Installation and Service Manual

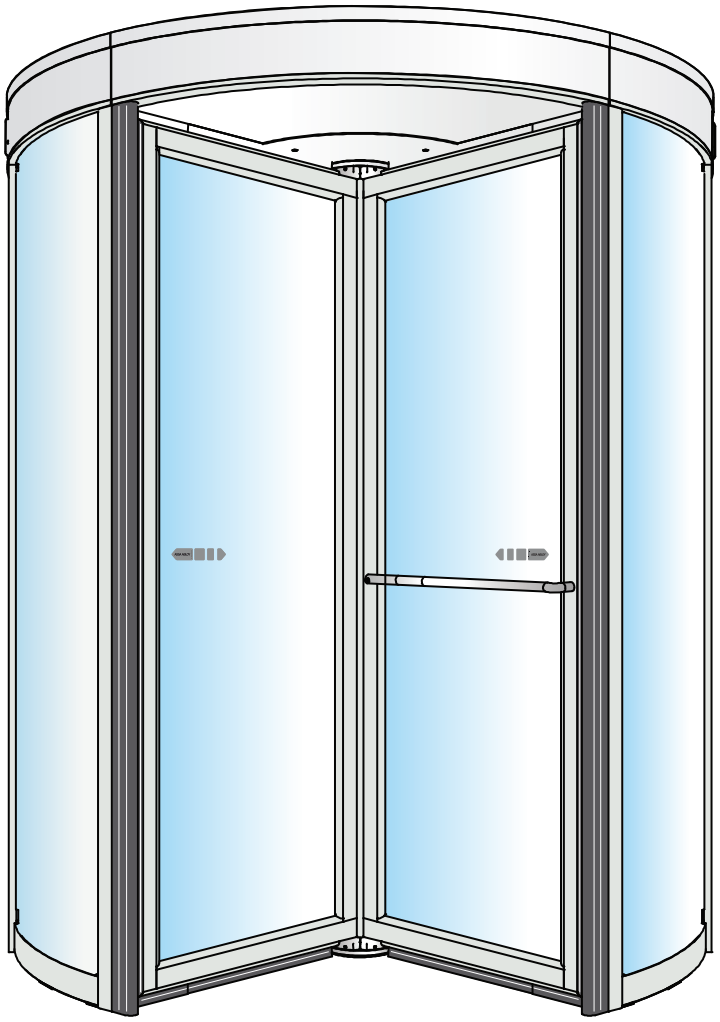
Revolving Door

ASSA ABLOY RD100-3, RD100-4

ASSA ABLOY

ASSA ABLOY Entrance Systems

The global leader in door opening solutions



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1 Revision

The following pages have been revised:

Page	Revision 1.0 → 2.0_draft
14	Updated illustration.
16	Updated accessories.
20	Updated texts.
27	Updated illustration.
30	Updated slam post.
32	Added this section.
34	Updated texts and illustration.
37	Updated illustration.
38	Updated illustration.
39	Updated illustration.
40	Updated illustration.
40	Added this illustration.
42	Updated.
44	Added grease.
49	Updated illustration.
50	Updated texts and illustration.
51	Updated texts and illustration.
60	Updated texts and illustration.
61	Added this new section.
62	Updated illustration.
63	Updated.
64	Updated.
67	Updated.
69	Added this section.
70	Updated.
73	Updated.
74	Updated.
77	Added this new section.

2 Instructions for safe operation

- Failure to observe the information in this manual may result in personal injury or damage to equipment.
- To reduce the risk of injury of persons - use this door set only as a pedestrian door.
- Do not use the equipment if repair or adjustment is necessary.
- Disconnect supply when cleaning or other maintenance is to be carried out.
- The operator can be used by children over 8 years of age if they have been instructed by a person in charge of their safety.
- The operator can be used by children 8 years of age or younger if they are supervised by a person responsible for their safety.
- The operator can be used by persons with impaired physical, sensory or mental capacity if they have been instructed by a person in charge of their safety.
- Cleaning and user maintenance shall not be made by children.
- Do not let anyone climb on or play with the door or the fixed/remote controls.
- In all instances, where work is being done, the area is to be secured from pedestrian traffic, and the power removed to prevent injury.

3 Important information

3.1 Intended use

The ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4 are revolving doors developed to provide draught free access to buildings.

The door is designed to offer continuous use, a high degree of safety and maximum lifetime. The system is self-adjusting to the effects caused by normal variations in the weather conditions and to minor friction changes caused by e.g. dust and dirt.

This manual contains the necessary details and instructions for the installation, maintenance and service of the Revolving Doors ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4.

The door can be used indoors or outdoors. Outdoor use with water resistant cover.

For use see User manual 1015322.

Save these instructions for future reference.

3.2 Safety precautions

When opening the box check that door leaves have not shifted during transport. Always use tools provided for lifting.

Be sure to complete a risk assessment according to "Guide for installers of Powered Pedestrian Revolving Doors" (PRA-0002) and fill in the "Site Acceptance Test" (PRA-0003) before taking the door into operation.

To avoid bodily injury, material damage and malfunction of the product, the instructions contained in this manual must be strictly observed during installation, adjustment, repairs and service etc. Training is needed to carry out these tasks safely. Only ASSA ABLOY Entrance Systems-trained technicians should be allowed to carry out these operations.

3.3 Electronic equipment reception interference

The equipment may generate and use radio frequency energy and if not installed and used properly, it may cause interference to radio, television reception or other radio frequency type systems.

If other equipment does not fully comply with immunity requirements interference may occur.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Relocate the receiver with respect to the equipment.
- Move the receiver away from the equipment.
- Plug the receiver into a different outlet so that equipment and receiver are on different branch circuits.
- Check that protective earth (PE) is connected.

If necessary, the user should consult the dealer or an experienced electronics technician for additional suggestions.

3.4 Environmental requirements

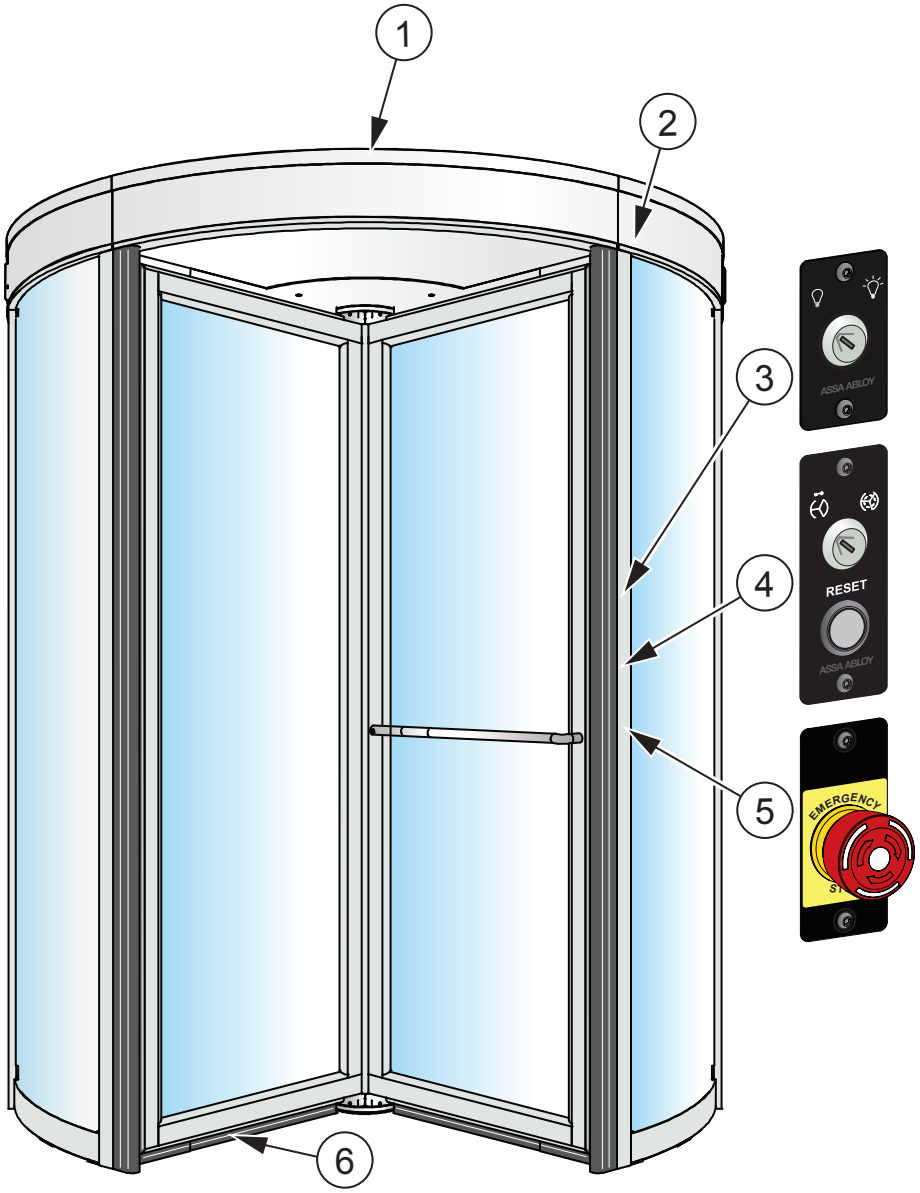
ASSA ABLOY Entrance Systems products are equipped with electronics and may also be equipped with batteries containing materials which are hazardous to the environment. Disconnect power before removing electronics and battery and make sure it is disposed of properly according to local regulations (how and where) as was done with the packaging material.

4 Technical specifications

Manufacturer:	ASSA ABLOY Entrance Systems AB
Address:	Lodjursgatan 10, SE-261 44 Landskrona, Sweden
Type:	ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4
Mains power supply:	100-240 V AC +10/-15%, 50/60 Hz, mains fuse max 10A (building installation) **Note!** The mains supply shall be installed with protection and an all-pole mains switch with isolating capability of Category III, at least 3 mm between contacts, shall be installed according to local regulations. These articles are not provided with the door.
Power consumption:	360W
Mains fuse F1, F2:	2 x T 6,3 AH/250 V
Temperature range:	-20 to +50°C
Degree of protection:	IP20
Degree of protection, control actuators:	IP54
Glass type:	Standard door leaves - clear laminated safety glass 3+0.38+3 mm (EN12600/2B2) Standard outer wall and night closing doors - clear laminated safety glass 4+0.76+4 mm (EN12600/1B1)
Approvals:	Third party approvals from established certification organizations valid for safety in use, see Declaration of Conformity.

