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INSTALLATION AND MAINTENANCE MANUAL

mcr PROFILE ISO DOORS AND PARTITIONS

Edition 14

Gdańsk, 10.08.2015

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Company **ASSA ABLOY Mercor Doors sp. z o.o.** continues the activity of **Mercor SA** in the branch of fire partitions. In

December 2013 it has become part of international group **ASSA ABLOY**, a world's leader in locking and doors systems.

With our highly qualified personnel, business know-how and strong technical expertise we offer professional customers service: from customized quotation, through manufacture, to delivery, installation and maintenance service.

The offer of **ASSA ABLOY Mercor Doors sp. z o.o.** includes:

- Steel hinged doors,
- Steel sliding gates,
- Steel and glass doors and partitions
- Wooden doors
- Fire curtains

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**Technical Approval: AT-15-7386/2007
Certificate of Conformity: CZ ITB – 2324/W
National Declaration of Compliance: 30_KDZ**

The documentation relates to the fireproof partitions – profile glazed doors and partitions of the EI30 or EI60 fire resistance class. The partitions described are suitable for indoor applications.

1. GENERAL CHARACTERISTICS

The fireproof profile partitions are made according to the FORSTER FUEGO LIGHT system of the imported steel profiles manufactured by FORSTER A.G. The structure is joined by welding.

The structure is powder painted after welding. Each door edge, except for the threshold, is sealed with two perimeter gaskets. The threshold gap may be sealed with a rubber threshold seal or with automatic drop-down seal ensuring that the doors are smoke-resistant.

The glass is embedded between fireproof seals made of flash resistant rubber. The structures may be filled in with fireproof glass panes or panels made of Vermiculux board or covered with steel sheets

The partition structures are glazed with Pyrobel, Contraflam, Swissflam or Pyrostop glass. The above-specified fireproof glass is transparent and flexible and features high mechanical strength.

The following accessories are used for the doors:

- Mortise latch and bolt lock
door closer (door coordinator is optional)
- hinges
- handle, knob or panic lever
- smoke-resistant seals, threshold strips (in smoke-proof doors)
- intumescent seals
- rubber or ceramic seals

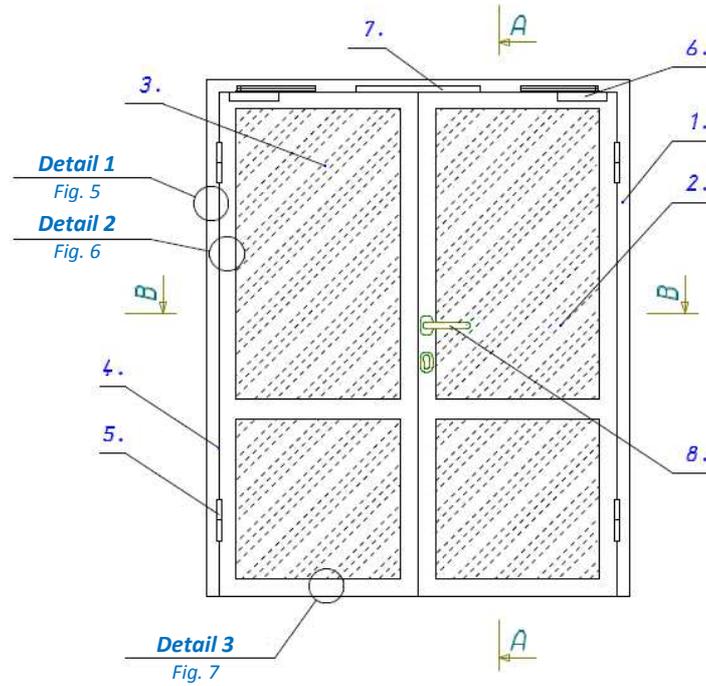
CAUTION:

Exposure of the paint coat covered with a protective film to sun and moisture may damage the coat permanently. Therefore, remove the protective film as soon as you install the door.

