



WMU 831 / 851 / 852

incl. UL-versions

Chain actuator up to 500N



Natural
ventilation



Smoke ventilation
EN 12101-2



Smoke ventilation
B300

24V

±24V control



MotorLink®



TrueSpeed™



UL certification
– Actuators

2.25

Description

- Designed for surface mounting
- For comfort ventilation
- To be used with all window types
- To be used together with $\pm 24V$ control units or control units with MotorLink®
- Can be used together with espagnolette WMB
- Available with and without cable: S = cable/ Z = no cable
- External safety edge can be connected directly to the actuator
- Synchronization of up to four window actuators – no need for an external synchronization module
- Genuine position feedback and three speeds when using control unit with MotorLink®
- Soft close function
- Built-in electronic load switch-off/end stop
- Electronic actuator with micro controller
- The actuator has an integrated reverse function to ensure a prolonged life span of the window gaskets
- Easy mounting

Actuator variants

The actuator is available in four different versions with or without cable:
single actuator (-1), double actuator (-2), triple actuator (-3) and quad actuator (-4).

The synchro actuators (-2, -3 and -4) are equipped with a synchronization function, in which the actuators communicate directly with each other, which ensures the actuators operate at exactly the same speed and position.

On large windows up to four actuators can be mounted on the same window – with no need for an external synchronization module.

Opening speeds

The number of window actuator running speeds (up to three) depends on the type of control unit to which the window actuator is connected.

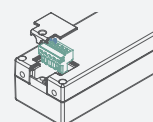
One speed:

Actuators connected to ± 24 VDC control units (e.g. WCC 103) can be run with one speed – see the following page for opening speed.

Three speeds:

Actuators connected to control units with MotorLink® (e.g. WCC 3x0) can be run with three different speeds:

- Automatically control speed – actuators run slowly and almost soundlessly.
- Manual control speed – actuators run faster and more audibly.
- H&S and safety control speed – actuators run fastest. H&S control always has highest priority.

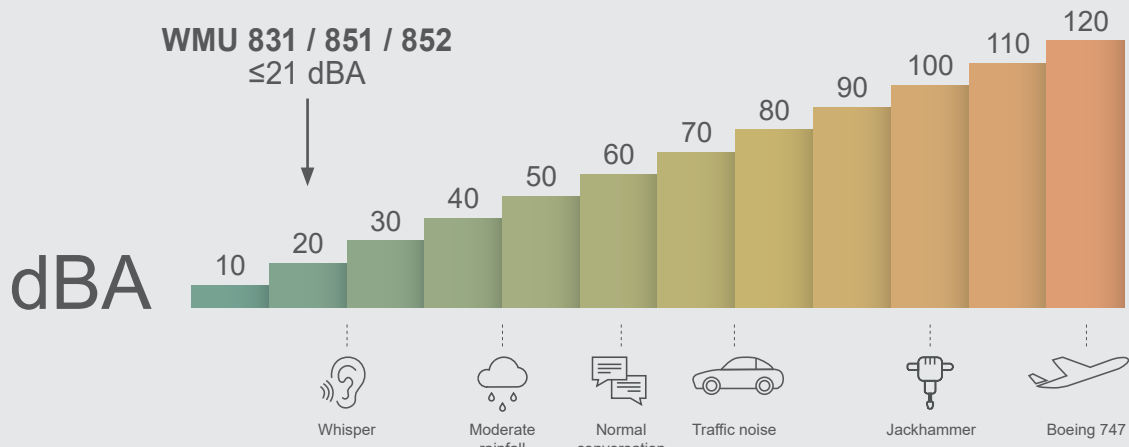


Notice:

Cable connection inside the actuator.

