



# TENSOR

Double-action door hinges

## CONVENIENCE – PRECISION – TENSOR

There are many arguments in favour of installing a toughened glass door – as many as there are applications and functional possibilities. Double-action doors offer particular convenience. And all the more so where the door is returned to the desired closed position by the action of the hinges alone – without any need for a recessed floor spring or an overhead door closer cluttering the top edge of the glass panel.

The TENSOR concept sets a new standard in this regard – whether for new installations or refurbishments. TENSOR double-action door hinges can be fixed directly to the masonry or to a non-rebated frame. In the case of “glass-to-glass” model, the double-action door is hung from a fixed toughened glass side screen.

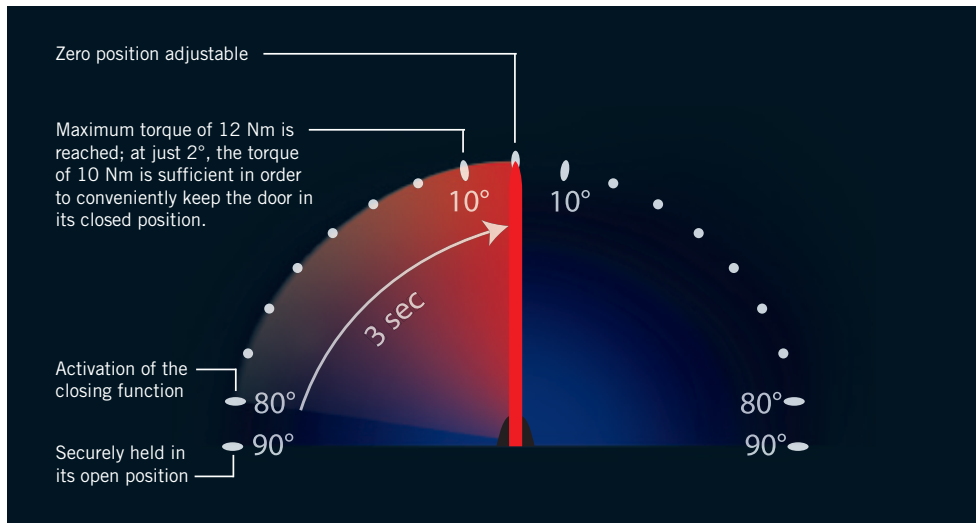
### Excellent returns from every angle

Viewed “superficially”, the TENSOR design exhibits a slightly convex, curved form. Also attractively conspicuous is the inlay of the DORMA brand, harmoniously integrated within the satin-finished aluminium hinge components. The emblem may be selected to match or to contrast with the hinge finish – three inlays of different colours are provided with each set. The inlay serves as a mechanical stop for the hinge, thus protecting the surface of the fixed hinge section against damage when the door is opened to 90°.

And it also conceals to the technical core of the system – the simple and high-precision zero-position adjustment mechanism. This is an essential feature for ensuring the effective and efficient closing of a double-action door.

At 90°, the TENSOR system holds the door firmly and securely in position. Once pushed in the closing direction, the spring mechanism of the TENSOR fitting takes over, operating from an angle of 80°. The door closes quickly and securely. And even at an opening angle of 2°, the torque of 10 Nm created is sufficient to keep the door conveniently in its closed position.

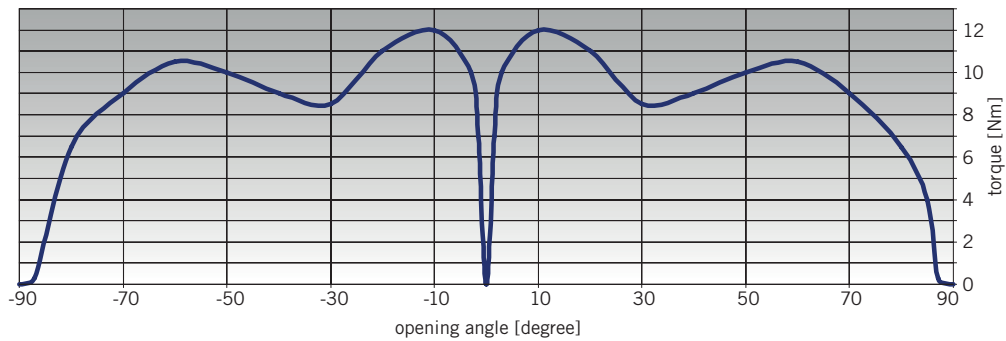




#### TENSOR

TÜV-tested/third-party verification with respect to quality and the production process. Confirmed completion of 500,000 operating cycles.


