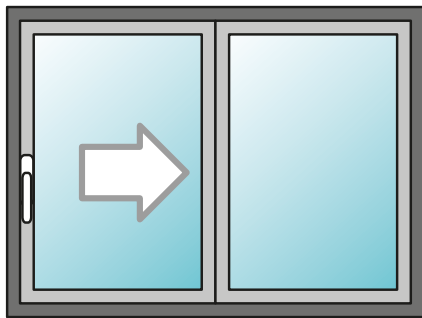


GS1000-HD160



GS1000-HD 160 TILT AND SLIDE

Functions

Tilt and slide system with semi-automatic forced control operation that allows closing the sash with just one hand, by operating the long-handled cremone.

For applications with sashes weighing up to 160 kg. Available for Euro groove profiles.

Technical Features

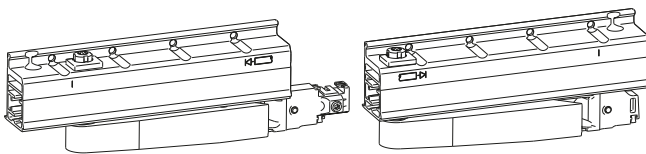
GS1000-HD 160 is ideal for sashes of up to 160 kg in weight, for those who want semi-automatic operation. Uses single pulleys with machined side plugs and reinforcements. GS1000 HD-160 is available in the configuration for the Euro groove profile and uses special fastening mechanisms specifically designed for aluminium.

All the hardware components are equipped with Torx fixing screws.

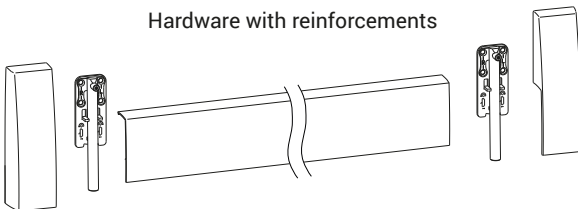
The hardware set uses fixed lock strikers and compression adjustable lock pawls (± 1.2 mm), with which you can optimize the perimeter pressure of the sash.

It is possible to add up to two additional locking points on the top and bottom cross-beams, depending on the size of the sash, to improve the air/water seal.

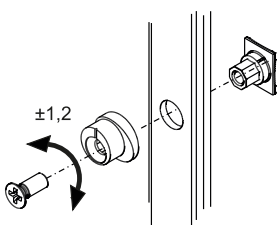
Single pulleys



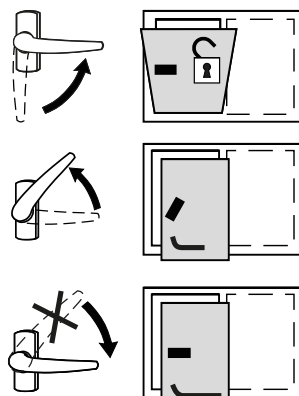
Hardware with reinforcements



Adjustable pawl



Operating scheme



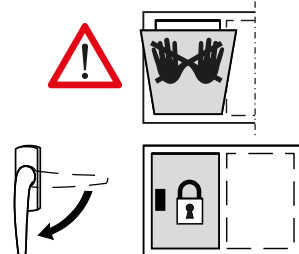
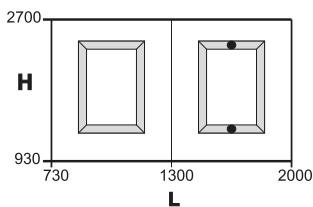
Automatic catch

GS1000-HD 160 features the automatic catch system installed at the bottom of the sash.

This device facilitates closing the sash that, when put in the closed position, automatically locks in the tilt position. Turning the cremone from 135° (sliding position) to 90° (tilt position) and putting the sash into the closed position engages the sash in the tilt position.

To close the sash, simply rotate the cremone to 0° (closed). The forced control device will close the sash automatically.

Additional locking points

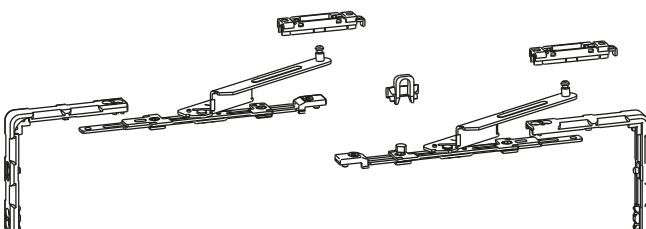


"LOGICA" opening mechanism

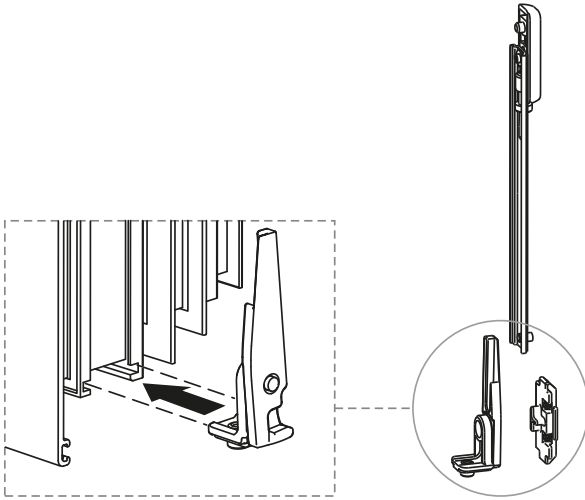
GS1000-HD 160 uses the LOGICA opening system whereby operating the cremone produces first tilt opening and then slide opening. Taking the cremone to 90° operates tilt opening and turning it to 135° operates slide opening.

To engage the automatic catch, the cremone must be turned back to 90° and the sash closed against the frame.

Fastening mechanisms



Incorrect movement safety device



Incorrect movement safety device

The new incorrect movement safety device for the forced control version allows operating the cremone only when the sash is hooked onto the frame, protecting the hardware against damage in the event of improper use.

The device also prevents the sash from lifting. Ideal for installation in conditions of high frequency opening and with occasional users (hotels, public buildings). It cannot be used in the case of an opening secondary sash. Sold separately.

Additional arm

Using the additional arm, thanks to the special spring, facilitates opening the sash in the case of heavy weights.

The arm is to be installed for sashes weighing more than 160 kg or weighing more than 100 kg and sash profile width > 75 mm. Sold separately.

Stay arm catch

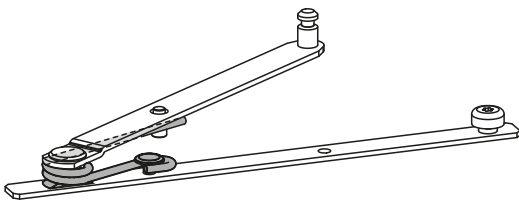
The system for coupling the opening arms and the sliders guarantees perfect coupling between the sash and the frame. The correct positioning of the steel insert ensures that the arms and sliders are linked together.

