5^\circ$  – within the top board notch).

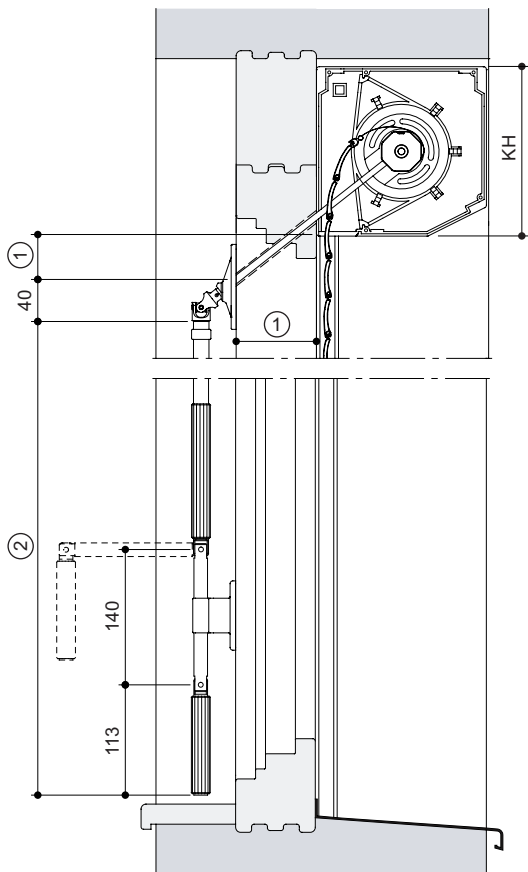
### Legend

- ① Bearing plate
- ② Bevel gear unit

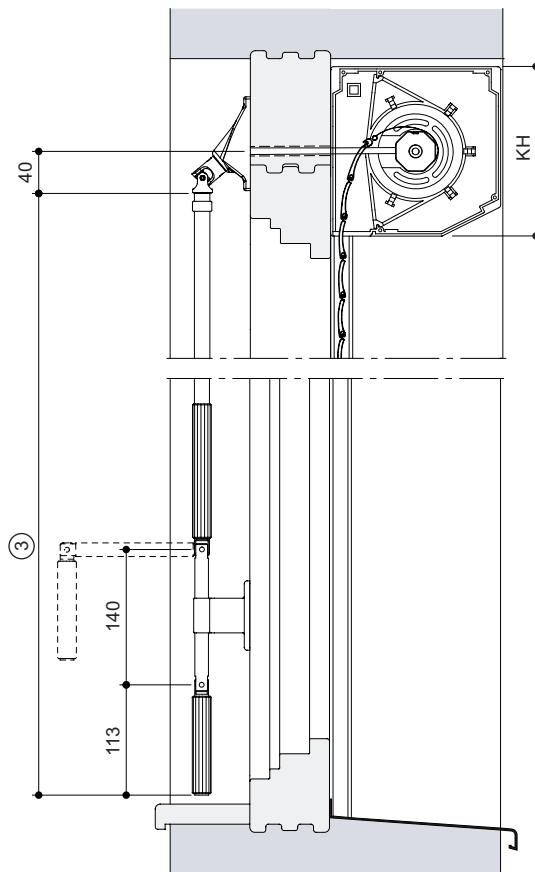
## Crank rod

The crank rod with folding handle is available in the standard lengths 800, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1800 and 2800 mm. Special lengths can be ordered between 500 and 2780 mm.

Duct diagonal – standard



Horizontal duct



### Legend

- ① Deduction diagonal duct = frame thickness + rear insulation
- ② Length crank rod with diagonal duct
- ③ Length crank rod with horizontal duct
- KH Box height

### Note

With the worm wheel gear, the position of the horizontal duct is located by the axle offset above the box centre.

### 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.

If two elements are operated with the same removable crank rod, the second element is to be ordered without a crank rod. The spherical bearing is then equipped with the necessary dowel pin.

# nova front-mounted roller shutter

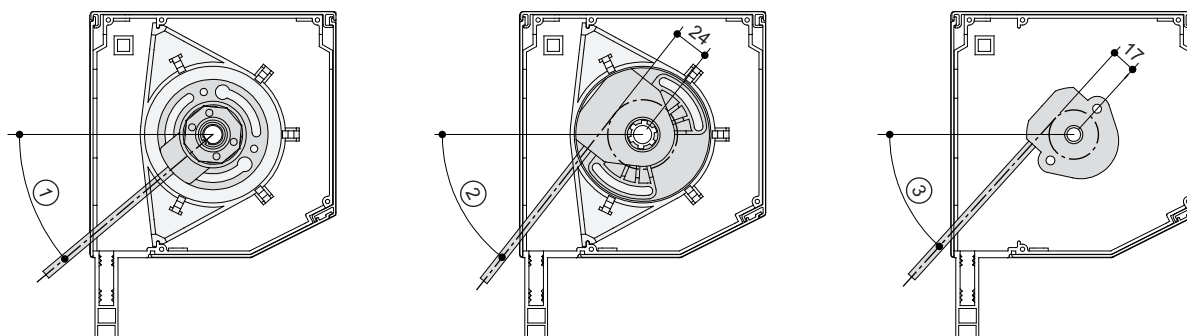
## Crank handle gear

Depending on the exit and shaft type, three different gear types are used.

Usage	Shaft	Gear ratio	max. weight of the roller shutter curtain [kg]	Freewheel at the bottom	Stop at the bottom	Axle offset [mm]
<b>(1) Bevel gear unit</b>						
Standard	SW40	3:1	21	yes	no	0
Standard	SW40	4:1	28	yes	no	0
<b>(2) Worm wheel gear with plastic casing.</b>						
Optional	SW40.	5,33:1	22	yes	no	24
Optional	SW40.	8:1	28	yes	no	24
<b>(3) Worm wheel gear with metal casing.</b>						
exterior adjustable	SW40	4:1	11	yes	no	17

### Note:

- The gears are built-in in a way that the crank handle rotation direction is independent from the drive side.
- With a horizontal duct the spherical bearing square is located by the axle offset above the centre of the shaft.
- The bevel gear unit and the plastic worm gear are screwed onto the bearing plate through elongated holes. This way, the screw connection is not visible at the outside and the exit angle can still be slightly adjusted by means of a spherical bearing square (approx.  $\pm 5^\circ$  – within the top board recess area).



### Exit angle with diagonal duct subject to the box size

	11	13	13XL	16	16XL	18	20
<b>(1) Bevel gear unit</b>	38°	39°	33°	40°	36°	41°	38°
<b>(2) Worm – plastic casing</b>	56°	54°	46°	53°	47°	52°	48°
<b>(3) Worm – metal casing</b>	50°	50°	42°	49°	44°	49°	46°

### Calculation of the operating force

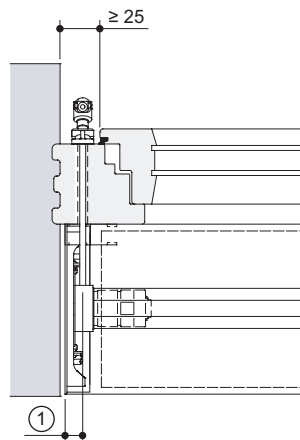
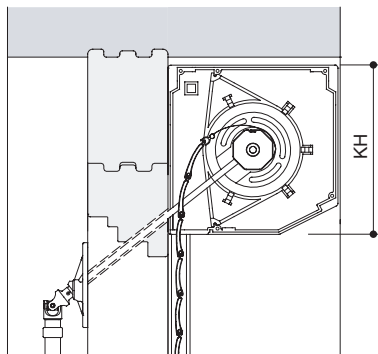
$$F = M : U : L$$

#### Legend

- F Operating force [N] at the folding handle
- M Torque [Nm] as described in chapter Application Sizes
- U Transmission ratio gear unit (the operating force can be reduced by selecting the type of gear unit)
- L Folding handle lever length [m]

## Crank handle drive

### S – Crank handle exit diagonal (standard)



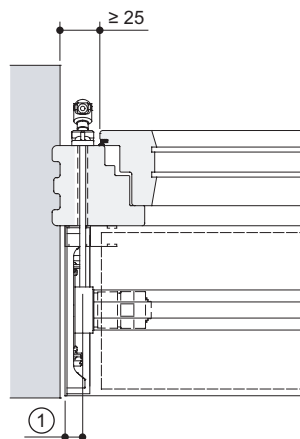
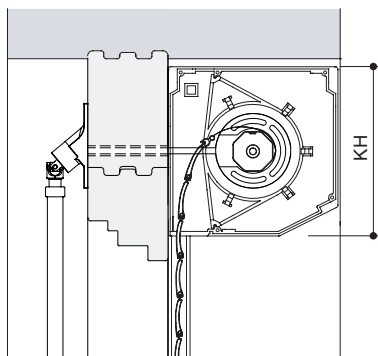
#### Legend

- ① Exit -16 mm
- KH Box height

#### Notes

- For exit angle see Subchapter crank handle gear.
- Duct normal to the mounting base (top view).
- With excess length of the box on the drive side, the gear is installed in the inner side cover.

### H – Crank handle exit horizontal



#### Legend

- ① Exit -16 mm
- KH Box height

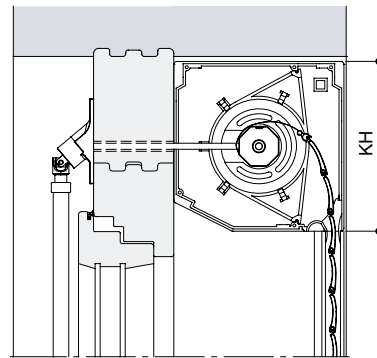
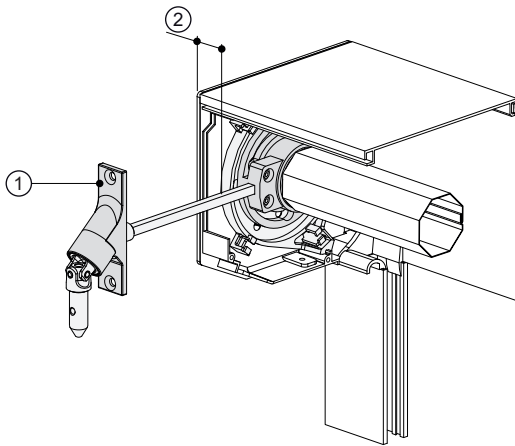
#### Notes

- Duct normal to the mounting base.
- With excess length of the box on the drive side, the gear is installed in the inner side cover.

# nova front-mounted roller shutter

## Crank handle drive

### V – Crank handle exit front



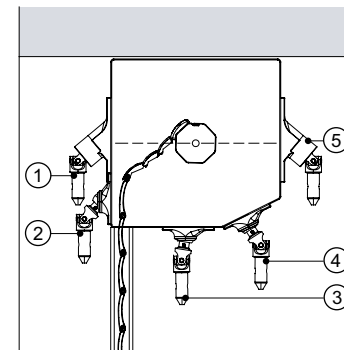
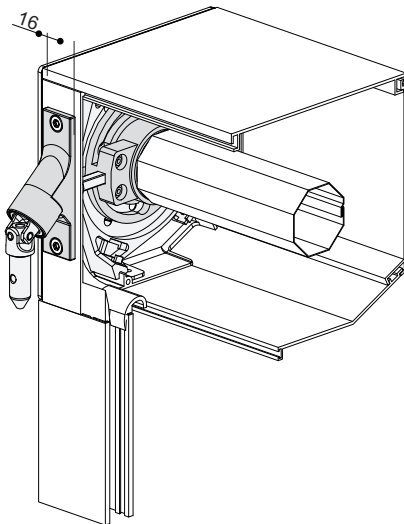
#### Legend

- ① Spherical bearing horizontal
- ② Exit -16 mm
- KH Box height

#### Notes

- Duct normal to the mounting base.
- Only feasible with bevel gear unit.
- No possible with box shape round or plaster base elements.

### X – Direct installation of the spherical bearing on the box



#### Legend

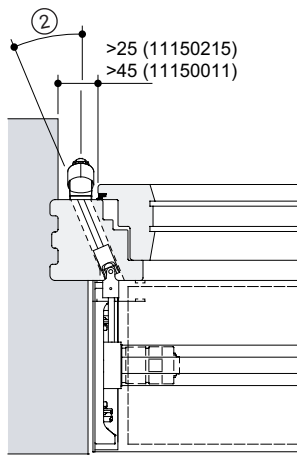
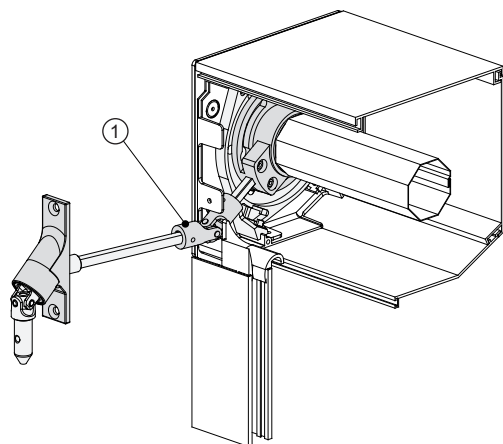
- ① Exit type 1
- ② Exit type 2
- ③ Exit type 3 (starting from KG 13XL)
- ④ Exit type 4
  - Starting from KG 16
  - Box shape V
- ⑤ Exit type 5
  - Starting from KG 13
  - Box shapes V+Q

#### Notes

- Not possible with profile T37
- Not possible with plaster base elements.
- Not possible with model Top-Safe



### K – Crank handle exit with universal joint



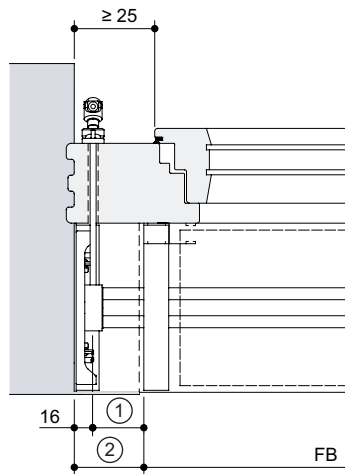
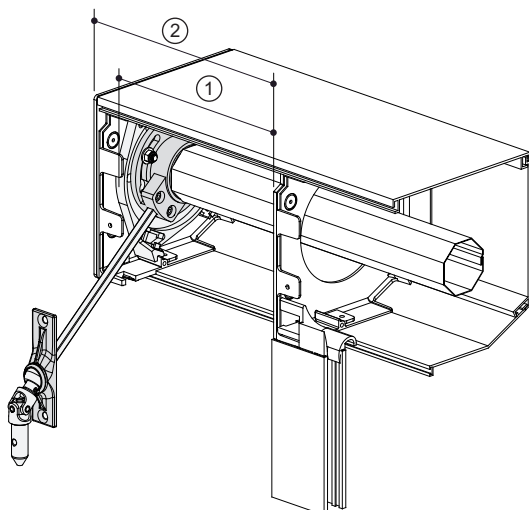
**Legend**

- ① Universal joint
- ② Duct inclination (lateral)
  - Spherical bearing 11150215 to 5°
  - Spherical bearing 11150011 to 20°

**Notes**

- Not feasible with exterior adjustable gear.
- The universal joint allows for a redirection of not more than 45° (also vertically).
- Lateral offset exclusively permissible with horizontal spherical bearing, as otherwise it must be drilled diagonally in two planes.
- Depending on the installation, the universal joint could either be connected to the square of the spherical bearing with the provided roll pin or it could be distanced from the gear mechanism with the provided round aluminium tube.

### KÜ – Gear in excess length of the box



**Legend**

- ① Exit from 12 to 199 mm
- ② Excess length of the box from 28 to 215 mm
- FB Complete width

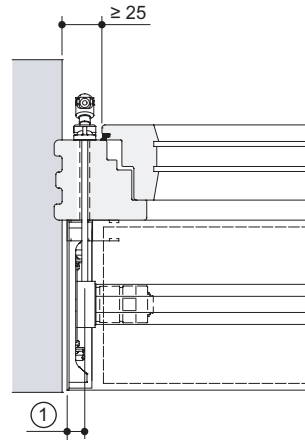
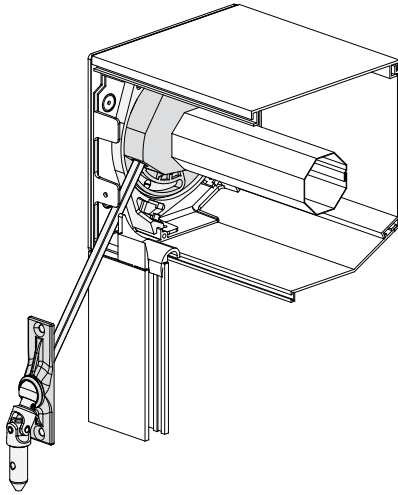
**Notes**

- Duct normal to the mounting base (top view).
- Excess length of the box visible on the outside, recommended on both sides for optical reasons.
- Not feasible with plaster base elements as the shaft cannot be removed via the inspection cover.

# nova front-mounted roller shutter

## Crank handle drive

### S – Worm wheel gear with plastic casing



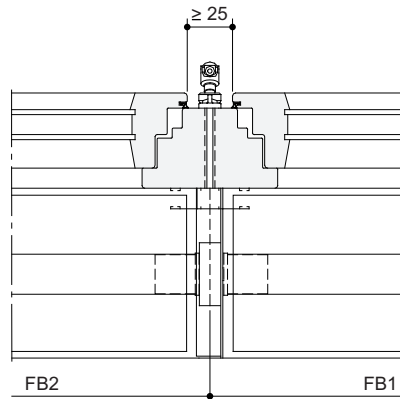
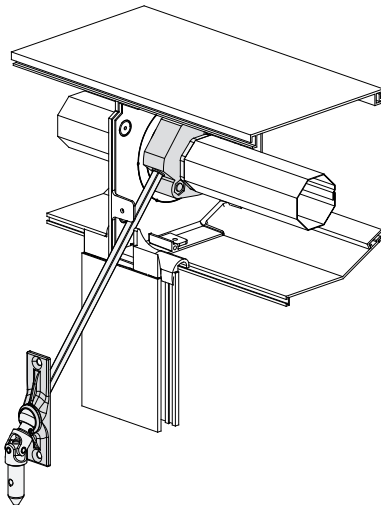
#### Legend

- ① Exit -16 mm

#### Notes

- For exit angle see Subchapter crank handle gear.
- Duct normal to the mounting base (top view).
- With excess length of the box on the drive side, the gear is installed in the inner side cover.

### M – Centrally built-in gear



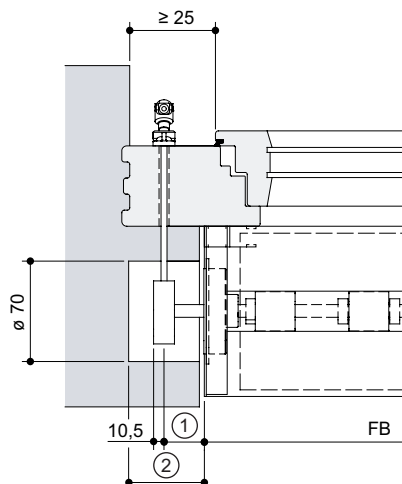
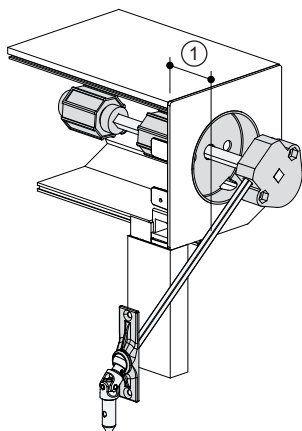
#### Legend

- FB1 Complete width 1  
FB2 Complete width 2

#### Note:

- Crank handle exit in the middle of the guide rail.
- Only possible for coupling with double guide rail.

### V – Gear exterior adjustable



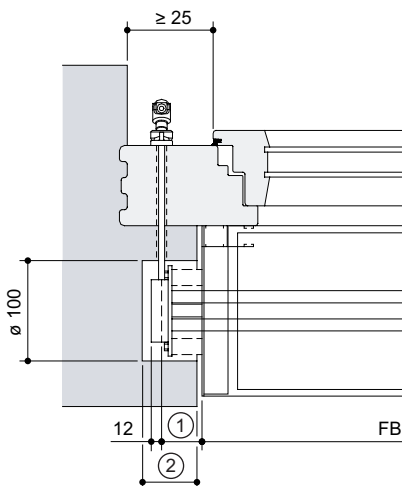
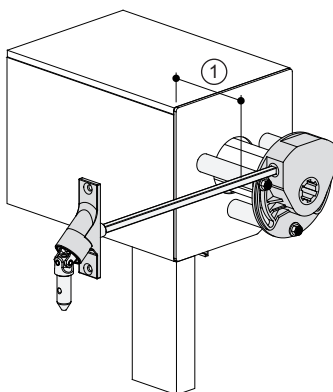
**Legend**

- ① Exit from 8 to 70 mm
- ② Depth of the chase = Exit + 20 mm
- FB Complete width

**Notes**

- Duct normal to the mounting base (top view).
- Not feasible with bevel gear unit.
- Maximum weight of the roller shutter curtain 11 kg.
- With excess length of the box on the drive side, the gear is located in the excess length of the box (min. excess length of the box = exit + 15 mm).

### F – Gear exterior fixed



**Legend**

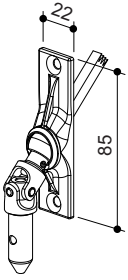
- ① Exit fixed dimension from 11 to 95 mm
- ② Depth of the chase = Exit + 20 mm
- FB Complete width

**Notes**

- Horizontal duct.
- Gear with spacer bushes screwed onto the box.

# nova front-mounted roller shutter

## Crank handle drive

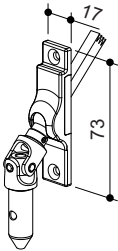


### Spherical bearing inclined by 45° up to 50°

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**

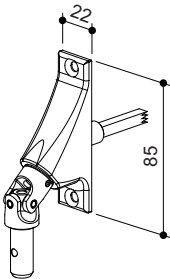


### Spherical bearing inclined by 45° up to 55°

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**

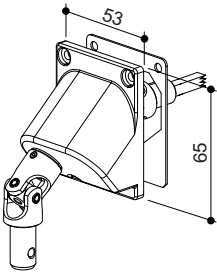


### Spherical bearing horizontal -5° up to 46°

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°

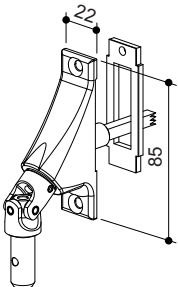
Universal joint made of aluminium, anodised with base plate 53x65 mm made of plastic in white color with sealing made of cellular rubber and 22.5 mm lateral offset

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.



### 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

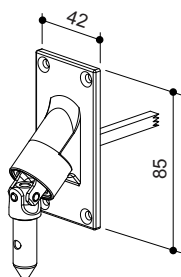
with square 6x6x500 mm

#### 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**

**Note:** The application area of the spherical bearing was defined with a vertical crank rod. With inclined spherical bearings an operation in the range of 35° up to 45° is possible. As the crank rod is slightly inclined during operation.

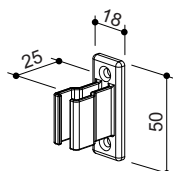


**Spherical bearing horizontal/inclined  
-5° up to 46°**

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**

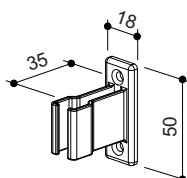


**Crank holder 25 mm**

made of plastic, colors: white and grey

**11300003**

Standard for joint bearing 45°

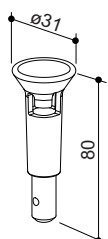


**Crank holder 35 mm**

made of plastic, colors: white and grey

**11300203**

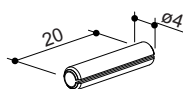
Standard for joint bearing 90°



**Crank handle funnel**

Steel, bright nickel-plated  
for removable crank rod

**11300005**

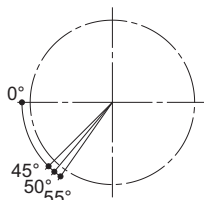


**Spiral spring pin 20mm**

for adapter cone (removable crank rod) shiny nickel-plated

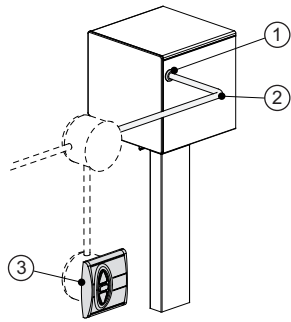
**85010015**

**Operative range of the bearing**



# nova front-mounted roller shutter

## Motor drive



### Operation

Raising and lowering of the blind by operating a switch or a remote control or by programming an automatic device (e.g. time switch).

### Legend

- ① Cable routing
- ② Motor cable (often connected with a junction box inside the room)
- ③ Motor control device (optional)

### Notes

- Steel shaft SW60 standard
- Steel shaft SW40 optional

### Basics tubular drives

With tubular drives it is differentiated between electronic and mechanical drives.

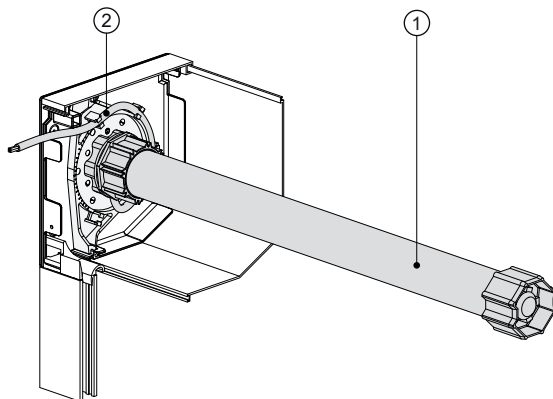
Plug&Play drives (self-teaching by torque switch-off on both sides), radio drives and the adjustable drives (ESO) rate among the electronic drives.

The mechanical drives can be recognised by the buttons or rotary controls necessary for settings.

Contrary to the electronic drives, these cannot be connected in parallel and must never be activated with the up and down command at the same time (switch with lock required).

To control several mechanical drives via one control section, either a two-pole switch (galvanically isolated, separate contacts for each drive and each running direction), motor control devices or cutoff relays are imperative.

## Bearing plate



Except for the emergency crank handle drive, all motors are screwed onto the bearing plate, which is why no screws are visible at the outside of the side cover.

Depending on the box size and the cable outlet, up to 400 mm of the motor cable to be found in the box (pushed into the cable clamps of the bearing plate). This reserve enables a smooth removal of the drive for maintenance purposes, even if the motor cable is permanently installed outside the box.

The short drives Ilmo50S and Oximo50S have an external board module, which is accommodated in the roller shutter box next to the bearing plate. This is why these drives can only be installed starting with box size 13XL.

### Legend

- ① Motor
- ② Motor cable provided in bearing plate

Drive system	Adjustment of the end position	Detection of obstacles Protection against freezing	Intermediate position	Identification Acquisition
<b>Motor drive – Units with 60 mm octagon shaft or Top-Safe shaft</b>				
ONYX.ROL.D+	automatically	●	1	FX
SO-RolTop	automatically	●		M
868 RolTop (radio)	automatically	●	2	F
ESO RolTop	automatic or adjustable	●		MM
E868 RolTop (radio)	automatic or adjustable	●	2	FM
Emergency crank handle RolTop	automatically	●		MN
Emergency crank handle Ilmo	automatically	●		MSN
DC VariEco	Knobs			MDC
WT Ilmo 50S	automatically	●		MS
WT Ilmo 50	automatically	●		MS
io Oximo 50S (radio)	automatically	●	1	FIO
io Oximo 50 (radio)	automatic or adjustable	●	1	FIO
RS100 io (radio)	automatic or adjustable	●	1	FS100
T5S AUTO+	automatically	●		MI
OZ Mech (battery drive)	Knobs		-	MOZ
<b>Motor drive – Units with 40 mm octagon shaft</b>				
SO RolTop	automatically	●		M40
868 RolTop (radio)	automatically	●	2	F40
LS Aries S	Knobs			MS40
WT Ilmo 40	automatically	●		MS40
io Oximo 40 Solar	automatic or adjustable	●	1	FIOSOL
OZ Mech (battery drive)	Knobs			MOZ40

**Note**

All motors, except io Oximo Solar, OZRoll and DC VariEco are operated with 230V alternating voltage.

**Detection of obstacles**

The motor stops, when during lowering the blind an obstacle causes a counter torque. This function serves as protection for the unit and not for personal safety. Nevertheless, there is danger of squashing due to the weight of the blind!

The drives ONYX.ROL, SO and 868 additionally perform counter movement, so that the obstacle is relieved again.

**Protection against freezing**

The motor stops, when during raising the blind the torque increases abruptly. This may be caused by a frozen end rod, for example.

**Soft cutoff**

The drives ONYX.ROL, SO, ESO, 868, E868 and RS100 io are equipped with a so-called soft cutoff. Here the end positions are moved to with reduced speed.

# nova front-mounted roller shutter

## Motor drive

Drive system	Identification Acquisition	Cable length [m]	Capacity [Watt]	Minimum width [mm]
<b>Motor drive - Units with 60 mm octagon shaft or Top-Safe shaft</b>				
SO RolTopD+, 06 Nm, 14 r.p.m.	M	3	118	630
SO RolTopD+, 10Nm, 14 r.p.m.	M	3	150	630
SO RolTopD+, 20Nm, 14 r.p.m.	M	3	220	690
SO RolTopD+, 30Nm, 14 r.p.m.	M	3	200	680
WT Ilmo 50S, 06Nm, 17rpm	MS	3	90	420
WT Ilmo 50, 06Nm, 17rpm	MS	3	90	665
WT Ilmo 50, 10Nm, 17rpm	MS	3	120	665
WT Ilmo 50, 15Nm, 17rpm	MS	3	140	685
WT Ilmo 50, 20Nm, 17rpm	MS	3	160	765
WT Ilmo 50, 30Nm, 17rpm	MS	3	240	815
io Oximo 50S, 06Nm, 17rpm	MIO	3	90	420
io Oximo 50, 06Nm, 17rpm	MIO	3	90	715
io Oximo 50, 10Nm, 17rpm	MIO	3	120	715
io Oximo 50, 20Nm, 17rpm	MIO	3	160	765
io Oximo 50, 30Nm, 17rpm	MIO	3	240	835
868 RolTopD+, 06 Nm, 14 r.p.m.	F	3	140	610
868 RolTopD+, 10Nm, 14 r.p.m.	F	3	140	630
868 RolTopD+, 20Nm, 14 r.p.m.	F	3	200	690
868 RolTopD+, 30Nm, 14 r.p.m.	F	3	200	680
E868 RolTopK, 06Nm, 14rpm	FM	3	140	455
E868 RolTop, 06Nm, 14rpm	FM	3	140	610
E868 RolTop, 10Nm, 14rpm	FM	3	140	630
E868 RolTop, 20Nm, 14rpm	FM	3	200	690
E868 RolTop, 30Nm, 14rpm	FM	3	200	680
ESO RolTopK, 06Nm, 14rpm	MM	3	140	455
ESO RolTop, 06Nm, 14rpm	MM	3	140	630
ESO RolTop, 10Nm, 14rpm	MM	3	140	630
ESO RolTop, 20Nm, 14rpm	MM	3	200	690
ESO RolTop, 30Nm, 14rpm	MM	3	200	680
OZ-Mech, 20Nm, 16U/min	MOZ	2	65	735
Emergency crank handle RolTopD+, 10Nm, 14 r.p.m.	MN	3	140	715
Emergency crank handle RolTopD+, 20Nm, 14 r.p.m.	MN	3	200	775
Emergency crank handle RolTopD+, 30Nm, 14 r.p.m.	MN	3	200	740
Emergency crank handle Ilmo, 10Nm, 17 r.p.m.	MSN	3	120	835
Emergency crank handle Ilmo, 20Nm, 17 r.p.m.	MSN	3	160	945
DC VariEco, 10Nm, 16U/min	MDC	3	48	635
DC VariEco, 12Nm, 16U/min	MDC	3	42	655
ONYX.ROL.D+, 10Nm, 14 r.p.m.	FX	3	115	630
ONYX.ROL.D+, 20Nm, 14 r.p.m.	FX	3	184	690
T5S AUTO+, 06Nm, 17 r.p.m.	MI	3	90	655
T5S AUTO+, 10Nm, 17 r.p.m.	MI	3	120	660
T5S AUTO+, 15Nm, 17 r.p.m.	MI	3	140	680
T5S AUTO+, 20Nm, 17 r.p.m.	MI	3	160	765
RS100 Solar io, 06Nm, 15 rpm	FS100SOL.	0.2	-	500
RS100 Solar io, 10Nm, 12 rpm	FS100SOL.	0.2	-	545



Drive system	Identification Acquisition	Cable length [m]	Capacity [Watt]	Minimum width [mm]
<b>Motor drive – Units with 40 mm octagon shaft</b>				
SO RolTopD+, 05 Nm, 17 r.p.m.	M40	3	130	675
SO RolTopD+, 08Nm, 17 r.p.m.	M40	3	175	675
SO RolTopD+, 12Nm, 17 r.p.m.	M40	3	175	675
LS Aries S, 04Nm, 14rpm	MS40	3	65	540
WT Ilmo 40, 04Nm, 14rpm	MS40	2.5	65	620
WT Ilmo 40, 09Nm, 14rpm	MS40	2.5	100	640
WT Ilmo 40, 13Nm, 8rpm	MS40	2.5	95	640
io Oximo 40, 09Nm, 16 r.p.m.	FIO40	3	110	640
io Oximo 40, 13Nm, 10 r.p.m.	FIO40	3	110	630
868 RolTopD+, 5Nm, 17 r.p.m.	F40	3	130	675
868 RolTopD+, 8Nm, 17 r.p.m.	F40	3	168	675
868 RolTopD+, 12Nm, 17 r.p.m.	F40	3	168	675
OZ-Mech, 10 Nm, 16U/min	MOZ40	2	40	685

For the motor selection see torque table for the respective roller shutter profile.

## Cable length

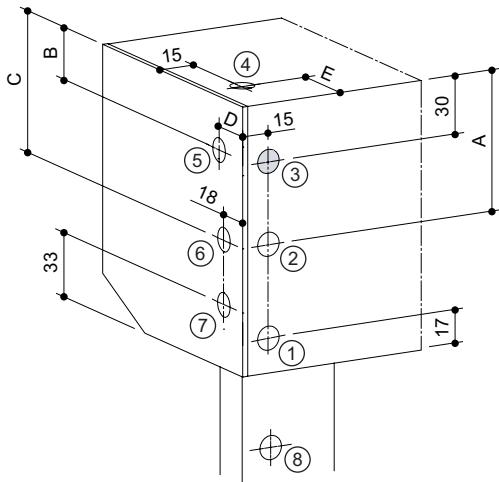
Depending on the drive type, the standard cable lengths differ as well as the optionally available cable lengths:

Type of drive	Standard	5 m	10 m	0.4 m with Hirschmann connector
SO, ESO, 868, E868, LT, WT 50	3 m	●	●	●
io	3 m	●	●	●
Emergency crank handle	3 m		●	●
LS	3 m			
WT 40	2.5 m			
OZ	2 m			
DC	3 m			

# nova front-mounted roller shutter

## Motor drive

### cabl e exits



For the nova front-mounted roller shutter, 8 different cable exits are available. If necessary, special cable exits as per sketch can also be ordered.

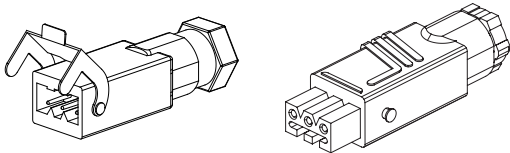
#### Legend

- ① Type 1 cable exit - at the rear towards the bottom
- ② Type 2 cable exit - at the rear in the middle
- ③ Type 3 cable exit - at the rear towards the top (standard)
- ④ Type 4 cable exit - at the top
- ⑤ Type 5 cable exit - at the side towards the top
- ⑥ Type 6 cable exit - at the side in the middle
- ⑦ Type 7 cable exit - at the side towards the bottom
- ⑧ Type 8 cable exit - in the guide rail towards the bottom

	11	13	13XL	16	16XL	18	20
<b>A</b>	58	73	73	84	84	93	102
<b>B</b>	16	38	38	38	38	38	38
<b>C</b>	-	-	73	84	84	93	102
<b>D</b>	21 <sup>1)</sup>	18	18	18	18	18	18
<b>E</b>	59 <sup>1)</sup>	59	36	36	36	36	36

<sup>1)</sup> ... not feasible with box shape round

## Hirschmann connector



STAS 3 connector with bracket

STAK 3 cable socket

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

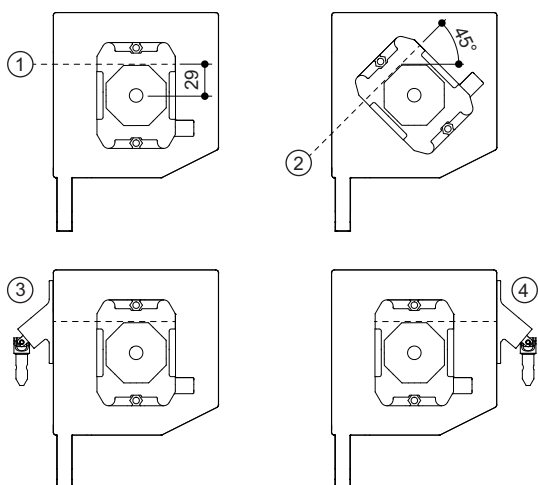
This meets the protection class IP 54:

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

With the 0.4 m long motor cable, the Hirschmann connector is permanently welded.

If larger cable lengths are required, the Hirschmann connector or the connector including the cable socket (mating part) can be ordered unmounted.

### MN – Emergency crank handle



Emergency crank handle drives are installed in roller shutters that must still be operated even in case of a power failure.

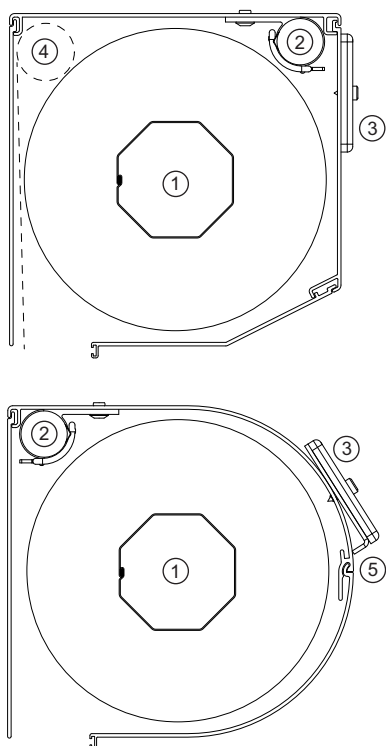
By default, the crank rod is then equipped with a crank handle funnel (crank rod removable).

The two screw points are visible on the outside of the side cover. When there is a plaster base element, rivet nuts are available for the side cover for fastening the drive. They jut out 6 mm over the side cover edge. Available from box size 13

#### Legend

- ① Crank handle exit horizontal
- ② Crank handle exit inclined
- ③ Spherical bearing on the back of the box
- ④ Spherical bearing on the box front side (not feasible with round or plaster base box)

### FS100SOL – Solar drive RS100 Solar io



The solar drive is used if no power outlet is available or if it would have to be prepared with a lot of effort.

This function is also guaranteed for north-facing orientation - without direct sunlight (2 cycles per day).

#### Legend

- ① Radio motor RS100 Solar io, SW60 or TSW, 6 or 10Nm
- ② Solar battery in the corner of the box at the front or rear of the round box
- ③ Solar panel screwed on box
- ④ Integrated insect screen roller blind can now also be combined with solar drive (except for round box)
- ⑤ Mounting bracket for solar panel on round box

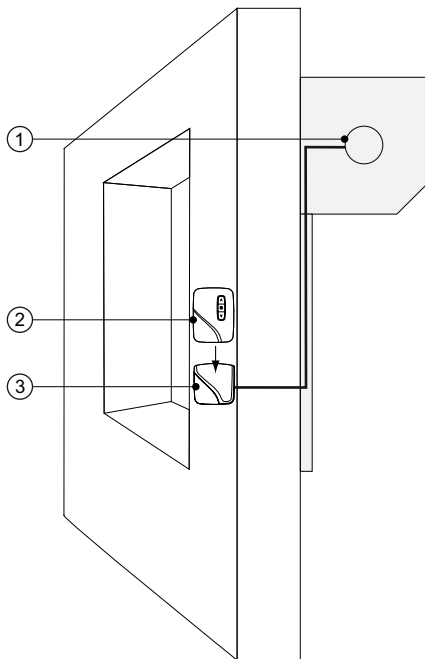
#### Attention:

Available from box size 13XL

# nova front-mounted roller shutter

## Motor drive

### MOZ/MOZ40 – Battery drive



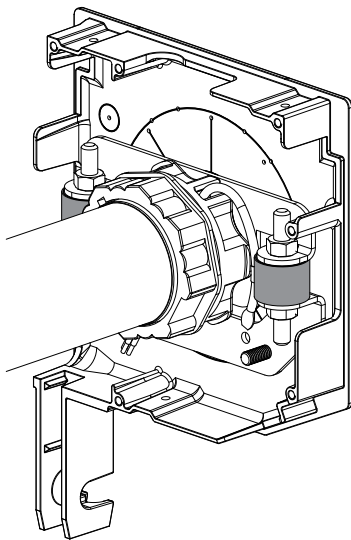
The battery drive is a mechanical 12V tubular motor that is operated from a battery control device inside the room. The drive is available in two sizes: SW40 with 10Nm and SW60 with 20Nm.

The battery control device must be recharged by means of a charger after approx. 3 weeks of operation (2 cycles per day). As an alternative, the charger can also be permanently connected to the battery control device located in the wall bracket in order to realize a battery-buffered roller shutter.

- Also works during a power failure
- Due to low voltage technology an electrician is not required
- No power supply cords and thus no mortising work
- Recommended cable outlet - along the guide rail

#### Legend

- ① Motor drive 12V
- ② Battery control device
- ③ Wall bracket for battery control device

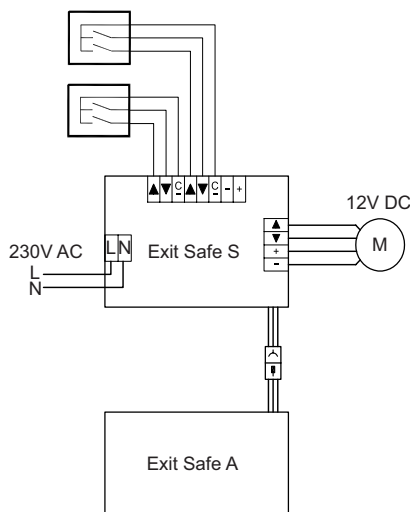


#### SILENT shaft bearing (optional)

The integrated vibration dampers on the motor and bearing sides greatly reduce the entry of vibration noise in the mounting base. This means that the ONYX.motor is barely perceptible inside the room - especially in whisper mode.

Possible for drives with star head (M, MM, MS, MI, F, FM, FS, FIO, FS100, FX) up to 20Nm.

## MDC - DC drive VariEco



In conjunction with the ExitSafe escape route module, which consists of a control module and a battery module, the drive for the **second escape route** can be equipped with battery buffering:

- Control device and battery in a double flush-mounted box
- Control device connected to a 230V network, continuously recharging the battery
- Connection option for individual operation (push-button) and central operation (e.g. smoke detector)

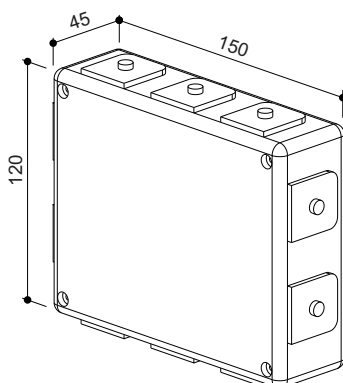
The ExitSafe escape route module works with the following drives:

- Tubular drive VariEco DC
- Outdoor blind drive JA DC

Model VariEco by elero is a DC drive with the following characteristics:

- 12V DC
- End position adjustment via knobs
- 60 mm, octagon shaft
- 10 or 12Nm

## Emergency-up control device + UPS



In combination with an uninterrupted power supply (UPS), the emergency-up control device enables the use of **wired 230V drives** for the so-called **second escape route** (approval by local fire safety officers required).

The control device moves the sun product up on its own in the following cases:

- Power outage of the 230V network
- Alarm signal from the connected push-button detector, the smoke alarm system or the fire alarm system
- UPS supply outage

The UPS used is selected regardless of the used drive type, the number of motors as well as the conditions on site.

Emergency-up control device



UPS unit

### Technical data

Emergency-up control device	
Power supply:	230 VAC/50 Hz
IP rating	IP 44
Installation type	Installation on the wall
Dimensions	150x120x45 mm (LxWxH)
Weight	430 g
Art. no.	05200036

# nova front-mounted roller shutter

## Stay - scissor-type stay

In the set out condition, the roller shutter allows for fresh air supply to the inside of the room while the room is kept comfortably cool due to the sun protection.

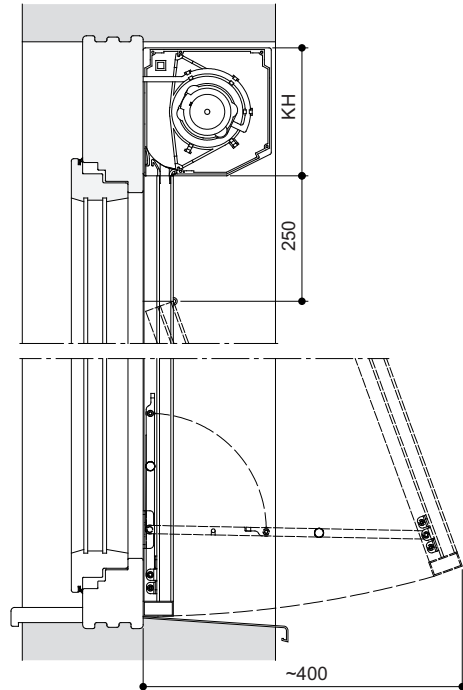
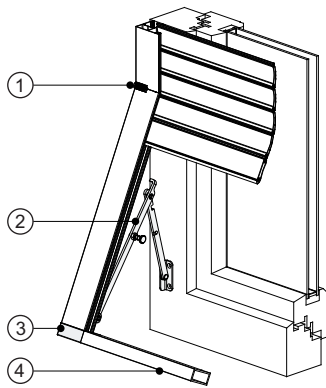
In the closed condition, the roller shutter provides the other benefits such as thermal protection and sound insulation.

### Notes

- Roller shutters with exhibitor meet the wind resistance class 0 in accordance with DIN EN 13659 (verification is not required).
- As the part of the guide rail that can be set out only rests on the mounting base and is not permanently screwed onto it, there can be a minimal incidence of light.
- Not possible with the roller shutter profiles S37 and T37.

### Limit sizes

	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. surface [m <sup>2</sup> ]
Toggle catch	600	2000	1000	3000	3



### Legend

- ① Toggle catch hinge
- ② Toggle catch with slidable lattice grate
- ③ Corner joint
- ④ Profiled pipe made of aluminium 40x20x2 mm

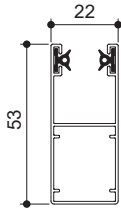
### Notes

- Guide rail type 18
- Not feasible with insect screen
- The scissor-type stay finds place in the chamber behind the distance guide rail, which is why the guide rail completely rests on the window in the closed condition.

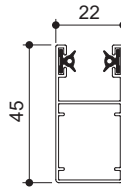


# Guide rails

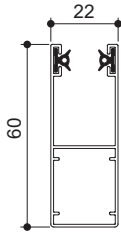
## General



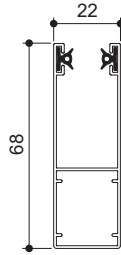
**Type 01 - Single guide rail**  
53x22 mm



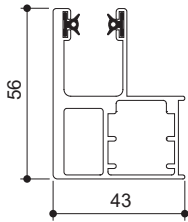
**Type 02 - Single guide rail**  
45x22 mm



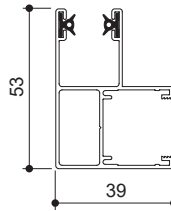
**Type 11 - Single guide rail**  
60x22 mm



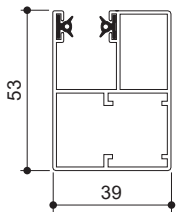
**Type 12 - Single guide rail**  
68x22 mm



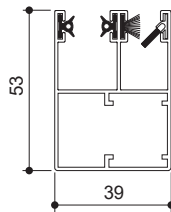
**Type 20 - Single guide rail**  
**Top-Safe**  
56x43 mm



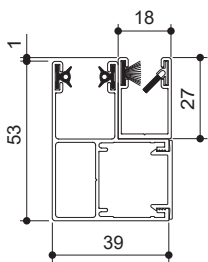
**Type 18 - Single guide rail**  
**for toggle catch**  
53x39 mm - open



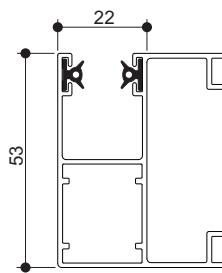
**Type 15 - Single guide rail**  
53x39 mm



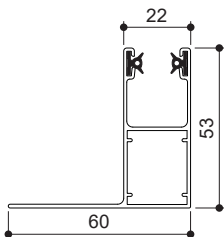
**Type 16 - Insect screen**  
**single guide rail**  
53x39 mm



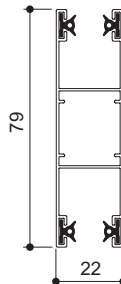
**Type 19 -**  
**Guide rail**  
for toggle catch with insect  
screen



**Type 05 - Single guide rail**  
53x22 mm with 20 mm rear  
distance



**Type 22 - Single guide rail**  
**with L-bracket 40 mm**  
**53x22 mm**  
To offset the guide rail  
mounting position. The guide  
rail is always undrilled.  
Also available with brush  
insert.

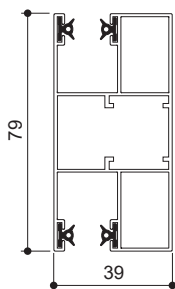


**Type 08 - Double guide rail**  
79x22 mm  
Also available with brush  
insert.

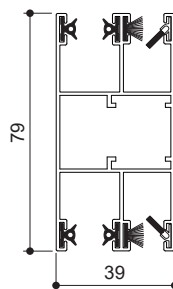
### Notes:

- All guide rails are available with brush insert.
- Curtain guidance for AV42, S37 and T37 profiles exclusively with brush inserts.

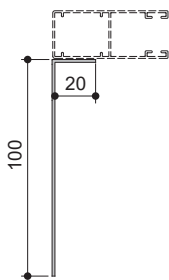




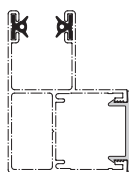
**Type 17 - Double guide rail**  
79x39 mm  
Also available with brush insert.



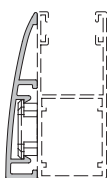
**Type 23 - Double guide rail**  
79x39 mm  
Also available with brush insert.



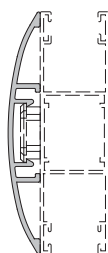
**Assembly bracket**  
100x20x2 mm  
For offset of the guide rail - Fixing position. The guide rail is always undrilled.



**Covering profile for guide rail type 21**  
Thermal separation of guide rail and mounting base.



**Round cover for 53 mm wide guide rails**  
For guide rails with end caps, the round cover extends to the lower edge of the end cap.



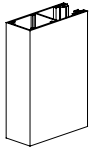
**Round cover for 79 mm wide guide rails**  
For guide rails with end caps, the round cover extends to the lower edge of the end cap.

**Notes:**

- All guide rails are available with brush insert.
- Curtain guidance for AV42, S37 and T37 profiles exclusively with brush inserts.

# Guide rails

## General



### End caps

End caps as lower end for the guide rails and to prevent the blind from running out.

The complete width refers to the lower edge of the end cap (guide rail 6 mm shortened). Not available for guide rails type 20, 24, and 25.

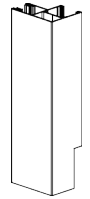


### Recess area at the bottom

Recess area guide rail in the area of the weatherboard.

Feasible with the guide rail types 15, 17 and 21.

Order via sketch with dimensional specification.

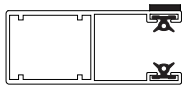


### Guide rail impermeable to driving rain

Dimension 53x39 mm

Sealing tape impermeable to driving rain 10 mm affixed to the guide rail as a seal between the guide rail and the mounting base. Necessary for all surface-mounted and plastered guide rails!

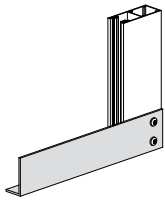
See chapter "Installation details".

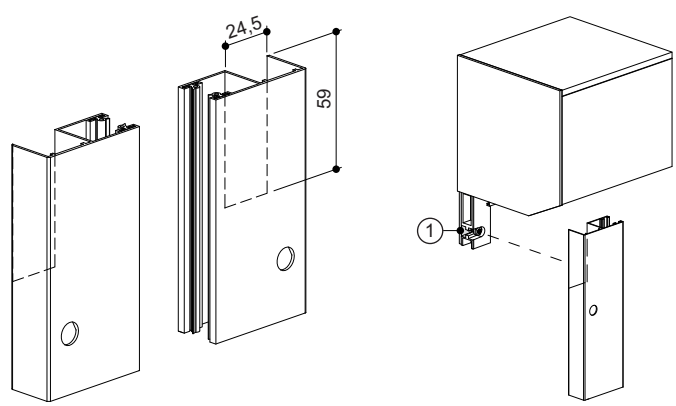


### End bracket

L-bracket 40x20x2 mm as lower end for the guide rails.

The bracket is screwed onto the guide rail by the customer.





**Recess area at the rear side**

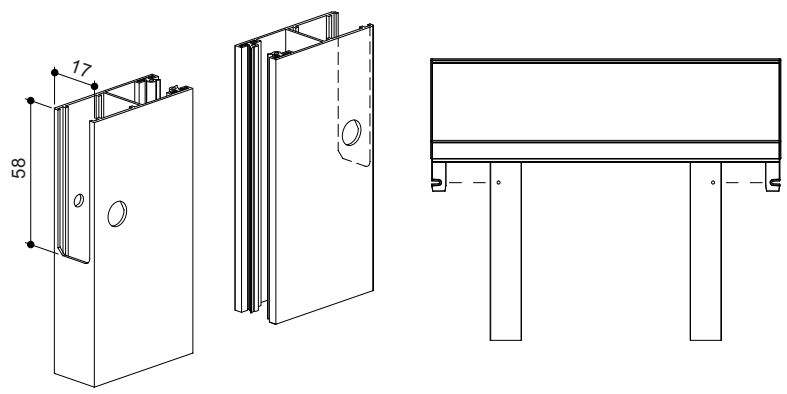
Facilitates the installation of box and guide rails in narrow recesses.

The box is screwed onto the mounting base by means of strut and support plate. Then the guide rail is pushed over it and screwed down.

Possible for guide rails type 01, 02, 08, 11, 12, 15, 16, 17

**Legend**

- ① Support plate for strut

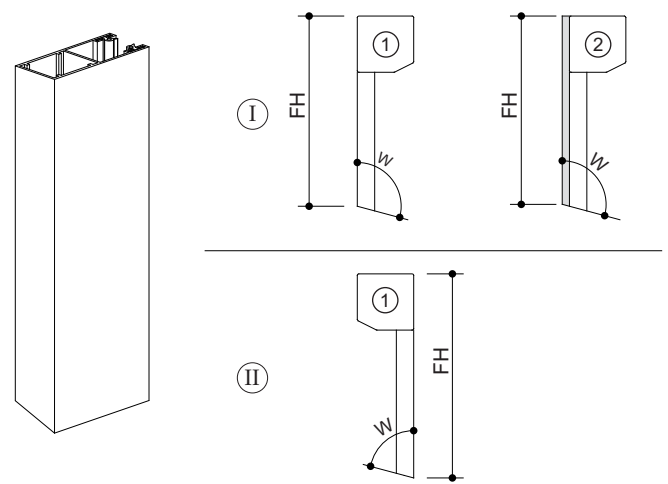


**Lateral recess area**

Facilitates the installation of box and guide rails in narrow recesses and in grooves.

It is possible to slide the guide rails onto the side cover struts at the side.

Possible for guide rails type 01, 02, 11, 12, 15, 16



**Diagonal cut for insect screen - guide rails**

**Legend**

- ① Standard design without insulation
- ② Guide rail with insulation
- ① Installation as left roller
- ② Installation as right roller
- FH Complete height = ordering dimension
- W Specification diagonal cut in degrees

# Guide rails

## Installation from the front

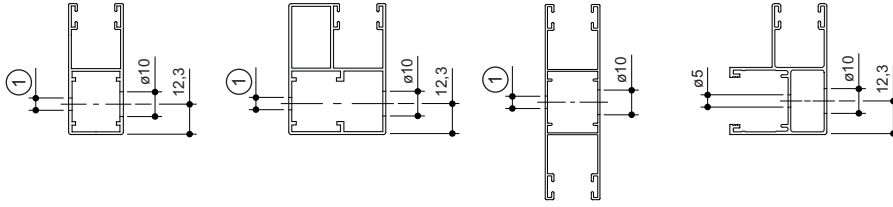
01, 02, 11, 12

15

### Type of guide rail

08

18, 21



The guide rails are screwed onto the closest bar through the mounting base.

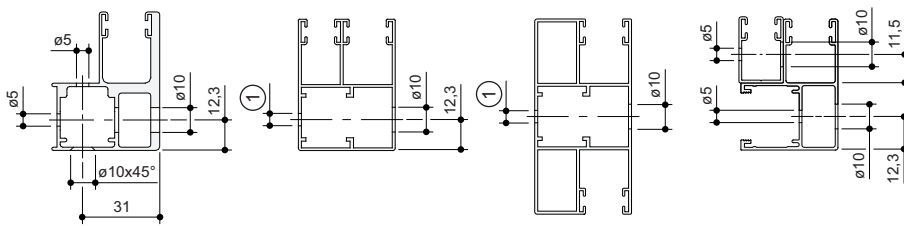
In order to be able to completely plaster the covering caps with plaster base elements, the box must be ordered with 25 mm wide plaster distances.

20

16

14

19

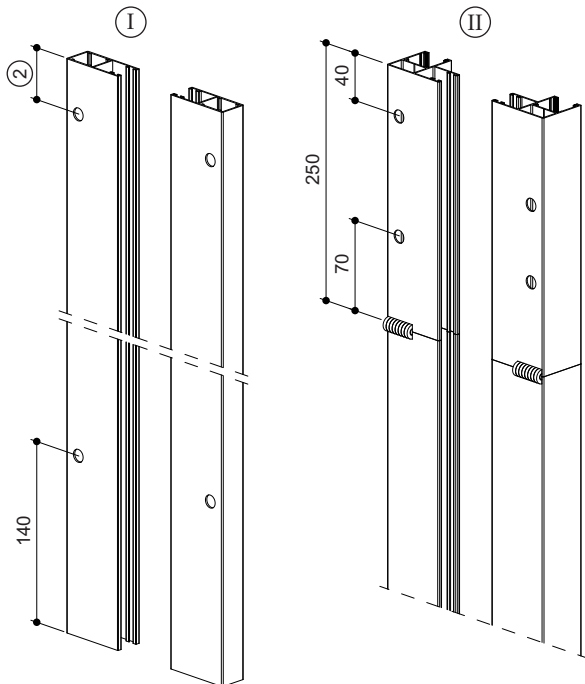


### Guide rail length

### Number of boreholes / guide rail

≤1400 mm	2
>1400 mm	3
>2600 mm	4

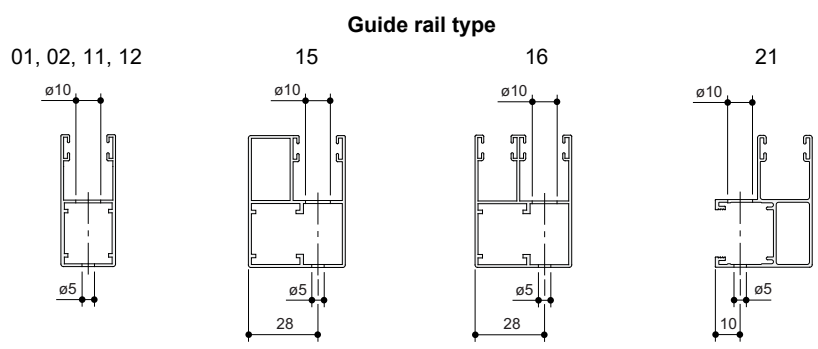
The drilled holes in the middle are evenly distributed between the outer ones.



### Legend

- ① ▪ ø5 standard
- ② ▪ 40 standard
- 140 with recess area at the rear side
- ① Distances between the boreholes standard
- ② Distances between the boreholes with stay

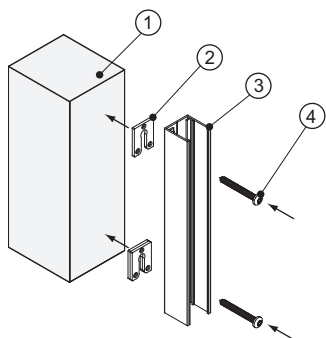
## Installation laterally



The guide rails are screwed down through the web that is closest to the mounting base.  
The edge distances are 140 mm.  
Double guide rails are not drilled when installed on the side.

Guide rail length	Number of boreholes / guide rail
≤1400 mm	2
>1400 mm	3
>2600 mm	4

The drilled holes in the middle are evenly distributed between the outer ones.



With the lateral guide rail installation, spacer plates made of plastic (00620940) can be ordered if necessary.

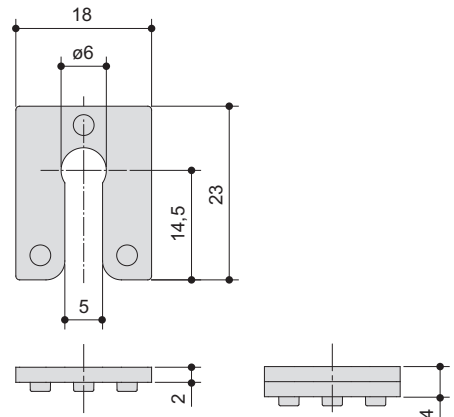
**Notes**

- For levelling out irregularities
- 2 mm thick
- Freely stackable as needed
- Available in white, grey and black

**Legend**

- ① Mounting base
- ② Small spacer plates
- ③ Guide rail
- ④ Fastening screw

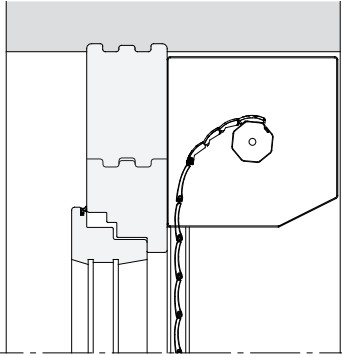
**Small spacer plates:**



# nova front-mounted roller shutter

## Locking devices and lift-up protections

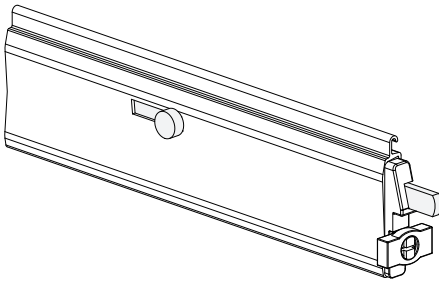
### Lift-up protection by means of shaft connection



The shaft connection pushes the blind down. This way the blind cannot be pushed upward.

Standard with motor drive.

### Sash bolt locking device (end rod can be locked)



By means of the sash bolt locking device the end rod is locked in the lower end position of the guide rail.

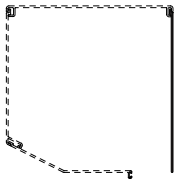
#### Attention:

- Not recommended with motor drive!
- The locking handle must be accessible!



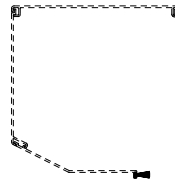
# Accessories box

## General



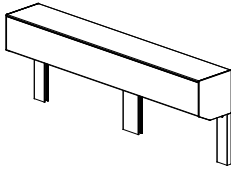
### Rear top board\*

with box design extruded.  
Standard with insect roller screen.  
Recommended with roller shutters that protrude into the window (without outer window frame doubling).



### Box sealing brush

Included in the surcharge for insect roller screen.  
Standard with insect roller screen.

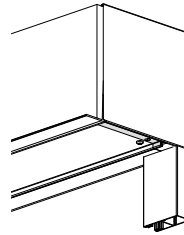


### Combination\*

Two roller shutter elements are connected to a box by means of continuous box top boards. Feasible with single and double guide rails.

Maximum overall width

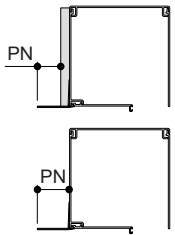
- 4500 mm



### Inspection cover with plaster distance

The split cut of the inspection cover is set off on the side (15 or 25 mm) so that the cover can also be opened with a laterally plastered box.

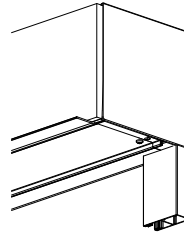
The box end profile is then designed up to the outer edge of the box.



### Plaster flange (PN)

Standard plaster flanges

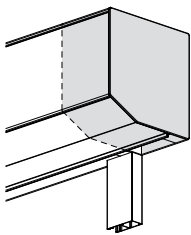
- 5, 15, 25, 35, 45 mm from leading edge plaster base
- 15, 25, 35, 45, 55 mm from leading edge box (without plaster base)



### Recess area plaster flange

Lateral shortening of the plaster flange, so that the plaster flange leading edge ends within the soffit with a laterally plastered box. Required for a correct drainage as per the connection guideline.

Standard with a plaster base element with plaster spacer (width like the plaster spacer); optionally without a recess area



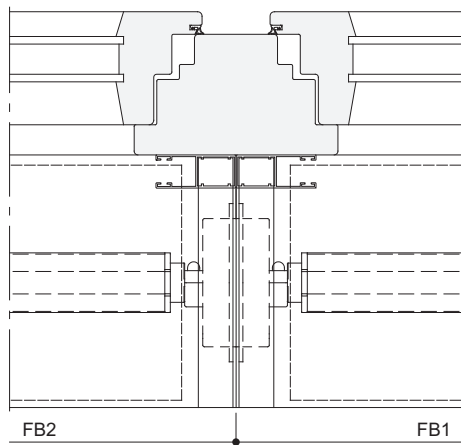
### Excess length of the box (KU)

Box extended beyond the guide rails, laterally closed with additional side cover. May also accommodate exterior drives – see chapter "Accessories drive".

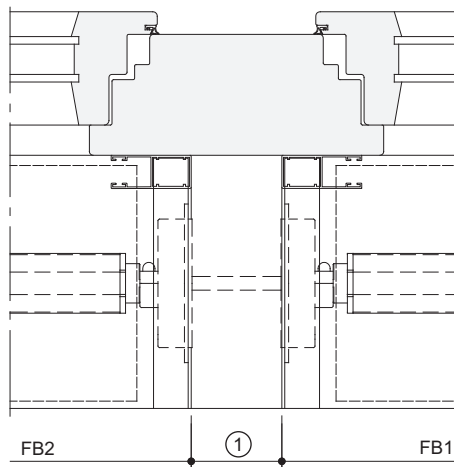
\* ... With combination of an extruded box, the rear top board is always provided due to stability reasons.



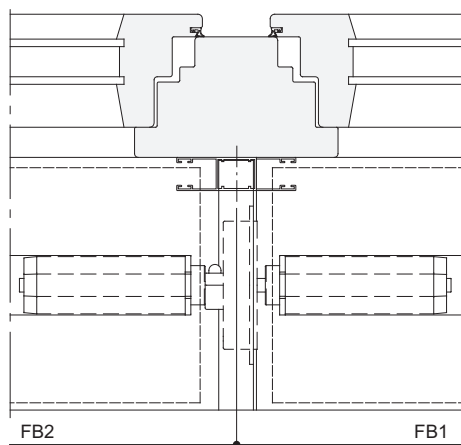
**Linkage for single guide rails without distance**



**Linkage for single guide rails with distance**



**Linkage for double guide rail**



**Legend**

- ① Linkage distance
- 0 to 300 mm

FB1, FB2 Complete width

**Linkage is only possible between**

- elements with the same complete height
- elements with the same shaft type
- elements with continuous top boards (combination)
- elements with the same curtain type

Attachment systems	Installation systems	Front-mounting systems with plaster bases	Build and Renovate	<b>Front-mounting systems</b>	Window and façade	General
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# BUILD AND RENOVATE

# Build and Renovate



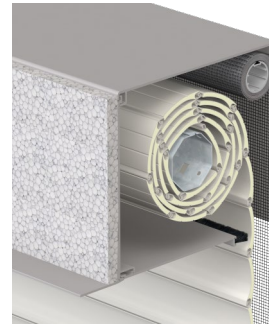
In the chapter Building and Renovation all systems are presented that are plastered in or installed in existing shafts and therefore do not require a visible box (cover).



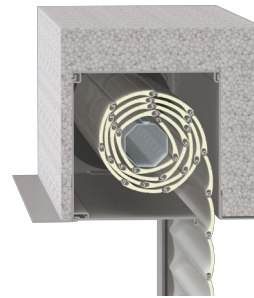


# nova front-mounted roller shutter - Plaster base element

Roller shutter in extruded aluminium box with plaster base element



Optional box sealing brush reduces incidence of light via the box.



Full-surface glued plaster base board, multitude of box end rails, alternatively with additional insulation on the top and rear side of the box leave no construction situation unresolved.

