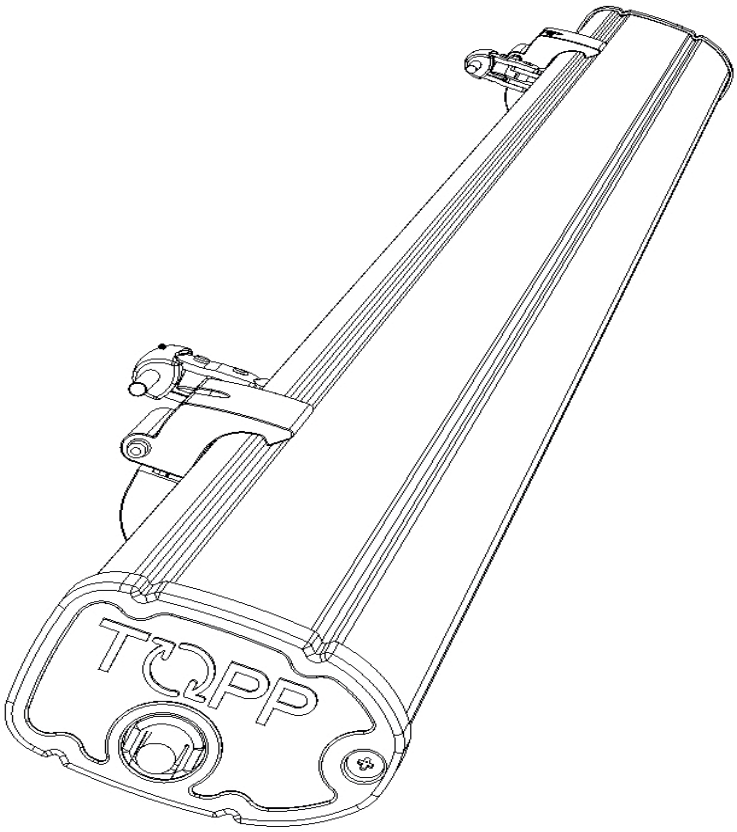
TOPP
tecnologie del movimento

EN

INSTALLATION AND USE INSTRUCTIONS

CHAIN ACTUATOR FOR WINDOW AUTOMATION

C260

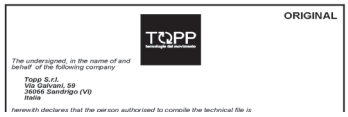


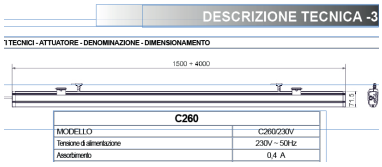
COD. 0P5371

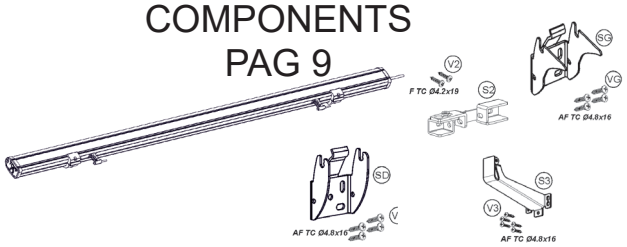
VER. 00 | REV.07.20

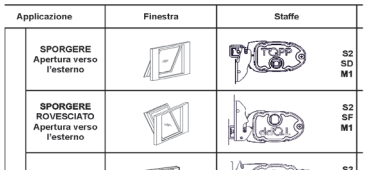
BEFORE INSTALLING AND USING THE ACTUATOR, IT IS COMPULSORY FOR THE INSTALLER AND THE USER TO READ AND UNDERSTAND THIS MANUAL IN ALL ITS PARTS.

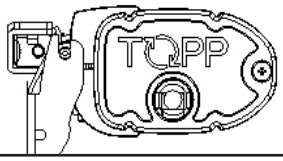
THIS MANUAL IS INTEGRAL PART OF THE ACTUATOR AND MUST BE PRESERVED FOR FUTURE REFERENCE UNTIL DEMOLITION OF THE SAME.

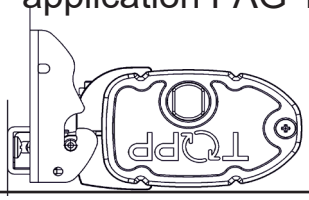


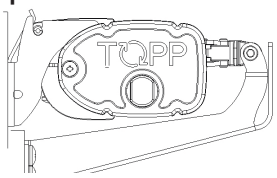


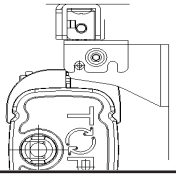


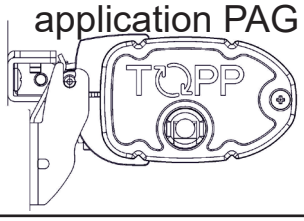


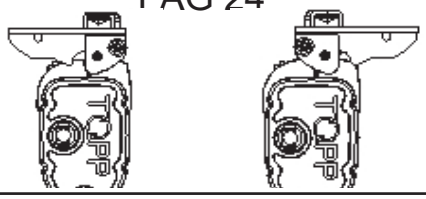


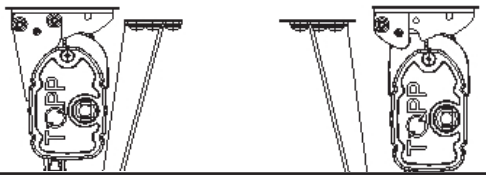


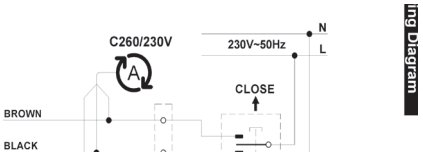












ing Diagram

ORIGINAL

The undersigned, in the name of and behalf of the following company

Topp S.r.l.
Via Galvani, 59
36066 Sandrigo (VI)
Italia

herewith declares that the person authorised to compile the technical file is
Name: Plaza Trinidad- Topp S.r.l.
Address: via Galvani,59 36066 Sandrigo (VI)

and that to the partly completed machinery

CHAIN ACTUATOR FOR WINDOW AUTOMATION

Type: C260
Model(s): C260/230V

the following essential requisites of the
2006/42/EC Machinery Directive (including all applicable amendments)
have been applied and fulfilled: Enclosure I: 1.5.1; 1.5.2; 1.5.10; 1.5.11
that the relevant technical documentation is compiled in accordance with part B of Annex VII of the above mentioned Machinery Directive..

The above identified partly completed machinery is also in conformity with the all the relevant provisions of the following directives (including all applicable amendments)
EMC Directive 2014/30/EU
RoHS II Directive 2011/65/EU

The following harmonised standards have been applied:
EN 60335-2-103:2015 *(applicable parts)*
EN 55014-1:2006 + A1:2009 + A2:2011
EN 55014-2:2015
EN 61000-6-2:2005.
EN 61000-6-3:2007 + A1:2011 + AC:2012.
EN 50581:2012
and the following technical documents:
EN 62233:2008

The undersigned also undertakes the obligation, in response to a duly reasoned request by the national market surveillance authorities, to transmit to the a.m. authorities, in electronic or paper format, the relevant technical documentation on the partly completed machinery.
The above identified partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the above mentioned Machinery Directive.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Date: *Sandrigo0 15/05/2020*

Signature: *Matteo Cavalcante*
Amministratore .....

GENERAL INSTRUCTIONS

- Before installing and using the actuator, it is compulsory that the installer and the user carefully read and understand this manual in all its parts.
- This manual is integral part of the actuator and must compulsorily be preserved for future reference.
- The manufacturer has no liability for any eventual damage to persons, animals and things due to the inobservance of the prescriptions described in this manual.
- In order for the automation unit to operate correctly, we recommend carrying out periodical maintenance on it, as indicated in this manual.
- The warranty on the actuator will not be honored if product is not installed and used according to the instructions provided and the regulations shown in this instruction manual and if it is used with non genuine parts, accessories, spare parts and/or control/feeding units.

INSTALLER AND USER

- The actuator installation can be performed exclusively by competent and qualified technical personnel satisfying the professional and technical requirements foreseen by the laws in force in the country of installation.
- The installation technician shall accept full responsibility for any installation errors and for any failure to adhere to the instructions provided in this manual. The installation technician shall therefore be exclusively liable for any damages caused to users and/or third parties that may arise as a result of incorrect installation.
- The actuator can be used exclusively by a user acting in compliance with the instructions contained in this manual and/or in the manual of the actuator control device (e.g.: control unit).

TECHNICAL ASSISTANCE

- Contact the installation technician or retailer for assistance.

RESERVED RIGHTS

- The reserved rights on this manual “Installation and use instructions” remain property of the Manufacturer.
- Each information herein contained (text, drawings, diagrams, etc.) is reserved.
- None part of this manual can be reproduced and disclosed (totally or partially) by any reproduction means (photocopies, microfilms or other) without written authorization of the Manufacturer.

DESCRIPTION OF PERSONNEL

USERS MUST NEVER PERFORM OPERATIONS RESERVED FOR MAINTENANCE PEOPLE OR SPECIALISED TECHNICIANS. THE MANUFACTURER DECLINES ALL LIABILITY FOR DAMAGE DERIVING FROM FAILURE TO OBSERVE THE ABOVE REQUIREMENTS.

Specialised electrician:
A specialised electrician must be able to install the actuator, start it and operate it both in normal conditions and in the maintenance mode; he/she is qualified to perform all electrical and mechanical adjustment and maintenance operations. He/she is allowed to work on live electrical cabinets and junction boxes.

User:
specialised person capable of operating the actuator under normal conditions by using the relative controls. He/she must also be able to operate with the actuator under “maintenance” in order to perform simple routine maintenance operations (cleaning), and start or reset the actuator following an unscheduled stop

SAFETY GENERAL INSTRUCTIONS

- Operators must be informed of accident risks, safety devices and the general accident prevention regulations established by international directives and by the law in force in the country of use. All operators must strictly comply with the accident prevention regulations in force in the country of use.
- Do not remove or alter the plates placed on the actuator by the manufacturer.
- If the window frame is accessible from or installed at a height of less than 2.5 m from the ground, and if it can be commanded by an untrained user or with a remote control device, fit an emergency stop system which automatically cuts in to prevent the risk of crushing or dragging parts of the body inserted between the moving and fixed parts of the window frame.
- Do not operate dome windows in the presence of a load of snow in excess of the quantity declared acceptable by the window manufacturer.
- Any tampering with or unauthorized replacement of one or more parts or components of the actuator, or the use of unoriginal accessories and consumables, may increase the risk of accident and thus relieves the manufacturer of all civil and penal liability.
- The maintenance operations involving the total or partial dismounting of the actuator may only be performed after disconnecting it from the power supply.
- This appliance may not be used by persons (children included) with reduced physical, sensorial or mental capacities, or inexpert people, unless they are supervised and taught how to use it by a person responsible for their safety.
- Children must be controlled to make sure they do not play with the appliance.
- During handling and installation of the parts, the personnel shall be equipped with suitable personal protection equipment (PPE) so as to perform the works required under safe conditions.

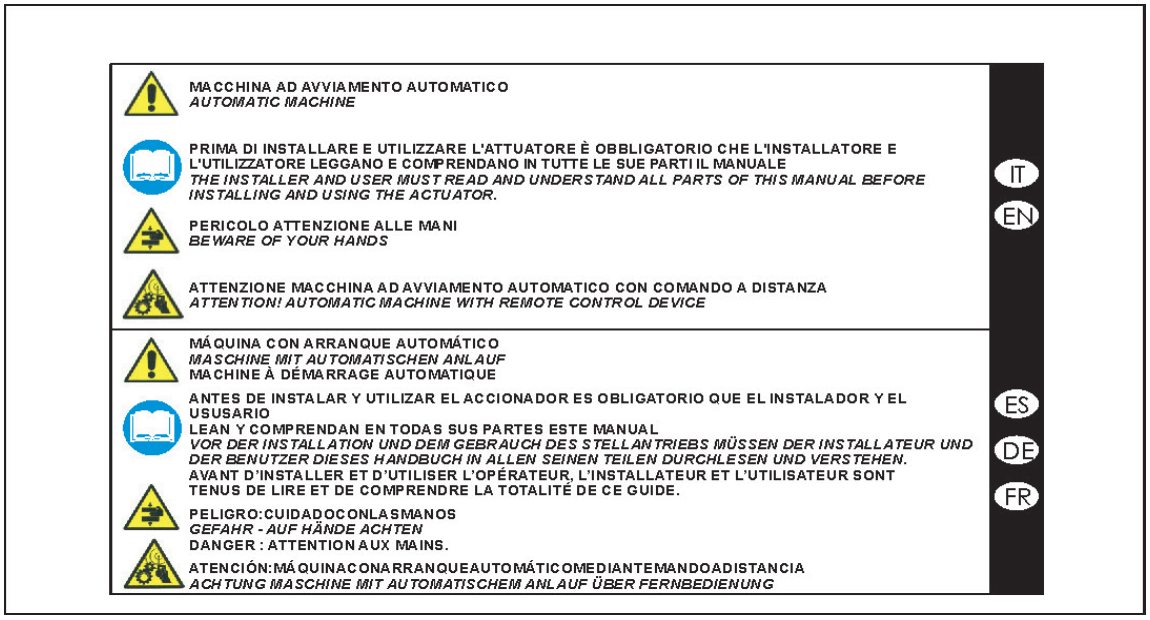
SAFETY DEVICES - PROTECTION AGAINST ELECTRIC HAZARD

- The actuator is protected against electric hazard due to direct and indirect contacts.
- The protection measures against direct contacts aim at protecting people against hazards due to contact with active parts, usually live parts; while the protection measures against indirect contacts aim at protecting people against hazards due to conducing part, which are usually insulated, but could become live in case of failure (insulation failure).

The adopted protection measures are the following:
1) Insulation of live parts by means of a plastic material body;
2) Enclosure with suitable protection degree;
3)C260 equipped with double insulation: Protection of passive type given by the use of components with double insulation, also called components of class II or with equivalent insulation. (It is forbidden to connect the actuators equipped with double insulation to the earth plant.

SAFETY PLATES

- It is forbidden to remove, move, spoil or in anyway reduce the visibility of the safety plates. Failure to observe the above may cause serious harm to people and damage to property. The manufacturer declines all liability for any damage caused by the failure to observe the above requirement.
- In Figure illustrates the safety plate: this must applied directly to the outside of the actuator or near it and always in a position where it can be seen by the installer and/or operator.



RESIDUAL RISKS

The installer and the user are herewith informed that after the actuator has been installed on the window, the actuator drive can accidentally generate the following residual risk:

- **Residual risk:** Hazard of squashing or dragging of body parts inserted between the movable and the fix part of the window frame.
- **Exposure frequency:** Accidental and when the installer or the user decides to perform a wrong voluntary action.
- **Severity of the damage:** Light lesions (usually reversible)
- **Adopted measures:** Before enabling the device, it is compulsory to verify that near the window there are not persons, animals or things whose safety may be accidentally jeopardized. During actuator operation, it is compulsory to be in a safe control position assuring visual control on the window movement.

SPARE PARTS AND ACCESSORIES UPON REQUEST

- The use of “non-original” spare parts and accessories which may endanger the safety and the efficiency of the actuator is forbidden.
- Original spare parts and accessories have to be requested exclusively to your dealer or to the manufacturer stating type, model, serial number, and year of construction of the actuator.
- In case of replacement of the power supply cable, it is necessary to use a cable type h05-vvf 3 x 0.75 .
- The replacement can be performed exclusively by competent and qualified technical personnel meeting the professional and technical requirements foreseen by the laws in force in the country of installation.

MAINTENANCE

- If the actuator works incorrectly, contact the manufacturer.
- Any work on the actuator (e.g.: power cable, etc.) or its components may only be carried out by personnel qualified by the manufacturer. Topp declines all liability for work performed by unauthorised people.
- The maintenance operations involving the total or partial dismounting of the actuator may only be performed after disconnecting it from the power supply. The actuator incorporates components that do not require significant routine or extraordinary maintenance operations.

The recommended maintenance activities should in any case involve the periodical execution (every 6 mounths) of at least the following operations: that the actuator assembly components are clean, the replacement of components that show signs of superficial damage such as injuries, cracks, discoloration, etc., the fixing systems (brackets and screws) are tight, the window frame is not deformed and the seals are tight, and check the cables and connectors.
This maintenance activity may be carried out either by TOPP, in accordance with a specific agreement made with the user, or by the installation technician or by other competent and qualified technical personnel in possession of all legal requirements.

DEMOLITION

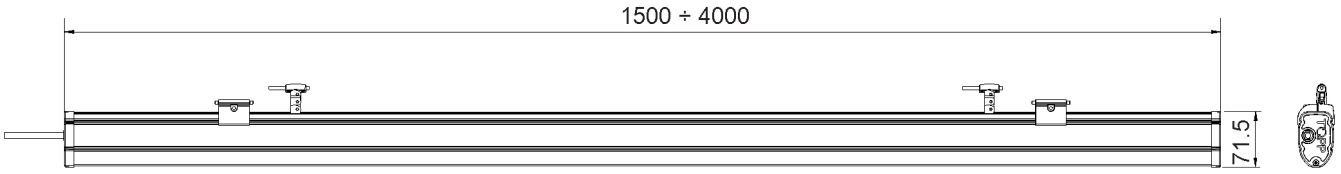
- The demolition of the actuator must occur in compliance with the laws in force on environment protection.
- Differentiate the parts making up the actuator according to their different material type (plastic, aluminum, etc.).

USE OF THE ACTUATOR

- The actuator can be used exclusively by an user acting in compliance with the instructions contained in this manual and/or in the manual of the actuator control device (e.g.: wind and rain control unit).
- Before using the actuator, it is compulsory for the user to read and understand in all its parts this manual, as well as the eventual manual of the installed control device type.
- Before operating the actuator, the user must compulsorily verify that near and/or under the window there are not any person, animal and thing whose safety may be accidentally jeopardized.
- During the operation of the actuator control device, the user has to compulsory occupy a safe control position assuring visual control on the window movement.
- It is compulsory to verify constantly in time the functional efficiency and the rated performance of the actuator, of the window frame where it is installed and of the electric plant, performing when necessary interventions of routine or supplementary maintenance assuring operation conditions complying with safety regulations.
- I above mentioned interventions can be performed only by competent and qualified technical personnel meeting the professional and technical requirements foreseen by the law in force in the country of installation.
- In order for the automation unit to operate correctly, we recommend carrying out periodical maintenance on it, as indicated in this manual.
- Topp informs the user that, in accordance with art. 8 of ministerial decree no. 38 of 22.1.2008, the owner of the system is responsible for adopting all necessary measures to maintain the safety features set out in applicable legislation, observing the instructions for maintenance and use provided by the manufacturer of the device and by the company that carried out the installation.
- The use of the actuator allows to control automatically the opening and closing of the window according to the type of control device installed.

