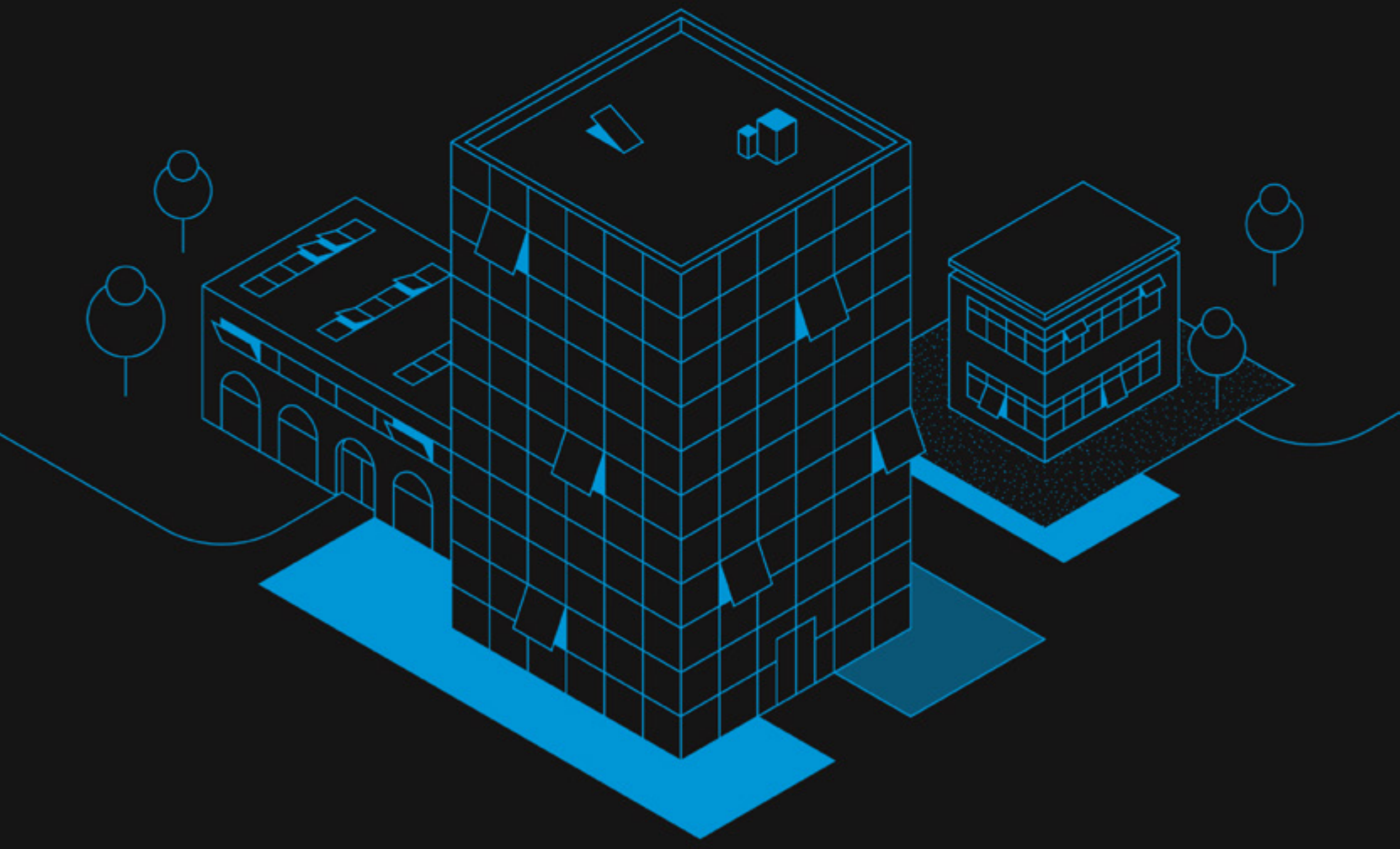
ULTRAFLEX CONTROL SYSTEMS

WINDOW AUTOMATION FOR GREEN BUILDING



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Cross industries with constant innovation.

ULTRAFLEX GROUP

The Ultraflex Group has 89 years of experience in manufacturing and distributing the highest quality and most innovative products all over the world.

The Ultraflex Group affiliate Companies design and produce widely known products for the automation of windows, steering systems and accessories for the marine, industrial and automotive fields, products connected to renewable energy applications, vacuum fillers and bottling machines.

Marine

ULTRAFLEX — Steering and control systems for pleasure boats.

UFLEX — Steering and control systems for pleasure boats.

UFLEX — Manufacturing of steering wheels and distribution of technical marine accessories.

Renewable energy

UFLEX DIVISIONE ENERGIA — Innovative solutions in renewable energy and energy efficiency.

Architecture

WES — Window automation for Green Building.

Automotive, industrial, agriculture

INDUSTRIA DI LEIVI — Mechanical remote controls for automotive and industrial field.

Food and beverage fillers

tec — Vacuum fillers and bottling machines.

From 1970 to today, a chain of progress.

Ultraflex Control Systems, briefly named UCS, is an Italian family-owned company, part of the Ultraflex Group.
UCS is based in Busalla, close to Genoa, and the products are Made in Italy.
It is a leading company in the Fenestration and Building Automation Industry and a manufacturer of Natural and Smoke Ventilation Systems; its focus today is the integration of Window Automation into BMS-Building Management Systems.

Its activity in the remote control for windows started about 50 years ago, in the 70s, as a division of Ultraflex.
In 1988 UCS becomes an independent company, fully dedicated to the window controls and starts to design and manufacture electrical actuators, creating the conditions for a rapid expansion in the European Market first and therefore in the rest of the world.
In 1999 it is the first European Company to certify an actuator according to UL standards in order to address the American market.
The export share is consistently higher than 80% of the turnover, counting on a worldwide distribution network that contributes to the realization of hundreds of important, prestigious and cutting-edge projects.

Pioneer of the Smoke Ventilation in Italy, UCS represents Italy in European Technical Committees for the development of Technical Standard for Smoke Ventilation. The UCS range includes electrical actuators and panels tested in conformity to the European Standard EN 12101-2 and EN 12101-10 for Natural Smoke and Heat Exhaust Ventilation (NSHEV) Systems.

UCS started 10 years ago the development of the first “intelligent” actuator (programmable and addressable) to satisfy the needs of increasingly sophisticated architectural scenarios connected to the building automation.
The experience gained by the company and the group in over 85 years of activity has led to invest human and economic resources in a large area for a laboratory equipped with advanced instrumentation and automatic controls, capable of operating more than 30 windows simultaneously and continuously.
We constantly check the quality of components, finished products and the consistency of their performance.
The modular structures also allow us to test new installations and develop new solutions for a constant development of our product range.

“Our strength is our people.”

UCS President

UCS

REFERENCES

Discover the showcase of our most prestigious projects.
In this section, we invite you to explore a selection of our most notable and impactful projects, where our cutting-edge actuators have played a pivotal role in creating smarter, more efficient, and aesthetically pleasing spaces. These success stories are a testament to our commitment to quality and excellence in the field of window automation.

MacKimmie Tower

Calgary – Canada

Educational building

Ferrari Store

Johannesburg – South Africa

Commercial building

Padiglione Jean Nouvel

Genova – Italy

Exhibition center

Agricultural bank of China

Beijin – China

Office building

NASA Research Center

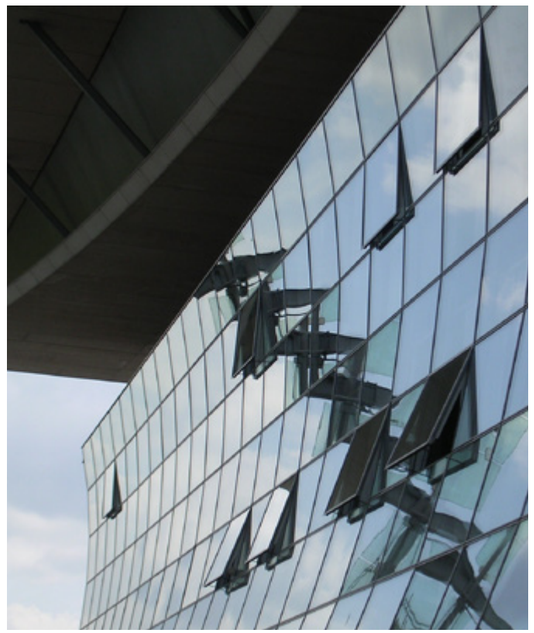
Mountain View, California – USA

Research center

German Pavillon – Expo 2000

Hannover – Germany

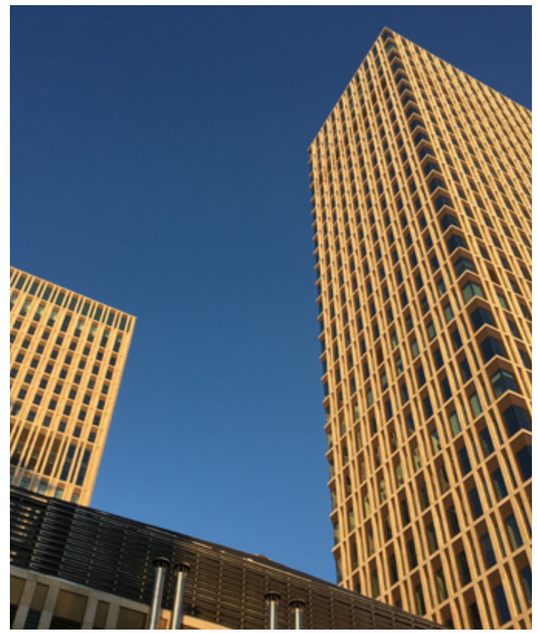
Exhibition center



Talan Towers

Astana – Kazakistan

Residential building



Mathison Hall – Haskayne School of Business

Calgary – Canada

Educational building

University of Auckland Building 405

Auckland - New Zealand

Educational building

Royal Botanic Gardens, Kew

London – UK

Pubblic building

Chicago University

Chicago, IL – USA

Public building

New Street Square

London – UK

Office building

Arora Complex

London – UK

Residential building

University of Melbourne

Melburne – Australia

Educational building

Riverside Center Building 3

New York City, NY – USA

Office building

International Commerce Centre

Hong Kong – Cina

Commercial building

Stanford University

Stanford, California – USA

Educational building

Musei Capitolini

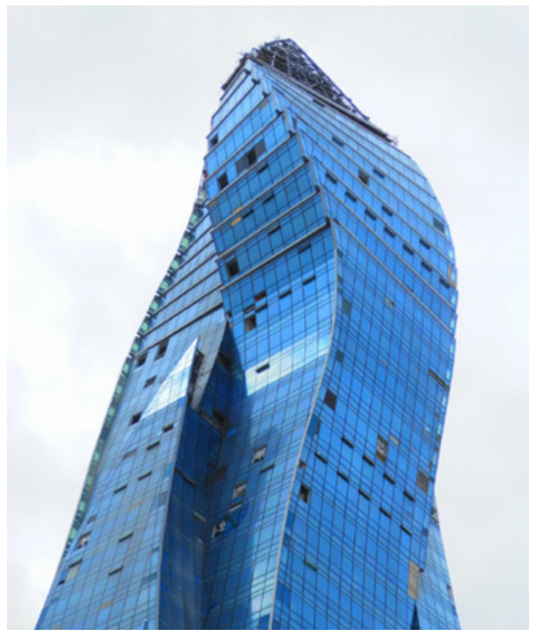
Roma – Italy

Museum

Socar Tower

Baku – Azerbaijan

Office Building



Kimmel Center

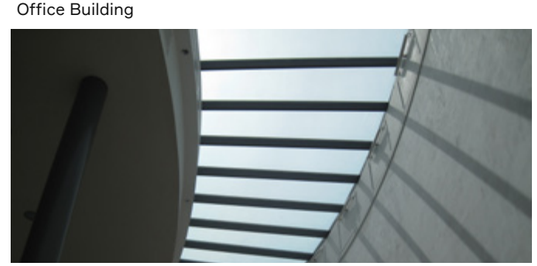
Philadelphia, PA – USA

Cultural Campus

Dong Energy Headquarter

Copenhaghen – Denmark

Office Building



Natural Ventilation

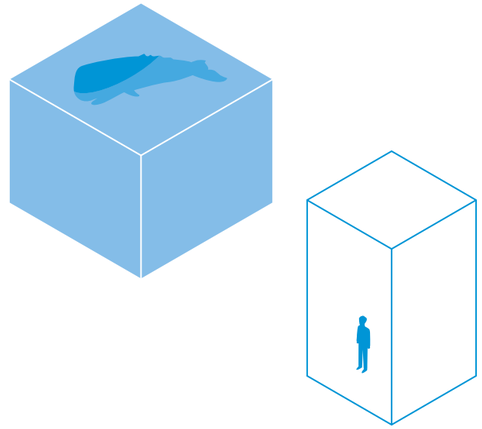
BENEFITS OF NATURAL VENTILATION IN ARCHITECTURE

Whales spend more time on the surface...than humans spend in the outdoors.

Sir David Attenborough

90% is the time that we spend indoors. We are basically an “indoor species.”

For this reason, the window automation for natural ventilation becomes of crucial importance for creating safe, sustainable, comfortable buildings.



Different buildings, same benefits

Education

- Comfortable environment.
- Better classroom attendance.
- Improved acoustics.
- Greater attention span.
- Lower infection risk.

Healthcare

- Lower infection risk.
- Connection to nature.
- Improved mood + mindset.
- Motivation to get better.
- Shorter stay in hospital.

Offices

- Improved productivity.
- Reduced Sick Building Syndrome (SBS).
- Job satisfaction.
- Less stress.
- Pleasant space.

Everywhere, for people with disabilities

- Improved quality of life with a greater sense of environmental control.
- Operate from wheelchair, bed, or sofa.
- Fresh air + connection to nature.

Planet

- Less energy consumption.
- Reduced greenhouse gas emissions.
- Minimizing ozone depletion.
- Lowers heat island effect.
- Fewer E-waste items.

Developers

- Capital cost savings (15% compared to HVAC).
- Lower operating costs (70%-90% lower compared to HVAC).
- Prestige of a sustainable building.
- Increased rent per square foot.
- Increased market value of building.

Buildings, like people, need to breathe.

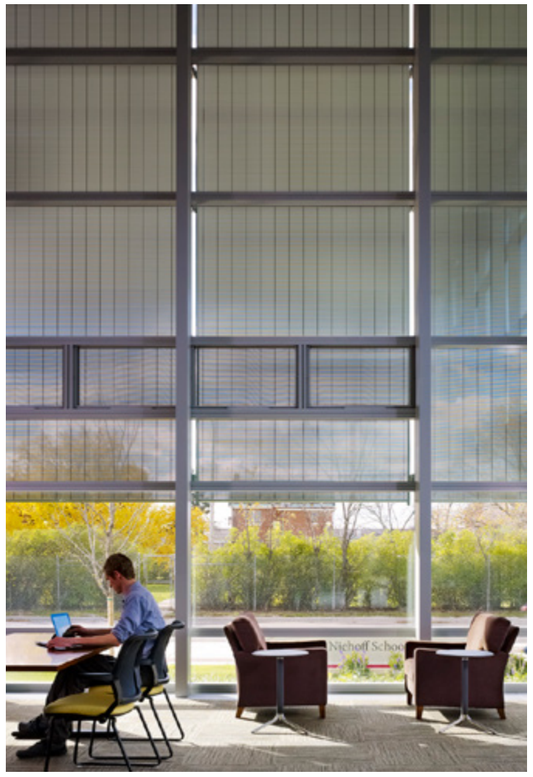
NATURAL VENTILATION AND ENERGY EFFICIENCY

40% of global CO_2 emissions come from real estate. 70% are produced by building operations.

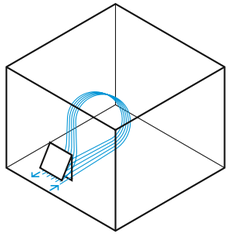
The global policies implemented in recent years have identified the reduction of energy consumption as the key point on which to intervene.

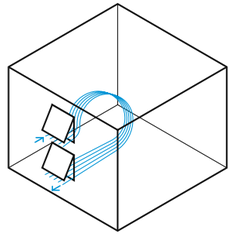
Research done by the World Green Building Council (WGCB) highlight how this aspect is the starting point to design new buildings and affects the criteria of renovation of existing ones. The application of this principle leads to the reduction of the use of air conditioning and mechanical ventilation: one of the most effective methods is the night cooling ventilation (automatically operating the windows during the night, bringing fresh air into the building and also restoring the correct balance between CO_2 and oxygen).

Natural ventilation has always been intended as an improvement in the indoor quality of the air only; with the advent of Building Management Systems, window automation has been interfaced with the other systems like air conditioning, heating, and forced ventilation in order to obtain energy savings as well.
For the above aims, in the last years the market is asking for new technologies for the integration in building management system and be part of the active system operate on daily base.



Natural ventilation can be obtained by the following configuration:



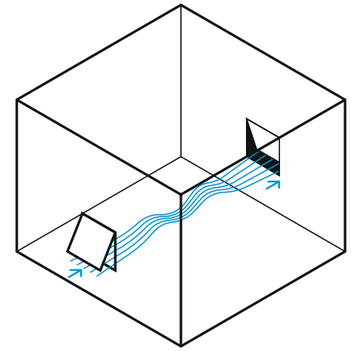


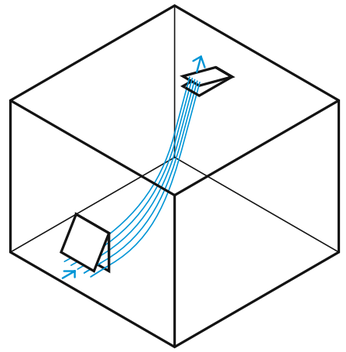
‹ SINGLE SIDE VENTILATION

One or more windows on the same facade.
For obtaining a good ventilation result, the room width should not exceed 2,5 times the room height.
Not recommended for meeting room and classroom.

› CROSS VENTILATION

One or more windows open on opposite facade side.
This solution uses the wind pressure difference present on each windows. Most significant result can be obtained when the room width is 5 times more the room height.





‹ STACK VENTILATION

Use the superposition effect given by facade window and roof windows and the different pressure generated by warm air collected in the top part of the building. Most significant result can be obtained when the room width is 5 times more the room height and the roof windows are installed in an appropriate way aim the wind pull out the heat increasing the natural ventilation effect.

Natural ventilation is maximized by cross-ventilation. In normal wind conditions, the side of a building facing the wind will be subject to a positive pressure and the opposite side will have a zone of negative pressure. Installing adequate window opening on these two sides of the building, a positive flow of air through the interior, from positive to negative pressure, is encouraged.

Ventilation effectiveness depends on wind speed, the angle at which the wind strikes the window, and the location and size of the windows.
The efficiency is limited to only 12–23% in a room with a single opening; this improves up to 51% if windows are located on adjacent walls and 65% can be reached with windows also on opposite walls.

Natural Smoke and Heat Exhaust Ventilation (NSHEV) systems

WHAT IS NSHEV?

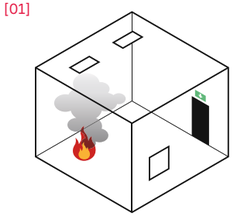
In the event of fire inside of a building, smoke and heat gases rise up in the building, creating a layer of dangerous gases under the ceiling, which fill up the room in a very short time.

The smoke precludes the visibility of the emergency exits and impedes the prompt intervention of the firemen.

Moreover, 90% of all fire victims die in consequence of smoke inhalation.

The second critical risk is the flashover generated by the very high temperature inside of the building that could generate explosion or big damages to the building structures, with the consequent collapse.

[01]



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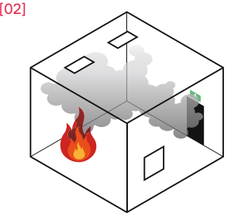

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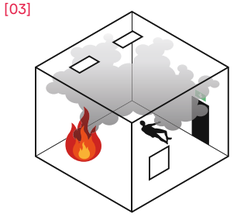

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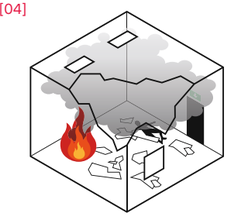

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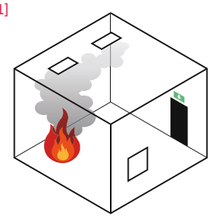

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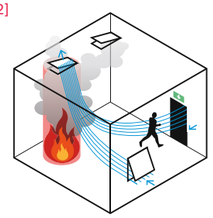

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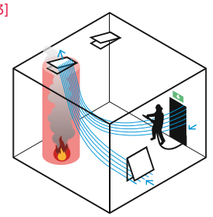


[01] SHEVS OPEN IMMEDIATLY

[02] CHIMNEY EFFECT ALLOW FAST EVACUATION

[03] EASILY FIREMAN INTERVENTION

In order to avoid the above dangerous events, and keep escape routes clear for longer and also to ensure the fire service can quickly and safely locate and extinguish a fire, a Natural Smoke and Heat Exhaust systems must be integrated in fire protection concept.

The NSHEV consists in a system of automatic opening windows installed in the upper sections of the façade or in the roof in order to let the building free from smoke and heat. Ventilation openings in the lower area increase the thermal uplift, generating a “chimney effect”.

The NSHEV can be installed in parallel to sprinkler system increasing positive results and avoiding collateral damages like other fire protection system generate (water-based suppression system, foam-based suppression system, etc.).

Summarizing, the following benefits can be achieved installing a NSHEV system:

- People protection against smoke inhalation.
- Granted visibility for escape routes and firemen intervention.
- Preservation the building structures.
- Minimum use of extinguishing agents.

FAÇADE AND ROOF EXHAUST SYSTEMS

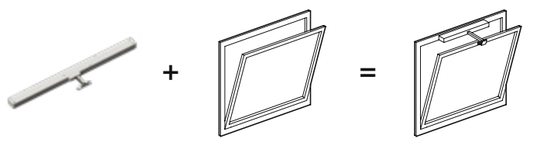
NSHEV systems can be divided in two main categories:

- **Façade exhaust system (Vertical façade).**
- **Roof exhaust system.**

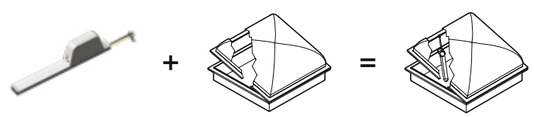
The NSHEV consists in an electrical drive installed and operating on vertical or horizontal window design and developed to withstand very high heat (up to 300°C) and life-time (up to 10.000 cycles) tests.

The NSHEV in vertical façade is composed by electrical chain drive (or rack or spindle drive) installed on top hung, side hung or bottom hung window.

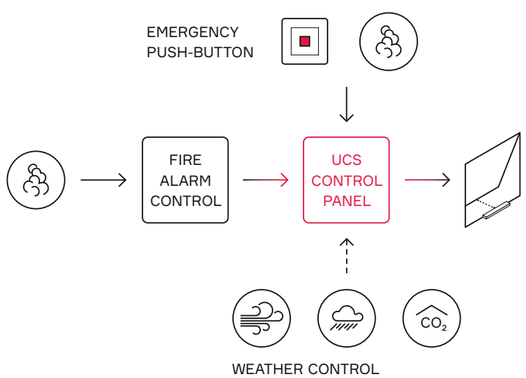
The NSHEV installed on the upper part of the building, directly on the roof or in the nearest area, is composed by electrical drive (rack or spindle drive) installed on a skylight.



CHAIN DRIVE **WINDOW** **NSHEV** Façade exhaust system.



RACK DRIVE **SKYLIGHT** **NSHEV** Roof exhaust system.



Smoke ventilation control panel

NSHEV systems need electrical power supply 24Vdc and shall be connected to an electric system for smoke and heat extraction which are composed by a control unit and related smoke and heat detector and/or emergency push buttons. The control unit shall be including power supply backup solution, in order to grant the 24Vdc even if the main power supply 230Vac is down due to the blackout caused by the fire.

In Europe, the smoke ventilation control panel must be certified according to the EN12101-10.

The same configuration might be used also for introducing natural ventilation to improve the quality of the air inside of the building. In such case sensors, like rain detector, wind detector and CO_2 sensors can be connected easily to the smoke ventilation control panel.

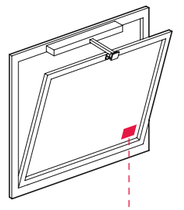
EUROPEAN CERTIFICATION PROCESS FOR NSHEV

Initial Type Test (according to EN12101-2)

UCS and notified body perform Initial Type Test according to the EN12101-2 on a single or full range of NSHEVs.

The following documents are the base for the right certification of the NSHEV:

- **Initial Type Test report**: ITT reports performance and list of components of NSHEV.
- **Technical catalogue:** including all the instructions related to the assembling procedure of the NSHEV.
- **Cascading ITT**: regulating the relation between the parties and the NSHEV manufacturer and the FPC (Factory Production Control) process.



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AnyCoLtd., P.O. Box 21, B - 1050
02
123-CPD-001

EN 12101-2:2003
Natural heat and exhaust ventilator any type

A_a = 3,10 m²
WL 1500; SL 500; T(-0,5); RE 1000; B 300, A1
temperature of thermal initiation device (if fitted)

CE Mark and FPC (Factory Production Control)

According to the Construction Products Regulation (CPR), NSHEV must comply with System 1. Under the CPR 305/2011, manufacturers of System 1 Construction Products must have an FPC system performed and approved by a Notified Body and it must be re-assessed annually.

If the audit is passed positively, the manufacturer will be issued a CCP (Certificate of Constancy and Performance).

Then the manufacturer can produce NSHEV following the indication written in the Technical catalogue and using same components listed in the ITT Report.

Manufacturer must declare the performance of NSHEV basing on the test report and report them on the DOP (Declaration of Performance) written on the CE Mark label.

BMSline

Integrating window automation into Building Management Systems

PROGRAMMABLE AND ADDRESSABLE ACTUATORS

BMSline represents the most advance technology allowing the two-way communication between window automation and Building Management System enabling interaction with other systems in building (HVAC, lighting...).

By the Integration in Building Management Systems (BMS) the window automation allows:

- **Energy saving**: automatic switch-off or reduced use of Air conditioning, heating, lights.
- **Comfort** in the building: easy control of window automation through computer or other devices, quiet operation, wellbeing that becomes health, then productivity at job place or school.
- **Safety** by smoke ventilation in case of emergency.

The windows can be organized into groups thanks to addressable BMSline actuators. Building Management system can easily define different scenarios for each single group for total automation or local and/or remote control.

NIGHT COOLING

To avoid or limit air conditioning during the day. With continually monitored indoor and outdoor temperatures, windows can be partly opened at night to exploit the cool air from outside and reduce indoor temperature.

MICRO VENTILATION

To recycle air and regulate humidity. For a healthy environment, windows can be opened a little for air to circulate and to regulate humidity indoors.

DAILY COMFORT VENTILATION

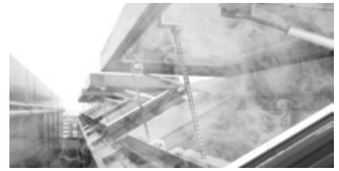
With continued monitored indoor and outdoor temperature and CO2 concentration, windows can be controlled to provide first class living comfort and to save energy. Windows will be closed in bad weather conditions, ignoring all other commands (apart smoke ventilation).

REMOTE CONTROL

For groups of windows in rooms, zones, etc. All scenarios can be set on a time and daily basis, but the system can always be used for any temporary need.

LOCAL CONTROL

The BMSline actuator can be manually operated by the local push button. Continual real-time feedback to BMS system.

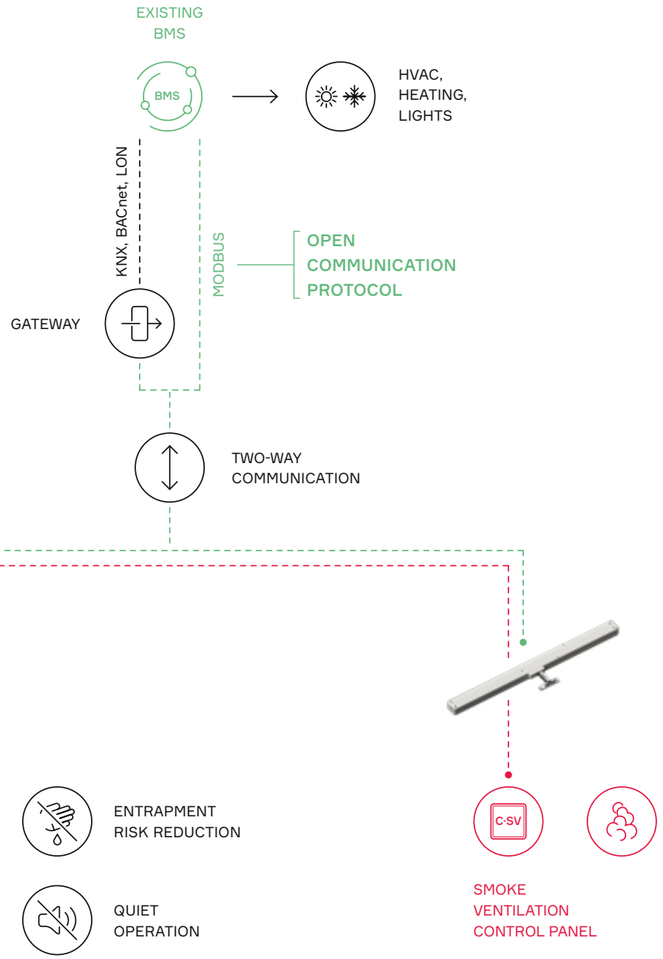


SMOKE & HEAT EXTRACTION

Dedicated Control Panels and actuators, tested in fire conditions, operate windows, skylights and louvres to extract smoke.

INTEGRATING WINDOW AUTOMATION INTO BMS

- Compatible with all existing Building Management Systems.
- Continual, totally controlled window with real-time feedback. Not just an ON/OFF operation (open/close).
- Addressable actuators in order to control the environment of each room in a building.
- No need for external modules/control panels: the actuator has built-in intelligence.
- Window controlled locally by a standard wall switch, even with a centralized Building Management System.
- Smoke Ventilation Control Panels with back-up batteries can be directly and safely connected.



ENERGY SAVING & WELLBEING

REDUCED INSTALLATION & SETUP COST

BMS

INTEGRATION IN EXISTING BMS

100% SAFETY CONDITION

The BMSline smart features are available for NANO, QUASAR, TWIN QUASAR and VEGA actuator series with 24Vdc voltage supply.

Programmable parameters

- Stroke.
- Percentage of opening and closing action.
- Speed, in opening and closing action.
- Force, in opening and closing action.
- Real close position of the window.
- Closing position tolerance.
- Soft stop length and speed.

Real-time feedback

- Full opening or closing.
- Percentage of opening and position of the chain.
- Current setting of parameters and scenarios.
- Location in the building and address in the network.
- Statistics and diagnostic.
- Command state.
- Eventual Failures.

Scenarios

- Reduction of entrapment risk.
- Local control of the window even with centralized management.
- Speed synchronization for multiple actuators on the same window.
- Quiet operation for Natural Ventilation and full speed and force for Smoke Ventilation.

BMSline ACTUATORS CONFIGURATION AND ADDRESSING

BMSline actuators can be easily programmend and configured through the communication cable Modbus RTU.
UCS can provide a “BMSline Setup kit” that allows anytime to set the programmable parameters, choose the scenarios and receive real-time feedback.

BMSLINE SETUP KIT PART NO. 41587H

User friendly Configuration Software and cable for fast connection between PC (USB connector) and actuators.
The UCS BMSline Configuration Software works on any computer with Windows XP and following versions.

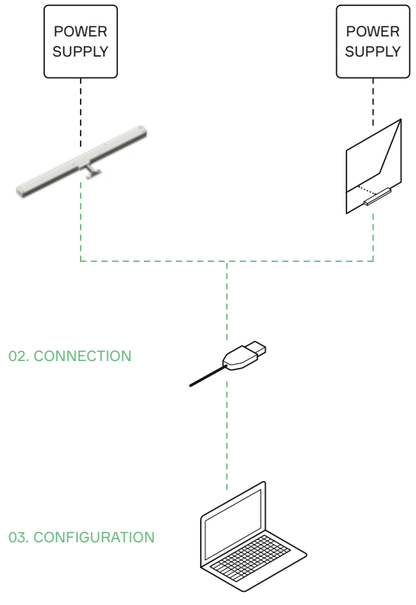
- Parameters, scenarios, network address, assignment.
- Actuator control and closing position adjustment.
- Information feedback and diagnostic.
- Warnings and Faults indication .
- Status of the communication.
- Statistic.
- Setup data recording.

› BEFORE INSTALLATION
Parameter configuration, Address assignment.

› DURING INSTALLATION
Parameter configuration, Address assignment, Closing position adjustment (opt).

› AFTER INSTALLATION
Parameter configuration, Commissioning, Window control/feedback, Diagnostic.

01. POWER SUPPLY



BMSline ACTUATORS INTEGRATION IN BUS LINES

BMSline actuators have been designed with an Open Communication Protocol (Modbus RTU on RS-485) for an easy integration in existing BUS communication line and Building Management Systems.

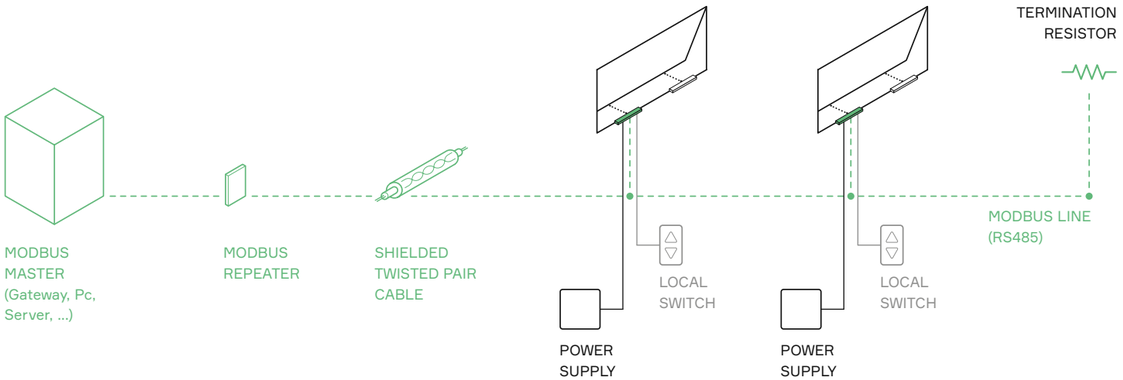
UCS provides Remote Technical Assistance to the System Integrators with regard to:

- Requirements and functions of UCS actuators and accessories (gateways, repeaters, resistors, controllers, ...).
- Positioning of actuators in the building (Network addresses for groups of windows, creation of branches, ...).
- Information about type and characteristics of power supplies and power lines.
- Commissioning.

BMSline actuators can be easily programmed and configured through the communication cable Modbus RTU anytime by System Integrators; UCS provides a table with the list of Modbus Registers for easy setup and control.

On request, actuators can be configurated in the factory and the Network Address can be assigned according to the customer requirements.

The Network address can be also be indicated on a label on the actuator and packaging, for an easier distribution and installation on big projects/ buildings.



BMSline GATEWAYS

The BMSline Gateway allows the translation of BMSline communication BUS protocol (Modbus RTU) to other standard BUS languages (BACnet, KNX, Lonworks ...).

The gateway behaves like a Modbus master towards the actuators, cyclically polling them and making the information accessible to the target technology (other protocols).
The process also works in the reverse direction: when the data points of the target technology are changed, the gateway will automatically update the corresponding Modbus registers of the actuators.

The gateway provides a web-type interface that allow to perform configuration and diagnostic operations from any machine provided with network interface and a web browser.

REPEATERS

MODBUS REPEATER FOR RS-485 TRANSMISSION

The Modbus repeater for RS-485 transmission allows to:

- Extend the network maximum length.
- Increase the actuator number on the same line (install one repeater for every group of 30 actuators).
- Create network branches.

Moreover:

- The LED lights on the repeater supply a first diagnostic test regarding the network communication state.
- The repeater divides the network in two sections, protecting from communication disturbance, or voltage dispersion that may damage the network.

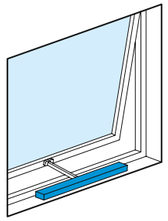
The standards supported currently are:

PROTOCOL	NOTE	MAX ACTUATORs	PART No.
Modbus RTU - LON	Both LON TP/FT-10 and LON/IP	30	41648Q
Modbus RTU - BACnet	Both BACnet MS/TP and BACnet/IP	30	41649R
Modbus RTU - KNXnet/IP	/	30	41650S
Modbus RTU - KNX TP1	To be used with Interface module 41652U	30	41651T
Modbus RTU - BACnet/IP	/	20	41888V
Modbus Repeater	For RS-485 transmission	30	41624S

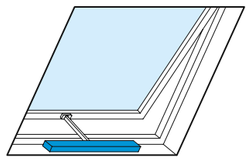
POSSIBLE APPLICATIONS

LEGEND
- Common application
- Special application

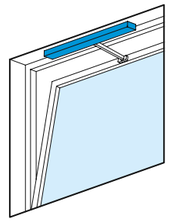
CHAIN ACTUATORS OUTWARD OPENING



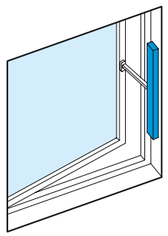
Top hung window.



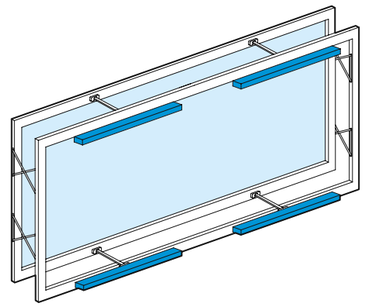
Top hung roof window.



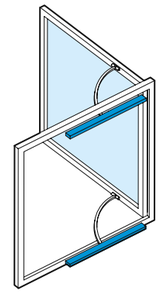
Bottom hung window.



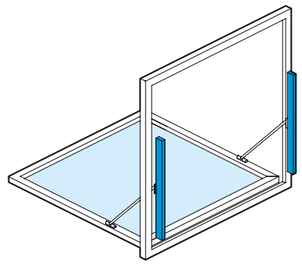
Side hung window.



Parallel window.

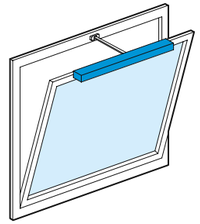


BOW CHAIN. Side hung window up to 90º opening.

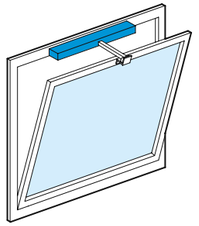


DRAW BRIDGE. Bottom hung window Draw Bridge installation.

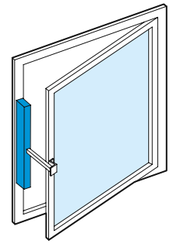
CHAIN ACTUATORS INWARD OPENING



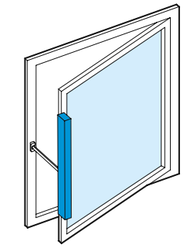
Bottom hung window.



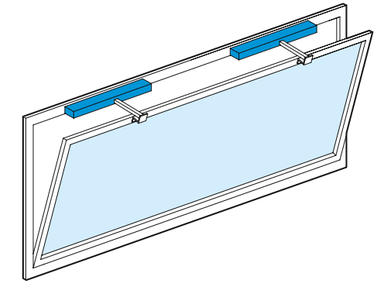
Bottom hung window.



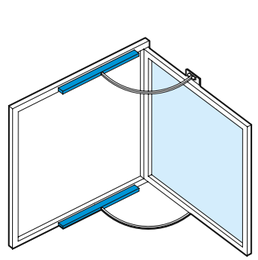
Side hung window.