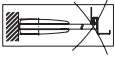
Average values for a door with two TENSOR hinges





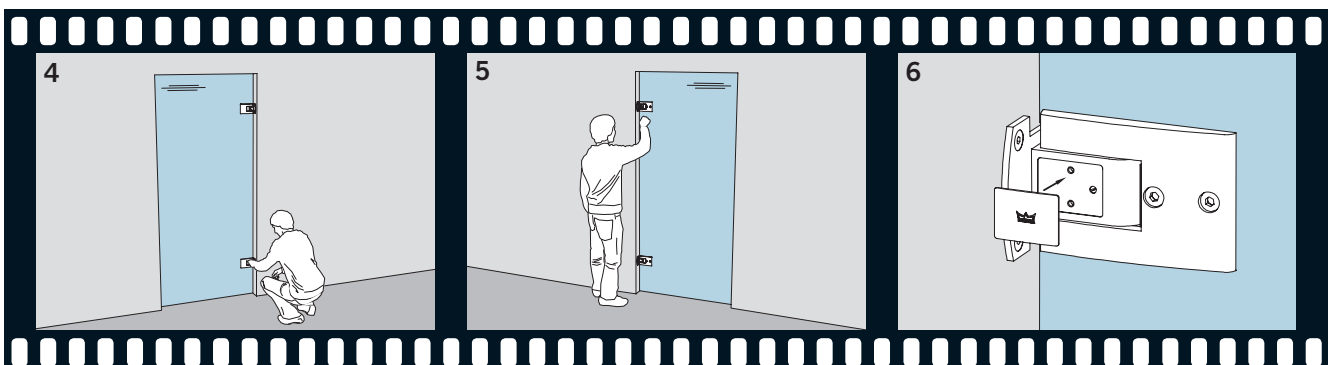
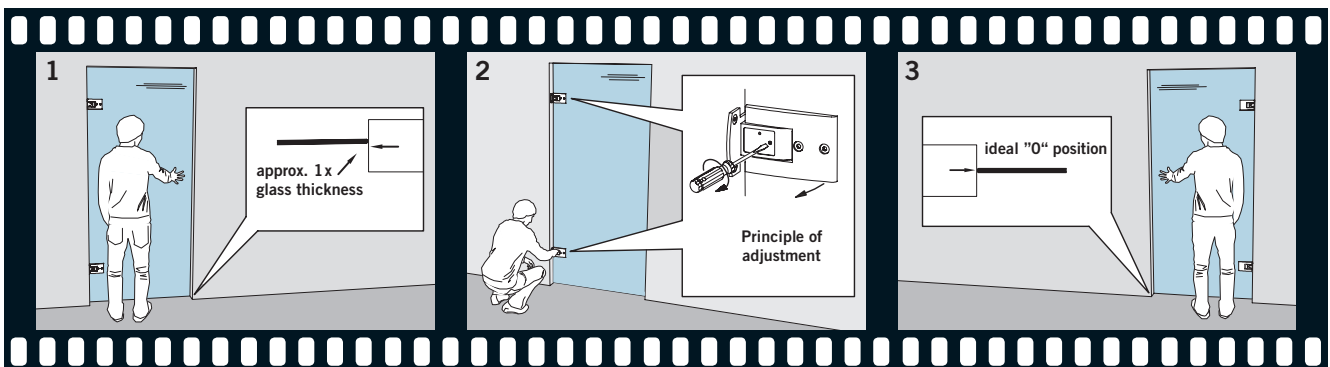


## CONVINCING TECHNIQUE

- Hinge with spring-aided self-closing function, without damping
- Max. torque 12 Nm (with 2 hinges)
- Applications: Interior doors (single or double-leaf) in private and public environments
-  Not for sauna, baths or brine bath applications
-  Not suitable for single action door applications
- Versions for wall and frame fixing and also fixing to a glass side panel
- Hold-open at 90° related to the zero position
- Fast and easy zero position adjustment - patent applied for
- Max. door panel weight 65 kg
- Max. door panel width 1,000 mm
- Min. side panel width 700 mm (lower measures on request)
- Max. side panel width 1,500 mm
- For 8, 10 and 12 mm glass (TSG)
- TÜV-tested/third-party verification with respect to quality and the production process; with confirmed completion of 500,000 operating cycles

