

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





#### **MAIN FEATURES**

- The longest stroke (800 mm) and the highest force (400 N): it solves the problems to operate very heavy vents and the necessity of wide opening without taking up space inside the room (800 mm only for bottom hinged windows).
- Double link chain.
- Red led light placed on the actuator to signal the close position.

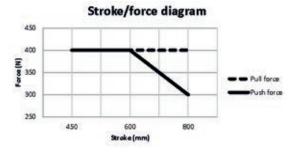
#### **INSTALLATION REMARKS**

- Minimum window height: 900 mm for 450 mm stroke, 1200 mm for 600 mm stroke, 1600 mm for 800 mm stroke.
- For windows without windowsill a fixing bracket (sliding within the dovetail slide) is available for an easy installation.
- In case of vents with four-bar hinges, please contact our Technical Dept.
- Supplied with 2 m cable (450-600 mm), 3 m cable (800 mm).
- 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)



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.

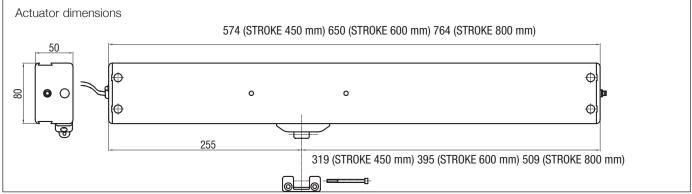




	SUPERMASTE	R 230 V AC		SUPERMASTE	R 24 V DC	
STROKE	450 - 600 - 800 m	ım		450 - 600 - 800 m	ım	
VOLTAGE SUPPLY	230 Vac ± 10%			24 Vdc ± 10%		
ELECTRIC CONNECTION	3 wires + earth			2 wires + signali	ng	
OPERATION	-			by polarity inver	sion	
FORCE (in push action)	400 N (300 N for	800 mm stroke)		400 N (300 N for	800 mm stroke)	
FORCE (in pull action)	400 N			400 N		
SPEED	~23 mm/s			~20 mm/s		
CURRENT ABSORPTION (with max load)	0,8 A			2 A		
PARALLEL CONNECTION	Yes			Yes		
LIMIT STOP	Micro switches			Micro switches		
SAFETY STOP	Thermic			Electronic		
FEEDBACK SIGNAL	-			Open/Close		
PROTECTION CLASS	IP20			IP20		
PART No.						
STROKE	450 mm	600 mm	800 mm	450 mm	600 mm	800 mm
SILVER ANODIZED	40462T	40452P	40518U	40506L	40461R	40469H
DARK BROWN ANODIZED	40465Z	40464X	40753T	40509T	40467D	40470S
WHITE PAINTED RAL 9010	40466B	40454U	407740	40507N	40468F	40471U

#### **SUPERMASTER**





### **SPECIFICATION PROSPECTS**

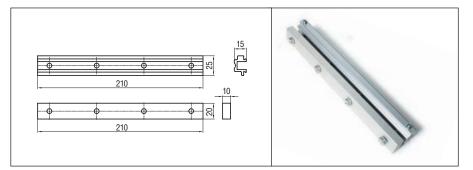
Electric chain actuator Ultraflex Control Systems named Supermaster with double link chain. Force 400 N.

Strokes: 450-600-800 mm. Voltage supply 230 Vac or 24 Vdc. Limit stop by micro switches and thermal protection (230 Vac version) or electronic safety stop (24 Vdc version).

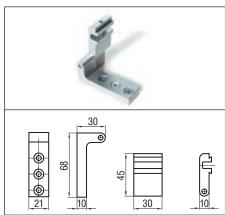
Parallel connection. Casing in silver anodized or painted aluminium.

The 230 Vac version and the 24 Vdc version are conform to 2004/108/CE directive, the 230 Vac version is also conform to 2006/95/CE.