TECHNICAL DESCRIPTION -3

TECHNICAL DATA

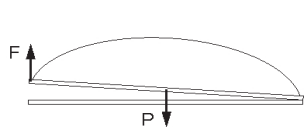


C260	
MODEL	C260/230V
Power supply voltage	230V ~ 50Hz
Absorbed current	0,4 A
Absorbed power with load	80 W
Thrust force	600 N
Tractive force	600 N
Idle translation speed	13 mm/s
Duration of the idle stroke (2)	46 s
Protection against electric shock	Class II
Actuator length	1500 ÷ 4000 mm
Protection degree of electric devices	IP30
Type of service S2 (1)	4 min
Parallel electric connection of more actuators on different windows	Yes
Operating temperature	-5°C ÷ +50°C
Limit switch: Electronic for opening - by amperometric absorption for closing.	
Actuator weight with brackets	4,9Kg - 8 Kg
Operation stroke(2)	600mm

(1) Service of limited duration according to EN 60034
(2) Tolerance on the precision of limit switch tripping at output: +/- 10mm

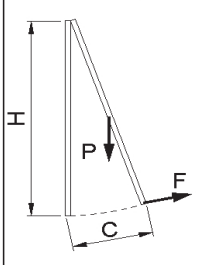
FORMULAS FOR THE CALCULATION OF THRUST AND TRACTIVE FORCE

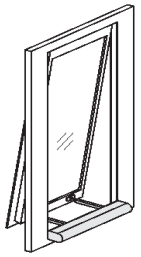
Finestre con apertura a montaggio verticale / Windows with vertical mounting / Ventanas con apertura montaje vertical/ senkrechte Verbindung am Rahmen/Fenêtres en montage vertical



F = (0,54 x P)

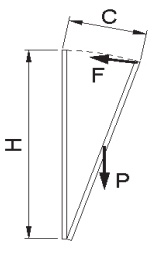
Finestre con apertura a sporgere
Windows with top hung opening
Ventanas con apertura proyectante
Klappfenster
Fenêtres saillissantes

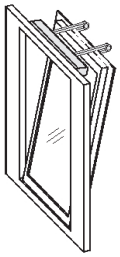




F = (0,54 x P) x (C / H)

Finestre con apertura a vasistas
Windows with bottom hung opening
Ventanas con apertura basculante
Klippfenster
Fenêtres vasistas





F = (0,54 x P) x (C / H)

DESTINATION OF USE

- The actuator has been designed and manufactured to perform, by means of a command device, the opening and closing of top hinged windows, bottom hinged windows, vertical and side hinged windows.

USE LIMITS

- The actuator has been designed and manufactured exclusively for the destination of use given in the previous paragraph, therefore, any other type of use is strictly forbidden in order to assure in any moment the safety of the installer and of the user, as well as the efficiency of the actuator itself.
- Check carefully all environmental conditions (temperature, humidity, wind, snow, potential chemical agents, etc.) and installation settings (misaligned fitting of brackets and attachment to the frame, frictions produced by hinges or gaskets, use of selfbalancing window stays, etc.) it is recommended that they not exceed the actuator performances shown in the technical data table. If they do, please find an alternative and more suitable product for your application.
- It is strictly forbidden to install the actuator on the external side of the window frame subject to atmospheric agents (rain, snow, etc.).
- The use of the actuator in environments with potentially explosive atmosphere is strictly forbidden.
- It is compulsory to keep the package and the actuator out of reach of children.

RATING PLATE AND “CE” MARKING

The “CE” marking certifies the compliance of the machine with the essential safety and health requirements foreseen by the product European Directives.
The rating plate is an adhesive plate in polyester, silk-screen printed in black, having the following size: L=24 mm - H=60 mm
It is applied externally on the actuator. The plate bears in readable and indelible way the following data:

- logo and address of the manufacturer
- type and model
- voltage and intensity of power supply (V - A)
- absorbed electric power P (W)
- thrust and tractive force F (N)type of service S2 (min)
- idle translation speed (mm/s)
- protection degree (IP)
- “CE” marking
- symbol of WEEE Directive 2002/96/CE
- serial number

STANDARDS, LAWS, CODES AND REGULATIONS

- The latest versions of the common and country specific standards, laws, codes and regulations have to be observed.

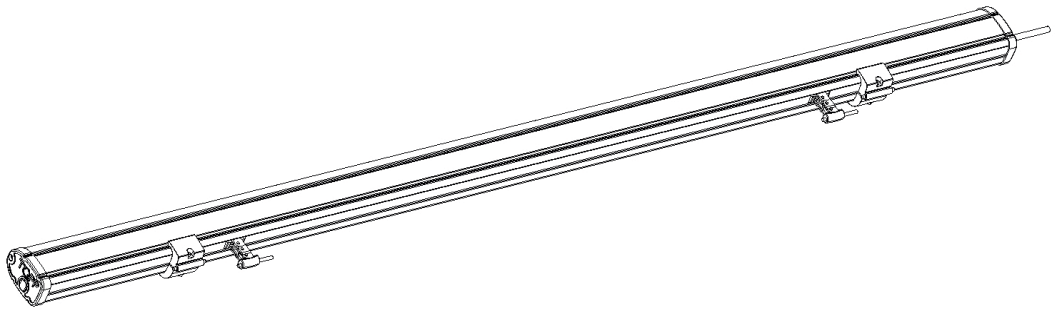
PACKAGE

Each package of the product contains:
1) Actuator equipped with power supply (Ref. A);
2) Window mounting brackets (depending on application) and screws for aluminum (Ref. B);
3) Actuator brackets (depending on application) and screws for aluminum (Ref. C);
4) Installation and use instructions (Ref.D);
5) Safety plate (Ref. E).

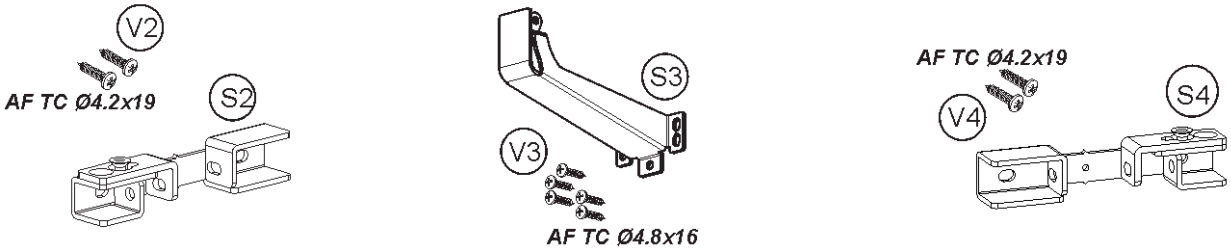
- Make sure that the above described components are contained in the package, as well as that the actuator has not been damaged during transport.
- Should any anomaly be detected, it is forbidden to install the actuator, and it is compulsory to require technical assistance from your dealer or the manufacturer.
- The packaging (paper, plastic, etc.) Has to be disposed according to the laws in force.

COMPONENTS

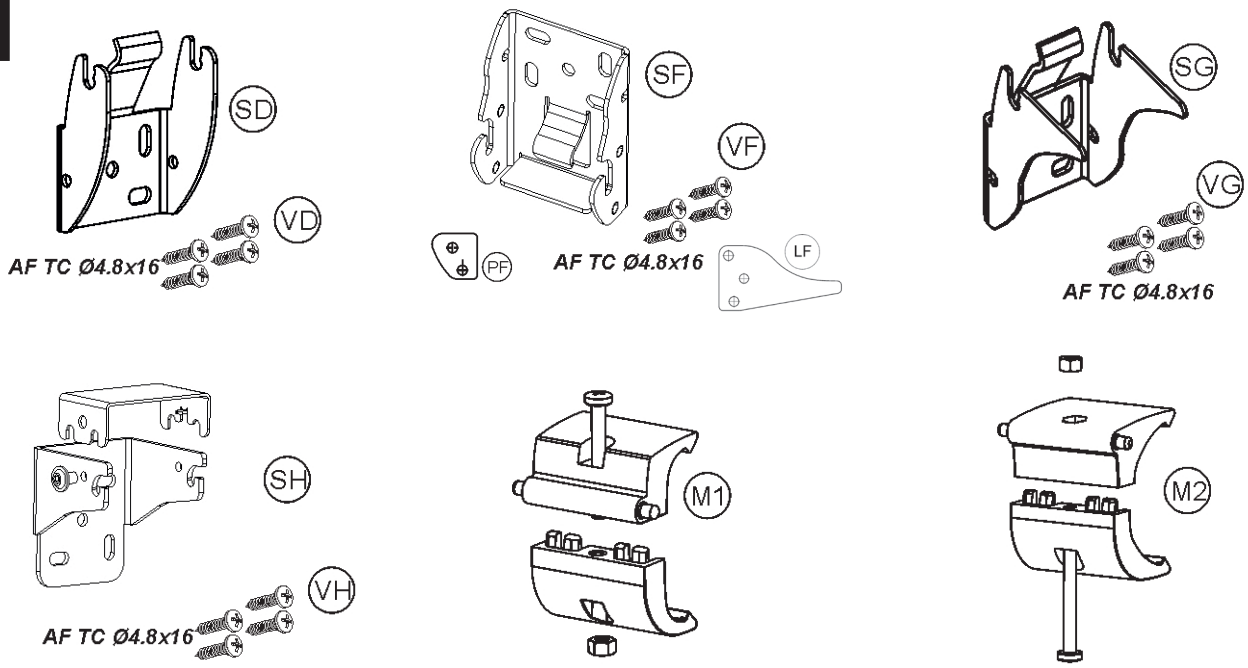
A



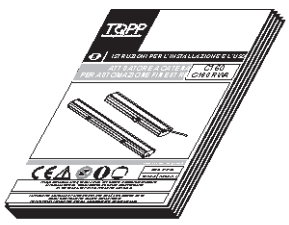
B



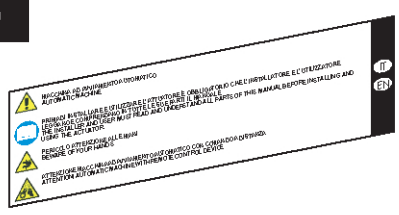
C



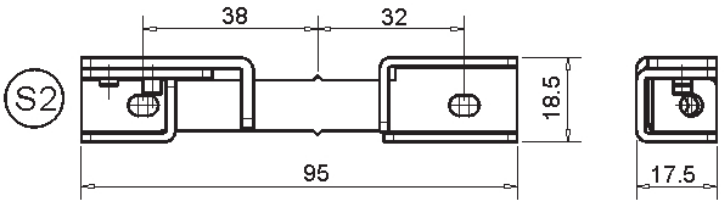
D

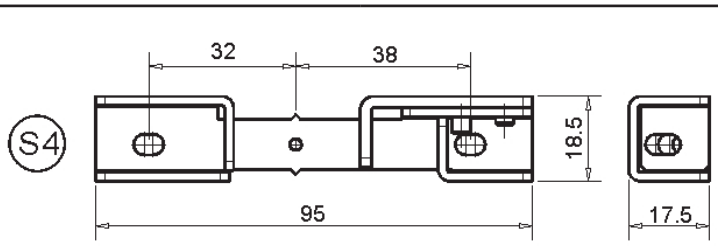


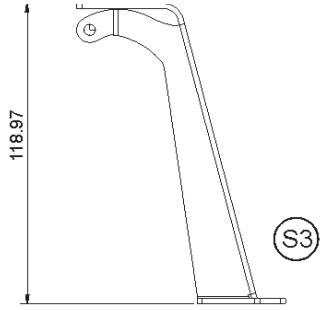
E

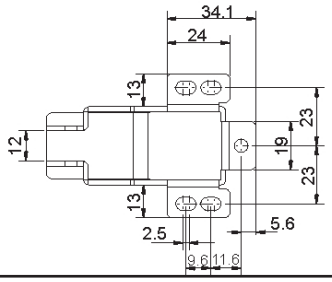


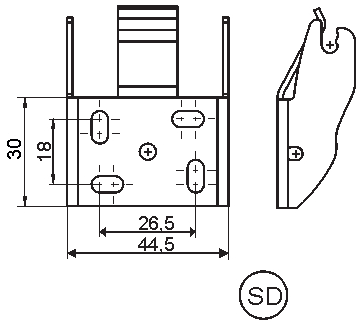
COMPONENTS DIMENSIONING

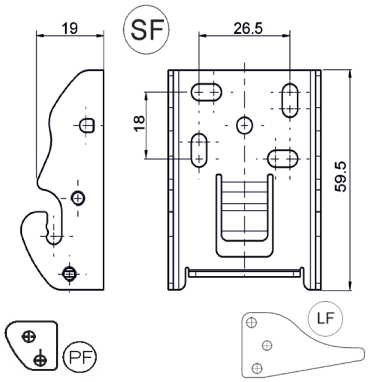


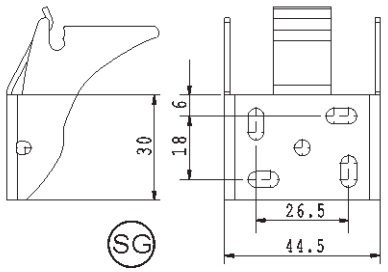


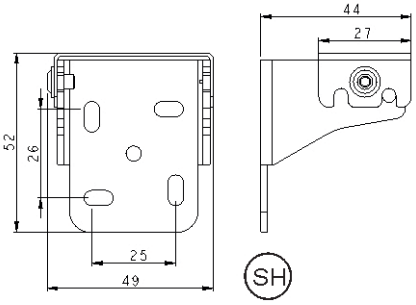


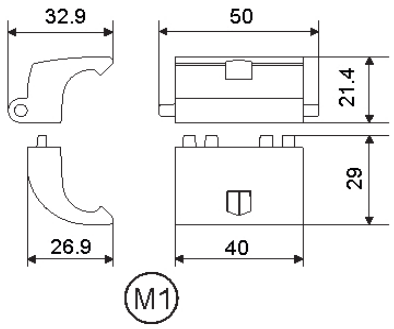


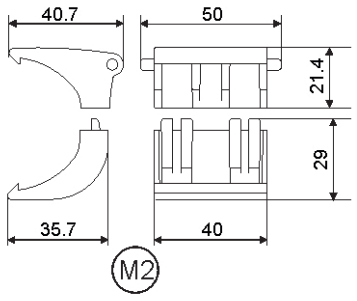


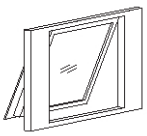
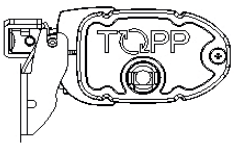
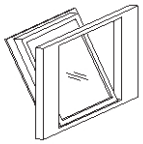
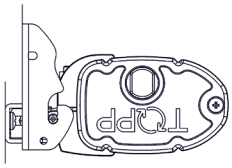
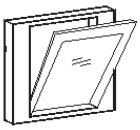
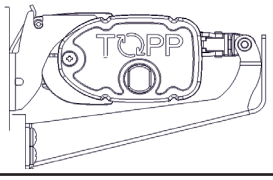
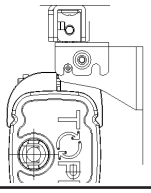
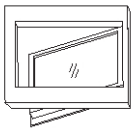
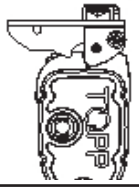
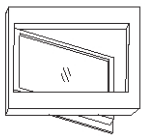
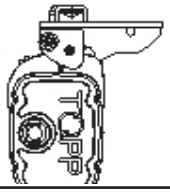
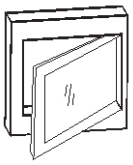
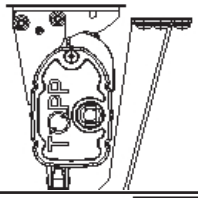
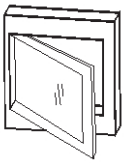
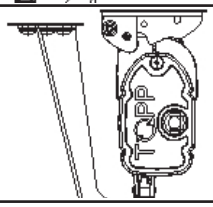
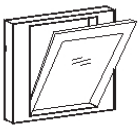
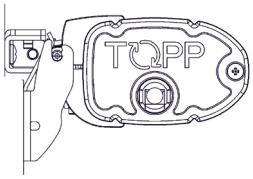










Applications			Window	Brackets		H (mm)(*)
ACTUATOR MOUNTING	ON THE FRAM	**TOP HUNG outward opening application**			**S2 SD M1**	600
		BOTTOM HUNG outward opening application			**S2 SF M1**	600
		BOTTOM HUNG inward opening application			**S3 SG M2**	1000
		VERTICAL outward opening application			**S4 SH M1**	800
		SIDE HUNG outward opening application LEFT			**S2 SF PF M1**	600
		SIDE HUNG outward ope-ning application RIGHT			**S4 SF PF M1**	600
		SIDE HUNG inward opening application LEFT			**S3 SF LF M2**	1000
		SIDE HUNG inward opening application RIGHT			**S3 SF PF M2**	1000
	ON LEAF	**On the window inward opening application**			**S4 SD M1**	950

(*) Distance from the opening edge of the window to the axis of rotation of the window.

GENERAL INSTRUCTIONSI

- L'installazione dell'attuatore deve essere eseguita esclusivamente da personale tecnico competente e qualificato in possesso de
- The actuator installation can be performed exclusively by competent and qualified technical personnel satisfying the professional and technical requirements fore seen by the laws in force in the country of installation.
- The actuator performance must be sufficient to assure the correct movement of the window. It is compulsory to verify the thrust or tractive force according to the type and weight of the window. It is forbidden to exceed the limits concerning technical data (cap 3).
- The actuator installation must be performed exclusively with closed window.
- Before performing the installation of the actuator on bottom hung windows, verify that on both sides of the window two compass stroke limit devices are installed in order to avoid the accidental fall of the window.
- For correct operation of the actuator, the window frame must have a minimum height value included in the range stated in par 3.
- Verify that distance "D" between the actuator shell and the chain end is greater than 5 mm.
- The fitting surface for the brackets must be perfectly flat and/or smooth.
- Check the adequacy of the window and the suitability of the materials of the window and/or frame on which the actuator will be fastened. And it must ensure a good support of the actuator-window assembly during the movement.

INSTALLATION

- Perform the installation as described in Chapter 5 : INSTALLATION INSTRUCTIONS / FIGURES.

ELECTRIC CONNECTIONS

- The electric connection of the actuator (Cap.6) can be performed only by competent and qualified technical personnel foreseen by the law in force in the country of installation who can issue to the customer a declaration of conformity for the connection and/or plant carried out.
- Before performing the electric connection of the actuator, verify the correct installation on the window
- The mains to which the actuator is connected must comply with the requirements of the laws in force in the country of installation, as well as satisfy the technical features given in Cap.3 and on the rating plate and the "CE" marking.
- The section of the mains cables must be properly sized according to the absorbed electric power (see rating plate and "CE" marking).
- Any type of electric material (plug, cable, terminals, etc.) Used for the connection must be suitable for the use, with "CE" marking, and complying with the requirements foreseen by the laws in force in the country of installation.
- To assure an efficient separation from the mains, it is compulsory to install upstream of the device a temporary bipolar switch (push-button) of approved type. Upstream of the command line, it is compulsory to install an unipolar main switch with opening of contacts of at least 3 mm.
- Before making any electrical connections on the actuator, make sure the power supply cable is not damaged. If the cable is damaged, then it must be replaced by the manufacturer through the technical assistance service or by technical operators.

ELECTRIC CONNECTIONS DEVICES

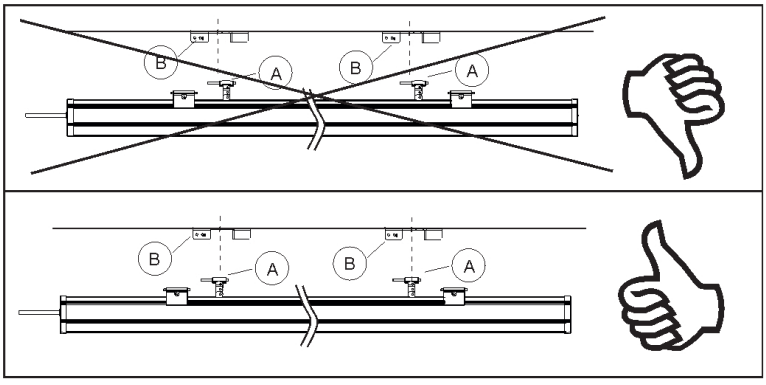
THE CONTROL DEVICES USED TO DRIVE THE ACTUATOR MUST ASSURE THE SAFETY CONDITIONS FORESEEN BY THE LAWS IN FORCE IN THE COUNTRY OF USE.

