

# TENSOR

## Double-acting hinge for tempered glass doors



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## Double-acting hinge for tempered glass doors

TENSOR double-acting hinges enable tempered glass doors to return to their desired closed position without requiring concealed floor or overhead closers. TENSOR hinges can be mounted directly to the masonry or to a non-recessed frame. In the case of a "glass-to-glass" model, the double-acting door is hung from the sidelite.

The TENSOR hinge features a slightly convex, curved form, with an inlay that serves as a mechanical stop. This inlay, which displays the DORMA crown logo, protects the surface of the fixed hinge section from damage when the door is opened to 90°.

The inlay also conceals the hinge's technical core—a simple, high-precision zero-position adjustment mechanism that ensures the door closes effectively and efficiently.

At 90°, the TENSOR system holds the door securely in the open position. Once pushed in the closing direction, the spring mechanism of the TENSOR fitting takes over, operating from an angle of 75°. The door closes quickly and securely. Even at an opening angle of 3°, the torque of 5 ft-lb (7 Nm) created is sufficient to keep the door in its closed position.



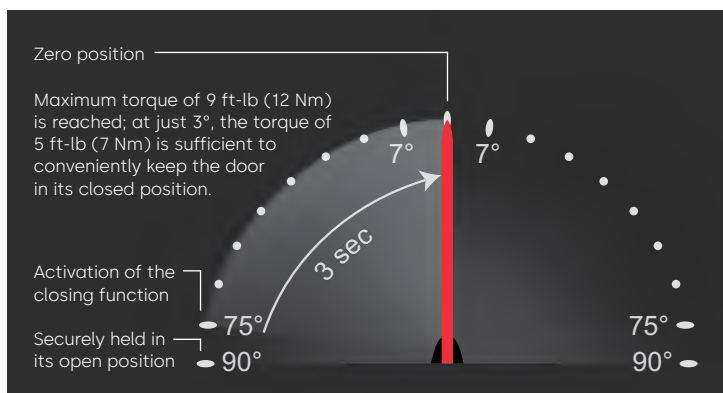
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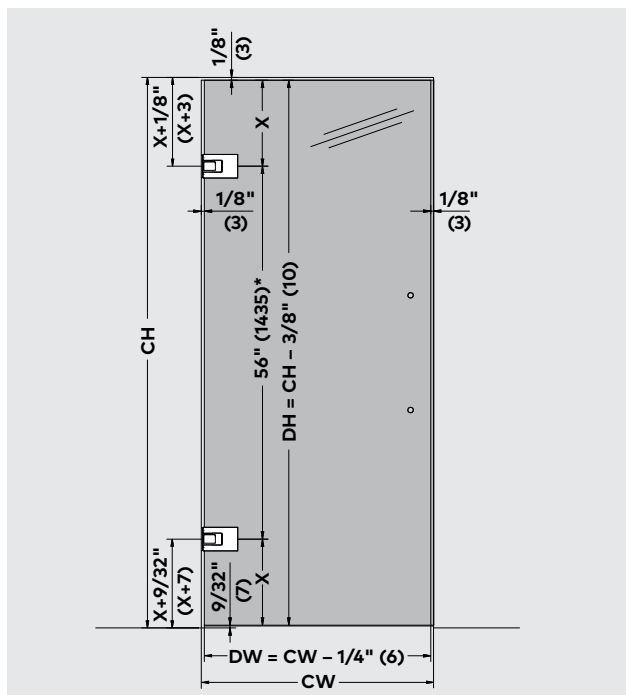
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# Surface mounting

## Typical assemblies



### Assembly

**TENSOR Double-acting door fixed to wall/frame with surface mounting plate**

#### Single leaf

##### Glass door height

$$DH = CH - 3/8" (10)$$

##### Glass door width

$$DW = CW - 1/4" (6)$$

##### Fittings for

3/8" (10) and 1/2" (12) glass

##### Door weight

max. 143 lb (65 kg)

