



**ENERGY SAFE TECHNOLOGIES**

# **Single-Leaf Traffic Swinging Doors (TSD)**

**OPERATION MANUAL**

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**After having installed the door, it is important to adjust the leaf!**

## 1. GENERAL INFORMATION

This manual outlines information pertaining to ProfHolod doors: main uses, information about the doors, technical specifications and installation instructions.

All comments and suggestions for improving operations should be sent to: Russian Federation 141000, MO, Shchelkovo, st. Zavodskaya, 2, tel: +7 (495) 240-83-14, e-mail: info@profholod.com.

## 2. PURPOSE AND USE

Traffic swinging doors produced by ProfHolod are designed for doorways in places where people and low trolleys regularly pass, for operation in heated and unheated rooms with an ambient temperature of + 10°C to +45°C and a relative humidity of no more than 80%. The doors are not intended for use in rooms with a high dust or solid particle count.

## 3. SPECIFICATIONS

Door type	Width of opening BEFORE installation (mm)	Clearance height BEFORE installation (mm)	Door leaf thickness (mm)	External material of the door leaf	Internal material of the door leaf	Threshold height (mm)	Frame type: ("ANG", "U", or "OVR T") where "T" is the wall thickness	Hinge location (R-right, L-left)
TSD	XXXX	XXXX	40	XXX-XXX	XXX-XXX	0	ANG	XX

Materials from which the door is made:

Material code	Description
RAL-0,5	Metal sheet, thickness 0.5 mm, with a RAL polymer coating
Zn-0,5	Galvanized metal sheet, thickness 0.5 mm
AISI 304-0,5	304 stainless steel (food grade), thickness 0.5 mm
AISI 430-0,5	403 stainless steel (food grade), thickness 0.5 mm

Table 1 shows the range of sizes for TSD by ProfHolod.

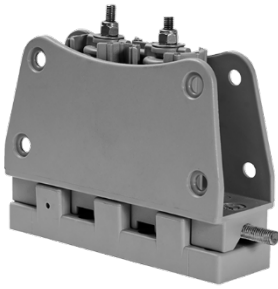
Table 1: Range of TSD door sizes (multiples of 10 mm)

Width of opening	Clearance height	Leaf thickness
700...1300	1800...3300	40

Figure 1.  
TSD hardware



1 - KIDE swing hinge, Spain



2 - COLDTECH swing hinge, Italy

## 4. TECHNICAL SPECIFICATIONS

The door leaf, including the edges, is made from 0.5 mm thick steel sheet, which protects the door leaf from impact. Rigid polyurethane foam, thermal conductivity 0.022 W/m\*K.

TSD can be equipped with different metal frames: "overlapping", "angular", or a curved "U-shaped" frame of 20x60.

A seal of the appropriate height is included as standard, as well as a window with a rubber frame. (see "Delivery set")

Please be aware that traffic swinging doors do not completely seal shut around the opening, since there are gaps along the perimeter between the frame and the door leaf. For cold rooms use refrigeration doors by ProfHolod.

Protection of the door leaf from damage during transportation is ensured by a special polyethylene film, 50 microns thick, which is freely removed after installation.

## 5. TSD SET WITH AN ANGULAR DOOR FRAME

The standard angular door frame is made from 2 mm thick cold rolled steel sheet and painted with powder enamel paint in RAL 9003 or any other colour from the RAL catalogue.

Available in stainless steel AISI 304 or AISI 430.

The frame is mounted on one side of the opening using the mounting kit (optional) and can be installed in the following:

- An opening in a wall made of sandwich panels
- An opening in load-bearing walls made of concrete or brick
- An opening in a metal wall.

Figure 2.  
Metal angular frame.

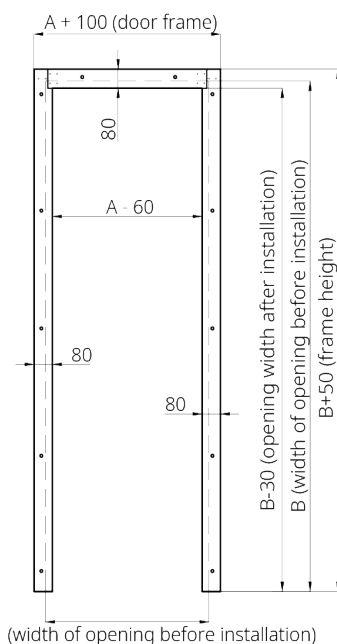


Figure 3.  
TSD with metal angular frame.