Figures showing the door structure:

- Fig. 1 – View of double-leaf door
- Fig. 2 – Vertical (A-A) and horizontal (B-B) sections of double-leaf door
- Fig. 3 – View of single-leaf door
- Fig. 4 – Vertical (A-A) and horizontal (B-B) sections of single-leaf door
- Fig. 5 – Installing the structure in a wall (Detail 1)
- Fig. 6 – Mounting the glass (Detail 2)
- Fig. 7 – Position of the bottom leaf profile relative to the floor (Detail 3)

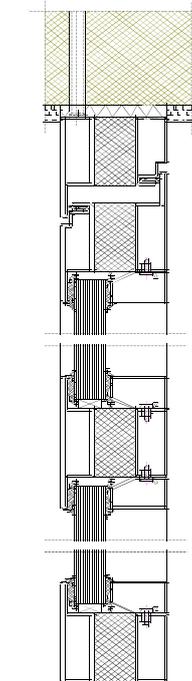
Fig. 1 - View of double-leaf door



1. Door frame
2. First door leaf
3. Second door leaf
4. Location of the nameplate (on the door frame, visible when the door leaf is open)
5. Hinge
6. Door closer
7. Door coordinator
8. Door handle (lever handle or knob)

Section A - A

Fig. 2 – Vertical (A-A) and horizontal (B-B) sections of double-leaf door



Section B - B

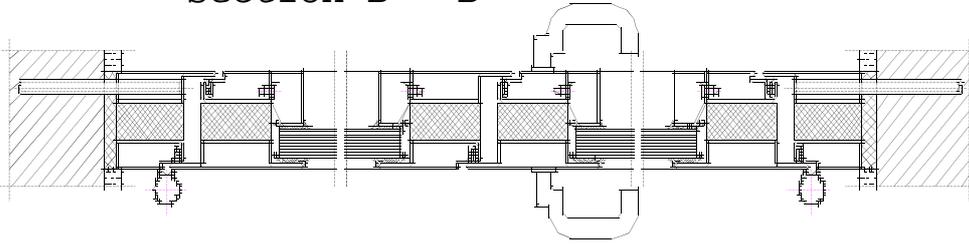
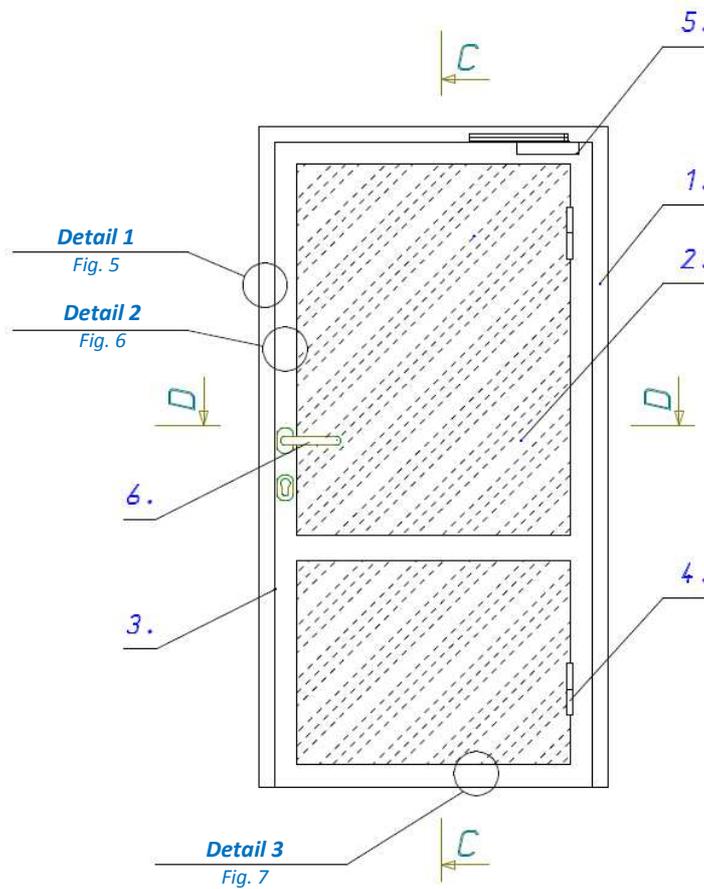


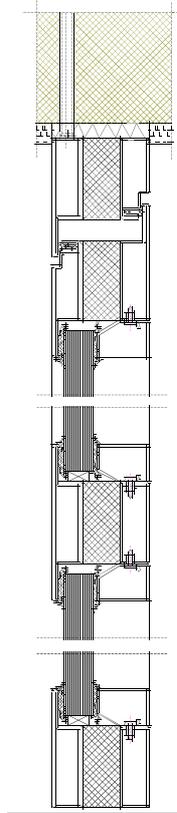
Fig. 3 – View of single-leaf door



- 1. Door frame
- 2. Door leaf
- 3. Location of the nameplate (on the doorframe, visible when the door leaf is open)
- 4. Hinge
- 5. Door closer
- 6. Door handle (lever handle or knob)