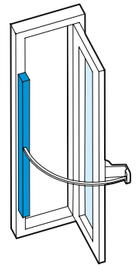
Side hung window.



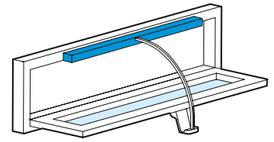
Bottom hung window.



BOW CHAIN. Side hung window up to 90º opening.

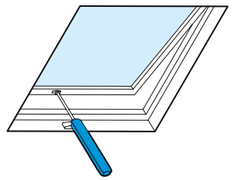


FLEX CHAIN. Side hung window up to 90º opening.

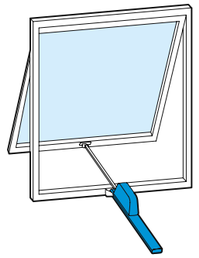


FLEX CHAIN. Bottom hung window up to 90º opening.

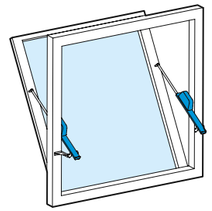
LINEAR / RACK ACTUATORS



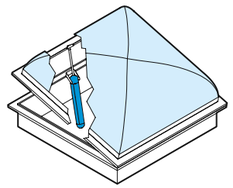
Top hung roof window open outwards.



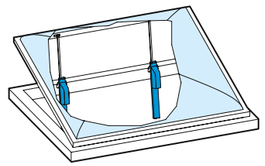
Top hung window open outwards.



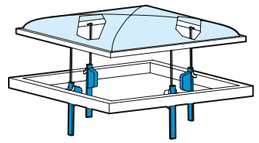
Bottom hung roof window open outwards.



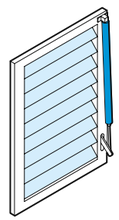
Dome & skylight.



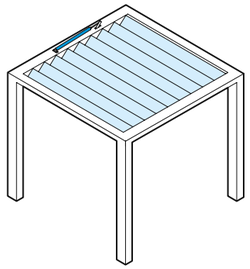
Dome & skylight.



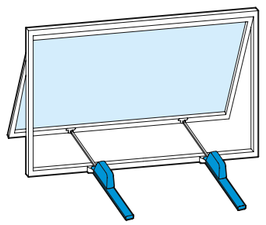
Dome & skylight.



Sun blades or Louvre window.



Pergola.



Top hung window open outwards.

ICON INDEX

PRODUCT APPLICATIONS

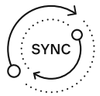
NATURAL VENTILATION

SMOKE AND HEAT EXTRACTION

PRODUCT VERSIONS

STANDARD

Standard version.



SYNCHRO

Versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel.

F-SIGNAL

Versions provide opening and closing feedback signal (free potential, maintained contact), activated by the current limit. Useful to share with third part devices the status of the windows.

RF-WIFI

Intelligent wireless solution to operate window automation by radio remote control or smart devices through the WIFI connection with local router, keeping the option of wired wall push buttons and switches. The RF-WIFI technology is integrated into SIRIUS RF-WIFI chain actuator and available with external modules for all other UCS actuators.

BMSline

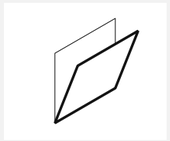
Versions fully programmable (stroke length, speed, force) and addressable via Modbus RTU. Introducing special features like: real-time feedback, soft closing, speed synchronization, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.

GUIDE TO SELECT THE ACTUATOR

Ultraflex Control Systems proposes a complete line of electric chain and linear actuators, that allows the choice of the more suitable actuator for every kind of requirement. The following technical details are a valid support to this choice that must be effected considering the following elements:

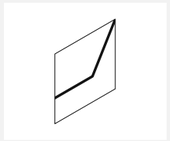
01 › WINDOW TYPE

BOTTOM HUNG WINDOWS (hinges on the bottom side, inside opening)



Chain actuators installation is recommended because they do not take up space inside the room and are aesthetically discreet.
Moreover, for these kind of installations, are not usually required special protection class for water or powder.
The installation of linear actuators would need very long brackets (not available). For windows wider than 1,5 m we suggest to install actuators with two thrust points.

TOP HUNG WINDOWS (hinges on the top side, outside opening)

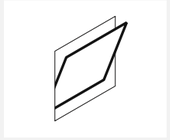


It is recommended the installation of actuators with a special protection class and enough powerful to support with sufficient rigidity the maximum load that occurs when the window is completely opened. We suggest actuators like Nano, Quasar, Twin Quasar, Vega, Twin Vega, Supermaster or Stilewith double link chains. It is possible to install also linear or rack actuators, considering their encumbrance, the rotation of actuator's body and aesthetic effect. For window wider than 1,5 mm we suggest to install actuators with two thrust points, rack systems connected by connecting rod, or two actuators with control coupling unit.

ROOF WINDOWS (skylights,domes, etc.)

See the installation instructions for top hinged windows. The hinges can be on one of the two horizontal sides or on the two vertical sides (central rotation axis). In that case it has to be considered as height of the window, the distance between the hinges and the fixing point of the actuator; besides, consider weight as zero if window is not equipped with brakes.

HORIZONTAL PIVOTING WINDOWS

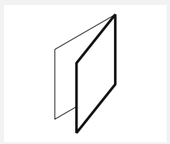


See the installation instructions for top or bottom hinged windows and bottom hinged windows according to actuator fixing position on the pivoting window. In the calculation of the opening and closing effort it is necessary to consider the height of the window as a distance between the fixing position of the actuator and the rotation point of the window, in order to avoid an extreme bending of the chain. Besides, consider weight as zero if window is not equipped with brakes.

LOUVRE WINDOW OR SUN BLADES

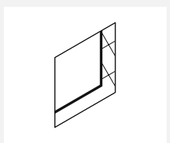
It is necessary to specify the control level stroke for their movement and the necessary force to apply on it. After this choose an adequate rack/spindle actuator (Ulysses, Max, Rack). In case the actuator is installed exposed to bad weather conditions we suggest to contat our technical department.

SIDE HUNG WINDOWS (hinges on the vertical sides and inside or outside opening)



It is necessary to install a chain actuator on the vertical side (with the same kind of brackets for bottom and top application), considering the right installation way of the chain: it doesn't have to be bent because of the gravity force to choose the adequate stroke and brackets. For choosing the adequate stroke and brackets consider as "height" of the window the distance between the hinges and the fixing point of the actuator.

PARALLEL WINDOWS (outside parallel opening)



It is required the installation of at least two chain actuators with speed synchronization, in order to keep the sash parallel to the frame. For window sides wider than 1,5 m we suggest to install two actuators per side or the installation of the locking drive E-Lock connected to the internal multilocking hardware. We suggest to install Synchro Vega, Synchro Nano or Synchro Quasar chain actuators because of their small size, eventually integrated inside of the curtain wall profiles, having stroke suitable to the max opening of the parallel hinges.

02 › ACTUATOR STROKE

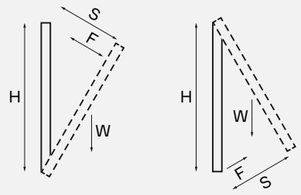
The necessity of a wide window opening contrasts with the following factors:

- for a chain actuator, if it is not used the pivoting brackets kit, the stroke must not exceed 1/3 of the window height, otherwise the chain bending would cause a loss of rigidity and for this reason a loss of performance in the long run. **In case of vents with four-bar hinges please contact our Technical Dpt.**
- for a linear actuator it is necessary to consider the actuator encumbrance inside the room; aesthetic effect apart, it grows as much as the required stroke increases, and it must be considered also the actuator rotation angle. In order to avoid interferences of the actuator with the elements in the room, it is necessary to evaluate carefully the position of the rotation axis opportunely choosing and positioning the fixing brackets. For this purpose, UCS proposes for all the linear actuators side fixing brackets, sliding within the proper dovetail slide on the actuator.

03 › ACTUATOR FORCE

To calculate the window opening and closing force, please refer to the following simplified formula (in case of vents with four-bar hinges please contact our Technical Dpt.):

› FOR VERTICAL BOTTOM OR TOP HINGED WINDOWS



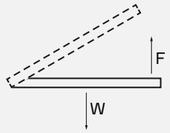
$$F\,(kg) = \frac{W\,(Kg)}{2} \times \frac{S\,(mm)}{H\,(mm)}$$

$$W_{max}\,(kg) = 2 \times F(Kg) \times \frac{H\,(mm)}{S\,(mm)}$$

W = window leaf weight
W_{max} = max window leaf weight
S = actuator stroke
F = required force (in kg, 1kg ~10 N)
H = window leaf height

Therefore, the required force is lower as higher is the window leaf and shorter is the required stroke.

› FOR HORIZONTAL WINDOWS
(roof windows, skylights, domes, etc.)



$$F\,(kg) = \frac{W\,(Kg) + Sl\,(Kg)}{2}$$

$$W_{max}\,(kg) = [2 \times F(Kg)] - Sl$$

W = window leaf weight
Sl = snow load
W_{max} = max window leaf weight
F = required force (in kg, 1kg ~10 N)

› FOR INCLINED WINDOWS
Apply the formula for the horizontal windows; that is necessary if during the opening the window lies in horizontal position, and anyhow for higher safety margin.

› FOR WINDOWS WITH FOUR BARS (SIDE ARM) HINGES
The force needed depends on the hinge used; for any further information do not hesitate to contact our technical department.

NOTE: In the above mentioned formulas the wind load has not being considered: it is necessarily to be considered above all for wide windows; if they are very high, for example, the greatest part of their weight is loaded on the hinges and the required opening force is very reduced, but in case of wind the effect on the large surface is considerable and the actuator must be chosen carefully.

04 › PROTECTION CLASS

The chain actuators are less protected from water or solid bodies (dust, sand, etc.) than the linear actuators. Some linear actuators, with protection class IP 65, are practically watertight in static conditions. For this reason we suggest to install chain actuators on bottom hinged windows or, in connection with a rain sensor, on top hinged windows. Quasar and Nano actuators are available with Protection Class IP 42.

05 › LARGE WINDOWS

For very large windows only one pushing point in the central position cannot be sufficient.
When the window is closed its corners cannot be watertight or airtight and, anyway, when it is opened the stability is compromised in case of wind. We recommend to install two pushing points (or pulling points) if the window is larger than 1,5 m and also for an inferior width if the window leaf rigidity (profile + glass or polycarbonate) is not sufficient.
The installation of two electric actuators on the same window leaf is not possible if it is not used a suitable electronic (coupling) control system, because it is not possible to guarantee the constancy in time of the actuators speed, with consequent probable break of one of them. In this case if the actuators are not equipped with the electronic stop system, it results the break of one actuator or of the window.
The control panel for coupling actuators on the same vent controls only the current absorption of the connected motors, so it can be supplied only with couples of actuators selected during their production by UCS.

The best solution for big windows are Synchro Nano, Synchro Quasar, Synchro Quasar-L, Synchro Vega, Twin Quasar and Twin Vega. These actuators are equipped with integrated speed control sensor than enable the installation of more actuators on the same window without the usage of control panel to synchronize them. Dual rack and double rack systems enable to have two, three or four pushing points mechanically synchronized with connection nods.

For any further information do not hesitate to contact our Technical Department.

06 › INSTALLATION REMARKS

- For some actuators the installation without brackets is possible for windows with pivoting hinges only if the vent height is at least 1500 mm.
- In case of vents with four-bar hinges, please contact our Technical Dept.
- If installed on PVC or wooden windows, the profile has to be reinforced.
- In case of Building Management System control, avoid repetitive commands in the same direction.

For further information contact our Technical Department.

GREEN LINE

Electric systems for natural
ventilation and smoke ventilation.

NANO

24 Vdc

Chain actuator
Maximum force in push action 400 N
Maximum stroke 800 mm

STD

SYNC

F SIGN

BMS

The solution for the integration into the window profiles. Very silent operation.

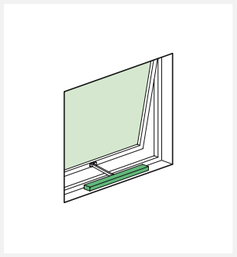
- Chain in double stainless-steel links.
- Smallest case (24 x 35 mm) in aluminum extrusion.
- Electronic stop in the intermediate positions in case of overload.
- Electronic Soft Stop in close and fully open position.
- Reduction of entrapment risk: stop and reverse action in case of obstacle detected (outside the Soft Stop zone).
- Quick and easy installation: the manual closing position regulation is not required.
- Suitable for combined installation with the additional locking device E-LOCK.
- NANO versions with IP42 protection class, for a higher resistance against atmospheric agents, available upon request.
- c UL us LISTED and C US versions for USA and Canada.
- 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

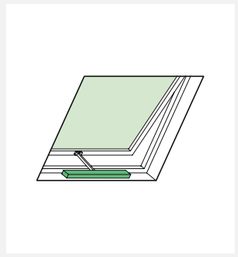
POSSIBLE APPLICATIONS

LEGEND
- Common application
- Special application

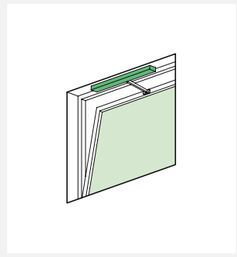
OUTWARD OPENING



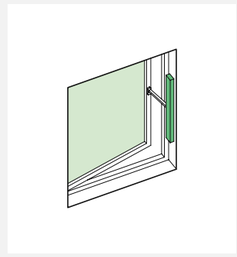
Top hung window.



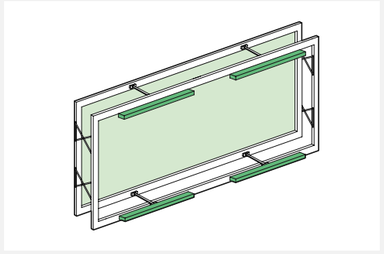
Top hung roof window.



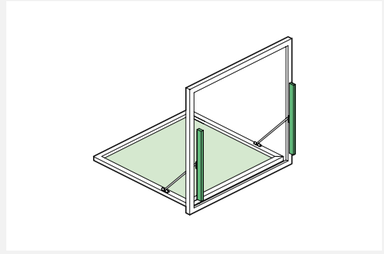
Bottom hung window.



Side hung window.

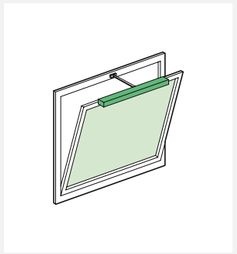


Parallel window.

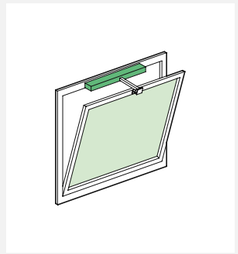


DRAW BRIDGE.
Bottom hung window.

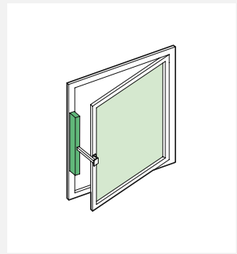
INWARD OPENING



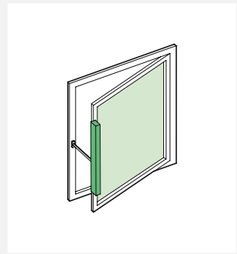
Bottom hung window.



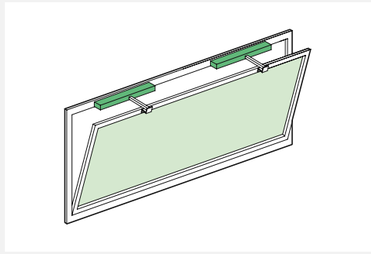
Bottom hung window.



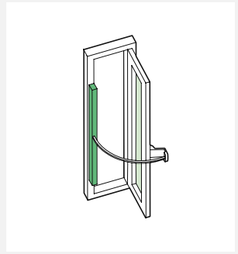
Side hung window.



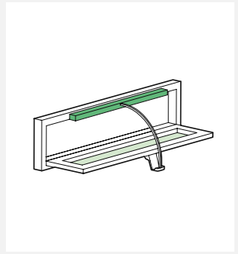
Side hung window.



Bottom hung window.



FLEX CHAIN.
Side hung window.



FLEX CHAIN.
Bottom hung window.

SPECIAL VERSIONS

NANO FLEX

UP TO 90 DEGREES OPENING thanks to a flexible chain, allowing a wide opening angle according to the window size.

High narrow opening windows are becoming very popular and are implemented into the façade panel, as well as small bottom hinged windows, opening inward, with maximized opening angle.

- Flexible chain in stainless steel.
- Suitable for bottom and side hung windows, inwards opening, with pivoting hinges.
- Minimum distance from the hinges 170mm.
- Suitable for being concealed into aluminum profiles with minimal chain connector.
- Suitable for installation with the additional locking device E-LOCK.
- NANO FLEX is available in Synchro version; DC, and BMSline versions upon request.

NANO DRAW BRIDGE

Especially for smoke ventilation, wide opening angle represents a big advantage in order to reduce the number of openable windows, according to the required efficiency or geometrical free area.
NANO in DRAW BRIDGE application can increase the opening angle up to 90°, taking in consideration the window size and weight.
NANO can be installed in DRAW BRIDGE configuration on bottom hung windows opening inwards or outwards.

Suitable for installation with the additional locking device E-LOCK, granting a perfect tightness of the windows, even on very high sashes.

Contact our Technical Department for the installation limits (size and weight of window) and brackets for actuator installation (depending on type of profile).

TECHNICAL DATA

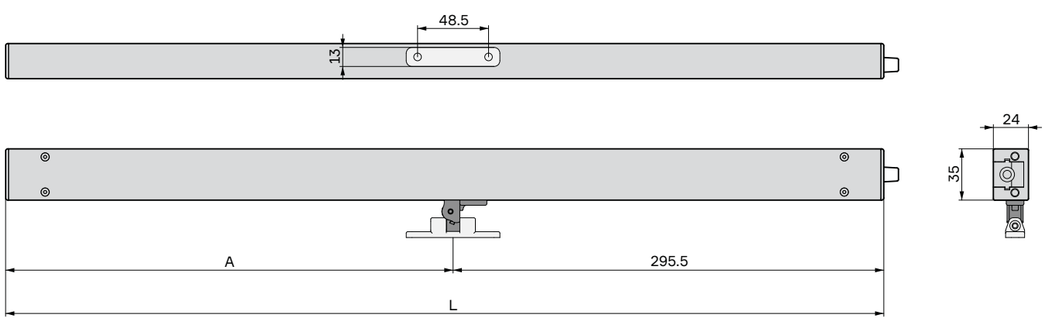
VERSION	DC VERSION	BMSline VERSION
VOLTAGE SUPPLY	24 Vdc ± 15%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	1,2 A	1,2 A
OPERATION	polarity inversion	programmable
MAX FORCE (see force/stroke diagram)	400 N*	programmable up to 400 N*
OPENING SPEED	4 - 14 mm/s**	programmable up to 14 mm/s
CLOSING SPEED	4 mm/s	programmable up to 14 mm/s
LOCKING FORCE	1900 N***	1900 N***
DUTY CYCLE	30%	30%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Electronic	Electronic
SAFETY STOP	Electronic	Electronic
PROTECTION CLASS	IP40****	IP40****

* Must be considered as a temporary load only, both in push and pull.
** Silent operation: minimum speed to complete the opening within 60s.
*** Installation with side bracket kit.
**** Version with IP42 protection class available upon request.

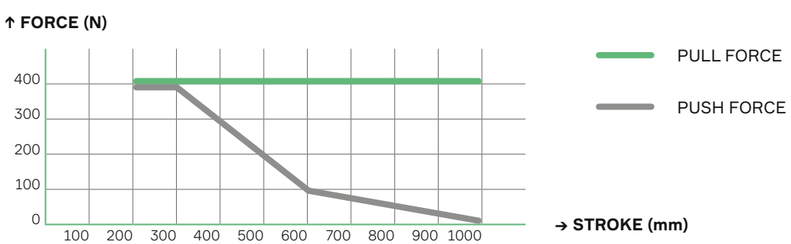
DIMENSIONS

Chain connector included.

STROKE	200	300	400	500	600	800
A (mm)	254,5		304,5	404,5		604,5
L (mm)	550		600	700		900



STROKE / FORCE DIAGRAM



SYNCHRO

The NANO SYNCHRO versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel (max 4 actuators + E-Lock).
Cable not provided, to order separately, and connectable on both sides of actuator.
Suitable for installation with the additional locking device E-LOCK BMS, for easier wiring and sequence operation.
NANO SYNCHRO versions provide also open/close feedback (not free potential).

F-SIGNAL

The NANO SYNCHRO F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit, in addition to the Synchro features.
The free potential feedback is often required to share with third part devices the status of the windows.

BMSline

The NANO BMSline version is fully programmable (stroke length, speed, force, ...) and addressable via the dedicated Modbus RTU communication line for the integration in the Building Management System.
Introducing special features like: real-time feedback, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.
For complete feature description refer to the BMSline section at page 20.

PART No.

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
NANO DC	-	-	1,5 m 2 wires	200mm	41944Z	41945A	41946B
				300mm	41947C	41948D	41949E
				400mm	41950F	41951G	41952H
				500mm	41953I	41954J	41955K
				600mm	41956L	41957M	41958N
				800mm	41959O	41960P	41961Q
NANO DC SYNCHRO	Yes	Open/closed	Not provided. Order separately. Refer to the accessories section.	200mm	41962R	41963S	41964T
				300mm	41965U	41966V	41967W
				400mm	41968X	41969Y	41970Z
				500mm	41971A	41972B	41973C
				600mm	41974D	41975E	41976F
				800mm	41977G	41978H	41979I
NANO DC SYNCHRO F-SIGNAL	Yes	Free potential Open/closed	Not provided. Order separately. Refer to the accessories section.	200mm	41980J	41981K	41982L
				300mm	41983M	41984N	41985O
				400mm	41986P	41987Q	41988R
				500mm	41989S	41990T	41991U
				600mm	41992V	41993W	41994X
				800mm	41995Y	41996Z	41997A
NANO DC SYNCHRO FLEX	Yes	Open/closed	Not provided. Order separately. Refer to the accessories section.	300mm	48226Q	48227R	48228S
				400mm	48221L	48222M	48223N
NANO BMSline	Yes	All features via BUS line	Not provided. Order separately. Refer to the accessories section.	200mm	41998B	41999C	42000D
				300mm	42001E	42002F	42003G
				400mm	42004H	42005I	42006J
				500mm	42007K	42008L	42009M
				600mm	42010N	42011O	42012P
				800mm	42013Q	42014R	42015S

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung roof window.


Bottom hung window.

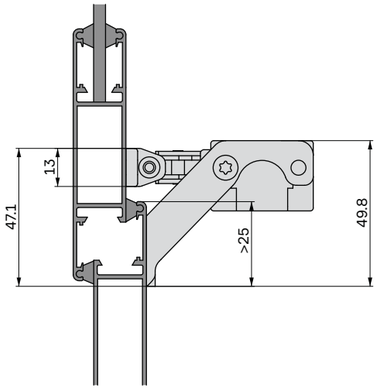

Side hung window.

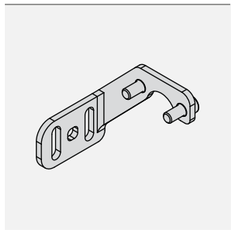

Parallel window.


DRAW BRIDGE. Bottom hung window.

INSTALLATION EXAMPLE 01

With front bracket kit.



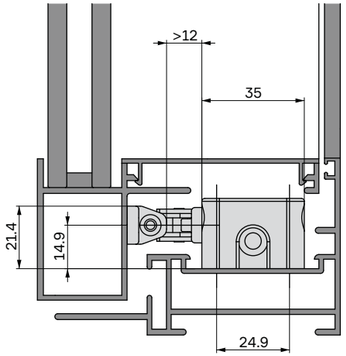


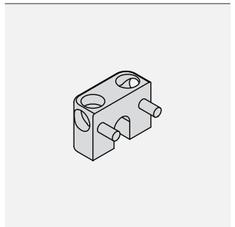
Front bracket kit

GREY RAL 9006	41935Q
BLACK RAL 9005	41936R
WHITE RAL 9010	41937S

INSTALLATION EXAMPLE 02

Integrated into the profile with side bracket kit.



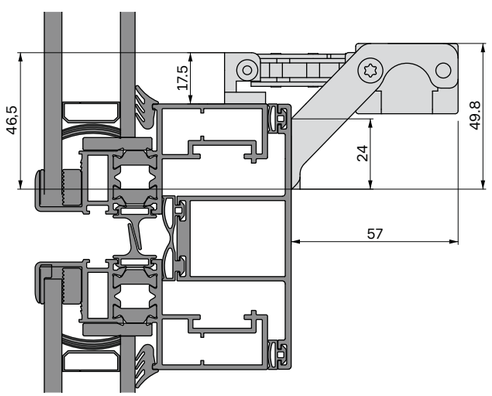


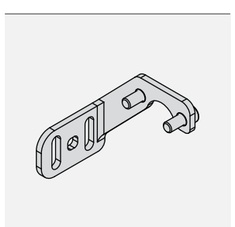
Side bracket kit

GREY RAL 9006	41938T
BLACK RAL 9005	41939U
WHITE RAL 9010	41940V

INSTALLATION EXAMPLE 03

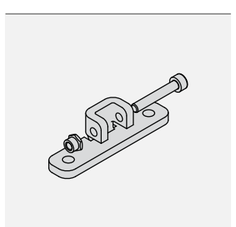
Concealed vent with front bracket kit.





Front bracket kit

GREY RAL 9006	41935Q
BLACK RAL 9005	41936R
WHITE RAL 9010	41937S



Chain connector

STAINLESS STEEL	48143L

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING


Bottom hung window.


Bottom hung window.

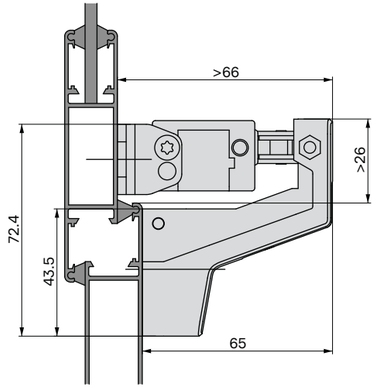

Side hung window.

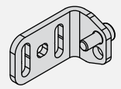

Side hung window.


Bottom hung window.

INSTALLATION EXAMPLE 01

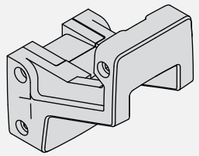
On the frame with Z bracket kit.





Back bracket kit

GREY RAL 9006	41932N
BLACK RAL 9005	41933O
WHITE RAL 9010	41934P

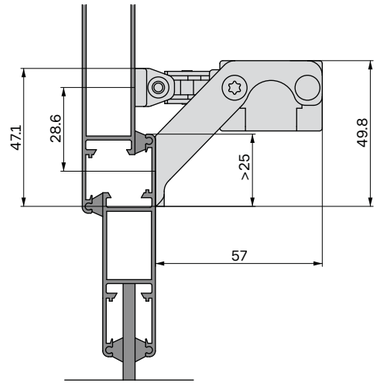


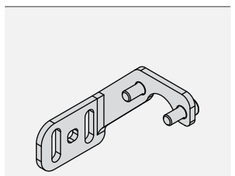
Z aluminium bracket kit

GREY RAL 9006	41941W
BLACK RAL 9005	41942X
WHITE RAL 9010	41943Y

INSTALLATION EXAMPLE 02

On the vent with front bracket kit.



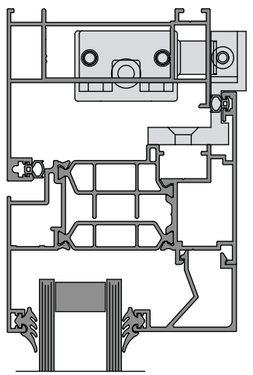


Front bracket kit

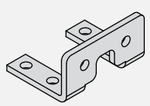
GREY RAL 9006	41935Q
BLACK RAL 9005	41936R
WHITE RAL 9010	41937S

INSTALLATION EXAMPLE 03

Concealed into the frame with customized bracket kit.



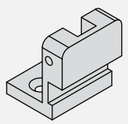
CUSTOMIZED



Side bracket kit

To be designed according to aluminium profile system. Please contact UCS technical department.

CUSTOMIZED



Chain connector kit

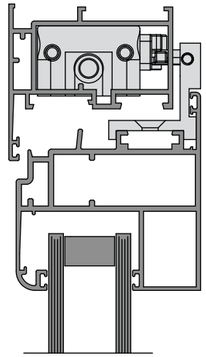
To be designed according to aluminium profile system. Please contact UCS technical department.


FLEX CHAIN. Side hung window.

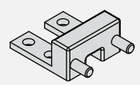

FLEX CHAIN. Bottom hung window.

INSTALLATION EXAMPLE 04

Concealed into the frame with customized bracket kit (wide opening angle).



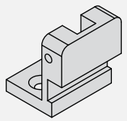
CUSTOMIZED



Side bracket kit

To be designed according to aluminium profile system. Please contact UCS technical department.

CUSTOMIZED

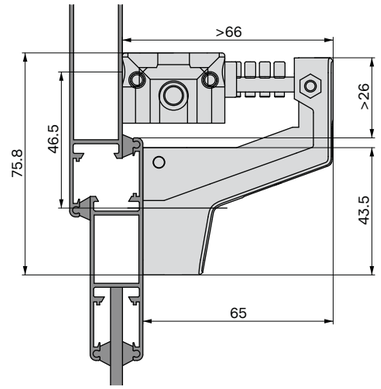


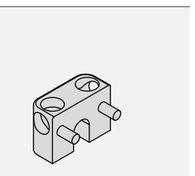
FLEX chain connector kit

To be designed according to aluminium profile system. Please contact UCS technical department.

INSTALLATION EXAMPLE 05

On the frame with Z bracket kit (wide opening angle).

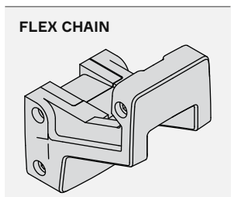




Side bracket kit

GREY RAL 9006	41938T
BLACK RAL 9005	41939U
WHITE RAL 9010	41940V

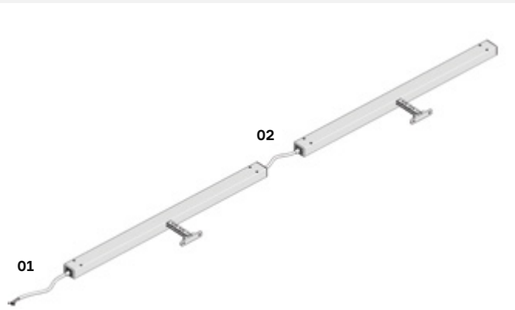
FLEX CHAIN



Z aluminium bracket kit

GREY RAL 9006	48298K
BLACK RAL 9005	48299L
WHITE RAL 9010	48300M

ELECTRICAL CONNECTORS AND CABLES



01

Power supply/Signal

NANO DC SYNCHRO	BLACK	42017U
	WHITE	42016T
NANO DC BMSline	BLACK	48016Q
	WHITE	48015P

02

Power supply/Synchro

NANO DC SYNCHRO	BLACK	42019W
	WHITE	42018V
NANO DC BMSline	BLACK	48019O
	WHITE	48013N

QUASAR

24 Vdc | 120 - 230 Vac

Chain actuator
Force in push action 300 N
Maximum stroke 500 mm

STD

SYNC

F SIGN

BMS

High performance in small die-cast aluminum casing (47 x 32 mm).

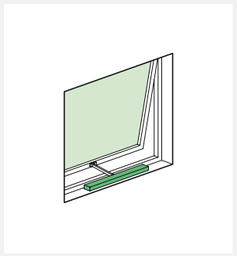
- Chain in double stainless-steel links, exit in central position.
- Electronic stop in the intermediate positions in case of overload.
- The stop in closing position is regulated by an electronic limit switch control.
- Quick and easy installation: the manual closing position regulation is not required.
- Suitable for combined installation with the additional locking device E-LOCK and PLUSULTRA.
- QUASAR versions with IP42 protection class, for a higher resistance against atmospheric agents, available upon request.
- c UL us LISTED and c TÜV us versions for USA and Canada.
- 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

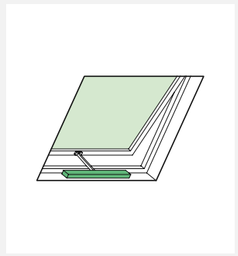
POSSIBLE APPLICATIONS

LEGEND
- Common application
- Special application

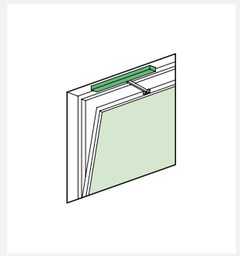
OUTWARD OPENING



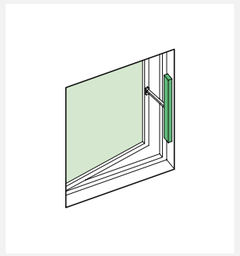
Top hung window.



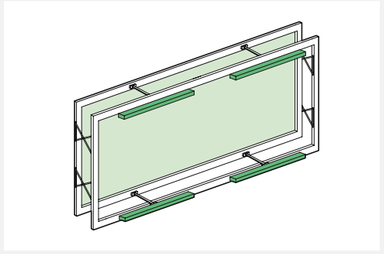
Top hung roof window.



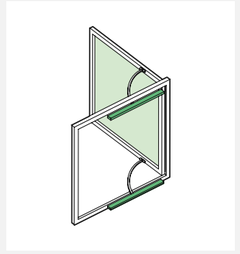
Bottom hung window.



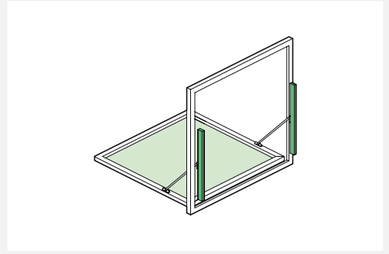
Side hung window.



Parallel window.

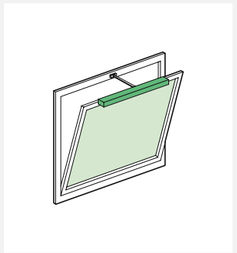


BOW CHAIN. Side hung window.

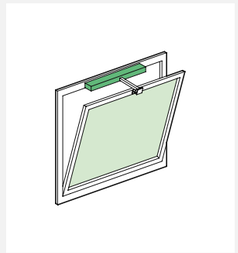


DRAW BRIDGE. Bottom hung window.

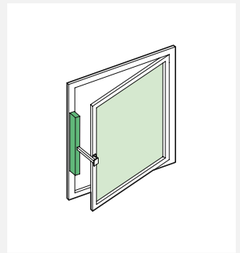
INWARD OPENING



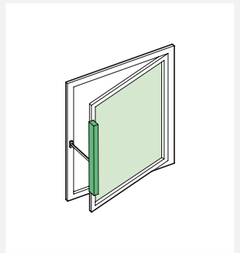
Bottom hung window.



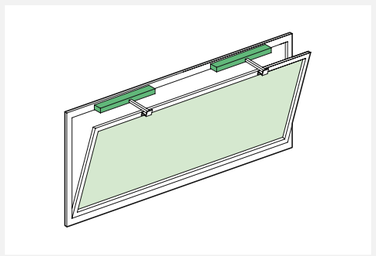
Bottom hung window.



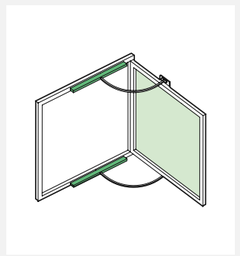
Side hung window.



Side hung window.



Bottom hung window.



BOW CHAIN. Side hung window.

SPECIAL VERSIONS

QUASAR BOW CHAIN

UP TO 90 DEGREES OPENING thanks to a bow chain, allowing a wide opening angle according to the window size.

The need to increase the opening angle of many currently manufactured vents is becoming very important to increase the flow of fresh air for natural ventilation and smoke and heat extraction for life safety.

- Bow chain in double stainless-steel links available up to 500mm.
- Suitable for side hung windows opening inwards or outwards, increasing the opening angle up to 90°.
- The distance of the chain exit from the pivoting hinges must be 340 mm.
- Suitable for installation with the additional locking device E-LOCK, granting a perfect tightness of the windows, even on very high sashes.
- QUASAR BOW CHAIN is available in Synchro version; DC, and BMSline versions upon request.
- Brackets can be customized according to the aluminum profile system.

QUASAR DRAW BRIDGE

Especially for smoke ventilation, wide opening angle represents a big advantage in order to reduce the number of openable windows, according to the required efficiency or geometrical free area. QUASAR DRAW BRIDGE is equipped with a special guide for the chain and can increase the opening angle up to 90°, taking in consideration the window size and weight.

- QUASAR DRAW BRIDGE in double stainless-steel links available up to 500mm.
- QUASAR DRAW BRIDGE can be installed in DRAW BRIDGE configuration on bottom hung windows opening inwards or outwards.
- Suitable for installation with the additional locking device E-LOCK, granting a perfect tightness of the windows, even on very high sashes.
- QUASAR DRAW BRIDGE is available in Synchro version; DC, and BMSline versions upon request
- Brackets can be customized according to the aluminum profile system.

Contact our Technical Department for the installation limits (size and weight of window) and brackets for actuator installation (depending on type of profile).

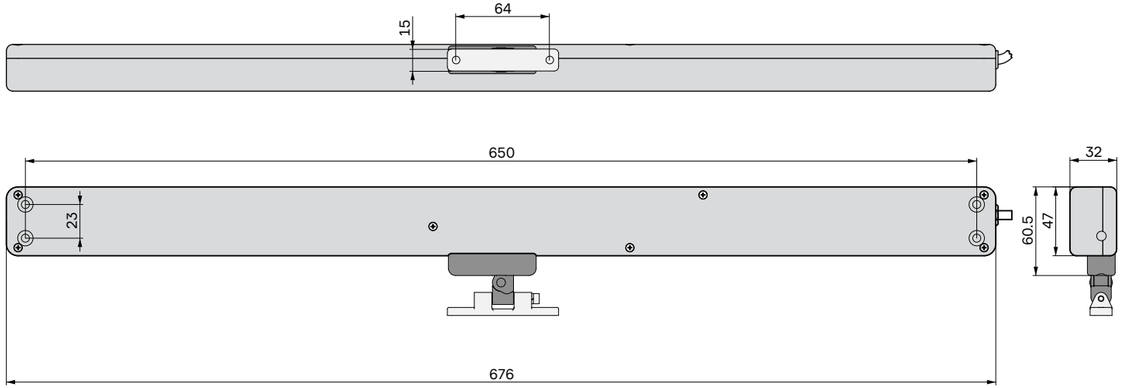
TECHNICAL DATA

VERSION	AC VERSION	DC VERSION	BMSline VERSION
VOLTAGE SUPPLY	120 - 230 Vac	24 Vdc ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,4 A - 0,2 A	0,9 A	0,9 A
OPERATION	OP / COM / CL	polarity inversion	programmable
MAX FORCE (see force/stroke diagram)	300 N	300 N	programmable up to 300 N
OPENING SPEED	≈ 15 mm/s	≈ 15 mm/s	programmable up to 15 mm/s
CLOSING SPEED	≈ 15 mm/s	≈ 15 mm/s	programmable up to 15 mm/s
LOCKING FORCE	3000 N*	3000 N*	3000 N*
DUTY CYCLE	50%	50%	50%
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
PROTECTION CLASS	IP40**	IP40**	IP40**

* Installation without pivoting brackets.
** Version with IP42 protection class available upon request.

DIMENSIONS

Chain connector included.



SYNCHRO

The QUASAR SYNCHRO versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel (max 4 actuators + E-Lock).
Available also in AC version: 1 QUASAR SYNCHRO AC + 1 QUASAR SYNCHRO DC (max 2 couples).

