DFM
EUROPE

INSTALLATION, OPERATION AND MAINTENANCE OF DOORS TYPE DFM DS

DS60-1, DS60-2, DS60B-1, DS30-1, DS30-2, DS30B-1, DS30B-2, DS00-1, DS00-2.

fire resistant range $EI_1$30, $EI_1$60, $EI_2$30, $EI_2$60 and non-resistant doors

v. EN 4.4 ETA

Our business model is designed to ensure guarantee:

FACILITY – comfortable and customised solutions aimed at Customers' needs

TRANSPARENCY- clear business relations

BUSINESS EXPERTISE – a team of passionate professionals with "out of the box " attitude

1 IDENTIFICATION, HANDOVER AND NOMENCLATURE

During installation, use and maintenance, on-site safety must be followed, especially those related to construction and joinery works.
Installation must be carried out by qualified installers trained in installation of fire doors.
Parts and components of doors shall not be modified or replaced.

e.g: DFM DS 30B-2 DS = steel door, 30 = EI30, 2 = double leaf
DFM DS 30-2 DS = steel door, 30 = EI30, 2 = double leaf
DFM DS 60-1A DS = steel door, 60 = EI60, 1 = single leaf, A=Rw 42dB

During handover of goods from transport company check packaging and quantity of doors and cartons. In case of any claim a note CMR must be made and photos taken and sent to: dfm@dfm-europe.eu

ORDER

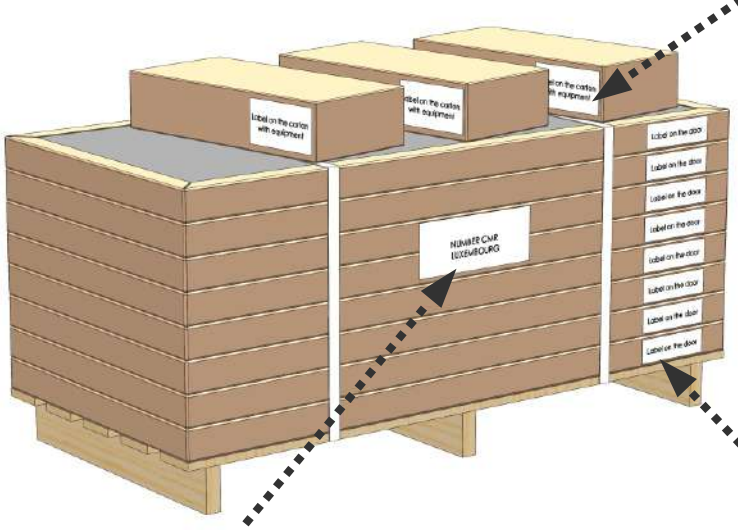
PROJECT NAME: „SOHO X.199808"
PROJECT DOOR NUMBER: „74"

PACKING LIST

PROJECT NAME: „SOHO X.199808"
PROJECT DOOR NUMBER: „I74"
INDIVIDUAL PRODUCTION DOOR NUMBER: 1087/2020/026

LABEL ON THE CARTON WITH EQUIPMENT

PROJECT NAME: „SOHO X.199808"
INDIVIDUAL PRODUCTION DOOR NUMBER:1087/2020/026
QUANTITY AND NUMBER OF CARTON: 1/3



CMR

INDIVIDUAL PRODUCTION DOOR NUMBER:
1087/2020
1345/2020
1589/2020

LABEL ON THE DOOR

PROJECT NAME: „SOHO X.199808"
PROJECT DOOR NUMBER: „74"
INDIVIDUAL PRODUCTION DOOR NUMBER: 1660/2020/021

ADDITIONAL INFORMATION ON PALLET SIDE :
NUMBER OF CMR: „573"
DELIVERY ADDRESS: "LUXEMBOURG"

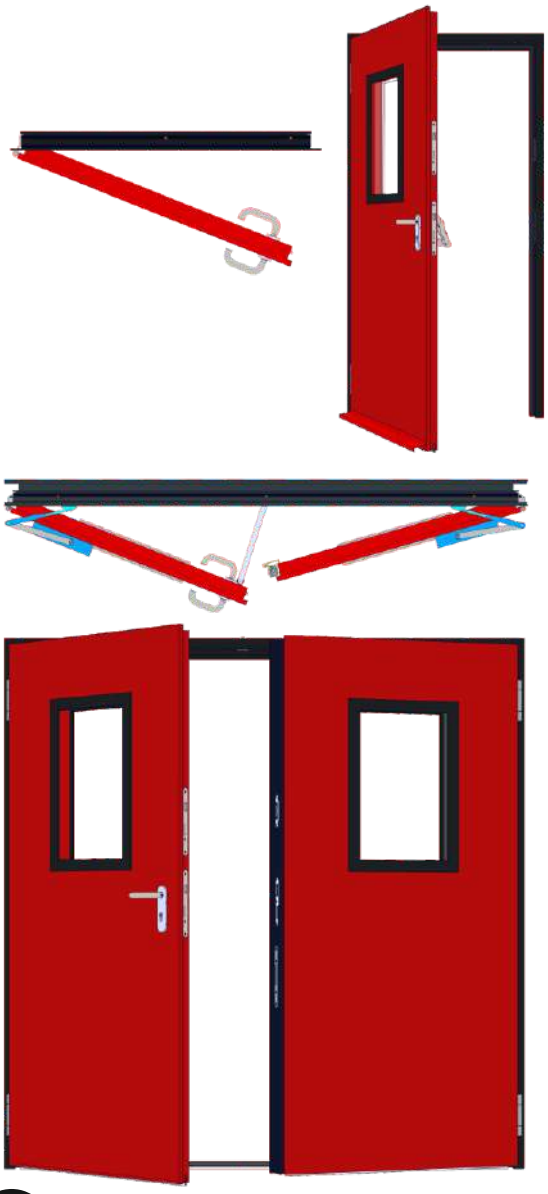
Example of labels on the door and the box with equipment:

DFM DS-30-1-OB.
DFM DOORS
Nr zlecenia / Production Nr.
01087/2020/026
1000 x 2130 P
Oznaczenie projektowe / Project Name
74 Project : SOHO X.199808
Data Produkcji / Prod Date : 2020-07-16 Kolor 8019 satyna

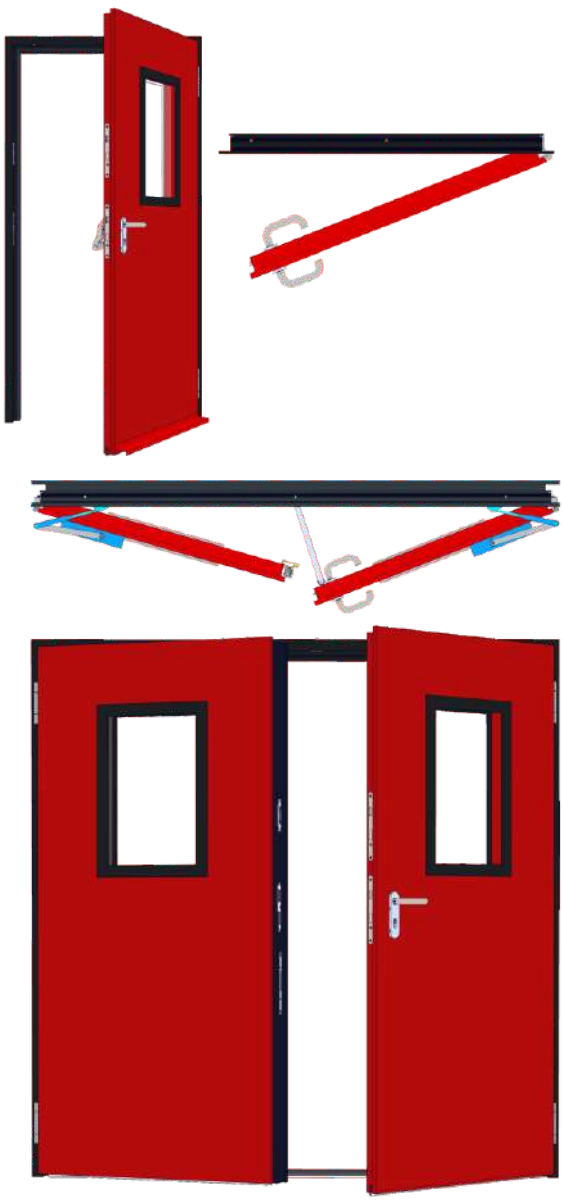
DFM DS
DFM DOORS
Nr zlecenia / Production Nr.
01087-EU-2020
PACZKI / EQUIPMENT **1/1**
Oznaczenie projektowe / Project Name
74 Project : SOHO X.199808
Data Produkcji / Prod Date : 2020-07-16

DFM
EUROPE

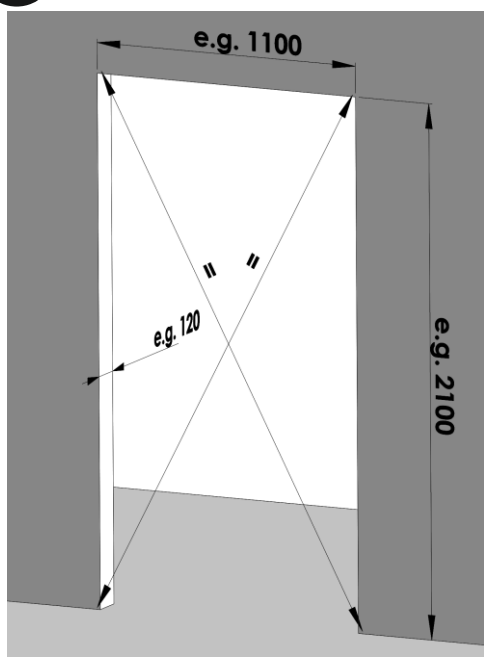
DIN LEFT



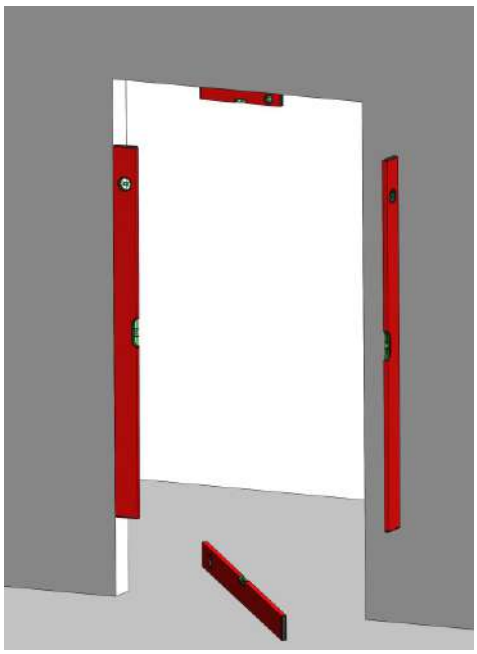
DIN RIGHT



2 CHECK THE WALL OPENING

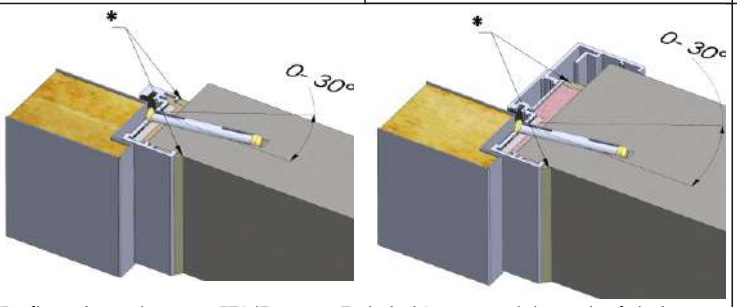


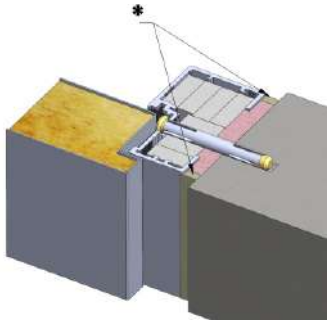
IS IT FINAL FLOOR?



DFM
EUROPE

3 INSTALLATION METHODS - MAKE SURE THAT PROPER INSTALLATION MATERIAL IS APPLIED

<table>
<tr><th></th><th>CORNER FRAME</th><th>EMBRACING FRAME</th><th>RECTANGULAR FRAME</th></tr>
<tr><td>TYPE OF DOOR FRAME / TYPE OF DOOR</td><td colspan="2"> 

For fire resistant doors acc. ETA (European Technical Assessment) the angle of placing anchor instead 0-30° (for non resistant doors) shall be 0-20°</td><td> 
</td></tr>
<tr><td>DS00-1
DS00-2</td><td colspan="3">Filling between the structural wall and the door frame: polyurethane foam, cement mortar, plaster mortar, gypsum-based plaster or adhesive, mineral wool (rock wool), or other materials as agreed with DFM.

At the locations where the steel anchors, steel self-tapping screws and security bolts are to be installed, spacer pads made of steel metal sheet (galvanized or stainless steel) plates, Promat boards, wooden or plastic wedges/ pads.</td></tr>
<tr><td>DS30-1

DS30-2</td><td>The gap between the door frame and the wall has to be fully filled with:

Option 1: cement mortar or lime-cement mortar, or gypsum mortar, or “Perlfix T” from manufacturer “Knauf Sp. z o.o.”

Option 2 mineral wool according to EN 13162 with classification A1 according to EN 13501-1 and a minimum density of 28 kg/m³ (e.g. “Megarock Plus” from manufacturer “Rockwool Polska Sp. z o.o”) + the gap between the door frame and the wall has to be additionally filled with cement mortar or lime-cement mortar, or gypsum mortar, or “Perlfix T” from manufacturer “Knauf Sp. z o.o.” , or ”*”.

-Option 3: Foam “Soudafoam FR” from manufacturer “Soudal NV”. Additionally, for smoke control doors + „*”.