Correct positioning of the sash

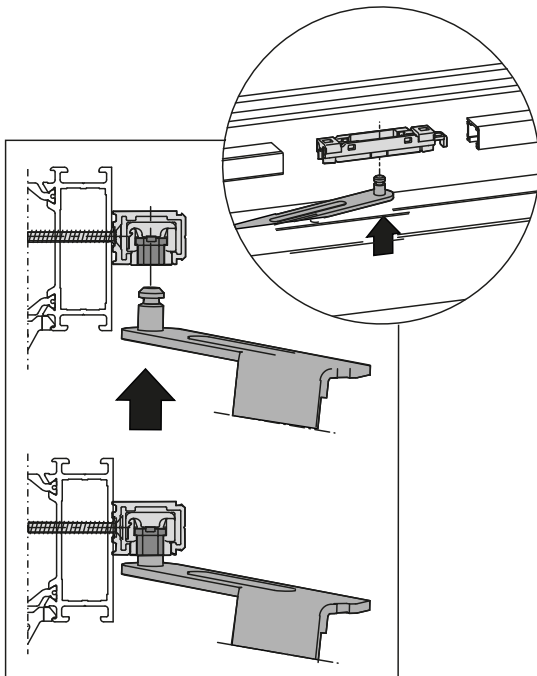
To improve the overall alignment of the sash with the frame, there are several adjustments

- height adjustment of the sash via the pulleys (-2/+4 mm)
- side adjustment via the command striker
- adjustment of the side reinforcements to improve the sash out and return phase
- adjustment of the sash-frame parallelism with pulleys and arms

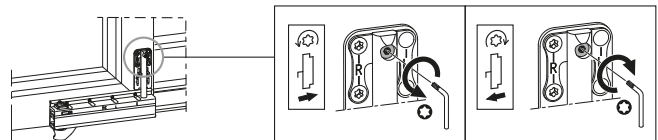
Additional arm



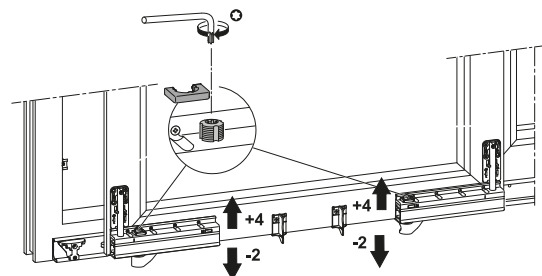
Stay arm catch



Adjustment of the side reinforcements



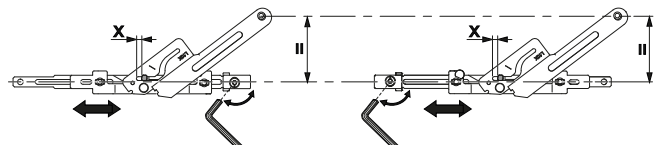
Height adjustment



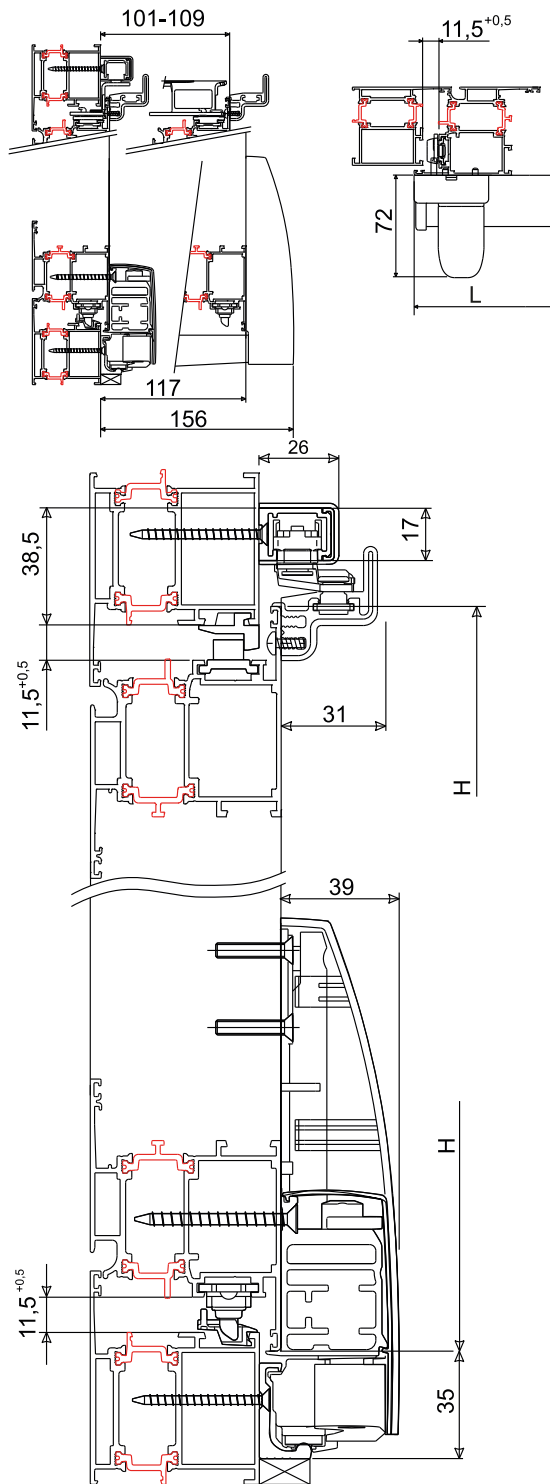
Sash-frame parallelism



Sash-frame parallelism with arms



Application section



GS1000-HD 160 range of use

Applications on aluminium doors and windows

Sash weight (kg) = max 160 kg

Sash width (W) = 730 to 2000 mm

Sash height (H) = 930 to 2700 mm

Minimum required dimensions

Bottom rail = 35 mm

Top rail = 38.5 mm

Bottom rail depth = 17 mm

Step ≥ 7 mm

Sash depth D:

≤ 87 mm check not required

> 87 mm do only after technical verification (return trajectory and sash centre of gravity)

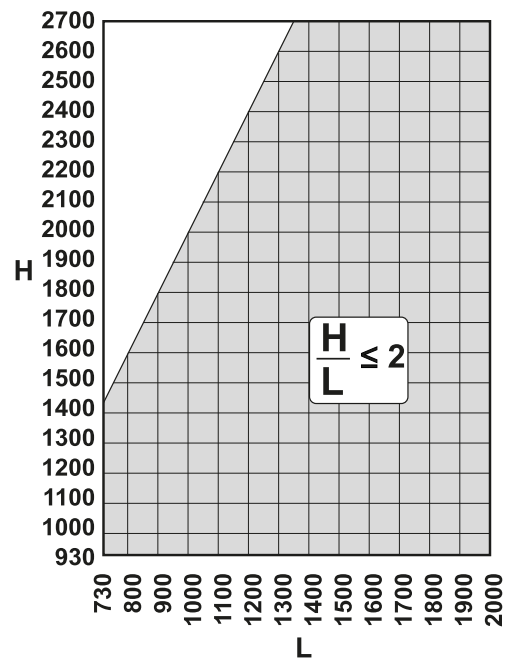
Important note

The H/L ratio ≤ 2 given in the scheme is binding and must not be exceeded.