5 Identification

5.1 Main parts



No.	Description
1	Dust protection roof (max. load 0 kg) Do not walk or store any material on the roof!
2	Control unit CDC100 (behind fascia sheets)
3	Lighting LED with control (option)
4	ON/OFF switch
5	Emergency stop button (Not used in US and Canada)
6	Passive safety edges (option) (Not used in US and Canada)

6 Pre-installation

6.1 General tips/Safety concerns

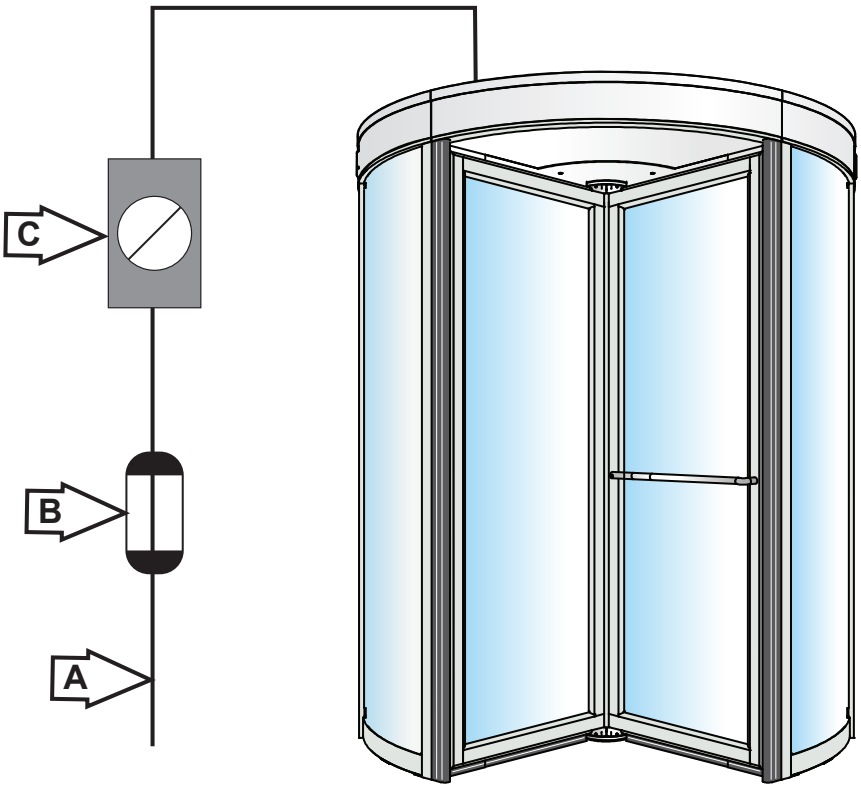
In all instances, where work is being done, the area is to be secured from pedestrian traffic, and the power removed to prevent injury.

- If there are sharp edges after drilling the cable outlets, chamfer the edges to avoid damage to the cables.
- For enhanced security and vandalism protection, always mount the operator access in the interior of a building whenever possible.
- Make sure the ambient temperature is in the range specified in section Technical specification.
- Make sure that the power is off before installing.
- Make sure that the door leaf and the wall are properly reinforced at the installation points.
- Unpack the operator and make sure that all parts are delivered in accordance with the packing note and that the operator is in good mechanical condition.
- Ensure proper material is being used for the door leaves and that there are no sharp edges. Projecting parts shall not create any potential hazards. If glass is used bare glass edges shall not come in contact with other glass. Toughened or laminated glass are suitable glasses.
- At least two persons are required to lift and handle drive parts.
- Ensure that entrapment between the driven part and the surrounding fixed parts due to the opening movement of the driven part is avoided. The following distances are considered sufficient to avoid entrapments for the parts of the body identified;
  - for fingers, a distance greater than 25 mm or less than 8 mm
  - for feet, a distance greater than 50 mm
  - for heads, a distance greater than 200 mm
  - and for the whole body, a distance greater than 500 mm
- Danger points shall be safe guarded up to a height of 2.5 m from the floor level.

7 Installation

7.1 Pre-installation check

Mains supply



	Description
A	Mains power supply
B	Protection (fuse, circuit breaker)
C	Main switch

The mains power supply shall be installed with protection and an all-pole mains switch with isolating capability of Category III, at least 3 mm between contacts, shall be installed according to local regulations. These articles are not provided with the door.

The mains inlet to the door is a point above the door according to illustration. The hole for the cable shall have a diameter of minimum 14 mm.

7.2 Floor surface

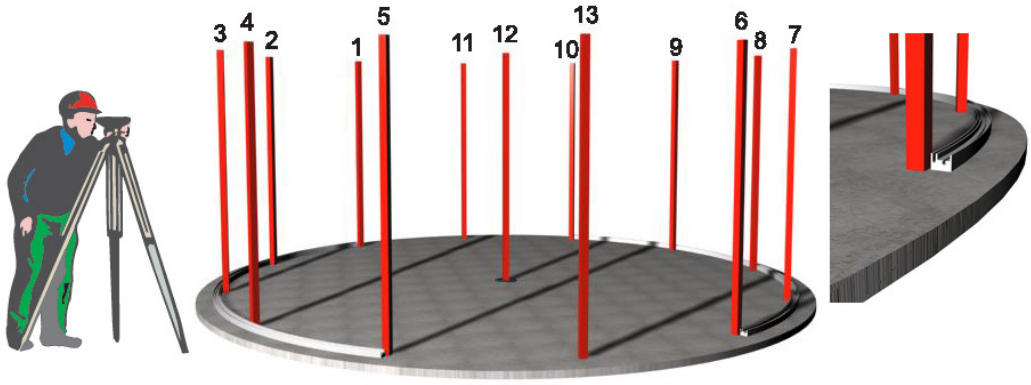
Check if the surface where the door is to be placed is suitable.

Measure the floor surface.

Fill in the table below.

Mark the highest point.

If the difference is more than ±3 mm, the contractor needs to be contacted.



Spot	Value	0-spot value	Difference (Max +/- 3mm)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

7.2.1 Mark up

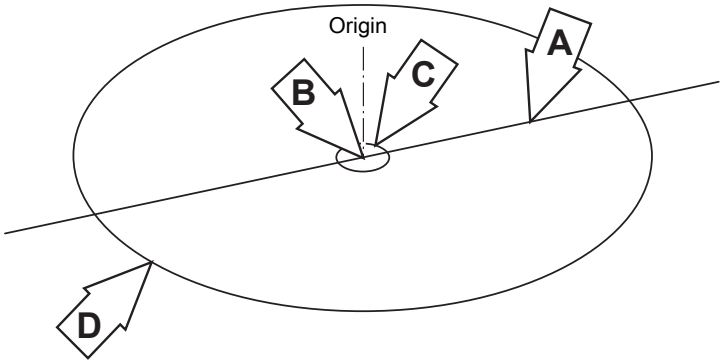
Mark line A. Line A is the centre line of the door between the adjacent walls.

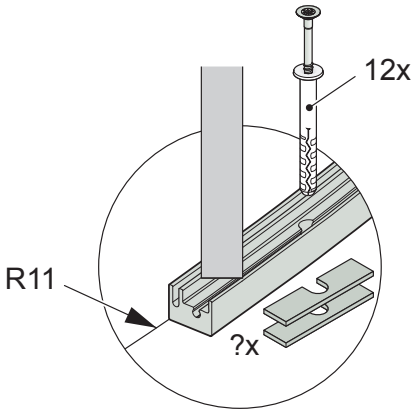
Mark the centre point of the door B along line A.

Mark circle C. Use the centre pivot plate as guide.

Mark circle D. This circle is the inside diameter of the fixing rails. For radius, see table.

If a ground ring is used, use the centre of the ground ring as a guide for line A and centre B.

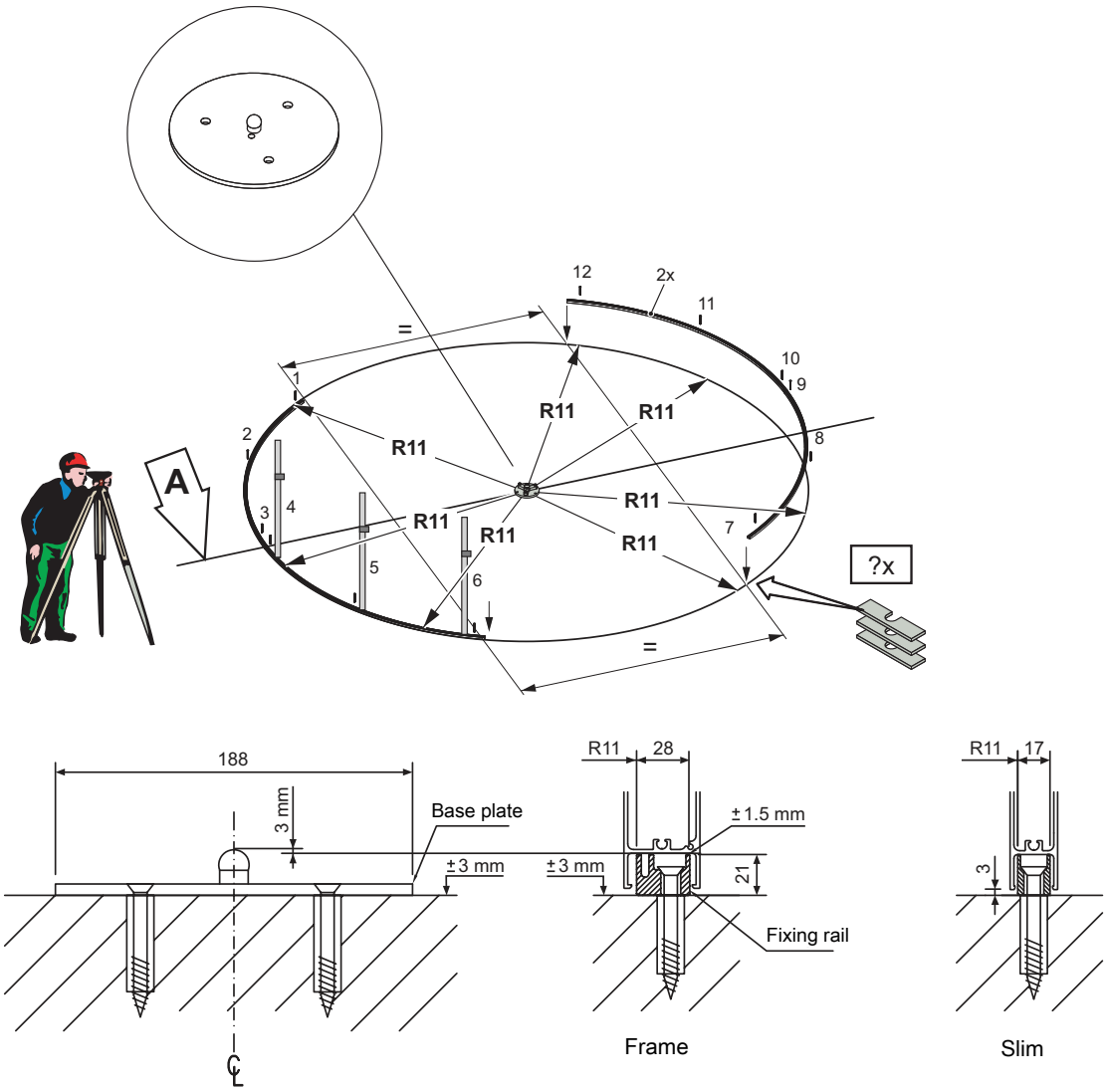




Door type	Nominal R11 Frame (inside)	Nominal R11 Slim (inside)
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-18	906	904
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-21	1056	1054
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-24	1206	1204
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-27	1356	1354
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-30	1506	1504

Max. deviation 1 mm

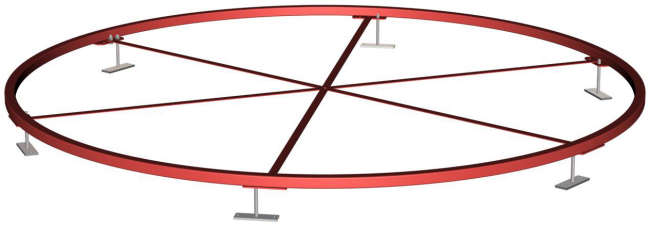
7.3 Fit the fixing rail and the centre plate

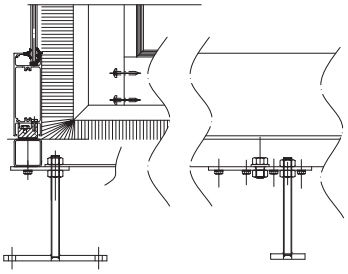


Fixing bolt size is 7x100 mm.