At the locations where the steel anchors, steel self-tapping screws and security bolts are to be installed, spacer pads made of PROMATECT®-H calcium silicate fire-protective boards manufactured by Etex Building Performance N.V. (nominal density 870 kg/m³, thickness 6 mm), with dimensions of 48 × 48 mm, shall be installed + ‘*’.

*In case of smoke control doors the joint between the door frame and the surface of the wall has to be additionally filled with “Fire Silicone B1 FR” from manufacturer “Soudal NV”.</td><td colspan="2">The gap between the door frame and the wall has to be fully filled like corner or embracing frame.

The rectangular door frame has to be fully filled (inside frame profile) with:
- gypsum boards (type A according to EN 520, density ≥ 660 kg/m³, thickness 9,5 mm to 12,5 mm or type F according to EN 520, density ≥ 740 kg/m³, thickness 9,5 mm to 12,5 mm)
- or cement mortar,
- or lime-cement mortar,
- or gypsum mortar,
- or “Perlfix T” from manufacturer “Knauf Sp. z o.o.”.
- Foam is not allowed</td></tr>
<tr><td>DS30B-1
DS30B-2
DS60-1
DS60B-1
DS60-2
DS60-1A
DS60-2A</td><td>The gap between the door frame and the wall has to be fully filled with:

Option 1: cement mortar or lime-cement mortar, or gypsum mortar, or “Perlfix T” from manufacturer “Knauf Sp. z o.o.”

Option 2 (is not suitable for DS 60B-1): mineral wool according to EN 13162 with classification A1 according to EN 13501-1 and a minimum density of 28 kg/m³ (e.g. “Megarock Plus” from manufacturer “Rockwool Polska Sp. z o.o”) + the gap between the door frame and the wall has to be additionally filled with cement mortar or lime-cement mortar, or gypsum mortar, or “Perlfix T” from manufacturer “Knauf Sp. z o.o.” , or ”*”.

At the locations where the steel anchors, steel self-tapping screws and security bolts are to be installed, spacer pads made of PROMATECT®-H calcium silicate fire-protective boards manufactured by Etex Building Performance N.V. (nominal density 870 kg/m³, thickness 6 mm), with dimensions of 48 × 48 mm, shall be installed + ‘*’.

*In case of smoke control doors the joint between the door frame and the surface of the wall has to be additionally filled with “Fire Silicone B1 FR” from manufacturer “Soudal NV”.</td><td colspan="2">The gap between the door frame and the wall has to be fully filled like corner or embracing frame.

The rectangular door frame has to be fully filled (inside frame profile) with:
- gypsum boards (type A according to EN 520, density ≥ 660 kg/m³, thickness 9,5 mm to 12,5 mm or type F according to EN 520, density ≥ 740 kg/m³, thickness 9,5 mm to 12,5 mm)
- or cement mortar,
- or lime-cement mortar,
- or gypsum mortar,
- or “Perlfix T” from manufacturer “Knauf Sp. z o.o.”.
- Foam is not allowed</td></tr>
<tr><td>Wall requirements</td><td colspan="3">The structure and load-bearing capacity of the wall shall be designed and adapted to the weight of the door and the method of its installation.

Installation in walls of fire resistance according to EN 13501-2:2016, not less than EI 30 for DS30-1, DS30-2 and EI60 for DS30B-1, DS30B-2, DS60-1, DS60B-1, DS60-2, DS60-1A, DS-60-2A.</td></tr>
<tr><td>Requirements for the dimensions of the mounting gap</td><td colspan="2">G ≤ 20 мм (S_{94}, S_{200} GAP ≤ 8 мм)</td><td>G ≤ 20 мм (S_{94}, S_{200} GAP ≤ 15 мм)</td></tr>
<tr><td>Standard mounting gap per side</td><td colspan="2">Gst = 7мм</td><td>Gst = 10мм</td></tr>
</table>

3.1 INTENDED USE: TYPES OF WALLS FOR FIRE RESISTANT DOORS

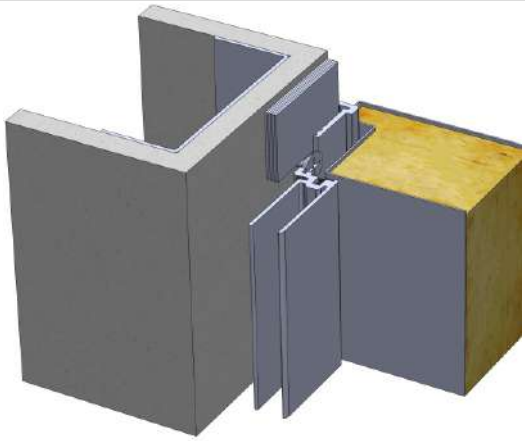
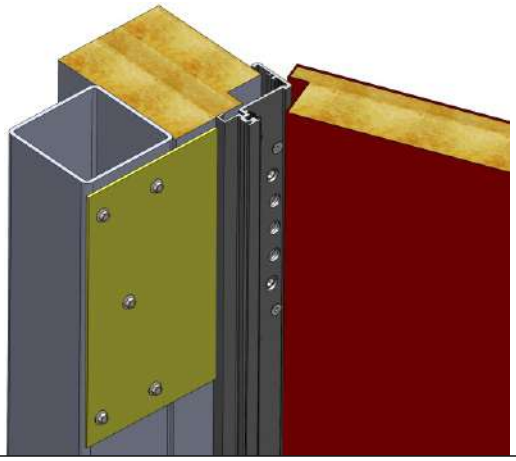
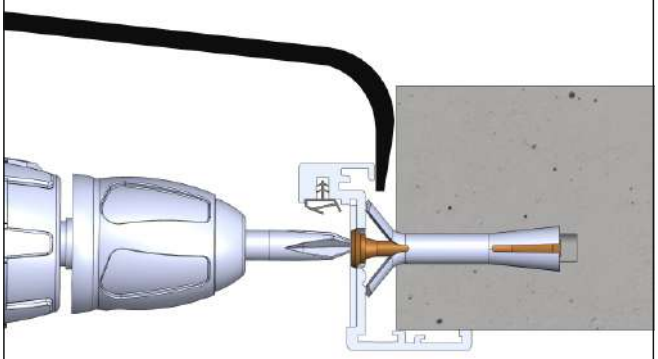
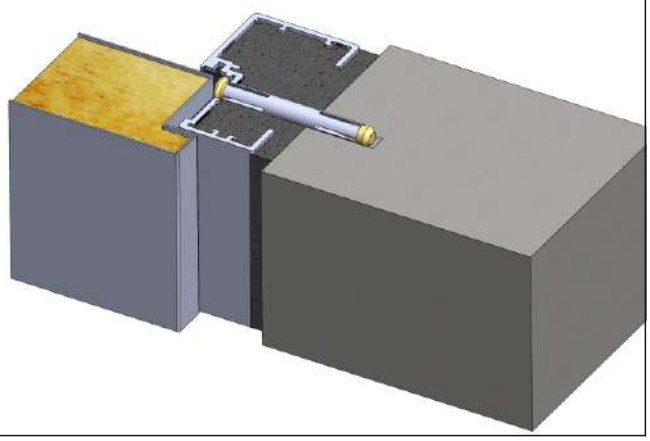
separating element	construction
RIGID WALLS	Perforated bricks, autoclaved aerated concrete blocks, solid bricks, concrete blocks, concrete or reinforced concrete - Minimum density 450 kg/m³ - Minimum thickness 125 mm - Classification according to EN 13501-2: accordongly ≥ EI 30 for DS 30 or ≥ EI 60 for DS 30B and DS60
	Calcium silicate blocks - Minimum density 1400 kg/m³ - Minimum thickness 180 mm - Classification according to EN 13501-2: accordongly ≥ EI 30 for DS 30 or ≥ EI 60 for DS 30B and DS60
FLEXIBLE WALLS	Steel studs according to EN 14195 lined on both faces with minimum 2 layers of gypsum boards (type F or DF according to EN 520, minimum thickness 12,5 mm) with classification A2-s1,d0 or A1 according to EN 13501-1. Between the steel studs mineral wool according to EN 13162 (reaction to fire class A1 according to EN 13501-1) with a minimum density of 31 kg/m³ and a minimum thickness of 50 mm can be installed - Minimum width of steel studs: 75 mm (e.g. CW 75) - Minimum thickness 125 mm. - Classification according to EN 13501-2: accordongly ≥ EI 30 for DS 30 or ≥ EI 60 for DS 30B and DS60

3.2 TYPES OF SCREWS:

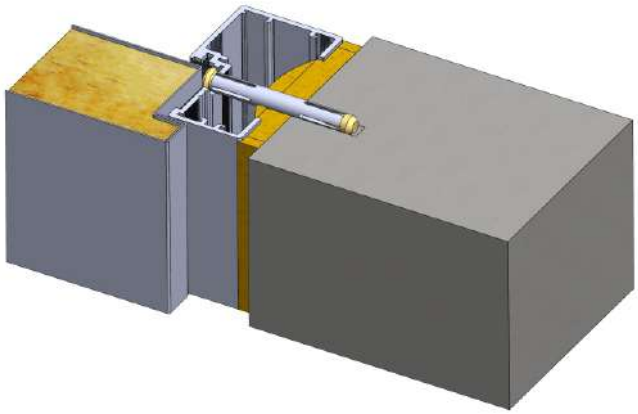
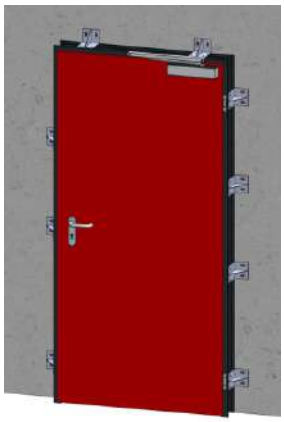
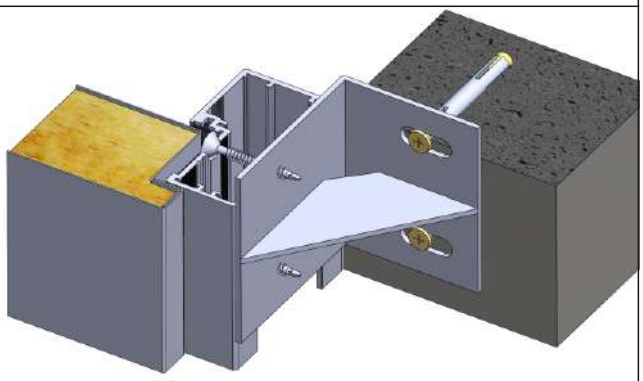
type of frame / type of wall	ATTENTION ! DON'T USE ANY PLASTIC ELEMENTS FOR FIXING FIRE DOORS ! All exeptions must be agreed with DFM		NON FIRE RESISTANT DOORS	
	corner or embracing frame	rectangular frame	corner or embracing frame	rectangular frame
Flexible walls (see. 3.4) e.g. drywall	steel self-drilling screws of size not less than Ø6,3x50mm	steel self-drilling screws of size not less than Ø6,3x85mm	steel self-drilling screws of size not less than Ø6,3x50mm	steel self-drilling screws of size not less than Ø6,3x85mm
				
Rigid walls (see 3.4)	steel anchors of size not less than Ø10x92mm	steel anchors of size not less than Ø10x132mm	steel anchors of size not less than Ø10x92mm	steel anchors of size not less than Ø10x132mm
				
			Dowel screw AST of size not less than Ø10x100mm	Dowel screw AST of size not less than Ø10x135mm
				

THE SIZES GIVEN FOR ANCHORS AND SCREWS ARE MINIMUM SIZES, THE APPROPRIATE LENGTH MUST BE CHOSEN WITH REGARDS TO THE ACTUAL INSTALLATION CONDITIONS

3.3 EXAMPLES OF METHODS OF FIXING FRAMES. CHECK COMPLIANCE WITH APPROPRIATE CERTIFICATE

Installation to the drywall with steel screws with with silicate calcium pads (e.g. TECBOR, SILBOARD, PROMAT) on places of anchor fixing. *Or steel plate spacers for non-fire resistant doors. Spacers produced only for request (optional). Supporting steel construction must be overlaid with gipsum board layer between door frame and drywall. Location of the spacers above the screw. The thickness of the spacer's plates set depends on the width of the installation gap. Ensure that the frame is vertical and not twisted.	
Installation of external non fire resistant doors in sandwich panel with galvanized steel plates min. 3 mm or composite isolation plates (for better U-coof.) Installation plates are ordered individually acc. to the wall construction. Additionally, door frame must be blocked with hardwood or plasstic edges to preserve rigidity of the frame. Special attention should be paid to bottom hinge while fixing the door frame. Filling of gap between wall and door frame with polyurethane foam and, as an option, dedicated membranes.	
Method of tightening of anchors without usage of installation steel space plates or hardwood wedge for non-fire resistant doors. Only for light weight doors. The gap between the door frame and the wall has to be fully filled with foam, lime cement or plaster mortar or gipsum glue.	
Cement mortar or lime cement mortar or gypsum mortar or Perlix T can be used as alternative to filling of door frame instead plaster boards,.	

3.4 CONTINUATION. EXAMPLES OF METHODS OF FIXING FRAMES. CHECK COMPLIANCE WITH APPROPRIATE CERTIFICATE

Filling of wall gap with polyurethane foam in internal applied non- fire resistant door in block frame	
Mounting of non-fire resistant doors with steel brackets 	

3.5 ENSURING THE RIGIDITY OF DOOR INSTALLATION IN WALL

The door frame shall be rigidly fixed within the opening.

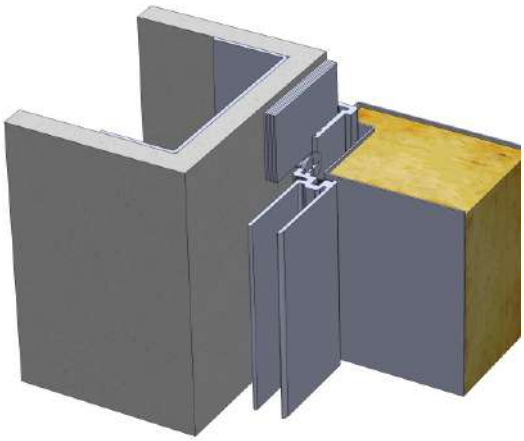
For this purpose, spacers shall be used at the height of the anchoring points.