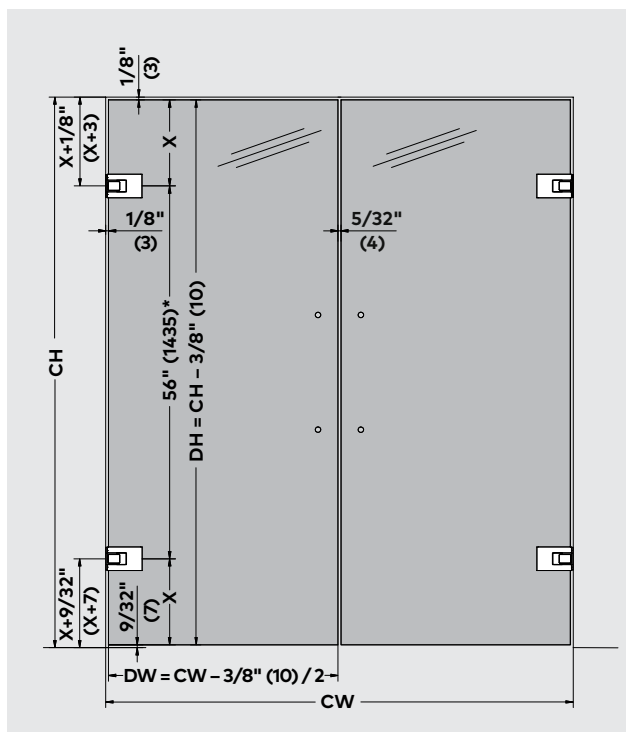
##### Door width

max. 39-3/8" (1000)

CH = Clear opening height

CW = Clear opening width

\* for glass height 71"-98" (1800 –2500) (min. 28" [700] panel width)



**TENSOR Double-acting door fixed to wall/frame with surface mounting plate**

#### Double leaf

##### Glass door height

$$DH = CH - 3/8" (10)$$

##### Glass door width

$$DW = (CW - 3/8" [10]) / 2$$

##### Fittings for

3/8" (10) and 1/2" (12) glass

##### Door weight

max. 143 lb (65 kg)

##### Door width

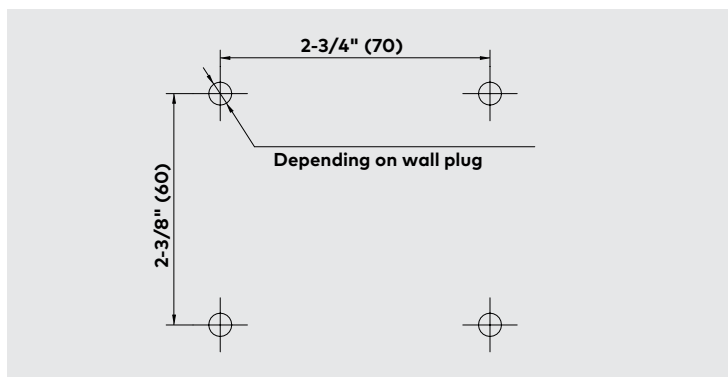
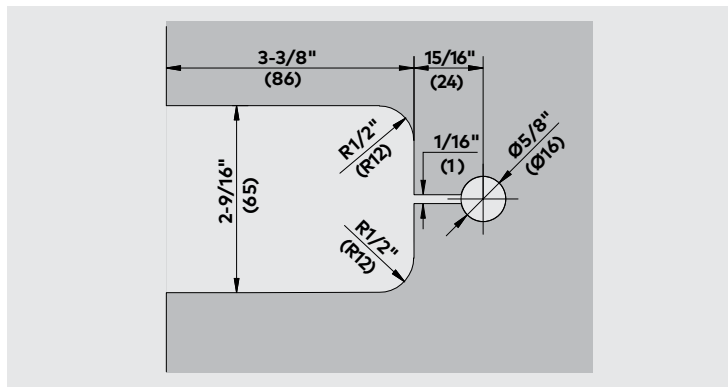
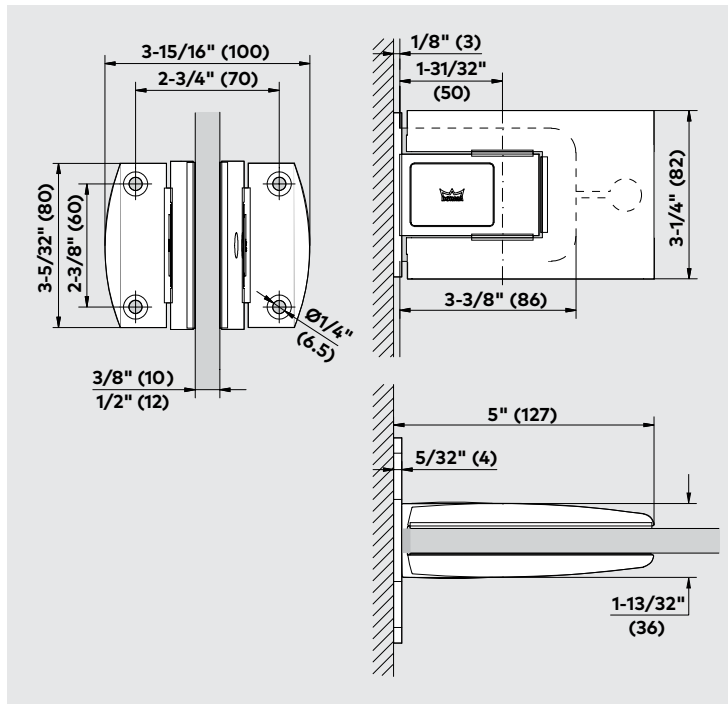
max. 39-3/8" (1000)