Fig. 4 – Vertical (A-A) and horizontal (B-B) sections of single-leaf door

Section A - A



Section B - B

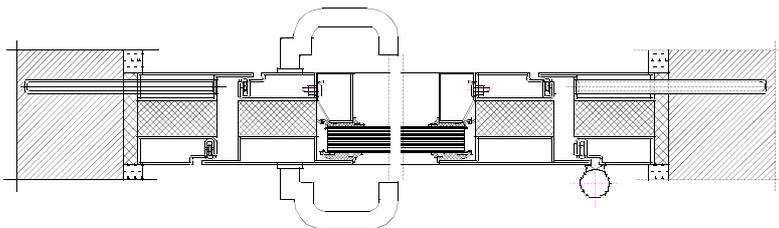


Fig. 5 – Installing the structure in a wall

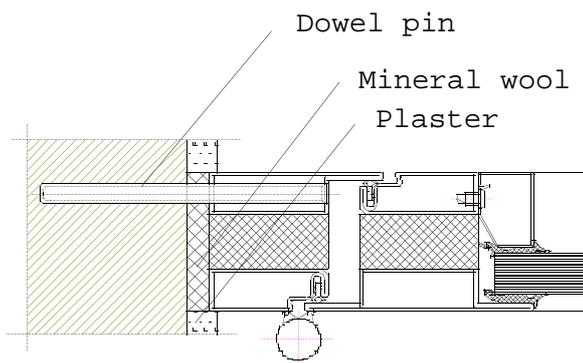


Fig. 6 – Spacing of dowel pins

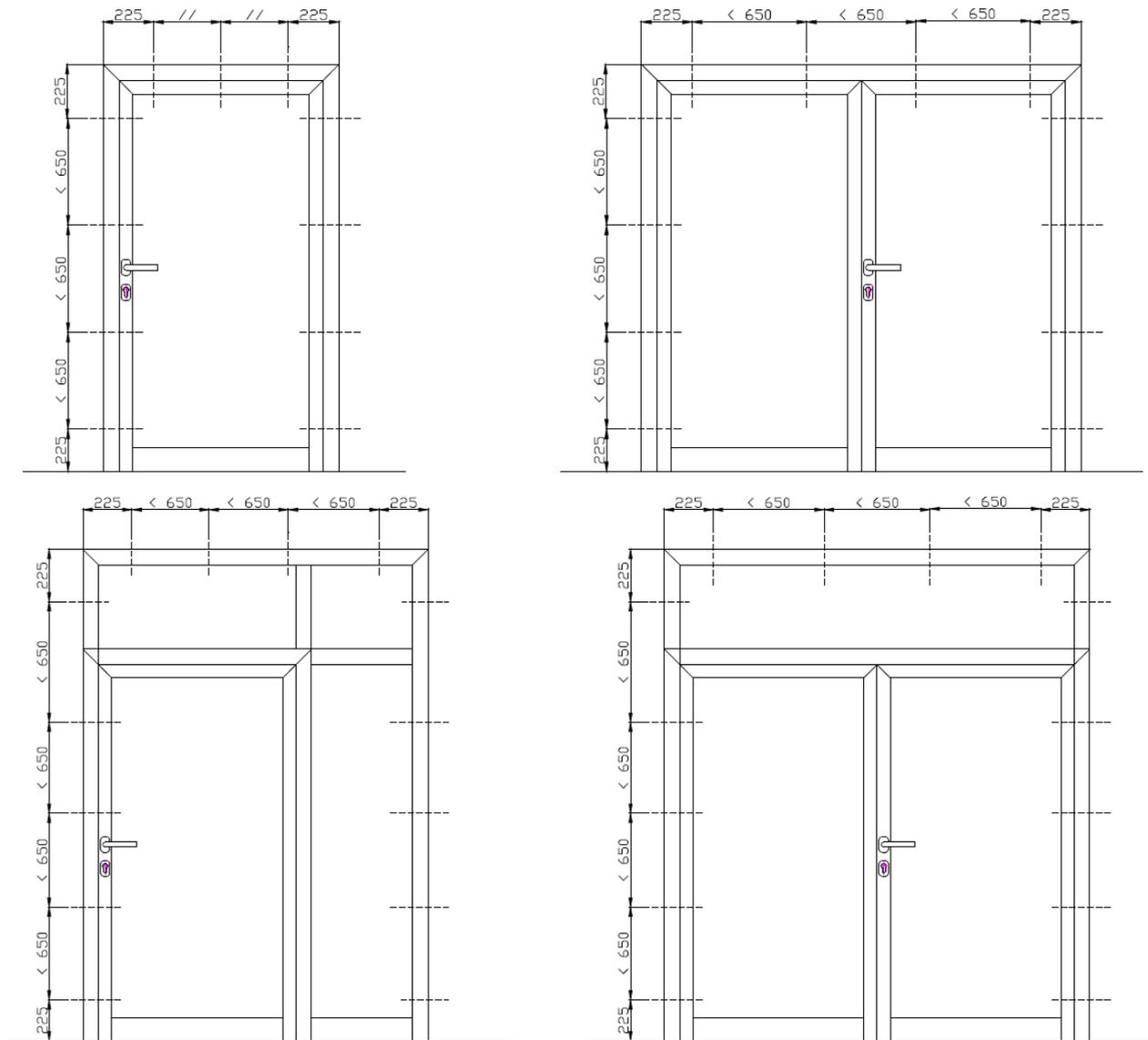


Fig. 7 – Mounting the glass

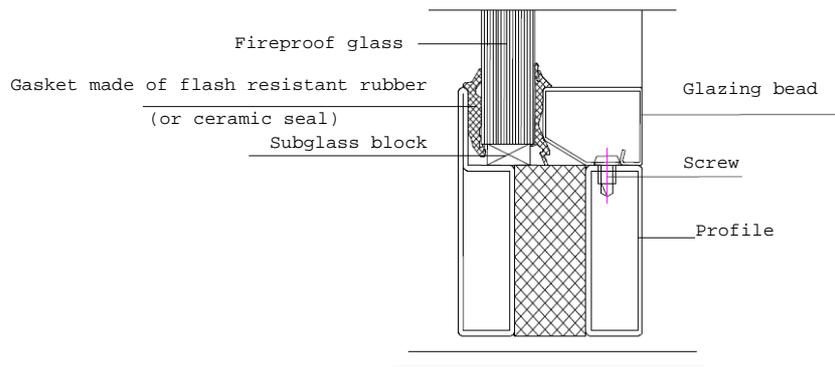
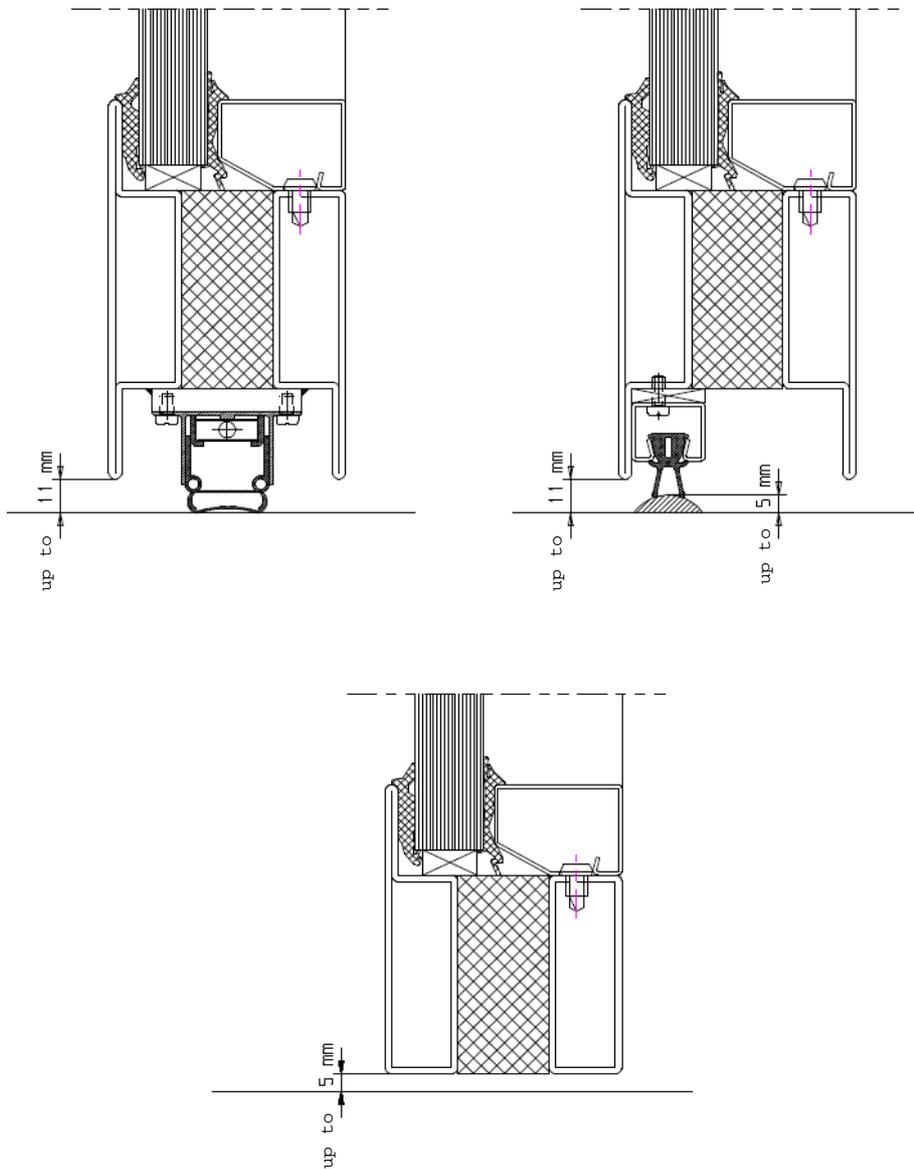