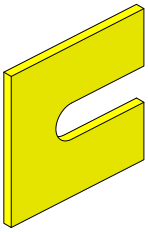
These spacers may be made of steel metal sheet (galvanized or stainless steel) plates, Promat boards, wooden or plastic wedges/ pads - acc. table 3.

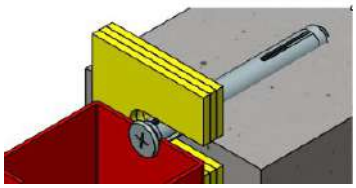
In order to preserve the frame rigidity, all spacers shall remain in place after filling the gap between the frame and the wall.

The thickness of the spacers may vary depending on the gap between the wall and the door frame.

If the wall is constructed with a double layer of gypsum plasterboards, it is permissible to install with self-drilling screws at an angle. Also in order to extend the fixing point of the door frame (non fire resistant doors) is permissible to use steel plates min. 3mm (thicker for heavy doors) attached to the metal profile of the wall opening.







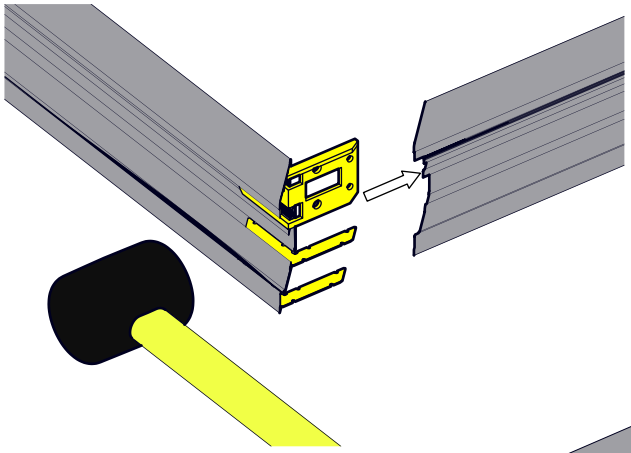
4 PRELIMINARY ACTIVITIES

4.1 FRAME ASSEMBLING

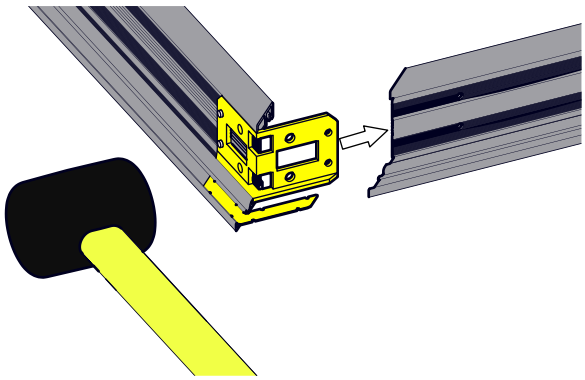
Since the weight of the leaves or/and dimentions of doors are significant, double-leaf doors sometimes are supplied in parts, frame and leaves separately.

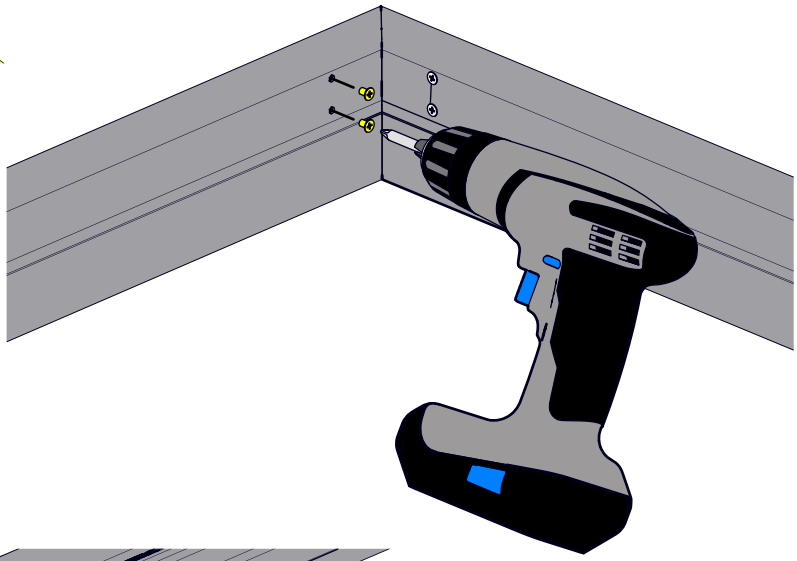
Single doors are supplied as a set, frame and leaves together.