## Limit sizes

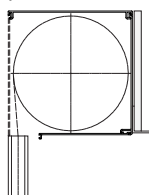
Profile type	Max. complete width [mm]	Min. complete width [mm]	Max. complete height [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	1800	400*	3000	3.1	3.6
A37	3000	400*	4000	7.5	2.6
AV42	3500	400*	3450	8.0	2.9
T37	2500	400*	2300	4.5	9.1
S37	2500	400*	3000	6.0	7.0

\* Depending on the drive system, the minimum complete width is higher than indicated in the table above:

- 400 mm with crank handle
- 425 mm with short motor SW60
- 500 mm with belt
- 500 mm with solar drive RS100 Solar io SW60
- 535 mm with short motor SW40

## Box forms and box sizes

quadratic

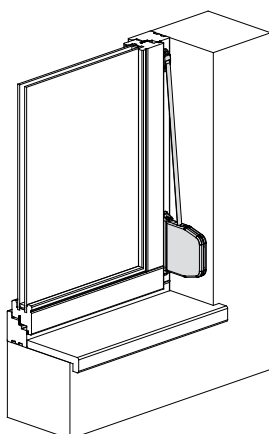


Box size	11	13	13XL	16	16XL	18	20
Box height [mm]	115	139	139	169	169	185	209
Box depth [mm]	125	149	169	179	196	195	219
quadratic	●	●	●	●	●	●	●

## Types of drives

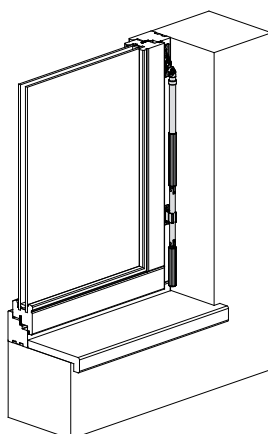
### Lift tape drive

with lift tape roll and swivelling take-up reel



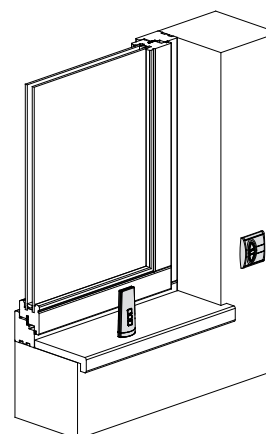
### Crank handle drive

with bevel gear unit, diagonal bearing, crank rod with folding handle and crank holder



### Motor drive Plug&Play

230V, incl. 3 m motor cable (2.6 m from side cover), without switch



#### Scope of delivery

- Roller shutter box extruded without back panel with box shape square
- Fully bonded plaster base board 10 mm made of EPS and box end profile extruded with profile noses 5, 15, 25, 35 or 45 mm from front edge of plaster base or 15, 25, 35, 45 or 55 mm from front edge of box
- Inspection cover extruded with plaster distance (15 or 25 mm) to be plastered on the side
- Drive belt drive, crank drive, motor drive
- Blind locked, end rod with weighting steel, seal, concealed limit stops
- Guide rail 53x22 mm or 45x22 mm with guide rail inserts
- Aluminium parts according to HELLA Color world
- Mounting material

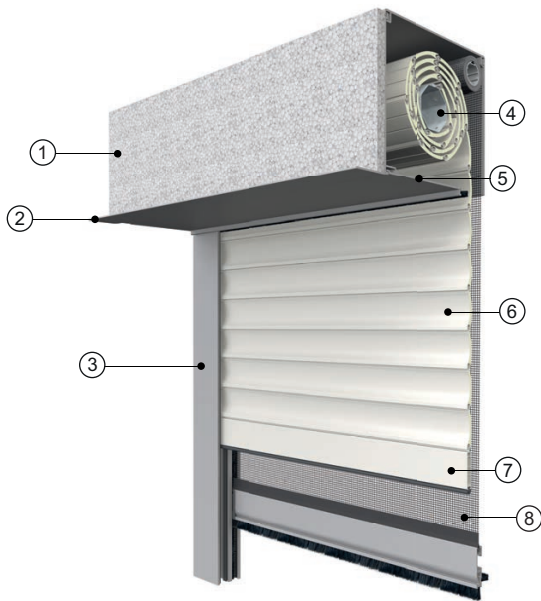
#### Supplementary equipment

- Integrated insect protection roller blind with run-up brake
- Box sealing brush
- Top board at the rear side extruded
- Roller shutter profile AV42, S37, T37
- Operation with radio motor
- Drive and control for second emergency route
- Variety of different guide rails

#### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- Insect screens
- High-quality construction elements guarantee a long lifespan and convenient operation

# nova front-mounted roller shutter - Plaster base element



## Field of application and use

Energy saving front-mounted roller shutter for subsequent installation in new or old buildings or for the integration in the thermal insulation composite system. Once plastered, the roller shutter box is no longer visible.

## Benefits of the product/product features

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Light regulation
- Insect screens

## Types of drives

- Lift tape
- Crank handle drive
- Motor drive

## Legend

- ① Plaster base
- ② Box end profile
- ③ Guide rail with seal or brush inserts
- ④ Octagon steel shaft
- ⑤ Top board profile inspection cover with groove to insert the brush
- ⑥ Roller shutter curtain
- ⑦ End rod with sealing profile
- ⑧ Insect screens



## Technical product description

### Roller shutter box

5-part: 5-piece cover profiles, top side, front side, revision, rear side and box end profile

Material Extruded aluminium

Box width Max. 4500 mm

Plaster base 10 mm EPS-30

Box end-rail Leg lengths 15, 25, 35, 45 or 55 mm

- Connected with stable hinge connection for revision purposes
- The box is closed with side covers made of cast aluminium

#### Box sizes

quadratic: PQ11, PQ13, PQ13XL, PQ16, PQ16XL, PQ18, PQ20

### Guide rails

#### Dimension 53x22 mm

Material Extruded aluminium

Details with seal or brush inserts

- The mounting holes are closed with covering caps.
- Additional guide rails see chapter "Accessories for guide rails"!

### Shaft

#### Octagon shaft 40x0.6 mm

made of galvanised steel, standard with belt tension and crank handle drive; optional with motor drive

#### Octagon shaft 60x0.6 mm

made of galvanized steel, standard for motor drive

### Drive system

#### Lift tape:

Width of the lift tape: 14 mm, made of polyester blended fabric, optionally available with lift tape gear 2:1 for larger curtain surfaces

#### Crank handle drive:

Worm-wheel gear with gear reduction 5.33:1 or 8:1, complete with bearing, powder-coated crank rod, folding handle and crank holder

#### Motor drive:

Plug-in drive built into the drive shaft, with adjustable limit stop

### Profiles

- **Profile K37:** double-walled plastic profile with light and ventilation slots, with 2 grooves, dimensions 37x8 mm, optionally locked
- **Profile A37:** double-walled, foamed aluminium profile with light and ventilation slots, with 2 grooves, dimensions 37x8.2 mm, locked
- **Profile AV42:** double-walled, foamed aluminium profile with light and ventilation slots, with 2 grooves, dimensions 42x9.3 mm, locked
- **Profile T37:** double-walled, extruded daylight profile, without grooves, dimensions 38.4x8.5 mm, intermediate profile made of translucent plastic, with ventilation slots, locked
- **Profile S37:** double-walled, extruded safety profile with light and ventilation slots, with 2 grooves, dimensions 37x8.5 mm, locked

### End rod

#### Dimension 42x7.5 mm

Material Extruded aluminium

Details with inserted sealing profile; with hidden, rotating plastic stoppers

### Colors

#### powder-coated aluminium parts

Color in standard colors without surcharge

Special colors as per "HELLA Color worlds" for a surcharge

- Roller shutter profiles see chapter "Standard colors" or "Colors for roller shutter profiles"

### Insect screens

#### Roller blind:

Insect roller screen with spring balancer drive and run-up brake completely integrated in the box. With brush seals guided safely in the guide rails behind the roller shutter. Details see chapter "Accessories insect screen".

#### Frames:

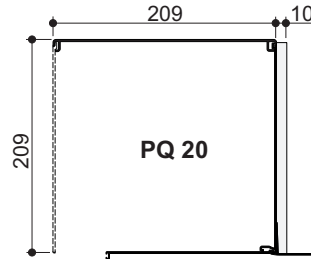
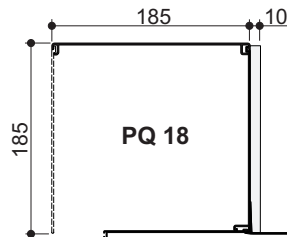
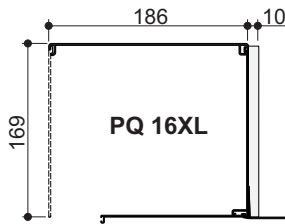
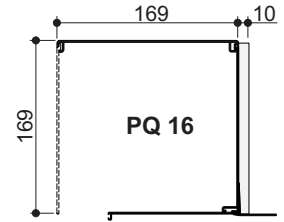
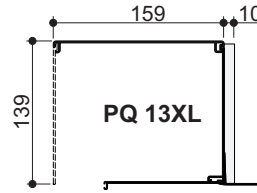
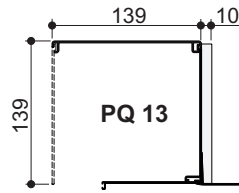
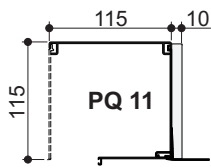
clamping frame, swing frame or slide frame mounted behind the front-mounted roller shutter. Details see chapter "Accessories insect screen".

#### Pleated blind:

pleated insect screen mounted behind the front-mounted roller shutter. Details see chapter "Accessories insect screen".

# nova front-mounted roller shutter - Plaster base element

Type: quadratic



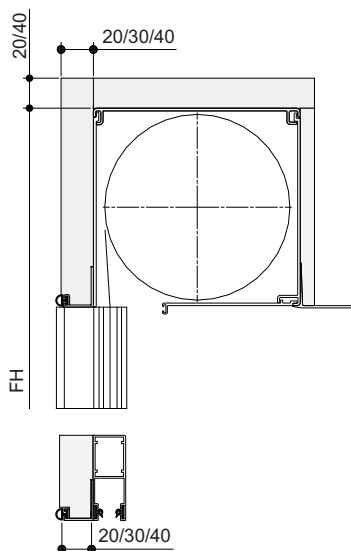
## Notes:

The box end profile is available in 5 different leg lengths (15, 25, 35, 45 and 55 mm). In conjunction with a plaster base board of 10 mm, this means a plaster flange of 5, 15, 25, 35 and 45 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).

## Insulation



### Field of application and use

Thermal separation between the front-mounted roller shutter and the mounting base.

### Benefits of the product/product features

Insulation with insulation bodies made of expanded polystyrene EPS 30 with a thickness of 20, 30 or 40 mm. Visibly closed with an extruded aluminium insulating covering profile with retracted sealing profile.

### Attention!

The complete width (FH) still refers to the upper edge of the box. Thus, an element with ceiling insulation must be ordered smaller analogous to the insulation thickness in order to fit into the existing soffit.

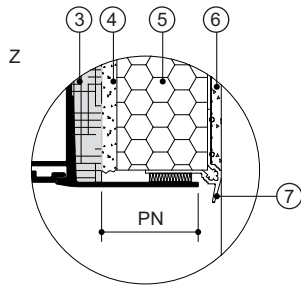
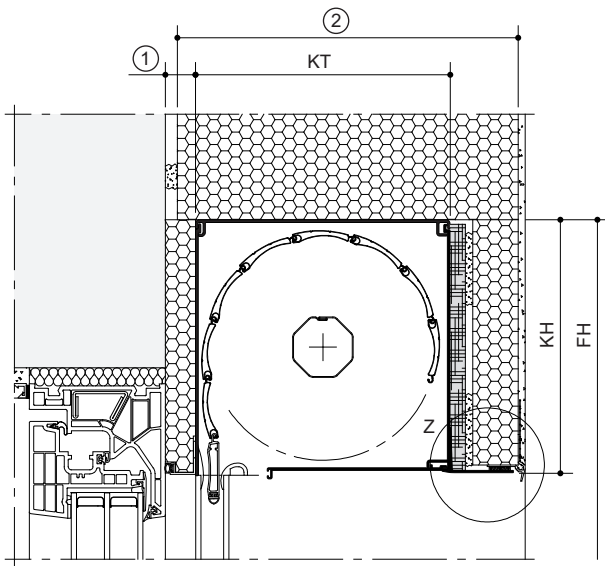
Moreover, the roller shutter box including the guide rail is distanced from the mounting base by the rear insulation thickness.

### Notes

- Rear insulation of guide rails and box can be selected separately
- Ceiling insulation can be selected separately
- Not possible with nova Top-Safe
- For soffit installation only, as the insulation is visible at the outer edge of the guide rail
- With extruded design only with rear top board

# nova front-mounted roller shutter - Plaster base element

## Installation situation for different wall constructions



When installing a front-mounted roller shutter into a thermal insulation composite system, the directive – Connections to windows and roller shutters with plaster, thermal insulation composite system and drywall installation – must be observed.

In this directive, the following paragraph can be found: "Systems that can be plastered and protrude over the wall surface and link in a ETICS, shall be insulated approx. 40 mm at the front in order to achieve a decoupling of the material transition". ... "With an insulation of approx. 40 mm on the front-mounted roller shutter box, the risk of a possible cracking at the transition to the overall insulation thickness in the plaster system is minimised. If no insulation or only an insulation thickness of less than 40 mm is possible, for example, an additional layer of reinforcement plaster with fabric inserts on the reinforced rendering coat can become necessary".

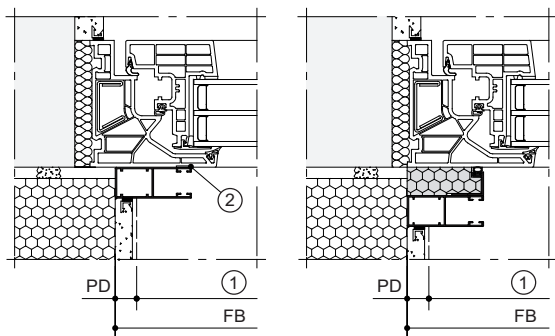
### Note with ETICS

In order to be able to connect the front-mounted roller shutter to a ETICS system in accordance with the directive, there is the option to order the plaster flange with the corresponding projection to enable the attachment of the plaster bead.

Plaster beads and sealing are deliverables provided by the customer.

### Legend

- ① Rear insulation (20/40 mm)
- ② Thickness ETICS
- ③ Plaster base plate board EPS 30 – 10 mm
- ④ Glue
- ⑤ ETICS (approx. 40 mm)
- ⑥ External rendering
- ⑦ Plaster bead with drip edge
- FH Complete height
- KH Box height
- KT Box depth
- PN Plaster flange 15, 25, 35, 45 or 55 mm



**Plaster distance**

For optical reasons the guide rails are partly plastered with plaster base roller shutters. In order that the inspection cover can still be opened, it is designed in three parts. The lateral parts are called plaster distance and can be plastered. The actual inspection cover is thus shortened by this plaster distances.

**Attention:**

With plastered guide rails, the connection to the window must be designed impermeable to driving rain. According to the guideline "Directory for the planning and execution of the installation of windows and entry doors for new buildings and renovations" there are the following options:

Sealing of the capillary joint using sealing tape

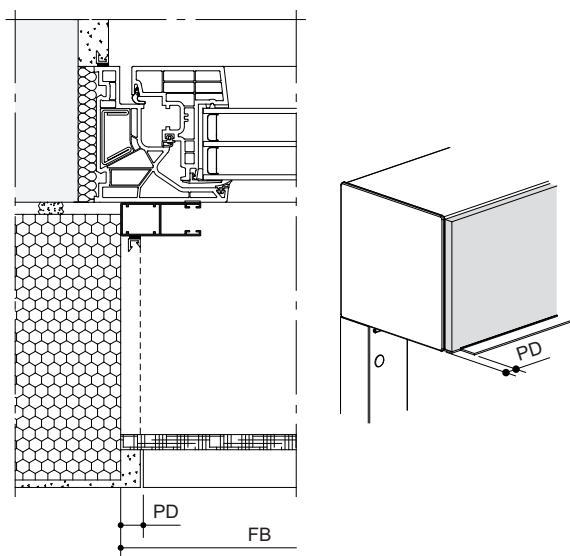
Ordering version impermeable to driving rain

Sealing of the capillary joint using sealing profile

Ordering rear insulation

**Legend**

- ① Wide inspection cover
- ② Sealing tape resistant to driving rain
- FB Complete width
- PD Plaster distance (up to outer edge inspection cover) = maximum area that can be plastered: 15 or 25 mm



**Recess area plaster flange**

If the guide rails are plastered on the side, a recess area of the plaster flange is also necessary in this area in order to rule out a lateral feeding of water into the brickwork.

The recess area is 15 or 25 mm wide depending on the plaster distance and reaches to the front edge of the plaster base board.

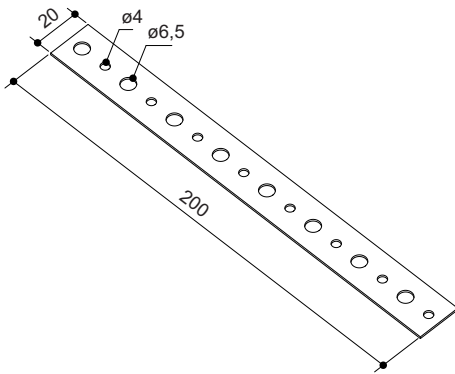
**Note**

If the guide rails should not be plastered, no plaster distance and thus no plaster flange recess area is required!

**Legend**

- FB Complete width
- PD Plaster distance (up to outer edge inspection cover) = maximum area that can be plastered: 15 or 25 mm

# nova front-mounted roller shutter - Plaster base element



## Mounting lug

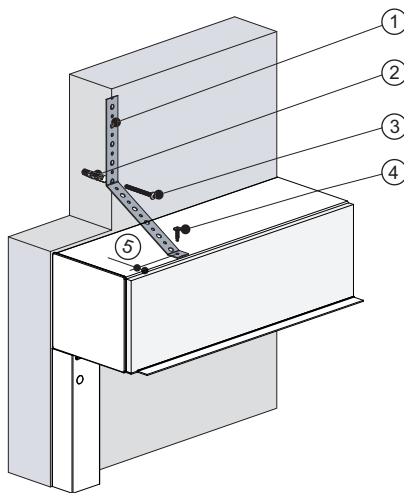
In case of the plaster base roller shutters, the box must not move, this is why an additional fastening with the enclosed fastening lugs must be performed.

The mounting lugs are loosely supplied. On delivery they are flat. The mounting lugs can be bent to fit the construction situation. They must be symmetrically split and fixed. The mounting material is supplied.

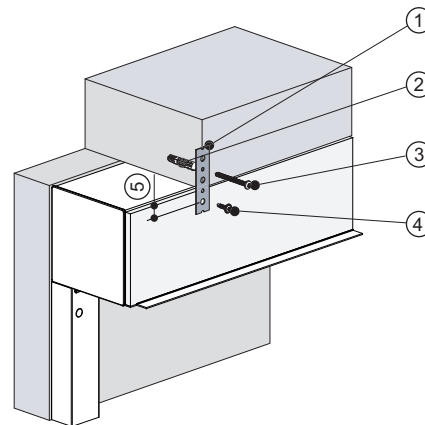
## Definition of mounting lugs

Complete width [mm]	Number [Unit]
to 2500	2
2501-3500	3
3501-4500	4

## Fixing on mounting level



## Fixing on plaster base level (soffit)

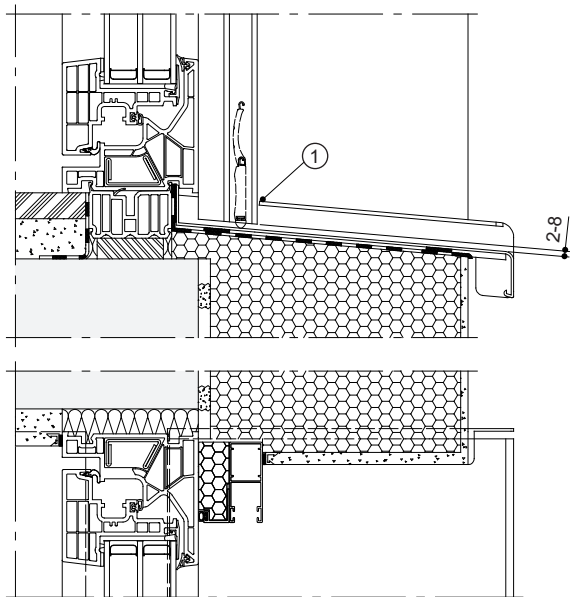


## Legend

- ① Mounting lug
- ② Dowel SX8
- ③ Pan head screw  $\varnothing 4.5 \times 50$  mm
- ④ Pan-headed drilling screw with collar  $\varnothing 4.2 \times 16$  mm
- ⑤ Screwing as close as possible to the corner point

## Window sill connection – guide rail plastered

### Aluminium window sill



### Note

In order to prevent structural damage due to uncontrolled water seepage, it must be ensured that the outer edge of the guide rail is within the window sill connection.

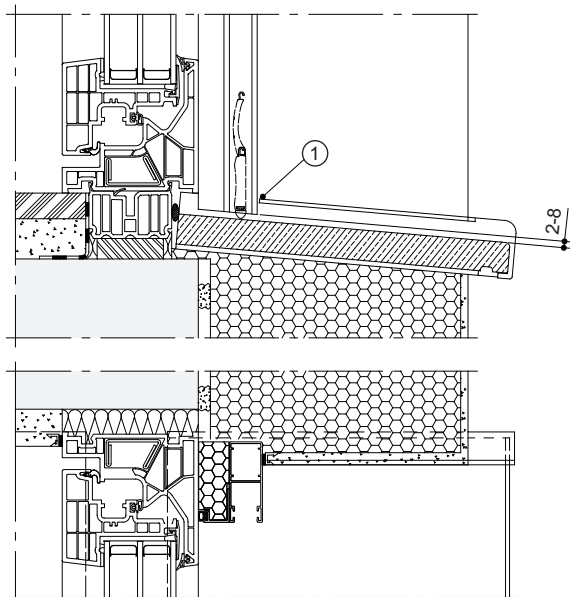
### Order of installation:

1. Mounting the window sill
2. Install front-mounted roller shutter with guide rails
3. Completing the façade

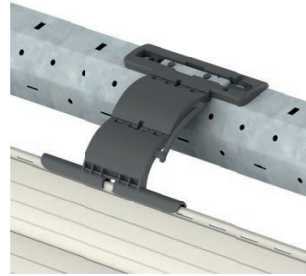
### Legend

- ① Window sill connection recessed in the area of the guide rail

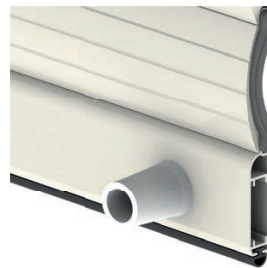
### Stone window sill



# Built-in roller shutter - Blind



Locked roller shutter curtain guarantees smooth running and prevents collisions.



Extruded, locked end rod with weighting steel, seal profile, limit stops.

## Limit sizes

Profile type	Min. width [mm]	Max. width [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	450*	1800	3.1	3.6
K52	450*	2300	4.5	3.5
A37	450*	3000	7.5	2.6
A52	450*	4000	10.0	3

\*Minimum width with short motor drive SW60, support on drive side 120 mm, guide rail surface-mounted.

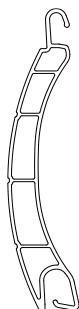
Minimum width 500 mm with belt pull, support 100 mm on drive side and 30 mm on bearing side, guide rail surface-mounted.



## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile A52

### Scope of delivery

- Roller shutter profile made of extruded, solid colored plastic or roll-formed foamed aluminium with light and air slits
- Hanging locked and suspension springs
- End rod with weighting steel, seal, limit stops
- Aluminium parts can be selected freely from the HELLA Color world
- Mounting material

### Supplementary equipment

- End bar with stop plate
- 2-part end bar with stop plate
- Rigid shaft connectors instead of suspension springs

### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- High-quality construction elements guarantee a long lifespan and convenient operation

# Built-in roller shutter

Type: Roller shutter curtain



## Field of application and use

High-quality roller shutter blind to be installed in an existing recess system. With new and old buildings suitable for all door and window openings with recesses.

## Benefits of the product

- View protection, glare protection and sun protection
- Protection against bad weather, heat and the cold
- UV-protection and noise insulation
- Blacking out
- Limited protection against burglary
- High-quality, corrosion resistant materials guarantee a maximum operational reliability
- Environmentally friendly due to the use of recyclable materials

## Roller shutter profile



Profile K37



Profile K52



Profile A37

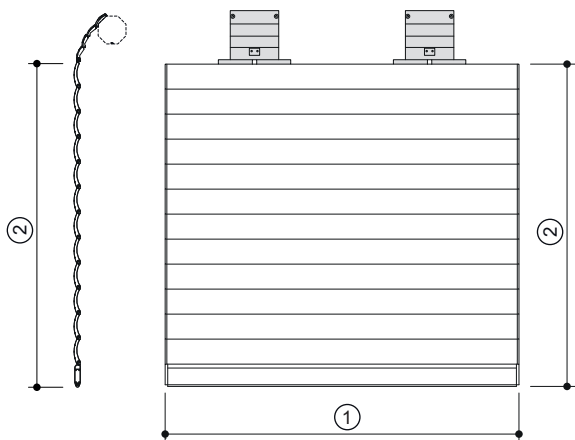


Profile A52

Type	Description
K37.	Plastic profile, double-walled with light and ventilation slots, with 2 grooves
K52	Plastic profile, double-walled with light and ventilation slots, with 3 grooves
A37	Aluminium profile, double-walled, foamed, with light and ventilation slots
A52.	Aluminium profile, double-walled, foamed, with light and ventilation slots

## Type: Roller shutter curtain

Taking dimension of roller shutter blind (Delivery of blind and suspension only)

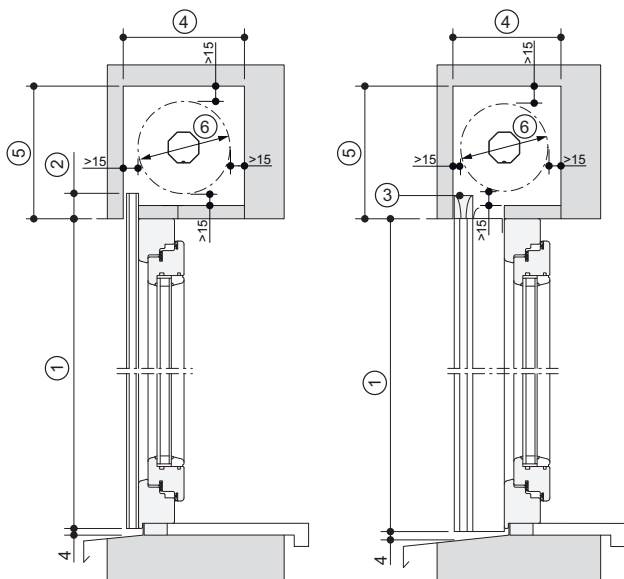


### Legend

- ① Width (incl. any locking device)
- ② Height = blind height = lower edge of end rod to upper edge of blind, without suspension

## Guide rails

Taking dimension of guide rail (as single model)



### Legend

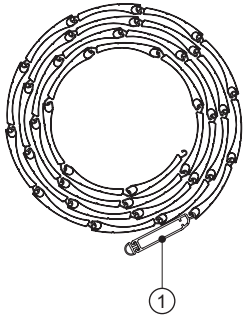
- ① Ordering information length of guide rail
- ② Additional height in mm  
Standard 60 mm with FS types 33, 54, 55, 90, 91
- ③ Entry guide for FS type 43-46, 56, 57
- ④ Recess depth
- ⑤ Recess height
- ⑥ Coil diameter of blind

# Built-in roller shutter

Type: Built-in roller shutter - right roller

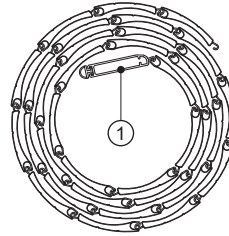
## Winding direction of roller shutter blind

When ordering, you can choose between two winding directions of the blind.



### End rod outside

For example, for roller shutters with inspection from the inside.



### End rod inside

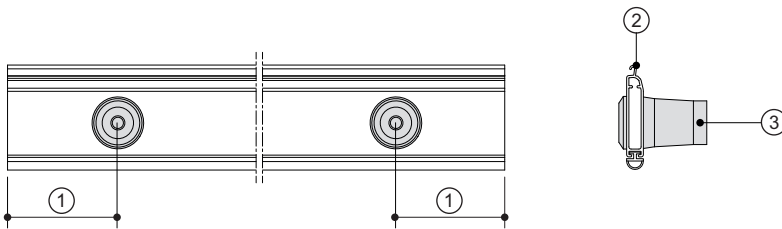
For example, for roller shutters with inspection from the outside.

Legend

① End rod

## Limit stop

Two dimensions for lateral indentation are possible for the limit stops.

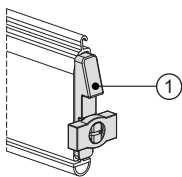


Legend

- ① Distance from the edge: 42 mm (Standard), optionally 100 mm
- ② End rod
- ③ Limit stop

## Concealed and rotatable stopper

For roller shutter profile K37, A37 in conjunction with guide rail types 43 or 56



Legend

- ① Concealed, rotatable stopper

## Number of rigid shaft connections or suspension springs

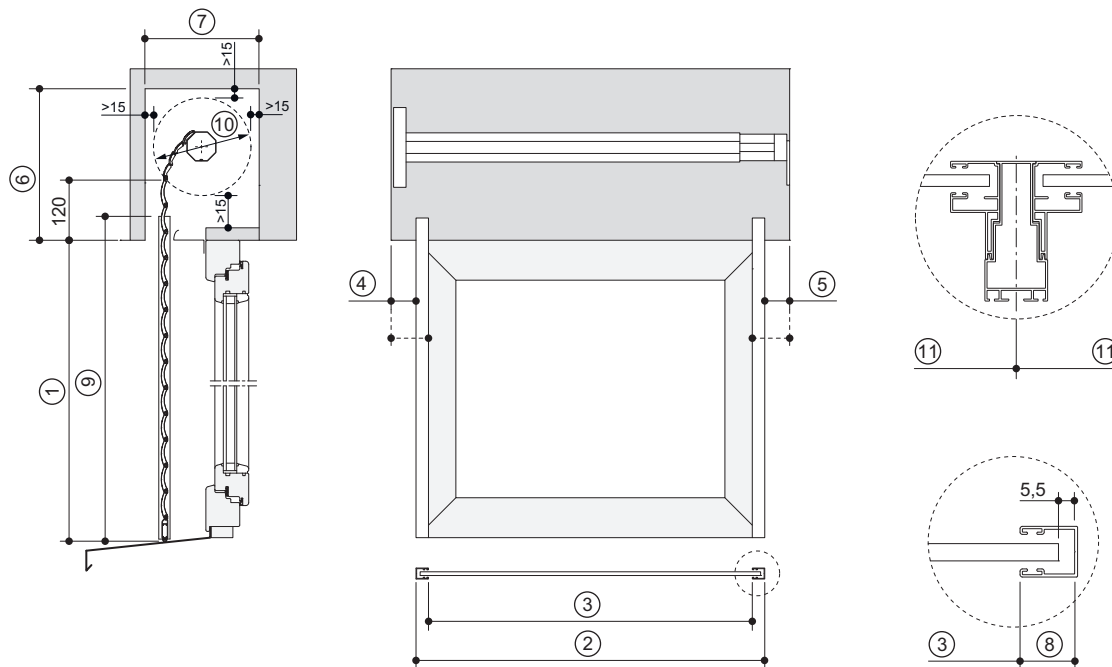
Blind width in [mm]	Unit
to 1200	2
1201-1800	3
1801-2400	4
2401-3000	5
3001-3600	6
3601-4000	7

## Ordering information

### Taking dimensions of built-in roller shutters (Overall model)

Applies for:

- Inspection from the inside
- Inspection from the outside



Sample illustration for inspection from the outside

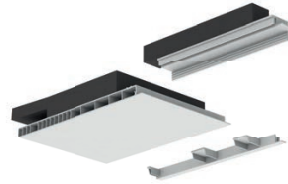
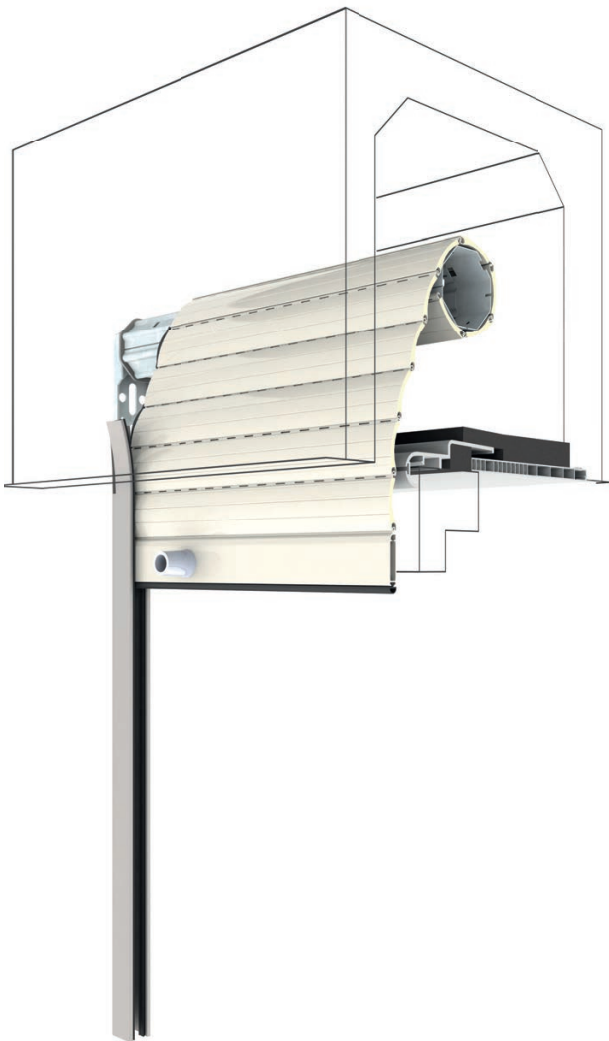
### Legend

- ① Clear height (lower edge of end rod till lower edge of plaster profile)
- ② Width for dimensional situation "outer edge of guide rail"  
Delivery with guide rails
- ③ Width for dimensional situation "inner edge of guide rail"  
Delivery without guide rails, additional query of groove depth for third-party guide rails
- ④ Lateral support surface to the right, seen from inside, inside edge of side cover to AK-guide rail with dimension AK or IK-guide rail with dimension IK, optional specification
- ⑤ Lateral support surface to the left (seen from inside), inside edge of side cover to AK-guide rail with dimension AK or IK-guide rail with dimension IK, optional specification
- ⑥ Recess height
- ⑦ Recess depth
- ⑧ Groove depth
- ⑨ Length of the guide rail:  
with attached entry guide: Clear height = cutting dimension of the guide rail (plus entry guide)  
slitted entry guide: Clear height + additional height 60 mm (standard)
- ⑩ maximum coil diameter according to limit dimensions per roller shutter profile
- ⑪ Width with dimension situation "Dimension between axes guide rail", possible with FS type 56,57

### Note:

The length of the drive shaft or the PVC inspection cover for inspection from the inside is +200 mm in the standard "Order width roller shutter". Optional made-to-measure order available.

# Built-in roller shutter - inspection from inside RvI



Variable inspection cover with airtight, lateral end caps.



Extruded, locked end rod with weighting steel, seal profile, limit stops.

## Limit sizes

Profile type	Min. width [mm]	Max. width [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	450*	1800	3.1	3.6
K52	450*	2300	4.5	3.5
A37	450*	3000	7.5	2.6
A52	450*	4000	10.0	3

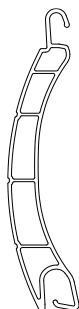
\*Minimum width with short motor drive SW60, support on drive side 120 mm, guide rail surface-mounted.

Minimum width 500 mm with belt pull, support 100 mm on drive side and 30 mm on bearing side, guide rail surface-mounted.

## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile A52

### Scope of delivery

- Roller shutter profile made of extruded, solid colored plastic or roll-formed foamed aluminium with light and air slits
- Hangings locked and rigid shaft connectors
- End rod with weighting steel, seal, limit stops
- Aluminium parts can be selected freely from the HELLA Color world
- Mounting material

### Supplementary equipment

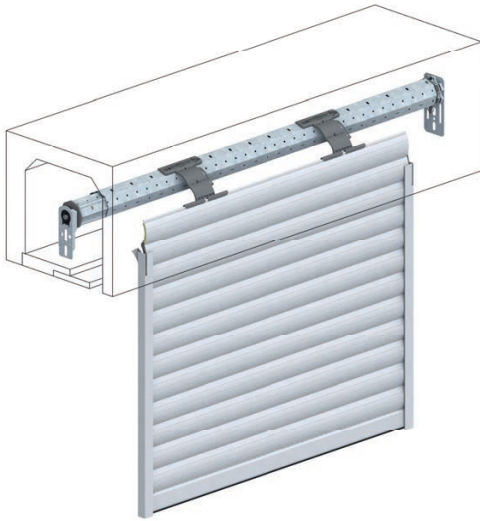
- End bar with stop plate
- 2-part end bar with stop plate
- Drive sets for belt tension, motor drive
- Operation via radio motor
- Drive and control for second escape route
- PVC lid with flex foam incl. lateral adapter
- PVC cover with heavy foil with flex foam incl. lateral adapter
- Roll-off profile with foam with or without bar
- PVC balancing profiles with foam adhesive tape
- Variety of different guide rails

### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- High-quality construction elements guarantee a long lifespan and convenient operation

# Built-in roller shutter - inspection from inside RvI

Type: Right roller - overall model



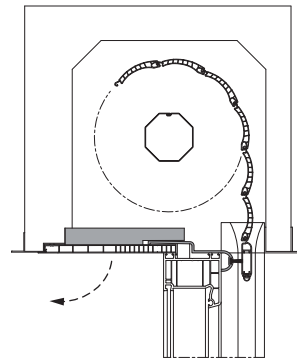
## Field of application and use

High-quality roller shutter to be installed in an existing recess system. With new and old buildings suitable for all door and window openings with recesses.

## Benefits of the product

- View protection, glare protection and sun protection
- Protection against bad weather, heat and the cold
- UV-protection and noise insulation
- Blacking out
- Limited protection against burglary
- High-quality, corrosion resistant materials guarantee a maximum operational reliability
- Guide rail with noise insulating brush sealing or PVC insert
- Inspection cover on the inside
- Environmentally friendly due to the use of recyclable materials

## Inspection from the bottom



## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile A52

Type	Description
K37.	Plastic profile, double-walled with light and ventilation slots, with 2 grooves
K52	Plastic profile, double-walled with light and ventilation slots, with 3 grooves
A37	Aluminium profile, double-walled, foamed, with light and ventilation slots
A52.	Aluminium profile, double-walled, foamed, with light and ventilation slots



**Inspection cover**

made of extruded plastic, thickness 10 mm, with glued flex foam 20 mm for optimum insulation performance, optionally equipped with heavy weight foil for better sound insulation, lateral adapter pieces available as a defined plaster removal edge.

**Window rabbet profile**

Rolling profile made of plastic and glued foam tape serves as a defined position for the window. Suitable for frame thicknesses 70-80 mm.

**Shaft**

60x0.6 mm or 40x0.6 mm octagon steel shaft

**Types of drive**

**Lift tape:** Tape 22 mm wide made of polyester blended fabric, grey color with flush-mounted take-up reel 160 mm or 186 mm and optionally with wall box or insulated wall box, optionally with surface-mounted tape take-up reel.

Tape 14 mm wide made of polyester blended fabric, grey color, with surface-mounted tape take-up reel.

**Belt tension gear:** Tape 22 mm wide made of polyester blended fabric, grey color, reduction ratio 2:1, with flush-mounted take-up reel 160 mm or 186 mm and optionally with wall box or insulated wall box, optionally with surface-mounted tape take-up reel.

**Motor drive:** Plug-in drive built into the drive shaft, with protection device against unintentionally raising of the curtain and automatic limit stop or adjustable limit stop.

**Hanger assembly**

for fixing the roller shutter blind to the drive shaft by means of steel tape suspension 123 mm, 158 mm or 178 mm or optionally with rigid shaft connection 2-part or 3-part made of plastic.

**Profiles**

**Profile K37** (37x8 mm) double-walled roller shutter hollow chamber profile made of extruded, solid colored plastic with 2 grooves and light and ventilation slits. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile K52** (52x14 mm) double-walled roller shutter hollow chamber profile made of extruded, coloured plastic with 3 grooves and light and ventilation slots. As a standard the roller shutter curtain is not locked.

**Profile A37** (37x8.2 mm) double-walled, roll formed roller shutter profile made of aluminium with 2 grooves and light and ventilation slots. Hollow space foam filled with polyurethane. The blind is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile A52** (52x13 mm) double-walled, roll formed roller shutter profile made of aluminium, with 3 grooves and light and ventilation slits. Hollow space foamed with polyurethane, outer surfaces coated with thick lacquer. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**End rod**

made of extruded aluminium and retracted sealing profile, dimension 36x7.5 mm, with stop plug at the front of the end rod or laterally installed, twistable invisible plastic stop plug for switching off in the upper end position. Optional angled end rod with 2-sided stop plugs for switching off in the upper end position, dimension 32.5x7.5 mm, without sealing profile.

End rod for K52 and A52 made of extruded aluminium and retracted sealing profile, dimension 44x12 mm, with stop plug at the front of the end rod for switching off in the upper end position.

Optional angled end rod with fixed stop tab, dimension 46x14 mm, with lateral plastic glides or 2-part angled end rod, with removable stop tab, dimension 52x12 mm, stop tab for switching off in the upper end position.

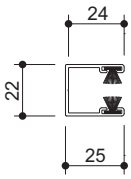
**Colors**

Guide rails and end rods in powder coated standard colors without surcharge.

Special colors according to the brochure "HELLA Color worlds" for a surcharge. PVC inspection cover in white color, PVC rolling profile in white color and anthracite.

# Built-in roller shutter - inspection from inside RvI

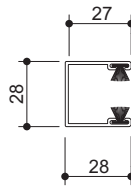
## Aluminium guide rails



**Type 33 - Single guide rail**  
25x22 mm

Suitable for roller shutter profile

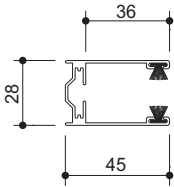
- K37.
- A37



**Type 54 - Single guide rail**  
28x28 mm

Suitable for roller shutter profiles

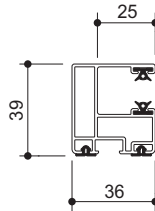
- K52.
- A52



**Type 55 - Single guide rail**  
45x28 mm

Suitable for roller shutter profile

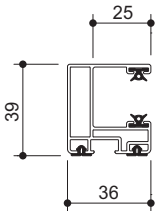
- K52.
- A52



**Type 90**  
Single guide rail  
36x39 mm

Suitable for roller shutter profiles

- K37.
- A37

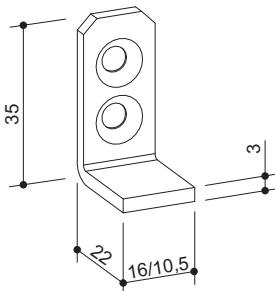


**Type 91**  
Single guide rail  
36x39 mm

Suitable for roller shutter profile

- K52.
- A52

## Accessories



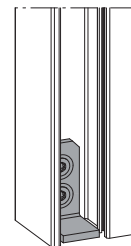
Intercepting angle for guide rail  
coated

Available colors:

- white
- anthracite
- Galvanized

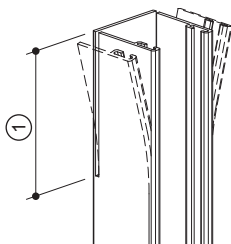
**Installation detail**

**Guide rail at the bottom**



## Entry guide

Inspection from the inside



**Entry guide**  
Slotted design

The corresponding guide rails are cut to fit ex works and are widened on site.

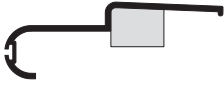
Applicable for guide rail:  
Types 33, 54, 55, 90, 91

**Legend**

① slotted height (Standard 50 mm)

# Built-in roller shutter - inspection from inside RvI

## Inspection covers and accessories



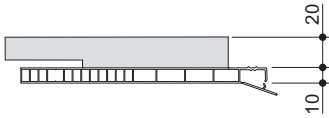
Rolling profile with foam, without bar  
for blind frame 70-80 mm

White color, anthracite



Rolling profile with foam  
for blind frame 70-80 mm

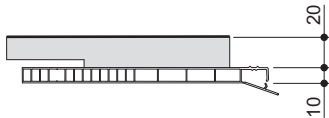
White color, anthracite



PVC revision cover  
with Flex foam

Color white

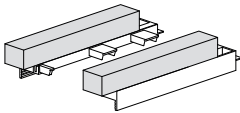
Available cover widths:  
160, 180 and 220 mm  
optionally cut to size in the range from 100  
to 220 mm



PVC revision cover  
with Flex foam and soundproof film

Color white

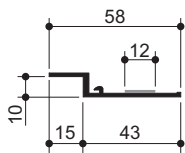
Available cover widths:  
140, 160, 180 and 220 mm  
optionally cut to size in the range from 100  
to 220 mm



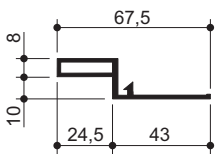
Adapter for inspection lid  
2-part, with Flex foam

Color white

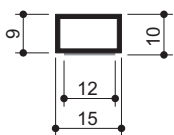
Available cover widths:  
160, 180 and 220 mm



PVC compensation profile with foam  
adhesive tape for fixing the inspection  
cover for Prix system



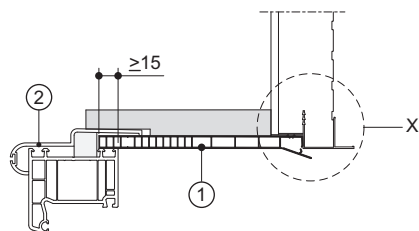
PVC compensation profile for fastening the  
inspection cover for Beck & Heun system



PVC compensation profile universal 15x10  
mm with foam adhesive tape

## Installation details

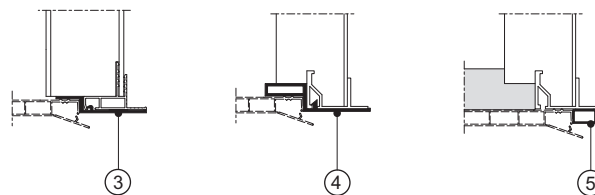
### PVC revision cover



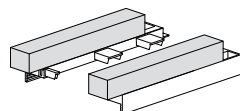
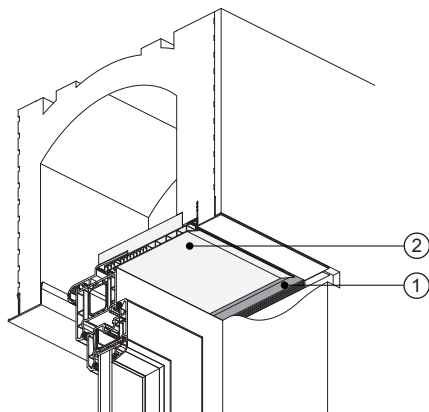
#### Legend

- ① PVC revision cover
- ② Unwinding profile
- ③ PVC compensation profile for Prix boxes
- ④ PVC compensation profile for Beck & Heun boxes
- ⑤ PVC compensation profile universal 15x10 mm

Detail X



### Adapter for PVC inspection lid



The lateral adapter with Flex foam is pushed laterally on the inspection cover and, when installed, serves as a deduction edge when plastering. The inspection cover can be opened effortlessly for maintenance work via the slid-on adapter connector.

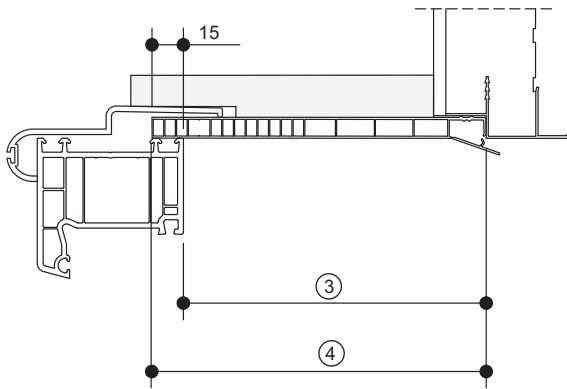
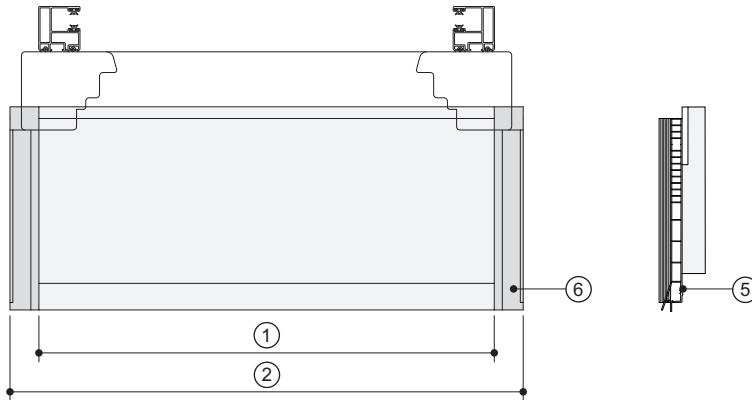
#### Legend

- ① Lateral adapter with flex foam
- ② PVC revision cover

# Built-in roller shutter - inspection from inside RvI

## Dimensional definition PVC inspection cover

PVC revision cover

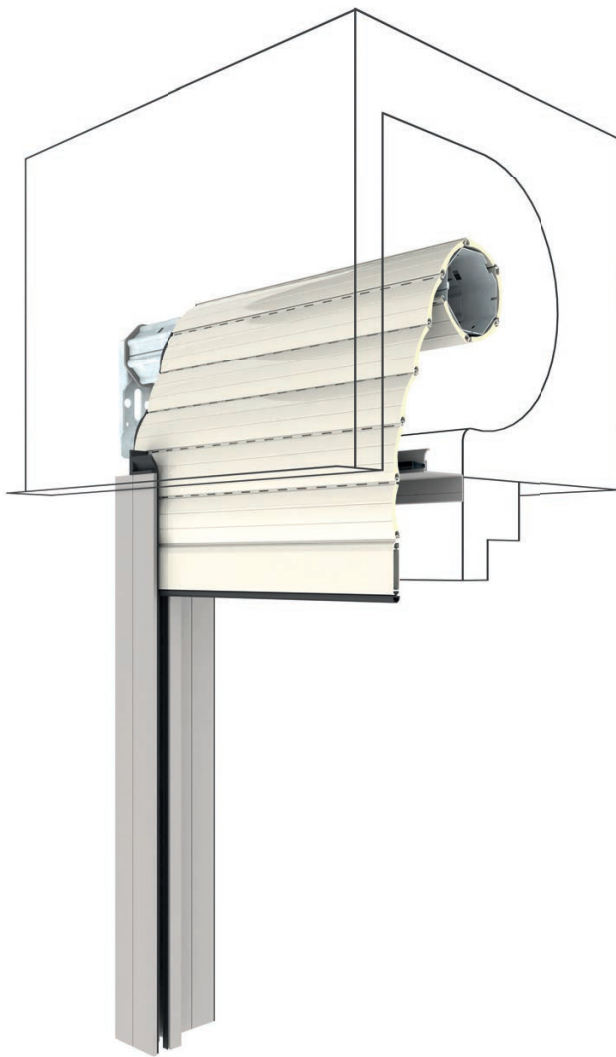


### Legend

- ① Width of inspection lid = inner edge of lateral adapter
- ② Wide inspection lid incl. lateral adapter
- ③ Dimension X
- ④ Order dimension lid width = 15 + dimension X
- ⑤ PVC revision cover
- ⑥ lateral adapter



# Built-in roller shutter - inspection from outside RvA



Inspection cover made of aluminium with retracted brush sealing.



Extruded, 2-part guide rail with guide rail inserts.

## Limit sizes

Profile type	Min. width [mm]	Max. width [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	450*	1800	3.1	3.6
K52	450*	2300	4.5	3.5
A37	450*	3000	7.5	2.6
A52	450*	4000	10.0	3

\*Minimum width with short motor drive SW60, support on drive side 120 mm, guide rail surface-mounted.

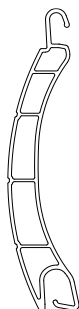
Minimum width 500 mm with belt pull, support 100 mm on drive side and 30 mm on bearing side, guide rail surface-mounted.



## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile A52

### Scope of delivery

- Roller shutter profile made of extruded, solid colored plastic or roll-formed foamed aluminium with light and air slits
- Hangings locked and rigid shaft connectors
- End rod with weighting steel, seal, limit stops
- Aluminium parts can be selected freely from the HELLA Color world
- Mounting material

### Supplementary equipment

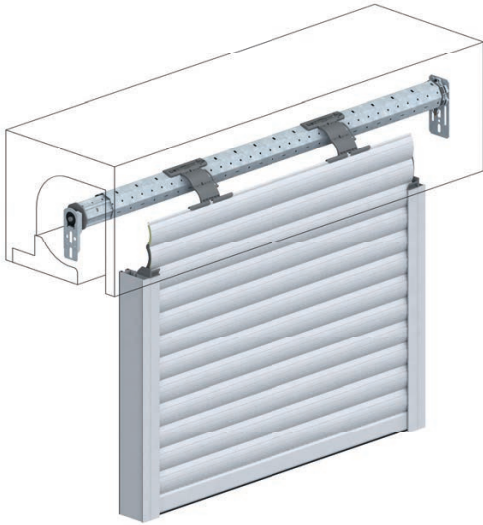
- End bar with stop plate
- 2-part end bar with stop plate
- Rigid shaft connectors instead of suspension springs
- Drive sets for belt tension, motor drive
- Operation via radio motor
- Drive and control for second escape route
- Inspection panel length 37mm or 45 mm with brush
- 2-part guide rail with guide rail inserts

### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- High-quality construction elements guarantee a long lifespan and convenient operation

# Built-in roller shutter - inspection from outside RvA

Type: Right roller - overall model



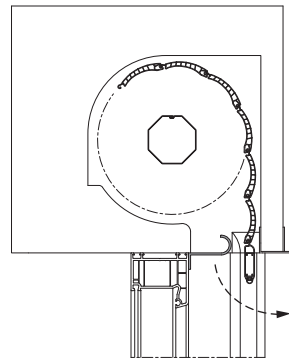
## Field of application and use

High-quality built-in roller shutter to be installed in an existing recess system. With new and old buildings suitable for all door and window openings with recesses.

## Benefits of the product

- View protection, glare protection and sun protection
- Protection against bad weather, heat and the cold
- UV-protection and noise insulation
- Blacking out
- Limited protection against burglary
- High-quality, corrosion resistant materials guarantee a maximum operational reliability
- Guide rail with noise insulating brush sealing or PVC insert
- inspection cover on the outside
- Environmentally friendly due to the use of recyclable materials

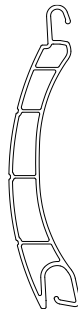
## Inspection from the outside



## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile A52

Type	Description
K37.	Plastic profile, double-walled with light and ventilation slots, with 2 grooves
K52	Plastic profile, double-walled with light and ventilation slots, with 3 grooves
A37	Aluminium profile, double-walled, foamed, with light and ventilation slots
A52.	Aluminium profile, double-walled, foamed, with light and ventilation slots

**Inspection cover**

made of extruded aluminium and retracted brush seal, available in depths of 37 mm and 45 mm.

**guide rail**

made of extruded aluminium, 2-part design, optionally as single guide rail in dimension 26/47x75 mm. 32/53x85 mm and available as double guide rail 38/80x85 mm. The guide notch is equipped on both sides with a PVC seal or a brush insert for the roller shutter blind.

**Shaft**

60x0.6 mm or 40x0.6 mm octagon steel, galvanised.

**Types of drive**

**Lift tape:** Tape 22 mm wide made of polyester blended fabric, grey color with flush-mounted take-up reel 160 mm or 186 mm and optionally with wall box or insulated wall box, optionally with surface-mounted tape take-up reel.

Tape 14 mm wide made of polyester blended fabric, grey color, with surface-mounted tape take-up reel.

**Belt tension gear:** Tape 22 mm wide made of polyester blended fabric, grey color, reduction ratio 2:1, with flush-mounted take-up reel 160 mm or 186 mm and optionally with wall box or insulated wall box, optionally with surface-mounted tape take-up reel.

**Motor drive:** Plug-in drive built into the drive shaft, with protection device against unintentionally raising of the curtain and automatic limit stop or adjustable limit stop.

**Hanger assembly**

for fixing the roller shutter blind to the drive shaft by means of steel tape suspension 123 mm, 158 mm or 178 mm or optionally with rigid shaft connection 2-part or 3-part made of plastic.

**Profiles**

**Profile K37** (37x8 mm) double-walled roller shutter hollow chamber profile made of extruded, solid colored plastic with 2 grooves and light and ventilation slits. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile K52** (52x14 mm) double-walled roller shutter hollow chamber profile made of extruded, colored plastic with 3 grooves and light and ventilation slots. As a standard the roller shutter curtain is not locked.

**Profile A37** (37x8.2 mm) double-walled, roll formed roller shutter profile made of aluminium with 2 grooves and light and ventilation slits. Hollow space foam filled with polyurethane. The blind is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile A52** (52x13 mm) double-walled, roll formed roller shutter profile made of aluminium, with 3 grooves and light and ventilation slits. Hollow space foamed with polyurethane, outer surfaces coated with thick lacquer. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**End rod**

made of extruded aluminium and retracted sealing profile, dimension 36x7.5 mm, with stop plug at the front of the end rod or laterally installed, twistable invisible plastic stop plug for switching off in the upper end position. Optional angled end rod with 2-sided stop plugs for switching off in the upper end position, dimension 32.5x7.5 mm, without sealing profile.

End rod for K52 and A52 made of extruded aluminium and retracted sealing profile, dimension 44x12 mm, with stop plug at the front of the end rod for switching off in the upper end position.

Optional angled end rod with fixed stop tab, dimension 46x14 mm, with lateral plastic glides or 2-part angled end rod, with removable stop tab, dimension 52x12 mm, stop tab for switching off in the upper end position.

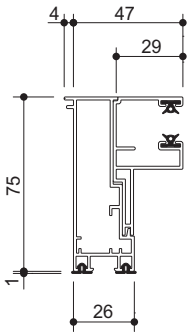
**Colors**

Guide rails and end rods in powder coated standard colors without surcharge.

Special colors according to the brochure "HELLA Color worlds" for a surcharge.

# Built-in roller shutter - inspection from outside RvA

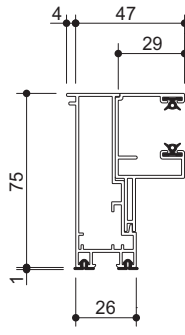
## Aluminium guide rails



**Type 43 - Guide rail 2-part**  
47x75 mm

Suitable for roller shutter profile

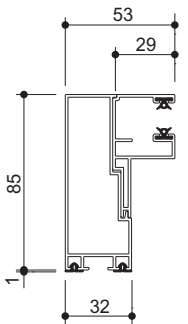
- K37
- A37



**Type 44 Guide rail 2-part**  
47x75 mm

Suitable for roller shutter profile

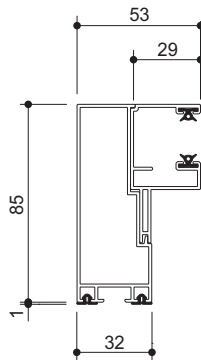
- K52
- A52



**Type 45 - guide rail 2-part**  
53x85 mm - single

Suitable for roller shutter profile

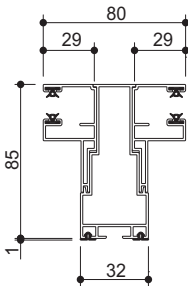
- K37
- A37



**Type 46 - guide rail 2-part**  
53x85 mm - single

Suitable for roller shutter profile

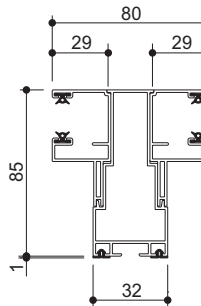
- K52
- A52



**Type 56 Double guide rail 2-part**  
80x85 mm

Suitable for roller shutter profile

- K37
- A37

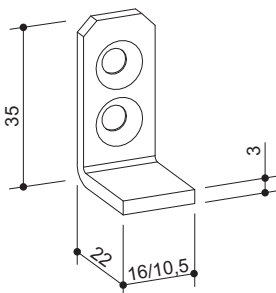


**Type 57 Double guide rail 2-part**  
80x85 mm

Suitable for roller shutter profiles

- K52
- A52

## Accessories



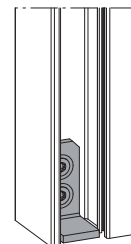
Intercepting angle for guide rail coated

Available colors:

- white
- anthracite
- Galvanized

**Installation detail**

**Guide rail at the bottom**

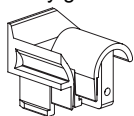


## Entry guide

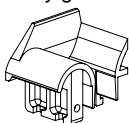
### Inspection from the outside

#### Entry guide for small spacing

Entry guide on the left



Entry guide on the right



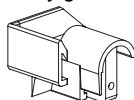
Can be used for guide rail:  
Types 43, 45, 56

Fixing:  
laterally on guide rail  
Pan-head tapping screw 3.9x16 A2

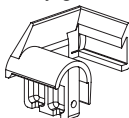


#### Entry guide for large spacing

Entry guide on the left



Entry guide on the right



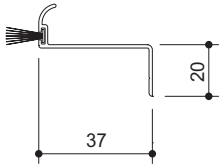
Can be used for guide rail:  
Types 44, 46, 57

Fixing:  
laterally on guide rail  
Pan-head tapping screw 3.9x16 A2



# Built-in roller shutter - inspection from outside RvA

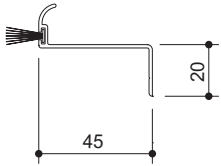
## Inspection covers and accessories



Inspection cover length 37 mm made of extruded aluminium, with black brush

Can be used for guide rail:  
Types 43, 44

Fixing from the front:  
Pan-headed drilling screw 3.9x13 A2



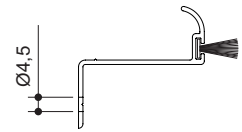
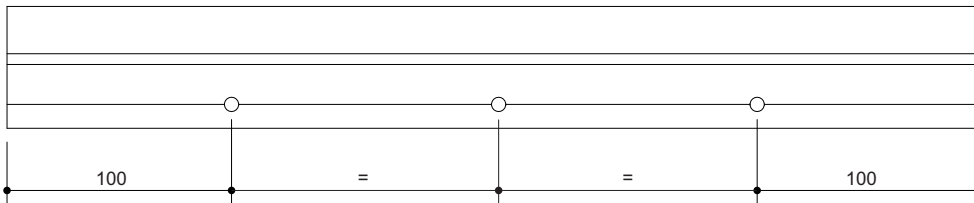
Inspection top board length 45 mm made of extruded aluminium, with black brush

Can be used for guide rail:  
Types 45, 46, 56, 57

Fixing from the front:  
Pan-headed drilling screw 3.9x13 A2



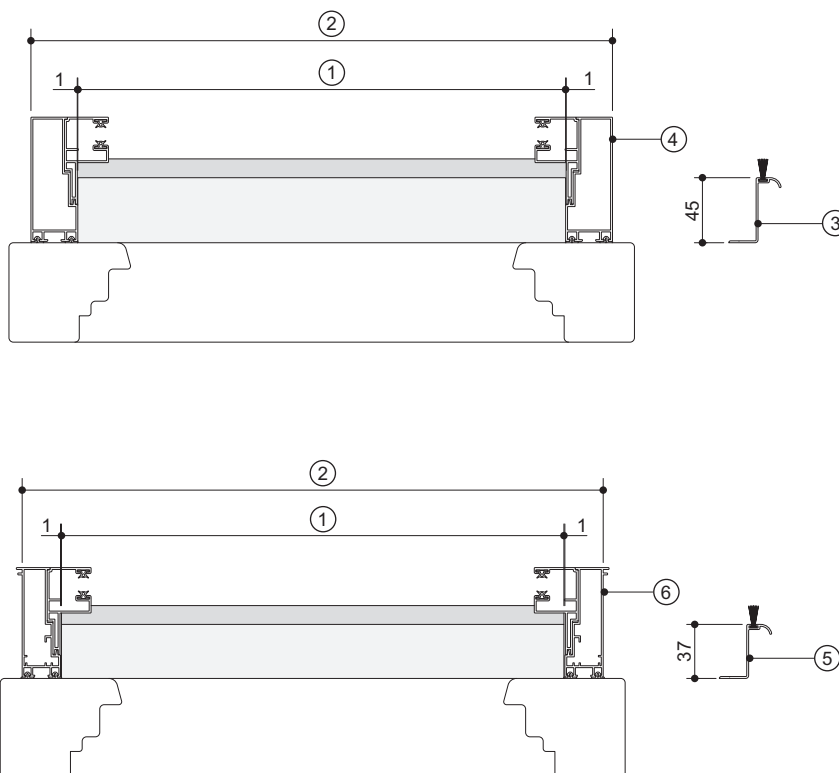
## Definition of the fixing boreholes



The extruded inspection cover can optionally be ordered pre-drilled.

## Dimensional definition of inspection covers

### Inspection cover



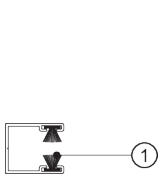
#### Legend

- ① Order length of inspection top board
- ② Outer edge of the guide rail
- ③ Inspection cover 45 mm
- ④ 2-part aluminium guide rail 53x85 mm
- ⑤ Inspection cover 37 mm
- ⑥ 2-part aluminium guide rail 47x75 mm

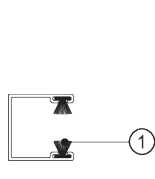
# Built-in guide rail RvI, RvA - General

## Aluminium guide rails for inspection from the inside

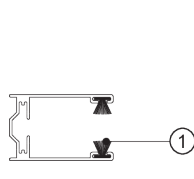
Type 33



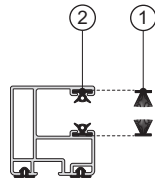
Type 54



Type 55



Types 90, 91



### Guide rails inserts

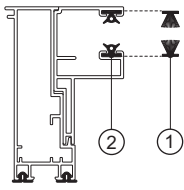
With roller shutter guide rails, you can usually choose between seal and brush inserts (see note).

#### Legend

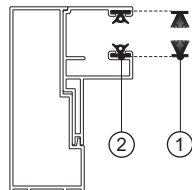
- ① Brushes with centre bar for FB >700 mm  
Brushes without centre bar for FB <700 mm
- ② PVC seal

## Aluminium guide rails for inspection from the outside

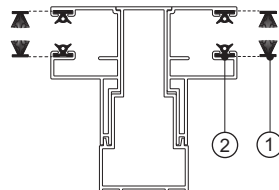
Types 43, 44



Types 45, 46



Types 56, 57



### Note

Seal not possible for types 33, 54 and 55.



# Fixing

## Overview of installation types

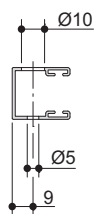
Guide rail type	clipped	screwed	from the front	lateral
33, 54		●	●*	●
55		●		●
43, 44, 56, 57	●*	●	●	
45, 46	●*	●	●*	●
90, 91	●		●	
87, 88				●

\* preassigned as standard

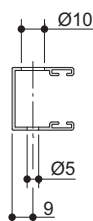
## Guide rail types

### Installation from the front

#### Type 33



#### Type 54



### Fastening direction:

screwed on from **front** with pan-head screw

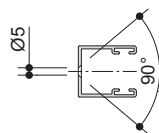
Example of mounting on plastic:



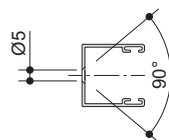
**laterally** screwed on with countersunk screw



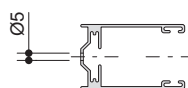
#### Type 33



#### Type 54



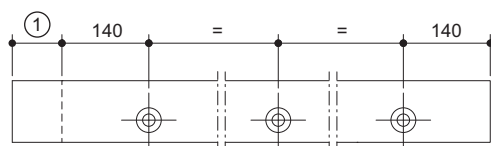
#### Types 55, 87, 88



Length Guide rail	Number of boreholes
up to 1400 mm	2
1401-2600 mm	3
2601-4000 mm	4

## Division of the fixing boreholes

Valid for mounting from the front and side



### Legend

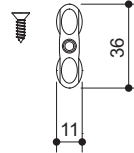
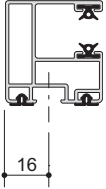
① Additional height top (Standard 60 mm)

# Built-in guide rail RvI, RvA - General Fixing

## Inspection from the inside

### Guide rail types

#### Types 90, 91

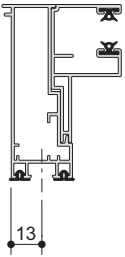


#### Fastening direction:

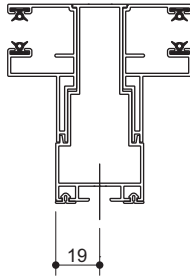
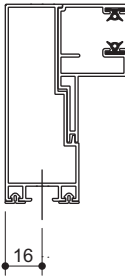
- clipped from the front
- with plastic fastening clips and screw

## Inspection from the outside

#### Types 43, 44



#### Type 45, 46 Typ 56, 57

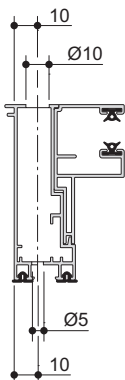


Length Guide rail	Number Fastening clips per rail
up to 500 mm	2
501-750 mm	3
751-1000 mm	4
1001-1250 mm	5
1251-1500 mm	6
1501-1750 mm	7
1751-2000 mm	8
2001-2250 mm	9
2251-2500 mm	10
2501-2750 mm	11
2751-3000 mm	12
3001-3250 mm	13
3251-3500 mm	14
3501-3750 mm	15
3751-4000 mm	16

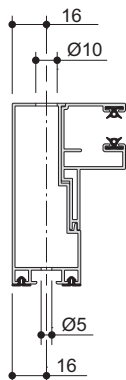
Guide rail types

Installation from the front

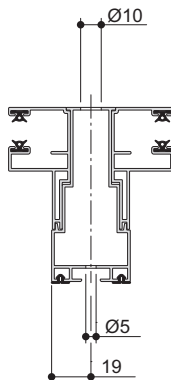
Types 43, 44



Types 45, 46



Types 56, 57



Fastening direction:

from **front** screwed (Standard) **laterally** screwed

Example of mounting on plastic:



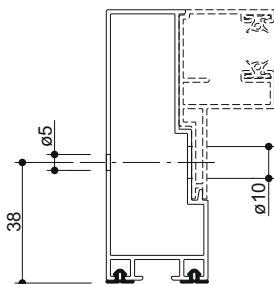
Length Guide rail	Number of boreholes
up to 1400 mm	2
1401-2600 mm	3
2601-4000 mm	4

Note:

The division of the fixing boreholes is valid for types 43-46, D45, D46.

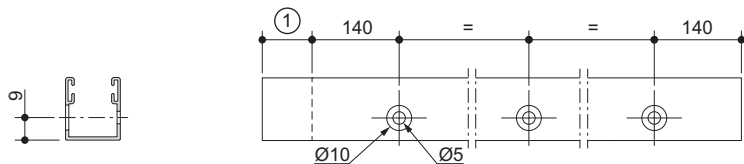
Installation laterally

Types 45, 46

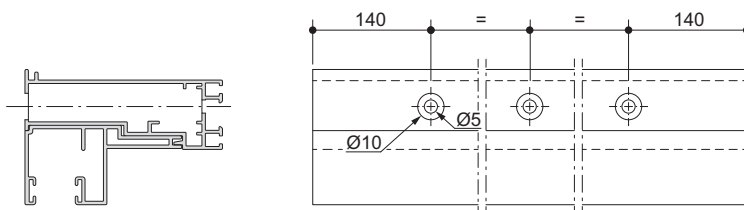


Division of the fixing boreholes from the front or side

Types 33, 54



Types 43-46, 56, 57



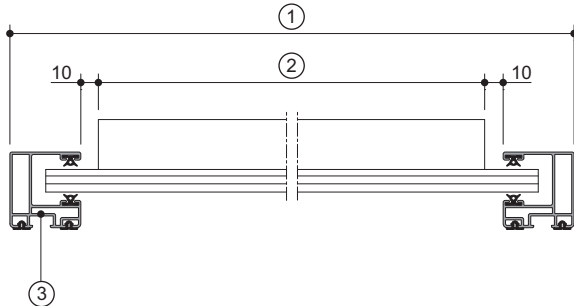
Example image for mounting from the front

# Built-in guide rail RvI, RvA - General

## Dimension definition for 2-part angular end rod

For the 2-part angular end rod, a distinction is made between the dimension specification with guide rail from the HELLA range or the dimension specification with on-site guide rail.

### 1. Guide rail supplied



Shown with guide rail type 91 as an example.  
Also valid for types 54, 55, 44, 46, 57

### Dimensional situation outer edge guide rail

This situation applies if the roller shutter blind is supplied together with the guide rail. The gap between the guide rail and the stop bracket is 10 mm on each side.