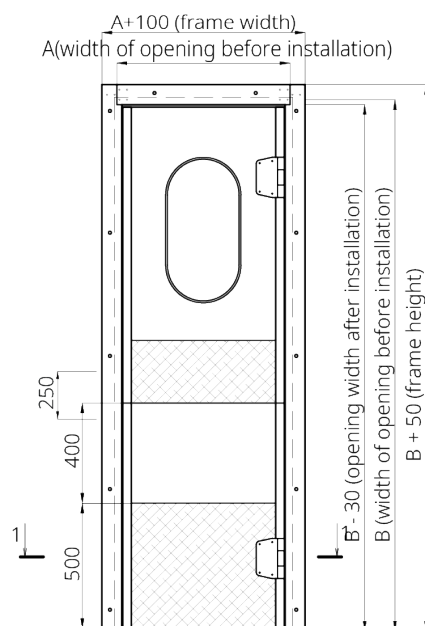


Figure 4.  
Cross-section 1-1. TSD with flat bumper

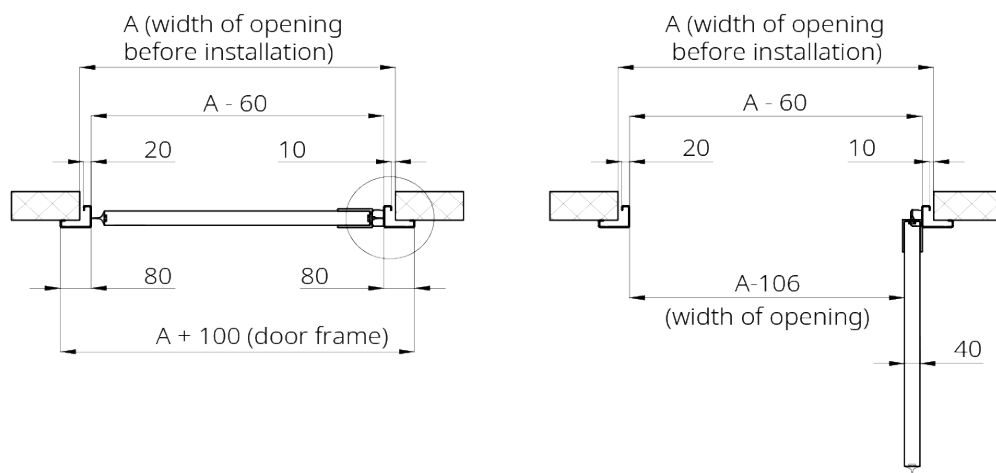
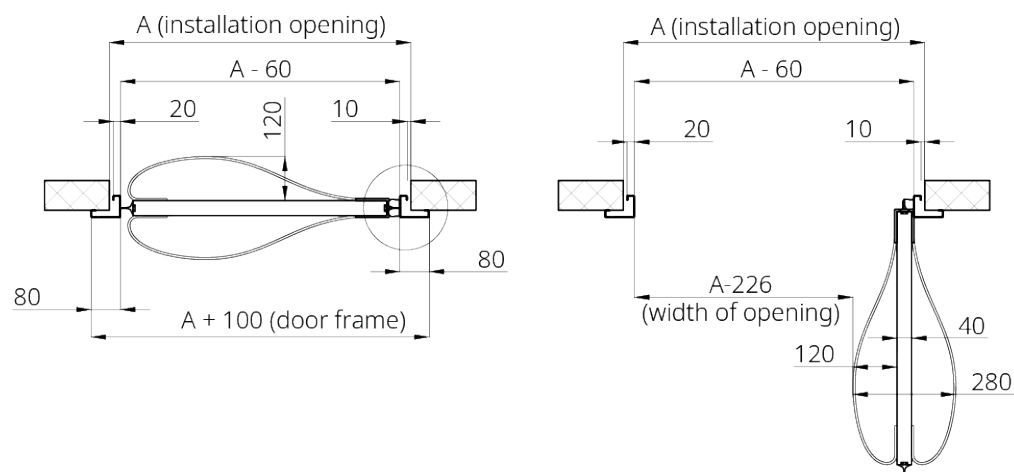


Figure 5.  
Cross-section 1-1. TSD with curved bumper



## 6. DOOR ASSEMBLY KITS FOR AN ANGULAR FRAME.

Attachments and fasteners for an angular door frame:

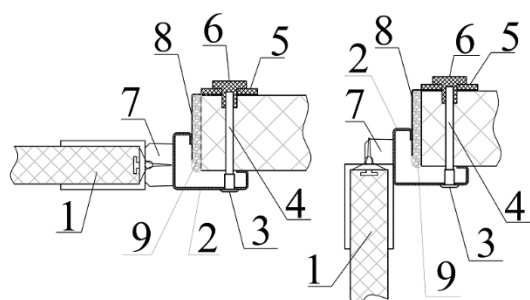


Figure 6.  
Assembly unit 1. Fastening a metal angular door frame to a sandwich panel

- 1 - TSD
- 2 - Door frame
- 3 - Erickson's nut
- 4 - Threaded rod M8
- 5 - PVC thermal washer
- 6 - PVC thermal nut
- 7 - Door hinge
- 8 - Moulded element
- 9 - Polyurethane foam