F-SIGNAL

The QUASAR F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit.
The free potential feedback is often required to share with third part devices the status of the windows.

BMSline

The QUASAR BMSline version is fully programmable (stroke length, speed, force, ...) and addressable via the dedicated Modbus RTU communication line for the integration in the Building Management System.
Introducing special features like: real-time feedback, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.
For complete feature description refer to the BMSline section at page 20.

PART No.

AC POWER SUPPLY (100 - 240 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					GREY RAL 9006	BLACK RAL 9005	WHITE RAL 9010
QUASAR AC	-	-	1,5 m 3 wires + earth	500 mm	40837Z	40838A	40839B
QUASAR AC SYNCHRO	Yes	-	2 x 3 m cables: › 3 wires + earth › 5 wires	500 mm	41316I	41317J	41318K

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.		
					GREY RAL 9006	BLACK RAL 9005	WHITE RAL 9010
QUASAR DC	-	-	1,5 m 2 wires	500 mm	40840C	40841D	40842E
QUASAR DC SYNCHRO	Yes	-	3 m 5 wires	500 mm	41119Z	41120A	41121B
QUASAR DC F-SIGNAL	-	Free potential Open/closed	1,5 m 5 wires	500 mm	41327T	41328U	41329V
QUASAR DC SYNCHRO F-SIGNAL	Yes	Free potential Open/closed	2x3m cables: › 5 wires › 3 wires	500 mm	41319L	41320M	41321N
QUASAR DC SYNCHRO BOW CHAIN	Yes	-	3 m 5 wires	510 mm	48081B	48063L	48074W
QUASAR DC SYNCHRO DRAW BRIDGE	Yes	-	3 m 5 wires	500 mm	41928J	41929K	41930L
QUASAR BMSline	Yes	All features via BUS line	Supplied with 2x3 m cables: › 2 wires voltage supply › 2 wires Synchro/E-Lock › 3 wires local switch › 3 wires Modbus RTU › 2 wires smoke ventilation	500 mm	48035J	48036K	48037L

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung window.


Top hung roof window.


Bottom hung window.

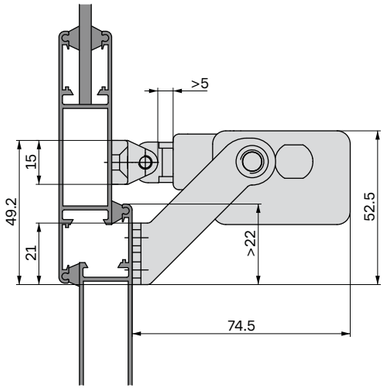

Side hung window.

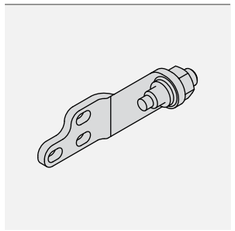

Parallel window.


BOW CHAIN. Side hung window.

INSTALLATION EXAMPLE 01

Front installation with long slim bracket kit.



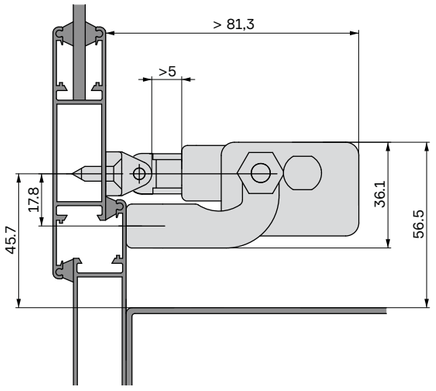


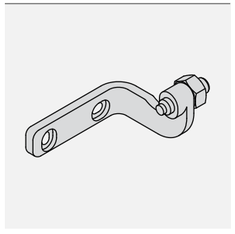
Long slim bracket kit

GREY RAL 9006	41898F
BLACK RAL 9005	41899G
WHITE RAL 9010	41900H

INSTALLATION EXAMPLE 02

With die-cast bracket kit.



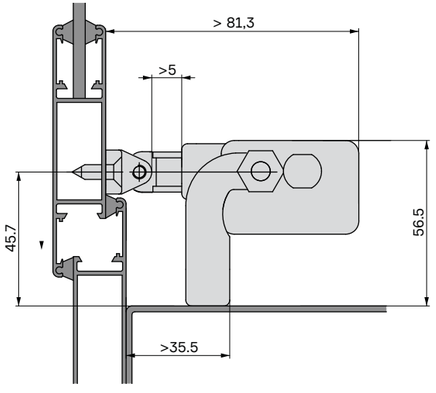


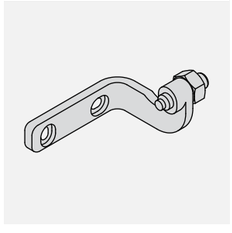
Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

INSTALLATION EXAMPLE 03

With windowsill with die-cast bracket.



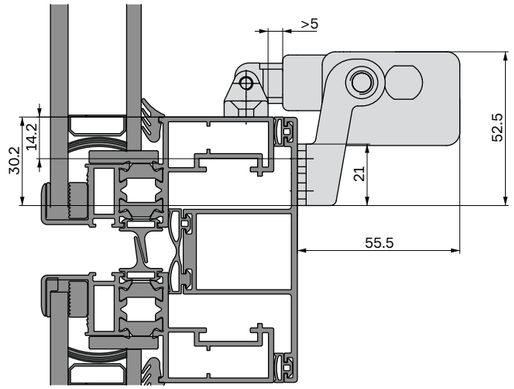


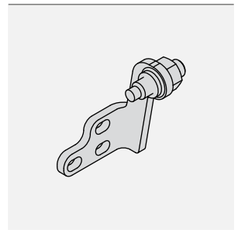
Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

INSTALLATION EXAMPLE 04

Concealed vent with short slim bracket kit.



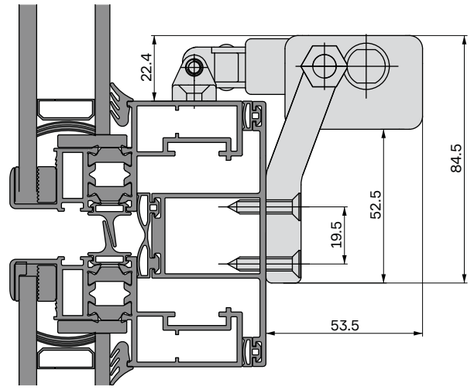


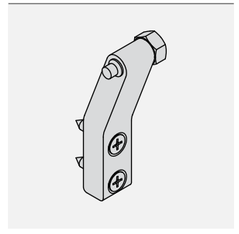
Short slim bracket kit

GREY RAL 9006	41901I
BLACK RAL 9005	41902J
WHITE RAL 9010	41903K

INSTALLATION EXAMPLE 05

Concealed vent with long bracket kit.





Long bracket kit

GREY RAL 9006	40941H
BLACK RAL 9005	40942I
WHITE RAL 9010	40943J

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING

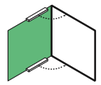

Bottom hung window.


Bottom hung window.


Side hung window.

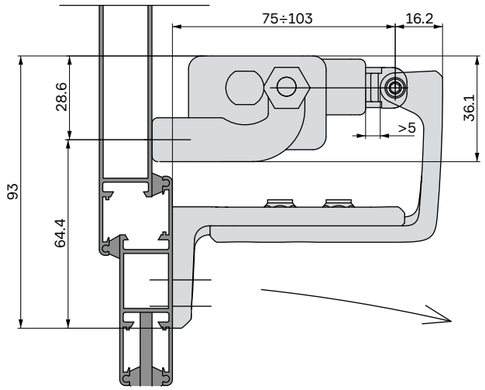

Side hung window.

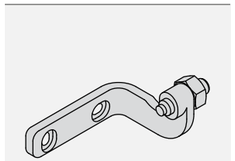

Bottom hung window.


BOW CHAIN. Side hung window.

INSTALLATION EXAMPLE 01

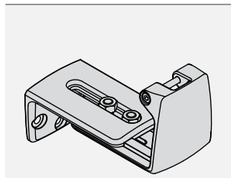
On the frame with adjustable Z bracket.





Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

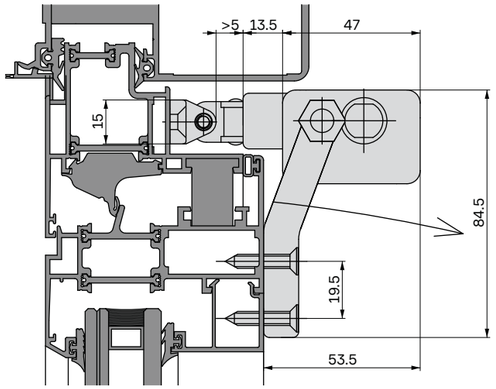


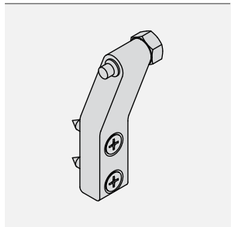
Adjustable Z bracket kit

GREY RAL 9006	41709Z
BLACK RAL 9005	41710A
WHITE RAL 9010	41711B

INSTALLATION EXAMPLE 02

On the vent with long braket kit.





Long bracket kit

GREY RAL 9006	40941H
BLACK RAL 9005	40942I
WHITE RAL 9010	40943J

QUASAR L

24 Vdc | 120 - 230 Vac

Chain actuator
Force in push action up to 300 N
Stroke 600 - 750 - 1000 mm

STD

SYNC

F SIGN

BMS

The solution for wide openings, up to 1000 mm.

- Chain in double stainless-steel links.
- Electronic stop in the intermediate positions in case of overload.
- The stop in closing position is regulated by an electronic limit switch control.
- Quick and easy installation: the manual closing position regulation is not required.
- Suitable for combined installation with the additional locking device E-LOCK and PLUSULTRA.
- Easy replacement of the cable, in case a different/longer cable or a different colour is required; upon request it is possible to supply actuators with cable exit by the opposite side.
- QUASAR L versions with IP42 protection class, for a higher resistance against atmospheric agents, available upon request.
- c UL us LISTED and c TÜV us versions for USA and Canada.
- 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

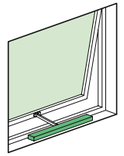
For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

POSSIBLE APPLICATIONS

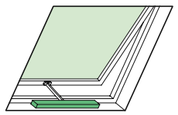
LEGEND

- Common application
- Special application

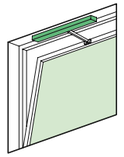
OUTWARD OPENING



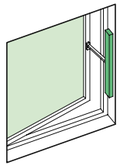
Top hung window.



Top hung roof window.

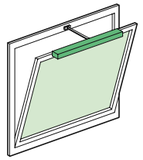


Bottom hung window.

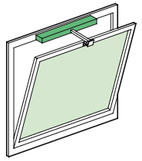


Side hung window.

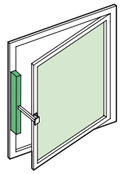
INWARD OPENING



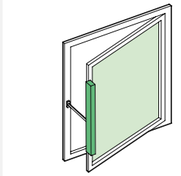
Bottom hung window.



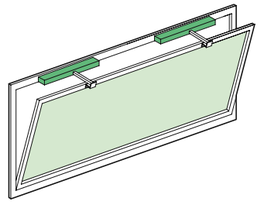
Bottom hung window.



Side hung window.



Side hung window.



Bottom hung window.

TECHNICAL DATA

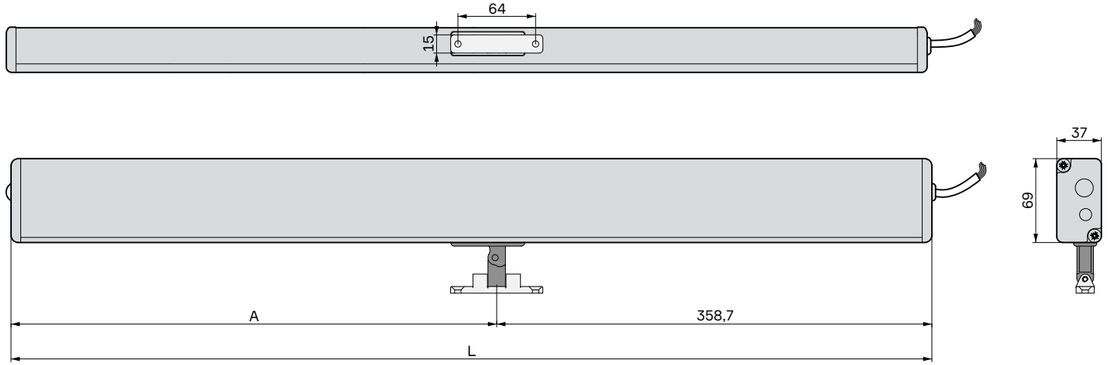
VERSION	AC VERSION	DC VERSION	BMSline VERSION
VOLTAGE SUPPLY	120 - 230 Vac	24 Vdc ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,4 A - 0,2 A	0,9 A	0,9 A
OPERATION	OP / COM / CL	polarity inversion	programmable
MAX FORCE (see force/stroke diagram)	300 N	300 N	programmable up to 300 N
OPENING SPEED	≈ 15 mm/s	≈ 15 mm/s	programmable up to 15 mm/s
CLOSING SPEED	≈ 15 mm/s	≈ 15 mm/s	programmable up to 15 mm/s
LOCKING FORCE	3000 N*	3000 N*	3000 N*
DUTY CYCLE	50%	50%	50%
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
PROTECTION CLASS	IP40**	IP40**	IP40**

* Installation without pivoting brackets.
** Version with IP42 protection class available upon request.

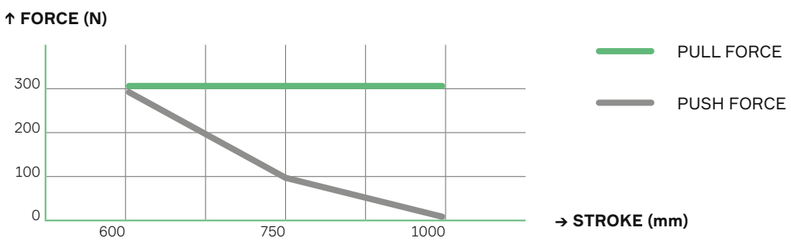
DIMENSIONS

Chain connector included.

STROKE	600	750	1000
A (mm)	400,3	475,3	600,3
L (mm)	759	834	959



STROKE / FORCE DIAGRAM



SYNCHRO

The QUASAR L SYNCHRO versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel (max 4 actuators + E-Lock).
Available also in AC version: 1 QUASAR L SYNCHRO AC + 1 QUASAR L SYNCHRO DC (max 2 couples).

F-SIGNAL

The QUASAR L F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit.
The free potential feedback is often required to share with third part devices the status of the windows.

BMSline

The QUASAR L BMSline version is fully programmable (stroke length, speed, force, ...) and addressable via the dedicated Modbus RTU communication line for the integration in the Building Management System.
Introducing special features like: real-time feedback, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.
For complete feature description refer to the BMSline section at page 20.

PART No.

AC POWER SUPPLY (100 - 240 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
QUASAR L AC	-	-	3 m 3 wires + earth	600 mm 750mm 1000mm	41052C 41055J 41058R	41053E 41056L 41059T	41054G 41057N 41060B
QUASAR L AC SYNCHRO	Yes	-	2 x 3 m cables: › 3 wires + earth › 5 wires	600 mm 750mm 1000mm	41286E 41289H 41292K	41287F 41290I 41293L	41288G 41291J 41294M

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
QUASAR L DC	-	-	3 m 2 wires	600 mm 750mm 1000mm	41061D 41064K 41067S	41062F 41065M 41068U	41063H 41066P 41069W
QUASAR L DC SYNCHRO	Yes	-	3 m 5 wires	600 mm 750mm 1000mm	41189G 41212I 41242M	41190R 41240K 41243N	41191T 41241L 41244O
QUASAR L DC F-SIGNAL	-	Free potential Open/closed	3 m 5 wires	600 mm 750mm 1000mm	41277V 41280Y 41283B	41278W 41281Z 41284C	41279X 41282A 41285D
QUASAR L DC SYNCHRO F-SIGNAL	Yes	Free potential Open/closed	2x3m cables: › 5 wires › 3 wires	600 mm 750mm 1000mm	41295N 41298Q 41307T	41296O 41299R 41302U	41297P 41300S 41303V
QUASAR L BMSline	Yes	All features via BUS line	Supplied with 2x3 m cables: › 2 wires voltage supply › 2 wires Synchro/E-Lock › 3 wires local switch › 3 wires Modbus RTU › 2 wires smoke ventilation	600 mm 750mm 1000mm	41632A 41635D 41638G	41633B 41636E 41639H	41634C 41637F 41640I

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung window.


Top hung roof window.

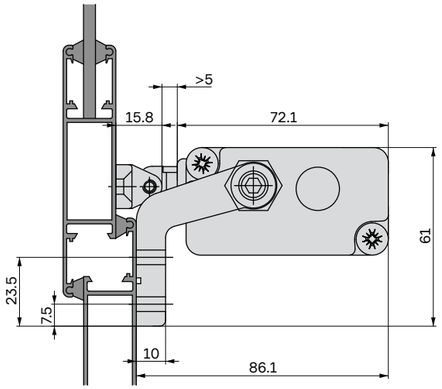

Bottom hung window.

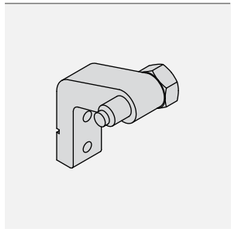

Side hung window.


DRAW BRIDGE. Bottom hung window.

INSTALLATION EXAMPLE 01

On the frame with pivoting bracket.



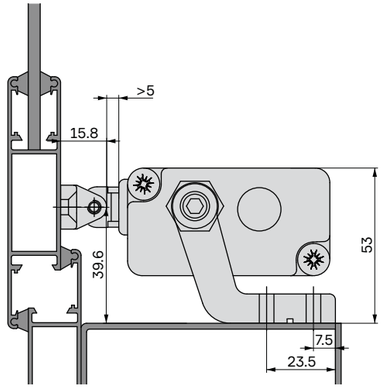


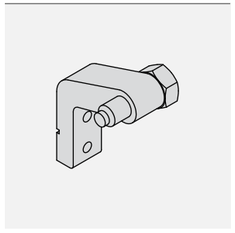
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

INSTALLATION EXAMPLE 02

On windowsill with pivoting bracket.





Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING


Bottom hung window.

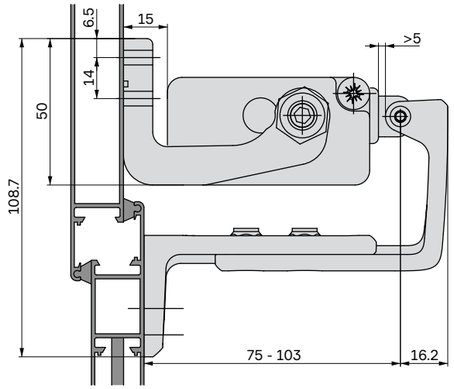

Bottom hung window.

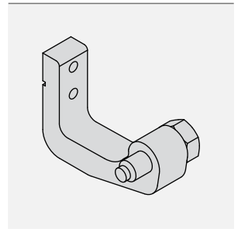

Side hung window.


Side hung window.

INSTALLATION EXAMPLE 01

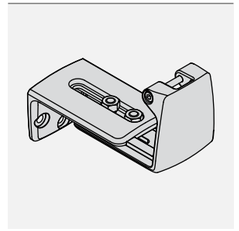
On the frame with Z bracket kit.





"C" pivoting bracket kit

SILVER ANODIZED	41197Z
BLACK RAL 9005	41198A
WHITE RAL 9010	41199B

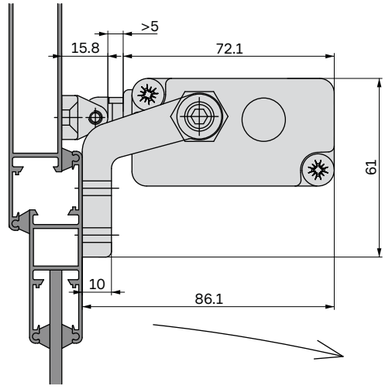


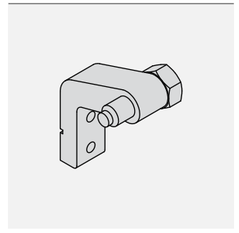
Adjustable Z bracket kit

GREY RAL 9006	41709Z
BLACK RAL 9005	41710A
WHITE RAL 9010	41711B

INSTALLATION EXAMPLE 02

On the vent with bracket kit.





Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

VEGA

24 Vdc | 120 - 230 Vac

Chain actuator
Force in push action 300 N
Maximum stroke 300 mm

STD SYNC F SIGN BMS

High performance in small die-cast aluminum casing (45 x 32 mm).

- Chain in double stainless-steel links, exit in central position.
- Electronic stop in the intermediate positions in case of overload.
- The stop in closing position is regulated by an electronic limit switch control.
- Quick and easy installation: the manual closing position regulation is not required.
- Suitable for combined installation with the additional locking device E-LOCK and PLUSULTRA.
- VEGA versions with IP42 protection class, for a higher resistance against atmospheric agents, available upon request.
- c UL us LISTED and c RU us versions for USA and Canada.
- 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

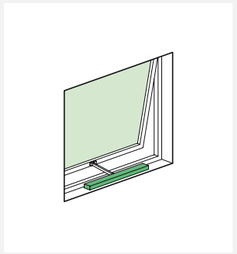
For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

POSSIBLE APPLICATIONS

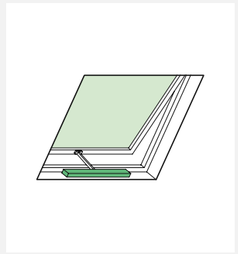
LEGEND

- Common application
- Special application

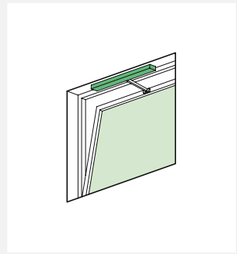
OUTWARD OPENING



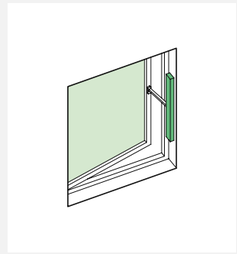
Top hung window.



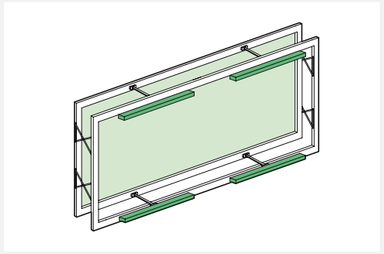
Top hung roof window.



Bottom hung window.

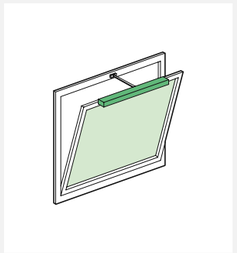


Side hung window.

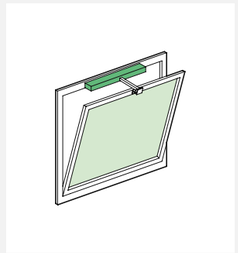


Parallel window.

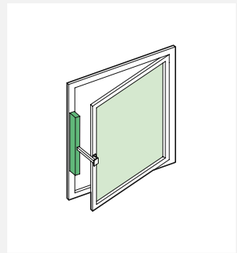
INWARD OPENING



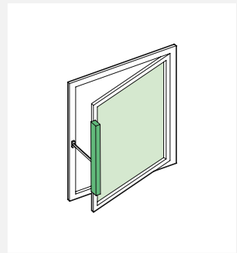
Bottom hung window.



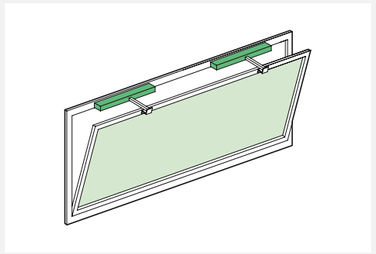
Bottom hung window.



Side hung window.



Side hung window.



Bottom hung window.

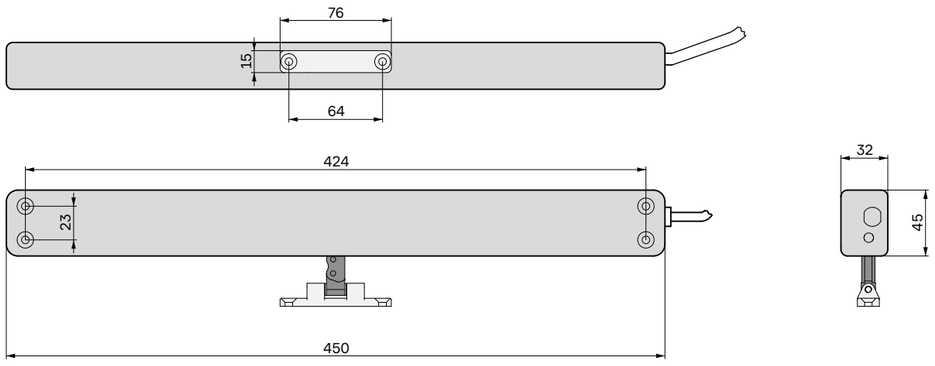
TECHNICAL DATA

VERSION	AC VERSION	DC VERSION	BMSline VERSION
VOLTAGE SUPPLY	120 - 230 Vac	24 Vdc ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,3 A - 0,15 A	0,7 A	0,7 A
OPERATION	OP / COM / CL	polarity inversion	programmable
MAX FORCE (see force/stroke diagram)	300 N	300 N	programmable up to 300 N
OPENING SPEED	≈ 9 mm/s	≈ 9 mm/s	programmable up to 9 mm/s
CLOSING SPEED	≈ 9 mm/s	≈ 9 mm/s	programmable up to 9 mm/s
LOCKING FORCE	2500 N*	2500 N*	2500 N*
DUTY CYCLE	50%	50%	50%
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
PROTECTION CLASS	IP30	IP30	IP30

* Installation without pivoting brackets.

DIMENSIONS

Chain connector included.



SYNCHRO

The VEGA SYNCHRO versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel (max 4 actuators + E-Lock).

F-SIGNAL

The VEGA F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit.
The free potential feedback is often required to share with third part devices the status of the windows.

BMSline

The VEGA BMSline version is fully programmable (stroke length, speed, force, ...) and addressable via the dedicated Modbus RTU communication line for the integration in the Building Management System.
Introducing special features like: real-time feedback, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.
For complete feature description refer to the BMSline section at page 20.

PART No.

AC POWER SUPPLY (100 - 240 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.		
					GREY RAL 9006	BLACK RAL 9005	WHITE RAL 9010
VEGA AC	-	-	1,5 m 3 wires + earth	300 mm	40900K	40901L	40902M

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.		
					GREY RAL 9006	BLACK RAL 9005	WHITE RAL 9010
VEGA DC	-	-	1,5 m 2 wires	300 mm	40903N	40904O	40905P
VEGA DC SYNCHRO	Yes	-	3 m 5 wires	300 mm	41122C	41123D	41124E
VEGA DC F-SIGNAL	-	Free potential Open/Closed	1,5 m 5 wires	300 mm	41304W	41305X	41306Y
VEGA DC SYNCHRO F-SIGNAL	Yes	Free potential Open/Closed	2x3m cables: › 5 wires › 3 wires	300 mm	41307Z	41308A	41309B
VEGA BMSline	Yes	All features via BUS line	Supplied with 2x3 m cables: › 2 wires voltage supply › 2 wires Synchro/E-Lock › 3 wires local switch › 3 wires Modbus RTU › 2 wires smoke ventilation	300 mm	41579Z	41580A	41581B

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung window.


Top hung roof window.

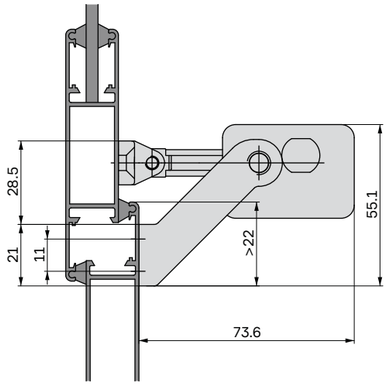

Bottom hung window.

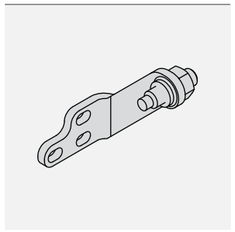

Side hung window.


Parallel window.

INSTALLATION EXAMPLE 01

With long slim bracket kit.



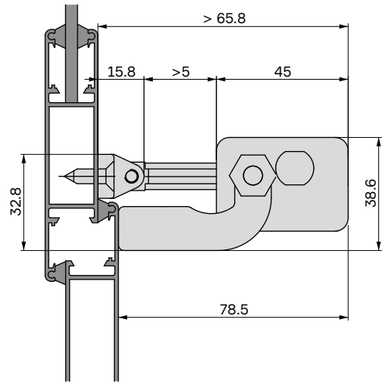


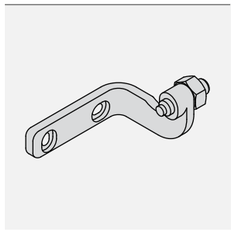
Long slim bracket kit

GREY RAL 9006	41898F
BLACK RAL 9005	41899G
WHITE RAL 9010	41900H

INSTALLATION EXAMPLE 02

With die-cast bracket kit.



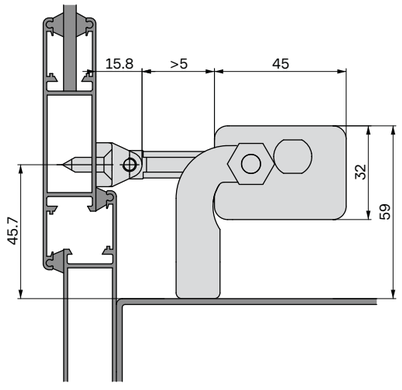


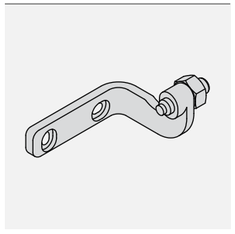
Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

INSTALLATION EXAMPLE 03

With windowsill with die-cast bracket.



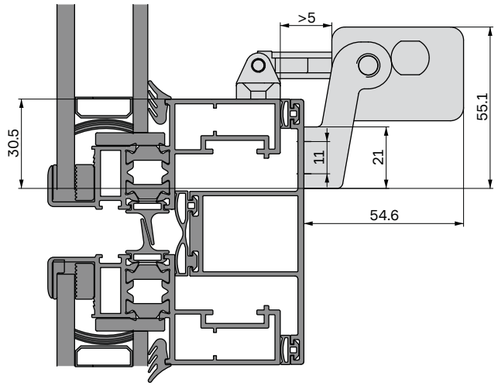


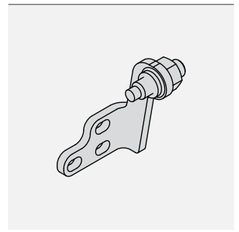
Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

INSTALLATION EXAMPLE 04

Concealed vent with short slim bracket kit.



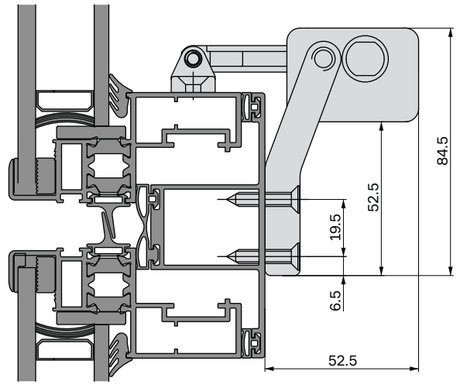


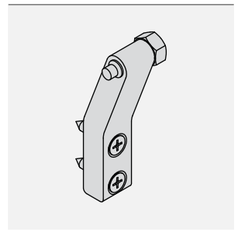
Short slim bracket kit

GREY RAL 9006	41901I
BLACK RAL 9005	41902J
WHITE RAL 9010	41903K

INSTALLATION EXAMPLE 05

Concealed vent with long bracket kit.





Long bracket kit

GREY RAL 9006	40941H
BLACK RAL 9005	40942I
WHITE RAL 9010	40943J

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING


Bottom hung window.


Bottom hung window.

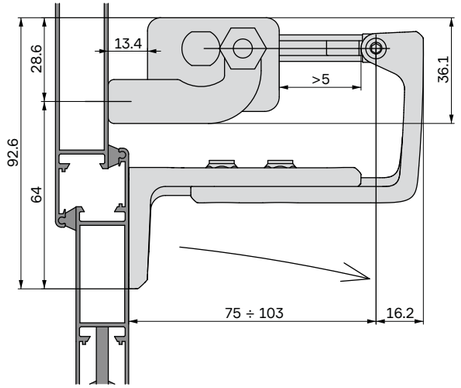

Side hung window.

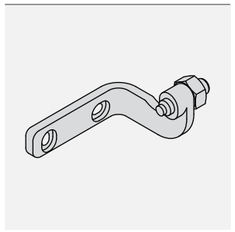

Side hung window.


Bottom hung window.

INSTALLATION EXAMPLE 01

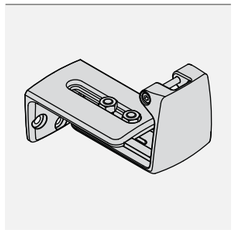
On the frame with adjustable Z bracket.





Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

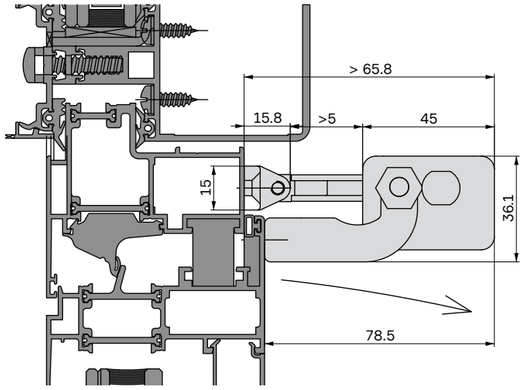


Adjustable Z bracket kit

GREY RAL 9006	41709Z
BLACK RAL 9005	41710A
WHITE RAL 9010	41711B

INSTALLATION EXAMPLE 02

On the vent with die-cast braket kit.

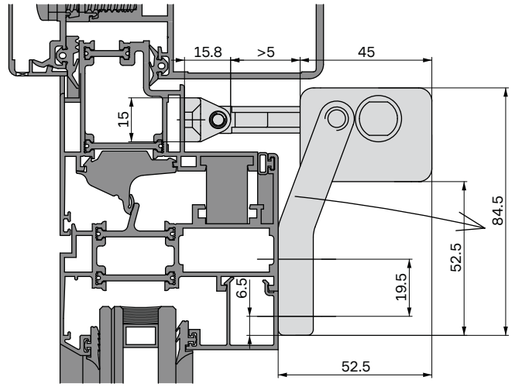


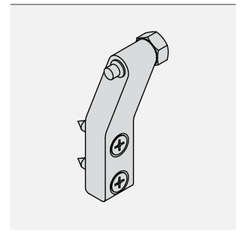
Die-cast bracket kit

GREY RAL 9006	40843F
BLACK RAL 9005	40844G
WHITE RAL 9010	40845H

INSTALLATION EXAMPLE 03

On the vent with long bracket kit.



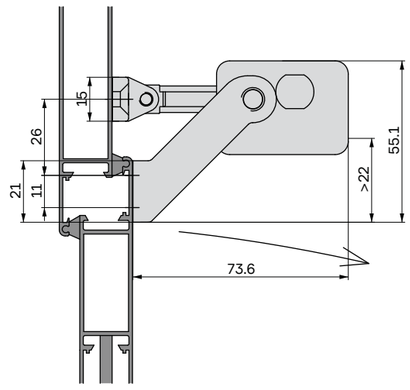


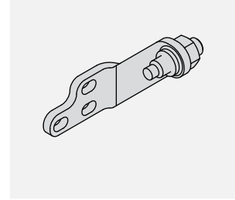
Long bracket kit

GREY RAL 9006	40941H
BLACK RAL 9005	40942I
WHITE RAL 9010	40943J

INSTALLATION EXAMPLE 04

On the vent with long slim bracket kit.





Long slim bracket kit

GREY RAL 9006	41898F
BLACK RAL 9005	41899G
WHITE RAL 9010	41900H

TWIN QUASAR / TWIN VEGA

24 Vdc | 120 - 230 Vac

Two-Chains actuator

TWIN QUASAR
Force in push action 600 N
Maximum stroke 500 mm

TWIN VEGA
Force in push action 600 N
Maximum stroke 300 mm

STD

F SIGN

BMS

The strongest Chain actuator: 600 N.

- Chains in double stainless-steel links.
- Electronic stop in the intermediate positions in case of overload.
- The stop in closing position is regulated by an electronic limit switch control.
- Quick and easy installation: the manual closing position regulation is not required.
- Suitable for combined installation with the additional locking device E-LOCK.
- Versions with IP42 protection class, for a higher resistance against atmospheric agents, available upon request.
- c UL us LISTED and c UL us versions for USA and Canada.
- 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

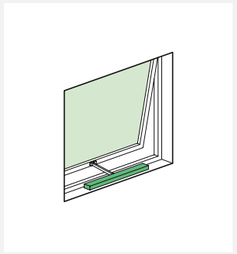
For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

POSSIBLE APPLICATIONS

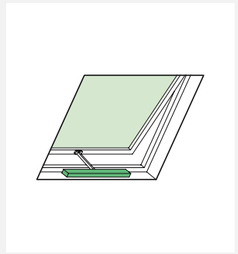
LEGEND

- Common application
- Special application

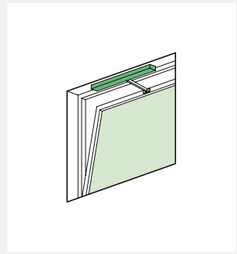
OUTWARD OPENING



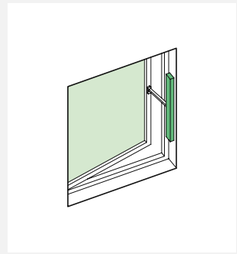
Top hung window.



Top hung roof window.

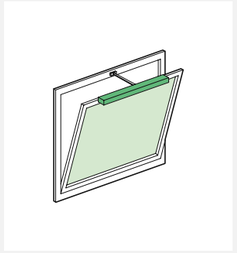


Bottom hung window.

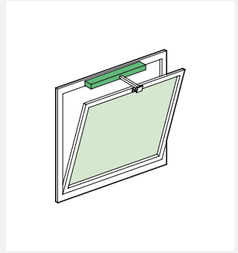


Side hung window.

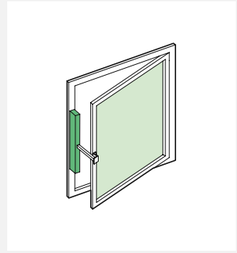
INWARD OPENING



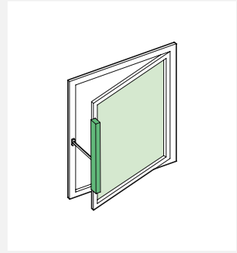
Bottom hung window.



Bottom hung window.



Side hung window.



Side hung window.

