Muto Premium XL150/80
Muto Comfort L80
Ceiling mount with Dormotion

Installation instructions
936002 – 05-2018
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# 1 Technical specifications

## 1.1 Overview

These instructions are for installation of MUTO PREMIUM and COMFORT sliding door system XL150/80 / L80 for the following mounting and style versions:

### 1. Ceiling mount

#### 1.1 General information

- dormakaba requires use of tempered monolithic or tempered laminated glass.
- dormakaba glass hardware is not suitable for application in rooms where chemicals (e.g. chlorine) are used as indoor swimming pools, saunas or salt-water pools.
- Never move sliding panels faster than walking speed and always stop the door manually before it reaches end position.
- Do not slide doors with excessive force. Install limiting stop to prevent door from opening too far.

#### 1.1.2 Intended use

- For sliding door in dry indoor areas only
- For manual slowly opening and closing only

#### 1.1.3 Glass requirements and fittings

- The substructure/wall must be able to bear permanent loads and be level (max. tolerance: 1/16" [2] per 39" [1m]).
- Fasteners must be sufficiently dimensioned for the substructure/wall and weight of the door.
- When adjusting glass components, always stick to the required clearance for the respective hardware. Adjust clearance so glass does not come in contact with any hard surfaces such as glass, metal or concrete.
- Do not use excessive force when installing the glass (avoid over tightening screws).

#### 1.1.4 Requirements for glass panel

- dormakaba requires use of fully tempered glass, which complies with ASTM C 1036 and ASTM C 1048. Secondary heat soaking processes are optional but not required. This applies to both tempered monolithic and tempered laminated glass.
- Clamping area must be flat and uncoated (no self-cleaning coating!)
- Never use glass with conchoidal fractures and/or damaged edges.

#### 1.1.5 Safety instructions

- Installation requires two people.

## 1.6 Symbols used - Safety/Installation

### CAUTION

Mounting components must meet the requirements of substructure/wall and door weight. Please read the technical information for fittings.

### WARNING

Risk of breaking glass. When installing the door, support the door panel with a block of wood or similar object.

### TIPS AND RECOMMENDATIONS

Information note

### CLOSING EDGE

## 1.7 Maintenance, care, repair

- Immediately replace damaged parts.
- Always use original dormakaba parts.
- Clean clamping area with alcohol-based standard commercial cleaning agent before mounting the glass hardware.
- Use a damp cloth for occasional cleaning, especially the track.
- Always use silicone - and oil-free cleaners (e.g. acetone).
- Check glass hardware at regular intervals for proper positioning and smooth operation and correct adjustment.
- High traffic door systems require inspection by properly qualified staff (specialized companies or installation firms.)

## 1.8 Disposal

Disposal in accordance with local, state and national regulations.
1.2 Specifications - technical data

<table>
<thead>
<tr>
<th>Ceiling mount</th>
<th>Single Door</th>
<th></th>
<th>Double Door</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>XL150</td>
<td>XL80</td>
<td>L80</td>
<td>XL150</td>
<td>XL80</td>
</tr>
</tbody>
</table>

* Including weight of auxiliary hardware.

1.3 Tempered laminate glass (TLG) and adhesive specifications

<table>
<thead>
<tr>
<th>Required parts for laminate glass with MUTO System (not included)</th>
<th>Part Number</th>
<th>Quantity</th>
<th>Usage recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M™ Scotch-Weld™ Urethane Adhesive, DP 605 NS</td>
<td>934.800</td>
<td>1 tube</td>
<td>1 tube per 4 roller carriers</td>
</tr>
<tr>
<td>3M™ Scotch-Weld™ EPX™ Plus II Applicator with 1:1 Plunger ²</td>
<td>934.801</td>
<td>1 applicator</td>
<td>1:1 plunger with 934.800 adhesive</td>
</tr>
<tr>
<td>3M™ Scotch-Weld™ EPX™ Plus II Mixing Square Nozzle, 5.3mm ³</td>
<td>934.805</td>
<td>Pk of 4</td>
<td>4 nozzles per 1 tube of adhesive</td>
</tr>
<tr>
<td>MUTO TLG gasket set</td>
<td>807.640</td>
<td>1 set</td>
<td></td>
</tr>
</tbody>
</table>

Handling time frame

<table>
<thead>
<tr>
<th>Function</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working life (time between application and clamping of carrier)</td>
<td>5 minutes @ 75°F</td>
</tr>
<tr>
<td>Handling strength</td>
<td>20 minutes @ 73°F or more</td>
</tr>
<tr>
<td>Full cure time (normal door usage not recommended until full cure time as been met)</td>
<td>48 hours @ 73°F or more</td>
</tr>
</tbody>
</table>

NOTE: Door glass should not be installed until the full cure time as been reached (see chart above).