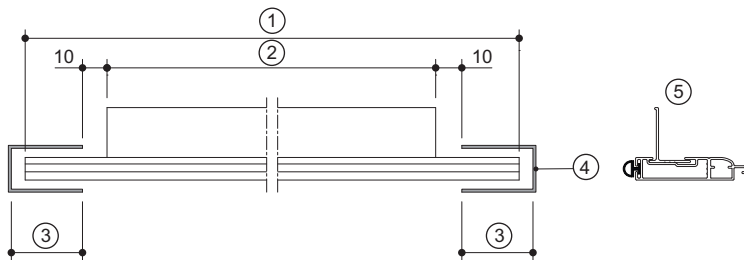
### Ordering information:

Dimension up to the outer edge of the guide rail  
Guide rail type

### Legend

- ① Outer edge of the guide rail
- ② Length of the stop bracket
- ③ Guide rail from the HELLA range
- ④ Angular end rod with stop bracket, 2-part

### 2. Guide rail on site



### Dimensional situation of guide rail on site

If only one roller shutter blind is supplied, this dimension must be selected.

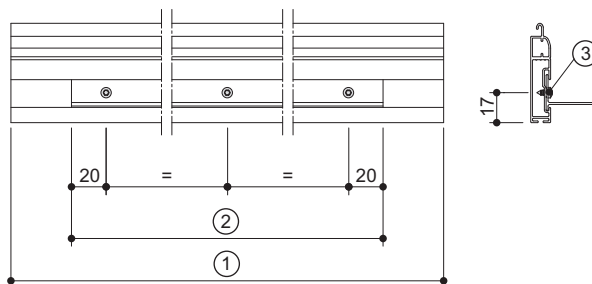
### Ordering information:

Blind width dimension (incl. lock)  
Groove depth of the guide rail

### Legend

- ① Blind width dimension (incl. lock)
- ② Length of stop bracket
- ③ Groove depth
- ④ on-site guide rail
- ⑤ Angular end rod with stop bracket, 2-part

### Drilling pattern for the angular end rod



The stop bracket is supplied loose and screwed to the end rod from the outside using 2.9x6.5 A2 pan-head tapping screws.

Both the angular end rod and the stop bracket are already pre-drilled.

### Legend

- ① Length angular end rod
- ② Length of stop bracket
- ③ Pan-head tapping screw

## Motor drive

Drive system	Adjustment of the end position	Detection of obstacles Protection against freezing	Intermediate position	Identification Acquisition
<b>Motor drive – Units with 60 mm octagon shaft</b>				
SO-RolTopD+	automatically	●		M
868 RolTopD+ (radio)	automatically	●	2	F
ESO RolTop	automatic or adjustable	●		MM
NHK RolTopD+	automatically	●		MN
WT Oximo 50	automatically	●		MSOWT
NHK Ilmo 50	automatically	●		MSN
T5S-drives object motor	automatically	●		MI
ONYX.ROL	automatically	●	●	FX
io Oximo 50S (radio)	automatically	●	1	FIO
io Oximo 50 (radio)	automatic or adjustable	●	1	FIO
<b>Motor drive – Units with 40 mm octagon shaft</b>				
ESO RolTop	automatic or adjustable	●		MM40.
868 RolTopD+ (radio)	automatically	●	2	F40
io Oximo 40	automatic or adjustable	●	1	FIO40

### Detection of obstacles

The motor stops, when during lowering the blind an obstacle causes a counter torque. This function serves as protection for the unit and not for personal safety. Nevertheless, there is danger of squashing due to the weight of the blind! The drives ONYX.ROL, SO, ESO and 868 additionally perform counter movement, so that the obstacle is relieved again.

### Protection against freezing

The motor stops, when during raising the blind the torque increases abruptly. This may be caused by a frozen end rod, for example.

### Soft cutoff

The drives ONYX.ROL, SO, ESO and 868 are equipped with a so-called soft cut-off. Here the end positions are moved to with reduced speed.

# Built-in guide rail RvI, RvA - General

## Overview motor types

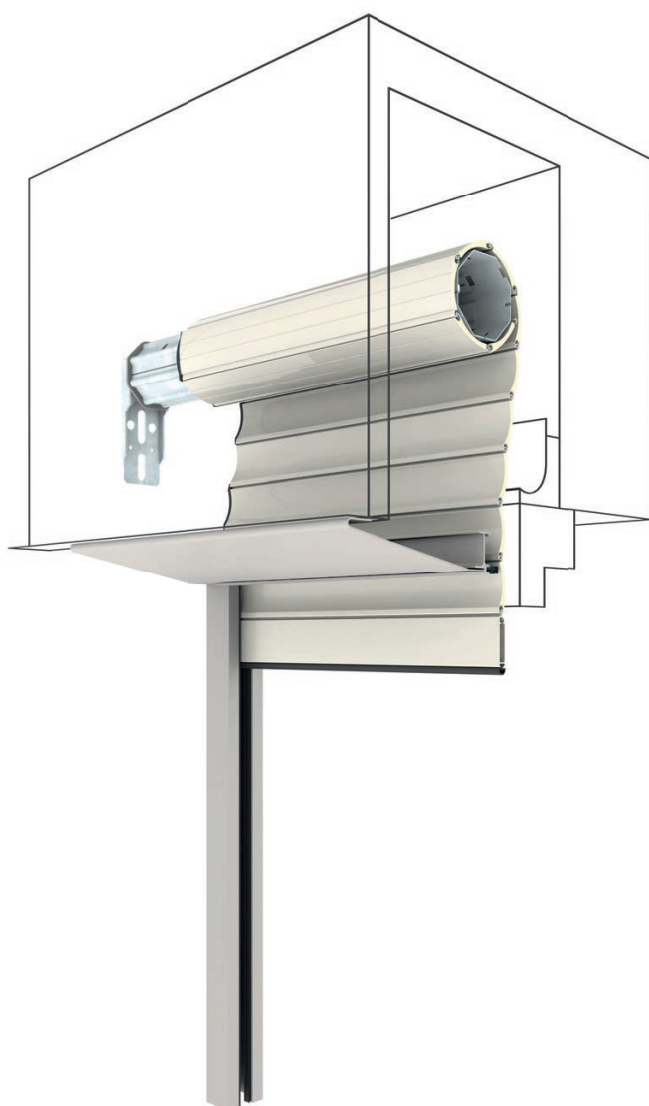
Drive system	Identifier Entry	Cable length [m]	Performance [Watt]	Motor length [mm]
<b>Motor drive wired – Units with 60 mm octagon shaft</b>				
<b>elero Plug&amp;Play</b>				
SO RolTopD+, 6 Nm, 14 r.p.m.	M	3	118	485
SO RolTopD+, 10 Nm, 14 r.p.m.	M	3	150	485
SO RolTopD+, 20 Nm, 14 r.p.m.	M	3	220	545
SO RolTopD+, 30 Nm, 14 r.p.m.	M	3	200	535
<b>elero electronically adjustable</b>				
ESO RolTop K, short, 6 Nm, 14 rpm	MM	3	140	400
ESO RolTop, 6 Nm, 14 r.p.m.	MM	3	140	485
ESO RolTop, 10 Nm, 14 r.p.m.	MM	3	140	485
ESO RolTop, 20 Nm, 14 rpm	MM	3	200	545
ESO RolTop, 30 Nm, 14 rpm	MM	3	200	535
<b>Somfy electronically adjustable</b>				
WT Oximo 50, 6 Nm, 17 rpm	MSOWT	3	90	625
WT Oximo 50, 10 Nm, 17 rpm	MSOWT	3	120	675
WT Oximo 50, 15 Nm, 17 rpm	MSOWT	3	140	675
WT Oximo 50, 20 Nm, 17 rpm	MSOWT	3	160	675
<b>Motor for emergency crank handle elero Plug&amp;Play</b>				
NHK RolTopD+, 10 Nm, 14 r.p.m.	MN	3	140	570
NHK RolTopD+, 20 Nm, 14 r.p.m.	MN	3	200	630
NHK RolTopD+, 30 Nm, 14 r.p.m.	MN	3	200	594
<b>Motor for emergency crank handle Somfy Plug&amp;Play</b>				
NHK Ilmo, 10 Nm, 17 rpm	MSN	3	120	690
NHK Ilmo, 20 Nm, 17 rpm	MSN	3	160	800
<b>Object motor Plug&amp;Play</b>				
T5S AUTO+, 6 Nm, 17 rpm	MI	3	90	510
T5S AUTO+, 10 Nm, 17 rpm	MI	3	120	515
T5S AUTO+, 15 Nm, 17 rpm	MI	3	140	535
T5S AUTO+, 20 Nm, 17 rpm	MI	3	160	617
<b>Motor drive radio-controlled- Units with 60 mm octagon shaft</b>				
<b>elero</b>				
868 RolTopD+, 6 Nm, 14 rpm	F	3	118	485
868 RolTopD+, 10 Nm, 14 rpm	F	3	140	485
868 RolTopD+, 20 Nm, 14 rpm	F	3	200	545
868 RolTopD+, 30 Nm, 14 rpm	F	3	200	535
<b>Somfy</b>				
io Oximo 50S short, 6 Nm, 17 rpm	FIO	3	90	380
io Oximo 50, 6 Nm, 17 rpm	FIO	3	90	570
io Oximo 50, 10 Nm, 17 rpm	FIO	3	120	570
io Oximo 50, 20 Nm, 17 rpm	FIO	3	160	620
io Oximo 50, 30 Nm, 17 rpm	FIO	3	240	670
<b>ONYX</b>				
ONYX.ROL.D+, 10 Nm, 14 rpm	FX	3	115	485
ONYX.ROL.D+, 20 Nm, 14 rpm	FX	3	184	545

### Note

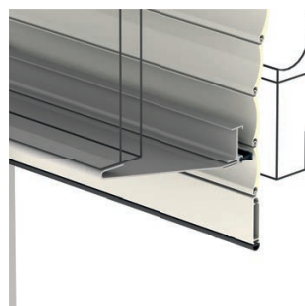
All motors, except io Oximo Solar, OZRoll and DC VariEco are operated with 230V alternating voltage.

Drive system	Identifier Entry	Performance [Watt]	Speed [r.p.m.]	Motor length [mm]
<b>Motor drive wired- Units with 40 mm octagon shaft</b>				
<b>elero electronically adjustable</b>				
ESO RolTop+, 5 Nm, 17 rpm	MM40.	3	130	545
ESO RolTop+, 8 Nm, 17 rpm	MM40.	3	175	545
ESO RolTop+, 12 Nm, 17 rpm	MM40.	3	175	545
<b>Motor drive radio-controlled- Units with 40 mm octagon shaft</b>				
<b>Somfy</b>				
io Oximo 40, 9 Nm, 16 rpm	FIO40.	3	110	498
io Oximo 40, 13 Nm, 16 rpm	FIO40.	3	110	498
<b>elero</b>				
868 RolTopD+, 5 Nm, 17 rpm	F40.	3	130	545
868 RolTopD+, 8 Nm, 17 rpm	F40.	3	168	545
868 RolTopD+, 12 Nm, 17 rpm	F40.	3	168	545

# Built-in roller shutter - installation in HELLA TRAV



Option for integrated insect screen roller blind made of weather-resistant, plastic-coated fibreglass fabric.



Variable top board as required with additional brush profile.

## Limit sizes

Profile type	Min. width [mm]	max. width [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37.	400*	1800	3.1	3.6
K52	400*	2300	4.5	3.5
A37	400*	3000	7.5	2.6
AV42	400*	3500	8.0	2.9
A52	400*	4000	10.0	3.0
T37	400*	2300	4.5	9.1
S37	400*	2500	6.0	7.0

\*Depending on the drive type, the minimum complete width is higher than indicated in the table above:

Minimum width 400 mm with crank, support surface on drive side 70 mm, guide rail surface mounted

Minimum width 500 mm with lift tape, support surface on drive side 70 mm, guide rail surface mounted

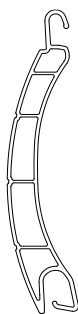
Minimum width 450 mm with short motor drive SW60, support surface on drive side 120 mm, guide rail surface mounted



## Roller shutter profile



Profile K37



Profile K52



Profile A37



Profile AV42



Profile A52



Profile T37



Profile S37

### Scope of delivery

- Roller shutter profile made of extruded, solid colored plastic or roll-formed foamed aluminium with light and air slits, locked and rigid shaft connections
- Hanging locked and suspension springs
- End rod with weighting steel, seal, concealed stop tab, limit stops
- Aluminium parts can be selected freely from the HELLA Color world
- Mounting material

### Supplementary equipment

- Inspection cover made of edged aluminium with brush profile
- Roller shutter profile AV42, S37, T37
- Wide range of different guide rails with guide rail inserts
- Drive set for belt pull, crank drive and motor drive
- Operation via radio motor
- Drive and controls for second escape route

### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- High-quality construction elements guarantee a long lifespan and convenient operation

# Built-in roller shutter - installation in HELLA TRAV



## Field of application and use

High-quality built-in roller shutter to be installed in an existing recess system. With new and old buildings suitable for all door and window openings with recesses.

## Benefits of the product

- View protection, glare protection and sun protection
- Protection against bad weather, heat and the cold
- UV-protection and noise insulation
- Blacking out
- Limited protection against burglary
- Optionally available with insect screen with a plastic roll up cassette when installed into the lintel system TRAV
- High-quality, corrosion resistant materials guarantee a maximum operational reliability
- Guide rail with noise insulating brush sealing or PVC insert
- inspection cover on the outside
- Environmentally friendly due to the use of recyclable materials

**Inspection cover**

made of aluminium sheet steel 1.2 mm, with brush profile as border to the roller shutter curtain

**guide rail**

Made of extruded aluminium, optionally available dimensions 30x39 mm or 31x48 mm. On both edges the guide notch is provided with a PVC-insert or a brush insert for the roller shutter curtain, and with a brush insert for the insect screen.

**Shaft**

60x0.6 mm octagon steel, made of galvanised steel (with belt and motor drive).

**Type of drive**

Lift tape: Lift tape, width: 22 mm, made of polyester blended fabric, surface-mounted or flush-mounted.

Crank handle drive: Crank handle gear with gear reduction 5.33:1 or 8:1 and freewheel (Top-Safe shaft without freewheel), complete with spherical bearing, powder-coated crank rod, folding handle and crank holder

Motor drive: Plug-in drive built into the primary shaft, with protection device against unintentionally raising of the curtain, and automatic limit stop.

**Hanger assembly**

for fixing the roller shutter curtain to the shaft via rigid shaft connectors made of plastic placed between the roller shutter curtain and the shaft.

**Profiles**

**Profile K37** (37x8.2 mm) double-walled roller shutter hollow chamber profile made of extruded, colored plastic with 2 grooves and light and ventilation slots. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile K52** (52x14 mm) double-walled roller shutter hollow chamber profile made of extruded, colored plastic with 3 grooves and light and ventilation slots. As a standard the roller shutter curtain is not locked.

**Profile A37** (37x8.2 mm) **Profile AV42** (42x9.3 mm) double-walled, roll formed roller shutter profile made of aluminium with 2 grooves and light and ventilation slots. Hollow space foam filled with polyurethane. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Profile A52** (52x13 mm) double-walled, roll formed roller shutter profile made of aluminium with 3 grooves and light and ventilation slots. Hollow space foamed with polyurethane, outer surfaces coated with thick lacquer. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**Daylight profile T37** (38.4x4.5 mm) double-walled, extruded roller shutter profile made of aluminium without grooves. The blind is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

Intermediate profile made of diffuse plastic (PMMA). In the lower part of the roller shutter curtain the intermediate profiles are provided with ventilation slots.

**Safety profile S37** (37x8.5 mm) double-walled, extruded roller shutter profile made of foam-free aluminium with 2 grooves and light and ventilation slots. The curtain is locked over the complete height on both sides, so that a lateral shifting of the profiles is not possible.

**End rod**

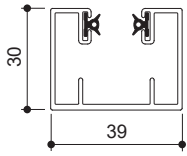
Made of extruded aluminium, dimension 36x7.5 mm, with laterally installed, rotating hidden plastic stop plugs; provided with plastic support profile on the lower edge. End rod for K52 and A52 made of extruded aluminium, dimension 44x12 mm, with visible stop plugs and without support profile at the bottom side.

**Colors**

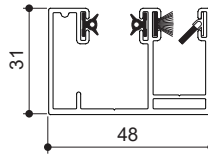
Guide rails, inspection covers and end rods in powder coated standard colors without surcharge.  
Special colours according to the brochure "HELLA Color worlds" for a surcharge.

# Built-in roller shutter - installation in HELLA TRAV

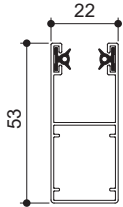
## Guide rails



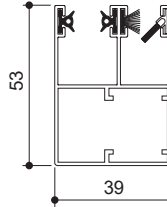
**Type 30 - Guide rail**  
30x39 mm - single with small spacing with brush/seal



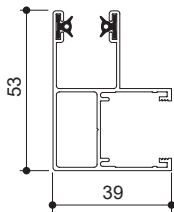
**Type 41 - Guide rail**  
31x48 mm - single with small spacing with brush/seal



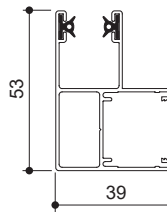
**Type 01 - Guide rail**  
53x22 mm - single with small spacing with brush/seal



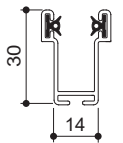
**Type 16 - Insect screen-guide rail**  
53x39 mm - single with small spacing with brush/seal



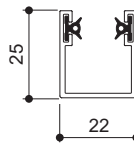
**Type 21 - Guide rail**  
53x39 mm - open, single with small spacing with brush/seal



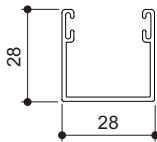
**Type 18 - Guide rail for exhibitor**  
53x39 mm - open, single with small spacing with brush/seal



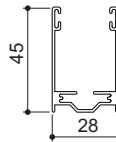
**Type 32 - Guide rail**  
30x14 mm Plastering - single with small spacing with brush/seal



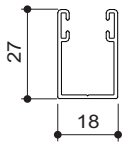
**Type 33 - Guide rail**  
25x22 mm - single with small spacing with brush/seal



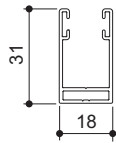
**Type 54 - Guide rail**  
28x28 mm with large spacing without brushes



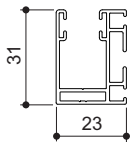
**Type 55 Guide rail**  
45x28 mm with large spacing without brushes



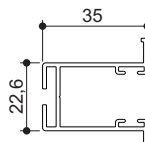
**Type 80 - Insect screen - Guide rail**  
27x18 mm without brushes



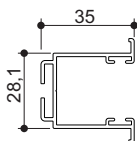
**Type 81 - Insect screen-Guide rail**  
31x18 mm without brushes



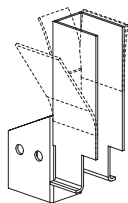
**Type 82 - insect screen guide rail**  
31x23 mm without brushes



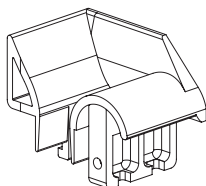
**Type 87 - Guide rail**  
35x22.6 mm - open, single with small spacing without brushes



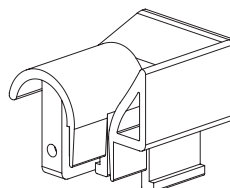
**Type 88 - Guide rail**  
35x28.1 mm single with large spacing without brushes



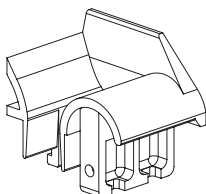
**Entry guide  
made of galvanised sheet steel**  
for type 01  
**01100401**



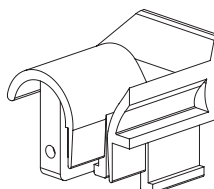
**Entry guide  
for guide rails  
with a width of 30 mm, left**  
for type 41  
**01100405**



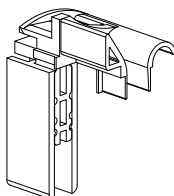
**Entry guide  
for guide rails  
with a width of 30 mm, right**  
for type 41  
**01100406**



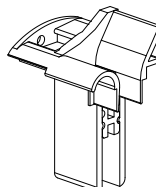
**Entry guide  
for guide rails  
with a width of 30 mm, shortened,  
left**  
for type 30  
**011004U3**



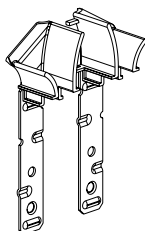
**Entry guide  
for guide rails  
with a width of 30 mm, shortened,  
right**  
for type 30  
**011004U4**



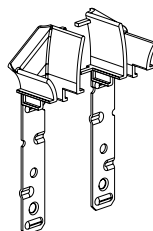
**Entry guide with strut  
for guide rails  
with a depth of 39 mm, left**  
for types 16, 21  
**011209U1**



**Entry guide with strut  
for guide rails  
with a depth of 39 mm, right**  
for types 16, 21  
**011209U2**



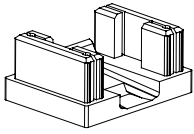
**Entry guide  
Guide rail 35x22, 6 mm lugs white**  
for type 87  
**12010411**



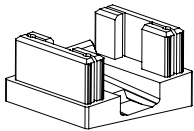
**Entry guide  
Guide rail 35x28, 1 mm lugs grey**  
for type 88  
**12010413**

# Built-in roller shutter - installation in HELLA TRAV

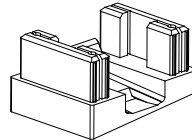
## Guide rails



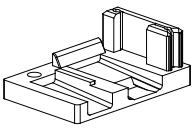
**End cap guide rail 30x39 mm**  
left/right  
Available in grey, black and white colors  
**01100906**



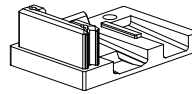
**End cap 5° Guide rail 30x39 mm**  
on the left side  
Available in grey, black and white colors  
**01100907**



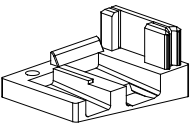
**End cap 5° Guide rail 30x39 mm**  
on the right side  
Available in grey, black and white colors  
**01100908**



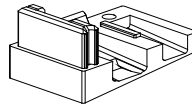
**End cap guide rail 31x48 mm**  
on the left side  
Available in grey, black and white colors  
**01100909**



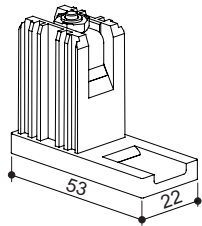
**End cap guide rail 31x48 mm**  
on the right side  
Available in grey, black and white colors  
**01100910**



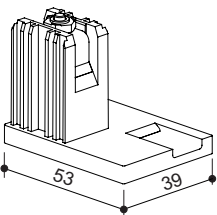
**End cap 5° Guide rail 31x48 mm**  
on the left side  
Available in grey, black and white colors  
**01100911**



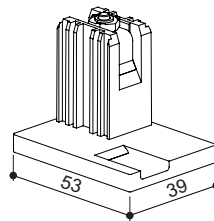
**End cap 5° Guide rail 31x48 mm**  
on the right side  
Available in grey, black and white colors  
**01100912**



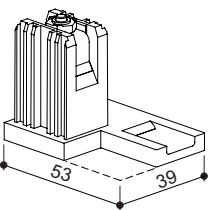
**End cap guide rail 53x22 mm**  
Available in grey, black and white colors  
**02620902**



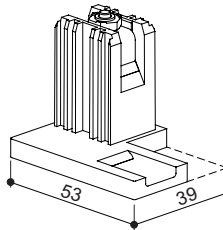
**End cap guide rail 53x39 mm**  
on the left side  
Available in grey, black and white colors  
**02620905**



**End cap guide rail 53x39 mm**  
on the right side  
Available in grey, black and white colors  
**02620906**



**End cap guide rail 53x39 mm**  
open, on the left side  
Available in grey, black and white colors  
**02620907**



**End cap guide rail 53x39 mm**  
open, on the right side  
Available in grey, black and white colors  
**02620908**

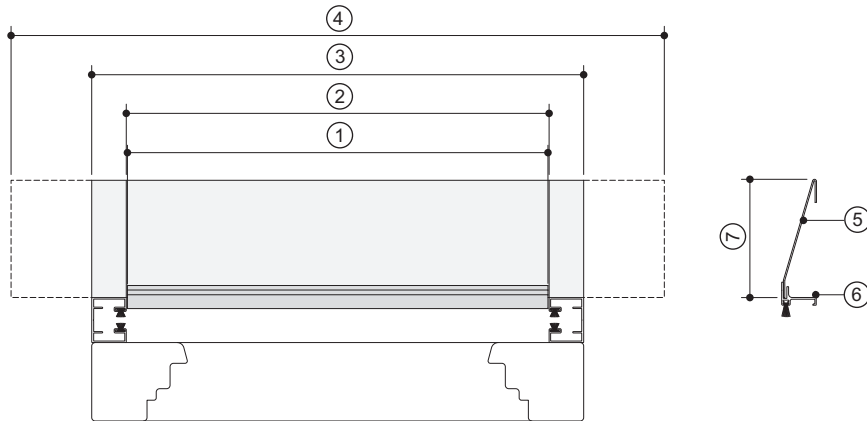


# Built-in roller shutter - installation in HELLA TRAV

## Dimensional definition of inspection covers

### Inspection cover

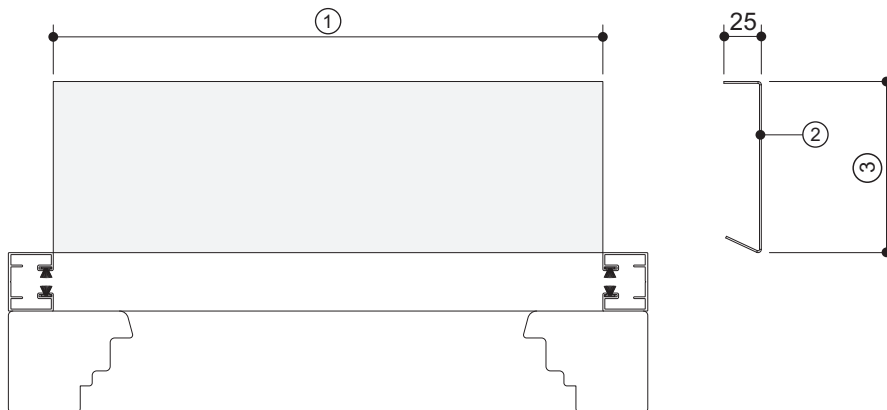
#### Inspection cover for type 30 and type 41



#### Legend

- ① Length of brush retaining strip
- ② Inner edge of guide rail, for example with flush-mounted design
- ③ Outer edge of guide rail, for example with surface-mounted design
- ④ Order length of inspection top board with oversize, fitting on site to the soffit
- ⑤ canted inspection top board made of 1.2 mm aluminium
- ⑥ Extruded aluminium brush retaining strip, with brush seal
- ⑦ Depth of inspection top board

#### Inspection cover as U profile canted



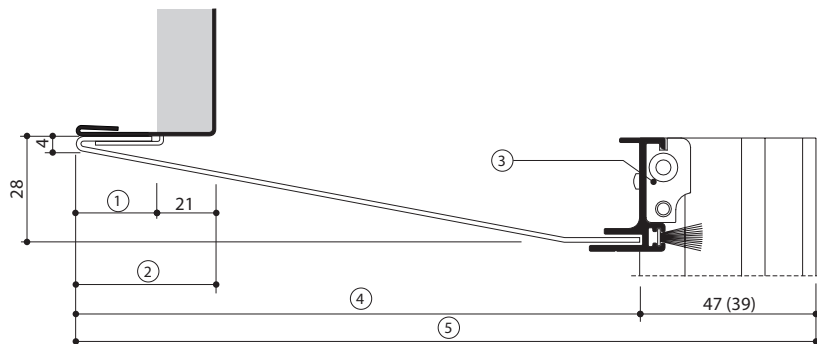
#### Legend

- ① Order length of inspection cover (for flush-mounted design)
- ② canted inspection cover made of 1.2 mm aluminium
- ③ Depth of inspection cover

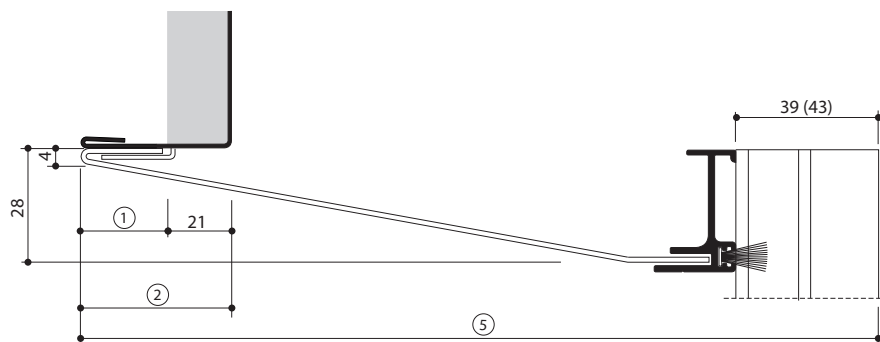


## Inspection covers and accessories

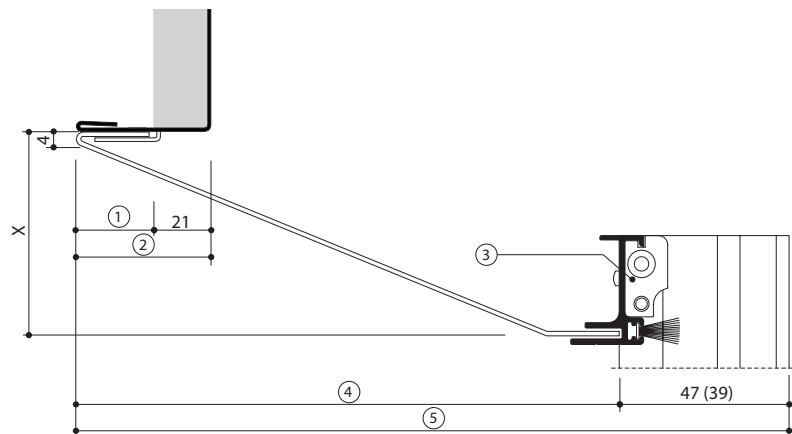
Inspection cover for type 30 (30x39 mm) and type 41 (31x48 mm)



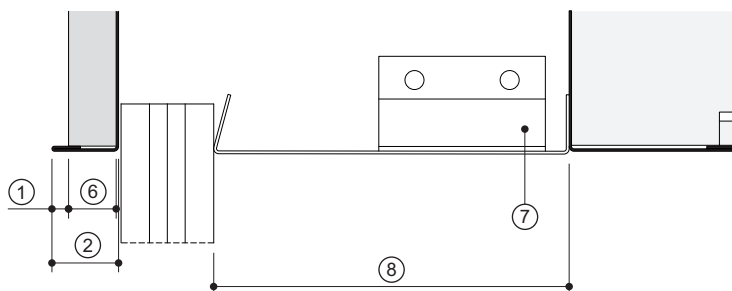
Inspection cover for type 18 (53x39 mm) and type 20 (56x48 mm)



Special design



Inspection cover as U profile canted



### Legend

- ① Plaster flange
- ② Lower edge wrapping
- ③ Fixing device for the brush strip
- ④ Total depth with guide rail plastered in
- ⑤ Total depth for AP - guide rail
- ⑥ Thickness Plaster base
- ⑦ Lateral mounting bracket for screwing on the inspection cover
- ⑧ Depth of inspection cover

# Built-in roller shutter - installation in HELLA TRAV

## Motor drive

Drive system	Adjustment of the end position	Detection of obstacles Protection against freezing	Intermediate position	Identification Acquisition
<b>Motor drive – Units with 60 mm octagon shaft</b>				
ONYX.ROL	automatically	●	1	FX
SO-RolTopD+	automatically	●		M
868 RolTopD+ (radio)	automatically	●	2	F
ESO RolTop	automatic or adjustable	●		MM
E868 RolTop (radio)	automatic or adjustable	●	2	FM
NHK RolTopD+	automatically	●		MN
WT Ilmo 50	automatically	●		MS
WT Ilmo 50 S short	automatically	●		MS
T5S-drives object motor	automatically	●		MI
io Oximo 50S (radio)	automatically	●	1	FIO
io Oximo 50 (radio)	automatic or adjustable	●	1	FIO
<b>Motor drive – Units with 40 mm octagon shaft</b>				
SO RolTopD+	automatically	●		M40
ESO RolTop	automatic or adjustable	●		MM40.
WT Ilmo 40	automatically	●		MS40
868 RolTopD+ (radio)	automatically	●	2	F40
E868 RolTop (radio)	automatic or adjustable	●	2	FM40
io Oximo 40	automatic or adjustable	●	1	FIO40

### Detection of obstacles

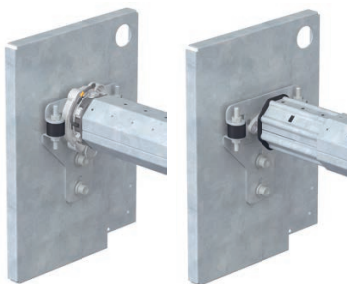
The motor stops, when during lowering the blind an obstacle causes a counter torque. This function serves as protection for the unit and not for personal safety. Nevertheless, there is danger of squashing due to the weight of the blind! The ONYX.ROL, SO, ESO, 868 and E868 drives also perform a counter movement so that the obstacle is relieved again.

### Protection against freezing

The motor stops, when during raising the blind the torque increases abruptly. This may be caused by a frozen end rod, for example.

### Soft cutoff

The ONYX.ROL, SO, ESO, 868 and E868 drives are equipped with a so-called soft shut-off. Here the end positions are moved to with reduced speed.



### SILENT shaft bearing

The integrated vibration dampers on the motor and bearing sides greatly reduce the transmission of vibration noise in the mounting base. This means that the ONYX.MOTOR SILENT is barely perceptible inside the room - especially in whisper mode.

Possible for drives with star head (M, MM, MS, MI, F, FM, FIO, FX) up to 20Nm.

## Size overview of the drives

Drive system	Identifier Entry	Cable length [m]	Performance [Watt]	Minimum width <sup>1)</sup> [mm]	Max. weight of the roller shutter curtain with end rod [kg]
<b>Manually operated drive system with 60 mm octagon shaft</b>					
Lift tape	G	-	-	500	9
Crank handle (5.33:1) Worm wheel gear, 8 Nm	K	-	-	400	22
Crank handle (8:1) Worm wheel gear, 16 Nm	K	-	-	400	28
<b>Motor drive wired – Units with 60 mm octagon shaft</b>					
<b>elero Standard</b>					
ESO RolTop K, short, 6 Nm, 14 rpm	M	3	118	465	
SO RolTopD+, 6 Nm, 14 r.p.m.	M	3	118	515	
SO RolTopD+, 10 Nm, 14 r.p.m.	M	3	150	535	
SO RolTopD+, 20 Nm, 14 r.p.m.	M	3	220	595	
SO RolTopD+, 30 Nm, 14 r.p.m.	M	3	200	580	
<b>Somfy</b>					
WT Ilmo 50S kurz, 6 Nm, 17 rpm	MS	3	90	570	
WT Ilmo 50, 6 Nm, 17 rpm	MS	3	90	570	
WT Ilmo 50, 10 Nm, 17 rpm	MS	3	120	590	
WT Ilmo 50, 15 Nm, 17 rpm	MS	3	140	590	
WT Ilmo 50, 20 Nm, 17 rpm	MS	3	160	720	
WT Ilmo 50, 30 Nm, 17 rpm	MS	3	240	740	

Drive system	Identification Acquisition	Cable length [m]	Capacity [Watt]	Minimum width <sup>1)</sup> [mm]	
<b>Motor drive radio-controlled – Units with 60 mm octagon shaft</b>					
<b>ONYX</b>					
ONYX.ROL.D+, 10 Nm, 14 rpm	FX	3	115	515	
ONYX.ROL.D+, 20 Nm, 14 rpm	FX	3	184	595	
<b>elero Standard</b>					
E868 RolTop K short, 6 Nm, 14 rpm	F	3	118	465	
868 RolTopD+, 6 Nm, 14 rpm	F	3	118	515	
868 RolTopD+, 10 Nm, 14 rpm	F	3	140	535	
868 RolTopD+, 20 Nm, 14 rpm	F	3	200	595	
868 RolTopD+, 30 Nm, 14 rpm	F	3	200	580	
<b>Somfy</b>					
io Oximo 50S short, 6 Nm, 17 rpm	FIO	3	90	440	
io Oximo 50, 6 Nm, 17 rpm	FIO	3	90	675	
io Oximo 50, 10 Nm, 17 rpm	FIO	3	120	720	
io Oximo 50, 20 Nm, 17 rpm	FIO	3	160	740	
io Oximo 50, 30 Nm, 17 rpm	FIO	3	240	740	

### Note:

<sup>1)</sup> ... Minimum width refers to the outer edge of the guide rail and is applicable for the installation example with 120 mm support on the drive side.

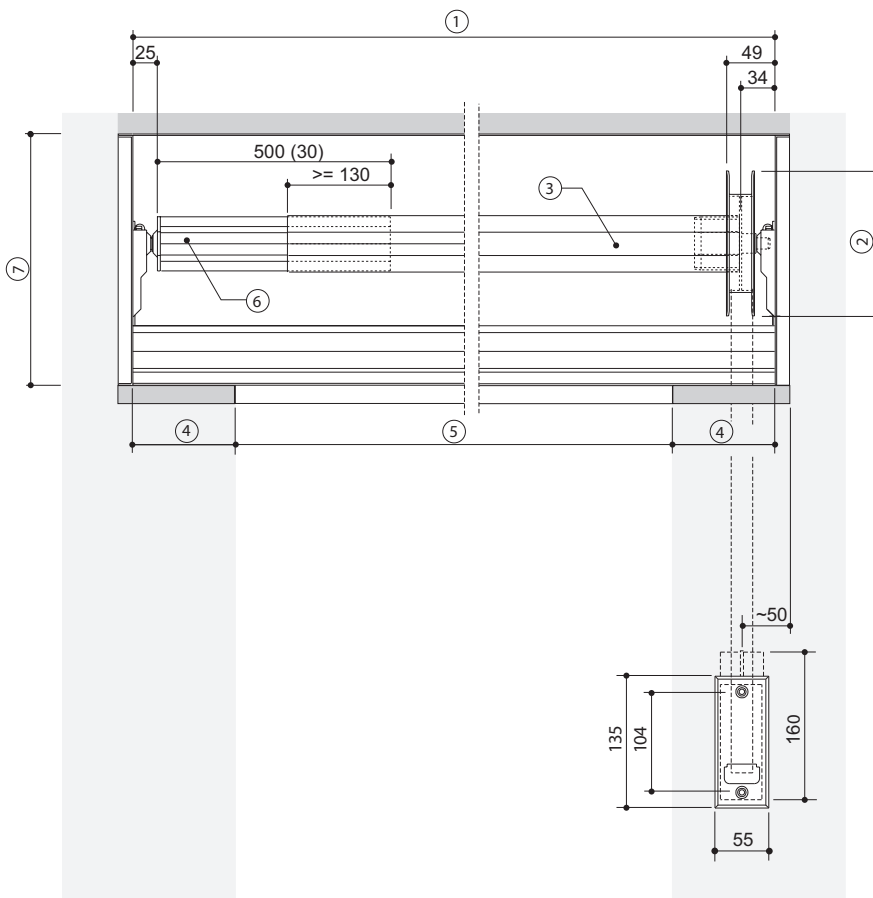
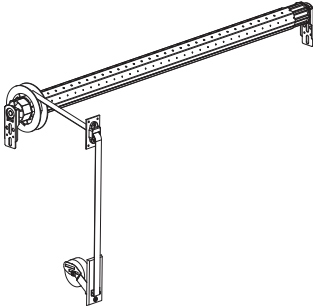
### Comment:

HELLA recommends to link 1 blind at a maximum, to ensure the synchronous running of both roller shutter curtains, in this special case with opened light slots.

# Built-in roller shutter - General

## Installation location and dimensioning instructions

### Tape drive



Interior view of drive set with lift tape for windows and doors

#### Attention:

**Minimum support surface of the drive side surface-mounted:**  
25 mm or 52 mm for type 41 (31x48 mm) and type 30 (30x39 mm)

**Minimum support surface drive side flush-mounted:**  
72 mm for type 41 (31x48 mm) and type 30 (30x39 mm)

**Support surface definition for surface-mounted guide rail:**  
Outer edge of guide rail to box clearance

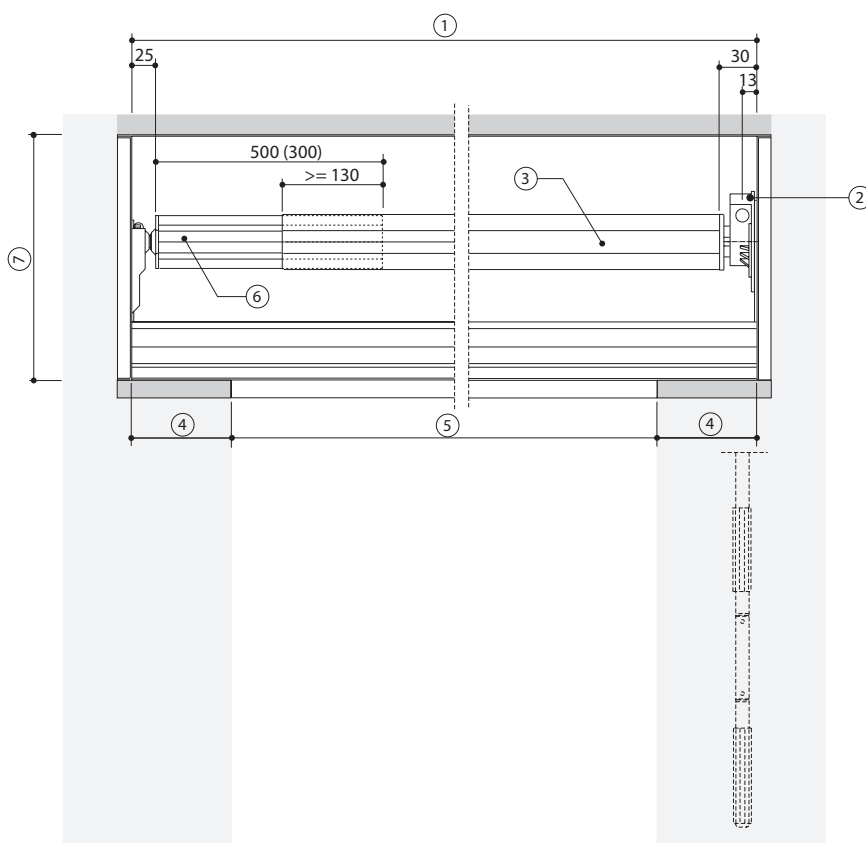
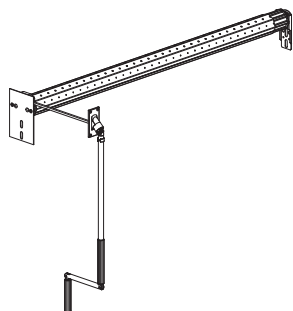
**Support surface definition for flush-mounted guide rail:**  
Plaster clearance to box clearance

Operating side right (R) or left (L)  
View from the inside!

#### Legend

- |   |  |   |                   |
|---|--|---|-------------------|
| ① | Box clearance                          | ⑤ | Plaster clearance |
| ② | Outer diameter belt pulley             | ⑥ | Telescopic shaft  |
| ③ | 60 mm octagon shaft                    | ⑦ | Recess height     |
| ④ | Support surface left and right on site |   |                   |

### Crank handle drive



Interior view of the drive set with crank handle drive for windows and doors

**Attention:**

**Minimum support surface of the drive side surface-mounted:**  
10 mm or 37 mm for type 41 (31x48 mm) and type 30 (30x39 mm)

**Minimum support surface for drive side flush-mounted:**  
57 mm for type 41 (31x48 mm) and type 30 (30x39 mm)

**Support surface definition for surface-mounted guide rail:**  
Outer edge of guide rail till box clearance

**Support surface definition for flush-mounted guide rail:**  
Plaster clearance till box clearance

Operating side right (R) or left (L)  
View from the inside!

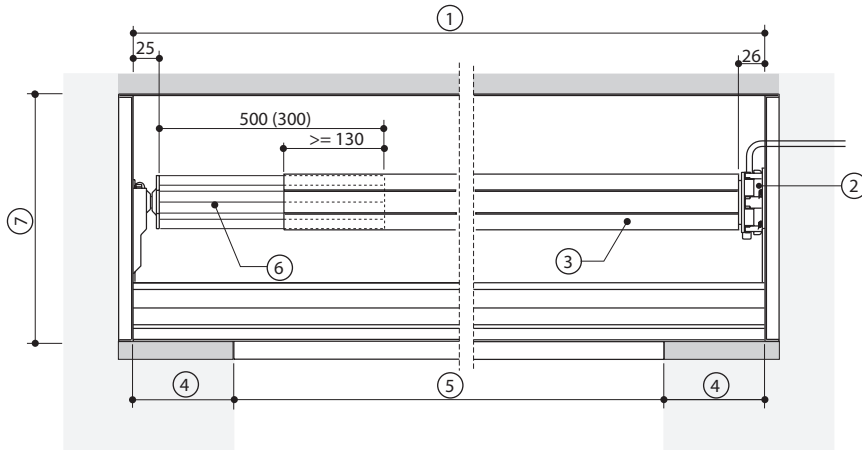
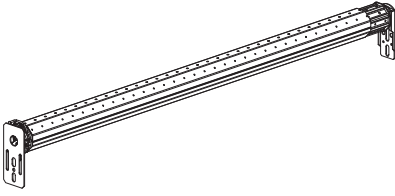
**Legend**

- |   |                                |   |                   |
|---|--------------------------------|---|-------------------|
| ① | Box clearance                  | ⑤ | Plaster clearance |
| ② | Crank handle gear              | ⑥ | Telescopic piece  |
| ③ | 60 mm octagon shaft            | ⑦ | Recess height     |
| ④ | Support surface left and right |   |                   |

# Built-in roller shutter - General

## Installation location and dimensioning instructions

### Motor drive

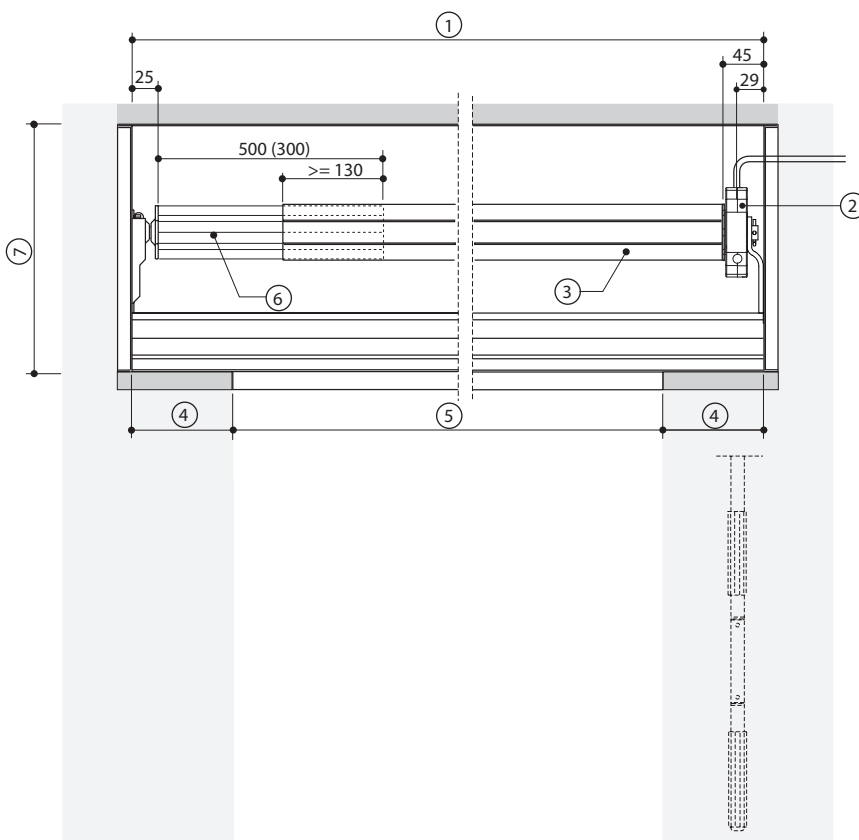
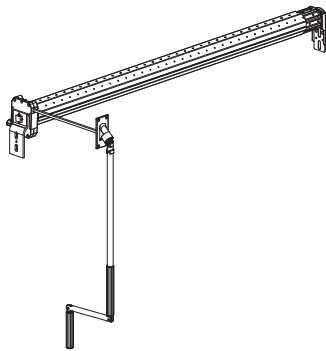


#### Legend

- ① Box clearance
- ② Motor drive
- ③ 60 mm octagon shaft
- ④ Support surface left and right on site
- ⑤ Plaster clearance
- ⑥ Telescopic shaft
- ⑦ Recess height

Interior view of drive set with motor drive for windows and doors

Motor drive with emergency crank handle

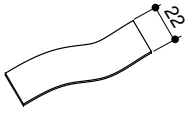


Legend

- ① Box clearance
- ② Motor drive with emergency crank handle
- ③ 60 mm octagon shaft
- ④ Support surface left and right on site
- ⑤ Plaster clearance
- ⑥ Telescopic shaft
- ⑦ Recess height

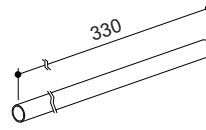
Interior view of drive set with motor drive and emergency crank handle for windows and doors

# Drive system lift tape



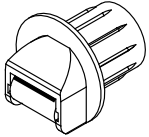
Lift tape 22 mm, 50 m grey

01130208



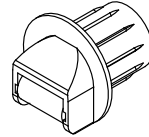
Round tube  $\varnothing$ 31 mm, plastic for wall duct, internal diameter 29 mm, external diameter 31 mm, length 330 mm, special length till 1000 mm, ideal in conjunction with pluggable tape guidance 01100205

01100206



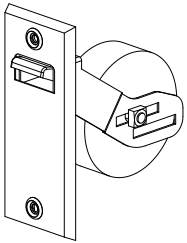
Tape guidance pluggable with brush for 22 mm tape black plastic roll in white housing

01100205



Tape guidance pluggable for 22 mm tape black plastic roll in white housing

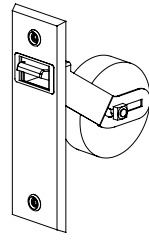
01100203



Tape take-up reel can be flush mounted for 22 mm tape

Plastic cover available in the color white, housing made of sheet steel  
Hole spacing 105 mm  
As a standard if an element is ordered

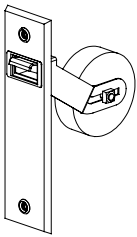
01130209



Tape take-up reel can be flush mounted for 22 mm tape

Plastic cover available in the color white, housing made of sheet steel  
Hole spacing 135 mm

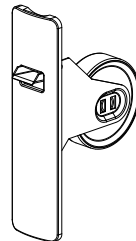
01130215



Tape take-up reel can be flush mounted for 22 mm tape

Plastic cover available in the color white, housing made of sheet steel  
Hole spacing 165 mm

01130211

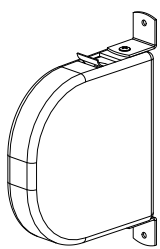


Tape take-up reel can be flush mounted for 22 mm tape

Plastic cover available in the color white, housing made of sheet steel  
Hole spacing 185 mm

01130213

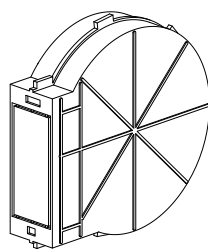




**Tape take-up reel can be swivelled with 22 mm lift tape**

Standard with lift tape gear; plastic housing available in the color white

**01130216**



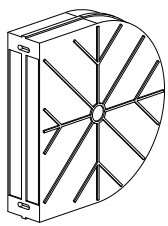
**Wall housing**

Plastic cassette in the color black to integrate the tape take-up reel, retractable  
01130209

**Hole spacing 105 mm**

As a standard if an element is ordered

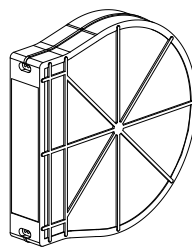
**01130210**



**Wall housing**

Plastic cassette in the color black to integrate the tape take-up reel, flush mountable, 01130211

**01130212**



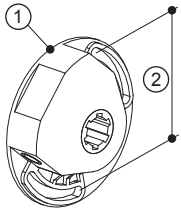
**Wall housing**

Plastic cassette in the color black to integrate the tape take-up reel, retractable  
01130213

**Hole spacing 185 mm**

**01130214**

# Crank handle drive

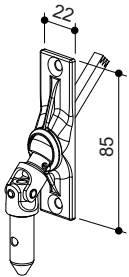


**Worm gear with left-handed worm**  
SW40, VK 6mm, plastic

Art. no.	Torque [Nm]	Gear reduction [i]	TK [mm]	D [mm]
11050012	16	8:1	78	92
11050015	8	5,33:1	78	92

## Legend

- ① Diameter (D)
- ② Pitch circle (TK)

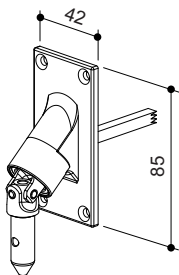


## Spherical bearing inclined by 45° up to 50°

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

No surcharge if an element is ordered.  
with square 6x6x500 mm

**11150214**

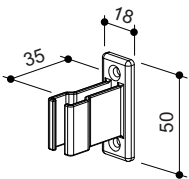


## Joint bearing horizontal/inclined -5° up to 46°

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

with square 6x6x500 mm

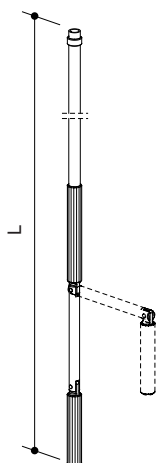
**11150011**



## Crank holder 35 mm

made of plastic in the colors white, brown and grey; Standard with joint bearing horizontal;  
No surcharge if an element is ordered.

**11300203**



**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**

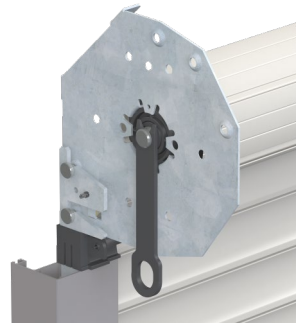
The crank rod is equipped with a crank handle funnel. This is hooked into the spherical bearing that is provided with a dowel pin.



**Design without crank rod**

for operation with crank handle funnel

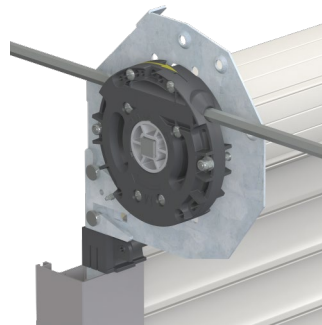
# Shaft roller shutters



Bearing can be mounted on the guide rail either as a left-hand or right-hand roller.



Or, a height-adjustable inspection panel can also be ordered.



Motor drive or crank drive

## Limit sizes

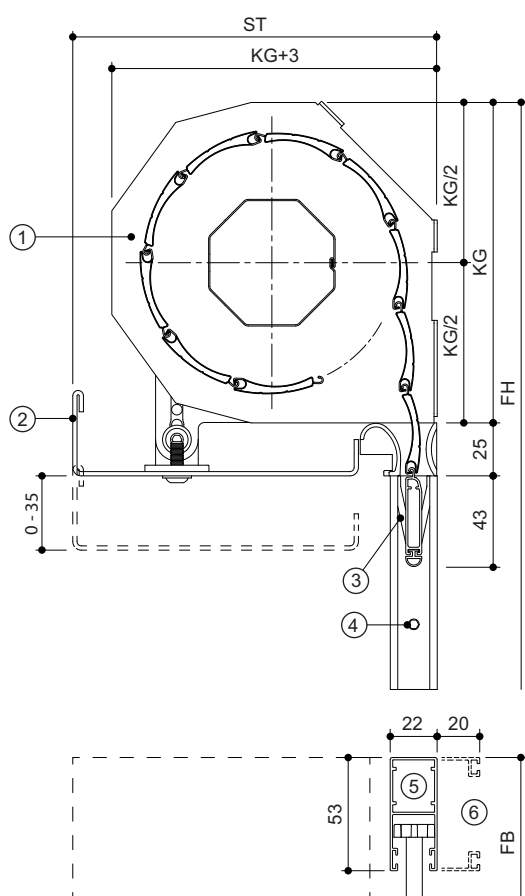
Profile type	Min. width [mm]	max. width [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
A37 crank drive	400	3000	7.5	2.6
A37 Motor drive	600	3000	7.5	2.6

## Roller shutter profile



Profile A37

## Installation details



### Legend

- ① Deflector plate with shaft support
  - ② Inspection panel according to shaft depth (optional)
  - ③ V-stopper concealed
  - ④ Clamping screw for skewer
  - ⑤ Guide rail 53x22 mm standard
  - ⑥ Guide rail 53x22 mm optionally with 20 mm rear distance for bridging a frame over-insulation on the shaft side
- FB Complete width  
 FH Complete height  
 KG Box size
- 150 up to FH 1600 mm
  - 165 up to FH 2400 mm
  - 180 up to FH 3300 mm
  - 205 up to FH 4000 mm
- ST Shaft depth, minimum depth = KG + 5

### Scope of delivery

- Motor drive with shaft and bearing
- Blind locked, end rod with keder and weighting steel, concealed stopper
- Guide rail 53x22 mm with guide rail inserts
- Aluminium parts according to HELLA Color world
- Mounting material

### Supplementary equipment

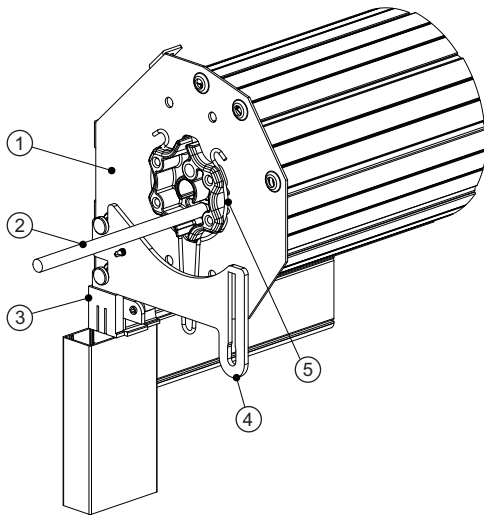
- Inspection panel made of canted aluminium
- Guide rail with 20 mm rear spacing
- Crank handle drive

### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Façade design without visible box
- High-quality construction elements guarantee a long lifespan and convenient operation

# Shaft roller shutters

## Motor drive



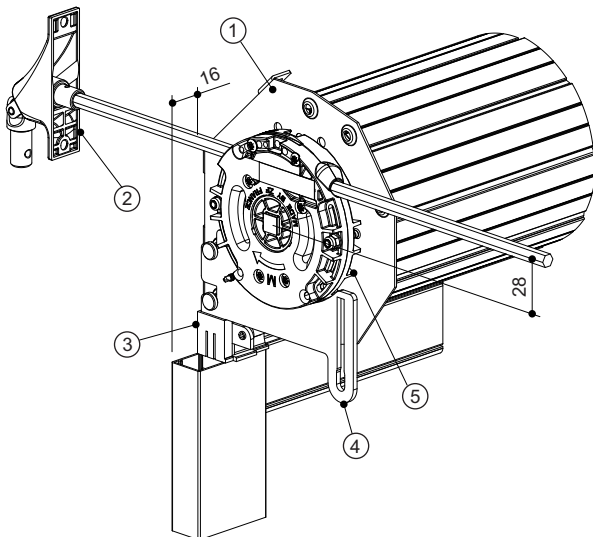
### Legend

- ① Deflector plate for star head drives
- ② Motor cable outside deflector plate
- ③ Entry guide on steel strut
- ④ Steel strut screwed to deflector plate
- ⑤ Lock ring for motor head

### Available motor types

- DX radio motor ONYX.ROL D+
- M elero Roltop D+
- MS Somfy Ilmo
- MI Simu T5S AUTO
- F radio motor elero 868 Roltop D+
- FIO radio motor Somfy Oximo io
- FIO radio motor Somfy RS100 io

## Crank handle drive

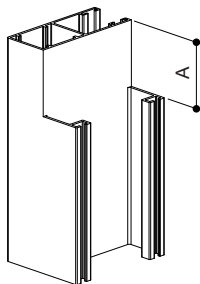


### Legend

- ① Deflector plate with slide bearing
- ② Joint bearing 90 with base plate 85x22 and 7mm hexagon
- ③ Entry guide on steel strut
- ④ Steel strut screwed to deflector plate
- ⑤ Worm gear 5.25:1 with freewheel on crank handle side in down direction

The centre of the shaft is halfway up the box.

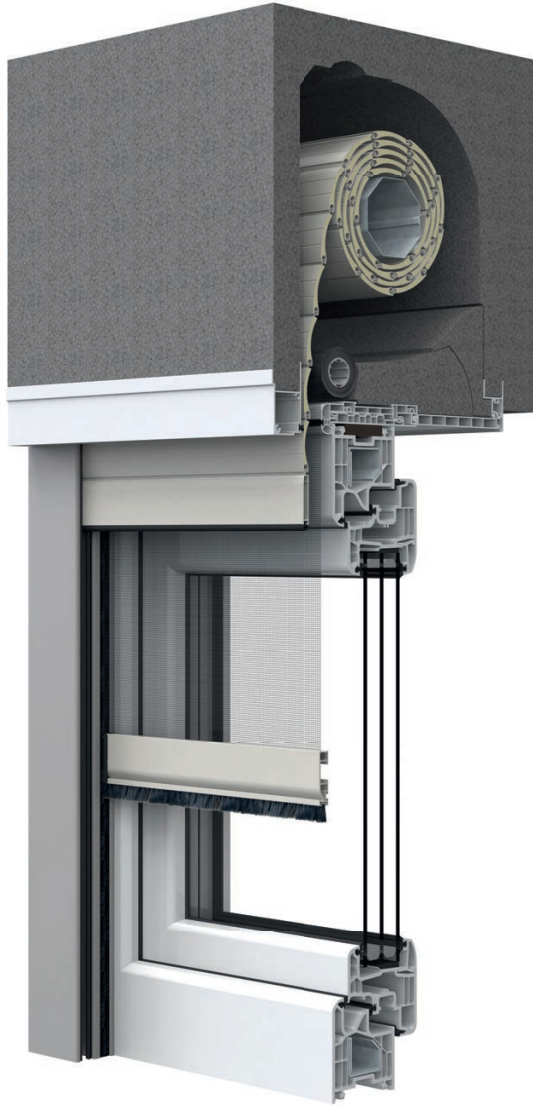
## Recess area guide rail top/bottom



For shafts with 20 mm frame insulation, the guide rail 53x22 with 20 mm spacer strips must be ordered. To enable this guide rail to also protrude into the shaft, it is possible to recess out the spacer strips at the top according to the dimensions entered. There is also the option of recessing at the bottom.



# TOP FOAM RvU/RvU.S - Top-mounted roller shutter



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

Option for fully integrated insect screen roller blind made of weather-resistant, plastic-coated fibreglass fabric.



End rod with concealed stoppers.

## Limit sizes

Profile type	Max. complete width [mm]	Min. complete width [mm]	Max. complete height* [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	1800	445	3000	3.1	3.6
K52	2300	445	3000	4.5	3.5
A37	3000	445	4000	7.5	2.6
AV42	3500	445	3500	8.0	2.9
A52	3700	445	3000	8.0	3.0

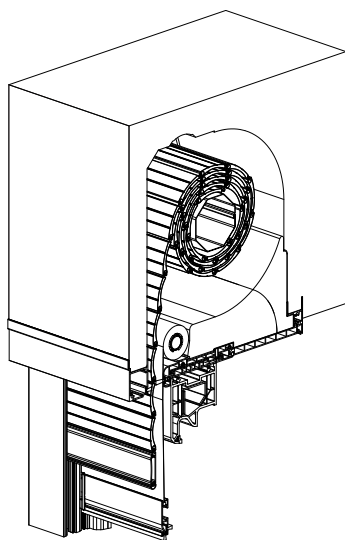
\*max. Finished height relates to box size 300

### Note:

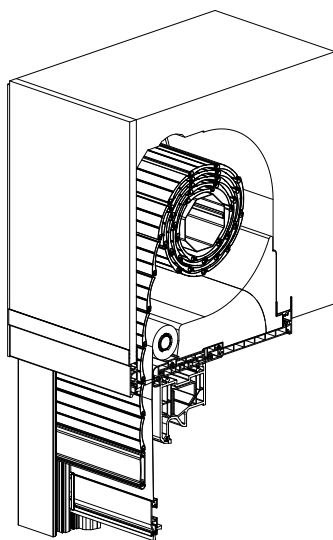
Box element unparted available as combination (max. 3 blinds). Maximum complete width 4500 mm.



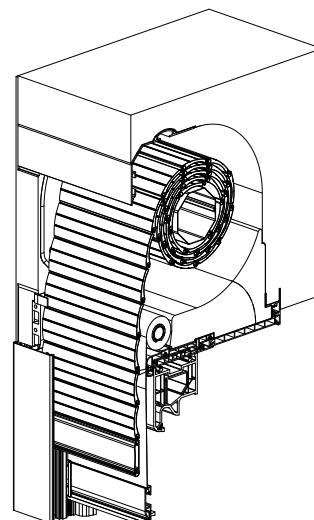
**Box forms and box sizes**



**TOP FOAM RvU**  
 Inspection from the bottom side  
 Optionally available with insect screen roller blind



**TOP FOAM RvU.S**  
 Inspection from the bottom side with front box top board on a PUR/PIR rigid foam basis  
 Optionally available with insect screen roller blind



**TOP FOAM RvU.S without front skirt**  
 Inspection from the bottom side  
 Optionally available with insect screen roller blind

**Comment:**

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

**TOP FOAM RvU**

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 (ø186 mm)				300 (ø205 mm)				variable

**TOP FOAM RvU.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 (ø186 mm)			300 (ø205 mm)			variable

**Legend**

KT Box depth variable, KTmin: 260, KTmax: 500

KH Box height variable, KHmin: 250 or 300, KHmax: 299 or 360

**TOP FOAM RvU.S - without front skirt**

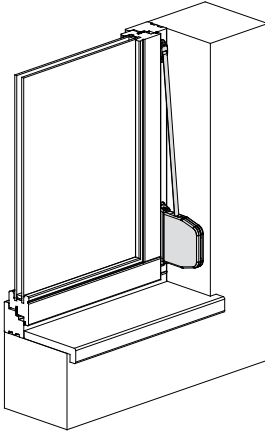
The box dimensions correspond to the version RvU.S, whereas the box depth is reduced by 10mm! For details see chapter Equipment Features.

# TOP FOAM RvU/RvU.S - Top-mounted roller shutter

## Types of drives

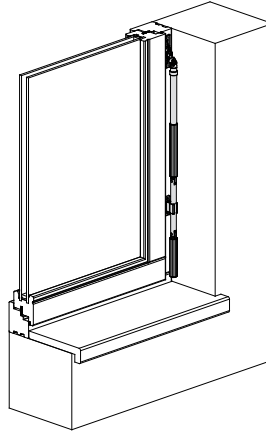
### Lift tape drive

with lift tape roll and swivelling take-up reel



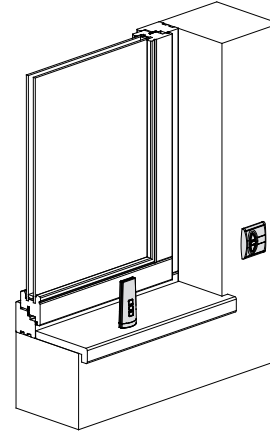
### Crank handle drive

with bevel gear unit, diagonal bearing, crank rod with folding handle and crank holder



### Motor drive Plug&Play

230V, incl. 3 m motor cable (2.6 m from side cover), without switch



#### Scope of delivery

- Box element TOP FOAM
- Box heights 250 and 300 mm
- Box depths 260 and 300 mm
- Inspection from the bottom
- Box end profile outside and inside in the color white Roller shutter made of extruded, solid coloured plastic or roll-formed foamed aluminium with light and air slits
- End rod with weighting steel, seal, limit stops
- Drive belt drive, crank drive, motor drive
- PVC guide rail (61x41 mm) with guide rail inserts
- Fastening handles
- Aluminium parts according to HELLA Color world
- Mounting material

#### Supplementary equipment

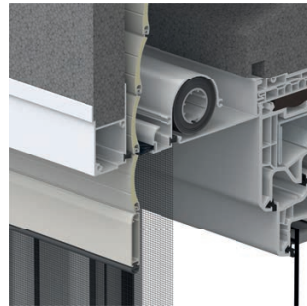
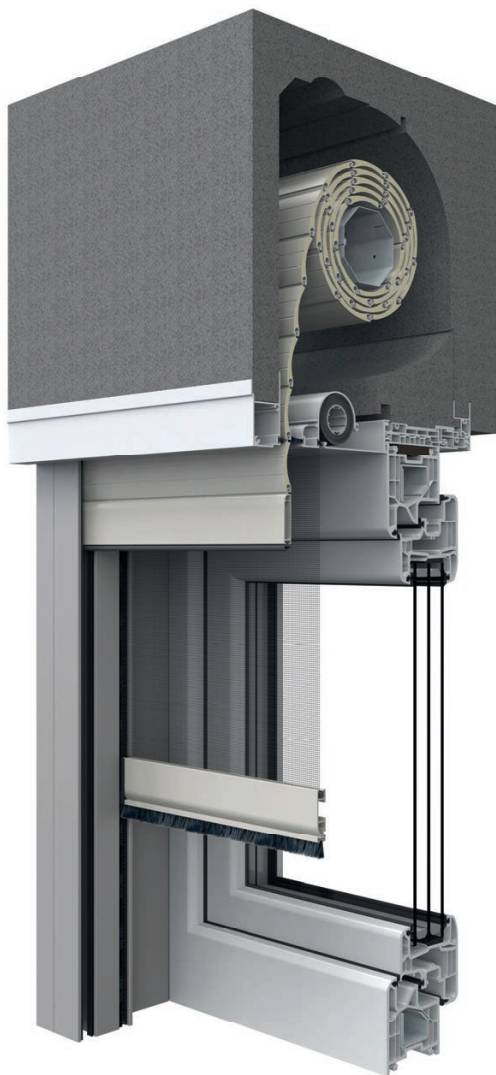
- Box depths 365/425 mm
- Variable box sizes
- Box for clinker
- Bottom side of the lintel provided with a cover panel
- Radio drive with hand-held or wall-mounted radio transmitter
- Window specific clip adapter
- different box end profiles
- additional possibilities to fix the box
- Bottom strengthening profile
- Statics bracket
- Fan cut-out
- Fan Aereco and Siegenia
- Integrated fall protection

#### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Energy saving
- Integrated into façade
- Tests for sound insulation, airtightness and thermal insulation
- High-quality construction elements guarantee a long lifespan and convenient operation



# TOP FOAM RvA/RvA.S - Top-mounted roller shutter



Option for fully integrated insect screen roller blind made of weather-resistant, plastic-coated fibreglass fabric.



Extruded 2-part guide rail with guide rail inserts.

