



WMX 523 / 523 UL / 823 / 823 UL Chain actuator



Natural ventilation



Smoke ventilation
EN 12101



Smoke ventilation
B300

24V

±24V control



MotorLink®



UL certification
– Actuators

1.51

Description

- optimized design for concealed installation in window profiles
- WMX 523 for comfort ventilation
- WMX 823 for smoke and comfort ventilation
- to be used with all window types
- to be used together with ±24V control units or control units with MotorLink®
- can be used together with espagnolette WMB
- external safety edge can be connected directly to the actuator (actuator version 'E')
- available with and without UL certification:
 - Europe: order without UL certification (version 0)
 - USA / Canada: order with UL certification (version U)
- 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
- 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: single actuator (-1), double actuator (-2), triple actuator (-3) and quad actuator (-4).

The synchro actuators (-2, -3 and -4) are equipped with a patented 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.

Pressure safety function

The risk of entrapment is reduced as the actuators are programmed to reverse if they encounter obstacles when closing. The set points determining when the actuators are to reverse are individually adjustable.



Opening speeds

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

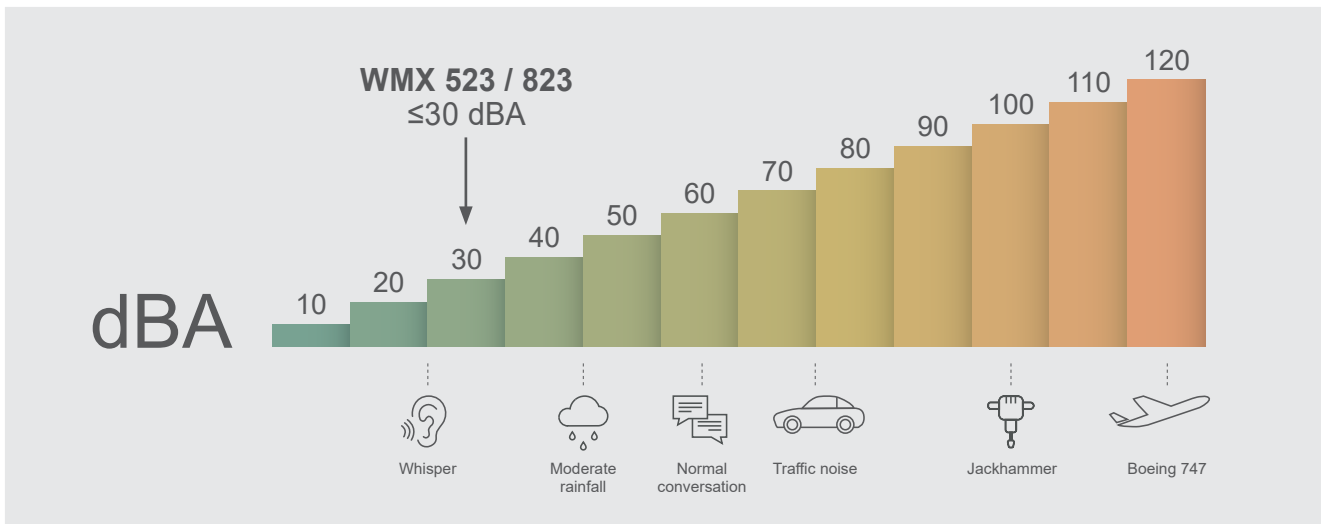
Actuators connected to control units with MotorLink® (e.g. WCC) can be run with three different speeds:

- 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.

Technical specifications

| | |
|---|---|
| Locking force | 3000 N |
| Permitted short pressure load when chain has run to end stop | 400 N |
| Short pressure capacity on motor | WMX 523: max. 150 N (e.g. at the beginning of opening: Sticky gasket, ice, wind pressure) WMX 823: max. 200 N (e.g. at the beginning of opening: Sticky gasket, ice, wind pressure) |
| Chain opening | 1 15/16" – 1' 7 11/16" in increments of 25/64" (10mm), maximum opening depends on the window construction |
| Opening speed | WMX 523: 9/32" in/s / WMX 823: 23/64" in/s (programmable 1/8 in/s - 3/8 in/s) |
| Sound pressure level | ≤30 dBA (operational speed: 1/8 in/s), ≤46 dBA (operational speed: 3/8 in/s) |
| Window type | For vertical or horizontal installation in the frame of inward and outward opening windows, window types and sizes must be agreed with the window supplier and WindowMaster |
| Window width | Min. 1' 9 5/8", maximum width depends on the window construction and the number of window actuators |
| Window height | Min. 2' 3 9/16", maximum height depends on the window construction and the number of window actuators |
| Nominal voltage | 24V DC (max. 10% ripple) |
| Voltage | 20-36V DC |
| Max. open-circuit voltage | Max. 36V DC |
| Current consumption | WMX 523: max. 0.5A / WMX 823: max. 1A |
| Working condition | +23°F – +113°F, max. 90% relative humidity (not condensing) |
| Switch-on-duration | ED 40% (max. 4 min. per 10 min) |
| Material | Lacquered zinc housing and zinc chromate passivated steel chain and a 3 15/16" cable with fast-in/fast-on connectors for connection to the extension cable WLL |
| Colour | Aluminium (RAL 9006), other RAL colours available at additional price |
| Size | 1' 8 3/8" x 1 1/4" x 1 5/8" (W x H x D) |
| Weight | 2.9 lbs |
| IP rating | Surface mounted: IP 20, concealed: IP 32 |
| Certification | Actuators with "U" in the article no. are L certified accordingly to UL 325 and CAN/CSA-22.2 No. 247-14 and is supplied with UL approved cables UL STYLE 2464 (primary for U.S./Canada) |
| SHE test | WMX 823: Approved according to EN 12101-2 with selected profiles – please contact WindowMaster for further information. B300 tested according to EN 12101-2 WMX 523 / 823U: Not SHE tested |
| Life span | Tested with 10,000 opening and closing movements |
| Delivery includes | Actuator with 3 15/16" connection cable with fast-in/fast-on connector for WLL cable |
| To be ordered separately | Brackets and standard extension cables (WLL) |
| 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.