rectangular frame

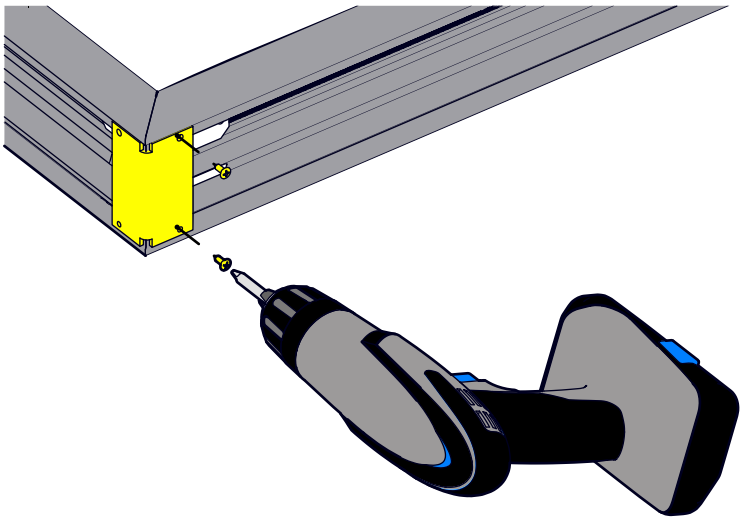


corner frame

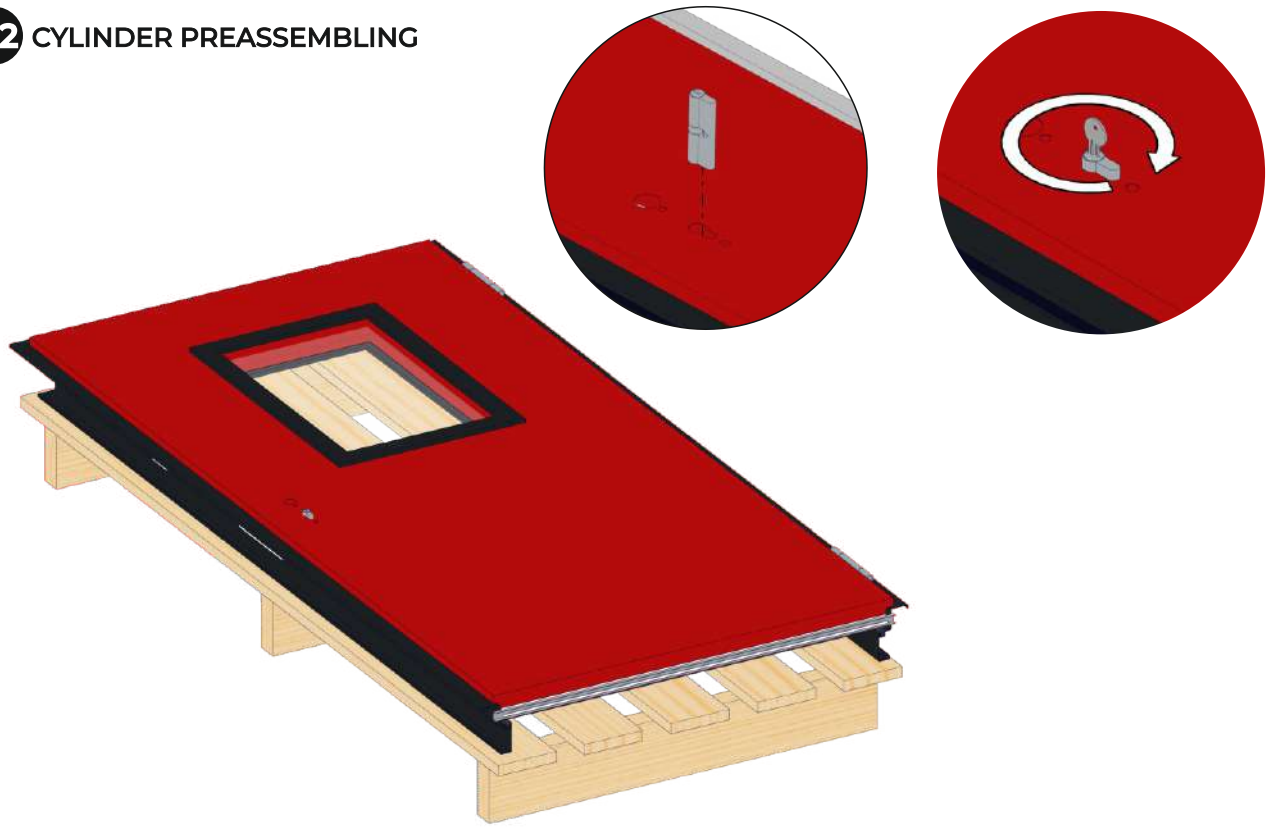




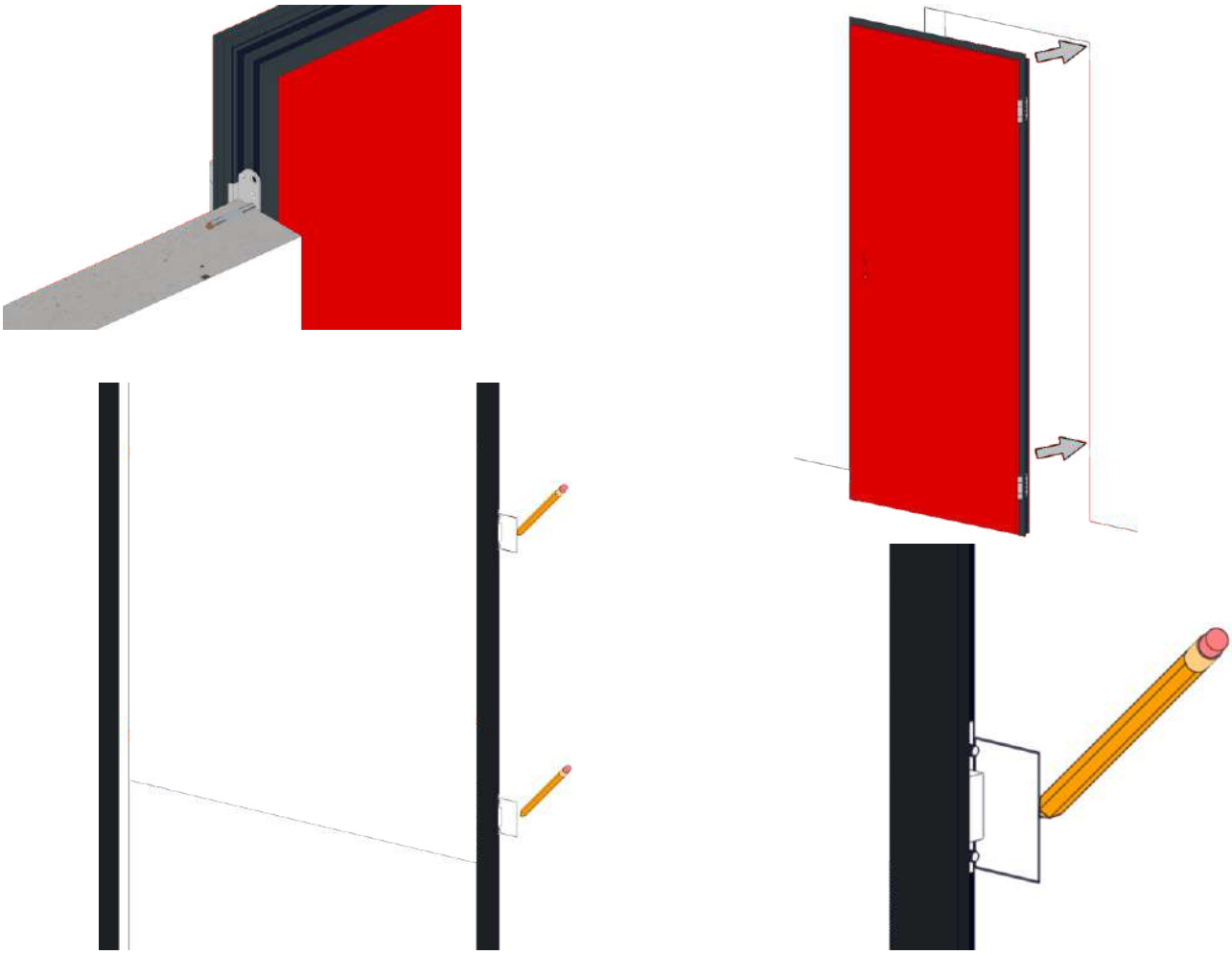
rectangular frame



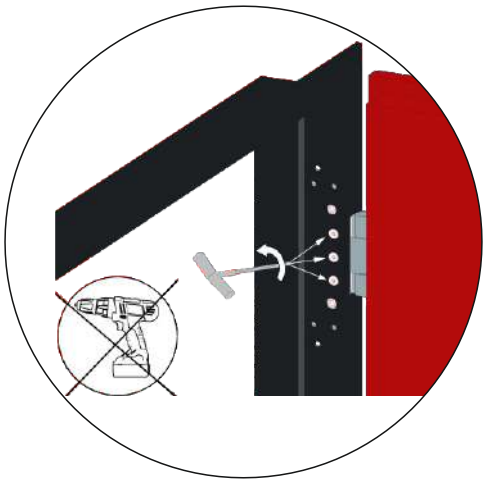
4.2 CYLINDER PREASSEMBLING

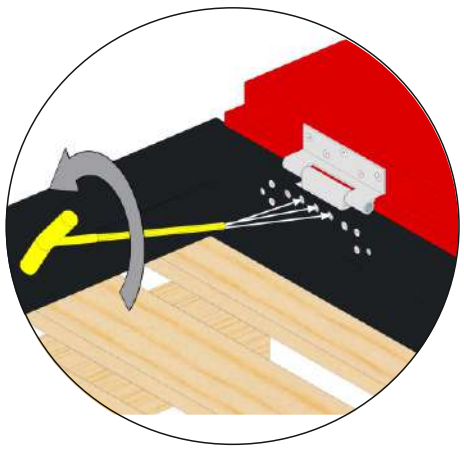


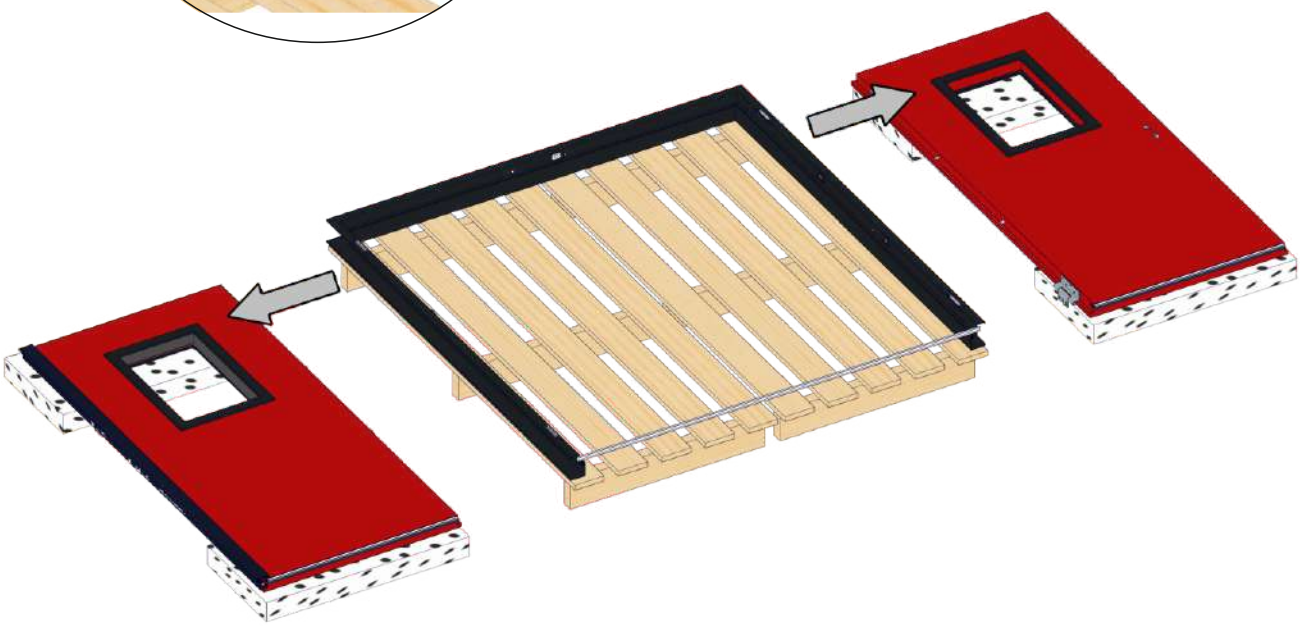
4.3 FOR STANDARD (NON ADJUSTABLE) HINGES WALL TO BE CUT OUT FOR LOCK AND SECURITY PIN BOXES



4.4 OPTIONAL 3D HINGE- DISMANTLING THE DOOR LEAF BEFORE FIXING OF FRAME IS RECOMMENDED



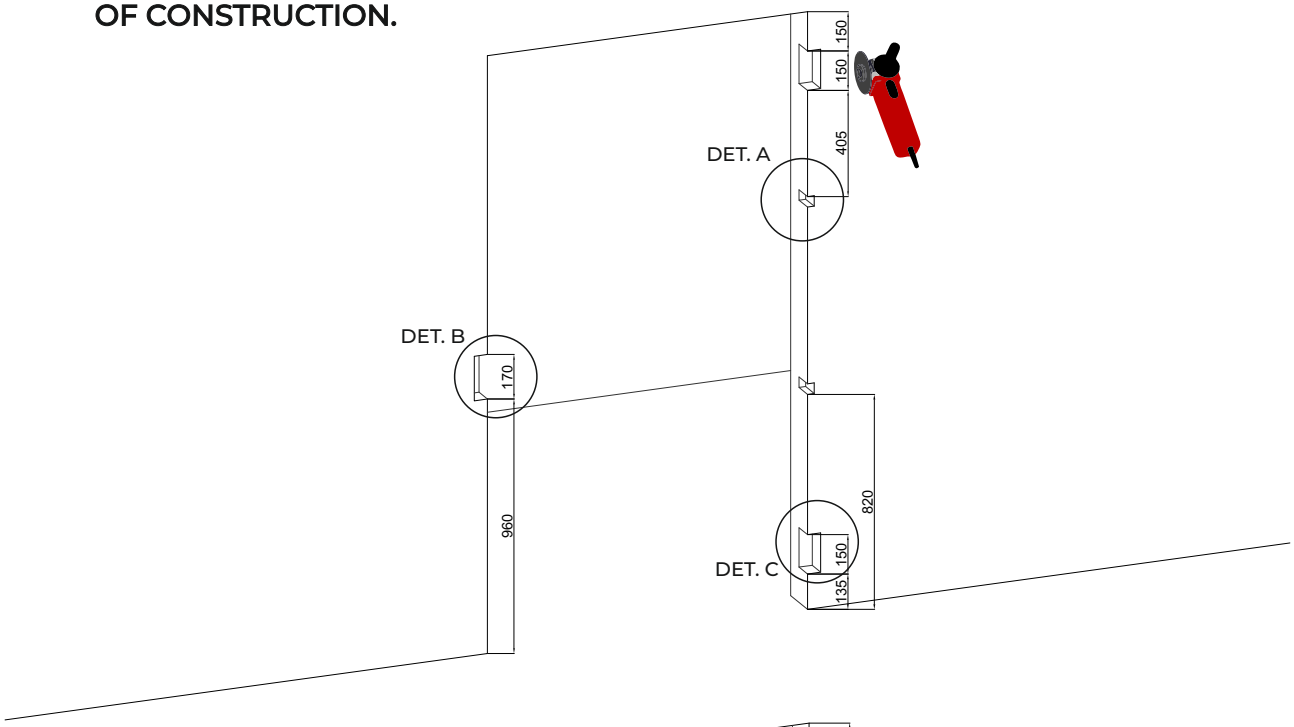


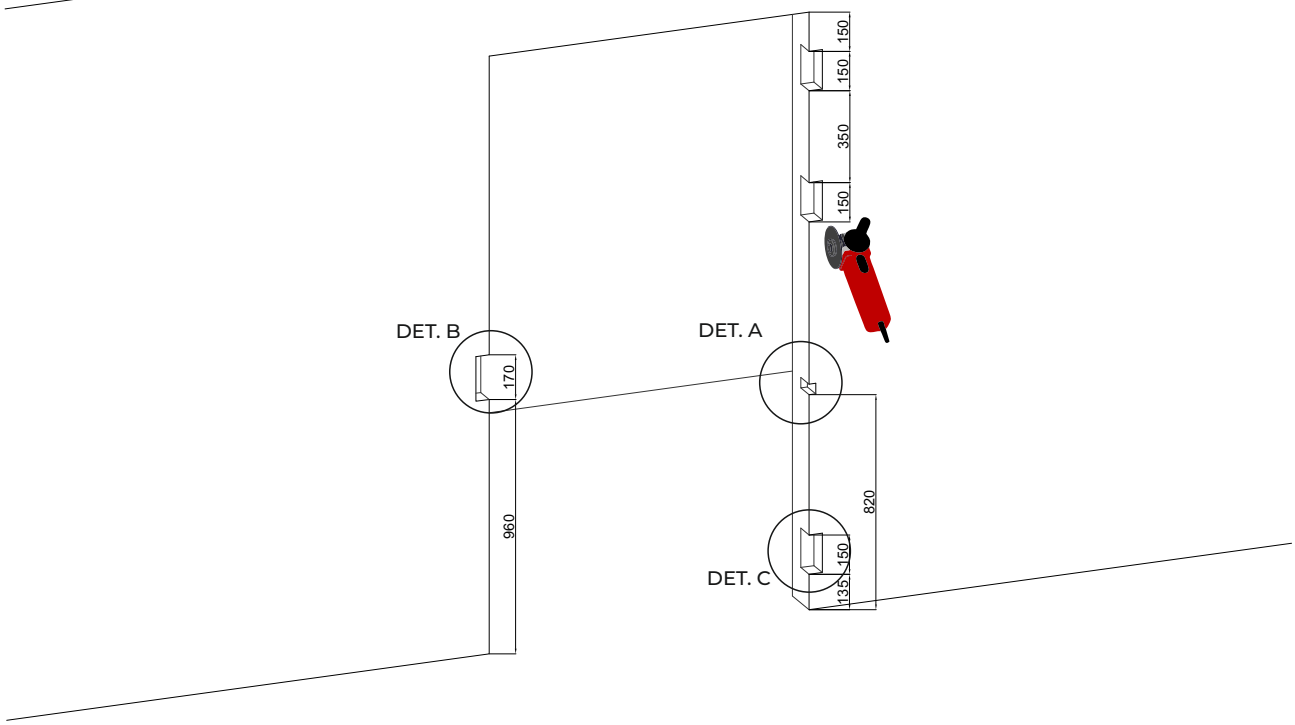


4.4 DISMANTLING TRANSPORTATION BENT PROFILE

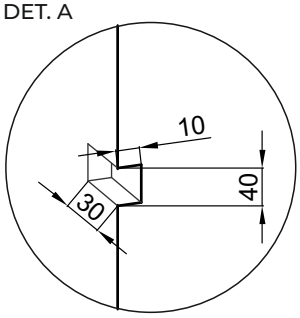
5 PREPARATION OF THE WALL

5.1 BELOW AS AN EXAMPLE OPENINGS FOR CORNER STEEL FRAME (WITH THE ASSUMTION THAT INSTALLATION GAP SEE point 3).
PLEASE NOTE THAT SIZES,GIVEN ON DRAWINGS ARE ILLUSTRATIVE ONLY, TO BE VERIFIED ON RECEIVED DOORS. CHANGES CAN OCCUR DEPENDING ON PARTICULAR EQUIPMENT OR AS RESULT OF AMENDMENTS OF CONSTRUCTION.