## Limit sizes

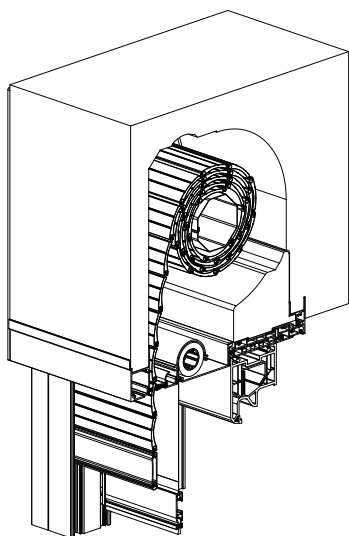
Profile type	Max. complete width [mm]	Min. complete width [mm]	Max. complete height* [mm]	Max. surface [m <sup>2</sup> ]	Weight [kg/m <sup>2</sup> ]
K37	1800	445	3000	3.1	3.6
K52	2300	445	3000	4.5	3.5
A37	3000	445	4000	7.5	2.6
AV42	3500	445	3500	8.0	2.9
A52	3700	445	3000	8.0	3.0

\*max. Finished height relates to box size 300

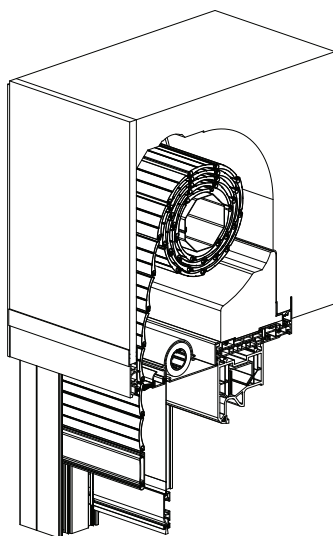
### Note:

Box element unparted available as combination (max. 3 blinds). Maximum complete width 4500 mm.

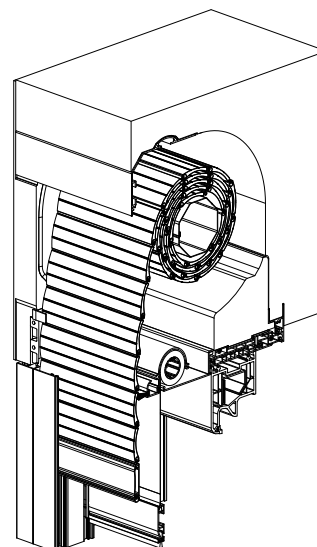
## Box forms and box sizes



**TOP FOAM RvA**  
Inspection from the outside  
Optionally available with insect screen roller blind



**TOP FOAM RvA.S**  
Inspection from the outside  
with front box top board on a PUR/PIR rigid foam basis  
Optionally available with insect screen roller blind



**TOP FOAM RvA.S without front skirt**  
Inspection from the outside  
Optionally available with insect screen roller blind

**Comment:**

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

**TOP FOAM RvA**

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 (ø186 mm)				300 (ø205 mm)				variable

**TOP FOAM RvA.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 (ø186 mm)			300 (ø205 mm)			variable

**Legend**

KT Box depth variable, KTmin: 260, KTmax: 500

KH Box height variable, KHmin: 250 or 300, KHmax: 299 or 360

**TOP FOAM RvA.S - without front skirt**

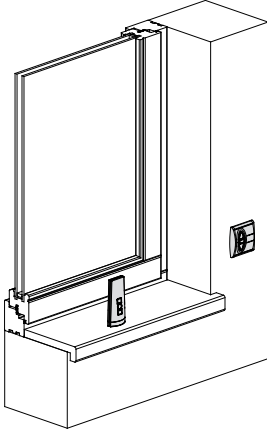
The box dimensions correspond to the version RvA.S, whereas the box depth is reduced by 10mm! For details see chapter Equipment Features.

# TOP FOAM RvA/RvA.S - Top-mounted roller shutter

## Types of drives

### Motor drive Plug&Play

230V, incl. 3 m motor cable (2.6 m from side cover), without switch



#### Scope of delivery

- Box element TOP FOAM
- Box heights 250 and 300 mm
- Box depths 260 and 300 mm
- Inspection from the outside
- Box end profile on the outside and on the inside in white color
- Roller shutter made of extruded, solid colored plastic or roll-formed foamed aluminium with light and air slits
- End rod with weighting steel, seal, limit stops
- Motor drive
- 2-part aluminium guide rail with guide rail inserts
- Fastening handles
- Aluminium parts according to HELLA Color world
- Mounting material

#### Supplementary equipment

- Box depths 365/425 mm
- Variable box sizes
- Box for clinker
- Bottom side of the lintel provided with a cover panel
- Radio drive with hand-held or wall-mounted radio transmitter
- Window specific clip adapter
- 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

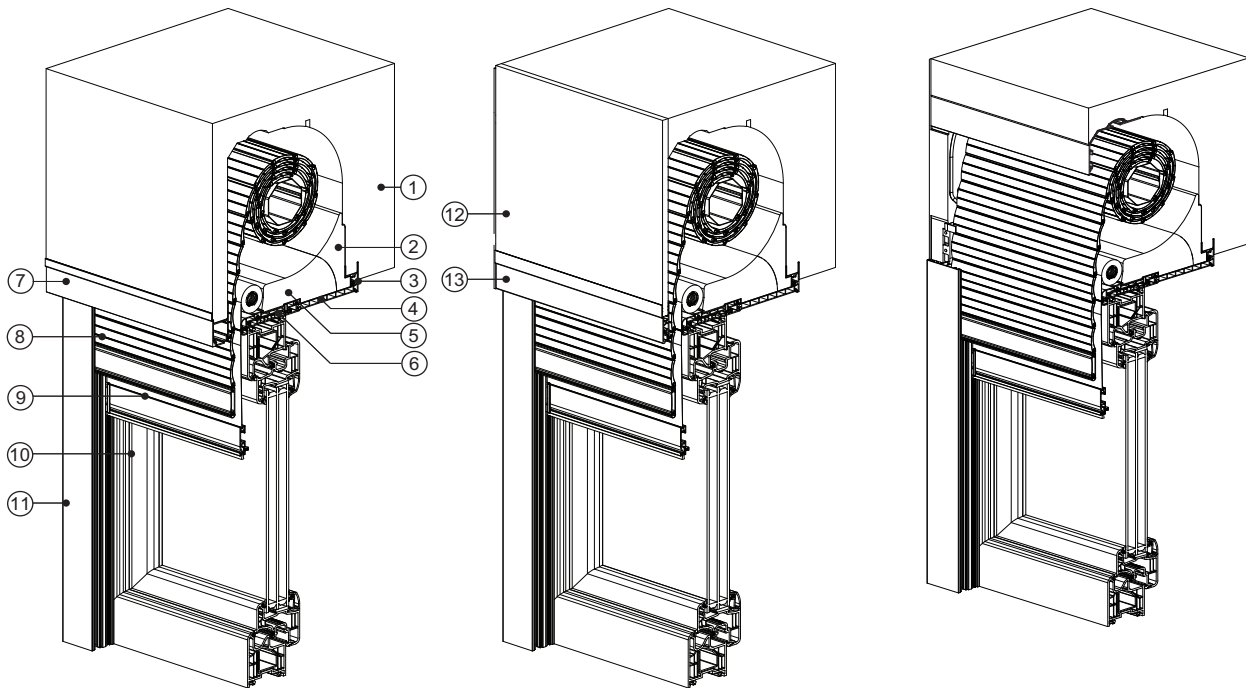
#### Benefits of the product

- Thermal insulation
- Sight screen
- Sun protection
- Noise insulation
- Weather protection
- Glare protection
- Blacking out
- Energy saving
- Integrated into façade
- Tests for sound insulation, airtightness and thermal insulation
- High-quality construction elements guarantee a long lifespan and convenient operation



# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Type overview



**TOP FOAM RvU**

**TOP FOAM RvU.S**

**TOP FOAM RvU.S without front skirt**

- Monolithic brickwork
- Thermal insulation composite system

- Clinker facade
- Timber construction
- Thermal insulation composite system

- Clinker facade

### Legend

- |   |   |   |  |
|---|---|---|--|
| ① | Insulation body of the box RvU/RvU.S                          | ⑧ | Roller shutter curtain                             |
| ② | Insulation profile Inspection cover                           | ⑨ | Insect roller screen                               |
| ③ | Box end rail 0 mm inside, aluminium                           | ⑩ | Window element                                     |
| ④ | Inspection cover at the bottom side, inside lying             | ⑪ | Guide rail for the roller shutter                  |
| ⑤ | Insulation profile for inspection from the inside, fixed part | ⑫ | Box top board on a PUR/PIR rigid foam basis, 10 mm |
| ⑥ | Floor base profile with brush and adapter profile             | ⑬ | Box end profile outside, narrow                    |
| ⑦ | Box end profile outside, aluminium                            |   |  |



## Technical product description

### Top-mounted box

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

Insulation elements (For inspection cover and fixed part) 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 element with integrated recess to incorporate roller shutters
- Connection to the window via a clips profile and lateral fastening handles made of 2 mm thick galvanised sheet steel
- Profile rails made of extruded aluminium, screwed to the side cover
- Plastic side covers with holding fixture for the entry guide of the roller shutter curtain or insect roller screen and to fix the manual operating elements or fastening devices of the rolling profile
- **RvU:**  
Front top board made of EPS 032, 27 mm with consistent plaster adhesion
- **RvU.S:**  
Front top board on a PUR/PIR rigid foam basis, 10 mm

### Box sizes

RvU 260/300, 300/300, 365/300, 425/300, 260/250, 300/250, 365/250, 425/250

RvU.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

### Inspection cover and 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 in the interior of the box ensure a significantly better insulation effect of the box

### Guide rails

Design optionally as PVC or aluminium guide rails

- On both sides, the guide notch for the roller shutter curtain is either provided with a brush sealing (PVC guide rails) or with a PVC-seal (aluminium guide rails)
- With insect screens both edges of the guide notch are provided with brush sealings

### Types of drives

- **Lift tape:**  
Belt 14 mm wide, made of polyester blended fabric; optionally available with belt gear 2:1 or belt offset with a width of 22 mm
- **Crank handle drive:**  
Crank handle drive with gear reduction 4:1 and freewheel, complete with bearing, powder-coated crank rod, folding handle and crank holder
- **Motor drive:**  
Plug-in drive built into the primary shaft, with protection device against unintentionally raising of the curtain and automatic limit stop

### Octagon steel shaft

Dimension 60x0.6 mm / 60x1.0 mm

Material galvanised steel

### Profiles

#### Profile K37 (37x8 mm)

Description double-walled roller shutter hollow-chamber profile

Material extruded, colored plastic

- with 2 grooves and light and air slits
- Curtain locked as a standard

#### Profile K52 (52x14 mm)

Description double-walled roller shutter hollow-chamber profile

Material extruded, colored plastic

- with 3 grooves and light and air slits
- Curtain locked as a standard

#### Profile A37 (37x8.2 mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 2 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

#### Profile AV42 (42x9.3mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 2 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

#### Profile A52 (52x13 mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 3 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

### End rod

Material Extruded aluminium

Dimension 36x7.5 mm and 44x12 mm with drawn-in sealing profile

Details with limit stop for switching-off in the upper end position. Optional with hidden, rotating plastic stoppers

### Colors

#### powder-coated aluminium parts

Color in standard colors without surcharge

Special colors as per "HELLA Color worlds" for a surcharge

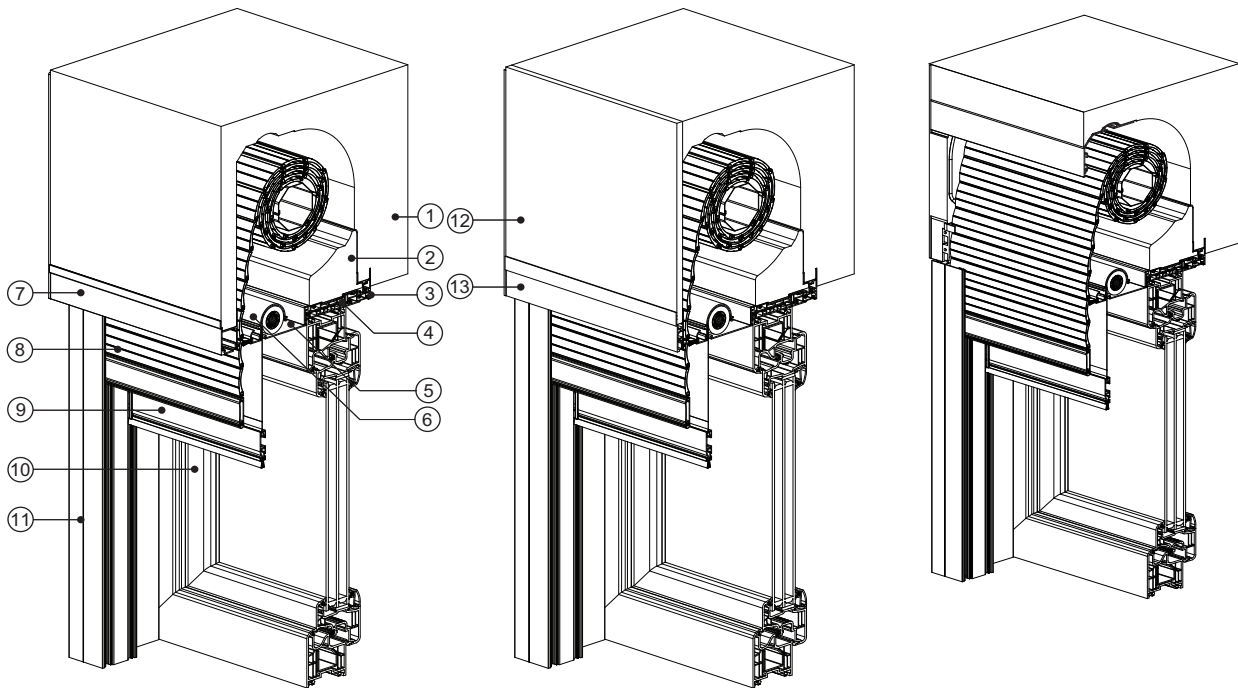
- PVC guide rails and floor base profile in solid-colored white or in the selected décor according to current range

### Insect roller screen

- insect roller screen with spring balancer drive and run-up brake completely integrated in the box
- with brush seals guided safely in the guide rails behind the roller shutter
- Details see chapter "Accessories insect screen"

# TOP FOAM RvA/RvA.S - Inspection from the outside

## Type overview



TOP FOAM RvAction from the outside

TOP FOAM RvA.S

TOP FOAM RvA.S without front skirt

- Monolithic brickwork
- Thermal insulation composite system

- Clinker facade
- Timber construction
- Thermal insulation composite system

- Clinker facade

### Legend

- |   |   |   |  |
|---|---|---|--|
| ① | Insulation body of the box RvA/RvA.S              | ⑧ | Roller shutter curtain                             |
| ② | Insulation profile Inspection cover               | ⑨ | Insect roller screen                               |
| ③ | Box end rail 0 mm inside, aluminium               | ⑩ | Window element                                     |
| ④ | Floor base profile with brush and adapter profile | ⑪ | Guide rail for the roller shutter                  |
| ⑤ | Inspection cover on the outside                   | ⑫ | Box top board on a PUR/PIR rigid foam basis, 10 mm |
| ⑥ | Closed cassette for insect screen                 | ⑬ | Box end profile outside, narrow                    |
| ⑦ | Box end profile outside                           |   |  |

## 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 element with integrated recess to incorporate roller shutters
- Connection to the window via a clips profile and lateral fastening handles made of 2 mm thick galvanised sheet steel
- Profile rails made of extruded aluminium, screwed to the side cover
- Plastic side covers with holding fixture for the entry guide of the roller shutter curtain or the insect roller screen
- **RvA:**  
Front top board made of EPS 032, 27 mm with consistent plaster adhesion
- **RvA.S:**  
Front top board on a PUR/PIR rigid foam basis, 10 mm

### Box sizes

RvA 260/300, 300/300, 365/300, 425/300, 260/250, 300/250, 365/250, 425/250

RvA.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

### Inspection cover

Material extruded aluminium 1.5 mm

Details With inserted brush sealing for ideal sealing to the roller shutter curtain

### 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.
- additional insulation elements made of expanded polystyrene EPS 032 ensure a significantly better insulation effect of the box

### Guide rails

Material Extruded aluminium

- On both edges a PVC seal is pulled into the guide notch for the roller shutter curtain
- With insect screens both edges of the guide notch are provided with brush sealings

### Octagon steel shaft

Dimension 60x0.6 mm

Material galvanised steel

### Drive type

- **Motor drive:**  
Plug-in drive built into the primary shaft, with protection device against unintentionally raising of the curtain and automatic limit stop

### Profiles

#### Profile K37 (37x8 mm)

Description double-walled roller shutter hollow-chamber profile

Material extruded, colored plastic

- with 2 grooves and light and air slits
- Curtain locked as a standard

#### Profile K52 (52x14 mm)

Description double-walled roller shutter profile hollow-chamber profile

Material extruded, colored plastic

- with 3 grooves and light and air slits
- Curtain locked as a standard

#### Profile A37 (37x8.2 mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 2 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

#### Profile AV42 (42x9.3mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 2 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

#### Profile A52 (52x13 mm)

Description double-walled, roll formed roller shutter profile

Material Aluminium

- with 3 grooves and light and air slits
- Hollow space foam filled with polyurethane
- The curtain is locked over the complete height on both sides (no lateral shifting of the profiles possible)

### End rod

Material Extruded aluminium

Dimension 36x7.5 mm and 44x12 mm with drawn-in sealing profile

Details with limit stop for switching-off in the upper end position. Optional with hidden, rotating plastic stoppers

### Colors

#### powder-coated aluminium parts

Color in standard colors without surcharge

Special colors as per "HELLA Color worlds" for a surcharge

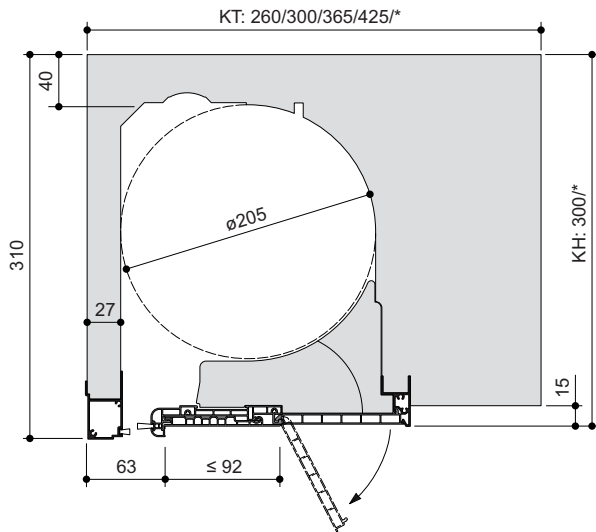
- Floor base profile in solid-colored white or in the selected décor according to current range

### Insect roller screen

- insect roller screen with spring balancer drive and run-up brake completely integrated in the box
- with brush seals guided safely in the guide rails behind the roller shutter
- Details see chapter "Accessories insect screen"

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## TOP FOAM RvU - Box height 300



### Box

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

### Box end profile

The box end profiles are made of extruded aluminium and screwed to the side part. Standard without plaster flange.

### Side covers

Made of plastic with holding fixture for the entry guide of the roller shutter curtain or insect roller screen and to fix the manual operating elements or fastening devices of the inspection cover.

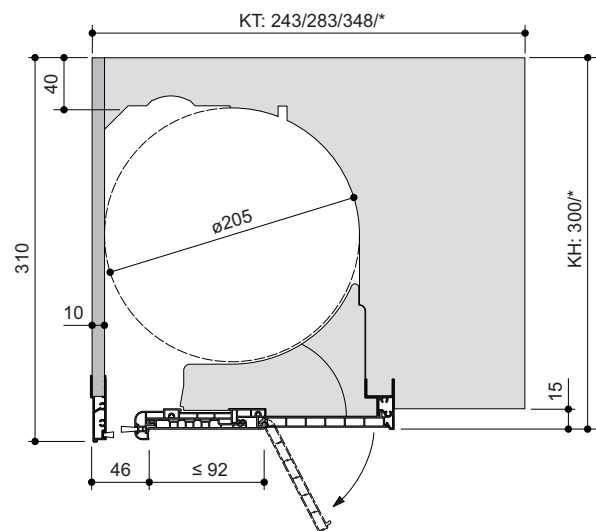
### Insulation elements

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

## TOP FOAM RvU.S - box size 300 with front skirt



### RvU

- 260x300 mm
- 300x300 mm
- 365x300 mm
- 425x300 mm
- KTxKH variable,  $\varnothing$ 205 mm
- KTmin: 260, KTmax: 500
- KHmin: 300, KHmax: 360

### RvU.S

- 243x300 mm
- 283x300 mm
- 348x300 mm
- KTxKH variable,  $\varnothing$ 205 mm
- KTmin: 243, KTmax: 500
- KHmin: 300, KHmax: 360

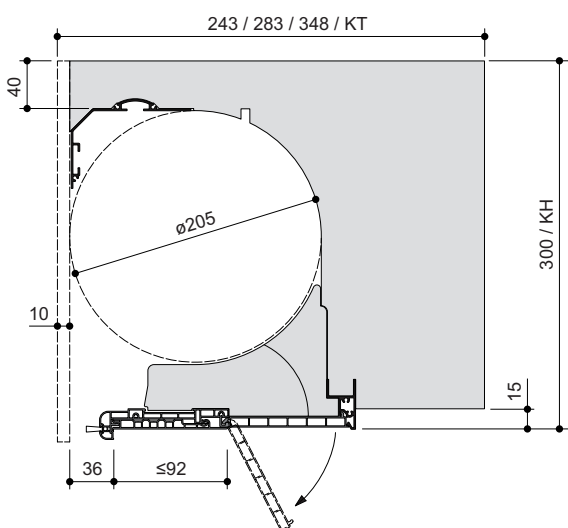
### Note:

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

### Window frame thickness

max. 92 mm

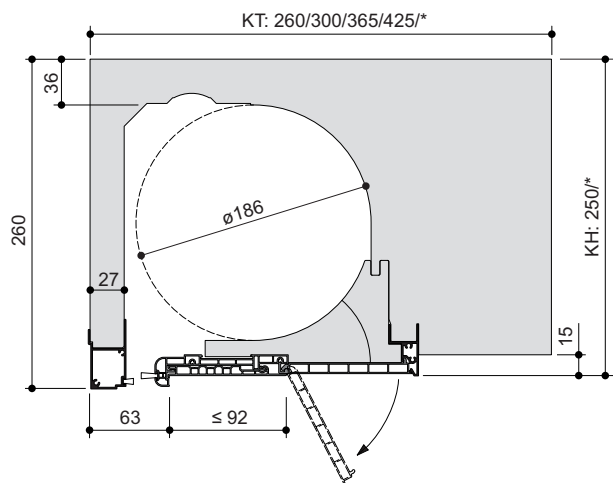
## TOP FOAM RvU.S - box size 300 without front skirt



### Legend

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

**TOP FOAM RvU - Box height 250**



**Box**

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

**Box end profiles**

The box end profiles are made of extruded aluminium and screwed to the side part. Standard without plaster flange.

**Side covers**

Made of plastic with holding fixture for the entry guide of the roller shutter curtain or insect roller screen and to fix the manual operating elements or fastening devices of the inspection cover.

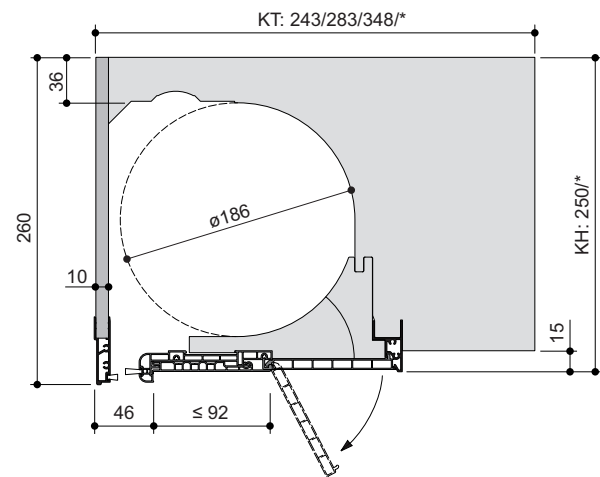
**Insulation elements**

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

**TOP FOAM RvU.S - box size 250 with front skirt**



**RvU**

- 260x250 mm
- 300x250 mm
- 365x250 mm
- 425x250 mm
- KTxKH variable, ø186 mm
- KTmin: 260, KTmax: 500
- KHmin: 250, KHmax: 299

**RvU.S**

- 243x250 mm
- 283x250 mm
- 348x250 mm
- KTxKH variable, ø186 mm
- KTmin: 243, KTmax: 500
- KHmin: 250, KHmax: 299

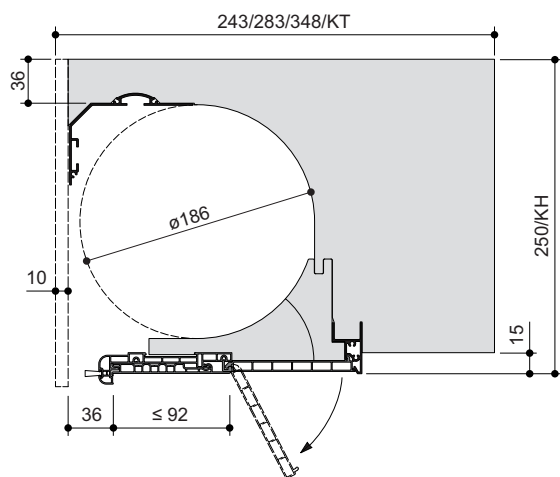
**Note:**

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

**Window frame thickness**

max. 92 mm

**TOP FOAM RvU.S - box size 250 without front skirt**

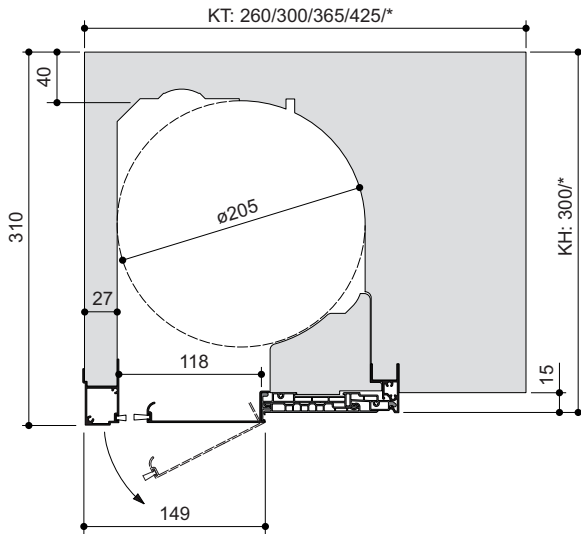


**Legend**

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

# TOP FOAM RvA/RvA.S - Inspection from the outside

## TOP FOAM RvA - Box height 300



### Box

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

### Box end profiles

The box end profiles are made of extruded aluminium and screwed to the side part. Standard without plaster flange.

### Side covers

Made of plastic with holding fixture for the entry guide of the roller shutter curtain or insect roller screen and to fix the manual operating elements or fastening devices of 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.

### Box dimensions

Depth x height on the inside

### RvA

- 260x300 mm
- 300x300 mm
- 365x300 mm
- 425x300 mm
- KTxKH variable,  $\varnothing 205$  mm
- KTmin: 260, KTmax: 500
- KHmin: 300, KHmax: 360

### RvA.S

- 243x300 mm
- 283x300 mm
- 348x300 mm
- KTxKH variable,  $\varnothing 205$  mm
- KTmin: 243, KTmax: 500
- KHmin: 300, KHmax: 360

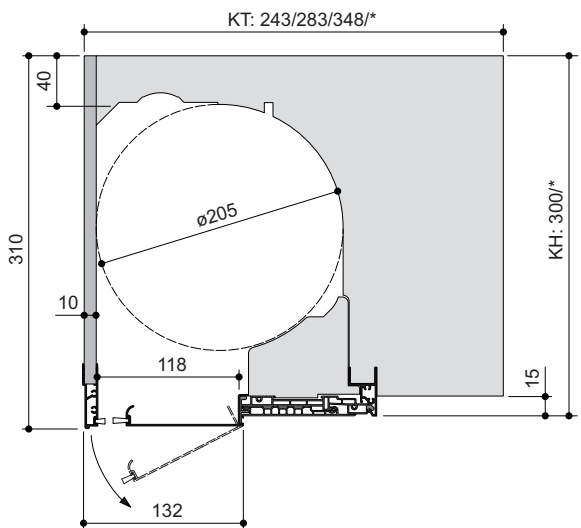
### Note:

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

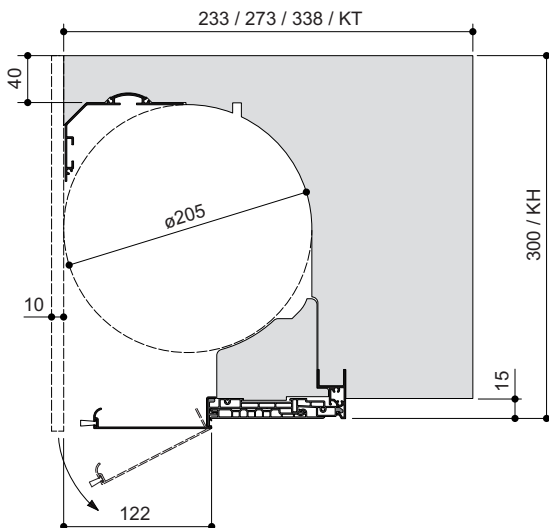
### Window frame thickness

max. 92 mm

## TOP FOAM RvA.S - box height 300 with front skirt



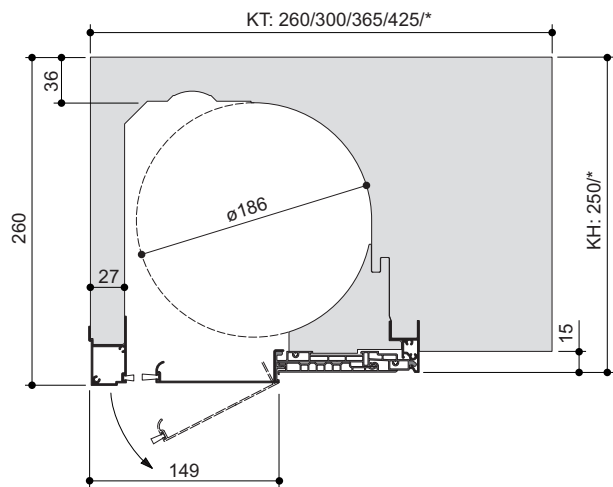
## TOP FOAM RvA.S - box height 300 without front skirt



### Legend

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

**TOP FOAM RvA - Box height 250**



**Box**

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

**Box end profiles**

The box end profiles are made of extruded aluminium and screwed to the side part. Standard without plaster flange.

**Side covers**

Made of plastic with holding fixture for the entry guide of the roller shutter curtain or insect roller screen and to fix the manual operating elements or fastening devices of 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.

**Box dimensions**

Depth x height on the inside

**RvA**

- 260x250 mm
- 300x250 mm
- 365x250 mm
- 425x250 mm
- KTxKH variable,  $\varnothing$ 186 mm
- KTmin: 260, KTmax: 500
- KHmin: 250, KHmax: 299

**RvA.S**

- 243x250 mm
- 283x250 mm
- 348x250 mm
- KTxKH variable,  $\varnothing$ 186 mm
- KTmin: 243, KTmax: 500
- KHmin: 250, KHmax: 299

**Note:**

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

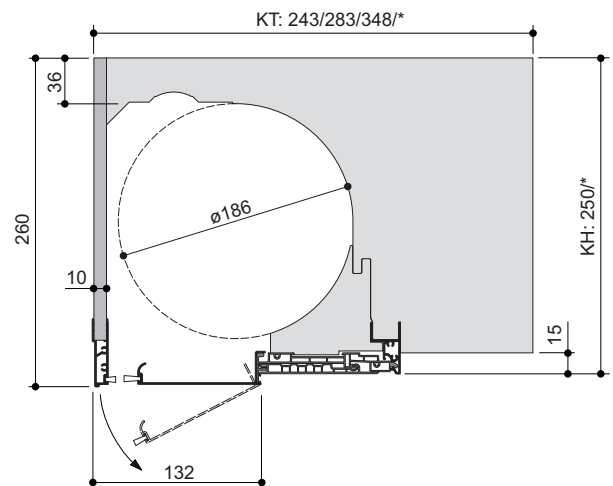
**Window frame thickness**

max. 92 mm

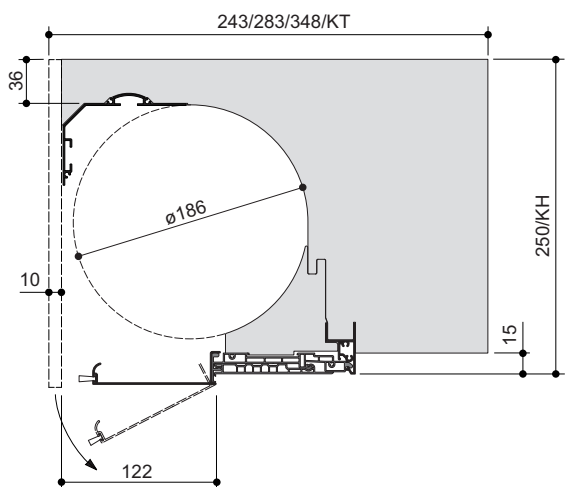
**Legend**

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

**TOP FOAM RvA.S - box height 250 with front skirt**



**TOP FOAM RvA.S - box height 250 without front skirt**

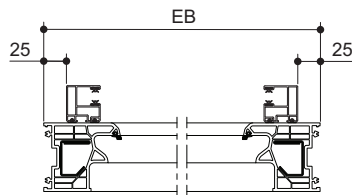
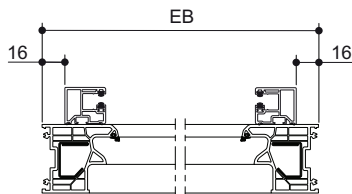
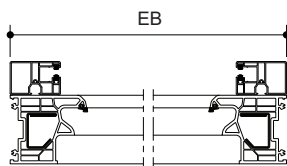
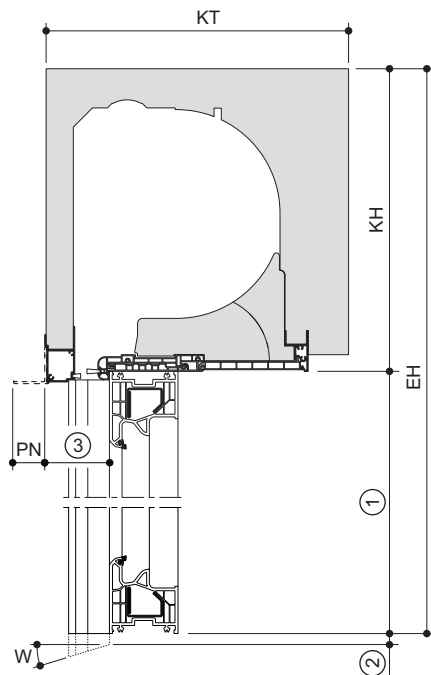




# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## 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

### Design with insect roller screen

You will find the dimensioning specification for the design with insect roller screen on the following page.

### Attention

A guide rail lengthening only lengthens the guide rail, not the element height or the blind. 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
- ③ Window position from outside of box  
62 for standard box  
45 for .S box  
35 for .S box without front skirt
- PN Plaster flange (optional)

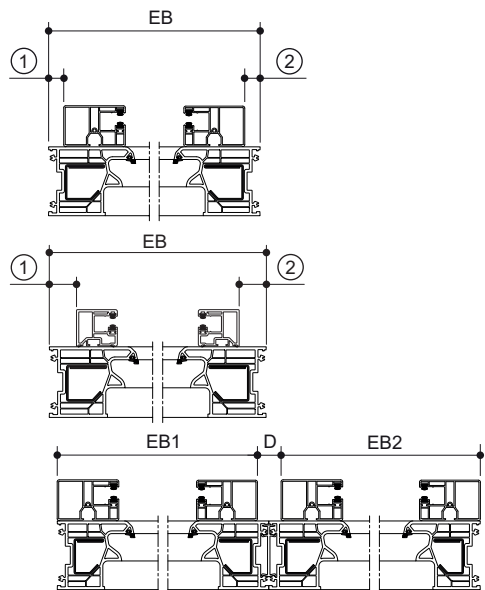
### Offset dimensions per side

	Guide rails (standard)	PVC guide rail narrow (type 89)	Aluminium guide rail narrow (type 90, 91)
<b>Standard</b>	0 mm	16 mm	25 mm
<b>optional</b>	≥ 11 mm (≥ 15 mm*)	≥ 27 mm (≥ 31 mm*)	≥ 36 mm (≥ 40 mm*)

\*... for RvU.S without front skirt



**Offset guide rail**



An offset guide rail makes the insulation of the window frame possible. The minimum dimension, which depends on the guide rail type, must be observed. For each element the guide rail can be mounted offset on the left side, on the right side or on both sides.

**Legend**

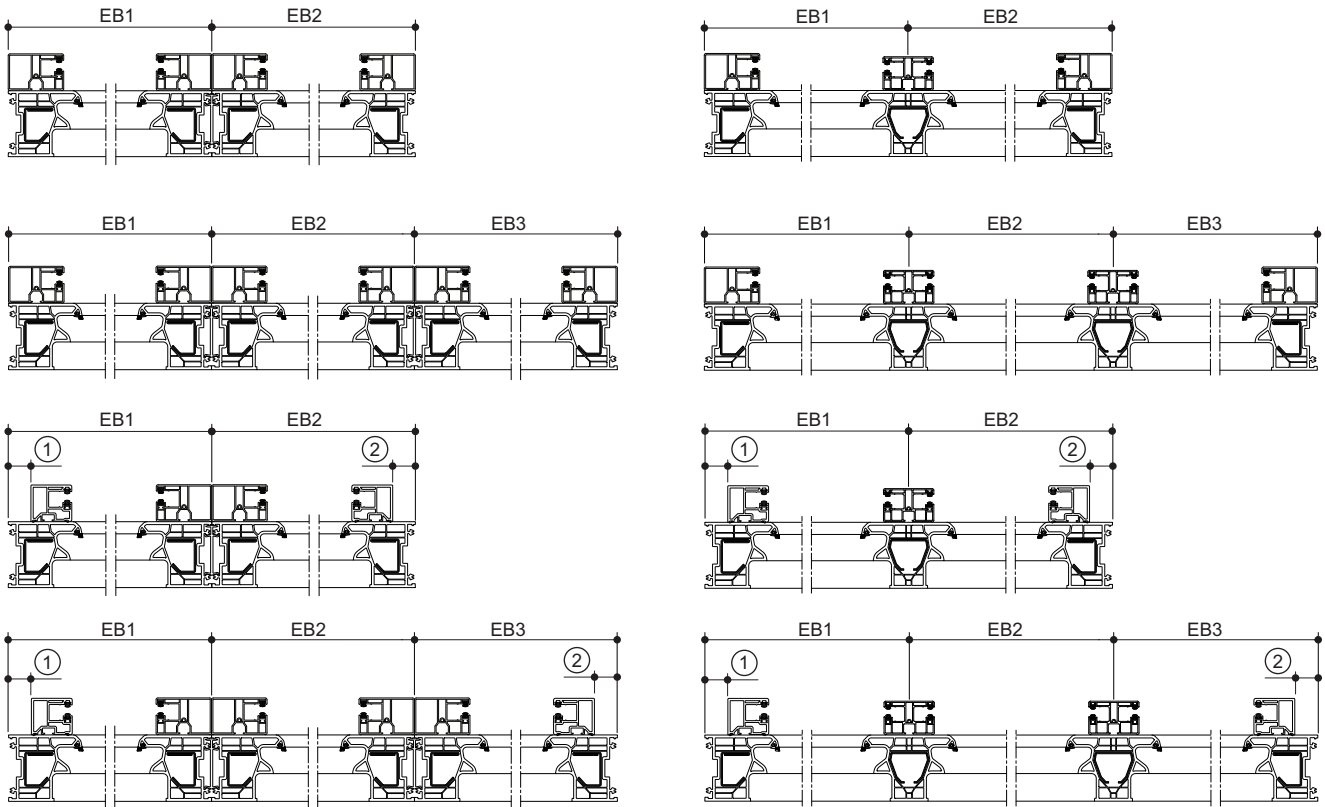
- EB Element width
- D Distance dimension between single guide rails with combination (optional)
- ① Guide rail offset on the left side (minimum offset dimension see front)
- ② Guide rail offset on the right side (minimum offset dimension see front)

In the case of combination and linkage, the guide rails for the middle element can be mounted without distance. Linkages or combinations with the same element height can also be designed double using basic profiles.

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Taking of measurements

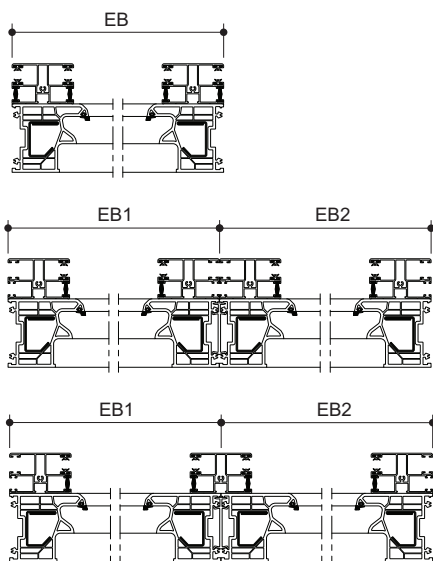
### Combination and linkage



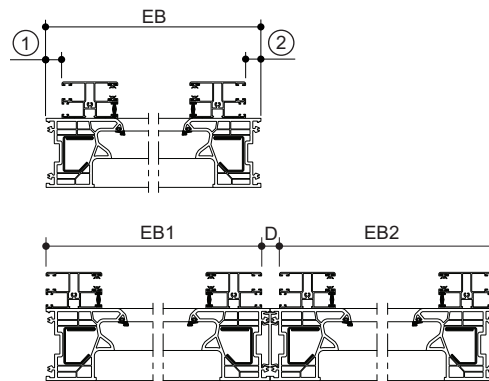
### Note

In the area of the central bearing a drive is not possible. Combination Start element always on the left side seen from the inside.

### Insect roller screen



### guide rail offset at insect roller screen



If an insect roller screen is used, only the guide rail type 77 is allowed as external guide rail.

### Legend

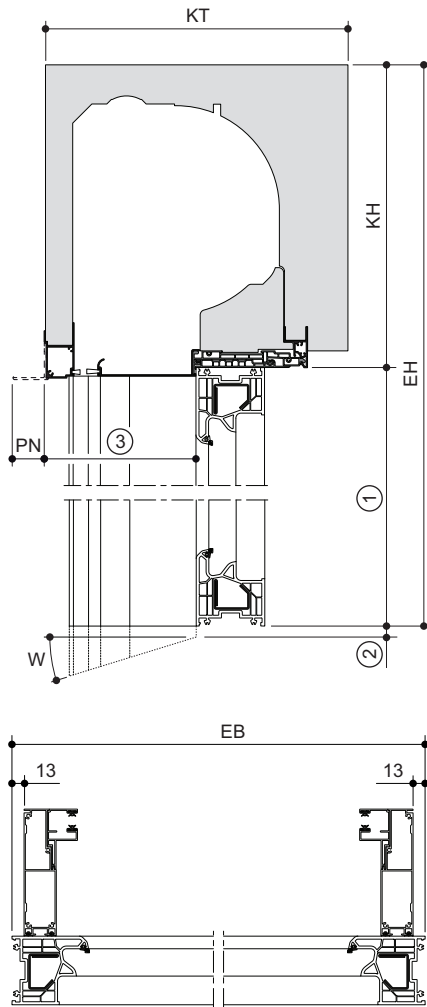
- ① Guide rail offset on the left side (minimum offset dimension see front)
- ② Guide rail offset on the right side (minimum offset dimension see front)



# TOP FOAM RvA/RvA.S - Inspection from the outside

## 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

### Design with insect roller screen

You will find the dimensioning specification for the design with insect roller screen on the following page.

### Attention

The external guide rail is always designed with an offset entry guide of at least 13 mm. Please refer to the following page for additional details regarding offset mounted guide rails. A guide rail lengthening only lengthens the guide rail, but not the element height or the blind. 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.

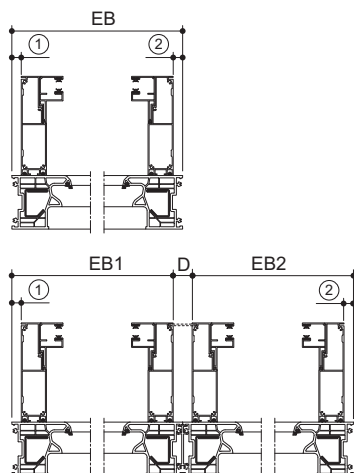
### Legend

- 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
- ③ Window position from outside of box
  - 148 for standard box
  - 131 for .S box
  - 121 for .S box without front skirt
- PN Plaster flange (optional)

### Offset dimensions per side

	Guide rails (standard)	Guide rails fall protection (type 92, 93)
Standard	13 mm	25 mm
optional	≥ 24mm	≥ 36mm

**Offset guide rail**



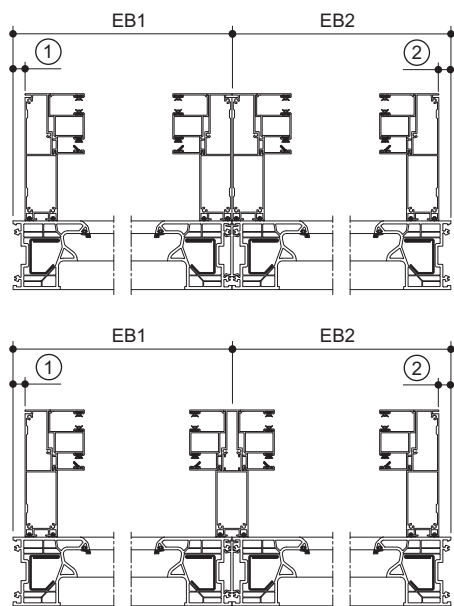
An offset guide rail makes the insulation of the window frame possible. The minimum dimension of 24 mm must be observed with external guide rails. For each element the guide rail can be mounted offset on the left side, on the right side or on both sides.

**Legend**

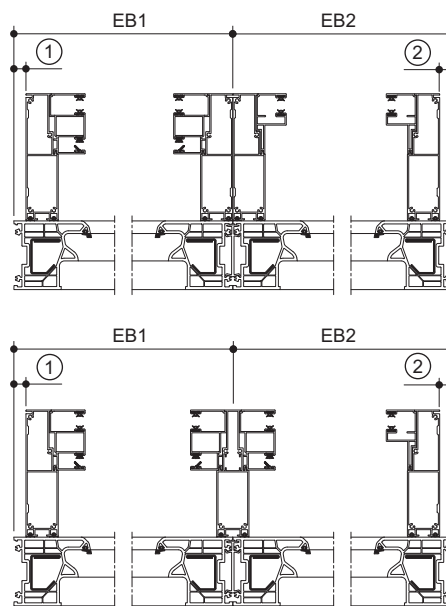
- EB Element width
- D Distance dimension between single guide rails with combination (optional)
- ① Guide rail offset on the left side (minimum offset dimension see front)
- ② Guide rail offset on the right side (minimum offset dimension see front)

In the case of combination and linkage, the guide rails for the middle element can be mounted without distance. Linkages or combinations with the same element height can also be designed double using basic profiles.

**Combination with insect screen on both sides**



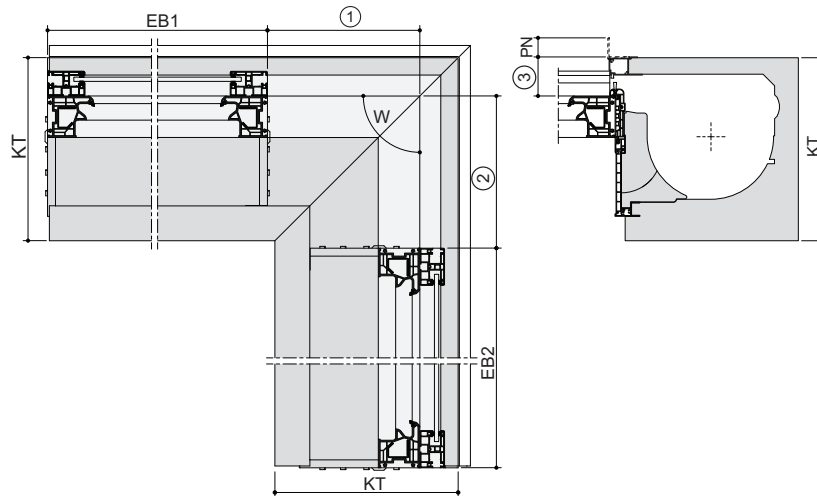
**Combination with insect screens on one side**



# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Taking of measurements

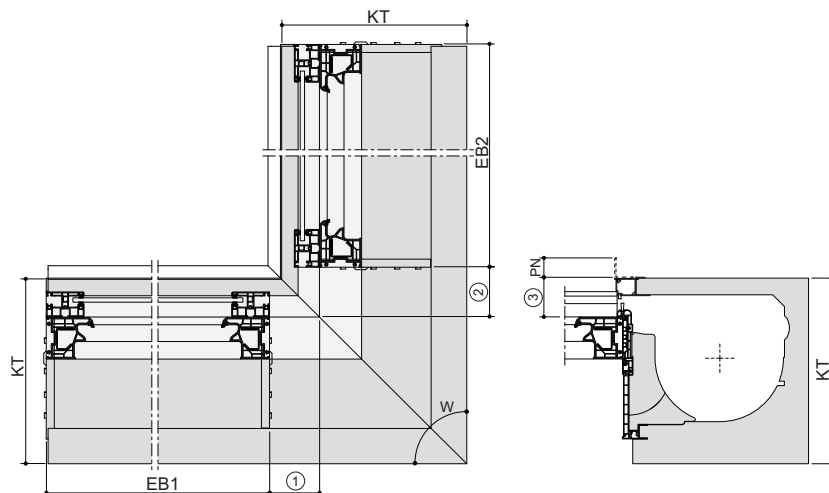
### Mitre cut - outer corner



#### Legend

EB1/EB2	Element width
KT	Box depth
W	Mitre angle
①	Mitre lengthening on the right side: at 90° outer mitre $\geq 192$ mm
②	Mitre lengthening on the left side: at 90° Outer mitre $\geq 192$ mm
③	Window position from outside of box 62 for standard box 45 for .S box 35 for .S box without front skirt
PN	Plaster flange (optional)

### Mitre cut - inner corner



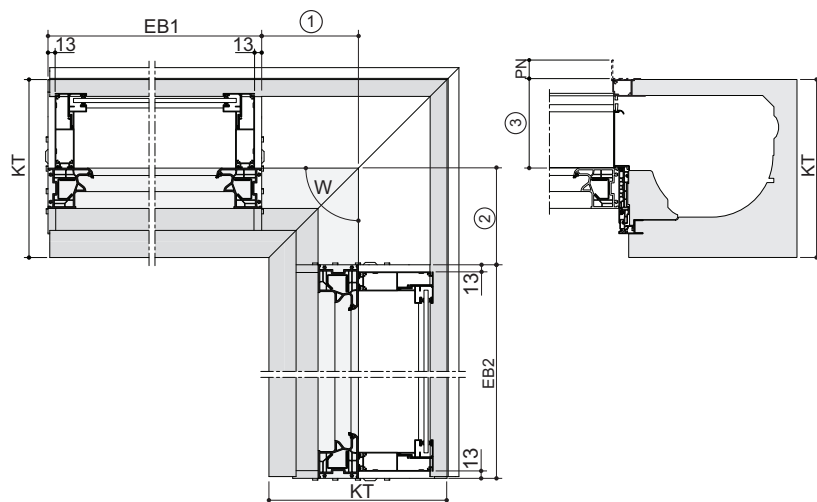
#### Legend

EB1/EB2	Element width
KT	Box depth
W	Mitre angle
①	Mitre lengthening on the right side: at 90° Inside mitre $\geq 41$ mm
②	Mitre lengthening on the left side: at 90° Inside mitre $\geq 41$ mm
③	Window position from outside of box 62 for standard box 45 for .S box 35 for .S box without front skirt
PN	Plaster flange (optional)

# TOP FOAM RvA/RvA.S - Inspection from the outside

## Taking of measurements

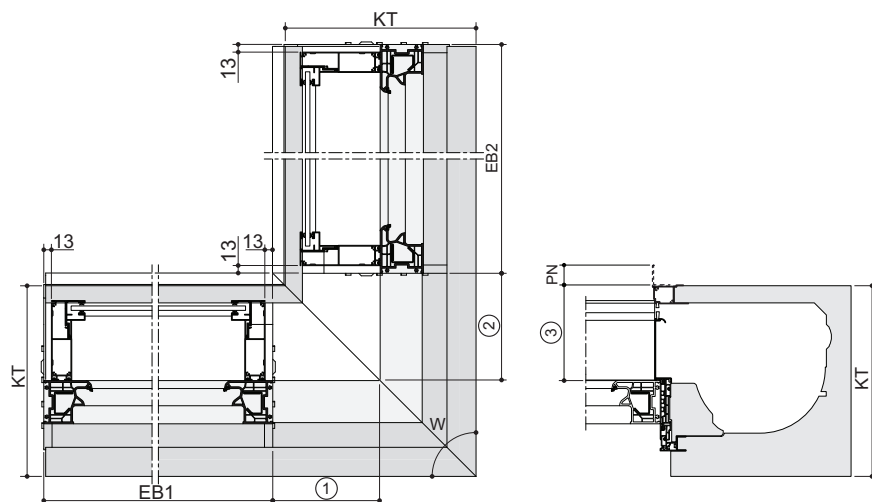
### Mitre cut - outer corner



#### Legend

- EB1/EB2 Element width
- KT Box depth
- W Mitre angle
- ① Mitre lengthening on the right side: at 90° outer mitre  $\geq 105$  mm
- ② Mitre lengthening on the left side: at 90° outer mitre  $\geq 105$  mm
- ③ Window position from outside of box  
148 for standard box  
131 for .S box  
121 for .S box without front skirt
- PN Plaster flange (optional)

### Mitre cut - inner corner



#### Legend

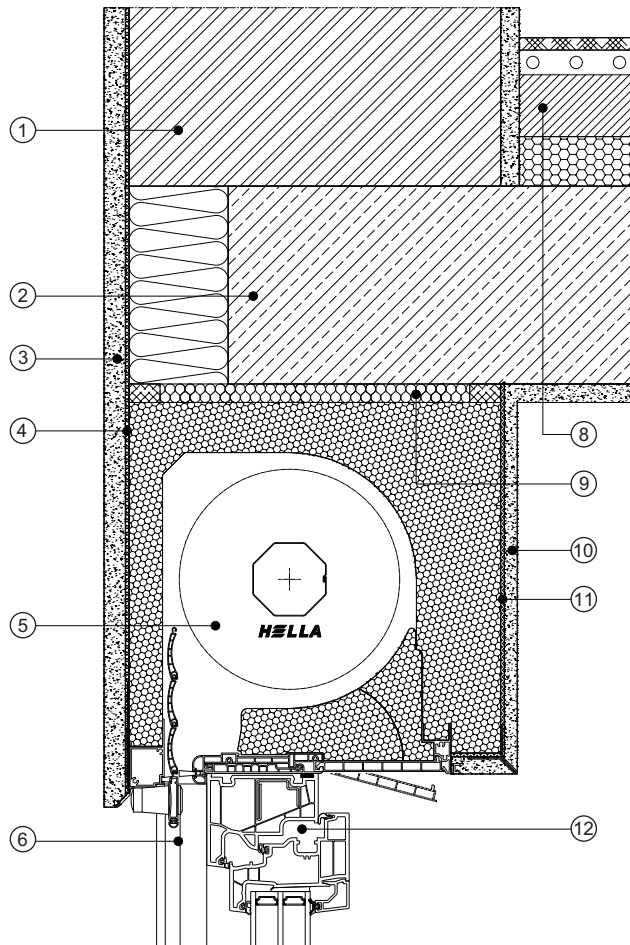
- EB1/EB2 Element width
- KT Box depth
- W Mitre angle
- ① Mitre lengthening on the right side: at 90° inner mitre  $\geq 132$  mm
- ② Mitre lengthening on the left side: at 90° inner mitre  $\geq 132$  mm
- ③ Window position from outside of box  
148 for standard box  
131 for .S box  
121 for .S box without front skirt
- PN Plaster flange (optional)

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Installation situation for different wall constructions

### Wall structure

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

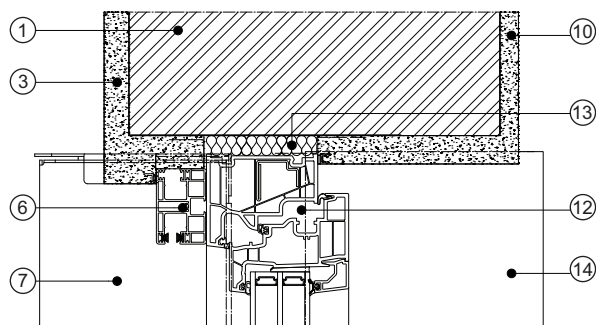


### Legend

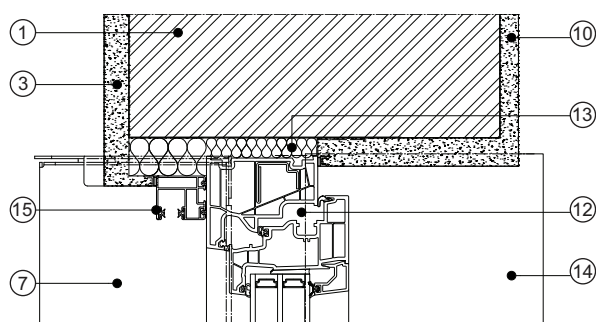
- ① Brickwork
- ② Reinforced concrete ceiling with ceiling face insulation
- ③ External rendering
- ④ Reinforcement on the outside
- ⑤ TOP FOAM RvU – Inspection from the bottom side
- ⑥ Guide rail
- ⑦ Aluminium window sill system, 2-part
- ⑧ Floor construction
- ⑨ Connection joint  
Providing the functional 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
- ⑮ Guide rail narrow for frame insulation

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### without frame insulation



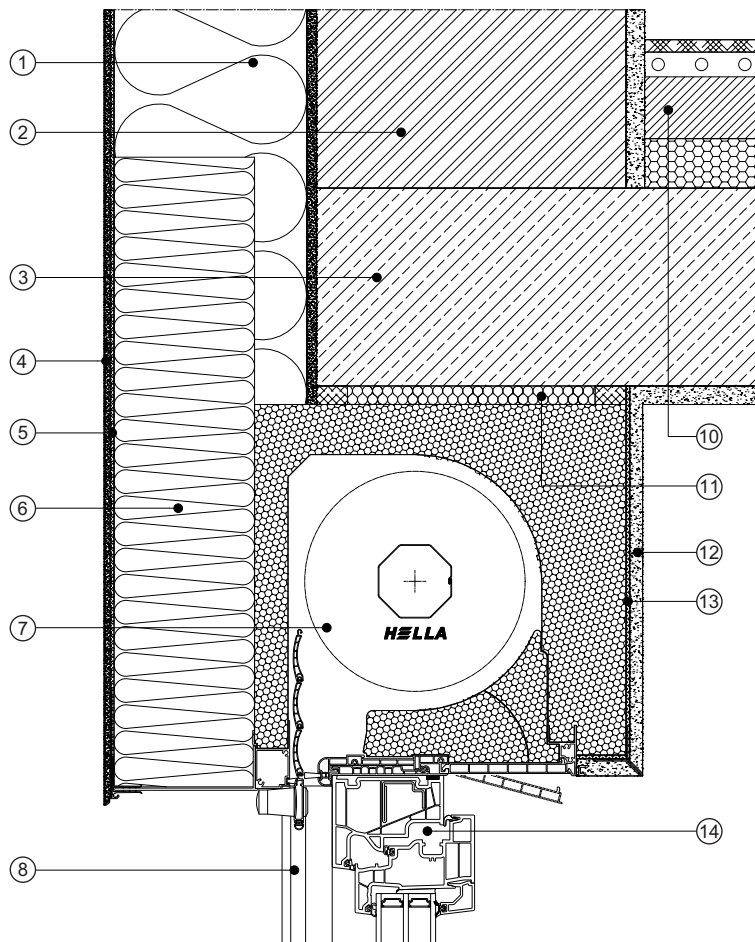
### with frame insulation





**Wall structure**

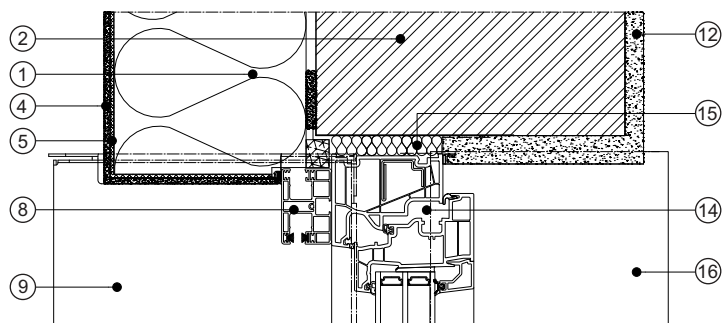
Brickwork with thermal insulation composite system for windows with floor-to-ceiling element height



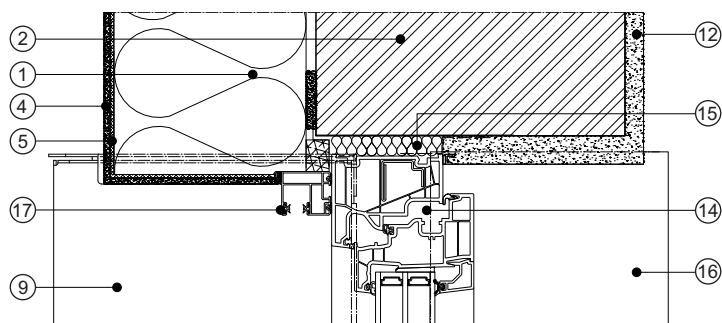
**Legend**

- ① Insulation
- ② Brickwork
- ③ Reinforced concrete ceiling
- ④ External rendering
- ⑤ Reinforcement on the outside
- ⑥ Insulation of the roller shutter box
  - Thickness  $\geq 40$  mm
  - laterally and at the top  $\geq 200$  mm overlapped
- ⑦ TOP FOAM RvU – Inspection from the bottom side
- 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 Guide rail narrow for frame insulation

**without frame insulation**



**with frame insulation**



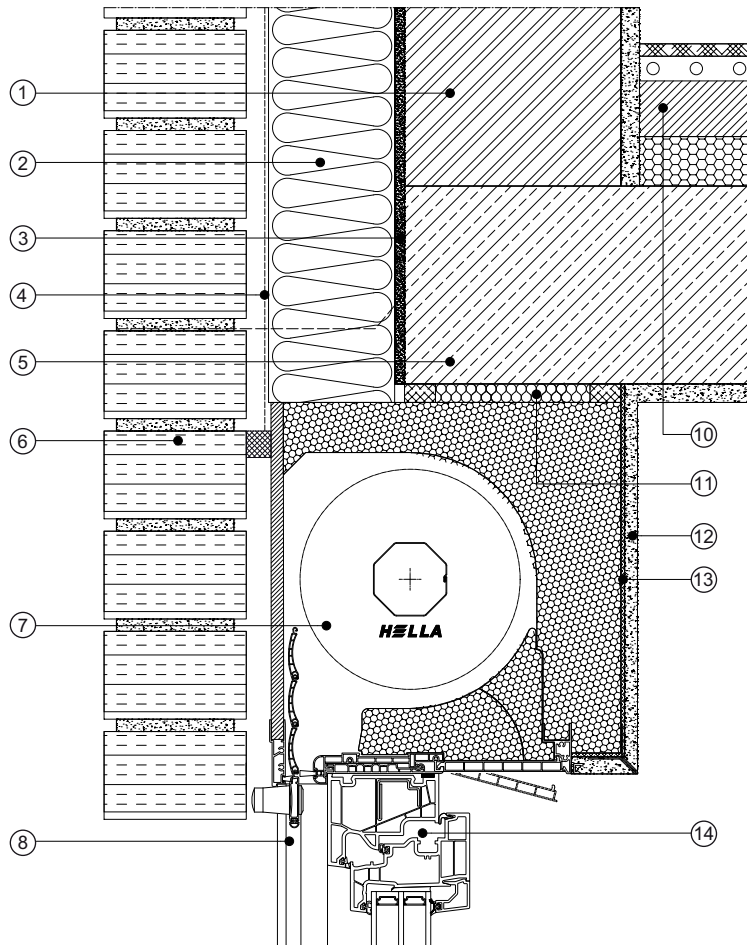
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# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Installation situation for different wall constructions

### Wall structure

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

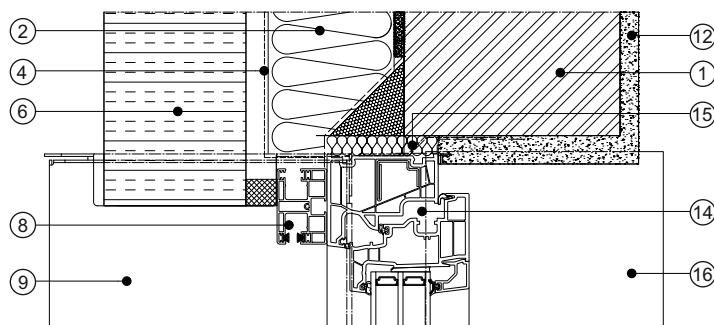


### Legend

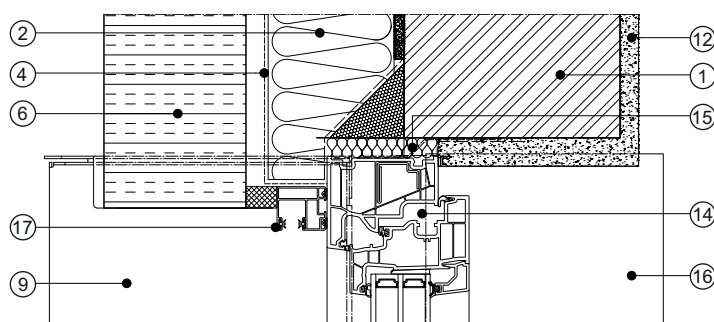
- ① Brickwork
- ② Insulation
- ③ Sealing level
- ④ sealing level
- ⑤ Reinforced concrete ceiling
- ⑥ Clinker façade
- ⑦ TOP FOAM RvU.S – Inspection from the bottom side
- ⑧ Guide rail
- ⑨ Aluminium window sill system, 2-part
- ⑩ Floor construction
- ⑪ Connection joint  
Providing the functional levels 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 Guide rail narrow for frame insulation

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### without frame insulation

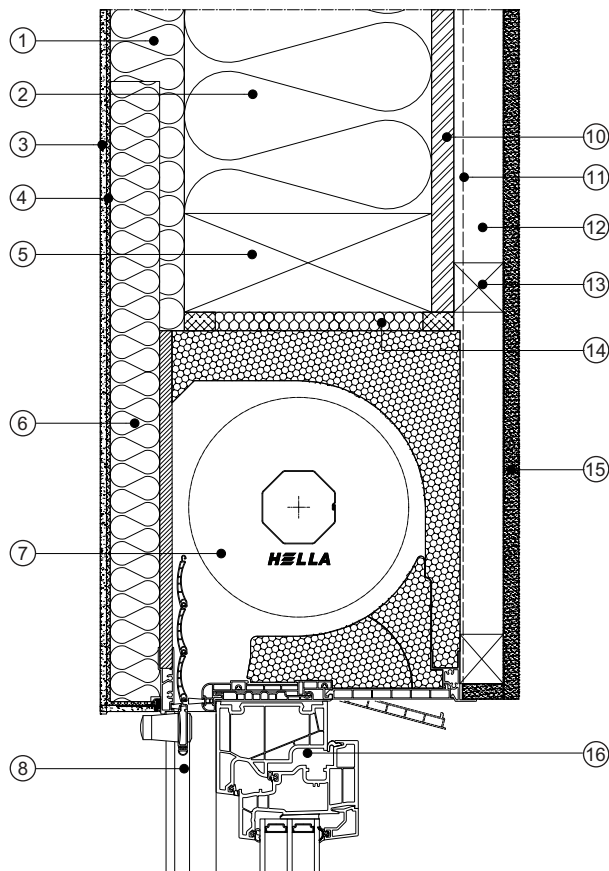


### with frame insulation



**Wall structure**

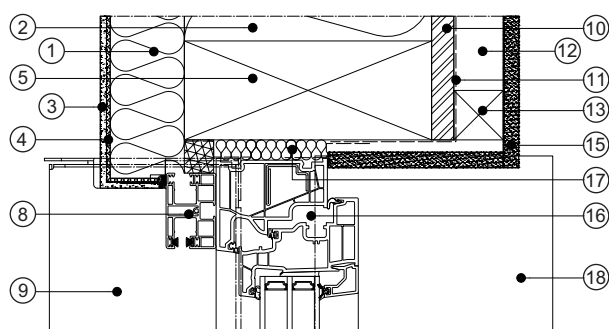
Wood frame construction with external rendering and installation level on the inside



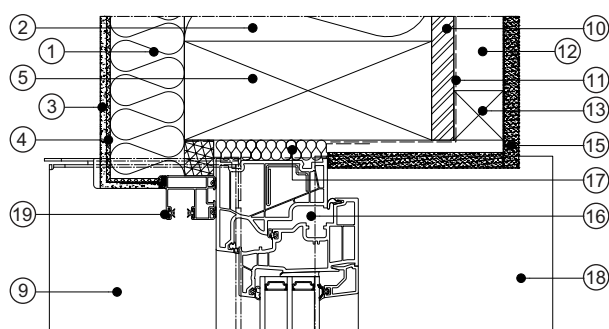
**Legend**

- ① Exterior insulation
- ② Core insulation
- ③ External rendering
- ④ Reinforcement
- ⑤ Nogging piece
- ⑥ Insulation of the roller shutter box
  - Thickness  $\geq 40$  mm
  - laterally and at the top  $\geq 200$  mm overlapped
- ⑦ TOP FOAM RvU.S – Inspection from the bottom side
- 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
- ⑲ Guide rail narrow for frame insulation

**without frame insulation**



**with frame insulation**



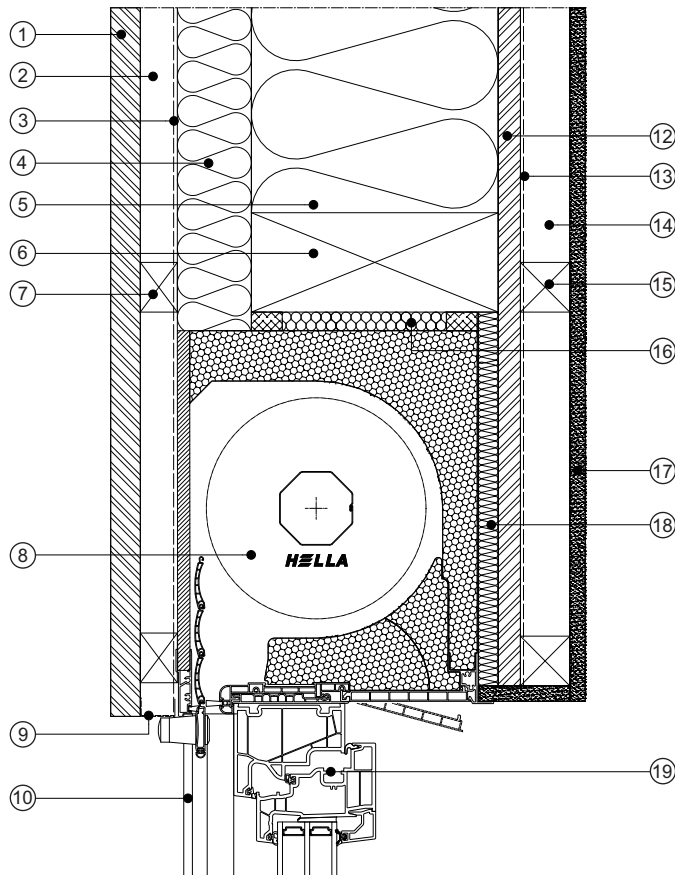
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# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Installation situation for different wall constructions