# **Accessories**



Sliding aluminium bracket with shim part No. 40460N



Pivoting brackets kit part No. 40560T









On windows with windowsill without brackets

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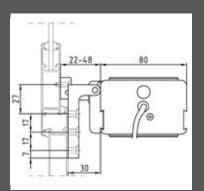
18,8

80

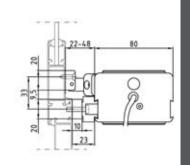
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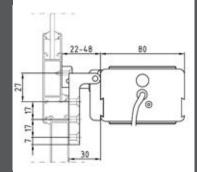
3



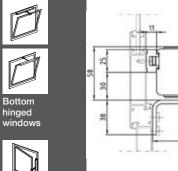
On the frame with pivoting brackets part No. 40560T



Without windowsill with bracket part No. 40460N



On windows with windowsill with pivoting brackets part No. 40560T

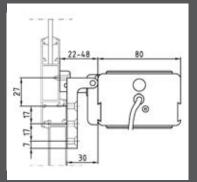




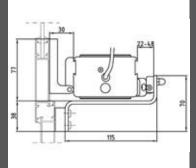
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On the vent with the pivoting bracket part No. 40560T



On the frame with the pivoting bracket part No. 40560T and bracket part No. 40472W

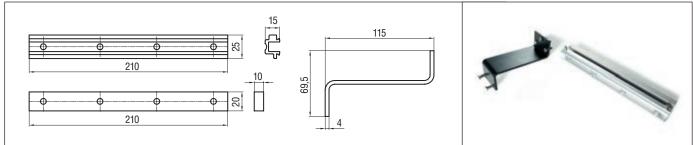
▲ The instructions for a safe installation are included in the section "SECURITY WARNINGS"

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# **Accessories**

Side hinged windows



Sliding aluminium steel bracket with shim and bottom hinged painted steel bracket part No. 40472W



Chain actuator – Force 300 N – Stroke 400 mm





### **MAIN FEATURES**

- Double link chain for a better load resistance in case of top hinged windows, heavy windows or roof windows.
- Glass strengthened nylon casing.
- Double electric insultation actuator (no electric connection to earth is needed).
- The special removable plug allows a very quick and easy connection. It is deal for the final test of the actuators on the building site.
- Provided with closing feedback signal.
- STILE with selectable stroke 230/400 mm
- STILE R with a maximum stroke of 400 mm, adjustable from 0 to 300 mm, by positioning a magnet on the chain during installation.
- STILE RF with a selectable stroke 230/400 mm and integrated Radio Receiver. Radio Transmitter to be ordered separately-

### **INSTALLATION REMARKS**

- Exclusive system for a quick and safe installation.
- Quick release system for an easy window cleaning.
- Supplied with pivoting brackets and spacer for chain connector to be used on windows with a high overlap.
- In case of vents with four-bar hinges, please contact our Technical Dept.
- For installation of two **STILE** on the same vent it is available the Coupling Control Unit CP230, part No. 41089V. (See CONTROL ACCESSORIES section)

### **32** GREEN LINE



	STILE	STILE R	STILE RF
VOLTAGE SUPPLY	230 Vac 50/80 Hz	230 Vac 50/80 Hz	230 Vac 50/80 Hz
ELECTRIC CONNECTION	3 wires (*)	3 wires (*)	3 wires (*)
MAXIMUM STROKE	selectable 230/400 mm	400 mm: adjustable from 0 to 300 mm	selectable 230/400 mm
FORCE	300 N (**)	300 N (**)	300 N (**)
SPEED	~30 mm/s	~30 mm/s	~30 mm/s
CURRENT ABSORPTION (max load)	0,8 A	0,8 A	0,8 A
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Micro switches	Micro switches/Hall sensor	Micro switches
PROTECTION	Thermic	Thermic	Thermic
FEEDBACK SIGNAL	Close	Close	Close
PROTECTION CLASS	IP20	IP20	IP20
RADIO RECEIVER (integrated)	No	No	Yes
PART No.			
GRAY	41554A	41558E	41730U
BLACK	41555B	41559F	41731V
WHITE	41556C	41560G	41732W

(\*) Double electric insulation actuator: no electric connection to earth is needed. (\*\*) In case of push action and full stroke, maximum force is intended for short period only





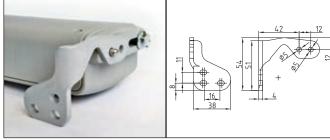


# Radio Transmitter

part No. 41729T Compatible with Stile-RF and Radio Receiver 230 Vac and 24 Vdc. 6 CH (open-stop-close) can operate up to 6 CH simultanusly and/or independently.

