

# Automations

Chain, Rod and Rack  
actuators

 **GIESSE**

# Index

## Chain Actuators

Varia Evo	06
Varia Tube	08
Varia Slim Base	10
Varia Slim Plus	12
Varia Slim / Varia Slim syncro	14
Varia - Accessories	18
Slim Lock	20

## Rod Actuator

Rod Actuator ST450	22
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## Rack Actuators

RackMax 450	24
RackMax 650	26

## Control Units

Shev RWA	30
Power BT Control Units	32
Power AT Control Units	34

# RWA SYSTEMS SMOKE AND HEAT EVACUATION

Statistical data has shown that almost all building-fire-related fatalities are caused by poisoning as a result of inhaling smoke and toxic gases rather than thermal damage due to high temperatures. When fires occur on building premises, smoke spreads throughout the rooms, causing considerable damage to the structure itself and the equipment inside. Bringing the temperature down or delaying temperature increase not only helps to preserve the stability of the structure but also makes it easier for firefighters to see their way around, keeps the air cooler at head level and retards the spread of flames sideways.

The primary concern of any fire-fighting team is to stop smoke from building up in the rooms and reaching escape routes, creating safe areas where people can survive.

The safety system must be activated automatically, ensuring that all apertures are unobstructed so that heat and smoke can get out, thus freeing escape routes so people can reach areas with clean fresh air. This very same system regulates air changes in rooms on a daily basis, improving occupants' quality of life and general health.

RWA actuators mean you only have to install one single actuator for both smoke evacuation and natural ventilation.

GIESSE RWA actuators have been designed and tested to be used with integrated systems for smoke and heat evacuation in compliance with the European Standard EN12101-2.

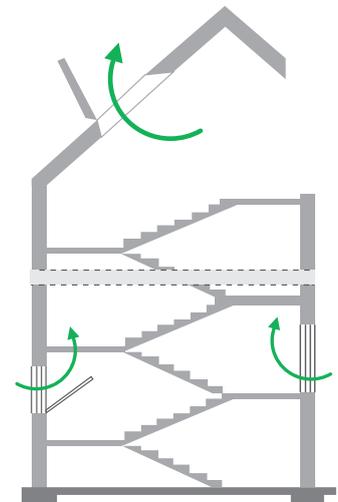
NRWG certification determines the test procedures which the various parts of the system undergo, such as windows, automations, detection devices and the central control and monitoring unit. Even construction materials are subject to this certification.

Building structure should be a prime consideration when creating evacuation systems and deciding where to put them because of the need for outlets on vertical walls, roofs, shafts, etc.

GIESSE produces remote-controllable electric actuators which move windows and ventilation openings in the event of fire.

Using an integrated smoke-and-heat evacuation system in conjunction with the actuators will protect people's lives. When smoke and hot air are released from rooms, chances of survival increases.

Creating a smoke-free space low down at ground level, **freeing stairwells and corridors and diminishing deadly fumes** are all ways to help occupants to quickly identify escape routes and make it easier for emergency-rescue services to gain access. This is why the actuators have been designed and tested for use with integrated systems and frames for extracting smoke and heat in compliance with European Standard EN12101-2.



# CHOOSE YOUR SOLUTION

Windows come in a variety of types, sizes and weights. Sometimes weather factors can be such that significant force is required to open windows.

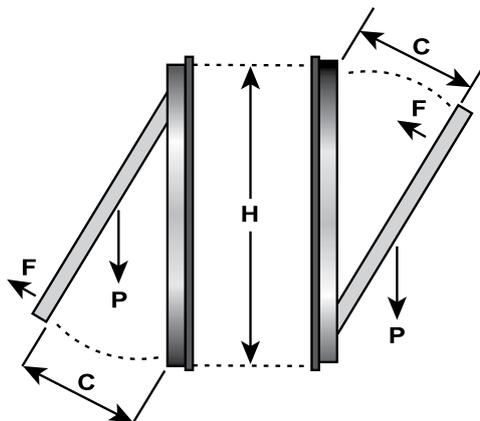
In other circumstances, electronic-control devices are necessary for reasons of practicality or security so windows can be opened or closed automatically. Before an actuator is installed on a window, checks must be run to ensure that it is suited to the task. This is particularly important when smoke and heat protection is required.

Formulas for calculating the push or pull force required to open a window.

Finding out how much force is required to move the window is the first step in determining which automation is the right one.

An initial check can be made by using the formulas beneath. However, they do not take into account the action of external agents on the window, such as friction, air currents, low-pressure areas, snow and wind.

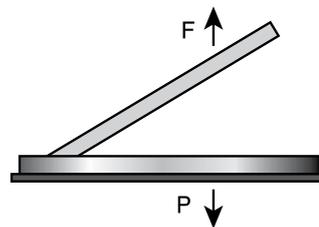
**Calculation for determining the force (Newton=N) required for top-hung and bottom-hung windows and doors:**



$$F = \frac{P}{2} \times \frac{C}{H} = \text{kg F}$$

$$\text{Kg F} \times 9,81 = \text{N}$$

**Calculation for determining the force (Newton=N) required for horizontal domes and dormer windows:**



$$F = \frac{P}{2} = \text{kg F}$$

$$\text{Kg F} \times 9,81 = \text{N}$$

1 kg = 9,81 N

1 N (Newton) = 0,102 kg

**F: force required to open and close - kg**

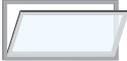
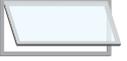
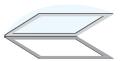
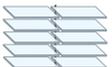
**P: window weight (only movable part) - kg**

**C: window opening stroke (actuator stroke) - mm**

**H: window height - mm**

Theoretical calculation (does not take into account friction of the hinges, wind thrust and weight of snow).

## Giesse actuators

Type of Automation		Chains				Rod	Racks	
Model		Varia Evo	Varia Slim Varia Slim Plus	Varia Slim Base	Varia Tube	ST 450	RackMax 450	RackMax 650
Thrust Force		300 N	300 N	250 N	350 N	450 N	450 N	650 N
Bottom-Hung		✓	✓	✓	✓			
Bottom-Hung Width > 1.6 m			✓ Syncro Version		✓ Syncro Version			
In-Line Bottom-Hung (Ribbon development) Max 3 windows with width < 1 m		✓	✓	✓	✓			
Top-Hung		✓	✓	✓	✓	✓	✓	✓
Top-Hung And Shed windows Width > 1.6 m			✓ Syncro Version		✓ Syncro Version			✓ Add. Drive unit
In-Line Top-Hung And Shed windows		✓	✓	✓	✓	✓	✓	✓
Skylights			✓	✓	✓			
Pivoting window		✓	✓	✓	✓	✓	✓	✓
Small Roof Vents			✓	✓	✓	✓	✓	✓
Small In-Line Roof Vents Width < 1 m			✓	✓	✓	✓	✓	✓
Large Roof Vents Max 110 Kg with width > 1.8 m								✓ Add. Drive unit
Vertical Sunblinds						✓	✓	✓
Jalousie Window							✓	✓
Parallel Opening			✓ Syncro Version		✓ Syncro Version			

Chain actuator

Rod actuator

Rack actuators

Control Units

# VARIA EVO

## Chain actuator

Chain actuator for natural ventilation, designed for top-hung and bottom-hung windows. It features a robust double-link steel chain within a compact, high-strength housing.

- Push and pull force: 300 N

The chain stroke can be set to 200 mm or 380 mm via the internal selector.

Installation is made easy by a quick-coupling bracket system with 15 mm of adjustment, allowing precise fit on various frame profiles.

An integrated buzzer provides an audible alert if the actuator is mounted incorrectly, enhancing installation safety.

VARIA EVO is supplied with all necessary brackets and hardware, ready for installation.



Natural ventilation



Robust double-link steel chain within a compact, high-strength housing.



300 N push and pull force



Integrated buzzer for incorrect mounting.



Go to the technical data sheet

Code	Description
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08000	VARIA EVO 230 V
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Add the 3-digit color code to the main product code when ordering.