**Once correctly set, the door returns to “closed” quickly and reliably – effective zero-point adjustment with TENSOR**

1. Pushing away from your body by hand, move the door panel approx. 1 glass thickness from the desired zero position.
2. Turn the bottom hinge adjustment screw clockwise until the door panel begins to move.  
Then turn the adjustment screw in the top hinge clockwise until the door panel has reached the zero position.
3. Pass through the door and return the panel to its zero position by hand.
4. Tighten the adjustment screws in the top and bottom hinges by turning clockwise.
5. Pass through the door again, and tighten the adjustment screws top and bottom from this side as well.
6. The door will always return to the adjusted position.  
Finally, press the inlay caps into position.



## TENSOR SAMPLE

### Installation onto wall or frame with surface mounted mounting plate

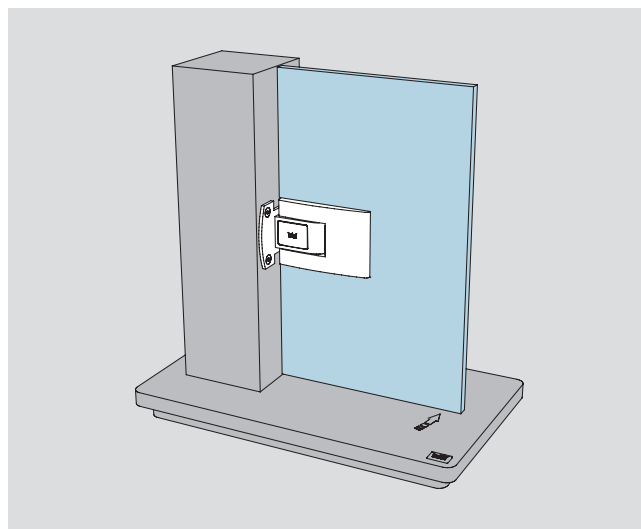
TENSOR double-action hinge  
with reduced spring load for  
demonstration purposes,  
12 mm glass panel fixed to a  
timber construction mounted on  
a support floor of black-dyed  
MDF board

Dimensions of the desk sample:

height 440 mm  
width 430 mm  
depth 250 mm

**Art. No. 12.553**

Finish: Aluminium EV 1 Deco



### Installation glass to glass

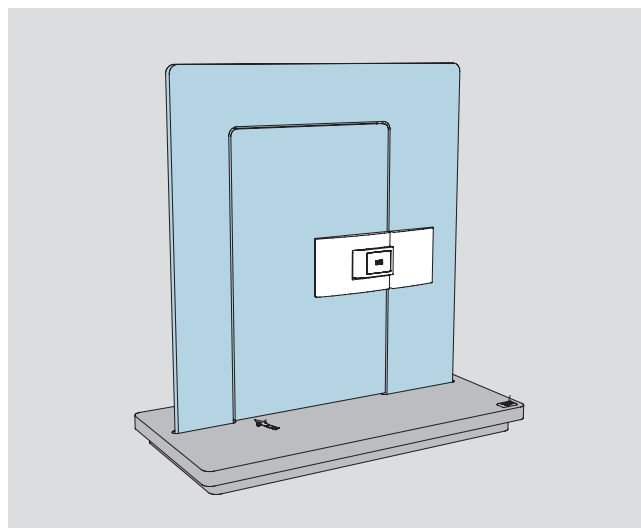
TENSOR double-action hinge  
with reduced spring load for  
demonstration purposes,  
12 mm glass panel, fixed to  
glass frame, inserted in support  
floor of black-dyed MDF board

Dimensions of the desk sample:

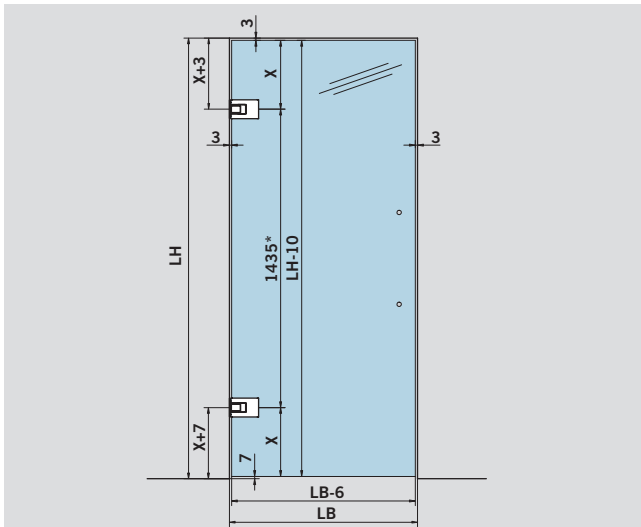
height 520 mm  
width 500 mm  
depth 250 mm

**Art. No. 12.555**

Finish: Aluminium EV 1 Deco



## FOR WALL / FRAME FIXING

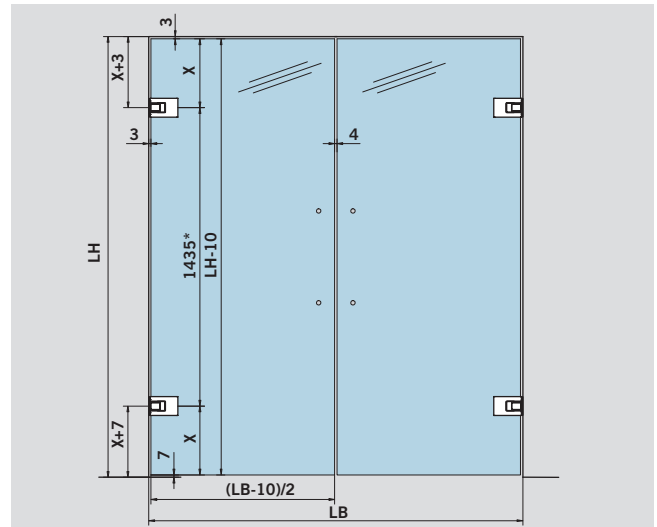


**TENSOR Double-action door fixed to wall/frame with surface mounted mounting plate**

### Single leaf

Fittings for 8, 10 and 12 mm glass  
Door weight: max. 65 kg  
Door width: max. 1,000 mm

LH = clear height  
LB = clear width  
Glass height = LH - 10  
Glass width = LB - 6  
\* for glass height 1,800 - 2,500 mm



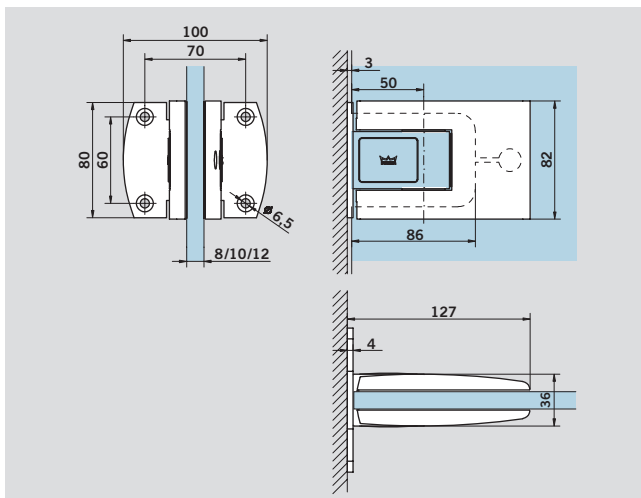
**TENSOR Double-action door fixed to wall/frame with surface mounted mounting plate**

### Double leaf

Fittings for 8, 10 and 12 mm glass  
Door weight: max. 65 kg  
Door width: max. 1,000 mm

LH = clear height  
LB = clear width  
Glass height = LH - 10  
Glass width = (LB - 10) / 2  
\* for glass height 1,800 - 2,500 mm