1.1 Clean clamping area with alcohol-based standard commercial cleaning agent before mounting the glass hardware.

1.2 Never clamp metal glass fitting hardware directly to glass surface.

1.3 Never use clamping product on surfaces with self-cleaning coatings.

2 Scotch-Weld™ EPX™ Plus II Applicator with 1:1 Plunger is a trademark of 3M.

3 Scotch-Weld™ EPX™ Plus II Mixing Square Nozzle is a trademark of 3M.
2 Installation instructions

2.1 Overall
2.2 Securing track to mounting surface

Fig. 1

2.2.1 Ensure the track is properly level and secure it to the ceiling per the appropriate measurements on the following page.

- NOTE: SEE DIMENSION INSTRUCTIONS ON NEXT PAGE FOR REFERENCE.

2.2.2 Use appropriate fasteners according to the following recommendations.

NOTE:
OVERHEAD REINFORCEMENT:
The overhead reinforcement must be a minimum of ¼” [6] x 3” [76] steel angle, 16 gauge metal stud, or two pieces of 1-1/2” [38] thick wood blocking [double stacked], secured to studs or joists on a maximum 16” [406] centers for the length of the track. The overhead reinforcement may be flush on the overhead surface or on the interior of this surface.

Track mounting screws must fully penetrate the steel angle, metal stud, or at a minimum of 2” [51] into wood blocking, utilizing the predrilled holes in the MUTO track.

Consult with a structural engineer to determine if reinforcement is adequate for your specific application or to meet specific codes in your location.
2.3 Door/wall dimensions

**Single door mount**

- Clear opening height (CH)
- Back of track to center of mounting hole in track
- Bottom of glass to floor

**Double door mount**

- Clear opening height (CH)
- Back of track to center of mounting hole in track
- Bottom of glass to floor
2.4A Installing roller carriers: on monolithic glass ONLY

Fig. 2

DETERMINE THE LEADING (X) VERSUS TRAILING (Z) EDGE OF THE GLASS.
"LEADING IS SIDE CLOSEST TO LATCH CLOSED."

<table>
<thead>
<tr>
<th></th>
<th>XL150/80</th>
<th>L80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single door X</td>
<td>3-1/8&quot; [80]</td>
<td>3-1/8&quot; [80]</td>
</tr>
<tr>
<td>Single door Z</td>
<td>1-9/16&quot; [40]</td>
<td>1-9/16&quot; [40]</td>
</tr>
<tr>
<td>Double door X</td>
<td>1-9/16&quot; [40]</td>
<td>1-9/16&quot; [40]</td>
</tr>
<tr>
<td>Double door Z</td>
<td>2-3/8&quot; [60]</td>
<td>2-3/8&quot; [60]</td>
</tr>
</tbody>
</table>

**Legend**
- Closing edge of door

**NOTE:** FULLY CLEAN SURFACE OF GLASS WITH AN ALCOHOL-BASED MILD GLASS AND SURFACE CLEANER. ENSURE NO DEBRIS IS ON THE GASKET.

**NOTE:** ENSURE ROLLER CARRIER WHEELS ARE FREE OF DEBRIS.

2.4A.1 Slide roller carriers onto glass.
2.4A.2 Slide glass gasket and metal shim between glass and roller carrier.

- **NOTE:** Orient gasket with rubber side facing the glass.

2.4A.3 Secure roller carriers to glass using appropriate-size hex key at 10 ft lbs [14 Nm].
2.4B Installing roller carriers: on tempered laminate glass ONLY

Fig. 3

![Diagram of roller carrier installation](image)

**NOTE: THE RECOMMENDED ADHESIVE'S SET-UP TIME IS 20 MINUTES FOR THE DUO-PAK CARTRIDGES.**

**NOTE: USE 1:1 RATIO PLUNGER WITH THE 3M™ Scotch-Weld™ Urethane Adhesive.**

**NOTE: FULLY CLEAN SURFACE OF GLASS WITH AN ALCOHOL-BASED MILD GLASS AND SURFACE CLEANER. ENSURE NO DEBRIS IS ON THE GASKET.**

**NOTE: ENSURE ROLLER CARRIER WHEELS ARE FREE OF DEBRIS.**

2.4B.1 Slide carriers onto glass.
2.4B.2 Replace existing gasket with TLG gasket.
2.4B.3 Slide laminated glass gasket and metal shim between glass and roller carrier.
2.4B.4 Replace existing set screws with vented set screws.
2.4B.5 Tighten vented set screws at 4 ft lbs [5Nm].

**NOTE: Orient gasket with rubber side facing the glass.**

2.4B.6 Dispense adhesive into vented set screws on both sides of carrier.