According to the different type of installations, the actuators can be driven by the following control devices:
1) MANUAL PUSH-BUTTON:
Bipolar switch button with central OFF position, with biased-off switch;
2) OPTIONAL: CONTROL AND FEEDING UNIT:
TOPP microprocessor control units (e.g.: Mod. TF, etc.) controlling the single actuator or more than one actuator simultaneously by means of one or more manual pushbuttons, an infrared remote control or a 433 Mhz radio control. To these control units, it is possible to connect rain sensors (RDC - 12V), wind sensor (RW) and brightness sensor.

- **To assure a correct operation of the actuator, the command and feeding units eventually used have to provide power supply to the actuator for max. 120 sec.**
- **Before operating the actuator, the user must compulsorily verify that near and/or under the window there are not any person, animal and thing whose safety may be accidentally jeopardised**

CORRECT ASSEMBLY OF THE ACTUATOR

- The correct adjustment of the window frame closing assures the life and the tightness of the seals, as well as the good operation of the actuator.
- With open window frame, verify that the stroke is some centimetre lower than the stroke limited by window frame mechanical limit devices;
- Verify that the chain coupling (A) is on the same axis of the chain end (B). Otherwise, loosen the tightening screws and position correctly. When the devices are not coaxial, damages to the actuator and the window frame may arise.



MANUAL RELEASE OF THE ACTUATOR

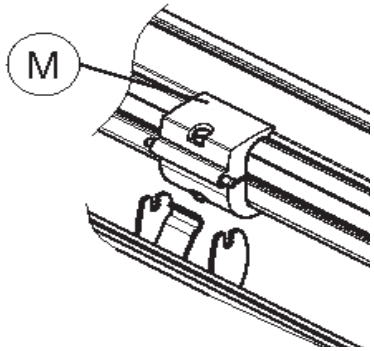
BEFORE PERFORMING ANY TYPE OF TRIPPING ON THE ACTUATOR AND ON THE WINDOW, IT IS COMPULSORY TO DISCONNECT THE POWER SUPPLY OF THE ACTUATOR AND TO PUT ON “0” THE EVENTUAL SWITCHES OF THE CONTROL DEVICES.
IT IS COMPULSORY TO PADLOCK THE MAIN SWITCH OF THE DISCONNECTION DEVICE INSTALLED ON THE MAINS IN ORDER TO AVOID ANY UNEXPECTED START. IF THE MAIN SWITCH CANNOT BE PADLOCKED, IT IS COMPULSORY TO PLACE A SIGN FORBIDDING THE ENABLING.

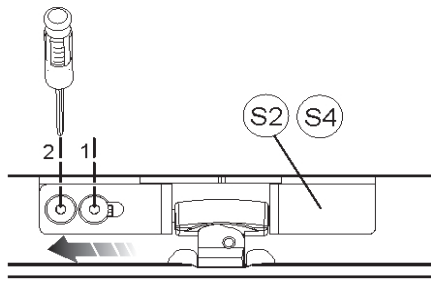
If it is necessary to operate the window manually, to close it, open it, in the absence of electricity or if the mechanism is blocked, follow the installation instructions in reverse order:

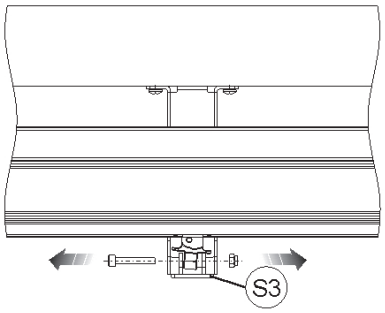
- Release the actuator (terminals M1-M2) from the bracket.
- Release the end of the chain,

S2-S4: unscrew both screws (Ref. 1.2) with a 2.5mm hexagon wrench, move the bracket and remove the end of the chain from the shorter pin side.

S3- Bottom hung – inward opening: with a 3 mm Allen key and 7 mm hex wrench unscrew the nut, remove the pin until the chain end is released.







RESTORATION OF THE STROKE

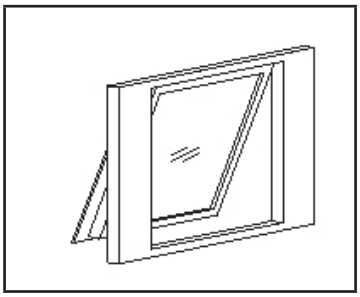
The Smart Reset System is integrated into the software of the electronic control board of actuator. This system adjusts the closure of the window in a highly efficient fashion so as not to damage the window in any way. If you were to put an obstacle in the way while the window is closing, the system would block the actuator(s) attached to the window to avoid damaging it. If this happens in the last 50mm of the movement, which is below the allowable maximum overlap, you might find that the window remains slightly open the next time it is closed. You only need to briefly open and close the window a few times (about 4times) to activate the system and restore the window to its correct and proper closure.

Detailed description for restoration of the stroke:

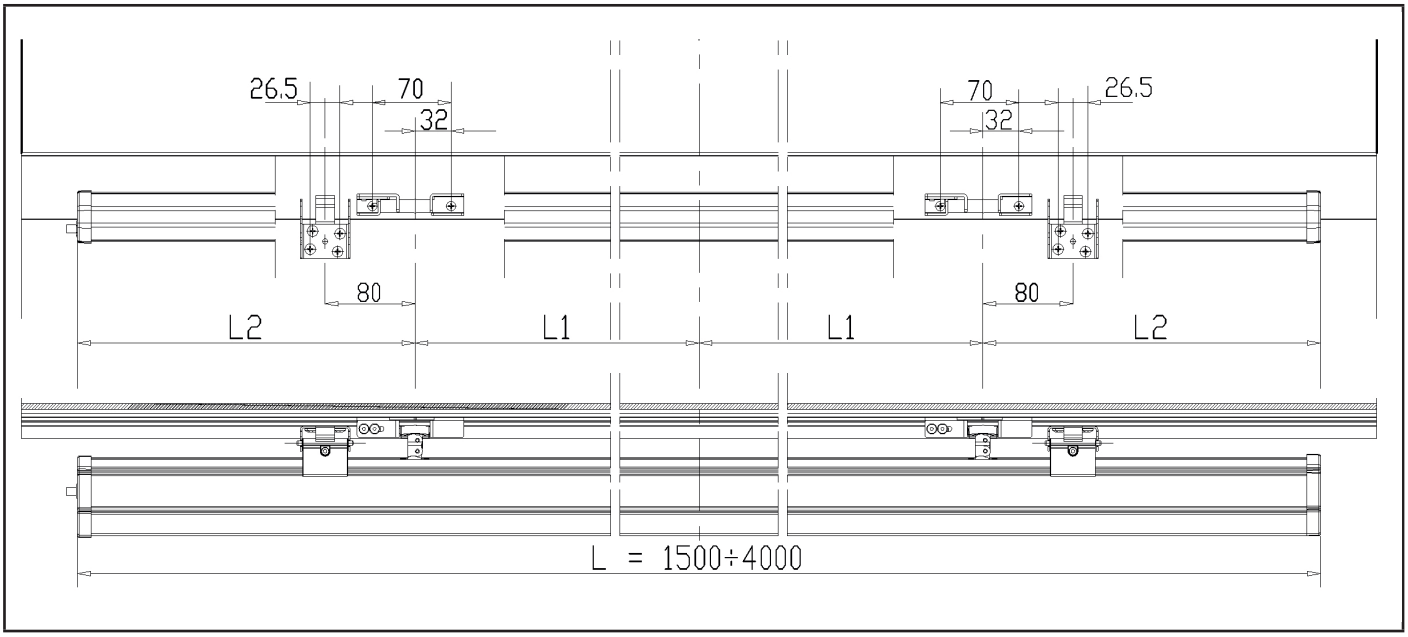
Once the mechanical final stroke has been adjusted and the installation is completed, the actuator does not need further adjustment.
If an obstacle is detected, more than 3 times consecutively in the same position, it will be recognized as a final stroke (in opening or closing) and therefore, at subsequent openings, the stroke will be automatically reduced to the obstacle even if this is removed.
The original final stroke is restored automatically, as the actuator checks the limit switches every 4 cycles. If the obstacle has been removed, on the fifth cycle, the machine will continue its run for a maximum of 50mm beyond the previous acquired position.
If the obstacle had limited the stroke by more than 50mm, you will have to wait for the next 4 cycles to repeat the limit switch check and to continue the run for a further 50mm.
To restore the final stroke manually it will be sufficient (once the obstacle is removed) to position the machine near the original final stroke and activate the manual command in open-close for 4 cycles (it is not necessary to complete the whole cycle but it is sufficient to give the command for 1s in open and 1s in close). In this way, every 4 cycles the stroke will be increased by 50mm.

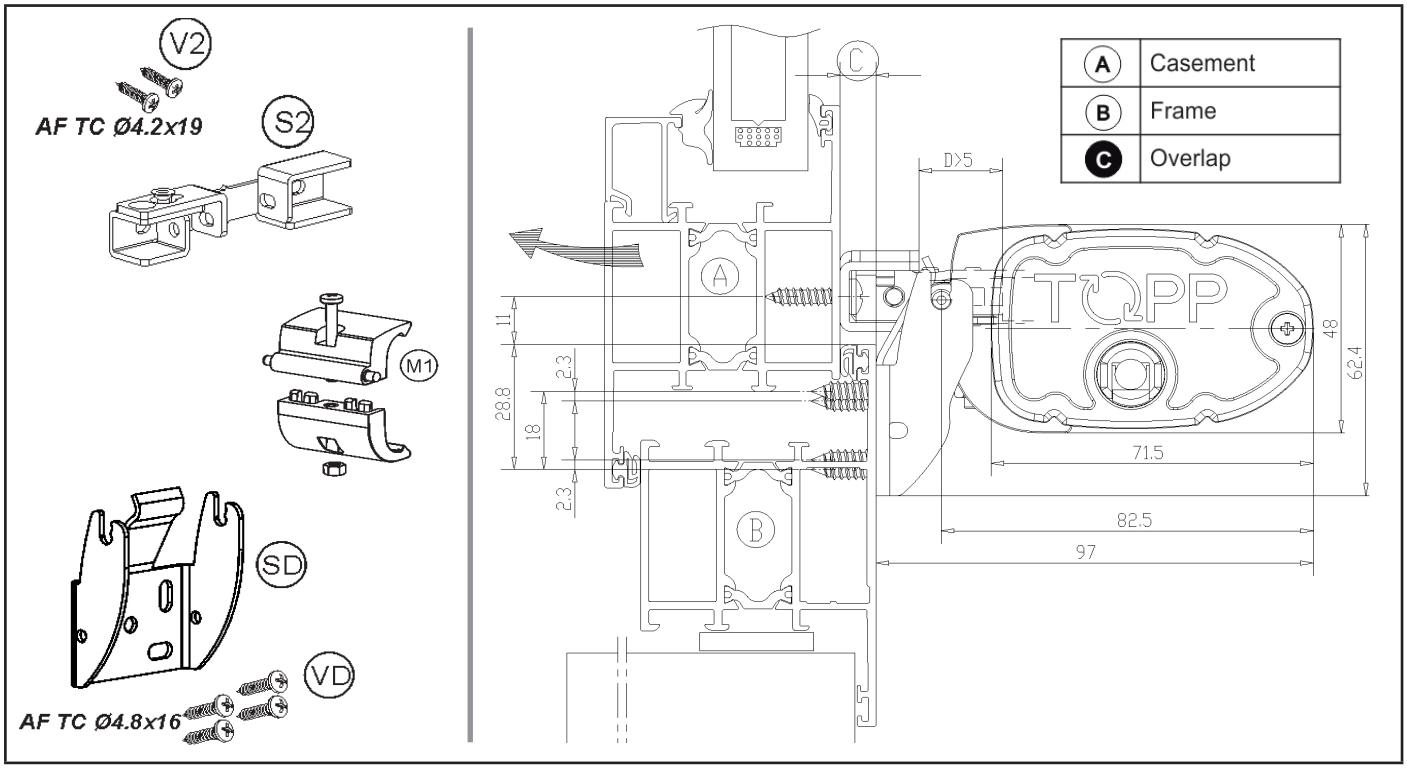
TOP HUNG
outward opening application
Double push point

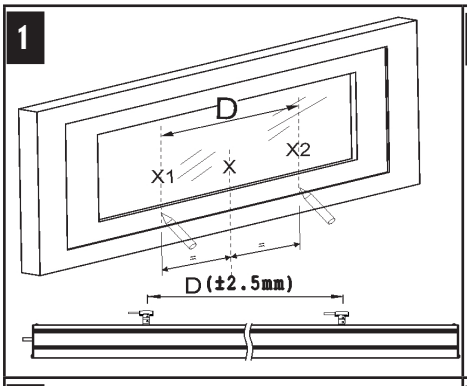
Stroke 600
230V
Standard

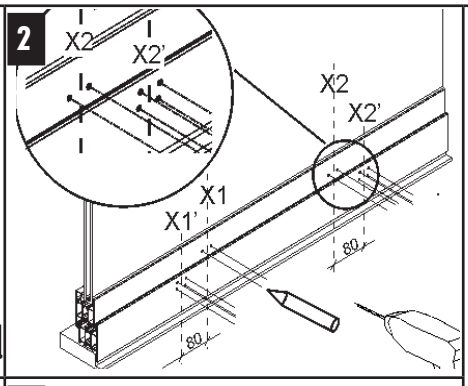


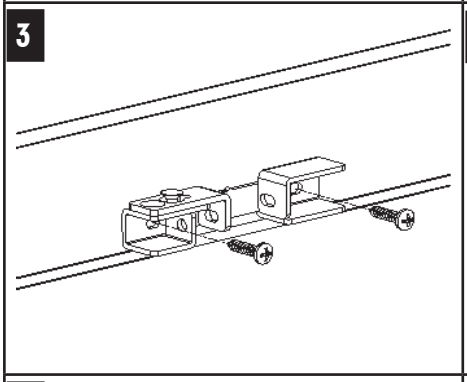
POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500÷1800	900	450	(1/2 L)-450	2
1810÷4000	1/2 L	1/4 L	1/4 L	2
3010÷4000	1/2 L	1/4 L	1/4 L	3

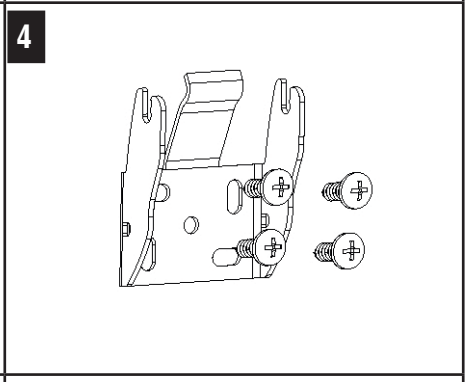


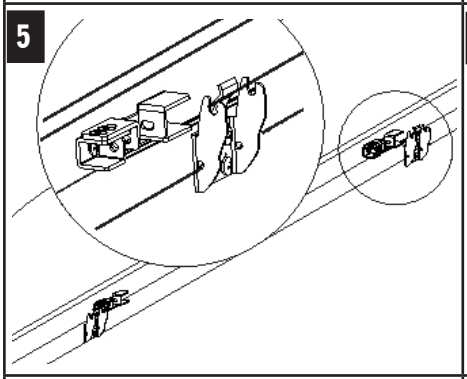


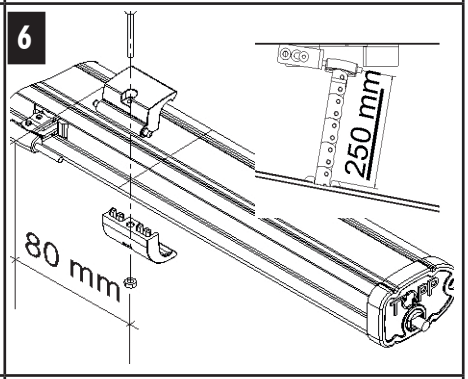


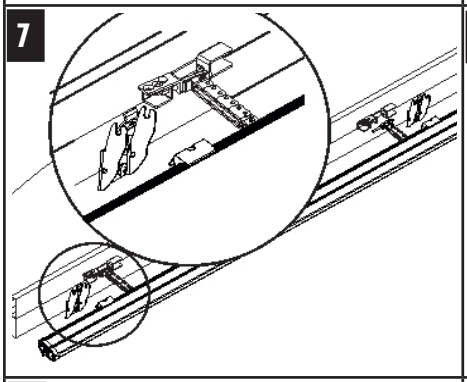


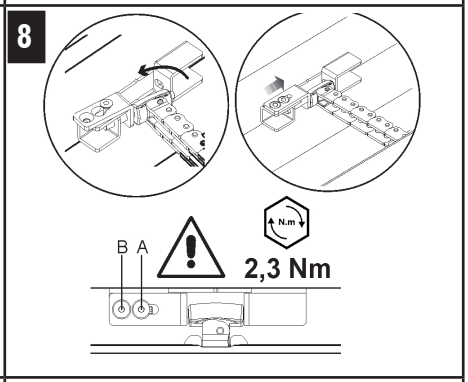


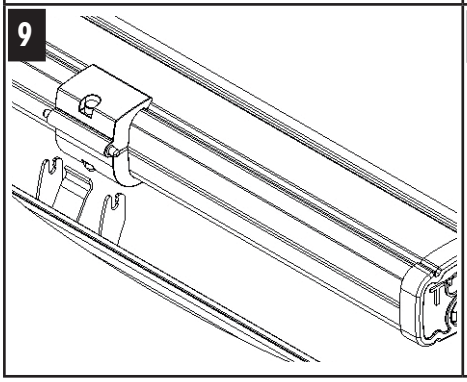


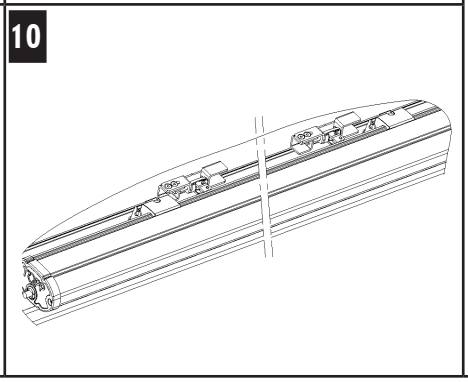












INSTALLATION- Open the package and remove the various components;

1)With a pencil draw the centre line X of the window frame. Measure the distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline X marked previously, trace axis X1 and X2;

2)Trace axis X1' and X2'.

Taking as reference the axis X1,X1' and X2,X2' previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S2 and SD; with a suitable drill, create on the window the holes;

3)4)5) Mount the two movable window brackets S2 and the two frame brackets SD, with appropriate screws;

6)Insert the two pairs of clamps "M1", fitting them in the actuator slider adjacent to the chain terminal, then close them partially with the screw and nut in the package; Position the clamps 80mm on either side of the chain terminal midline and tighten the screw all the way;

Perform the electric connections according to the provisions as well as with reference to the wiring diagram. Power the actuator and let the chain come out for at least 250mm of stroke, then disconnect the actuator;

7)8)First fasten the LEFT chain terminal to the S2, first fit the long side of the shaft and then insert the entire assembly. Move the square plate to the centre of the mount and hand tighten bolt A. Now insert bolt B (included) into the frame mount and tighten both bolts down fully with a 2.5mm hex wrench (torque to 2,3 Nm).

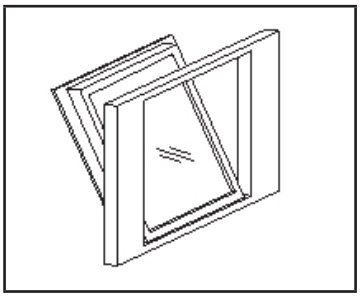
Then fasten the RIGHT chain terminal to the S2, as described upper.

