



AUTOMATIONS

CHAIN, ROD AND RACK
ACTUATORS

AUTOMATIONS CHAIN, ROD AND RACK ACTUATORS

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PIONEERS IN QUALITY, INNOVATION & DESIGN

We are pioneers.

For more than 50 years, we have been pushing back frontiers and changing the way hardware for aluminium windows and doors is designed and produced.

We are part of Schlegelgiesse, the international division of Tyman plc, a global group with hardware-manufacturing plants in Italy, the United Kingdom, China and the United States, and our sales network is able to serve almost every country in the world.

Our mission is to be a global partner to the fenestration industry, providing customers with engineered components from our full range of sealing systems and hardware solutions for doors and windows covered by over 100 registered patents.

We strive to maintain high professional standards and uphold our core values of Quality, Innovation and Design. Our goal is complete customer satisfaction and we achieve this by designing, manufacturing and marketing cutting-edge solutions that meet market demands all over the world.



RESEARCH AND DESIGN AT OUR SCHLEGELGIESSE LABORATORY

WinLab is the name of the Laboratory that we set up with pride in 1995 in order to carry out research and design activities aimed at the development of new products and the improvement of existing ones. It provides our design and development functions with support and is the place where samples for testing and developing new products are created and built. This is also where you can benefit from in-depth advice about special needs and obtain technical support during the product-design and development stage.

At WinLab we run mechanical and performance tests on hardware, doors and windows in order to gauge their performance level. We have a dedicated test area equipped with cutting-edge machinery, such as a salt-spray test chamber which assesses the resistance of hardware solutions to salt-spray-corrosion.

The test area is where cyclic mechanical and functional tests are conducted to test the durability of hinges, handles, pulleys, tilt-and-turn mechanisms, variable geometry arms and other such systems.

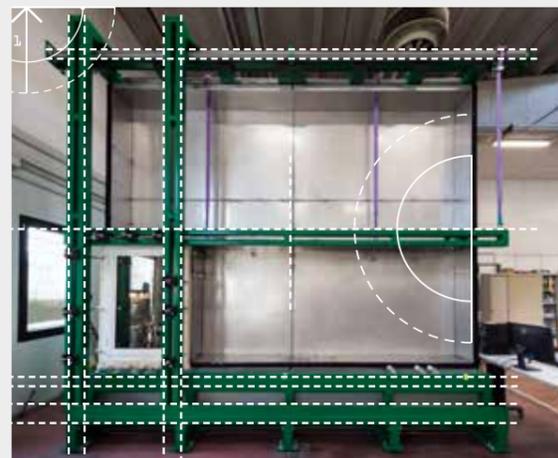
The most important tests required by European standards (UNI EN 14351-1) can be performed on the premises of our GIESSE WinLab:

- Thermal-calculation test
- Mechanical-durability test
- Air permeability test
- Watertightness test
- Resistance-to-windload test

Hardware performance

- Mechanical testing in accordance with industry standards
- Product-development testing based on our design specifications

The Giesse WinLab team is here to serve our customers, simulating foreseeable conditions and testing products at each relevant phase in compliance with all applicable rules and official procedures.



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.

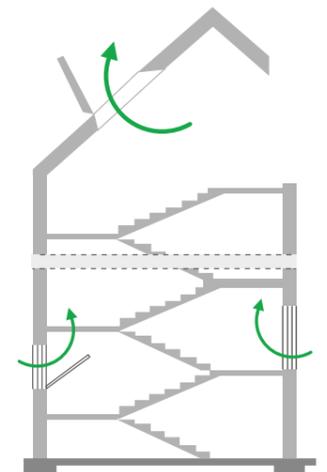
NRWG certification determines the test procedures which the various parts of the system undergo, such as windows, automations, detection devices and the central control and monitoring unit. Even construction materials are subject to this certification.

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 SOLUTIONS

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

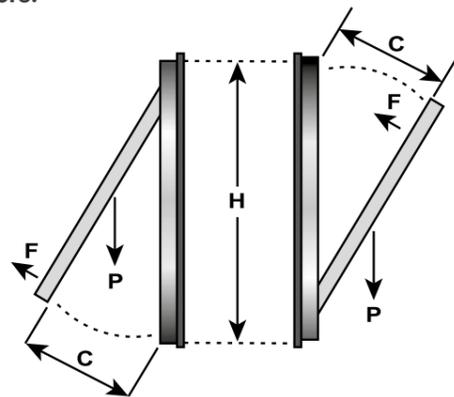
In other circumstances, electronic-control devices are necessary for reasons of practicality or security so windows can be opened or closed automatically. Before an actuator is installed on a window, checks must be run to ensure that it is suited to the task. This is particularly important when smoke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

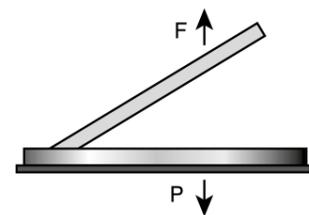
Calculation for determining the force (Newton=N) required for top-hung and bottom-hung windows and doors:



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

$$\text{KgF} \times 9.81 = \text{N}$$

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



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

$$\text{KgF} \times 9.81 = \text{N}$$

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).

Giessere actuators

| Type of Automation | Chains | | | | | Rod | Racks | |
|--|------------------------|-------------------------------|-----------------|------------------|------------------------------------|------|--------|----------------------------|
| | Varia Tube | Varia Slim Varia Slim Plus | Varia Slim Base | Varia Slim Small | Varia UNI 230V AC Varia 24 V DC | | ST 450 | RackMax 450 |
| Model | | | | | | | | |
| Thrust Force | 350N | 300N | 250N | 200N | 150N | 450N | 450N | 600N |
| Drive Force | | | | | 300N | | | |
| Bottom-Hung | ● | ● | ● | ● | ● | | | |
| Bottom-Hung Width > 1.6 m | ● Syncro Version | ● Syncro Version | | | ● Varia UNI 2 Pcs | | | |
| 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 | | | ● Varia UNI 2 Pcs | | | ● Add. Drive unit |
| In-Line Top-Hung And Shed windows | ● Syncro Version | ● | ● | | ● | ● | ● | ● |
| Skylights | ● | ● | ● | | | | | |
| Hopper | ● | ● | ● | | ● | ● | ● | ● |
| 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 | | | ● Varia UNI 2 Pcs | | | |

VARIA TUBE CHAIN ACTUATOR



The latest addition to Giesse chain-actuators' family boosts power (350 N) and increases the number of strokes (from 200 to 1,000 mm), adapting to a variety of windows from outward-opening to bottom-hung windows, including dormer windows and domes.

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.

Varia Tube is entirely made of metal, certified under EN 12101-2 and can be used for smoke and heat extraction systems (RWA).



000 - Anodised silver

- 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
- Reliability tested via 10,000 cycles at maximum load
- 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
- High resistance to corrosion and diverse weather conditions

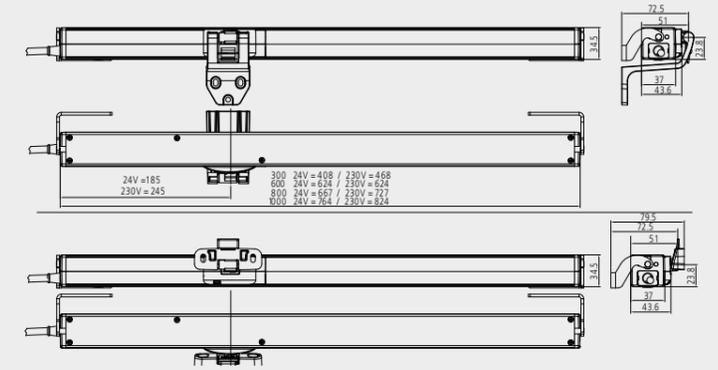
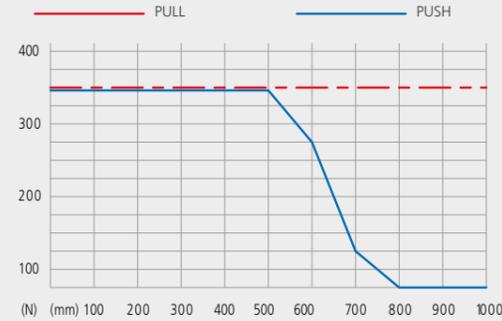
| Code | Model |
|-------|---------------------------------|
| 07875 | VARIA TUBE 230 V - 300 |
| 07876 | VARIA TUBE 230 V - 600 |
| 07877 | VARIA TUBE 230 V - 800 |
| 07878 | VARIA TUBE 230 V - 1,000 |
| 07896 | VARIA TUBE Syncro 230 V - 300 |
| 07897 | VARIA TUBE Syncro 230 V - 600 |
| 07898 | VARIA TUBE Syncro 230 V - 800 |
| 07899 | VARIA TUBE Syncro 230 V - 1,000 |

| Code | Model |
|-------|------------------------------------|
| 07804 | VARIA TUBE RWA 24 V - 300 |
| 07805 | VARIA TUBE RWA 24 V - 600 |
| 07806 | VARIA TUBE RWA 24 V - 800 |
| 07807 | VARIA TUBE RWA 24 V - 1,000 |
| 07815 | VARIA TUBE RWA Syncro 24 V - 300 |
| 07816 | VARIA TUBE RWA Syncro 24 V - 600 |
| 07817 | VARIA TUBE RWA Syncro 24 V - 800 |
| 07818 | VARIA TUBE RWA Syncro 24 V - 1,000 |

Sash bracket to be ordered separately.

VARIA TUBE TECHNICAL DATA

TABLE OF FORCE-STROKE RELATIONSHIP



| VARIA TUBE | 230 V AC | RWA 24 V DC | Syncro 230 V AC | RWA Syncro 24 V DC |
|--|--|--------------------|--------------------|---------------------|
| Pull force | 350 N | | | |
| Push force | 350 N (see strength diagram) | | | |
| Variable strokes | 300 (100, 200) mm | 600 (400, 500) mm | 800 (600, 700) mm | 1,000 (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. | | | |
| Connection with Tube Lock | NO | YES | NO | YES |

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

VARIA TUBE ACCESSORIES

Sash brackets (to be ordered separately)



Bottom-hung
bracket

Code

Model

05921

ZAMAK SASH BRACKET



Top-hung
frontal bracket

Code

Model

05922

ZAMAK SASH BRACKET



Top-hung
horizontal bracket

Code

Model

05923

ZAMAK SASH BRACKET

Spare parts



Frame bracket (CP)

Code

Model

05920

STEEL SASH BRACKET



Rapid fixing clip

Code

Model

05924

STEEL RAPID FIXING CLIP



TUBE LOCK ELECTRIC LOCK



Tube Lock is an electric lock specially designed to automatically open/close the multi-point locking system of top-hung, bottom-hung and parallel windows in conjunction with Varia Tube 24 V chain actuators.

The presence of locking points around the window significantly increases its air, water and wind tightness.

Tube Lock is small and unobtrusive (25x26 mm) with recessed installation inside a slot in the window frame and no impact on visual design.

Tube Lock operates quietly and comes equipped with advanced electronics. It works in conjunction with Varia Tube 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.



