

Integrated hinged doors

Installation and operating instructions



Installation and operating instructions for the DEZI integrated hinged door

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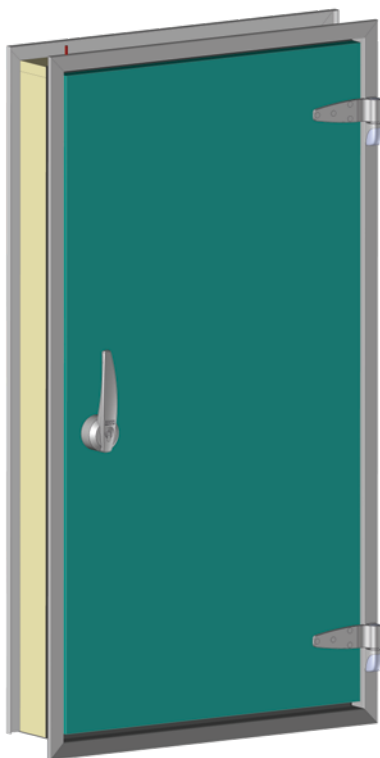


Image 1, only an approximation

General overview of the standard hinged door

Cold-store and deep-freeze room door for temperatures ranging from +1° C to 50° C or -25° C to 40° C

A ready-to-install hinged door system for easy subsequent installation. Type: DEZI, single-leaf

Door leaf

- Door leaf with 60, 100 or 140mm insulation thickness
- Highly elastic circumferential EPDM seal, replaceable
- Vertical sheet metal stop with clearance width of 1050mm
- Inside and outside handle are thermally separated

Frame

- Two-part thermally separated frame for later installation
- With polyurethane foam core for better insulation
- Depending on application purpose, integrated frame heating with a direct connection to 230V

Metal mount

- Injection-molded safety lock with silver ions for enhanced hygiene
- Outside and inside handles are resistant to corrosion with a profile cylinder lock and internal integrated emergency opening
- Flap hinge for flush doors, rising, die-cast zinc, RAL 7043 EPS-coated

Coatings

- SAE 304 stainless steel with sheet gauges of 0.6 or 0.8mm, either smooth-sanded or polished
- Galvanized sheet with coil-coating process finish, layer thickness 25µm, various RAL coatings available from stock

The surfaces are covered with a protective film which must be removed by the customer after installation or, at the latest, prior to taking the doors into service. Film left stuck to the component may result in adhesive residue which cannot be repaired!

Required tools

- Power drill
- 4.1mm tungsten carbide drill
- TORX bit set
- Vise, mounting pliers
- Mechanic's level
- Riveting pliers with 4mm insert
- 1 set of Allen wrenches
- Non-pressing, one-component PU insulating foam (OCF)
- Silicone application gun



Prior to beginning installation, please check the delivered parts are complete and inspect the surfaces and function. At this point, deficient parts can still be easily replaced. Replacement after installation and assumption of subsequent costs or installation costs is not possible. Parts with visible flaws should not be processed further. In this case, please inform your dealer.

Work preparation

- The installation area should be clean and equipped with a soft base (cardboard, solid fiber board, etc.) in order to avoid damaging the door during installation.

Factory configuration

- Upright clearance between outside frame and door leaf ~ 10mm on the left and right
- Top clearance between the outside frame and door leaf ~ 11mm
- Clearance between the floor seal and top edge of threshold ~ 1mm
- Overlap of door handle to closing pin ~ 6mm
- Center closing pin grid plate
- Hinge pin in hinge bracket ~ 3mm
- Center hinge bracket grid plate

These dimensions must be checked prior to installation and readjusted if necessary. The clearance between the outside frame and door leaf is adjustable vertically and horizontally. In addition, the position of the closing pin is also adjustable. For more information, please see the installation instructions in the Fine Adjustment section.

For more functional dimensions, see image 2.