Electrical connector included (no cable)

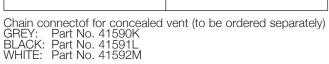
Accessories

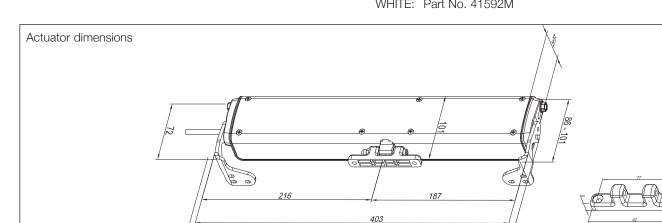




11 mm chain connector spacer (included)



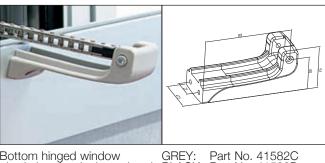




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Connector included

Pivoting brakets (included)



Bottom hinged window plastic bracket (to be ordered separately)



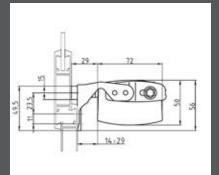




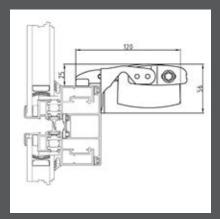
Side hinged windows



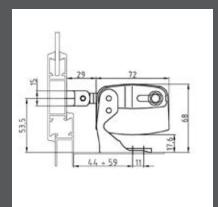
Root windows



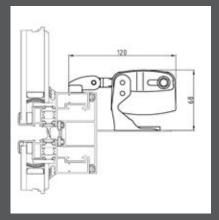
On the frame with pivoting brackets included



On the frame with pivoting brackets included and chain connector for concealed vents



On the windowsill with pivoting brackets included

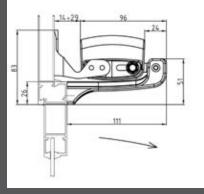


On the windowsill with pivoting brackets included and chain connector for concealed vents

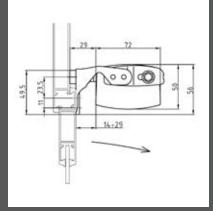




windows



On the frame with pivoting brackets included and bottom hinged bracket



On the vent with pivoting brackets included

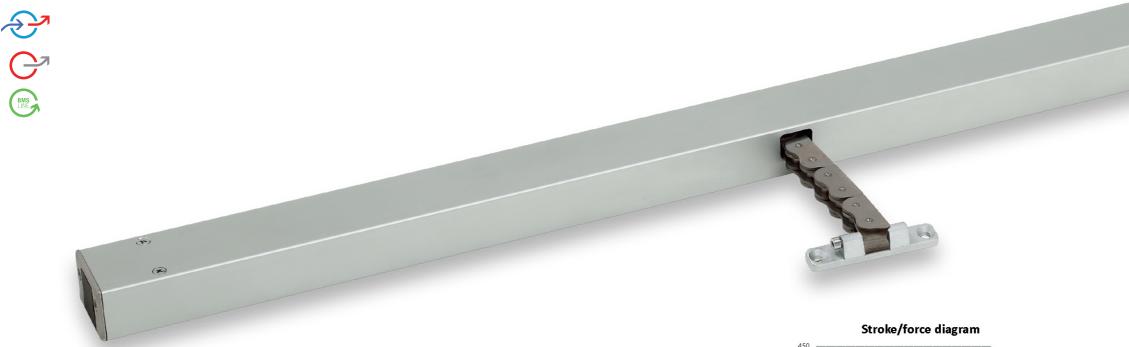
▲ The instructions for a safe installation are included in the section "SECURITY WARNINGS"

### **SPECIFICATION PROSPECT**

Class 2 electric insulation chain actuator Ultraflex Control Systems named Stile with double link chain in two versions: selectable stroke 230/400 mm or adjustable stroke from 0 to 300 mm. Voltage supply: 230 Vac. Parallel connection. Limit stop by micro switches and thermal protection. Plastic scratch resistant finish.