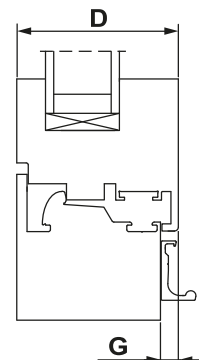
In all cases, refer to the profile manufacturer's instructions and comply with the requirements.

Take the due precautions to avoid straining the mechanism in specific sites such as hotels, schools, kindergartens, etc.

Range of use



G = step
D = sash depth

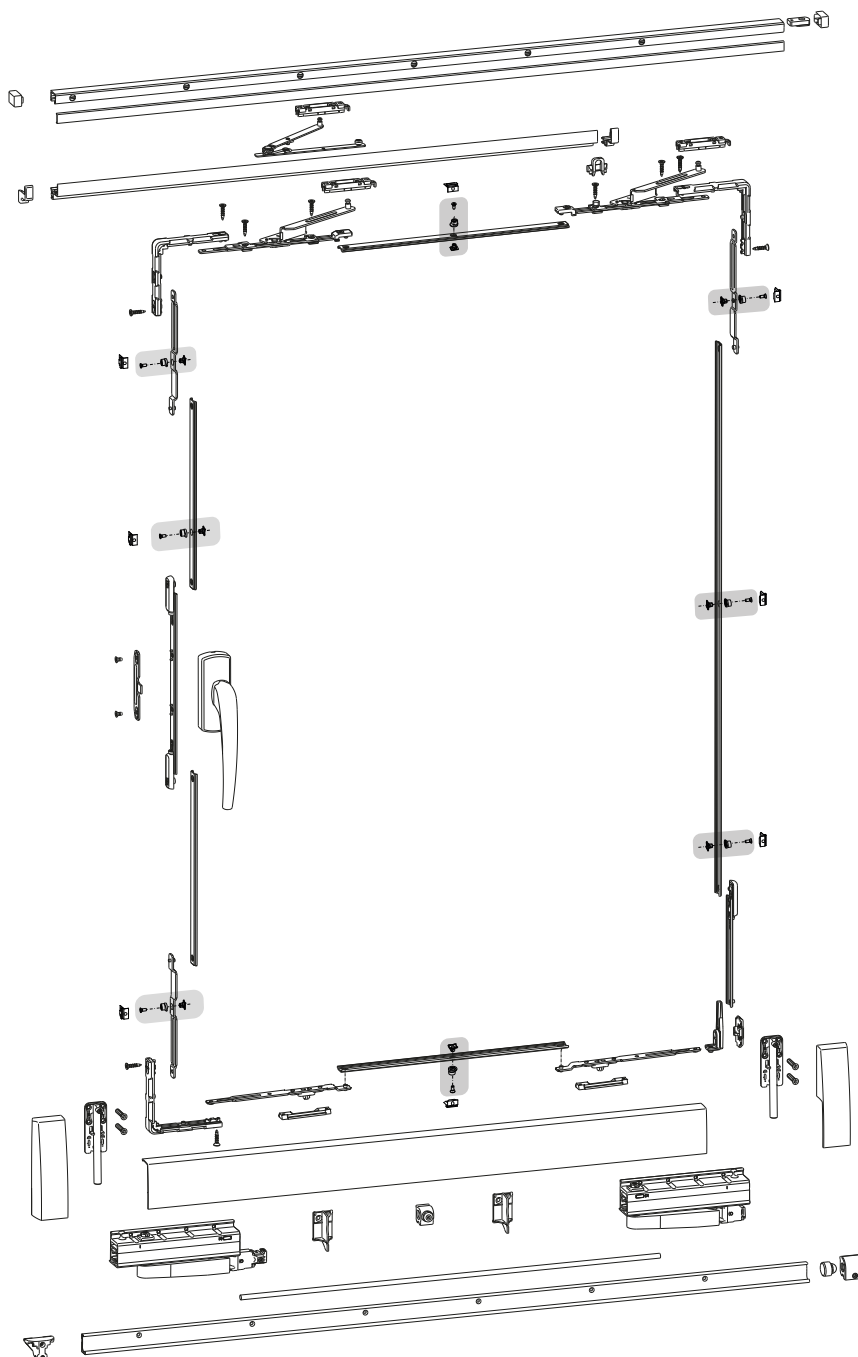


GS1000-HD 160 TILT AND SLIDE

A typical GS1000-HD 160 configuration consists of:

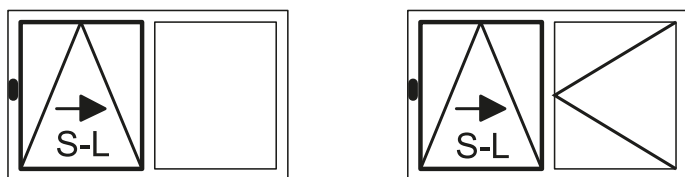
- single pulley set
- special hardware set for Euro groove profile
- profile set
- accessories set without side reinforcements
- fastening striker set
- cremone with long handle (in the version with and without a key)
- additional arm to be used in cases of heavy weights to facilitate sash opening
- incorrect movement safety device that prevents incorrect operation of the sash
- mobile control (in the case of an opening secondary sash)
- support block for pulley connection rod (for sashes of width >1480 mm)