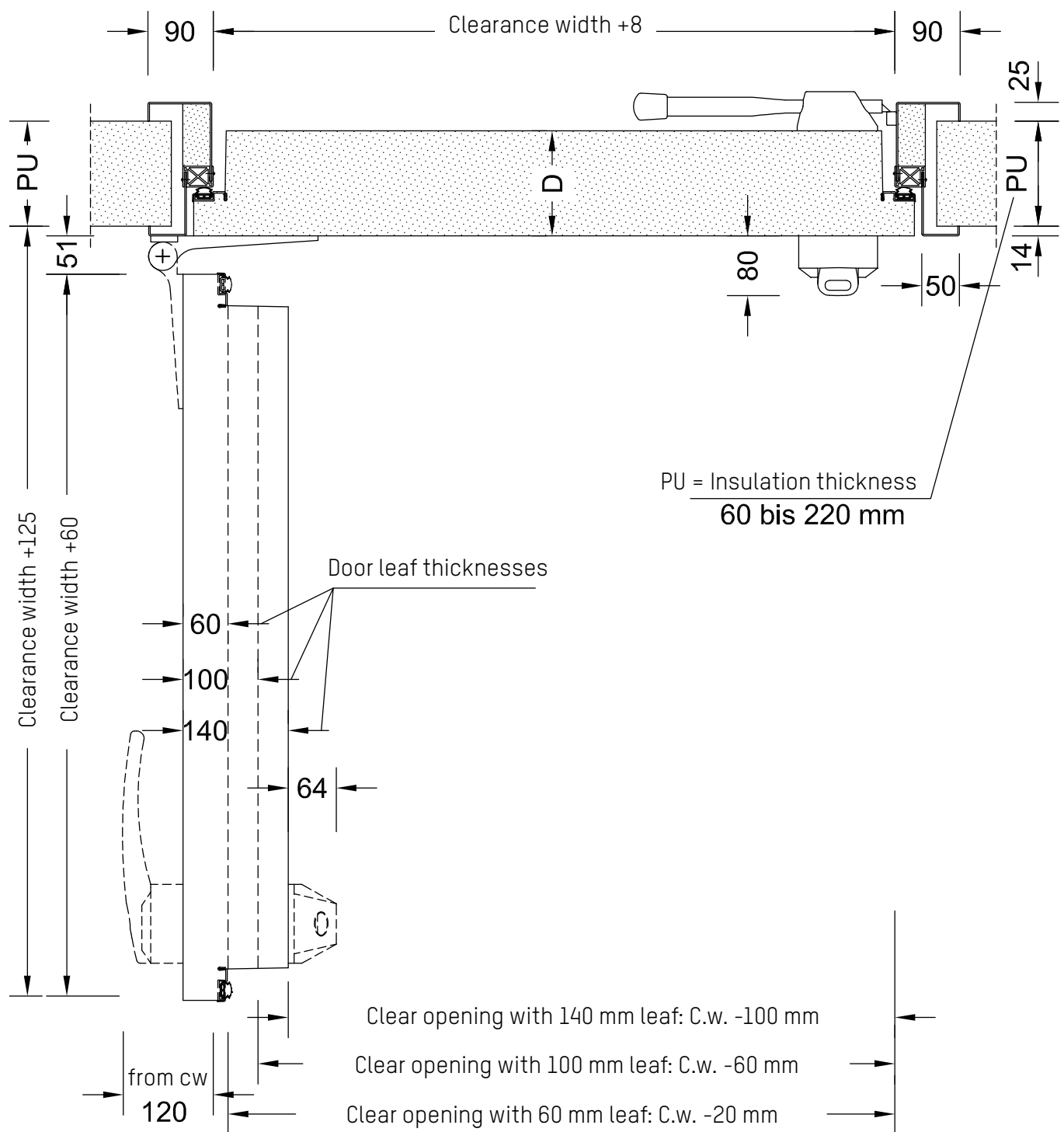


Image 2, figure similar

Scope of supply

A DEZI door system consists of the following components:

- | | |
|---|---|
| 1 = 1x outside frame | 6 = 1x inside press lever with door handle function mounted on door leaf |
| 2 = 1x inside frame | 7 = 1x closing pin mounted on inside frame |
| 3 = 1x door leaf | 8 = Flap hinge for flush doors; number depends on size and application, mounted on door leaf and outside frame- Rivets (black) for fastening outside and inside frames into place |
| 4 = 1x threshold, mounted on the outside frame in the standard version; versions "without a threshold" with auxiliary threshold, not shown in drawing | |
| 5 = 1x outside handle mounted on the door leaf | |

Installation instructions:

- i** i) The door system is delivered to you completely pre-mounted and pre-adjusted (see Factory Configuration section).
- i** i) The door system must be partially disassembled for installation situations such as in existing panel or wall openings.
- i** i) Installation is made easier if during the first steps the door is dismantled horizontally. All dimensional and direction information is based on the door after it has been installed.