### Wall structure

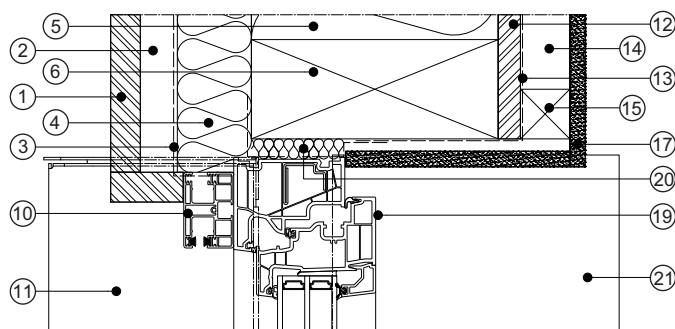
Wood frame construction with rear-ventilated curtain facade and installation level



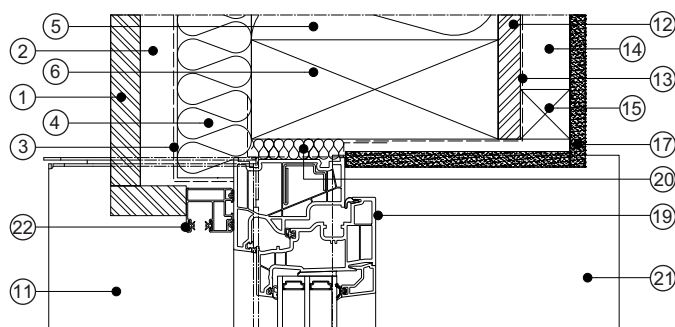
### Legend

- 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 RvU.S – Inspection from the bottom side
- 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
- ㉒ Guide rail narrow for frame insulation

### without frame insulation



### with frame insulation

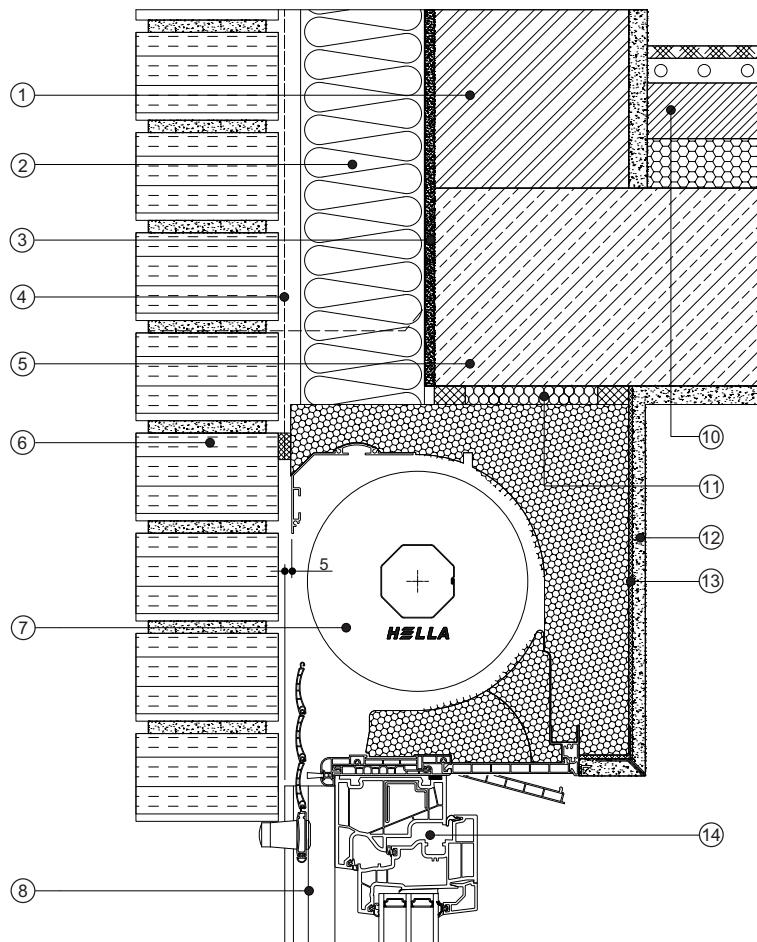


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**Wall structure**

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

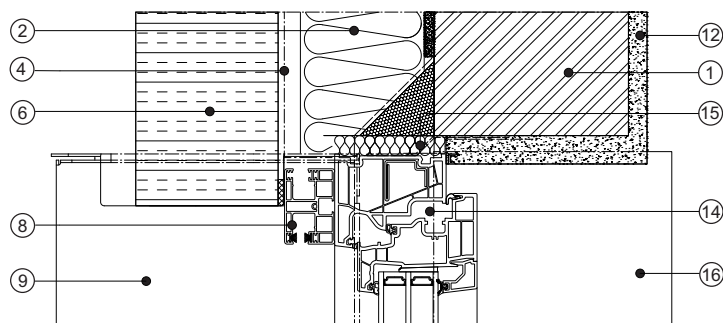


**Legend**

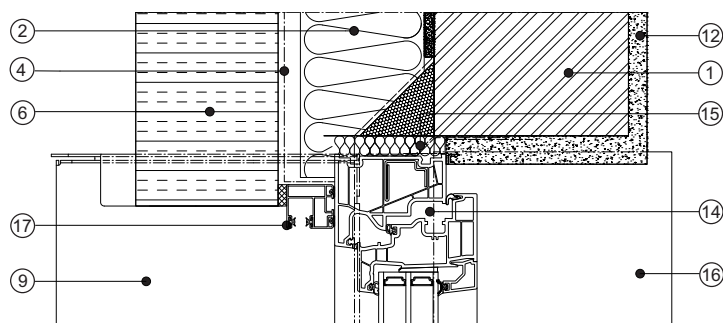
- ① Brickwork
- ② Insulation
- ③ Sealing level
- ④ sealing level
- ⑤ Reinforced concrete ceiling
- ⑥ Clinker façade
- ⑦ TOP FOAM RvU.S – Inspection from the bottom side
- ⑧ Guide rail
- ⑨ Aluminium window sill system, 2-part
- ⑩ Floor construction
- ⑪ Connection joint Providing the functional levels 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 Guide rail narrow for frame insulation

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**without frame insulation**



**with frame insulation**

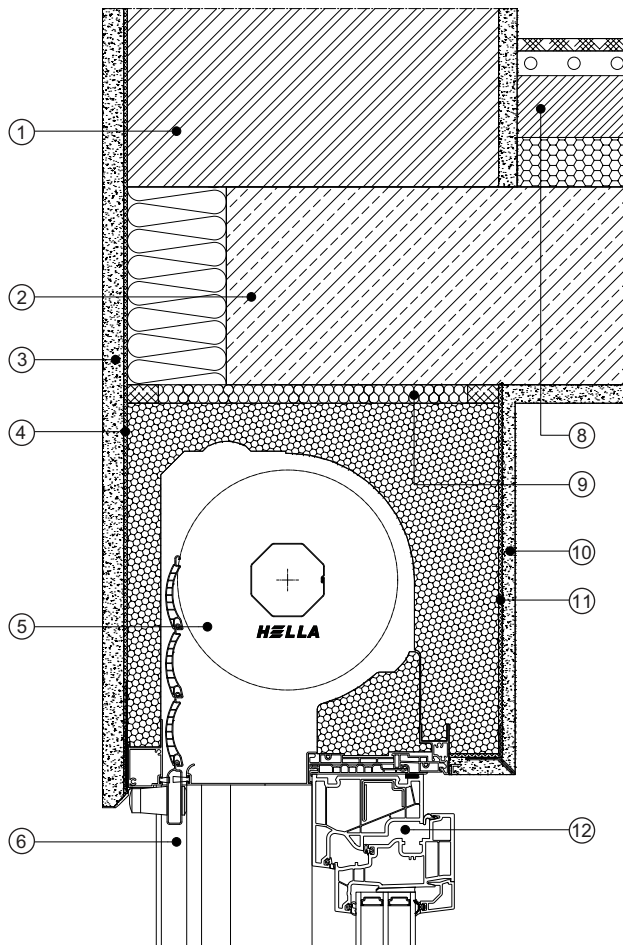


# TOP FOAM RvA/RvA.S - Inspection from the outside

## Installation situation for different wall constructions

### Wall structure

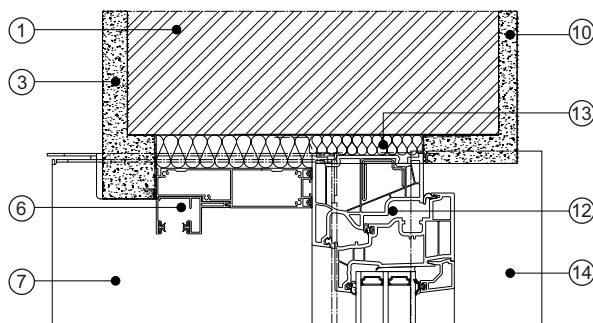
Monolithic brickwork for windows with floor-to-ceiling element height



### Legend

- ① Brickwork
- ② Reinforced concrete ceiling with ceiling face insulation
- ③ External rendering
- ④ Reinforcement on the outside
- ⑤ TOP FOAM RvA – Inspection from the outside
- ⑥ Guide rail, two-piece
- 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

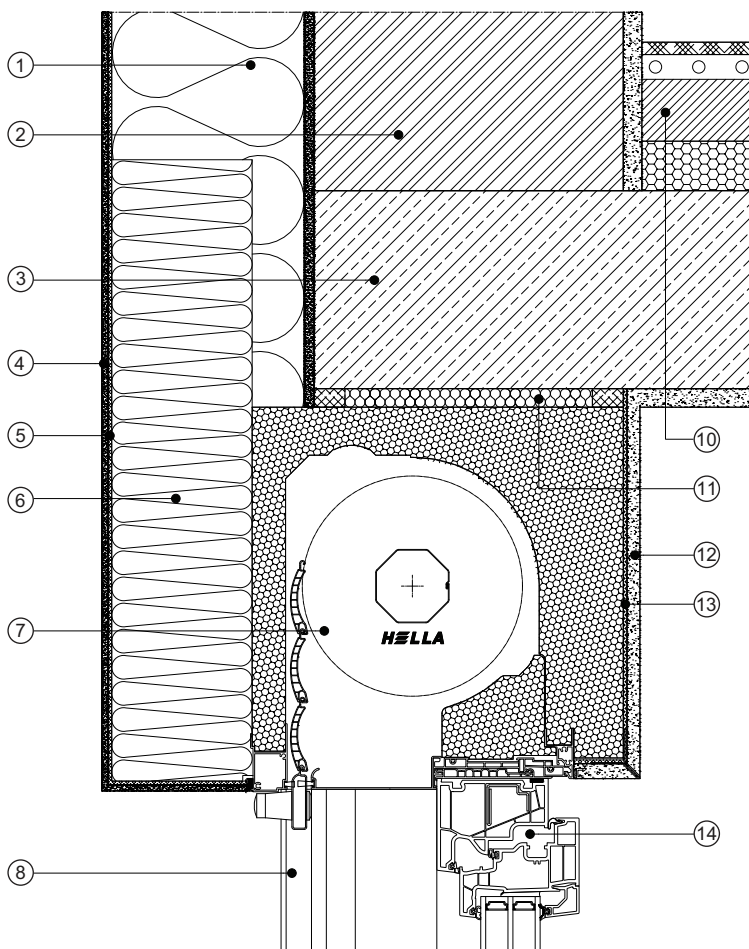
### with frame insulation



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**Wall structure**

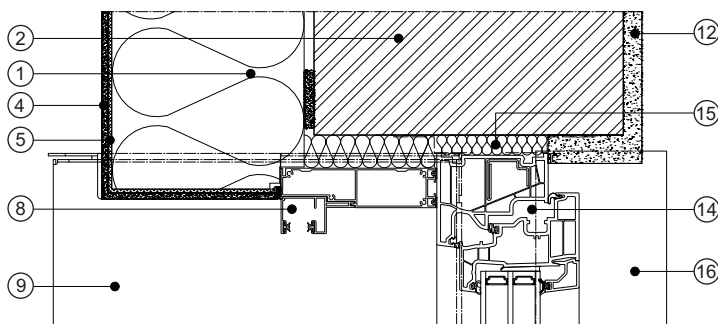
Brickwork with thermal insulation composite system for windows with floor-to-ceiling element height



**Legend**

- ① Insulation
- ② Brickwork
- ③ Reinforced concrete ceiling
- ④ External rendering
- ⑤ Reinforcement on the outside
- ⑥ Insulation of the roller shutter box
  - Thickness  $\geq 40$  mm
  - laterally and at the top  $\geq 200$  mm overlapped
- ⑦ TOP FOAM RvA – Inspection from the outside
- ⑧ Guide rail, two-piece
- 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**



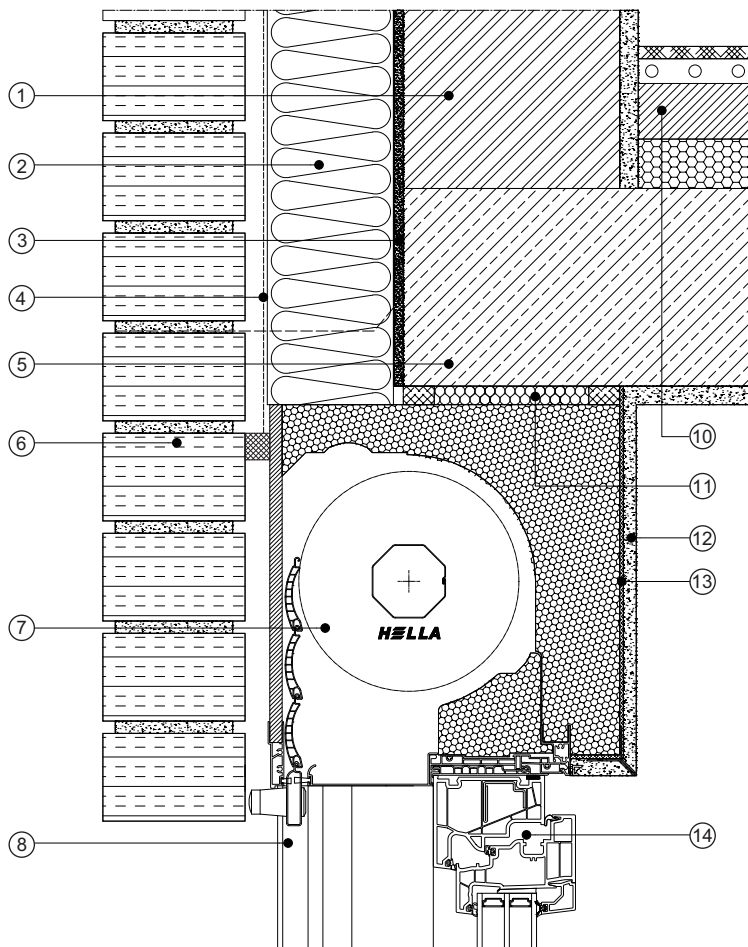
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# TOP FOAM RvA/RvA.S - Inspection from the outside

## Installation situation for different wall constructions

### Wall structure

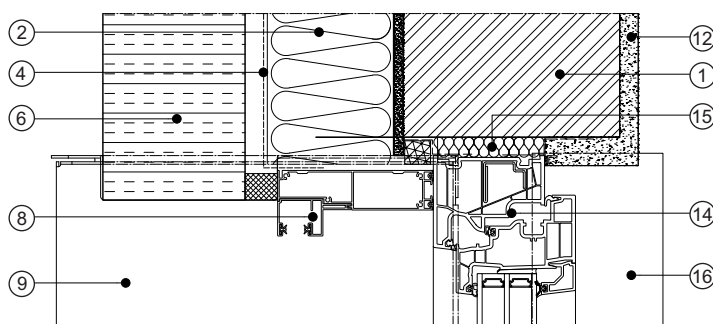
Core-insulated brickwork with clinker façade, rear-ventilated, for windows with floor-to-ceiling element height



### Legend

- ① Brickwork
- ② Insulation
- ③ Sealing level
- ④ sealing level
- ⑤ Reinforced concrete ceiling
- ⑥ Clinker façade
- ⑦ TOP FOAM RvA.S – Inspection from the outside
- ⑧ Guide rail, two-piece
- 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

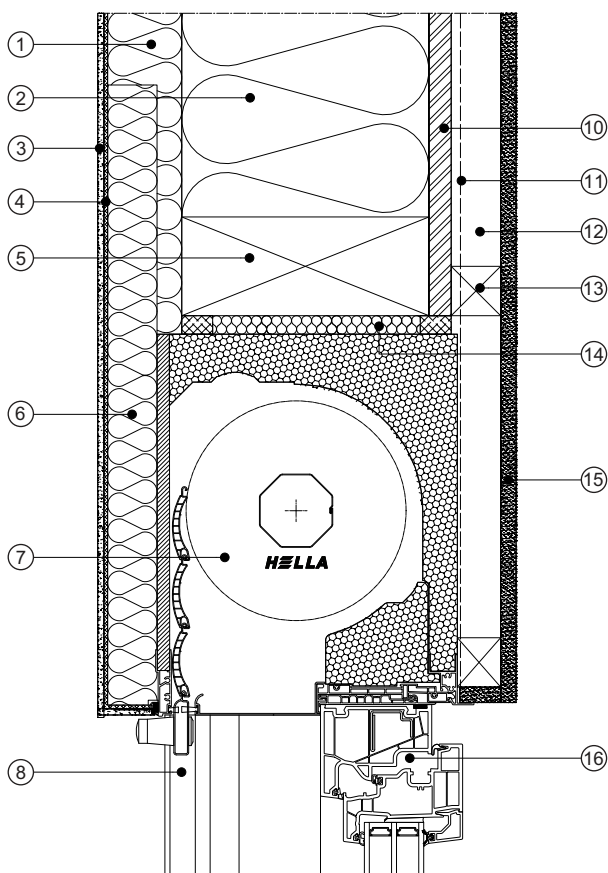


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**Wall structure**

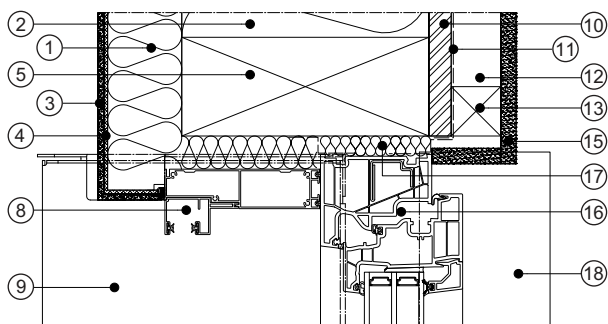
Wood frame construction with external rendering and installation level on the inside



**Legend**

- ① Exterior insulation
- ② Core insulation
- ③ External rendering
- ④ Reinforcement
- ⑤ Nogging piece
- ⑥ Insulation of the roller shutter box
  - Thickness  $\geq 40$  mm
  - laterally and at the top  $\geq 200$  mm overlapped
- ⑦ TOP FOAM RvA.S – Inspection from the outside
- ⑧ Guide rail, two-piece
- 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**



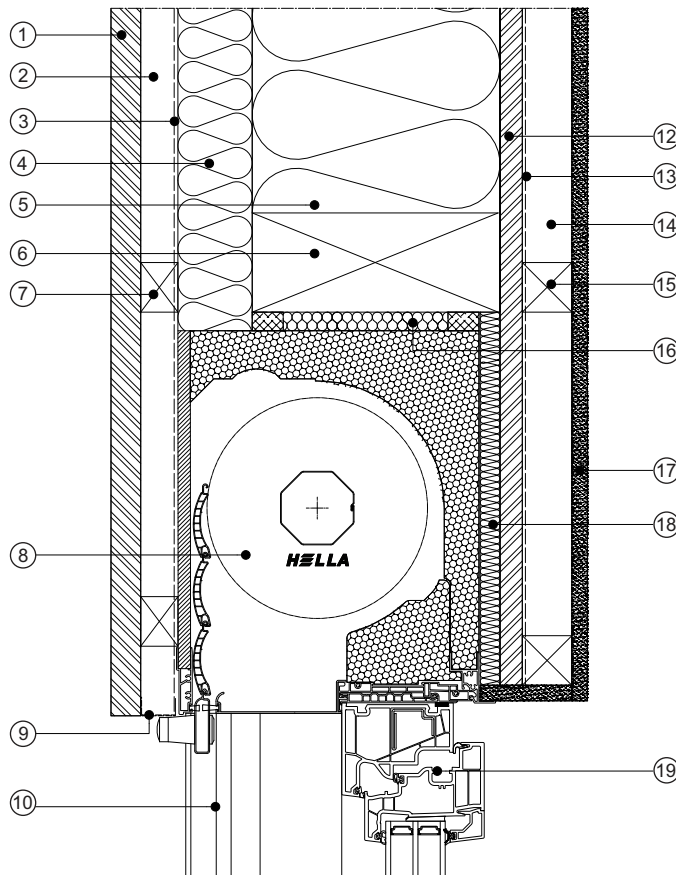
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# TOP FOAM RvA/RvA.S - Inspection from the outside

## Installation situation for different wall constructions

### Wall structure

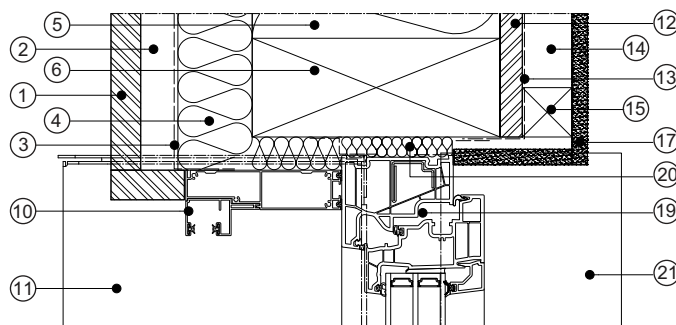
Wood frame construction with rear-ventilated curtain facade and installation level



### 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 RvA.S – Inspection from the outside
- ⑨ Ventilation grille
- ⑩ Guide rail, two-piece
- 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

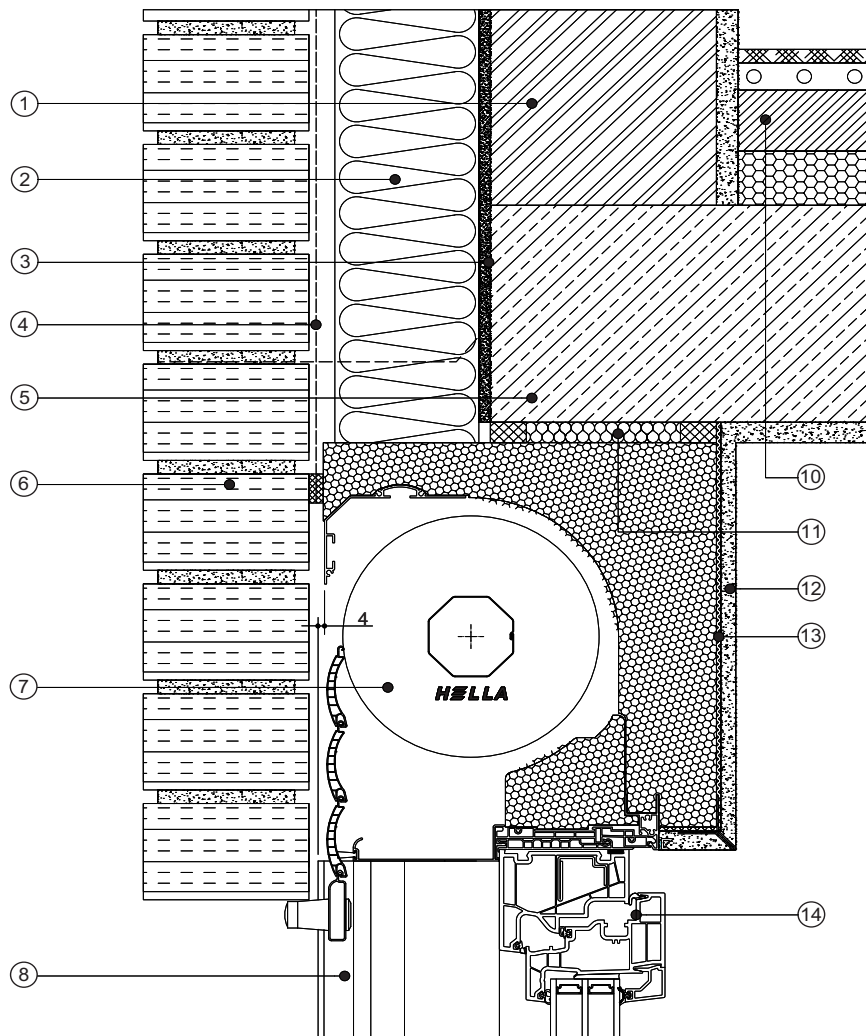
### with frame insulation



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**Wall structure**

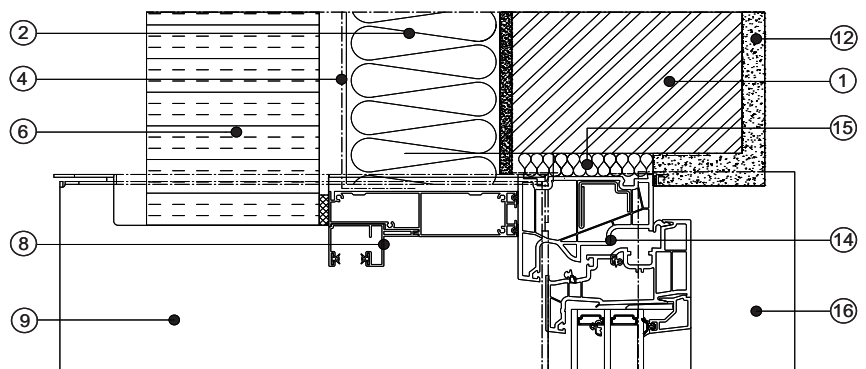
Core-insulated brickwork with clinker façade, rear-ventilated, for windows with floor-to-ceiling element height



**Legend**

- ① Brickwork
- ② Insulation
- ③ Sealing level
- ④ sealing level
- ⑤ Reinforced concrete ceiling
- ⑥ Clinker façade
- ⑦ TOP FOAM RvA.S – Inspection from the outside
- ⑧ Guide rail, two-piece
- 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**



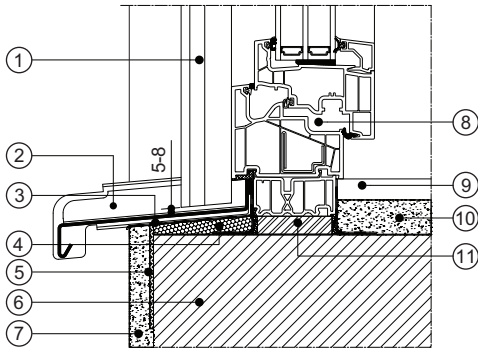
This presentation is only a general, suggested design concept. Design and surrounding structures are depicted only schematically. The detail does not release anyone from the responsibility to individually check the completeness and applicability, as well as the required execution planning, detailed planning 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.

# TOP FOAM top-mounted roller shutter

## Installation situations with different wall structures - Window sill connection

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 recommended to apply the current guidelines "Guidelines for the installation of window sills - 3rd edition 08-2015".

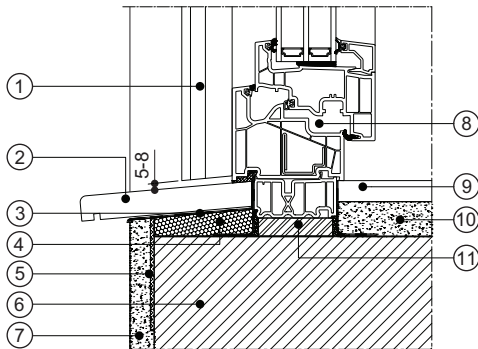
### Window sill connection Aluminium window sill



#### 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

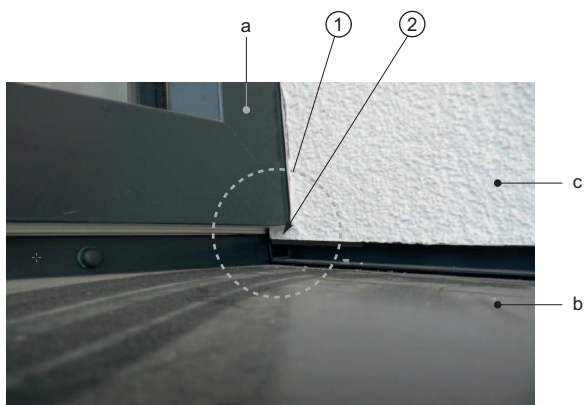
### Window sill connection Window sill made of stone



#### 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

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.



Source: Guidelines Window sill - Austrian Working Group Window Sill

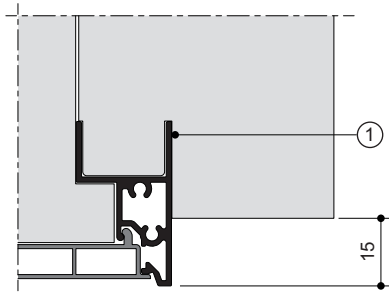
The term interface gap describes an opening, which always occurs at the cutting points of window frame (1), window sill with lateral sliding closures (b), soffit (c) and - if available - roller shutter guide rail in the corner area. Depending on the correct order of the structural works, the facade manufacturer,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

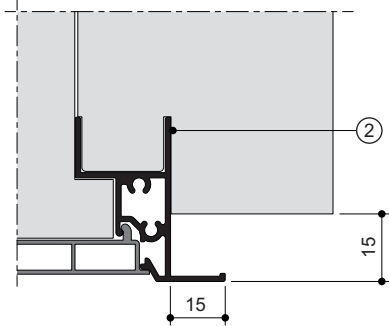
# TOP FOAM top-mounted roller shutter

## Box end profile overview



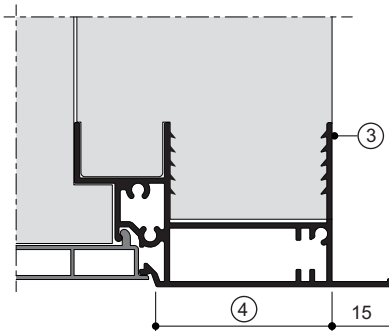
### Box end profile inside straight

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 additional 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

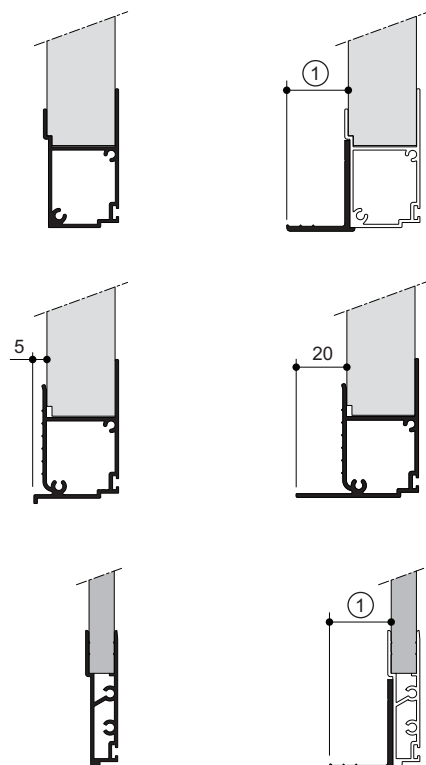
Box end profile	Box depth				
	260	300	365	425	variable
①	●	●	●	●	●
②	●	●	●	●	●
③	●	●	●	-	-

### Note:

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

## Box end profile overview

### Box end profile outside



#### Legend

- ① Plaster flange

#### TOP FOAM RvU/RvA

- Standard with box end profile on the outside, 0 mm with brush
- On smooth aluminium surfaces, a clean plaster end bead can be provided with customary plaster sealing strips. (Testing the adhesive is required!)

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

- Box end profile outside with brush, plaster flange 5 mm
- Box end profile outside with brush, plaster flange 20 mm
- Box end profile outside with brush, 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 box end profiles.

A powder-coated lower visible surface serves for a visually attractive closure.

#### TOP FOAM RvU.S/RvA.S

- Standard with box end profile on the outside, 0 mm with brush
- On smooth aluminium surfaces, a clean plaster end bead can be provided with customary plaster sealing strips. (Testing the adhesive is required!)

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

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

#### Plaster joint

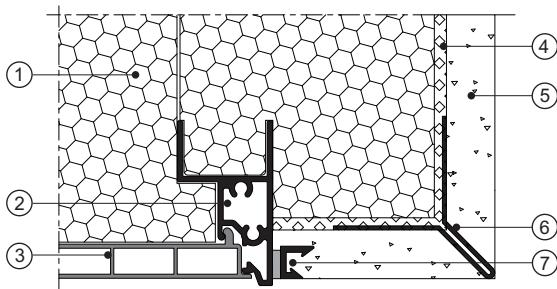
The plaster joint towards the aluminium profile can be provided via customary plaster beads/slip-on profiles from divers system providers. Checking and use of the suitable plaster bead profile/slip-on profile must be decided on-site and has to be adapted to the structural conditions. The plaster flange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



# TOP FOAM top-mounted roller shutter

## Plaster connections with box end profiles

Lintel view from below on the inside  
Plaster (standard)

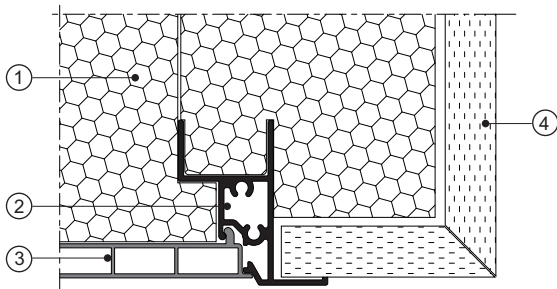


Connection to the box via plaster connection strip for a visually attractive plaster joint and to minimize the risk of plaster crack formation.

### 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

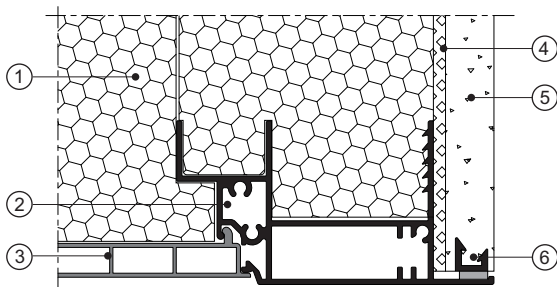


Connection joint between gypsum board and top-mounted box is hidden via a powder-coated aluminium tabs, 15 mm.

### 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.

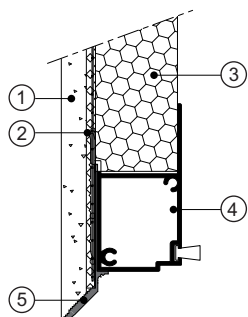
### Legend

- 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, straight (Standard)**

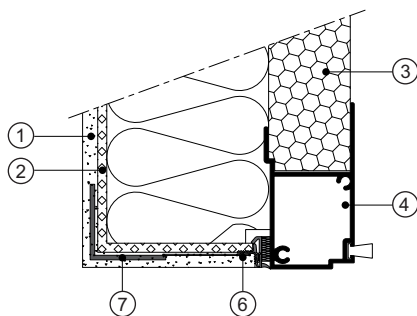
Monolithic brickwork



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

**Box end profile outside, straight**

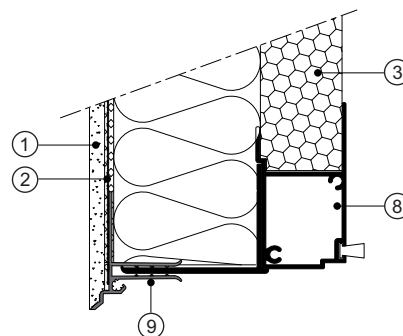
Thermal insulation composite system with box insulation



External plaster joint via plastering sealing strip for the exterior and formation of edges via edge profile.

**Box end profile outside with lengthened plaster profile**

Thermal insulation composite system with box insulation



Plaster end bead via slip-on profile with integrated drip edge. The lengthened, powder-coated box end profile serves for a finished and excellent bottom view.

**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:**

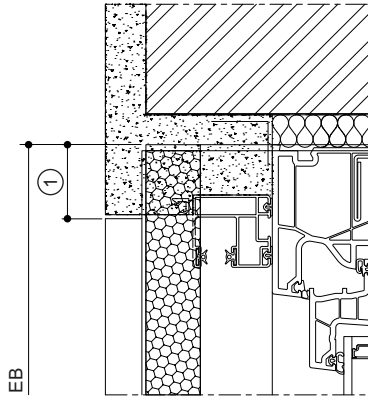
The box end profile is not intended for plastering. According to the guideline, plastering strips must be placed on the profile noses on site to prevent development of cracks and thus the ingress of water.

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 top-mounted roller shutter

## 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

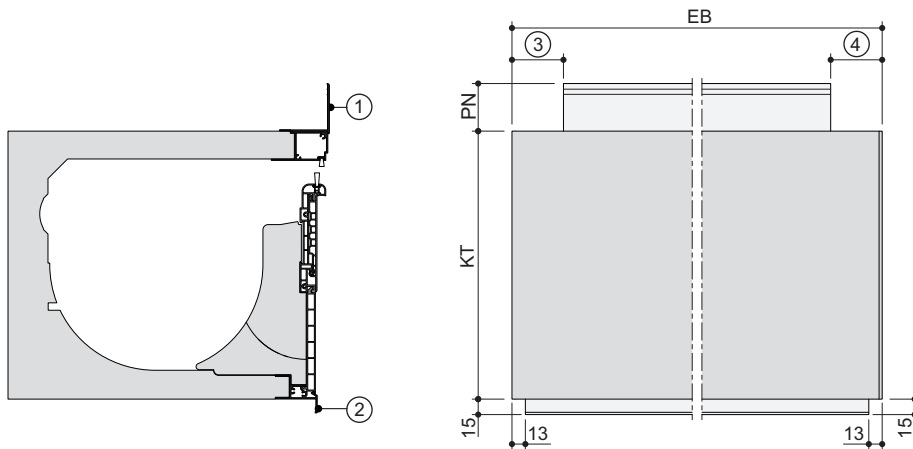
## Recess area box end profile outside/inside

### 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

The definition of the plaster flange recess area is applicable to RVU and RvA.

#### 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

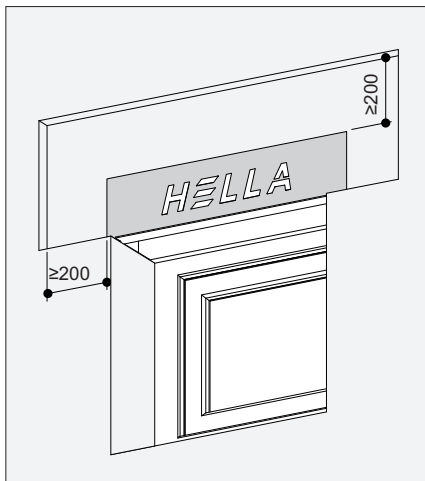
## Installation situation with thermal insulation composite system

### 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

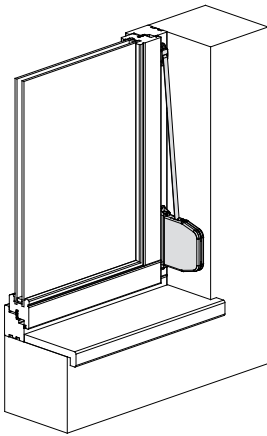


The box insulation must have a thickness of at least 40 mm and must on three sides overlap by at least 200 mm.

# TOP FOAM top-mounted roller shutter

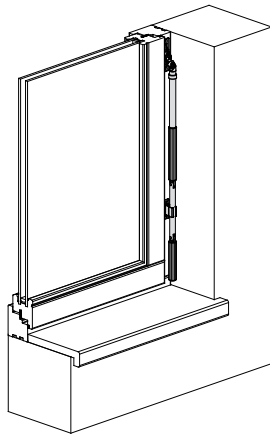
## Types of drives

Lift tape



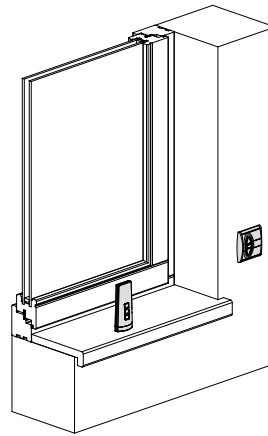
only for RvU/RvU.S -  
Inspection from below

Crank handle drive

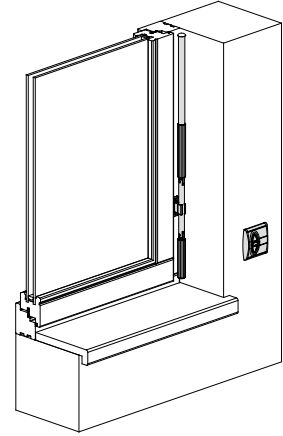


only for RvU/RvU.S -  
Inspection from below

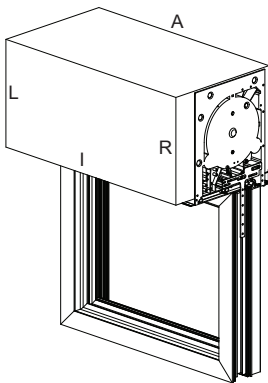
Motor drive



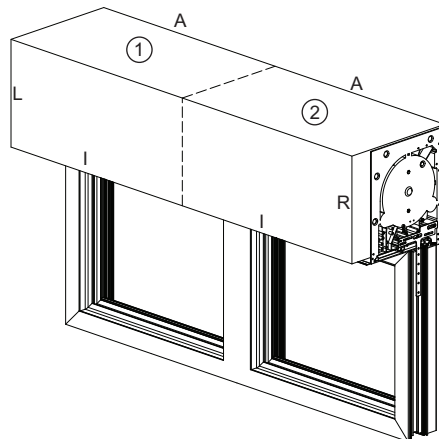
Motor drive with emergency crank handle



## Definition drive side



Individual element



Combination/linkage

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.

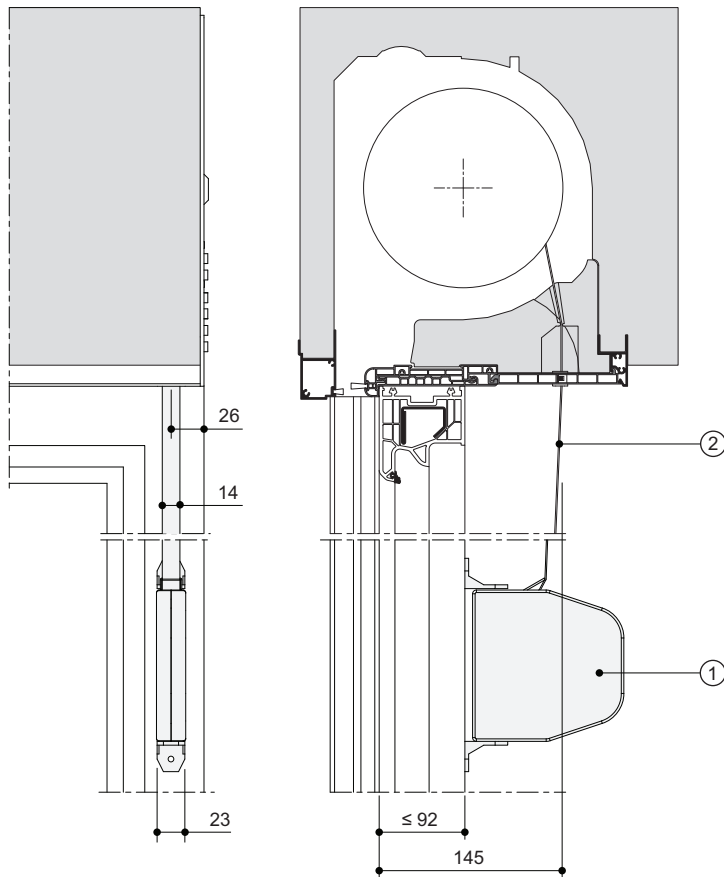
### Legend

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



# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Drive system Lift tape



### Operation

Opening and closing the curtain by pulling the lift tape. According to EN 13659, the maximum operating force for lift tape is 90N, which equates to a maximum blind weight of 9 kg.

### Tape duct

The tape guidance is pushed into the inspection cover and is herewith already pre-assembled. The brush inserted into the guiding slot provides for an optimum sealing.

### Lift tape gear

The lift tape gear (gear ratio 2:1) reduces the operating force at the lift tape by approx. 50%. Considering the maximum operating force of 90N (EN 13659), elements with a curtain weight of up to 17 kg can be provided with a lift tape gear. The lift tape gear is not available with the lift tape drive on the outside.

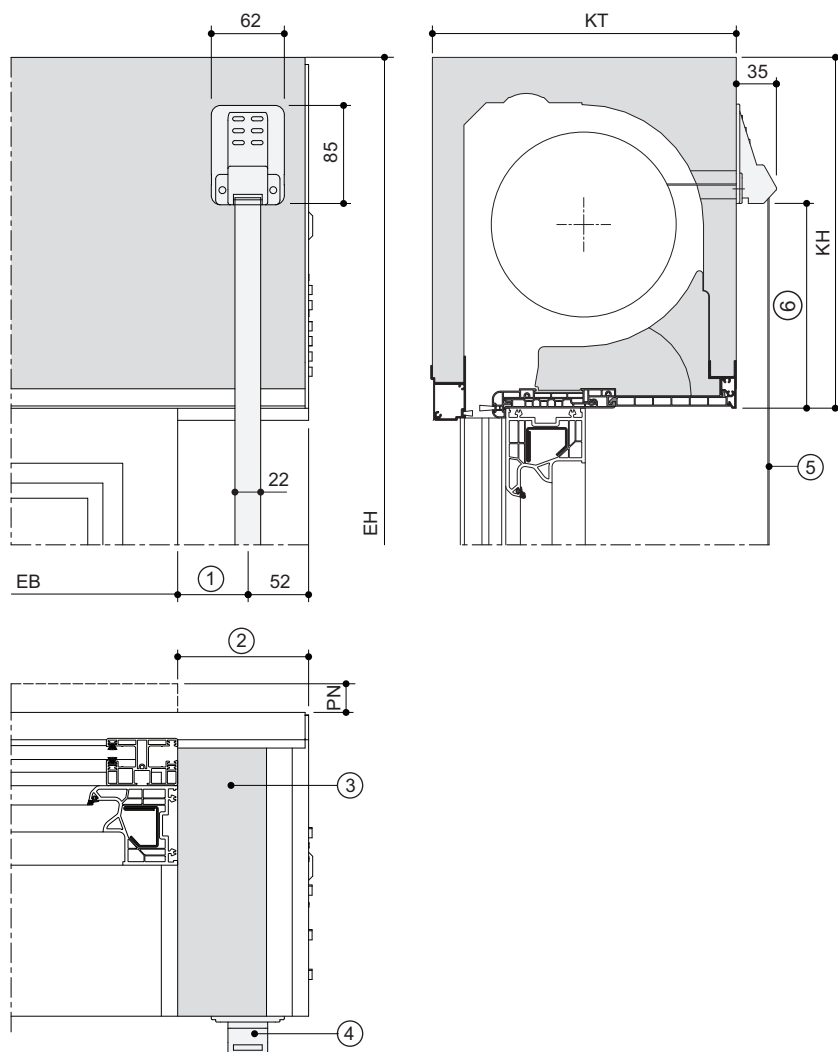
### Window frame thickness

max. 92 mm

### Legend

- ① Tape take-up reel
- ② Lift tape

## Drive system for the lift tape offset



### Operation

Opening and closing the curtain by pulling the lift tape.

### Tape duct

An exit opening from 20 to 320 mm is possible!  
The excess length of the box on the drive side is: Size of the exit opening (1) + 52 mm.

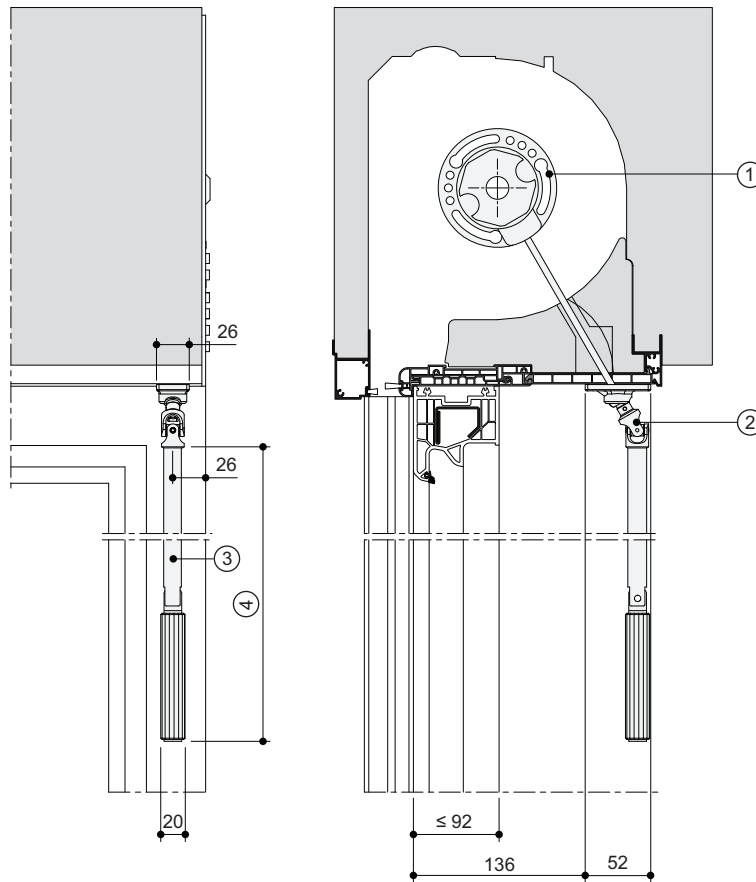
As a standard available with strapcoiler or optionally with swivellable take-up reel!  
View applies to all available guide rails.

### Legend

- KT Box depth
- KH Box height
- EW Element width
- EH Element height
- PN Plaster flange
- ① Exit 60 mm, standard; optionally 20 to 320 mm
- ② Box end profile outside and inside recessed up to min. outer edge of the element width
- ③ Supporting surface insulated with expanded polystyrene EPS 032, 20 mm thick
- ④ Guidance for lift tape
- ⑤ Lift tape
- ⑥ Box height 300: 175 mm  
Box height 250: 138 mm

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Drive system crank handle



### Operation

Opening and closing the curtain by turning the crank rod.

### Crank handle duct

The joint bearing is screwed to the inspection cover and is herewith already pre-assembled. An adjustable crank holder that is fixed to the window frame provides the necessary distance between the wall and the crank rod.

### Note:

Due to the duct openings for the drives placed at the side covers it is not necessary to bore a hole into the window frame. Consequently a thermal bridge is avoided. If the crank handle exits are in the corner area, the top-mounted box must be ordered with a mitre lengthening, to prevent a collision of the two crank rods.

### Window frame thickness

max. 92 mm

### Legend

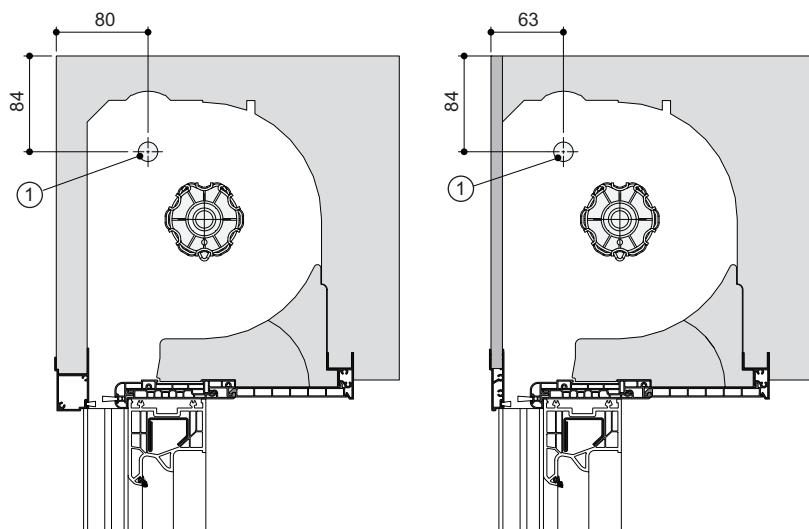
- ① Crank handle gear
- ② Bearing 26x52 mm
- ③ Crank rod
- ④ Length Crank rod

The crank rod with folding handle is available in the standard lengths 800, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1800 and 2800 mm. Special lengths can be ordered between 500 and 2780 mm.



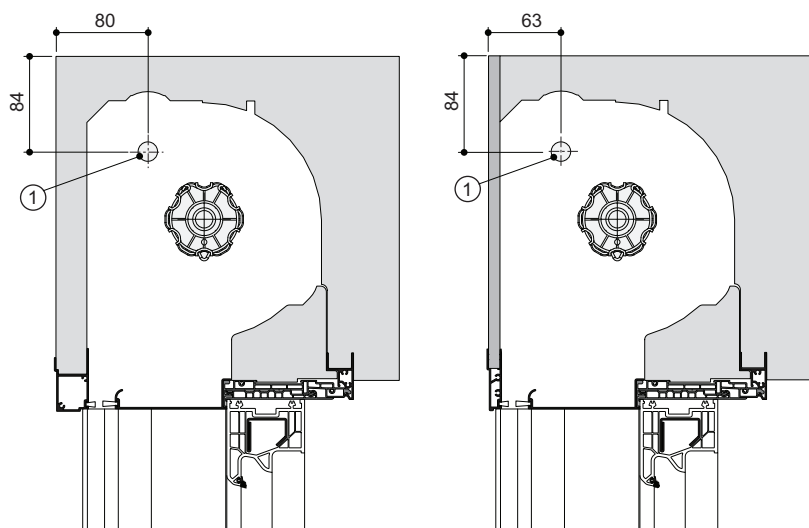
# TOP FOAM top-mounted roller shutter

## Motor drive



TOP FOAM RvU

TOP FOAM RvU.S



TOP FOAM RvA

TOP FOAM RvA.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

## Cable length

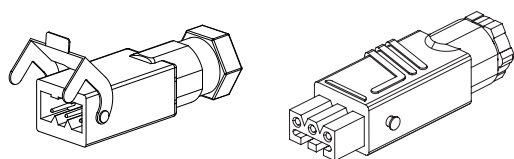
Depending on the drive type, the standard cable lengths differ as well as the optionally available cable lengths:

Type of drive	Standard	5 m	10 m
ONYX.ROL, SO, ESO, 868, E868, WT50	3 m	●	●
NHK, io, RS100 io	3 m		●
OZ	2 m		

### Note:

Up to 400 mm of the motor cable are stowed in the box (pushed into the cable clamps of the side cover). This reserve enable an easy removal of the drive for maintenance purposes, even if the motor cable is permanently installed outside the box.

## 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 top-mounted roller shutter

Drive system	Adjustment of the end position	Detection of obstacles Protection against freezing	Soft cutoff	Intermediate position	Identification Acquisition
<b>Motor drive – Units with 60 mm octagon shaft</b>					
ONYX.ROL	automatically	●	●	1	FX
SO-RolTop	automatically	●	●		M
868 RolTop (radio)	automatically	●	●	2	F
ESO RolTop	automatic or adjustable	●	●		MM
E868 RolTop (radio)	automatic or adjustable	●	●	2	FM
Emergency crank handle RolTop D+	automatically	●			MN
DC VariEco	Knobs				MDC
WT Ilmo 50S	automatically	●			MS
WT Ilmo 50	automatically	●			MS
NHK Ilmo 50	automatically				MSN
T5S-drives object motor	automatically	●			MI
io Oximo 50S (radio)	automatically	●		1	FIO
io Oximo 50 (radio)	automatic or adjustable	●		1	FIO
RS100 io (radio)	automatic or adjustable	●	●	1	FS100
OZ Mech (battery drive)	Knobs			-	MOZ

## Note

All motors, except OZRoll and DC VariEco, are operated with 230V alternating voltage..

## Detection of obstacles

The motor stops, when during lowering the blind an obstacle causes a counter torque. This function serves as protection for the unit and not for personal safety. Nevertheless, there is danger of squashing due to the weight of the blind!

The drives ONYX.ROL, SO and 868 additionally perform counter movement, so that the obstacle is relieved again.

## Protection against freezing

The motor stops, when during raising the blind the torque increases abruptly. This may be caused by a frozen end rod, for example.

## Soft cutoff

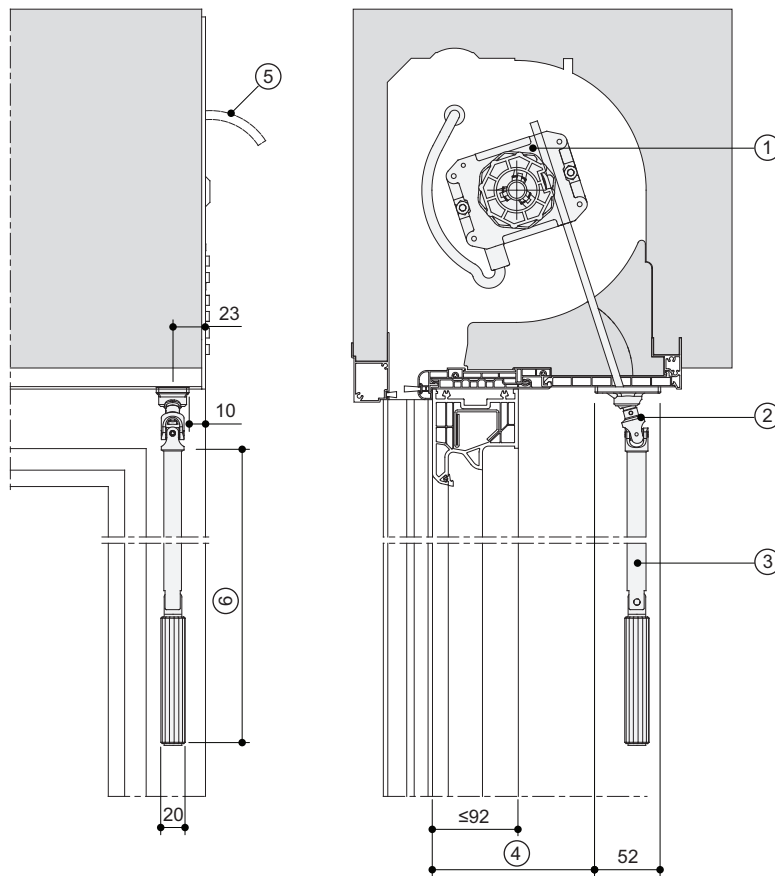
Here the end positions are moved to with reduced speed.

## Overview motor types

Drive system	Torque [Nm]	Performance [Watt]	Speed [r.p.m.]	Minimum width (element) [mm]
<b>Motor drive wired- Units with 60 mm octagon shaft</b>				
<b>elero Plug&amp;Play</b>				
ESO RolTop K 6/14 short	6	118	14	470
SO RolTopD+ 6/14	6	118	14	700
SO RolTopD+ 10/14	10	150	14	700
SO RolTopD+ 20/14	20	220	14	760
SO RolTopD+ 30/14	30	200	14	750
<b>Motor for emergency crank handle elero Plug&amp;Play</b>				
NHK RolTopD+ 10/14	10	140	14	785
NHK RolTopD+ 20/14	20	200	14	845
NHK RolTopD+ 30/14	30	200	14	810
<b>elero ExitSafe - direct current drive 12V</b>				
DC VariEcoM, 10/16, 12V	10	48	16	705
DC VariEcoM, 12/16, 12V	12	42	16	725
<b>Somfy Plug&amp;Play</b>				
WT Ilmo 50S 6/17 short	6	90	17	435
WT Ilmo 50 6/17	6	90	17	735
WT Ilmo 50 10/17	10	120	17	735
WT Ilmo 50 15/17	15	140	17	755
WT Ilmo 50 20/17	20	160	17	835
WT Ilmo 50 30/17	30	240	17	885
<b>Motor for emergency crank handle Somfy Plug&amp;Play</b>				
NHK Ilmo, 10/17	10	120	17	905
NHK Ilmo, 20/17	20	160	17	1015
<b>Object motor Plug&amp;Play</b>				
T5S AUTO+ 06/17	6	90	17	725
T5S AUTO+ 10/17	10	120	17	730
T5S AUTO+ 15/17	15	140	17	750
T5S AUTO+ 20/17	20	160	17	835
<b>Battery drive 12V - DC</b>				
OZ Mech 20/16	20	60	16	805
<b>Motor drive radio-controlled- Units with 60 mm octagon shaft</b>				
<b>ONYX</b>				
ONYX.ROL.D+ 10/14	10	115	14	700
ONYX.ROL.D+ 20/14	20	184	14	760
<b>elero</b>				
E868 RolTop K 6/14 short	6	118	14	475
868 RolTopD+ 6/14	6	118	14	680
868 RolTopD+ 10/14	10	140	14	700
868 RolTopD+ 20/14	20	200	14	760
868 RolTopD+ 30/14	30	200	14	750
<b>Somfy</b>				
io Oximo 50S 6/17 short	6	90	17	435
io Oximo 50 6/17	6	90	17	785
io Oximo 50 10/17	10	120	17	785
io Oximo 50 20/17	20	160	17	835
io Oximo 50 30/17	30	240	17	885

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Emergency crank handle option with motor drive



### Motor with emergency crank handle

For the second emergency route, the roller shutter can be provided with a motor for the emergency crank handle. For this purpose one motor and one crank handle are mounted in one unit. In the case of a power blackout, the roller shutter can be operated with the crank handle.

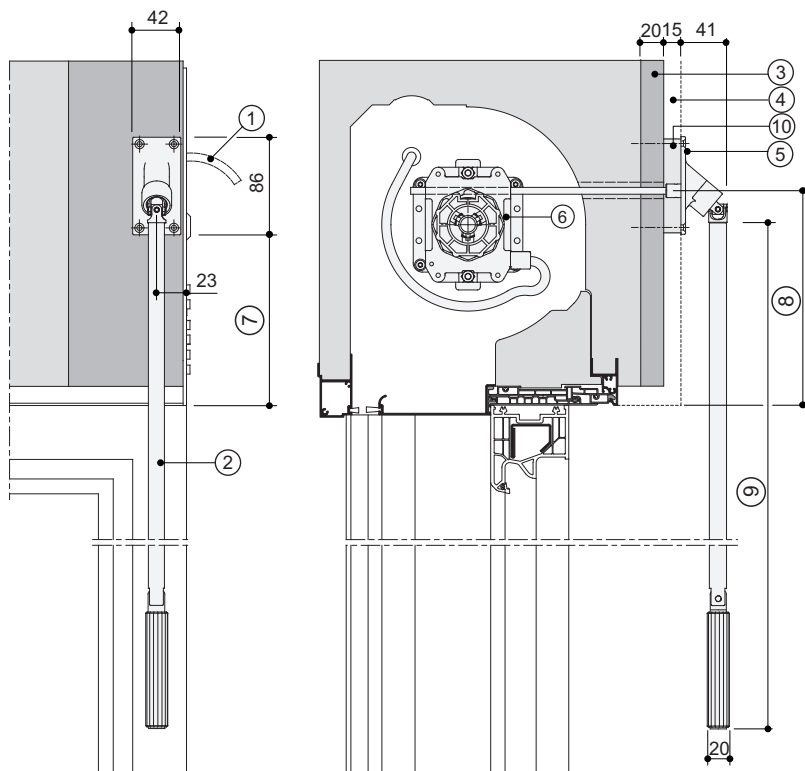
The drive side is either on the left or on the right. The crank handle exit is only diagonally towards the back possible.

### Legend

- ① Motor with emergency crank handle
- ② Bearing 26x52 mm
- ③ Crank rod
- ④ Box height 300: 128 mm  
Box height 250: 114 mm
- ⑤ Motor cable, cable exit laterally
- ⑥ Length Crank rod

# TOP FOAM RvA/RvA.S - Inspection from the outside

## Emergency crank handle option with motor drive



### Motor with emergency crank handle

For the second emergency route, the roller shutter can be provided with a motor for the emergency crank handle. For this purpose one motor and one crank handle are mounted in one unit. In the case of a power blackout, the roller shutter can be operated with the crank handle.

The drive side is either on the left or on the right. The crank handle exit is only horizontally towards the inside possible.

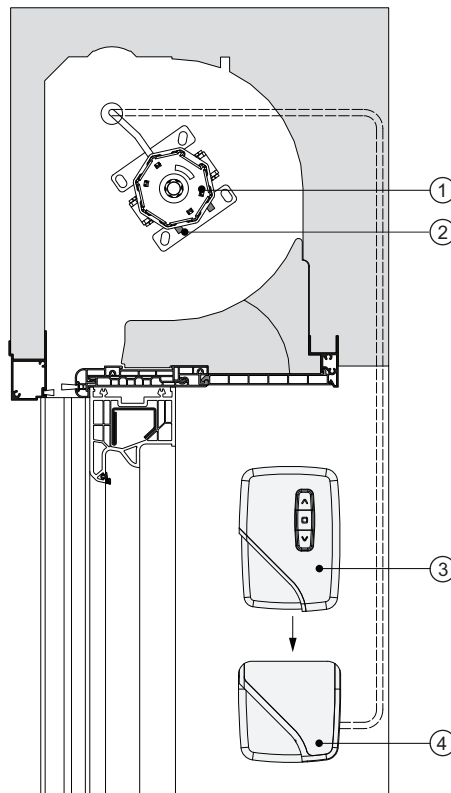
### Legend

- ① Motor cable
- ② Crank rod
- ③ Pressure-resistant mounting base on a PUR/PIR hard foam base
- ④ Interior plaster 15 mm
- ⑤ Bearing 42x86 mm
- ⑥ Motor with emergency crank handle
- ⑦ Box height 300: 148 mm  
Box height 250: 111 mm
- ⑧ Box height 300: 186 mm  
Box height 250: 149 mm
- ⑨ Length Crank rod
- ⑩ Plaster distance

# TOP FOAM top-mounted roller shutter

## Battery drive option with motor drive

The battery drive is a mechanical 12V tubular motor that is operated from a battery control device inside the room.



The battery control device must be recharged by means of a charger after approx. 3 weeks of operation (2 cycles per day). As an alternative, the charger can also be permanently connected to the battery control device located in the wall bracket in order to realize a battery-buffered roller shutter.

- Also works during a power failure
- Due to low voltage technology an electrician is not required
- No power supply cords and thus no mortising work
- Recommended cable outlet - along the guide rail

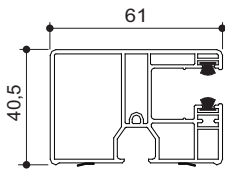
### Legend

- ① Motor drive 12V
- ② Adjustment of the end position
- ③ Battery control device
- ④ Wall bracket for battery control device



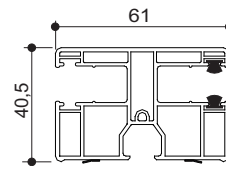
# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## PVC Guide Rails



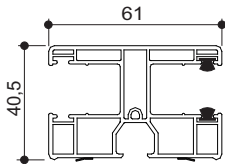
**Type 34 - PVC single guide rail with brush**  
61x41 mm  
with small spacing

01130901



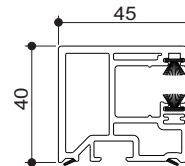
**Type 35 - PVC double guide rail, with brush on one side**  
61x41 mm  
with small spacing

01130909



**Type 36 - PVC double guide rail, with brush on one side**  
61x41 mm  
with large spacing

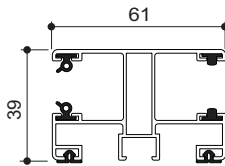
01130902



**Type 89 - PVC single guide rail with brush**  
45x40 mm  
with small spacing

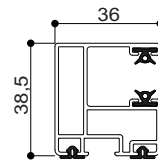
01130936

## Aluminium guide rails



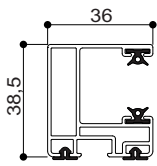
**Type 64 - Aluminium double guide rail**  
61x39 mm  
with small/large spacing

01130903



**Type 90 - Aluminium single guide rail**  
36x39 mm  
with small spacing

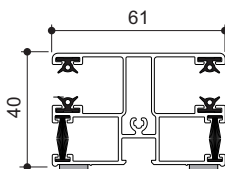
01130934



**Type 91 - Aluminium single guide rail**  
36x39 mm  
with large spacing

01130935

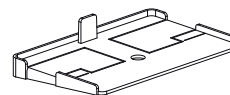
## Insect screen Guide rails



**Type 77 - Aluminium-insect screen-double guide rail with brush and seal**

61x41 mm  
with small spacing

01130931



**PVC end cap 5°**  
for guide rail 61x41 mm  
in white and brown colors

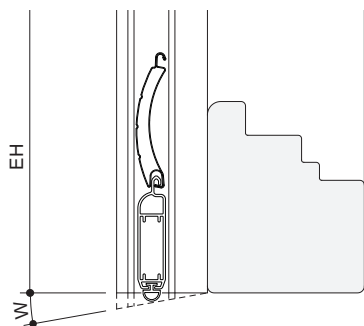
01130908

### Note:

The end caps are not suitable as a lower end stop for supporting the blind weight.



**Guide rails**



**Diagonal cut for guide rails**

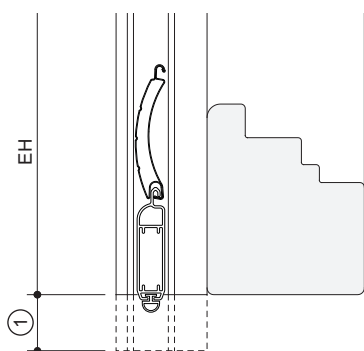
To adjust the guide rail to the inclination angle of the window sill, all guide rail types can be ordered with a diagonal cut of 1-25°. The guide rail is always lengthened by the angular dimension.

End caps as lower end for the guide rails and to prevent the curtain from running out. The element height refers to the lower edge of the end cap. Availability of the end caps as per table.

**Legend**

- EH Element height
- W Specification diagonal cut in degrees
- available
- not available

	Type 34	Type 35	Type 36	Type 89	Type 64	Type 90	Type 91	Type 77
x° Diagonal cut	●	●	●	●	●	●	●	●
5° end cap	●	●	●	-	-	-	-	●

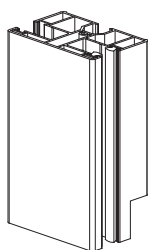
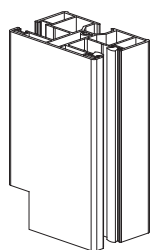


**Guide rail lengthening**

Irrespective of the element height, the guide rail may be lengthened for visual reasons. If the guide rail is lengthened, the curtain must be stopped before it reaches the lower edge of the guide rail (for example by a window sill laying in between).

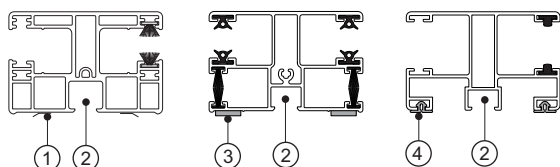
**Legend**

- ① Guide rail lengthening
- EH Element height



**Recess area of the guide rail**

in the area of the weatherboard or the windowsill. Order via sketch with dimensional specification.



