

TENSOR

Double-acting hinge for
tempered glass doors



Interior glass systems



TENSOR

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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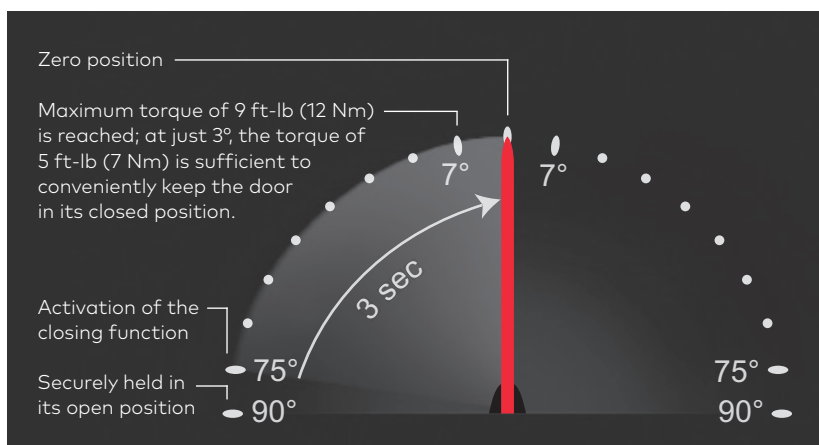
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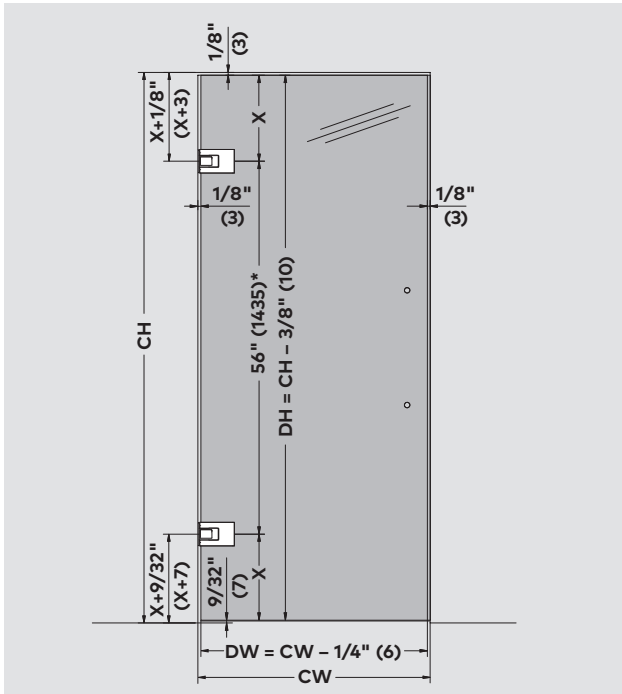
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Surface mounting

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)