Scheme for GS1000-HD 160 Euro groove profile

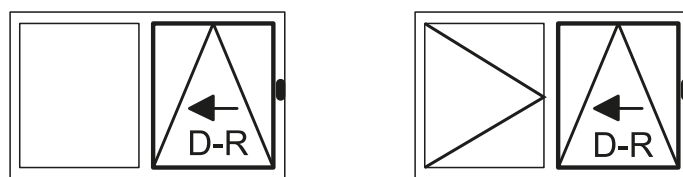


OPENING SCHEMES

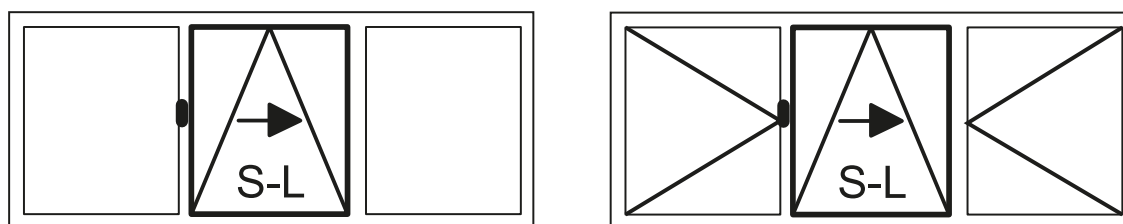
A1 - Two sashes
Left-sliding sash and fixed/opening secondary sash



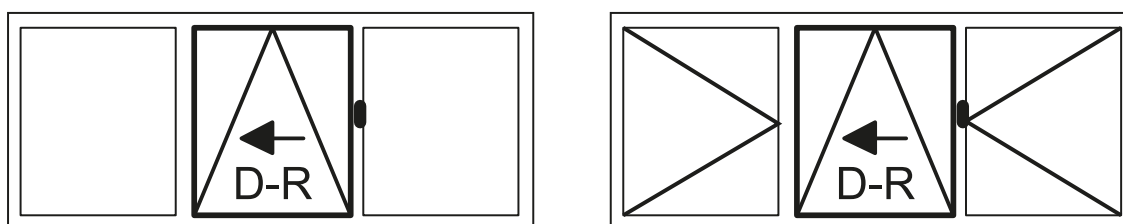
A2 - Two sashes
Right-sliding sash and fixed/opening secondary sash



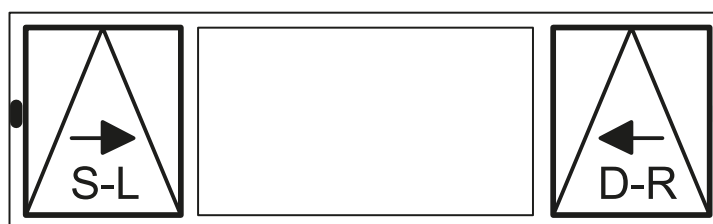
G1 - Three sashes
Left-sliding centre sash and fixed/opening secondary sashes



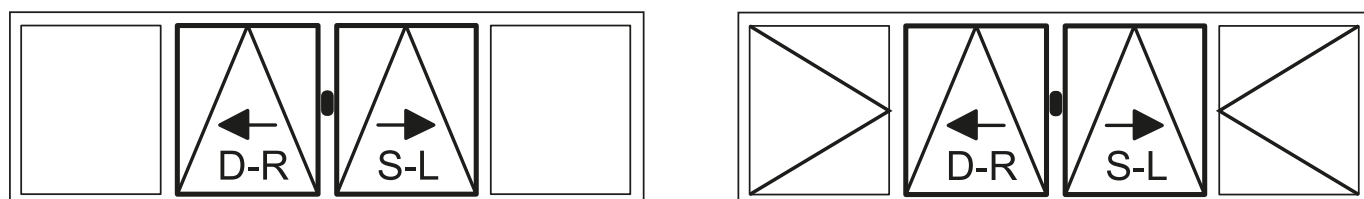
G2 - Three sashes
Right-sliding centre sash and fixed/opening secondary sashes



K - Three sashes
Fixed centre sash and sliding side sashes



C - Four sashes
Sliding centre sashes and fixed secondary sashes (with/without central upright)



SINGLE PULLEYS

Functions

Single pulleys for GS1000 tilt and slide system.

Technical features

Single pulleys to be used for making windows with the following tilt and slide versions:

- GS1000-ML
- GS1000-HL
- GS1000-HD 100
- GS1000-HD 160

The set of single pulleys consists of a primary pulley, which controls sash return and a secondary pulley, available in right-hand and left-hand versions. The opening of the arm of the pulleys allows the sash to come out from the frame by 117 mm.

Applicable on profiles with a step greater than or equal to 7 mm.

Both pulleys are designed for use with side reinforcements that improve the seal of the profile (sold separately in the hardware set).

Using the pulleys it is possible to adjust the height of the sash (-2/+4 mm) and the parallelism between the sash and frame.

The machining on the profile for installing pulleys can be done with a specific drilling template.

Fixing to the profile is done with self-threading screws.

The pulleys are supplied with 2 supports for the bottom guard and the screws and bolts for fixing the pulleys and the set of rails.

Materials

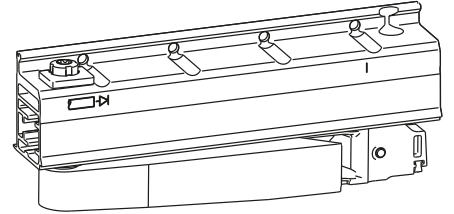
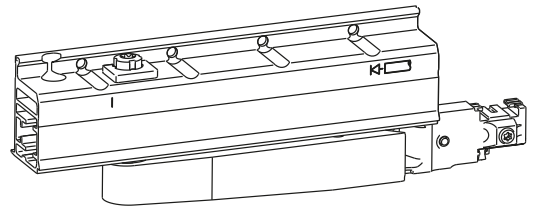
Body and opening levers of aluminium