020 - Anodised silver



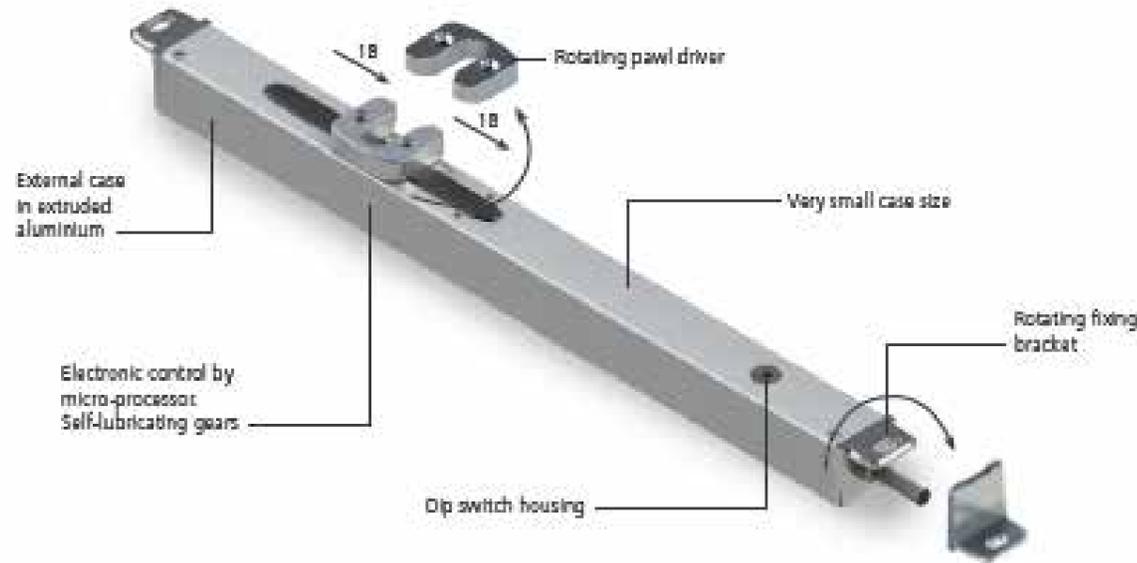
Quiet and powerful



Reliability tested via 10,000 cycles at maximum load

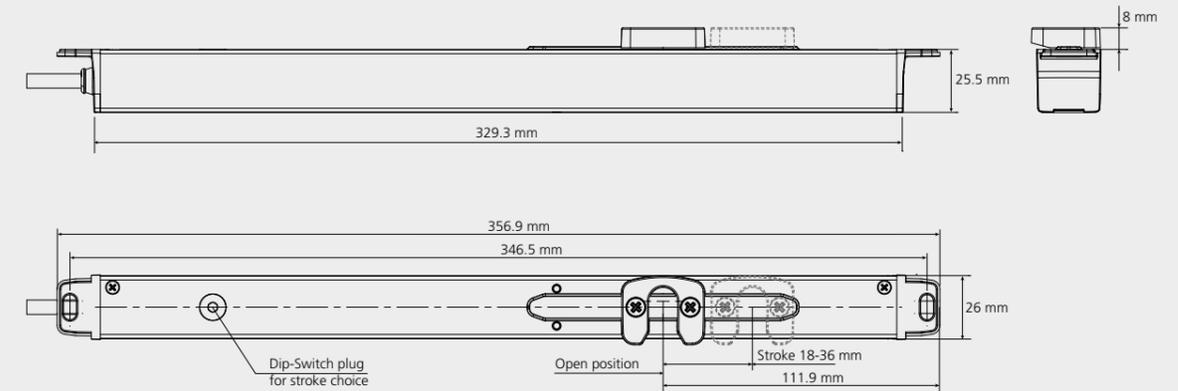


Syncro technology (patented) allows for up to 8 Tube Locks and Varia Tube 24 V actuators to be connected together



| Code | Model |
|-------|----------------|
| 07809 | TUBE LOCK 24 V |

TUBE LOCK TECHNICAL DATA



| TUBE LOCK 24 V DC | 07809 |
|---|--|
| Push and pull force | 600 N - 850 N at start |
| Stroke | 18 mm / 36 mm |
| Power-supply voltage | 24 V DC (20.4 ÷ 30 V AC) |
| Current absorbed at nominal load | 0.85 A during 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 | Aluminium alloy extrude |
| Operating temperature | -20 °C ÷ +70 °C |
| Degree of protection for electrical devices | IP 40 |
| Opening/closing stroke-end setting | Electronically set |
| Operating with chain actuators | Selectable |
| Operating without chain actuators | Selectable |
| Silicone cable | 3 x 0.5 mm ² - 2.00 m |
| Overload protection during opening/closing phases | Supply cut due to power overload |
| Dimensions | 25.5 x 25.5 x 357 mm |
| Weight | 0.56 kg |
| Connectable to | Varia Tube 24 V DC Varia Tube Syncro 24 V DC |

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

VARIA SLIM PLUS

300 N CHAIN ACTUATOR

adjustable stroke up to 500 mm



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-DC 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.



- 500 - RAL9005 ○ 410 - RAL9010
- 970 - RAL9006

- Body is made of die-cast aluminium
- Support brackets in zamak
- Easy to install via quick-coupling assembly onto the support brackets without the need for screws or fastening components (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



| Code | Model and colour |
|----------|-----------------------------|
| 07882500 | VARIA SLIM PLUS 230 V black |
| 07882410 | VARIA SLIM PLUS 230 V white |
| 07882970 | VARIA SLIM PLUS 230 V grey |

Sash bracket to be ordered separately.

VARIA SLIM PLUS SYNCRO

SYNCHRONIZED ACTUATORS

Varia Slim Plus Syncro is composed of a couple of chain actuators with the same technical features of Varia Slim Plus. They are able to work in perfect synchrony. In fact, the Syncro version gives instant control over the force, speed and resistance of each actuator via an encoder reading of how the individual motors are functioning.

Syncro3 software allows for the direct connection of up to 8 actuators without the need for external synchronisation control units. The number of actuators synchronised varies according to window size, weight and type. For windows over 1600 mm in width, two actuators are recommended to ensure correct movement and guarantee perimeter sealing. An additional actuator is recommended for every additional 1,600 mm in width.

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

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



- 500 - RAL9005 ○ 410 - RAL9010
- 970 - RAL9006

- Body is made of die-cast aluminium
- Support brackets in zamak
- Easy to install via quick-coupling assembly onto the support brackets without the need for screws or fastening components (patented system)
- Choice of 3 different chain strokes by means of dip-switches
- Relax and Soft-Stop function for resting mechanical parts after every stroke-end
- Synchronisation of up to 8 actuators without any need for an external controller



| Code | Model and colour |
|----------|------------------------------------|
| 07883500 | VARIA SLIM PLUS SYNCRO 230 V black |
| 07883410 | VARIA SLIM PLUS SYNCRO 230 V white |
| 07883970 | VARIA SLIM PLUS SYNCRO 230 V grey |

Sash bracket to be ordered separately.

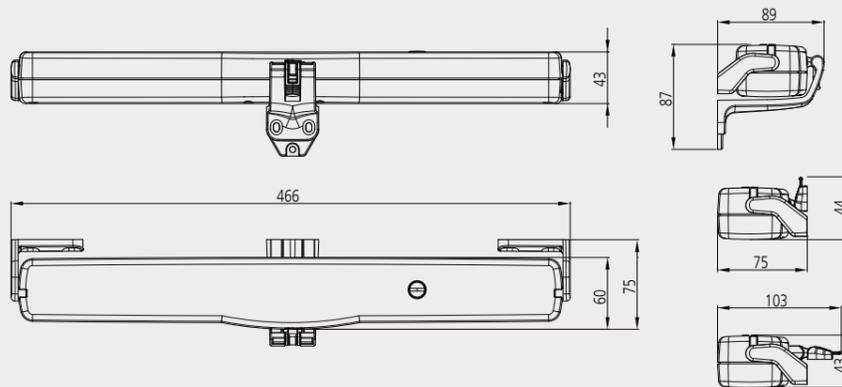
| Code | Model and colour |
|----------|-----------------------------------|
| 07881500 | VARIA SLIM PLUS SYNCRO 24 V black |
| 07881410 | VARIA SLIM PLUS SYNCRO 24 V white |
| 07881970 | VARIA SLIM PLUS SYNCRO 24 V grey |

VARIA SLIM PLUS & SLIM PLUS SYNCRO

TECHNICAL DATA

Specifications

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). **Standard colours:** Black (RAL9005) with a black cable, White (RAL9010) and Grey (RAL9006) with white cables. The 24 V DC versions have a black silicone cable. Additional characteristics are provided in the technical data table.

| Model | Varia Slim Plus 24 V code 07880 | Varia Slim Plus Syncro 24 V code 07881 | Varia Slim Plus 230 V code 07882 | Varia Slim Plus Syncro 230 V code 07883 |
|---|--|--|--|---|
| Push and pull force | 300 N | | | |
| Strokes | 200/300/500 mm | | | |
| Synchronisation | NO | YES | NO | YES |
| Power-supply voltage | 24 V DC | | 110 ÷ 230 V AC 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 | IP 32 | | | |
| 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 | 2.5 m | 2 m | 2.5 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 | Only frame brackets included. Sash bracket to be ordered separately. | | | |
| Connection with Slim Lock | YES | YES | NO | NO |

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

VARIA SLIM PLUS & SLIM PLUS SYNCRO

ACCESSORIES

Sash Brackets (to be ordered separately)



05900
Bottom-hung-window support brackets

| Code | Model and colour |
|----------|--|
| 05900500 | BOTTOM-HUNG WINDOW BRACKET - VARIA SLIM PLUS black |
| 05900410 | BOTTOM-HUNG WINDOW BRACKET - VARIA SLIM PLUS white |
| 05900970 | BOTTOM-HUNG WINDOW BRACKET - VARIA SLIM PLUS grey |



05901
Outward-opening support brackets

| Code | Model and colour |
|----------|--|
| 05901500 | OUTWARD-OPENING WINDOW BRACKET - VARIA SLIM PLUS black |
| 05901410 | OUTWARD-OPENING WINDOW BRACKET - VARIA SLIM PLUS white |
| 05901970 | OUTWARD-OPENING WINDOW BRACKET - VARIA SLIM PLUS grey |



05902
Top-hung support brackets

| Code | Model and colour |
|----------|--|
| 05902500 | OUTWARD OP. BRACKET VARIA SLIM PLUS (top-hung) black |
| 05902410 | OUTWARD OP. BRACKET VARIA SLIM PLUS (top-hung) white |
| 05902970 | OUTWARD OP. BRACKET VARIA SLIM PLUS (top-hung) grey |



05909
Top-hung support brackets

| Code | Model and colour |
|----------|--|
| 05909000 | OUTWARD OP. BRACKET VARIA SLIM PLUS (top-hung) 15 mm |

Special Applications (to be ordered separately)



05911
Special frame support brackets for Varia Slim Plus, Varia Slim, and Varia Slim Base

| Code | Model and colour |
|----------|--|
| 05911500 | METAL SUPPORT BRACKETS H. 45 mm (CP) black |
| 05911410 | METAL SUPPORT BRACKETS H. 45 mm (CP) white |
| 05911970 | METAL SUPPORT BRACKETS H. 45 mm (CP) grey |

Spare parts



05903
Standard frame support brackets (spare part)

| Code | Model and colour |
|----------|--|
| 05903500 | STANDARD SUPPORT BRACKETS - VARIA SLIM PLUS (CP) black |
| 05903410 | STANDARD SUPPORT BRACKETS - VARIA SLIM PLUS (CP) white |
| 05903970 | STANDARD SUPPORT BRACKETS - VARIA SLIM PLUS (CP) grey |



05908
Quick connector for VARIA SLIM PLUS, VARIA SLIM and VARIA SLIM BASE

| Code | Model and colour |
|----------|------------------|
| 05908000 | QUICK CONNECTOR |

VARIA SLIM

300N CHAIN ACTUATOR



Varia Slim is a perfect combination of performance, quality, and safety. The unit is available in a 230 V AC mains version and in a low-voltage 24 V DC version. 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.