Fig. 8 – Position of the bottom leaf profile relative to the floor



2. TERMS OF DELIVERY

The doors are delivered in parts as follows:

1. structure (door leaf and door frame)
2. a set of glazing materials (seals and glass blocks)
3. door handle
4. brass hinge washers - 1 set
5. glass panes

The profile structures are wrapped with a bubble wrap which protects them against damage of the painted surfaces. Additionally, the profiles are covered with protective film. The structures should be handled with care to avoid mechanical damage.

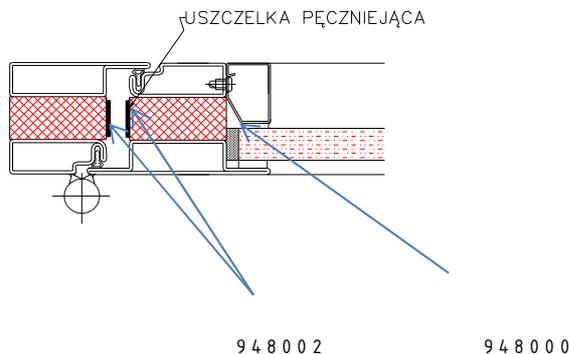
3. INSTALLATION OF DOORS AND PARTITIONS

3.1. INSTALLATION IN THE OPENING

Prior to installation, cut off the bottom rod temporarily welded for transport. Then, assembly the door frame and door leaves, putting the hinge bearing washers. After inserting the door into the wall opening, pre-install the door frame. Both sides and the upper part of the structure should be spaced 10 mm from the wall. Install the structure with steel dowel pins fastened to the wall and inserted through the existing holes in the door frame. The minimum thickness and length of dowel pins is 8 mm and 120 mm respectively. If you have to fasten the structure to the cavity or cellular bricks, use the steel anchors. The door frame posts may be installed into the floor or may be butt to it. If there is no system threshold sealing provided, the door should be mounted so that a 5 mm threshold gap remains when the installation is completed. In the smoke-proof doors, you may use an additional rubber threshold seal with an aluminium corrugated strip or an automatic drop-down seal. In both cases, clearance under the profile should not exceed 11 mm. Then, you should evenly distribute width of the gaps between the door leaves and the frame by using e.g. 5 mm spacer plates inserted between the profiles. When you set the door correctly, tighten the door frame. When installing the double-leaf door, you should install the floor sleeve in the floor, which should be positioned exactly in the axis of the rod of passive door leaf.

Any assembly of finished frames in a larger component shall be done with steel screws screwed into the rivet nuts. Ceramic seal should then be glued in, along the entire joint, at both profile edges.

In doors EI30 and EI 60 insert an intumescent gasket 948 002 size 24 x 2,2 mm into door frame profile and around door leaf profiles. Under the glass gasket 948 000 size 24 x 1,5 mm should be placed.