Wheel support of zamak

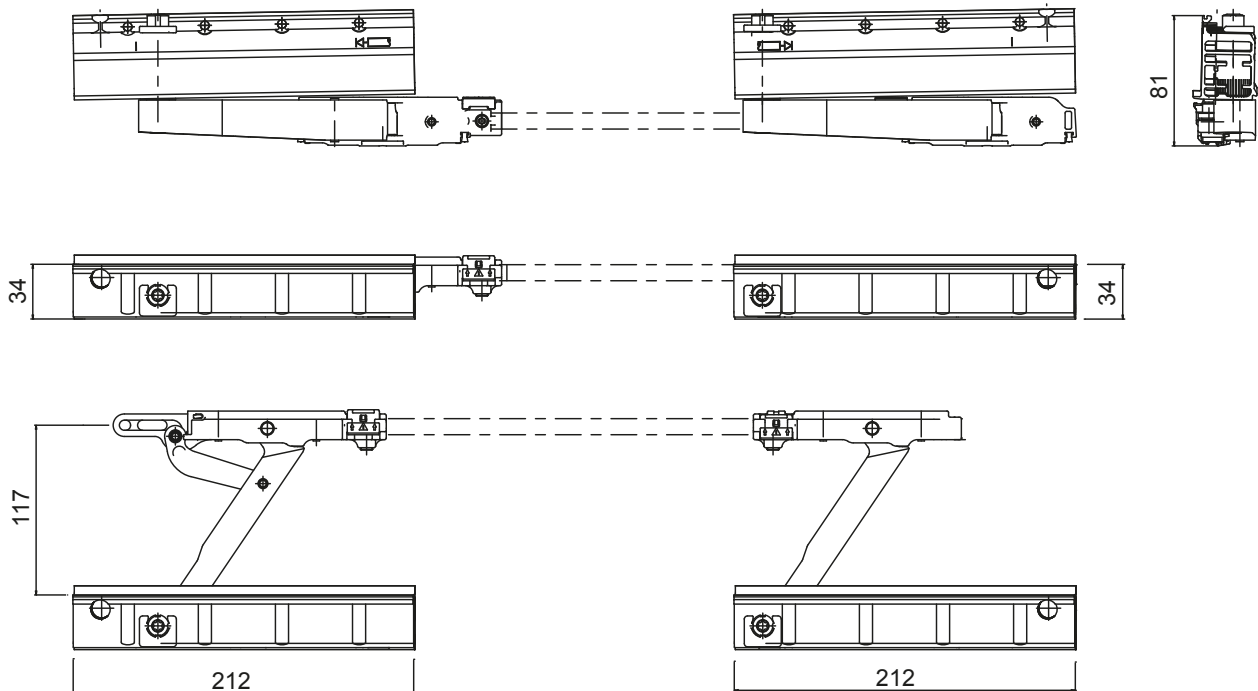
Polyamide wheels

Bottom guard supports of polyamide

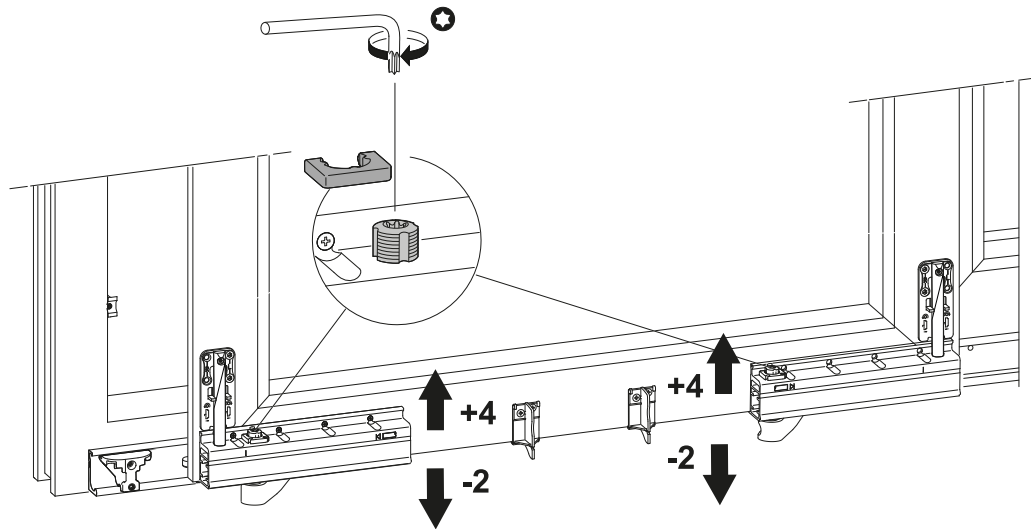
Screws and pins of stainless steel



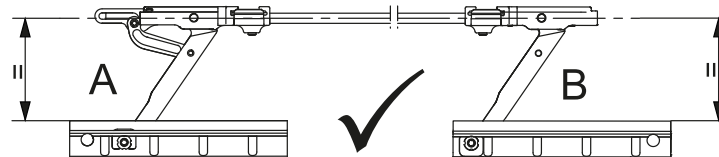
Single pulleys



Height adjustment



Sash-frame parallelism



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09776	SET OF RH SINGLE PULLEYS	-	-	X	X	X	X	-	X				1
09777	SET OF LH SINGLE PULLEYS	-	-	X	X	X	X	-	X				1

GS1000-HD HARDWARE

Functions

Complete fastener system for making GS1000 tilt and slide type windows with forced control.

Available in version for Euro groove.

Technical features

The fastening system uses the special fastening mechanism with LOGICA opening with which operating the cremone produces first tilt opening and then slide opening.

The particular shape of the arms of the special hardware allows semi-automatic return of the sash into the bottom-hung opening position and into the closing position.

The hardware set uses fixed strikers and adjustable pawls (± 1.2 mm) to optimize the perimeter pressure of the sash.

The hardware components are pre-assembled and are attached to the profile with Torx screws.

It is possible to add up to two additional locking points, depending on the size of the sash.

The hardware set consists of:

- no. 3 corner drives to transmit the motion between the uprights and cross-beams, to be secured to the profile with Torx screws
- no. 1 cremone drive rod
- no. 2 opening arms + sliders
- no. 2 spring latches (matching the set of strikers sold separately)
- no. 3 fastening mechanism rods
- no. 8 locking points (adjustable pawls + fixed strikers)
- no. 1 sticker for correct system operation
- no. 1 arm and pulley release device

Materials

Drive rod of aluminium and zamak

Zamak drives

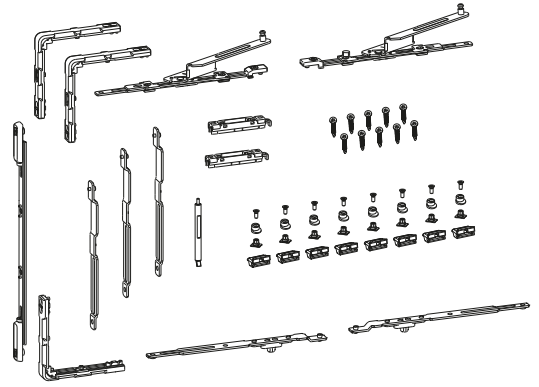
Opening arms and spring latches made of steel