● 590 - Black ○ 560 - White ● 542 - Grey



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



| Code | Model and colour |
|----------|------------------------|
| 07884590 | VARIA SLIM 230 V black |
| 07884560 | VARIA SLIM 230 V white |
| 07884542 | VARIA SLIM 230 V grey |

| Code | Model and colour |
|----------|-----------------------|
| 07885590 | VARIA SLIM 24 V black |
| 07885560 | VARIA SLIM 24 V white |
| 07885542 | VARIA SLIM 24 V grey |

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).



● 590 - Black ○ 560 - White ● 542 - Grey



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



| Code | Model and colour |
|----------|-------------------------------|
| 07886590 | VARIA SLIM SYNCRO 230 V black |
| 07886560 | VARIA SLIM SYNCRO 230 V white |
| 07886542 | VARIA SLIM SYNCRO 230 V grey |

| Code | Model and colour |
|----------|------------------------------|
| 07887590 | VARIA SLIM SYNCRO 24 V black |
| 07887560 | VARIA SLIM SYNCRO 24 V white |
| 07887542 | VARIA SLIM SYNCRO 24 V grey |

VARIA SLIM RADIO 300N SYNCHRONISED ACTUATOR



Varia Slim Radio is an advanced wireless version belonging to the Varia Slim family. Its body looks identical, but it is more sophisticated in terms of intelligence.

Complete with a **radio-frequency** receiver built into the body of the actuator, it should be installed wherever remote-control functions are required by means of Radio Remote Control (not included, see page 22) with rolling-code technology.

In any case it can also be connected to a wire pulse control located near the window.

In conjunction with the rain detectors (items 07893000 and 07894000), it ensures automatic window closure by wire or radio signal in the event of rain without the need for any additional control units.



● 590 - Black ○ 560 - White ● 542 - Grey



| Code | Model and colour |
|----------|------------------------------|
| 07888590 | VARIA SLIM RADIO 230 V black |
| 07888560 | VARIA SLIM RADIO 230 V white |
| 07888542 | VARIA SLIM RADIO 230 V grey |

| Code | Model and colour |
|----------|--------------------------------|
| 07893000 | HEATED RAIN SENSOR - SPR RADIO |
| 07894000 | HEATED RAIN SENSOR - SPR CABLE |
| 07892000 | REMOTE CONTROL - RC |

Remote controls and rain sensors are supplied separately. See pages 22 and 23.

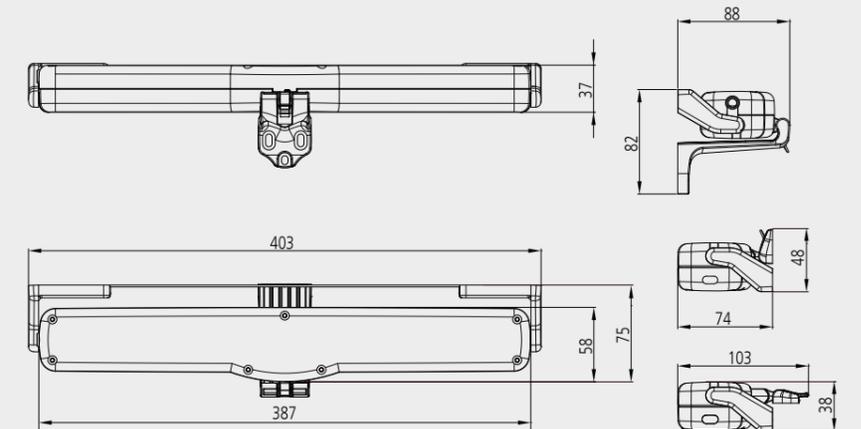
VARIA SLIM, SLIM SYNCRO & SLIM RADIO TECHNICAL DATA

Specifications

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 and is designed to function both at a voltage of 230 V AC 50 Hz or at a lower voltage of 24 V DC.

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). Standard colours: Black with black cable, White and Grey with white cables.



| Model | Varia Slim 230 V code 07884 | Varia Slim 24 V code 07885 | Varia Slim Syncro 230 V code 07886 | Varia Slim Syncro 24 V code 07887 | Varia Slim Radio 230 V code 07888 |
|---|--|----------------------------------|--|---|---|
| Push and pull force | 300N | | | | |
| Strokes | 110 / 200 / 300 / 400 mm | | 100 / 200 / 400 mm | | 100 / 200 / 300 / 400 mm |
| Synchronisation | NO | NO | YES | YES | NO |
| Power-supply voltage | 230 V~ 50 Hz | 24 V = | 230 V~ 50 Hz | 24 V = | 230 V~ 50 Hz |
| Current at nominal load | 0.115 A | 0.950 A | 0.115 A | 0.950 A | 0.160 A |
| Power absorbed at nominal load | ~ 25 W | ~ 23 W | ~ 25 W | ~ 25W | ~ 28 W |
| No-load speed | 12.5 mm/s | | 8.5 mm/s | | 12 mm/s |
| Maximum no-load stroke time | 32 s | 32 s | 48 s | 48 s | 30 s |
| Double electrical insulation | YES | L.V. | YES | L.V. | YES |
| Service type | S2 of 3 min | | | | |
| Operating temperature | -5 °C ÷ +65 °C | | | | |
| Degree of protection for electrical devices | IP30 | | | | |
| Soft Stop | NO | NO | YES | YES | NO |
| Relax function | YES | YES | YES | YES | YES |
| Self-learning frame rebated overlap | Self-determination of the position | | | | |
| Connection in parallel | YES | YES | YES | YES | NO |
| Power-supply-cable length | 2 m | 2 m | 2.5 m | 2.5 m | 2 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 | 0.97 Kg | 0.94 Kg | 1.18 Kg | 1.15 Kg | 1.17 Kg |
| Static holding force | 1700 N | | | | |
| Supplied brackets | Sash and frame brackets for top/bottom hung and sill application | | | | |
| Connection with Slim Lock | NO | YES | NO | YES | NO |

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

REMOTE-CONTROL DEVICE

For radio-operated remote-control operation.

The transmitter is modern, functional, comfortable and ergonomic.

30 direct transmission channels (with the F1 and F2 functions, 90 control outputs can be reached) via radio waves at a frequency of 433.92 MHz rolling code with a resolution higher than 18×10^{18} possible combinations.



| Code | Model | For actuator |
|----------|---------------------|------------------|
| 07892000 | REMOTE CONTROL - RC | VARIA SLIM RADIO |

TECHNICAL DATA

| Model | Remote Control - Rc code 07892 |
|---------------------------------|--|
| Type | Multi-channel-radio remote control with microprocessor |
| Number of transmission channels | 30 |
| Transmission frequency | 433.92 MHz |
| Modulation | ASK |
| Power-supply voltage | 2 x 1.5 V batteries – type AAA |
| Operating voltage | 1.8 V ÷ 3.3 V |
| Estimated battery lifespan | > 2 years (based on an average use of 1 minute per day) |
| Display | LCD (liquid-crystal display) |
| Visualisation | 2 digits (selected channel) |
| | battery-charge-status indicator |
| | transmission state |
| | Specific functions letters |
| Display dimensions | 18.5 x 13.5 mm |
| Encoding | HCS301 |
| Independent codes | > 18×10^{18} "rolling-code" combinations |
| Absorption in stand-by mode | < 1 µA |
| Absorption during transmission | < 20 mA |
| Keypad | Operational control (UP arrow, DOWN arrow, STOP) |
| | 2 Function buttons (F1, F2) |
| | 1 Memory button (M) |
| | 1 Channel button (CH) |
| Transmission distance | 50 m (with charged batteries) |
| Regulatory references | Approved in compliance with the R&TTE Directive 1999/5/EC – Directive 1999/5/EC of the European Parliament and Council of 9 March 1999 |
| Dimensions | 145 x 38.5 x 22.5 mm |
| Weight | 76 g |

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

HEATED RAIN DETECTOR

The rain-detector device should be placed outside so it can interact with the actuators in the event of incessant rain. The sensor can be connected:

- directly by wire to Varia Slim Radio – SPR CABLE
- directly by radio signal to Varia Slim Radio – SPR RADIO

The sensor is not sensitive to dewdrops or humidity, it dries quickly after rainfall and is not susceptible to ice formation.

5 metres in length, the power-supply cable has been built to withstand harsh environments and inclement weather, featuring a highly weather-resistant PVC sheath which is also non-fire-propagating and resistant to UV radiation.



| Code | Model | For actuator |
|----------|------------------------------|------------------------|
| 07893000 | HEATED RAIN SENSOR SPR RADIO | VARIA SLIM RADIO 07888 |
| 07894000 | HEATED RAIN SENSOR SPR CABLE | VARIA SLIM RADIO 07888 |

TECHNICAL DATA

| Model | Heated rain sensor SPR radio code 07893 | Heated rain sensor SPR cable code 07894 |
|---|--|--|
| Power-supply voltage | 12 V ÷ 24 V= (DC) | 12 V ÷ 24 V= (DC) |
| Maximum absorption power | 20 ma – (120 ma with active heater) | 20 ma – (120 ma with active heater) |
| Type of sensor | Capacitive | Capacitive |
| Heater intervention | < +4 °C | < +4 °C |
| Contact type | SPDt | SPDt |
| Contact rating | 0.5 A / 125 V AC – 1 A / 24 V DC | 0.5 A / 125 V AC – 1 A / 24 V DC |
| Radio-transmission frequency | 433.92 MHz | - |
| Operating temperature | -20 ÷ +65 °C | -20 ÷ +65 °C |
| Feeding cable length | 5 m | 5 m |
| Feeding cable type - wire number | PVC LiY2Y protected from UV - 5 wires | PVC LiY2Y protected from UV - 5 wires |
| Degree of protection for electrical devices | IP65 | IP65 |
| Dimensions | 45 x 93 h=19 mm | 45 x 93 h=19 mm |
| Weight | 552 g (cable excluded) | 552 g (cable excluded) |

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

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 x 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.