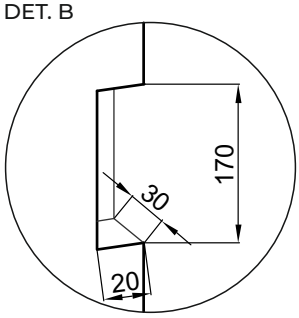




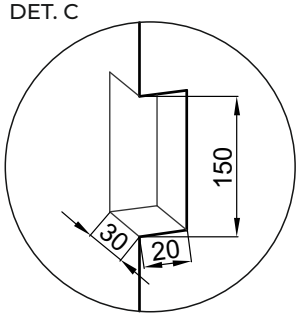
DET. A



DET. B



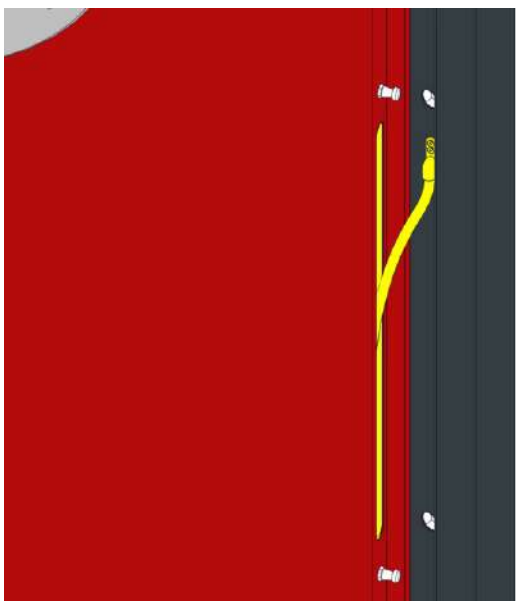
DET. C

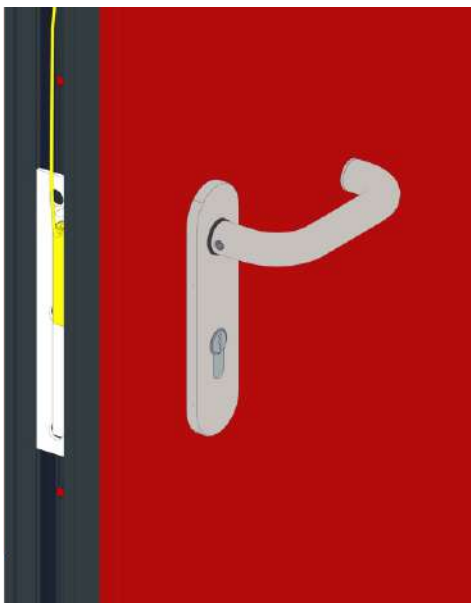


5.2 IF ACCESS CONTROL IS PIANNED, CHECK WHETHER THE CABLE HAS BEEN DISTRIBUTED AT AN APPROPRIATE PLACE.

5.3 FOR EXAMPLE FOR MAGNETIC CONTACT

5.4 FOR EXAMPLE FOR ELECTRICAL STRIKE/CABLE CONDUCT

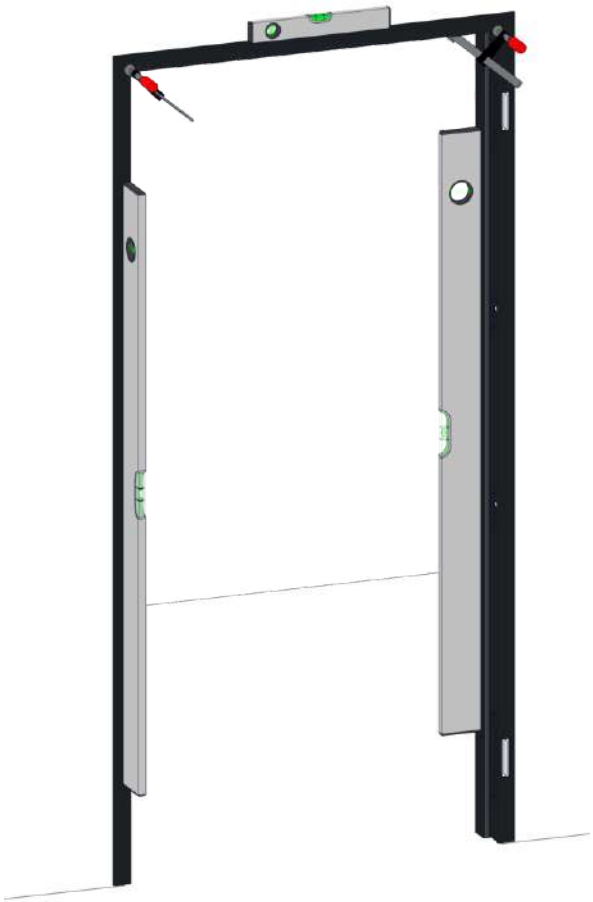


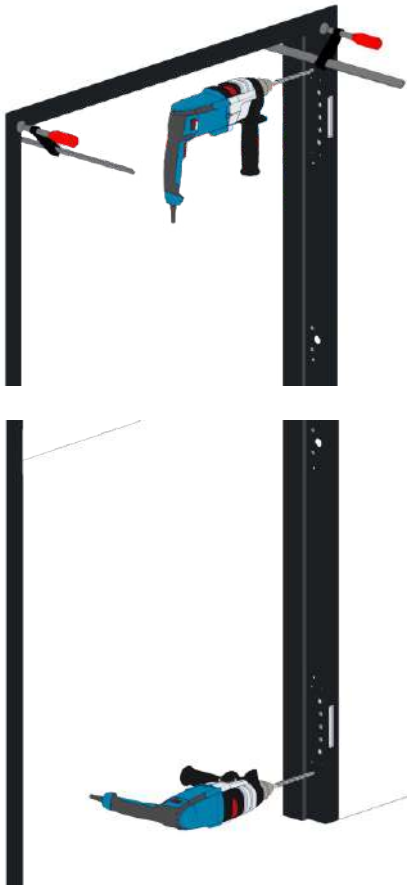


6 FIXING OF THE DOOR FRAME

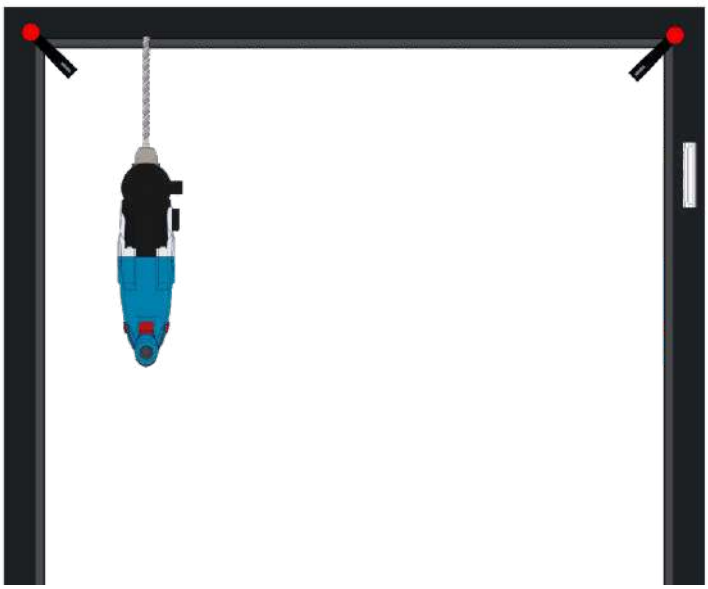
THE QUANTITY OF ANCHORS DEPENDS ON NUMBER OF FRAME PREPARED HOLES. SCREW OPENINGS ARE PREPARED IN ACCORDANCE WITH RELEVANT CERTIFICATES. .

6.1 VERTICAL PARTS – START FROM HINGES SIDE

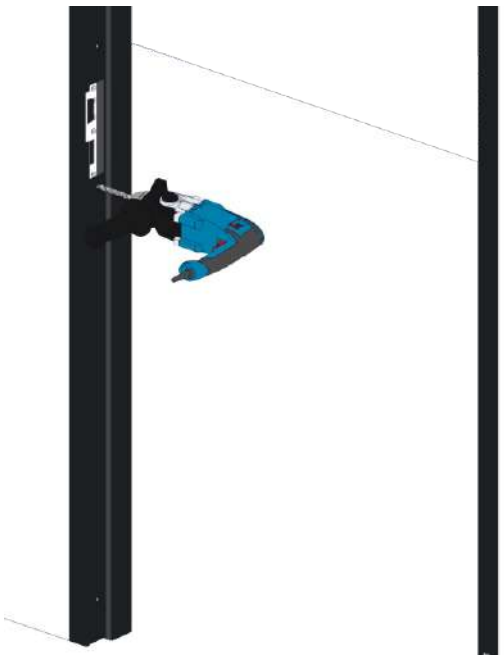


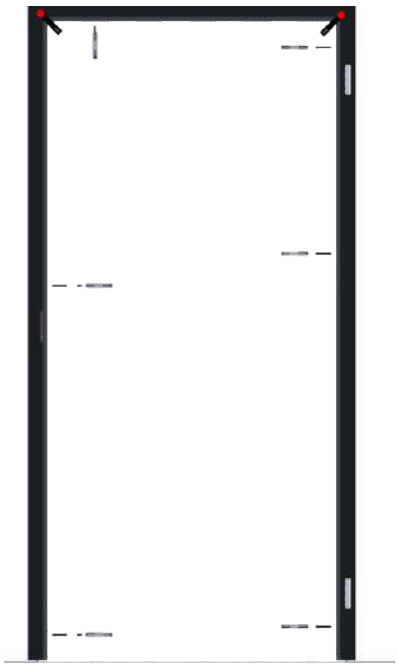


6.2 UPPER PART

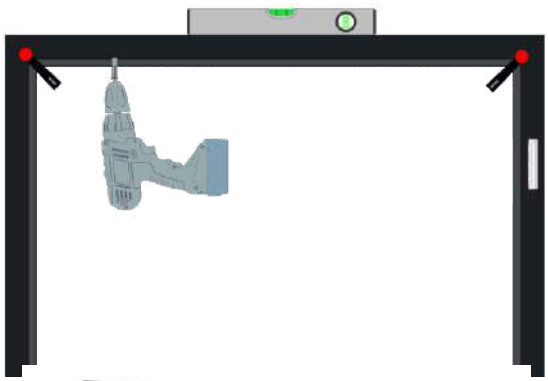


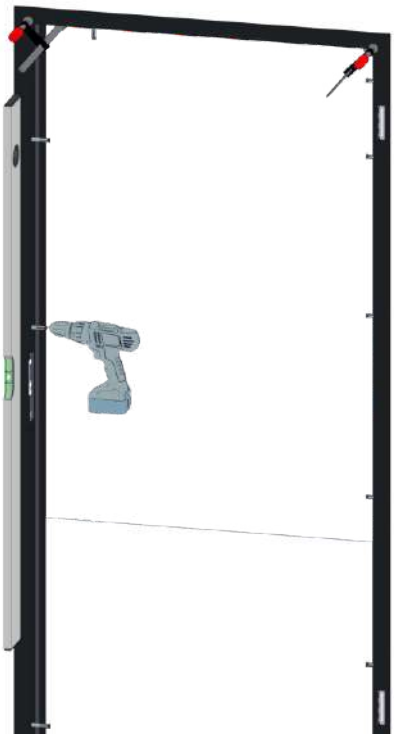
6.3 VERTICAL PART – LOCK SIDE

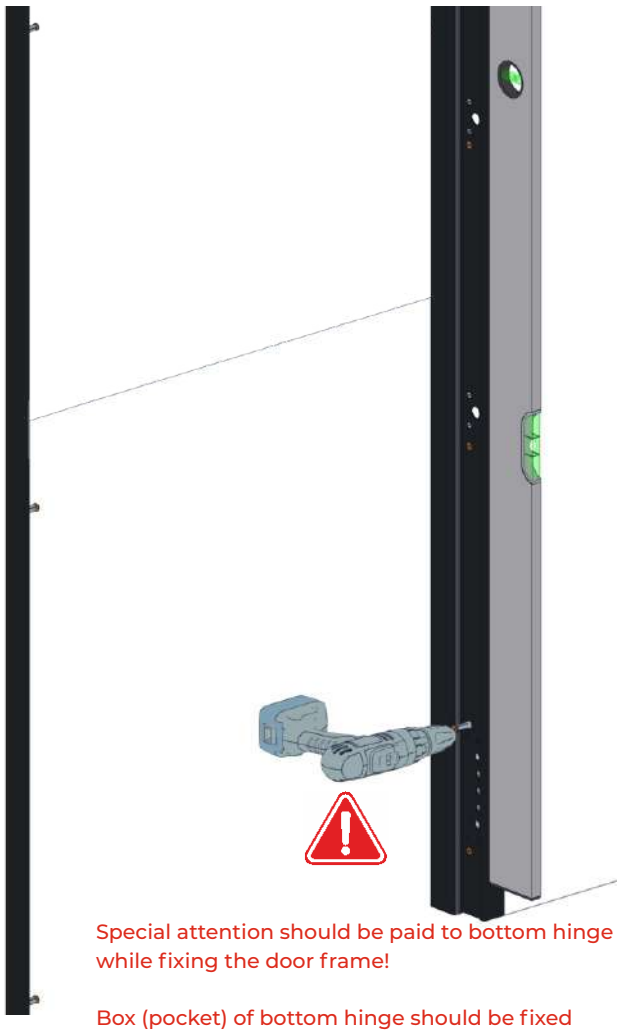




6.4 TIGHTENING ANCHORS WHILE CHECKING THE VERTICAL AND HORIZONTAL LEVEL





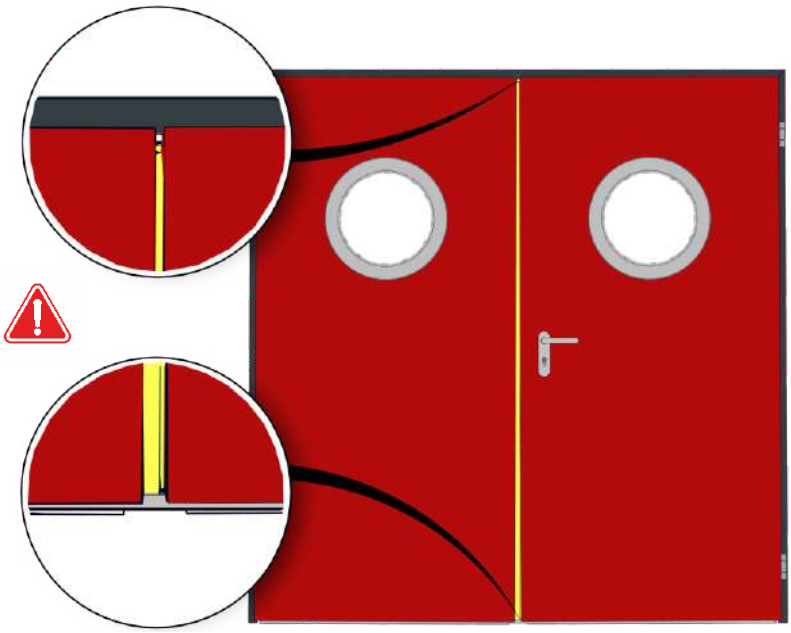


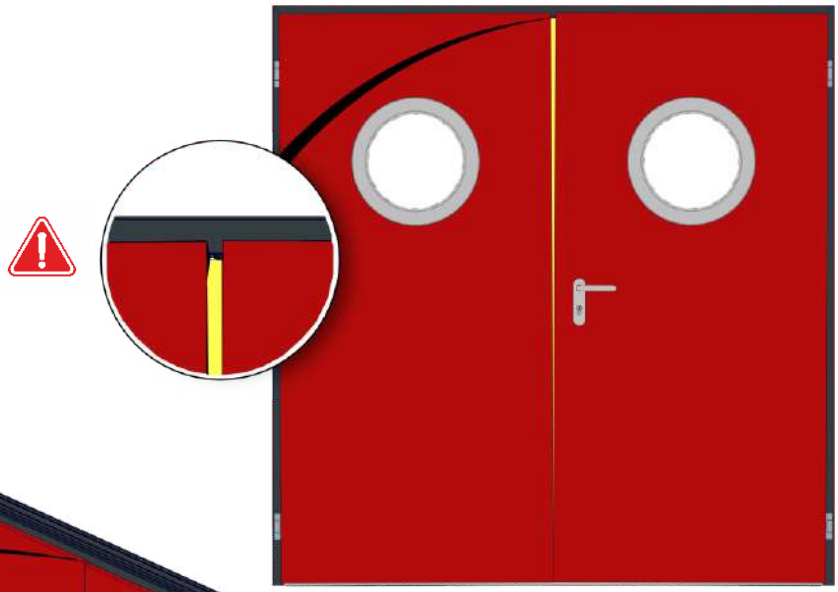
Special attention should be paid to bottom hinge while fixing the door frame!