- 1** Remove the protective cap and – if already installed – the lift-off guard on all the hinges (see Fine Adjustment section). Remove the door leaves. The door must be opened at least 90° to do so. Move the door wing along the vertical axis about 80mm upwards. The hinge flap is no longer around the hinge pin and the door wing is free. Do not place the door on the seal (see image 3). Remove door contact switch.

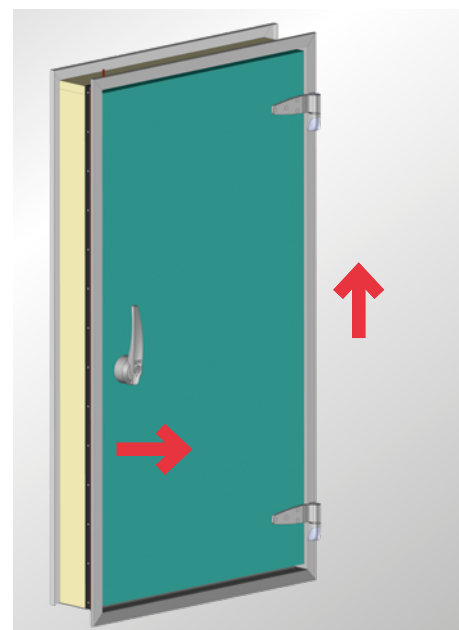


Image 3

- 2** Remove the inside frame (counter-frame, see image 4)



Caution: The inside frame should be evenly lifted at all four corners. Otherwise, torsion may occur.



Image 4

- 3** Place the outside frame in the existing opening (see image 5).

- i** For door systems without a threshold, the auxiliary threshold must first be removed. The auxiliary threshold is only designed to ensure safe transport and has no other function (see Auxiliary Threshold section).



After removing the auxiliary threshold, the outside frame is prone to bend due to torsion forces exerted on it.



Image 5, Execution of "threshold for cell"



If frame heating is being installed, make sure the heating line is lying in the correct opening and the wall opening has enough space for the heating line. Otherwise there is a danger of damage to the heating line.

- 4** The outside frame must be set perpendicular (horizontally and vertically) and parallel to the wall. Small wood wedges and liners are helpful for this (see image 7).

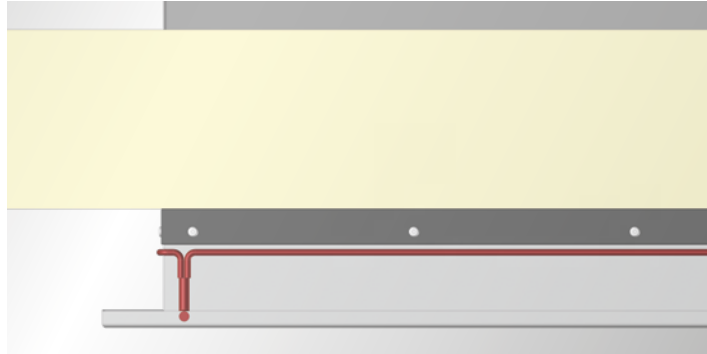


Image 6

- 5** Anchor into place at points 500mm apart using non-pressing, one-component PU insulating foam (OCF) – not included in scope of supply – between the outside frame and the wall at the corners. After this, close the door and check that the gap is the same size on the closing edge at the top and bottom. If necessary, adjust the frame again. Open the door again and use a board to support the frame horizontally halfway up. Now apply foam to the remaining gap space all the way around the frame. This serves to anchor the frame into place and also provides optimal insulation. Carry out the foaming with extreme care. After a sufficient drying period, the board can be removed (see image 8).