9)Fasten the clamps M1 to the brackets for connection to the window SD . Make sure the brackets for connection to the window are correctly fastened to their clamps. The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

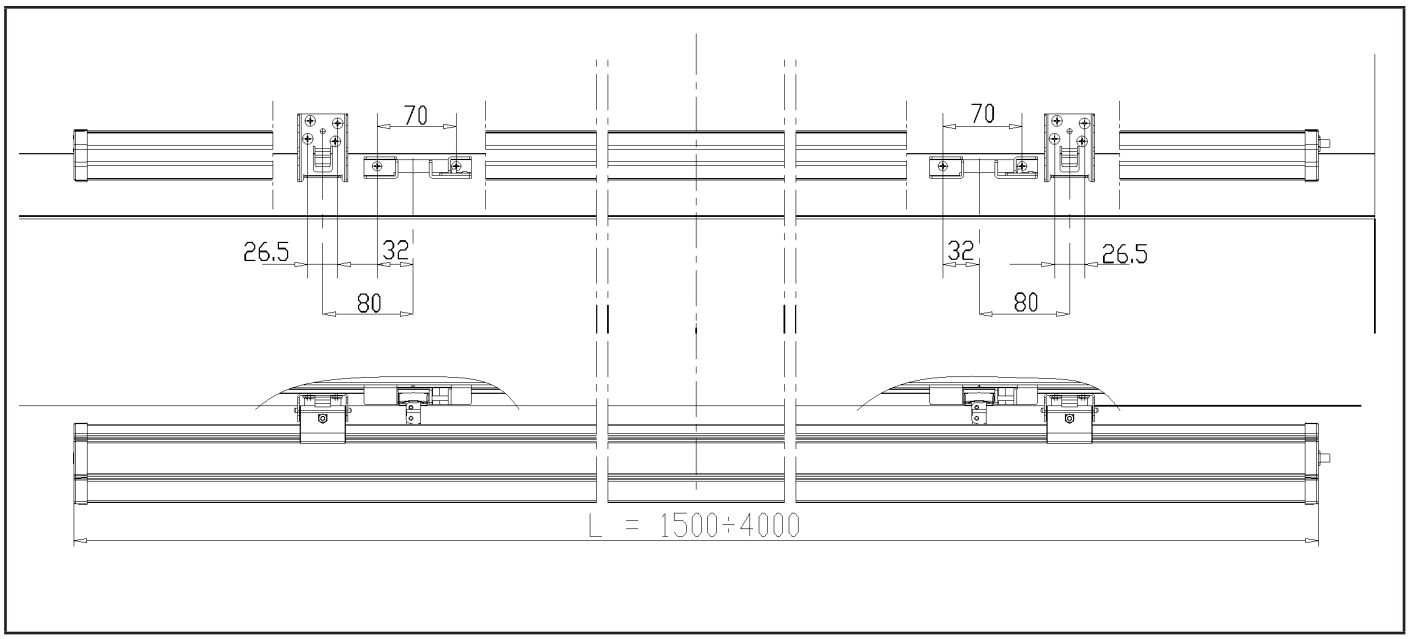
10) Connect the power actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

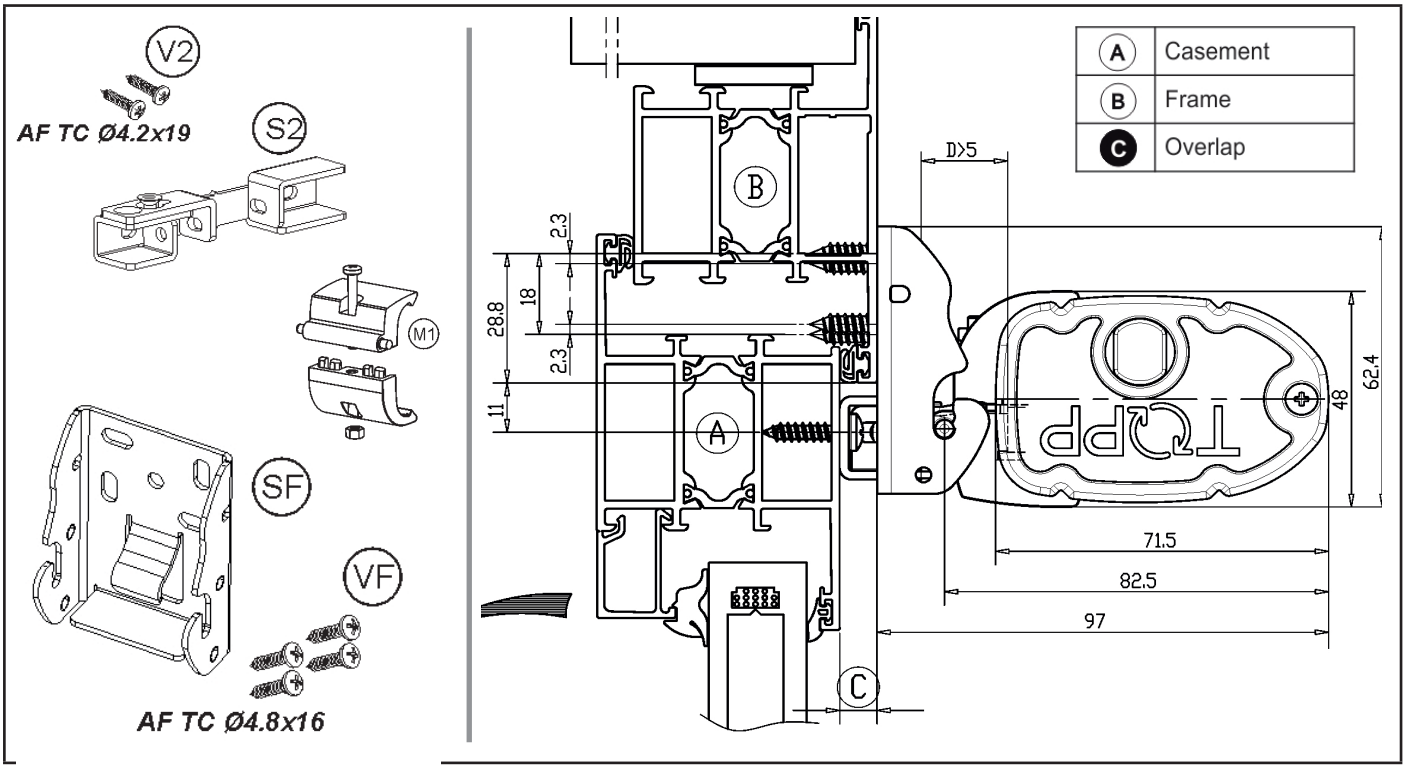
BOTTOM HUNG
outward opening application
Double push point

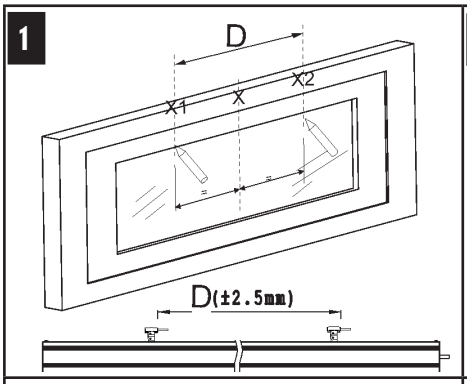
Stroke 600
230V
Standard

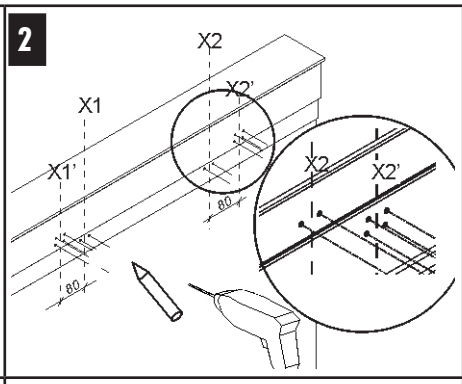


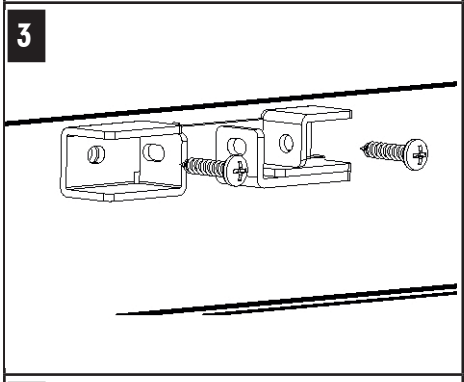
POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500÷1800	900	450	(1/2 L)-450	2
1810÷4000	1/2 L	1/4 L	1/4 L	2
3010÷4000	1/2 L	1/4 L	1/4 L	3

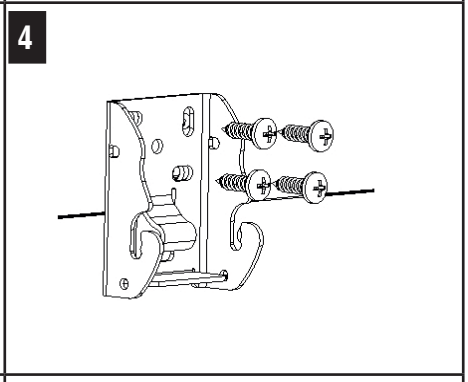


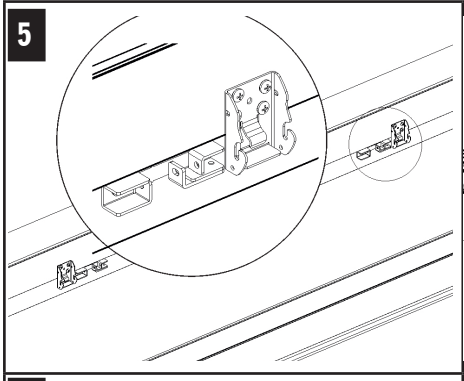


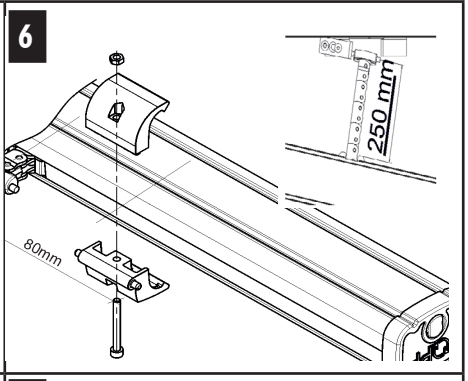


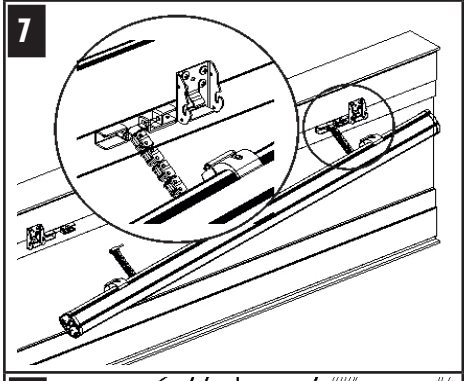


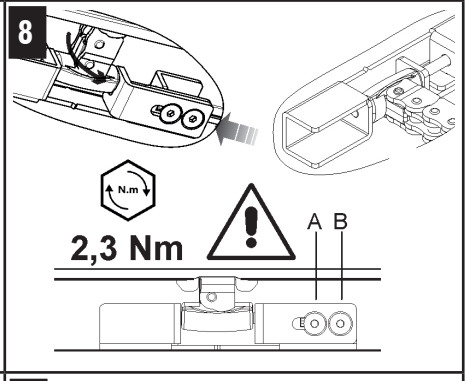


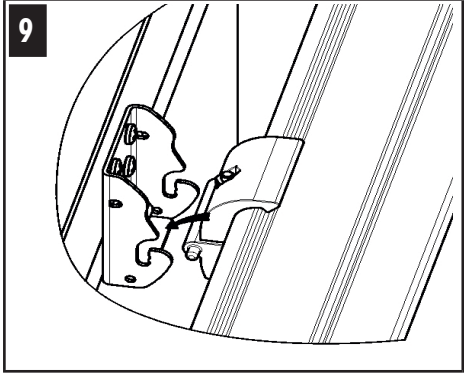


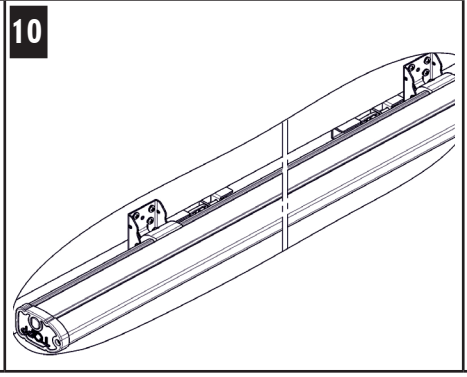












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the centre line X of the window frame. Measure the distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline X marked previously, trace axis X1 and X2;

2)Trace axis X1' and X2'.

Taking as reference the axis X1,X1' and X2,X2' previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S2 and SF; with a suitable drill, create on the window the holes;

3)4)5) Mount the two movable window brackets S2 and the two frame brackets SF, with appropriate screws;

6)Insert the two pairs of clamps "M1", fitting them in the actuator slider adjacent to the chain terminal, then close them partially with the screw and nut in the package; Position the clamps 80mm on either side of the chain terminal midline and tighten the screw all the way;Perform the electric connections according to the provisions as well as with reference to the wiring diagram. Power the actuator and let the chain come out for at least 250mm of stroke, then disconnect the actuator;

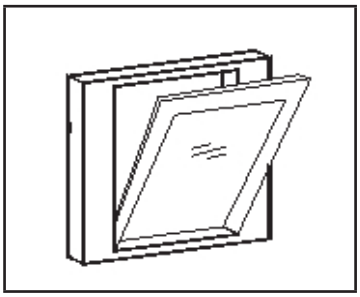
7)8)First fasten the RIGHT chain terminal to the S2, first fit the long side of the shaft and then insert the entire assembly. Move the square plate to the centre of the mount and hand tighten bolt A. Now insert bolt B (included) into the frame mount and tighten both bolts down fully with a 2.5mm hex wrench (torque to 2,3 Nm). Then fasten the LEFT chain terminal to the S2, as described upper.

9)Fasten the clamps M1 to the brackets for connection to the window SF . Make sure the brackets for connection to the window are correctly fastened to their clamps. The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

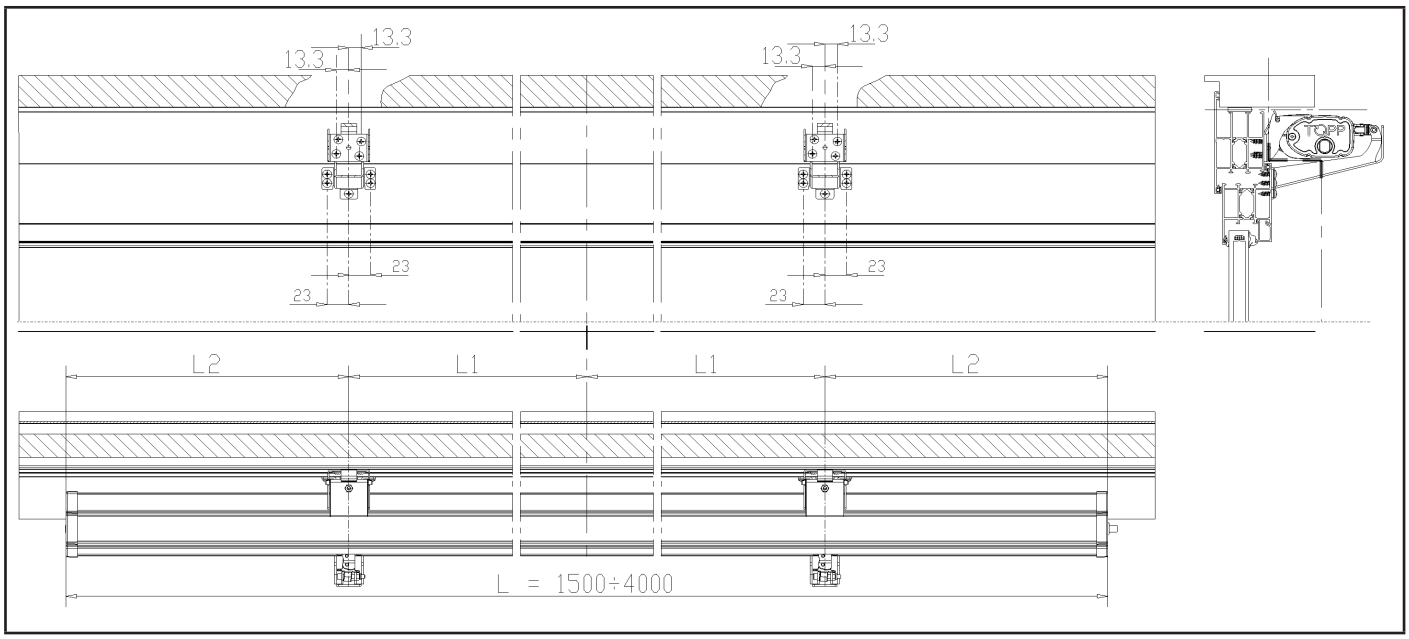
10) Connect the actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

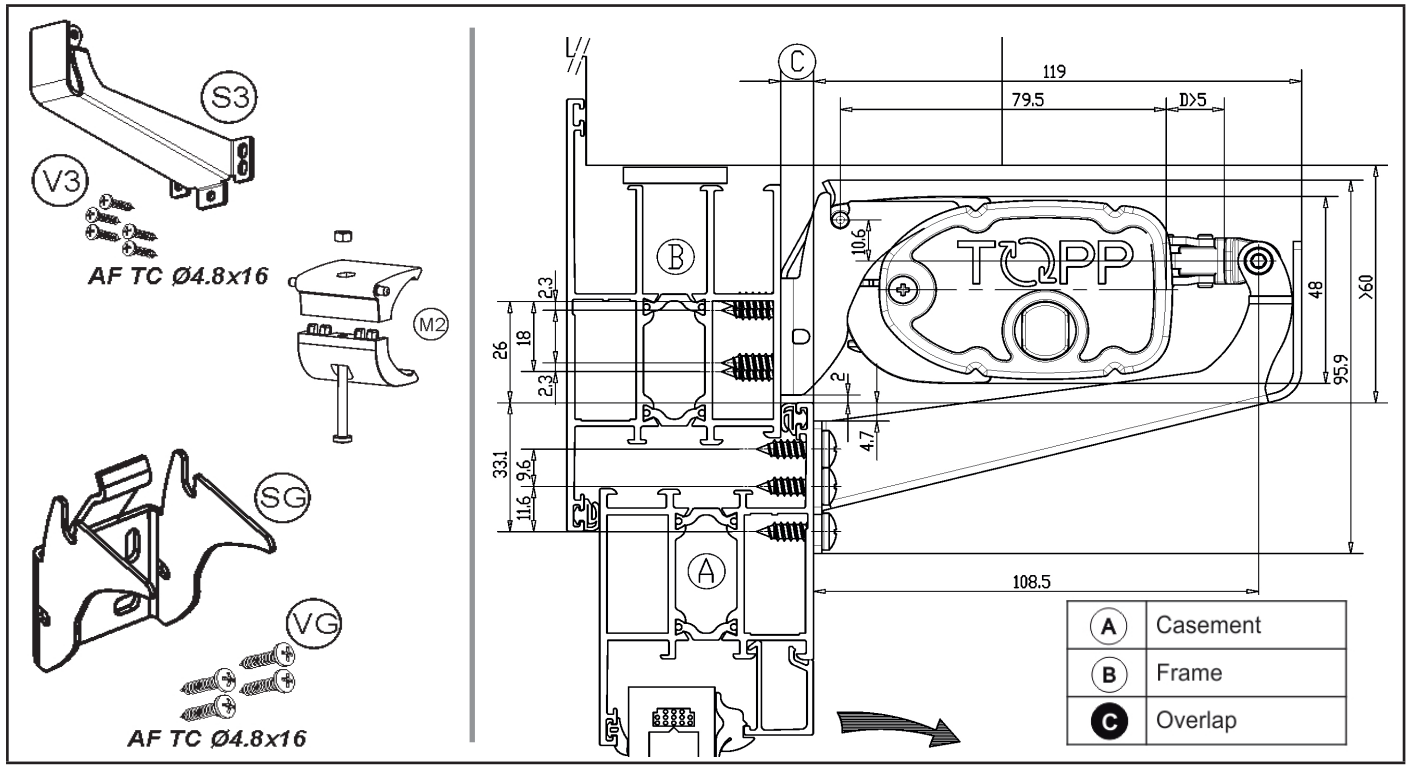
BOTTOM HUNG
Inward opening
Double push point