TECHNICAL DATA

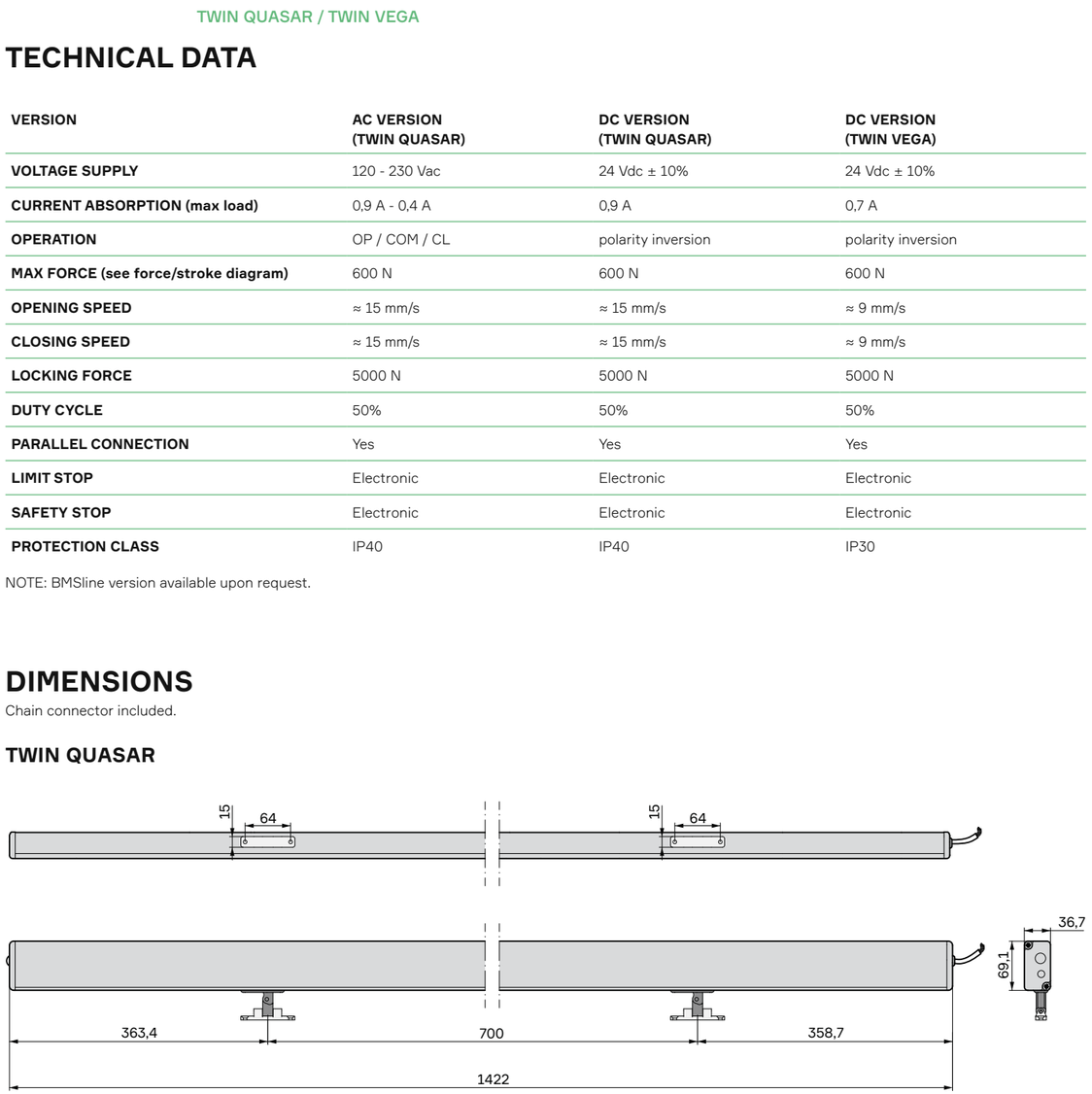
VERSION	AC VERSION (TWIN QUASAR)	DC VERSION (TWIN QUASAR)	DC VERSION (TWIN VEGA)
VOLTAGE SUPPLY	120 - 230 Vac	24 Vdc ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,9 A - 0,4 A	0,9 A	0,7 A
OPERATION	OP / COM / CL	polarity inversion	polarity inversion
MAX FORCE (see force/stroke diagram)	600 N	600 N	600 N
OPENING SPEED	≈ 15 mm/s	≈ 15 mm/s	≈ 9 mm/s
CLOSING SPEED	≈ 15 mm/s	≈ 15 mm/s	≈ 9 mm/s
LOCKING FORCE	5000 N	5000 N	5000 N
DUTY CYCLE	50%	50%	50%
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
PROTECTION CLASS	IP40	IP40	IP30

NOTE: BMSline version available upon request.

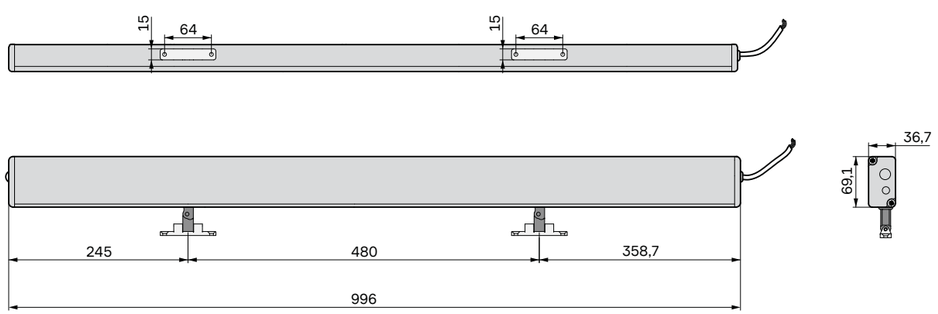
DIMENSIONS

Chain connector included.

TWIN QUASAR



TWIN VEGA



F-SIGNAL

The F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit.
The free potential feedback is often required to share with third part devices the status of the window.

BMSline

The BMSline version is fully programmable (stroke length, speed, force, ...) and addressable via the dedicated Modbus RTU communication line for the integration in the Building Management System.
Introducing special features like: real-time feedback, entrapment risk reduction, statistics, override of local push button by BMS, quite operation for Natural Ventilation and full speed for Smoke Ventilation.
For complete feature description refer to the BMSline section at page 20.

PART No.

AC POWER SUPPLY

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
TWIN QUASAR AC	-	-	3 m 3 wires + earth	500 mm	40989D	40990E	40991F

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
TWIN QUASAR DC	-	-	3 m 2 wires	500 mm	40992G	40993H	40994I
TWIN QUASAR DC F-SIGNAL	-	Free potential Open/closed	3 m 5 wires	500 mm	41310C	41311D	41312E
TWIN VEGA DC	-	-	3 m 2 wires	300 mm	41245P	41246Q	41247R

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung window.

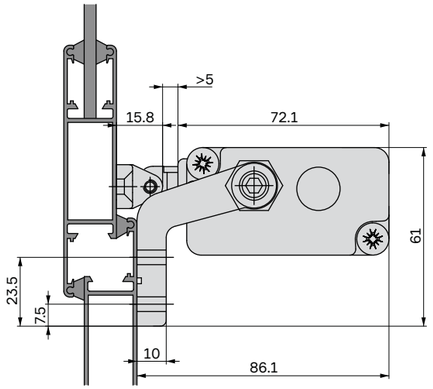

Top hung roof window.

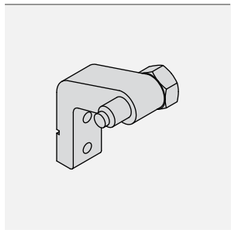

Bottom hung window.


Side hung window.

INSTALLATION EXAMPLE 01

TWIN QUASAR on the frame with pivoting bracket.



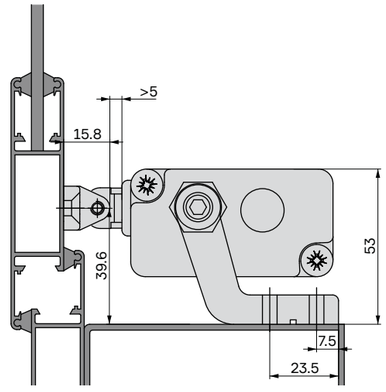


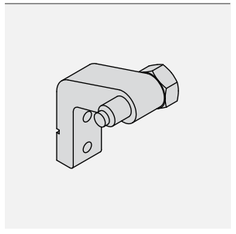
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

INSTALLATION EXAMPLE 02

TWIN QUASAR on windowsill with pivoting bracket.



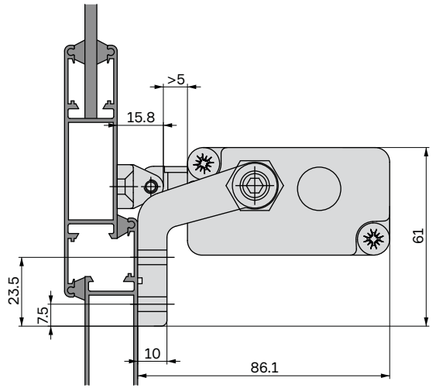


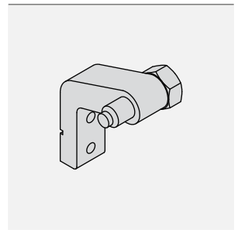
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

INSTALLATION EXAMPLE 03

TWIN VEGA on the frame with pivoting bracket.



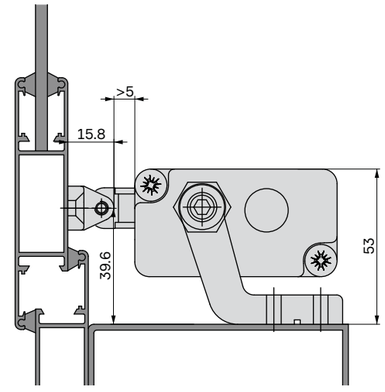


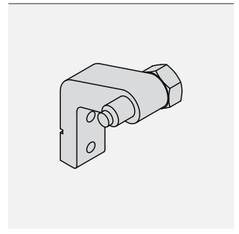
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

INSTALLATION EXAMPLE 04

TWIN VEGA on windowsill with pivoting bracket.





Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING


Bottom hung window.

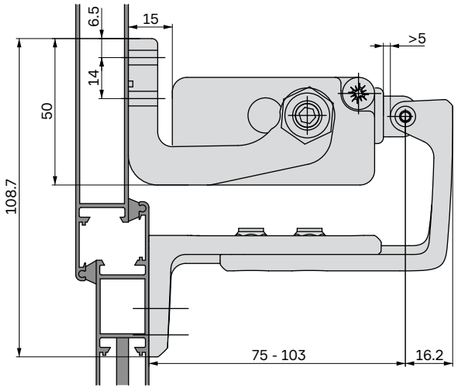

Bottom hung window.

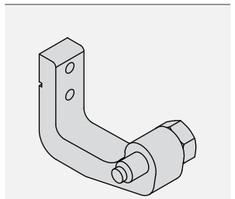

Side hung window.


Side hung window.

INSTALLATION EXAMPLE 01

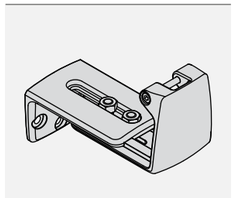
TWIN QUASAR on the frame with Z bracket kit.





"C" pivoting bracket kit

SILVER ANODIZED	41197Z
BLACK RAL 9005	41198A
WHITE RAL 9010	41199B

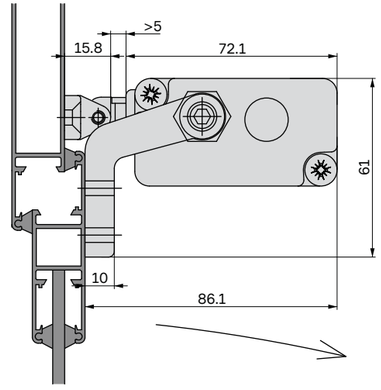


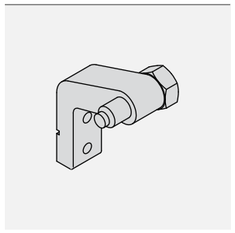
Adjustable Z bracket kit

GREY RAL 9006	41709Z
BLACK RAL 9005	41710A
WHITE RAL 9010	41711B

INSTALLATION EXAMPLE 02

TWIN QUASAR on the vent with bracket kit.



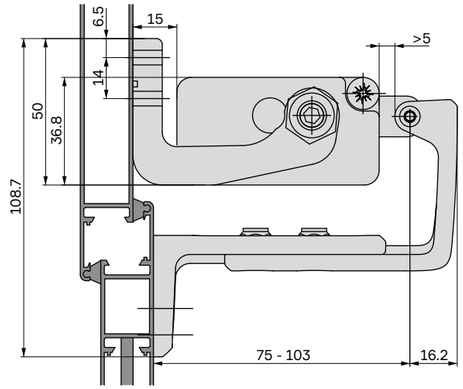


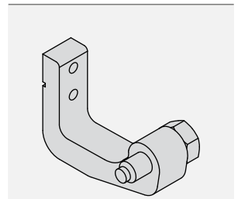
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

INSTALLATION EXAMPLE 03

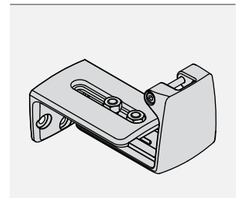
TWIN VEGA on the frame with Z bracket kit.





"C" pivoting bracket kit

SILVER ANODIZED	41197Z
BLACK RAL 9005	41198A
WHITE RAL 9010	41199B

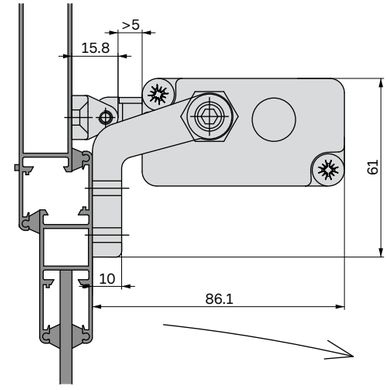


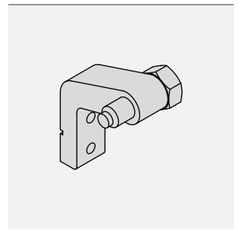
Adjustable Z bracket kit

GREY RAL 9006	41709Z
BLACK RAL 9005	41710A
WHITE RAL 9010	41711B

INSTALLATION EXAMPLE 04

TWIN VEGA on the vent with bracket kit.





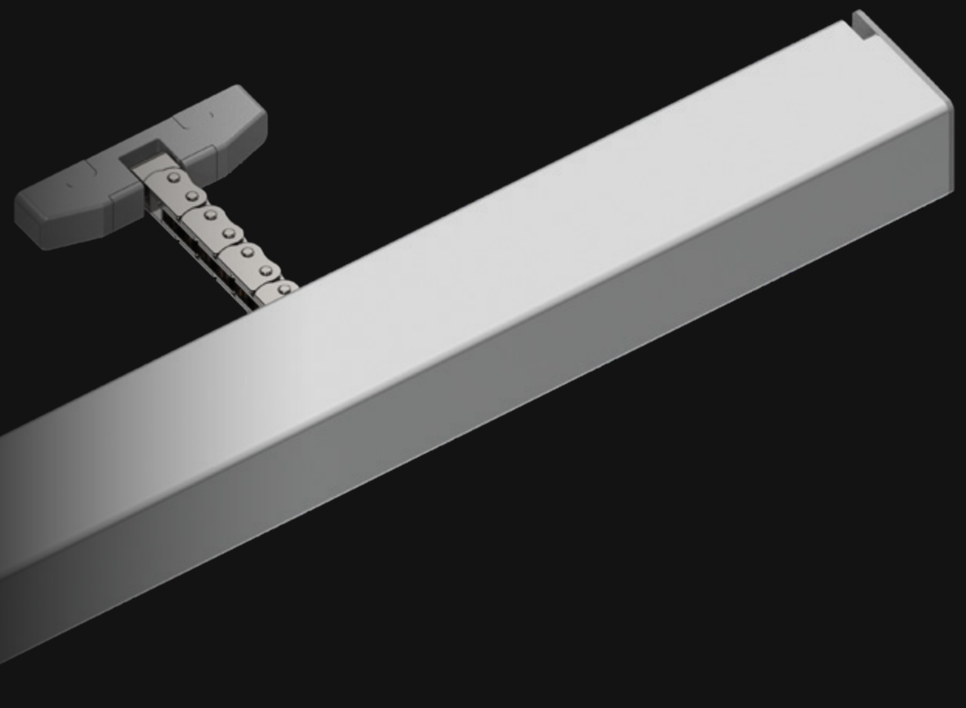
Pivoting bracket kit

SILVER ANODIZED	41906N
BLACK RAL 9005	41907O
WHITE RAL 9010	41908P

SIRIUS

24 Vdc | 230 Vac

Chain actuator
Force in push and pull action 300 N
Selectable stroke 130 - 200 - 300 - 400 mm



STD

SYNC

The New Star in the UCS constellation.

- The new slim actuator for Natural Ventilation, with aluminum case cover and invisible brackets.
- Double link chain for 300 N force.
- Chain exit in central position.
- Selectable strokes through dip-switches: 130 mm, 200 mm, 300 mm, 400 mm.
- Exclusive system for quick and easy installation:
  - Invisible actuator brackets: the brackets slide into the slots on the actuators, locked by side covers without screws.
  - The chain terminal placed into the slot on the slim sash connector is locked by a clip cover without screws. Quick release for an easy window cleaning.
- The manual closing position regulation is not required: stop in closing position is regulated by an electronic limit switch control.
- Electronic stop in the intermediate positions in case of overload.
- Double electric insulation actuator (no electric connection to earth is needed).

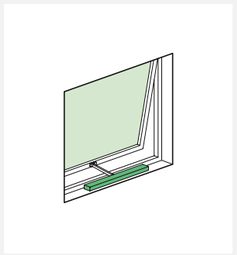
For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

POSSIBLE APPLICATIONS

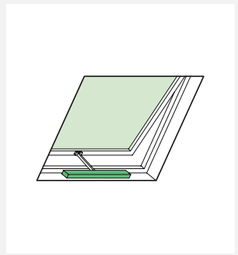
LEGEND

- Common application
- Special application

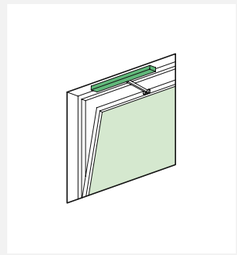
OUTWARD OPENING



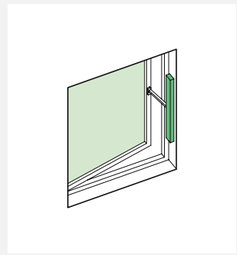
Top hung window.



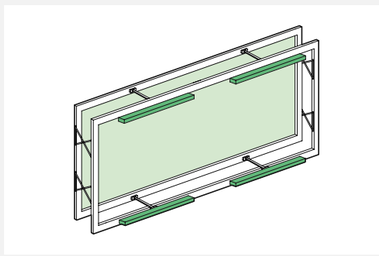
Top hung roof window.



Bottom hung window.

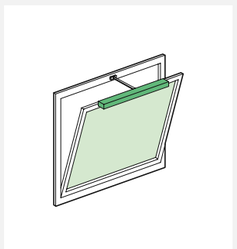


Side hung window.

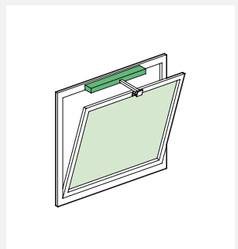


Parallel window.

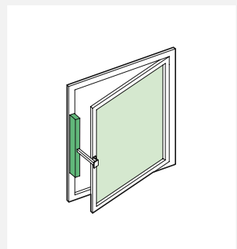
INWARD OPENING



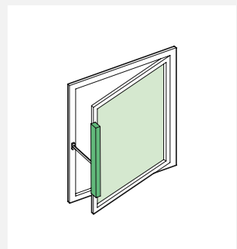
Bottom hung window.



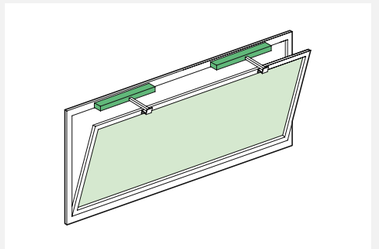
Bottom hung window.



Side hung window.



Side hung window.



Bottom hung window.

SIGNATURE FEATURES

INTERCHANGEABLE AND CUSTOMIZABLE ALUMINUM COVER

Sirius Chain actuators are supplied with an aluminum case cover that can be easily removed and painted (or customized) according to the final customer requirements. Aluminum case covers are also available as spare part/accessory; UCS distributors can offer a wide range of color/customization options.

INVISIBLE ACTUATOR BRACKETS, INSTALLATION WITHOUT SCREWS/TOOLS

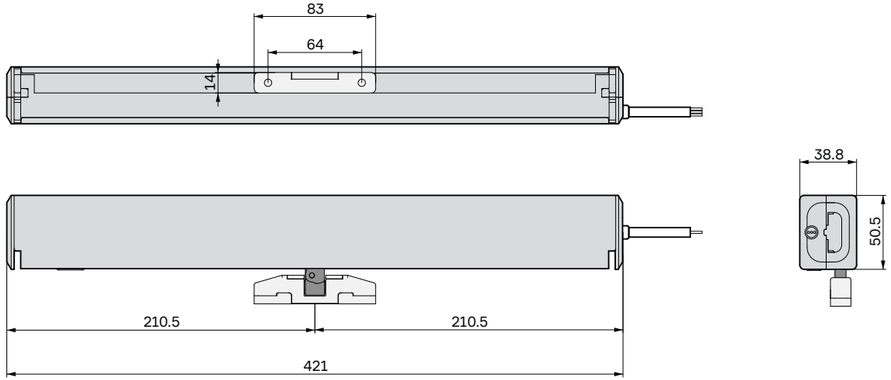
QUICK RELEASE CHAIN CONNECTOR, INSTALLATION WITHOUT SCREWS/TOOLS

TECHNICAL DATA

VERSION	AC VERSION	DC VERSION
VOLTAGE SUPPLY	230 Vac ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,14 A	0,8 A
OPERATION	OP / COM / CL	polarity inversion
MAX FORCE (see force/stroke diagram)	300 N	300 N
OPENING SPEED	≈ 7 mm/s	≈ 7 mm/s
CLOSING SPEED	≈ 7 mm/s	≈ 7 mm/s
LOCKING FORCE	1200 N	1200 N
DUTY CYCLE	30%	30%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Electronic	Electronic
SAFETY STOP	Electronic	Electronic
PROTECTION CLASS	IP40	IP40

DIMENSIONS

Chain connector included.



SYNCHRO

The SIRIUS SYNCHRO versions are equipped with an integrated speed synchronization control board for the installation of more than one actuator on the same vent, avoiding any external control panel (max 4 actuators + E-Lock).
Available also in AC version.

PART No.

AC POWER SUPPLY (230 Vac)

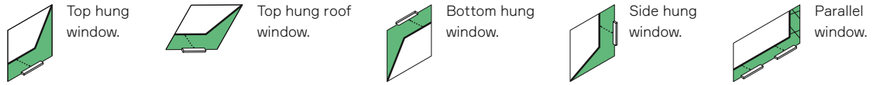
MODEL	SYNCHRO	COVER	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
SIRIUS AC	-	Included Outward opening	1,5 m 3 wires + earth	Selectable: 130/200/ 300/400 mm	48246K	48247L	48248M
	-	Included Inward opening	1,5 m 3 wires + earth	Selectable: 130/200/ 300/400 mm	48249N	48250O	48251P
	-	Not included	1,5 m 3 wires + earth	Selectable: 130/200/ 300/400 mm	48243H	48244I	48245J
SIRIUS AC SYNCHRO	Yes	Included Outward opening	1 x 2,90 m cable 5 wires + earth	Selectable: 130/200/ 300/400 mm	48255T	48256U	48257V
	Yes	Included Inward opening	1 x 2,90 m cable 5 wires + earth	Selectable: 130/200/ 300/400 mm	48258W	48259X	48260Y
	Yes	Not included	1 x 2,90 m cable 5 wires + earth	Selectable: 130/200/ 300/400 mm	48252Q	48253R	48254S

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	COVER	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
SIRIUS DC	-	Included Outward opening	1,5 m 2 wires	Selectable: 130/200/ 300/400 mm	48264C	48265D	48266E
	-	Included Inward opening	1,5 m 2 wires	Selectable: 130/200/ 300/400 mm	48267F	48268G	48269H
	-	Not included	1,5 m 2 wires	Selectable: 130/200/ 300/400 mm	48261Z	48262A	48263B
SIRIUS DC SYNCHRO	Yes	Included Outward opening	2,90 m 4 wires	Selectable: 130/200/ 300/400 mm	48273L	48274M	48275N
	Yes	Included Inward opening	2,90 m 4 wires	Selectable: 130/200/ 300/400 mm	48276O	48277P	48278Q
	Yes	Not included	2,90 m 4 wires	Selectable: 130/200/ 300/400 mm	48270I	48271J	48272K

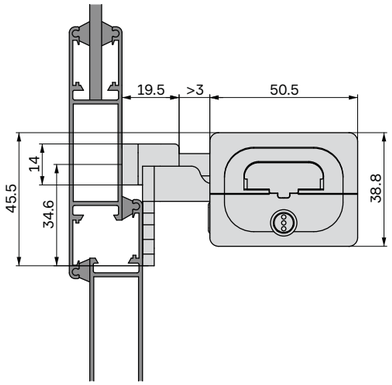
POSSIBLE APPLICATIONS & ACCESSORIES

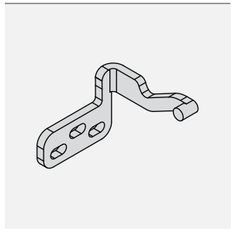
OUTWARD OPENING



INSTALLATION EXAMPLE 01

On the frame with pivoting bracket.



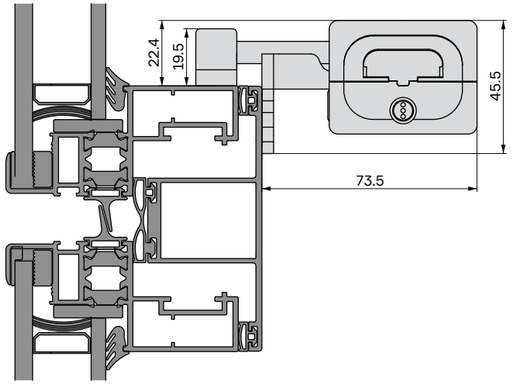


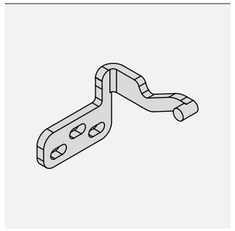
Pivoting bracket kit

INCLUDED

INSTALLATION EXAMPLE 02

Concealed vent with pivoting bracket.



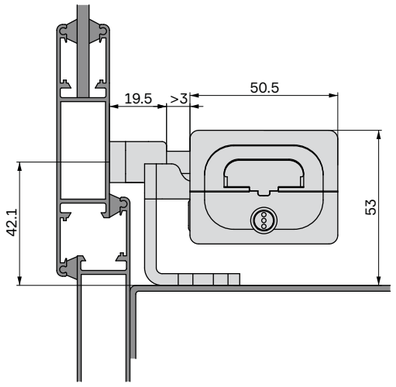


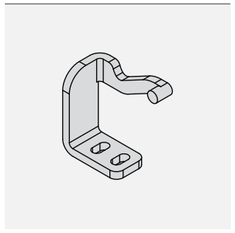
Pivoting bracket kit

INCLUDED

INSTALLATION EXAMPLE 03

On the windowsill with L pivoting bracket.





L pivoting bracket kit

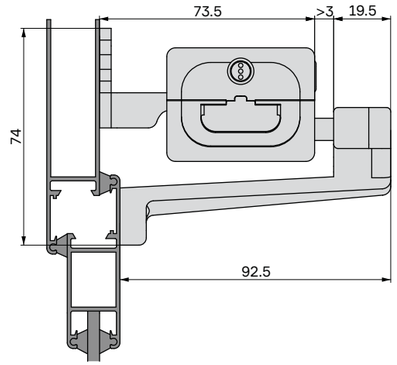
STAINLESS STEEL	48285X

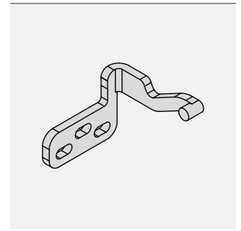
POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING

INSTALLATION EXAMPLE 01

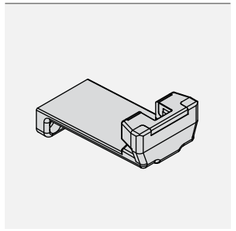
On the frame with Z bracket kit and pivoting brackets.





Pivoting bracket kit

INCLUDED

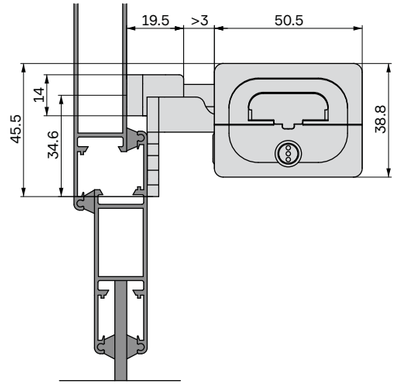


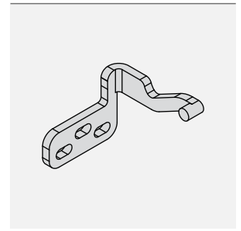
Z bracket kit

GREY	48287Z
BLACK	48288A
WHITE	48289B

INSTALLATION EXAMPLE 02

On the vent with pivoting bracket kit.

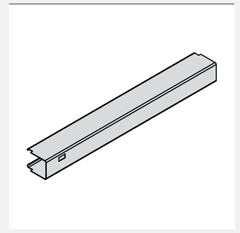




Pivoting bracket kit

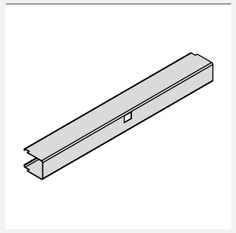
INCLUDED

ACCESSORIES



Cover for outward opening

SILVER ANODIZED	48279R
BLACK RAL 9005	48281T
WHITE RAL 9010	48280S



Cover for inward opening

SILVER ANODIZED	48282U
BLACK RAL 9005	48284W
WHITE RAL 9010	48283V

SINTESI 2000

230 Vac

Chain actuator
Force in pull action 300 N
Stroke 250 - 380 mm

STD

A timeless classic.

- Selectable strokes: 250 mm or 380 mm.
- Three dovetail slides for an easy installation; the sliding fixing bracket is included in the package.
- Special removable plug for very quick electrical connection and stroke selection. Convenient for the final test of actuators on the building site.
- For installation on top hinged windows select the 250 mm stroke for better resistance to the wind load.
- Minimum window height: 500 mm with 250 mm stroke, 800 mm with 380 mm stroke.
- Adjustment of closing position through tie-rod. A longer version is available on request in case of wooden or PVC windows.
- For installation of two SINTESI 2000 on the same vent it is available the Coupling Control Unit CP230, part No. 41089V.

  (See CONTROL ACCESSORIES section).

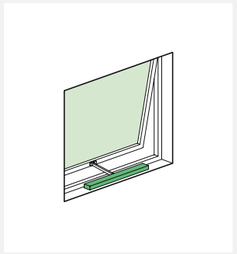
For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

POSSIBLE APPLICATIONS

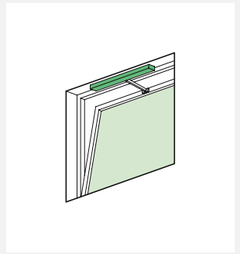
LEGEND

- Common application
- Special application

OUTWARD OPENING

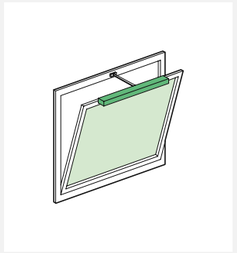


Top hung window.

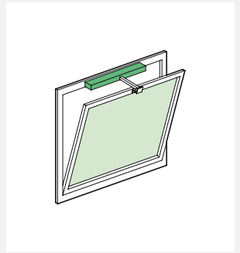


Bottom hung window.

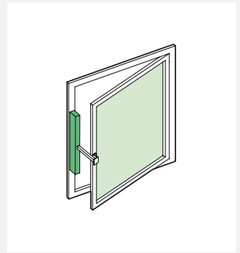
INWARD OPENING



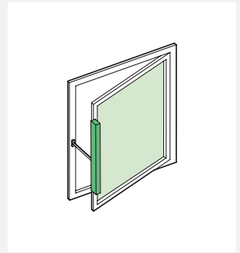
Bottom hung window.



Bottom hung window.



Side hung window.



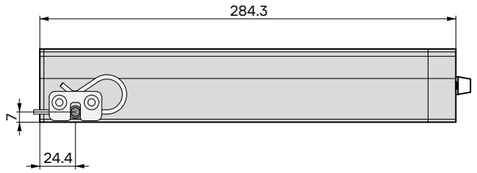
Side hung window.

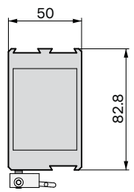
TECHNICAL DATA

VERSION	AC VERSION
VOLTAGE SUPPLY	230 Vac
CURRENT ABSORPTION (max load)	0,65 A
OPERATION	OP / COM / CL
MAX PUSH FORCE (see force/stroke diagram)	180 N (stroke 250mm) 90 N (stroke 180mm)
MAX PULL FORCE (see force/stroke diagram)	300N
OPENING SPEED	≈ 40 mm/s
CLOSING SPEED	≈ 40 mm/s
LOCKING FORCE	2500 N
DUTY CYCLE	5%
PARALLEL CONNECTION	Yes
LIMIT STOP	Micro Switches
SAFETY STOP	Thermic
PROTECTION CLASS	IP20

DIMENSIONS

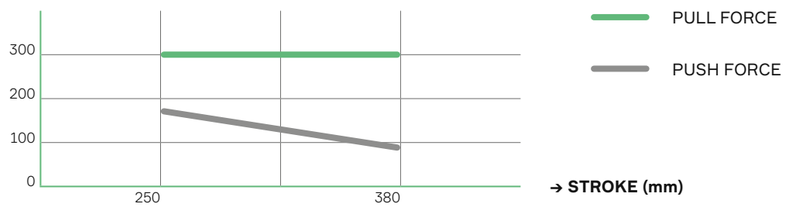
Chain connector included.





STROKE / FORCE DIAGRAM

↑ FORCE (N)



→ STROKE (mm)

PART No.

AC POWER SUPPLY (230 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
SINTESI 2000 AC	-	close	not included	180mm - 250mm	40313C	40314D	40316F

POSSIBLE APPLICATIONS & ACCESSORIES

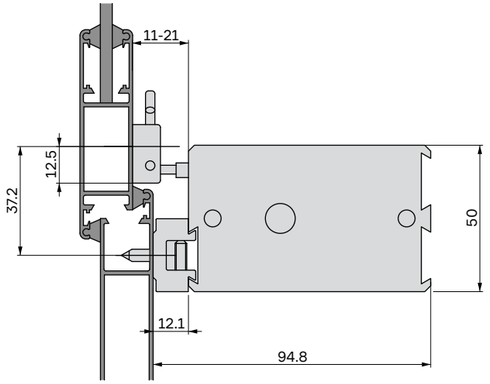
OUTWARD OPENING


Top hung window.


Bottom hung window.

INSTALLATION EXAMPLE 01

Front installation with dovetail plastic bracket (included).



POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING


Bottom hung window.

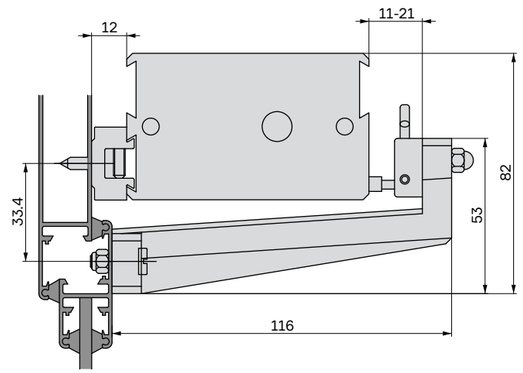

Bottom hung window.

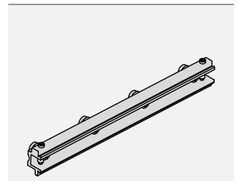

Side hung window.


Side hung window.

INSTALLATION EXAMPLE 01

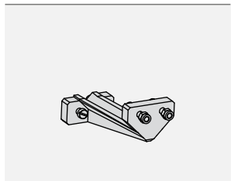
Installation with dovetail plastic bracket (included).





Long aluminum bracket (alternative)

SILVER ANODIZED 37021U

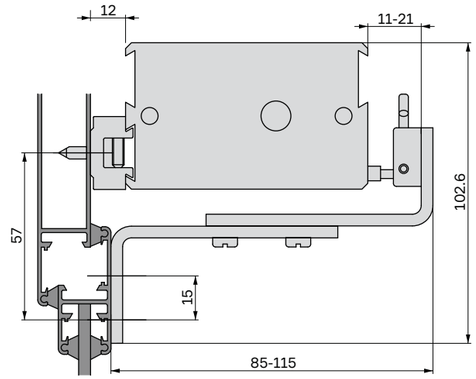


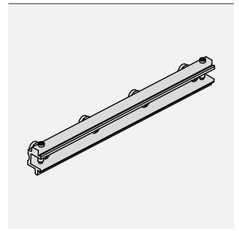
Bottom hung window plastic bracket

BLACK 36665E

INSTALLATION EXAMPLE 02

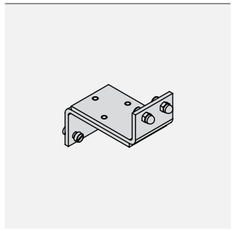
Installation with dovetail plastic bracket (included).





Long aluminum bracket (alternative)

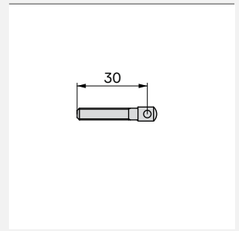
SILVER ANODIZED 37021U



Adjustable aluminum bracket

SILVER 37493H

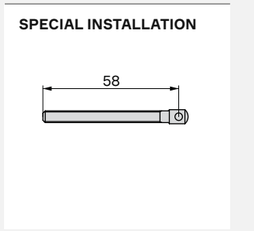
ACCESSORIES



Tie rod 30 mm

INCLUDED

SPECIAL INSTALLATION



Tie rod for PVC or wooden windows

81222C

SUPERMASTER

24 Vdc | 230 Vac

Chain actuator
Force in pull action 400 N
Stroke 450 - 600 - 800 mm

STD

The first powerful actuator.

- Big Double link chain for 400 N force.
- Red led light on the actuator side cover for the close position indication.
- Adjustment of the close position through a knob on the side cover.
- Dovetail slides for easy installation with sliding brackets.
- Top hinged windows: in case of installation without pivoting brackets, the minimum window height is: 900 mm for 450 mm stroke, 1200 mm for 600 mm stroke, 1600 mm for 800 mm stroke.
- Bottom hinged windows, inward opening: minimum window height is: 900 mm for 450 mm stroke, 1200 mm for 600 mm stroke, 1600 mm for 800 mm stroke.
- For installation of two SUPERMASTER AC on the same vent it is available the Coupling Control unit CP230, part No. 41089V.