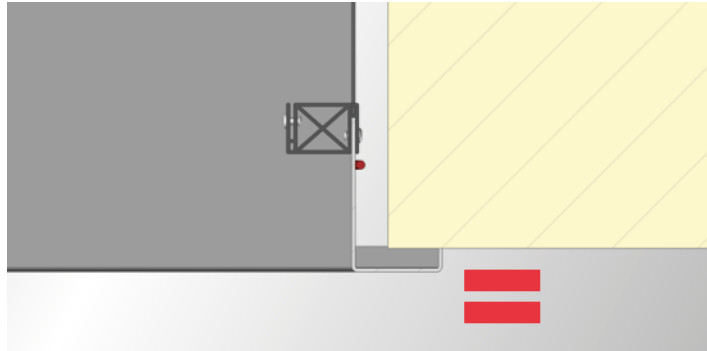


Image 7

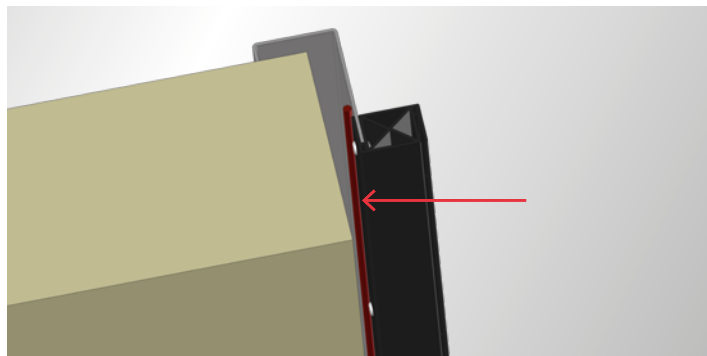


Image 8

- 6** Slide the inside frame (counter-frame) into the groove of the black plastic profile (see image 9)

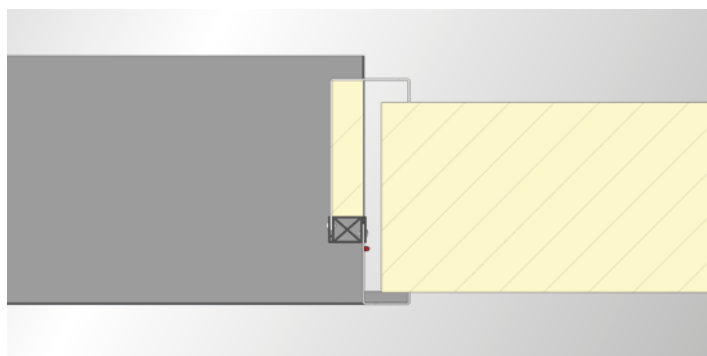


Image 9

- 7** Check that the outside and inside frames are parallel with the wall or panel and fix in place with screw or installation clamp (see image 10).

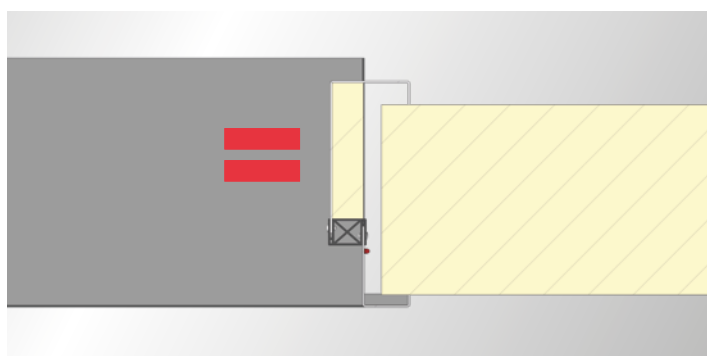


Image 10

- 8** Use a drill ($\varnothing$ 4.1mm) to drill through the thermal profile and inside frame spaced 500mm apart. Use the stamped groove for the optimal position. If necessary, the installation clamp must be readjusted (see image 11).

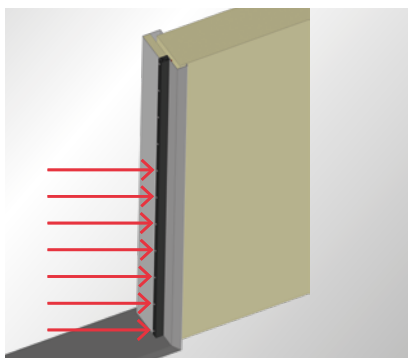


Image 11

- 9** Remove the installation clamps and mount the door leaves. Place the door into position.



Be sure the hinge bracket and hinge leaf are in the correct position. Otherwise the door will not close properly (see Fine Adjustment section).