| Product code composition <i>(actuator supplied in sealed plastic packaging)</i> | | | | | | |
|---|--|---|-----|---|---|---|
| WMX 523 WMX 823 | -n | x | xxx | x | x | 3 |
| | | | | | | Product version: 3 |
| | | | | | | Certification: 0 = CE, U = CE + UL, E = CE + EN 12101-2 |
| | | | | | | Actuator hardware version: S = standard, E = with connection for pressure safety strip (E: not UL actuator) |
| | | | | | | Chain opening: 1 15/16" (50mm) – 9 13/16" (500mm) increments of 25/64" (10mm) (050 = 25/64") |
| | | | | | | Colour: G = grey |
| | | | | | | Actuator variant: 1 = single, 2 = double, 3 = triple, 4 = quad |
| Explanation of product code structure | | | | | | |
| WMX 823-2G070E 03 | WMX 823 actuator, double synchronisation, grey, 2 3/4" chain opening, with connection for pressure safety strip, with CE certification, product version 3. | | | | | |
| WMX 823-2G070S U3 | WMX 823 actuator, double synchronisation, grey, 2 3/4" chain opening, standard, with CE and UL certification, product version 3. | | | | | |

| Items | Chain stroke [ft. and in.] | Length (L) [ft. and in.] | Item no. | Item no. with entrapment connection |
|-----------------|----------------------------|--------------------------|---|---|
| Single actuator | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 523-1Gxxx ¹ S x ² | WMX 523-1Gxxx ¹ E 0 |
| | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 823-1Gxxx ¹ S x ³ | WMX 823-1Gxxx ¹ E x ⁴ |
| Double actuator | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 523-2Gxxx ¹ S x ² | WMX 523-2Gxxx ¹ E 0 |
| | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 823-2Gxxx ¹ S x ³ | WMX 823-2Gxxx ¹ E x ⁴ |
| Triple actuator | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 523-3Gxxx ¹ S x ² | WMX 523-3Gxxx ¹ E 0 |
| | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 823-3Gxxx ¹ S x ³ | WMX 823-3Gxxx ¹ E x ⁴ |
| Quad actuator | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 523-4Gxxx ¹ S x ² | WMX 523-4Gxxx ¹ E 0 |
| | 1 15/16" – 9 13/16" | 1' 8 3/8" | WMX 823-4Gxxx ¹ S x ³ | WMX 823-4Gxxx ¹ E x ⁴ |

¹ 1 15/16" (50mm) – 9 13/16" (500mm) increments of 25/64" (10mm), (050 = 25/64")

² The actuator can be supplied with certification according to UL 325

³ The actuator can be supplied with certification according to UL 325 / EN 12101-2