000 - Anodised silver



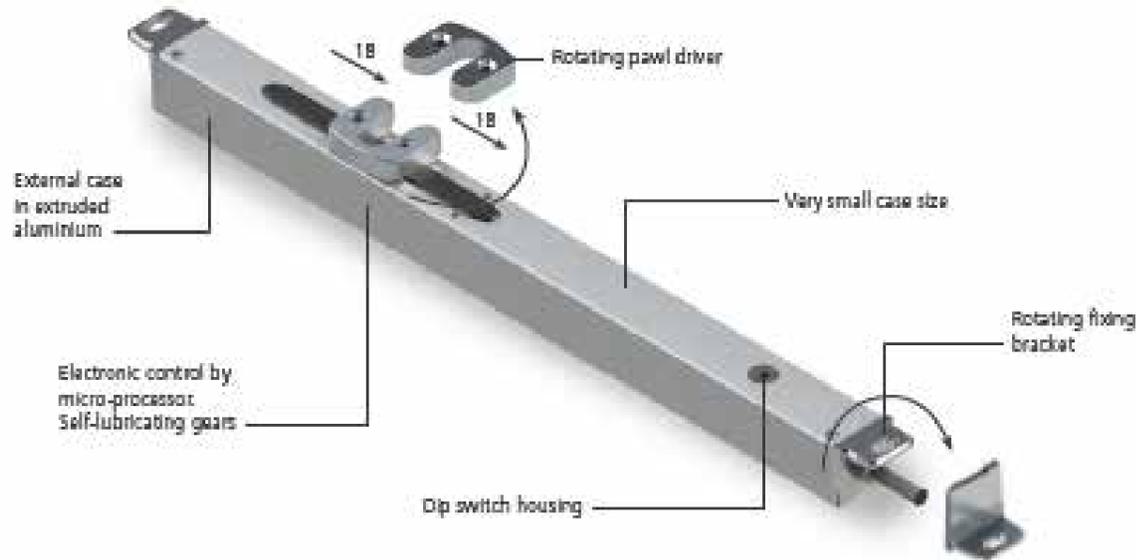
Quiet and powerful



Reliability tested via 10,000 cycles at maximum load

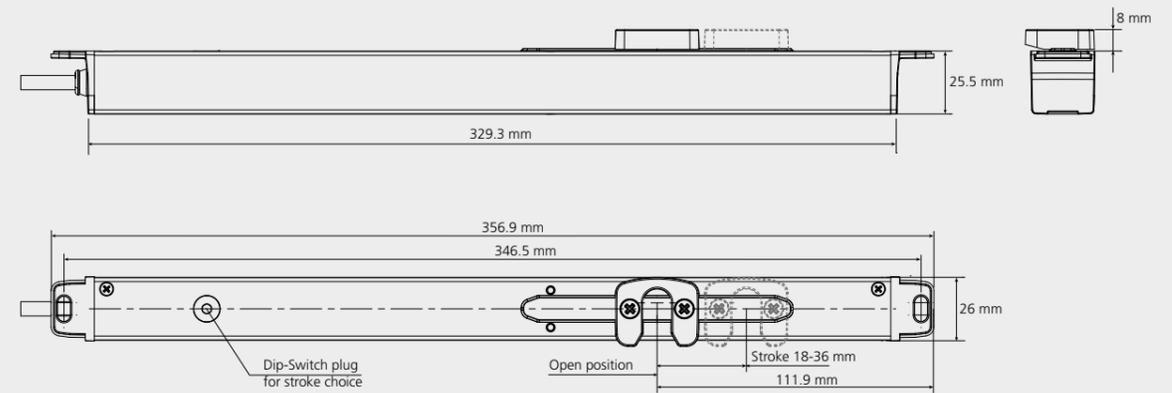


Syncro technology (patented) allows for up to 8 Slim Lock and Varia Tube 24 V actuators to be connected together



| Code | Model |
|-------|----------------|
| 07895 | SLIM LOCK 24 V |

SLIM LOCK TECHNICAL DATA



| SLIM LOCK 24 V DC | 07895 |
|---|--|
| Push and pull force | 600 N – 850 N at start |
| Stroke | 18 mm / 36 mm |
| Power-supply voltage | 24 V DC (20.4 ÷ 30 V AC) |
| 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 | IP 40 |
| Opening/closing stroke-end setting | Electronically set |
| Operating with chain actuators | Selectable |
| Operating without chain actuators | Selectable |
| Silicone cable | 3x0.5 mm ² - 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 Small 24 V art. 07891 Varia Slim Plus 24 V art. 07880 – Varia Slim Plus syncro art. 07881 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.

VARIA SLIM BASE

CHAIN ACTUATOR 250 N



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.



● 590 - Black ○ 560 - White ● 542 - Grey



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

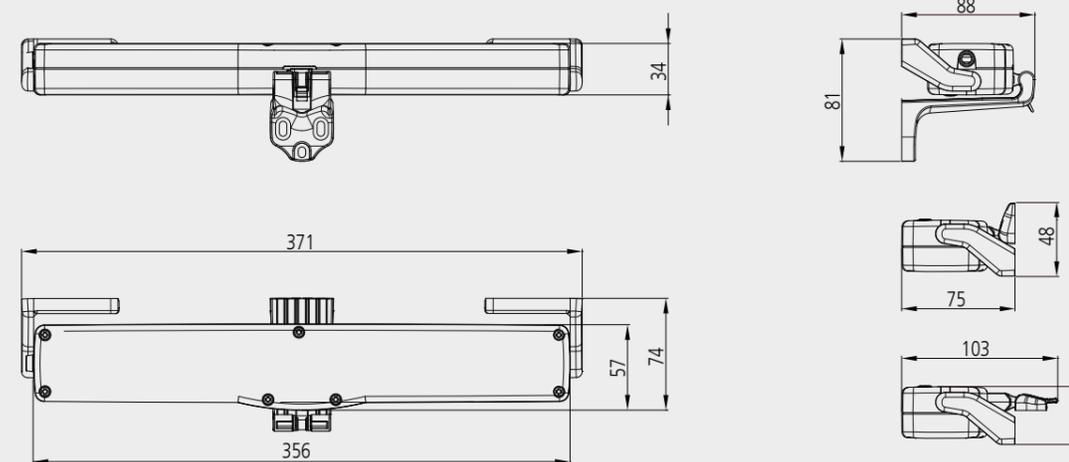


| Code | Model and colour |
|----------|-----------------------------|
| 07889590 | VARIA SLIM BASE 230 V black |
| 07889560 | VARIA SLIM BASE 230 V white |
| 07889542 | VARIA SLIM BASE 230 V grey |

| Code | Model and colour |
|----------|----------------------------|
| 07890590 | VARIA SLIM BASE 24 V black |
| 07890560 | VARIA SLIM BASE 24 V white |
| 07890542 | VARIA SLIM BASE 24 V grey |

VARIA SLIM BASE

TECHNICAL DATA



Specifications

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).

Standard colours: Black with black power cable, White and Grey with white cables.

| 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~ (AC) 50/60 Hz | 24 V= (DC) |
| 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 | NO |

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

VARIA SLIM & SLIM BASE ACCESSORIES

Accessories



05910
Top-Hung bracket
for VARIA SLIM
and VARIA SLIM
BASE

| Code | Model and colour |
|----------|---|
| 05910590 | OUTWARD OP. BRACKET - SECURITY CLUTCH H 14.5 mm black |
| 05910560 | OUTWARD OP. BRACKET - SECURITY CLUTCH H 14.5 mm white |
| 05910542 | OUTWARD OP. BRACKET - SECURITY CLUTCH H 14.5 mm grey |

Spare parts



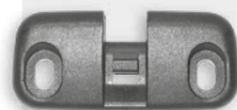
05904
Standard support
brackets for VARIA
SLIM and VARIA
SLIM BASE

| Code | Model and colour |
|----------|--------------------------------------|
| 05904590 | STANDARD SUPPORT BRACKETS (CP) black |
| 05904560 | STANDARD SUPPORT BRACKETS (CP) white |
| 05904542 | STANDARD SUPPORT BRACKETS (CP) grey |



05905
Brackets for vertical
mounting for VARIA
SLIM and VARIA SLIM
BASE

| Code | Model and colour |
|----------|---|
| 05905590 | BRACKETS FOR VERTICAL MOUNTING (CP) black |
| 05905560 | BRACKETS FOR VERTICAL MOUNTING (CP) white |
| 05905542 | BRACKETS FOR VERTICAL MOUNTING (CP) grey |



05906
Brackets for
outward opening
for VARIA SLIM and
VARIA SLIM BASE

| Code | Model and colour |
|----------|-------------------------------|
| 05906590 | OUTWARD OPENING BRACKET black |
| 05906560 | OUTWARD OPENING BRACKET white |
| 05906542 | OUTWARD OPENING BRACKET grey |



05907
Bottom-hung-
window brackets
for VARIA SLIM
and VARIA SLIM
BASE

| Code | Model and colour |
|----------|----------------------------------|
| 05907590 | BOTTOM-HUNG-WINDOW BRACKET black |
| 05907560 | BOTTOM-HUNG-WINDOW BRACKET white |
| 05907542 | BOTTOM-HUNG-WINDOW BRACKET grey |



05908
Quick connector
for VARIA SLIM
PLUS, VARIA
SLIM and VARIA
SLIM BASE

| Code | Model |
|----------|-----------------|
| 05908000 | QUICK CONNECTOR |



VARIA SLIM SMALL 200 N CHAIN ACTUATOR



With a compact design and sleek silhouette, VARIA SLIM SMALL can be incorporated into curtain-wall cross-beams and does not only contribute to the beauty of an uninterrupted glazed surface, it also provides a perfect solution for conventional openings.

Varia Slim Small can be applied to awning windows, hopper windows, dormer windows and light domes. Intelligent, compact and robust (made entirely of metal), it is the smallest actuator for windows available on the market. With recessed mounting on any European chamber profile, it fixes onto the frame with two brackets.

Remarkably quiet (only 42 db) and sturdy, it boasts a compact design and measures only 28 x 28 x 310 mm.



● 970 - RAL9006



Progressive starting ramp



Power control over the entire stroke



Intuitive and immediate stroke selection with a dip-switch



Relax function for resting mechanical parts after every stroke-end



Embedded window brackets allowing for motor inspection, even during a power outage or in the event of product failure



| Code | Model and colour |
|----------|----------------------------|
| 07891970 | VARIA SLIM SMALL 24 V grey |

VARIA SLIM SMALL TECHNICAL DATA



Specifications

Linear electric actuator with three-link articulated chain (patented) enclosed in an appropriate metal casing and suitable for moving awning and hopper windows. The actuator has a push and pull force of 200 N and only functions only at a low voltage (24 V DC).

It comes supplied with pivoting support brackets, no screws and universal coupling brackets for awning and hopper windows. Opening stroke-end can be adjusted at any time by selecting the appropriate dip-switches whilst closing stroke-end occurs upon power absorption and as a protection mechanism against overload.

Can be connected in parallel. Complies with Directives 2004/108 EC (EMC Directive) and 2006/95 EC (Low Voltage Directive).

Colours available: Grey (RAL9006) with black-silicone cable.

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

Model

| | Varia Slim Small 24 V code 07891 |
|---|--|
| Push and pull force | 200 N |
| Strokes | 70 / 125 / 170 / 210 mm |
| Synchronisation | NO |
| Power-supply voltage | 24 V= (DC) |
| Current absorbed at nominal load | 0.32 A |
| Power absorbed at nominal load | 7.5 W |
| No-load speed | 6 mm/s |
| Maximum no-load stroke time | 27 s |
| Double electrical insulation | Low Voltage |
| Service type | S2 of 3 min |
| Operating temperature | -5 °C ÷ +65 °C |
| Degree of protection for electrical devices | IP32 |
| Soft Stop | NO |
| Relax function | YES |
| Self-learning frame rebated overlap | Upon absorption of power |
| Connection in parallel | YES |
| Power-supply-cable length | 2 m |
| Opening stroke-end setting | Dip-switch setting |
| Closing stroke-end setting | Upon absorption of power |
| Overload protection | Upon absorption of power |
| Dimensions | 28 x 28 x 310 mm |
| Weight | 0.72 Kg |
| Static holding force | 1,000 N |
| Supplied brackets | Standard support brackets, sash brackets |
| Connection with Slim Lock | YES |

VARIA & VARIA UNI IN 300 N - OUT 150 N



Rugged durable chain actuators for bottom-hung and top-hung windows. Chain stroke adjustable from 90 to 400 mm for Varia by means of a selector.

Thrust force = 150 N

Pulling force = 300 N

Equipped with a limit switch and indicator light which warns that the window is closing, this unit can be easily connected to the power line with the pull-put terminal board.

The drive chain is protected with a thin non-electrolytic "Geomet" coating to impart optimal corrosion resistance.

The actuator is supplied with a frame-fixing bracket, 2 sash brackets (one top-hung and one bottom-hung), all the required fixing screws and a positioning template.

Comes supplied with fittings, drilling templates and brackets for top-hung and bottom-hung windows. An extended chain pin is also available on request for wood and PVC frames.