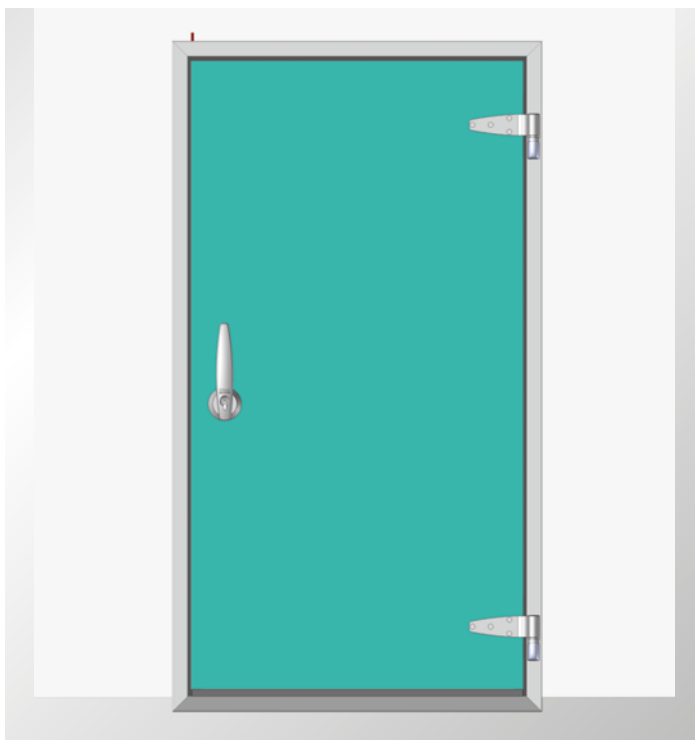


Image 12

Auxiliary threshold

The auxiliary threshold is fastened in place on the left and right by a total of 4 welding points and can be removed by striking forcefully with a hammer once or twice. Sand down the edges with files or an angle grinder.



After removal of the auxiliary threshold, the outside frame may become distorted or twisted and bend due to forces it is exposed to.



Image 13

Fine adjustment



With the factory adjustment, the door should now easily open and close and achieve the desired frame and floor seal contact pressure to ensure optimal tightness. Because construction conditions are not always optimal (wall thickness varies or wall is at an angle, not level, other deviations), it is absolutely mandatory to check all the functional dimensions and clearances and especially the compression of the frame seal once more and, if necessary, carry out fine adjustments.



Removing the door leaf is only necessary if the vertical axis is out of position.

Scope of supply for each Varioflex hinge:

- 1 = 1x hinge leaf
- 2 = 1x hinge bracket
- 3 = 1x protective cover on bottom (bracket)
- 4 = 1x protective cover on top (bracket)
- 5 = 4x cover plugs (leaves)
- 6 = 1x hinge pin
- 7 = 1x lift-off guard (orange, must be removed prior to disassembly)
- 8 = 4x Allen keys
- 9 = 2x screw-on plates
- 10 = 1x locking wedge
- 11 = 4x blind rivets 5x12
- 12 = 2x blind rivets 5x8
- 13 = hinge shim, frame side