Spot	Value	0-spot value	Difference Max. +/- 0.5 mm
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
12			

7.4 Ground ring (option)





Door type	Article No.	D
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-18	1000990 -18	1880
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-21	1000990 -21	2180
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-24	1000990 -24	2480
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-27	1000990 -27	2780
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-30	1000990 -30	3080

The kit consists of:

2x	180° ring parts
6x	Plates
6x	Spokes
7x	Supports
6x	Screws M6S M12 x 20
20x	Nuts M6M M12
16x	Screws RTS ST 6.3 x 19

Mounting

a Screw the two 180° ring parts together.

b Mount the spokes and the supports.

c Put the ground ring in its correct position.

d Check the roundness of the ground ring.

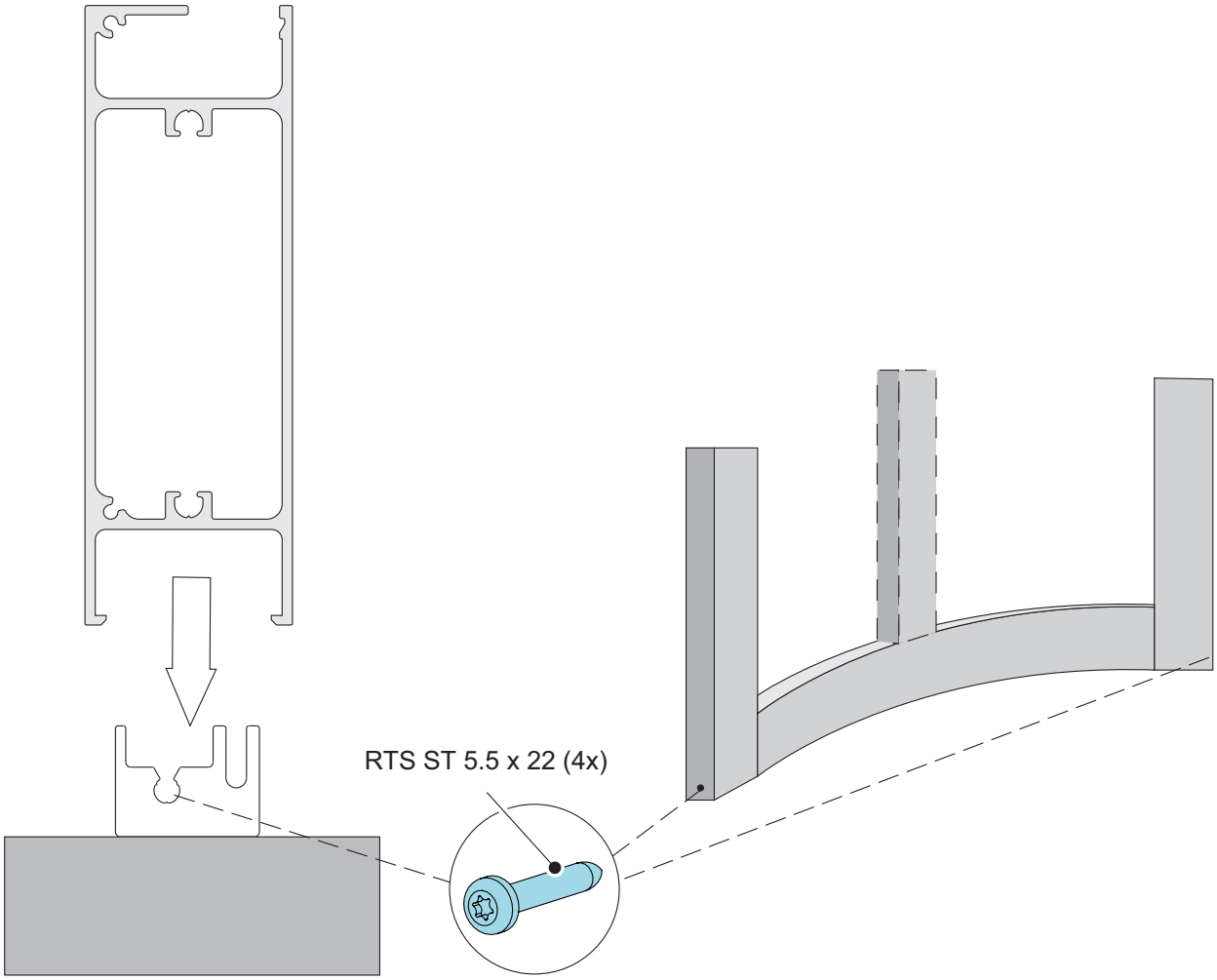
e Level the ground ring to its correct height by adjusting the supports.

f Fix the ground ring to the floor.

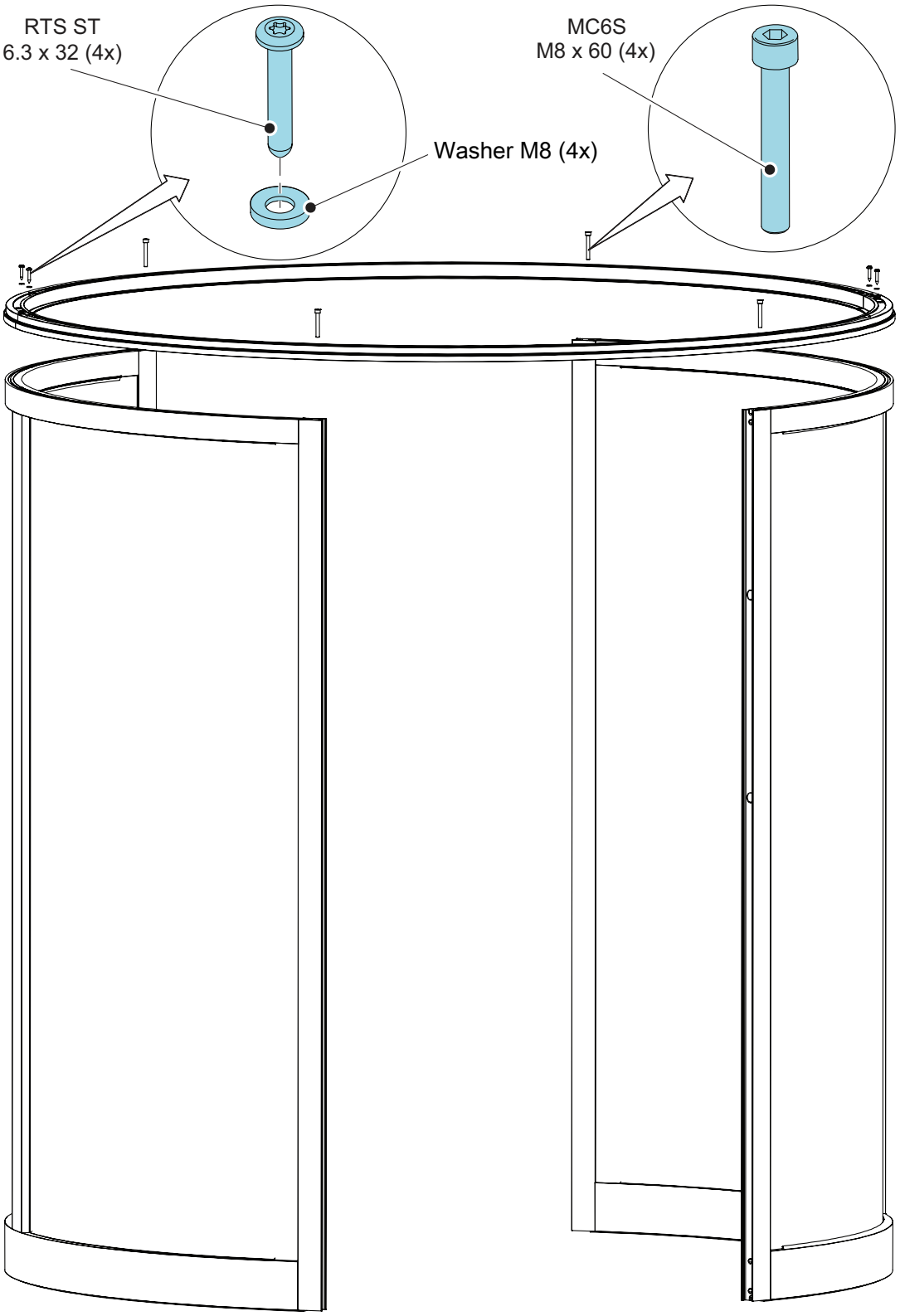
g If necessary, cut the threaded rod on the supports.

7.5 Outer walls

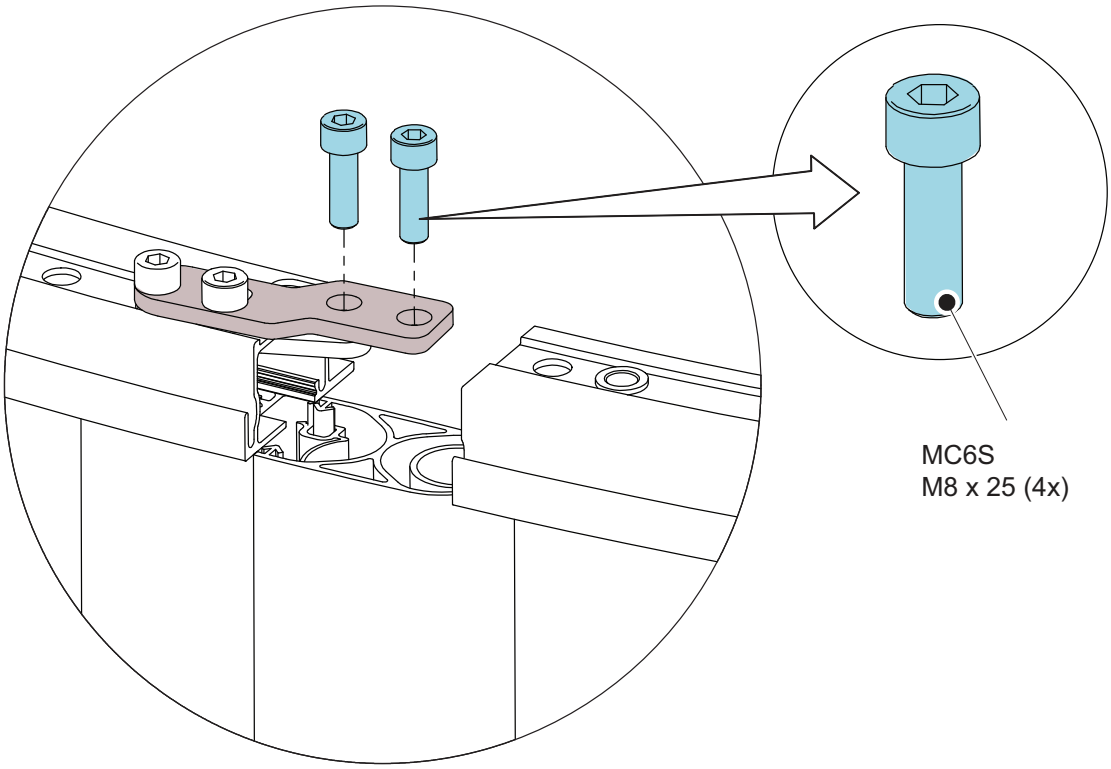
7.5.1 Outer wall sections



7.5.2 Wall ring Frame



7.5.3 Wall ring Slim



7.5.4 Passive safety edges, outer wall

a Mount the passive safety edge to the outer wall.