● 010 - **Black**   ○ 560 - **White**   ● 544 - **Grey**

Code	Description
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04867	Vertical support bracket for VARIA EVO 230 V
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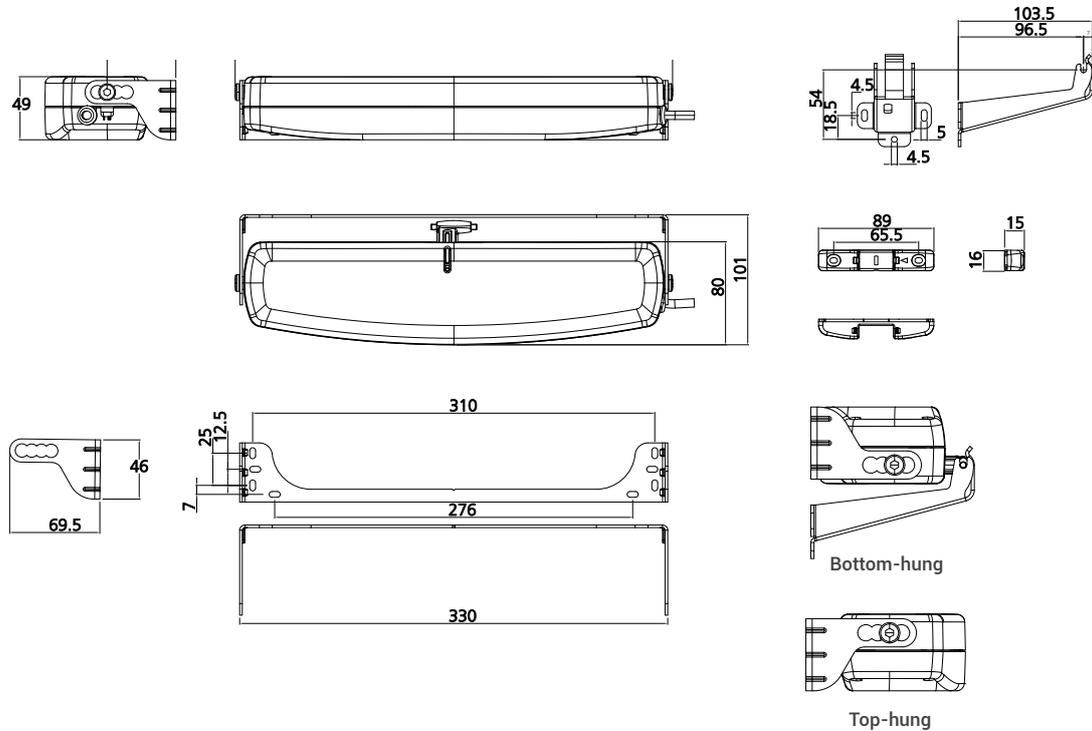
Add the 3-digit color code to the main product code when ordering.

● 500 - **Black**   ○ 410 - **White**   ● 379 - **Metallic Grey**

## Varia Evo - Technical data

Electric actuator with double link steel chain for the automation of top hung and bottom hung windows. Power supply 230 V AC ~ 50 Hz. Equipped with limit switch and integrated buzzer for incorrect mounting alert.

Quick-coupling bracket system with 15 mm of adjustment.



Model	Varia EVO 230 V
Power-supply voltage	230 V AC ~ 50 Hz
Thrust force	300 N
Drive force	300 N
Strokes	200 or 380 mm (selectable via internal selector)
No-load speed	37 mm/s
Full-stroke time (no load)	~11 s
Adjustment on chain terminal	15 mm (telescopic)
Parallel connection	YES (up to 30 actuators on separate windows)
Power consumption (max load)	60 W
Current draw (max load)	0.26 A
Duty cycle	S2 4 min (short-time)
Protection rating	IP30 (indoor use)
Operating temperature	-5 °C ÷ +50 °C
Insulation class	II (double insulation)
Dimensions (L×H×D)	337 × 49 × 80 mm
Weight	1.1 kg
Supplied brackets	1 frame bracket (pivoting) + 2 sash brackets (outward & inward)

# VARIA TUBE

Chain actuator

A sophisticated electronic system with a microprocessor means that the actuator can be installed not only on industrial premises, but also integrated into domotic system to which it can be easily connected via existing devices and made to transmit an "open/close window" signal.



Power control over the entire stroke.



Remarkably quiet (41 dB) while maintaining high power standards.



Easy to install thanks to rapid release support brackets and fixing brackets (patented).



Strokes can be selected by means of dip-switches.



Syncro technology (patented) allows for up to 8 Varia Tubes to be connected together.



Relax and Soft-Stop function for resting mechanical parts after every stroke-end.



Reliability tested via 10,000 cycles at maximum load.



High resistance to corrosion and diverse weather conditions.



Go to the technical data sheet

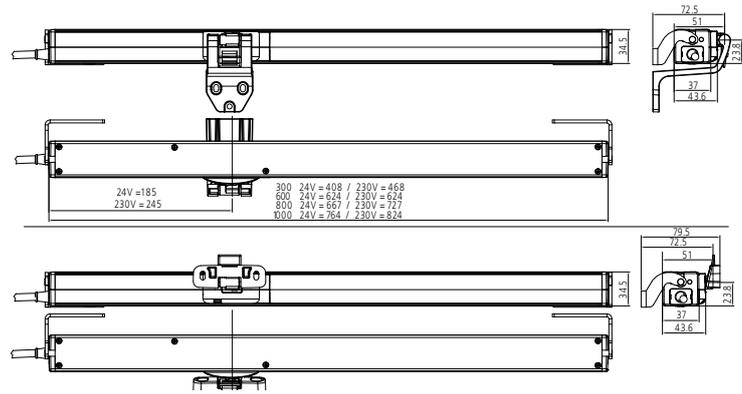
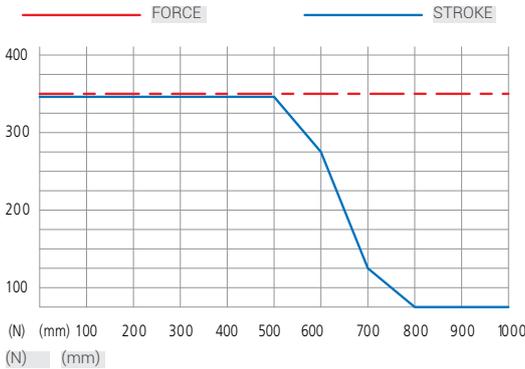
Code	Description	Code	Description
07875	VARIA TUBE 230 V - 300	07804	VARIA TUBE RWA 24 V - 300
07876	VARIA TUBE 230 V - 600	07805	VARIA TUBE RWA 24 V - 600
07877	VARIA TUBE 230 V - 800	07806	VARIA TUBE RWA 24 V - 800
07878	VARIA TUBE 230 V - 1000	07807	VARIA TUBE RWA 24 V - 1000
07897	VARIA TUBE Syncro 230 V - 600	07815	VARIA TUBE RWA Syncro 24 V - 300
07898	VARIA TUBE Syncro 230 V - 800	07816	VARIA TUBE RWA Syncro 24 V - 600
07899	VARIA TUBE Syncro 230 V - 1000	07817	VARIA TUBE RWA Syncro 24 V - 800
		07818	VARIA TUBE RWA Syncro 24 V - 1000

Add the 3-digit color code to the main product code when ordering.

● 000 - Anodised silver

## Varia Tube - Technical data

### TABLE OF FORCE-STROKE RELATIONSHIP



VARIA TUBE	230 V CA	RWA 24 V CC	Syncro 230 V CA	RWA Syncro 24 V CC
Pull force	350 N			
Push force	350 N (see strength diagram)			
Variable strokes	300 (100, 175) mm - 600 (400, 500) mm - 800 (600, 700) mm - 1000 (800, 900) mm			
Syncro3 technology (patented)	No	No	Yes	Yes
Power-supply voltage	110÷230 V~(AC)	24 V=(DC)	110÷230 V~ (AC)	24 V=(DC)
Frequency	50/60 Hz	-	50/60Hz	-
Current absorbed at nominal load	0.23 A (230 V)	0.80 A	0.23 A (230 V)	0.80 A
Power absorbed at nominal load	29 W	19.2 W	29 W	19.2 W
Speed	11 / 9.6 mm/s		11 / 9.6 mm/s	
Stroke duration at nominal charge (Open)	Stroke 300/600/800/1,000 = 28 / 54 / 72 / 90 s			
Stroke duration at nominal charge (Close)	Stroke 300/600/800/1,000 = 36 / 67 / 88 / 109 s			
Double electrical insulation	YES	L.V.	YES	L.V.
Service type	S2 of 3 min			
Operating temperature	-20 °C ÷ +70 °C			
Degree of protection for electrical devices	IP32			
Soft Stop / Start	YES			
Relax function	YES			
Self-learning frame rebated overlap	Self-determination of the position			
Parallel connection	YES			
Power-supply cable type and length	H05VV-F - 2 m		FRR/2 - 2.5 m	
Opening stroke-end setting	Electronic via dip-switches			
Closing stroke-end setting	Upon absorption of power			
Overload protection	Upon absorption of power			
Dimensions for 230 V (strokes 300/600/800/1,000)	34.6x37 L=468/624/727/824 mm			
Dimensions for 24 V (strokes 300/600/800/1,000)	34.6x37 L=408/624/667/764 mm			
Static holding force	2000 N			
Weight	0.9/1.4/1.8/2.2 Kg	0.8/1.3/1.7/2.1 Kg	0.9/1.4/1.8/2.2 Kg	0.8/1.3/1.7/2.1 Kg
Supplied brackets	Only frame brackets included. Sash bracket to be ordered separately.			

The data provided in these illustrations is non-binding and subject to change, even without advance notice.

# VARIA SLIM BASE

Chain actuator 250N

Chain actuator for awning windows, hopper windows, dormer windows and light domes. Simple mechanical selection of the two strokes, 240 mm and 360 mm. Equipped with a microprocessor with relax function and power control over the entire stroke.



Progressive starting ramp



Power control over the entire stroke



Body and brackets are made from a high-strength composite material (glass-fibre reinforced polyamide)



Even simpler and more intuitive stroke selection



Relax function for resting mechanical parts after every stroke-end



Go to the technical data sheet

Code	Description
07889	VARIA SLIM BASE 230 V
07890	VARIA SLIM BASE 24 V

Add the 3-digit color code to the main product code when ordering.