### TENSOR Double-action hinges



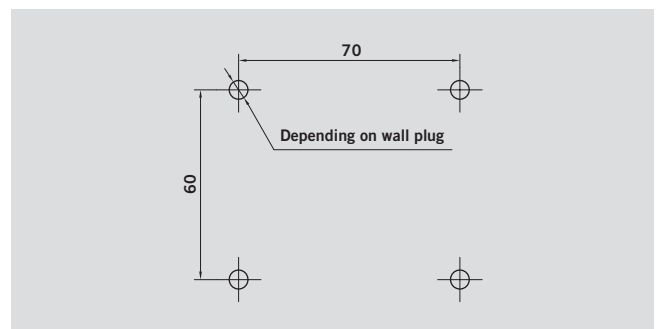
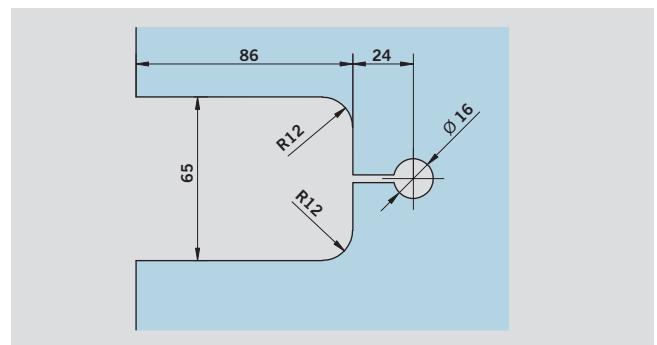
**Pair of double-action hinges incl. mounting plate, round; for installation onto wall or frame with surface mounted mounting plate**  
for 8, 10 and 12 mm glass

**Art. No. 12.520**

Finishes:  
Alumin. EV 1 Deco (114)  
Alumin. similar satin stainless steel (113)  
Alumin. brass-coloured (105)

On request:  
Alumin. polished chromed (122)

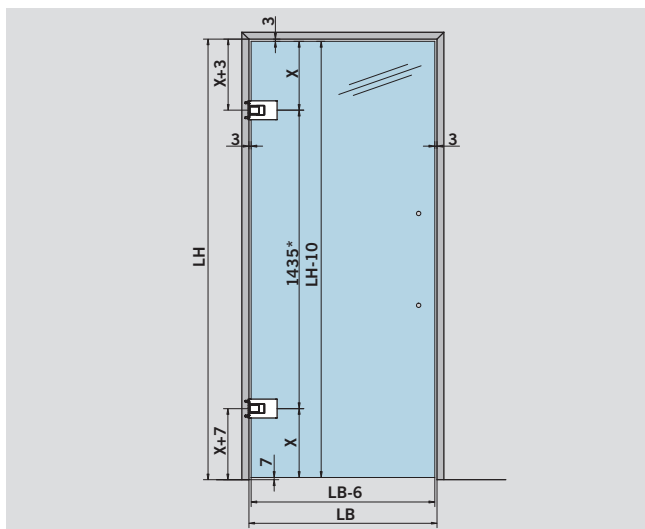
### Glass preparation/Drilling scheme



**PLEASE NOTE: Condition is a suitable substructure!**

Excessive opening of the door must be prevented (max. 90°).  
Please use a door stop – see page 10, Art. No. 29.950.