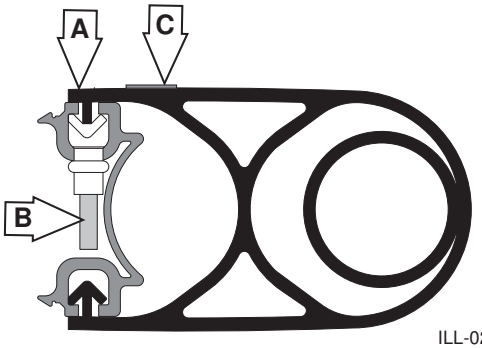
b Loosen the edge of the rubber (A) to get access to the screw behind it.

c Tighten the screw (B).

d Put the rubber back in place.

e Screw side marked with green dot (C).

f Two screws are located 10mm from each end of the aluminium fixing profile and one at the the middle of the profile length.



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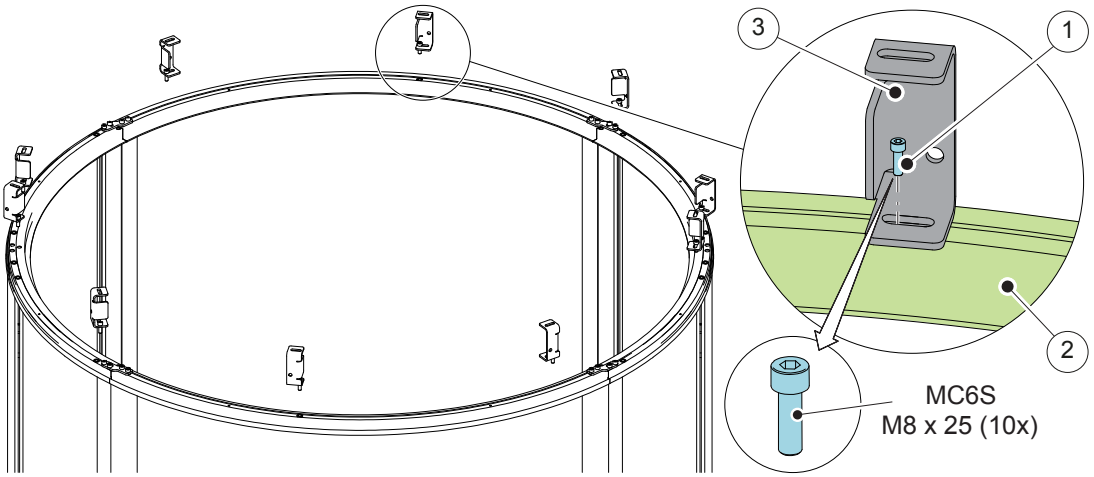
7.5.5 Brackets

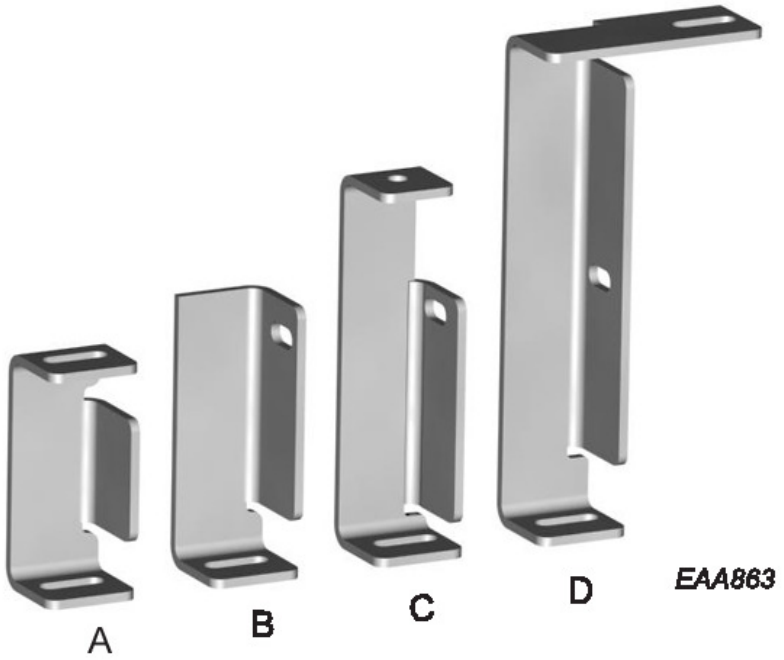
a Do not tighten the bolts (1) until the wall ring (2) has been installed and adjusted.

b The brackets (3) close to the openings shall be located above the wall sections.



1 Bolt
2 Wall ring
3 Bracket

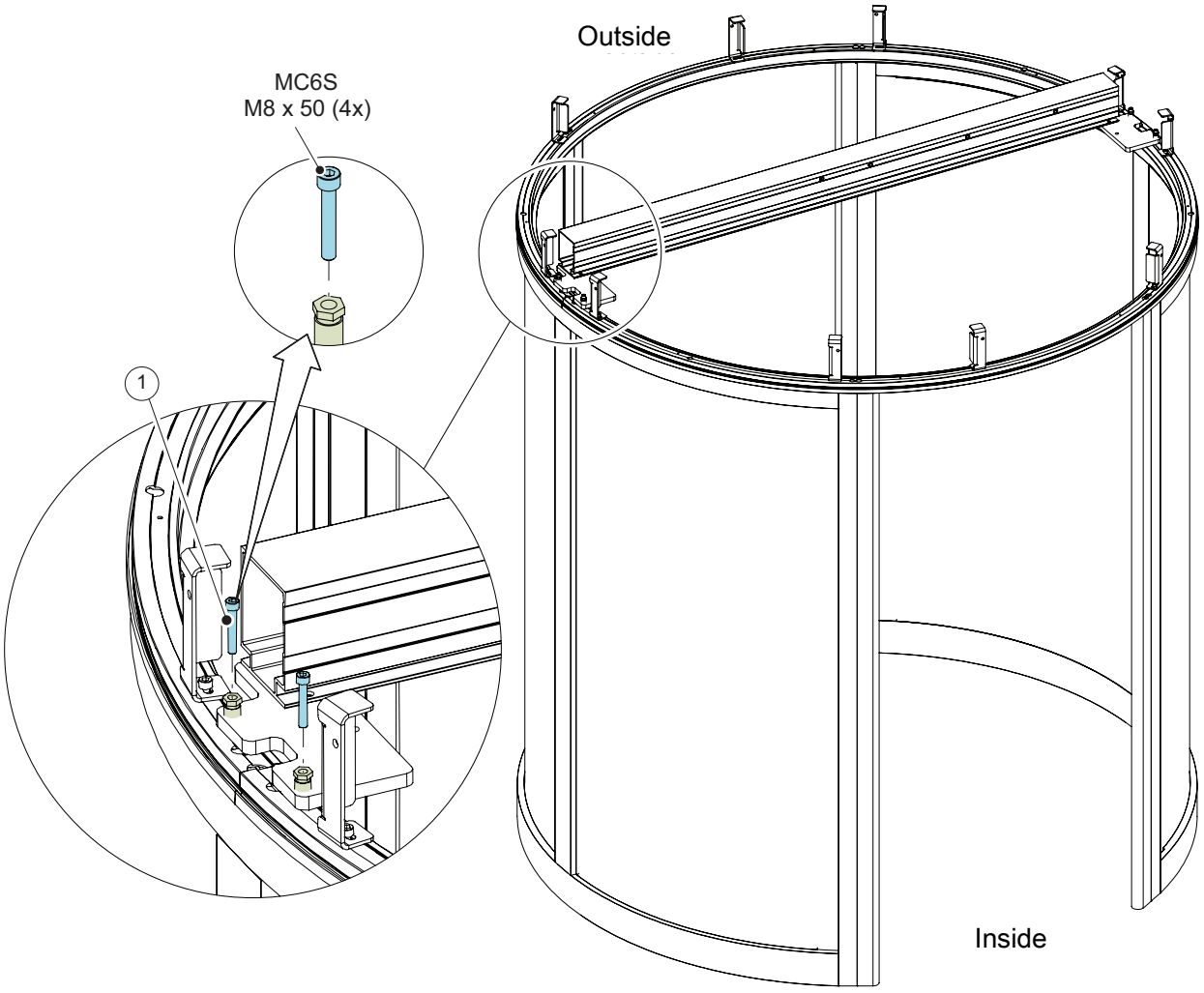
Brackets



Item	Used where?
A	Door without NCD. Internal half of doors with NCD. Fascia height 200 - 1250 mm.
B	External half of doors with NCD. Fascia height 200 - 210 mm.
C	External half of doors with NCD. Fascia height 211 - 280 mm.
D	External half of doors with NCD. Fascia height 281 - 1250 mm.