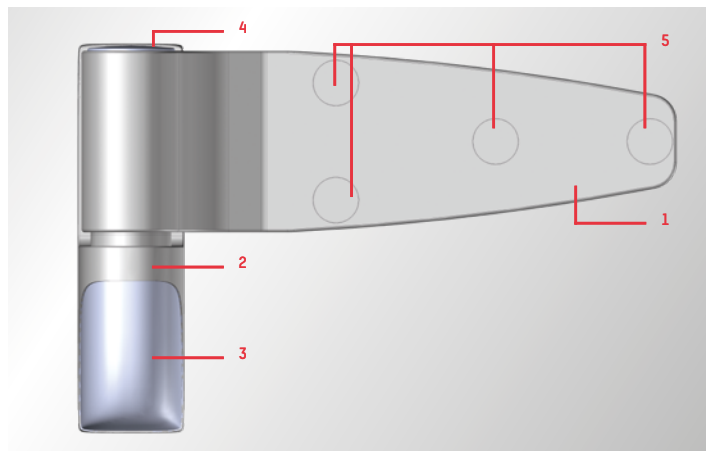


Image 14

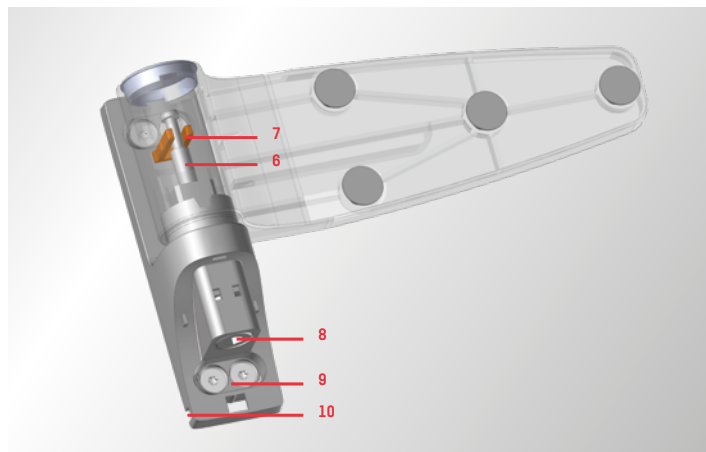


Image 15

- 10** First, check the clearances between the door leaf and outside frame. Refer to the Factory Configuration section for the correct clearances.

Proceed as follows if it is necessary to correct clearances:

Slide the locking wedge (10) in the lower part of the hinge brackets approx. 10mm outward. Remove cover cap (3); (counter-frame, see image 16).

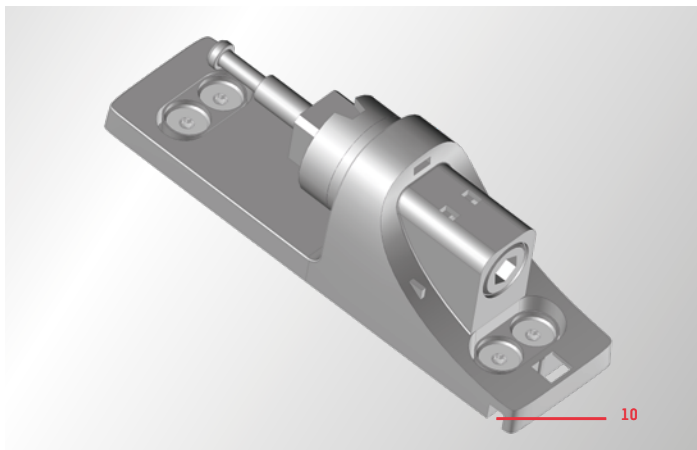


Image 16

- 11** Horizontal axis: Loosen all the screws on the screw-on plate (9). Move the hinge bracket (no. 2. on page 7) to the desired position and retighten the screws (see image 17).



Caution: The screws should not be completely removed when loosened. 1 – 2 turns are sufficient.

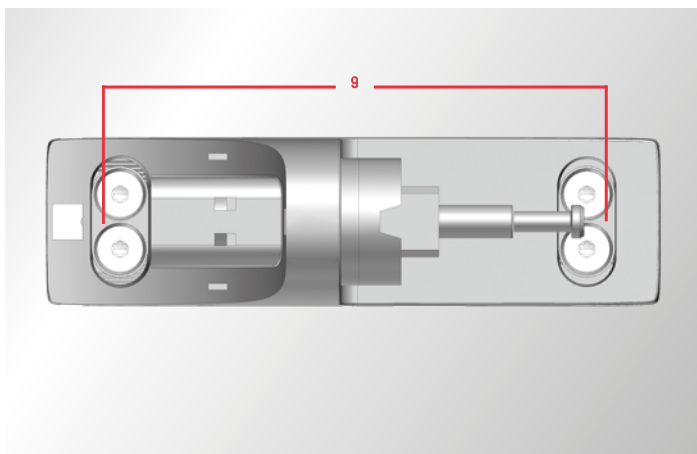


Image 17

- 12** Vertical axis: The desired height can be set using the M16 Allen screw (8-piece Allen wrench set). The door rises when movement is counterclockwise. The door descends when movement is clockwise (see image 18).



Caution: All hinges must be tightened to the same tightening torque, as otherwise a stronger load will be exerted on individual hinges. This may cause band rupture.

Repeat these steps for all the hinges.