## FOR FRAME FIXING



**TENSOR Double-action door fixed to frame with embedded mounting plate**

### Single leaf

Fittings for 8, 10 and 12 mm glass

Door weight: max. 65 kg

Door width: max. 1,000 mm

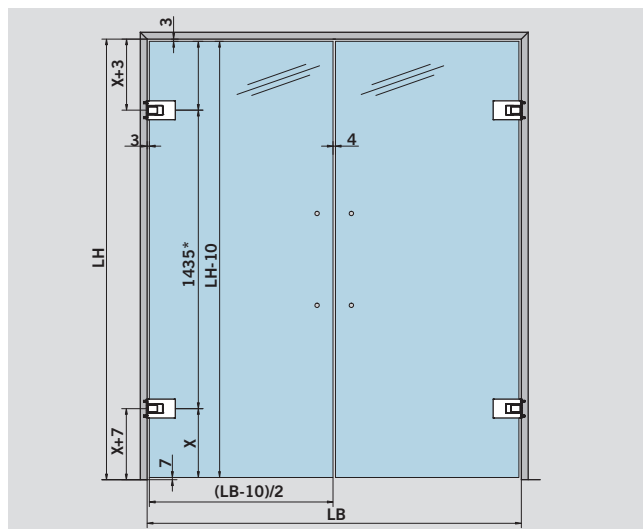
LH = clear height

LB = clear width

Glass height = LH - 10

Glass width = LB - 6

\* for glass height 1,800 - 2,500 mm



**TENSOR Double-action door fixed to frame with embedded mounting plate**

### Double leaf

Fittings for 8, 10 and 12 mm glass

Door weight: max. 65 kg

Door width: max. 1,000 mm

LH = clear height

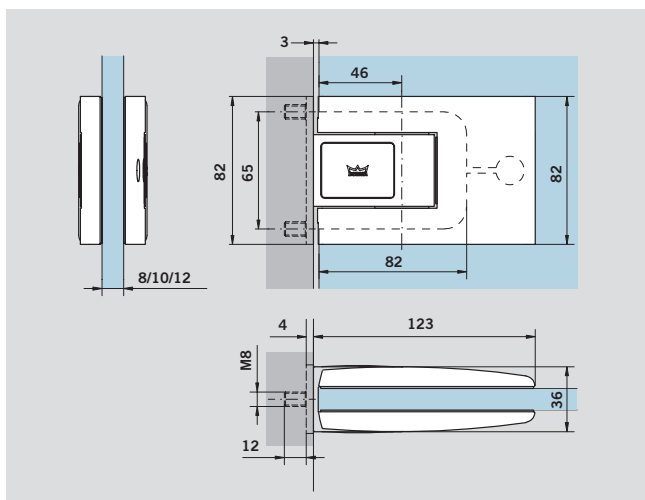
LB = clear width

Glass height = LH - 10

Glass width = (LB - 10) / 2

\* for glass height 1,800 - 2,500 mm

### TENSOR Double-action hinges



**Pair of double-action hinges incl. mounting plate; for installation into frame with embedded mounting plate for 8, 10 and 12 mm glass**

**Art. No. 12.522**

Finishes:

Alumin. EV 1 Deco (114)

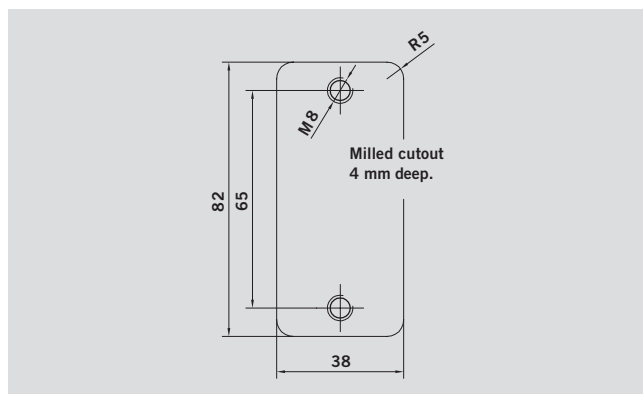
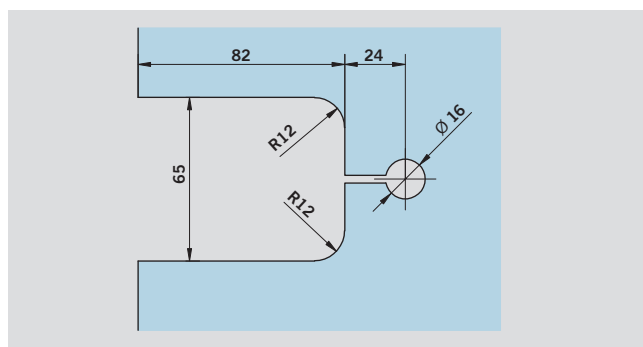
Alumin. similar satin stainless steel (113)

Alumin. brass-coloured (105)

On request:

Alumin. polished chromed (122)

### Glass preparation/Drilling scheme



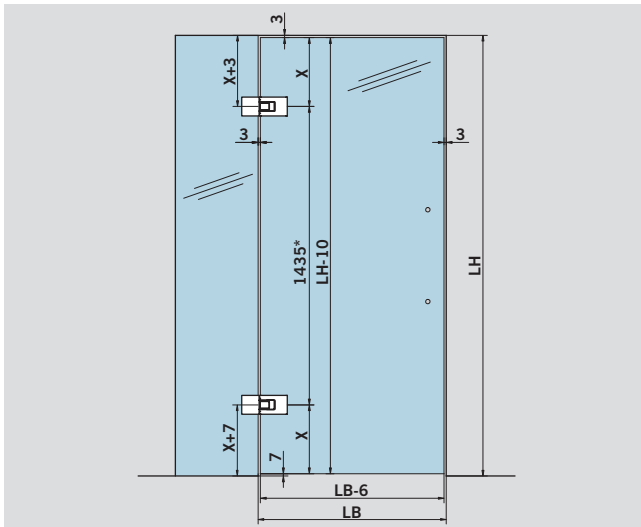
**PLEASE NOTE: Condition is a suitable substructure!**

Excessive opening of the door must be prevented (max. 90°).