⁴ The actuator can be supplied with certification according to EN 12101-2

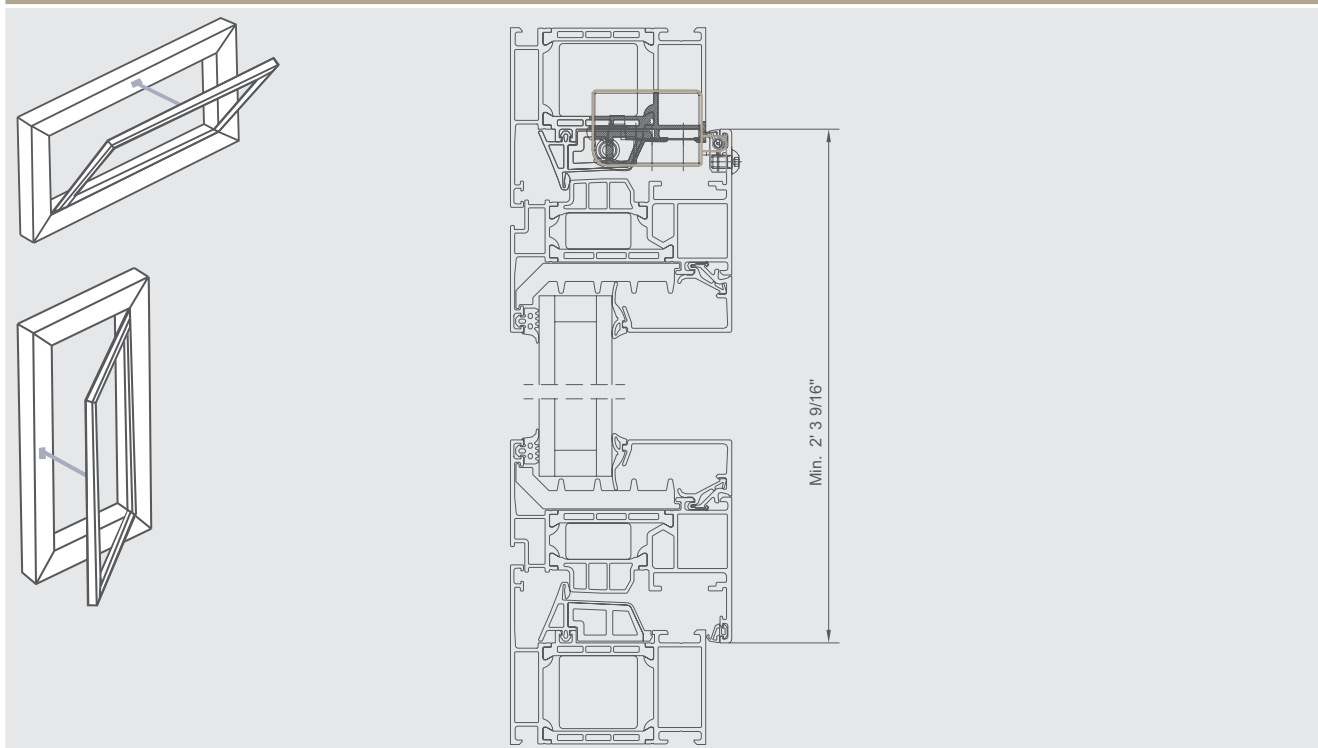
See also the table 'Product code composition' for further details as well as determination of final item no.

WMX 523 / 523 UL / 823 / 823 UL

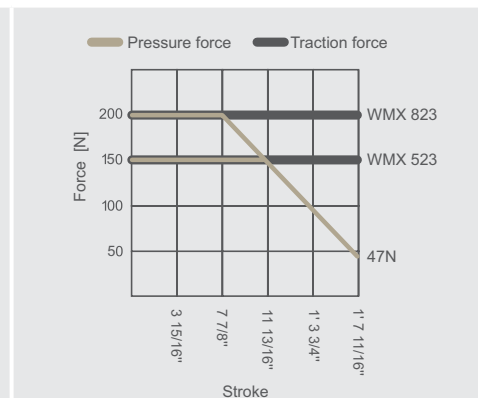
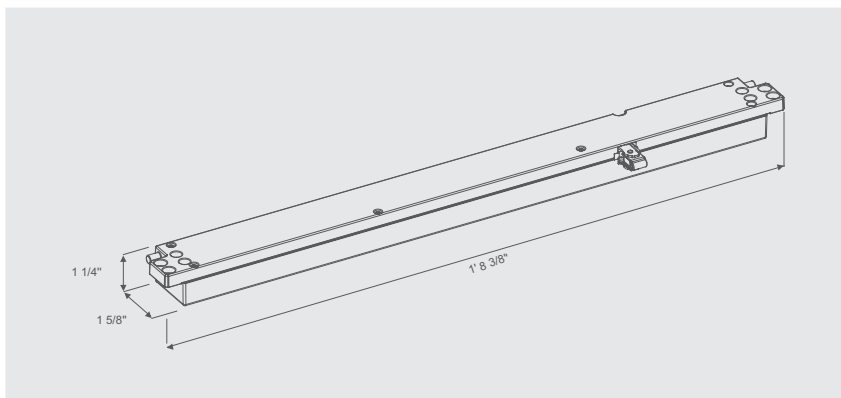
Chain actuator

| Brackets and accessories | Item no. |
|---|--------------|
| Chain bracket with tight-fitting bolt, WMX, for sash or frame | WAB 801 |
| Chain bracket for integrated WMX, for sash | WAB 833 |
| Chain bracket with split, for sash or frame | WAB 860 |
| Chain bracket for Schüco systems, for sash | WAB 863 |
| Chain bracket for wooden windows, for sash | WAB 867 |
| Mounting profile for WMX 820 (tested in accordance with EN 12101-2) | WAB 909 0384 |
| See separate product sheets for further information. | |

Installation suggestion - Bottom hung, inward opening



For questions regarding the concealed installation – contact WindowMaster



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