  (See CONTROL ACCESSORIES section).
- The 24 Vdc version is suitable for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to European Standard EN 12101-2, tested by Istituto Giordano.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

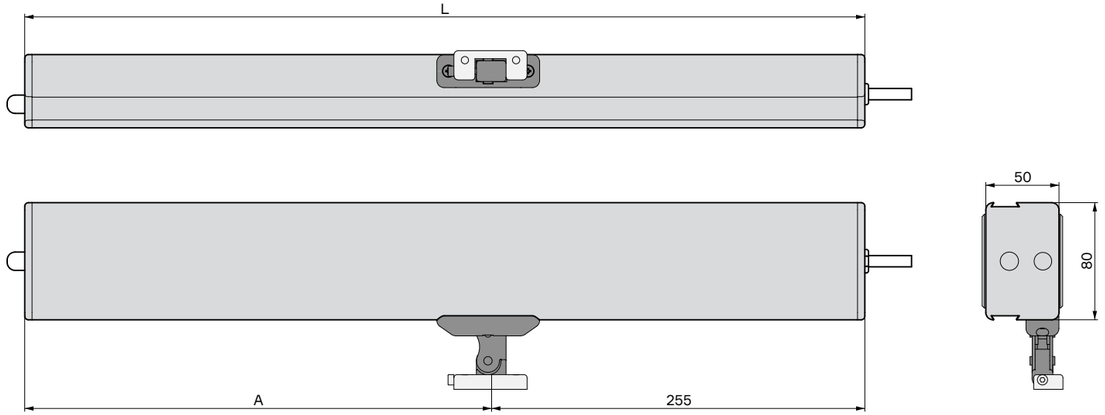
TECHNICAL DATA

VERSION	AC VERSION	DC VERSION
VOLTAGE SUPPLY	230 Vac	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,8 A	2,0 A
OPERATION	OP / COM / CL	polarity inversion
MAX FORCE (see force/stroke diagram)	400 N	400 N
OPENING SPEED	≈ 23 mm/s	≈ 20 mm/s
CLOSING SPEED	≈ 23 mm/s	≈ 20 mm/s
LOCKING FORCE	2500 N	2500 N
DUTY CYCLE	5%	20%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Micro Switches	Micro Switches
SAFETY STOP	Thermic	Electronic
PROTECTION CLASS	IP20	IP20

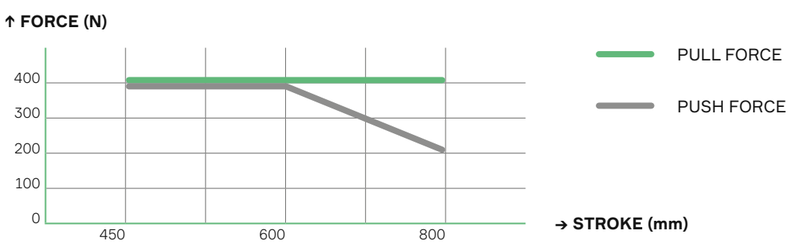
DIMENSIONS

Chain connector included.

STROKE	450	600	800
A (mm)	319	395	509
L (mm)	574	650	764



STROKE / FORCE DIAGRAM



PART No.

AC POWER SUPPLY (230 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
SUPERMASTER AC	-	-	1,5 m 3 wires + earth	450 mm	40462T	40465Z	40466B
				600 mm	40452P	40464X	40454U
				800 mm	40518U	40753T	40774O

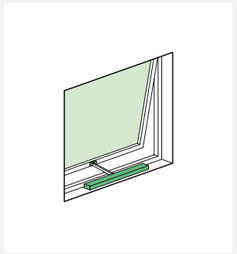
DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.		
					SILVER ANODIZED	BLACK RAL 9005	WHITE RAL 9010
SUPERMASTER DC	-	Open/Closed	1,5 m 2 wires	450 mm	40506L	40509T	40507N
				600 mm	40461R	40467D	40468F
				800 mm	40469H	40470S	40471U

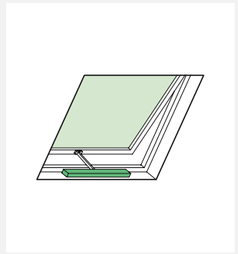
POSSIBLE APPLICATIONS

LEGEND
- Common application
- Special application

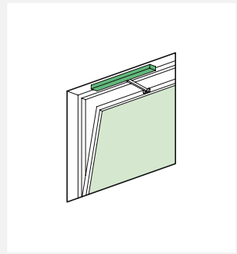
OUTWARD OPENING



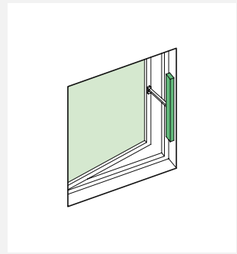
Top hung window.



Top hung roof window.

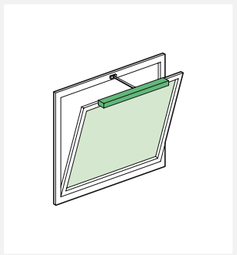


Bottom hung window.

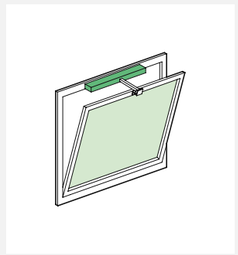


Side hung window.

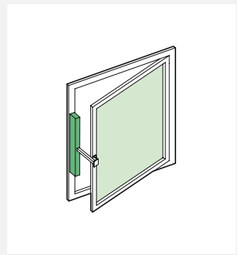
INWARD OPENING



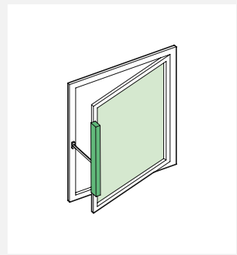
Bottom hung window.



Bottom hung window.



Side hung window.



Side hung window.

POSSIBLE APPLICATIONS & ACCESSORIES

INWARD OPENING

Bottom hung window.

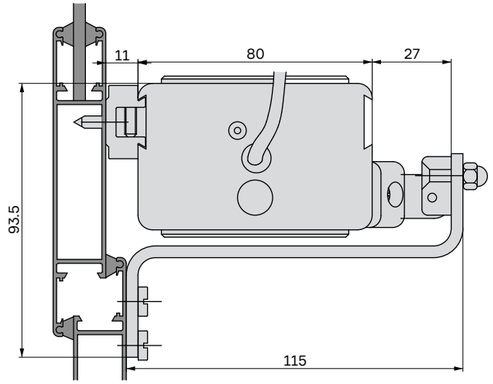
Bottom hung window.

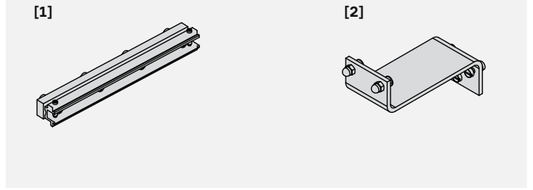
Side hung window.

Side hung window.

INSTALLATION EXAMPLE 01

On the frame with Z bracket.



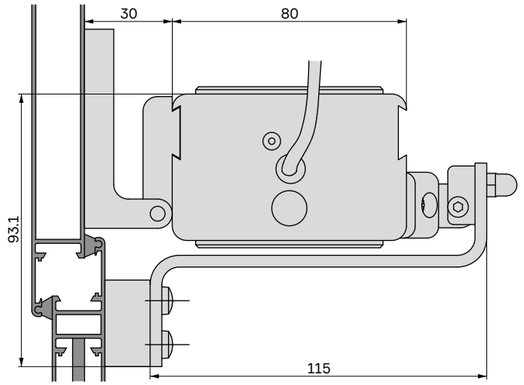


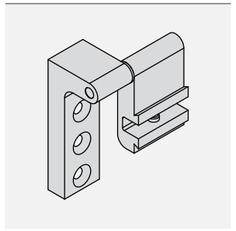
Sliding aluminium bracket [1] + Z bracket [2]

SILVER ANODIZED 40472W

INSTALLATION EXAMPLE 02

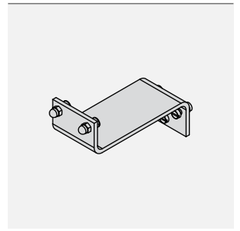
On the frame with pivoting bracket.





Pivoting bracket kit

SILVER ANODIZED 40560T

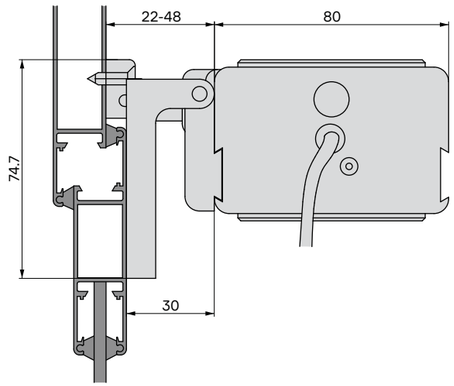


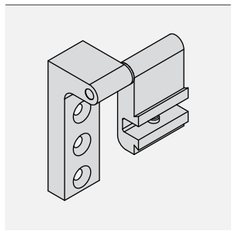
Z bracket

SILVER ANODIZED 40472W

INSTALLATION EXAMPLE 03

On the vent with pivoting bracket kit.





Pivoting bracket kit

SILVER ANODIZED 40560T

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung window.

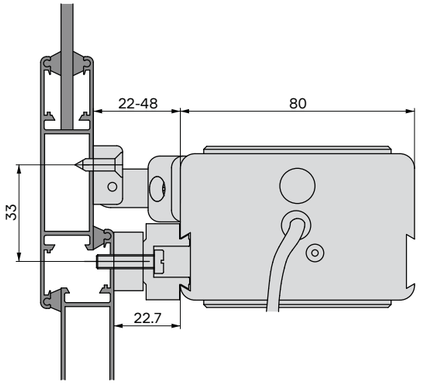

Top hung roof window.


Bottom hung window.


Side hung window.

INSTALLATION EXAMPLE 01

On the frame with sliding aluminium bracket.

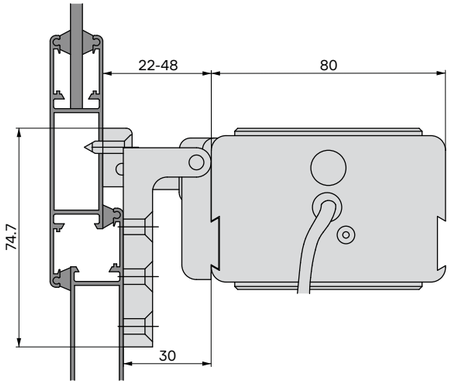


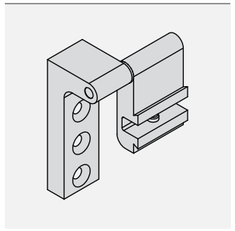
Sliding aluminium bracket

SILVER ANODIZED 40460N

INSTALLATION EXAMPLE 02

On the frame with pivoting bracket kit.



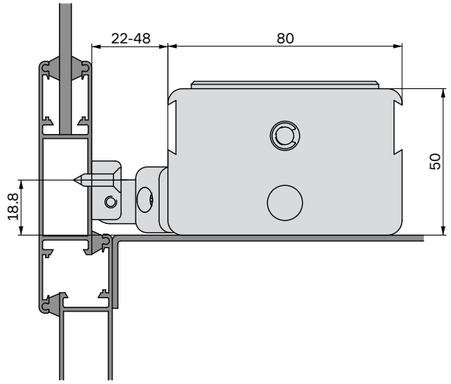


Pivoting bracket kit

SILVER ANODIZED 40560T

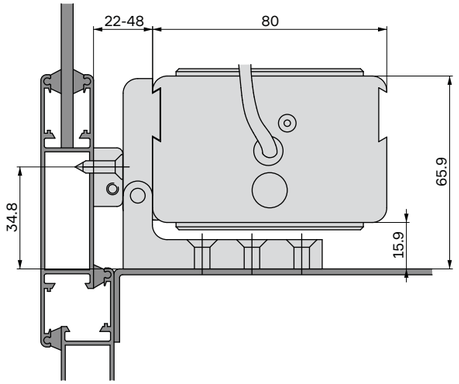
INSTALLATION EXAMPLE 03

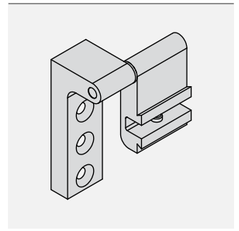
On windowsill without bracket.



INSTALLATION EXAMPLE 04

On the windowsill with pivoting bracket kit.





Pivoting bracket kit

SILVER ANODIZED 40560T

E-LOCK

24 Vdc

Electric additional locking device

STD

BMS

Linear drive designed to operate the window hardware and ensure the closing tightness.

E-LOCK has been designed to be used in combination with electric chain actuators series NANO, QUASAR, VEGA and SIRIUS in 24 Vdc version.

The operation of the window hardware happens through a fork, that can be mounted on both sides of the drive:

- Short Fork, in case the E-LOCK is integrated into the window profile.
- Long Fork, in case the E-LOCK is installed on the profile, through a slot in the profile itself.

Available cover in silver anodized aluminum to hide the locking device.

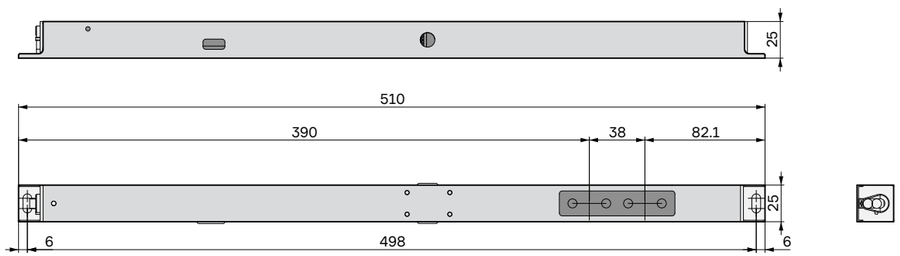
- Stainless steel case.
- Provided with an emergency unlocking mechanism.
- Different strokes and directions can be selected by dip-switches.
- Available on request E-LOCK F-SIGNAL version that provides lock/unlock feedback signal.
- It is possible to install two E-LOCK drives on one window: contact our Technical Department for the special configuration.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

TECHNICAL DATA

VERSION	DC VERSION	BMSline VERSION
VOLTAGE SUPPLY	24 Vdc ± 10%	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,3 A	0,3 A
OPERATION	polarity inversion	via Modbus RTU
STROKE (selectable by switches)	19 - 38 mm	19 - 38 mm
MAX FORCE (see force/stroke diagram)	600N	600N
OPENING SPEED	≈ 1,6 mm/s	≈ 1,6 mm/s
CLOSING SPEED	≈ 1,6 mm/s	≈ 1,6 mm/s
DUTY CYCLE	50%	50%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Hall sensor	Hall sensor
SAFETY STOP	Electronic	Electronic
PROTECTION CLASS	IP32	IP32

DIMENSIONS



PART No.

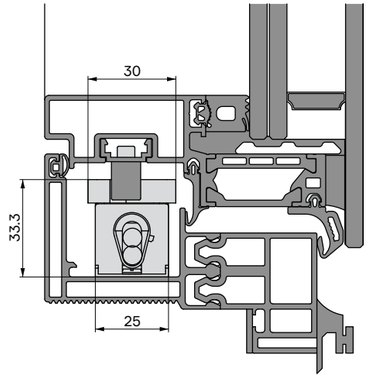
DC POWER SUPPLY (24 Vdc)

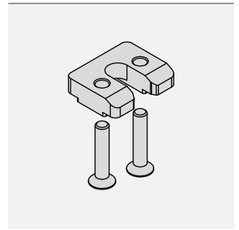
MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.
					STAINLESS STEEL
E-LOCK DC	-	-	Not included	19 - 38 mm	48240E
E-LOCK BMSline	-	All features via BUS line	Not included	19 - 38 mm	48241F

POSSIBLE APPLICATIONS & ACCESSORIES

INSTALLATION EXAMPLE 01

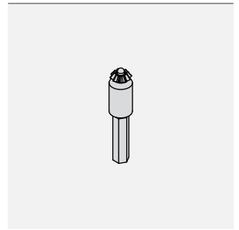
Integrated ino the window profile with Short Fork.





Short Fork

48242G

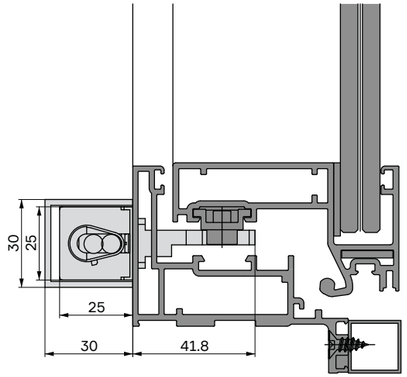


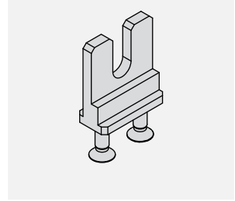
Emergency unlocking tool

INCLUDED 41596Q

INSTALLATION EXAMPLE 02

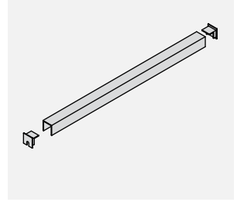
Intstalled on the profile with Long Fork and Cover.





Long Fork

42138L



Alumium cover

GREY RAL 9006	48230U
BLACK RAL 9005	48231V
WHITE RAL 9010	48130Y

OPERATION LOGIC

E-LOCK DC

Opening: the E-Lock actuator unlocks the hardware and, only after the complete release, the power is supplied to the chain actuator for the window opening.
Closing: the E-lock actuator remains in the unlock position until the fully closing operation of the chain actuator, and then locks the window hardware.

The sequence of the operations happens in two ways:

a) delay, selectable by dip switches

b) feedback signal , from microswitches or magnetic contacts installed on the window or signal coming from UCS chain actuators in “F-Signal” versions.

E-LOCK BMS communicates via BUS line with BMSline actuators or with NANO DC SYNCHRO chain actuator, whose electronic board manages the feedback information and checks the locking or unlocking status of the hardware.

PLUSULTRA

Additional locking device - Not motorized

PlusUltra is an easy inexpensive solution for the automation of windows with multiple locking points, avoiding the installation of additional electric actuators (or electronic locks).

- It is suitable for outward opening windows.
- PlusUltra has to be installed together with chain actuators series QUASAR and VEGA. A version for manual opening mechanism is also available.
- The force to release the locking points (before opening) and engage them again (after complete closing) is supplied by the chain of the electric actuator during the first part of its travel.
- The transmission of the movement is provided by 90° rotation of the standard pin for internal gear (7x7 mm) included in PlusUltra. The gearbox integrated in the profile operates the bars of the multiple docking hardware.
- PlusUltra provides max torque of 0.34 Nm, usually suitable for operation of max 4 locking points.
- According to the actuator to which it is connected, different fixing systems are necessary.
- Avaialble two versions:
  - PLUSULTRA LEFT for gearbox with clockwise closing rotation.
  - PLUSULTRA RIGHT for gearbox with counterclockwise closing rotation.

POSSIBLE CONFIGURATIONS

PLUSULTRA RIGHT/LEFT + QUASAR (electric actuator) + specific brackets.
PLUSULTRA RIGHT/LEFT + VEGA (electric actuator) + specific brackets.

NOTE: Product with minimum order quantity required - contact UCS Sales Office.

PART No.

PLUSULTRA RIGHT GREY RAL 9006	41428TRN
PLUSULTRA RIGHT BLACK RAL 9005	41429TRN
PLUSULTRA RIGHT WHITE RAL 9010	41430TRN
PLUSULTRA LEFT GREY RAL 9006	41431TRN
PLUSULTRA LEFT BLACK RAL 9005	41432TRN
PLUSULTRA LEFT WHITE RAL 9010	41433TRN

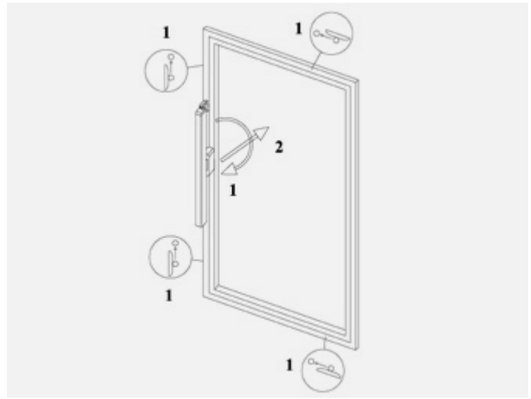
INSTALLATION EXAMPLES

OUTWARD OPENING

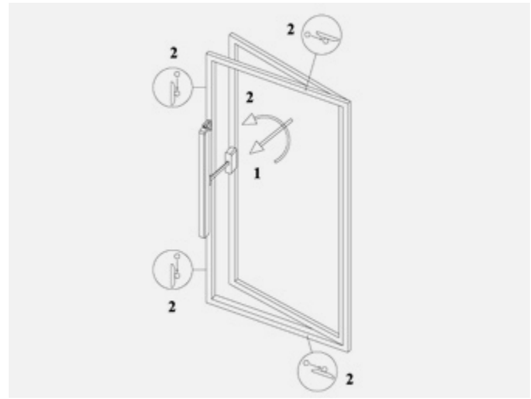
Top hung window.

Top hung roof window.

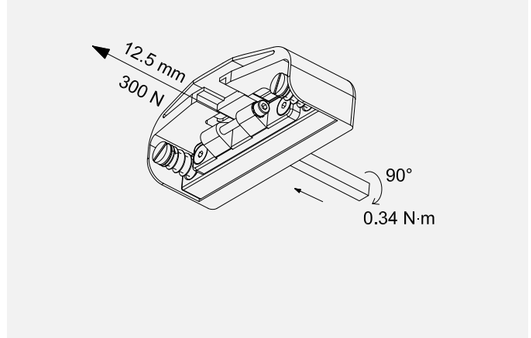
Side hung window.



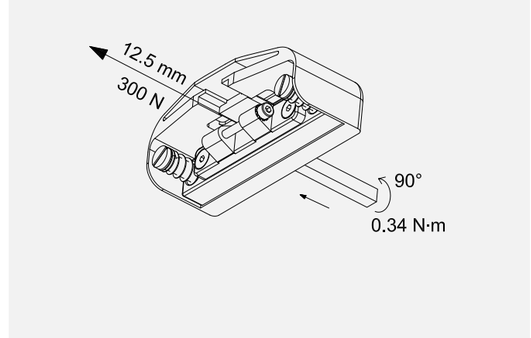
Opening: PlusUltra system releases the locking points before the window opening.



Closing: PlusUltra system engages the locking points after the complete window closing.

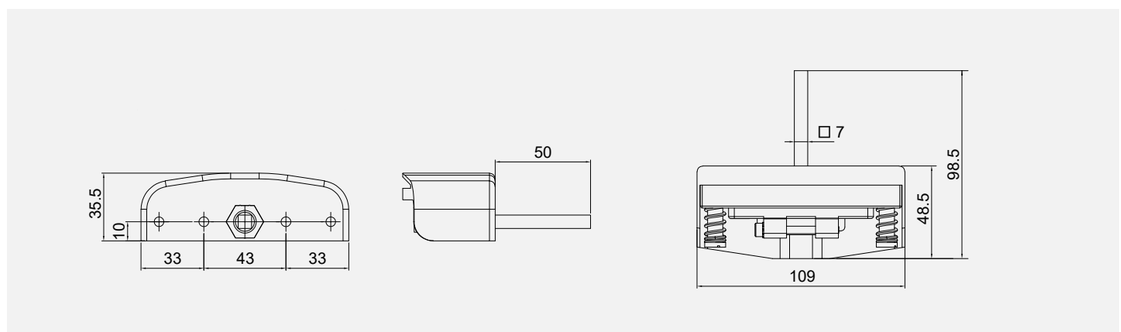


PLUSULTRA LEFT



PLUSULTRA RIGHT

DIMENSIONS

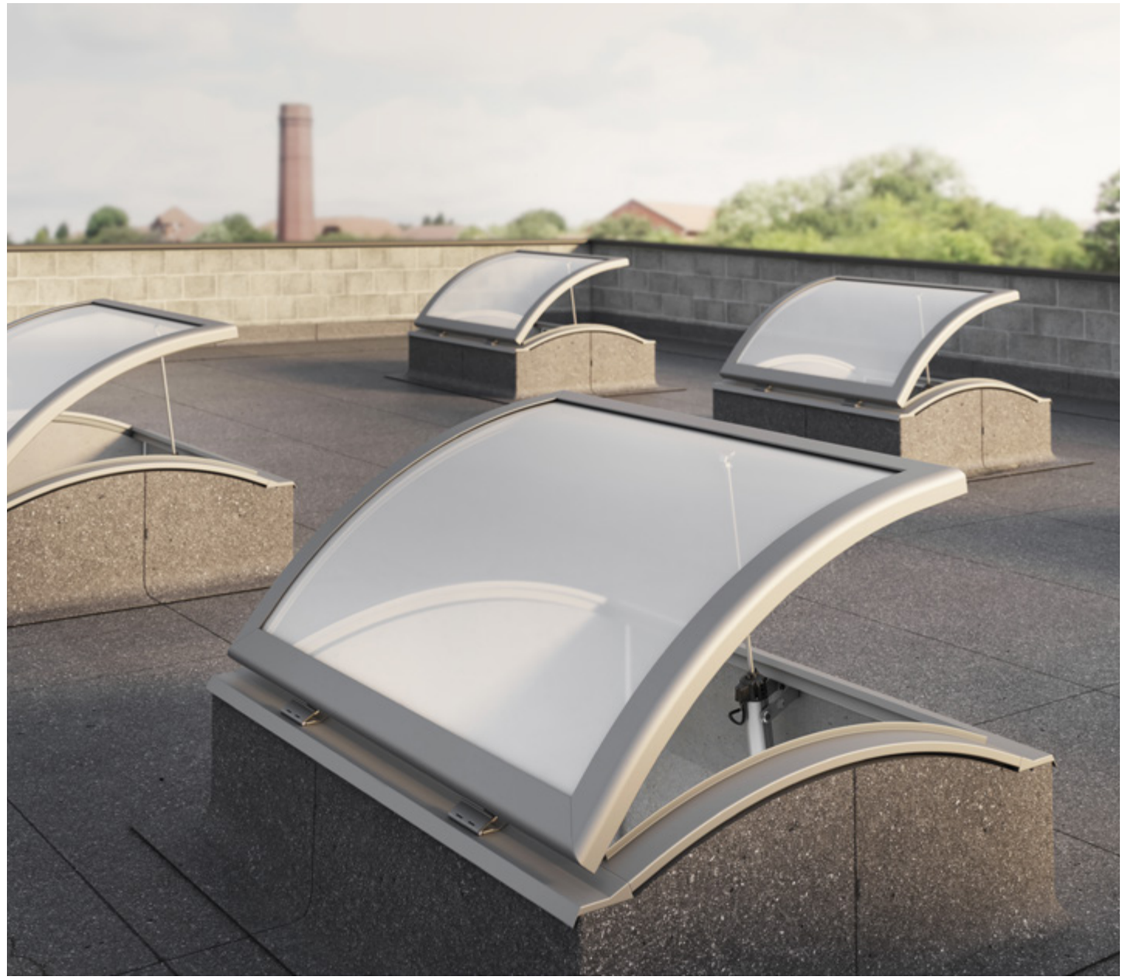


MAX

230 Vac

Linear spindle actuator
Force in push action 450 N (stroke 180 - 300 mm)
/ 350 N (stroke 500 mm)

STD

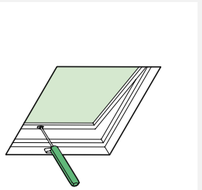


The most versatile spindle actuator.

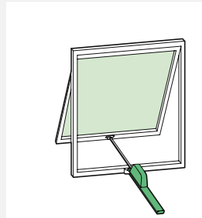
- Load transmission by rigid spindle.
- Supplied with 1 m cable.
- Not suitable for outdoor application. In this case, a special version is available on request: Max WP-specific installation guide to follow.
- With end bracket and adjustable eyelet for an easier installation.
- With sliding bracket and fixed eyelet: for easier installation also on window with windowsills or other internal obstacles, the sliding bracket can be fixed on the whole length of actuator, provided with two dovetail guides.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

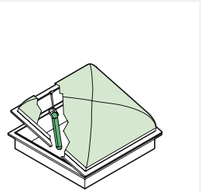
POSSIBLE APPLICATIONS



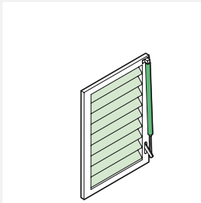
Top hung roof window open outwards.



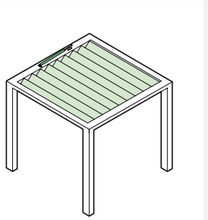
Top hung window open outwards.



Dome & skylight.



Sun blades or Louvre window.



Pergola.

TECHNICAL DATA

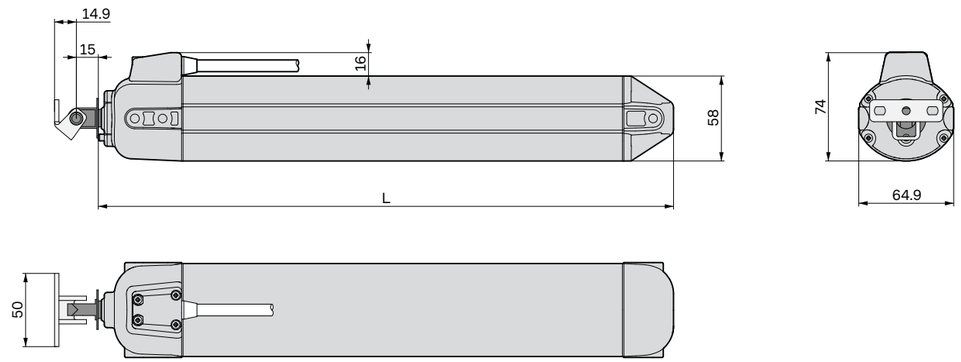
VERSION	AC VERSION
VOLTAGE SUPPLY	230 Vac
CURRENT ABSORPTION (max load)	0,7 A
OPERATION	OP / COM / CL
MAX FORCE (see force/stroke diagram)	450 N (stroke 180-300mm) 350 N (stroke 500mm)
OPENING SPEED	≈ 20 mm/s
CLOSING SPEED	≈ 20 mm/s
LOCKING FORCE	2500 N
DUTY CYCLE	5%
PARALLEL CONNECTION	Yes
LIMIT STOP	Micro Switches
SAFETY STOP	Thermic
PROTECTION CLASS	IP65

DIMENSIONS

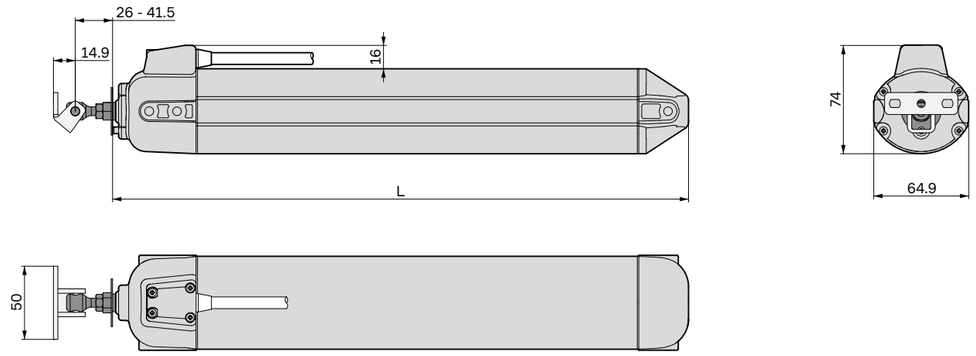
Spindle connector included.

STROKE	180	300	500
L (mm)	293	393	593

Fixed terminal



Adjustable terminal



PART No.

AC POWER SUPPLY (230 Vac)

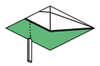
MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
MAX - with end brackets	-	-	1,5 m 3 wires + earth	180 mm 300 mm 500 mm	41325R 40541N 40614P
MAX - with sliding brackets	-	-	1,5 m 3 wires + earth	300 mm 500 mm	40915Z 40292V

POSSIBLE APPLICATIONS & ACCESSORIES

OUTWARD OPENING


Top hung roof window.


Top hung window.

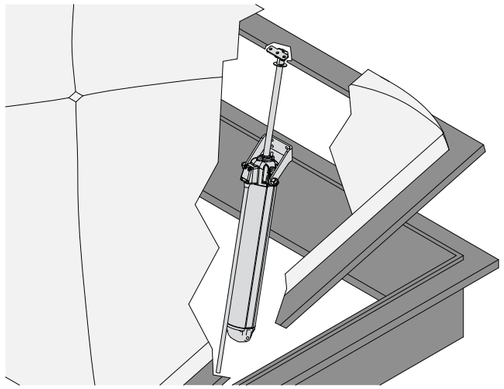

Dome & skylight.

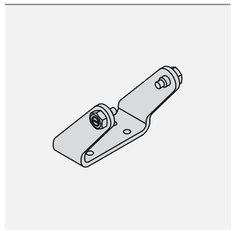

Sun blades or Louvre window.


Pergola.

INSTALLATION EXAMPLE 01

On dome with end bracket.



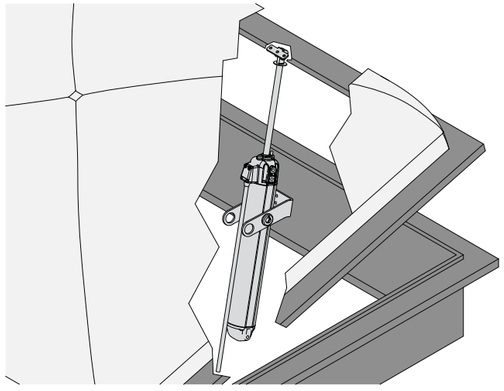


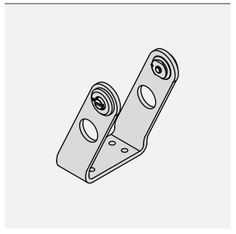
End bracket

INCLUDED 81559R

INSTALLATION EXAMPLE 02

On dome with sliding bracket.



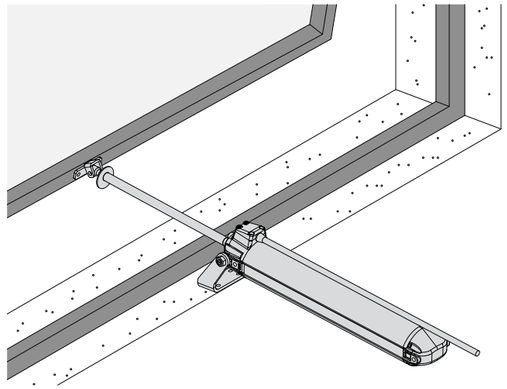


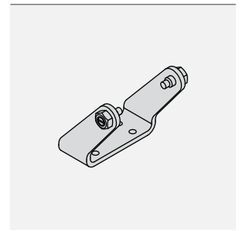
Sliding bracket

INCLUDED 40536W

INSTALLATION EXAMPLE 03

On the windowsill of top hung window with end bracket.



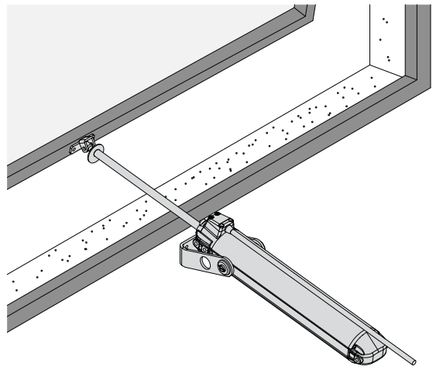


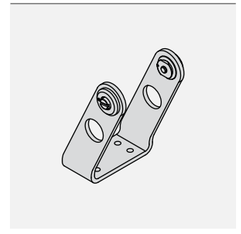
End bracket

INCLUDED 81559R

INSTALLATION EXAMPLE 04

On vertical wall with sliding bracket.





Sliding bracket

INCLUDED 40536W

ULYSSES

24 Vdc

Linear spindle actuator
Force in push action 650 N
Stroke 180 - 300 mm

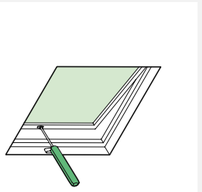
STD

Slim and powerful spindle actuator.

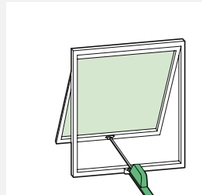
- Minimum size: external diameter 34 mm.
- Load transmission by rigid spindle.
- Particulary indicated to operate sun blades.
- High protection from atmospheric agents (IP65).
- Supplied with steel end bracket and connector. Front or back fixing possibility.
- Aluminum back bracket to be ordered separately (part No. 35697P).
- Available kit to reduce the stroke (part No. 40735V).
- For installation on SHEV available special triangular brackets and magnetic locking device.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

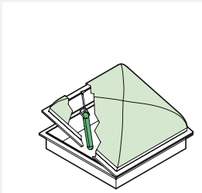
POSSIBLE APPLICATIONS



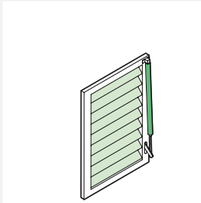
Top hung roof window open outwards.



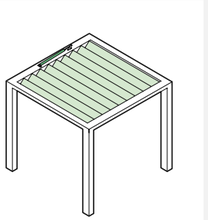
Top hung window open outwards.



Dome & skylight.



Sun blades or Louvre window.



Pergola.

Ulysses Rwa.

All external parts in aluminum for installation on Smoke and Heat Exhaust Ventilators (SHEV) in conformity to standard EN 12101-2 and tested by Istituto Giordano.

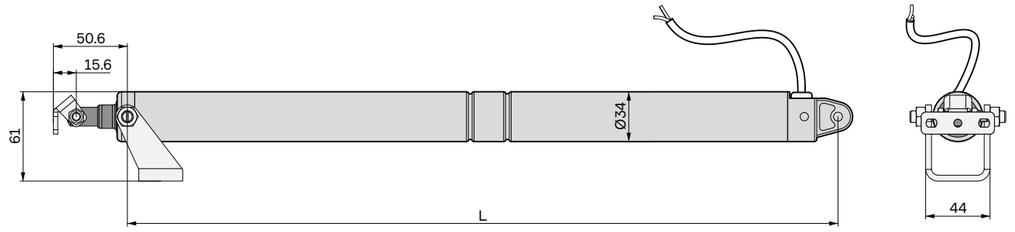
TECHNICAL DATA

VERSION	DC VERSION
VOLTAGE SUPPLY	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	1,0 A
OPERATION	polarity inversion
MAX FORCE (see force/stroke diagram)	650 N
OPENING SPEED	≈ 6 mm/s
CLOSING SPEED	≈ 6 mm/s
LOCKING FORCE	2500 N
DUTY CYCLE	30%
PARALLEL CONNECTION	Yes
LIMIT STOP	Electronic
SAFETY STOP	Electronic
PROTECTION CLASS	IP65

DIMENSIONS

Spindle connector included (not in RWA version).

STROKE	180	300
L (mm)	520	640



PART No.

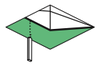
DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
ULYSSES	-	-	1,5 m 2 wires	180 mm	40759Z
				300 mm	40760A
ULYSSES RWA	-	-	1,5 m 2 wires	180mm	41767F
				300 mm	41718I

POSSIBLE APPLICATIONS & ACCESSORIES

Top hung roof window.

Top hung window.



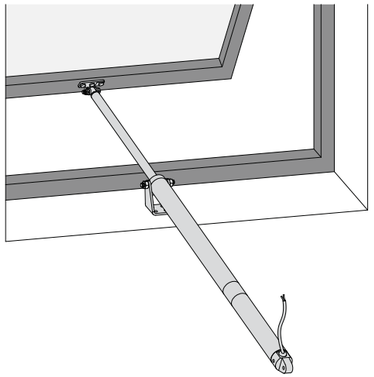
Dome & skylight.

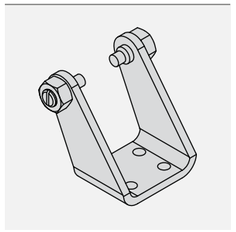
Sun blades or Louvre window.

Pergola.

INSTALLATION EXAMPLE 01

On windowsill of top hung window with end bracket.