Please use a door stop – see page 10, Art. No. 29.950.



# GLASS TO GLASS



**TENSOR Double-action door fixed to glass side panel**

## Single leaf

Fittings for 8, 10 and 12 mm glass

Door weight: max. 65 kg

Door width: max. 1,000 mm

Side panel width: max. 1,500 mm

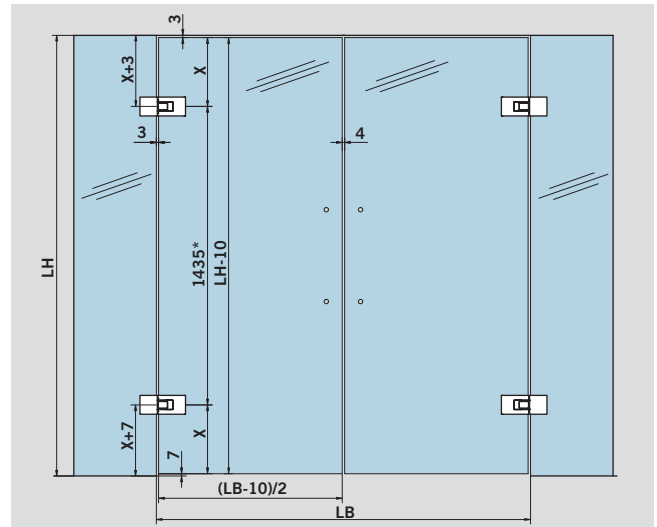
LH = clear height

LB = clear width

Glass height = LH - 10

Glass width = LB - 6

\* for glass height 1,800 - 2,500 mm



**TENSOR Double-action door fixed to glass side panel**

## Double leaf

Fittings for 8, 10 and 12 mm glass

Door weight: max. 65 kg

Door width: max. 1,000 mm

Side panel width: max. 1,500 mm

LH = clear height

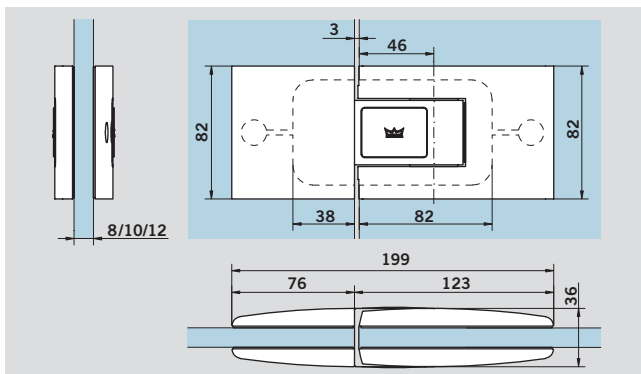
LB = clear width

Glass height = LH - 10

Glass width = (LB - 10) / 2

\* for glass height 1,800 - 2,500 mm

## TENSOR Double-action hinges



**Pair of double-action hinges for installation glass to glasse**  
for 8, 10 and 12 mm glass

**Art. No. 12.523**

Finishes:

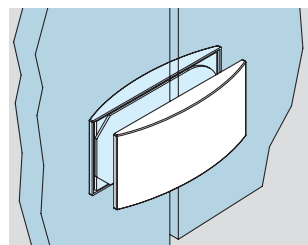
Alumin. EV 1 Deco (114)

Alumin. similar satin stainless steel (113)

Alumin. brass-coloured (105)

On request:

Alumin. polished chromed (122)