Technical specifications	
Pressure force	See variant table and stroke / force diagram
Traction force	300N
Locking force	3000N mounting front otherwise 2000N
Chain stroke	1' 3 3/4", 1' 7 11/16", 1' 11 5/8" depending on variant
Opening speed	1/16 - 1/2 in/s
Sound pressure level	≤21 dBA (operational speed: 1/16 in/s), ≤45 dBA (operational speed: 3/8 in/s)
Window types	Tophung, bottomhung, pivot and turning window – vent size should be confirmed with the window supplier and WindowMaster
Nominal voltage	24 VDC (max. 10% ripple)
Voltage	20 - 36 VDC
Open circuit voltage	Max. 36 VDC
Current consumption	Min. 1A or Max. 2A depending on variant
Consumption of power	1A = Max. 24W & 2A = Max. 48W
Operating conditions	+23°F – +113°F, max. 90% relative humidity (not condensing)
Switch-on-duration	ED 40% (max. 4min. per 10min). If speed < 20% ED 100%.
Material	Aluminium housing with steel chain WMU 831 / 851 / 852 S: with 16' 4 7/8" silicone cable, grey, 3-cores, AWG 19 WMU 831 S UL: with 16' 4 7/8" UL approved cable, grey, 3-cores, AWG 18 WMU 831 / 851 / 852 Z: Without cable
Colour	Aluminium RAL 9006. RAL colours available at an additional price
Size	1' 11 13/16" x 1 5/8" x 2 1/4" (L x H x D)/(L = 1' 11 13/16" + 11/16" = 2' 1/2" incl. screws)
Weight	1' 3 3/4": 4.9lbs, 1' 7 11/16": 5.3lbs, 1' 11 5/8": 5.7lbs
IP rating	IP32
SHE test	Approved according to EN 12101-2 with selected profiles – please contact WindowMaster for further information B300 tested according to EN 12101-2
Certification	Certified accordingly to UL 325 and CAN/CSA-22.2 No. 247-14. Actuators intended to comply with UL Standard 325 paragraph 34A.3 should satisfy one of the following criteria: a) Be intended for mounting at least 8 ft above the floor; b) Require constant contact on a control within view of the window to cause movement of the window; c) Have a maximum chain length of 7 7/8"; d) Be provided with external entrapment protection device. External entrapment protection device can be supplied by an alternative supplier; e) The actuators are used in a heat and smoke system.
Life span	Tested with 10,000 opening and closing movements
Delivery includes	WMU 831 / 851 / 852 S: Actuator with 16' 4 7/8" cable and plug WMU 831 / 851 / 852 Z: Plug incl. but actuator without cable
To be ordered separately	Actuator, motor and chain bracket
Note	We reserve the right to make technical changes

The sound pressure level was measured externally by The Danish Technological Institute. The measurements have been carried out in a large regular room size 7 x 14 x 2.4 m (W x L x H) with the ceiling covered with a standard sound absorbent material. The A-weighted sound pressure levels have been measured at a distance of 1 meter away from the surface of the actuators and at the height of 1.6 meters from the floor. The actuators were not installed on any window profile nor added any load. The full opening and full closing sound of the actuators have been measured and the result represents the average of the measurements.



Description of product code composition

WMU 831 WMU 851 WMU 852	-n	G	xx	xxxx	01
					Product version: 1
					Stroke: 0400 = 1' 3 3/4", 0500 = 1' 7 11/16", 0600 = 1' 11 5/8" & Z = Zero cable/ S = Standard cable (0400=400mm)
					Certification: EN = approved according to EN 12101-2, UL = approved according to UL 325
					Color: G = Grey, K = Bronze
					Actuator variant: 1 = single, 2 = double, 3 = triple, 4 = quad

Example of product code

WMU 852-2G 600S 01 WMU 852 actuator, double synchronisation, Grey, S incl. cable, 1' 11 5/8" chain stroke, product version 1