590 - **Black**



560 - **White**



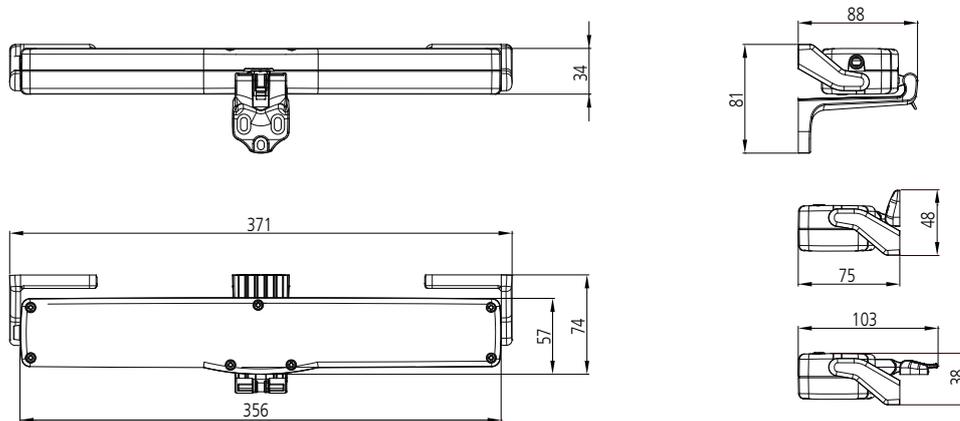
542 - **Grey**

## Varia Slim Base - Technical data

Linear electric actuator with double-row four-link articulated chain enclosed in composite casing suitable for moving awning windows, hopper windows, dormer windows and light domes. The actuator has a push and pull force of 250 N and is designed to function at 110/230 V AC 50/60 Hz or 24 V DC. It comes supplied with quick-coupling screwless assembly brackets (patented), awning and bottom-hung-window brackets with quick coupling (patented).

Two opening strokes with mechanical selection. Stroke-end stop during opening and closing upon power absorption and as protection against overloading. Can be connected in parallel.

Complies with Directives 2004/108 EC (EMC Directive) and 2006/95 EC (Low Voltage Directive).



Model	Varia Slim Base 230 V Code 07889	Varia Slim Base 24 V Code 07890
Push and pull force	250 N	
Strokes	240/360 mm	
Synchronisation	NO	
Power-supply voltage	110 ÷ 230 V ~ (CA) 50/60 Hz	24 V = (CC)
Current at nominal load	0.180 A	0.800 A
Power absorbed at nominal load	~ 30 W	~ 18 W
No-load speed	13.5 mm/s	12.8 mm/s
Maximum no-load stroke time	18 s/27 s	19 s/28 s
Double electrical insulation	YES	Low Voltage
Service type	S2 of 3 min	
Operating temperature	-5 °C ÷ +65 °C	
Degree of protection for electrical devices	IP30	
Soft Stop	NO	
Relax function	YES	
Self-learning frame rebated overlap	Upon absorption of power	
Connection in parallel	YES	
Power-supply-cable length	1 m	2 m
Opening stroke-end setting	Upon absorption of power	
Closing stroke-end setting	Upon absorption of power	
Overload protection	Upon absorption of power	
Dimensions	356 x 57 x 34 mm	
Weight	0.84 kg	0.82 kg
Static holding force	1700 N	
Supplied brackets	Sash and frame brackets for top/bottom-hung application	
Connection with Slim Lock	NO	

The data provided in these illustrations is non-binding and subject to change, even without advance notice.

# VARIA SLIM PLUS

Chain actuator 300N

Varia Slim Plus is a sleek combination of design, high performance levels, quality and safety. The units are available in 230 V and in the low voltage 24-V CC version. The casing of Varia Slim Plus comes in aluminium and has a distinctive robust design.

Frame support brackets are included with the product. Sash brackets to be ordered separately



Natural ventilation

**ALU** Body is made of die-cast aluminium.



Support brackets in zamak.



Easy to install via quick-coupling of the actuator to the quick-fit frame brackets (without screws). Patented system.



Choice of 3 different chain strokes by means of dip-switches.



Quick-release from the window for even easier cleaning.



Relax and Soft-Stop function for resting mechanical parts after every stroke-end.



Go to the technical data sheet

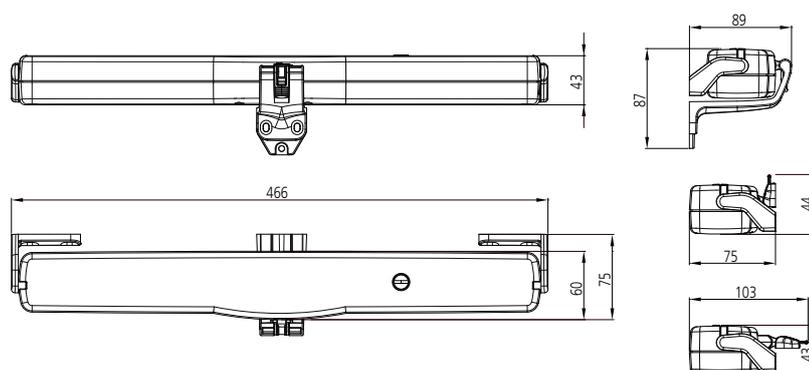
Code	Description	
07880	VARIA SLIM PLUS 24 V [only in 500 - RAL 9005]	● 500 - <b>RAL 9005</b>
07882	VARIA SLIM PLUS 230 V	○ 410 - <b>RAL 9010</b> ● 970 - <b>RAL 9006</b>

Sash bracket to be ordered separately.

Add the 3-digit color code to the main product code when ordering.

## Varia Slim Plus & Slim Plus Syncro - Technical data

Electric linear actuator: double-row four-link articulated chain enclosed in an appropriate aluminium casing and designed to move awning windows, hopper windows, dormer windows and light domes. The actuator has a push and pull force of 300 N and is designed to function at a voltage of 110/230 V AC 50/60 Hz. The device comes equipped with universal swing support brackets that are quick-coupling without any need for screws (patented). Electronic stroke-end for opening with three strokes (200 - 300 - 500 mm), which can be selected at any time using dip-switches; stroke-end upon power absorption during closing and as protection against overloading. The actuator is equipped with a Soft-Stop and Relax function, and it can be connected in parallel. Complies with the Directives 2004/108 EC (EMC Directive) and 2006/95 EC (Low Voltage Directive).



Model	Varia Slim Plus 24 V Code 07880	Varia Slim Plus 230 V Code 07882
Push and pull force	300 N	
Strokes	200/300/500 mm	
Synchronisation	NO	NO
Power-supply voltage	24 V CC	110 ÷ 230 V CA 50/60 Hz
Current absorbed at nominal load	0,910 A	0,160 A
Power absorbed at nominal load	~ 20 W	~ 36 W
No-load speed	8,9 mm/s	7,2 mm/s
Maximum no-load stroke time	56 s	70 s
Double electrical insulation	Low voltage	YES
Service type	S2 of 3 minutes	
Operating temperature	-5 ÷ 65 °C	
Degree of protection for electrical devices	IP32	
Soft Stop	YES	
Relax function	YES	
Self-learning frame rebated overlap	Self-determination of the position	
Connection in parallel	YES (max 30 actuators)	
Power-supply cable length	2 m	2 m
Opening stroke-end setting	Electronic dip-switch setting	
Closing stroke-end setting	Upon absorption of power	
Protection on overload at opening and closure	Upon absorption of power	
Dimensions	456 x 60 x 43 mm	
Weight	1,63 kg	1,43 kg
Static holding force	1700 N	
Supplied brackets	Frame brackets included. Sash bracket to be ordered separately.	
Connection with Slim Lock	YES	NO

The data shown in these illustrations are not binding and may be subject to change without prior notice.

# VARIA SLIM

Chain actuator 300N

Varia Slim is a perfect combination of performance, quality, and safety.

The Varia Slim frame is made of extremely robust technopolymer.

Sash and frame brackets included (bottom-hung, top-hung).

Four different chain strokes are available: 110, 200, 300 and 400.



Natural  
ventilation



Fibreglass-reinforced polyamide actuator housing and sash and frame fixing brackets.



Sash and frame brackets supplied with the product.



The actuator chain disconnects easily and quickly from the sash bracket.



Choice of 4 different chain strokes by means of dip-switches.



Relax function for resting mechanical parts after every stroke-end.



Go to the technical data sheet

Code	Description
07885	VARIA SLIM 24 V

Add the 3-digit color code to the main product code when ordering.



590 - **Black**



560 - **White**

# VARIA SLIM SYNCRO

300N synchronised actuator

Varia Slim Syncro boasts all the main technical features of Varia Slim but it also gives the option of perfectly synchronised operation with another Varia Slim Syncro.

Varia Slim Syncro is the ultimate choice for large windows requiring 2 or more thrust and pull points. With Varia Slim Syncro you can synchronise up to 8 actuators simultaneously without any need for an external controller. The product comprises a pair of actuators preset to operate in sync.

Three different chain strokes are available: 100, 200 and 400.

Note: Syncro items are made up of two actuators (one couple).



Natural ventilation



Fibreglass-reinforced polyamide actuator housing and sash and frame fixing brackets.