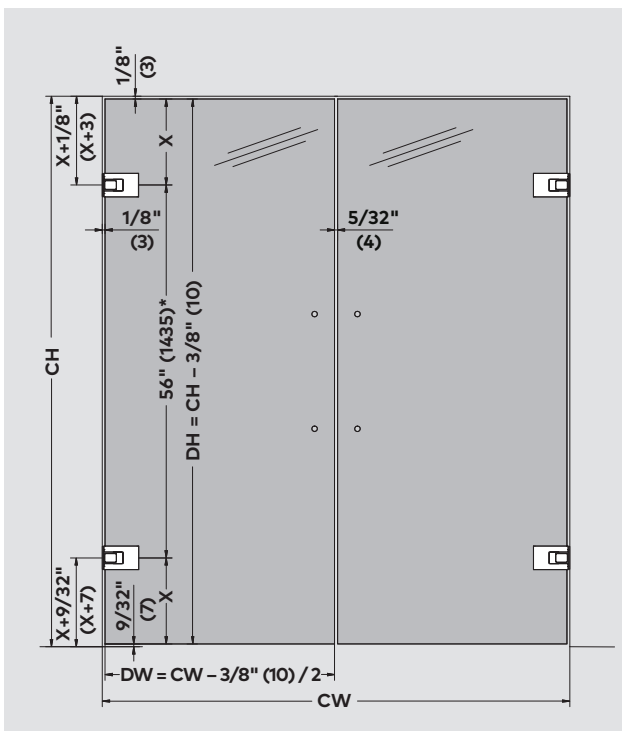
Door width

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

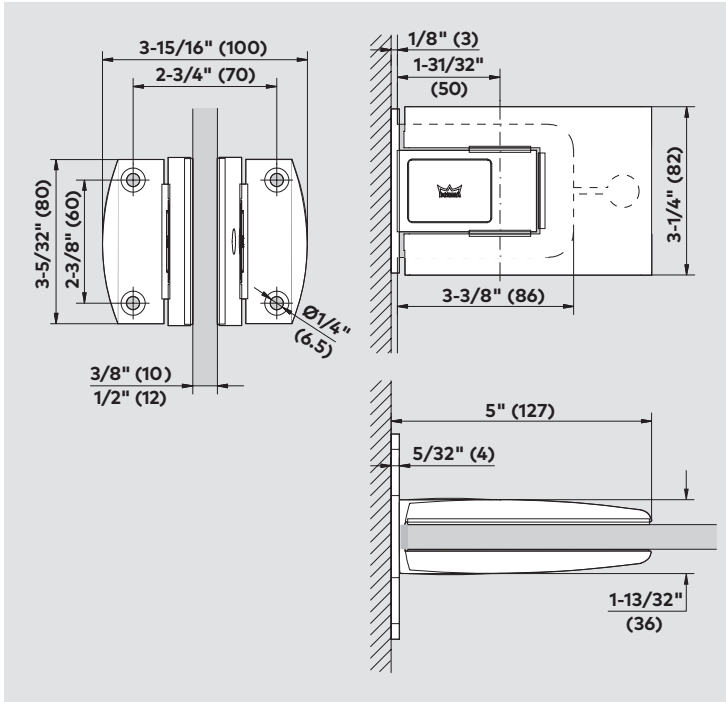
max. 39-3/8" (1000)

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.
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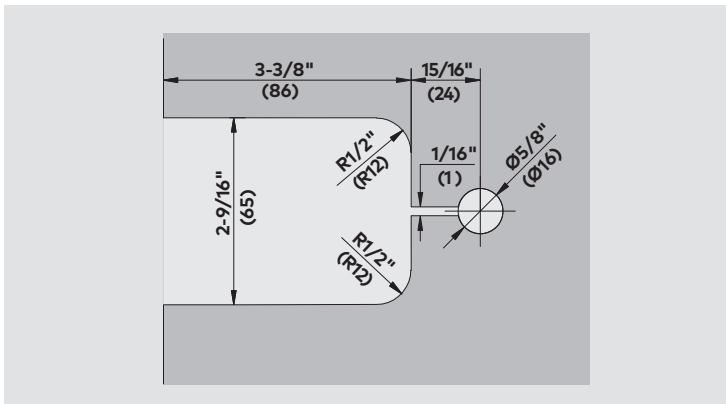
TENSOR Double-acting hinges	812.520
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Pair of double-acting hinges incl. mounting plate, round; for installation onto wall or frame with surface mounting plate

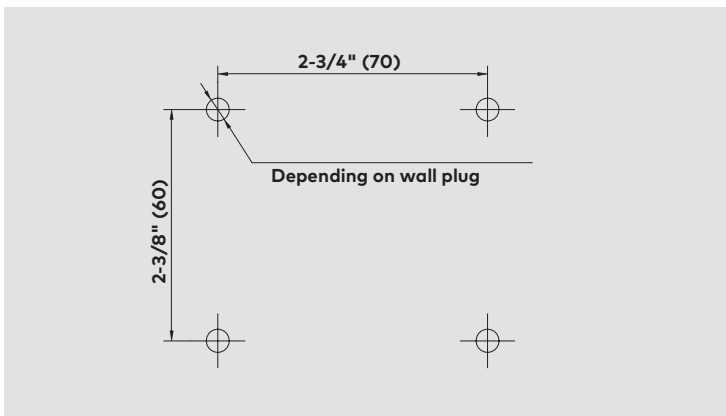
For 3/8" (10) and 1/2" (12) glass

Finishes

Anodized aluminum EV1 (114)
 Similar to satin stainless steel anodized (113)