Items 1A<60sec	Chain stroke [ft and in]	Pressure force [N] (only bottom hung window)	Length (L) [ft and in] (incl. screws = 3/4")	Item no. with cable	Item no. without cable*
Single actuator	1' 3 3/4"	300	2' 1/2"	WMU 831-1G XX ¹⁾ 400S 01	WMU 831-1X ²⁾ 400Z 01
	1' 7 11/16"			WMU 831-1G XX ¹⁾ 500S 01	WMU 831-1G 500Z 01
	1' 11 5/8"			WMU 831-1G XX ¹⁾ 600S 01	WMU 831-1G 600Z 01
Double actuator	1' 3 3/4"			WMU 831-2G XX ¹⁾ 400S 01	WMU 831-2G 400Z 01
	1' 7 11/16"			WMU 831-2G XX ¹⁾ 500S 01	WMU 831-2G 500Z 01
	1' 11 5/8"			WMU 831-2G XX ¹⁾ 600S 01	WMU 831-2G 600Z 01
Triple actuator	1' 3 3/4"			WMU 831-3G XX ¹⁾ 400S 01	WMU 831-3G 400Z 01
	1' 7 11/16"			WMU 831-3G XX ¹⁾ 500S 01	WMU 831-3G 500Z 01
	1' 11 5/8"			WMU 831-3G XX ¹⁾ 600S 01	WMU 831-3G 600Z 01
Quad actuator	1' 3 3/4"			WMU 831-4G XX ¹⁾ 400S 01	WMU 831-4G 400Z 01
	1' 7 11/16"			WMU 831-4G XX ¹⁾ 500S 01	WMU 831-4G 500Z 01
	1' 11 5/8"			WMU 831-4G XX ¹⁾ 600S 01	WMU 831-4G 600Z 01

* All actuators without cables are UL 325 listed

¹⁾ EN = approved according to EN 12101-2, UL = UL 325 listed

²⁾ G = Grey, RAL 9006; K = Bronze, RAL 8019

Items 1A>60sec	Chain stroke [ft and in]	Pressure force [N] (only bottom hung window)	Length (L) [ft and in] (incl. screws = 3/4")	Item no. with cable	Item no. without cable*
Single actuator	1' 3 3/4"	500	2' 1/2"	WMU 851-1G 400S 01	WMU 851-1G 400Z 01
Double actuator				WMU 851-2G 400S 01	WMU 851-2G 400Z 01
Triple actuator				WMU 851-3G 400S 01	WMU 851-3G 400Z 01
Quad actuator				WMU 851-4G 400S 01	WMU 851-4G 400Z 01

* All actuators without cables are UL 325 listed

Items 2A<60sec	Chain stroke [ft and in]	Pressure force [N] (only bottom hung window)	Length (L) [ft and in] (incl. screws = 3/4")	Item no. with cable	Item no. without cable*
Single actuator	1' 3 3/4"	500	2' 1/2"	WMU 852-1G XX ¹⁾ 400S 01	WMU 852-1G 400Z 01
	1' 7 11/16"			WMU 852-1G XX ¹⁾ 500S 01	WMU 852-1G 500Z 01
	1' 11 5/8"			WMU 852-1G XX ¹⁾ 600S 01	WMU 852-1G 600Z 01
Double actuator	1' 3 3/4"			WMU 852-2G XX ¹⁾ 400S 01	WMU 852-2G 400Z 01
	1' 7 11/16"			WMU 852-2G XX ¹⁾ 500S 01	WMU 852-2G 500Z 01
	1' 11 5/8"			WMU 852-2G XX ¹⁾ 600S 01	WMU 852-2G 600Z 01
Triple actuator	1' 3 3/4"			WMU 852-3G XX ¹⁾ 400S 01	WMU 852-3G 400Z 01
	1' 7 11/16"			WMU 852-3G XX ¹⁾ 500S 01	WMU 852-3G 500Z 01
	1' 11 5/8"			WMU 852-3G XX ¹⁾ 600S 01	WMU 852-3G 600Z 01
Quad actuator	1' 3 3/4"			WMU 852-4G XX ¹⁾ 400S 01	WMU 852-4G 400Z 01
	1' 7 11/16"			WMU 852-4G XX ¹⁾ 500S 01	WMU 852-4G 500Z 01
	1' 11 5/8"			WMU 852-4G XX ¹⁾ 600S 01	WMU 852-4G 600Z 01