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



| Code | Model and colour |
|----------|-----------------------|
| 01654010 | VARIA UNI 230 V black |
| 01654560 | VARIA UNI 230 V white |
| 01654544 | VARIA UNI 230 V grey |
| 01654593 | VARIA UNI 230 V brown |

| Code | Model and colour |
|----------|------------------|
| 01495010 | VARIA 24 V black |
| 01495560 | VARIA 24 V white |
| 01495544 | VARIA 24 V grey |
| 01495593 | VARIA 24 V brown |

VARIA & VARIA UNI TECHNICAL DATA

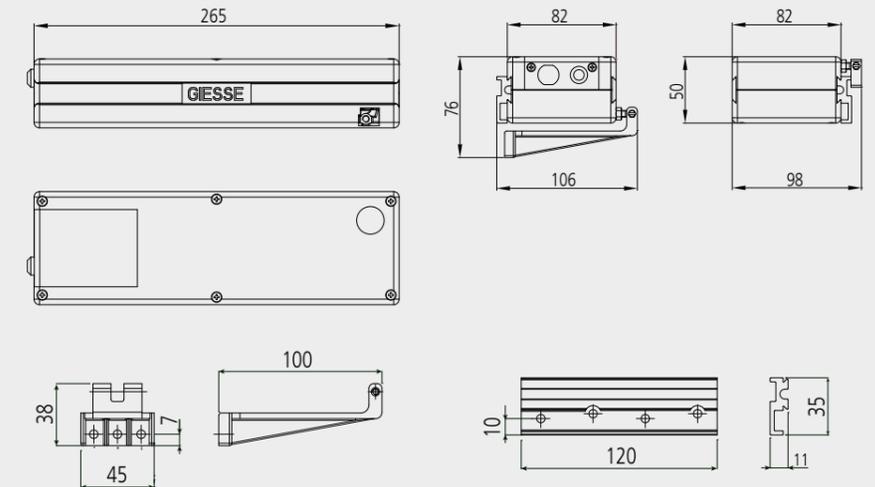
Specifications

Electric actuator with articulated chain housed in a case made of high-strength composite material (fibreglass reinforced polyamide) suitable for the automation of top-hung and bottom-hung windows. Geomet-treated chain for enhanced corrosion resistance.

Pulling force 300 N and thrust force 150 N (or 200 N). 230 V AC 50/60 Hz or 24 V DC power supply. Comes supplied with brackets and fixing screws for rapid reliable product installation.

Provided with micro limit switch. Can be connected in parallel. Adjustment of the chain stroke from 90 mm to 400 mm by means of a mechanical selector with 12 mm adjustment steps.

Standard colours: black, white, grey, and brown. Additional characteristics are provided in the technical data table.



| Model | Varia UNI 230 V code 01654 | Varia 24 V code 01495 |
|---|---|-----------------------------|
| Power-supply voltage | 230 V AC 50/60 Hz | 24 V DC |
| Thrust force | | 150 N |
| Drive force | | 300 N |
| Strokes adjustable every 12 mm | | from 90 to 400 mm |
| No-load speed | | 40 mm/sec |
| Front adjustment | | max. 10 mm |
| Parallel connection | | YES (max 4) 230 V |
| Power absorbed at nominal load | 170 W | 40 W |
| Current absorbed at nominal load | 0.8 A | 1.8 A |
| Thermal protection | 120 °C | |
| Capacitor | 4 µF | |
| Relay included | YES | |
| Lamp indicating limit switch | | YES |
| Removable terminal block | | YES |
| Degree of protection for electrical devices | | IP 20 |
| Operating temperature | | - 20 °C / + 40 °C |
| Supplied brackets | Standard support bracket (frame), sash brackets (bottom hung, top hung opening) | |

VARIA 24 V & VARIA UNI 230 V

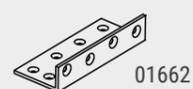
ACCESSORIES

Accessories



Extension pins for Varia chain for wooden and PVC windows.

| Code | Model | Notes |
|----------|----------------------------------|----------------------|
| 04847000 | EXTENDED PIN FOR CHAIN ZNB 40 mm | for steps 13 ÷ 21 mm |
| 63993000 | EXTENDED PIN FOR CHAIN ZNB 50 mm | for steps 22 ÷ 33 mm |



L-shaped bracket for fitting on the windowsill of Top-Hung windows.

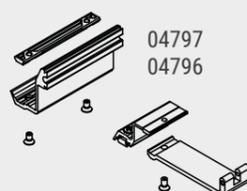
| Code | Model |
|----------|---------------------------------|
| 01662190 | L-SHAPED BRACKET FOR WINDOWSILL |



Test kit for the adjustment of the chain length exiting Varia UNI actuator during the operating test on the bench.

| Code | Model |
|------------|-------------------|
| 0479300001 | PUL VARIA (230 V) |

Bracket kits for fast fitting



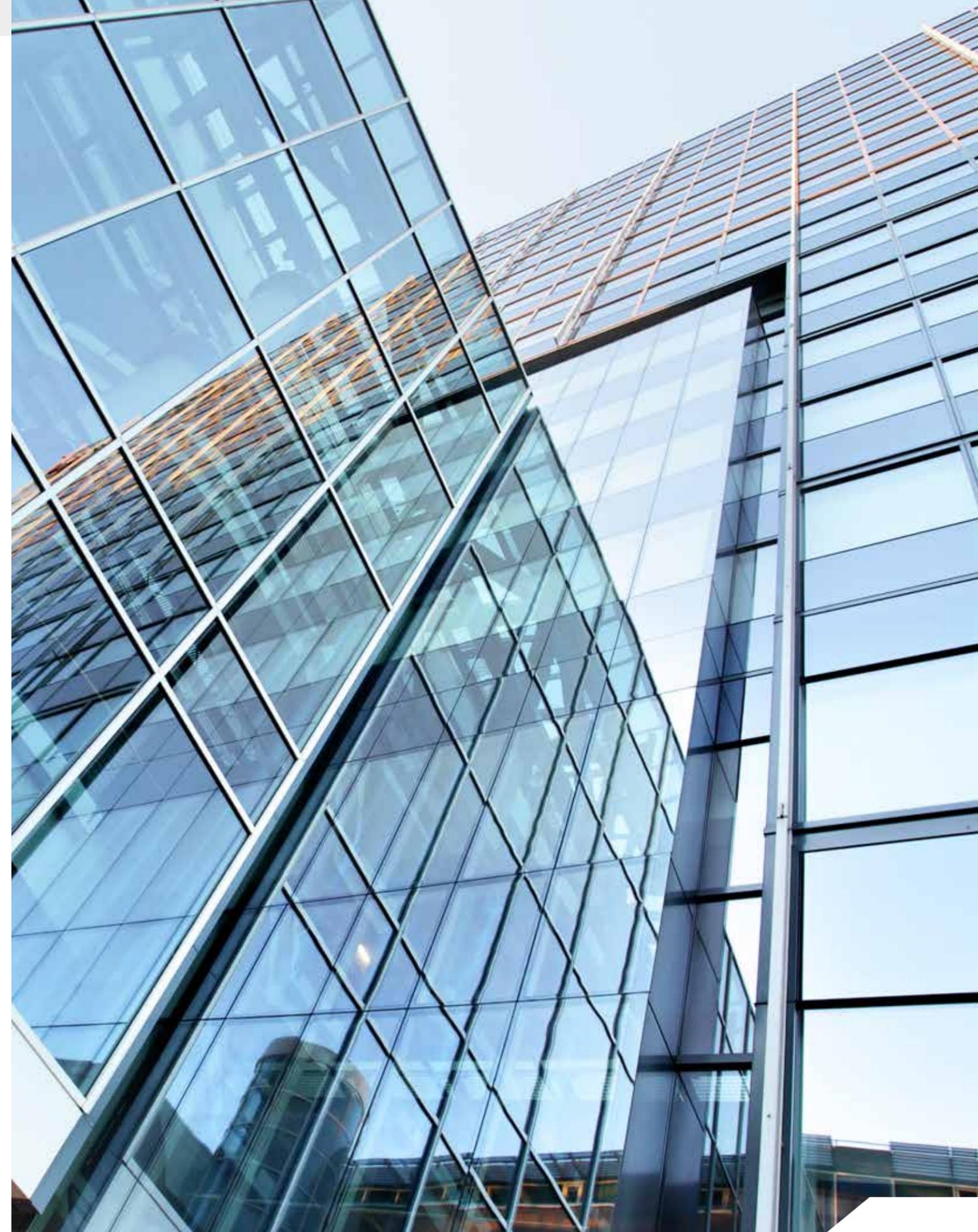
| Code | Model |
|----------|--|
| 04797190 | RAPID BRACKET KIT FOR BOTTOM-HUNG WINDOW (EURO GROOVE) |
| 04796190 | RAPID BRACKET KIT FOR BOTTOM-HUNG WINDOW (R40-R50-R50TT) |

Fast fixing kits for "Euro Groove" and "R" profiles for a significant reduction in assembly time.

Spare parts



| Code | Model |
|----------|--|
| 04794000 | UNIVERSAL FIXING KIT FOR TOP-HUNG WINDOWS |
| 04795000 | UNIVERSAL FIXING KIT FOR BOTTOM-HUNG WINDOWS |

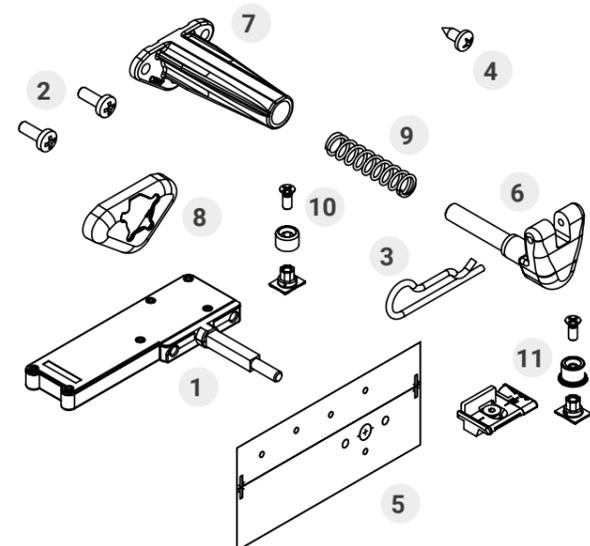


BOTTOM-HUNG MULTIPOINT KIT AUTOMATION WITH MULTILOCKING

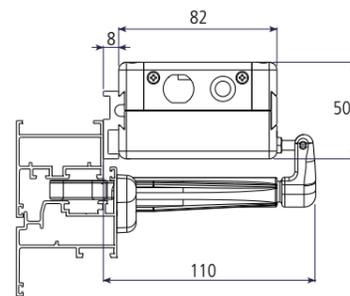


The bottom-hung window multi-point kit uses Varia or Varia Slim actuators' chain movement to activate a mechanism that turns transverse motion into axial motion. The resulting push allows to move the entire locking system (on 3 sides of the window) via a special pawl mounted on the window's rod. The mechanism movement is unidirectional (standing in front of the window: locking on the left side and opening on the right side).

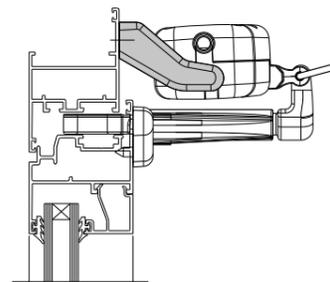
The bottom-hung-window multi-point allows for perimeter fastening on 3 sides using standard Giesse pawls and strikers. This feature greatly increases the air-, water- and wind tightness of the automated bottom-hung window.