CH = Clear opening height

CW = Clear opening width

\* for glass height 71"-98" (1800 –2500) (min. 28" [700] panel width)

# Wall/frame mounting



## Product description

Ref. No.

## TENSOR Double-acting hinges

812.520

Pair of double-acting hinges incl. mounting plate, round; for installation onto wall or frame with surface mounting plate

For 3/8" (10) and 1/2" (12) glass

## Finishes

Anodized aluminum EV1 (114)

Similar to satin stainless steel anodized (113)

## Glass preparation

## Drilling scheme

### Please note:

- Substructure must be adequate for mounting the TENSOR hinges and tempered glass door.
- Excessive opening of the door must be prevented (max. 90°). Please use a door stop – see page 8.

# Frame mounting

## Product description

Ref. No.

### TENSOR Double-acting hinges

812.520

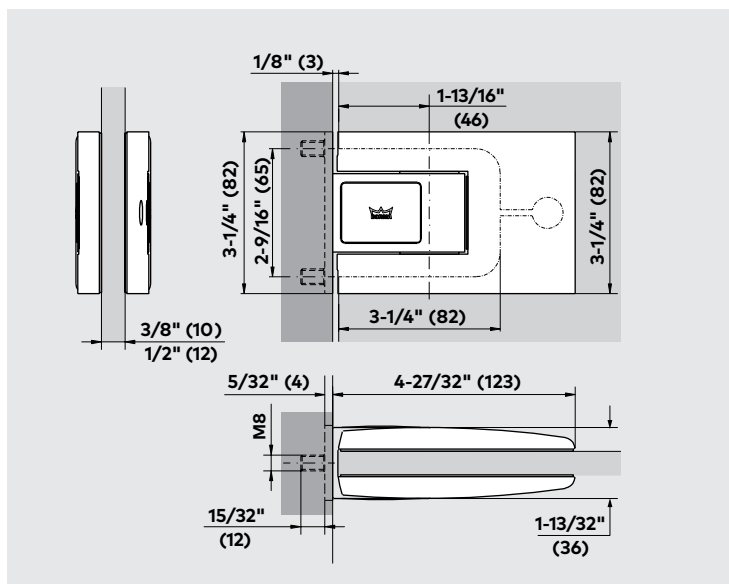
Pair of double-acting hinges incl. mounting plate;  
for installation into frame with embedded  
mounting plate

For 3/8" (10) and 1/2" (12) glass

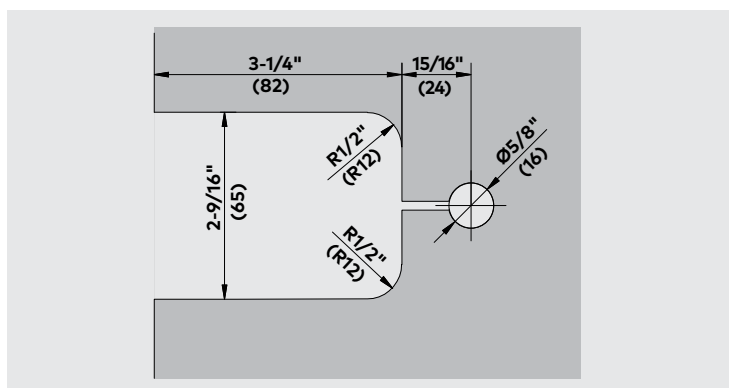
### Finishes

Anodized aluminum EV1 (114)

Similar to satin stainless steel anodized (113)