NANO

Chain actuator - Force in push action 400 N - Maximum stroke 800 mm



#### MAIN FEATURES

- The highest performance (400 N) in the smallest case (24 x 35 mm)
- Very silent operation
- Chain in double stainless steel links.
- Aluminum extrusion
- Electronic stop in the intermediate positions in case of overload.
- Soft stop in close and fully open position
- Reduction of entrapment risk: stop and reverse action in case of obstacle detected
- Cable connection on both sides (Synchro versions)

 The SYNCHRO NANO 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).
SYNCHRO NANO versions provide also open/close feedback.

- The SYNCHRO NANO F-SIGNAL versions provide free potential opening and closing feedback signal (maintained contact), activated by the current limit.
- NANO DC is provided with 1,5 m cable (no synchronization, feedback signal and speed selection).
- Suitable for combined installation with the additional locking device E-LOCK (see related data sheet).
- Suitable for drawbridge application (Synchro versions).

#### **OTHER VERSIONS UPON REQUEST:**

• NANO versions with IP42 protection class, for a higher resistance against atmospheric agents.

• CNUS Versions for USA and Canada.

#### **INSTALLATION REMARKS**

- In case of vents with four-bar hinges, please contact our Technical Dept.
- If installed on PVC windows, the profile has to be reinforced.
- In case of Building Management System control, avoid repetitive commands in the same direction.

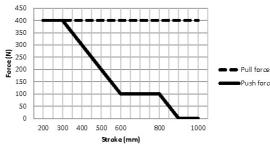
For further information contact our Tech. Dept.

Suitable for installation on **Smoke and Heat Exhaust Ventilators (SHEV)** in conformity to European Standard **EN 12101-2** (pending test).



The BMSline version is fully programmable (stroke, speed, force, ...); different scenarios are selectable with a connection to a computer throught dedicated software. See BMSline section.

NOTE: brackets, electrical connector and cable not included - to be ordered separately



800 and 1000 mm stroke only for bottom hinged windows.

\*Must be considered as a temporary load only, both in push and in pull. \*\*Silent operation: opening speed depending on stroke (minimum speed to complete the opening within 60 s). Synchro versions can provide Silent Ventilation (slower speed) activated by UCS C-SV Smoke Ventilation Control Panels.

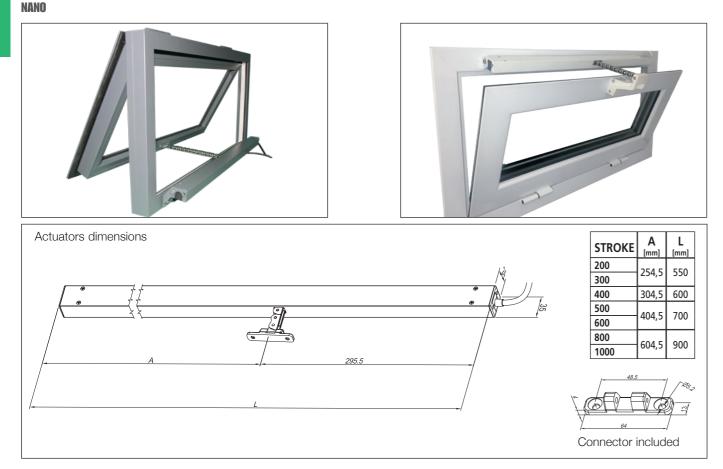
#### Part No. for DC VERSIONS (24 Vdc ±15%)

MODEL	SYNCHRO	FEEDBACK	CABLE	COLOUR	PART No. (Stre	oke)
NANO DC	-		1,5 m 2 wires	SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010 SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010	41944Z 419 41945A 419 41946B 419 500 mm 600 41953I 419 41954J 419	0 mm 400 mm 947C 41950F 948D 41951G 949E 41952H 0 mm 800 mm 956L 41959O 957M 41960P 958N 41961Q
SYNCHRO NANO DC	Yes	open/close	8 pole connector	SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010 SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010	200 mm     300       41962R     419       41963S     419       41964T     419       500 mm     600       41971A     419       41972B     419	0 mm 400 mm 965U 41968X 966V 41969Y 967W 41970Z 0 mm 800 mm 974D 41977G 975E 41978H 976F 41979I
SYNCHRO NANO DC F-SIGNAL	Yes	free potential open/close	8 pole connector	SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010 SILVER ANODIZED BLACK RAL 9005 WHITE RAL 9010	41980J 419 41981K 419 41982L 419 500 mm 600 41989S 419 41990T 419	0 mm 400 mm 983M 41986P 984N 41987Q 985O 41988R 0 mm 800 mm 992V 41995Y 993W 41996Z 994X 41997A