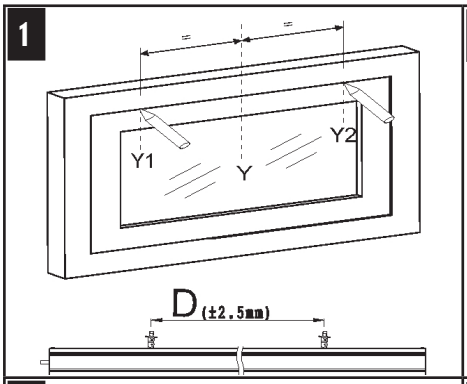
Stroke 600
230V
Standard

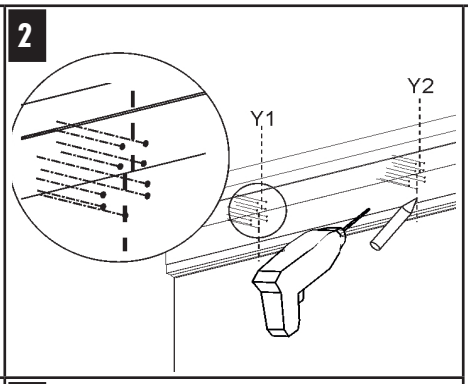


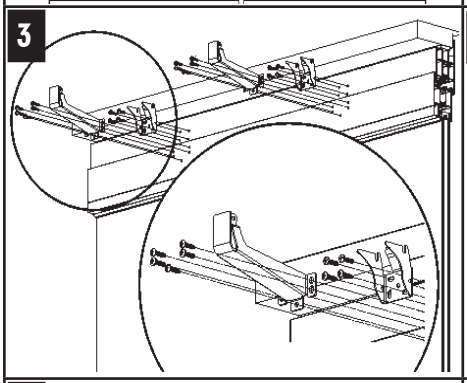
POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500÷1800	900	450	(1/2 L)-450	2
1810÷4000	1/2 L	1/4 L	1/4 L	2
3010÷4000	1/2 L	1/4 L	1/4 L	3

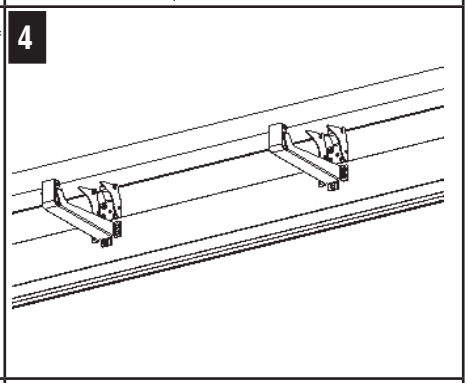


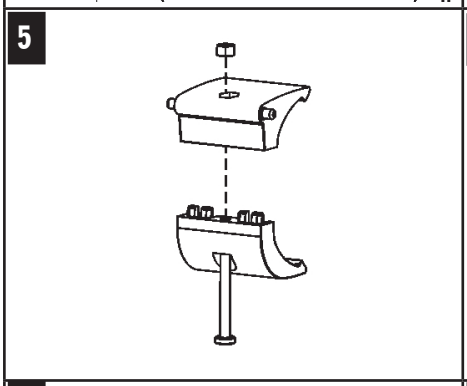


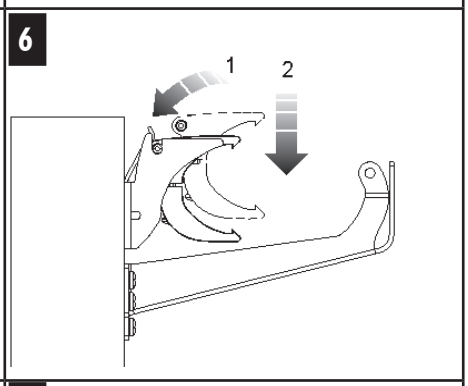


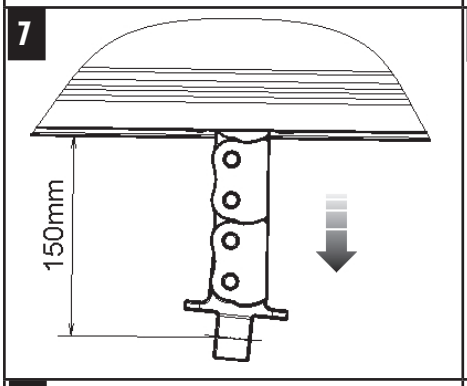


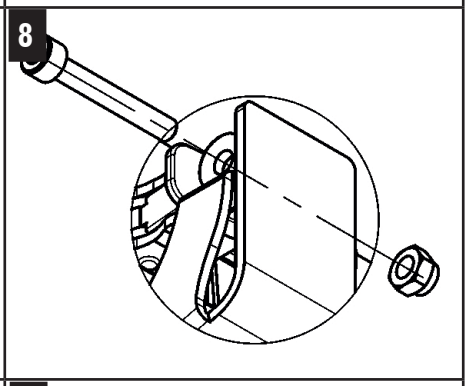


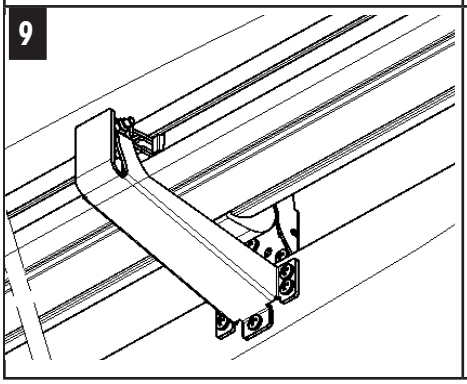


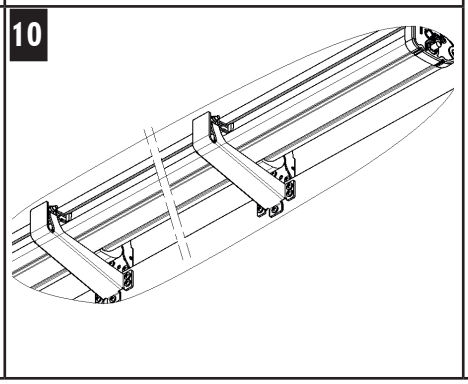












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the centre line Y of the window frame. Measure he distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline Y marked previously, trace axis Y1 and Y2;

2)Taking as reference the axis Y1 and Y2 previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S3 and SG;

With a suitable drill, create on the window the holes;

3) 4) Mount the two movable window brackets S3 and the two frame brackets SG with appropriate screws;

5)Close the two pairs of clamps M2 partially with the screws and nut provided in the package;

6)Fit the two pairs of clamps previously assembled M2 on the brackets SG (window frame);

WARNING: do not damage the swivel bracket when fitting the clamps; make sure that the window brackets are correctly fastened to their clamps.

7)Perform the electric connections according to the wiring diagram. Power the actuator and let the chain come out for at least 150mm of stroke, then disconnect the actuator;

Fit the actuator into the clamps M2 through the tracks on the actuator. Centre the chain-end on the bottom-hinged bracket.

8) Fasten the chain terminal to the bottomhinged Bracket S3 (wing) with the screw and nut provided in the package;

WARNING: tighten the nut up to the stop with the bracket, not over as this may compromise the correct functioning of the actuator.

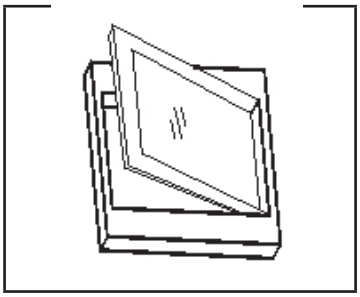
9) Check the correspondence of each chain terminal S3 with the M2 terminal, then close firmly the clamps M2;

The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

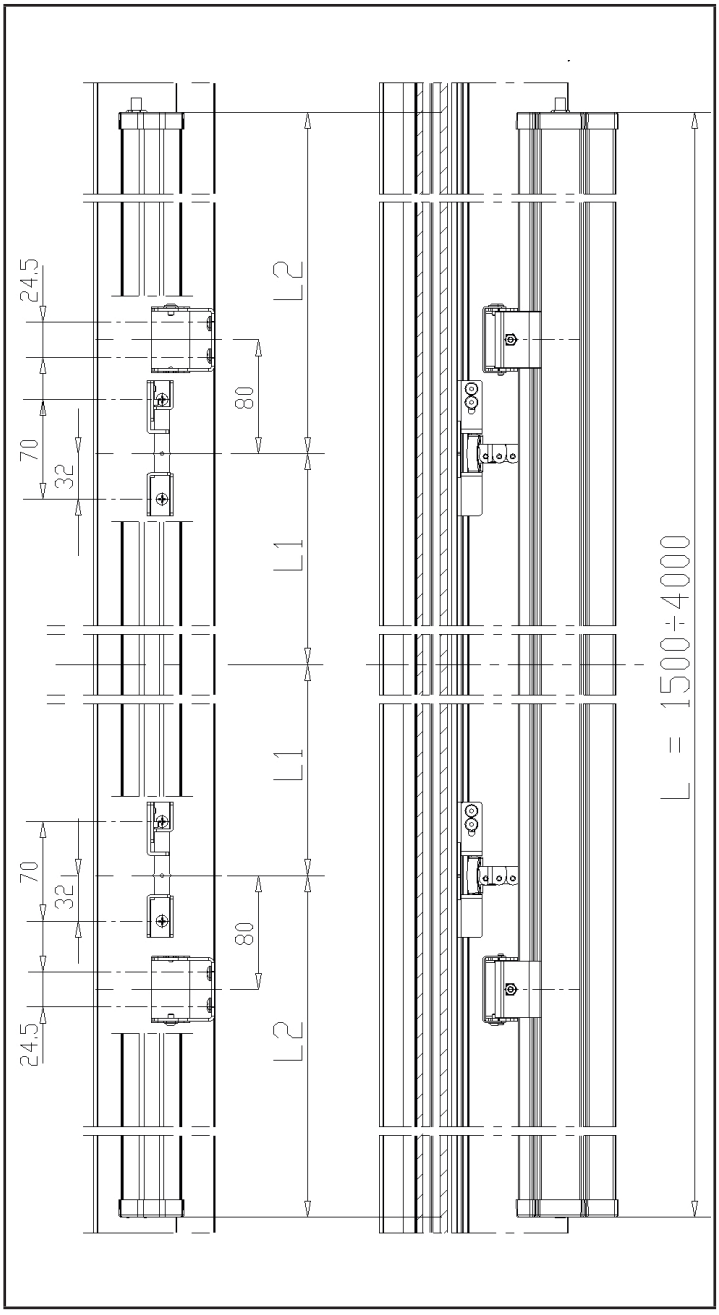
10)) Power the actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

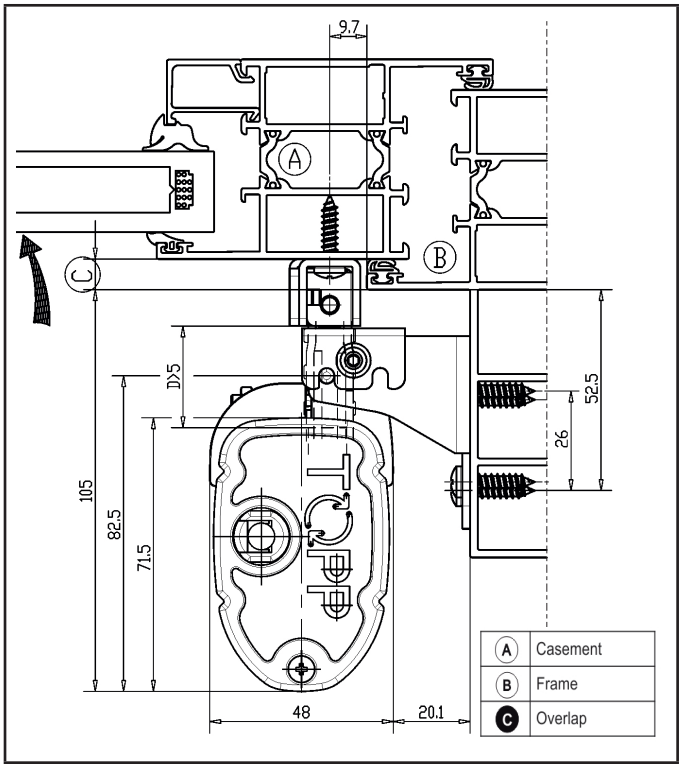
VERTICAL
outward opening application
Double push point

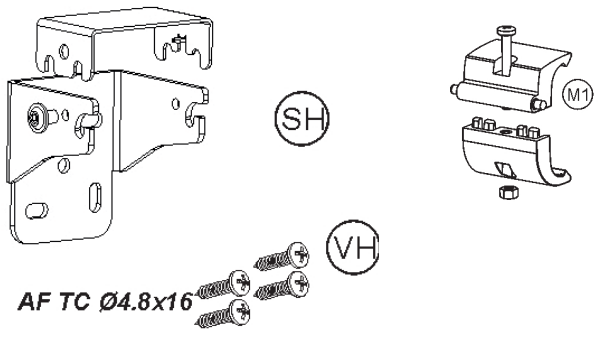
Stroke 600
230V
Standard

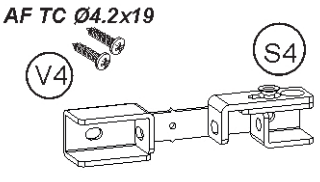


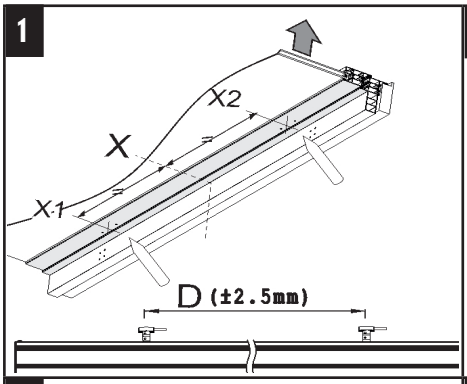
POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500÷1800	900	450	(1/2 L)-450	2
1810÷4000	1/2 L	1/4 L	1/4 L	2
3010÷4000	1/2 L	1/4 L	1/4 L	3

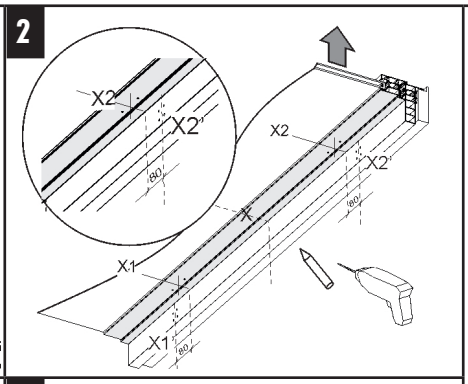


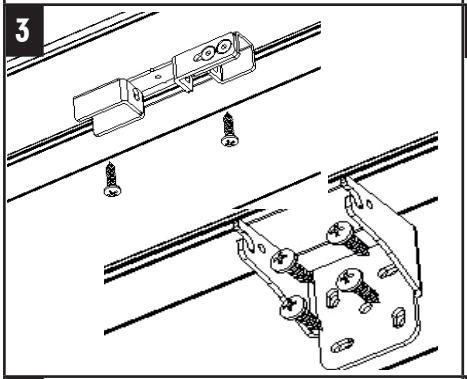


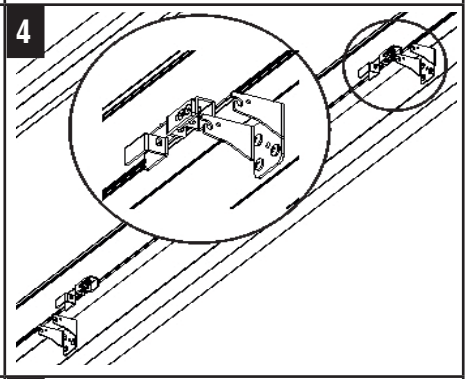


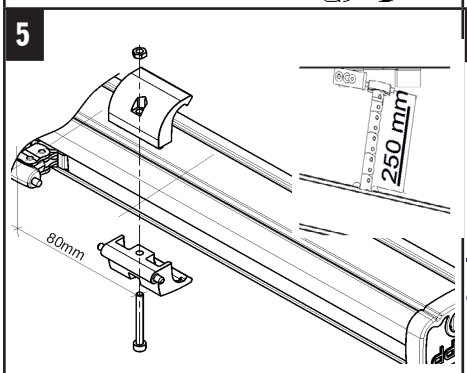


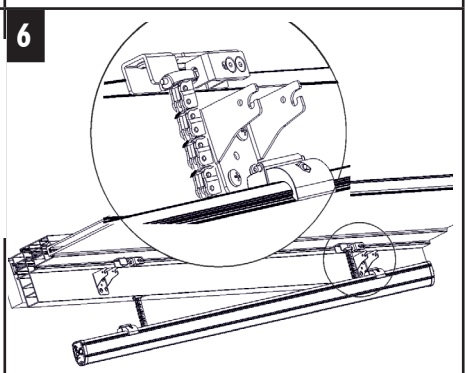


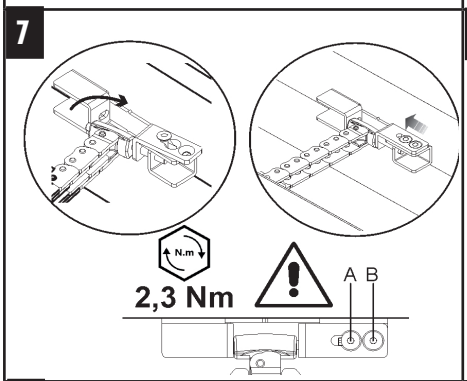


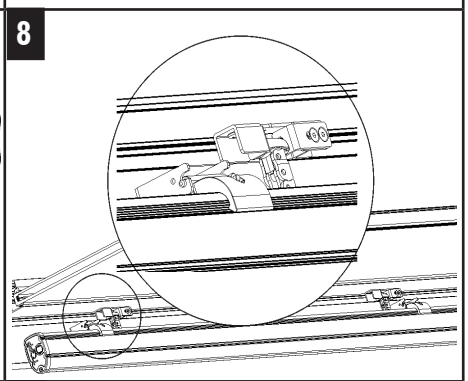


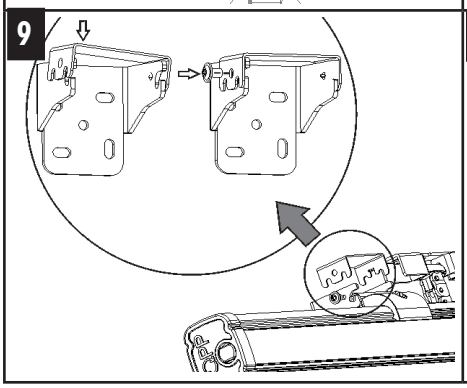


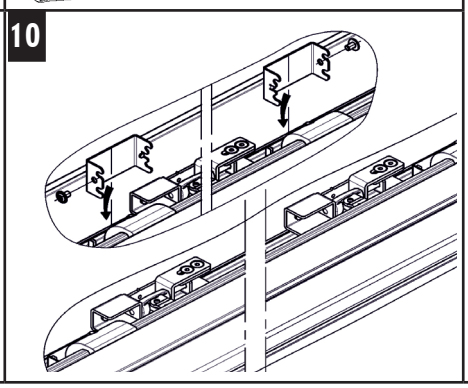












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the centre line X of the window frame. Measure the distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline X marked previously, trace axis X1 and X2;

2)Trace axis X1' and X2'.