Sash and frame brackets supplied with the product



Actuator chain disconnects easily and quickly from the sash bracket



Choice of 3 different chain strokes by means of dip-switches.



Relax function for resting mechanical parts after every stroke-end.



Synchronisation of up to 8 actuators without any need for an external controller.



Go to the technical data sheet

Code	Description
07887	VARIA SLIM SYNCRO 24 V

Add the 3-digit color code to the main product code when ordering.



590 - Black



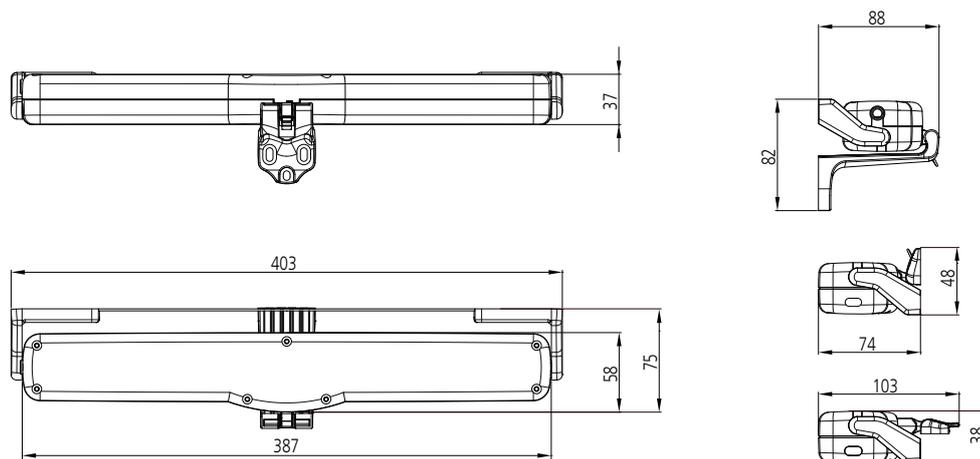
542 - Grey

## Varia Slim, Slim Syncro - Technical data

Linear electric actuator: with double-row four-link articulated chain enclosed in an appropriate high-strength composite casing (glass fibre reinforced polyamide) and suitable for moving awning windows, hopper windows, dormer windows and light domes.

The actuator has a push and pull force of 300N.

The actuator comes supplied with quick-coupling screwless assembly brackets (patented) and awning and bottom-hung-window brackets with quick coupling/uncoupling of the window (patented). Stroke-end: electronic opening stroke-end with variable strokes that can be selected at any time using dip-switches. Closing stroke-end upon power absorption. Can be connected in parallel. Complies with Directives 2004/108 EC (EMC Directive) and 2006/95 EC (Low Voltage Directive).



Model	Varia Slim 24 V Code 07885	Varia Slim Syncro 24 V Code 07887
Push and pull force	300 N	
Strokes	110/200/300/400 mm	100/200/400 mm
Synchronisation	NO	YES
Power-supply voltage	24 V =	24 V =
Current at nominal load	0,950 A	0,950 A
Power absorbed at nominal load	~ 23 W	~ 25W
No-load speed	12,5 mm/s	8,5 mm/s
Maximum no-load stroke time	32 s	48 s
Double electrical insulation	L.V.	L.V.
Service type	S2 di 3 min	
Operating temperature	-5 °C ÷ +65 °C	
Degree of protection for electrical devices	IP30	
Soft Stop	NO	YES
Relax function	YES	YES
Self-learning frame rebated overlap	Self-determination of the position	
Connection in parallel	YES	YES
Power-supply-cable length	2 m	2,5 m
Opening stroke-end setting	Dip-switch setting	
Closing stroke-end setting	Upon absorption of power	
Overload protection	Upon absorption of power	
Dimensions	387 x 59 x 37 mm	
Weight	0,94 kg	1,15 kg
Static holding force	1700 N	
Supplied brackets	Sash and frame brackets for top/bottom hung and sill application	
Connection with Slim Lock	YES	YES

The data provided in these illustrations is non-binding and subject to change, even without advance notice.



## Varia - Accessories and Spare parts

	Code	Product	Description
	05900	Varia Slim Plus	Bottom-hung outward opening window bracket
	05901	Varia Slim Plus	Top-hung outward opening bracket
	05902	Varia Slim Plus	Top-hung bracket
	05903	Varia Slim Plus	Standard frame support brackets (spare parts)
	05904	Varia Slim and Varia Slim Base	Standard support brackets (cp)
	05905	Varia Slim and Varia Slim Base	Brackets for vertical mounting (cp)
	05906	Varia Slim and Varia Slim Base	Outward-opening brackets
	05907	Varia Slim and Varia Slim Base	Outward-opening window bracket
	05908	Varia Slim Plus, Varia Slim and Varia Slim Base	Quick connector
	05909	Varia Slim Plus (15 mm)	Top-hung bracket
	05910	Varia Slim and Varia Slim Base	Top-hung outward opening bracket - Security clutch H 14,5 mm
	05911	Varia Slim Plus, Varia Slim and Varia Slim Base	Metal sash support brackets H 45 mm (cp)
	05920	Varia Tube	Steel top-hung horizontal sash brackets (spare parts)

	Code	Product	Description
	05921	Varia Tube	Zamak bottom-hung sash bracket
	05922	Varia Tube	Zamak top-hung frontal sash bracket
	05923	Varia Tube	Zamak top-hung horizontal sash bracket
	05924	Varia Tube	Steel rapid fixing clip (spare parts)

Add the 3-digit color code to the main product code when ordering.

 590 - **Black**
 560 - **White**
 542 - **Grey**

# SLIM LOCK

Electric Lock

Slim Lock is an electric lock specially designed to automatically open/close the multi-point-locking system on top-hung, bottom-hung and parallel windows in conjunction with Varia Slim 24 V chain actuators. The presence of locking points around the window significantly increases its air, water and wind tightness.

Slim Lock is small and unobtrusive (25 × 26 mm) with recessed installation inside a slot in the window frame and no impact on visual design.

Slim Lock operates quietly and comes equipped with advanced electronics.

It works in conjunction with Varia Slim 24 V actuators: upon the opening signal, the lock releases the locking points before the actuator goes into action; conversely it blocks the locking points as soon as the window is closed. The push/pull force (600 N – 850 N at start) ensures high operational reliability even when the locking points are numerous.



Natural ventilation



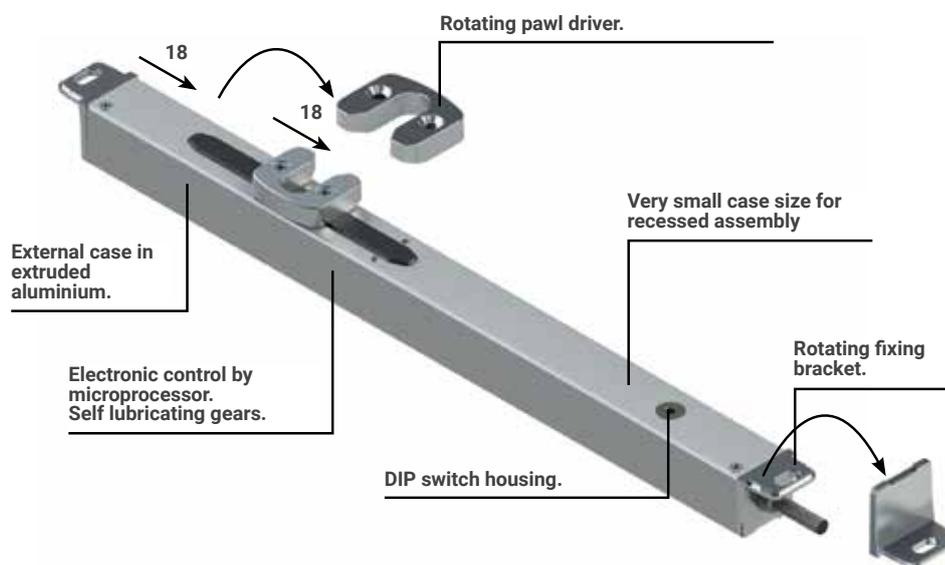
Quiet and powerful

TESTED  
10,000

Reliability tested via 10,000 cycles at maximum load



Syncro technology (patented) allows for up to 8 Slim Lock and Varia Tube 24 V actuators to be connected together



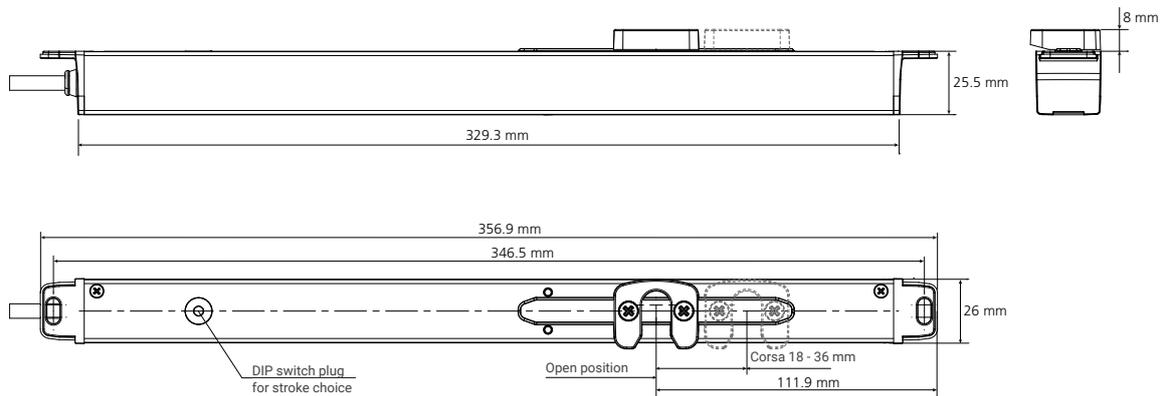
Go to the technical data sheet

Code	Description
07895	SLIM LOCK 24 V

Add the 3-digit color code to the main product code when ordering.