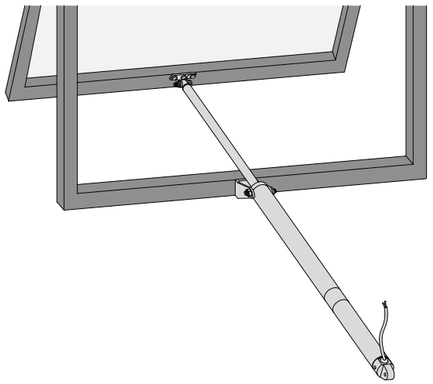


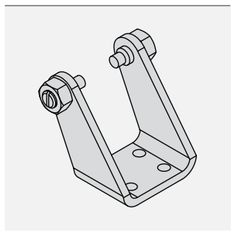
End bracket

INCLUDED 40234E
(not in RWA version)

INSTALLATION EXAMPLE 02

On the profile of top hung window with end bracket.



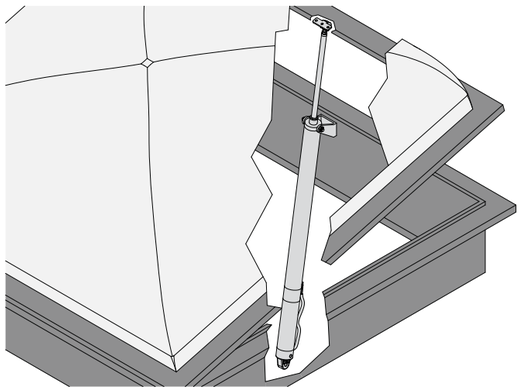


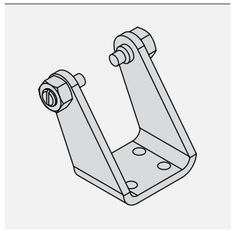
End bracket

INCLUDED 40234E
(not in RWA version)

INSTALLATION EXAMPLE 03

On dome with end bracket.



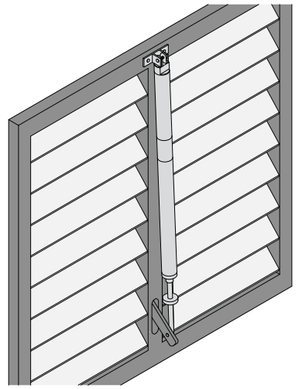


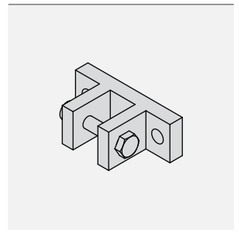
End bracket

INCLUDED 40234E
(not in RWA version)

INSTALLATION EXAMPLE 04

On vertical sun blades with back bracket.

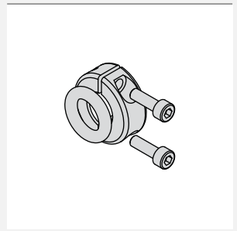




Back bracket

35697P

ACCESSORIES



Kit to reduce the stroke

40735V

T-RACK

24 Vdc | 230 Vac

Linear rack actuator
Force in push action 1000 / 4000 N
Stroke 350 - 550 - 750 - 1000 mm

STD

SYNC

The most powerful linear actuator.

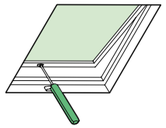
- 12 mm square rack transmission.
- Supplied with 1,5 m cable.
- Available end brackets or sliding brackets (to be ordered separately); the dovetail slide allows the fixing on the whole length of the T-Rack actuator.
- Available on request:
  - 1200 mm stroke.
  - F-SIGNAL versions with opening and closing feedback signal (free potential, maintained contact), activated by the current limit.

MULTIPLE SYSTEMS

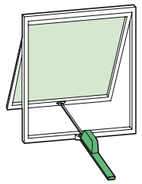
- For large domes/top hinged windows or to provide more stability, the T-Rack actuator can be used in the Dual T-Rack version, providing two push points on the same vent. For each system assembly are necessary 1 T-Rack actuator, 1 T-Rack group, 1 connecting rod and 2 end fix brackets (part No. 41760Y).
- For special multiple application when speed synchronization or more power is required, max 4 actuators Synchro T-Rack can be used, each one providing 1000 N force. Synchro T-Rack version is equipped with an integrated speed synchronization control board, avoiding the installation of an external control box and metallic rod between the actuators.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

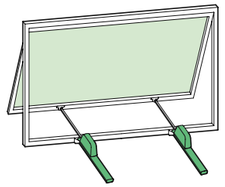
POSSIBLE APPLICATIONS



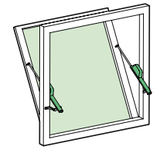
Top hung roof window open outwards.



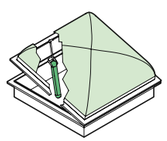
Top hung window open outwards.



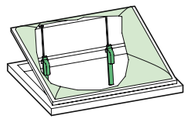
Top hung window open outwards.



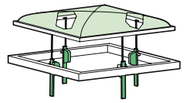
Bottom hung roof window open outwards.



Dome & skylight.

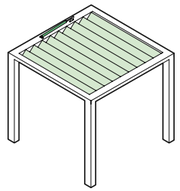


Dome & skylight.



Dome & skylight.

Sun blades or Louvre window.



Pergola.

TECHNICAL DATA

VERSION	AC VERSION	DC VERSION
VOLTAGE SUPPLY	230 Vac	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,28 A	1,5 A
OPERATION	OP / COM / CL	polarity inversion
MAX FORCE (see force/stroke diagram)	1000 N	1000 N
OPENING SPEED	≈ 12,5 mm/s	≈ 12,5 mm/s
CLOSING SPEED	≈ 12,5 mm/s	≈ 12,5 mm/s
LOCKING FORCE	2500 N	2500 N
DUTY CYCLE	25%	25%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Electronic	Electronic
SAFETY STOP	Electronic	Electronic
PROTECTION CLASS	IP65	IP65

PART No.

AC POWER SUPPLY (230 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
T-RACK AC	-	-	1,5 m 3 wires + earth	350 mm 550 mm 750 mm 1000 mm	41740E 41741F 41742G 41743H

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
T-RACK DC	-	-	1,5 m 2 wires	350 mm 550 mm 750 mm 1000 mm	41745J 41746K 41747L 41748M
T-RACK DC SYNCHRO	Yes	-	3 m 5 wires	350 mm 550 mm 750 mm 1000 mm	41750O 41751P 41752Q 41753R

T-RACK GROUP

STROKE	PART No.
350 mm	41755T
550 mm	41756U
750 mm	41757V
1000 mm	41758W

SYNCHRO

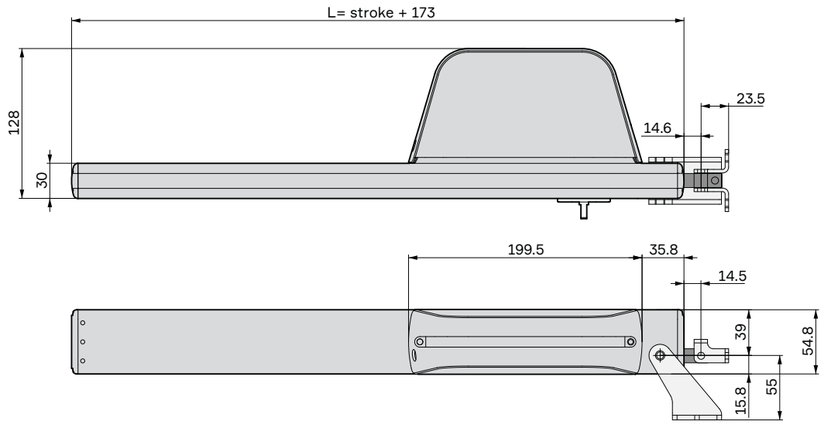
T-RACK SYNCHRO versions are equipped with an integrated speed synchronization control board avoiding the installation of an external control box and metallic rod between the actuators.

DIMENSIONS

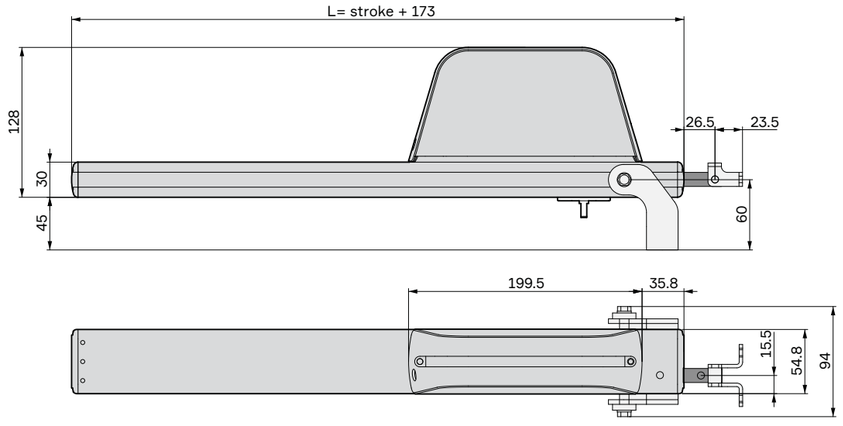
Rack connector included.

STROKE	180	350	550	750	1000
L (mm)	353	523	723	923	1173

Actuator with end bracket (Part No. 41760Y)



Actuator with sliding bracket (Part No. 41761Z)



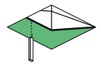
POSSIBLE APPLICATIONS & ACCESSORIES


Top hung roof window.


Top hung window.

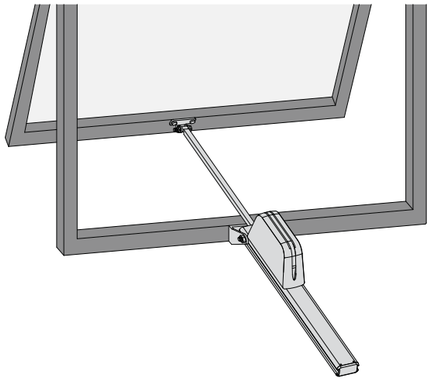

Top hung window.

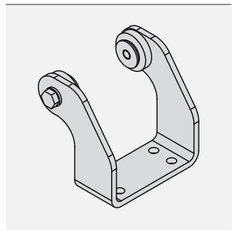

Bottom hung roof window.


Dome & skylight.

INSTALLATION EXAMPLE 01

On top hung window with sliding bracket.



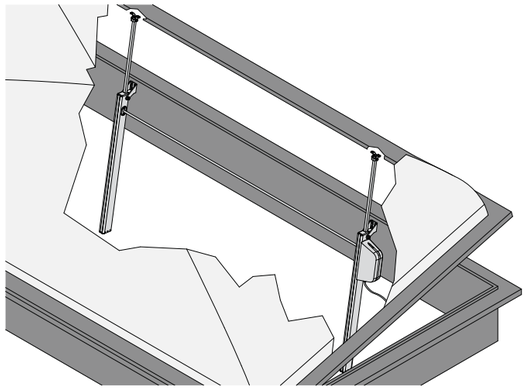


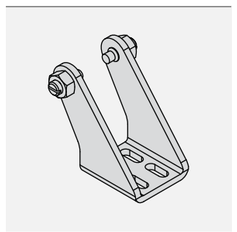
Sliding Bracket

41761Z

INSTALLATION EXAMPLE 02

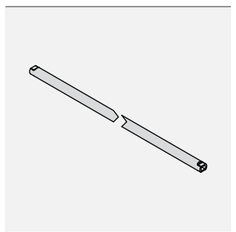
On large dome in Dual T-Rack configuration.





End bracket

41760Y

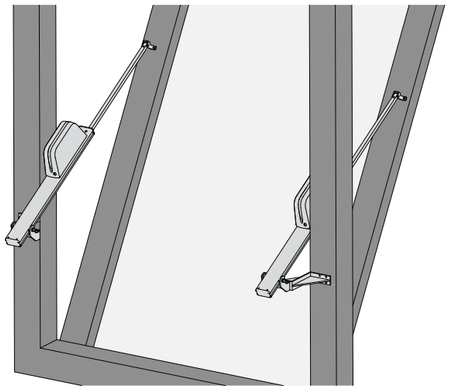


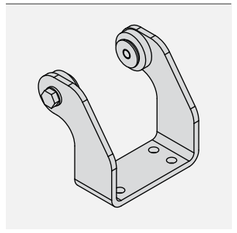
Connecting Rod

1005 mm	40231B
1505 mm	40232C
2005 mm	40233D

INSTALLATION EXAMPLE 03

On bottom hung window with T-Rack Synchro.*

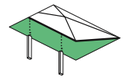


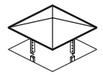


Sliding Bracket

41761Z

* Installation on the frame to be customized.


Dome & skylight.

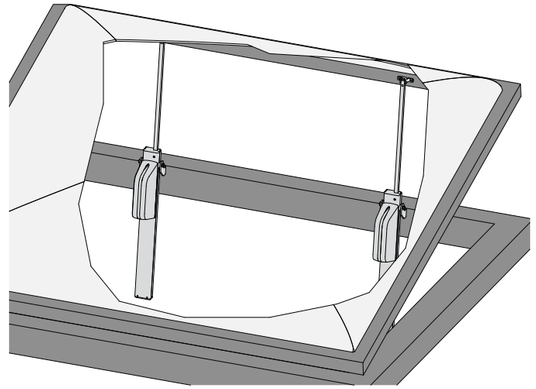

Dome & skylight.

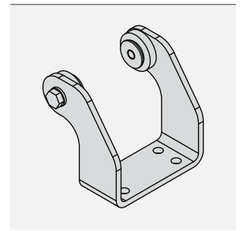

Sun blades or Louvre window.


Pergola.

INSTALLATION EXAMPLE 04

On large dome with T-Rack Synchro.



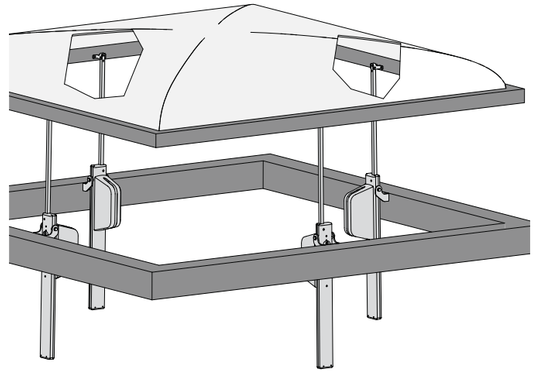


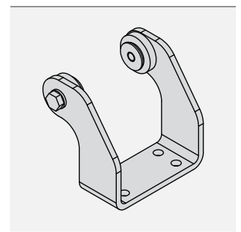
Sliding Bracket

41761Z

INSTALLATION EXAMPLE 05

On vertically oprning dome with sliding bracket.





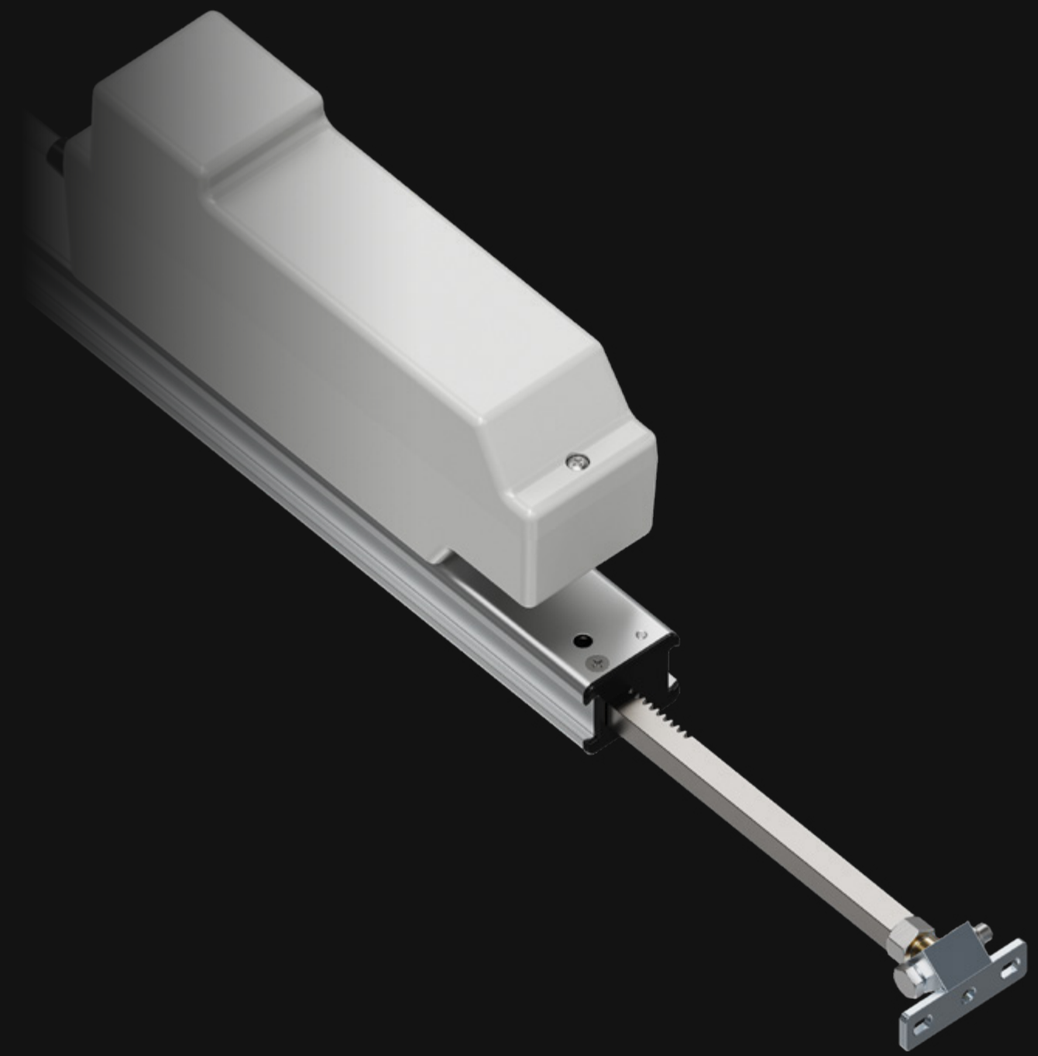
Sliding Bracket

41761Z

RACK

24 Vdc | 230 Vac

Linear rack actuator
Force in push action 650 / 1500 N
Stroke 350 - 550 - 750 - 1000 mm



STD

Versatile linear actuator for mutliple push points.

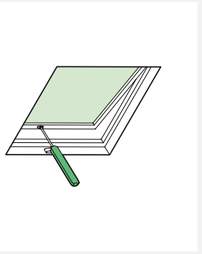
- 10 mm square rack transmission for stroke 180 mm, 350 mm, 550 mm and 12 mm square rack transmission for stroke 750 mm e 1000 mm.
- Supplied with 1,5 m cable.
- Available end brackets or sliding brackets (to be ordered separately); the dovetail slide allows the fixing on the whole length of the rack actuator. Not for multiple systems.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

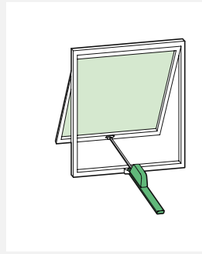
MULTIPLE SYSTEMS

- For large domes or windows: Dual Rack or Double Rack version, providing two or more push points on the same vent. Double Rack provides the double of the force.
- Dual Rack: push force 650 N (230 Vac) - 750 N (24 Vdc). For each system assembly: 1 Rack actuator, 1 Rack group, 1 connecting rod and 2 end brackets.
- Double Rack: push force 1300 N (230 Vac) - 1500 N (24 Vdc). For each system assembly: 1 Rack actuator, 1 Auxiliary Rack actuator in parallel connection, 1 connecting rod and 2 end brackets.
- Other multiple systems: available Rack Group Double Pivot for system assembly providing 3 or more push points.

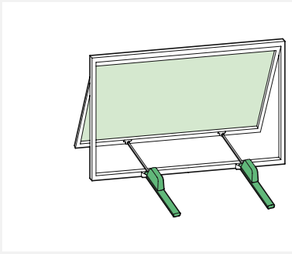
POSSIBLE APPLICATIONS



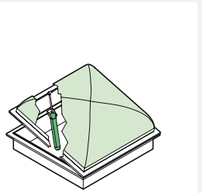
Top hung roof window open outwards.



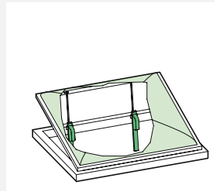
Top hung window open outwards.



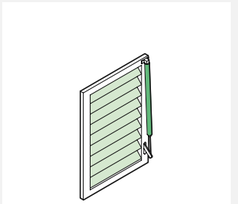
Top hung window open outwards.



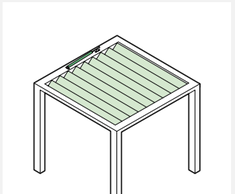
Dome & skylight.



Dome & skylight.



Sun blades or Louvre window.



Pergola.

TECHNICAL DATA

VERSION	AC VERSION	DC VERSION
VOLTAGE SUPPLY	230 Vac	24 Vdc ± 10%
CURRENT ABSORPTION (max load)	0,1 A	1,0 A
OPERATION	OP / COM / CL	polarity inversion
MAX FORCE (see force/stroke diagram)	650 N (Push force)	750 N (Push force)
OPENING SPEED	≈ 8,0 mm/s	≈ 8,0 mm/s
CLOSING SPEED	≈ 8,0 mm/s	≈ 8,0 mm/s
LOCKING FORCE	2500 N	2500 N
DUTY CYCLE	50%	50%
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Electronic	Electronic
SAFETY STOP	Electronic	Electronic
PROTECTION CLASS	IP65	IP65

PART No.

AC POWER SUPPLY (230 Vac)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
RACK AC	-	-	1,5 m 3 wires + earth	180 mm 350 mm 550 mm 750 mm 1000 mm	40209F 40211T 40213V 40789D 40790E
AUXILIARY RACK AC	-	-	1,5 m 3 wires + earth	180 mm 350 mm 550 mm 750 mm 1000 mm	40631P 40632S 40633U 40847J 40848K

DC POWER SUPPLY (24 Vdc)

MODEL	SYNCHRO	FEEDBACK	CABLE & BUS LINE	STROKE	→ COLOUR / ↓ PART No.
					SILVER ANODIZED
RACK DC	-	-	1,5 m 2 wires	180 mm 350 mm 550 mm 750 mm 1000 mm	40400A 40217D 40219H 40791F 40792G
AUXILIARY RACK DC	-	-	1,5 m 2 wires	180 mm 350 mm 550 mm 750 mm 1000 mm	40636A 40637C 40638E 40849L 40850M

RACK GROUP

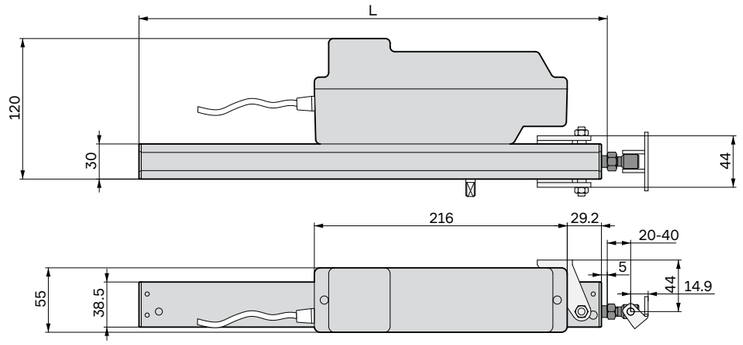
MODEL	STROKE	PART No.
RACK GROUP	180 mm	40223B
	350 mm	40225D
	550 mm	40227F
	750 mm	40754U
	1000 mm	40755V
RACK GROUP DOUBLE PIVOT	180 mm	40379W
	350 mm	40380U
	550 mm	40381V
	750 mm	40851N
	1000 mm	40852O

DIMENSIONS

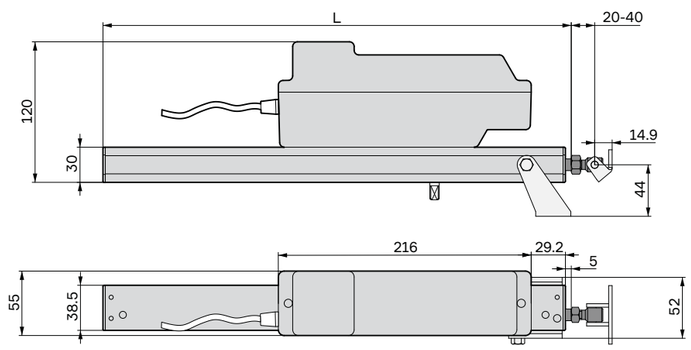
Rack connector included.

STROKE	180	350	550	750	1000
L (mm)	400	570	770	970	1220

Actuator with end bracket (Part No. 40234E)



Actuator with sliding bracket (Part No. 40235F)

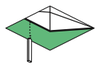


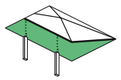
POSSIBLE APPLICATIONS & ACCESSORIES


Top hung roof window.


Top hung window.


Top hung window.


Dome & skylight.

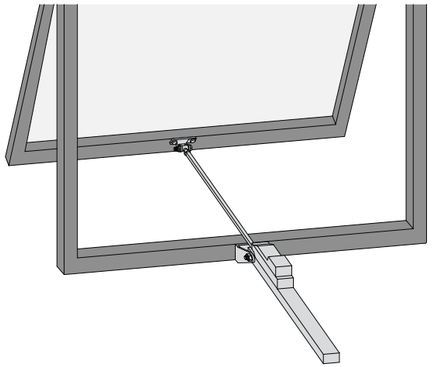

Dome & skylight.

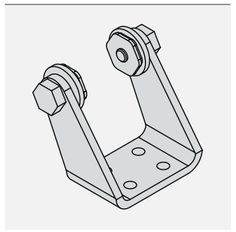

Sun blades or Louvre window.


Pergola.

INSTALLATION EXAMPLE 01

On top hung window with sliding bracket.



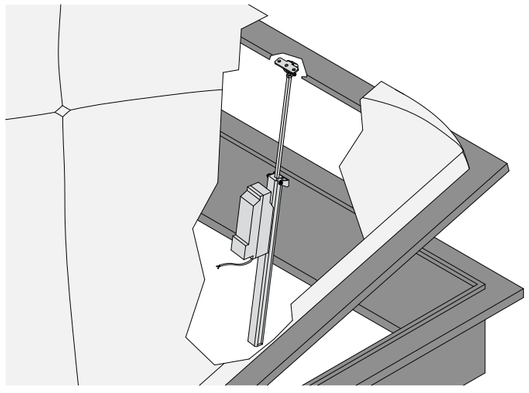


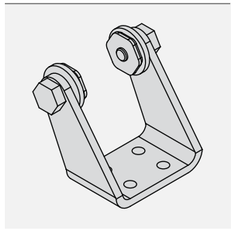
Sliding bracket

40235F

INSTALLATION EXAMPLE 02

On dome with sliding bracket.



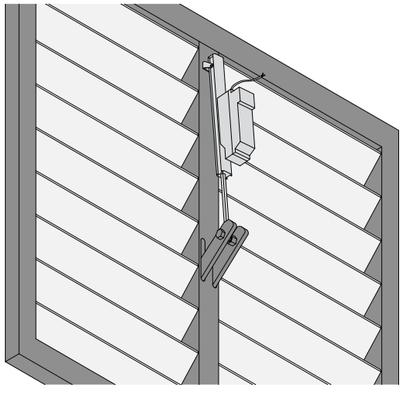


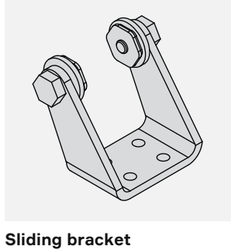
Sliding bracket

40235F

INSTALLATION EXAMPLE 03

On horizontal louvres with sliding bracket.



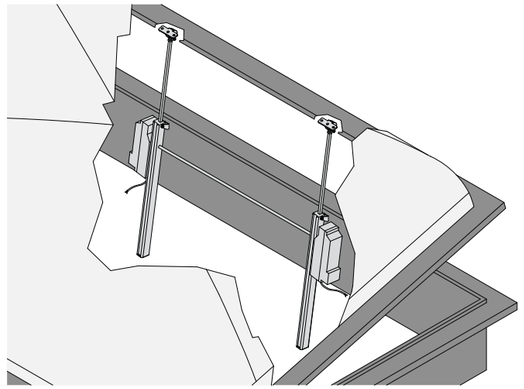


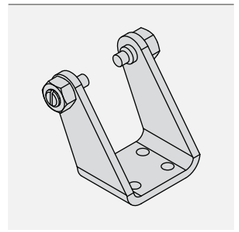
Sliding bracket

40235F

INSTALLATION EXAMPLE 04

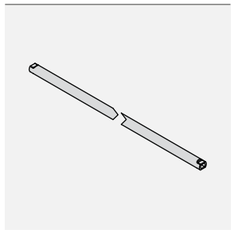
On large dome in Double Rack configuration.





End bracket

40234E

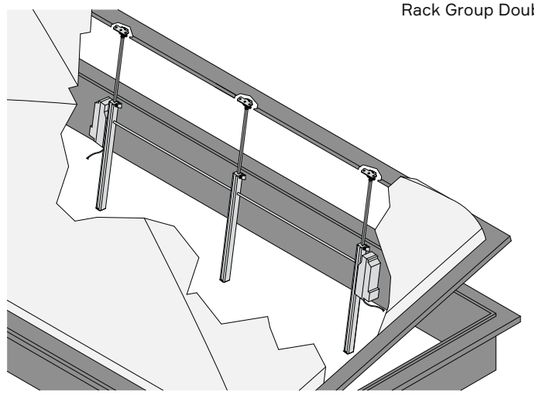


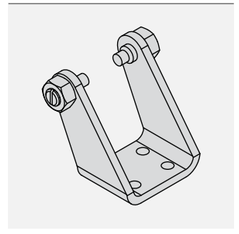
Connecting rod

1000 mm	40231B
1500 mm	40232C
2000 mm	40233D

INSTALLATION EXAMPLE 05

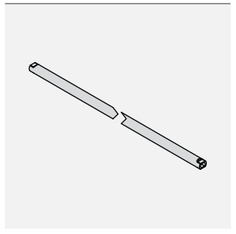
On very large dome in Multiple Rack configuration with Rack Group Double Pivot.





End bracket

40234E

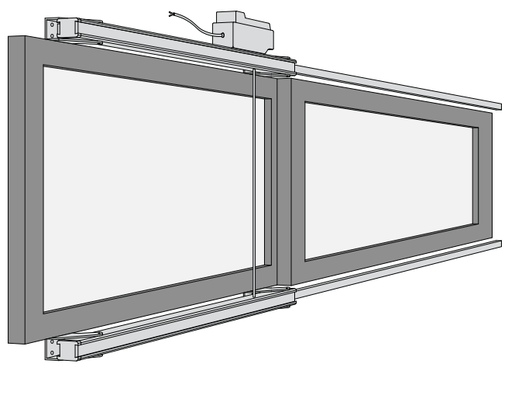


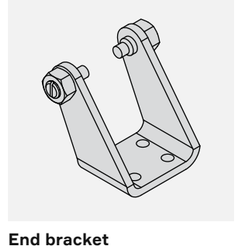
Connecting rod

1000 mm	40231B
1500 mm	40232C
2000 mm	40233D

INSTALLATION EXAMPLE 06

On sliding windows in Dual Rack configuration.





End bracket

40234E

Connecting rod

1000 mm	40231B
1500 mm	40232C
2000 mm	40233D

MOTOR CONTROLLER - MC²

The UCS MC² Motor Controllers are the perfect solution to operate window actuators in building automation.

The units are composed basically by the following parts:

- Power module.
- 1 or more command / output modules.
- Metal Enclosure.

Each command / output module offers one general command input as well as one local command input. General command has first priority over local command.
These inputs are in the form of (open/common/close) and are free dry circuit/contact closured.
The general command acts on all the modules of the MC² Motor Controller.

NOTE: According to some national regulations for Smoke ventilation, it can be connected to a Fire Alarm System for specific operations (for example, air inlet for Mechanical Smoke Ventilation).

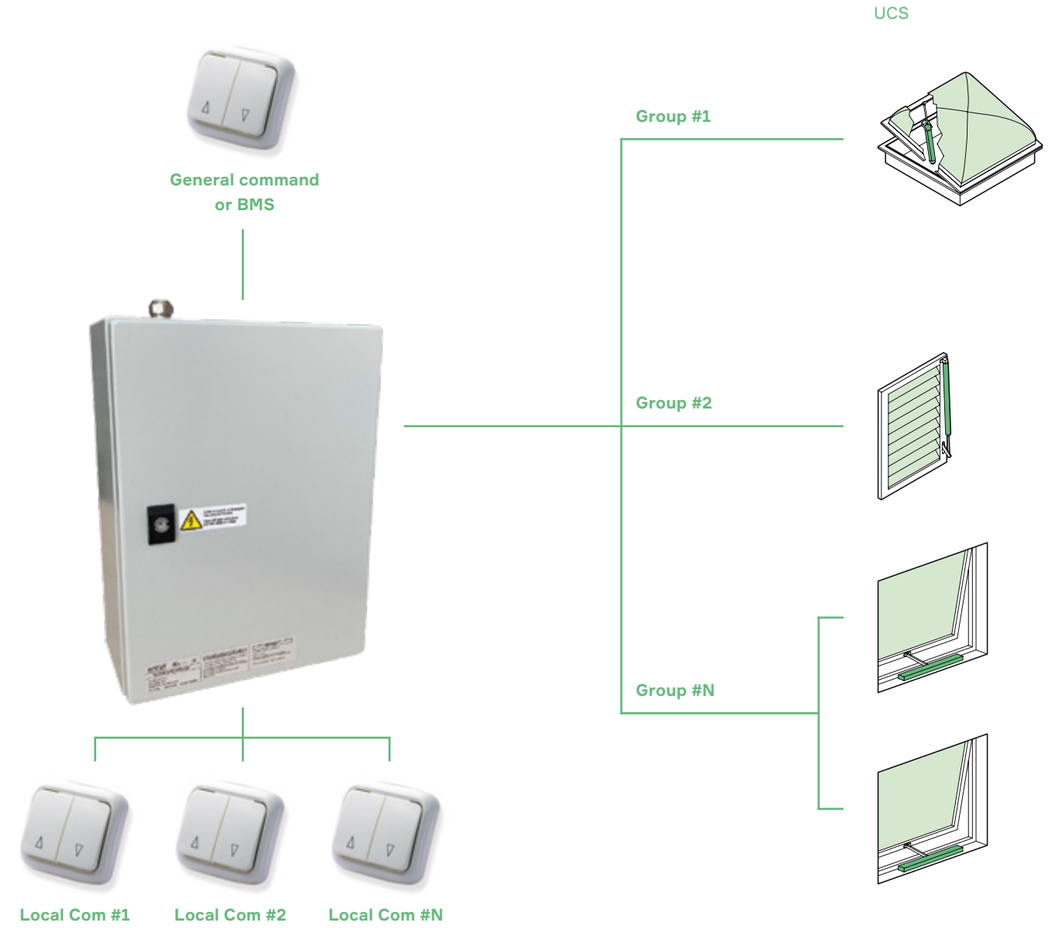
MAIN FEATURES

- Power output from 100W up to 500W;
- 1 to 5 output modules /groups (max 100W each);
- 2 output for each module (4 only for special version on request);
- 1 general command input;
- 1 local command input for each module;
- 1 24Vdc output for auxiliary devices for each module;
- Each module meets NEC Class 2 for UL325 compliance.

The UCS MC² Motor Controllers can operate the following UCS actuator versions:

- DC, DC Synchro (with or without feedback signal).
- BMS.

MC² Motor Controllers can be connected to 1 control unit for general / local input commands (example: gateway for BMS applications).



TECHNICAL DATA

MODEL	MC²-100	MC²-200	MC²-300	MC²-400	MC²-500
PART NO.	48125T	48126U	48127V	48128W	48131Z
VOLTAGE SUPPLY INPUT	100/240Vac – 50/60Hz				
VOLTAGE SUPPLY OUTPUT	+/- 24 Vdc				
AUXILIARY VOLTAGE SUPPLY	+24 Vdc				
MAX OUTPUT CURRENT (Motor output only)	2x 2A	4x 2A	6x 2A	8x 2A	10x 2A
MAX OUTPUT CURRENT (Motor output+AUX)	4 A	8 A	12 A	16 A	20 A
GENERAL COMMAND INPUT	1 (3x wires free potential) – with priority on local commands				
LOCAL COMMAND INPUT	1x (three wires)	2x (three wires)	3x (three wires)	4x (three wires)	5x (three wires)
COMPATIBLE SENSORS	Rain, Wind, CO2, Thermostat				
BMS COMPATIBLE	YES				
METAL ENCLOSURE	400 x 300 x 160 mm	400 x 300 x 160 mm	400 x 300 x 160 mm	500 x 400 x 160 mm	500 x 400 x 160 mm
CERTIFICATION	NEC Class 2 for UL325 compliance				

ENTRAPMENT PROTECTION SYSTEMS EPS

Power actuated window protection system

Infra-red sensor
PART No. 41343J

Quasar
Vega

Power supply

Control panel

Push button
PART No. 41013B

EPS Entrapment Protection System provides protection to people close to the automated window area, also for children or people with reduced attention and response capacity, above all in case of accessible windows or with automatic control without visual contact.

The infra-red active sensor, or other presence sensor, gives a signal to the control unit in case of foreign presence; the EPS system reverses the closing movement for 3 seconds to release possible objects or body parts entrapped in the window, then stops the power to the actuator.

EPS can also provide the visual and acoustic signal in case of intervention of the presence sensor; moreover it is possible to continue the closing action as soon as the foreign presence disappears. It is possible to connect more than one actuator and/or sensor to the control unit.

⚠ The instructions for a safe installation are included in the section “SECURITY WARNINGS”.

EPS 24 Vdc
PART No. 41342I

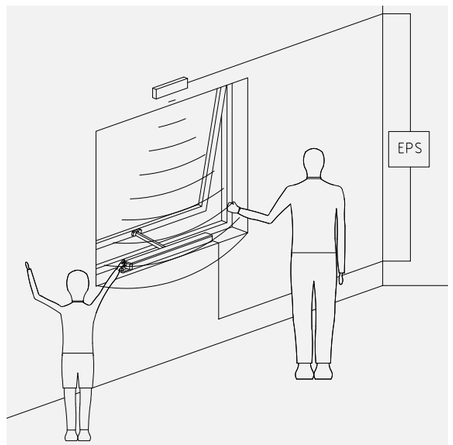
Control unit for 24 Vdc actuators.
Inputs: feeder; EFC control panel; push button or BMS system.
Dimensions: 115 x 155 x 75 mm

EPS 230 Vac
PART No. 41341H

Control unit for 230 Vac actuators.
Inputs: line – push button or BMS system.
Dimensions: 115 x 155 x 75 mm

PRESENCE SENSOR
PART No. 41343J

The infra-red presence sensor gives a signal to the EPS control unit in case of foreign presence.
Dimensions: 221 X 63 X 30 mm



CONTROL ACCESSORIES

Accessories for electric actuators

FLUSH MOUNT DOUBLE PUSH BUTTON
PART No. 41013B

For actuators with 3 wires operation (230Vac actuators) and for Control Panels.

FLUSH MOUNT BIPOLAR PUSH BUTTON
PART No. 41014C

For the actuators with polarity inversion operation (24Vdc actuators).
Max current 5 A.

WALL PUSH BUTTON WITH TWO BUTTONS
PART No. 41019H

For actuators with 3 wires operation (230Vac actuators) and for Control Panels.
Dimensions: mm 80x80x30.

BOX FOR FLUSH MOUNT PUSH BUTTON
PART No. 83475J

For flush mount push button.

COUPLING CONTROL UNIT CP230
PART No. 41089V

It permits to control a couple of 230 Vac actuators (SINTESI 2000, SUPERMASTER 230 Vac, MAX). In case of sudden failure, or blockage of any of the two actuators the other will also be stopped.