Glass preparation

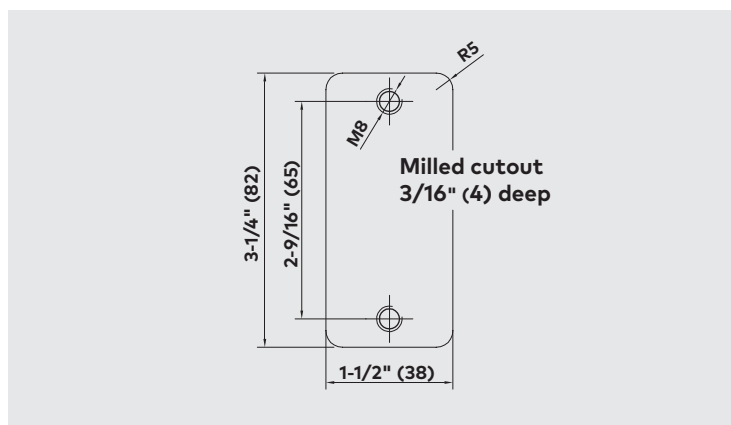
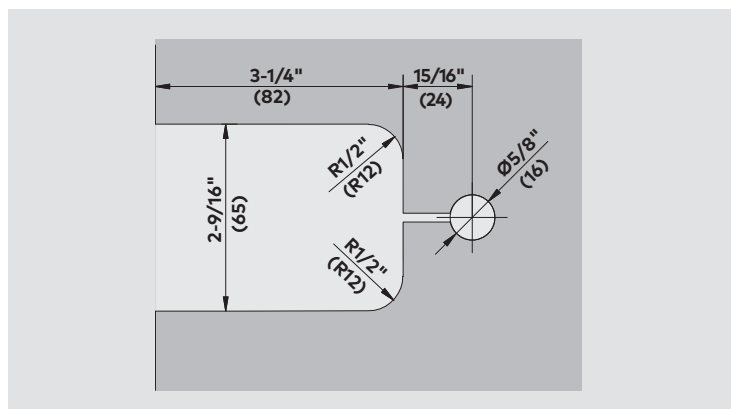
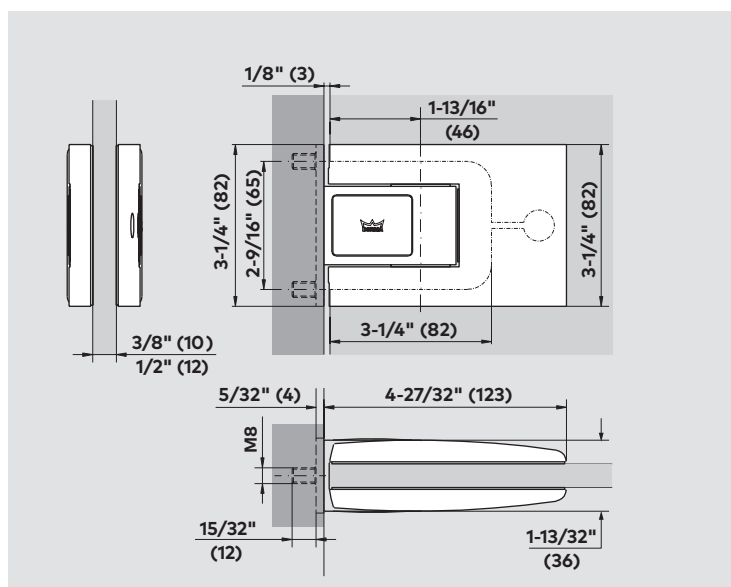


Drilling scheme

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.
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TENSOR Double-acting hinges	812.522
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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