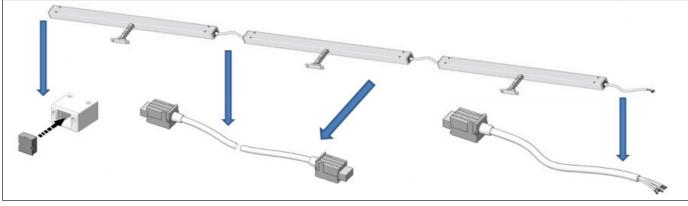
# THE SOLUTION FOR INTEGRATION INTO THE WINDOW PROFILES

#### **TECHNICAL DATA**

	DC VERSION
VOLTAGE SUPPLY	24 Vdc ± 15%
CURRENT ABSORPTION (max load)	1 A
OPERATION	polarity inversion
MAX FORCE	400 N*
OPENING SPEED	4 - 14 mm/s**
CLOSING SPEED	4 mm/s
DUTY CYCLE	30%
PARALLEL CONNECTION	Yes
LIMIT STOP	Electronic
SAFETY STOP	Electronic
PROTECTION CLASS	IP40



# **Accessories - Electrical connectors and cables**



Electrical Connector with 1,5 m cable (white) for SYNCHRO NANO DC 42016T 42017U Electrical Connector with 1,5 m cable (black) for SYNCHRO NANO DC

**Accessories - Brackets** 

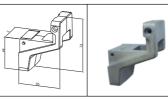




- 42021Y Electrical Connector (without cable) for SYNCHRO NANO DC and SYNCHRO NANO DC F-SIGNAL
- 42018V Cable with 2 connectors (1m, white) for installations of 2 x SYNCHRO NANO DC actuators.
- 42019W Electrical Connector (without cable)







Aluminum bracket for bottom hinged windows: GREY part no BLACK part no part no. 41941W part no. 41942X part no. 41943Y WHITE

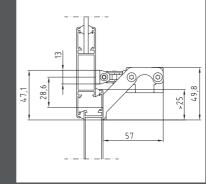
## **Installation examples**



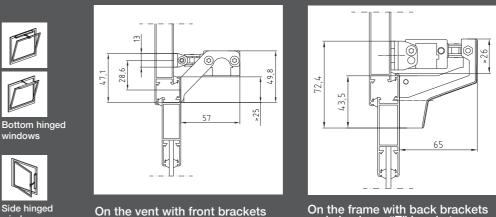
Concealed vent with front bracket



Parallel windows



With front brackets



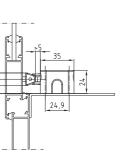
The instructions for a safe installation are included in the section "SECURITY WARNINGS"

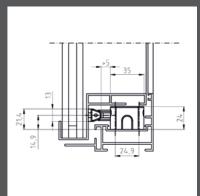
#### SPECIFICATION PROSPECTS

Electric chain actuator Ultraflex Control Systems named Nano DC with chain in double stainless steel links. High performance (400 N) in very small case (24 x 35 mm). Voltage supply: 24 Vdc – Electronic limit stop; electronic stop in the intermediate positions in case of overload. Electric chain actuator Ultraflex Control Systems named Synchro Nano DC with chain in double stainless steel links. High performance (400 N) in very small case (24 x 35 mm). Voltage supply: 24 Vdc - Electronic limit stop; electronic stop in the intermediate positions in case of overload. Suitable for mounting more than one actuators (max 4 actuators) on the same vent: integrated speed synchronization. When "free potential open/close feedback" is required, indicate suffix "F-SIGNAL"



**2** GREEN LINE

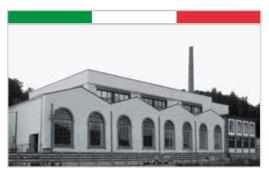




On windowsill with side brackets

Integrated into window profiles with side brackets

On the frame with back brackets and aluminum "Z" bracket





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Window & Door Accessories Ltd Window & Door Automation Specialists Natural ventilation, Hybrid ventilation, Smoke ventilation Facade Management Automation Equipment Website: www.wdacc.ie E-mail: info@wdacc.ie



Linear rack actuators - Force in push action 1000/2000 N - Stroke 350, 550, 750 and 1000 mm



- 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.