Steel fastening rods

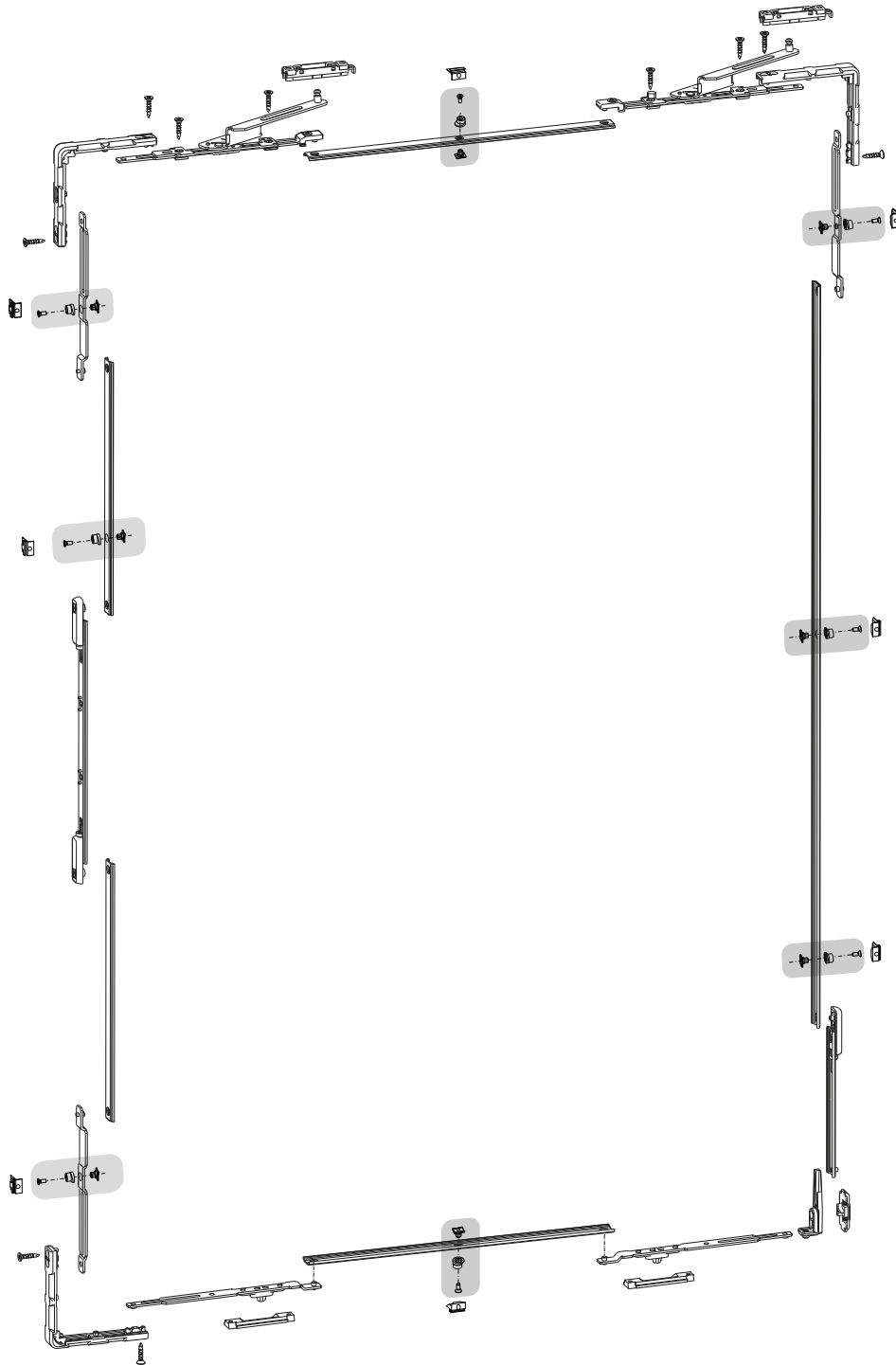
Sliders of polyamide and steel

Strikers and pawls of zamak

Steel screws



GS1000 HD hardware set



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09781	GS1000-HD LH HARDWARE SET	-	C001-C002-C003-C005	-	-	X	X	X	X				1
09782	GS1000-HD RH HARDWARE SET	-	C001-C002-C003-C005	-	-	X	X	X	X				1

GS1000-HD 160 TILT AND SLIDE

PROFILES SET

Functions

Profiles with the function of supporting and guiding in the phase of operating the sliding sash and with the function of a stylish cover for the GS1000 tilt and slide system.

Technical features

Each set of profiles consists of:

- top guards and track
- bottom guards and track
- screw protection plug
- pulley connection rod

The profiles set is available in various sizes, depending on the width of the sash to be constructed.

The bottom rail always has an anodised, silver or black finish.

The fixing of the profiles is by means of self-threading screws (supplied with the set of pulleys).

There are specific templates for the installation of the various profiles.

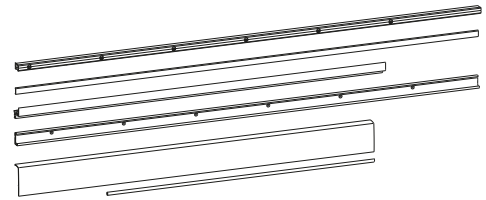
Materials

Rails and covers made of extruded aluminium

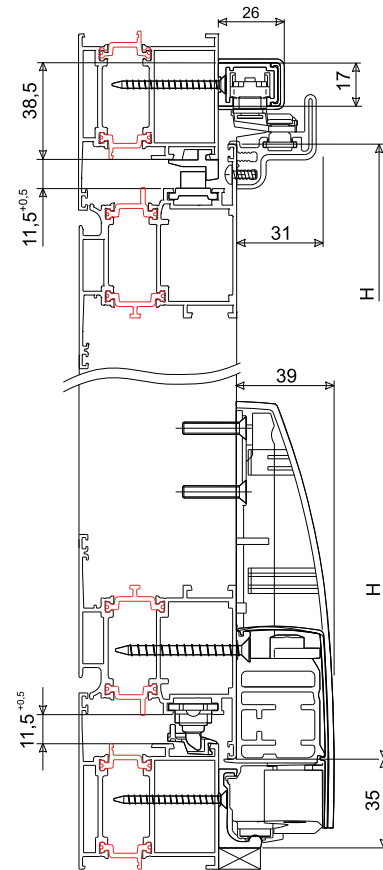
PVC screw cover rod (*)

Steel connection rod

(*) Available in the basic finishes of white, black and grey, combined with the various profile set finishes.