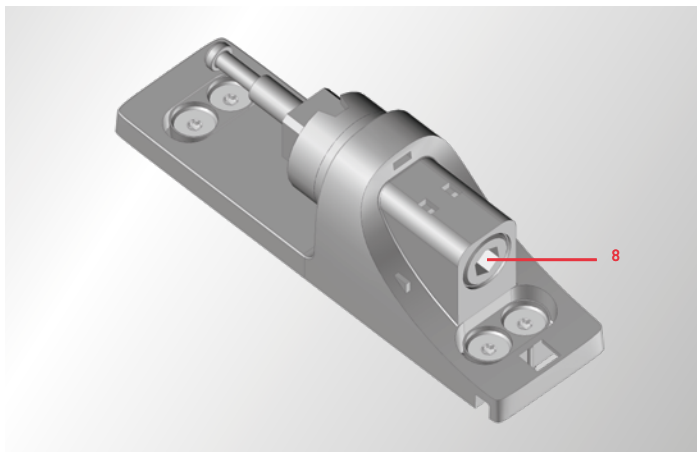


Image 18

- 13** Once the door is correctly adjusted, attach the lift-off guard (7) at the rear of the hinge leaf (can only be attached in the open position). And put the cover cap back into place (see image 19).

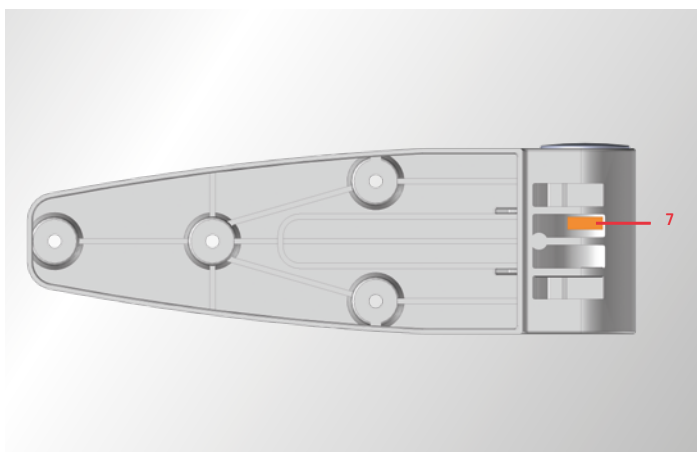


Image 19



Adjusting the contact pressure

To ensure optimal tightness, the contact pressure must be adjusted. The door leaf frame seal should be in contact in the "closed" position all around, and pressed shut by about 1–2mm. A paper sheet can be used to test this. Place a sheet of paper between the door leaf and door frame and move the door to the "closed" position. If the sheet can be moved easily, the seal has no contact, if the sheet tears, then the contact pressure is too strong. This test should be carried out at various heights on the door handle and the door hinge side.

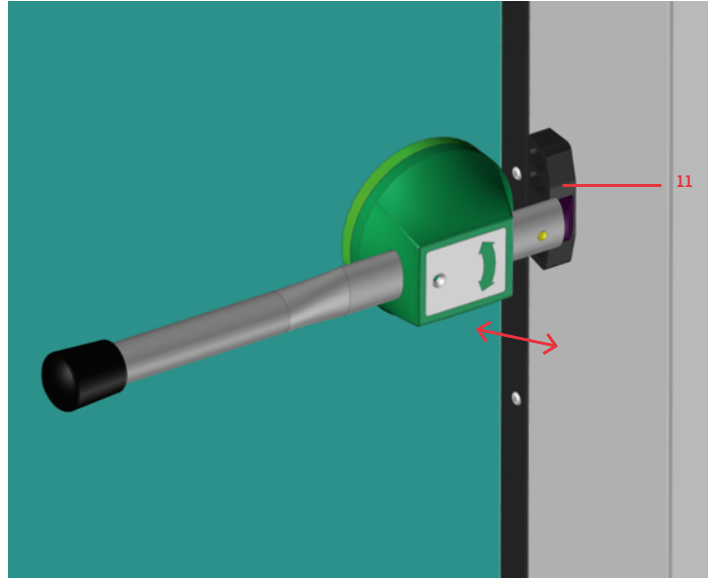


Image 20

14

Adjusting the contact pressure

Loosen the screw connection and move the closing pin (11) to the desired position (see image 20).

15

Finally, the door frame should have high-grade special silicone (ROMASIL) sealer or a similar sealant applied to it (see image 21).