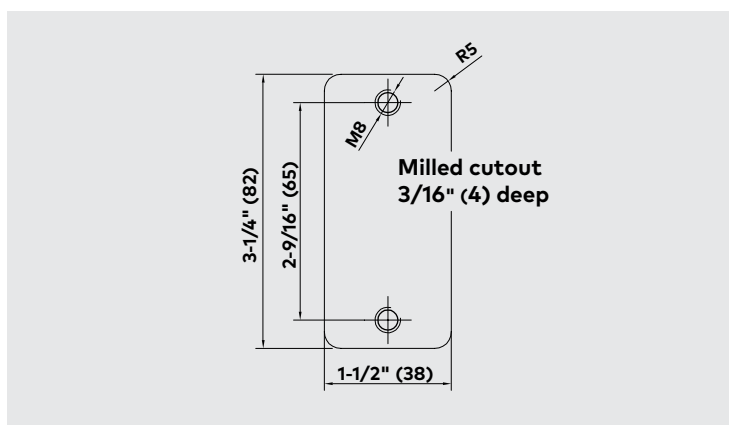
## Glass preparation



## Drilling scheme

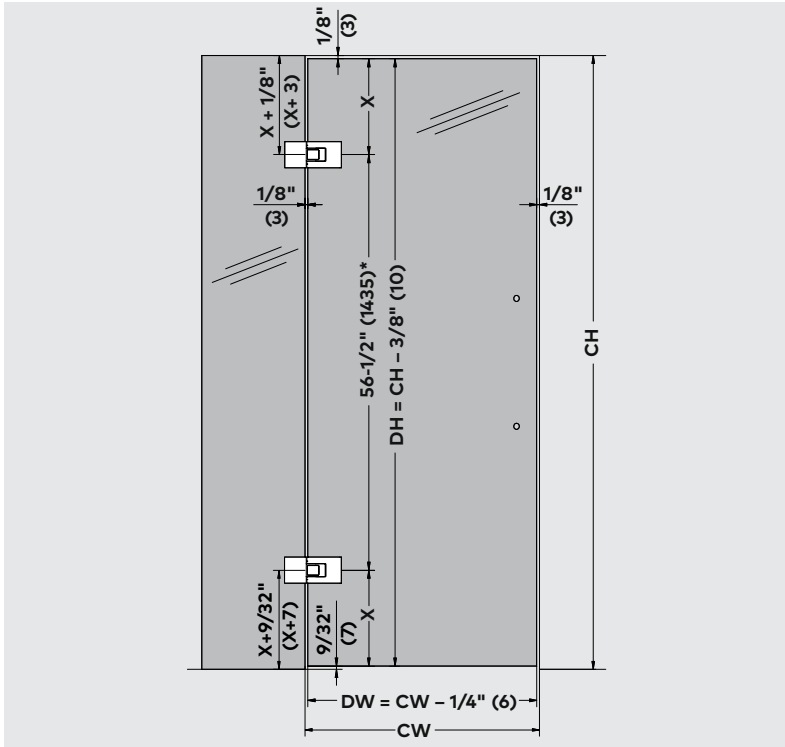
### Please note:

- Substructure must be adequate for mounting the TENSOR hinges and tempered glass door.
- Excessive opening of the door must be prevented (max. 90°). Please use a door stop – see page 8.



# Glass-to-glass mounting

## Typical assemblies



### Assembly

#### TENSOR Double-acting door fixed to glass sidelite

##### Single leaf

##### Glass door height

$$DH = CH - 3/8" (10)$$

##### Glass door width

$$DW = CW - 1/4" (6)$$

##### Fittings for

3/8" (10) and 1/2" (12) glass

##### Door weight

max. 143 lb (65 kg)

##### Door width

max. 39-3/8" (1000)