**Guide rail impermeable to driving rain (standard)**

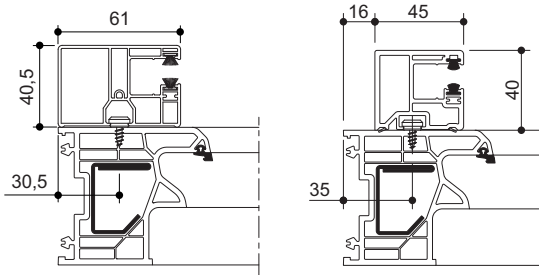
Sealing profiles, inserted in the the guide rails, sealing tape impermeable to driving rain, 10 mm, and glued to the guide rail, co-extruded PVC sealing profiles or a chamber design serve for the sealing between the guide rail and the window frame.

**Legend**

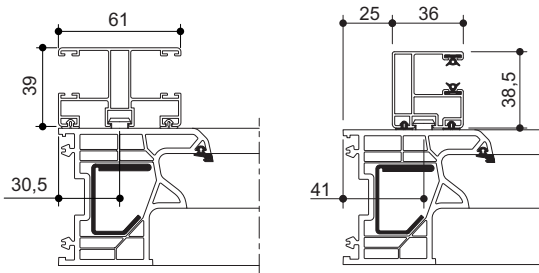
- ① Sealing profile
- ② Chamber
- ③ Sealing tape 10 mm
- ④ PVC sealing profile

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Installation with clips



Installation of the PVC guide rail with clamp nipple screws.



Installation of the aluminium guide rail with fastening clips. The fastening clips are mounted to the window frame via screws.

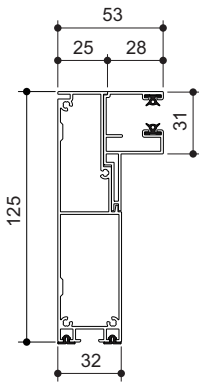
### Note:

Guide rails must be secured against slipping at the upper end with a locking screw.



# TOP FOAM RvA/RvA.S - Inspection from the outside

## Aluminium guide rails

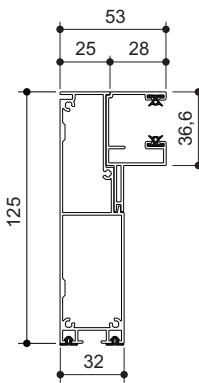


### Type 69

Single guide rail made of aluminium, 2-part, with seal/sealing profile  
53x125 mm

with small spacing  
consisting of:

Basic profile 01130923  
(without sealing profile)  
Guide profile 01100919  
(without seal)

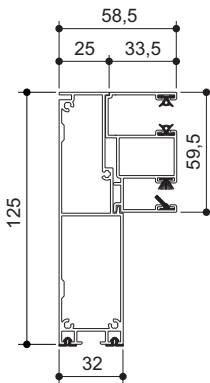


### Type 70

Single guide rail made of aluminium, 2-part, with seal/sealing profile  
53x125 mm

with large spacing  
consisting of:

Basic profile 01130923  
(without sealing profile)  
Guide profile 01100920  
(without seal)

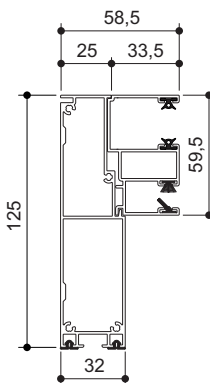


### Type 71

Single guide rail made of aluminium, 2-part, with seal/sealing profile  
58.5x125 mm

with small spacing  
consisting of:

Basic profile 01130923  
(without sealing profile)  
Guide profile 01130928  
(without seal)



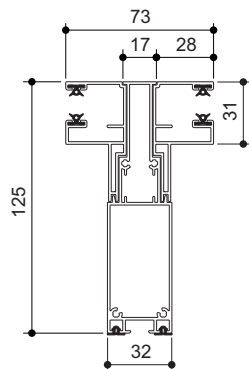
### Type 72

Single guide rail made of aluminium, 2-part, with seal/sealing profile  
58.5x125 mm

with large spacing  
consisting of:

Basic profile 01130923  
(without sealing profile)  
Guide profile 01130927  
(without seal)

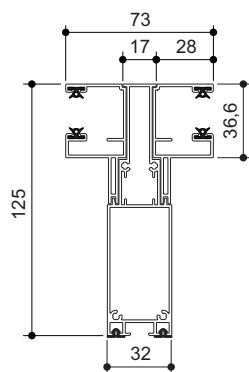
## Aluminium guide rails



**Type 73**  
**Double guide rail made of aluminium, 3-part, with seal/sealing profile 73x125 mm**

with small spacing  
 consisting of:

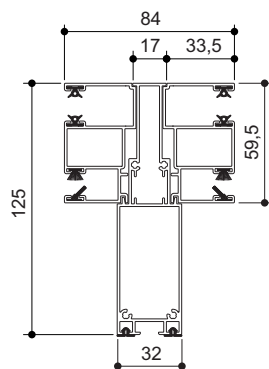
- Basic profile 01130926 (without sealing profiles)
- Guide profile 01100919 (without seal)



**Type 74**  
**Double guide rail made of aluminium, 3-part, with seal/sealing profile 73x125 mm**

with large spacing  
 consisting of:

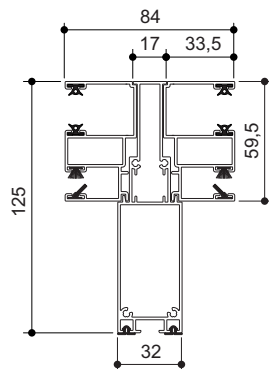
- Basic profile 01130926 (without sealing profile)
- Guide profile 01100920 (without seal)



**Type 75**  
**Double guide rail made of aluminium, 3-part, with seal/sealing profile 84x125 mm**

with small spacing  
 consisting of:

- Basic profile 01130926 (without sealing profile)
- Guide profile 01130928 (without seal)

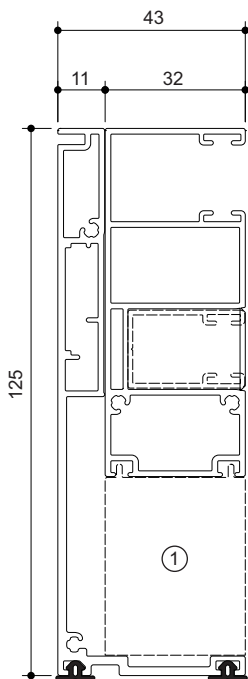


**Type 76**  
**Double guide rail made of aluminium, 3-part, with seal/sealing profile 84x125 mm**

with large spacing  
 consisting of:

- Basic profile 01130926 (without sealing profile)
- Guide profile 01130927 (without seal)

# TOP FOAM RvA/RvA.S - Inspection from the outside



## Type 92 - guide rail for design with fall protection

**Aluminium single guide rail, multi-part, with seal/sealing profile**  
**43x125 mm**

with small spacing  
 consisting of:

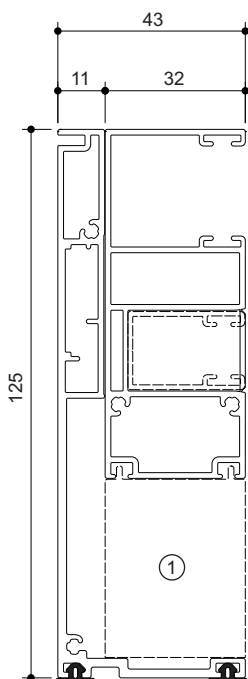
Basic profile 01600901  
 (without sealing profile)

Guide profile 01600902  
 (without seal)

Distance profile  
 01600904/5 (depending on  
 the design of the fall  
 protection)

### Legend

- ① Space for fall protection!



## Type 93 - guide rail for design with fall protection

**Aluminium single guide rail, multi-part, with seal/sealing profile**  
**43x125 mm**

with large spacing  
 consisting of:

Basic profile 01600901  
 (without sealing profile)

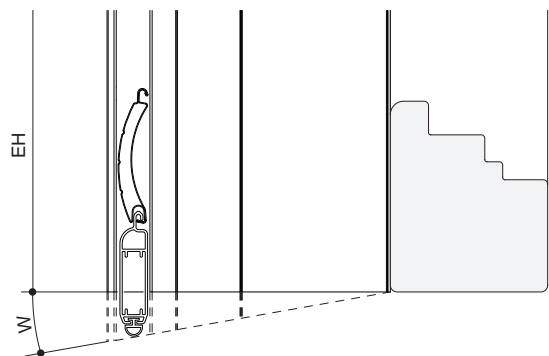
Guide profile 01600903  
 (without seal)

Distance profile  
 01600904/5 (depending on  
 the design of the fall  
 protection)

### Legend

- ① Space for fall protection!

**Guide rails**



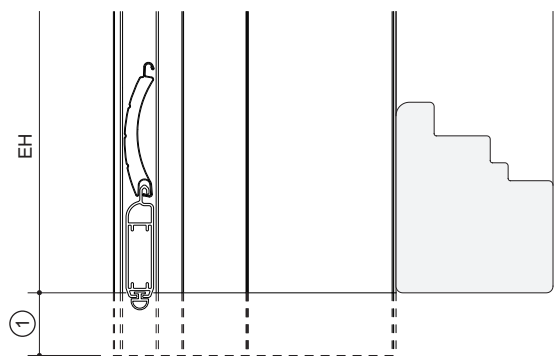
**Diagonal cut**

To adjust the guide rail to the inclination angle of the window sill, all guide rail types can be ordered with a diagonal cut of 1-25°. The guide rail is always lengthened by the angular dimension.

End caps as lower end for the guide rails and to prevent the curtain from running out. The element height refers to the lower edge of the end cap. Availability of the end caps as per table.

**Legend**

- EH Element height
- W Specification diagonal cut in degrees

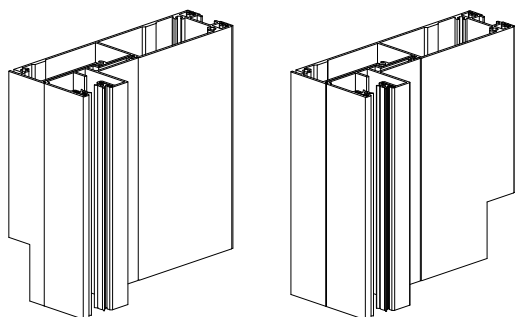


**Guide rail lengthening**

Irrespective of the element height, the guide rail may be lengthened for visual reasons. If the guide rail is lengthened, the curtain must be stopped before it reaches the lower edge of the guide rail (for example by a window sill laying in between).

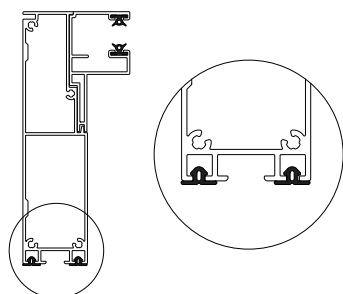
**Legend**

- ① Guide rail lengthening
- EH Element height



**Recess area of the guide rail**

in the area of the weatherboard or the windowsill. Order via sketch with dimensional specification.



**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.

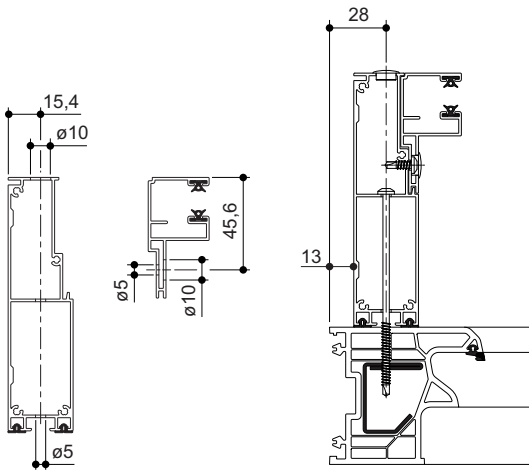
# TOP FOAM RvA/RvA.S - Inspection from the outside

## Installation of the guide rail, screwed from the front

All guide rail types RvA

The bracket profile is fixed to the mounting base through the closest bar. An offset dimension of at least 13 mm must be observed. Then the guide profile is screwed to the bracket profile.

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

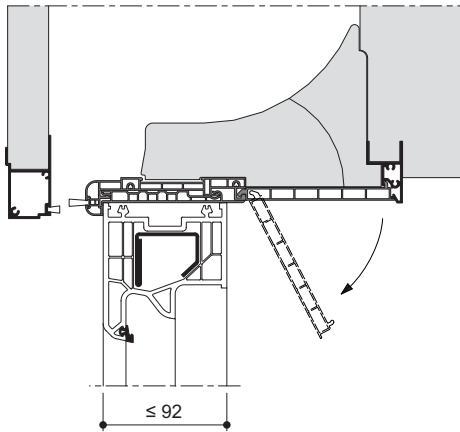






# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Inspection



### Inspection cover

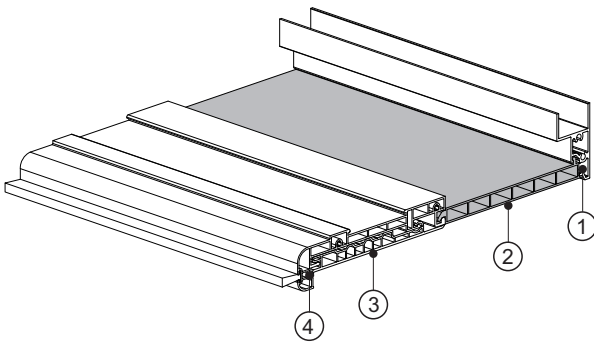
Made of rigid PVC, extruded; as a result no pulling out of shape or swelling of the profiles. The hollow chamber structure ensures a high stability and, due to the insulating air cushions, supports the insulating effect. Easy opening and closing of the inspection cover by clipping into the aluminium box end profile on the inside. The positive locking of the interlocking profiles and a sealing cord embedded in the side cover serve for an airtight closure.

### Window frame thickness

max. 92 mm

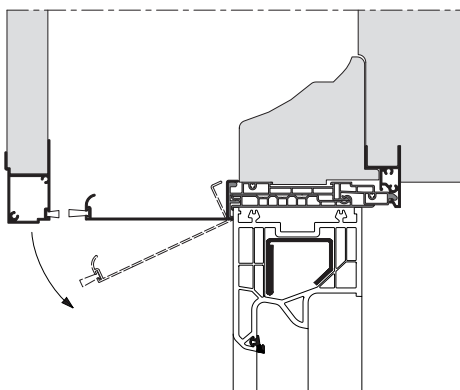
### Legend

- ① Box end profile straight, inside, aluminium
- ② Inspection cover
- ③ Adapter profile
- ④ Floor base profile with brush and window rabbet



# TOP FOAM RvA/RvA.S - Inspection from the outside

## Inspection



### Inspection cover

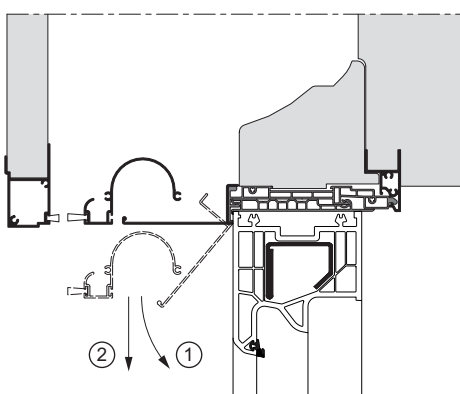
Made of extruded aluminium 1.3 mm, with drawn-in brush sealing for an optimum sealing towards the roller shutter curtain. The inspection cover is screwed laterally to the side cover.

The insect screen cassette made of extruded aluminium serves for a clean cover between the insect roller screen and the roller shutter curtain.

If it is designed with a insect roller screen, two steps are required for the inspection:

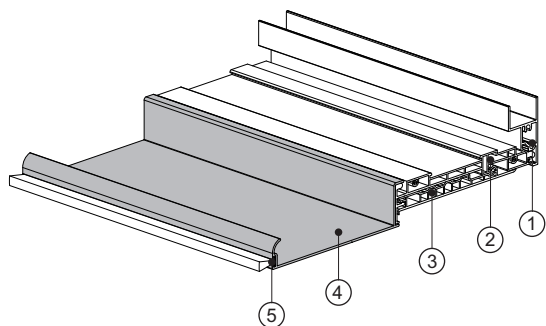
### Legend

- ① Unhinge the inspection cover and swivel it downwards
- ② Push the insect screen cassette downwards



### Window frame thickness

max. 92 mm



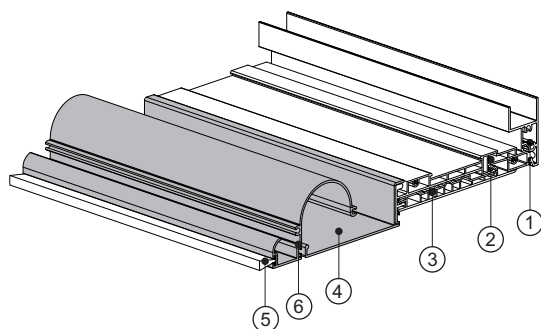
### Maintenance

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.

If it is designed with insect roller screen, the screw connection is loosened first, and then the insect screen cassette is pushed downwards. Then the inspection cover can be unhinged and swivelled downwards.

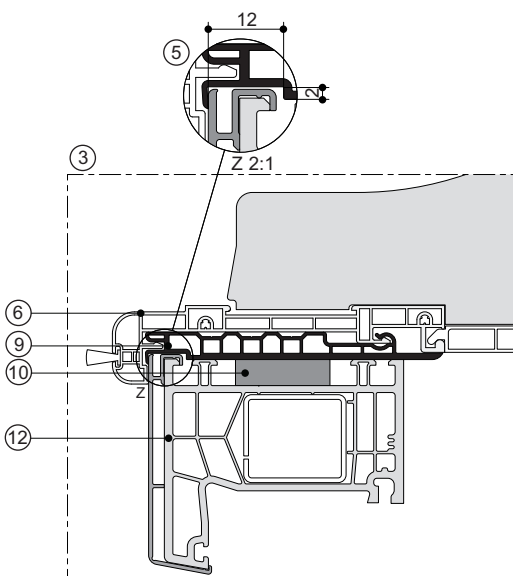
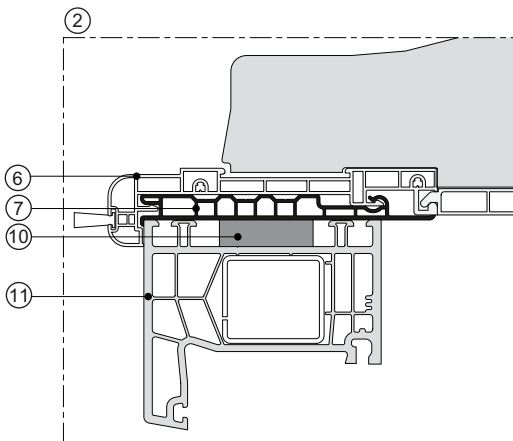
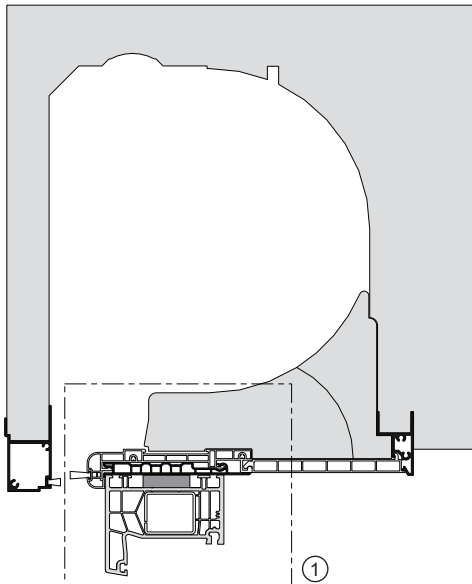
### Legend

- ① Box end profile made of aluminium, 0 mm
- ② Floor bracket profile
- ③ Adapter profile universal
- ④ Inspection cover on the outside
- ⑤ Brush
- ⑥ Insect screen cassette with covering profile



# TOP FOAM top-mounted roller shutter

## 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. Then you can clip the window frame to the box.

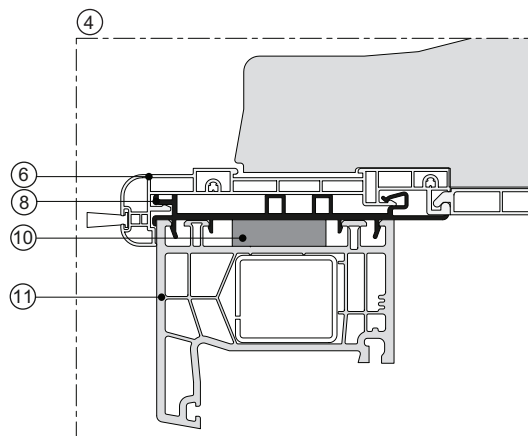
### Clip adapter universal for frame with aluminium shell

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

### Note:

For the aluminium shell, a recess of 12x2 mm is provided. Check in advance that the recess for the aluminium shell of the relevant top board frame is sufficiently large.

## Clip technology



### Available clip adapter systems:

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

### Clip adapter system

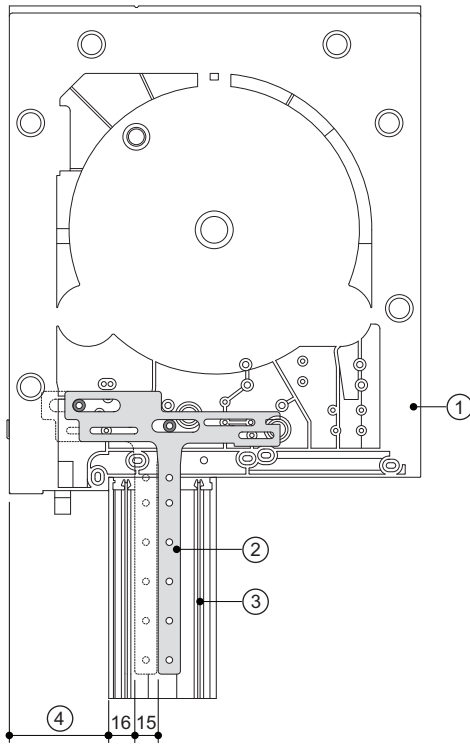
In the case of known plastic window systems, the corresponding clip adapters can be used. It matches the shape of the plastic window frame and therefore can be clipped-on easily. Then you can clip the window frame to the box. Clip adapters are available for the most well-known window systems.

### Legend

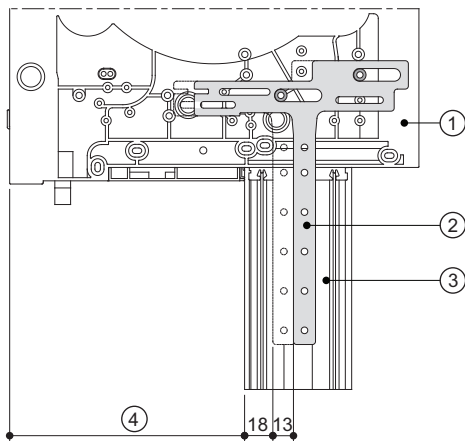
- ① Detailed view
- ② Detailed view with clip adapter universal
- ③ Detailed view with clip adapter universal, aluminium shell
- ④ Detailed view with clip adapter system
- ⑤ Recess in clip adapter for aluminium shell
- ⑥ Floor bracket profile
- ⑦ Clip adapter universal
- ⑧ Clip adapter system
- ⑨ Clip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

# TOP FOAM top-mounted roller shutter

## Fastening handle



RvU/RvU.S



RvA/RvA.S

### Fastening handle

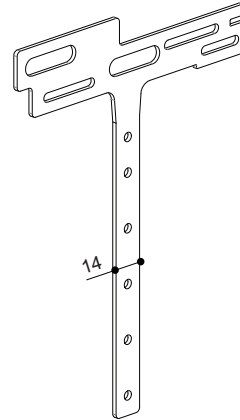
The box is fixed to the window frame via the fastening handles made of galvanized sheet steel, 2 mm.

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.

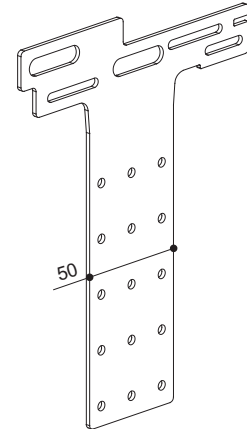
For positioning an adjustable range of 15 mm is available.

### Legend

- ① Side cover
  - ② Fastening handle
  - ③ Blind frame
  - ④ Distance from the front edge of the box to the window rabbet
- RvU: 63 mm  
RvU.S: 46 mm  
RvA: 149 mm  
RvA.S: 132 mm



Standard fastening handle



Fastening handle strengthened (optional)

### Fastening handle strengthened (optional)

Especially recommended with combinations and linkages or with wooden windows with small groove in the frame profile.



# TOP FOAM top-mounted roller shutter

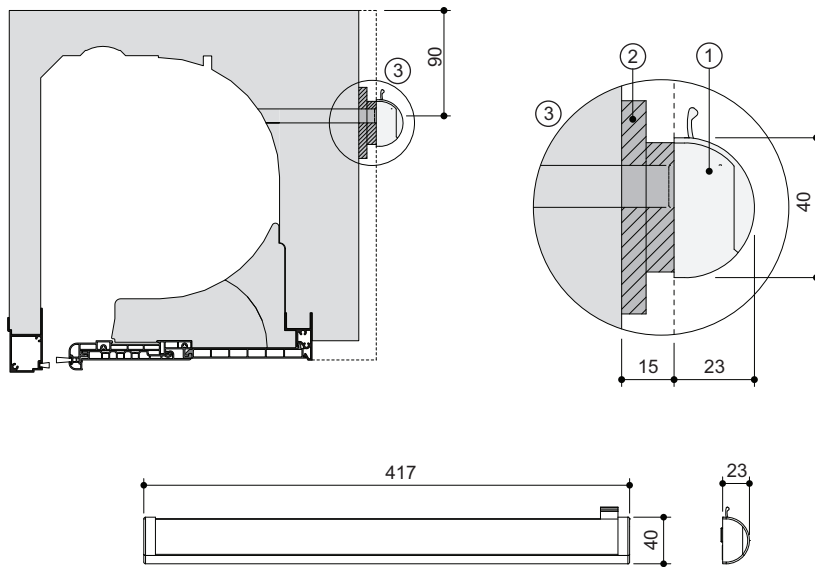
## Window fan systems

### 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

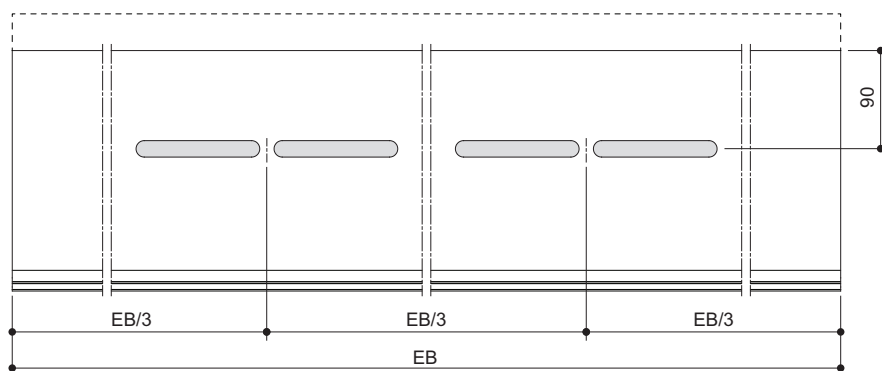
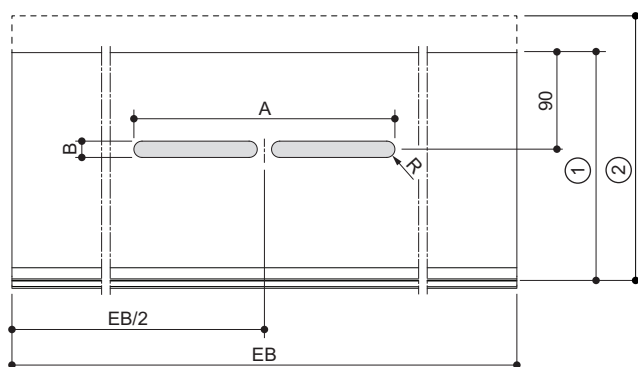
### Legend

- 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**

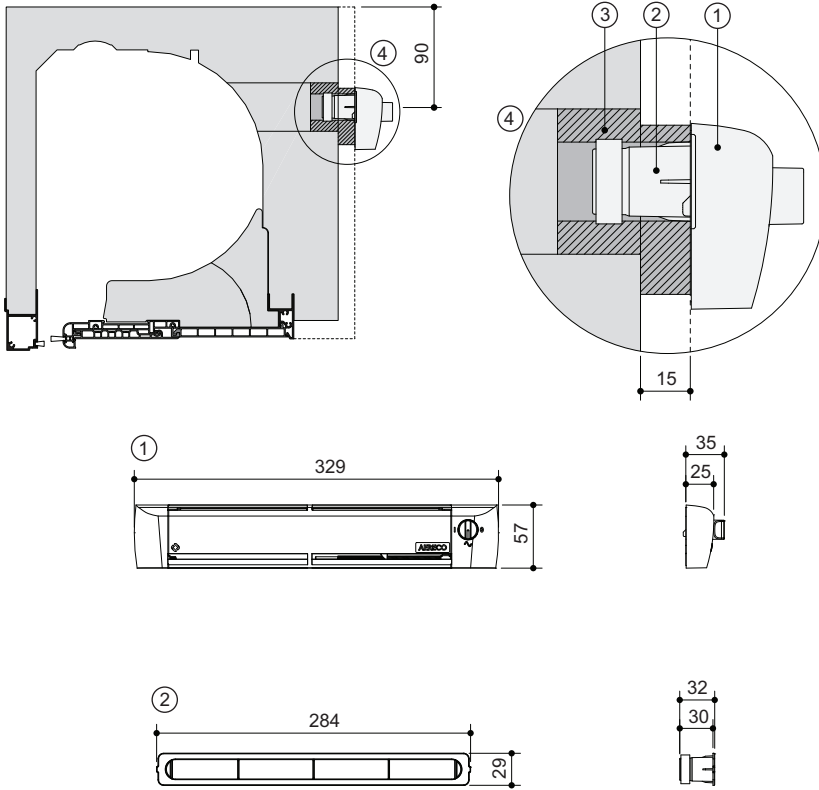
For window fan systems that are provided by the client, ventilation slots may be prepared in the top-mounted box. Please note, that we assume no responsibility for the correct selection or functionality of the window fan element when it is built in.

# TOP FOAM top-mounted roller shutter

## 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:

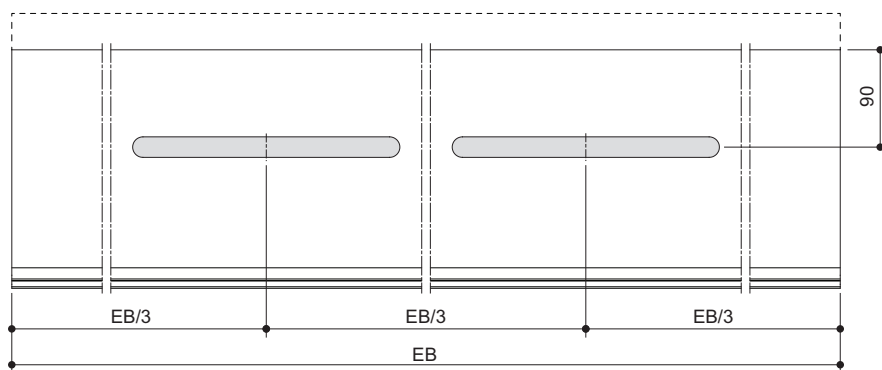
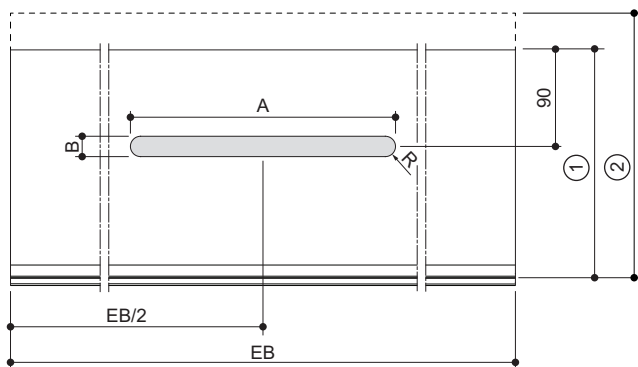
- Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.
- The van element is fixed after plastering.
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between 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.

### Sound insulation test certificates

Box size	$R_w$ [dB]			
	Blind position			
	at the top		at the bottom	
	Fan open	Fan closed	Fan open	Fan closed
RvU 300/300	36	37	38	39
RvA 300/300	36	37	40	42



**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**

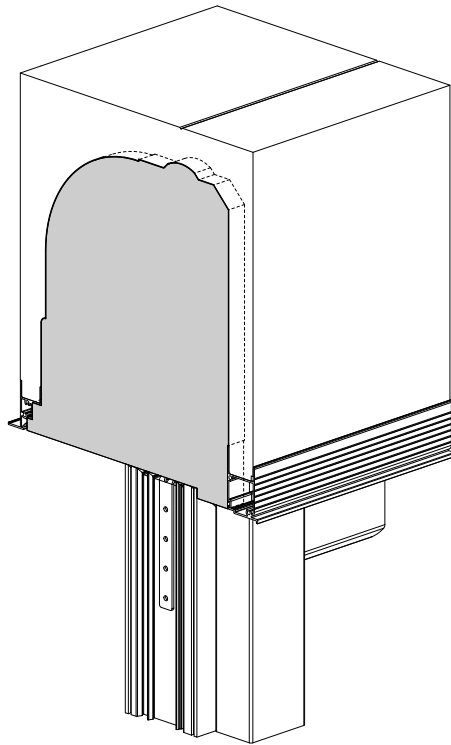
- Design and concept of the window fan as well as the ensuring of the air exhaust are in the responsibility of the designer/orderer.
- The window fan systems must not be in the same position as the frame stabilization. There must be sufficient distance between these two configuration options.
- All technical 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 top-mounted roller shutter

## Exterior insulation for side cover



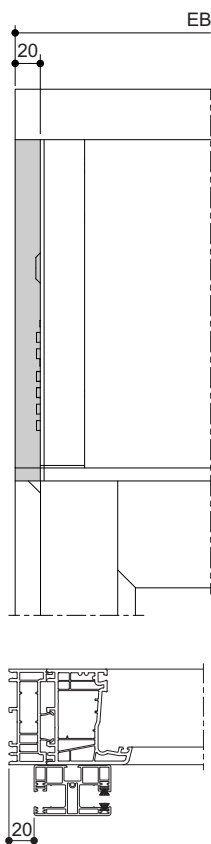
### External side cover insulation

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.

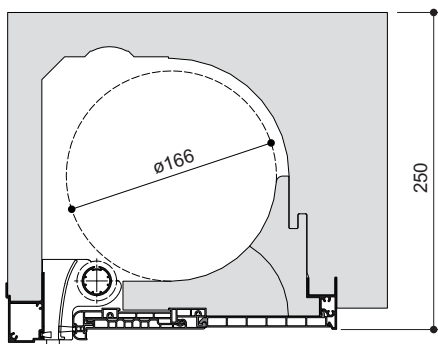
Due to the offset side cover, the exit positions of the manual drives are mounted offset by 20 mm towards the inside.

### Note:

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

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

Rolling space small



### Roll space small

Depending on the design option, the top-mounted box with a box height of 250 mm is provided with a narrowed roll space of ø166 mm. The free space in the roller shutter box is filled with insulation material to optimize the heat-insulating values.

This design is provided automatically and depends on the following:

- Insect roller screen
- Element height
- Combination/linkage

### Insect roller screen

If an insect roller screen is used, the small roll space is always provided.

### Combination/linkage

For elements with combination/linkage the small roll space is not possible.

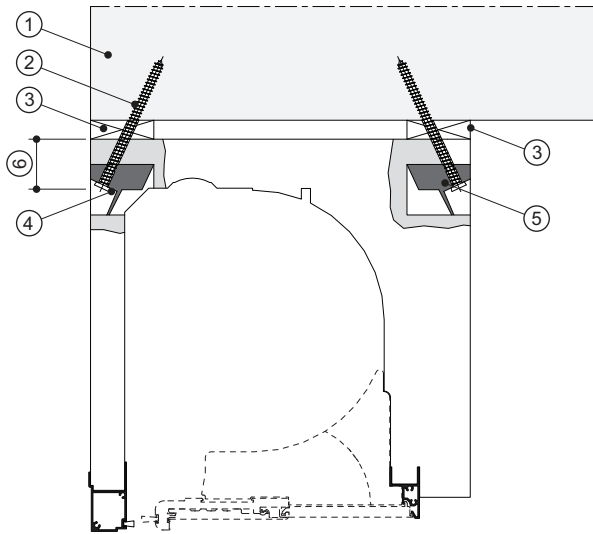
### Element height

Depending on the roller shutter profile, the small roll space is provided up to the following element heights:

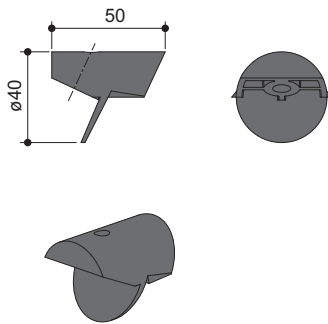
Profile type	Element height
K37	2800
K52	2000
A37	2800
AV42	2200
A52	2000

# TOP FOAM top-mounted roller shutter

## 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.

### Box fixing round

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 fastening round is permanently fixed to the box.

### Advantages of the box fixing:

- Quick installation
- Significantly higher stability

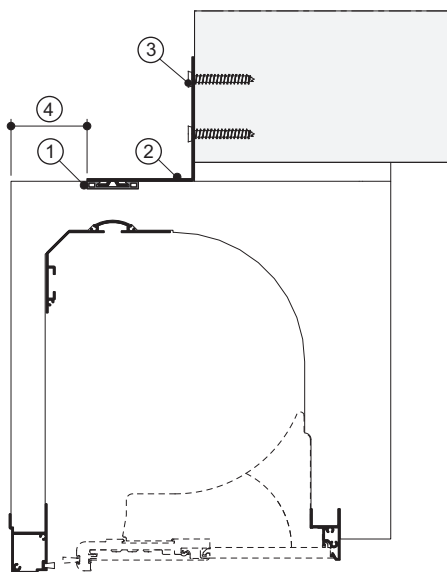
### Number

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

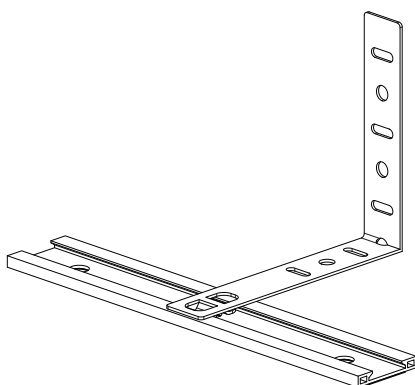
Element width [mm]	Number
800-1599	1
1600-2399	2
2400-3199	3
3200-3999	4
4000-4799	5
4800-5000	6

### RvU.S./RvA.S

No box fixing round, on the outside possible.



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 RvU/RvA = 60 mm  
RvU.S/RvA.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 fixing on the outside consists of an screw-in anchor (2 mm, sheet steel) and the connection profile.

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**

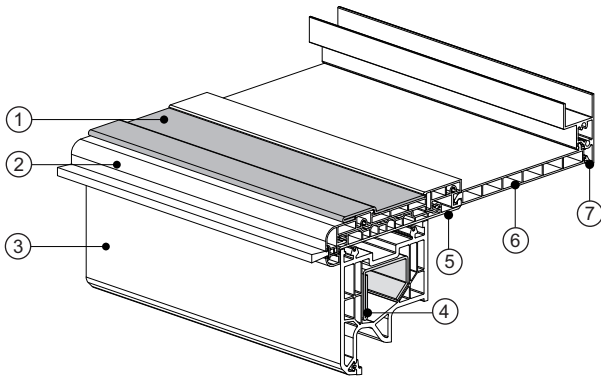
Standard: see table (recommendation)

Optional: according to customer request

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

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Bottom strengthening profile



### Bottom strengthening profile

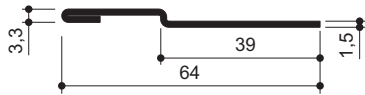
We recommend to use a bottom strengthening profile for split elements with a width above 2000 mm. This must be screwed shear-resistantly to the window frame. In the case of occurring wind loads, the bending of the frame is minimized.

### Technical details

Bottom strengthening profile  $I_y = 4.17 \text{ cm}^4$

### Window frame stabilization

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



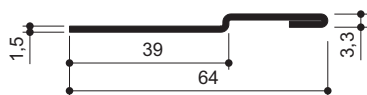
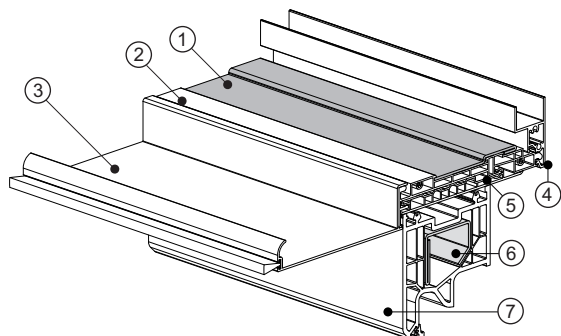
### Legend

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



# TOP FOAM RvA/RvA.S - Inspection from the outside

## Bottom strengthening profile



### Legend

- ① Bottom strengthening profile, 1.5 mm, galvanized steel
- ② Floor bracket profile
- ③ Inspection cover
- ④ Box end profile
- 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  $I_y = 4.17 \text{ cm}^4$

### Window frame stabilization

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

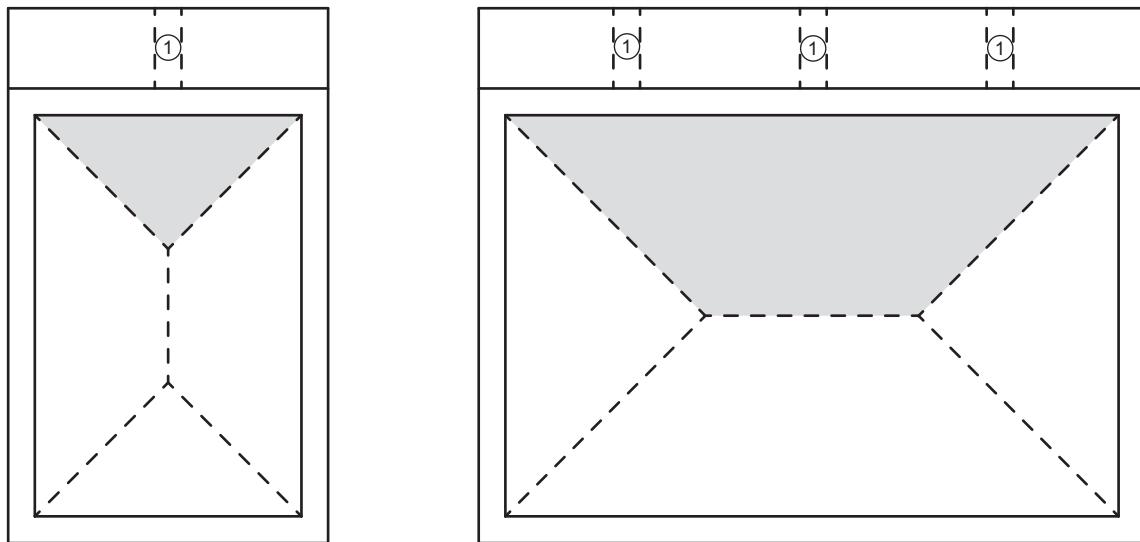
# TOP FOAM top-mounted roller shutter

## 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.**

# TOP FOAM top-mounted roller shutter

## Window frame stabilization

### 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.

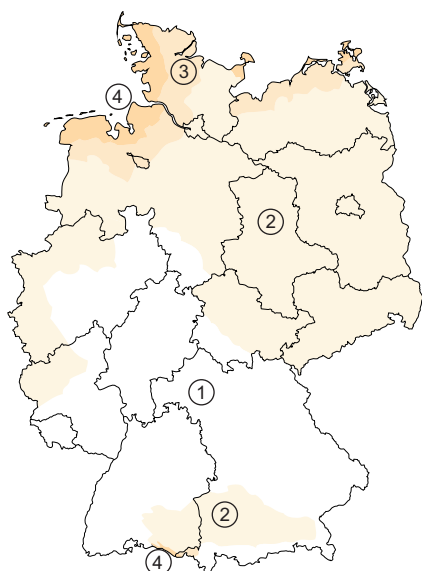
The **wind resistance according to DIN EN 12210** defines the wind resistance classes for **window elements with top-mounted boxes**. The classification regarding the wind resistance is classified in two classes: on the one hand the class of the maximum allowable window frame bending and on the other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

**These two norms must be observed independently of each other!**

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 static 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
<b>Interior land</b>				
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
<b>Coasts and Baltic Sea islands</b>				
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 static brackets for the respective element. The final demands on the window are given by the client or the window fitter.

# TOP FOAM top-mounted roller shutter

## Window frame stabilization

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  $I_y = 2.26 \text{ cm}^4$

Bottom strengthening profile  $I_y = 4.28 \text{ cm}^4$

### Wind protection class B2

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

	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4250	4500
	Element width [mm]																	
1000	0	0	0	0	0	0	0	0	1	1	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	1	1
1400	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2
1600	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2
1800	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2
2000	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2
2200	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	2
2400	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	2
2600	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	3
2800	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	3
3000	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	3	3
3200	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	3	3
3400	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	3	3
3600	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3
3800	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3
4000	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	4

### Wind protection class B3

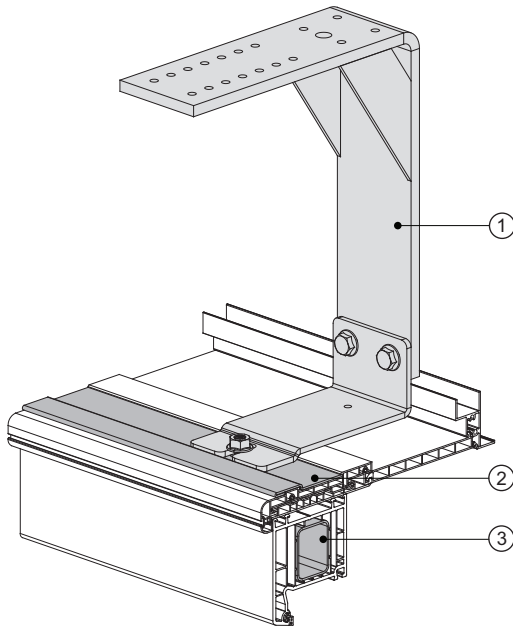
- Frame deflection < 1/200 of the window frame width
- Test pressure 1200 Pa

	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4250	4500
	Element width [mm]																	
1000	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2
1200	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2
1400	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	2	2
1600	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	2	3
1800	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	3	3
2000	0	0	0	0	0	1	1	1	2	2	2	2	2	2	2	3	3	3
2200	0	0	0	0	0	1	1	1	2	2	2	2	2	2	3	3	3	4
2400	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	3	4
2600	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	3	4
2800	0	0	0	0	0	1	1	1	2	2	2	2	3	3	3	4	4	4
3000	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	4	5
3200	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	4	5
3400	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	5	5
3600	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	5	5
3800	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	5	5
4000	0	0	0	0	0	1	1	1	2	2	2	2	3	3	4	4	5	5



# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Window frame stabilization



RvU/RvU.S

### Multi-part static bracket

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 static bracket is pre-mounted at the factory.

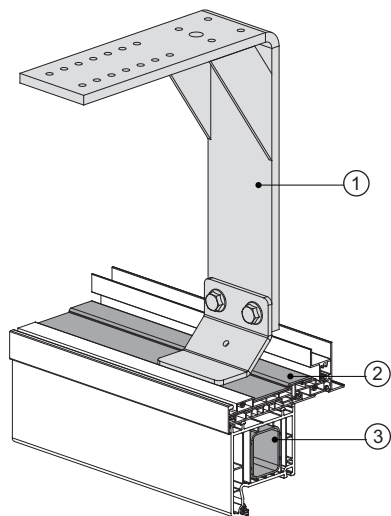
### Legend

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



# TOP FOAM RvA/RvA.S - Inspection from the outside

## Window frame stabilization



RvA/RvA.S

### Multi-part static bracket

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.

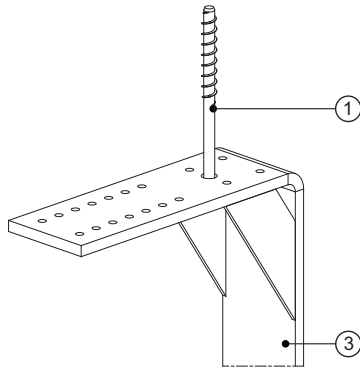
The static bracket is pre-mounted at the factory.

### Legend

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

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Window frame stabilization



### Installation from the bottom

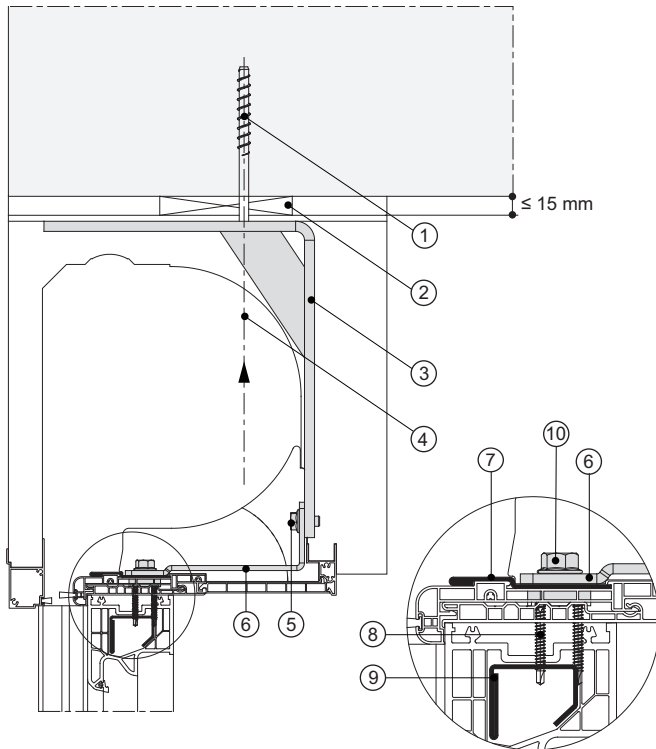
Due to the multi-part structure of the statics bracket, the inspection part can be easily removed for installation or inspection purposes. The statics bracket fixed part is permanently fixed to the box and in further consequence connected with the mounting base.

### mounting material

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

### Design can be selected for

- RvU
- RvU.S



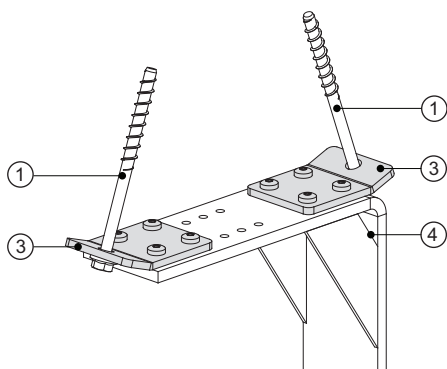
### Legend

- ① Mounting material (not included in the delivery)
- ② Spacer blocks pressure-resistant (not included in the delivery)
- ③ Statics bracket fixed part
- ④ Mounting direction (lower the roller shutter curtain to avoid damage)
- ⑤ Hexagon head screw M8x18 SW13
- ⑥ Statics bracket inspection part
- ⑦ Bottom strengthening profile
- ⑧ Countersunk drilling screw 3.9x38, AW20
- ⑨ Window frame reinforcement
- ⑩ Self-locking nut M8 SW13

Inspection from the bottom side with installation from the bottom

# TOP FOAM top-mounted roller shutter

## Window frame stabilization



### Mounting with mounting lugs

The connection of the window frame stabilisation with the wall lintel or the reinforced concrete ceiling is provided via mounting 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

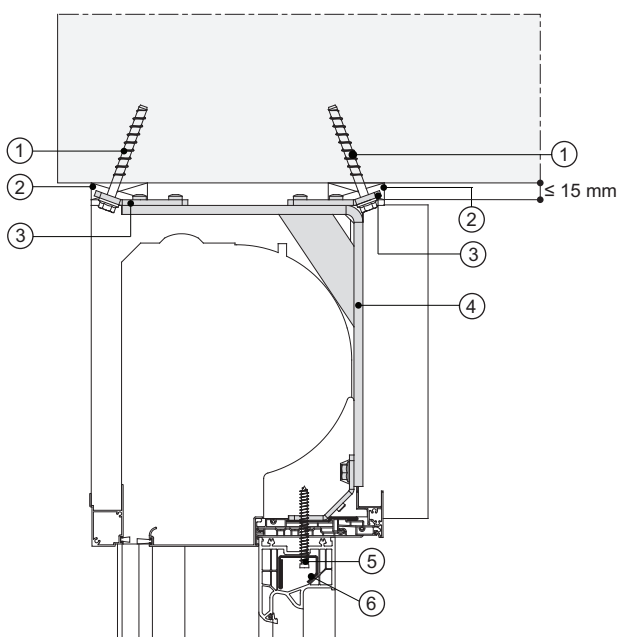
The suitable mounting material must be checked on-site and has to be adapted to the structural conditions.

### Design can be selected for

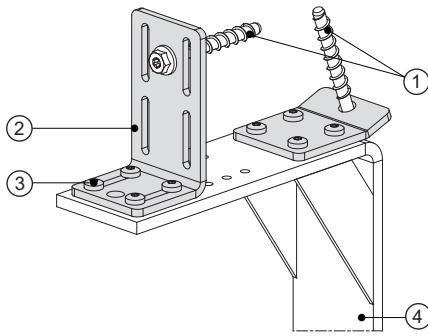
- RvU
- RvU.S
- RvA
- RvA.S

### Legend

- ① Mounting material (not included in the delivery)
- ② Spacer blocks pressure-resistant (not included in the delivery)
- ③ Mounting tabs
- ④ Statics bracket
- ⑤ The screw connection from the window frame must be directly in the static bracket (mounting material not included in the delivery)
- ⑥ Window frame reinforcement



# TOP FOAM top-mounted roller shutter



## Mounting with mounting bracket and mounting lug

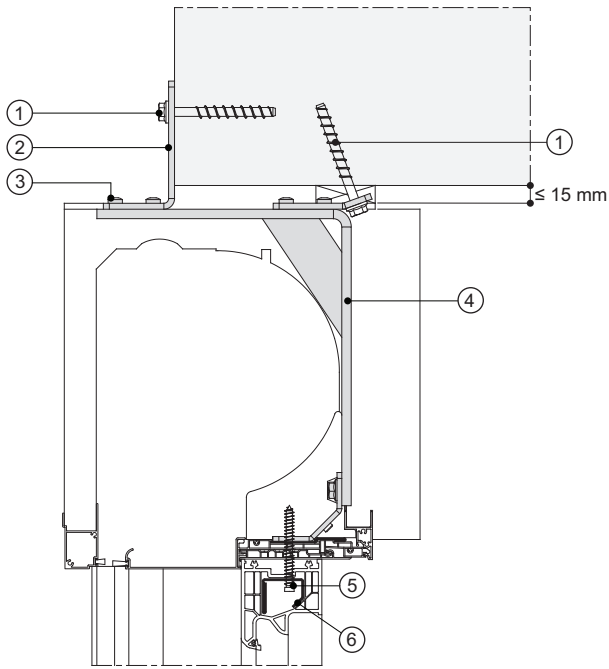
The connection of the window frame stabilization with the wall lintel or the reinforced concrete ceiling is provided via mounting brackets from the outside. Principally the mounting bracket is screwed to the statics brackets and the brickwork after the installation of the windows.

## 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.



## Design can be selected for

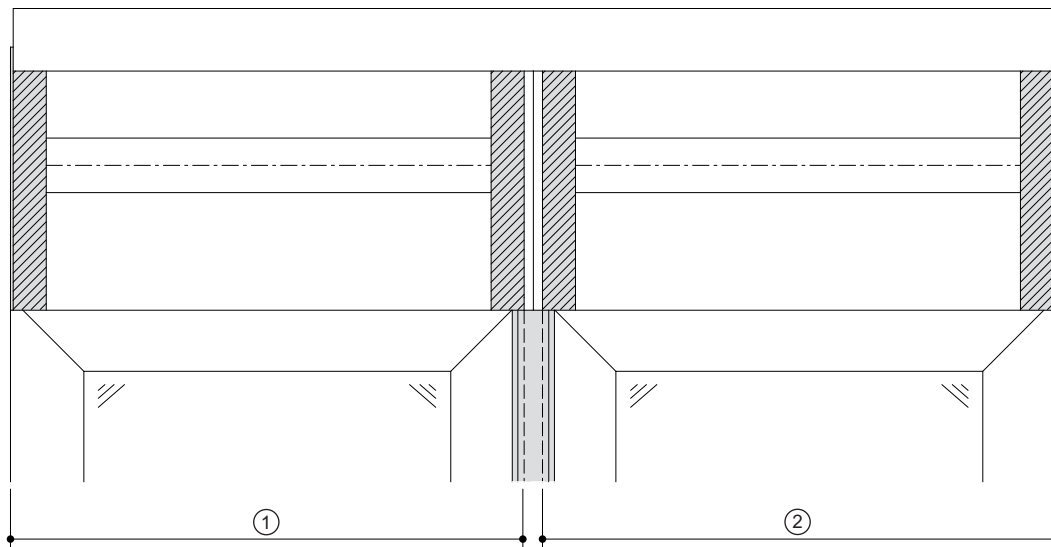
- RvU
- RvU.S
- RvA
- RvA.S

## Legend

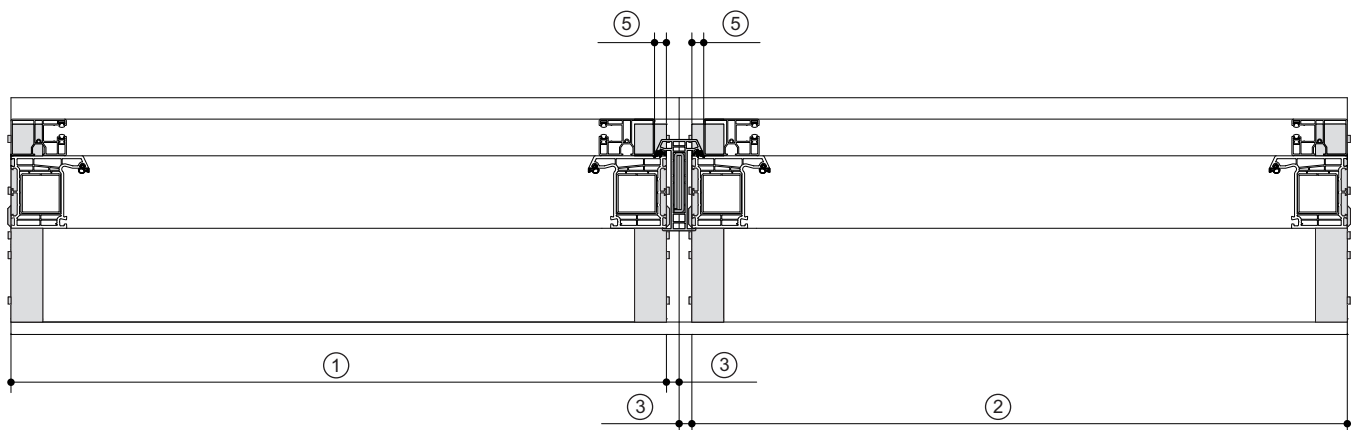
- ① Mounting material (not included in the delivery)
- ② Assembly bracket 108x60 mm (both lugs can be used for installation)
- ③ Self-tapping pan-head screw 6x16
- ④ Statics bracket
- ⑤ Mounting material, connection of the window frame to the box (not included in the delivery)
- ⑥ Window frame reinforcement

### Recess for post

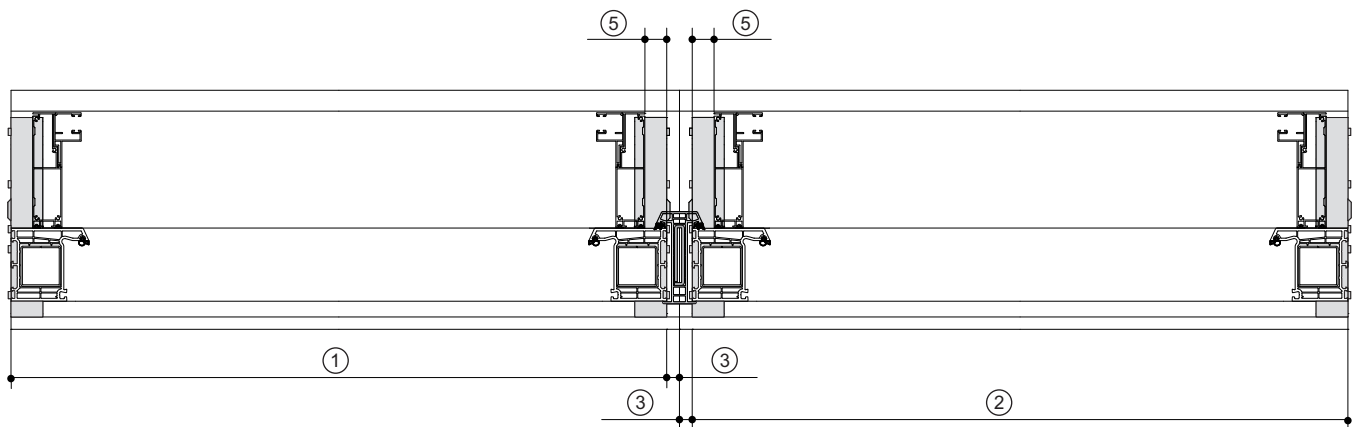
Often supporting or reinforcing posts between both window elements are used with static window linkages. In this case a recess area can be provided at the box.



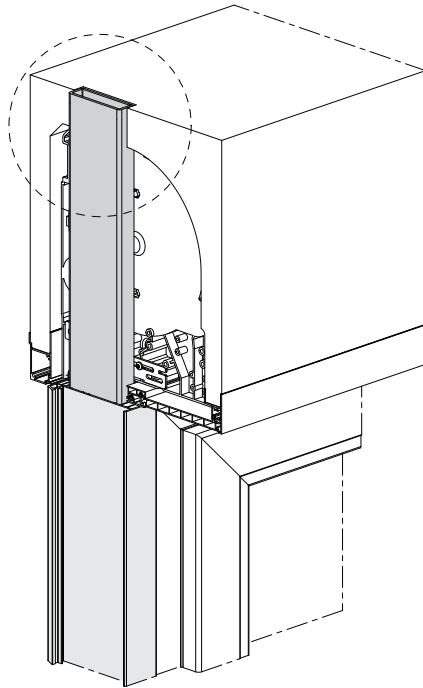
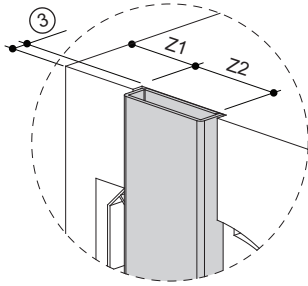
#### Inspection from the bottom:



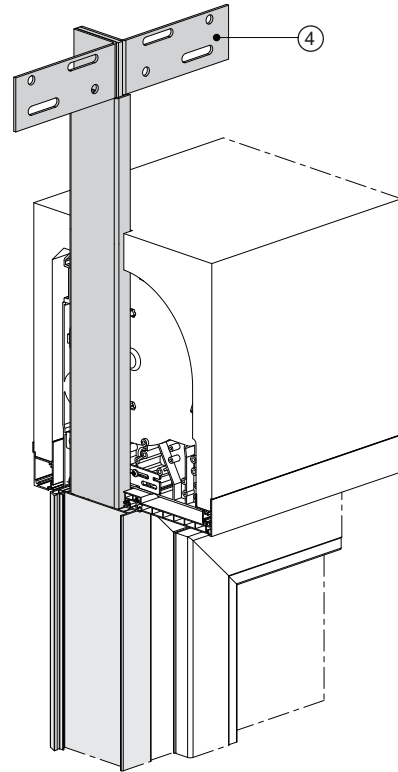
#### Inspection from the outside:



# TOP FOAM top-mounted roller shutter



View: Detail recess area at the box



View: Detail with box connection to the brickwork

## Legend

- ① Order dimension Element width 1
- ② Order dimension Element width 2
- ③ Excess length of the box
- ④ Example of a statics linkage element of the window
- ⑤ Offset dimension of the guide rail
- Z1 Offset dimension from the outer edge of the box Z2 ...
- Z2 Depth of the recess area

## Fixing material

### Guide rails

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

### Guide rail installation, clipped

Guide rail types 34, 35, 36, 89

Mounting base	Mounting material	Dimensions
all	Nipple screw KS, without drillbit	4.2x10

### 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.

### Guide rail installation, screwed

Guide rail types 64, 77, 90, 91

Mounting base	Mounting material	Dimensions
all	Mounting clip	
Wood/plastic	Tapping screw DIN7982C AW20	3.9x13
Metal	Countersunk drilling screw DIN7504P AW20	3.9x13

### Guide rail installation, screwed

Guide rail types 69, 70, 71, 72, 73, 74, 75, 76

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	3.9x13

### 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

# Insect screens

	Insect screen fabric Standard	Insect screen fabric VistaScreen	Pollen screen fabric	Insect screen fabric Aluminium	Pet fabric Petable	SOLTIS Horizon 86/Perform 92
Material	Plastic-sheathed fibreglass	Plastic-sheathed fibreglass	Polyester	Aluminium	Polyester	Plastic-sheathed polyester
Mesh density [threads/inch]	18x16	18x18	62x18	18x16	15x11	
Mesh size	1.41x1.58 mm	1.41x1.41 mm	1.37x0.41 mm	1.41x1.58 mm	1.49x2.54 mm	
Denier	0.28 mm	0.22 mm	0.27/0.24 mm	0.26 mm	0.64 mm	
Color	black with ISPL others grey	Black	Black	grey	Black	optional
Open area	60%	70%	33%	68%	43%	
Specific features	High tearing strength and weather resistance	Improved view and air permeability compared with the standard insect screen fabric	Prevents more than 99% of grass and birch pollen as well as 90% of ambrosia and stinging nettle pollen from entering.	Increased protection against small rodents, better view to the outside than the standard insect screen fabric	high tearing strength for pets	Visual cover, glare protection Cover shortened and therefore not guided in the guide rail
Fabric width	2000 mm	1500 mm	1600 mm	1500 mm	1520 mm	1500 mm
ISR	●	●	●	●	●	●
ISD	●	●	●	●	●	
IST	●	●	●	●	●	
IS13.	●	●				●
ISPL	●					



# nova front-mounted roller shutter

## Front-mounted roller shutter with integrated insect roller screen



### Integrated insect roller screen

Insect screen shaft  $\varnothing 23$  with spring mechanics and run-up brake fully integrated in the box.

### Insect screen fabric

- Fibreglass fabric Standard, plastic-coated, color: grey
- Fibreglass fabric VistaScreen, plastic-coated (improved view to the outside), color: black

### Locking system

Easy-Click with continuously adjustable limit stops.

- End rod (40x9 mm) (incl. loosely supplied pull cord)

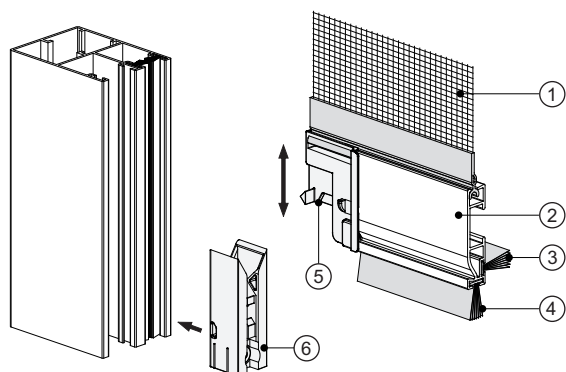
### Notes

- Feasible in the box sizes 13XL, 16, 16XL, 18 and 20
- Not available as right rolling element!
- Max. surface 4 m<sup>2</sup>
- Max. height 2500 mm
- Max. width 2200 mm
- Not possible with Top-Safe roller shutters!

## Field of application insect roller screen



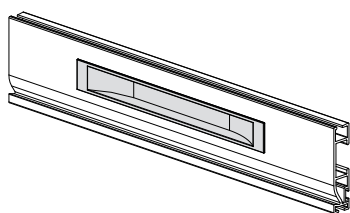
Shading represents the permissible dimensions!



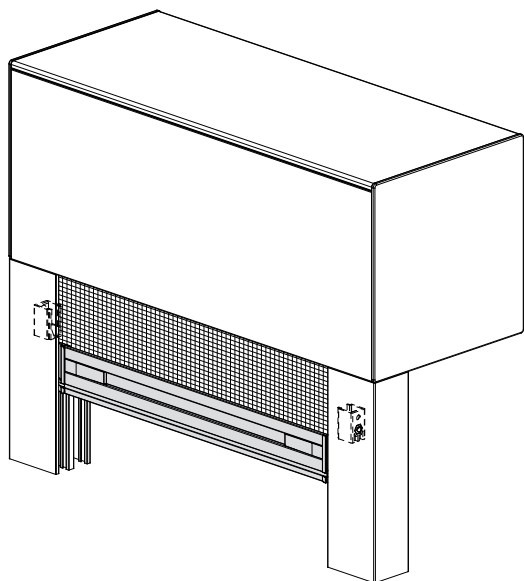
The inserted brush seals serve for the sealing towards the inside and towards the bottom.

**Legend**

- ① Insect screen fabric
- ② End rod 40x9 mm
- ③ Brush towards the inside 5x15 mm
- ④ Brush faces towards the bottom
  - 6.7x15 mm without guide rail end cap
  - 6.7x25 mm with guide rail end cap
- ⑤ End cap for end rod
- ⑥ Locking device in guide rail



For double-sided operation of the end rod, an **inset type handle** can optionally be incorporated upon request.



By default, the entry guide forms the upper stop for the insect screen end rod, which then projects 13 mm into the box.

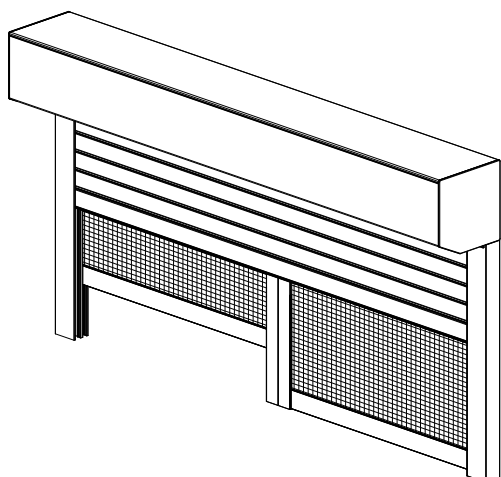
In order to lower the upper end position of the end rods, continuously adjustable **upper stops** can be inserted in the guide rails.