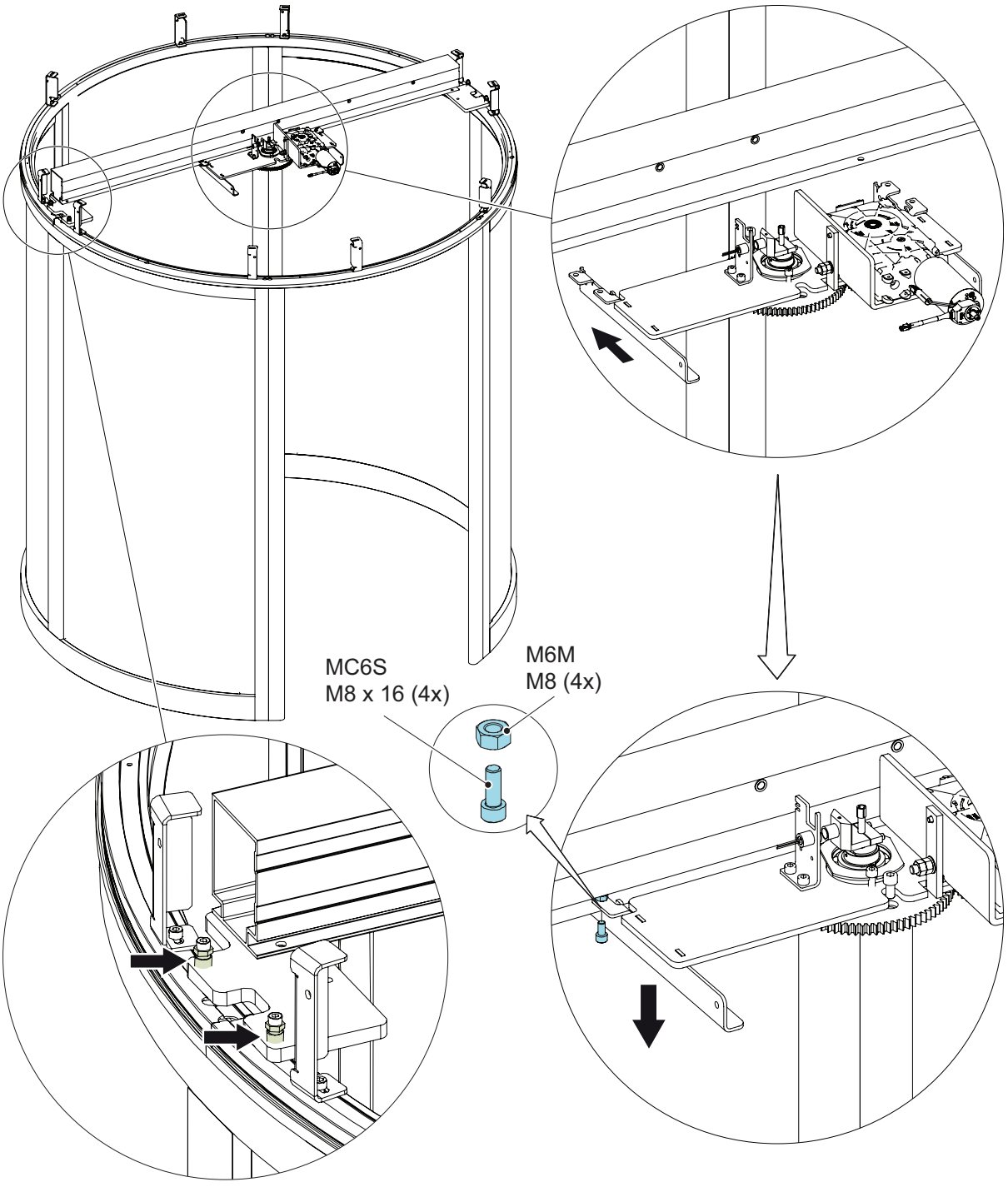
7.6 Centre beam

a Do not tighten the bolts (1) until the centre shaft has been aligned with the outer walls.



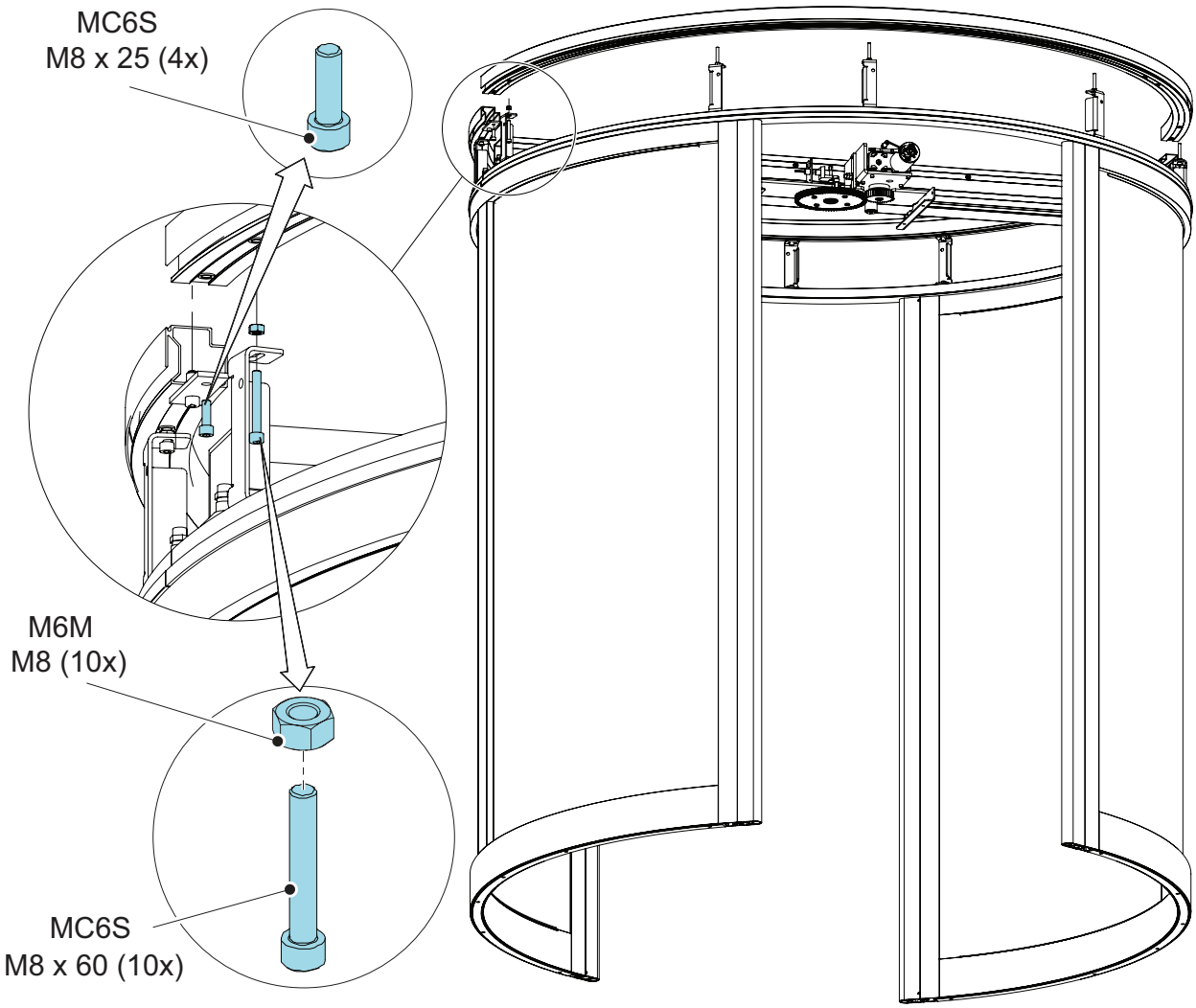
1 Bolt

7.7 Drive unit



Level the drive unit with the adjustment screws on the centre beam fixing brackets.