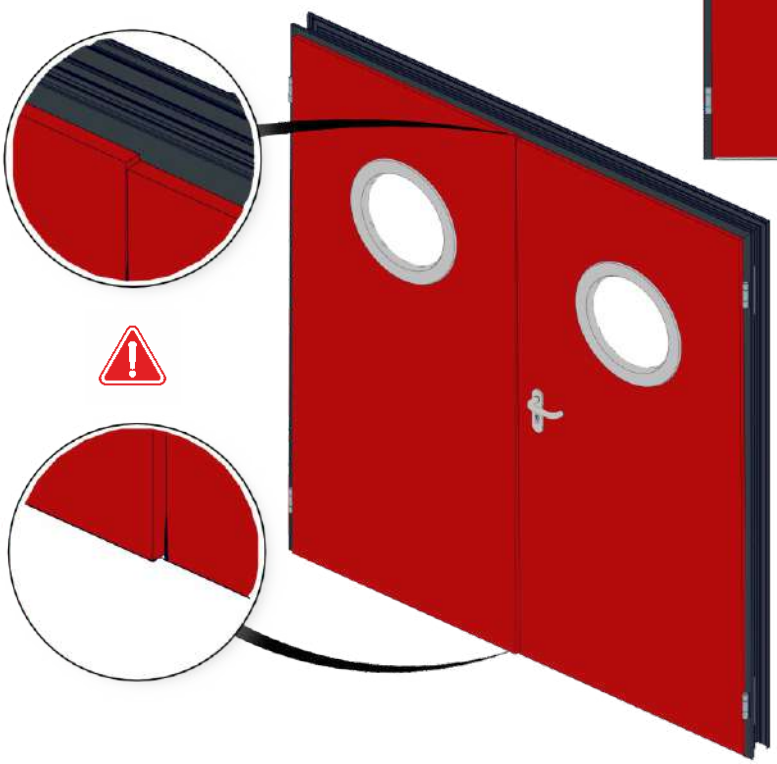
Box (pocket) of bottom hinge should be fixed rigidly without any twisting of the frame.

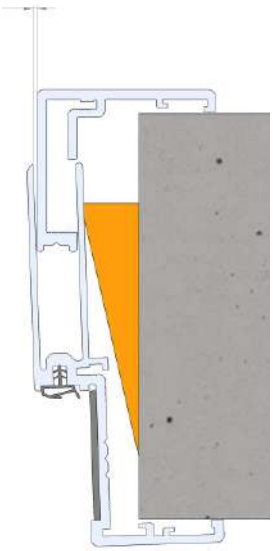
6.5 DRILL THE REMAINING HOLES FOR THE ANCHOR IN THE WALL THROUGH THE HOLES PREPARED IN THE BOX. SUPPLEMENT WITH ANCHORS, AT THE SAME TIME CHECK WHETHER THE FRAME IS NOT TWISTED AS „PROPELLER”.

6.6 SEE RESULTS OF INCORRECT INSTALLATION IF THE DOOR FRAME IS NOT FIXED PROPERLY AND RIGIDLY IN THE BEGINNING





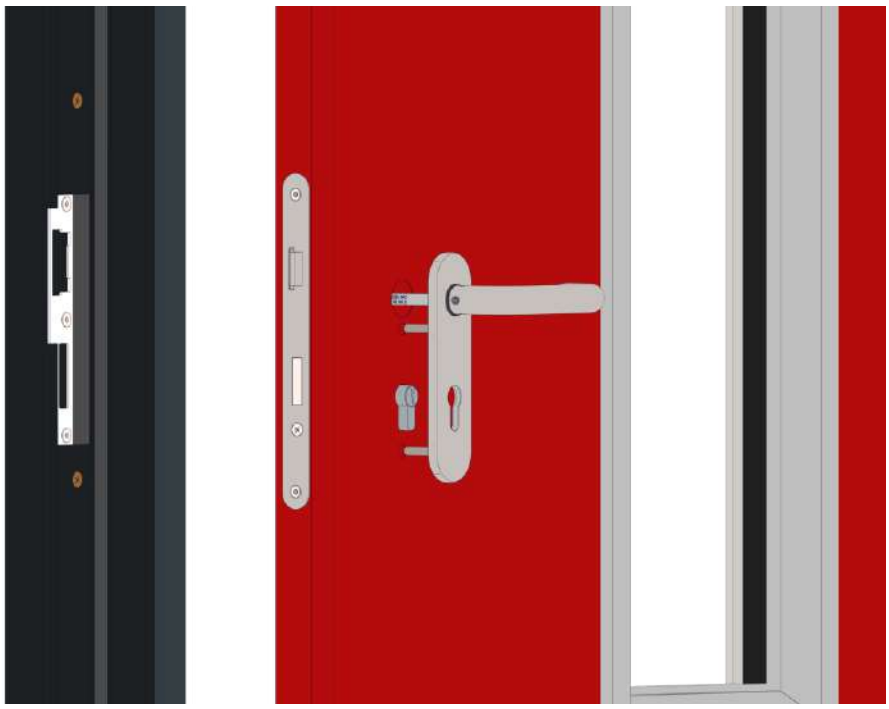




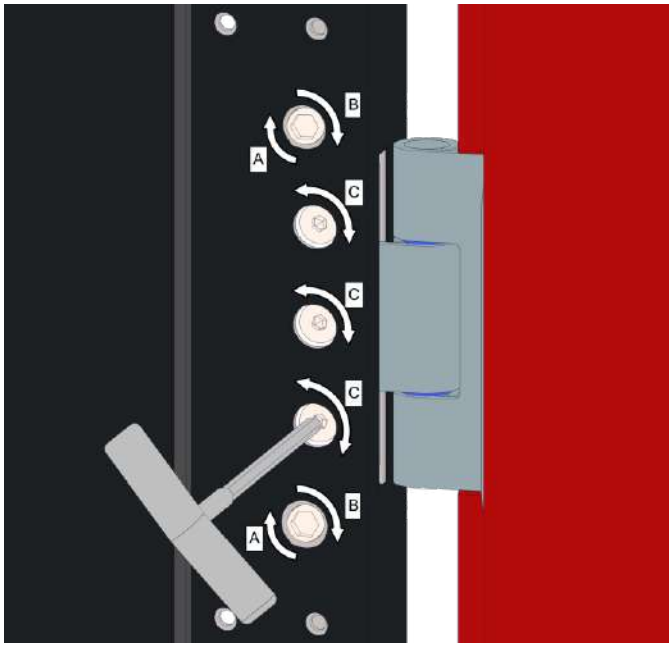
7 ASSEMBLING THE DOOR LEAF AND ITS ADJUSTMENT

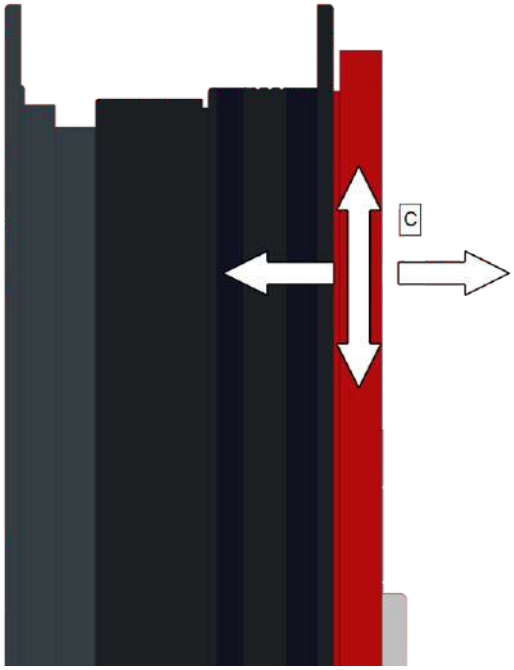
7.1 GET LEAF/LEAVES INSIDE TO THE FRAME. PREMILINARY TIGHT SCREWS