RELAIS BOX (RB24-E)
PART No. 40995J

It allows to control 24 Vdc actuators (at polarity inversion) through a standard 3 wires operation (open-close-common) and a voltage supply up to 20 A in two outputs current absorption.
It can also be connected to WCU 40490Y in order to control 24Vdc actuators.
Dimensions: mm 154x113x75

WEATHER CONTROL UNIT FOR 230 Vac ACTUATORS
PART No. 40490Y

Control panel with rain and wind sensors (adjustable wind sensibility). For one or more 230 Vac actuators, max total current absorption of 2.25 A. Dimensions: ø 150 mm x h 40 mm.

TESTING KIT
PART No. 42073Y

Voltage supply input: 100-250Vac - 50Hz
Voltage supply output: +/- 24Vdc
Output operation: by polarity inversion
Nominal current: 13A
Push button: integrated

SWITCHING POWER SUPPLY 24 Vdc

ITEM CODE	40775P	41526Y	40893D	40894E
INPUT VOLTAGE	85 - 264 Vac	90 - 264 Vac	85 - 264 Vac	85 - 264 Vac
OUTPUT VOLTAGE	24 Vdc	24 Vdc	24 Vdc	24 Vdc
OUTPUT CURRENT	3A (nominal current)	3.8A (nominal current)	8,4A (nominal current)	20A (nominal current)
DIMENSIONS	199x99x50 mm	91x90x55,6 mm DIN rail module	199x99x50 mm	185x120x92 mm

⚠ For installation remarks refer to the section at page 33 or contact UCS’s technical department for further information.

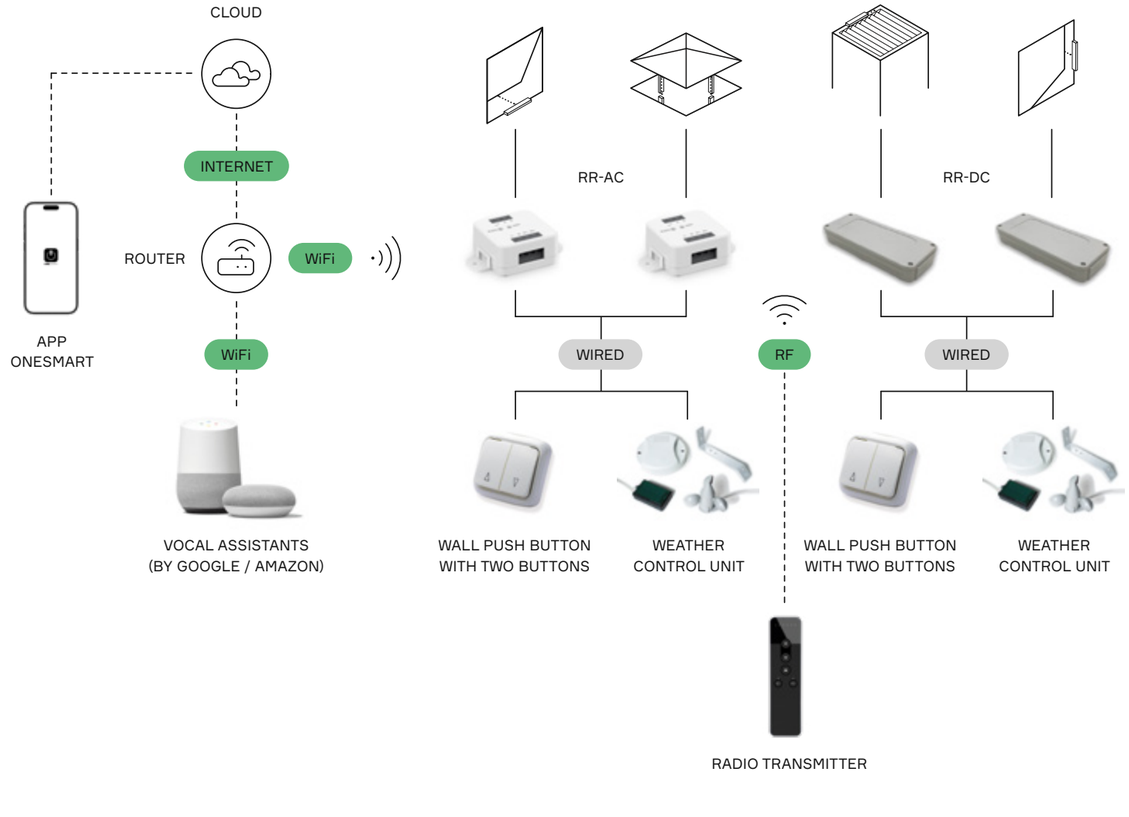
WIRELESS REMOTE CONTROL

The simplest way to control
natural ventilation

ONESMART APP
Smart Control via Cloud and Wi-Fi.

With the OneSmart app, you can communicate with the Control Units for AC and DC actuators from anywhere in the world using your smartphone.
Control up to 50 installations in different locations, managing up to 1,000 devices per installation. No gateway is required—just a Wi-Fi connection is all you need to set up and integrate the radio receivers.

ONESMART SYSTEM



ACCESSORIES FOR WIRELESS REMOTE CONTROL

RR-AC – CONTROL UNIT for AC actuators
PART No. 48318E

110/240Vac power supply. 1 output to manage actuator maximum power 500W (230 Vac).
Radio receiver 433.92MHz.
Three wire inputs 110/230 Vac open/common/close for switch and weather control unit.
Integrated WiFi module for remote control by App OneSmart and voice command via home assistants.

RR-DC – CONTROL UNIT for DC actuators
PART No. 48319F

24Vdc power supply.
1 output to manage actuator in 24 Vdc, 8A maximum power.
Radio receiver 433.92MHz.
Two wired inputs that can be set for wired commands (BMS free potential contact or local push button).
Two wired inputs with high priority for wired commands (BMS, weather control unit or rain sensor).
Integrated WiFi module for remote control by App OneSmart and voice command via home assistants.

RT – RADIO TRANSMITTER
PART No. 48320G

Radio transmitter 433,92MHz with Rolling Code technology.
Compatible with radio receiver RR-DC and RR-AC.
Able to control up to 6 groups of control units.
Wall mount included.

WALL PUSH BUTTON WITH TWO BUTTONS
PART No. 41019H

For actuators with 3 wires operation (230Vac actuators) and for Control Panels.
Dimensions: mm 80x80x30.

WEATHER CONTROL UNIT FOR 230 Vac ACTUATORS
PART No. 40490Y

Control panel with rain and wind sensors (adjustable wind sensibility). For one or more 230 Vac actuators, max total current absorption of 2.25 A. Dimensions: ø 150 mm x h 40 mm.

SMOKE VENTILATION CONTROL PANELS

Control unit for smoke and heat exhaust ventilators including meteorological detection and comfort ventilation

286 8005373
EN 12101-10:2015 +
AC:200

A very versatile range of smoke ventilation control panels, provided of back-up batteries: they operate 24 Vdc actuators for smoke and heat extraction in case of fire, and control the automation of single or multiple windows for natural ventilation even in a multy-storey building.

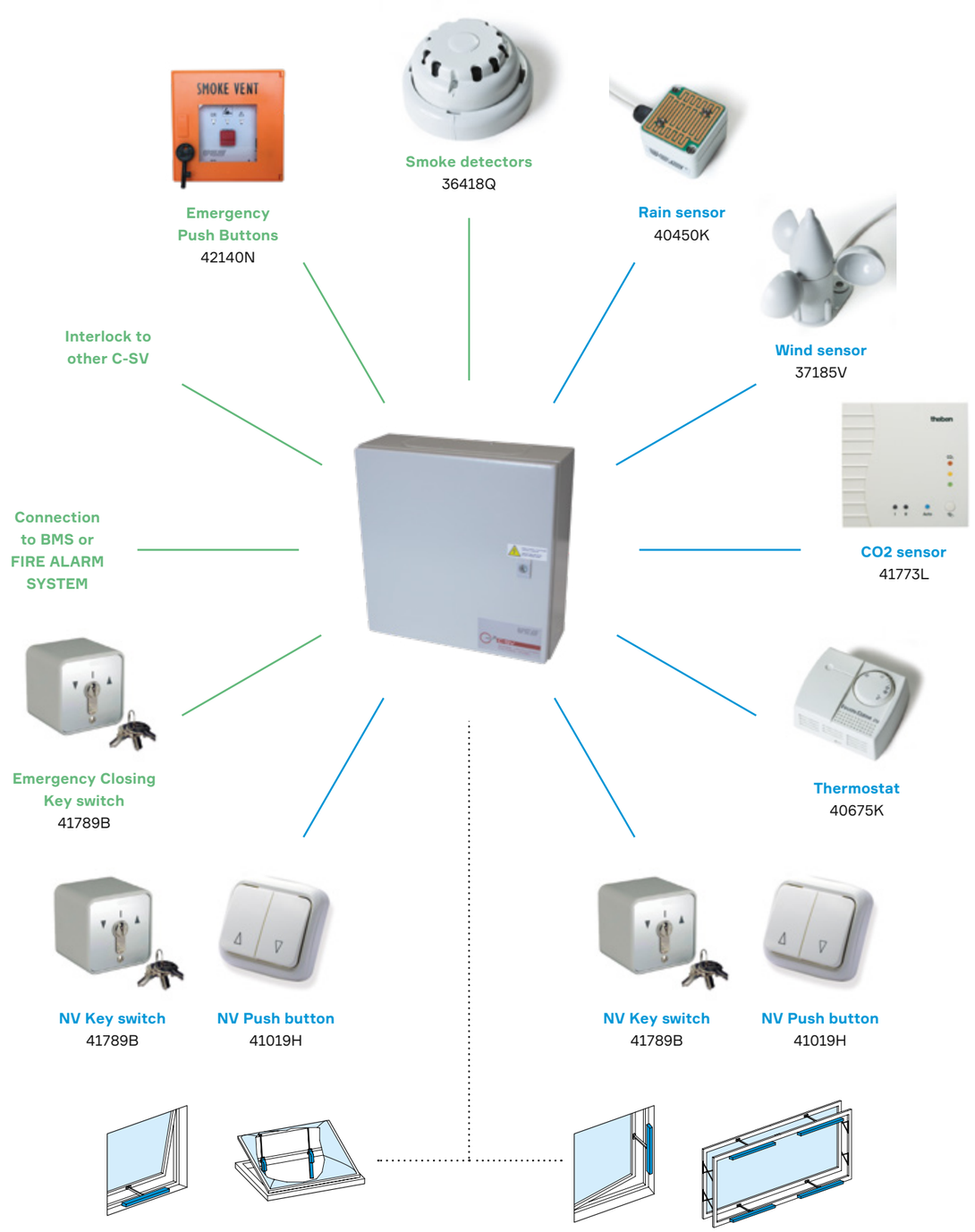
The opening command for smoke extraction is controlled by smoke detectors, emergency push buttons, fire alarm systems or Building Management Systems (BMS) by “free potential – normally closed” inputs.
The installation of the emergency push button (MCP - manual control point) is compulsory because, in addition to allowing manual emergency control, it also provides display of fault / emergency warnings, and can be used for easy, remote resetting.

C-SV and C-SV IB control panels have been designed and tested according to the European Standard **EN 12101-10** and **prEN 12101-9**. They have been certified as **Smoke and Heat Control Systems** according to the European Standard **EN 12101-10:2005 + AC:2007** by IFT Rosenheim (not for C-SV 13A and C-SV IB 13A versions.

In order to provide comfort and energy saving, the natural ventilation is granted by operating automatically the windows, according to the environmental conditions detected by the sensors. Windows can be manually controlled through push buttons or key switches in 2 different ventilation zones.

Additional features, selectable by internal dip-switches:

- Control of solenoids/electromagnets.
- Window closing after single or double reset.
- Repetition of emergency command
- Interlock function for multi-storey buildings installation
- Momentary or deadman ventilation control



POWER

VOLTAGE SUPPLY INPUT	100-250 Vac, 50-60 Hz
VOLTAGE SUPPLY OUTPUT	24 Vdc (±25%)
VOLTAGE OUTPUT OPERATION	Polarity inversion
AUX VOLTAGE OUTPUT	24 Vdc
NOMINAL CURRENT	4 A / 8 A / 13 A / 20 A
BACK UP BATTERY	2x 12 Vdc (sealed lead-acid batteries)

TECHNICAL DATA

SMOKE VENT ZONE	1
NATURAL VENT ZONE	2
SMOKE/HEAT DETECTOR	Max 10
EMERGENCY PUSH BUTTON	Max 10 (integrated on C-SV-IB version)
EMERGENCY CLOSING BUTTON	Max 10 (normally open contact)
EMERGENCY OUTPUT	Clean contact (e.g.: for acoustic alarm)
NATURAL VENT PUSH BUTTON	External (integrated on C-SV-IB version)
RAIN SENSOR	Max 1
WIND SENSOR	Max 1
CO2 SENSOR	Max 1
THERMOSTAT	Max 1

NOTE: The summarized values on the above table might be varied according to the final installation.
For any further information please contact our sales department.

DESCRIPTION	**NOMINAL CURRENT**	**DIMENSIONS (mm)**	**Emergency and Ventilation Push Buttons**	**BATTERIES**	**PART No.**
C-SV 4A	4A	300 x 300 x 150	Not included	Included	41736A
C-SV 8A	8A	300 x 300 x 150	Not included	Included	41737B
C-SV 13A	13A	400 x 400 x 150	Not included	Included	41918Z
C-SV 20A	20A	400 x 400 x 150	Not included	Included	41874H
C-SV IB 4A	4A	300 x 300 x 150	Integrated on the front of the control panel	Included	41738C
C-SV IB 8A	8A	300 x 300 x 150	Integrated on the front of the control panel	Included	41739D
C-SV IB 13A	13A	400 x 400 x 150	Integrated on the front of the control panel	Included	41919A
C-SV IB 20A	20A	400 x 400 x 150	Integrated on the front of the control panel	Included	41875I

ACCESSORIES FOR SMOKE VENT CONTROL

OPTICAL SMOKE DETECTOR
PART No. 36418Q

Smoke detection by infrared light diffusion for Tyndall effect. It is certified according to the UNI EN 54 - 7/9 regulations. Alarm signal through the red led.
RESPONSE TIME 3 sec approx.
VOLTAGE SUPPLY 24 V (min. 10 V, max. 30 V)
TEMPERATURE RANGE -10° + 80° C
DEGREE OF HUMIDITY < 95% MAX AIR SPEED 10 m/s DETECTED SURFACE 40 m2
A frequent cleaning, especially in dusty environments, is recommended.

EMERGENCY PUSH BUTTON
PART No. 42140N

It's necessary to break the safety glass to operate the emergency button. Emergency push button allow to control by LEDs the status of the system, reset the control panels and close the window at the end of the emergency.

NV KEY SWITCH
PART No. 41789B

Once connected to control panel allows to operate all window for natural ventilation.
If properly connected to C-SV, it can be used to send an emergency closing command.

DIAGNOSTIC KIT (CABLE + SOFTWARE)
PART No. 41853M

In the event of anomalies or installation problems, it is possible to interrogate the C-SV control panels using a special diagnostic USB cable connected to a simple computer. A dedicated software allows you to monitor in real time the operating parameters of the control panel (primary power supply, battery voltage, etc.) and to trace the origin of any faults by reading the associated error code.

RS RAIN SENSOR
PART No. 40450K

In case of rain, the rain sensor sends the signal for window automatic closing.

WS WIND DETECTOR
PART No. 37185V

It emits a variable signal according to the wind intensity and acts on the control panel as the rain sensors do.

CO2
PART No. 41773L

The CO2 sensor, if present, has the priority on the manual control. Suitable for conference and meeting rooms, offices, schools/nurseries, passive and low-energy buildings.
2 switch outputs CO2 controlled for 2 stage control, with manual and automatic mode as well as display of switching status.
3x 0–10 V outputs for CO2, temperature and relative humidity.
Compatible C-SV, IB-SV only.

TH THERMOSTAT
PART No. 40675K

The thermostat opens or closes windows when temperature settings are exceeded. Built in on/off switch.

FLUSH MOUNT DOUBLE PUSH BUTTON
PART No. 41019H

Once connected to control panel allows to operate all window for natural ventilation.

RED LINE

Pneumatic system for smoke ventilation.

PNEUMATIC CYLINDERS

Pneumatic system for smoke and heat exhaust

- The Redline cylinders are manufactured using corrosion-resistant materials;
- Suitable for smoke and heat exhaust systems according to the UNI EN 12101-2 standard;
- Double action cylinders, they can open and close;
- Provided with a mechanical locking device at the end of stroke positions. It can be pneumatically or manually (by pressing the corresponding end button) unlocked;
- On request (min. 50 pieces):
  - any intermediate stroke;
  - rear feeding;
  - cylinders without locking device.
- Fixing brackets, accessories and connectors must be ordered separately;
- The Redline cylinders can be used for ventilation where a compressed air system is available;
- The installation of two cylinders on the same vent requires the version without locking device (stroke 500mm part No.40344H – stroke 700mm part No 40610F).

STROKE AND PART No.

STROKE	PART No.
300 mm	40083L
500 mm	40085N
700 mm	40087P
1000 mm	40090K

FEATURES

BORE	35 mm
ROD	Ø 12 stainless steel
MAX WORKING PRESSURE	20 bar
TEMPERATURE RANGE	- 30°+ 120°C
FEED	front
THRUST	1900 N at 2 Mpa
LOCK RESISTANCE	3000 N up to 300°C

ACCESSORIES

PIVOT NIPPLE WITH FLOW LIMITING DEVICE

PART No. 40424I

It is necessary for the cylinder assembling with the bracket. The flow limiting device allows to reduce the speed during the window opening.

SYNTERIZED FLOW LIMITING DEVICE

PART No. 41225V

More effective than the standard device, where a more smooth opening is required. It can be installed on opening or closing side.

ROTATING NIPPLE

PART No. 40356N

It allows the ø 6x4 mm copper tube assembling and is necessary for the cylinder assembly with the bracket.

NIPPLE WITH FLOW LIMITING DEVICE

PART No. 36924K

The same as part No. 40356N but with flow limiting device.

POSSIBLE APPLICATIONS & ACCESSORIES

INSTALLATION EXAMPLE 01

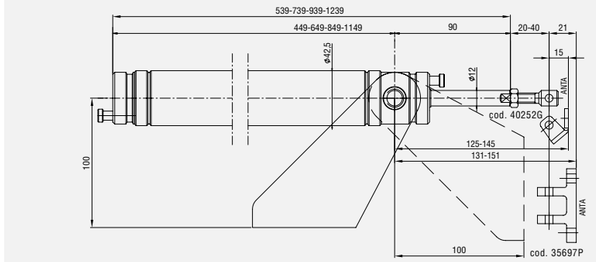
Installation on top hinged window with connection to compressed air system.

INSTALLATION EXAMPLE 02

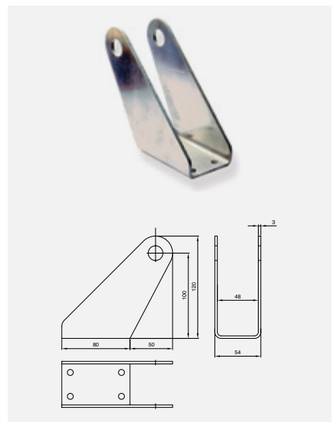
On dome with thermal valve.

SPECIFICATION PROSPECT

Pneumatic cylinder Ultraflex Control Systems - Red Line, used in smoke and heat exhaust systems according to UNI EN 12101-2 standard. Aluminium casing. The standard version is provided with mechanical locking device in the end stroke positions in order to keep the windows or domes open even without air pressure. It is possible the direct installation of the thermal valve.



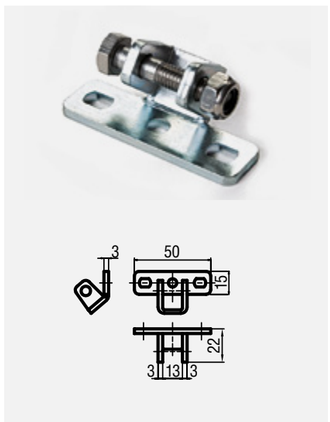
Actuators dimensions



ALUMINIUM FRONT BRACKET

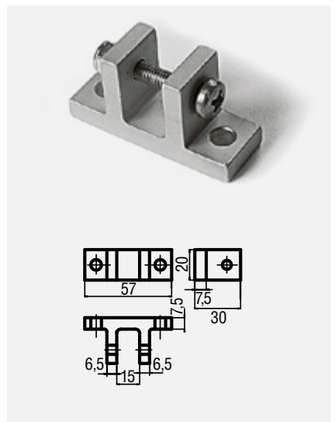
PART No. 35696O

It allows the fixing of the cylinder to the frame and the cylinder rotation during the opening phase. The bracket is connected to the cylinder by pivot or nipples.



GALVANIZED STEEL CONNECTOR (CYLINDER-VENT) FOR VENTILATION

PART No. 40252G



ALUMINIUM CONNECTOR (CYLINDER-VENT)

PART No. 35697P

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

VALVES AND ACCESSORIES

The valves pierce the CO2 cartridge in response to a thermal or electric (when the pyrotechnic device is installed) signal. The CO2 flows into the cylinder and causes the window opening.
Ultraflex Control Systems was in 1985 the first company in Italy starting the production of these emergency systems, contributing operatively and technically to carry on the experimental tests coordinated by the “National Center for Fire Prevention”.
The Ultraflex Control Systems valves grant a safe operation in case of fire and have been tested by an authorized Institute according to the UNI EN 12101-2 standard. The valves are supplied with the 68°C (180°F) thermal bulb.
Available on request other temperature calibrated thermal bulbs. CO2 cartridge are to be ordered separately.

For installation remarks refer to the section at page 33 or contact UCS’s technical department for further information.

ACCESSORIES

THERMAL VALVE WITH THERMAL BULB
PART No. 48232W

It is screwed directly to the cylinder (instead of the opening nipple). The needle pierces the CO2 cartridge when the temperature reaches the fusible link set value (68°C). The thermal valve is arranged for the pyrotechnic device application, also successively.

THERMAL VALVE WITH SELECTOR
PART No. 48234Y

It has the possibility to operate the cylinder by another energy supply such as a manual valves control box or a compressed air system.
It is supplied with connectors for the direct installation to cylinders and for connection to copper tubes.

MICRO CYLINDER
PART No. 40932Y

It can be used for additional lock on the vent in case of installation of cylinders without lock.
1/8” input and output attacks. Box in alluminium and stainless steel rod ø 14
Dimensions: ø 38x126 mm.

MANUAL VALVE CONTROL BOX
PART No. 40389F

It is the opening manual remote control. In case of fire for the operation it is necessary to break the glass and pull the lever down in order to obtain the punching of the CO2 cartridge internally installed. It is in red painted metal and provided with a sealable lock to prevent possible tamperings. The cartridges are to be ordered separately, according to the needs.
Available versions for cartridges up to 500g.

THERMAL BULBS

	PART No.
Red: 68°C	48236A

Other temperature settings available.
Ask for details.

THERMAL VALVE WITH THERMAL BULB WITH 1/8” THREAD
PART No. 48233X

Same features as thermal valve part No. 36751B: the 1/8” thread allows a direct connection to copper tubes by standard nipples (not supplied).

SELECTING VALVE
PART No. 36753D

It can be installed in any point of the system and allows to feed the cylinder by different energy supplies such as a manual valves control box or a compressed air system.
It is supplied with nipples for the copper tube 6 x 4.

VENTILATION MANUAL VALVE
PART No. 37878Y

Connected to a compressed air line, it allows the window opening and closing for daily ventilation.
The five ways valve with exhaust centres leaves the feeding ways free to enable the automatic operation in case of emergency.
It has 1/8” female thread and standard connectors are supplied for the 6x8 mm Rilsan tube.

CO2 CARTRIDGES

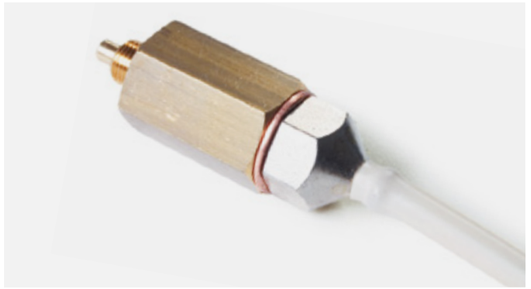
	PART No.
20g	41031V
30g	56071L
50g	56876X
75g	56878B
100g	57021C

Standard sizes available.
(coupling to thermal bulbs 68°).

ELECTRIC ACCESSORIES

for pneumatic systems

The automatic smoke detection system consists in the electronic control panel and the accessories. The built-in floating batteries guarantee the system operation also in case of main supply failure.



PYROTECHNIC DEVICE

PART No. 36754E (old for 12 mm bulbs)
PART No. 48235Z (new code for standard 5 mm bulbs)

It is a small piston containing a primer. It can be applied to the thermal valve or to the thermal valve with selector.
The detonation occurs when it is fed at 12 V or 24 V; its effect pushes a piston against the thermal bulb, breaking it.
It is for single use.

EMERGENCY PUSH BUTTON

PART No. 42140N

It's necessary to break the safety glass to operate the emergency button. Emergency push button allows control of the status of the system, reset the control panels and closes the windows at the end of the emergency.

Pyrotechnic device assembled to thermal valve and cartridge.

OPTICAL SMOKE DETECTOR

PART No. 36418Q

Smoke detection by infrared light diffusion for Tyndall effect. It is certified according to the UNI EN 54-7/9.

ALARM SIGNAL	through the red LED (light emitting diode).
RESPONS TIME	3 sec. approx.
VOLTAGE SUPPLY	24 V (min. 10 V, max. 30 V)
TEMPERATURE RANGE	-10° + 80° C
DEGREE OF HUMIDITY	< 95%
MAX AIR SPEED	10 m/s
DETECTED SURFACE	40 m2

A frequent cleaning, especially in dusty environment, is recommended.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

SPECIFICATION PROSPECTS

The system for smoke and heat exhaust with pneumatic cylinders must be completed with the following component according to the different kinds of installation:

Single System with automatic opening at 68° C:
› Thermal valve with CO2 cartridge and thermal bulb set at 68° C.

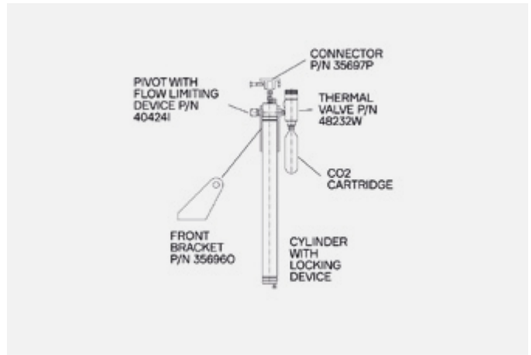
System with automatic opening at 68° C and ventilation control:
› Thermal valve with CO2 cartridge and thermal bulb set at 68° C;
› Selecting valve;
› Manual valve for ventilation to be connected to a compressed air system.

System with automatic opening at 68° C and smoke detector:
› Thermal valve with CO2 cartridge and thermal bulb set at 68° C;
› Pyrotechnic device for breaking the thermal bulb;
› Single zone electronic control panel with floating batteries and lock, suitable to be connected to optical smoke detectors, push buttons and sirens, emergency push buttons.

POSSIBLE APPLICATIONS & ACCESSORIES

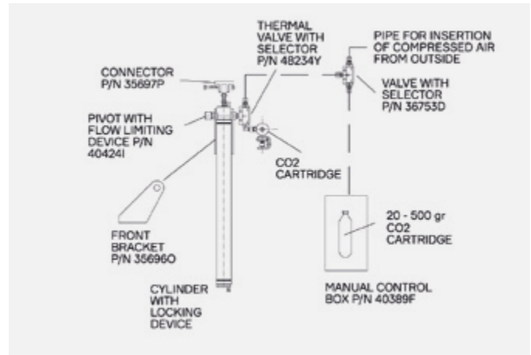
INSTALLATION EXAMPLE 01

Single system with automatic opening at 68° C.



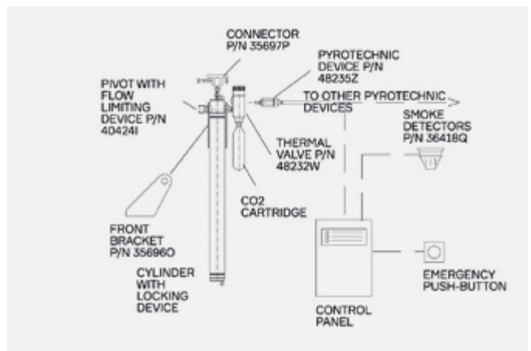
INSTALLATION EXAMPLE 02

Single system with automatic opening at 68° C and manual control box and opening from outside for maintenance.



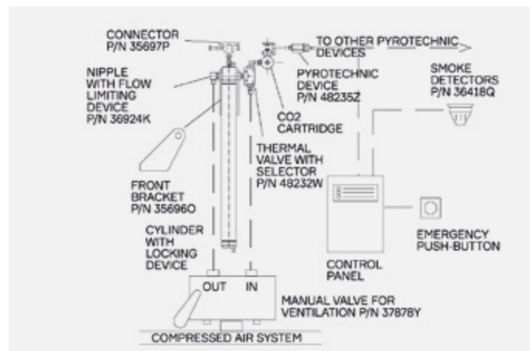
INSTALLATION EXAMPLE 03

System with automatic opening at 68° C and smoke detection.



INSTALLATION EXAMPLE 04

System with automatic opening at 68° C smoke detection and ventilation control.



For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

MEC LINE

Mechanical systems for natural ventilation.

MANUAL REMOTE CONTROLS

Mechanical systems for ventilation

The Mec Line mechanical systems for the window remote control are super-tested, reliable, economical, easy and quick to install.
The products are constantly improved thanks to the greatest experience in the window manual controls field. The movement transmission from the control operator to the opening mechanism is effected by a steel helical cable which runs inside a steel conduit.
The cable must pull against load (e.g. closing a bottom hinged window and opening a top hung window).

Every system has to be provided with the following items:

- CONTROL OPERATOR, flat, mini, simple, concealed and geared operator.
- TRANSMISSION ELEMENTS: cable, conduit, connectors, saddles, lock springs, end plugs.
- OPENING MECHANISM, chain openers, forks and locking openers for bottom hinged windows.

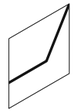
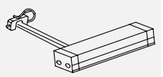
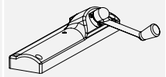
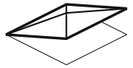
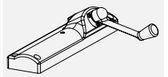
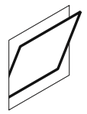
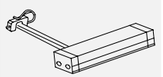
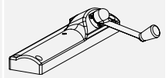
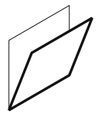
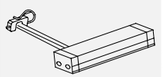
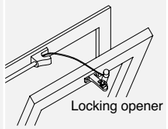
To open no more then one window with one control operator, the previuos items are also contained all together in the “BRAVO” or in the “KIT for BOTTOM or TOP HINGED WINDOWS”.
In case of installations with more than one locking opener or fork, rotary junction boxes are required (see TRANSMISSION ELEMENTS section).
For a right installation the tool for conduit preparation and the conduit bender are very useful (see TRANSMISSION ELEMENTS section).

For further information regarding the installation of the Mec Line product, please ask for the installation manual.

For installation remarks refer to the section at page 33 or contact UCS’s technical department for further information.

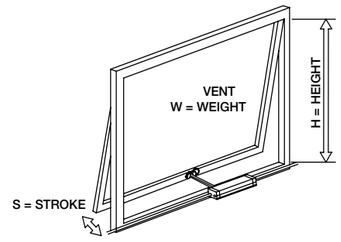
It’s possible to find the most appropriate opening mechanism and handle operator for the required system, referring to the following charts.

OPENING MECHANISM SELECTION

WINDOW TYPE	ADVISED MECHANISM		WINDOW TYPE	ADVISED MECHANISM	
	 Chain mechanism	 Cat		 Telescopic spindle	 Cat
	 Chain mechanism	 Cat		 Fork	
	 Chain mechanism	 Locking opener		 Fork	

CONTROL OPERATOR SELECTION

Following charts refer to accurate installation, executed with our tools, with only one 90° bend of the conduit and with no rotary junction box included; the wind load has not been considered. Every additional bend or rotary junction box has to be counted as an additional window. For intermediate window heights refer to the directly lower height; in case of window lower than 750 mm it is necessary to reduce the actuator stroke to 1/3 of the window height. For windows with four-bar hinges the calculation of the necessary force depends on the hinge model. Please contact our Thecnical Dpt. for any specific application.



THESE SELECTION GUIDES HAVE TO BE CONSIDERED AS A GENERAL DIRECTION AND MUST BE CHECKED BY THE INSTALLER. FOR ANY SPECIFIC APPLICATION, PLEASE CONTACT OUR TECHNICAL DEPT.

S = Stroke 250 mm

H WINDOWS	No.	WEIGHT OF THE WINDOW (kg)											
		10	15	20	25	30	35	40	45	50	60	70	
750-1150	1												
	2												
	3												
	4												
	5												
	6												
	7												
1151-1400	1												
	2												
	3												
	4												
	5												
	6												
	7												
1401-1600	1												
	2												
	3												
	4												
	5												
	6												
	7												

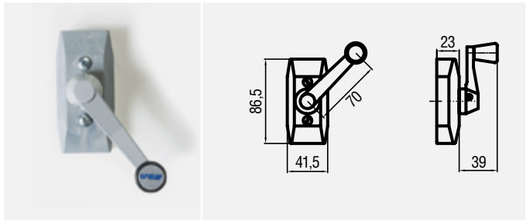
S = Stroke 380 mm

H WINDOWS	No.	WEIGHT OF THE WINDOW (kg)											
		10	15	20	25	30	35	40	45	50	60	70	
1150-1400	1												
	2												
	3												
	4												
	5												
	6												
	7												
1401-1600	1												
	2												
	3												
	4												
	5												
	6												
	7												

No. = No. windows + No. rotary junction boxes + No. bends (over 1)

Flat operator
Simple, mini, concealed operator
Geared operator

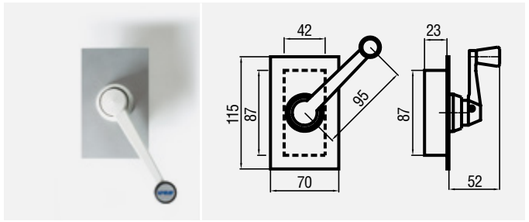
CONTROL OPERATORS



FLAT OPERATOR

- It can be used with the 25 cm and 38 cm chain openers and with the locking opener for single bottom hinged windows.
- The inside mechanism and the handle are made in metal and the cover in plastic.
- Maximum cable length: 6 m. The spent travel tube is external.

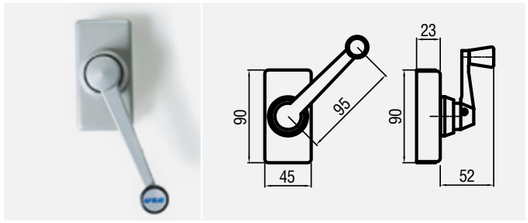
COLOUR	PART No.
WHITE RAL 9010	31560R
BLACK RAL 9005	37161J
GREY RAL 9006	40133A



CONCEALED OPERATOR

PART No. 30745X

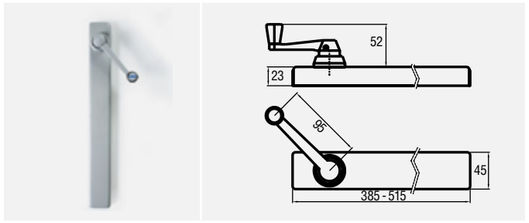
- It can be used with all opening mechanisms.
- It can be concealed into the wall or into the aluminium frame together with the spent travel tube.
- Completely made in metal with painted handle and aluminium anodized cover.



MINI OPERATOR

- It can be used with all opening mechanisms.
- Completely made in metal. The spent travel tube is external.

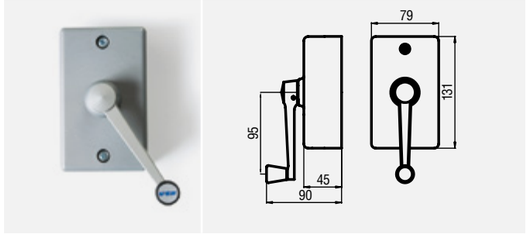
COLOUR	PART No.
WHITE RAL 9010	30748C
BLACK RAL 9005	36964S
GREY RAL 9006	36813E



SIMPLE OPERATOR - EXTENDED SIMPLE OPERATOR

- Style and efficiency are the main features of this operator.
- It incorporates the antitorsion spent travel tube which allows a maximum stroke of 25 cm or 38 cm.
- Completely made in metal.

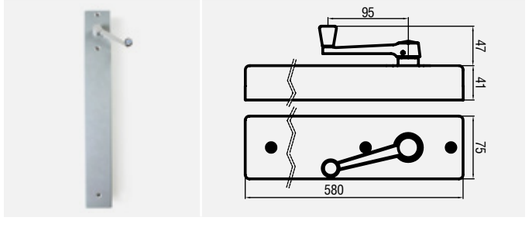
COLOUR	PART No. STROKE 250 mm	PART No. STROKE 380 mm
WHITE RAL 9010	41344K	30750U
BLACK RAL 9005	41345L	32594G
GREY RAL 9006	41346M	37035E



GEARED OPERATOR

- Ratio: 5:1
- It can be used with all opening mechanisms.
- Particularly suitable for operating many windows simultaneously and moving heavy windows.
- The inside mechanism and the handle are made in metal. The front cover is made in plastic. The spent travel tube is external.

COLOUR	PART No.
WHITE RAL 9010	40517S
BLACK RAL 9005	40543T
GREY RAL 9006	40544V



GEARED OPERATOR WITH LONG METALLIC COVER

- Version of geared operator with inner anti-torque spent travel tube and metal cover.

COLOUR	PART No.
WHITE RAL 9010	40777R
BLACK RAL 9005	40778S
GREY RAL 9006	40779T

TRANSMISSION ELEMENTS

In the manual window remote control systems MEC LINE, the transmission elements are the connection between the control operator, a manually moved mechanism through which it is possible to transmit the motion, and the opening mechanism which is directly connected to the window frame and it allows the opening. Transmission elements are the parts connecting the handle operators to the window openers, as below:

HELICAL CABLE

PART No. 30764A

It runs inside the conduit and it is the real transmission element. It is supplied in 50 meters reels.

CONDUIT

It is supplied in 3 meters steel rods externally coated in white, black or grey PVC. The internal tube is in polyethylene to make the cable sliding easier.

COLOUR	PART No.
WHITE RAL 9010	40205V
BLACK RAL 9005	40206A
GREY RAL 9006	36383B

END PLUG

It fixes the spent travel tube to the wall.

COLOUR	PART No.
WHITE	40139I
BLACK	40174J
GREY	40191O

CONNECTOR

The junction between two conduit rods.

COLOUR	PART No.
WHITE METAL	41079W
BLACK METAL	41078Z
GREY METAL	41080A

FIXING SADDLE

It is the element used to fix the conduit to the wall. It has to be placed one every meter and anyway one before and one after every bend.

COLOUR	PART No.
WHITE	30767D
BLACK	35446R
GREY	40134B

LOCK SPRING

PART No. 30770Y

It has to be screwed at the end of the helical cable, near the control operator.

ROTARY JUNCTION BOX

It is used to transfer the movement of the cable from the main line to the auxiliary ones; it is essential for systems with more than one locking opener, forks or chain openers (only if installed on windows placed upon others).

COLOUR	PART No.
WHITE	30768G
BLACK	37040B
GREY	40135C

TOOL FOR CONDUIT PREPARATION

PART No. 40097R

Necessary to prepare conduit ends.

CONDUIT BENDER

PART No. 30790G

Bending radius 100 mm. To form the conduit in such an even radius allowing regular operation of the cable.