**Stop application when adhesive can be seen past end of roller carrier.**

**DO NOT WIPE** any excess adhesive from glass surface. Allow adhesive to dry and scrape off glass surface with a beveled-edge chisel or putty knife.

**NOTE: Keep glass flat during curing process.**

**NOTE: See chart in Specifications section for appropriate curing time.**
2.5  XL150/80 (ONLY): Install DORMOTION Unit

Fig. 4

2.5.1  Slide DORMOTION dampener onto glass.

•  NOTE: Oriented with triggers facing outward.

2.5.2  Dampener must be flush against leading roller carrier.

XL150/80 (ONLY):

•  NOTE: Leading carrier is on side of glass closest to latch.

2.5.3  Secure dampener to glass using appropriate-size hex key.

2.5.4  Engage triggers: push out towards end of DORMOTION unit.

2.6  L80 (ONLY): Install DORMOTION start/stop

Fig. 5

2.6.1  Slide L80 start/stop onto glass.

2.6.2  Center between the carriers.

2.6.3  Slide glass gasket between start/stop and glass.

NOTE: Orient with gasket facing the glass.

2.6.4  Secure start/stop via set screws.
2.7  Disengaging the anti-jump

Fig. 6

2.7.1 Disengage the anti-jump on roller carrier.

NOTE: Using the appropriate-size hex key, push anti-jump adjustment screw IN and turn COUNTERCLOCKWISE 90° to disengage anti-jump.

2.8  Installing the end stops

Fig. 7

2.8.1 Slide end stops into each end of the track.

NOTE: Loosen bottom section of end stop for easier install.

NOTE: FOR XL150 end stops, be sure set screw is flush with back of end stops.

NOTE: Exact location/adjustments will be determined in “Adjustment End Stop Location” step.

2.9  Install glass/rollers in track

Fig. 8

*If installing/hanging tempered laminated glass panels, ensure carrier adhesive has cured for 48 hours. See Specifications for more information on cure time.*

![Diagram of glass and rollers installation]

**ENFORCE ROLLERS AND TRACK ARE FREE OF DEBRIS.**

2.9.1 Place glass on setting blocks on floor for stability.

2.9.2 Tip glass and rollers upward and rest rollers on track.
2.10 Install floor guide

![Diagram showing installation process]

- **2.10.1** Align centerline of glass with centerline of floor guide.
- **2.10.2** Be sure the glass is plumb.
- **2.10.3** Mark appropriate floor guide measurements.

**ANTI-JUMP IS DISENGAGED!**

- **2.10.4** Temporarily remove glass and rollers from track.
- **2.10.5** Pre-drill into mounting surface using a 5/16" drill bit.
- **2.10.6** Secure floor guide anchor with included fasteners.

2.11 Install floor guide: continued

![Diagram showing installation process]

- **2.11.1** Set glass and rollers onto track.
- **2.11.2** Slide floor guide over floor guide anchor and tighten with set screws.

**NOTE:** Be sure glass is centered in floor guide.

- **2.11.3** Remove setting blocks.
- **2.11.4** Adjust using set screws.
2.12  Engaging anti-jump

Fig. 11

2.12.1  Engage anti-jump on roller carrier.

2.12.2  Using appropriate-size hex key, push anti-jump adjustment screw IN and turn CLOCKWISE 90° to engage anti-jump.

<table>
<thead>
<tr>
<th>Hex key size</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL150/80</td>
</tr>
<tr>
<td>L80</td>
</tr>
</tbody>
</table>

2.13  Adjustment door height

Fig. 12

2.13.1  Set height of glass door.

2.13.2  Loosen height adjustment locking screws of carrier.

2.13.3  Using appropriate-size hex key, turn height adjustment screw CLOCKWISE or COUNTER-CLOCKWISE to raise or lower glass.

**NOTE:** Be sure glass is level during this adjustment.
2.14 Adjustment end stop
location: LEADING end stop

Fig. 13

Door closed

Door pull to jamb distance.
*Verify with local jurisdiction.*

NOTE: bi-folding: Be sure there is a 1/4" [6] gap between the right and left hand sets.

Set end stop locations:
2.14.1 Slide end stop to desired location on track. Bumper should touch edge of roller carrier.

Hex key size
<table>
<thead>
<tr>
<th></th>
<th>XL150/80</th>
<th>L80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque</td>
<td>3 ft lbs</td>
<td>2 ft lbs</td>
</tr>
<tr>
<td></td>
<td>[4 Nm]</td>
<td>[3 Nm]</td>
</tr>
</tbody>
</table>

Door pull to jamb distance.

Adjustment end stop
location: TRAILING end stop

Fig. 14

Door opened

Door pull to jamb distance.
*Verify with local jurisdiction.*

NOTE: bi-folding: Be sure there is a 1/4" [6] gap between the right and left hand sets.