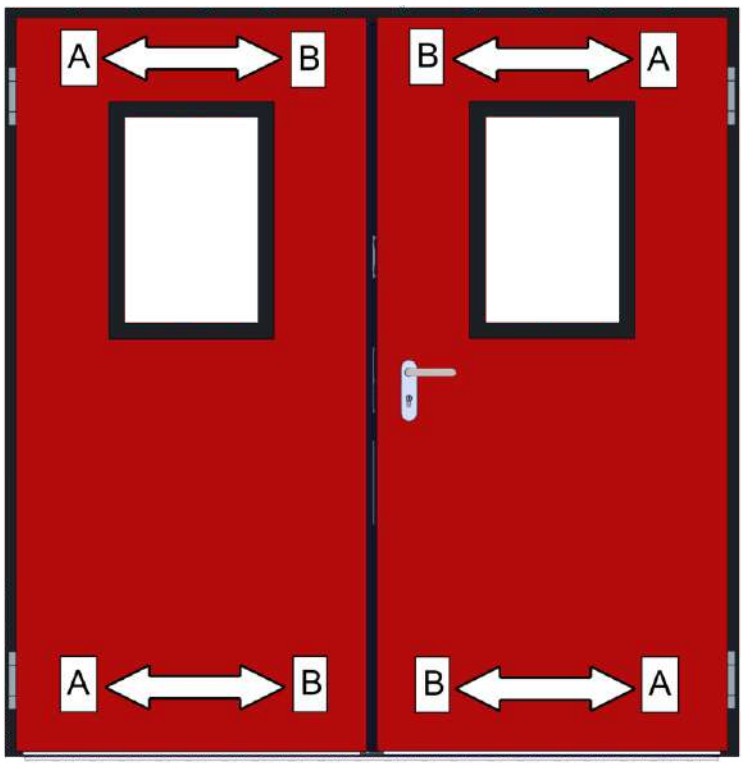
7.2 INSTALL HANDLE AND/OR PANIC BAR

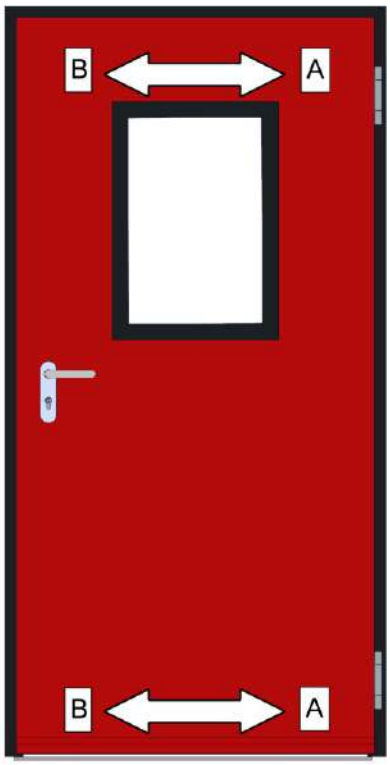


7.3 METHOD OF ADJUSTMENT 3D HINGES

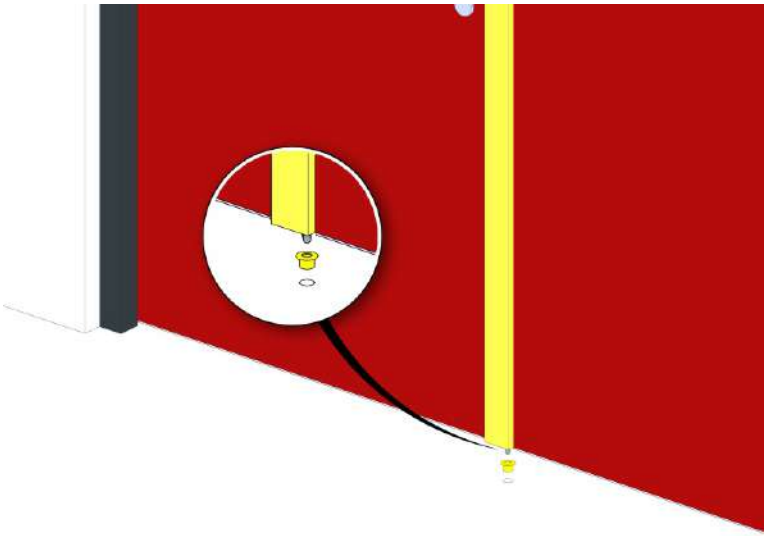


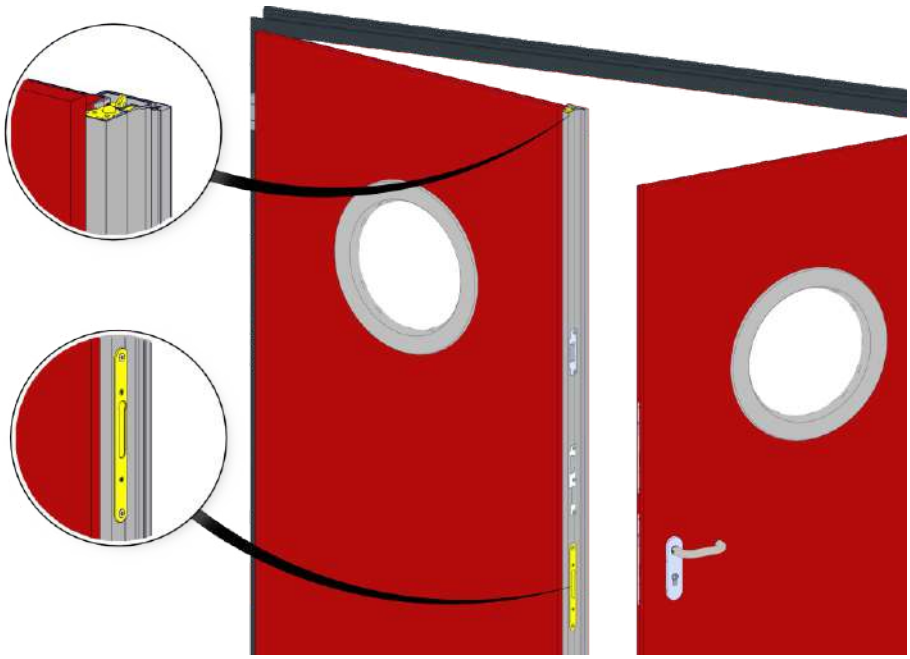




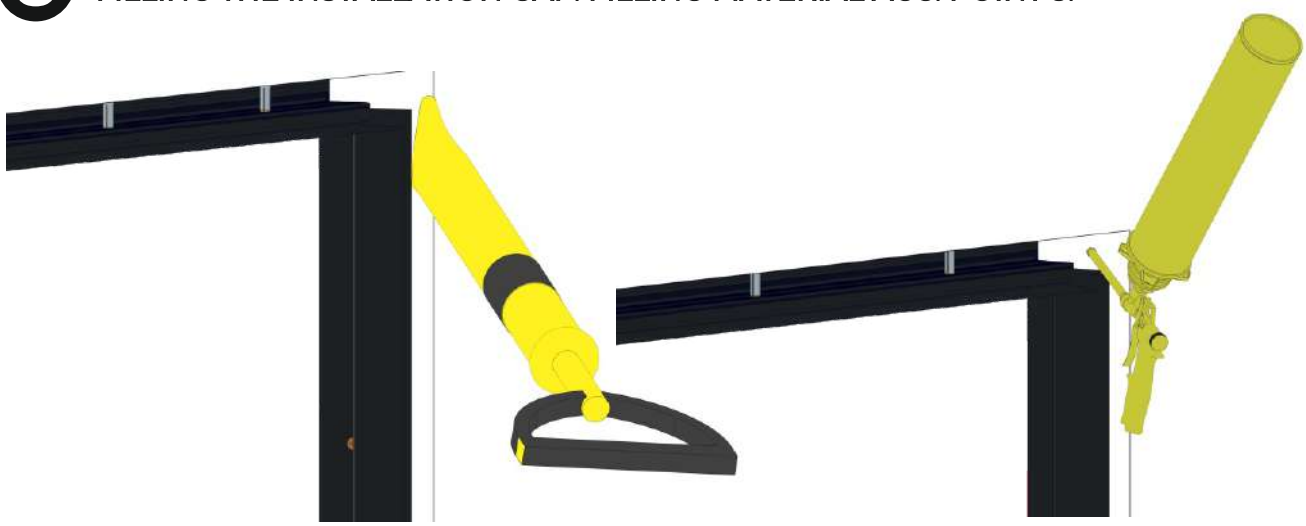


7.4 IN ORDER TO AVOID BENDING / BREAKING OF THE PASSIVE LEAF, FLOOR SLEEVE FOR FLUSH BOLT SHOULD BE INSTALLED IMMEDIATELY AFTER ADJUSTING THE POSITION OF THE LEAF.



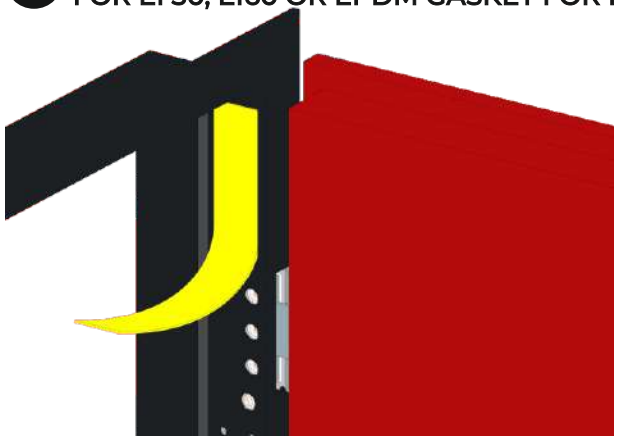


8 FILLING THE INSTALLATION GAP. FILLING MATERIAL ACC. POINT 3.



9 FIRE RESISTANT INTUMESCENT GASKET OR EPDM GASKET FOR NON FIRE RESISTANT DOORS

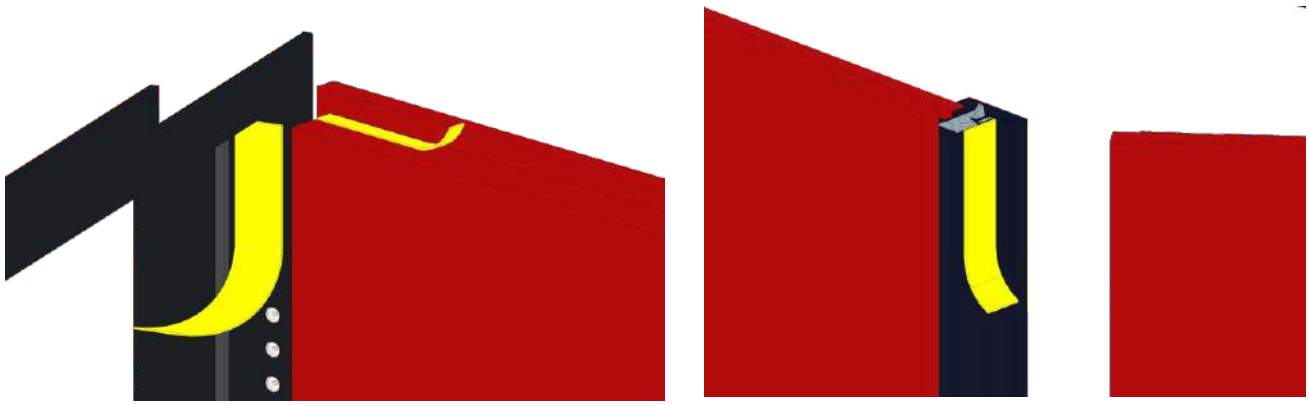
9.1 GLUEING IN PERIMETR OF FRAME FIRE RESISTANT INTUMESCENT GASKET FOR EI 30, EI60 OR EPDM GASKET FOR NON RESISTANT DOORS



For all types of adchesive gaskets: before applying clean the bonding surface from construction residues and thoroughly degrease it.

Gasket to be cut to size on site, please check quantity- spare length is in little excess.

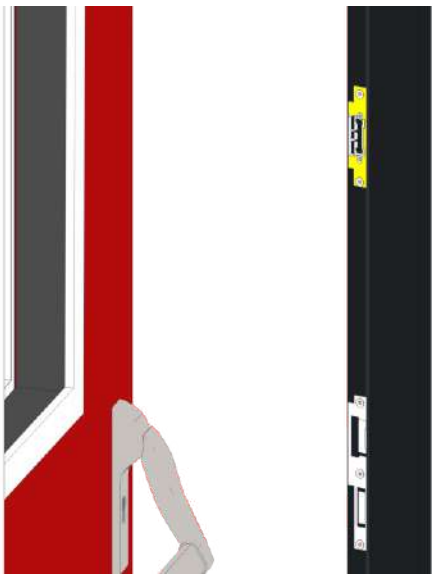
9.2 DOUBLE LEAF DOORS EI30 AND ALL Ei60 - GLUEING NARROW GASKET AT TOP OF LEAF AND AT THE FRONT OF ASTRAGAL ON PASSIVE LEAF



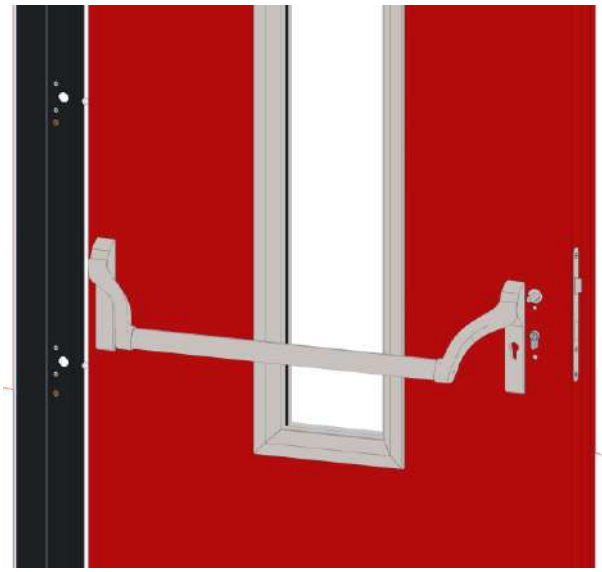
9.3 GLUEING GASKET FOR SMOKE PROOF DOORS. ON PERIMETER OF FRAME AND ON THE ASTRAGAL FOR DOUBLE LEAF DOOR

10 OPTIONAL EQUIPMENT

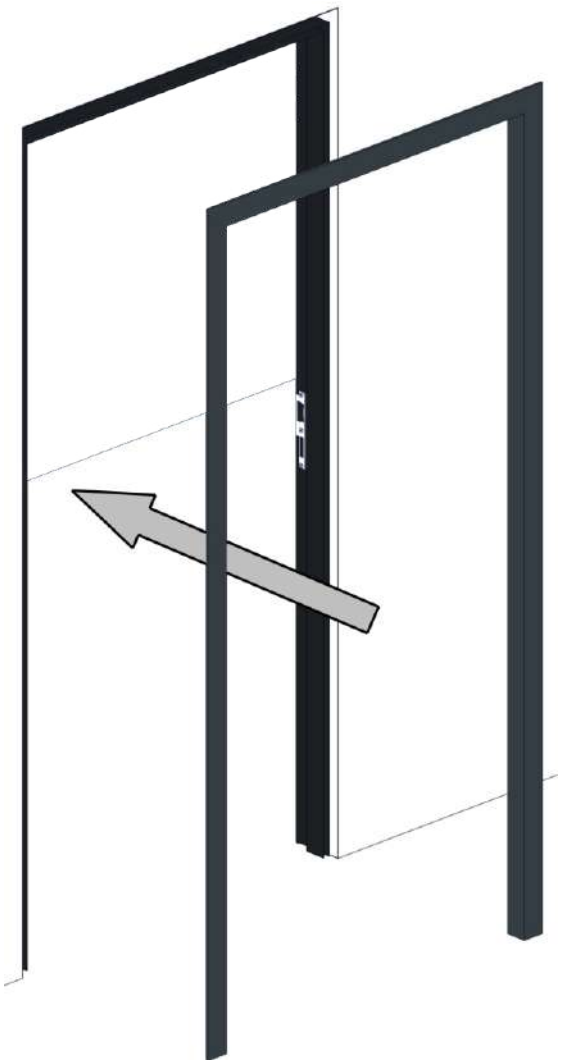
10.1 ELECTRICAL STRIKE



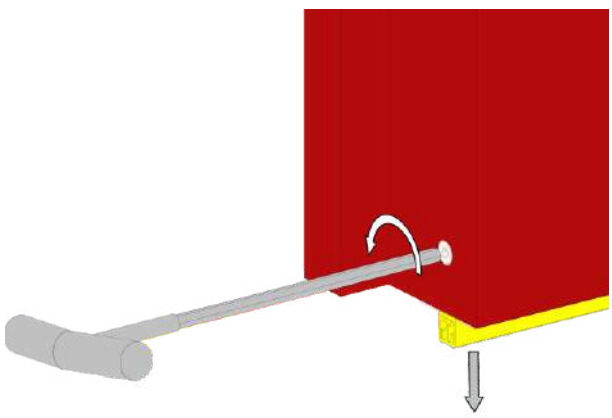
10.2 SYSTEM ANTIPANIC DEVICE Eco Schulte GBS+EPN900