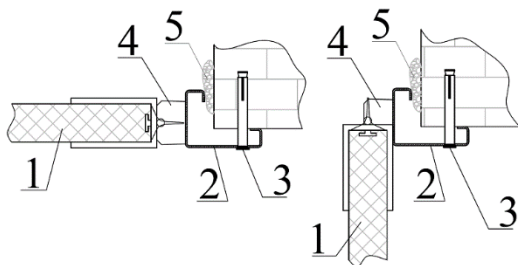


Figure 7.  
Assembly unit 2.  
Fastening a metal angular door frame to a brick wall

- 1 - TSD
- 2 - Door frame
- 3 - Anchor 10x92
- 4 - Door hinge
- 5 - Polyurethane foam

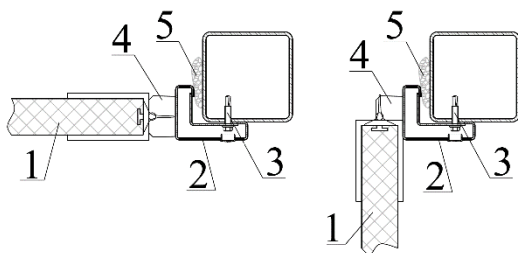


Figure 8.  
Assembly unit 2. Fastening a metal angular door frame to a metal structure

- 1 - TSD
- 2 - Door frame
- 3 - Self-tapping screw for roofing 6,3x32
- 4 - Door hinge
- 5 - Polyurethane foam

## 7. TSD with a curved "U-shaped" door frame

The standard curved door frame has a 20x60 profile and is painted with powder enamel paint in RAL 9003 or any other colour from the RAL catalogue. Available in stainless steel AISI 304 or AISI 430. The frame is mounted onto the inside of the opening using the mounting kit (optional), and can be mounted to the following:

- The opening of load-bearing walls, made of concrete or brick
- Metal structures