24 Vdc version is suitable for installation on **Smoke and Heat Exhaust Ventilators (SHEV)** i in conformity to European Standard **EN 12101-2** and tested by Istituto Giordano.

#### **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 large domes/top hinged windows that require double pushing force, coupled by connecting rods, **Double T-Rack** system is available. Please contact our Commercial Department.

• 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.

#### **CONNECTING ROD:**

Diameter 12 mm in stainless steel. Quick clutch: fixing accessories are not necessary. Available different lengths for following distance beetween racks:

PART No.	
1050 mm	40231B
1550 mm	40232C
2050 mm	40233D

	T-RACK 230 V AC	T-RACK 24 V DC	SYNCHRO T-RACK 24 V DC
VOLTAGE SUPPLY	230 Vca ± 10%	24 Vdc ± 10%	24 Vdc ± 10%
ELECTRIC CONNECTION	3 wires + earth	2 wires + signalling	5 wires
OPERATION	-	by polarity inversion	by polarity inversion
FORCE IN PUSH ACTION	1000 N	1000 N	1000 N
FORCE IN PULL ACTION	1000 N	1000 N	1000 N
SPEED	~12,5 mm/s	~12,5 mm/s	~12,5 mm/s
CURRENT ABSORPTION (with max load)	0,22 A	1,5 A	1,5 A
PARALLEL CONNECTION	Yes	Yes	Yes
LIMIT STOP	Electronic	Electronic	Electronic
SAFETY STOP	Electronic	Electronic	Electronic
FEEDBACK SIGNAL	-	Open/Close	-
PROTECTION CLASS	IP65	IP65	IP65
COLOUR	Silver anodized	Silver anodized	Silver anodized

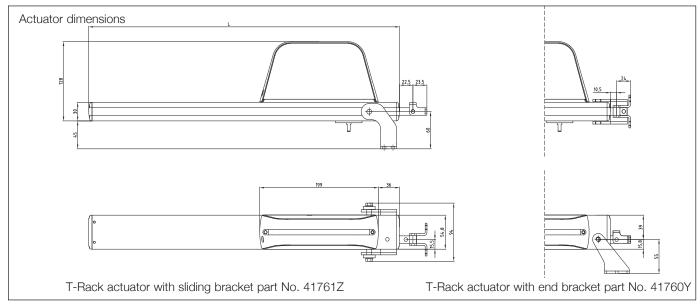
PART No.				T-RACK GROUP
STROKE 350 mm	41740E	41745J	417500	41755T
STROKE 550 mm	41741F	41746K	41751P	41756U
STROKE 750 mm	41742G	41747L	41752Q	41757V
STROKE 1000 mm	41743H	41748M	41753R	41758W

**NOTE:** brackets not included - to be ordered separately

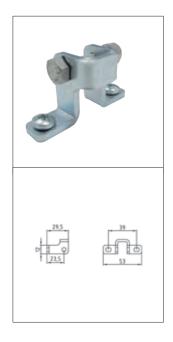
### **T-RACK**



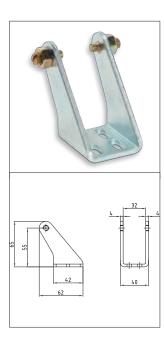
STROKE	L
350	523
550	723
750	923
1000	1173



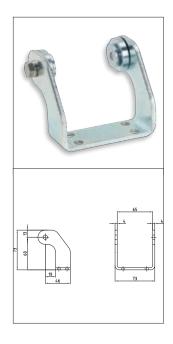
# **Accessories**



Connector kit to fix the rack to the vent (included)