Application section



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09761	630-880 PROFILES SET	630÷880	-	X	X	X	X	-	X	X	X		1
09762	881-1080 PROFILES SET	881÷1080	-	X	X	X	X	-	X	X	X		1
09763	1081-1280 PROFILES SET	1081÷1280	-	X	X	X	X	X	X	X	X		1
09764	1281-1480 PROFILES SET	1281÷1480	-	X	X	X	X	X	X	X	X		1
09765	1481-1680 PROFILES SET	1481÷1680	-	-	X	-	X	X	X	X	X		1
09766	1681-2000 PROFILES SET	1681÷2000	-	-	-	-	X	X	X	X	X		1
09768	TOP RAIL L=6000 mm	-	-	X	X	X	X	X	X	X	X		1
09769	BOTTOM RAIL L=6000 mm	-	-	X	X	X	X	X	X	X			1
09770	TOP GUARD L=6000 mm	-	-	X	X	X	X	X	X	X	X		1
09771	BOTTOM GUARD L=6000 mm	-	-	X	X	X	X	X	X	X	X		1
09772	PVC SCREW COVER L=6000 mm	-	-	X	X	X	X	X	X				1
09773	PULLEY CONNECTION ROD L=4000 mm	-	-	X	X	X	X	X	X				1

ACCESSORIES SET WITH SIDE REINFORCEMENTS

Functions

Components for covering and completing the GS1000 tilt and slide system.

Technical features

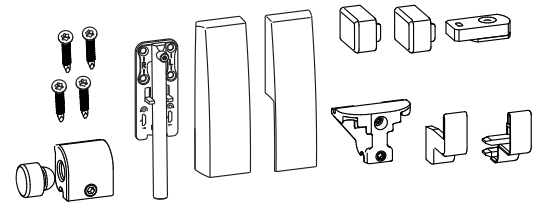
Accessories set with side reinforcements consists of:

- side reinforcements for pulleys
- machined side protective caps that can be painted as needed
- protective caps for guards
- top and bottom stops
- command striker

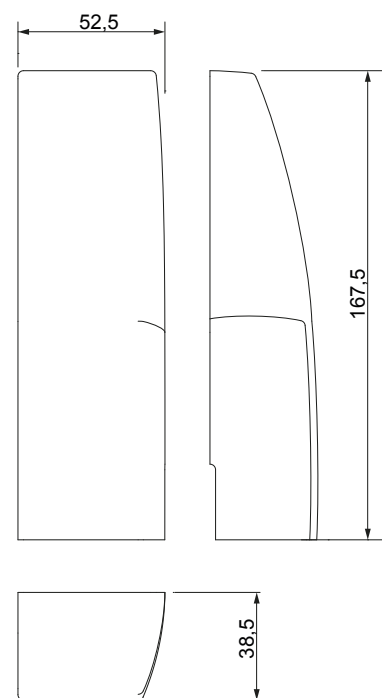
To be combined with the GS1000-HL, GS1000-HD 160 and GS1000-HD 200 versions for sashes weighing over 100 kg.

Materials

- Paintable plastic plugs
- Steel reinforcements
- Command striker of zamak
- Bottom limit stop striker of zamak and rubber
- Top limit stop striker of steel and rubber
- Stainless steel screws and bolts



Plugs art. 09775



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09775	ACCESSORIES SET WITH SIDE REINFORCEMENTS	-	-	-	X	-	X	X	X		X		1

INCORRECT MOVEMENT SAFETY DEVICE

Functions

Incorrect movement safety device for the GS1000-HD version of the GS1000 tilt and slide system with forced control, which prevents damage to the hardware in the event of incorrect operation.

Technical features

The incorrect movement safety device enables operating the special long-handled cremone only when the sash is attached to the frame.

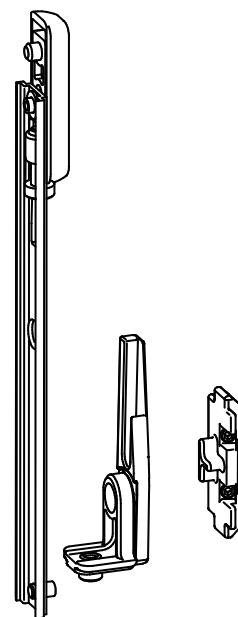
The device also prevents the sash from lifting.

Available in two versions, opening to the left or right, depending on the frame channel.

Materials

Incorrect movement safety device made of zamak

Stainless steel grub screws



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09791	GS1000-HD 14/18 LH INCORRECT MOVEMENT SAFETY DEVICE SET	-	C001-C002- C004-C005	-	-	X	X	X	X				1
09792	GS1000-HD 14/18 RH INCORRECT MOVEMENT SAFETY DEVICE SET	-	C001-C002- C004-C005	-	-	X	X	X	X				1
09793	GS1000-HD CE LH INCORRECT MOVEMENT SAFETY DEVICE SET	-	C003	-	-	X	X	X	X				1
09794	GS1000-HD CE RH INCORRECT MOVEMENT SAFETY DEVICE SET	-	C003	-	-	X	X	X	X				1

SUPPORT BLOCK

Functions

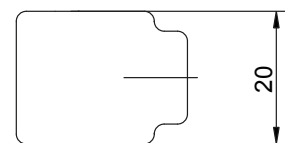
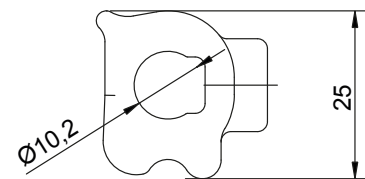
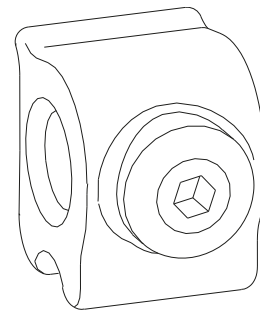
Component for supporting the pulley connection rod.
For all GS1000 tilt and slide system versions.

Technical features

The support block is used for sash widths > 1480 mm in order to make the connection rod between the two pulleys more stable.

Materials

Nylon block
Steel mounting grubscrew



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09789	SUPPORT BLOCK	-	-	-	X	X	X	X	X				1

GS1000-HD 160 TILT AND SLIDE

GS1000-HD ADDITIONAL ARM

Functions

Additional arm for GS1000-HD tilt-and-slide system.