Taking as reference the axis X1,X1' and X2,X2' previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S4 and SH; with a suitable drill, create on the window the holes;

3)4)Mount the two movable window brackets S4 and the two frame brackets SH, with appropriate screws;

5)Insert the two pairs of clamps "M1", fitting them in the actuator slider adjacent to the chain terminal, then close them partially with the screw and nut in the package; Position the clamps 80mm on either side of the chain terminal midline and tighten the screw all the way;

Perform the electric connections according to the provisions as well as with reference to the wiring diagram. Power the actuator and let the chain come out for at least 250mm of stroke, then disconnect the actuator;

6)First fasten the RIGHT chain terminal to the S4, first fit the long side of the shaft and then insert the entire assembly. Move the square plate to the centre of the mount and hand tighten bolt A. Now insert bolt B (included) into the frame mount and tighten both bolts down fully with a 2.5mm hex wrench (torque to 2,3 Nm).

Then fasten the LEFT chain terminal to the S4, as described upper.

7)8) Fasten the clamps M1 to the brackets for connection to the window SH . Make sure the brackets for connection to the window are correctly fastened to their clamps.

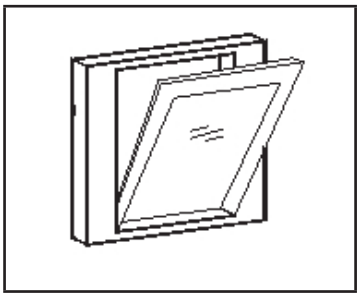
9)10) Insert the plate hooks and the screw.

The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

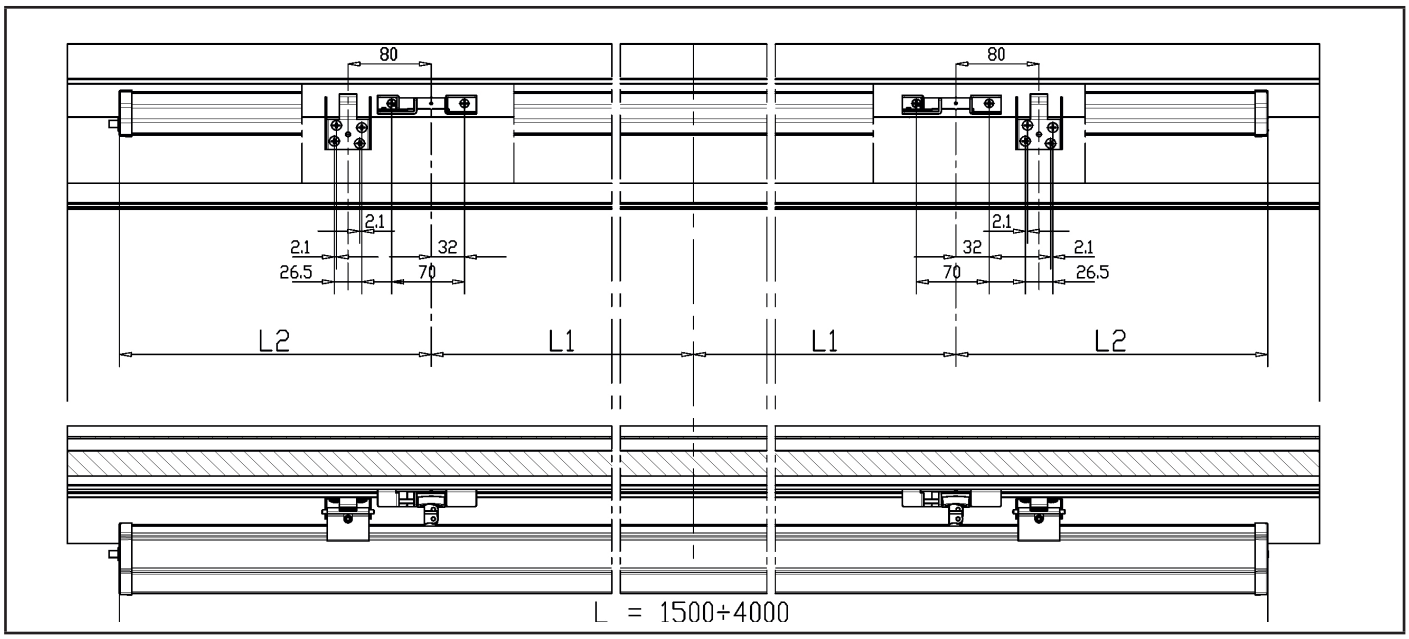
Connect the power actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimeters lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

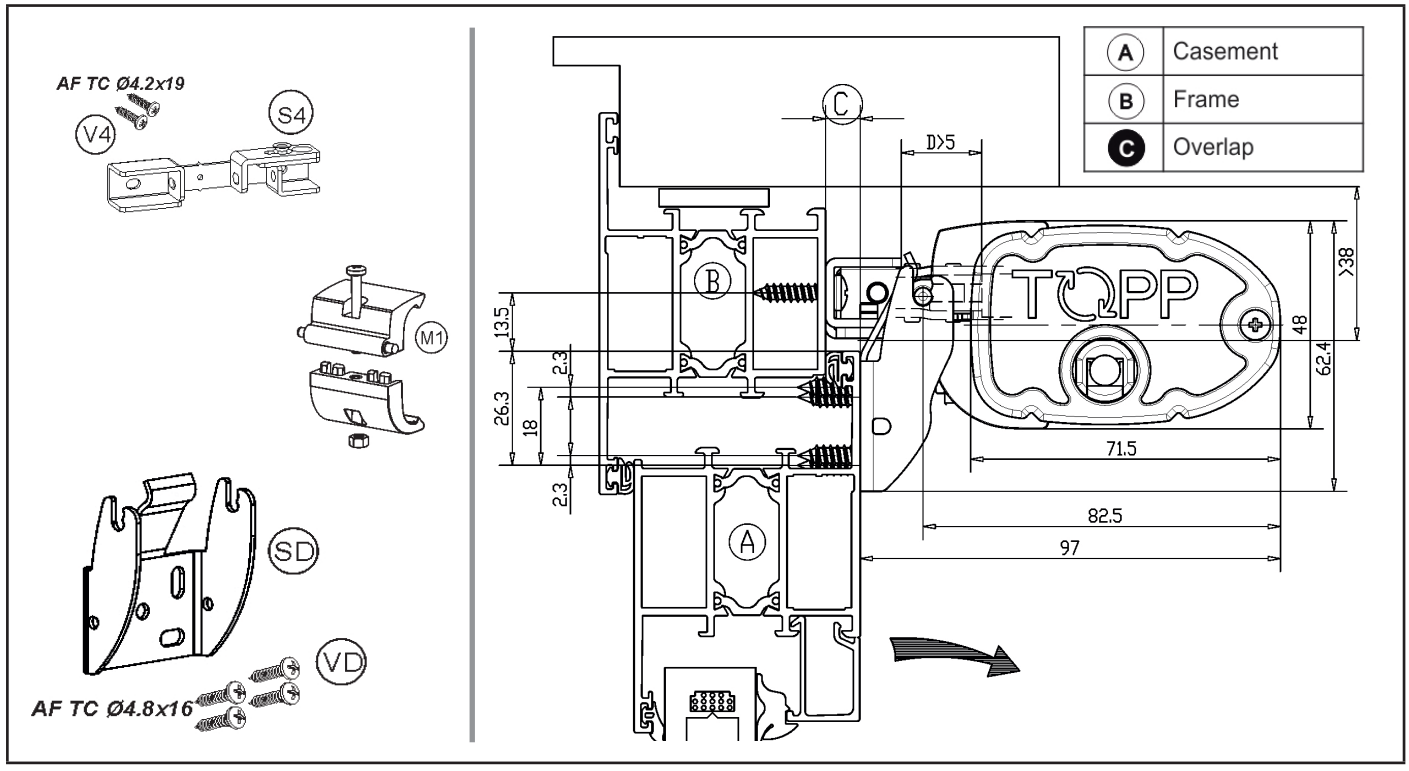
ON LEAF
inward opening application
Double push point

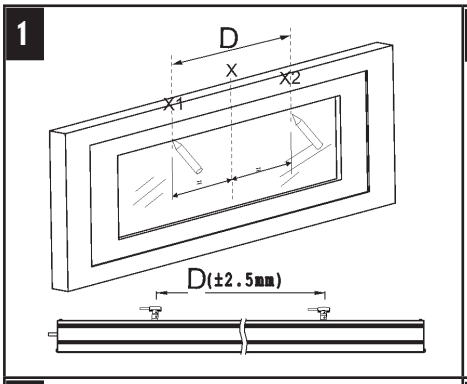
Stroke 600
230V
Standard

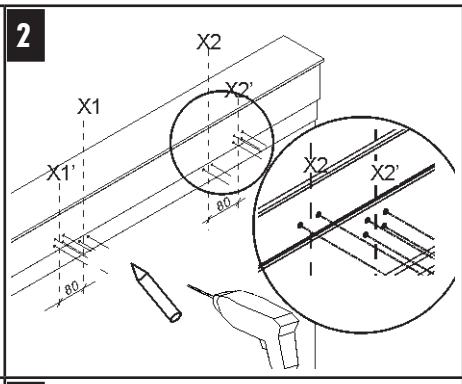


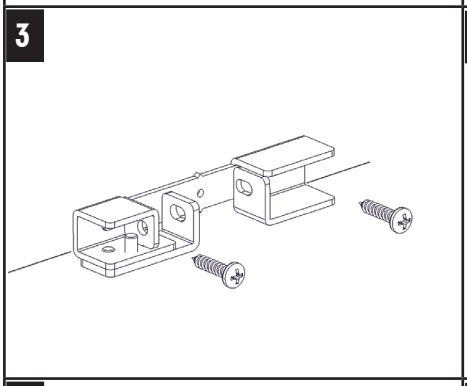
POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500÷1800	900	450	(1/2 L)-450	2
1810÷4000	1/2 L	1/4 L	1/4 L	2
3010÷4000	1/2 L	1/4 L	1/4 L	3

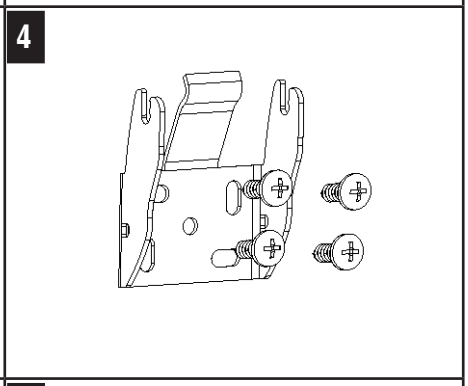


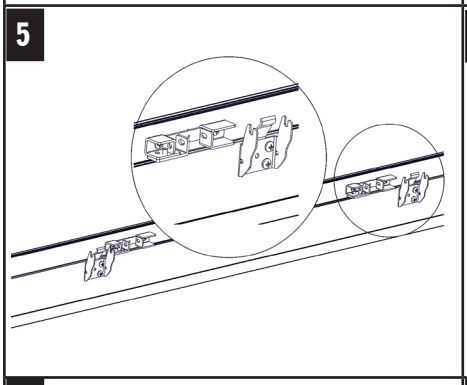


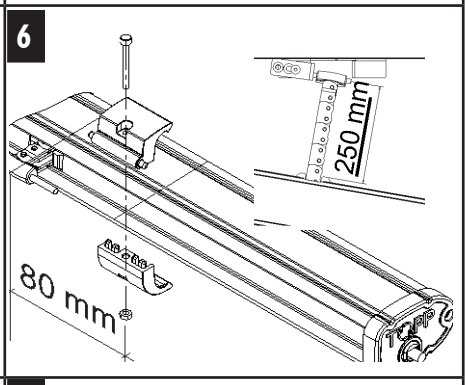


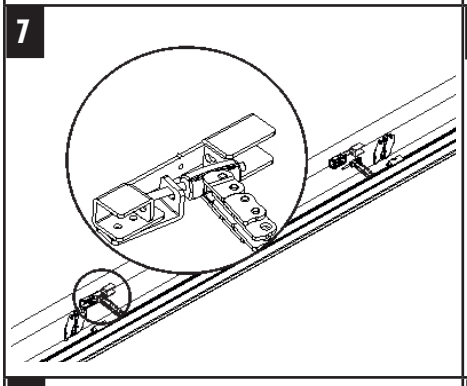


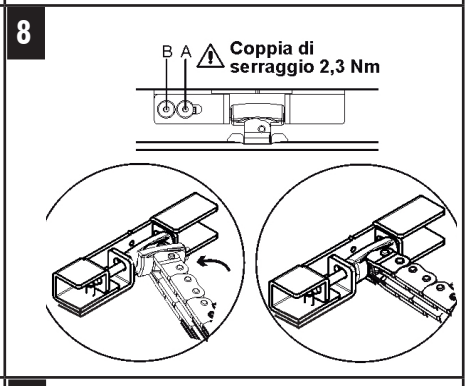


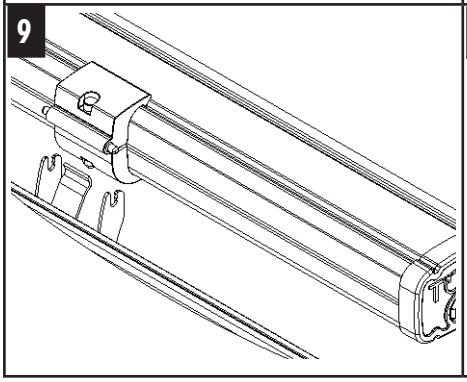


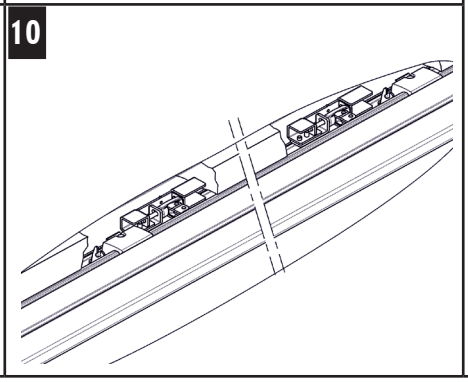












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the centre line X of the window frame. Measure the distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline X marked previously, trace axis X1 and X2;

2)Trace axis X1' and X2'.

Taking as reference the axis X1,X1' and X2,X2' previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S4 and SD; with a suitable drill, create on the window the holes;

3)4)5) Mount the two brackets S4 and the two brackets SD, with appropriate screws;

6)Insert the two pairs of clamps "M1", fitting them in the actuator slider adjacent to the chain terminal, then close them partially with the screw and nut in the package; Position the clamps 80mm on either side of the chain terminal midline and tighten the screw all the way;

Perform the electric connections according to the provisions as well as with reference to the wiring diagram. Power the actuator and let the chain come out for at least 250mm of stroke, then disconnect the actuator;

7)8)First fasten the LEFT chain terminal to the S4, first fit the long side of the shaft and then insert the entire assembly. Move the square plate to the centre of the mount and hand tighten bolt A. Now insert bolt B (included) into the frame mount and tighten both bolts down fully with a 2.5mm hex wrench (torque to 2,3 Nm).

Then fasten the RIGHT chain terminal to the S4, as described upper.

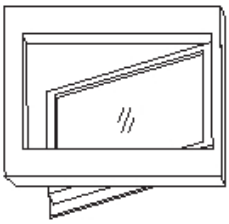
9)Fasten the clamps M1 to the brackets for connection to the SD . Make sure the brackets SD are correctly fastened to their clamps M1. The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