● 000 - Anodised silver

## Slim Lock - Technical data



Model	<b>Slim Lock 24 V CC Code 07895</b>
Push and pull force	600 N – 850 N at start
Stroke	18 mm/36 mm
Power-supply voltage	24 V CC
Current absorbed at nominal load	0.85 A during the opening/closing - 1.2 A for amperometric block
Power absorbed at nominal load	~ 20 W
No-load speed	5 mm/s
Maximum no-load stroke duration	4 s (18 mm) – 7,2 s (36 mm)
Double electrical insulation	Very low tension
Duty rate	30%
Service	S2 - 1 minute
Case material	Extruded aluminium
Operating temperature	-20 °C ÷ +70 °C
Degree of protection for electrical devices	IP40
Opening/closing stroke-end setting	Electronically set
Operating with chain actuators	Selectable
Operating without chain actuators	Selectable
Silicone cable	3 x 0,5 mm <sup>2</sup> - 2,00 m
Overload protection during opening/closing phases	Supply cut due to power overload
Dimensions	25,5 x 25,5 x 357 mm
Slot required	27 x 335,5 mm
Weight	0,560 kg
Matching actuators	Varia Slim 24 V art. 07885 Varia Slim Syncro art. 07887 (NO Varia Slim Base 24 V – art. 07890)

The data provided in these illustrations is non-binding and subject to change, even without advance notice.

## ROD ACTUATOR ST450

Electro-mechanical actuator with rigid rod

The linear rod actuator is particularly suitable for moving windows and doors that require a high degree of reliability and resistance to a combination of bending and compressive stresses. Ideal for skylights and shed windows, top-hung windows, vertical sunblinds, and jalousie windows.

They stand out in terms of speed and silence as well as their extreme versatility in terms of application.



Natural  
ventilation



Fast and silent



Can be installed everywhere



Attractive design



Takes up little space



Go to the technical data sheet

Code	Description
<b>0479101</b>	ST450 stroke 180 (top hung)
<b>0479201</b>	ST450 stroke 300 (top hung)
<b>0156001</b>	ST450 stroke 180 (vertical sunblinds)

Add the 3-digit color code to the main product code when ordering.

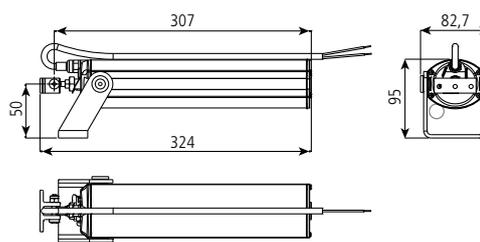
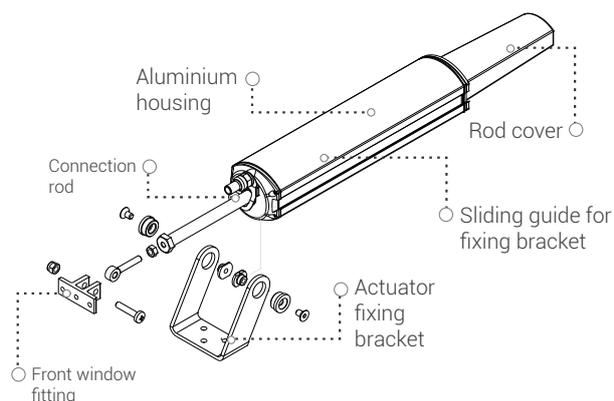
● 020 - **Anodised silver**

## Rod actuator - Technical data

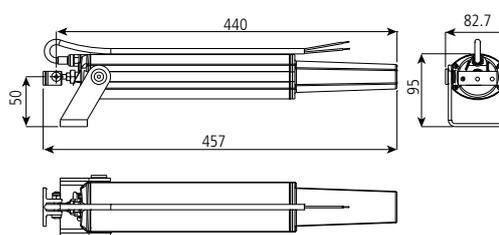
Electric actuator with aluminium enclosure, linear movement and rigid rod. Operation at 230 V AC, fitted with micro limit switch and thermally protected. Can be connected in parallel using the relay incorporated in the card. Equipped with a 1.5-m-long connection cable already wired inside the actuator.

The presence of two continuous lateral guides facilitates the positioning of the fixing bracket at any point along the motor housing, making it easier to adjust the window-locking position. Supplied with brackets and supports for the requested application.

The electric actuator has a push and pull force of 450N and it is available in the versions for top-hung windows or for vertical sunblinds and jalousie windows.

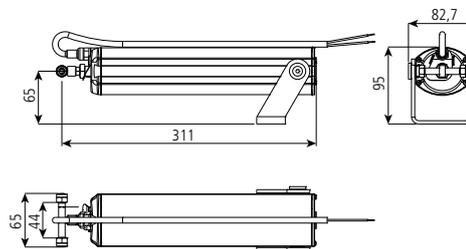
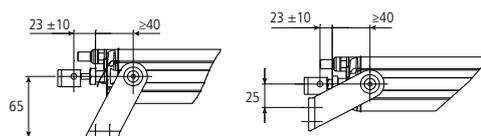
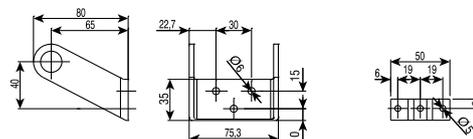


**0479101** ST450 stroke 180  
for TOP-HUNG windows



**04792** ST450 stroke 300  
for TOP-HUNG windows

Model	ST450		
	TOP HUNG		VERTICAL SUNBLINDS
Code	<b>0479101</b>	<b>0479201</b>	<b>0156001</b>
Corse	180 mm	300 mm	180 mm
Tensione di alimentazione	230 V c.a. ± 5%		
Push and pull force	450 N		
Max idle stroke duration	7	12	7
Noload speed	23 mm/s		
Current absorbed at nominal load	0,7 A		
Power absorbed at nominal load	150 W		
Thermal protection	YES		
Capacitor	5 µF		
Limit switch	YES		
Relay included	YES		
Pre-wired power-supply cable	YES		
Can be connected in parallel	1500 mm		
Degree of protection for electrical devices	IP55		
Operating temperature	20/+70 °C		
Sash and frame brackets	Included		



**01560** ST450 stroke 300  
for VERTICAL SUNBLINDS

# RACKMAX 450

Electric rack actuator

Rackmax 450 is the electric actuator with linear rack movement and a thrust and pull force of 450 N.

- 110-230 V~ 50/60 Hz supply voltage.
- Available in different stroke lengths: 180, 230, 350, 550, 750 and 1,000 mm
- Sash bracket and frame in polyamide (supplied)
- Large sash-bracket adjustment range over the entire length of the rod
- Opening and closing load-dependent stroke limit as electronic overload protection
- Can be connected in parallel.
- Complies with the 2004/108 EC (EMC) directive



450N



Thrust and pull force 450 N



Can be connected in parallel



Available in a 110-230 V AC version



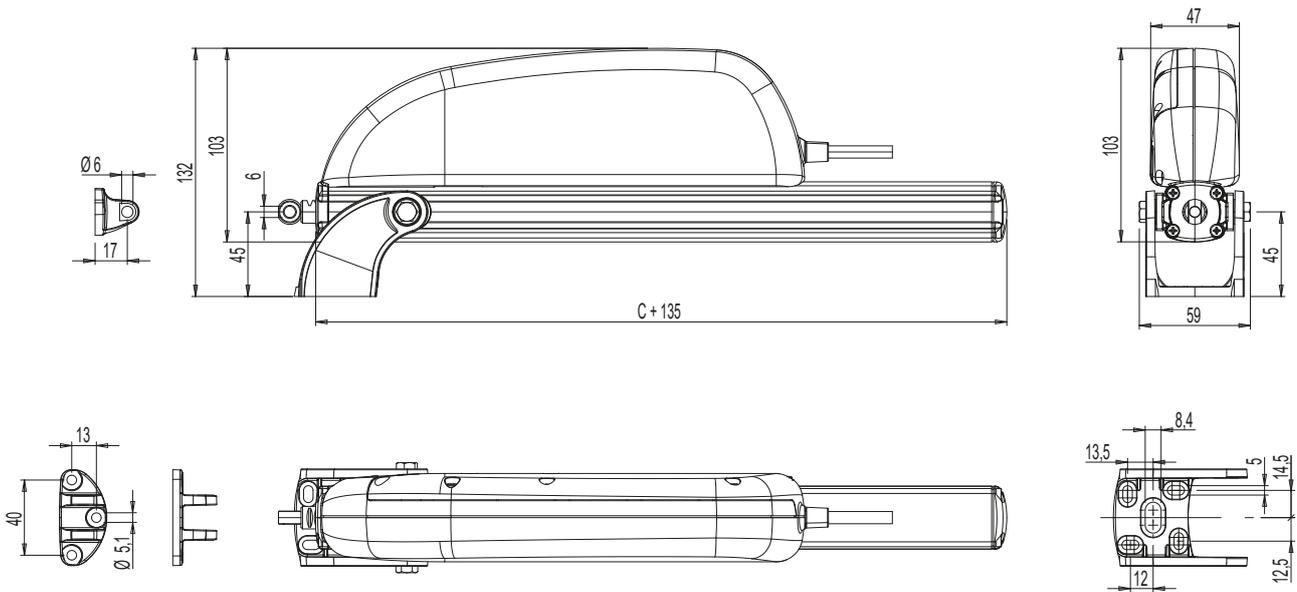
Go to the technical data sheet

Code	Description
07432	RackMax 450 230 V - 180 mm
07433	RackMax 450 230 V - 230 mm
07434	RackMax 450 230 V - 350 mm
07435	RackMax 450 230 V - 550 mm
07436	RackMax 450 230 V - 750 mm
07437	RackMax 450 230 V - 1000 mm
07460	Fixing accessories