With the design **prepared for insect roller screen** the front-mounted roller shutter is prepared in such a way that an integrated insect roller screen can be retrofitted or a divided insect screen can be installed at any time:

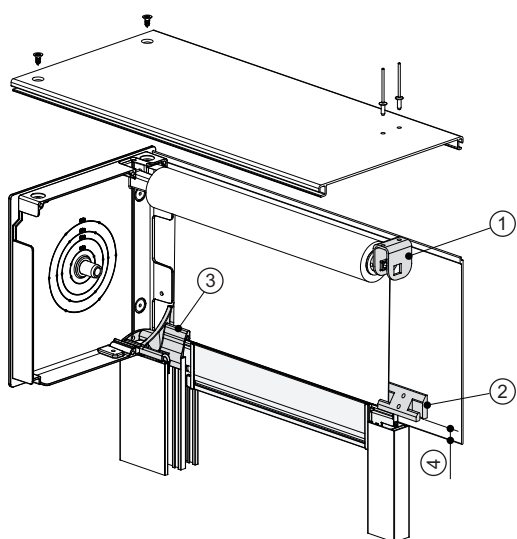
- Guide rail type 16
- Box sealing brush and rear top board with extruded design
- Box size tables insect roller screen (lower complete height)

# nova front-mounted roller shutter

## Front-mounted roller shutter with divided insect roller screen

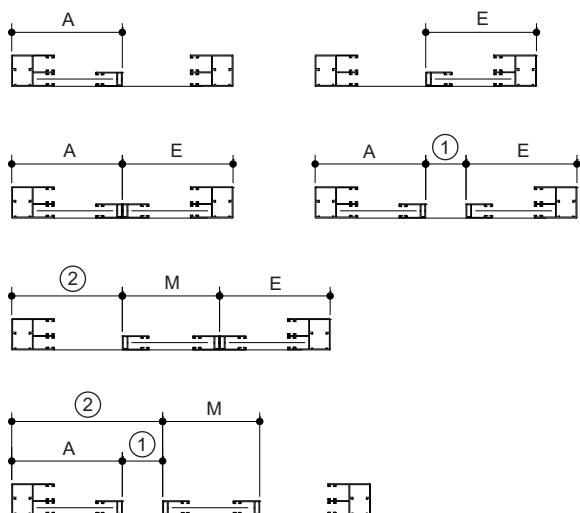


The divided insect screen is used for instance, when a front-mounted roller shutter is installed on a window with two wings where the insect screen has to be put only over one of the window elements.



### Legend

- ① Centre bearing for insect screen shaft
- ② Stopper centrally
- ③ Entry guide (serves as upper stop with the single-piece insect screen, too)
- ④ End rod 13 mm within the box



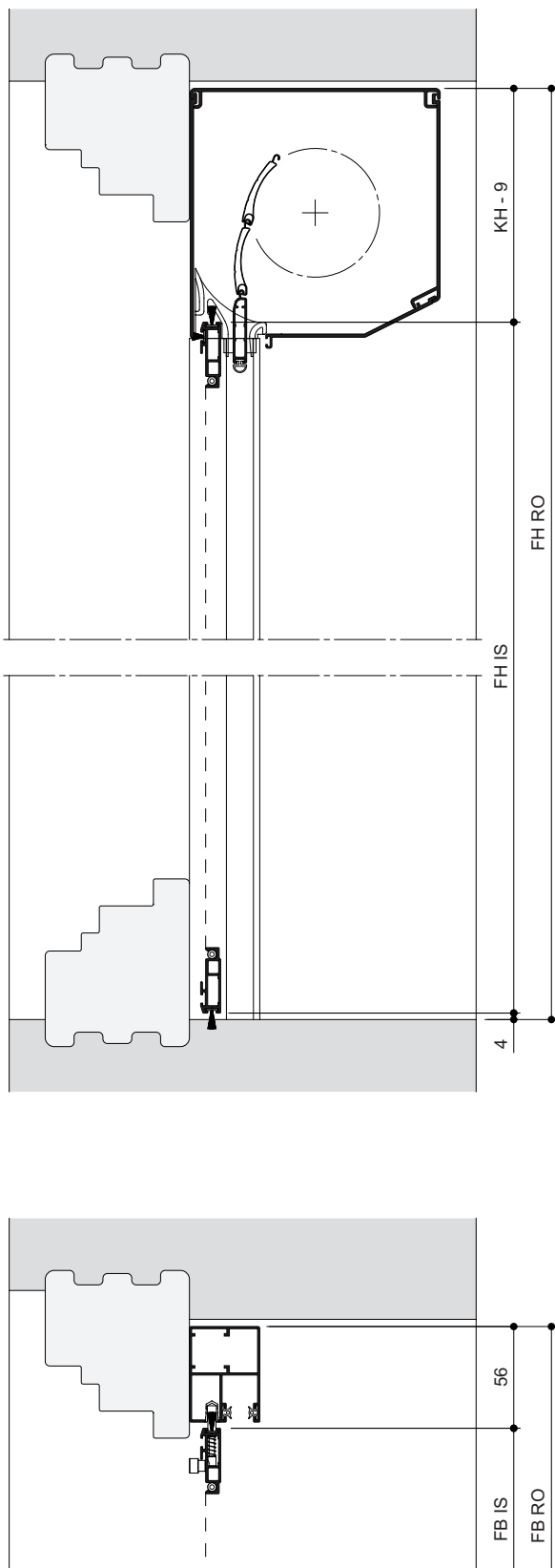
Like with combinations, the divided insect roller screen is optionally designed as starting, centre or end element – seen from the inside from left to right.

The complete width of the roller screen always refers to the outer edge of the guide rails concerned.

### Legend

- ① Distance between guide rails 0 mm or at least 19 mm
- ② Distance on the left from the outer edge to the middle element
- A Start element
- M centred
- E End element

### Front-mounted roller shutter with clamping frame ISR



**Notes**

- Only feasible with guide rial type 15 or type 21+80
- Special brushes can be put either on the back or on the front of each side

**Legend**

- FB IS Complete width insect screen
- FB RO Complete width roller shutter
- FH IS Complete height insect screen
- FH RO Complete height roller shutter
- KH Box height

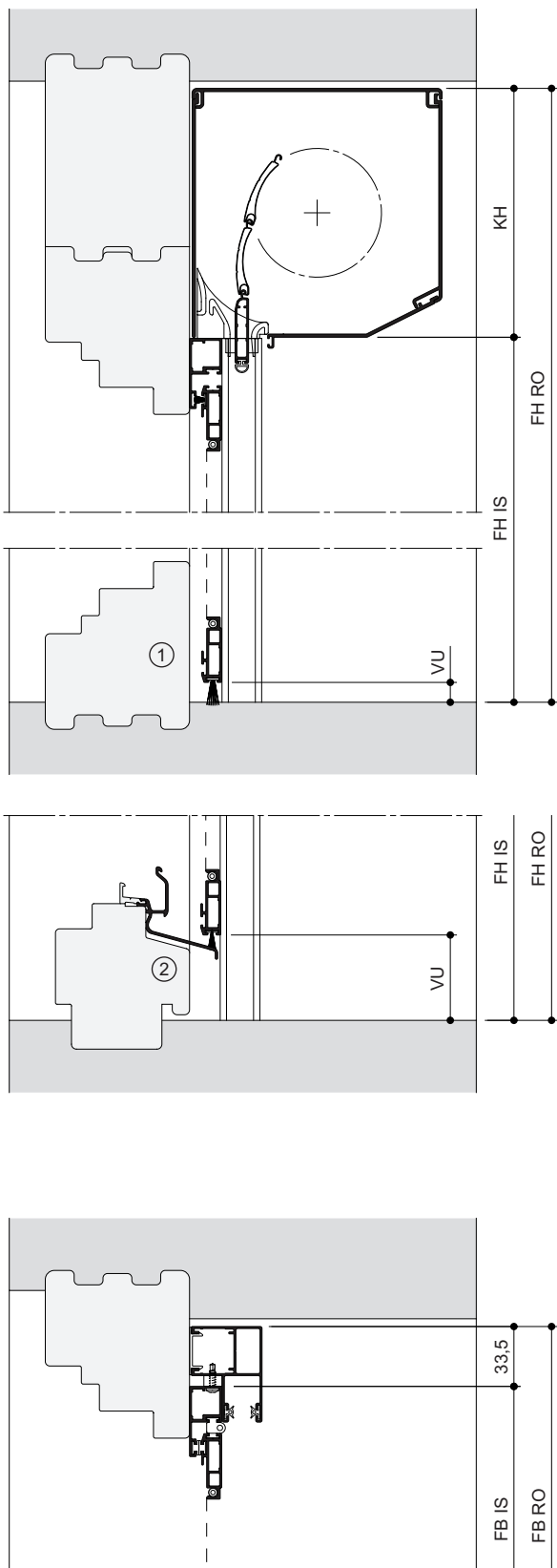
**Ordering dimensions insect screen frame**

FB IS = FB RO - 112

FH IS = FH RO - KH + 5

# nova front-mounted roller shutter

## Front-mounted roller shutter with pivoting frame ISD Z



### Notes

- Only feasible with guide rial type 21 with a covering profile
- Frame screwed to the outside on the sides
- Unhinging the swing frame by removing the hinge pins or by shifting the hinges that are clamped via threaded pins

### Legend

- FB IS Complete width insect screen
- FB RO Complete width roller shutter
- FH IS Complete height insect screen
- FH RO Complete height roller shutter
- KH Box height
- VU Shortening at the bottom (standard 11 mm with 15 mm sealing brush)
- ① Model without weatherboard
- ② Model with weatherboard

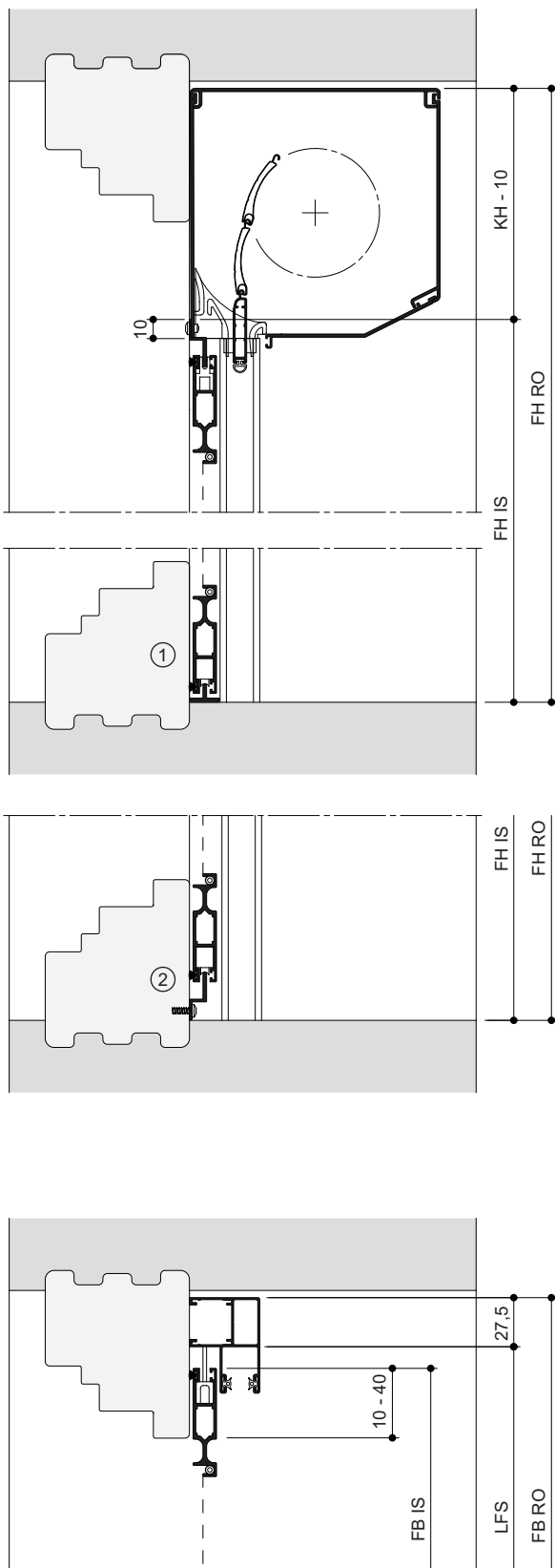
### Ordering dimensions insect screen frame

$$FB IS = FB RO - 67$$

$$FH IS = FH RO - KH$$



### Front-mounted roller shutter with sash IST E



**Notes**

- Only feasible with guide rail type 21 for windows/balcony doors with multiple wings
- Not feasible with protruding weatherboard
- The complete width of the insect screen frame is defined by the position of the middle transom (frame support 10-40 mm).

**Legend**

- FB IS Complete width insect screen
- FB RO Complete width roller shutter
- FH IS Complete height insect screen
- FH RO Complete height roller shutter
- KH Box height
- LFS Length of the slide rail
- ① T-profile glued downwards
- ② Z-profile screwed from the front

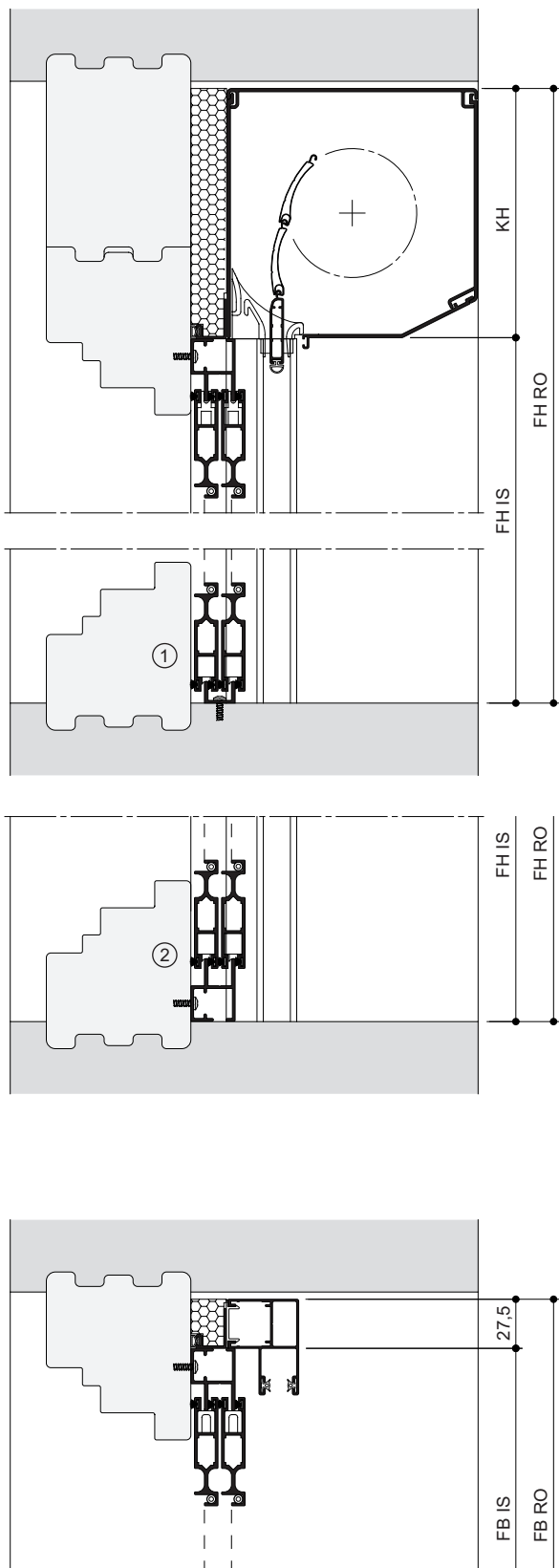
**Ordering dimensions insect screen frame**

LFS = FB RO - 55

FH IS = FH RO - KH + 10

# nova front-mounted roller shutter

## Front-mounted roller shutter with sash IST Z



### Notes

- Only feasible with guide rial type 21 with 20 mm insulation in the back for windows/balcony doors with multiple wings
- Not feasible with protruding weatherboard

### Legend

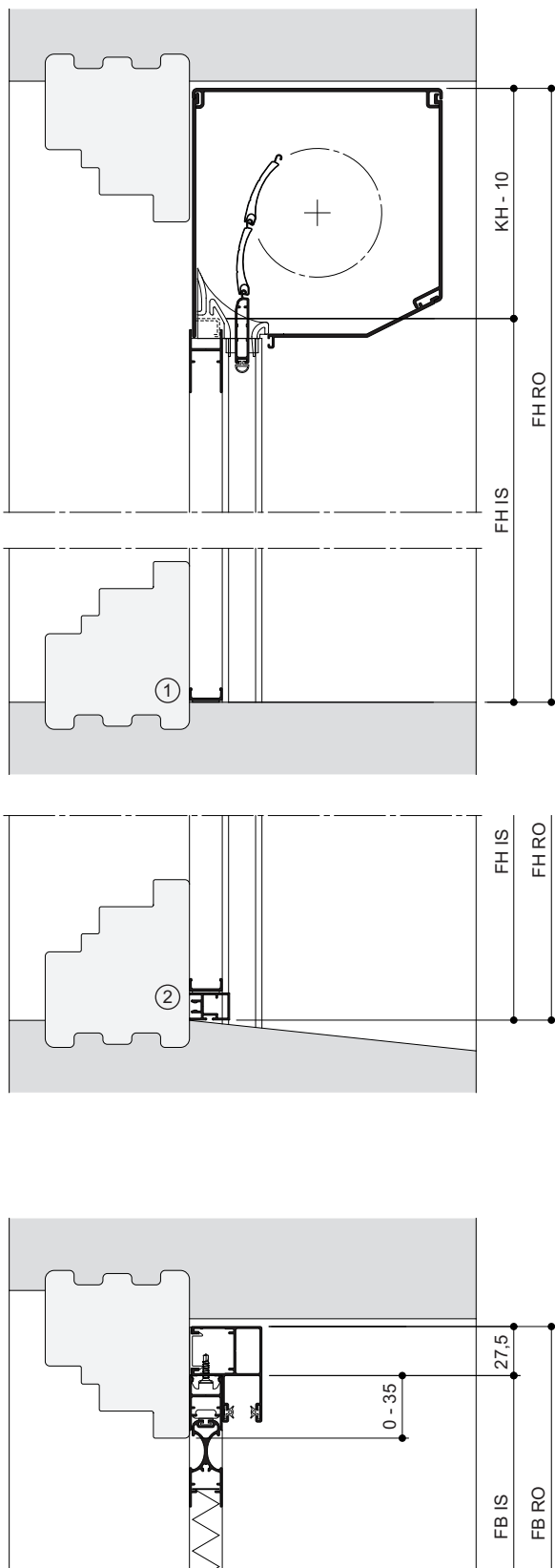
FB IS	Complete width insect screen
FB RO	Complete width roller shutter
FH IS	Complete height insect screen
FH RO	Complete height roller shutter
KH	Box height
①	U-profile screwed downwards
②	Frame profile screwed from the front

### Ordering dimensions insect screen frame

$$FB IS = FB RO - 55$$

$$FH IS = FH RO - KH$$

### Front-mounted roller shutter with pleated insect screen ISPL18



**Notes**

- Only feasible with guide rail type 21 with covering profile or type 15
- Not feasible with protruding weatherboard
- Make sure that the recessed grips are accessible
- To ensure a perfect fitting of the pleated blind, it is possible to use a guide rail type 21 on one side of the roller shutter, while a guide rail type 15 is used for the opposite side.

**Legend**

- FB IS Complete width insect screen
- FB RO Complete width roller shutter
- FH IS Complete height insect screen
- FH RO Complete height roller shutter
- KH Box height
- ① U-profile glued downwards
- ② U-profile glued to a 15 mm mounting frame
- ③ Guide rail deduction 28 mm with type 21 or 53 mm with type 15

**Ordering dimensions pleated insect screen**

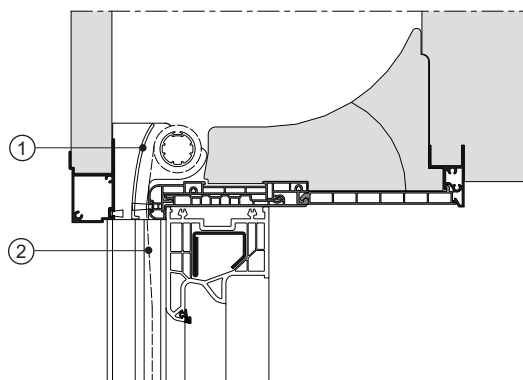
FB IS = FB RO - 55

FH IS = FH RO - KH + 10

FB IS = FB RO - ③ - ③

# TOP FOAM RvU/RvU.S - Inspection from the bottom side

## Insect screens



### Insect roller screen with Easy-Click locking mechanism

The two gliders in the end rod snap into the end caps when the insect screen is pulled down and can be unlocked again by pressing onto the end rod.

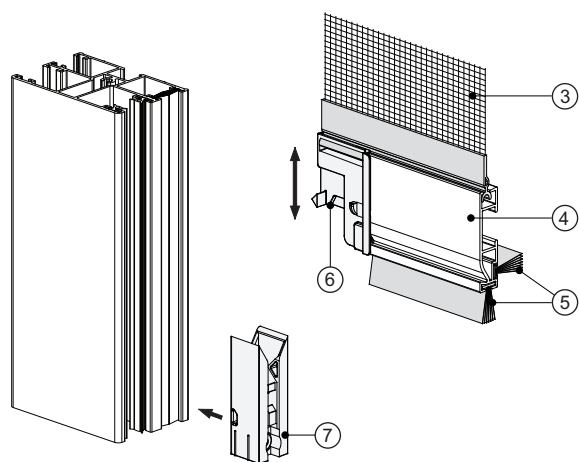
The inserted brush seals serve for the sealing towards the rear side (towards the window frame) and towards the bottom (towards the window sill).

The bearing of the insect screen shaft is provided at the entry guide.

### Notes:

- It must be observed that the guide rails are mounted in parallel to each other.
- If a box with a box height of 250 mm in combination with an insect roller screen are used, only a small space is provided for the roller shutter curtain.

Insect roller screen with Easy-Click system is only possible with insect screen guide rail type 77 (61x41 mm).

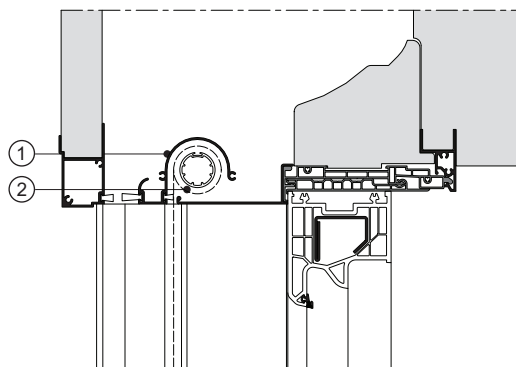


### Legend

- ① Entry guide as bearing for insect screen shaft
- ② Insect roller screen
- ③ Insect screen fabric
- ④ End rod 40x9 mm
- ⑤ Brush facing towards the inside and towards the bottom (brush color black)
- ⑥ End cap for end rod
- ⑦ Locking device in guide rail

# TOP FOAM RvA/RvA.S - Inspection from the outside

## Insect screens



### Insect roller screen with Easy-Click locking mechanism

The two gliders in the end rod snap into the end caps when the insect screen is pulled down and can be unlocked again by pressing onto the end rod.

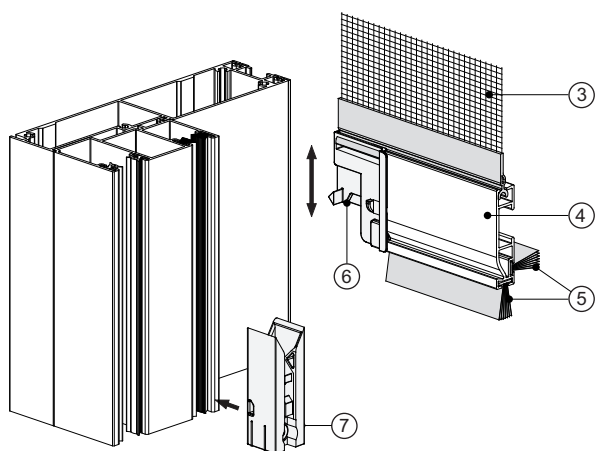
The inserted brush seals serve for the sealing towards the bottom (towards the window sill).

The bearing of the insect screen shaft is provided in the aluminium cassette.

### Note:

It must be observed that the guide rails are mounted in parallel to each other.

Insect roller screen with Easy-Click system is only possible with insect screen guide rail types 71, 72 (58.5x125 mm) and types 75, 76 (84x125 mm).



### Legend

- ① Insect screen cassette made of aluminium
- ② Insect roller screen
- ③ Insect screen fabric
- ④ End rod 40x9 mm
- ⑤ Brush facing towards the inside and towards the bottom (brush color black)
- ⑥ End cap for end rod
- ⑦ Locking device in guide rail

# TOP FOAM top-mounted roller shutter

## Technical product description

### Cassette (only for RvA)

Material	extruded aluminium, lateral end caps made of plastic
Details	drawn-in brush sealing to the insect screen fabric

### Fastening and bearing

Inserting the insect screen shaft in the mounting device provided

### Insect screen shaft

**Dimensions diameter 23,2 mm**

Material	Extruded aluminium
----------	--------------------

### Guide rails

Material	Extruded aluminium
Details	with brush sealing on both sides and integrated stopper at the bottom

### Drive type

Drive system	via spring mechanics
Details	The built-in brake provides for a slow raising of the roller screen

### End rod

**Dimension 40x9 mm**

Material	Extruded aluminium
Details	Sealing via pulled-in brush seals, locking system; Easy-Click, incl. pull cord

### Limit sizes insect roller screen

minimum complete width	500 mm
maximum complete width	2200 mm
maximum complete height	2700 mm
maximum surface	4 m <sup>2</sup>

### Drive system

Description	via spring mechanics
Details	The built-in brake provides for a slow raising of the roller screen

### End rod

**Dimension 40x9 mm**

Material	Extruded aluminium
Details	<ul style="list-style-type: none"> <li>Sealing via retracted brush seals</li> <li>Easy-Click locking system, incl. pull cord</li> </ul>

### Insect screen fabric

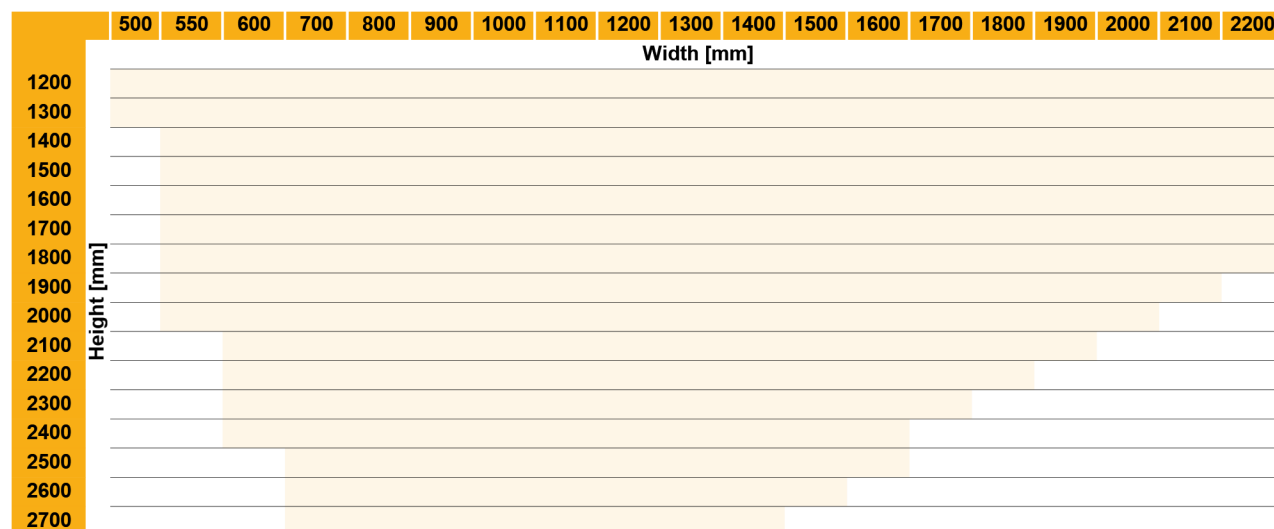
- Insect screen fabric made of fibreglass, plastic-sheathed, grey-colored
- Insect screen fabric VistaScreen made of fibreglass, plastic-coated, black colored, improved light and air permeability compared with the standard fibreglass fabric

### Colors

**powder-coated aluminium parts**

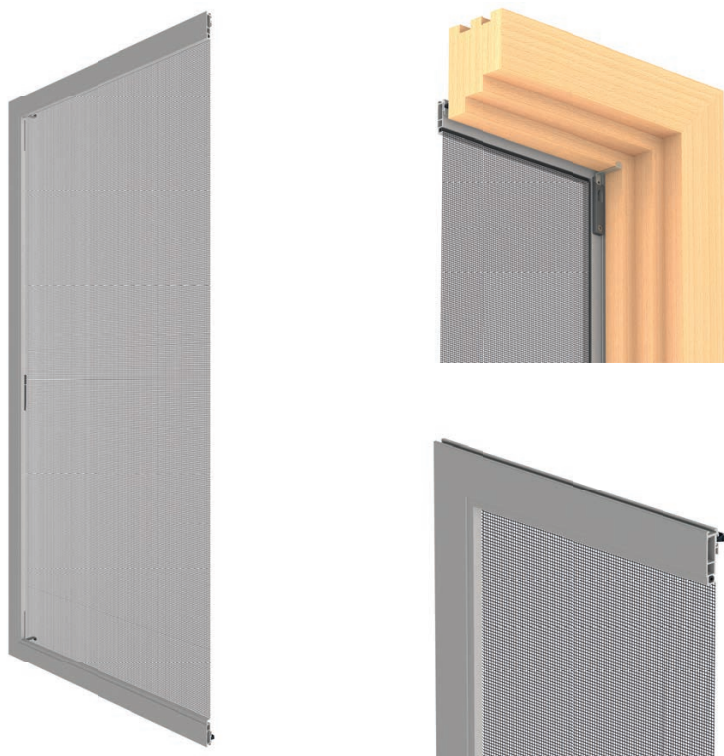
Color	in standard colors without surcharge
Special colors	as per "HELLA Color worlds" for a surcharge
Details	<ul style="list-style-type: none"> <li>End caps in black</li> </ul>

### Field of application insect roller screen





# 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

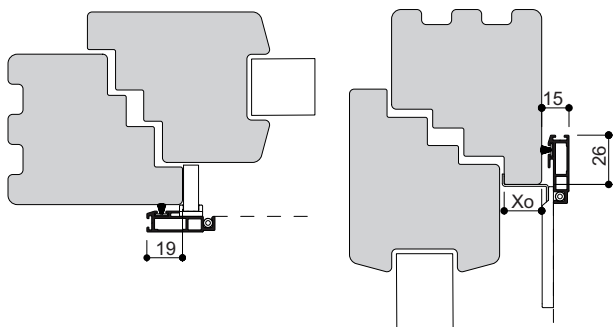
Insect screen cover	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. side length without sash-bars [mm]
Standard	300	2300*	300	2300	1500
VistaScreen	300	2300*	300	2300	1500
Aluminium	300	2000*	300	2000	1300
Petable	300	2000*	300	2000	1300
Pollen screen	300	2000*	300	2000	1000

\* 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.

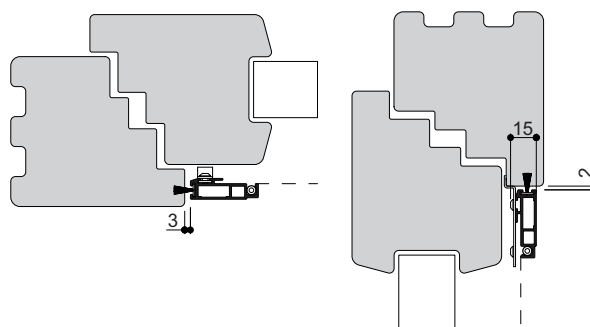


### Cross-section profile

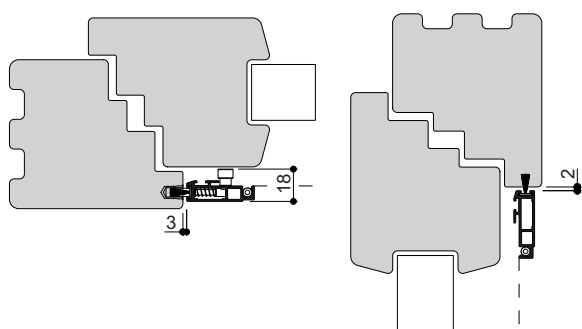
ISR A



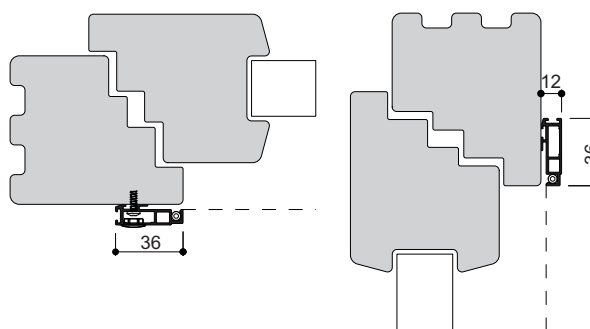
ISR B



ISR C



ISR D



#### Legend

X<sub>0</sub> 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

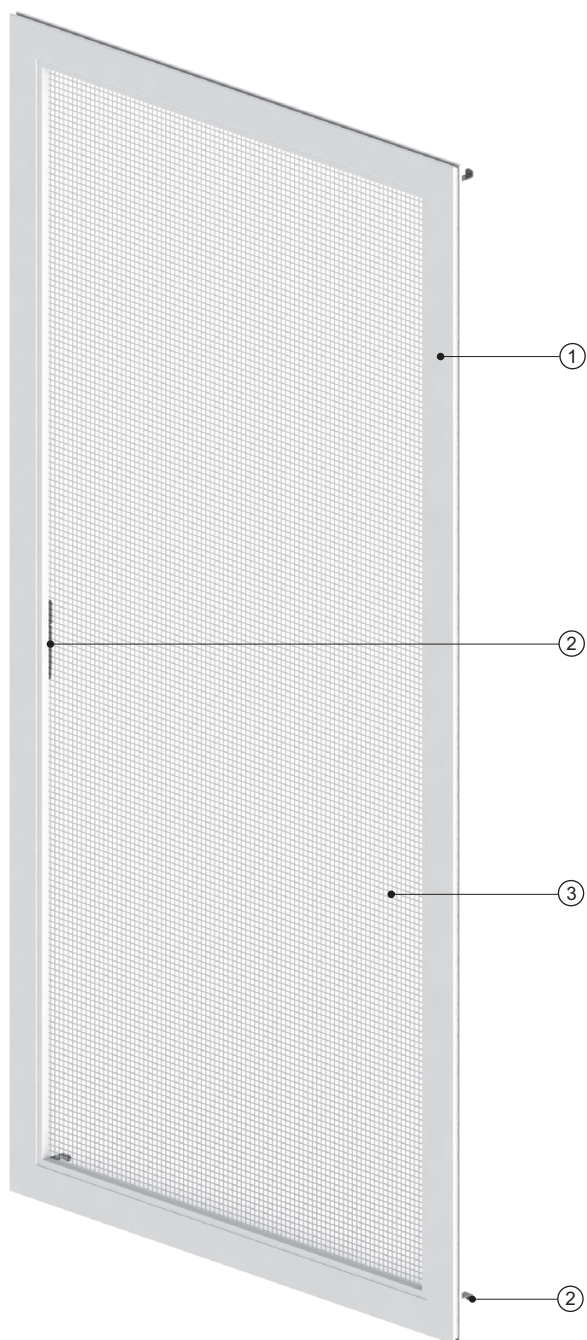
#### Supplementary equipment

- 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

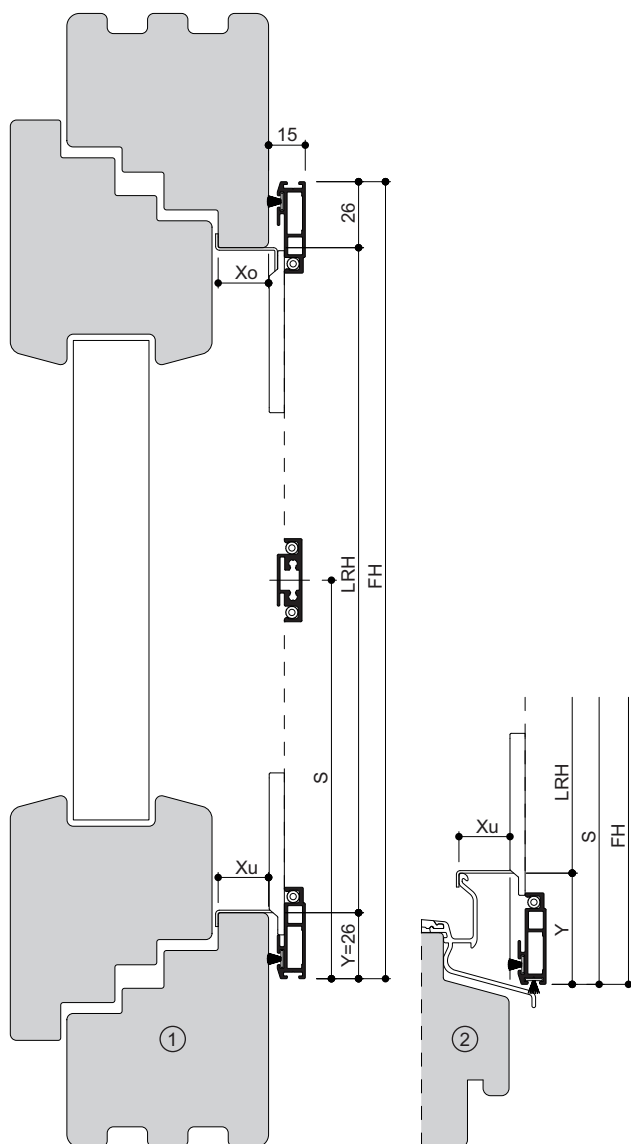
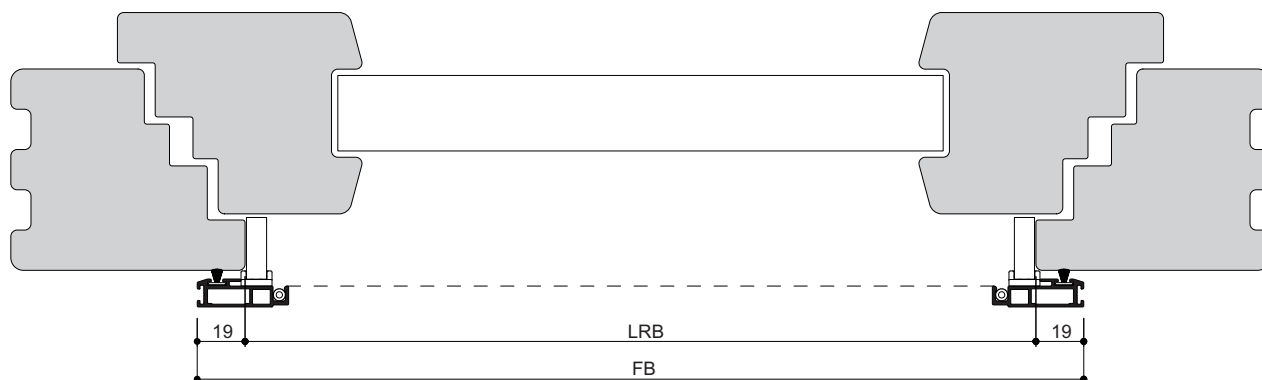
see Chapter Standard colors

### Special designs

on request

# Clamping frame

Type: ISR A - suspension bracket spring-mounted



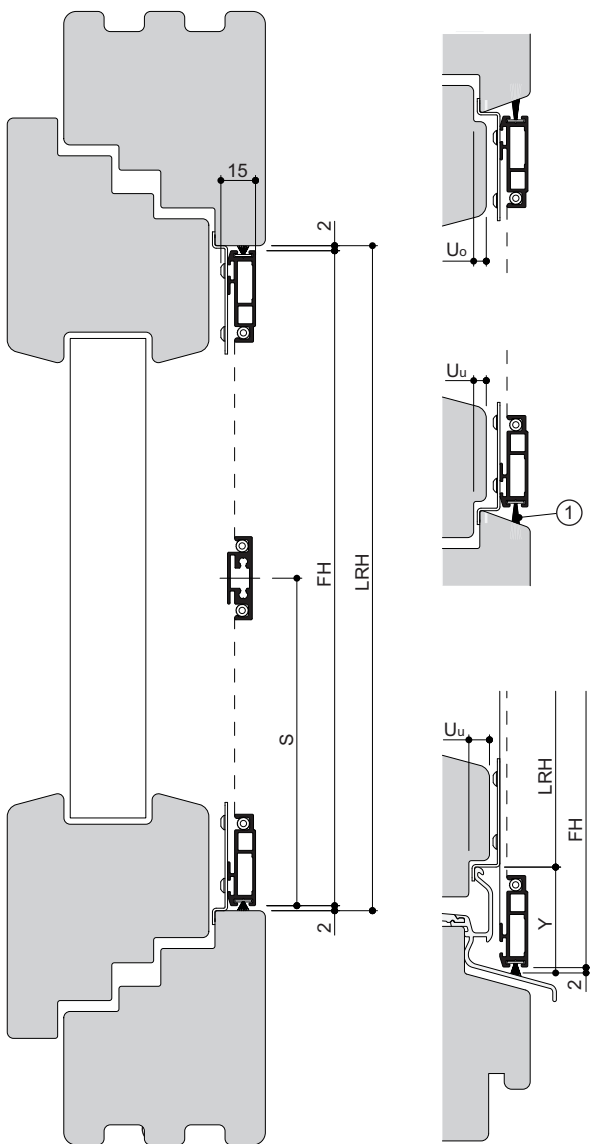
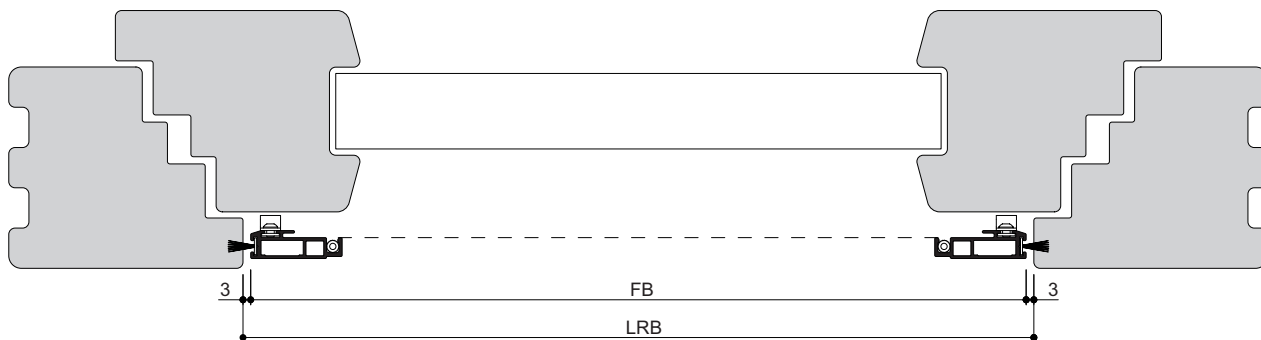
## Notes:

- 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 mm.

## 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<sub>0</sub> Thickness of the window frame rabbet at the top
- X<sub>u</sub> 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

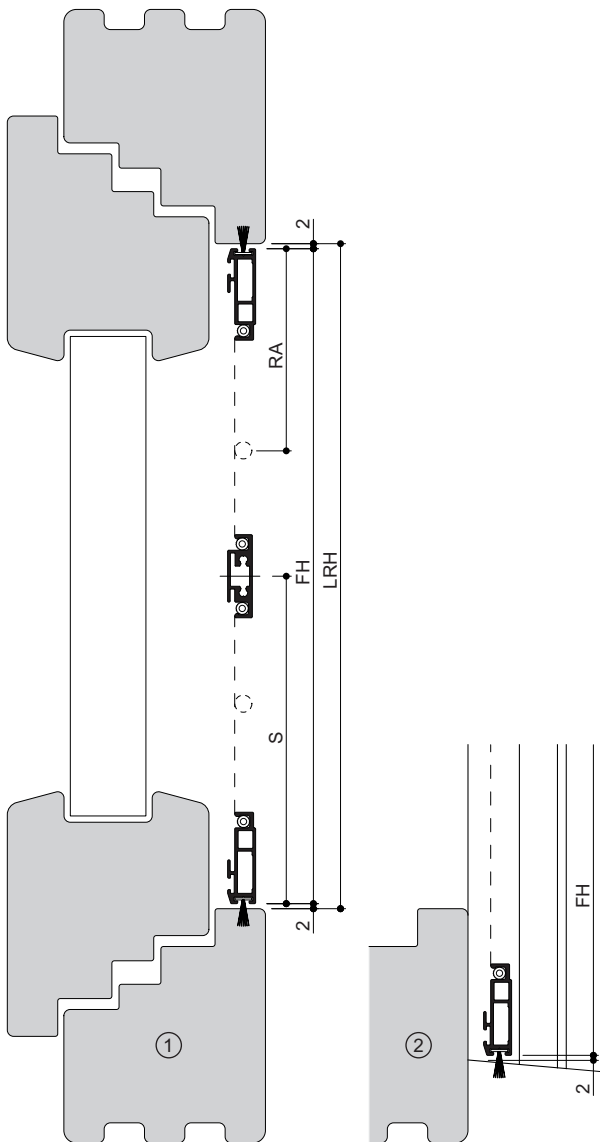
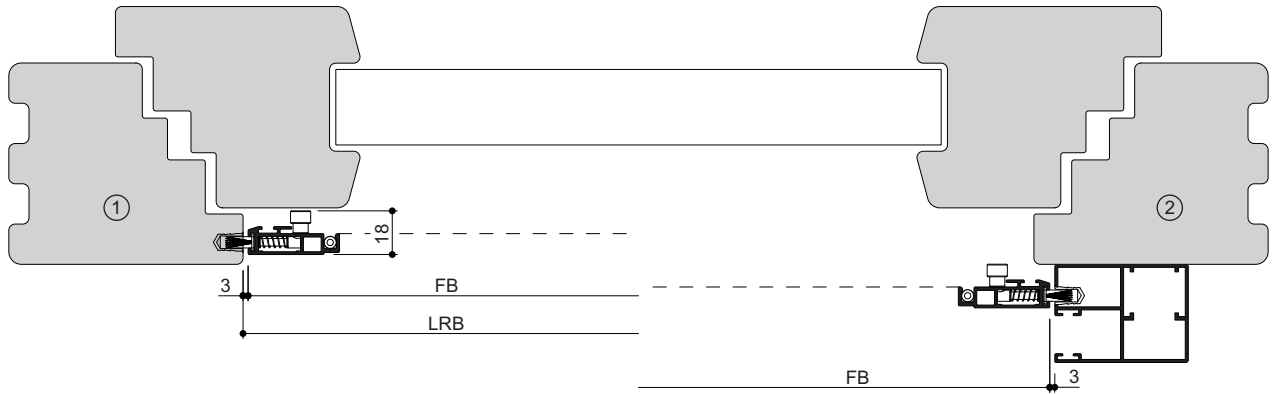
- ① Special brush (15 or 25 mm) all around for windows with a large window frame slant as well as with a large protruding window wing
- FB Complete width ( $FB = LRB - 6$ )
- FH Complete height ( $FH = LRH - 4 + Y$ )
- LRB Clear frame width of the window
- LRH Clear frame height of the window
- S Sash 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

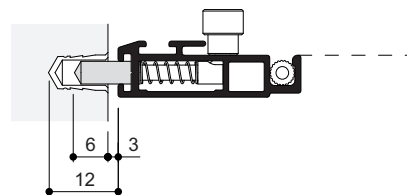
LRH Clear frame height of the window

S Sash bar position

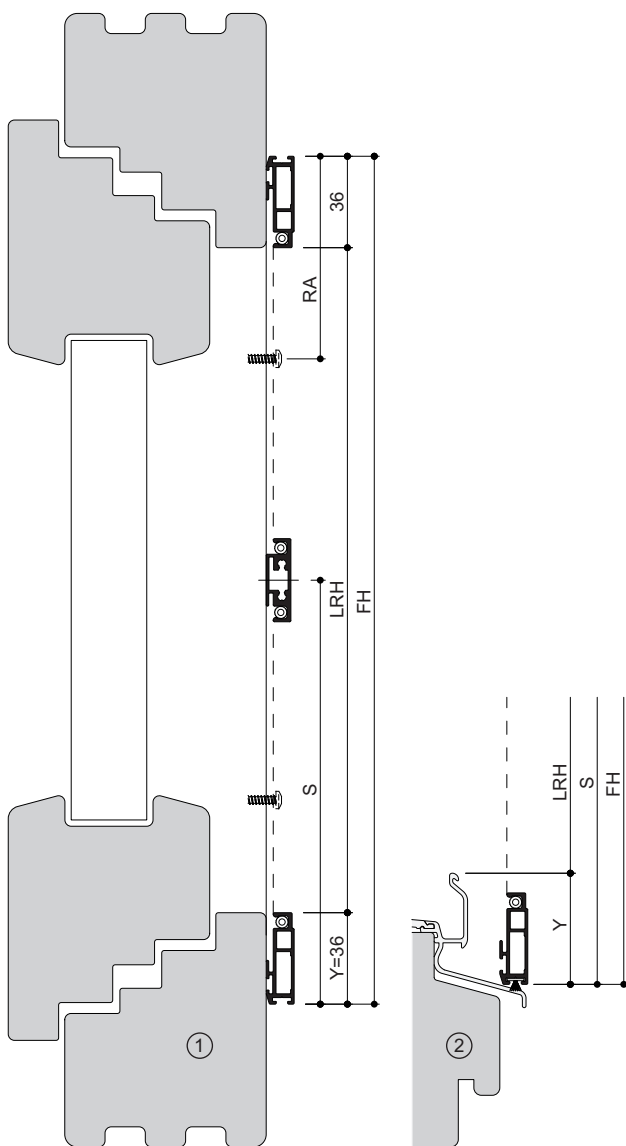
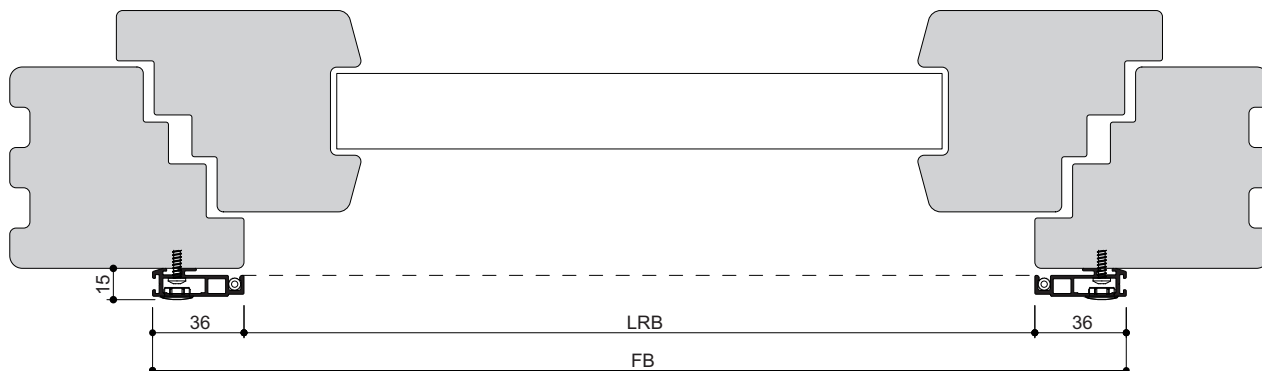
RA Distance from the edge

- 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

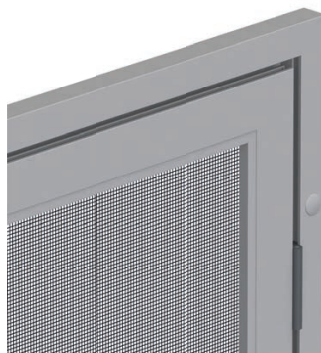
Legend

- 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.



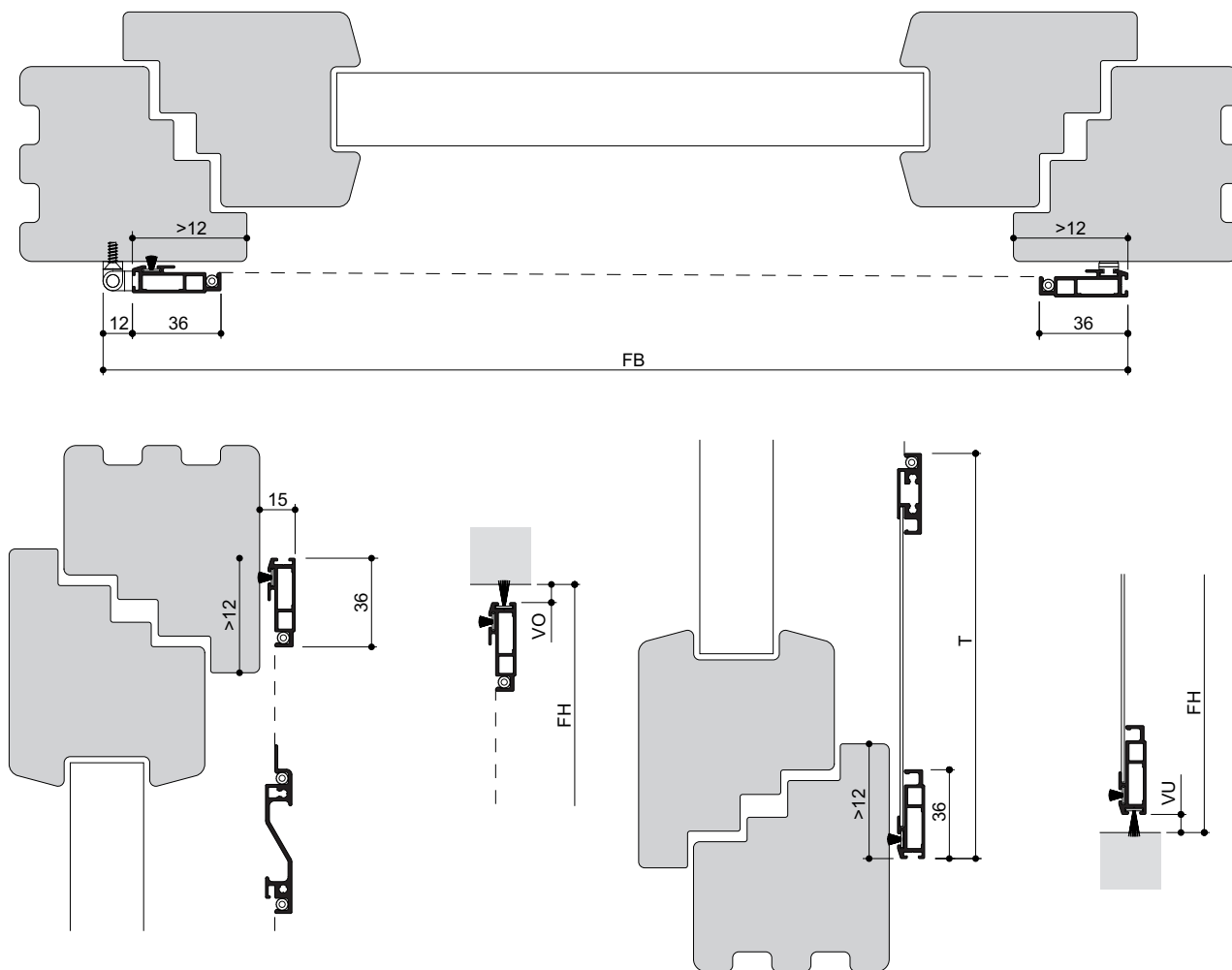
Optionally with step plate or integrated cat flap.

### Limit sizes

Type	Min. width [mm]	Max. width [mm]	Min. height [mm]	Max. height [mm]	Max. surface [m <sup>2</sup> ]
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

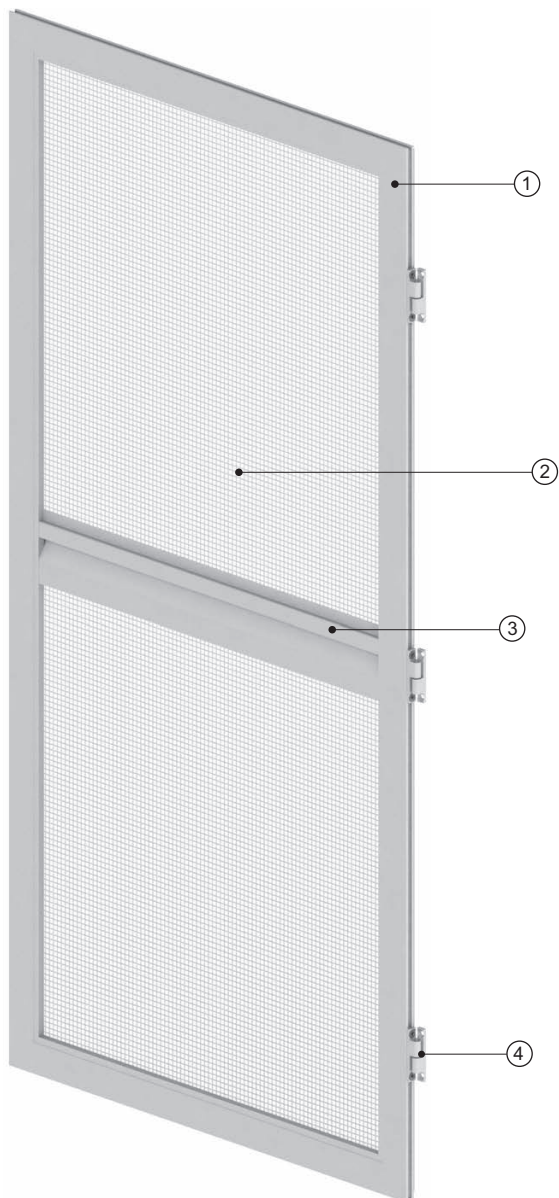
## Application

Rotating insect screen frame for seasonal use

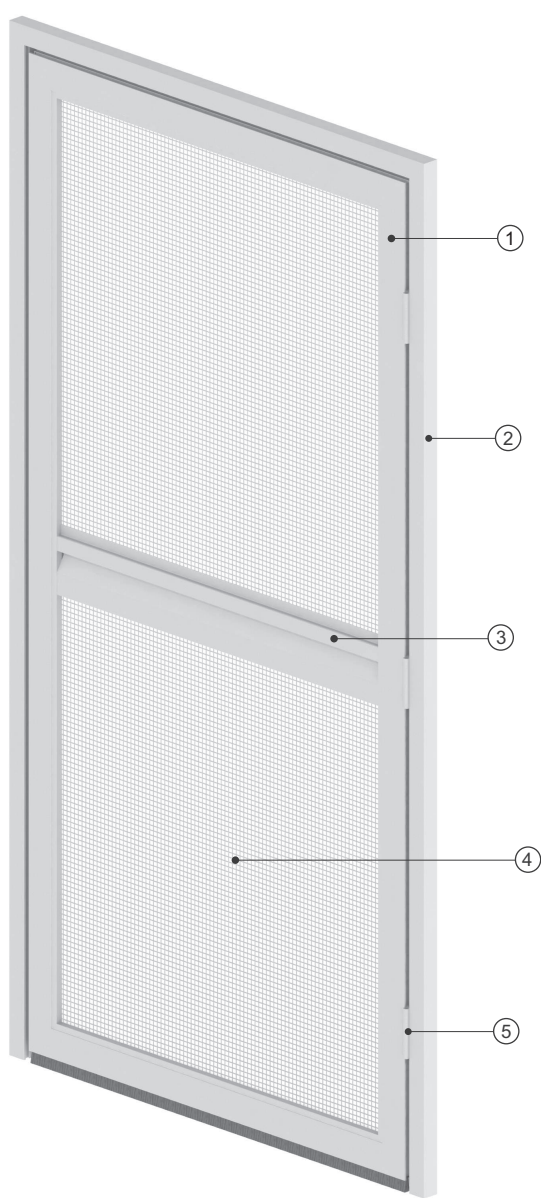
## Benefits of the product

- Insect screens
- Pollen screen (optional)

### ISD E



### ISD Z



## Field of application

All balcony and terrace doors without protruding fittings and handles

## Field of application

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

## Legend

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

## 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 and 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

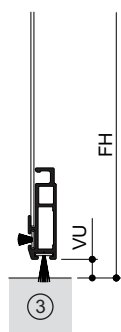
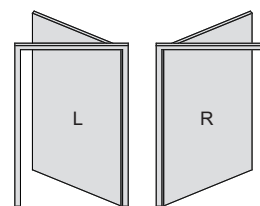
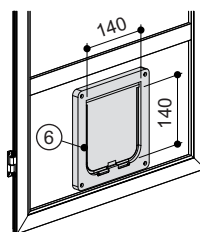
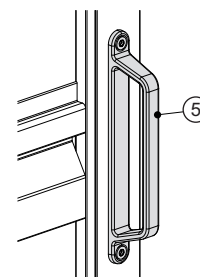
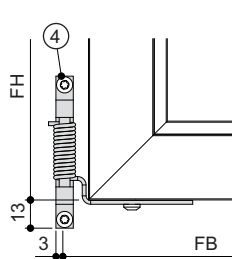
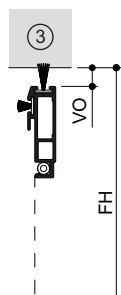
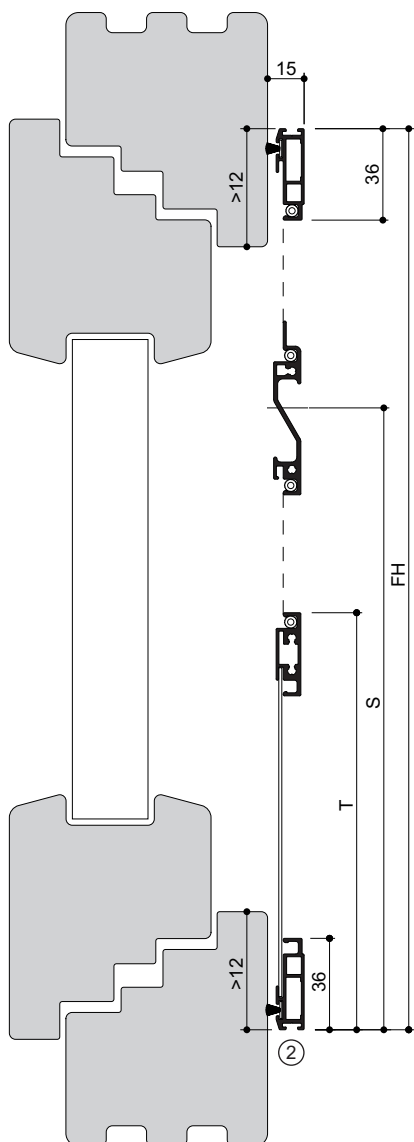
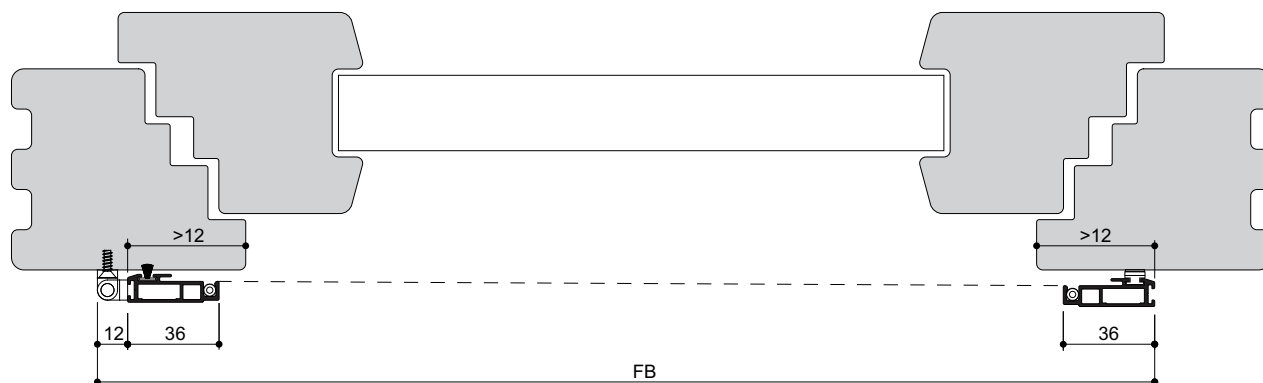
see Chapter Standard colors

### 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)

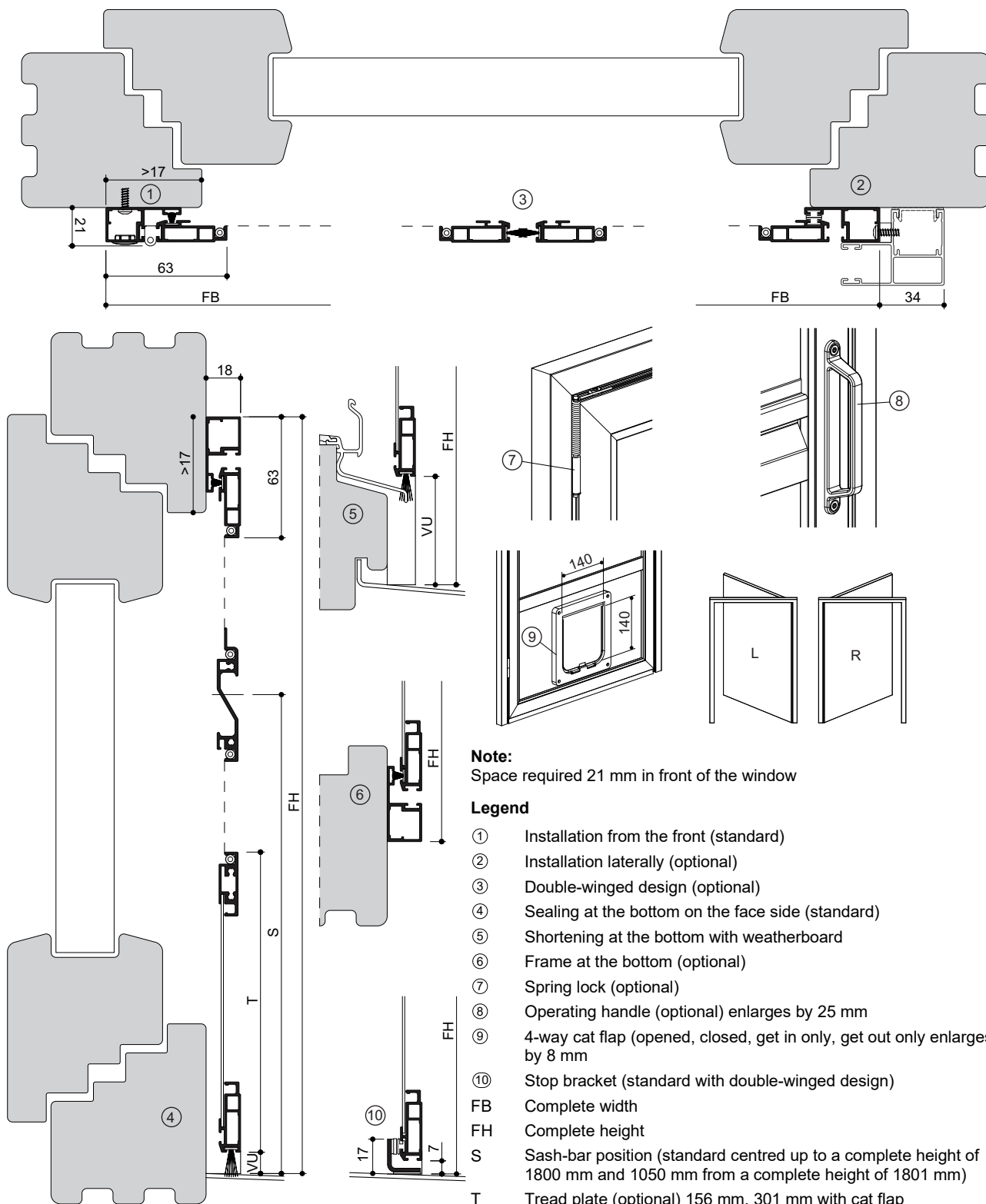
S Sash-bar position (standard centred up to a complete height of 1800 mm and 1050 mm from a complete height of 1801 mm)

T Tread plate (optional) 156 mm, 301 mm with cat flap

L Left-hand door

R Right-hand door

Type: ISD Z

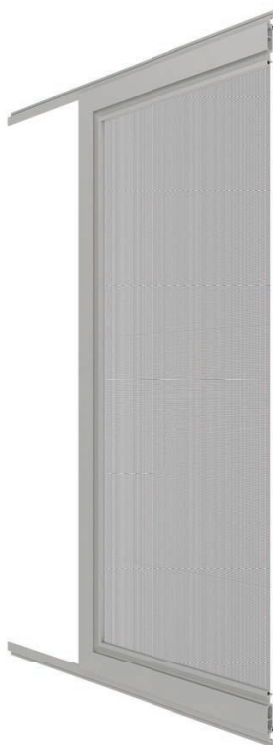


**Note:**  
Space required 21 mm in front of the window

**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



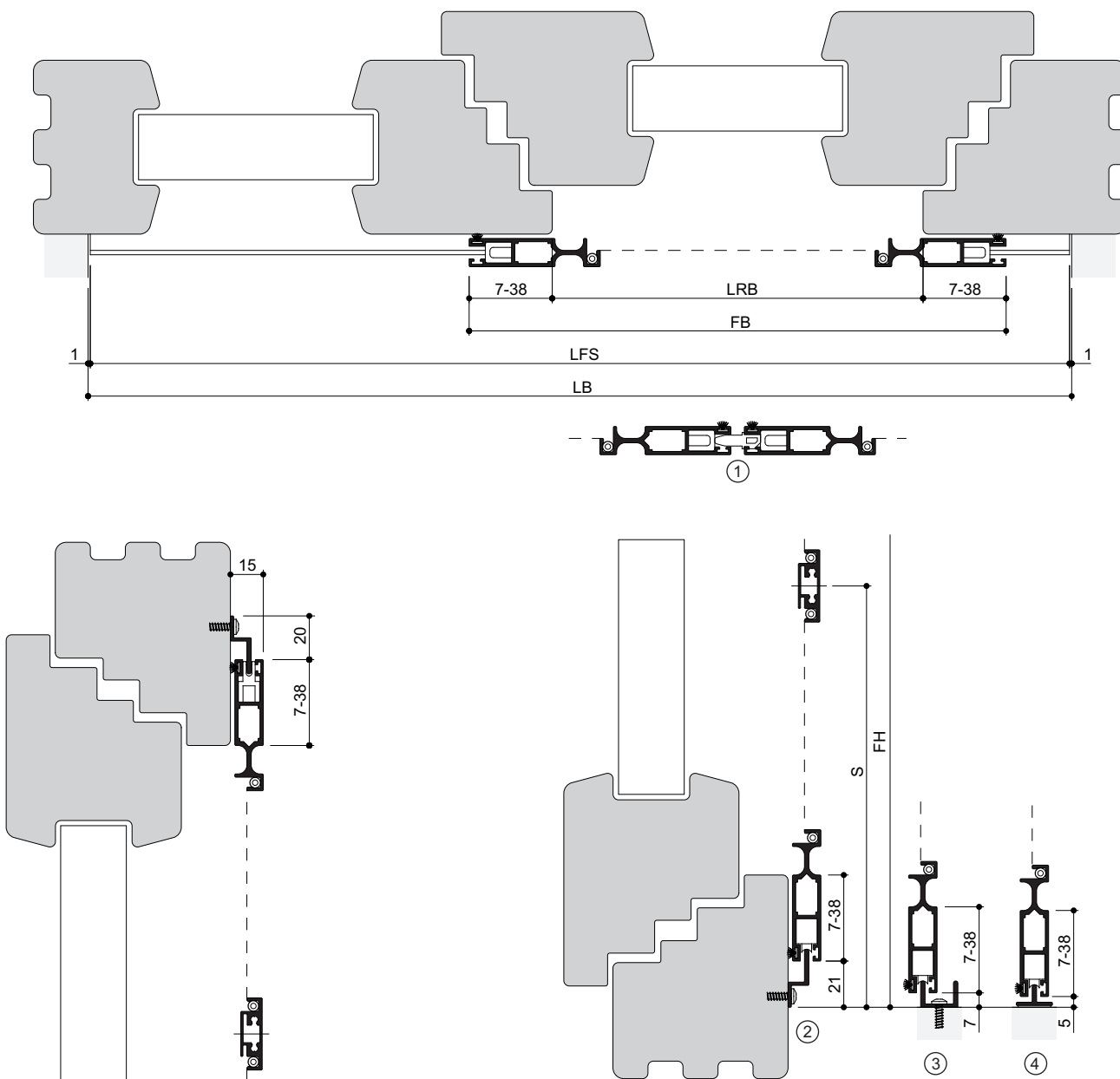
Mounting option with additional frame profile.