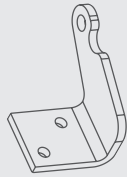
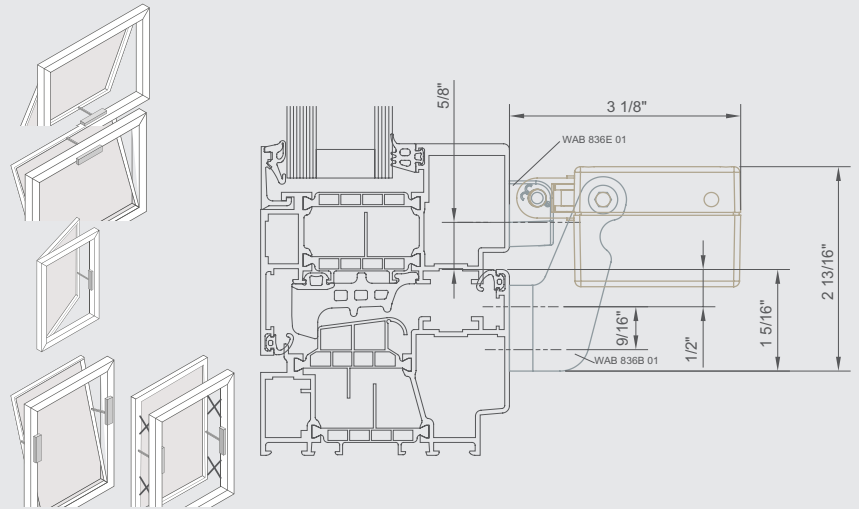
* All actuators without cables are UL 325 listed

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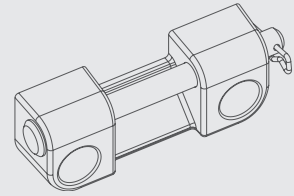
Accessories	Item no.
Actuator bracket for WMU 852/ 851/ 831	WAB 852A
Actuator bracket for WMU 852/ 851/ 831	WAZ 852i
Z-Bracket for inward opening windows	WAB 827
Actuator bracket for WMU 836 / 852 / 851 / 831 / 936 / 866	WAB 836B
Actuator bracket for WMU 836 / 852 / 851 / 831/ 936 / 866	WAB 836H
Chain bracket for WMU 836 / 852 / 851 / 831 / 936	WAB 836E

See separate product sheets for further information.

Installation suggestion 1 - Outward opening

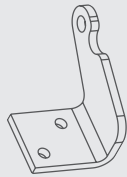
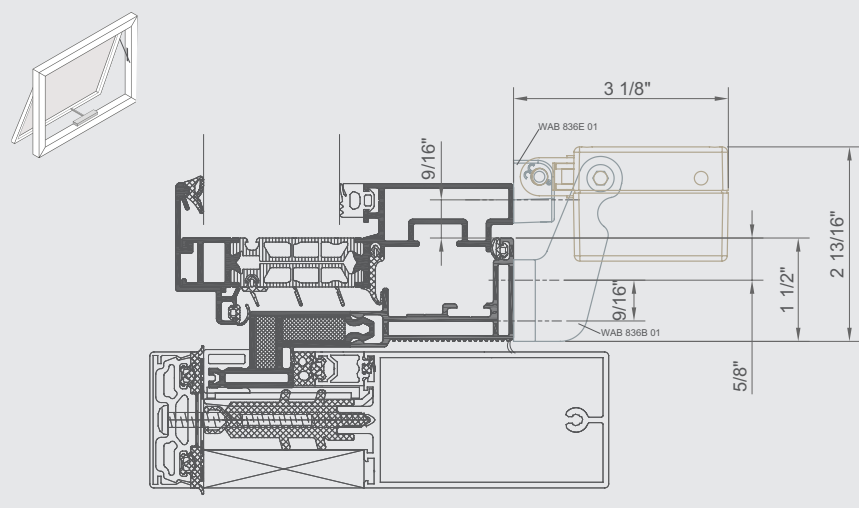