Figure 9.  
Metal "U-shaped" frame

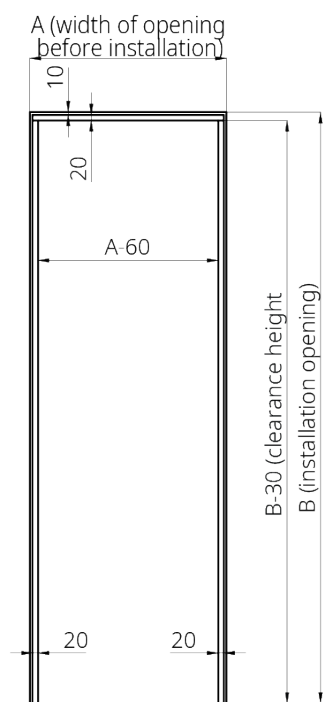


Figure 10.  
TSD with metal "U-shaped" frame

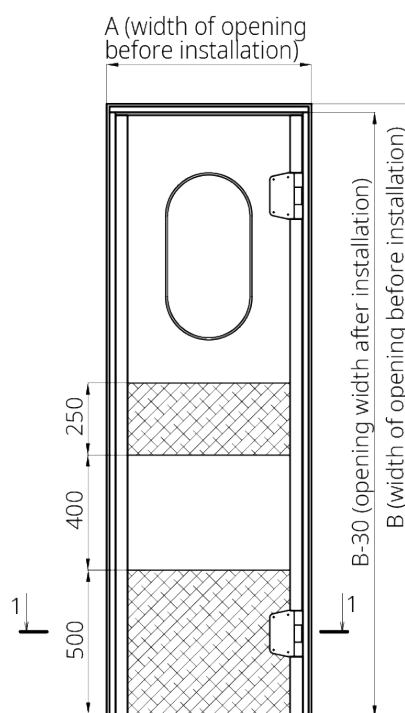


Figure 11.  
Cross-section 1-1. TSD with flat bumper

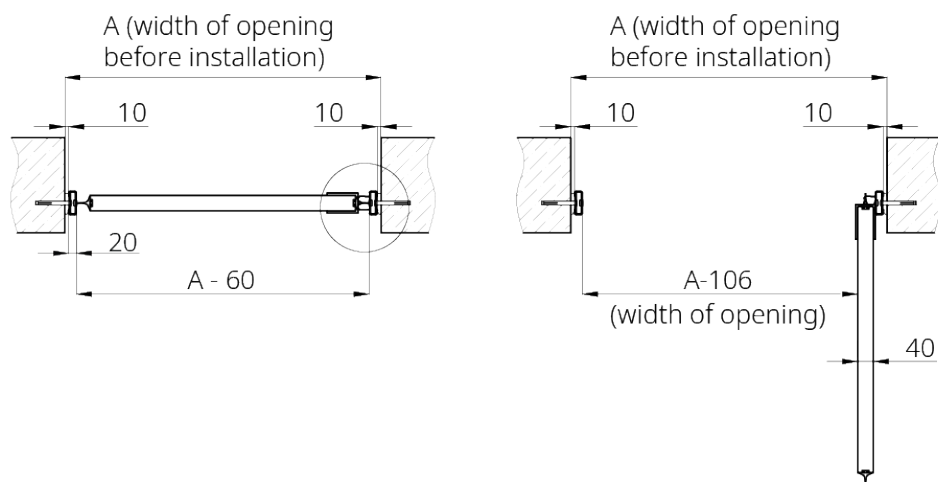
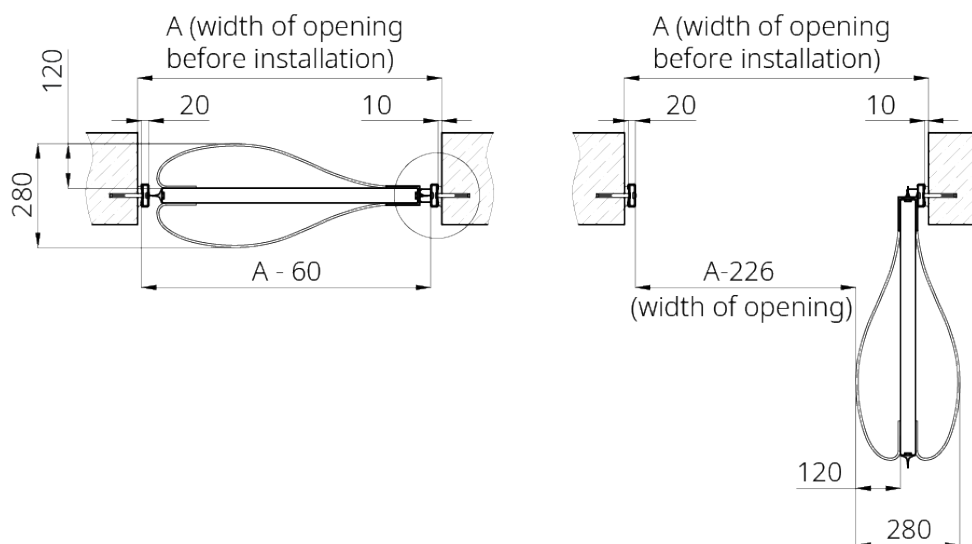


Figure 12.  
Cross-section 1-1. TSD with curved bumper



## 8. DOOR ASSEMBLY KITS FOR A CURVED U-SHAPED DOOR FRAME

Attachments and fasteners for a curved U-shaped door frame:

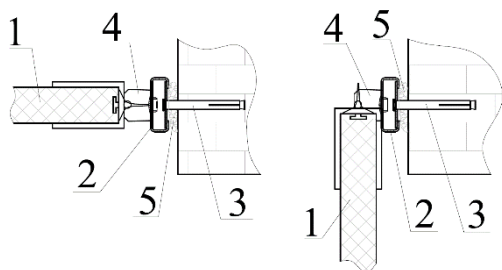


Figure 13.  
Assembly unit 1. Fastening the "U-shaped"  
frame to a brick wall

- 1 - TSD
- 2 - "U-shaped" door frame
- 3 - Anchor 10x92
- 4 - Door hinge
- 5 - Polyurethane foam

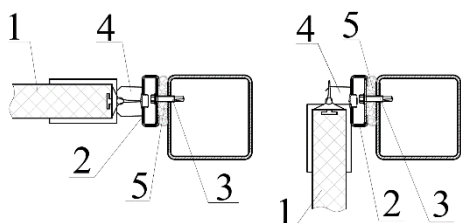


Figure 14.  
Assembly unit 1. Fastening the "U-shaped"  
frame to a metal structure

- 1 - TSD
- 2 - "U-shaped" door frame
- 3 - Anchor 10x92
- 4 - Door hinge
- 5 - Polyurethane foam

## 9. TSD WITH AN OVERLAPPING DOOR FRAME

The standard overlapping door frame is made from 2 mm thick cold rolled steel sheet and painted with powder enamel paint in RAL 9003 or any other colour from the RAL catalogue. Available in stainless steel AISI 304 or AISI 430. The frame is mounted onto both sides of the opening using a mounting kit (optional), and can be mounted to the following:

- An opening in a wall made of sandwich panels or drywall
- An opening in a wall made of concrete or brick