1. Multi-locking mechanism (x1)
2. Screws M 5x14 (x2)
3. Fixing spring (x1)
4. 4.8x13 screw (x1)
5. Sash drilling template (x1)
6. Front bracket for chain connection (x1)
7. Bracket carter (x1)
8. Carter screw cover (x1)
9. Spring (x1)
10. Driving pawl (x1)
11. Locking point (x1)



01655 (Varia)



01648 (Varia Slim)

| Code | Model |
|----------|---|
| 01648000 | MULTI DEVICE SYSTEM for all VARIA SLIM |
| 01655000 | MULTI DEVICE SYSTEM for VARIA and VARIA UNI |

| Code | Model |
|----------|------------------------|
| 01664000 | ADAPTER FOR R40 SYSTEM |

R40 systems need to be completed by adding two 01664000.

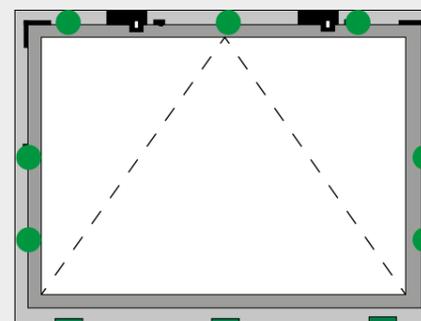
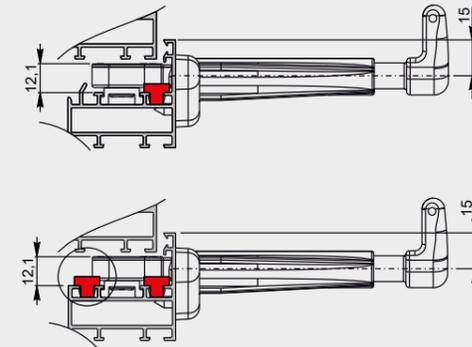
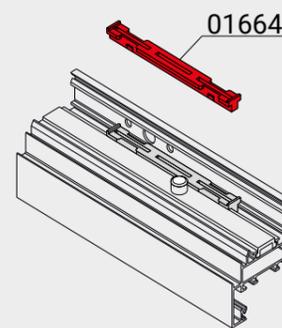
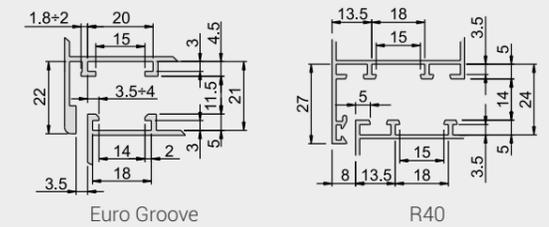
BOTTOM-HUNG MULTIPOINT KIT TECHNICAL DATA

Specifications

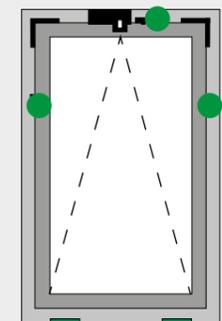
Mechanism made up of a system of levers operated by a pin inserted inside the front-fixing bracket of the chain that pulls the rod with a one-way movement, using the movement of the chain itself.

Activating the actuator in the opening direction first causes the pin and levers to move and this in turn leads to the movement of the rod and release of the fastening mechanisms, meaning the window can be opened.

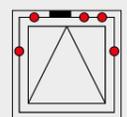
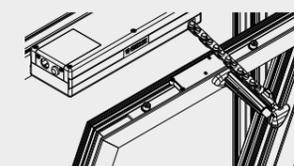
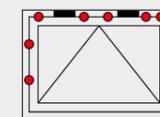
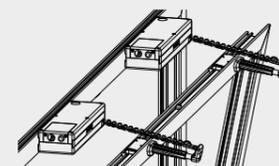
Activating the actuator in the closing direction produces the opposite effect: the returning chain closes the sash and then continues its action, compressing the pin and consequently securing the fastening mechanisms.



MAX
130 KG



MAX
70 KG



ROD ACTUATOR ST450

ELECTRO-MECHANICAL ACTUATOR WITH RIGID ROD MECHANISM



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.



020 - Anodised silver



Fast and silent



Can be installed everywhere



Attractive design



Takes up little space



| Code | Model and colour |
|----------|--|
| 04791020 | ST450 stroke 180 (top hung) silver |
| 04792020 | ST450 stroke 300 (top hung) silver |
| 01560020 | ST450 stroke 180 (vertical sunblinds) silver |

ROD ACTUATOR

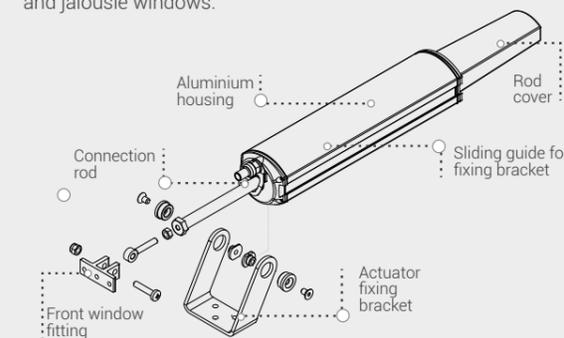
TECHNICAL DATA

Specifications

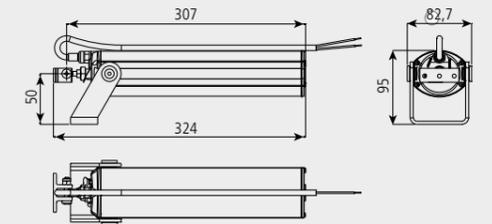
Electric actuator with aluminium enclosure, linear movement and rigid rod. Operation at 230 V AC, fitted with micro limit switch and thermally protected. Can be connected in parallel using the relay incorporated in the card. Equipped with a 1.5-m-long connection cable already wired inside the actuator.

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.

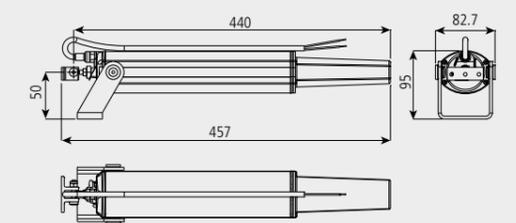
The electric actuator has a push and pull force of 450N and it is available in the versions for top-hung windows or for vertical sunblinds and jalousie windows.



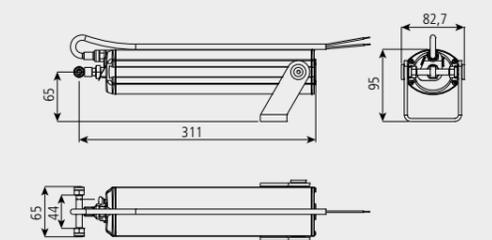
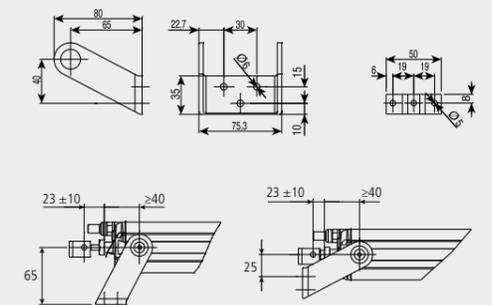
| Model | ST450 | | |
|---|-------------------|----------|--------------------|
| | TOP HUNG | | VERTICAL SUNBLINDS |
| Code | 04791020 | 04792020 | 01560020 |
| Strokes | 180 mm | 300 mm | 180 mm |
| Power-supply voltage | 230 V AC 50/60 Hz | | |
| Push and pull force | 450 N | | |
| Max idle stroke duration | 8/13 sec | | |
| Noload speed | 23 mm/sec | | |
| Current absorbed at nominal load | 0.7 A | | |
| Power absorbed at nominal load | 150 W | | |
| Thermal protection | 140 °C | | |
| Capacitor | 5 µF | | |
| Limit switch | with microswitch | | |
| Relay included | YES | | |
| Pre-wired power-supply cable | 1500 mm | | |
| Can be connected in parallel | YES | | |
| Degree of protection for electrical devices | IP 55 | | |
| Operating temperature | 20 / + 70 °C | | |
| Parallel connection | YES | | |
| Sash and frame brackets | Included | | |



04791020 ST450 stroke 180 - for TOP-HUNG windows



04792020 ST450 stroke 300 - for TOP-HUNG windows



01560020 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



000 - Anodised silver



Thrust and pull force
450 N



Can be connected in
parallel

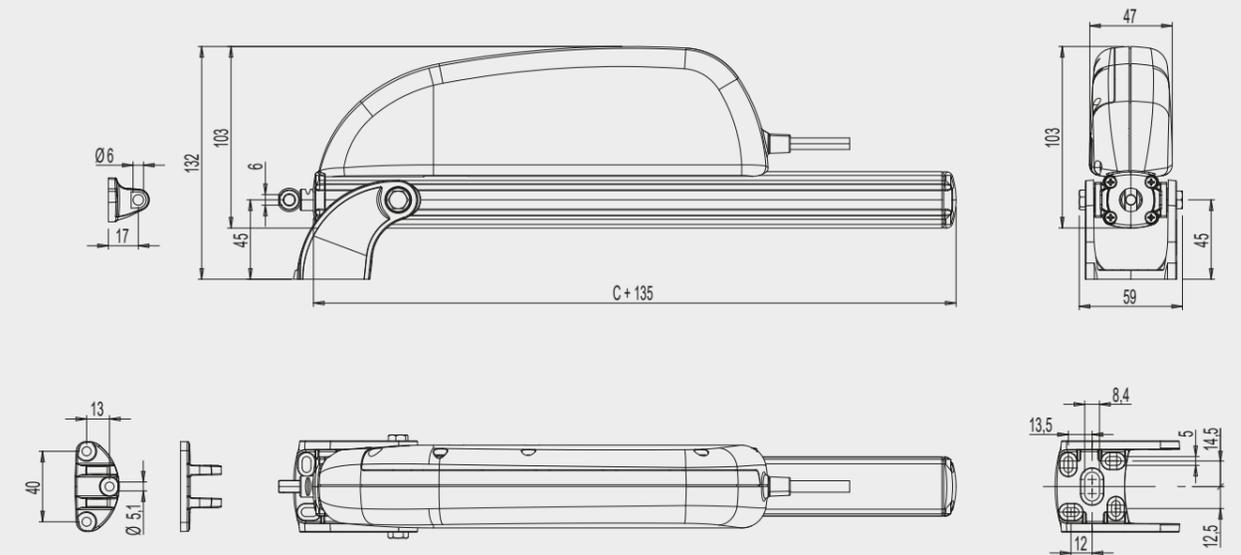


Available in a 110-230
V AC version

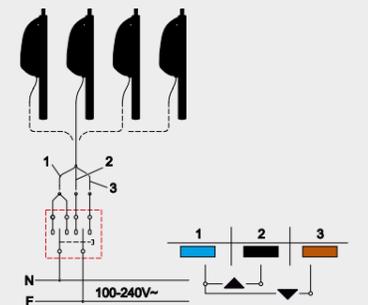
| Code | Model |
|-------|------------------------------|
| 07432 | Rackmax 450 230 V - 180 mm |
| 07433 | Rackmax 450 230 V - 230 mm |
| 07434 | Rackmax 450 230 V - 350 mm |
| 07435 | Rackmax 450 230 V - 550 mm |
| 07436 | Rackmax 450 230 V - 750 mm |
| 07437 | Rackmax 450 230 V - 1,000 mm |

RACKMAX 450

TECHNICAL DATA



| Model | 230 V AC |
|--|-----------------------------------|
| Thrust and drive force (F _N) | 450 N |
| Strokes (S _v) | 180, 230, 350, 550, 750, 1,000 mm |
| Power-supply voltage (U _N) | 110-230 V ~ 50/60 Hz |
| Current absorbed at nominal load (I _N) | 0.28 - 0.19 A |
| Power absorbed at nominal load (P _N) | 21.6 A - 24 W |
| Travel speed | 6.7 mm/s |
| No-load stroke duration | Depends on stroke |
| Electrical insulation | Class II |
| Service type (D _R) | 2 cycles |
| Operating temperature | -5 °C ÷ +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 **600 N**. It is possible to achieve a thrust force up to 1,000 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 DC 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).