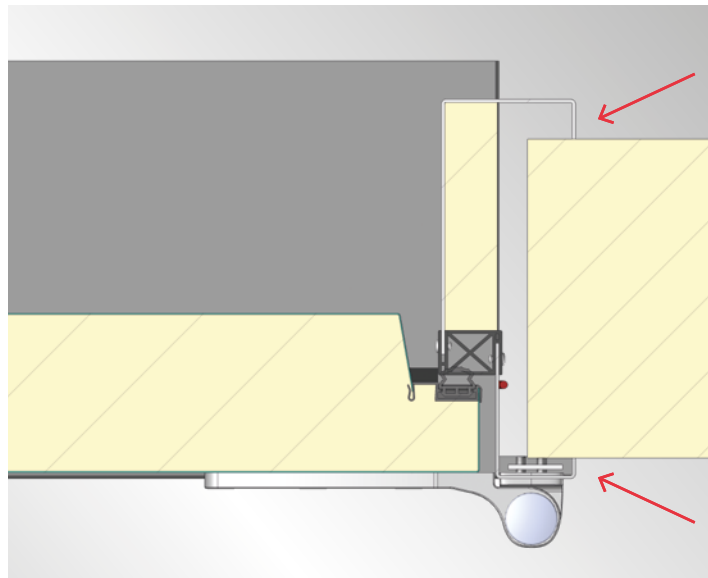


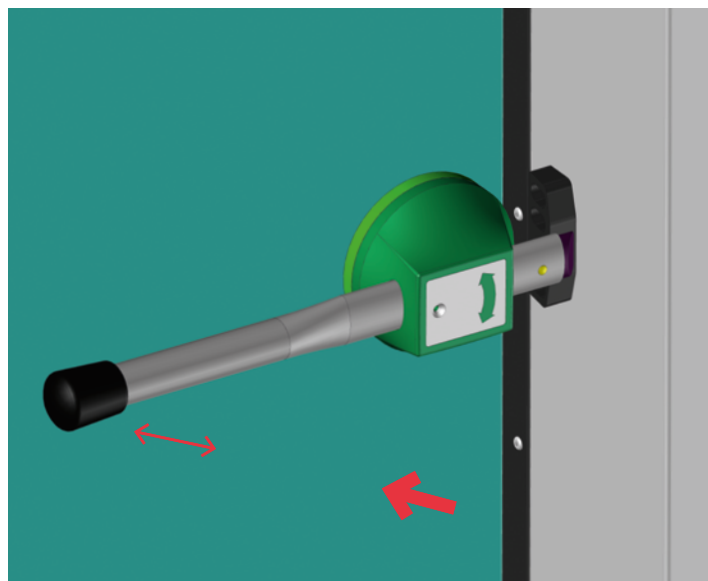
Image 21

Safety



There is a statutory requirement that it should always be possible to escape from the cold-store and deep-freeze areas. This means it must also be possible to use a handle to open the door from the inside when it is locked (from the outside) (see image 22).

When installing the door, general care must be taken with the escape direction. Installing door fittings without an emergency opening mechanism is not permitted. If you have any further questions, please contact your specialist dealer.



View of press lever from inside; thick red arrow is direction of escape.

Image 22

Door frame heating

Door frame heating for deep-freeze room doors must be connected to the power supply (230V). Standard delivery for cold-store room doors with a thermally separated frame does not include door frame heating. If cold-store room doors to be operated at temperatures above zero are equipped with door frame heating, we recommend having the frame heating include an On/Off switch so it can be turned on when necessary (230V).

Care and cleaning

- Cleaning the door with wet media is only permitted a minimum of three days after the sealing has been applied. Clean the plastic-coated surfaces with mild soap or standard detergent solutions or cleaning agents which have a pH value between 5.0 and 9.0.
- Cleaning agents should be used in standard dilution and should never be used in concentrated form. Never use paint thinners or cleaning agents containing active chlorine.
- Cleaning agents should be rinsed off with clear water to ensure that surfaces dry without any residue. Avoid standing moisture.

Maintenance

- The frame seal profile should be regularly cared for and protected. A standard car cleaning and care product should be used for this. Regular use reduces wear and helps maintain the quality of the frame seal.
- If the frame seal profile is damaged, it must be replaced with a new seal profile.

Troubleshooting

Ice formation on the door or inside frame

- Check the contact pressure of the frame seal (see Fine Adjustment of the Contact Pressure).
- Check if the door frame heating is connected or switched on.

The door cannot be moved easily

- Check the height of the door leaf. The floor seal may be pressing too strongly on the threshold (see Fine Adjustment View of press lever from inside; thick red arrow is direction of escape).
- Check the adjustment of the hinges. Incorrect adjustment may cause stronger loads to be exerted on individual hinges. The load must be distributed evenly on all the hinges (see Fine Adjustment section).



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