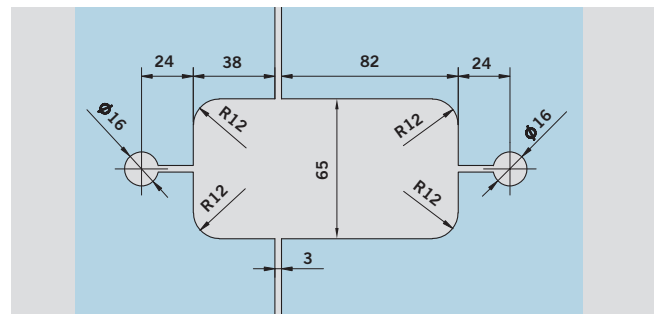
**Overpanel-sidelight connector**

**Art. No. 12.536**

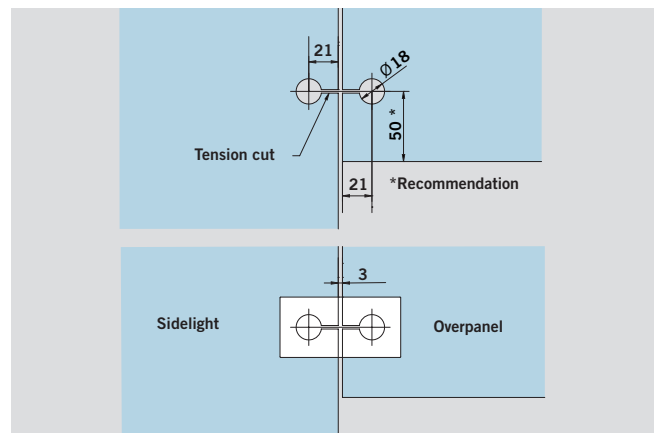
Weight in kg:

aluminium 0.146

## Glass preparation



for Art. No. 12.523

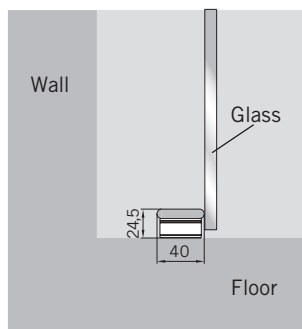
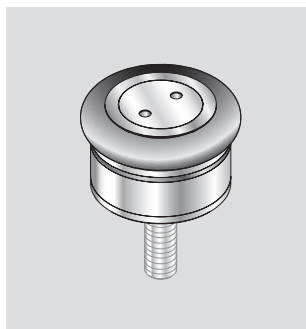
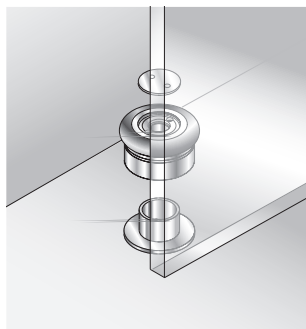


for Art. No. 12.536

Excessive opening of the door must be prevented (max. 90°).  
Please use a door stop – see page 10, Art. No. 29.950.

## ACCESSORIES

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### Ordering information

Stop for pivoting door  
floor mounting

**Art. No. 29.950**

## SAFETY-RELATED INFORMATION

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Important safety-related information for the mounting and use of DORMA 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 have to be informed about relevant points mentioned in these safety-related information and the mounting and operating instructions!

### General information

1. DORMA recommends using TSG-H (heat soaked toughened safety glass) to DIN EN 12150-1.
2. DORMA glass fittings are not suitable for application in rooms where chemicals (e. g. chlorine) are used such as indoor swimming pools, saunas or salt-water pools.
3. Never move sliding panels faster than walking speed and always stop the door manually before it reaches end position.
4. 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 is authorised to mount DORMA glass fittings.
2. Never use glass with conchoidal fractures and/or damaged edges.
3. Due to crushing hazards – among others in the area of the secondary closing edge – and possible injury caused by breakage of glass during mounting, corresponding protective clothing (especially gloves and protective goggles) is required.
4. Clean clamping area with fat solvent (standard commercial cleaning agent) before mounting the glass fitting.
5. Never use clamping shoes on structured glass surfaces (except on satined glass) or glass of heavily varying thickness unless with a corresponding levelling layer.
6. Never use clamping shoes on 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 local stress resulting from very tight screws).

### Maintenance

Check fittings at regular intervals for proper positioning and smooth running and door for correct adjustment. Especially highly-frequented door systems require inspection by properly qualified staff (specialised companies or installation firms). Immediately replace damaged glass elements (no glass flaking and/or conchoidal fractures)!



DORMA GmbH+Co. KG  
DORMA Platz 1  
58256 ENNEPETAL  
GERMANY  
Phone +49 2333 793-0  
Fax +49 2333 793-4950  
[www.dorma.com](http://www.dorma.com)

DORMA-Glas GmbH  
Max-Planck-Straße 33-45  
32107 BAD SALZUFLEN  
GERMANY  
Phone +49 5222 924-100  
Fax +49 5222 924-3100  
[www.dorma.com](http://www.dorma.com)