##### Sidelite width

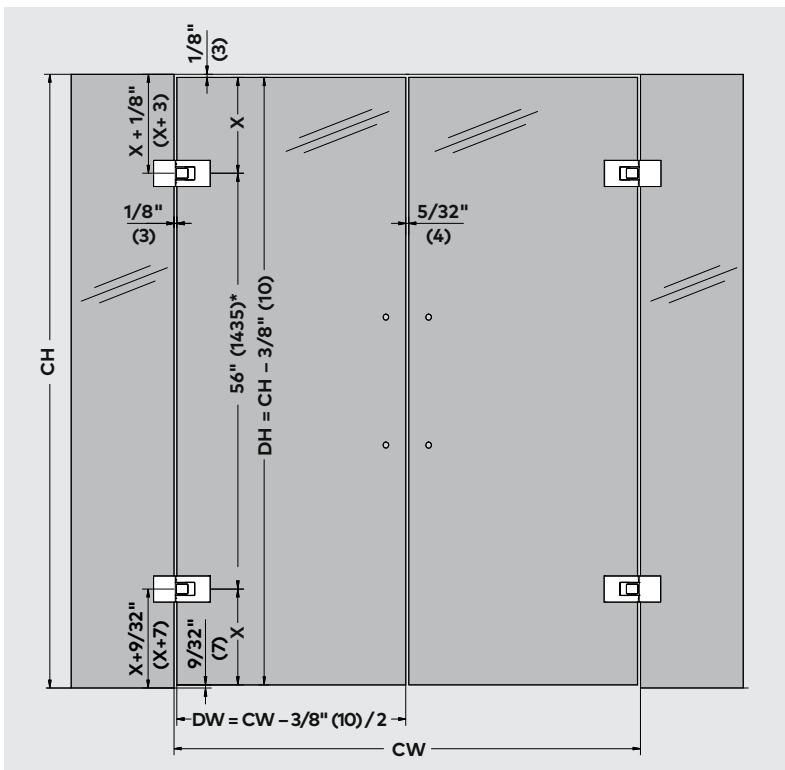
max. 59-1/16" (1500)

min. 12" (305)

CH = Clear opening height

CW = Clear opening width

\* for glass height 71"-98" (1800 - 2500) (min. 28" [700] panel width)



#### TENSOR Double-acting door fixed to glass sidelite

##### Double leaf

##### Glass door height

$$DH = CH - 3/8" (10)$$

##### Glass door width

$$DW = (CW - 3/8" [10]) / 2$$

##### Fittings for

3/8" (10) and 1/2" (12) glass

##### Door weight

max. 143 lb (65 kg)

##### Door width

max. 39-3/8" (1000)

##### Sidelite width

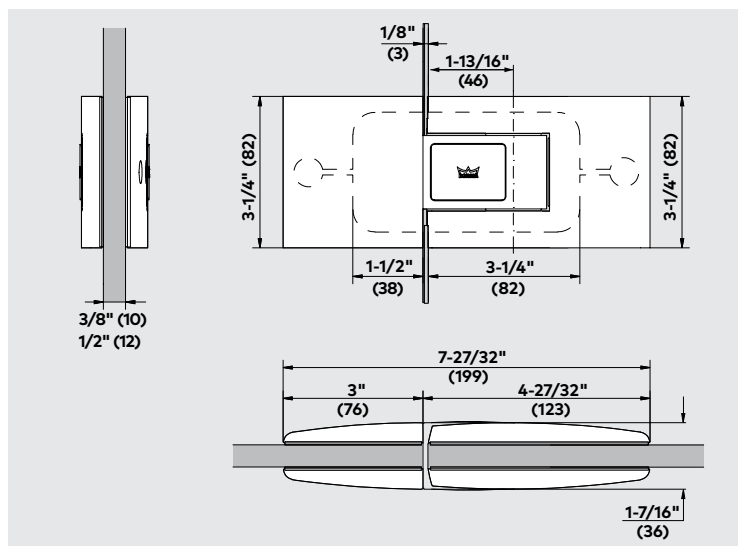
max. 59-1/16" (1500)

min. 12" (305)

CH = Clear opening height

CW = Clear opening width

\* for glass height 71"-98" (1800 - 2500) (min. 28" [700] panel width)

**Product description****Ref. No.****TENSOR Double-acting hinges****812.520**

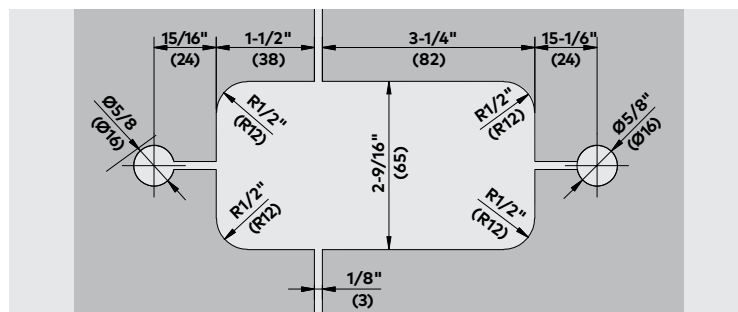
Pair of double-acting hinges for installation glass to glass