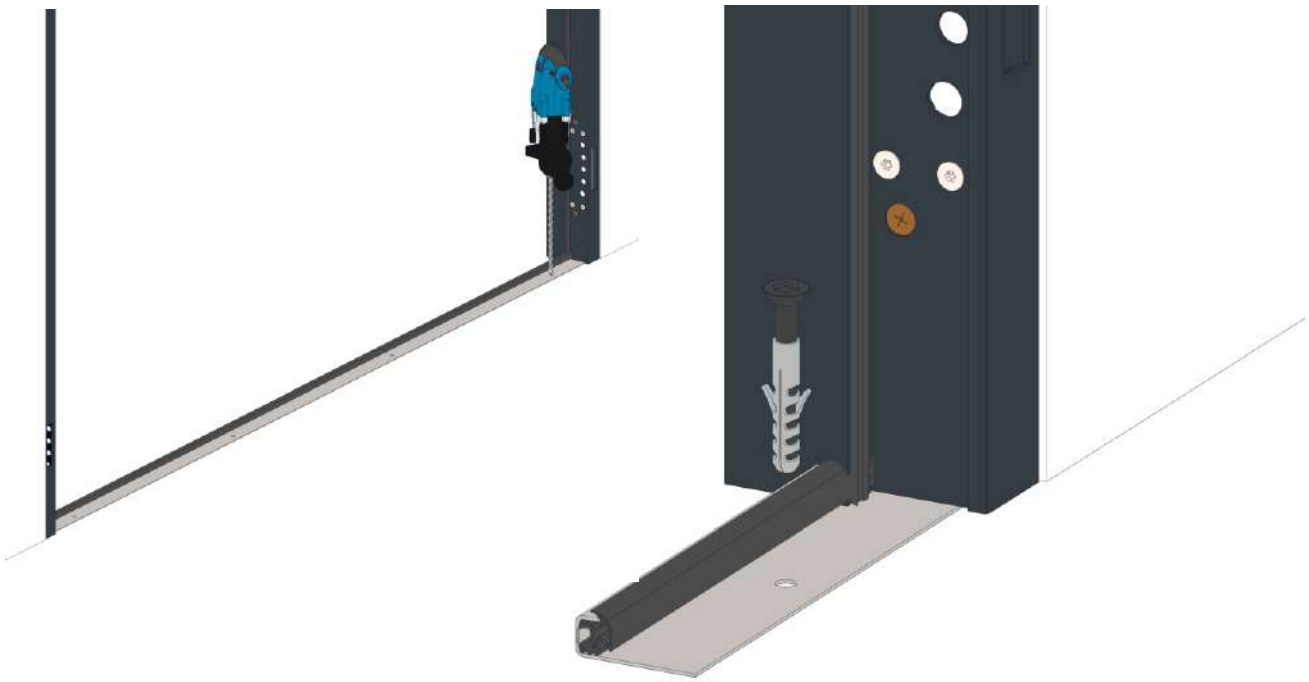
10.3 EMBRACING ELEMENT



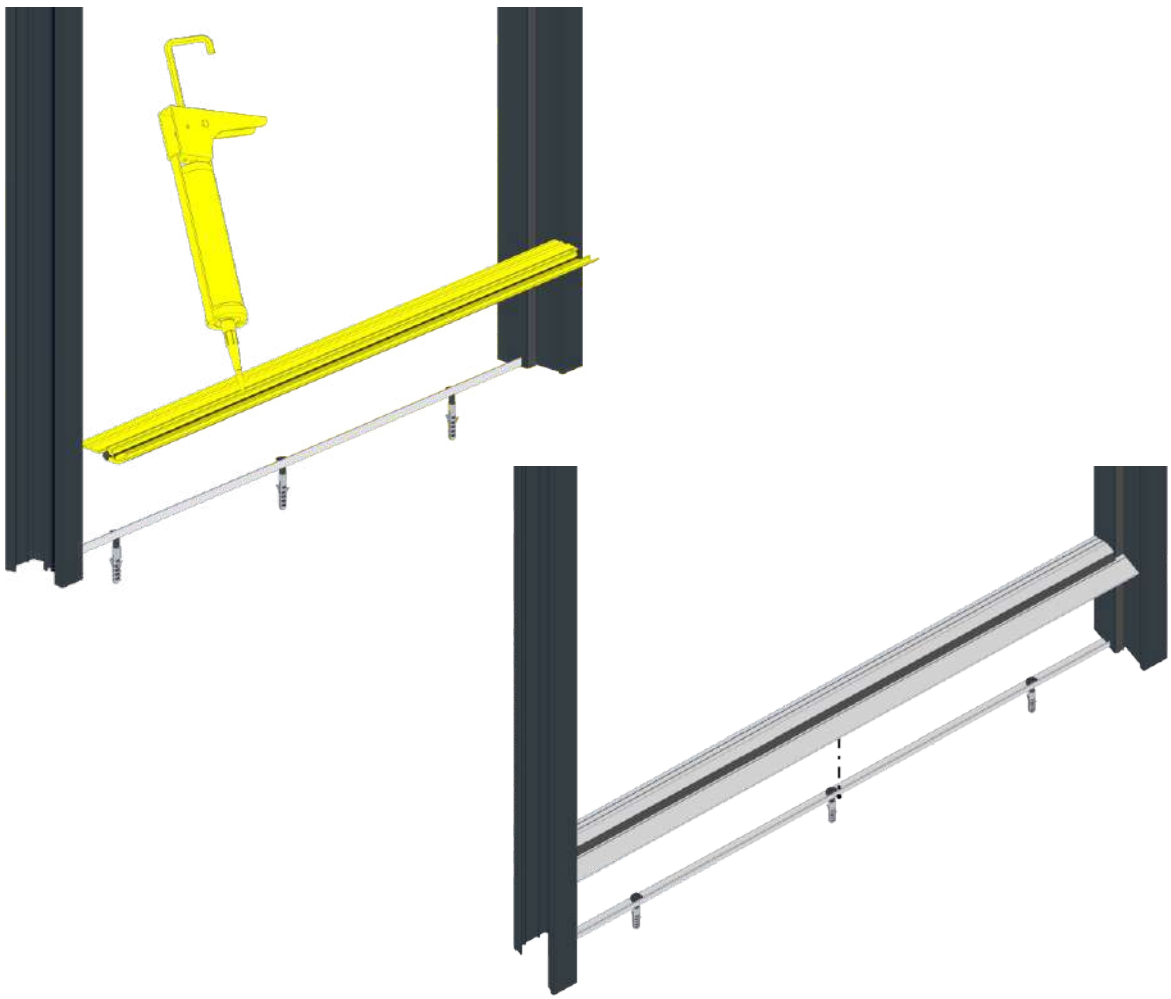
10.4 REGULATION OF AUTOMATIC DROP DOWN SEAL



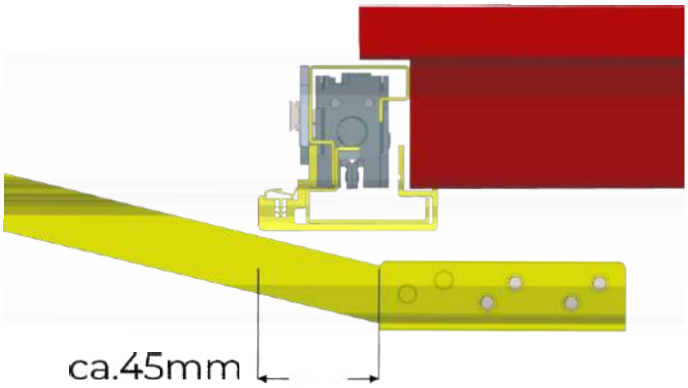
10.5 SCREWED THRESHOLD (INOX OR RAL PAINTED)

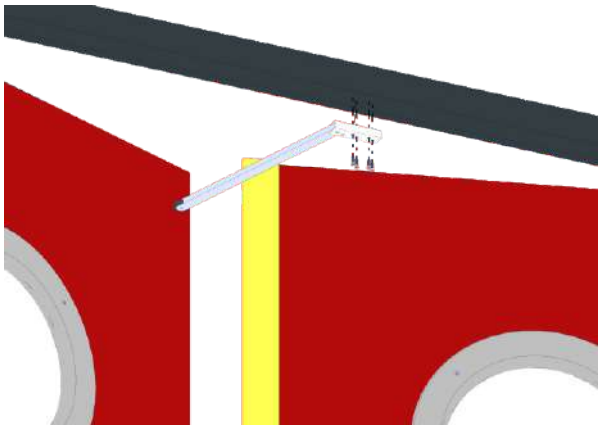


10.6 ALU THRESHOLD

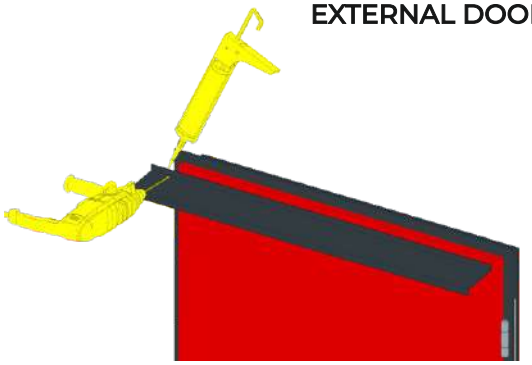


10.7 DOOR LEAF COORDINATOR FOR DOUBLE LEAF DOORS

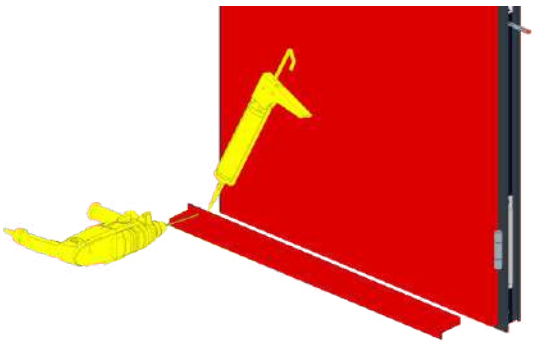




10.8 UPPER DRIP CAP (SILICON AND RIVIETS ARE NOT INCLUDED) STRICTLY MUST BE FOR EXTERNAL DOORS !



10.9 BOTTOM DRIP CAP (SILICON AND RIVIETS ARE NOT INCLUDED) STRICTLY MUST BE FOR EXTERNAL DOORS !



10.10 DOOR CLOSER ECO SCHULTE OR DORMA MOUNTING ACCORRDING TO PRODUCERS MANUAL

11 THE FILM SHOULD BE REMOVED FROM THE LEAF IMMEDIATELY AFTER INSTALLATION

12 SUBJECT OF THE DOCUMENTATION

This documentation covers the operation and maintenance conditions for external and internal doors manufactured by DFM (the Manufacturer). This Installation, Operation and Maintenance Manual (hereinafter referred to as "IOMM") does not include documentation for door accessories such as door closers, electric strikes, locks, drives, handles, etc. These are separate documents prepared by the the respective accessory manufacturers. Cylinders should be individually selected for each door, depending on the type of handle (thickness of shield), lock and the function required by the Customer. DFM provides cylinders for its standard door configurations.
A detailed list of doors and accessories covered by the warranty is included in the relevant Order Confirmation(s).

13 HEALTH AND SAFETY REGULATIONS

During the operation and maintenance of the doors, all applicable health and safety (OHS) regulations must be strictly followed. The following actions are prohibited and will result in loss of warranty:
Use or application contrary to the intended purpose;
Use of incorrect voltage, power survey, or improper wiring of electrical components, which may result in damage and/or injury.

14 OPERATING INSTRUCTIONS

Doors should be operated in a conventional manner, without applying excessive force on handles or door leaves. In the case of access control or electric locks, the system must be activated before opening (pulling or pushing) the door leaf.
A closing door leaf can cause injury—do not place hands between the leaf and frame, and/or do not stand in the path of the closing door.
Doors should not be left open during strong winds or drafts. Do not prop or block doors open—this may cause leaf deformation and malfunctioning of locks or electric strikes.
Special care should be taken with the bottom guide of sliding doors to prevent dirt or objects from obstructing the movement, which may damage the door.
Generally, fire-resistant/smoke-tight doors serve as fire/smoke barriers and must remain closed during a fire. They are equipped with door closers that must not be blocked or disconnected.
Emergency exit doors must be released from access control during evacuation.
Due to the variety of systems used, personnel and regular users of the facility must be instructed individually on how to operate each specific door.

15 WARRANTY CONDITIONS

The warranty period is 12 months, with the reservation that accessories are covered under their respective manufacturers' warranty terms. The warranty period may be extended under a separate agreement.
Doors must be installed by a team authorized by DFM Europe Sp. z o.o.
Adherence to the terms of this IOMM is a condition for warranty validity. The entitled party must notify DFM Europe Sp. z o.o. of any defects immediately, and no later than 7 days after becoming aware of the issue.
The defect report must be sent via email to: dfm@dfm-europe.eu
The notification must include:

- Contact details of the reporting person
- Contact person for follow-up
- List of detected faults with photo/video documentation (photos with brief filenames)
- Product serial number from the nameplate
- Proposed date for defect rectification

Defects due to inherent product issues, reported during the warranty period, will be corrected within a mutually agreed timeframe.
The facility operator must ensure access to the reported doors for DFM or its authorized personnel for inspection and repair, at the agreed time.
Failure to provide access at the agreed time may be treated as withdrawal of the complaint and/or may incur fees under the service agreement.
The warranty does not cover:
a. Mechanical or electrical damage due to improper use, cleaning, or maintenance by the Customer, Facility User, or third parties;
b. Damage caused by reasons other than hidden defects;
c. Structural modifications made independently by the Customer, Facility User, or third parties;
d. Color differences in stainless steel or paint coating (localized changes due to welding are a feature of the production process);
e. Defects resulting from maintenance contrary to the IOMM;
f. Removal of the product nameplate;
g. Use or application contrary to the intended purpose;
h. Use of incorrect voltage and/or surges and/or improper wiring in electrical components and resulting damage.
i. Defects resulting from incorrect installation.

Local touch-ups are not considered a product defect. The installation of metal sheet doors highly recommended after the final finishing of walls and floors,.
Warranty claims may can not exceed the sales price of the given product/goods;

16 MAINTENANCE AND TECHNICAL INSPECTIONS

Due to the high complexity of the equipment and the requirement for reliable operation, as well as to maintain warranty rights, the doors must undergo periodic servicing (i.e. adjustment, repairs) and maintenance at least every 6 months.
These activities are not included in the warranty services and are subject to additional charges under a separate service agreement with a company approved by DFM Europe Sp. z o.o.
Installation, commissioning, servicing, warranty repairs, and maintenance may only be performed by service personnel authorized by DFM Europe Sp. z o.o. Entrusting these tasks to unauthorized persons or entities will void the warranty.
The service inspection includes:

- General external inspection
- Paint coating, laminate, veneer or stainless steel condition check
- Inspection of mounting anchors
- Seal condition check
- Glass condition check
- Gap (clearance) - check between the leaf and the floor
- Check door and closer operation, including the force required to open and close
- Check and adjust fittings, locks, electric strikes, closers, drives
- Lubrication of hinges and other moving parts, if needed
- Preparation of a service inspection report

Worn parts must be repaired or replaced after inspection.
Only components that show a defect during proper use are eligible for warranty repair or replacement. All other actions or damage caused by misuse are not covered by the warranty and incur additional charges.

Hardware elements such as door closers, locks, handles, panic bars, etc. — do not have a defined corrosion resistance rating.

To ensure maximum protection of the coating against corrosion, the following maintenance rules must be observed for joinery:
- every 2 weeks – clean all painted surfaces.
- if road salt is present on the doors, it must be removed immediately, as it causes corrosion.
- every 6 months – thoroughly remove any accumulated dirt or residues from surfaces and from hardware components such as hinges, handles, locks, etc.
- use only mild cleaning agents. The use of products containing solvents, alkaline substances, or other aggressive chemicals is strictly prohibited. Test chemical agents on hidden surface before cleaning.
- remove any cleaning agent residues with water. Do not use high-pressure water, and do not allow water to penetrate inside the door leaf.
- after cleaning, dry the door leaves, frames, and all hardware components thoroughly.
- do not use detergents; caustic, corrosive, aggressive, or abrasive agents, or any other unsuitable cleaning agents for stainless steel.

The warranty period for the coating of a door installed in a C5 corrosivity environment is 1 year. The Customer must inform DFM about high corrosion environment before placing the order.