10) Connect the power actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

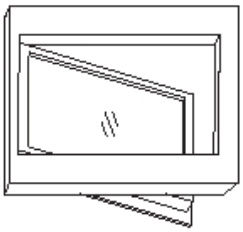
SIDE HUNG
outward opening
application

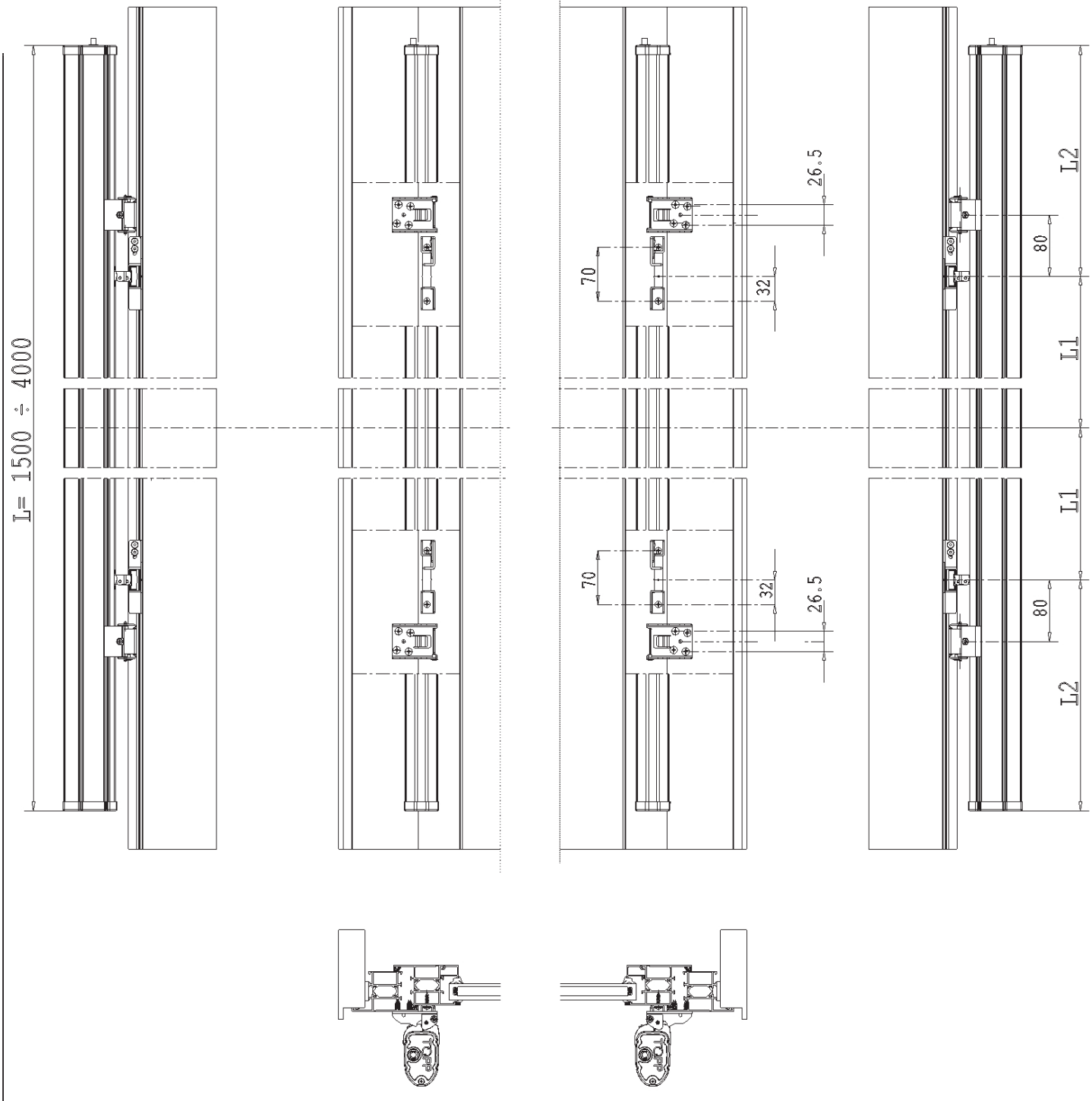
Stroke 600
230V
Standard

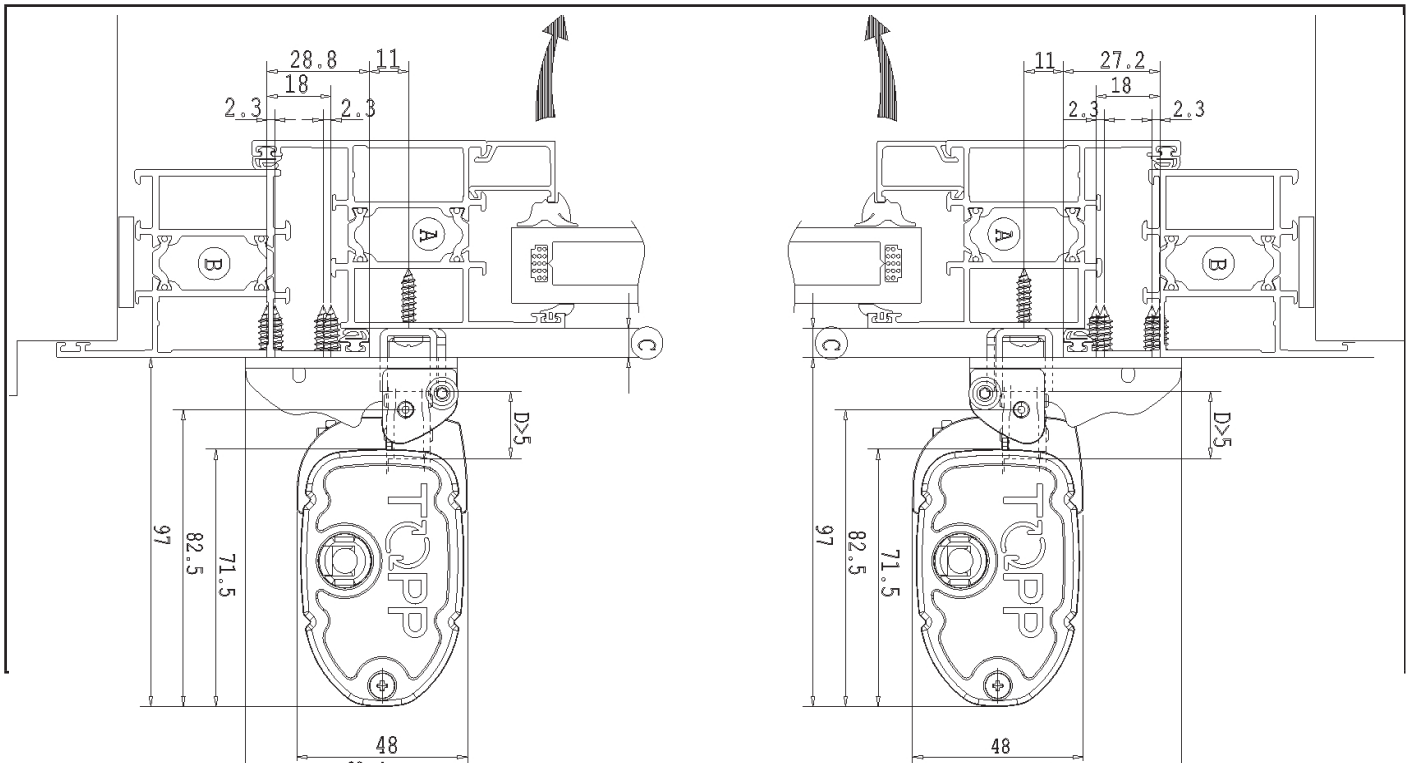
SIDE HUNG
outward opening
application



POSIZIONE DEI PUNTI DI SPINTA / PUSHING POINTS LOCATION				STAFFE/ FITTING BRACKETS
L= LUNGHEZZA MACCHINA / MACHINE LENGTH	DISTANZA TRA I PUNTI DI SPINTA / DISTANCE BETWEEN THE PUSHING POINTS	L1	L2	
1500+1800	900	450	(1/2 L)-450	2
1810+4000	1/2 L	1/4 L	1/4 L	2
3010+4000	1/2 L	1/4 L	1/4 L	3



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18
2.3
2.3
A
B
C
D<5
97
82.5
71.5
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C
D<5
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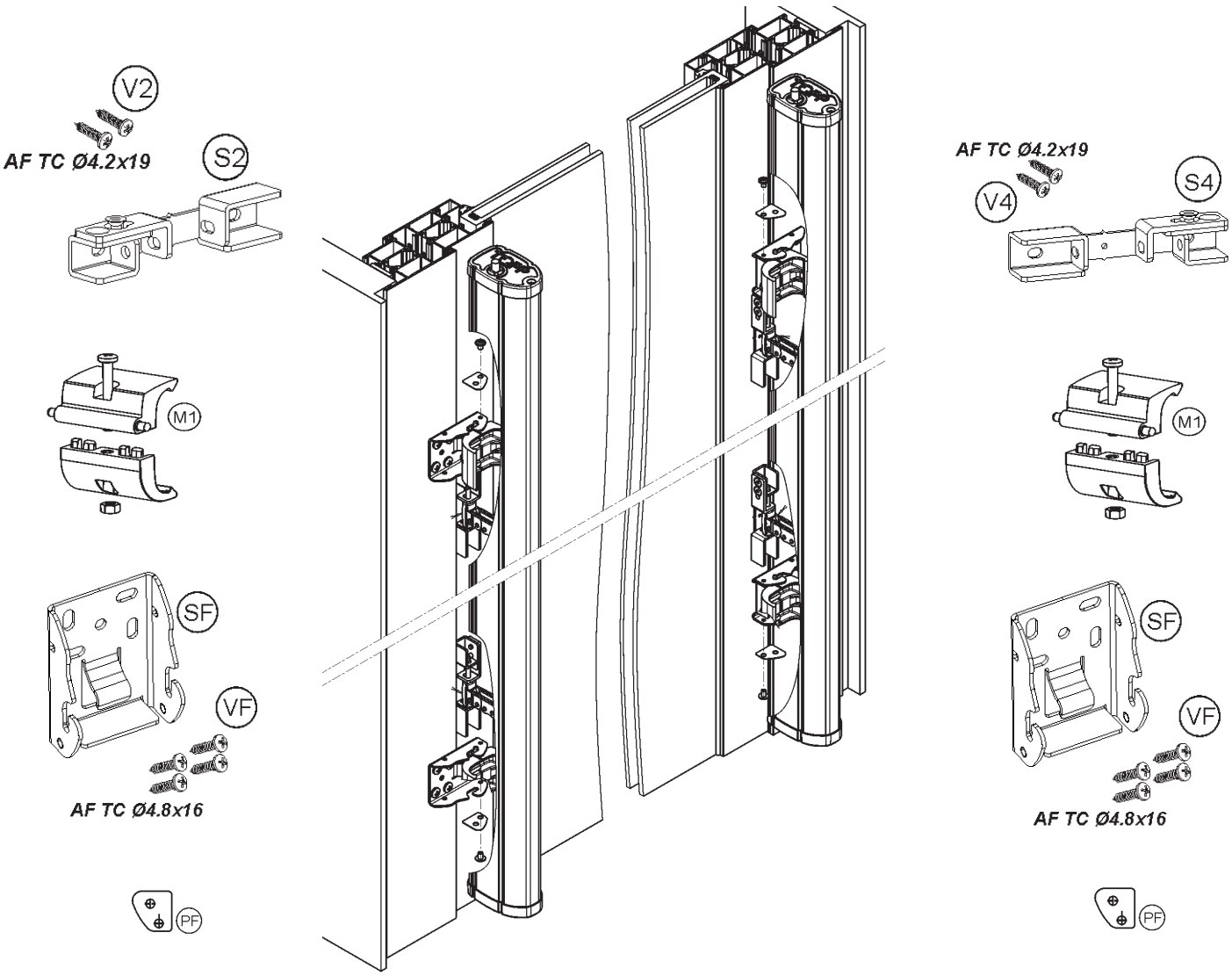
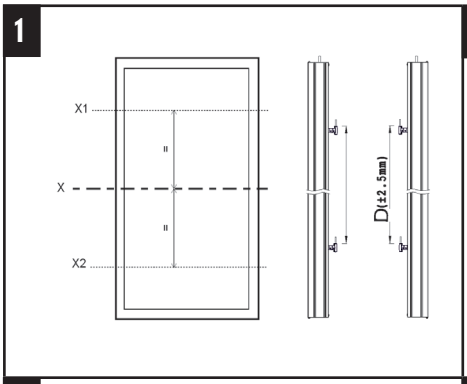
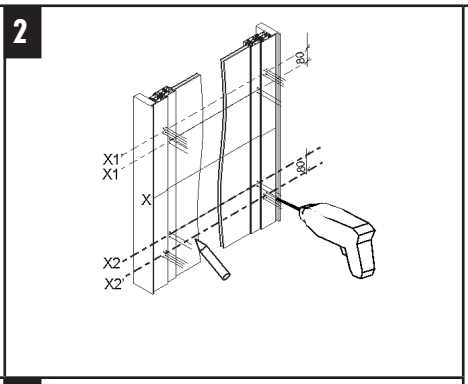
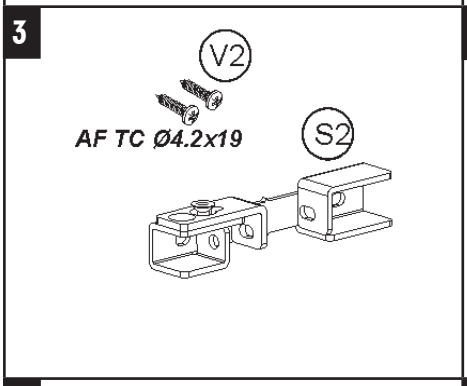
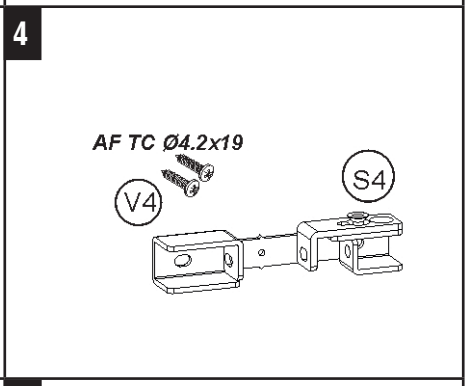
71.5
48

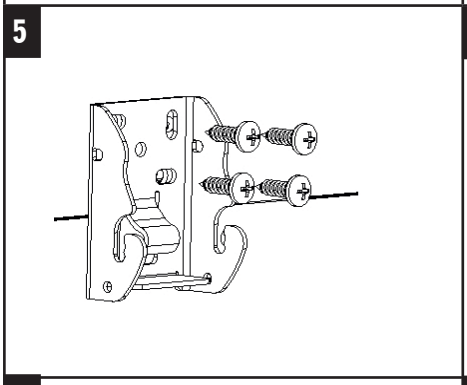

V2
AF TC Ø4.2x19
S2
M1
SF
VF
AF TC Ø4.8x16
PF
AF TC Ø4.2x19
V4
S4
M1
SF
VF
AF TC Ø4.8x16
PF

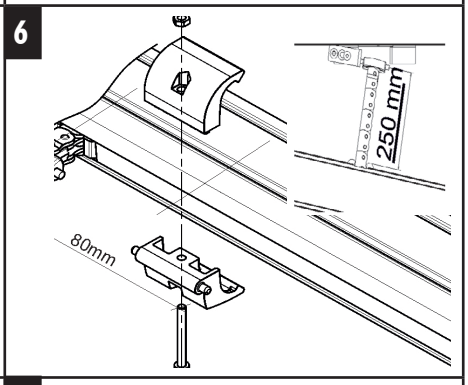


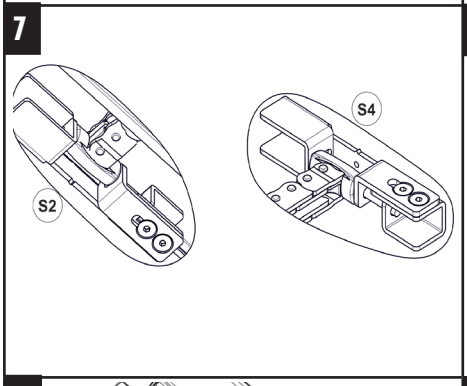


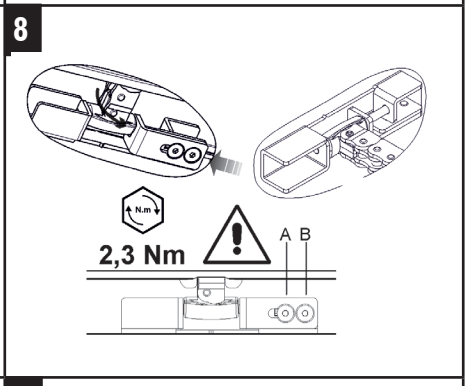


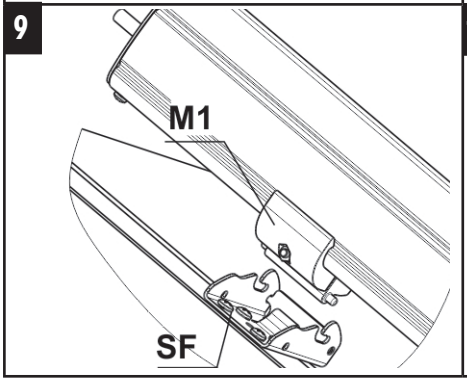


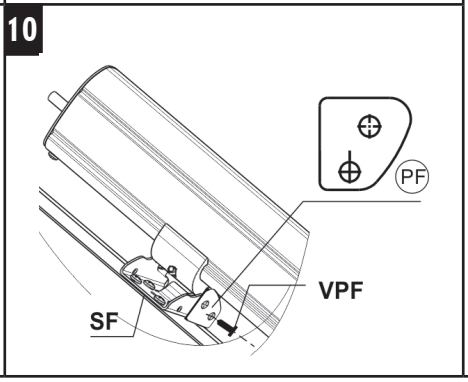












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the center line X of the window frame. Measure the distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline X marked previously, trace axis X1 and X2;

2)Trace axis X1' and X2'.

Taking as reference the axis X1,X1' and X2,X2' previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S2 (S4) and SF; with a suitable drill, create on the window the holes;

3)4)5) Mount the two movable window brackets S2 (S4) and the SF, with appropriate screws;

6)Insert the two pairs of clamps "M1", fitting them in the actuator slider adjacent to the chain terminal, then close them partially with the screw and nut in the package; Position the clamps 80mm on either side of the chain terminal midline and tighten the screw all the way;Perform the electric connections according to the provisions as well as with reference to the wiring diagram. Power the actuator and let the chain come out for at least 250mm of stroke, then disconnect electrically the actuator;

7)8)First fasten the UPPER chain terminal to the S2(S4), first fit the long side of the shaft and then insert the entire assembly. Move the square plate to the centre of the mount and hand tighten bolt A. Now insert bolt B (included) into the frame mount and tighten both bolts down fully with a 2.5mm hex wrench (torque to 2,3 Nm). Then fasten the LOWER chain terminal to the S2 (S4), as described upper.

9)Fasten the clamps M1 to the brackets for connection to the window SF . Make sure the brackets for connection to the window are correctly fastened to their clamps. The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

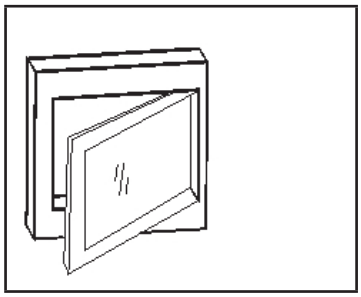
10) Insert the plate hooks PF and the screw.

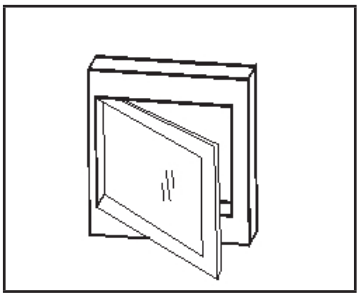
11) Connect the actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