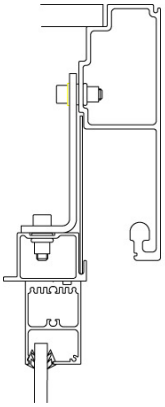
7.8 Top ring

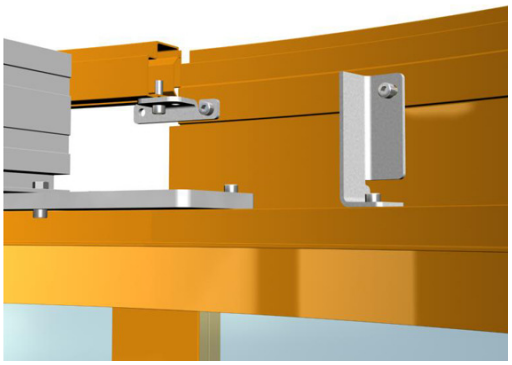


7.9 Night closing doors (Not used in US and Canada)

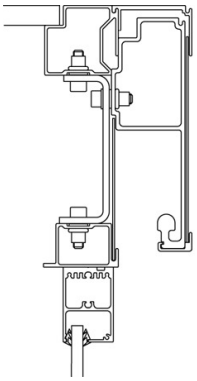
7.9.1 Support beam

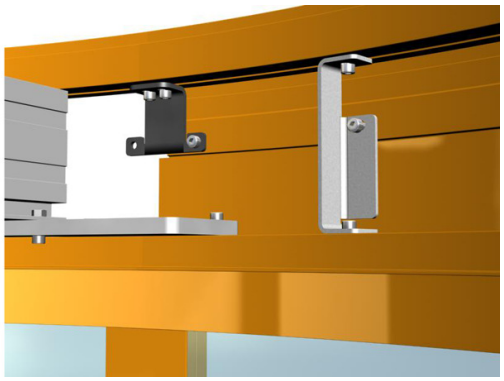
Fascia height 200 - 210 mm



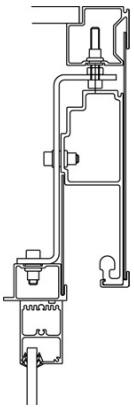


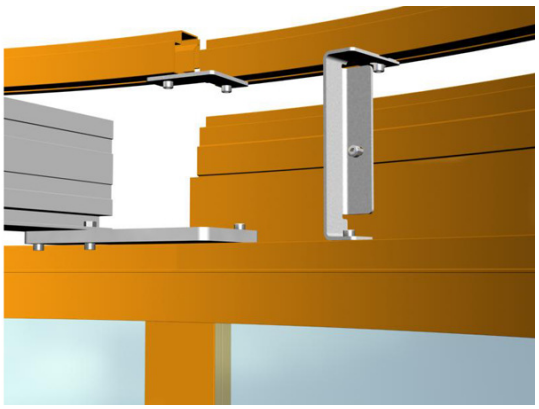
Fascia height 211 - 280 mm

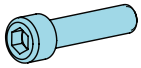




Fascia height 281 - 1250 mm

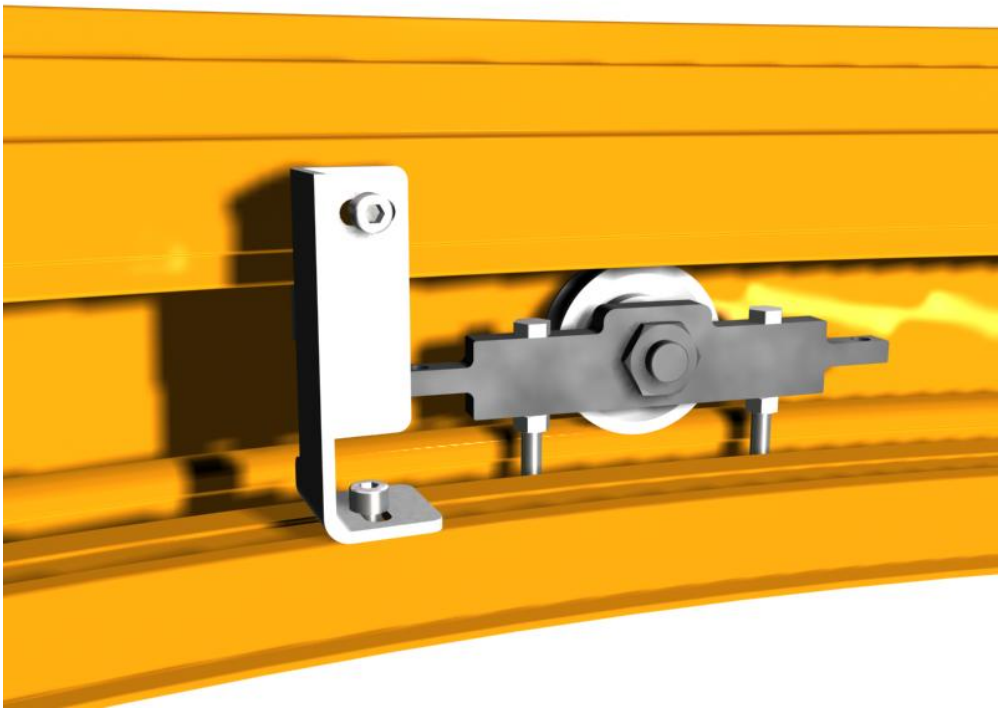






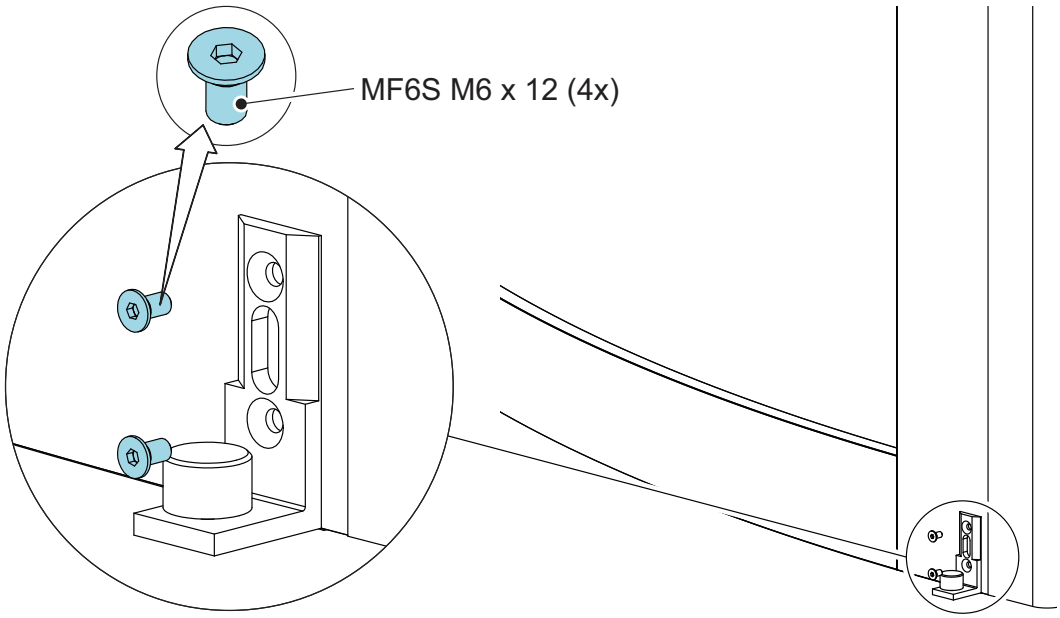
MC6S M8 x 25

7.9.2 Carriage wheel fittings

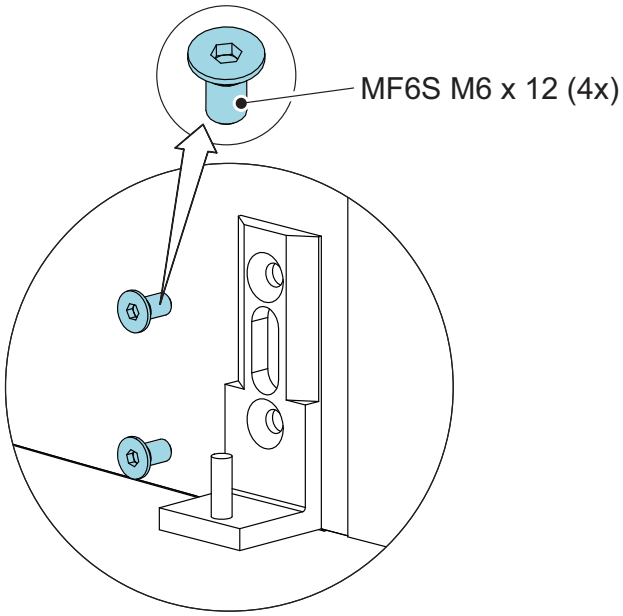


7.9.3 Floor guide

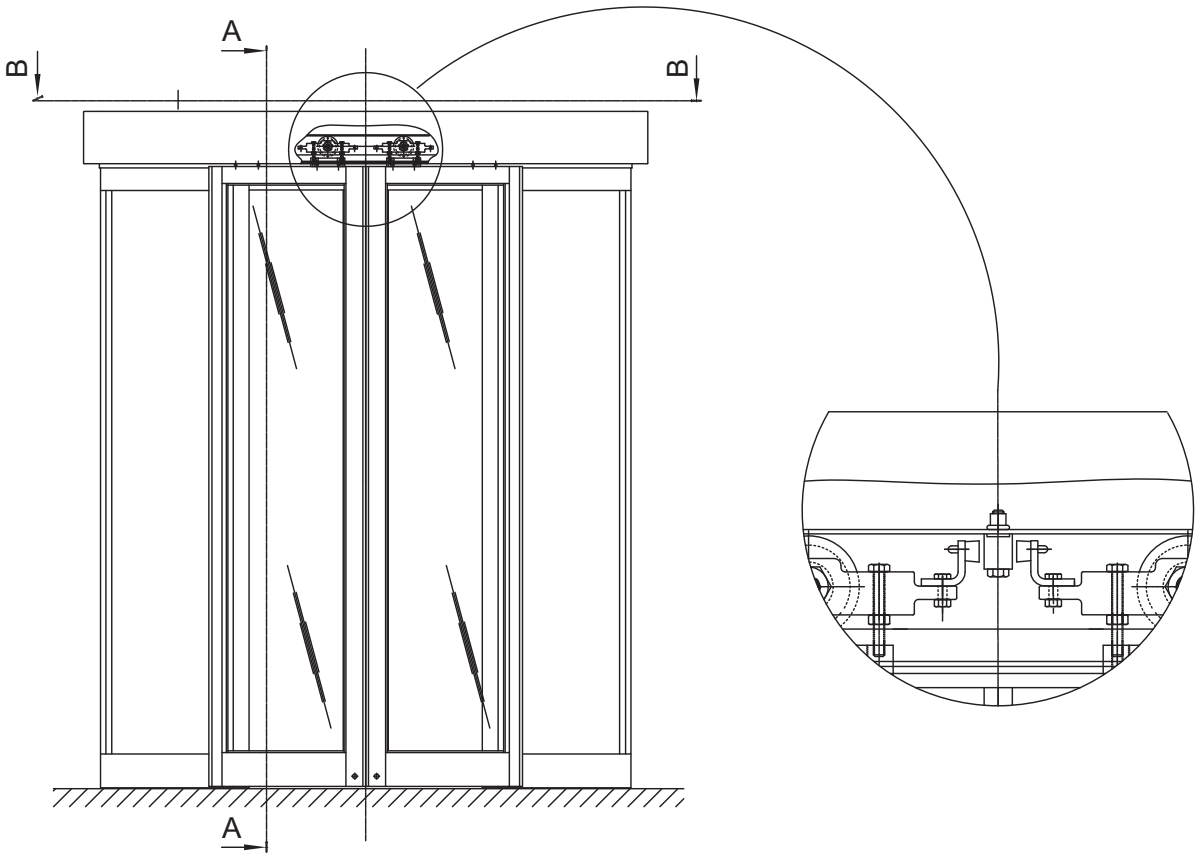
Frame NCD

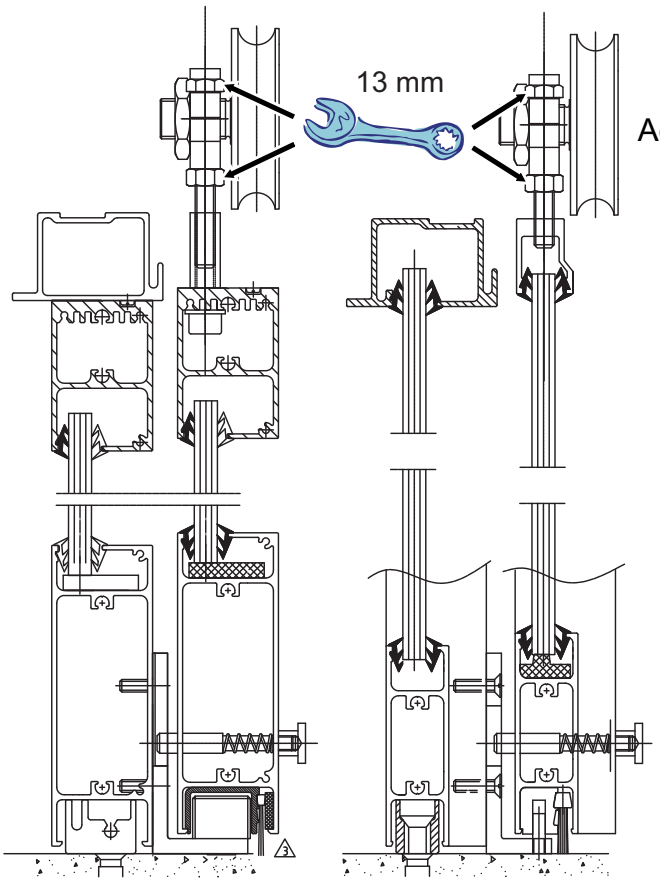


Slim NCD



7.9.4 Door leaves



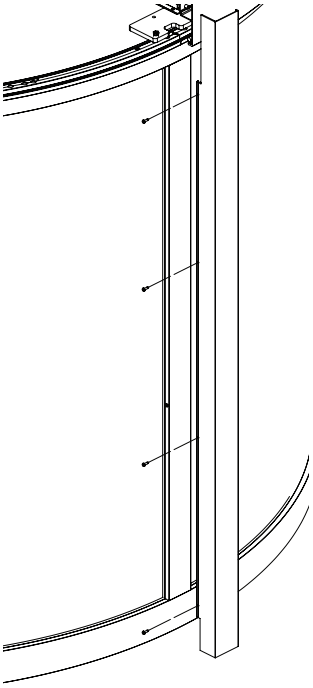


Adjust the height of door leaves.