CONDUIT BENDER FOR KIT WITH ROPE

PART No. 40153E

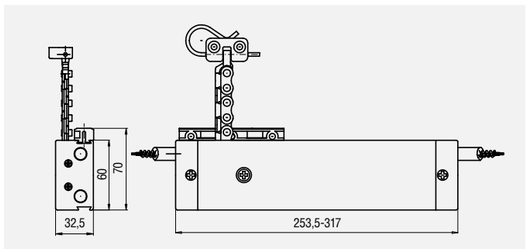
Bending radius 50 mm.

CHAIN OPENERS

Opening mechanisms for top and bottom hung windows

- Available with 250 mm or 380 mm stroke.
- Suitable for bottom hinged, top hinged and centre hinged windows.
- Versatility and ease of installation.
- Quick connection of the conduit to the chain opener: it's not necessary to work the conduit.
- Provided with quick release connector for an easy window cleaning.
- Minimum size: the minimum space for the mounting is 16 mm for top hinged windows and 36 mm for bottom hinged windows.
- The window opening stroke cannot exceed 1/3 of the window height. The chain stroke can be adjusted acting on the lock spring.
- The installation must be carried out in order to allow the cable working in pull action during the load operation (ex. in closing phase for bottom hinged windows and the opening phase for top hinged windows).
- In installations with two or more windows placed side by side, rotary junction boxes mechanism are not required.
- On windows wider than 1,5 m or anyway with a large area, for better stability to wind, it is suggested to install two or more chain openers.

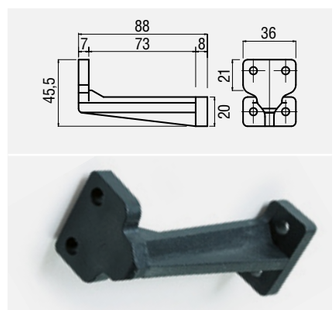
COLOUR	PART No. STROKE 250 mm	PART No. STROKE 380 mm
WHITE RAL 9010	37566D	37569I
BLACK ANODIZED	37565C	37568H
SILVER ANODIZED	37564B	37567E



Mechanism dimensions

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information. On bottom hinged windows for safety reasons always install side checks.

Bracket for top hinged window (included)

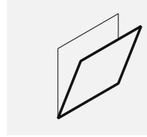


Bracket for bottom hinged part No. 37616T

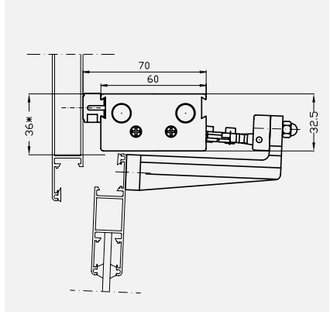
INSTALLATION EXAMPLES

INSTALLATION EXAMPLE 01

Installation on window frame, bracket included (bottom hinged window bracket to be ordered separately). Needs 36 mm free height as per drawing.

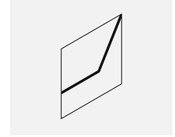


Bottom hinged windows

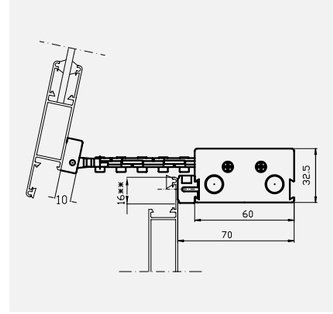


INSTALLATION EXAMPLE 02

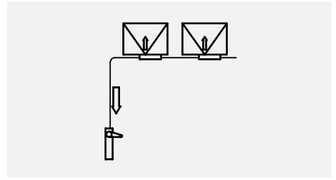
On window frame with included bracket. Needs 16 mm free height as per drawing.

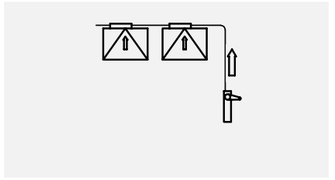


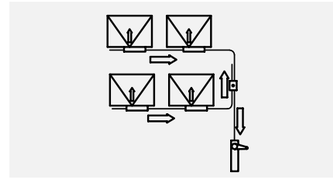
Top hinged window



EXAMPLE OF MULTIPLE INSTALLATION







The arrows show direction of cable run during window opening.

FORK

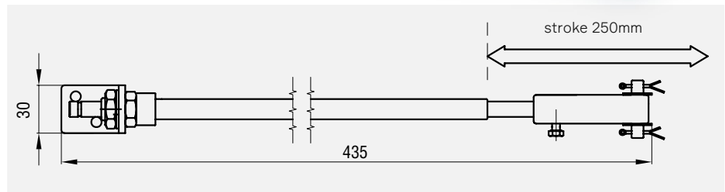
Opening mechanisms for louvres.

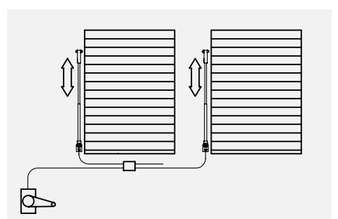
Fork dimensions

FORK AND SWIVEL - HEAVY DUTY (travel 250 mm)

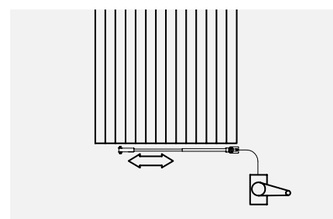
PART No. 30758E

- Suitable for horizontal or vertical sun louvre blades, both for one or more windows.
- Made in stainless steel, it's suitable both for internal and external installations.
- A geared operator should be used for sun-blades and vertical louvres with more than 10 blades or for horizontal louvres with more than 14 blades.
- For installation with more than one window, rotary junction boxes have to be used.





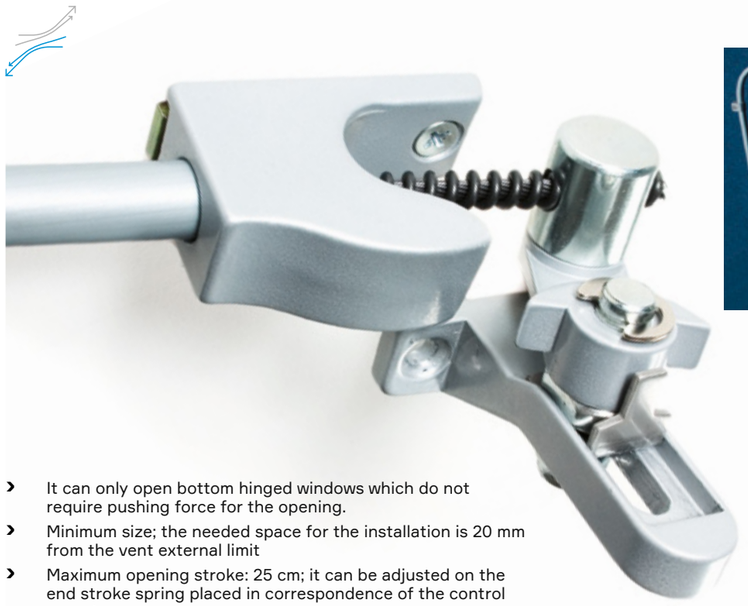
On horizontal louvre blades

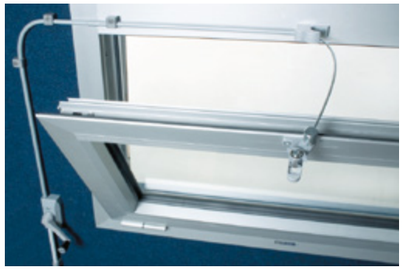


On vertical sun blades

LOCKING OPENERS

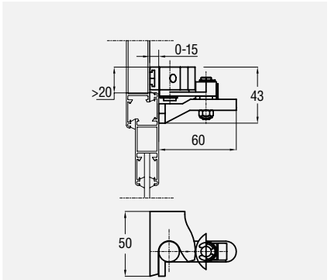
Opening mechanism for bottom hung windows





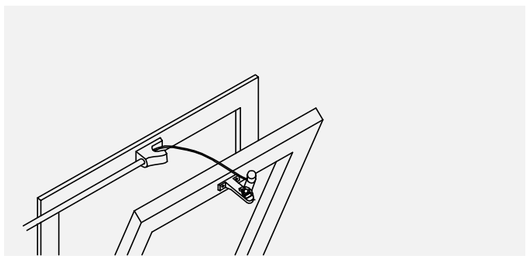
- It can only open bottom hinged windows which do not require pushing force for the opening.
- Minimum size; the needed space for the installation is 20 mm from the vent external limit
- Maximum opening stroke: 25 cm; it can be adjusted on the end stroke spring placed in correspondence of the control operator.
- For window heights less than 500 mm it is necessary to reduce the stroke to 1/3 of the window height.
- It is not necessay any work on conduit.
- In systems with more windows it is necessary to use rotary junction boxes to transmit the cable movement from the main line to the auxiliary ones.
- For windows wider than 1,5 m it is necessary to apply two or more thrust points.

COLOUR	PART No.
WHITE RAL 9010	30754Y
BLACK RAL 9005	37156M
GREY RAL 9006	37239Q

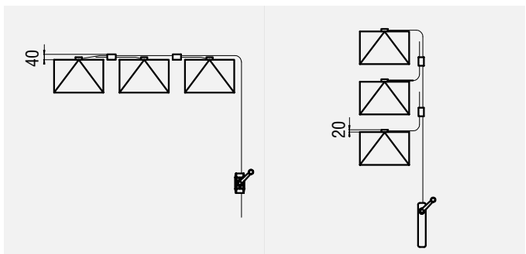


Locking opener dimensions

EXAMPLE OF SINGLE INSTALLATION



EXAMPLE OF MULTIPLE INSTALLATION

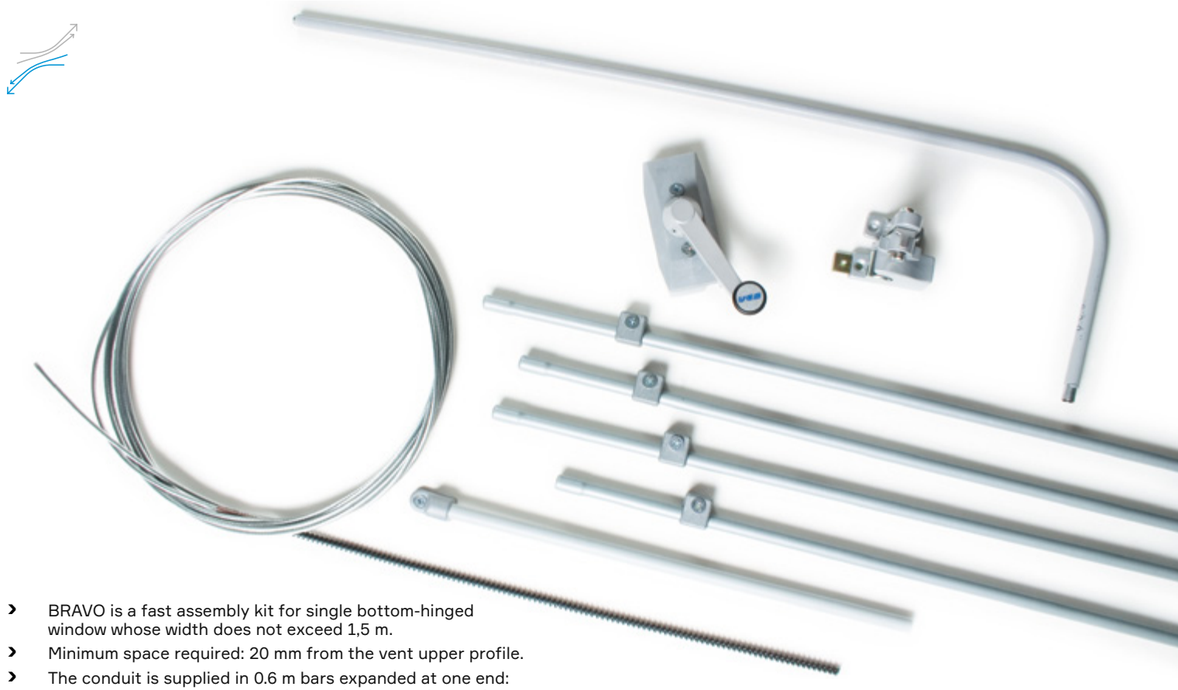


The dimension are measured from the external limits of the vent and show the minimum necessary space.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.
On bottom hinged windows for safety reasons always install side checks.

BRAVO

Fast assembly kit for single bottom-hung windows

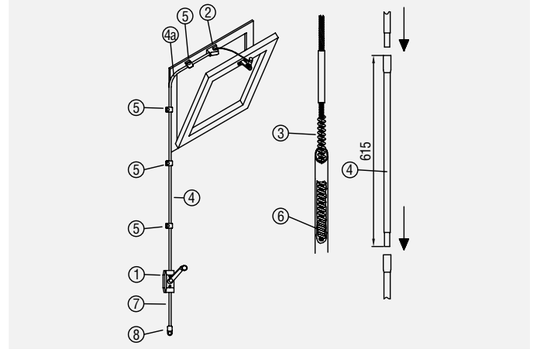


- BRAVO is a fast assembly kit for single bottom-hinged window whose width does not exceed 1,5 m.
- Minimum space required: 20 mm from the vent upper profile.
- The conduit is supplied in 0.6 m bars expanded at one end: speed of assembly is ensured thanks to its insertion, with no need of joints.
- One bar of the conduit is already bent (50 mm radius), there is no need of any tool.
- Maximum opening: 250 mm; the kit is supplied complete with a pre-cut spent travel tube.
- For vents lower than 500 mm, reduce the stroke to 1/3 of the height by adjusting the end stroke spring, located by the control operator.

COLOUR	PART NO. CONDUIT LENGTH 3,05 m	PART NO. CONDUIT LENGTH 4,25 m	PART NO. CONDUIT LENGTH 6,05 m
WHITE	40649K	40650U	40651W
BLACK	40652Y	40653A	40654C
GREY	40655E	40656G	40657J

NOTE: to open more than one window, loose elements must be ordered.

POS	DESCRIPTION	Q.TY	Q.TY	Q.TY
01	Flat operator	1	1	1
02	Locking opener	1	1	1
03	Cable	3,5 m	4,7 m	6,5 m
04	Conduit	4	6	9
04A	Bent conduit	1	1	1
05	Saddle	4	6	8
06	Lock spring	1	1	1
07	Spent travel tube	1	1	1
08	End plug	1	1	1



For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.
On bottom hinged windows for safety reasons always install side checks.

KIT

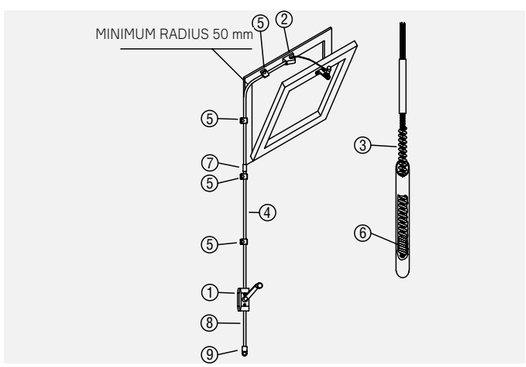
for single bottom hung windows with rope

- Suitable for single bottom hinged windows with less than 1,5 m width.
- To have less friction, in order to reduce friction , a rope substitutes the helical cable which is present just in correspondence of the control operator.
- Quick and easy installation. The conduit preparation tool is not required.
- The small section of the conduit allows an only 50 mm radius bend: it is usually possible to install the conduit on the window frame.
- Maximum opening 250 mm; the kit is provided with already cut spent travel tube.
- The conduit, coated in PVC, is supplied in 3 m pieces.

NOTE: to open more than one window, loose elements must be ordered.

COLOUR	PART NO. CONDUIT LENGTH 3,00 m	PART NO. CONDUIT LENGTH 4,50 m	PART NO. CONDUIT LENGTH 6,00 m
WHITE	40166J	40167K	40168N
BLACK	40171G	40172H	40173I
GREY	40194R	40195S	40196T

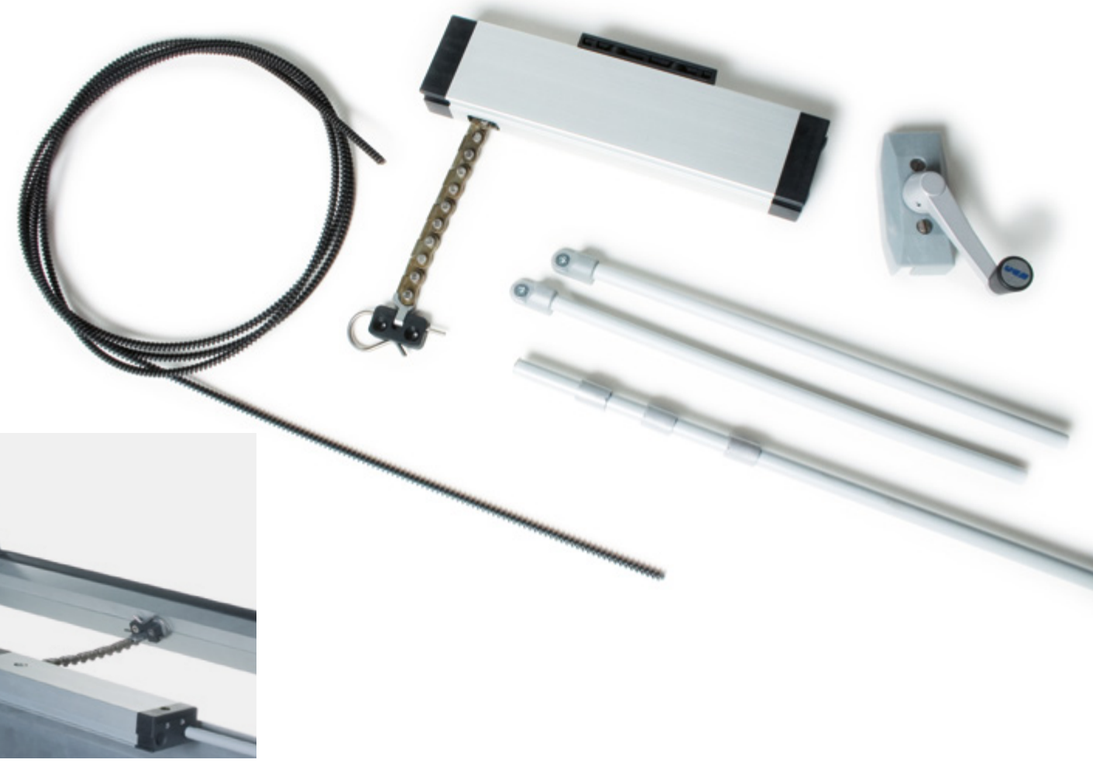
POS	DESCRIPTION	Q.TY	Q.TY	Q.TY
01	Flat operator	1	1	1
02	Locking opener	1	1	1
03	Cable	3 m	4,5 m	6 m
04	Conduit	3 m	4,5 m	6 m
05	Saddle	4	8	8
06	Lock spring	1	1	1
07	Connector	0	1	1
08	Spent travel tube	1	1	1
09	End plug	1	1	1



For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.
On bottom hinged windows for safety reasons always install side checks.

KIT

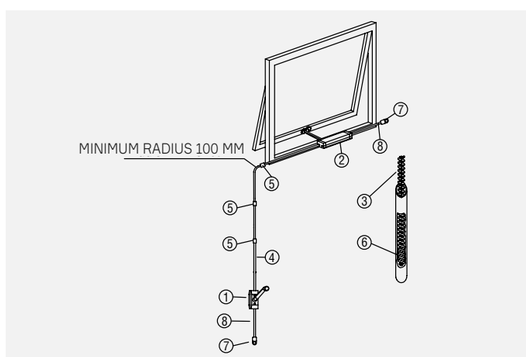
for single top hung windows



- Suitable for top hung windows with less than 1,5 m width.
- Maximum opening: 250 mm; the kit is provided with two already cut spent travel tube.
- The conduit is supplied in 3 m pieces.
- Available version: 3 m.
- Suitable for bottom hinged windows adding the bracket part No. 37616T.

COLOUR	PART NO.
WHITE	36715U
BLACK	37642Y
GREY	40138H

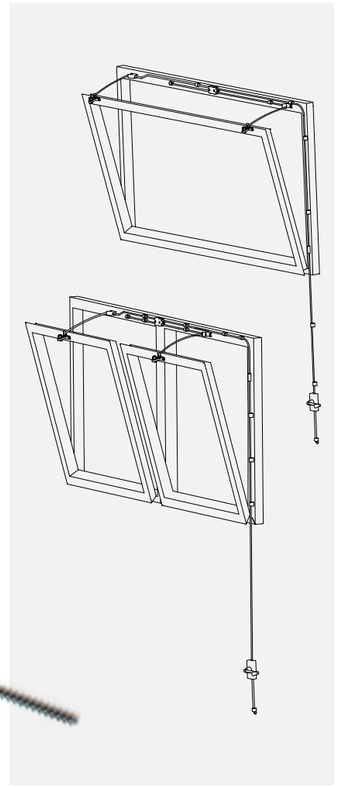
POS	DESCRIPTION	Q.TY
01	Flat operator	1
02	Chain opener	1
03	Cable	3 m
04	Conduit	3 m
05	Saddle	3
06	Lock spring	2
07	End plug	2
08	Spent travel tube	2



For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

DUETTO

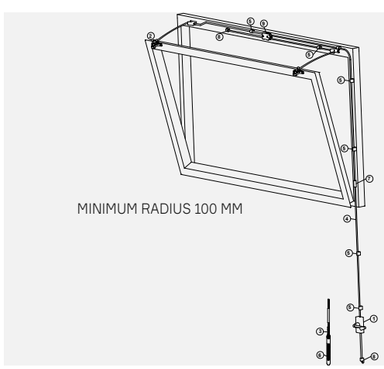
fast assembly kit for single or double bottom hung windows



- Use the kit only on windows with width not superior to 3,0 m.
- The minimum space required on the frame to install the locking opener and rotary junction box is 40 mm.
- Maximum opening is 250 mm.
- Conduit (2x3m), conduit bender and tool for conduit preparation are not included in the DUETTO kit and have to be ordered separately.

COLOUR	PART NO.
WHITE	42049A
BLACK	42050B
GREY	42051C

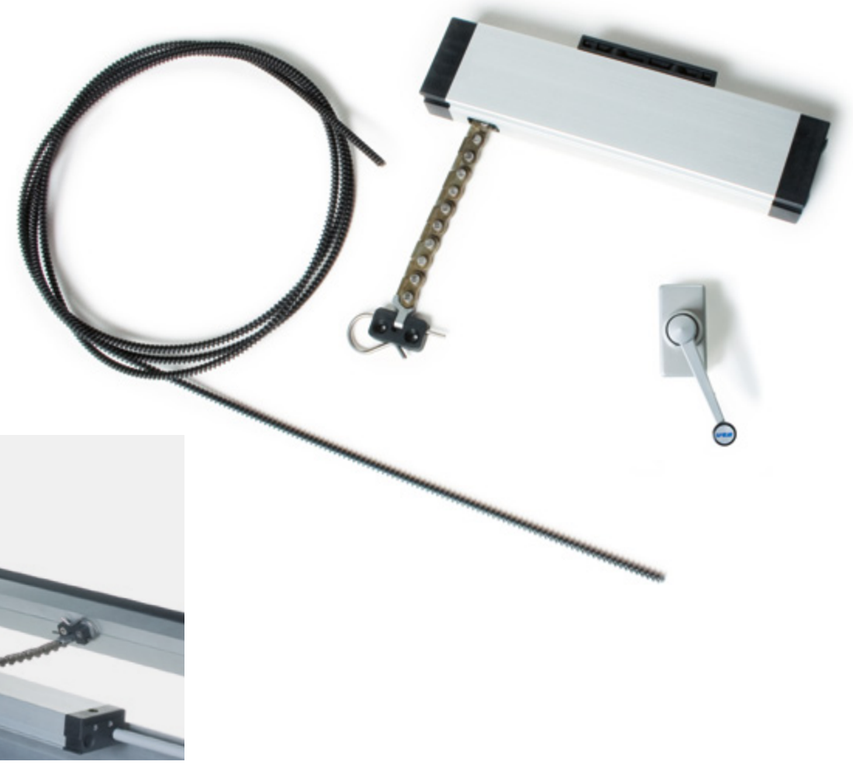
POS	DESCRIPTION	Q.TY
01	Mini operator	1
02	Locking opener	2
03	Cable	6 m
04	Conduit	Not included
05	Saddle	10
06	Lock spring	1
07	Conduit connector	1
08	End plug	2
09	Rotary junction box	1



For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.
On bottom hinged windows for safety reasons always install side checks.

ARIA

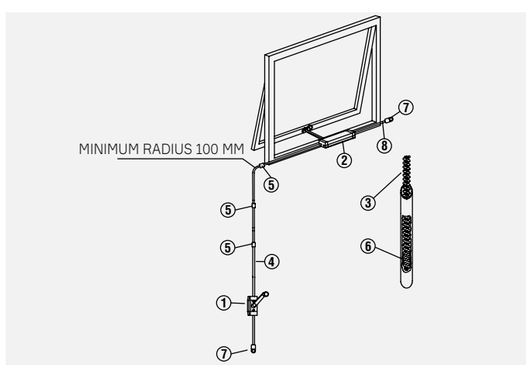
fast assembly kit for single top hung windows



- Suitable for top hung windows with less than 1,5m width
- Maximum opening: 250 mm;
- Conduit (2x3m), conduit bender and tool for conduit preparation are not included in the ARIA kit and have to be ordered separately.
- The 6m length represents the cable length.
- Suitable for bottom hinged windows adding the bracket part No. 37616T.

COLOUR	PART NO.
WHITE	42052D
BLACK	42053E
GREY	42054F

POS	DESCRIPTION	Q.TY
01	Mini operator	1
02	Chain opener	1
03	Cable	6 m
04	Conduit	Not included
05	Saddle	10
06	Lock spring	2
07	End plug	2

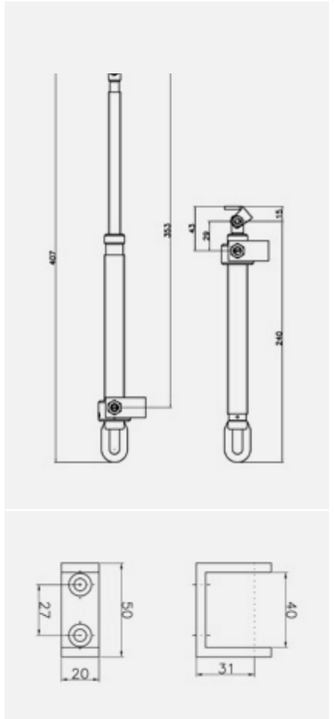


For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

TELESCOPIC SPINDLE

- Suitable to operate skylights, domes and roof windows up to a weight of 2000 Kg.
- Opening stroke: 310 mm.
- Chrome-plated surface, spindle in brass.
- Complete bracket set included.
- Operation by crank handle.

MODEL	PART NO.
TELESCOPIC SPINDLE	37243K
CRANK HANDLE 1500 mm	42051C
CRANK HANDLE 2000 mm	40001L
CRANK HANDLE 2500 mm	40002M
CRANK HANDLE 3000 mm	40003N

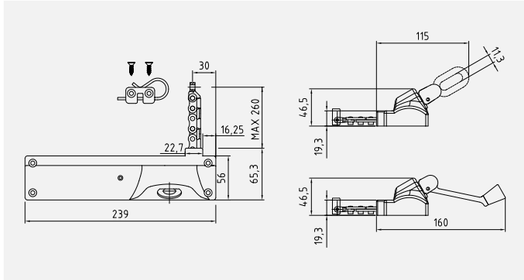


CAT

Manual chain opener

- Manual chain operator for skylights, roof windows and top hung windows.
- Easy and quick installation on wood, metal and PVC windows.
- Maximum opening approx. 260 mm. It is possible to stop the sash in any position.
- Allows window operation without remove any insect screen.
- When closed it is not possible to open the window from outside.
- Smooth and easy operation.
- Quick release system for easy window cleaning.
- Corrosion protected chain. Suitable for windows with more than 300 mm height.*
- The CAT chain actuator is supplied with a handle for installation on windowsill or eyelet for operation by crank handle for skylights or roof windows.

MODEL	→ COLOUR / ↓ PART NO.		
	WHITE RAL 9010	BLACK RAL 9005	GREY RAL 9006
CAT chain opener with handle	40761WIN	40807WIN	40808WIN
CAT chain opener with eyelet	40761SKY	40807SKY	40808SKY
Crank handle 1500 mm		40764E	
Crank handle 2000 mm		40765F	
Crank handle 2500 mm		40766G	
Crank handle 3000 mm		40767H	



Actuator dimension

* For window less than 500 mm high, please refer to the user manual.

Maximum load on the chain 180N

The above value do not include any wind or snow load.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

For installation remarks refer to the section at page 33 or contact UCS's technical department for further information.

SAFETY WARNINGS

- Before proceeding to install an actuator, verify the following:
  - the technical features of the actuator and its own fixing accessories are suitable to the advised application, to the type, weight and dimensions of the window; in case of actuator with available fixing brackets both in plastic and aluminium, use the aluminium ones if the performances required to the actuator are close to the nominal values;
  - window frame and accessories have to be correctly sized to stand the actuator load stress;
  - the window has to be free from any window hinge or other obstacle to open for the whole stroke of the actuator;
  - the electric system has to comply with current specifications;
  - power supply has to be the one indicated by the technical features of the actuator.
- The declared nominal values do not consider any wind stress: it is necessary to evaluate it correctly to avoid any failure of the actuator or of the window, particularly in case of large windows.
- The electric actuators have to be installed on windows out of range for people only. If the windows are within reach of people, provide systems of protection against squeezing.
- For safety reasons always install side checks on bottom hinged windows.
- It is advisable to install a momentary push-button.
- In case of actuator installed on the vent, verify the electric cable not to be stressed or cut or pinched during operation.
- During installation or release of the actuator, be careful to avoid accidental closing of the window causing damage to people (bruise-squeezing-cut).
- The installation of two actuators on the same window is possible, only with an adequate control system or using a Synchro versions actuators.
- The installation and the actuator's connection to electrical net has to be done from qualified people only in accordance with the directives.
- Installations and/ or equipments using our products must be carried out by UCS.
- The power control and the actuators included in this catalogue are not to be considered "machinery" pointed out in the directive 2006/42/CE and following modification. In case they are included in systems that are part of the application field of these directives, it is responsibility of the installer the fulfilment of the safety requisites.

GENERAL INFORMATIONS

- The actuators are tested one by one and periodically endurance tests (10.000 cycles with maximum load) are carried out, in compliance with specifications for actuators used both for ventilation and for smoke and heat extraction.
- The technical data reported in this catalogue are referred to tests carried out in room temperature.
- The working temperature of actuators are: from - 10°C to + 60°C with maximum relative humidity 60%.
- Notes about actuators voltage supply:
  - 230 Vac actuators: voltage supply has to be 230 Vac ± 10% through pure sine wave;
  - 24 Vdc actuators: voltage supply has to be 24 Vdc ± 10%.
- In case of electric actuators connected to automatic control systems (BMS), an approval by our techical department has to be required.

QUALITY MANAGEMENT SYSTEM

The Ultraflex Control Systems Quality Management Systems has been certified by DNV-GL in conformity with the UNI EN ISO 9001:2015 rule and involves all the company resources and processes starting from the design, in order to:

- Define and comply with the customer requirements.
- Set up the actions to maintain and improve the quality standards constantly.
- Pursue a continuous improvement of the effectiveness and efficiency of the processes in order to meet the needs of the market and increase customer satisfaction.

WARRANTY CONDITIONS

The following warranty conditions contain the whole agreement between UCS and the buyer and substitute all the previous commitments and representation both written than verbal between the buyer and UCS. If any of the following clause results invalid or non-applicable for any reason, the remaining part of the warranty and its appliance will be not compromised. Any notification by the buyer must be sent to ULTRAFLEX CONTROL SYSTEMS, Via XXV Aprile, 45 – 16012 Busalla (GE), ITALIA.

WARRANTY

UCS products are guaranteed for a period of two years starting from the date of production identified by the serial number on the label. For substitution or repair of the products in warranty, the warranty period of the new or repaired product terminates on the date regarding the warranty period of the original product. Buyer/installer is no co-warrantor and is not authorized from UCS to modify or amend the present warranty terms in any way. If UCS confirms plain defects or non-compliance of goods, payment for indemnity or direct/indirect punitive damages in any amount and quality is excluded. Cost of labor and other costs related to the removal and reinstallation of the replaced products are excluded as well as components not produced by UCS, even if guaranteed by other manufacturers. In case of defective products due to materials, engineering and manufacturing, UCS will repair or substitute (to UCS own discretion) any defective part delivered by the customer. Shipping costs for the replaced or repaired items that fall within the terms of the present warranty, are at UCS charge. If the returned item results no defective due to materials, engineering or manufacturing, UCS will not deal with the restitution. After evaluation, UCS will inform the customer in writing about the status of the product and about the repairing costs if the product is not included in the term of the present warranty.

TERMS OF WARRANTY EXCLUSION

- Products not returned to UCS to allow direct verification of the defects and the ability to repair.
- If the products cannot be identified by means of the Serial Number.
- If the warranty period, identified by means of the Serial Number, exceeds the terms or the present warranty.
- Damaged products due to wrong choice, installation and use that do not comply the specifications included in the technical manual supplied with the product.
- Damaged products due to modifications not formally approved by UCS.
- Damaged products due to usage, climate conditions, improper use and maintenance, accident, fire or other occasional damages that cannot be related to the product.
- Electric actuators damaged or malfunctioned connected to building automation systems that have not been in advance and formally authorized, in writing, by UCS.
- Products installed in combination with inappropriate components or components not manufactured by UCS.

Besides, we underline that the present warranty does not cover costs related to removal and reinstallation of the products, routine maintenance activities and the payment of damages direct or indirect of any nature and entity. The customer is responsible for the choice and appropriate use of the product required.

LAW AND JURISDICTION

The Italian Civil Code shall apply and the Court of Genoa shall have jurisdiction in the event of any dispute.

NOTE

Descriptions and pictures in the catalogue, on the website and in all the information material are provided as a rough guide.
Any partial or total reproduction is prohibited. For further detailed information please contact our Technical Department. UCS reserves the right to modify its products at any time, without notice.

SALES CONDITIONS

ORDERS - Orders sent to ULTRAFLEX CONTROL SYSTEMS (hereinafter referred to as UCS) means total and unconditional adherence to the present sales conditions and must be transmitted in writing. These sales conditions may be in any moment modified by UCS, giving notice to customers with sales contracts in progress. The sale contract is finalized with the submission by UCS of the order confirmation which includes all the terms of the negotiation; if the order confirmation is not returned to UCS by the customer indicating different observations within 2 days from the receiving, it is understood to be irrevocably accepted in any terms.

DELIVERY - The delivery date indicated on the confirmation order should not be considered binding being dependent by the supply of materials and other facts of force majeure. The delay on the agreed delivery terms does not permit request of damages.

TRANSPORT - The goods travel at the risk and peril of the customer even if sold free of carriage. In case of losses or damages to the goods, the customer must accept with reserve indicating the fact on the transport document that has to be signed by the transporter. Claims must be notified in writing to the carrier and, for information, to UCS within 3 days from the receiving of the goods.

SALE PRICE - UCS reserves the right to change sale prices present on the list price. The confirmation order sent to the customer brings the final price and without notice to the contrary by the customer it will be considered accepted.

PAYMENT TERMS - The confirmation order contains the terms of payment. In case of delay in the payment, interest shall be effective automatically by law. In case of default in payments, also in respect of previous orders, the fulfillment of order in progress will be suspended. The right of property will be reserved as per art. 1523 of the Italian Civil Code regarding the sale.

CLAIMS - Any claim related to plain defects or non-conformity, must be communicated to UCS within 7 days from the date of receipt of the goods; in case of hidden defects, the term starts from the proved date of discovery. The customer must transmit, in writing, information regarding the defects or the non-compliances found. Return of goods without written authorization by UCS is not accepted. Defective items must be sent at customer's risk and expenses.

Graphic Design
OSMO

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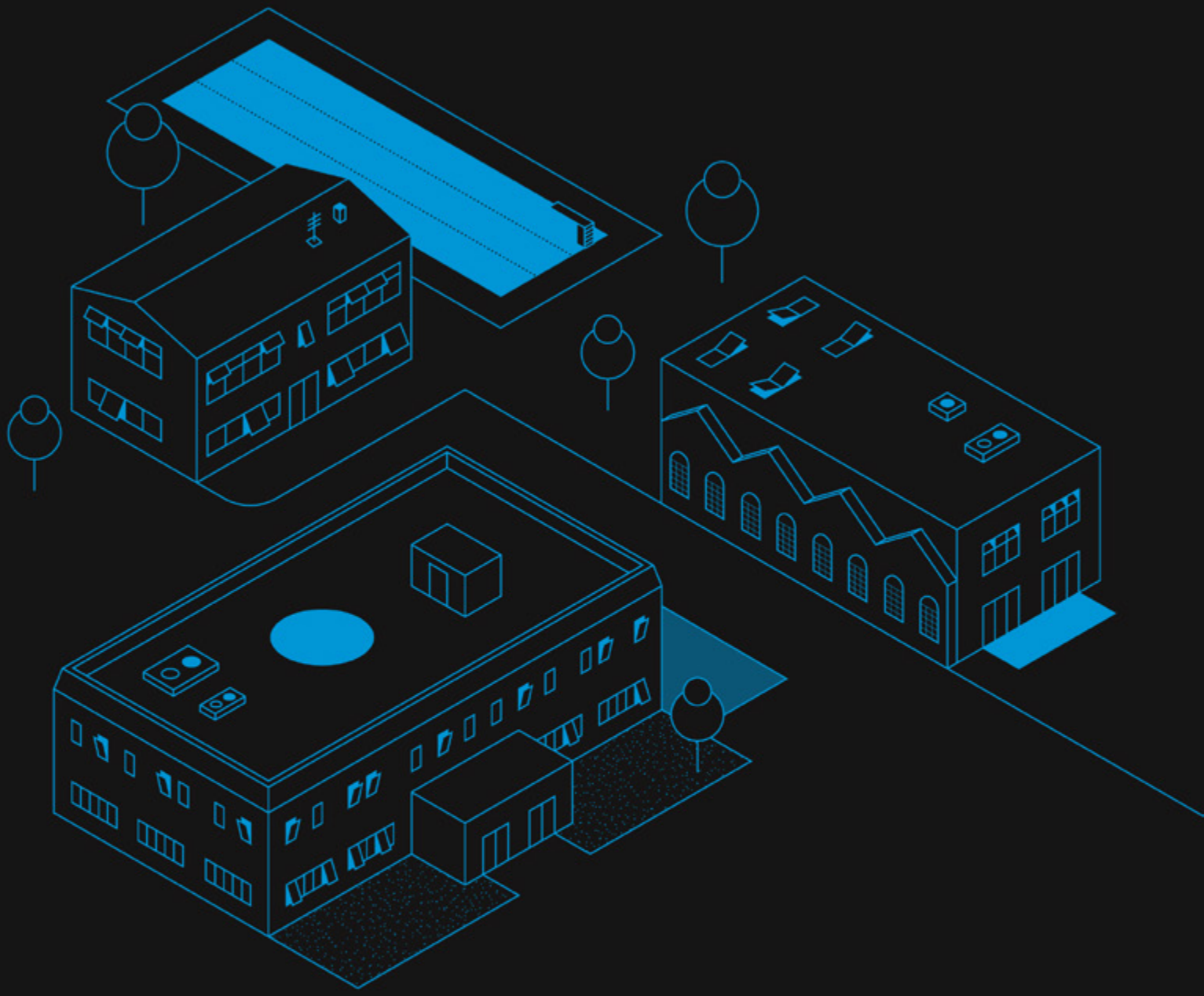

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