000 - Anodised silver



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



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



Can be connected in parallel



Available in a **24 V DC** and **110-230 V AC** version



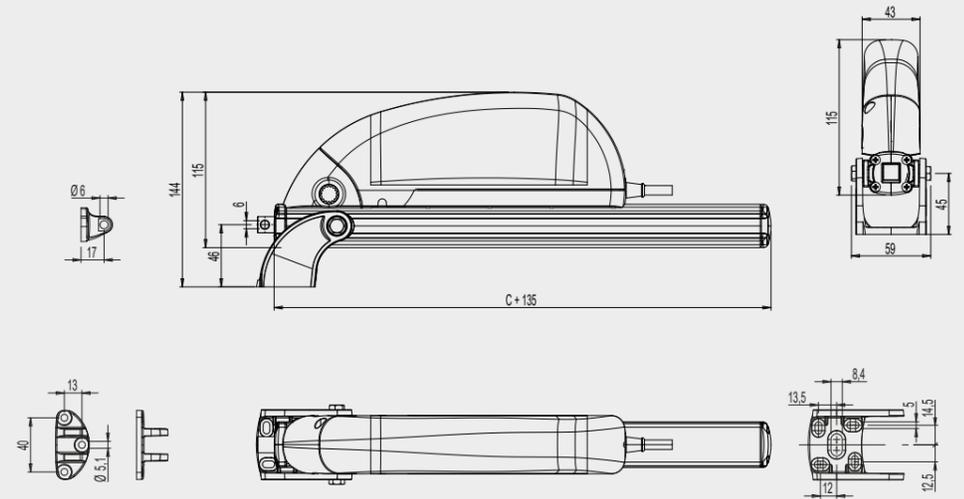
Drive units available

| Code | Model |
|-------|------------------------------|
| 07438 | Rackmax 650 230 V - 180 mm |
| 07439 | Rackmax 650 230 V - 230 mm |
| 07440 | Rackmax 650 230 V - 350 mm |
| 07441 | Rackmax 650 230 V - 550 mm |
| 07442 | Rackmax 650 230 V - 750 mm |
| 07443 | Rackmax 650 230 V - 1,000 mm |

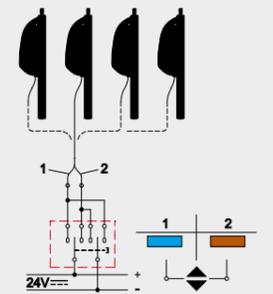
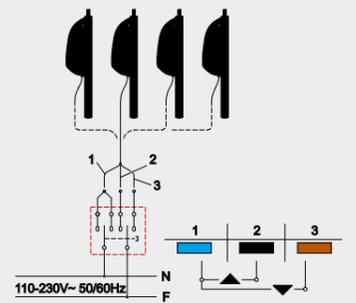
| Code | Model |
|-------|----------------------------|
| 07444 | Rackmax 650 24 V - 180 mm |
| 07445 | Rackmax 650 24 V - 230 mm |
| 07446 | Rackmax 650 24 V - 350 mm |
| 07447 | Rackmax 650 24 V - 550 mm |
| 07448 | Rackmax 650 24 V - 750 mm |
| 07449 | Rackmax 650 24 V - 1000 mm |

RACKMAX 650

TECHNICAL DATA



| Model | 230V AC | 24V DC |
|--|-----------------------------------|------------------|
| Thrust and drive force (Fn) | 600 N | |
| Strokes (Sv) | 180, 230, 350, 550, 750, 1,000 mm | |
| Power-supply voltage (Un) | 110-230 V ~ 50/60 Hz | 24 V= |
| Current absorbed at nominal load (In) | 0.45 - 0.22 A | 1.10 A |
| Power absorbed at nominal load (Pn) | ~ 30-31 W | ~ 27 W |
| Travel speed | 7.5 mm/s | 7.6 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 | -5 + 65 °C | |
| Degree of protection for electrical devices | IP42 | |
| Self-learning frame rebated overlap | Position self-determination | |
| Parallel connection | YES (max 20) | |
| Duo version (with Drive unit) | YES | |
| Static holding force (depending on brackets) | 3500 N | |
| Closing stroke-end setting | Upon absorption of power | |
| Overload protection | Upon absorption of power | |
| Pre-wired power-supply cable | 2 m (± 5 %) | |
| Dimensions | 115 x 42 x (stroke + 135) mm | |
| Weight | Variable | |
| Zamak sash/frame brackets | Included | |



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).

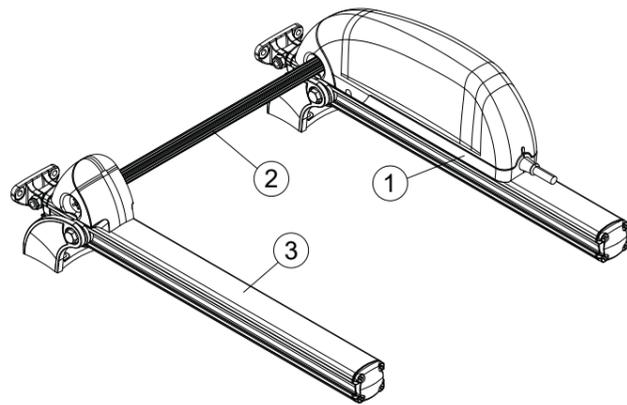
The physical connection between the drive motor (1) and the drive unit (3) takes place via an anodised aluminium drive tube (2), available for separate order and in different lengths - 1,000, 1,500, 2,000, 2,500 mm.

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.



● 000 - Anodised silver



- 1) Chain actuator Rackmax 650
- 2) Drive tube
- 3) Drive unit

| Code | Model |
|-------|-----------------------------------|
| 07450 | Drive unit Rackmax 650 - 180 mm |
| 07451 | Drive unit Rackmax 650 - 230 mm |
| 07452 | Drive unit Rackmax 650 - 350 mm |
| 07453 | Drive unit Rackmax 650 - 550 mm |
| 07454 | Drive unit Rackmax 650 - 750 mm |
| 07455 | Drive unit Rackmax 650 - 1,000 mm |

RACKMAX 650 DRIVE TUBE

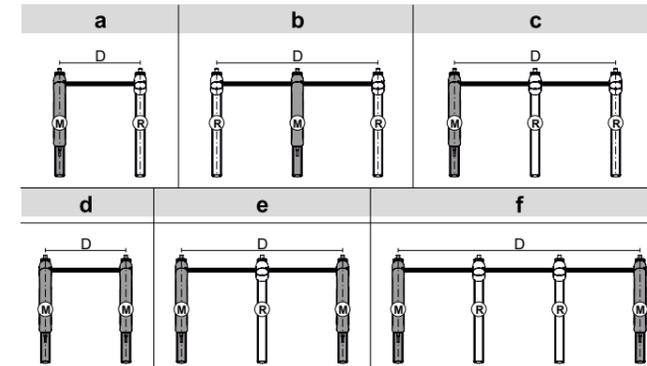
Drive tubes are employed to connect a Rackmax 650 rack actuator to one or more drive units, or to another Rackmax 650 motor.

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.



● 000 - Anodised silver

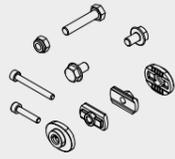


| Configu-ration | Engines | Drive units | Thrust points | Thrust force total |
|----------------|---------|-------------|---------------|--------------------|
| a | 1 | 1 | 2 | 600 N |
| b | 1 | 2 | 3 | 600 N |
| c | 1 | 2 | 3 | 600 N |
| d | 2 | 0 | 2 | 1,000 N |
| e | 2 | 1 | 3 | 1,000 N |
| f | 2 | 2 | 4 | 1,000 N |

| Code | Model |
|-------|-----------------------|
| 07456 | Drive tube - 1,000 mm |
| 07457 | Drive tube - 1,500 mm |
| 07458 | Drive tube - 2,000 mm |
| 07459 | Drive tube - 2,500 mm |

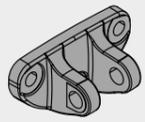
RACKMAX 450 & RACKMAX 650 ACCESSORIES

Spare parts



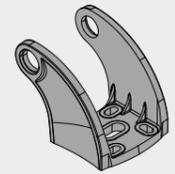
For RackMax 450,
RackMax 650 and
Drive unit.

| Code | Model |
|-------|--------------------|
| 07460 | FIXING ACCESSORIES |



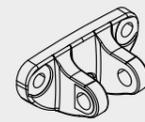
For RackMax 450.

| Code | Model |
|-------|------------------------|
| 07461 | POLYAMIDE SASH BRACKET |



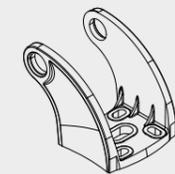
For RackMax 450.

| Code | Model |
|-------|-------------------------|
| 07462 | POLYAMIDE FRAME BRACKET |



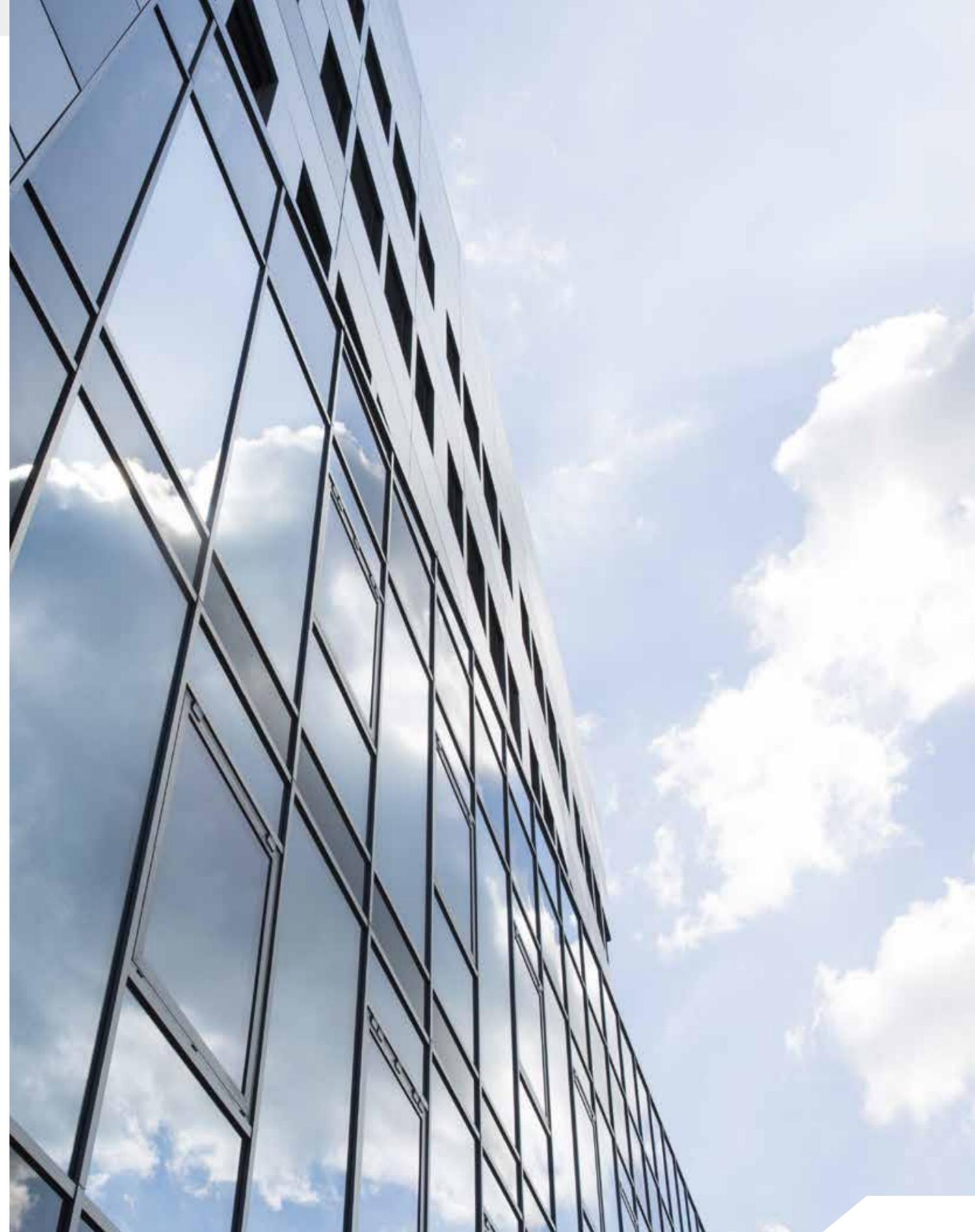
For RackMax 650 and
Drive unit.