If the total length of the partition exceeds 5 m, you should provide expansion joints. The expansion joints should be provided at distances of not more than 4 m, by tightening the profiles so that there is a gap of 15 - 18 mm between them. Fill the space between the frame and the wall with mineral wool. The external surface of the joint of the wall and frame should be finished with an incombustible material e.g. plaster or GKF plasterboards (see Fig. 5)

3.2. GLAZING

Glazing is the last stage of installation. Please proceed as follows:

- stick the self-adhesive non-flammable rubber seal to the frame profile
- mount the glass-holding blocks,
- mount / put the glass piece or panel in prepared profile.

Then, click the glazing beads in the mushroom-shaped screw heads and put another type of seal (without adhesive) into the gap between the glazing bead and the glass. Select the thickness of the seals depending on the glass thickness, according to the guidelines provided in the table below. Click-in the horizontal glazing bead first and then the vertical ones. Centre the glazing beads between the profiles, ensuring a clearance of 1±2mm on both sides. The glazing beads and the profile sides are marked with numbers. Remember to click the glazing beads on the profiles which are marked with the same numbers. Put two sub-glass blocks on each horizontal and vertical frame profiles at a distance of about 8 cm from the glass corners (8 blocks per glass in total.)

NOTE 1: when mounting doors or partitions from outside the building, remember that the fire glass pane installed in an insulated glazing unit must be located from inside the building. **If installed the other way round, the fire glass may be damaged.** The IGU is marked with a white self-adhesive 5 x 7 cm sticker with the wording: 'Outside.'

NOTE 2: the fire glass edges (applies also to the IGU's) are secured with a special protective tape. **When the protective tape is damaged or removed, the glass may be damaged permanently!** Any damage caused by failure to follow the above-specified notes is not covered by the guarantee.

NOTE 3: some grades of the fire glass are 'up and down-oriented'. It is indicated on a special sticker placed on the glass. **If installed the other way round, the fire glass may be damaged.**



Resistance	Filling	Seal with adhesive symbol	Seal without adhesive symbol	Pressure strip (clip) symbol	Notes
EI 30	Pyrobel 16 glass	905.312	905.317	901.247 (35mm)	
EI 30	Pyrobel 16 glass combined w. safe glass (32mm)	905.312	905.317	901.227 (20mm)	Seals No. 905.314 & 905.315 may also be used
EI 30	37mm panel	905.312	905.316	901.226 (15mm)	
EI 60	Pyrobel 25 glass	905.312	905.317	901.228 (25mm)	Seals No. 905.314 & 905.315 may also be used
EI 60	Pyrobel 25 glass combined w. safe glass (38mm)	905.312	905.315	901.226 (15mm)	use for doors
EI 60	Pyrobel 25 glass combined w. safe glass (40mm)	905.312	905.316	901.241 (10mm)	use for partitions
EI 60	37mm panel	905.312	905.316	901.226 (15mm)	

3.3. REMOVAL OF PROTECTIVE FILM

Exposure of the paint coat covered with a protective film to sun and moisture may damage the coat permanently. Therefore, remove the protective film as soon as you install the door.

4. OPERATION

The fire door prevents fire from spreading within a facility, thus being a barrier against fire, high temperature and smoke. For this purpose, the doors are equipped with the door closers.

Wedging of the open door leaf is unacceptable. If the doors are installed in passageways and they have to be permanently opened, the use of door closers equipped with electromagnets is recommended. This device will automatically release the door leaf, thus enabling it to be closed during fire.

4.1. MAINTENANCE

Perform the maintenance activities at least twice a year. Before maintenance, wash the door thoroughly. Wash the door with warm water using a small amount of car shampoo or other similar agent. Never use any agents which are excessively caustic to avoid damaging the paint coat.

4.2. GENERAL CONDITION CHECK

Ensure that the door leaves and the frame are not mechanically damaged and are free of corrosion. Check also the door mounting and repair any damaged plaster.

4.3. IRONMONGERY

During door maintenance, check the correct operation of locks and tighten the screws securing the locks and handles. Lubricate the locks and hinges and check if the screws securing the screwed hinges are tight. In passive door leaves- check the operation of the upper components of flush bolt. Tighten the rod securing screw, if necessary. You may tighten it through a specially designed hole from the top of the component by using an Allen key. Check the door closers operation and adjust them, if necessary, so that when releasing the door leaf open at an angle of 45°, it closes freely.