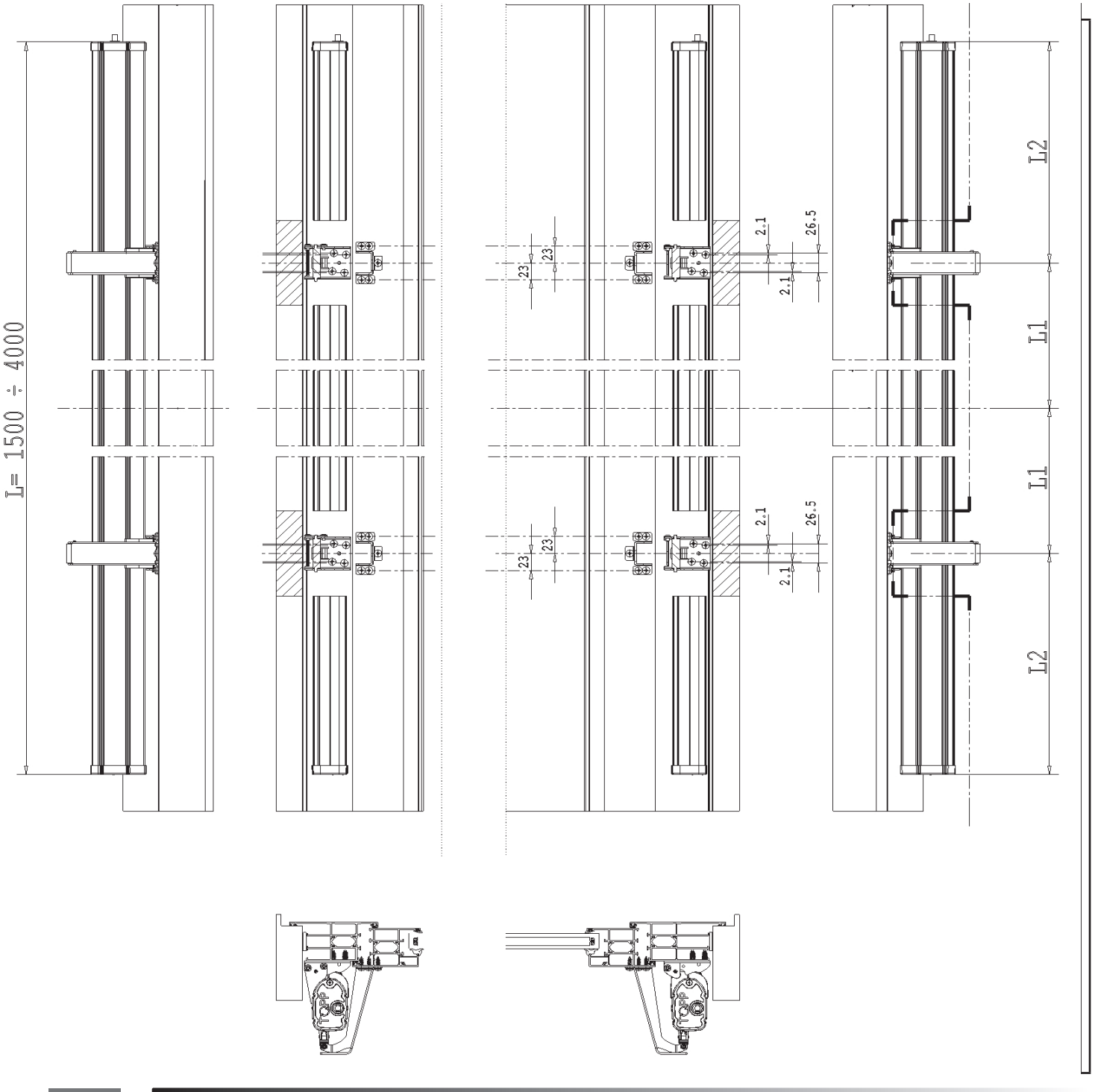
SIDE HUNG
inward opening
application

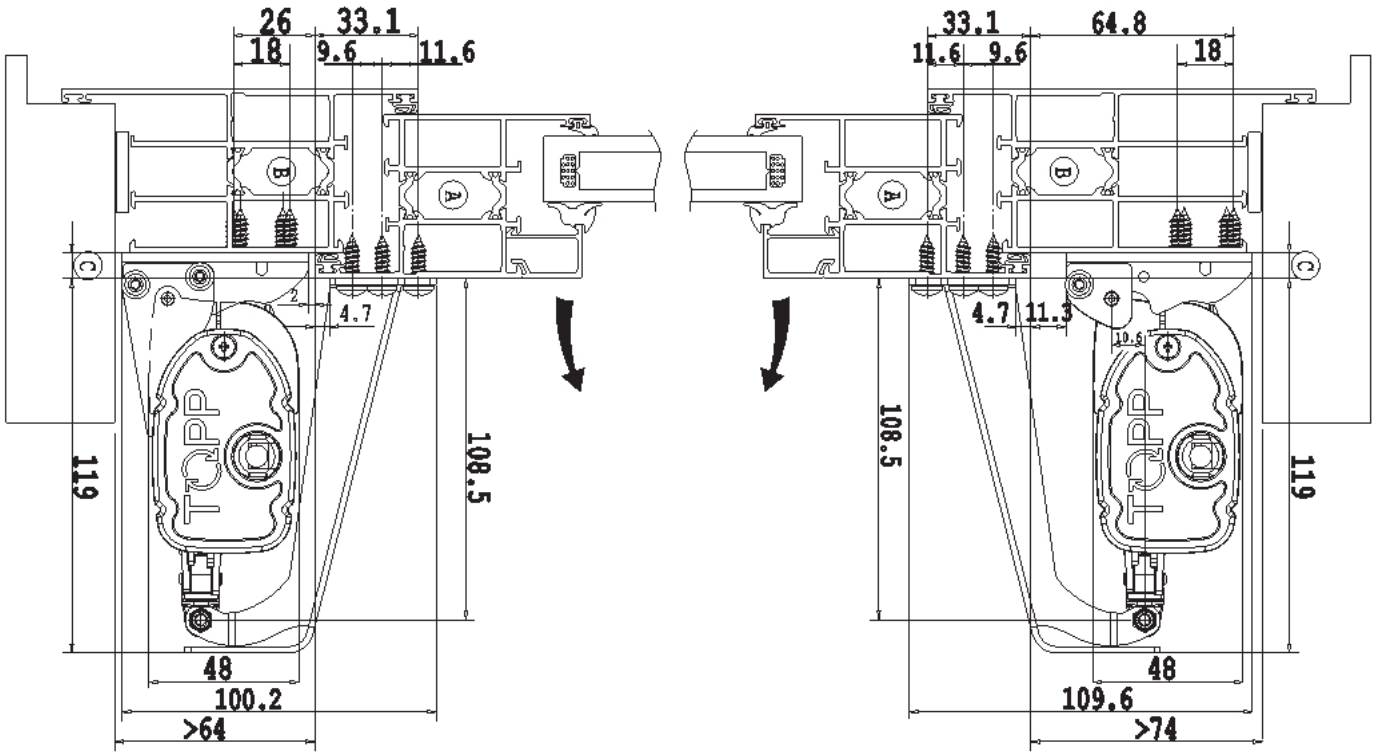
Stroke 600
230V
Standard

SIDE HUNG
inward opening
application





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9.6
11.6
4.7
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108.5
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100.2
>64
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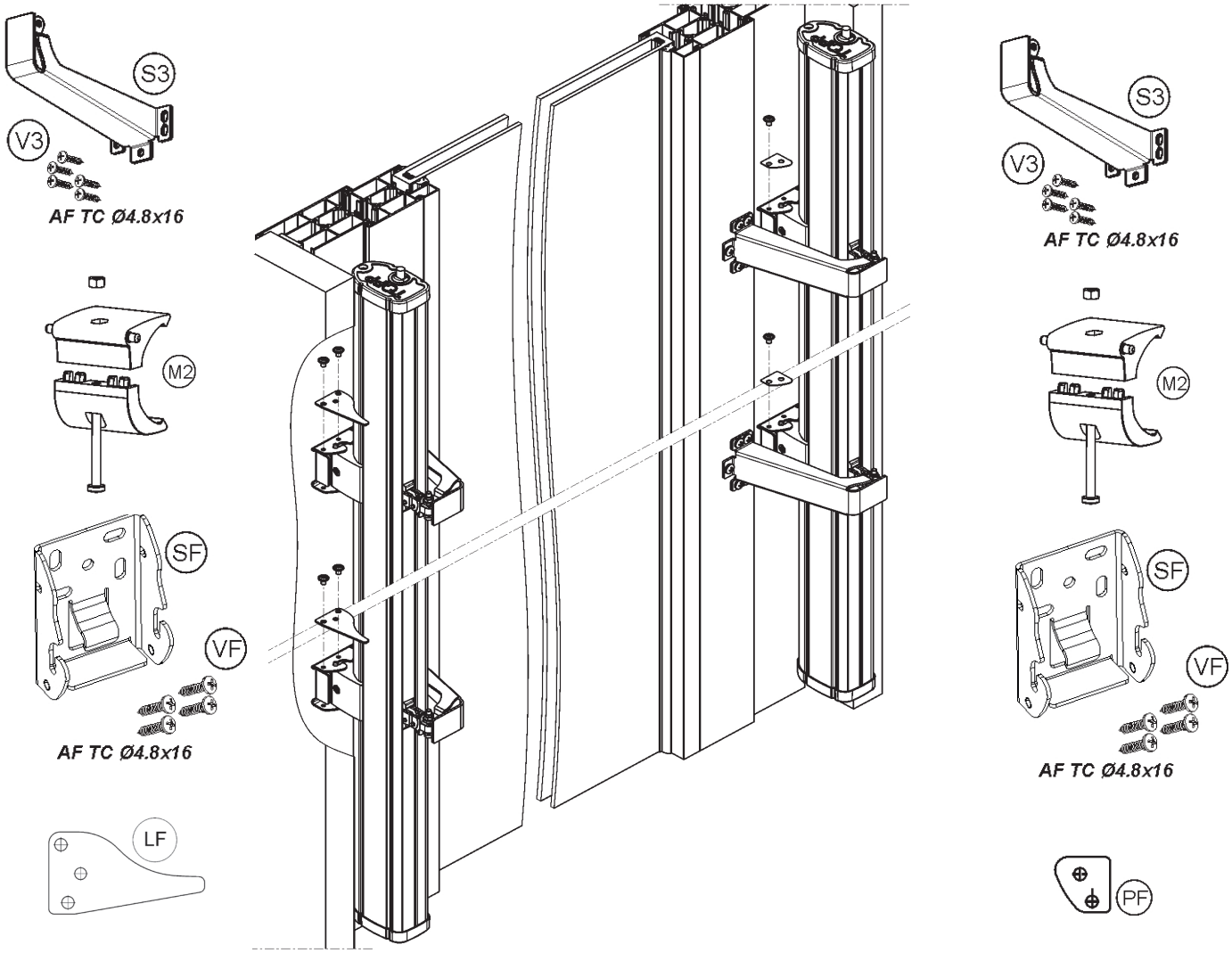
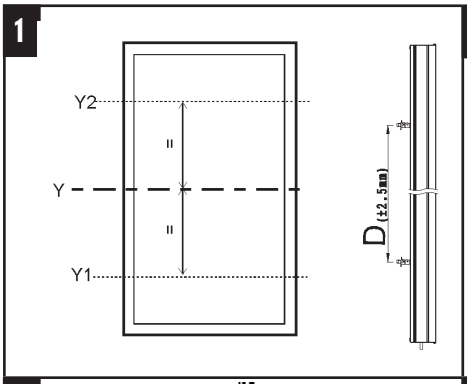
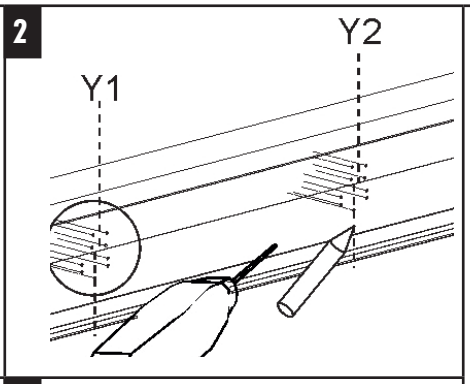
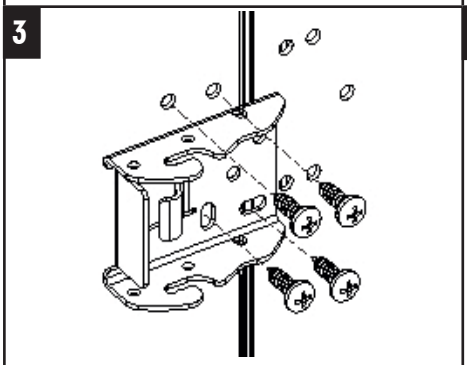
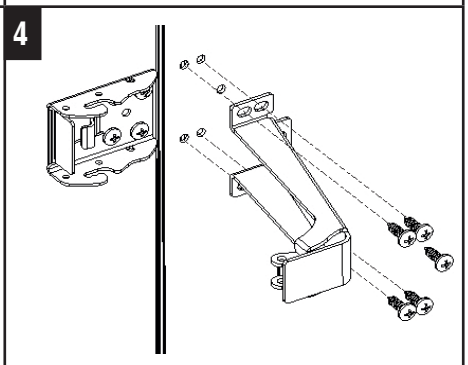
109.6
>74

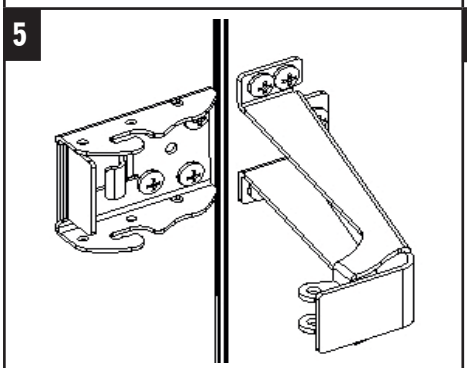

S3
V3
AF TC Ø4.8x16
M2
SF
VF
AF TC Ø4.8x16
LF
S3
V3
AF TC Ø4.8x16
M2
SF
VF
AF TC Ø4.8x16
PF

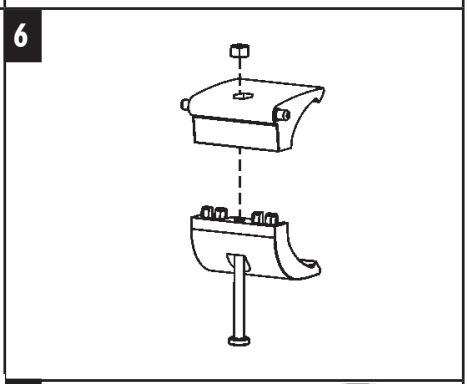


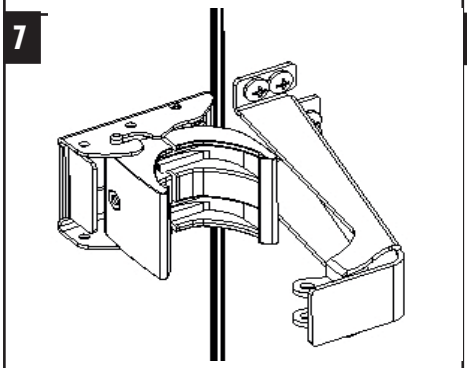


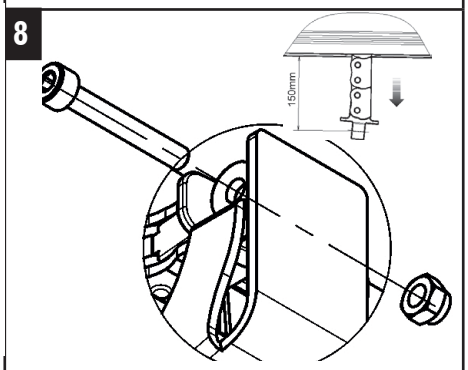


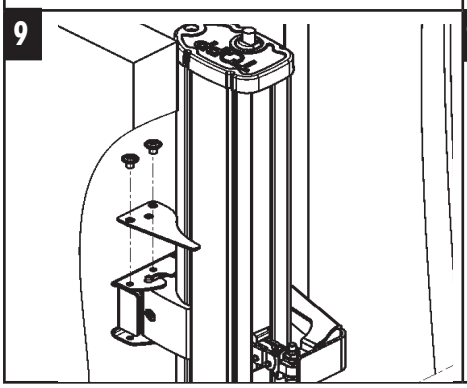


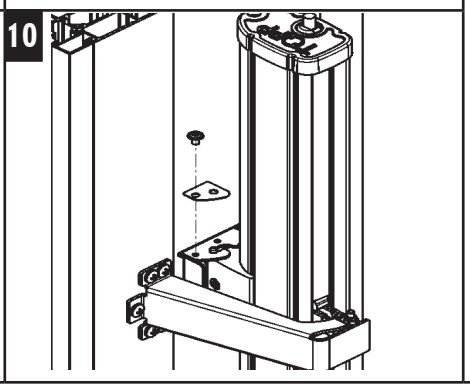












INSTALLATION

Open the package and remove the various components;

1)With a pencil draw the centre line Y of the window frame. Measure he distance D between the two chain terminals of the actuator and mark it on the window, symmetrically to the midline Y marked previously, trace axis Y1 and Y2;

2)Taking as reference the axis Y1 and Y2 previously traced, the hole layout for the application and the components dimensions, pag.10, mark the points for the holes to fasten the brackets S3 and SF;

With a suitable drill, create on the window the holes;

3) 4) 5) Mount the two movable window brackets S3 and the two frame brackets SF with appropriate screws;

6)Close the two pairs of clamps M2 partially with the screws and nut provided in the package;

7)Fit the two pairs of clamps previously assembled M2 on the brackets SF (window frame);

WARNING: do not damage the swivel bracket when fitting the clamps; make sure that the window brackets are correctly fastened to their clamps.

8) Perform the electric connections according to the wiring diagram. Power the actuator and let the chain come out for at least 150mm of stroke, then disconnect the actuator;

Fit the actuator into the clamps M2 through the tracks on the actuator. Centre the chain-end on the bottom-hinged bracket.

Fasten the chain terminal to the bottomhinged Bracket S3 (wing) with the screw and nut provided in the package;

WARNING: tighten the nut up to the stop with the bracket, not over as this may compromise the correct functioning of the actuator.

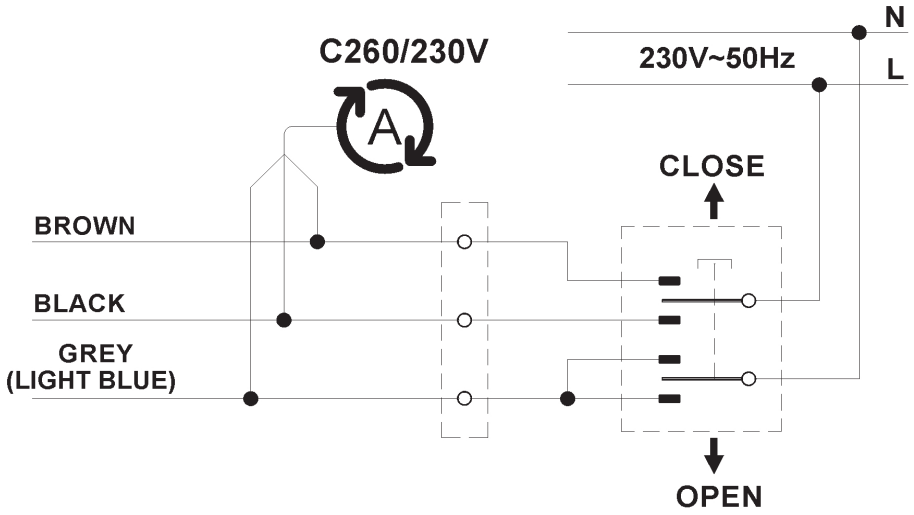
Check the correspondence of each chain terminal S3 with the M2 terminal, then close firmly the clamps M2;

9) Insert the plate hooks PF (LF) and the screw.

The number of clamps necessary for assembly will depend on the length of the actuator: up to 3 meters only 2 clamps are needed, over 3 meters add a third at the center of the actuator.

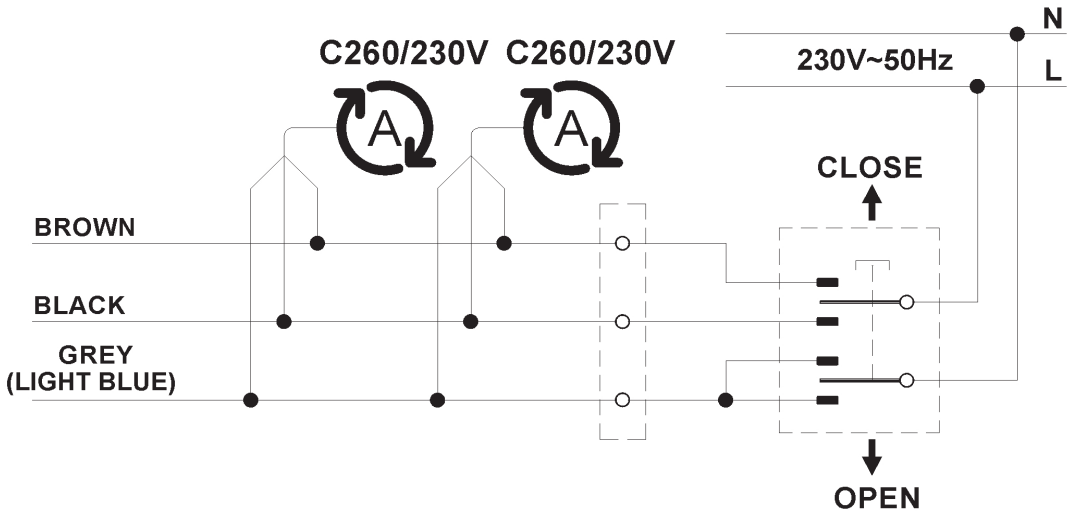
Power the actuator. Perform a test of complete window frame opening and closing. Verify that with open window frame, the stroke is some centimetres lower than the stroke limited by window frame mechanical limit devices. Once the closing phase is ended, verify that the window frame is completely closed by checking the seal deflection.

Wiring Diagram



A THIS SYMBOL IDENTIFIES THE TOPP ELECTRICAL ACTUATOR IN WIRING DIAGRAMS.

Wiring Diagram



A THIS SYMBOL IDENTIFIES THE TOPP ELECTRICAL ACTUATOR IN WIRING DIAGRAMS.

TOPP S.r.l.
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