For 3/8" (10) and 1/2" (12) glass

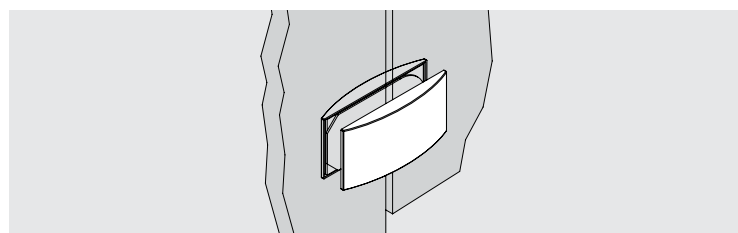
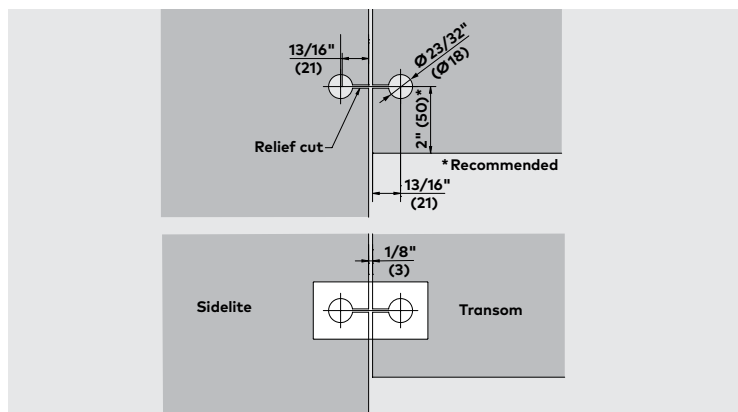
**Finishes**

Anodized aluminum EV1 (114)

Similar to satin stainless steel anodized (113)

**Glass preparation/drilling scheme**

For Ref. No. 812.523

**Transom to sidelite connector****812.536****Glass preparation/drilling scheme**

For Ref. No. 812.536

# Accessories

## Stop for pivoting door

Floor mounting

Ref. No. 829.950





# Safety-related information

## Important safety-related information for the mounting and use of dormakaba glass fittings

Follow these instructions in addition to the mounting and operating instructions in order to avoid damage of product and damage to person or property.

**Important:** All users must be informed about relevant points mentioned in these safety-related information and mounting and operating instructions!

### General information

1. dormakaba recommends using fully tempered monolithic glass, Kind FT, which complies with ASTM C 1036 and ASTM C 1048 requirements, including those indicated by reference to type, class, quality.
2. dormakaba glass fittings are not suitable for application in rooms such as indoor swimming pools, saunas, or salt-water pools, where chemicals (chlorine, for example) are used.
3. Do not shut swing doors with excessive force. Install door stop to prevent door from opening too far.

### Mounting

1. Only properly qualified and specially trained staff are authorized to mount dormakaba glass fittings.
2. Never use glass with conchoidal fractures and/or damaged edges.
3. Due to crushing and possible injury caused by breakage of glass during mounting, appropriate protective clothing (especially gloves and protective goggles) is required.
4. Clean clamping area with alcohol-based solvent (standard commercial cleaning agent) before mounting the glass fitting. Always use silicone and oil-free cleaners.
5. Never clamp metal fitting hardware directly to glass surfaces or use glass of heavily varying thickness unless with a corresponding leveling layer.
6. Never use clamping products with self-cleaning coatings.
7. When adjusting glass elements, always stick to the required clearance for the respective fitting. Adjust clearance so that the glass does not touch hard components such as glass, metal or concrete.
8. Make sure not to use excessive force when installing the glass (avoid over tightening screws).

### Maintenance

Check fittings at regular intervals for proper positioning and smooth running, and door for correct adjustment. Function of fittings is recommended to be inspected every 100,000 movements by a specialist. Immediately replace damaged glass elements (no glass flaking and/or conchoidal fractures)!

### General care instructions

The surface finishes of the fittings are not maintenance-free and should be cleaned according to their material and design.

For metallic surfaces (anodized finishes, stainless steel), only use appropriate cleaning agents without abrasive additives.

**For practical planning, please refer to dormakaba technical drawings.**



Entrance  
Systems

## Our Sustainability Commitment

We are committed to fostering sustainable development along our entire value chain in line with our economic, environmental and social responsibilities toward current and future generations.

Sustainability at product level is an important, future-oriented approach in the field of construction. In order to give quantified disclosures of a product's environmental impacts through its entire life cycle, dormakaba provides Environmental Product Declarations (EPDs), in which the results of the life cycle assessment (LCA) are presented.

The full EPD is available for download at

<https://www.dormakabagroup.com/en/sustainability/product-declarations>.

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