Check also the condition of the brass hinge bearing washer. If the washer appears to be worn, replace it with a new one.

Note: there are welds visible at the hinges.

4.4. SEALS AND GASKETS

Check if the seals and gaskets are not worn or damaged. Replace them, if necessary.

5. SERVICE

In order to ensure proper functioning of fire doors and to maintain the terms and conditions of the warranty, periodic door inspections and maintenance must be carried out at least once every 6 months.

The periodic inspection should include the following activities:

1. checking the door operation
2. visual inspection of the paint coat
3. checking and readjusting the locks, fittings, etc.
4. adjustment of the door closers
5. greasing the hinges and other moving components
6. preparing a service inspection record

During each inspection, replace or repair any damaged or worn parts.

6. WARRANTY TERMS AND CONDITIONS

1. ASSA ABLOY Mercor Doors sp. z o.o. provides a warranty for the supplied products for a 12-month period, unless the warranty period is specified in a separate agreement.
2. Any faults disclosed within this period that prevent the correct operation of the product shall be removed within 21 days from the date of notification.
3. The warranty shall be automatically extended for the period of the complaint, to the end of warranty repair.
4. Products that are under warranty, in which any defects are found that prevent their further operation, shall be replaced with fully operable products.
5. Warranty does not cover activities that should be carried out by the user as specified in this Technical Reference Manual.
6. To ensure proper operation of doors and partitions and to retain the rights which results from the warranty, periodic technical inspections of doors and partitions should be carried out and the maintenance activities should be performed at least once every 6 months during the entire period of operation. Periodic technical inspections and maintenance activities must be carried out by a company duly authorised by ASSA ABLOY Mercor Doors sp. z o.o..
7. The manufacturer is released from the warranty and other responsibilities if:
 - periodic technical inspections and maintenance activities were not carried out on time as specified in par. 6 above or were carried out by unauthorised persons or a service company not authorised by ASSA ABLOY Mercor Doors sp. z o.o..
 - mechanical damage of products occurs due to improper product operation by the user
 - the user has modified the product structure on his/her own
 - any faults of the product occur due to maintaining the product in a manner incompliant with the maintenance manual
 - any faults of the product occur due to improper storage and handling
 - the user installs the product in a manner incompliant with the installation manual
 - the product nameplate is removed
8. While performing the warranty repairs, the manufacturer deducts the value of the items missing or damaged due to the user's fault as well as the cost connected with the replacement of such items
9. ABLOY Mercor Doors sp. z o.o. provides the warranty for the manufactured partitions in terms of the paint coat durability providing that the paint coat has been completely applied by the production plant of ASSA ABLOY Mercor Doors sp. z o.o. If only galvanized partitions are purchased (without any paint coat), ASSA ABLOY Mercor Doors sp. z o.o. does not provide any warranty for a paint coat. Moreover, ASSA ABLOY Mercor Doors sp. z o.o. reserves that the galvanized coating may be damaged while e.g. handling and installing the partitions. It is recommended to paint the partition.
10. For the warranty to be provided for more than 3 years, it is necessary to conclude the service agreement with ASSA ABLOY Mercor Doors sp. z o.o.

The manufacturer reserves the right to implement changes without prior notice.

7. MAINTENANCE OF DOORS WITH A SPECIFIC CLASS OF CORROSION RESISTANCE

In order to ensure proper protection against corrosion, fittings and paint coats of the mcr PROFILE ISO door (external) made in corrosivity classes C3, C4 or C5 should be subject to periodic maintenance:

- clean the surface of the door and door frame paint coat from the collected deposits and dirt every 2 weeks
- clean the door thoroughly of deposits and dirt collected on the surface of the paint coat and moving parts such as hinges, handles, locks, etc. every 6 months, preferably before each winter and summer
- use a mild detergent or liquid, such as dishwashing detergent for cleaning. Do not use any solvent-based cleaning agents, alkaline or abrasive agents
- preparations for washing may not deteriorate the door leaf and door frame surfaces, and they may not contain any abrasives or chemicals that dissolve paintwork
- after cleaning the door, residual water should be discarded. Do not use running water under pressure from a water hose or pressure washers such as Kärcher or similar; avoid ingress of water into the door leaf
- finally, wipe dry the surface of the door leaves, frame and hardware