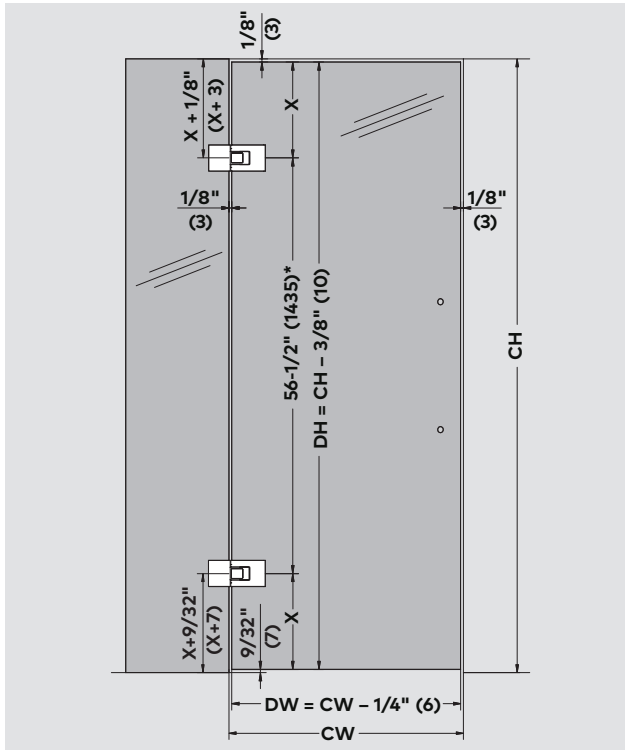
Drilling scheme

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

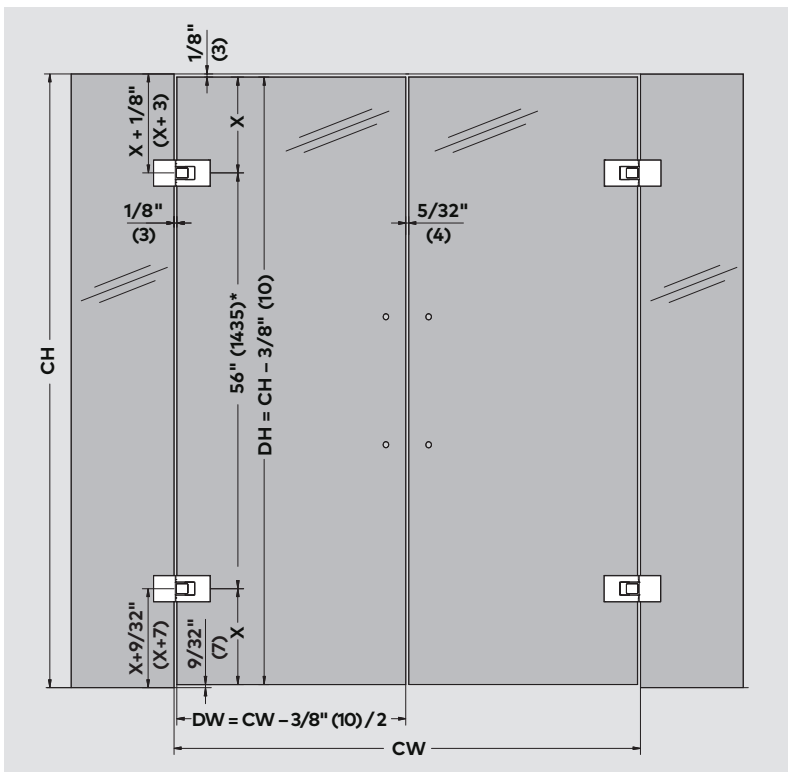
max. 59-1/16" (1500)

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

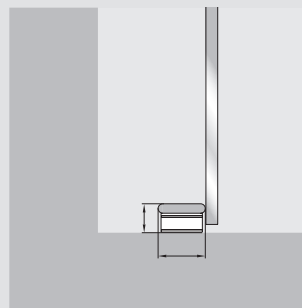
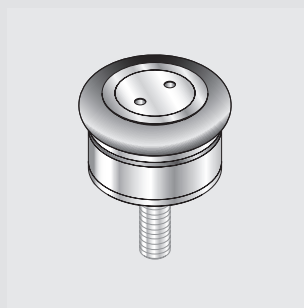
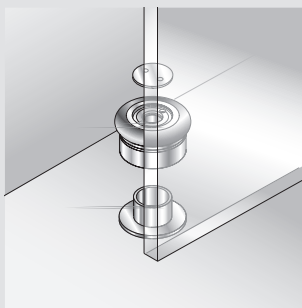
CW = Clear opening width

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

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.



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