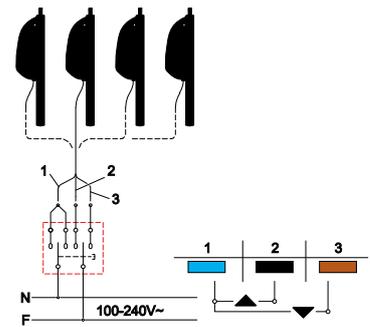
Add the 3-digit color code to the main product code when ordering.

● 000 - Anodised silver

## Rackmax 450 - Technical data



Model	230 V CA
Thrust and drive force (FN)	450 N
Strokes (SV)	180, 230, 350, 550, 750, 1000 mm
Power-supply voltage (UN)	110 - 230 V ~ 50/60 Hz
Current absorbed at nominal load (IN)	0,28 - 0,19 A
Power absorbed at nominal load (PN)	21,6 A – 24 W
Travel speed	6,7 mm/s
No-load stroke duration	Depends on stroke
Electrical insulation	Class II
Service type (DR)	2 cycles
Operating temperature	-5 +65 °C
Degree of protection for electrical devices	IP44
Self-learning frame rebated overlap	Position self-determination
Parallel connection	YES (max. 20)
Duo version (with Drive unit)	NO
Static holding force (depending on brackets)	2200 N
Closing stroke-end setting	Upon absorption of power
Overload protection	Upon absorption of power
Pre-wired power-supply cable	1 m
Dimensions	103 x 47 x (stroke + 135) mm
Weight	Variable
Polyamide sash/frame brackets	Included



# RACKMAX 650

Electric rack actuator

Rackmax 650 is the electric actuator with linear-rack movement and thrust and pull force of **650 N**. It is possible to achieve a thrust force up to 1100 N by connecting two Rackmax 650 motors together using a drive tube.

- Option of obtaining several thrust points using a Rackmax drive unit or in combination with a second Rackmax 650
- Version with 110-230 V~ 50/60 Hz and 24 V CC supply voltage
- Available in different stroke lengths: 180, 230, 350, 550, 750 and 1,000 mm
- Option of reducing the maximum exit of the rack (stroke) for the actuator prior to installation
- Sash bracket and frame in zamak (supplied)
- Wide bracket adjustment range over entire rod length
- Opening and closing load-dependent stroke limit as electronic overload protection
- Compliant with Directives 2004/108 EC (EMC Directive) and 2006/95 EC (L.V. Directive).



650N  
↔

Thrust and pull force up to 600 N  
(one rack actuator)

1100N  
↔

Thrust and pull force up to 1,000 N  
(two rack actuators)



Can be connected in parallel



Available in a 24 V CC  
and 110 - 230 V CA



Drive units available



Go to the technical data sheet  
RackMax 650 230 V



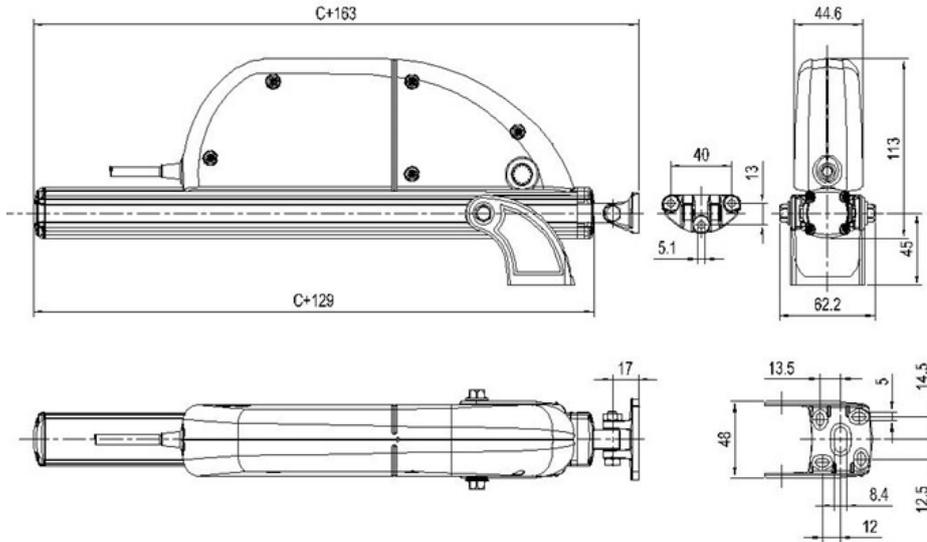
Go to the technical data sheet  
RackMax 650 24 V

Code	Model	Code	Model
<b>0743801</b>	RackMax 650 230 V - 180 mm	<b>0744501</b>	Rackmax 650 24 V - 230 mm
<b>0743901</b>	RackMax 650 230 V - 230 mm	<b>0744601</b>	Rackmax 650 24 V - 350 mm
<b>0744001</b>	RackMax 650 230 V - 350 mm	<b>0744701</b>	Rackmax 650 24 V - 550 mm
<b>0744101</b>	RackMax 650 230 V - 550 mm	<b>0744801</b>	Rackmax 650 24 V - 750 mm
<b>0744201</b>	RackMax 650 230 V - 750 mm	<b>0744901</b>	Rackmax 650 24 V - 1000 mm
<b>0744301</b>	RackMax 650 230 V - 1000 mm	<b>07460</b>	Fixing accessories
		<b>07464</b>	Zamak frame bracket

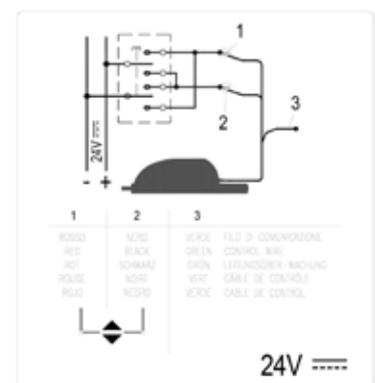
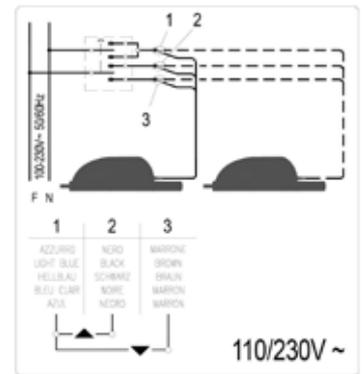
Add the 3-digit color code to the main product code when ordering.

● 000 - Anodised silver

## Rackmax 650 - Technical data



Modello	230 V CA	24 V CC
Thrust and drive force (FN)	650 N	
Strokes (SV)	180, 230, 350, 550, 750, 1000 mm	
Power-supply voltage (UN)	110 - 230 V ~ 50/60 Hz	24 V =
Current absorbed at nominal load (IN)	0,37 - 0,18 A	1,0 A
Power absorbed at nominal load (PN)	28W - 24 W	24 W
Travel speed	5 mm/s	7 mm/s
No-load stroke duration	Depends on stroke	
Electrical insulation	Class II	Class III (Selv)
Service type (DR)	2 cycles	5 cycles
Operating temperature	-20 +70 °C	
Degree of protection for electrical devices	IP65	
Soft-stop	YES	
Relax function	YES	
Self-learning frame rebated overlapo	Position self-determination	
Parallel connection	YES (max. 20)	
Synchronized operation	No	YES max 8
Duo version (with Drive unit)	YES	
Static holding force	3000 N	
Opening stroke-end setting	Electronic with encoder (after learning the limit stop)	
Closing stroke-end setting	Upon absorption of power	
Overload protection	Upon absorption of power	
Pre-wired power-supply cable	H05VV-F - 2m	
Noise detected	55 dB(A)	
Dimensions	44 x 113 x (stroke + 163) mm	
Weight	1,40 / 1,45 / 1,65 / 2,34 / 2,69 / 3,11 Kg	1,70 / 1,75 / 1,95 / 2,29 / 2,64 / 3,07 Kg
Synchronized function	NO	YES



# RACKMAX 650

Drive unit

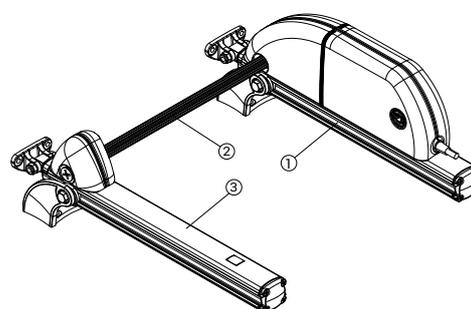
The RACKMAX 650 drive unit combines with the RACKMAX 650 electric-rack actuator for the automation of top-hinged windows, shed windows, skylights, domes, jalousie windows and sunshade blades.