Figure 15.  
Metal overlapping door frame

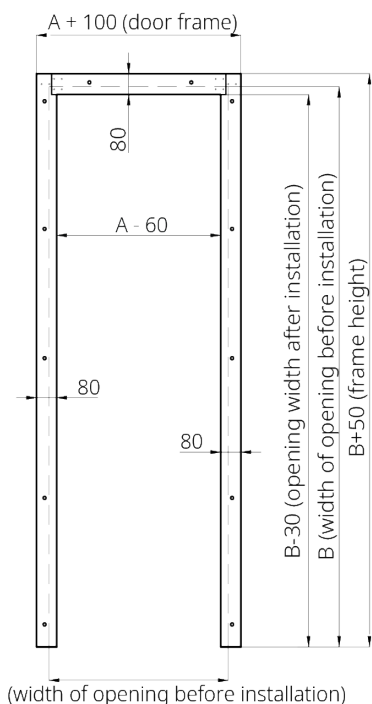
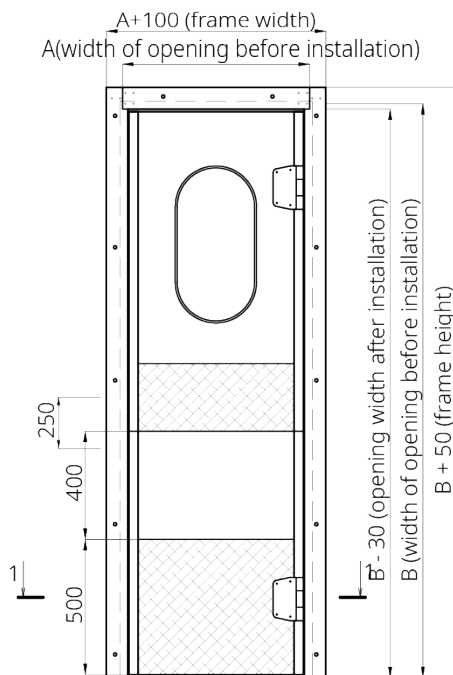


Figure 16.  
TSD with metal overlapping door frame



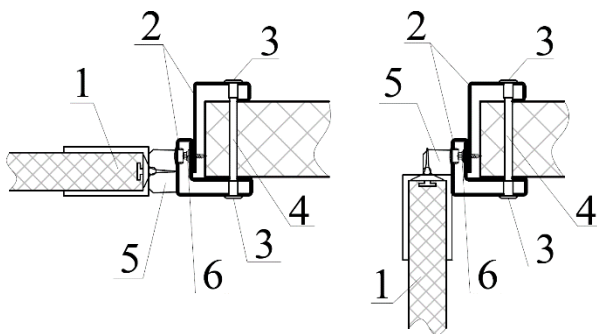


## 10. DOOR ASSEMBLY KITS FOR AN OVERLAPPING DOOR FRAME

Attachments and fasteners for an overlapping door frame:

Figure 19.

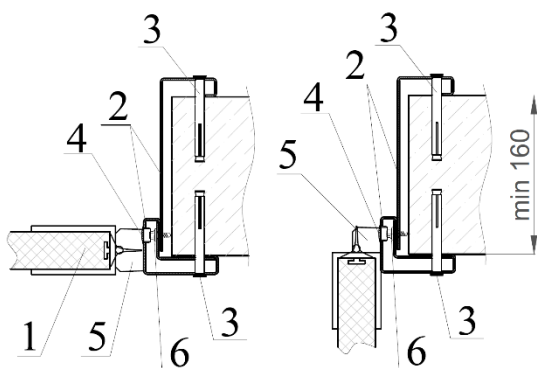
Assembly unit 1. Fastening an overlapping frame to a sandwich panel



- 1 - TSD
- 2 - door frame
- 3 - Erickson's nut
- 4 - Threaded rod M8
- 5 - Door hinge
- 6 - Self-tapping screw for fastening the frame components

Figure 20.

Assembly unit 2. Fastening an overlapping frame to a brick wall \*



- 1 - TSD
- 2 - Door frame
- 3 - Anchor 10x92
- 4 - Self-tapping screw for fastening the frame components
- 5 - Door hinge

\* - wall thickness cannot be less than 160 mm

## 11. INSTALLATION OF SWING DOORS WITH AN ANGULAR DOOR FRAME

- Before installing the doors, make sure that the leaves were not damaged during transportation. Check all parts are accounted for.
- Check the dimensions of the opening against the dimensions indicated in the door specification. Any deviation of the dimensions of the width and height of the opening cannot exceed  $\pm 5$  mm. Any diagonal deviation can also only be  $\pm 5$  mm.
- Unscrew the 4 fasteners from each hinge and remove the blade.
- Install the frame into the opening and check both levels: the posts vertically and the cross-beam horizontally.
- Mark the frame mounting holes on the wall.
- Using a drill with a 9 mm drill bit, drill holes into the wall of the sandwich panels where the markings are. It is important to ensure the perpendicularity of the holes to the surface of the sandwich panel wall. If fastening the frame to a brick wall, drill holes with a 10 mm drill bit to a depth of 80-100 mm.
- On the reverse side of the leaf, drill a hole of diameter 19-24 mm using a drill or "hole saw".
- Fasten the frame into the opening using the assembly kit (optional).
- Before the final tightening of the fasteners, check the leveling of the frame vertically and horizontally.
- Hang the door leaf onto the hinges and tighten the fasteners.
- Make sure that the door can open easily in both directions.
- Replace the mounting gap and install the fittings.
- Put the decorative plugs into the frame holes.