| Code | Model |
|-------|-------------------|
| 07463 | ZAMA SASH BRACKET |



For RackMax 650 and
Drive unit.

| Code | Model |
|-------|--------------------|
| 07464 | ZAMA FRAME BRACKET |



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.



Emergency switches



Wind-rain detectors



Smoke/heat detectors



Ventilation buttons



Alarm signals



Thermostat

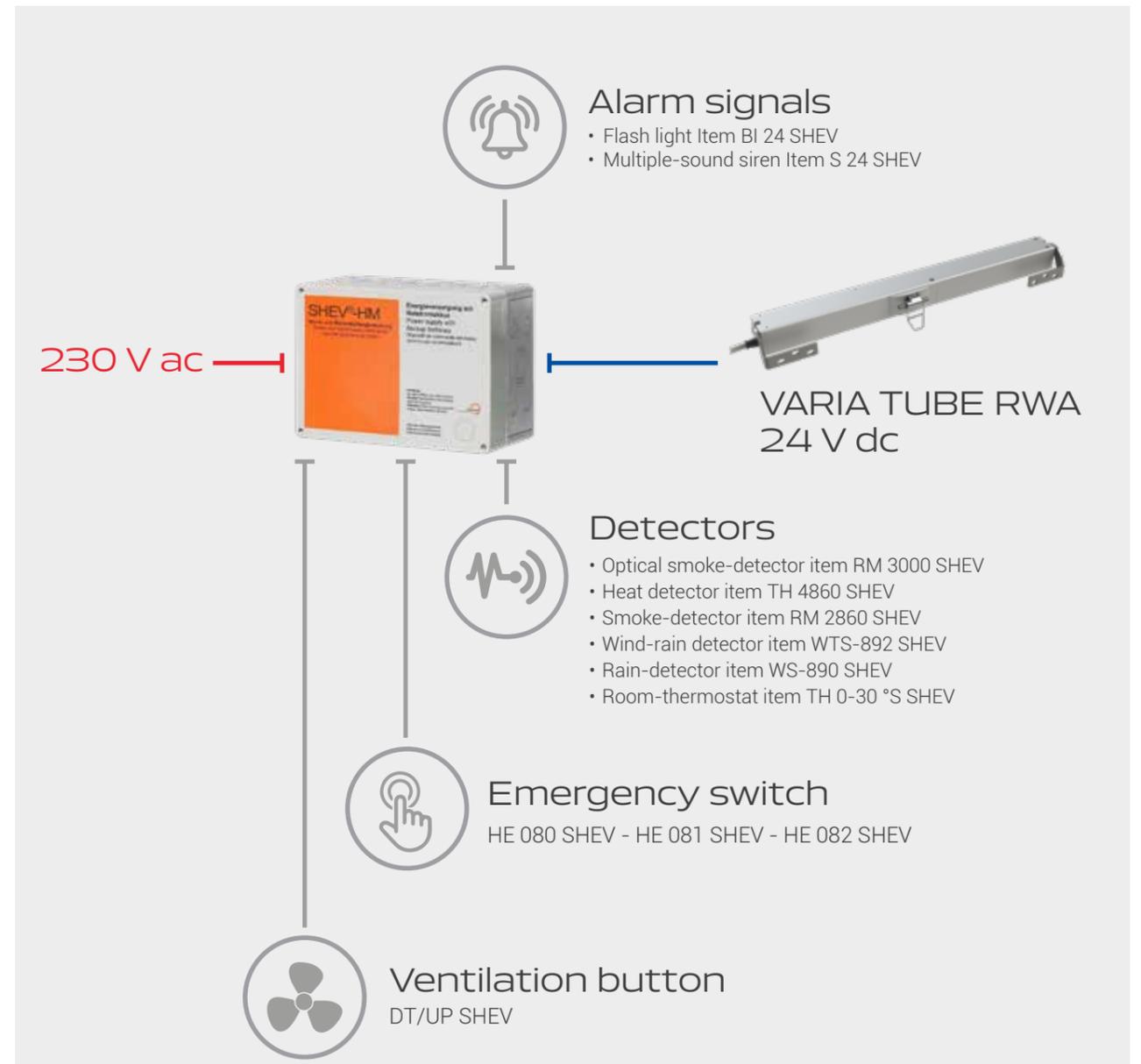
CE All the products in the SHEV family bear the CE marking, meaning they are authorised for sale within the European Union. The CE marking is a symbol of SHEV products' compliance with European standards for electrical products. Please refer to local laws in force for any countries outside the European Union.

| Code | Model |
|-------|--|
| 07823 | SHEV 3 |
| 07824 | SHEV 6 |
| 07825 | Optical smoke detector RM 3000 SHEV |
| 07826 | Heat detector TH 4860 SHEV |
| 07827 | Smoke detector RM 2860 SHEV |
| 07828 | Emergency switch with status led HE 082 SHEV |
| 07829 | Additional emergency switch HE 081 SHEV |
| 07839 | Ventilation button DT/UP SHEV |
| 07840 | Wind-rain detector WTS-892 SHEV |

| Code | Model |
|-------|---|
| 07841 | Emergency switch with status led + buzzer HE 080 SHEV |
| 07842 | Room thermostat TH 0-30 °S SHEV |
| 07846 | Additional module for thermostat THM-200 SHEV |
| 07847 | Flash light BI 24 SHEV |
| 07848 | Multiple-sound siren Item S 24 SHEV |
| 07849 | Rain detector WS-890 SHEV |

SHEV RWA CONTROL UNITS

TECHNICAL DATA



| Model | SHEV 3 07823 | SHEV 6 07824 |
|---|-----------------|-----------------|
| Power-supply voltage | 230 V AC | 230 V AC |
| Output voltage | 24 V DC | 24 V DC |
| 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 dc Giese 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. This product line also includes RADIO versions of the same products, which allow for opening/closing via a remote-control device (included) for extra convenience.



Wind detector



Rain detector



Ventilation button



Remote-control device

CE 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.

| Code | Model |
|-------|--------------------------|
| 07720 | POWER BT 2 |
| 07724 | POWER BT 6 |
| 07709 | POWER BT 6 Battery |
| 07721 | POWER BT 2 RADIO |
| 07725 | POWER BT 6 RADIO |
| 07712 | POWER BT 6 RADIO Battery |

| Code | Model |
|---------------|------------------------|
| 07894000 | HEATED RAIN SENSOR SPR |
| 07732000 | WIND DETECTOR |
| 6693500000136 | VENTILATION BUTTON |

POWER BT CONTROL UNITS TECHNICAL DATA

100-120 V ~ 50/60 Hz
200-240 V ~ 50/60 Hz



24 V dc

Actuators
power-supply
voltage 24 V dc



Detectors
• Rain detector 07894
• Wind detector 07732



Ventilation
Ventilation button 6693500000136

| Model | POWER BT 2 07720 POWER BT 2 RADIO 07721 | POWER BT 6 07724 POWER BT 6 RADIO 07725 | POWER BT 6 Battery 07709 POWER BT 6 RADIO Battery 07712 |
|---|--|--|--|
| Power-supply voltage | 100-120 V ~ 50/60 Hz 200-240 V ~ 50/60 Hz | | |
| Output voltage | 24 V DC | | |
| Max. load current | 2 A | 3 A | 3 A |
| Maximum output per module | 2.5 A (Fuse T 2.5 A for every module) | | |
| Maximum output current | 2 x 1.6 A | 6 x 1.1 A | 6 x 1.1 A |
| Electrical insulation | Class I | | |
| Connectable devices | Wind detector - Rain detector - Timer - Ventilation button | | |
| Operating temperature | -5 °C - +65 °C | | |
| Degree of protection for electrical devices | IP 65 | | |
| Radio | included with 07721, 07725 and 07712 | | |
| Back-up battery | NO | included (2 x 12 V dc) 1.2 Ah | |
| Material | Technopolymer | | |
| Number of actuators* | up to 2 actuators 07880 (VARIA SLIM PLUS) | up to 6 actuators 07880 (VARIA SLIM PLUS) | up to 6 actuators 07880 (VARIA SLIM PLUS) |
| | 1 item 01495 (VARIA) | up to 3 items 01495 (VARIA) | |

*For other actuators please contact SchlegelGiese technical support.

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 ac 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.

This product line also includes RADIO versions of the same products, which allow for opening/closing via a remote control device (included) for extra convenience.



Wind detector



Rain detector



Ventilation button



Remote-control device

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

| Code | Model |
|-------|------------------|
| 07718 | POWER AT 6 |
| 07719 | POWER AT 6 RADIO |

| Code | Model |
|---------------|------------------------|
| 07894000 | HEATED RAIN SENSOR SPR |
| 07732000 | WIND DETECTOR |
| 6693500000136 | VENTILATION BUTTON |

POWER AT CONTROL UNITS TECHNICAL DATA

100- V ~ 50/60 Hz
200-240 V ~ 50/60 Hz



110-240 V ~ 50/60 Hz

Actuators
power-supply voltage
100-120 V ~ 50/60 Hz
200-240 V ~ 50/60 Hz



Detectors
• Rain detector 07894
• Wind detector 07732



Ventilation
Ventilation button 6693500000136

Model

| | POWER AT 6 07718 | POWER AT 6 RADIO 07719 |
|---|----------------------|--|
| Power-supply voltage | 100-120 V ~ 50/60 Hz | 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 - Timer - Ventilation button |
| Operating temperature | | -5 °C - +65 °C |
| Degree of protection for electrical devices | | IP 65 |
| Radio | | included with 07719 |
| Back-up battery | | NO |
| Material | | Polymer |
| Number of actuators* | | up to 18 actuators 07882 (VARIA SLIM PLUS) |

*For other actuators please contact SchlegelGiesse technical support.

A GLOBAL PARTNER



SCHLEGELGIESSE

MADE FOR THE FUTURE

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U0892001 | 07/2020