Technical features

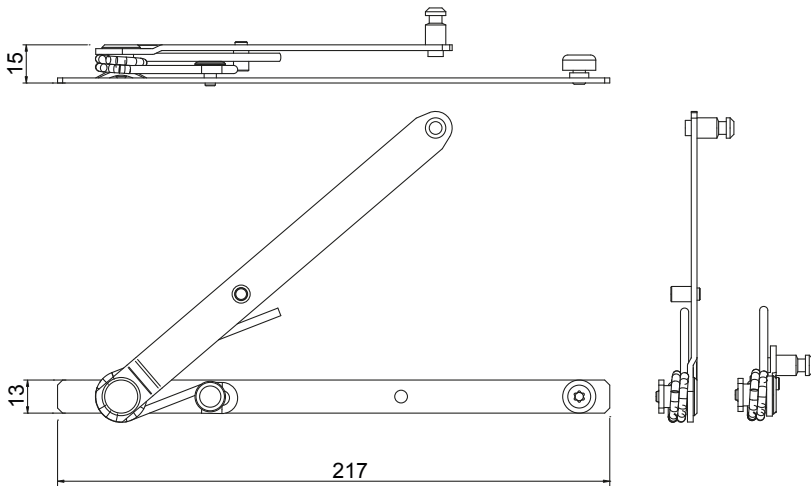
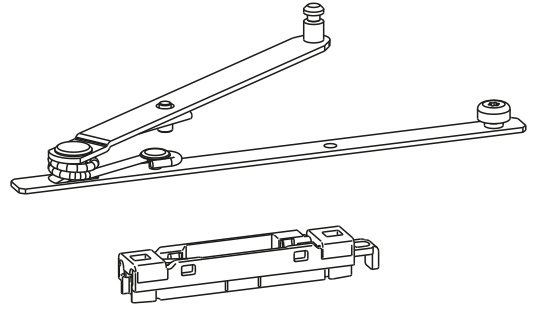
The additional arm, thanks to the special spring, facilitates opening the sash in the case of heavy weights.

The element must be installed between the two arms of the GS1000-HD hardware set for sashes weighing more than 160 kg or weighing more than 100 kg and sash profile width > 75 mm.

Materials

Steel arm

Sliders of steel and polyamide



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elbox	Painted	Trend/Gold Brass	Pieces per pack
09759	ADDITIONAL ARM	-	-	-	-	-	X	X	X				1

CREMONES FOR GS1000-HD

Functions

Right and left cremone versions, with and without key, specific for the GS1000-HD tilt and slide system with forced control.

Technical features

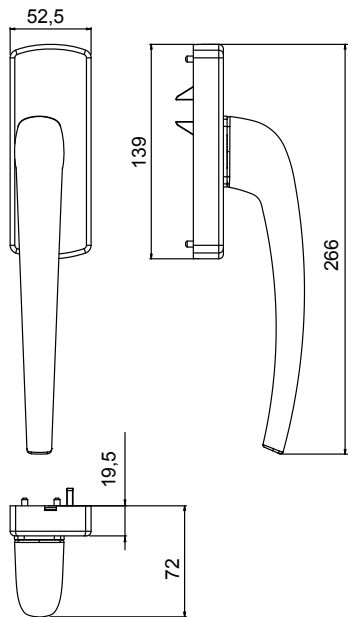
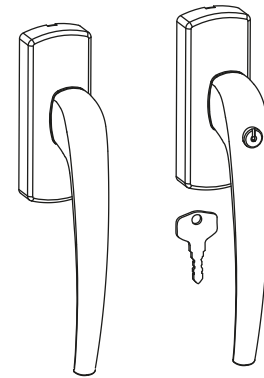
Long-handled cremone with specially designed internal mechanism to make it easier to operate sashes weighing up to 200 kg.

The special long-handled cremone consists of:

- cremone
- cover
- component connecting to the drive rod

Materials

Handle in die-cast aluminium
 Case and rack made of zamak
 Aluminium cover
 Steel screws and bolts



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09736N	GS1000-HD RH CREMONE	-	-	-	-	X	X	X	X	X	X		1
09737N	GS1000-HD LH CREMONE	-	-	-	-	X	X	X	X	X	X		1
09738N	GS1000-HD RH CREMONE WITH KEY	-	-	-	-	X	X	X		X	X		1
09739N	GS1000-HD LH CREMONE WITH KEY	-	-	-	-	X	X	X		X	X		1

SET OF STRIKERS

Functions

Lock strikers for the spring latches of the automatic catch system of the GS1000-HD tilt and slide system.

Technical features

The set of strikers is available in four versions depending on the frame channel and consists of:

- no. 2 strikers for spring latches to secure to the frame channel with contrast grub screws
- no. 1 sash centring striker

Materials

Automatic catch strikers of zamak

Sash centring striker of polyamide



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09785	SET OF STRIKERS E.G. 10-14	-	C003	-	-	X	X	X	X				1
09786	SET OF STRIKERS E.G. 12-15	-	C005	-	-	X	X	X	X				1
09787	SET OF STRIKERS E.G. 13.5-16.8	-	C002	-	-	X	X	X	X				1
09788	SET OF STRIKERS E.G. 14-18	-	C001-C004	-	-	X	X	X	X				1

MOBILE STRIKER

Functions

Component for positioning the mobile sash for GS1000 tilt and slide systems.

Technical features

The mobile striker enables run-by of the sliding sash, for opening the secondary sash.

In configurations with an opening secondary sash, this striker replaces the fixed command striker supplied with the hardware set.

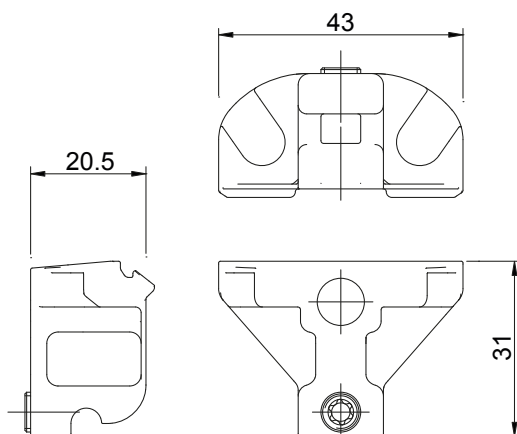
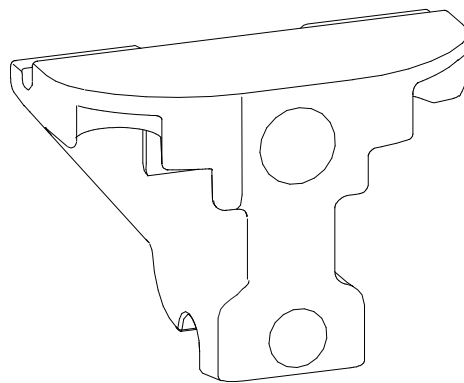
The pin with a spring keeps the striker in position and allows it to move in order to allow opening the secondary sash.

Installation can also be performed with a specific template.

Materials

Zamak striker

Spring and pin of steel



Item code	Description	Range [mm]	PROFILE CROSS - SECTION	GS1000-ML	GS1000-HL	GS1000-HD 100	GS1000-HD 160	GS1000-HD 200	Base Raw	Anodised Elox	Painted	Trend/Gold Brass	Pieces per pack
09790	MOBILE STRIKER	-	-	X	X	X	X	X			X		1