The Rackmax 650 drive unit can be applied in conjunction with one or two RackMax 650 rack actuators to gain more thrust points (see the table on the following page).

The physical connection between the drive motor (1) and the drive unit (3) takes place via an anodised aluminium drive tube (2), available for separate order and in different lengths -1,000, 1,500, 2,000, 2,500 mm.

Rackmax 650 drive units are available in 180, 230, 350, 550, 750 and 1,000 stroke lengths and should be used in conjunction with compatible Rackmax 650 actuators.

Zamak sash and frame brackets are included.



1. Chain actuator Rackmax 650
2. Drive tube
3. Drive unit



Go to the technical data sheet

Code	Model
<b>0745001</b>	Drive unit Rackmax 650 - 180 mm
<b>0745101</b>	Drive unit Rackmax 650 - 230 mm
<b>0745201</b>	Drive unit Rackmax 650 - 350 mm
<b>0745301</b>	Drive unit Rackmax 650 - 550 mm
<b>0745401</b>	Drive unit Rackmax 650 - 750 mm
<b>0745501</b>	Drive unit Rackmax 650 - 1,000 mm
<b>07460</b>	Fixing accessories
<b>07464</b>	Zamak frame bracket

Add the 3-digit color code to the main product code when ordering.

● 000 - **Anodised silver**

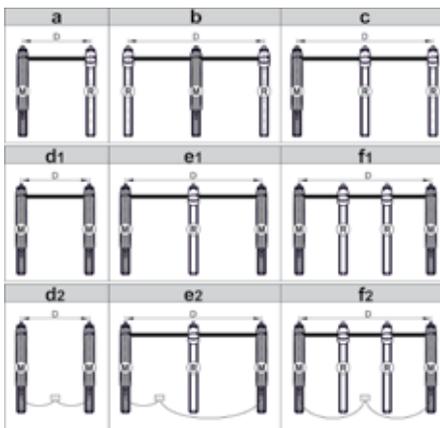
# RACKMAX 650

## Drive tube

Drive tubes are employed to connect a Rackmax 650 rack actuator to one or more drive units, or to another Rackmax 650 motor.

The connection between the motor and the drive units takes place via an aluminium drive tube with fixing screws. The drive tube makes it possible to mechanically connect actuators and drive units (see table).

Drive tubes are available in the following lengths: 1,000, 1,500, 2,000, 2,500 mm.



Configuration	Synchronization thrust points	N° engines (M)	N° drive units (R)	N° thrust points	Thrust force total
a 24V/230V	mechanical	1	1	2	650N
b 24V/230V	mechanical	1	2	3	650N
c 24V/230V	mechanical	1	2	3	650N
d1 24V/230V	mechanical	2	0	2	1100N
e1 24V/230V	mechanical	2	1	3	1100N
f1 24V/230V	mechanical	2	2	4	1100N
d2 24V	electronic	2	0	2	1100N
e2 24V	electronic	2	1	3	1100N
f2 24V	electronic	2	2	4	1100N



Go to the technical data sheet

Code	Model	Code	Model
<b>07457</b>	Drive tube - 1500 mm	<b>07459</b>	Drive tube - 2500 mm
<b>07458</b>	Drive tube - 2000 mm		

Add the 3-digit color code to the main product code when ordering.

● 000 - Anodised silver

# SHEV RWA CONTROL UNITS

for smoke and heat evacuation systems

SHEV control units are designed to be used in RWA systems for smoke and heat extraction. SHEV control units are installed together with Varia Tube RWA 24 V dc chain actuators as part of integrated systems that allow for the automatic and safe opening of windows in buildings in the event of fire. These systems are essential for the safety of building occupants because they allow smoke and heat to escape, protecting inhabitants from intoxication and facilitating the evacuation process.

The same RWA-system-controlled openings can be used for natural everyday room ventilation.



Smoke and heat evacuation



Emergency switches



Wind-rain detectors



Smoke/heat detectors



Ventilation buttons



Alarm signals



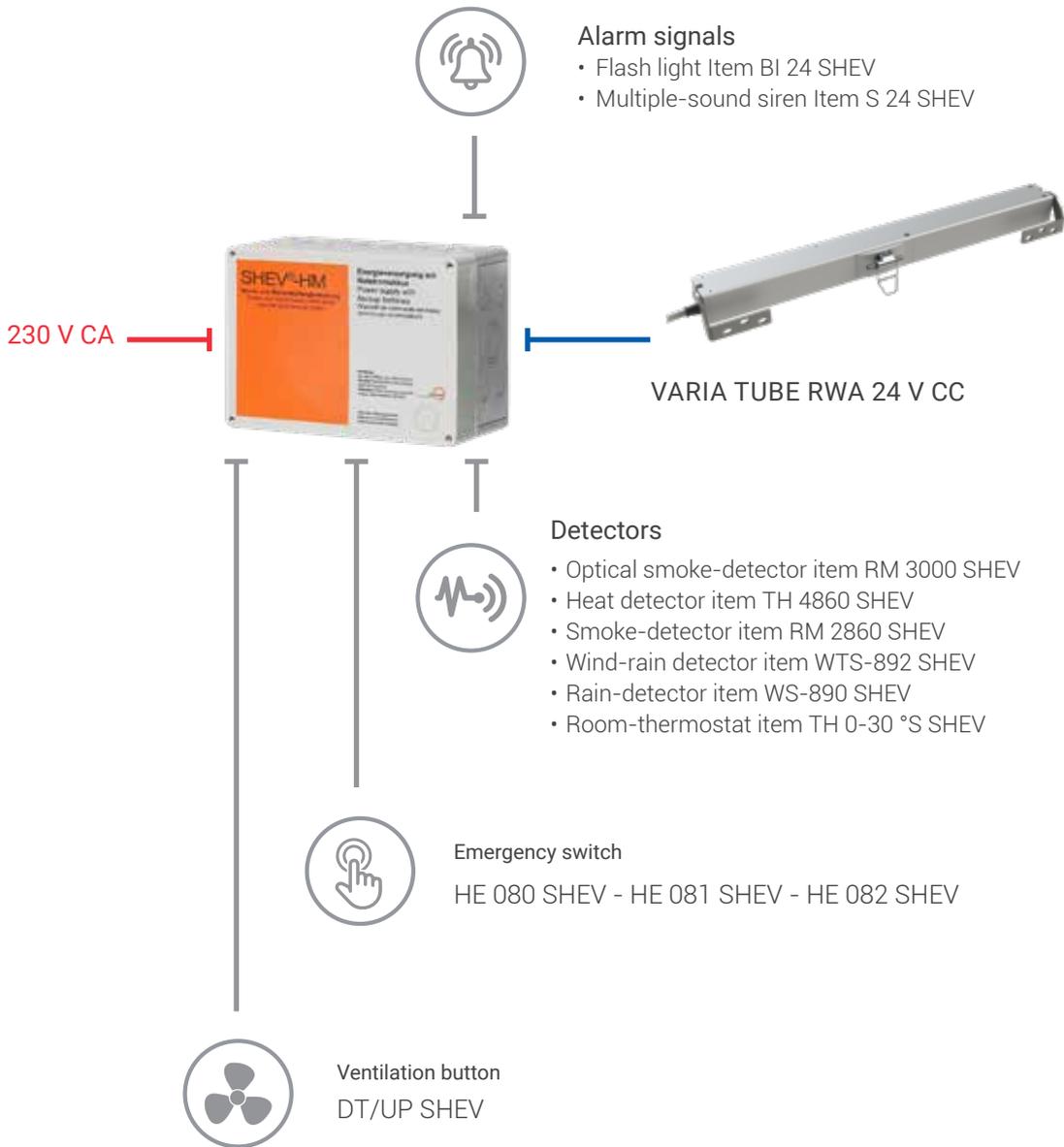
Thermostat

**CE** All the products in the SHEV family bear the CE marking, meaning they are authorised for sale within the European Union. The CE marking is a symbol of SHEV products' compliance with European standards for electrical products.

Please refer to local laws in force for any countries outside the European Union.

Code	Model	Code	Model
07823	SHEV 3	07840	Wind-rain detector WTS-892 SHEV
07824	SHEV 6	07841	Emergency switch with status led + buzzer HE 080 SHEV
07825	Optical smoke detector RM 3000 SHEV	07846	Additional module for thermostat THM-200 SHEV
07826	Heat detector TH 4860 SHEV	07849	Rain detector WS-890 SHEV
07828	Emergency switch with status led HE 082 SHEV		
07839	Ventilation button DT/UP SHEV		

Shev Rwa control units - **Technical data**



Model	SHEV 3 07823	SHEV 6 07824
Power-supply voltage	230 V CA	230 V CA
Output voltage	24 V CC	24 V CC
Max. load current	3 A	6 A
Max. number of connectable Varia Tube 24 V DC actuators	3	6
Housing	technopolymer	technopolymer
Back-up battery	included	included

## POWER BT for ventilation systems

POWER BT control units are designed for ventilation systems without smoke and heat evacuation.