WAB 836B

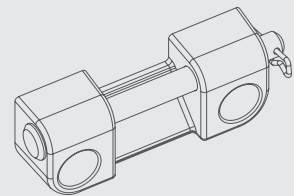


WAB 836E

Installation suggestion 2 - Outward opening (friction hinge)

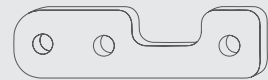
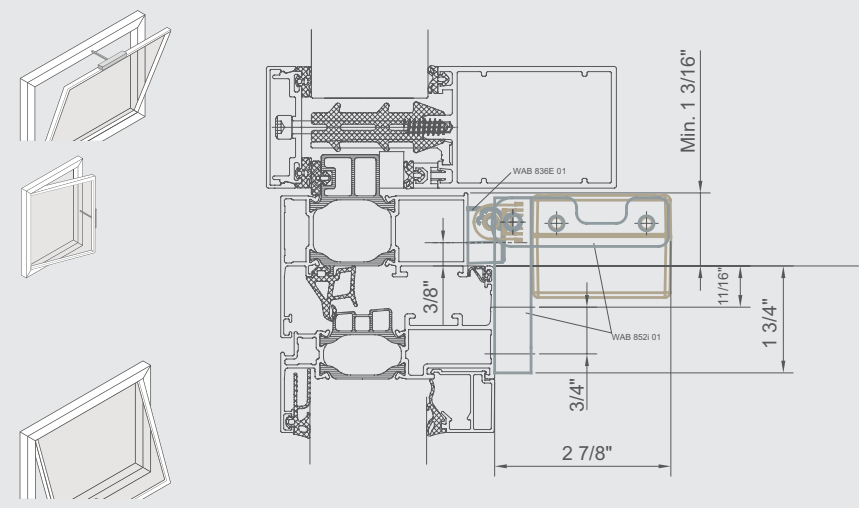


WAB 836B

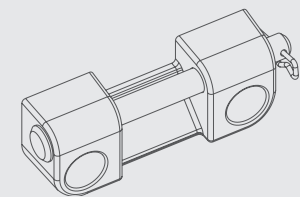


WAB 836E

Installation suggestion 3 - Inward opening (sash mounting)

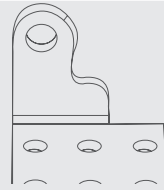
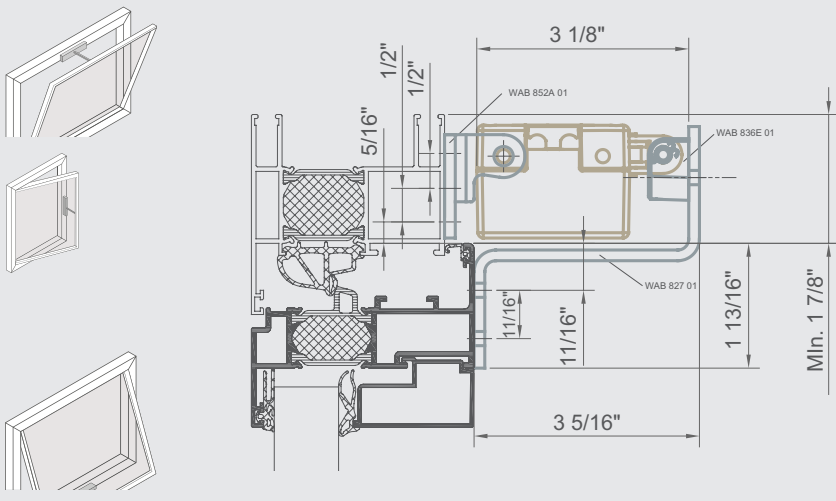


WAB 852i

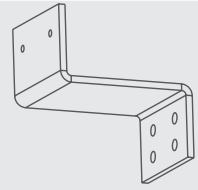


WAB 836E

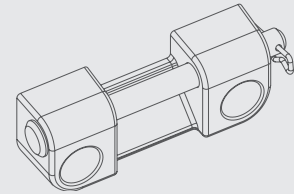
Installation suggestion 4 - Inward opening (frame mounting)