## 12. INSTALLATION OF SWING DOORS WITH A CURVED U-SHAPED DOOR FRAME

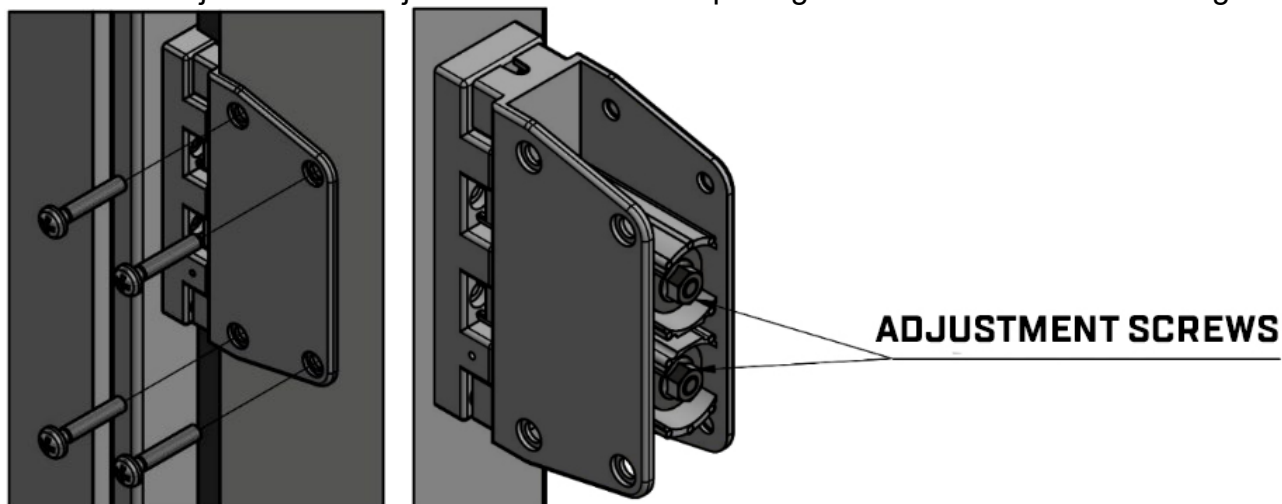
- Before installing the doors, make sure that the leaves were not damaged during transportation. Check all parts are accounted for.
- Check the dimensions of the opening against the dimensions indicated in the door specification. Any deviation of the dimensions of the width and height of the opening cannot exceed  $\pm 5$  mm. Any diagonal deviation can also only be  $\pm 5$  mm.
- Unscrew the 4 fasteners from each hinge and remove the blade.
- Install the frame into the opening and check both levels: the posts vertically and the cross-beam horizontally.
- Mark the frame mounting holes on the wall.
- Using a drill with a 9 mm drill bit, drill holes into the wall of the sandwich panels where the markings are. It is important to ensure the perpendicularity of the holes to the surface of the sandwich panel wall. If fastening the frame to a brick wall, drill holes with a 10 mm drill bit to a depth of 80-100 mm.
- Fasten the frame into the opening using the assembly kit (optional).
- Before the final tightening of the fasteners, check the leveling of the frame vertically and horizontally.
- Hang the door leaf onto the hinges and tighten the fasteners.
- Make sure that the door can open easily in both directions.
- Foam the gap, refine the edges of the mounting opening.

## 13. INSTALLATION OF SWING DOORS WITH AN OVERLAPPING DOOR FRAME

- Before installing the doors, make sure that the leaves were not damaged during transportation. Check all parts are accounted for.
- Check the dimensions of the opening against the dimensions indicated in the door specification. Any deviation of the dimensions of the width and height of the opening cannot exceed  $\pm 5$  mm. Any diagonal deviation can also only be  $\pm 5$  mm.
- Unscrew the 4 fasteners from each hinge and remove the blade.
- Install the frame into the opening and check both levels: the posts vertically and the cross-beam horizontally.
- Mark the frame fastening holes on both sides of the opening
- According to the markings, also on both sides of the opening, drill holes in the sandwich panel with a drill bit of diameter 9 mm, ensuring the perpendicularity of the hole to the level of the panel.
- Fasten the frame into the opening using the assembly kit (optional).
- Before the final tightening of the fasteners, check the leveling of the frame vertically and horizontally.
- Hang the door leaf onto the hinges and tighten the fasteners.
- Make sure that the door can open easily in both directions.
- Put the decorative plugs into the frame holes.