These units can control 24 V CC Giesse actuators for automatic window security.

Rain and wind detectors can be plugged into POWER BT in order to automatically manage the windows when specific weather conditions occur.

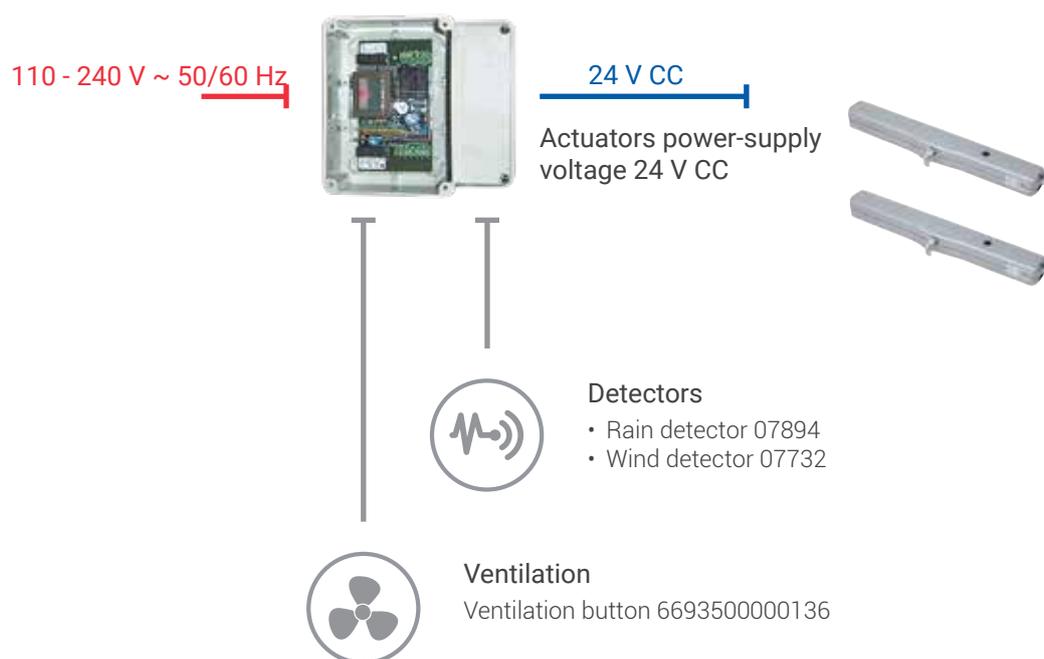


Wind detector



Ventilation button

### Centraline Power BT - Technical data



Code	Model
07712	POWER BT 6 RADIO Battery
07894	HEATED RAIN SENSOR SPR
6693500000136	VENTILATION BUTTON

Model	POWER BT 6 RADIO 07725	POWER BT 6 Battery 07709 POWER BT 6 RADIO Battery 07712
Power-supply voltage	110 - 240 V ~ 50/60 Hz	
Output voltage	24 V CC	
Max. load current	3 A	
Maximum output per module	2,5 A (fuse T 2.5 A for every module)	
Maximum output current	6 x 1,1 A	
Electrical insulation	Class I	
Connectable devices	Wind detector - Rain detector - Ventilation button	
Operating temperature	-5 °C- +65 °C	
Degree of protection for electrical devices	IP65	
Remote control	included with 07712	
Back-up battery	NO	included (2 x 12 V CC) 1,2 Ah
Material	Technopolymer	
Number of actuators*	up to 6 actuators 07880 (VARIA SLIM PLUS)	
	up to 3 items 01495 (VARIA)	

\*For other actuators please contact Giesse technical support.



Power BT control units bear the CE marking, meaning they are authorised for sale within the European Union. The CE marking is a symbol of the products' compliance with European standards for electrical products.

Please refer to local laws in force for any countries outside the European Union.



Go to the technical data sheet

### Heated rain sensor - Technical data

Model	Heated rain sensor SPR cable Code 07894
Power-supply voltage	12 V ÷ 24 V = (CC)
Maximum absorption power	20 mA – (120 mA with active heater)
Type of sensor	Capacitive
Heater intervention	< +4 °C
Contact type	SPDT
Contact rating	0,5 A/125 V CA – 1 A/24 V CC
Radio-transmission frequency	-
Operating temperature	-20 ÷ +65 °C
Feeding cable length	5 m
Feeding cable type - wire number	PVC LiY2Y protected from UV - 5 wires
Degree of protection for electrical devices	IP65
Dimensions	45 x 93 H = 19 mm
Weight	552 g (cable excluded)

# POWER AT for ventilation systems

POWER AT control units are designed for ventilation systems without smoke and heat evacuation. These units can control 230 V CA Giesse actuators for automatic window security.

Rain and wind detectors can be plugged into POWER AT in order to automatically manage the windows when specific weather conditions occur.

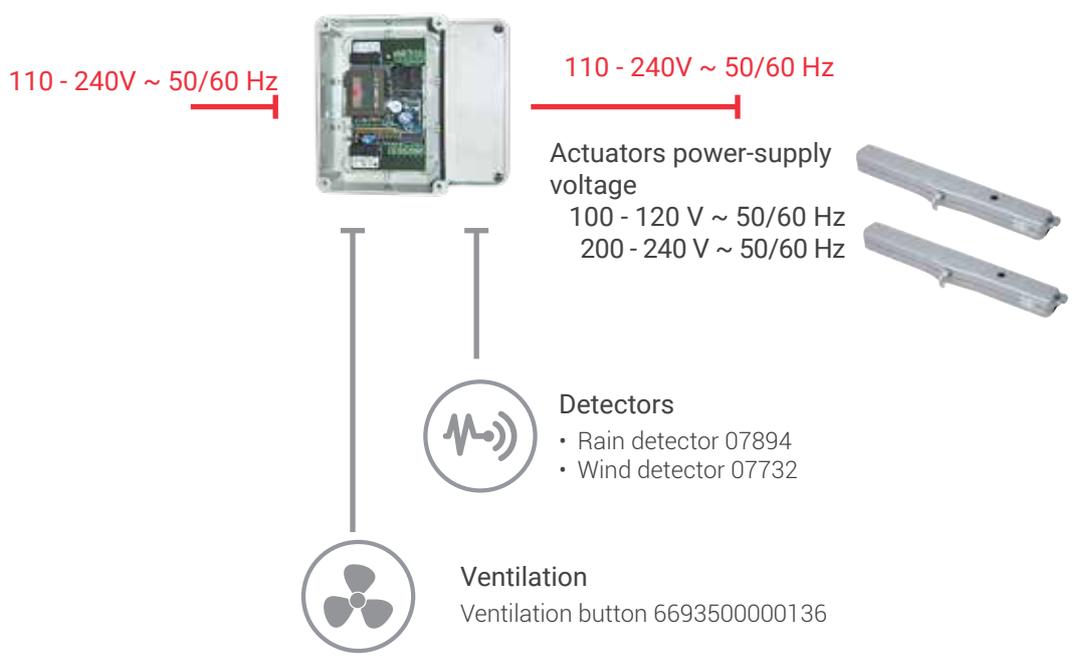


Wind detector



Ventilation button

## Centraline Power AT - Technical data



Code	Model
07718	POWER AT 6
07894	HEATED RAIN SENSOR SPR
07732	WIND DETECTOR
669350000136	VENTILATION BUTTON

Model	POWER AT 6 07718
Power-supply voltage	110 - 240 V ~ 50/60 Hz
Output voltage	110 - 240 V ~ 50/60 Hz
Max. load current	7,5 A
Maximum output per module	2,5 A (fuse T 2.5 A for every module)
Maximum output current	6 x 1,25 A
Electrical insulation	Class I
Connectable devices	Wind detector - Rain detector - Ventilation button
Operating temperature	-5 °C- +65 °C
Degree of protection for electrical devices	IP65
Back-up battery	NO
Material	Technopolymer
Number of actuators*	up to 18 actuators 07882 (VARIA SLIM PLUS)

\*For other actuators please contact Giesse technical support.



Power AT control units bear the CE marking, meaning they are authorised for sale within the European Union. The CE marking is a symbol of the products' compliance with European standards for electrical products.

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Go to the technical data sheet

### Heated rain sensor - Technical data

Model	Heated rain sensor SPR cable Code 07894
Power-supply voltage	12 V ÷ 24 V = (CC)
Maximum absorption power	20 mA – (120 mA with active heater)
Type of sensor	Capacitive
Heater intervention	< +4 °C
Contact type	SPDT
Contact rating	0,5 A/125 V CA – 1 A/24 V CC
Radio-transmission frequency	-
Operating temperature	-20 ÷ +65 °C
Feeding cable length	5 m
Feeding cable type - wire number	PVC LiY2Y protected from UV - 5 wires
Degree of protection for electrical devices	IP65
Dimensions	45 x 93 H = 19 mm
Weight	552 g (cable excluded)

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