Frame Slim

Cut A-A

7.9.5 Slam posts



RTS ST 5.5 x 13

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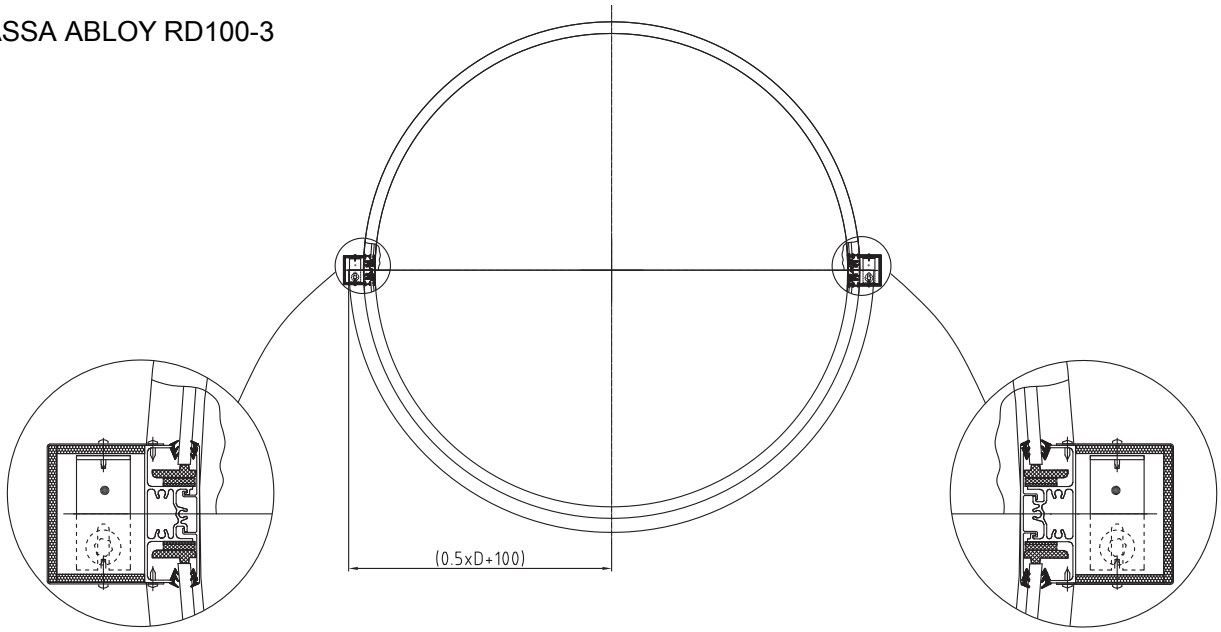
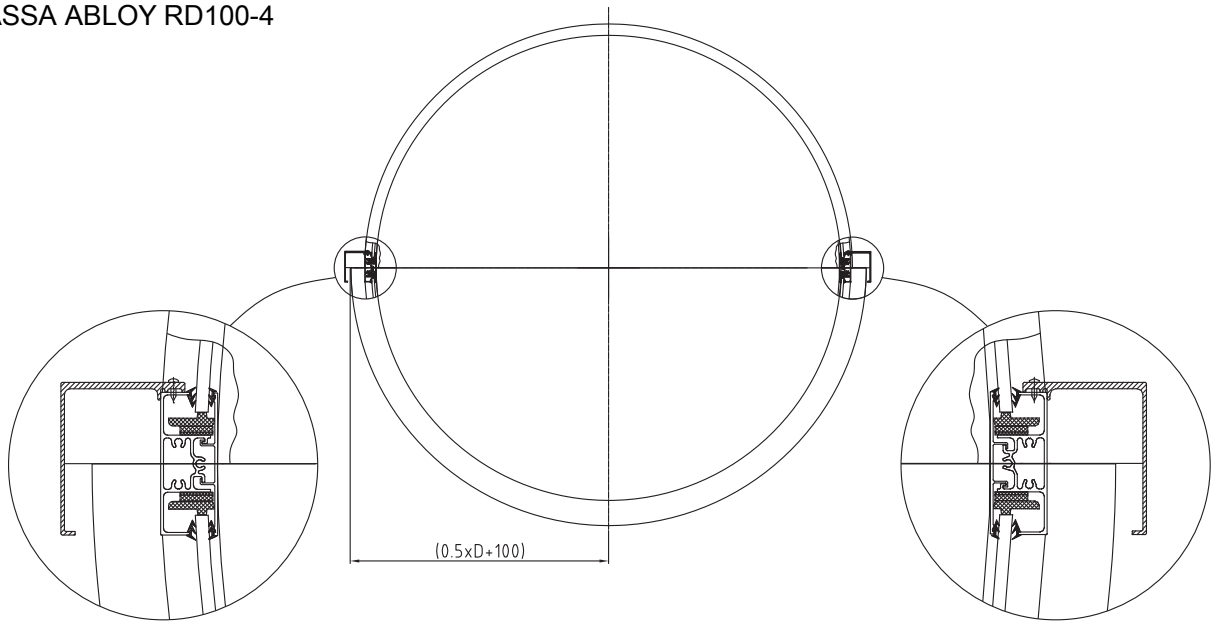
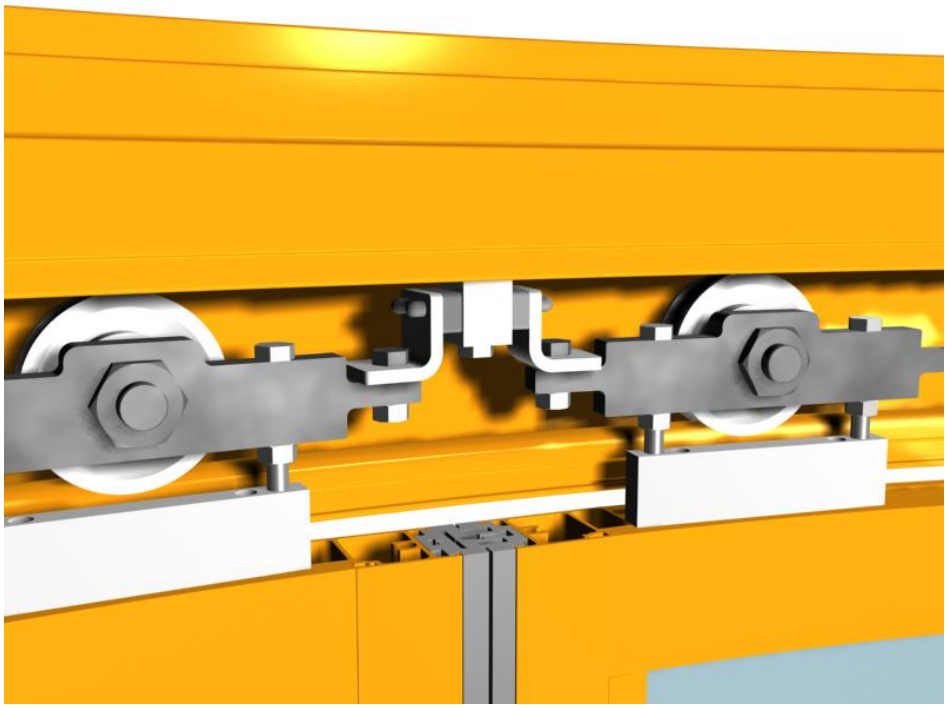