Set end stop locations:
2.14.1 Slide end stop to desired location on track. Bumper should touch edge of roller carrier.

Hex key size
<table>
<thead>
<tr>
<th></th>
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<tr>
<td>Torque</td>
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</tr>
<tr>
<td></td>
<td>[4 Nm]</td>
<td>[3 Nm]</td>
</tr>
</tbody>
</table>
2.15 L80 (ONLY): Install DORMOTION Unit

Fig. 15

2.15.1 Loosen hex screws on plates.
• Plates should start out parallel to track.

2.15.2 Place one L80 DORMOTION unit into each end of the track channel.

2.15.3 Slide door all the way OPEN.

2.15.4 Carrier should touch end stop.

2.15.5 Slide Dormotion unit over until it aligns with start/stop pin.
2.15.6 Rotate plates inside track to engage.
2.15.7 Tighten hex screws with 3 ft lbs (3Nm) of torque.

END STOP
0mm
Bumper

2.15.5 Slide Dormotion unit over until it aligns with start/stop pin.
2.15.6 Rotate plates inside track to engage.
2.15.7 Tighten hex screws with 3 ft lbs (3Nm) of torque.

END STOP
0mm
Bumper

Legend

Closing edge of door

Hex key size

L80

2.5mm

LEFT UNIT

RIGHT UNIT

Plates

Hex screws

Trigger

Plates parallel

Track

L80 DORMOTION unit

L80 Start/stop

Carrier should touch end stop.

Start/stop

Trigger

Plates rotated

Dormotion

UNIT

Start/stop

Dormotion

UNIT

Start/stop

Start/stop

Start/stop

Start/stop

Roller

End stop

Roller

Edge of roller carrier

Dormotion trigger

Roller

Start/stop

Start/stop

Start/stop

Roller

Dormotion trigger

Roller

Bumper

End stop

Bumper

End stop

End stop

0mm

Bumper

End stop

Bumper

End stop

Dormotion trigger

Plates rotated

Dormotion trigger

Plates rotated

Dormotion trigger

Plates rotated

Dormotion trigger

Plates rotated
2.16 L80 (ONLY): Adjust start/stop pin location for L80 DM unit

2.16.1 Adjust HEIGHT of start/stop pin, if necessary:
- Loosen hex screws.
- Slide pin and plate up or door.

2.16.1 Adjust start/stop pin LENGTH, if necessary:
- Remove hex screws.
- Remove pin and plate.
- Rotate hex nut to lengthen or shorten pin.
- Reassemble pin parts.
2.17 XL150/80 (ONLY): Install DORMOTION start/stops

Fig. 17

2.17.1 Loosen hex screws on plates.
• Plates should start out parallel to track.

2.17.2 Place start/stops into track channel.

2.17.3 Slide door all the way OPEN.

2.17.4 Carrier should touch end stop.

2.17.5 Slide start/stop into Dormotion unit trigger.
2.17.6 Rotate plates inside track to engage.
2.17.7 Hand tighten hex screws.
2.17.8 Adjust using center set screw, then fully tighten hex screws.

Legend

| Xl150/80 | 4mm |

Hex key size

Closing edge of door

2.17.3 Slide door all the way CLOSED.

2.17.4 Carrier should touch end stop.

2.17.5 Slide start/stop into Dormotion unit trigger.
2.17.6 Rotate plates inside track to engage.
2.17.7 Hand tighten hex screws.
2.17.8 Adjust using center set screw, then fully tighten hex screws.
2.18  Cover clips

Fig. 18

2.18.1  Insert cover clips into track. (One clip per foot)

2.18.2  Insert perpendicular to track, and turn **CLOCKWISE** to snap into place.

2.19  Install brush profile

Fig. 19

2.19.1  Measure and cut brush to appropriate length.

2.19.2  Slide brush into cover.
2.20 Install view protection clips

**Fig. 20**

**TO BE USED WITH ONE OR MULTIPLE SIDELITE APPLICATIONS.**

2.20.1 Slide door open until it meets the end stop.
2.20.2 Measure and cut view protection profile to fit into empty sliding portion of track - 3/16" [5].
2.20.3 Snap view protection clips onto inside of cover as shown.
2.20.4 Use minimum 1 clip per foot of profile. **Exception:** If profile is minimum of 1 foot in length, use 2 clips.
2.21 Install cover and view protection profile

2.21.1 Secure cover to clips and snap into place.
NOTE: Roll cover from the bottom upwards. Ensure the bottom of the cover is supported by the groove in the cover clip.

2.21.2 Tip view protection profile up into track and snap down into cover and onto track as shown.

2.22 Install end caps

2.22.1 Snap end caps onto track.