WAB 852A

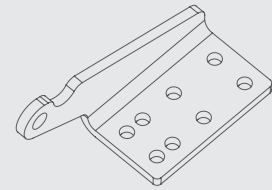
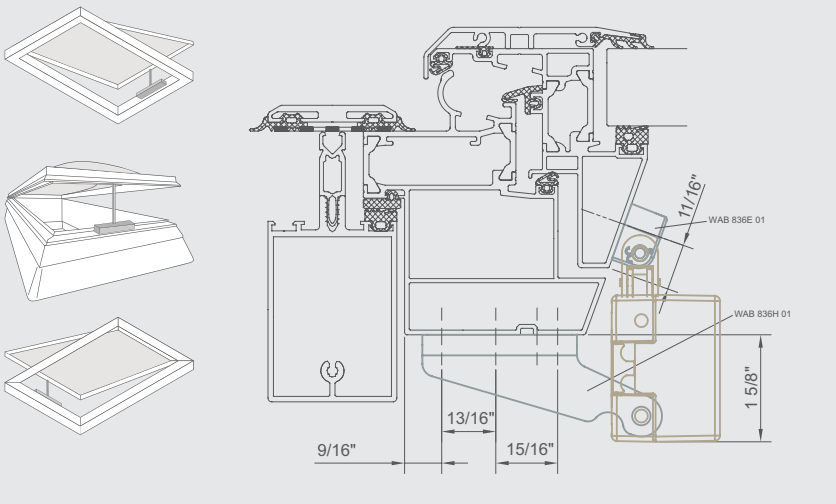


WAB 827

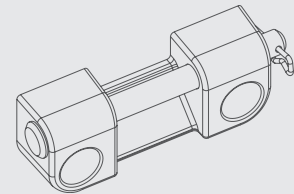


WAB 836E

Installation suggestion 5 - Outward roof opening

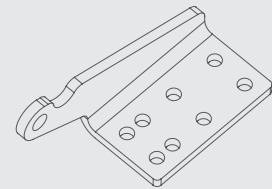
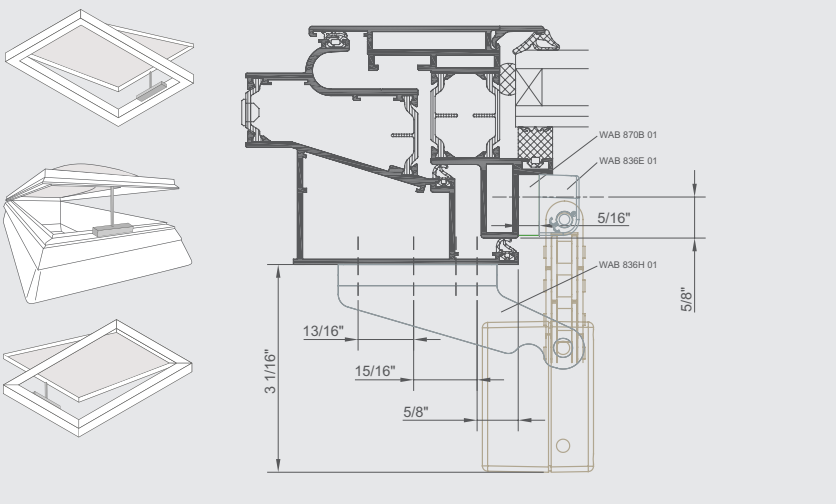