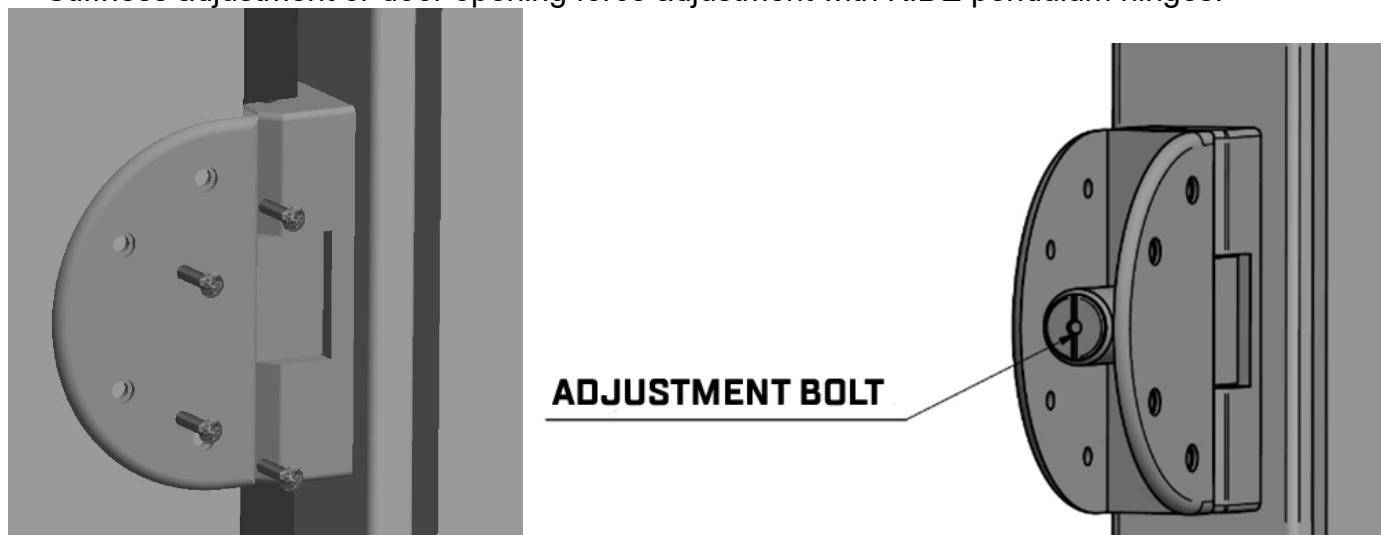
## 14. DOOR BLOCK ADJUSTMENT

- Stiffness adjustment or adjustment of the door opening force with COLDTECH swing hinges:



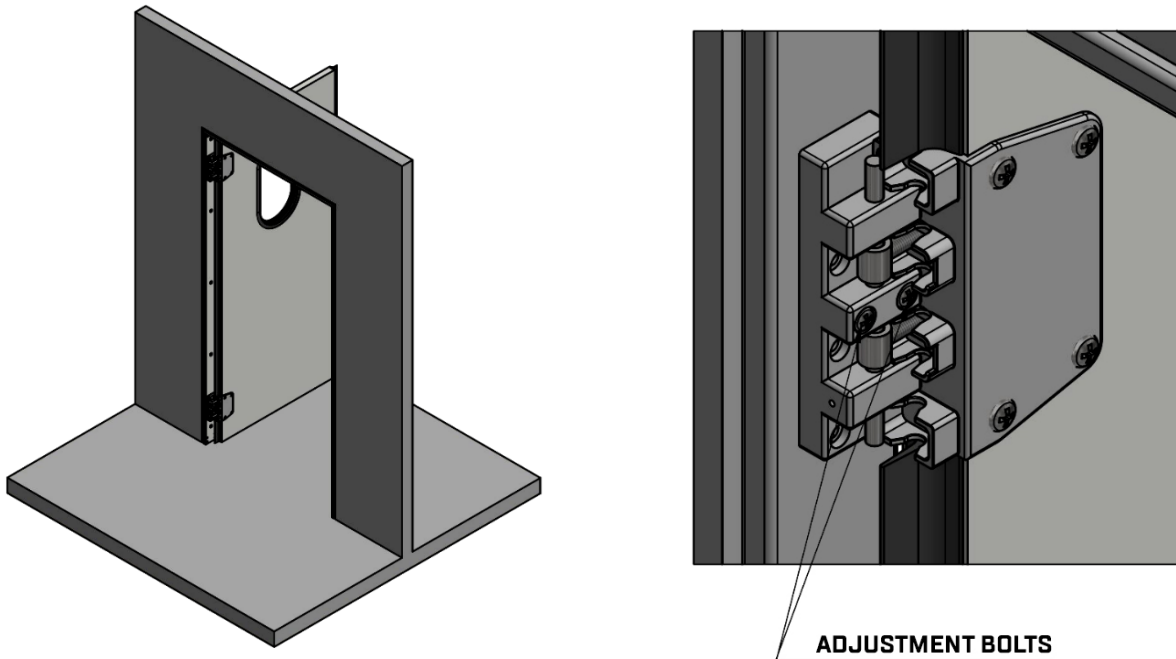
1. Remove the door leaf from the hinges by unscrewing the 4 screws securing the half-hinge.
2. Adjust the pressure with the adjusting screws.
3. Re-hang the door leaf and re-tighten the fastening screws.