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]
<b>IST E</b>					
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
<b>IST Z</b>					
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

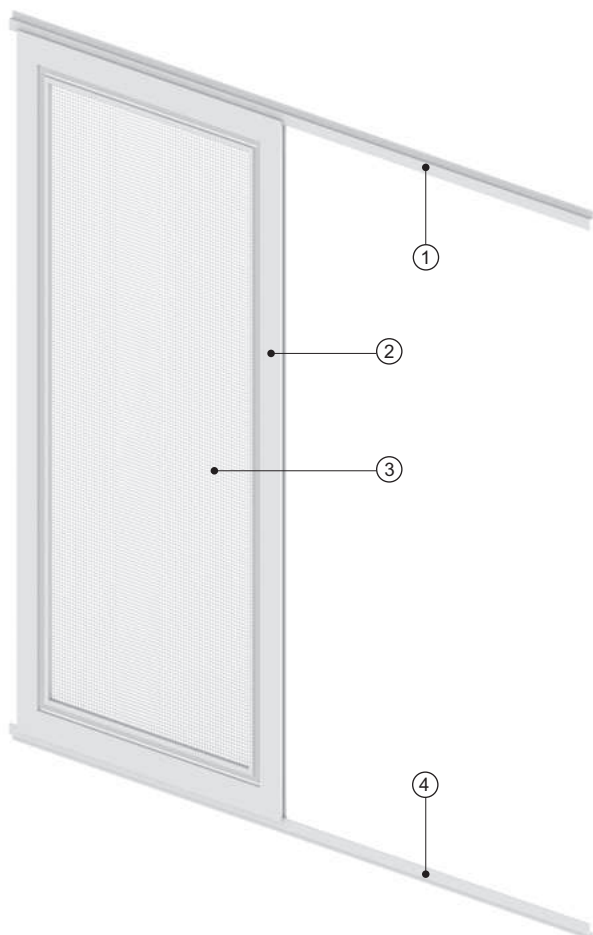
## Application

Sliding insect screen frame for seasonal use

## Benefits of the product

- Insect screens
- Pollen screen (optional)

### IST E



### IST Z



## 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)

## 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 the 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

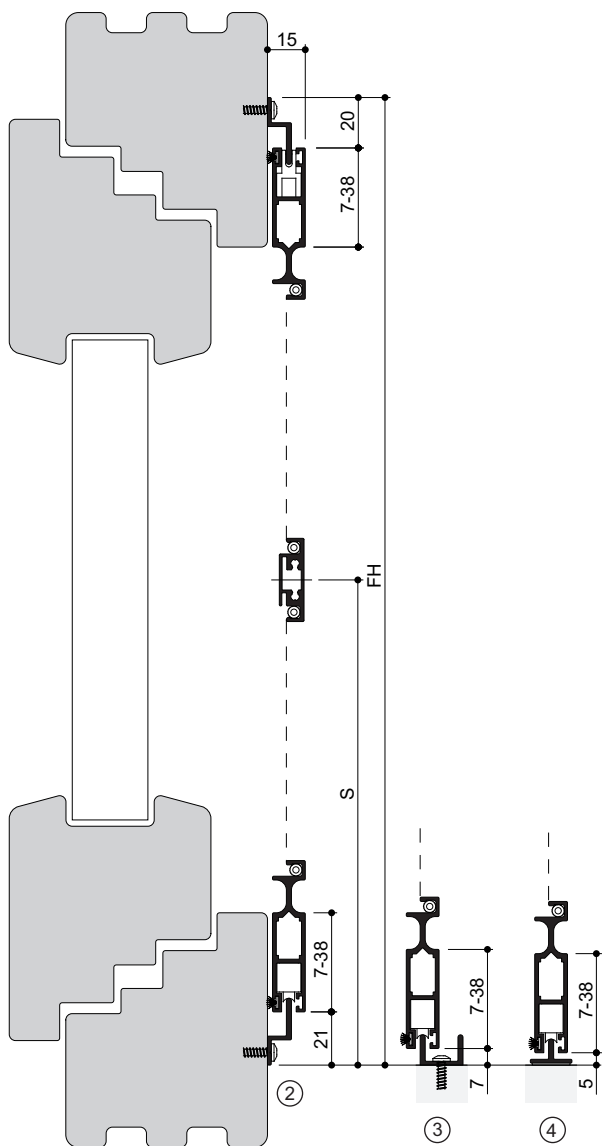
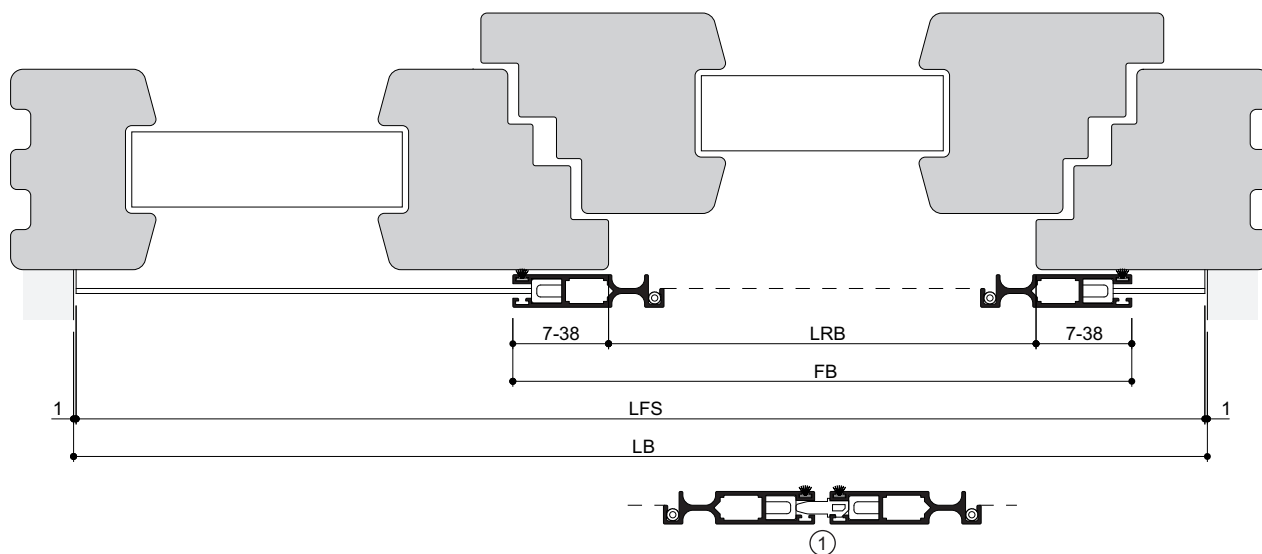
see Chapter Standard colors

### Special designs

on request

# Slide frame

Type: IST E



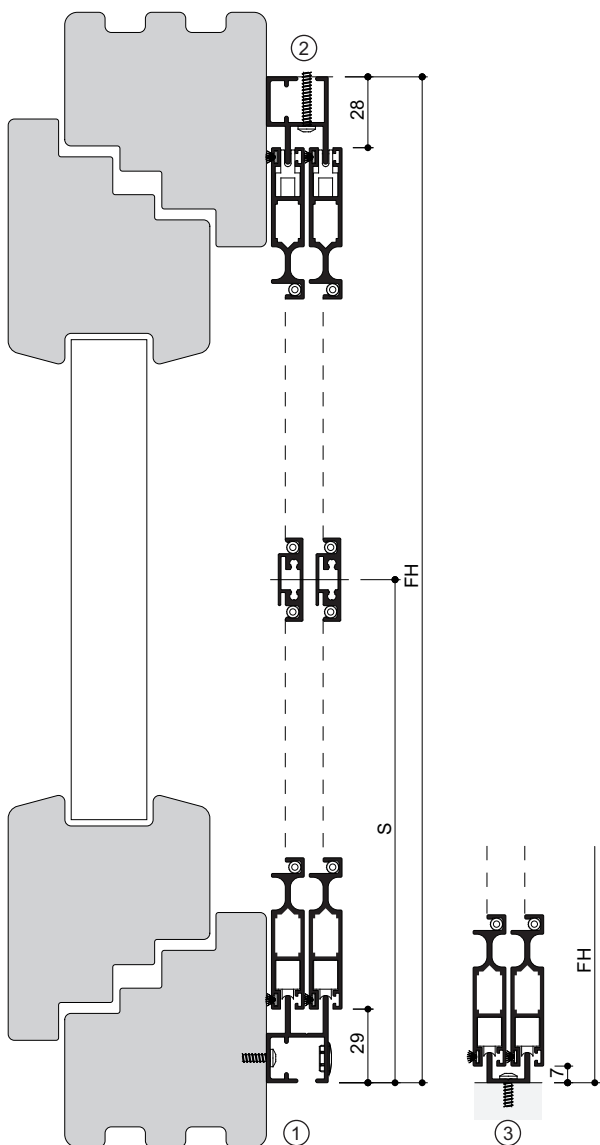
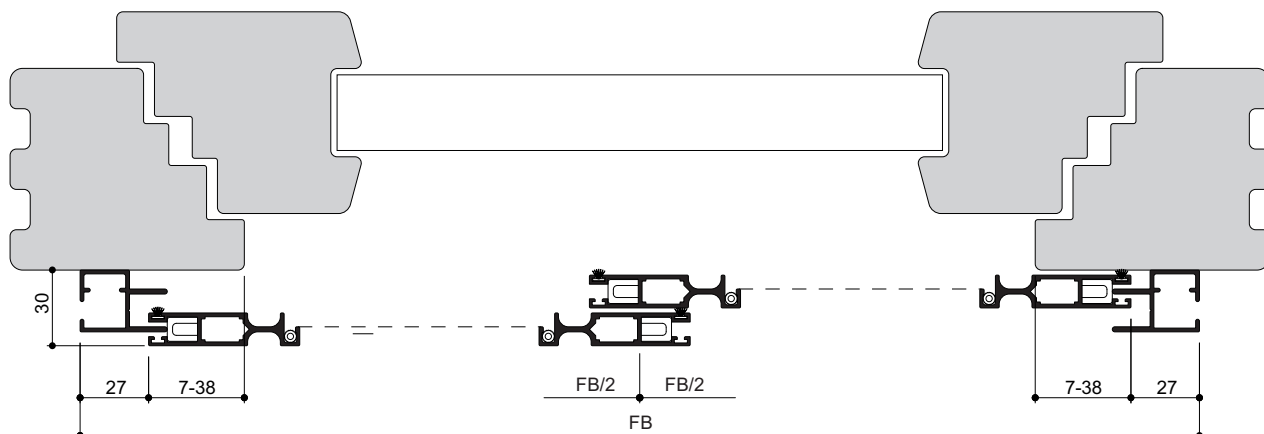
**Notes:**

- 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.

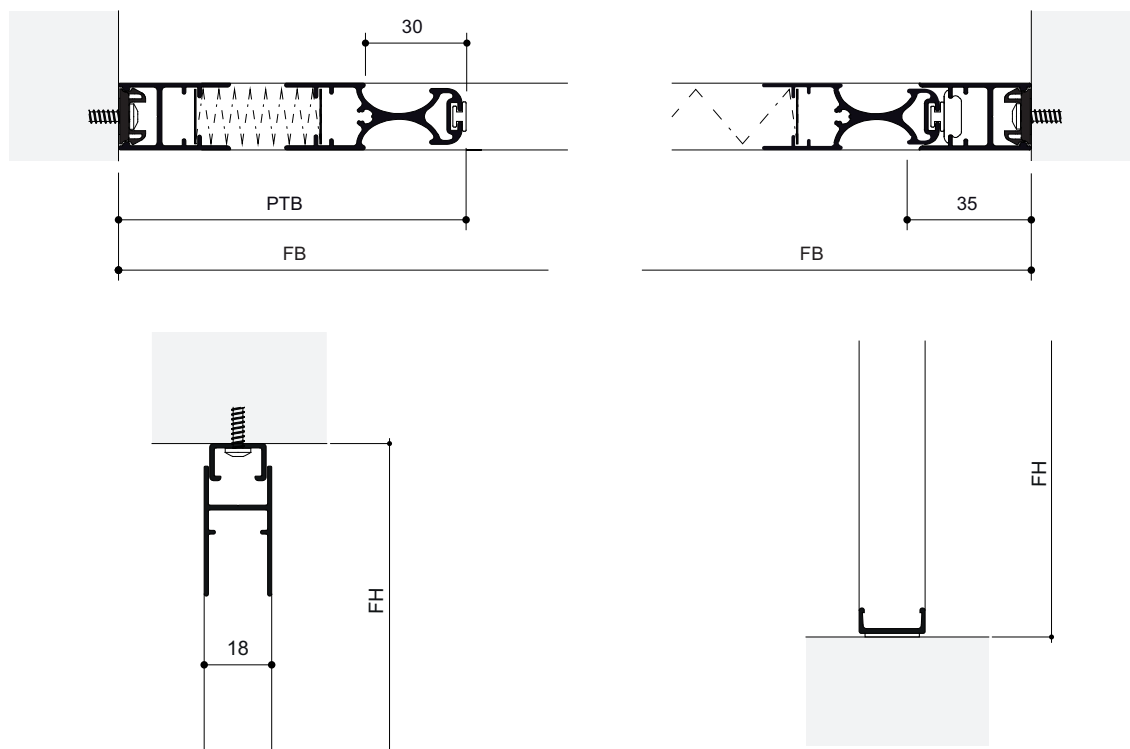
Pleated fabric enables high stability.

### 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

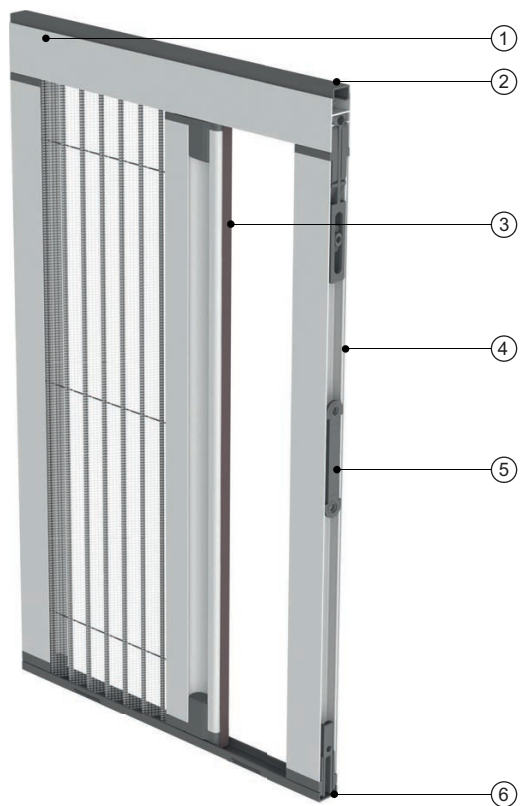
#### Supplementary equipment

- 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 be 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

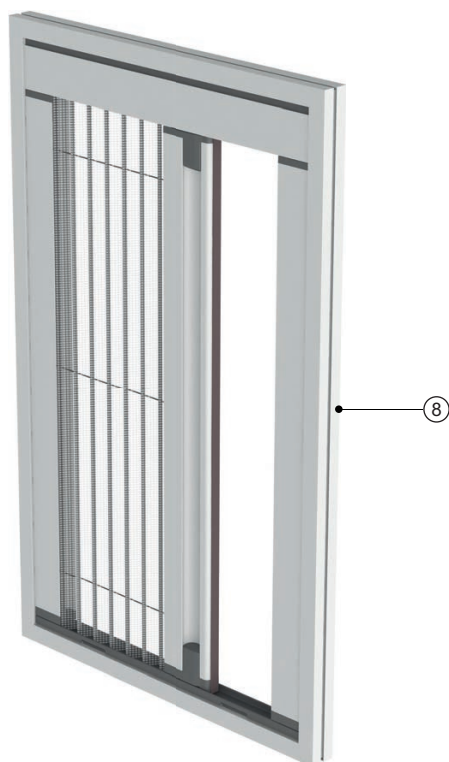
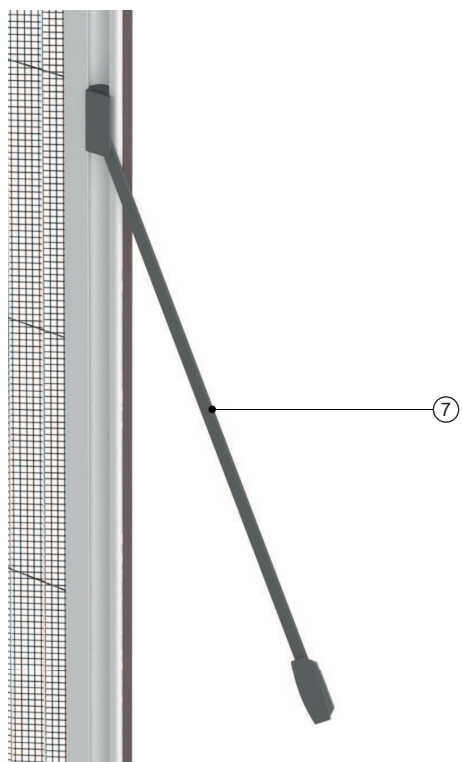
Pleated insect screen for seasonal use

## 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 stuck 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

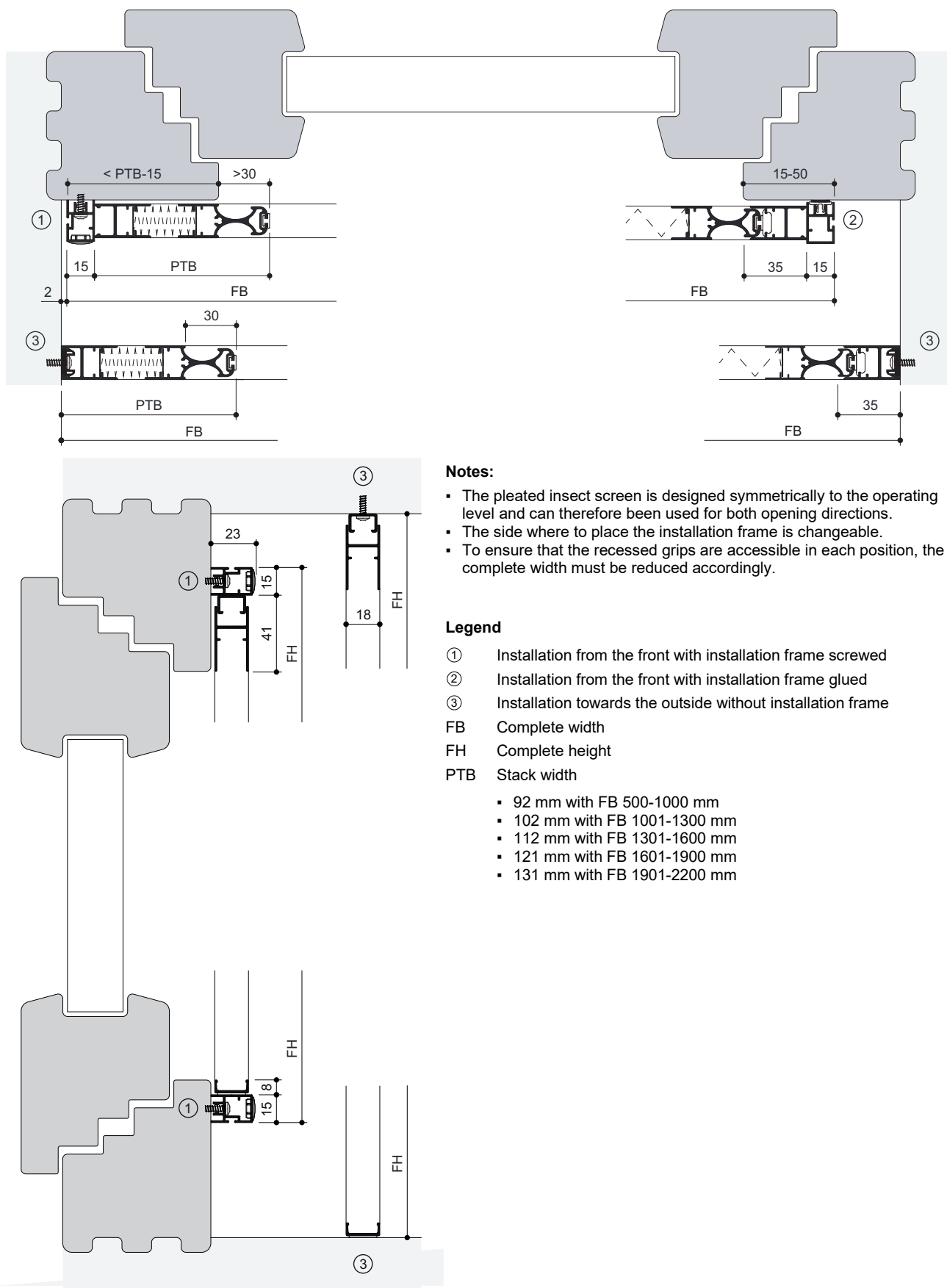
see Chapter Standard colors

### 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 be 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



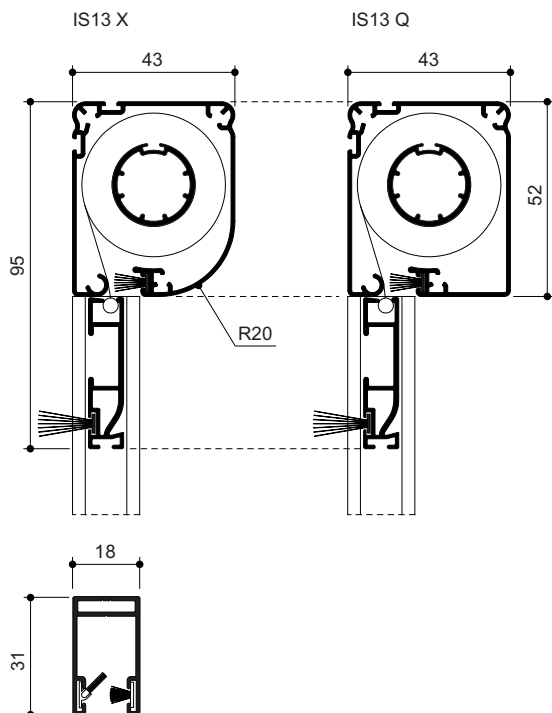
Easy-Click locking mechanism concealed in the guide rail.

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 [m <sup>2</sup> ]
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

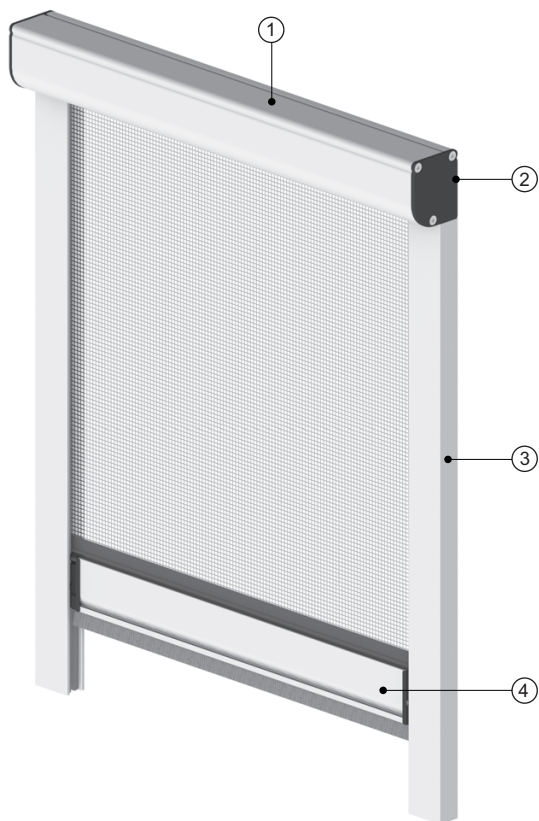
**Supplementary equipment**

- 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

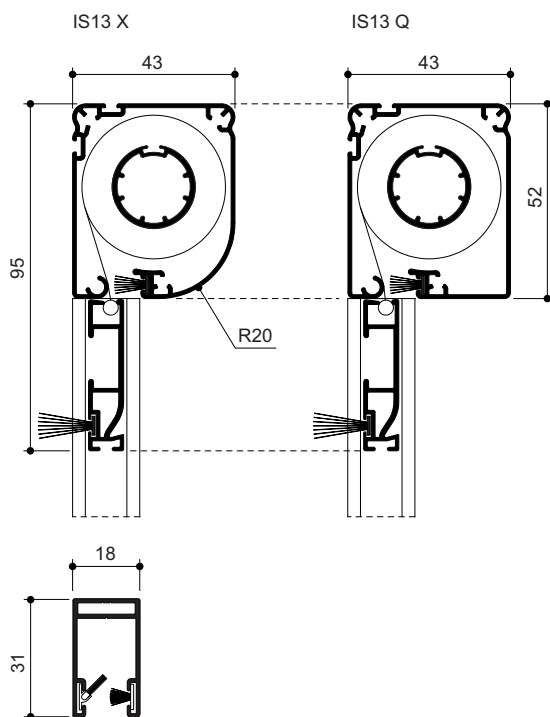
Rollable insect screen for seasonal use

## 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

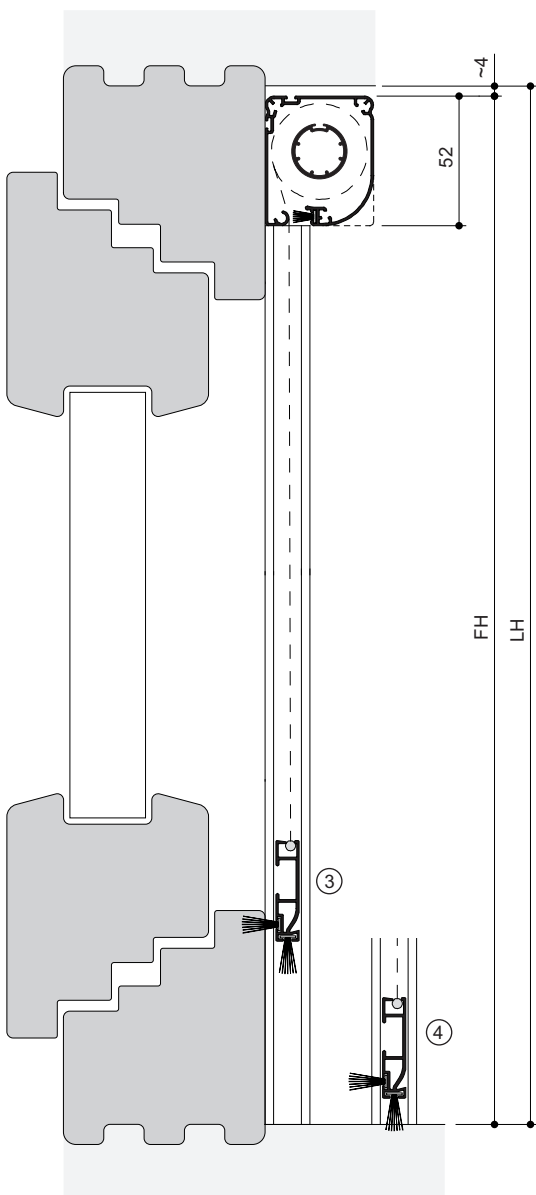
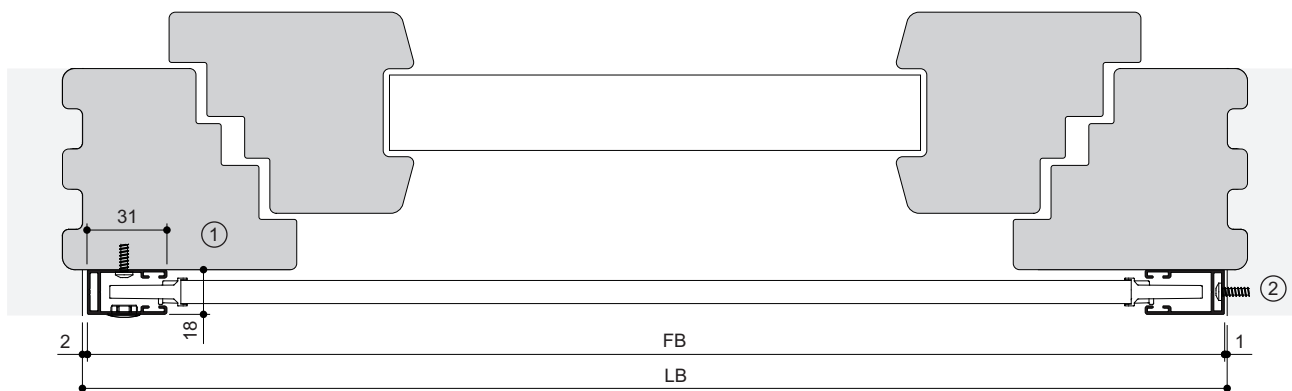
- From the front onto the window frame or lateral in the soffit

### 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



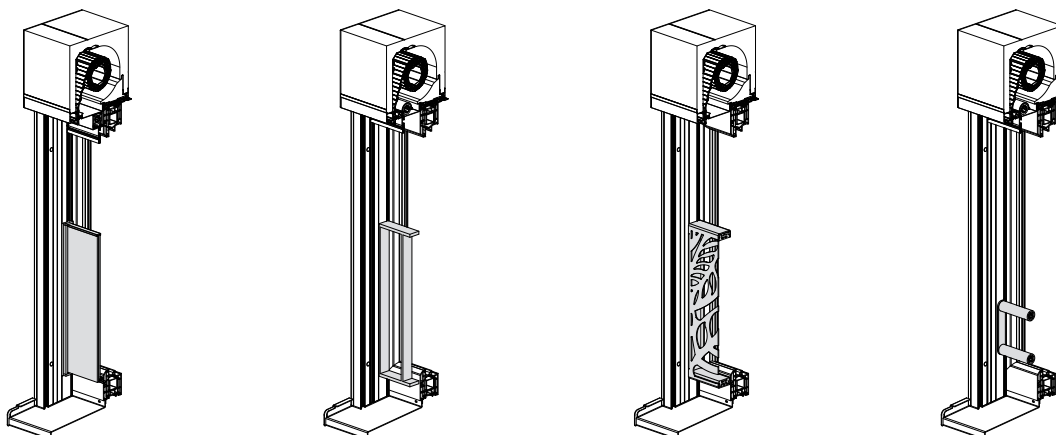
Universal rail enables lateral over-insulation of the window frame and has a very small distance to the fixing.



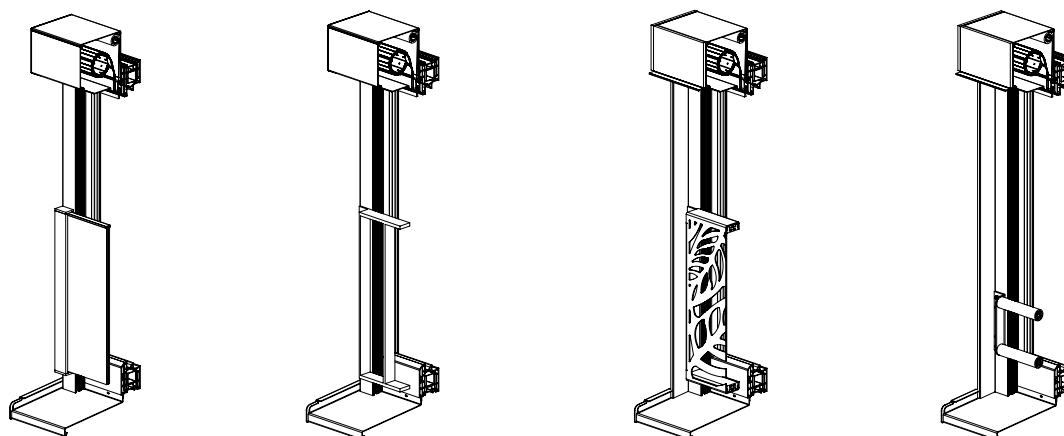
Possibility of integrating different types of fall protection, shown here with individual pattern plate.



**Combinations with TOP FOAM RvA**



**Combinations with nova front-mounted roller shutter**



**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/m<sup>2</sup> depending on glass thickness and dimensions for a permissible beam load of 0.5 kN/m - private area

	600	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	
	Glass width [mm]																								
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	4,00	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		
600	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/m<sup>2</sup> depending on glass thickness and dimensions for a permissible beam load of 1 kN/m - public area

	600	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
	Glass width [mm]																		
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 $\varnothing$ 34 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](http://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)

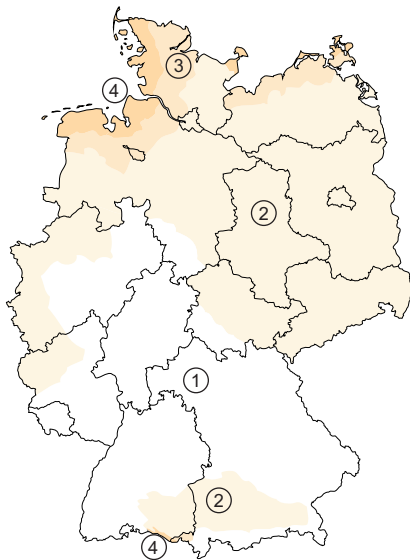
The integrated fall protection is screwed through the guide rail to the window frame, therefore the guide rail has no static function regarding the fall protection.

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](http://www.dibt.de)

Besides the above mentioned tie-bar loads, fall protection systems made of glass must withstand the occurring wind loads.

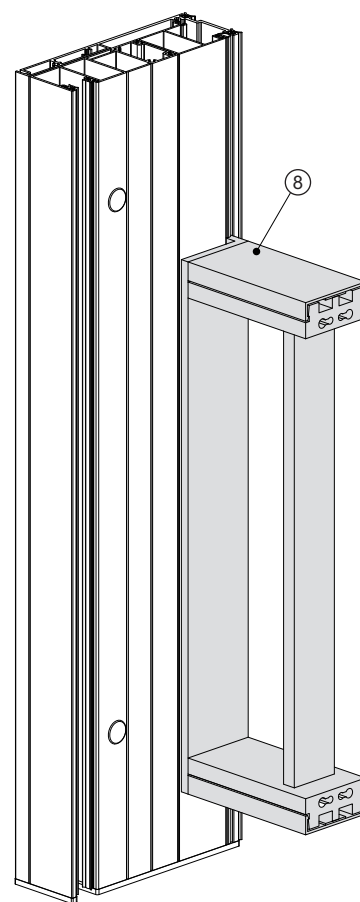
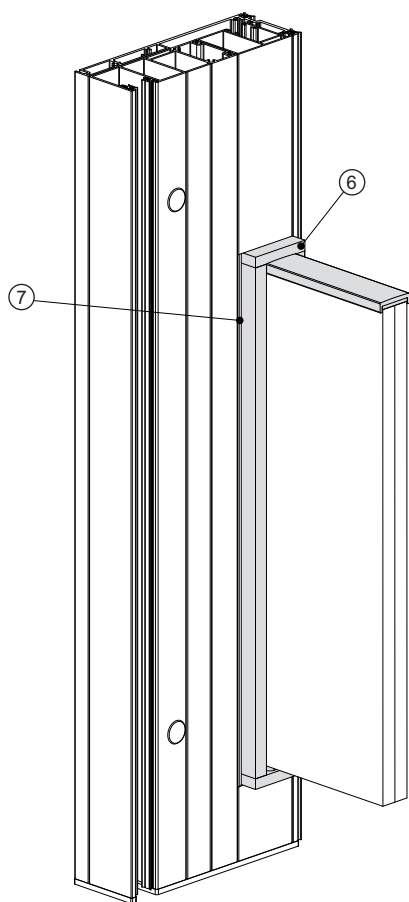
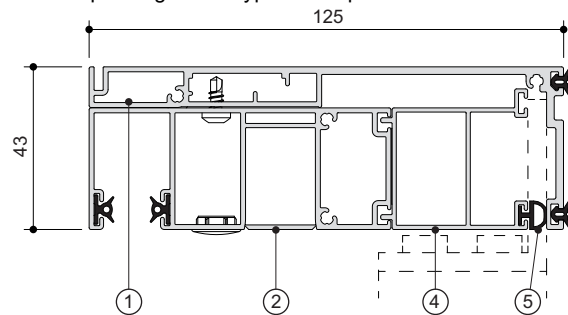
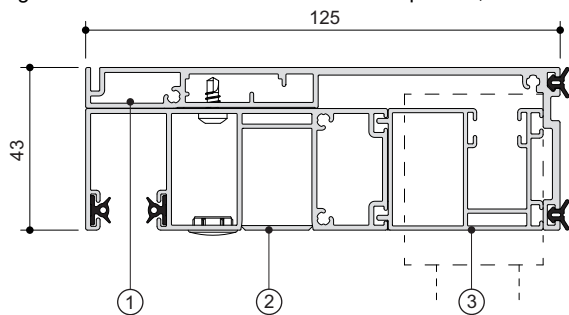
As explained in the chapter wind load, country-specific building regulations exist to determine the respective wind loads.

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/m <sup>2</sup>	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**

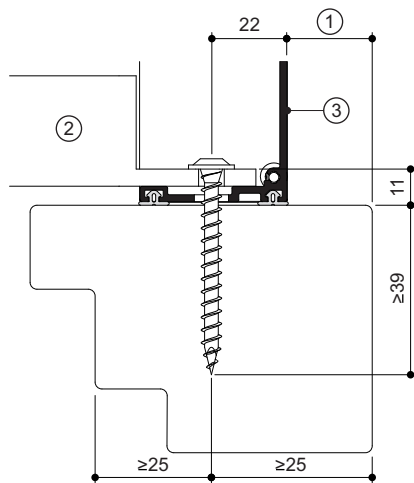
- ① Base profile 125 x 43 mm with sealing profiles on the back and lower end cap, can be plastered at the front (11 mm), if the window sill forms a suitable trough underneath
- ② Guide rail 32 x 80 mm, depending on the sun protection product roller shutter, external Venetian blind, or screen  
**Note:** 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 fall protection 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

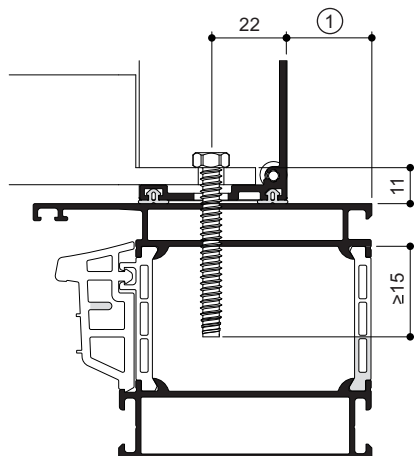
#### Notes:

- Pre-drill window with  $\varnothing 4$  mm
- Extend drill hole in aluminium tray to  $\varnothing 7$  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

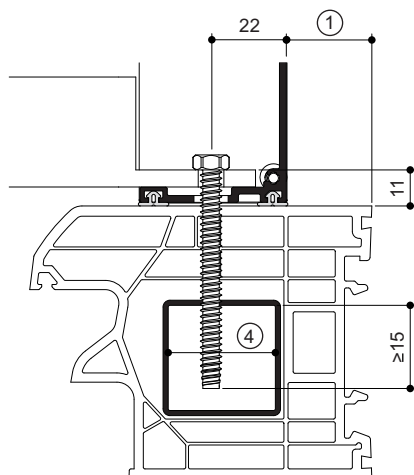
#### Notes:

- Pre-drill window with  $\varnothing 4.5$  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:

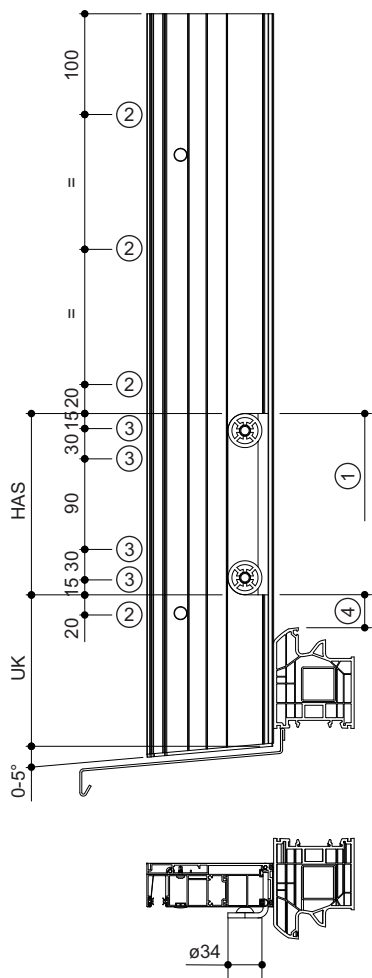
- Pre-drill window
  - $\varnothing 5$  mm with steel core thickness 1.5-2.4 mm
  - $\varnothing 5,3$  mm with steel core thickness 2.5-5.3 mm
  - Extend drill hole in aluminium tray with  $\varnothing 7$  mm
- Steel core thickness 1.5- 5.3mm, the steel core must not have any opening or welded joint 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

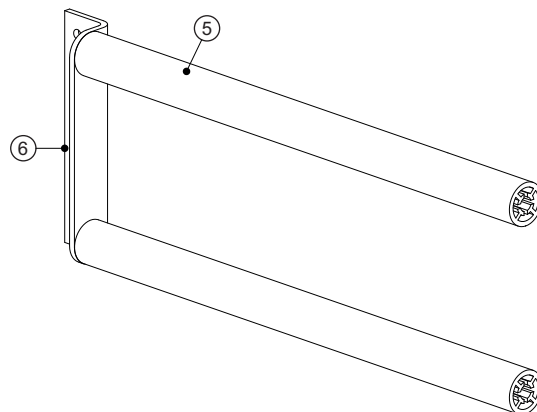


#### Design

- 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

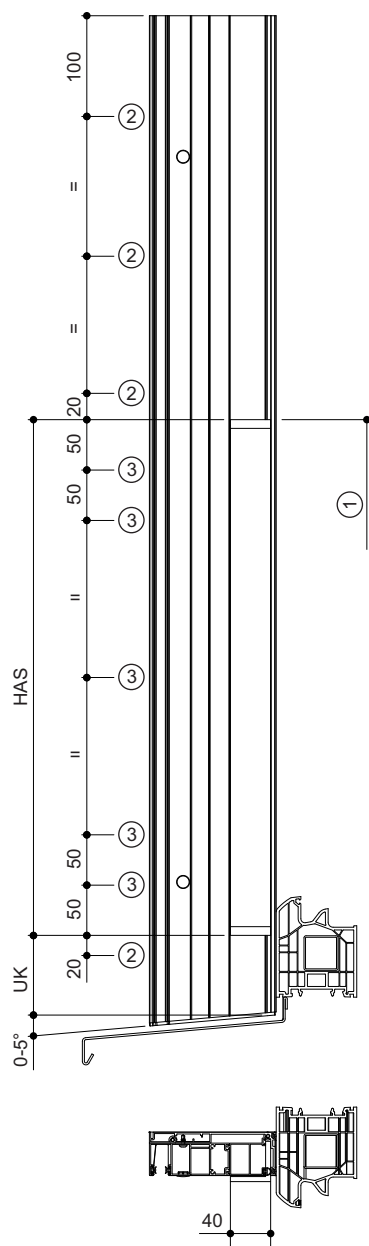
#### Legend

- 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  $\varnothing 5$
- ③ Fastening point fall protection  $\varnothing 10$
- ④ Distance beneath maximal 112 mm
- ⑤  $\varnothing 34$  mm round tubes extruded
- ⑥ 45x40x5 mm mounting bracket canted with 4 mounting holes  $\varnothing 7.5$



# Fall protection

Type: Steel grid



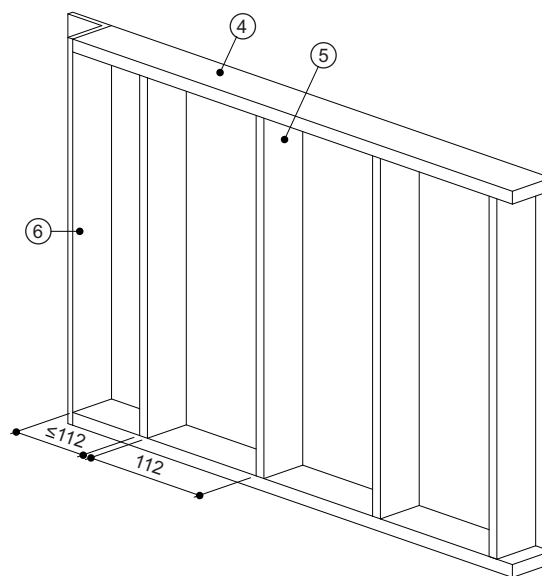
## Design

- 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

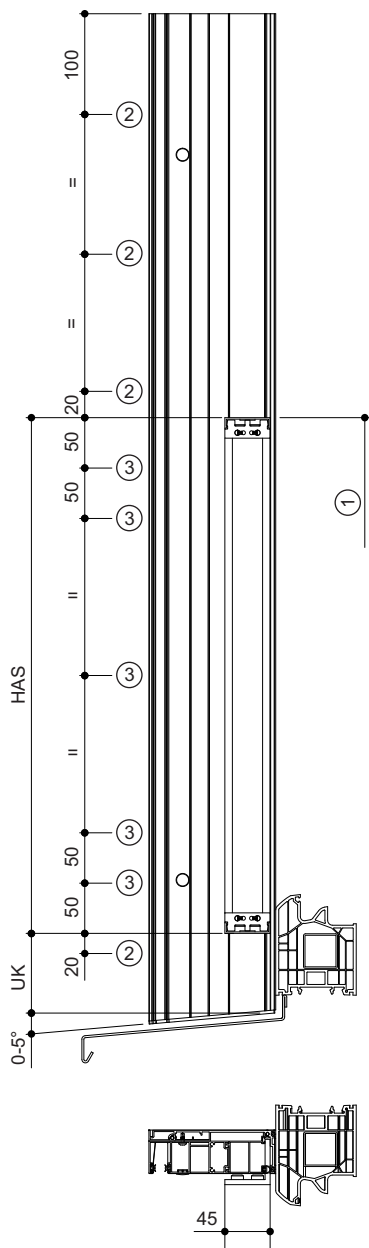
## Legend

- 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  $\varnothing 5$   
 ③ Fastening point fall protection  $\varnothing 10$   
 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  $\varnothing 7.5$

The lower edge of the grid may only be positioned max. 120 mm above the window frame.



Type: Aluminium grid



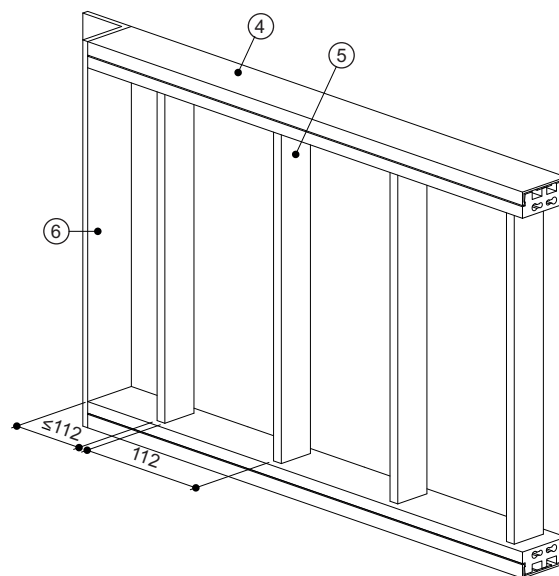
Design

- 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

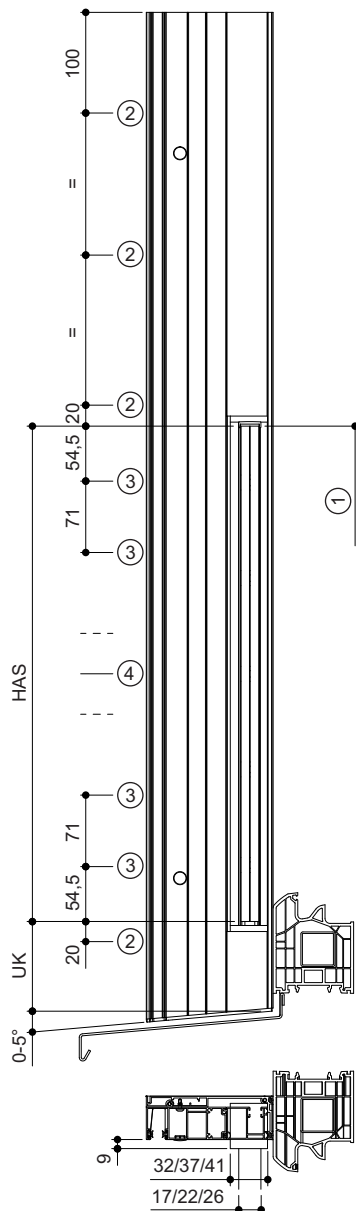
- HAS Height fall protection 500 500-1200mm
- UK Position of lower edge of the fall protection 40-200 mm
- ① Parapet height as per State Building Code
- ② Fastening point guide rail  $\varnothing 5$
- ③ Fastening point fall protection  $\varnothing 10$
- ④ 45x20 mm tie-bars, 2-part, extruded
- ⑤ 30x8 mm infill, extruded
- ⑥ 45x45x5 mm mounting bracket laterally with 5 mounting holes  $\varnothing 7.5$

The lower edge of the grid may only be positioned max. 120 mm above the window frame.



# Fall protection

## Type: Glass fall protection

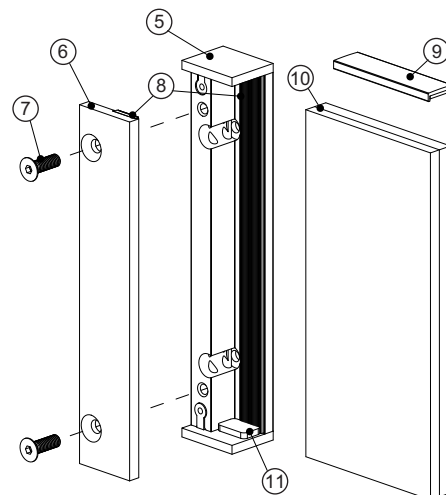


Integrable thickness of the laminated safety glass VSG

- 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

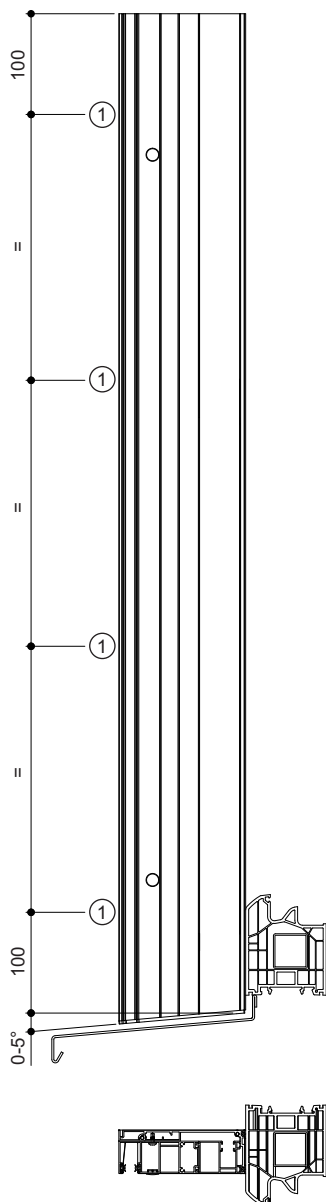
- HAS** Height of the fall protection (glass height)
- 700-1200 mm with VSG 12
  - 500-1200 mm with VSG 16 and VSG 20
- UK** Position of lower edge of the fall protection 40-200 mm
- ① Parapet height as per State Building Code
  - ② Fastening point guide rail  $\varnothing 5$
  - ③ Fastening point fall protection  $\varnothing 10$
  - ④ Fastening point fall protection  $\varnothing 10$ 
    - 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  $\varnothing 7.5$
  - 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



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.

**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

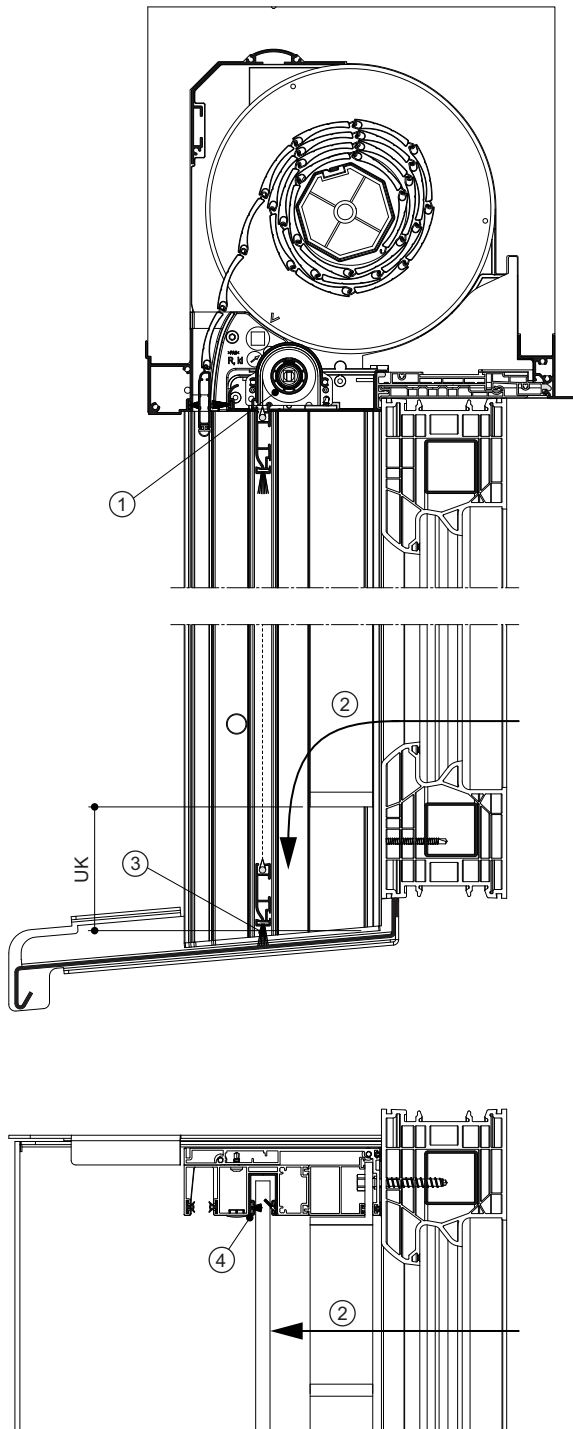
## Type: Insect roller screen in front of the fall protection grid / fall protection bars

The optional insect roller screen is positioned in front of the safety grid or the safety rods.

The insect protection guide rail is located in the rip channel of the corresponding 80x32 guide rail.

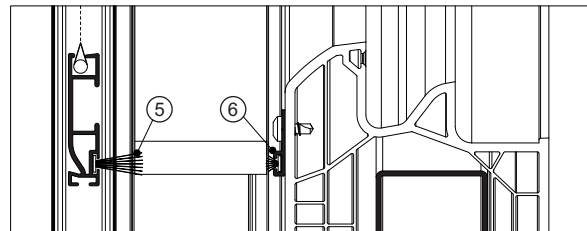
The roller screen is integrated in the box of the respective sun protection product, as shown here as an example with TOP FOAM RvA.

If the outdoor blind version is provided with an insect screen, the sealing is done over the holm of the fall protection grid towards the window (see image below). The dimension UK has to be therefore selected in such a way, that the holm is located in the area of the window frame.

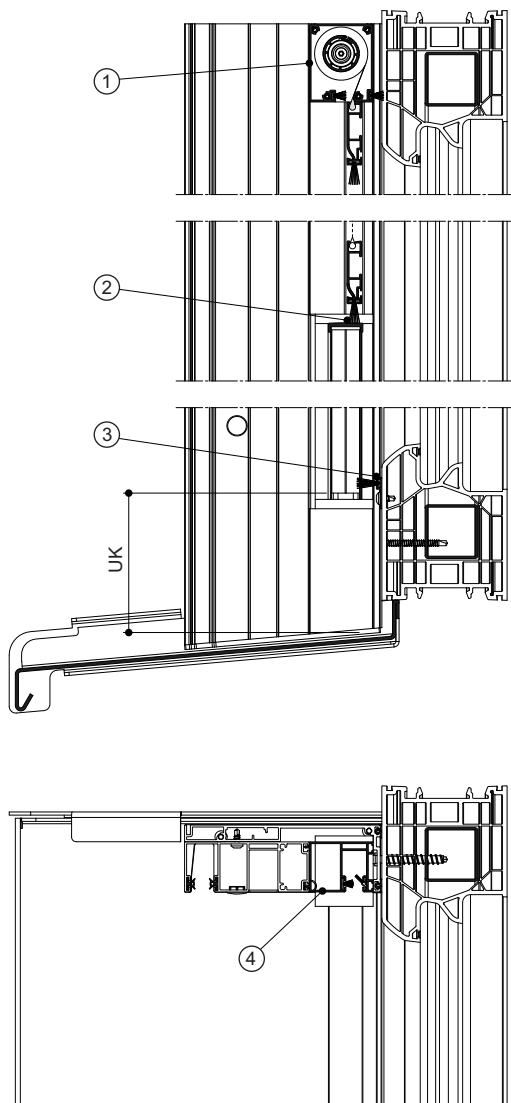


### Legend

- ① Insect roller blind integrated
- ② Operation by fall protection
- ③ Sealing towards the bottom side with roller shutter
- ④ Insect screen guide rail 27x18 mm
- ⑤ Sealing for holm at outdoor blind
- ⑥ Brush sealing profile 20 mm for sealing between window and holm
- UK Position of lower edge of the fall protection 40-200 mm



**Type: Insect roller screen above the glass**



In case of a fall protection made of glass, the optional insect roller screen is positioned above the glass; here the cassette must also be provided in the area of the guide rail.

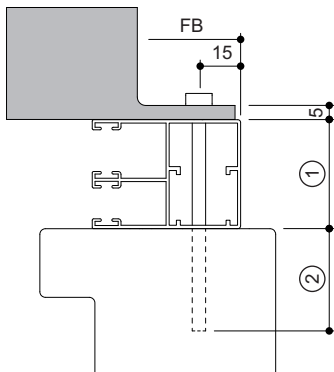
To ensure a sealing between the glass fall protection and the lower edge of the window frame, the dimension UK must be selected in such a way, that the lower edge of the glass is in the area of the window frame.

**Legend**

- ① Insect roller screen placed onto the guide rail
- ② Sealing onto the glass edge protection
- ③ Brush holding profile 20 mm for sealing between window and glass fall protection
- ④ Guide rail for insect screen
- UK Position of lower edge of the fall protection 40-200 mm

# Fall protection

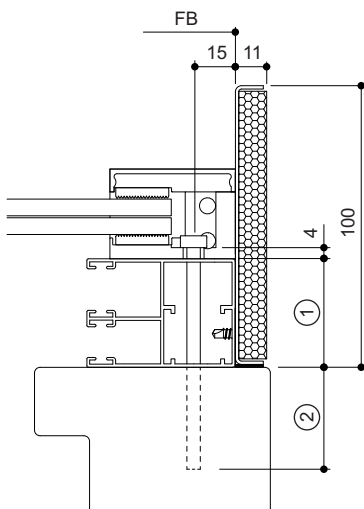
## Front-mounted roller shutter



The fall protection is screwed into the window frame through the guide rail of the front-mounted roller shutter (= pressure-stable distance).

- ① Guide rail depth (22 or 39mm)
- ② Screw-in depth and position (e.g. to reach the steel core in the plastic window) see mounting types

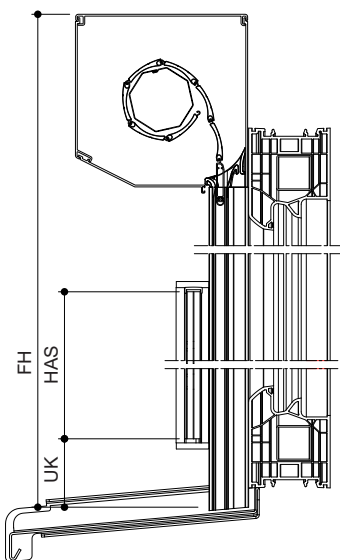
FB Complete width  
 FH Complete height  
 HAS Height fall protection  
 UK Lower edge of fall protection 60-120



In case of plaster base elements, the guide rail is fitted with a U-shaped plaster profile. This serves in setting the plaster bead, covers the area outside the fall protection and forms the driving rain-proof connection to the window. The empty space inside the plaster profile is filled with EPS 30. To level out the step between the guide rail and the box, a 10mm wide EPS insulation board is also attached to the side of the box.

### Note:

The complete width still refers to the outer edge of the guide rail, which is why the roller shutter must be ordered at least 22mm narrower than the window frame.



The roller shutter guide rail is equipped with corresponding through boreholes to match the fall protection ordered. The guide rail is screwed to 4 fastening points, whereby the lower two are not visibly placed behind the fall protection.

### Note:

To prevent possible heat build-up, the glass fall protection is not permitted in front of plastic curtains.



# CONTROL DEVICES ACCESSORIES

# 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.

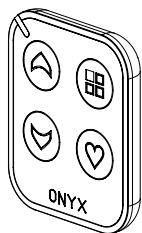
## Stand-Alone System

- 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)

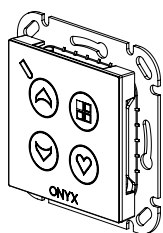
## Radio transmitter



### 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**

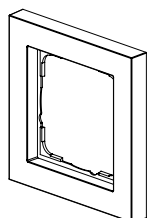


### Wall-mounted radio transmitter ONYX.SWITCH

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

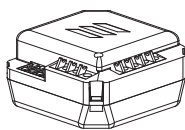


### Plastic frame

suitable for wall-mounted radio transmitter ONYX.SWITCH  
Available in white, grey and anthracite.

**05140130**

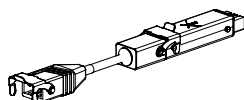
## Receiver



### 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**

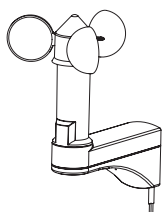


### Adapter plug ONYX.CONNECTOR

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**

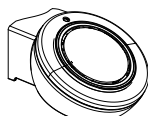
## Sensors



### Weather sensor ONYX.WEATHER

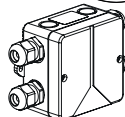
Weather sensor with wind and sun sensor; controls the entire sun protection unit automatically and weather-dependent

**50680202**

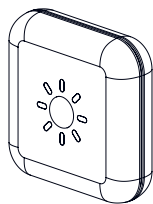


### ONYX control unit with rain sensor

ONYX control unit (in surface box), controls the entire sun protection systems automatically and depending on precipitation, incl. external precipitation sensor.



**05200114**



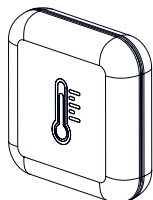
### Radio, sun and brightness sensor ONYX.TAG sun

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



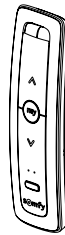
### Hand-held radio transmitter Situio 1 io II

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 Situio 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 Situio 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 Situio 5 Variation A/M io II

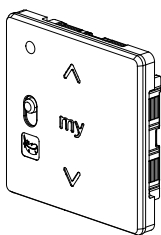
**05140104\_PURE** Pure

#### 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

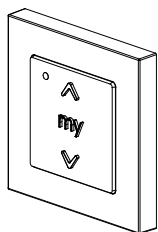
#### Note:

For further color options see price list "Control devices".



**Wall-mounted radio transmitter Smoove RS100 IN io**  
for the control of the two speed levels of the RS100 io, without frame

**05140100\_PURE** Pure

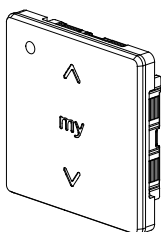


**Wall-mounted radio transmitter Smoove Origin io with frame Pure**  
for manual control of one drive or several drives at the same time via radio

**05140052\_PURE** Pure

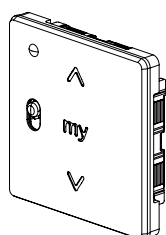
**Benefits of the product/product features**

- 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

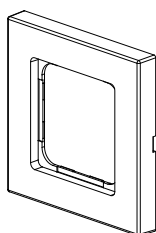
**05140056\_PURE** Pure



**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**



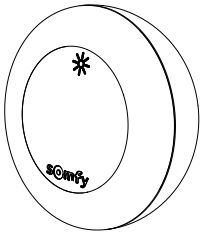
**Frame Smoove**  
suitable for all products by Smoove

- 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

## 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.

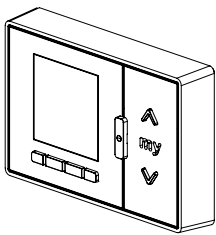
**05200104**

#### 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 programming 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.

## 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**

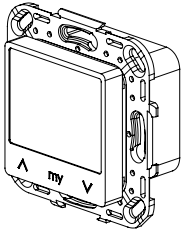
#### Benefits of the product / product features

- 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



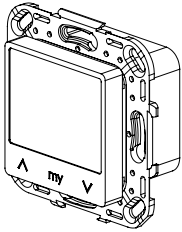
# Wire-bound control components – Somfy

## Switch



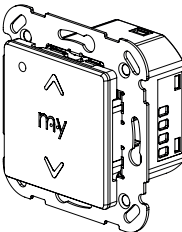
**Programme time switch Chronis Smoove Uno S Pure with brightness control**  
(without frame)

**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

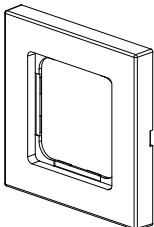


**Single drive control device Smoove Uno IB+ without frame**

for manual control of a 230V drive for roller shutters, textile shading systems and Venetian blinds, without frame

**05140083\_PURE** Pure

## 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 ProLine 2 – elero

## Bidirectional radio system ProLine 2 – elero

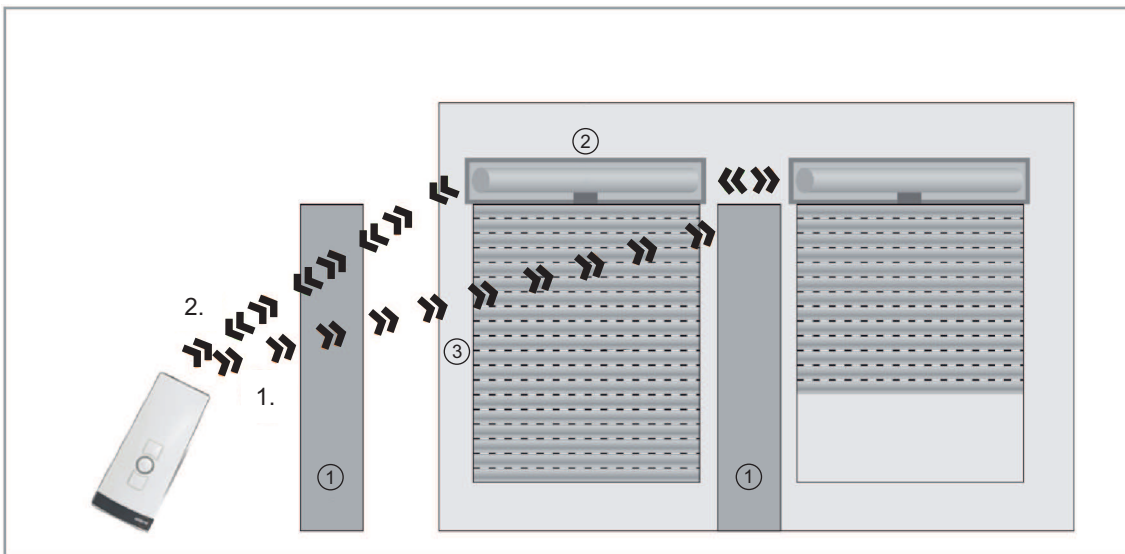
Compared to its predecessors, the new hand-held radio transmitter by elero provides you with an essential technical innovation: bidirectional wireless control. The characteristic of a bi-directional radio system is, that the transceiver (combination of transmitter and receiver) cannot only receive a 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.



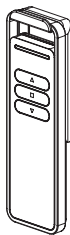
### Further advantages of the bi-directional radio technology:

- 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

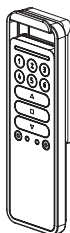


### Hand-held radio transmitter MonoCom 1

**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

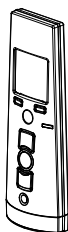
**05140118**

#### 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

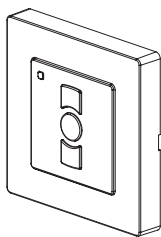
05140067

#### 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

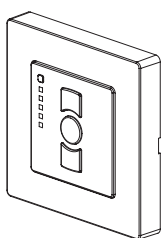
05140121

#### 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

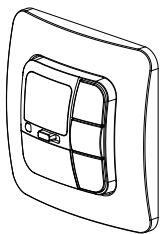
05140122

#### 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

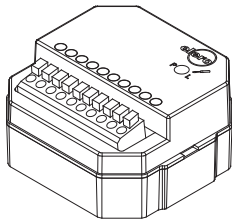
The AstroTec-868 bidi is a wall-mounted radio transmitter for the exclusive use with bidirectional receivers. The integrated timer can be easily and conveniently operated via the push of a button. It can be used as individual, group or central control device and, due to its permanent adjustment to sunrise 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

# Radio system ProLine 2 – elero

## Receiver



### Flush-mounted radio receiver Revio-868

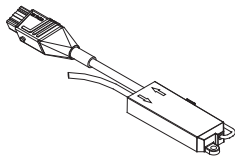
**05140073**

#### Field of application and use

The built-in radio receiver Revio-868 is suitable for the control of 230V drives. It is suitable for all alternating current drives, which are to be activated via ProLine-transmitters. In addition, the activation via a normal push-button is possible. The Revio-868 can be integrated into a surface-mounted/flush-mounted box.

#### Benefits of the product / product features

- Flexible radio receiver for the installation in switch / junction boxes
- Fits in flush-mounted boxes ø60 mm
- Different modes (RM, JA, JA-Pulse) can be set via a jumper circuit (With the setting JA the slat tilting is performed by means of inching. If the modus JA-Pulse is set, the drive for the pulse time is actuated with each short keystroke.)
- Additional control via external pushbutton is possible
- IP 20
- Full downward compatibility to unidirectional elero-radio products



### Radio receiver Combio III-868 RM

Radio receiver to controlling 230 V tubular drives

**05140076**

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