End bracket part No. 41760Y



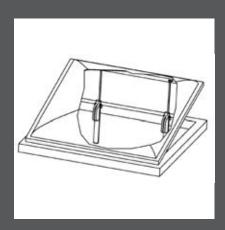
Sliding bracket part No. 41761Z



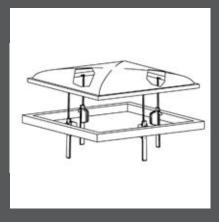
Installation on top hinged window



Installation on bottom hinged windows outward opening



Installation on domes



Installation on vertically opening domes

▲ The instructions for a safe installation are included in the section "SECURITY WARNINGS"

## **SPECIFICATION PROSPECTS**

#### **T-RACK**

Electric linear actuator Ultraflex Control Systems. Available strokes 350, 550, 750 or 1000 mm. Voltage supply: 230 Vac or 24 Vdc. Electronic

safety limit stop and electronic stop in the intermediate positions. Parallel connection. Color: silver anodized. Force 1000 N

#### **DUAL T-RACK**

System assembly with two push points composed by one T-Rack Actuator, one T-Rack Group and a connecting rod. Force 1000 N

#### **DOUBLE T-RACK**

System assembly with two push points composed by one T-RACK Actuator, one AUX T-RACK Actuator and a connecting rod. Force 2000N.

#### **SYNCHRO T-RACK**

Electric linear actuator Ultraflex Control Systems with integrated speed synchronization control board up to four push points on the same strucutre without connecting rod. Force 1000 N each actuator.



Linear rack actuators - Force in push action 650/1500 N - Stroke 180, 350, 550, 750 and 1000 mm



• 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.



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

HULLE

## **MULTIPLE SYSTEMS**

- For large domes/top hinged windows or to provide more stability, the Rack actuator can be used either in the **Dual Rack** or in the **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 are necessary 1 Rack actuator, 1 Rack group, 1 connecting rod and 2 end brackets (part No. 40234E see next page)
- Double Rack: push force 1300 N (230 Vac) 1500 N (24 Vdc) For each system assembly are necessary 1 Rack actuator, 1 Auxiliary Rack actuator in parallel connection, 1 connecting rod and 2 end brackets (part No. 40234E see next page)
- Other multiple systems:

It is also available a Rack Group Double Pivot for system assembly providing 3 or more push points

	RACK 230 V AC	RACK 24 V DC
VOLTAGE SUPPLY	230 Vac ± 10%	24 Vdc ± 10%
ELECTRONIC CONNECTION	3 wires + earth	2 wires + signalling
OPERATION	-	by polarity inversion
FORCE IN PUSH ACTION	650 N	750 N
FORCE IN PULL ACTION	350 N	650 N
SPEED	~8 mm/s	~8 mm/s
CURRENT ABSORPTION (with max load)	0,1 A	1 A
PARALLEL CONNECTION	Yes	Yes
LIMIT STOP	Electronic	Electronic
SAFETY STOP	Electronic	Electronic
FEEDBACK SIGNAL	-	Open/Close
PROTECTION CLASS	IP55	IP55
COLOUR	Silver anodized	Silver anodized

PART No.		
STROKE 180 mm	40209F	40400A
STROKE 350 mm	40211T	40217D
STROKE 550 mm	40213V	40219H
STROKE 750 mm	40789D	40791F
STROKE 1000 mm	40790E	40792G

PART No.	RACK GROUP	RACK GROUP DOUBLE PIVOT	AUXILIARY RACK 230 VAC	AUXILIARY RACK 24 VDC
STROKE 180 mm	40223B	40379W	40631P	40636A
STROKE 350 mm	40225D	40380U	40632S	40637C
STROKE 550 mm	40227F	40381V	40633U	40638E
STROKE 750 mm	40754U	40851N	40847J	40849L
STROKE 1000 mm	40755V	408520	40848K	40850M

### **CONNECTING ROD:**

MIL

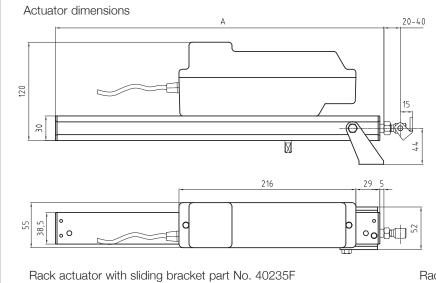
Diameter 12 mm in stainless steel. Quick clutch: fixing accessories are not necessary. Available different lengths for following distance beetween racks:

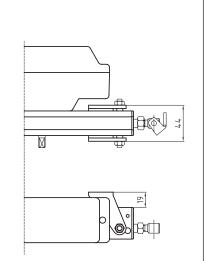
PART No.	
1000 mm	40231B
1500 mm	40232C
2000 mm	40233D

NOTE: brackets not included - to be ordered separately

## **RACK, DUAL RACK and DOUBLE-RACK**

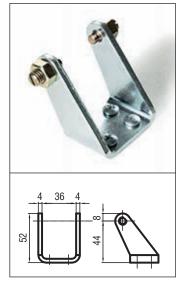


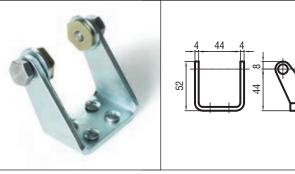




Rack actuator with end bracket part No. 40234E

# **Accessories**



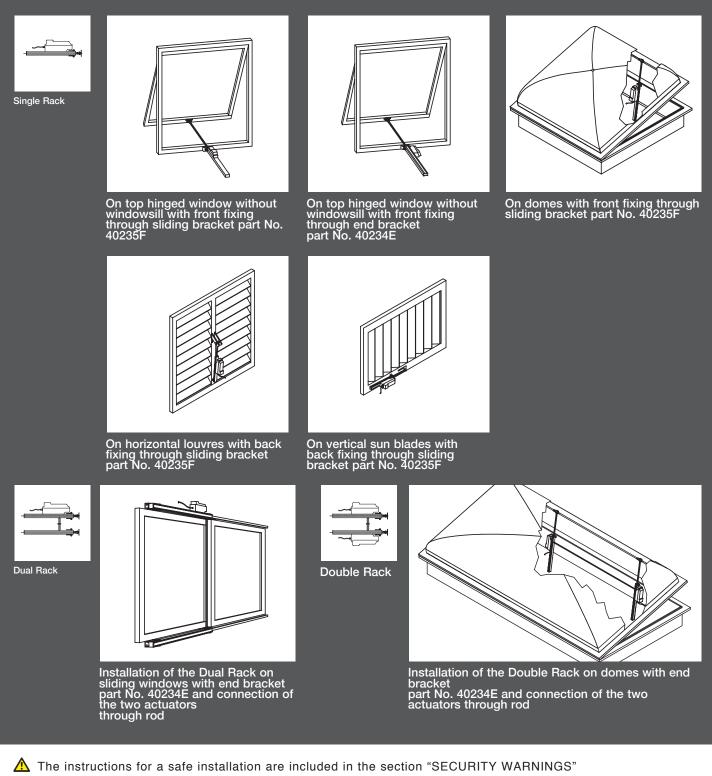




Sliding bracket part No. 40235F. It allows the fixing for the whole length of the actuator. To use only for single Rack.

Connector kit to fix the rack on the vent (included)

End bracket part No. 40234E. To use for Dual Rack and Double Rack system or single Rack.



# SPECIFICATION PROSPECTS

RACK

Electric linear actuator Ultraflex Control Systems. Available strokes 180, 350, 550, 750 or 1000 mm. Voltage supply: 230 Vac or 24 Vdc. Electronic

safety limit stop and electronic stop in the intermediate positions. Parallel connection. Color: silver anodized. Force 650 N/750 N

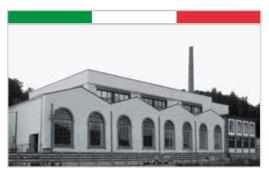
## **DUAL RACK**

System assembly with two push points composed by one Rack Actuator, one Rack Group and a connecting rod. Force 650 N/750 N

#### **DOUBLE RACK**

System assembly with two push points composed by one Rack Actuator, one auxiliary Rack and a connecting rod. Force 1300 N/1500 N.

Systems with more than two push points can be obtained with a Rack Group double pivot.





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