- Stiffness adjustment or door opening force adjustment with KIDE pendulum hinges:



1. Remove the door leaf from the hinges by unscrewing 4 screws securing the half-hinge.
2. Adjust the pressure of the adjustment bolt.
3. Re-hang the door leaf and re-tighten the fastening screws.

- Adjusting the position of the door leaf in the opening:



1. Open the door to 90°.
2. Adjust the door position with the adjusting bolts.
3. Close the door.

## 15. OPERATION AND MAINTENANCE INSTRUCTIONS

The effective operation and service life of hinged doors is largely dependent on the quality and regularity of maintenance. For a trouble-free and long-term operation of the fittings, it is recommended to schedule an inspection of the fittings, to tighten the fasteners and lubricate the surfaces that experience friction at least once every two weeks. The frequency of maintenance may vary depending on the frequency of the door opening-closing cycles. Careful operation and timely replacement of damaged elements will guarantee a long-term and trouble-free life cycle.

## 16. SAFETY MEASURES

Before starting work, it is important to inspect the general condition of the doors. Do not use the doors if there are any issues or malfunction of parts.

## 17. TRANSPORTATION AND STORAGE

The transportation of doors must be in their original factory packaging, to ensure the protection of the doors from any damage. During transportation the door sets must be securely fastened in a stable position, there can not be any shifting or movement. The doors can be transported by any means of transport, provided they can be securely fastened. Shock or impact to the surfaces of the door leaves during loading and unloading is not allowed. The door blocks should not be exposed to direct sunlight. Storage and operation of doors in direct sunlight is also prohibited. Doors should be stored in spaces protected from precipitation and in a position that does not add any load stress onto the fittings. No more than six doors, with foam pads, are allowed

to be stored horizontally.

Packaged products can get more heavy over time: they can absorb moisture, condensation, etc.

## 18. DISPOSAL

At the end of its service life, the disposal of heat-insulating material or polyurethane foam by incineration is **STRICTLY FORBIDDEN**.

## 19. DELIVERY SET

Metal frame

TSD door leaf

The standard version of the door includes:

1. Door leaf with a 0.5 mm thick galvanized metal exterior with a RAL polymer coating, according to the dimensions of the installation opening (see Table 1).
2. Side seal of the length of the height of the door leaf.
3. Window with rubber frame, oval 300x580.

Possible additions and adjustments to standard options:

1. Door leaf can be made from AISI 304 or AISI 430 stainless steel.
2. Metal frame can be made from 2 mm thick stainless steel AISI 304 or AISI 430.
3. A set of fixing elements, so you can install the frame to a sandwich panel, metal structure or brick wall.
4. Option for concealed fasteners
5. Window:
  - with rubber frame, round 300 mm.
  - with rubber frame, round 400 mm.
  - oval or round made to the client's specifications.
6. Protective Bumpers:
  - curved bumper with a height of 500 mm at the bottom, and of 250 mm in the middle (for opening by hand). On both sides of the door leaf.
  - curved bumper made to the client's specifications, but not exceeding 1000 mm in height.
  - flat bumper with a height of 500 mm at the bottom, and of 250 mm in the middle (for opening by hand). On both sides of the door leaf.
  - flat bumper made to the client's specifications, but not exceeding 1000 mm in height.
  - steel bumper, AISI 304 or AISI 430, with a height of 500 mm at the bottom and 250 mm in the middle (for opening by hand), on one / both sides of the door leaf.
  - corrugated aluminum "Quintet", thickness 1.5 mm, made to the client's specifications, but not exceeding 1500 mm in height. On one / both sides of the door leaf.

You can request any combination of the above bumpers to fit your door.

## 20. WARRANTY

ProfHolod LLC guarantees that the door set will meet the design specifications and operational functionality outlined in the documentation, provided that the consumer observes the recommended rules for transportation, storage, installation and operation.

The warranty period for the door set is 1 year from the date of shipment.

During the warranty period, **claims will not be accepted** if:

- Instructions for installing or adjusting the door block are violated;
- Parts or assembly units are damaged as a result of errors during installation and operation.

The warranty does not cover

- the seals.

- parts that wear quickly.

The manufacturer reserves the right to make minor design changes to the product that are not reflected in this document.

Detailed instructions for loading and unloading, transportation, storage, installation and operation, as well as technical documentation for products manufactured by ProfHolod LLC are available on our website [www.profholod.com](http://www.profholod.com).

# Certificate of receipt

Door kit, model \_\_\_\_\_  
corresponds to the documentation and is recognized as serviceable.

The door kit serial number is located at the end of the door leaf in the right corner.

Production date:  
«\_\_\_\_\_» \_\_\_\_\_ 20\_\_\_\_ г.

Head of quality control department

Stamp

Date of installation «\_\_\_\_\_» \_\_\_\_\_ 20\_\_\_\_.

# Maintenance Form

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