WAB 836H

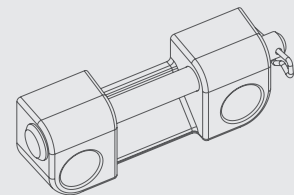


WAB 836E

Installation suggestion 6 - Outward roof opening



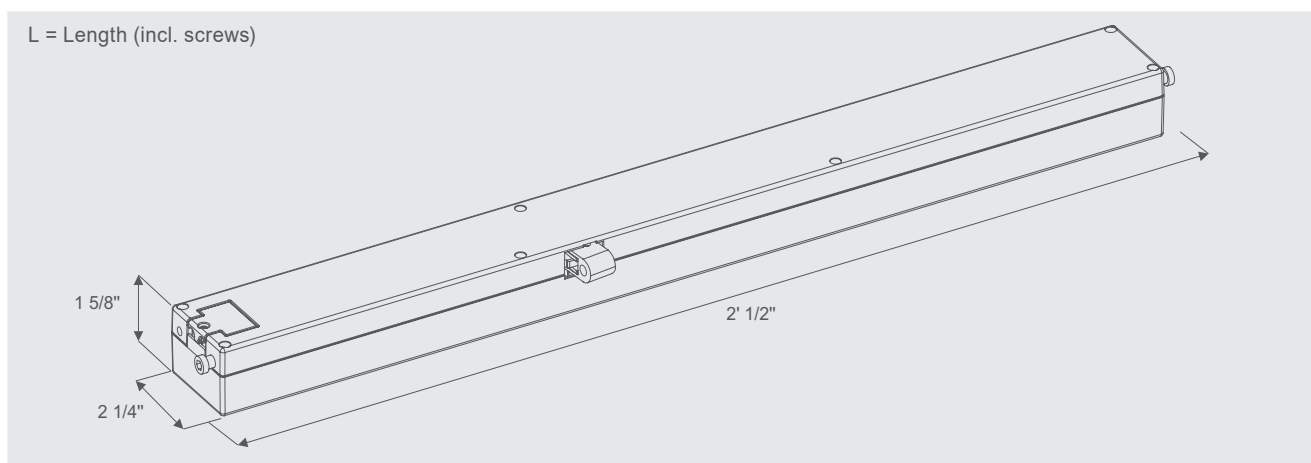
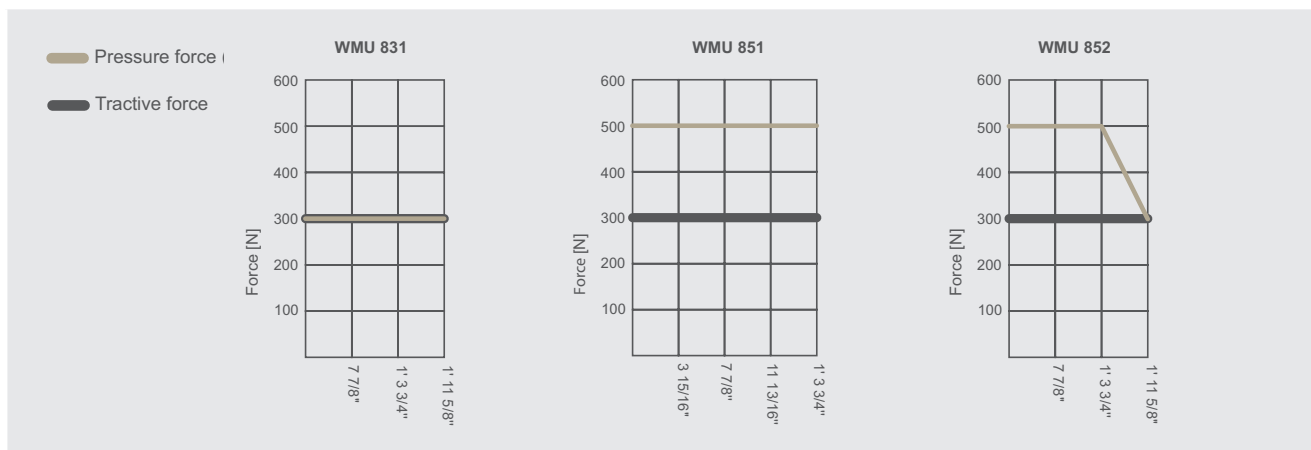
WAB 836H



WAB 836E

WMU 831 / 851 / 852

Chain actuator up to 500N



All dimensions are originally in metric units and converted into imperial units.
For exact measurements please refer to documentation with metric values.