ASSA ABLOY RD100-4



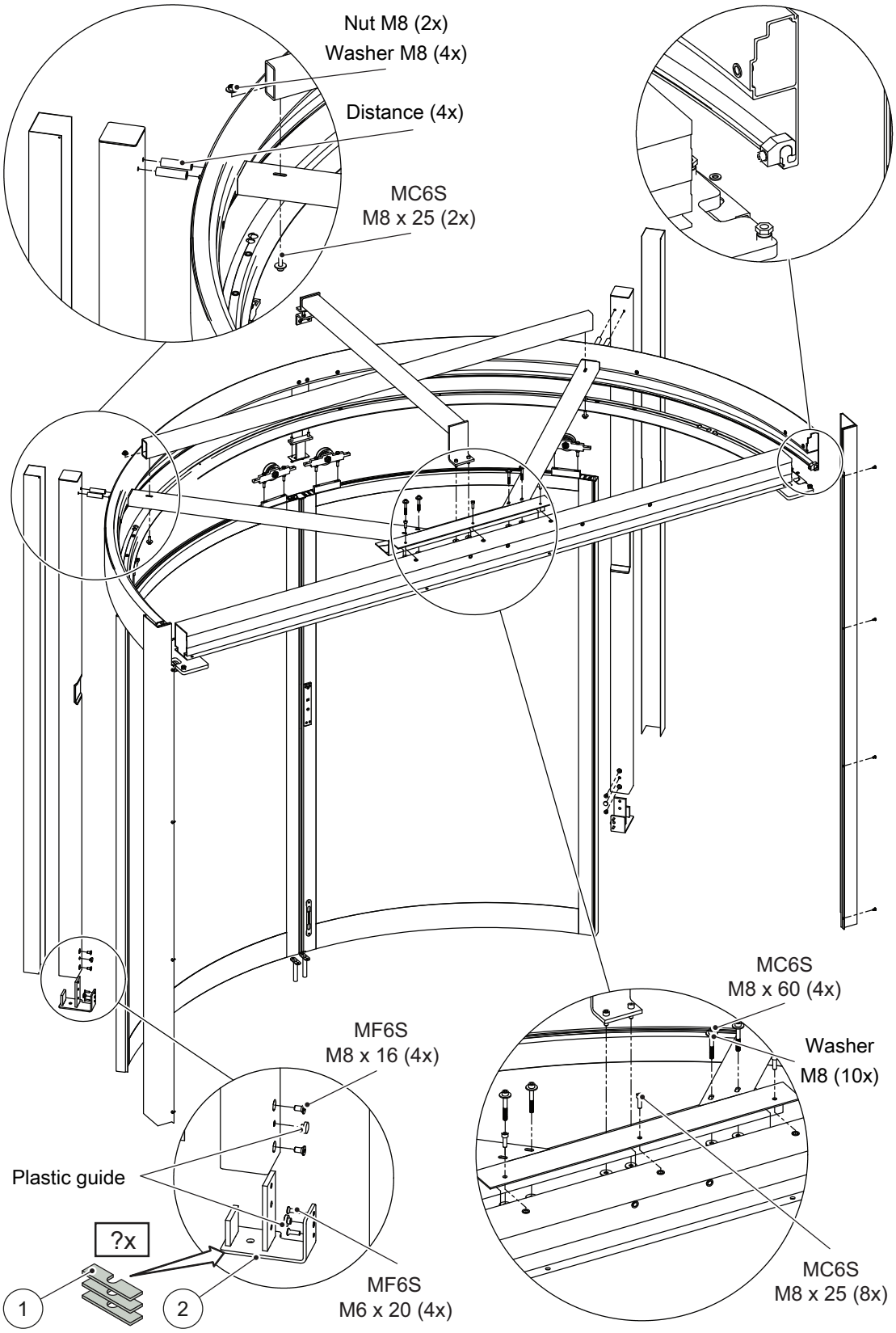
Cut B-B

7.9.6 Door stop

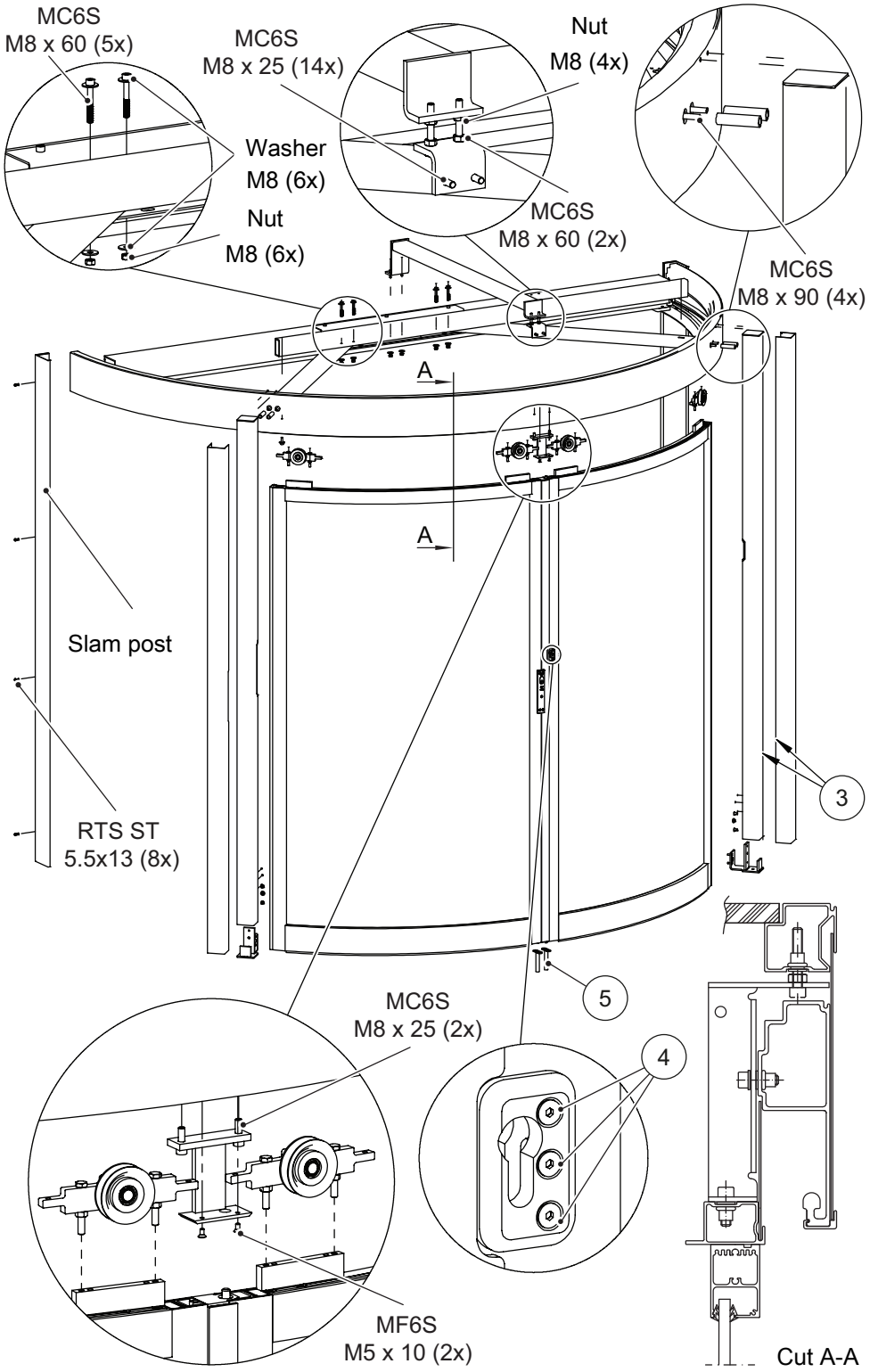


M6M M6
M6S 8 x 20
M6S 6 x 35

7.10 Night closing doors burglar resistance class 3 EN1627:2011 (Not used in US and Canada)



a Put steel spacers (1) to fill the 3mm gap between finished floor and floor guide bracket (2), and tighten the screw into concrete.



b Glue cladding (3) (when applicable) at site.

c Screws head (4) shall be drilled to ensure they cannot be removed. Put silicone sealant on the broken screws' head in case of rust.

d Espagnolette floor guide (5) shall be installed at last for the best fitting. Lock the door, and mark the pin position on concrete. Drill holes and fix the Espagnolette floor guide into the floor.

Note! To fulfill resistance class 3 EN 1627:2011, all glass, door leaves and outer wall must be glued (Silicone).

7.11 Glazing

Glazing of curved glasses

a Mount the glazing blocks (1) in the bottom rail (2) and the entrance post (3).

b Push the glass (4) into the head profile.

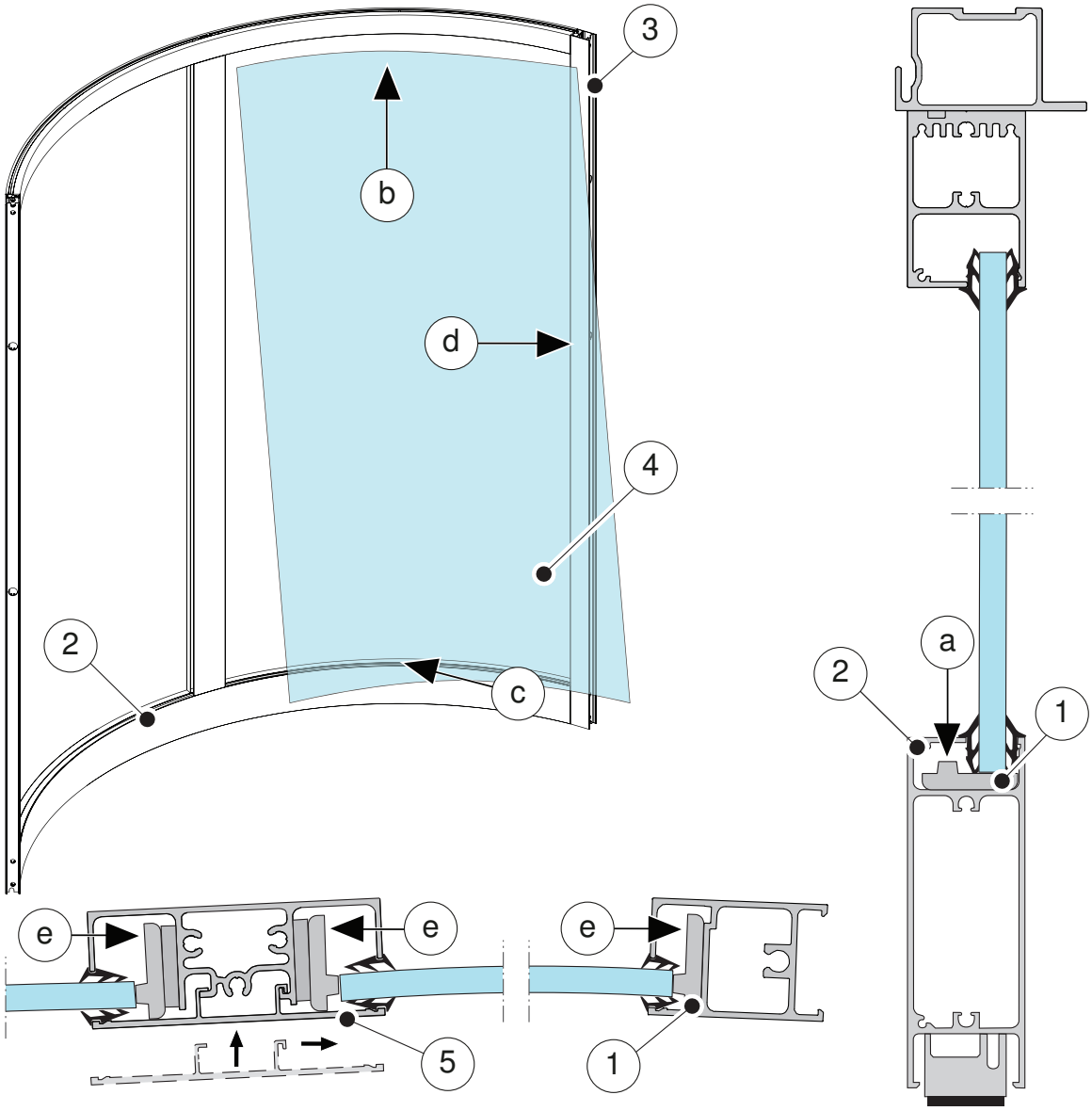
c Let the glass (4) slide down into the bottom rail (2).

d Push the glass (4) into the entrance post (3).

e Mount the blocks between the glass (4) and the vertical glazing bar.

f When both glasses (4) are in place in the wall section, mount the cover profile (5).

g Mount the rubber glazing strips.

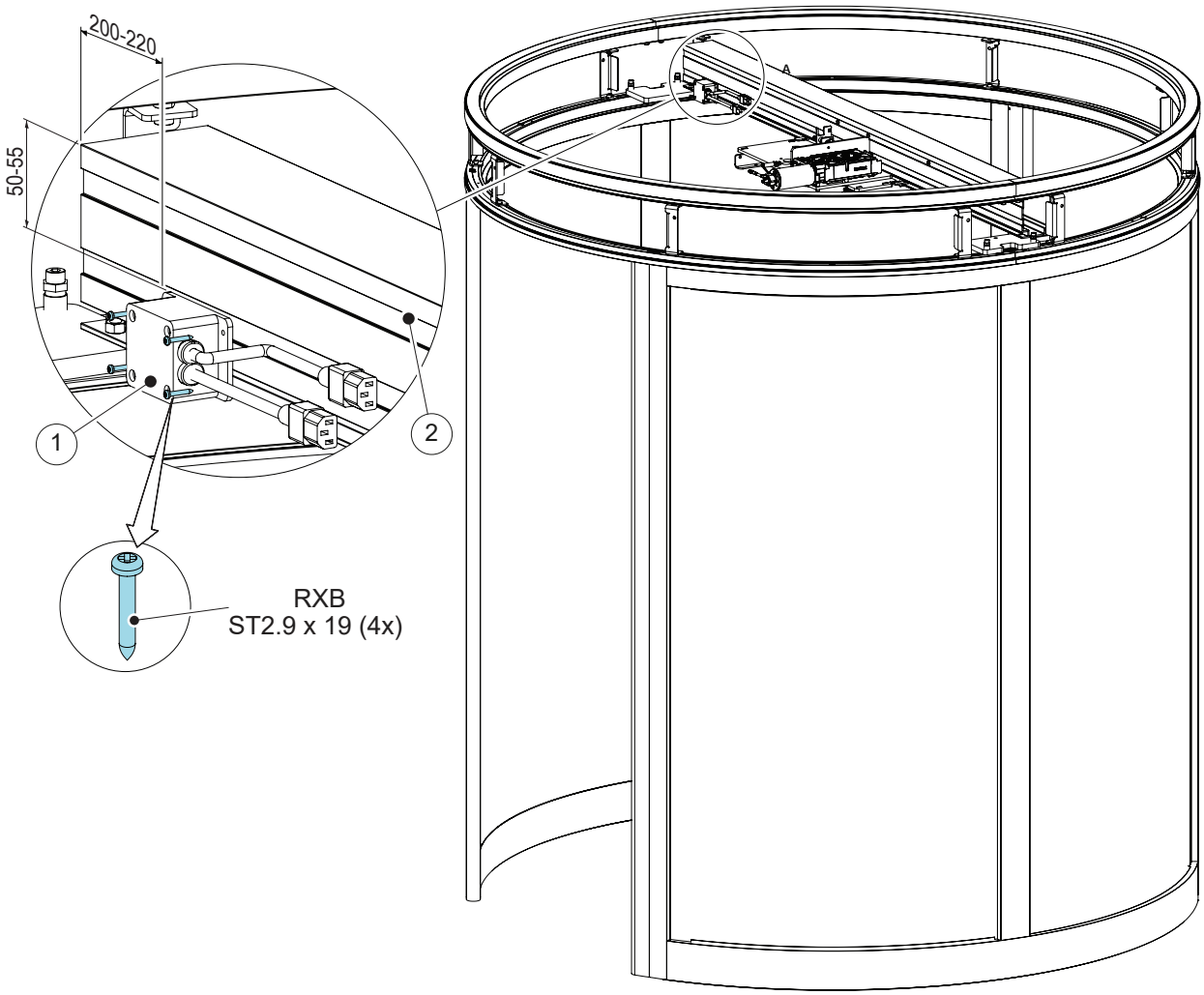


1 Glazing block
2 Bottom rail
3 Entrance post
4 Glass
5 Cover profile

7.12 Electrical installation

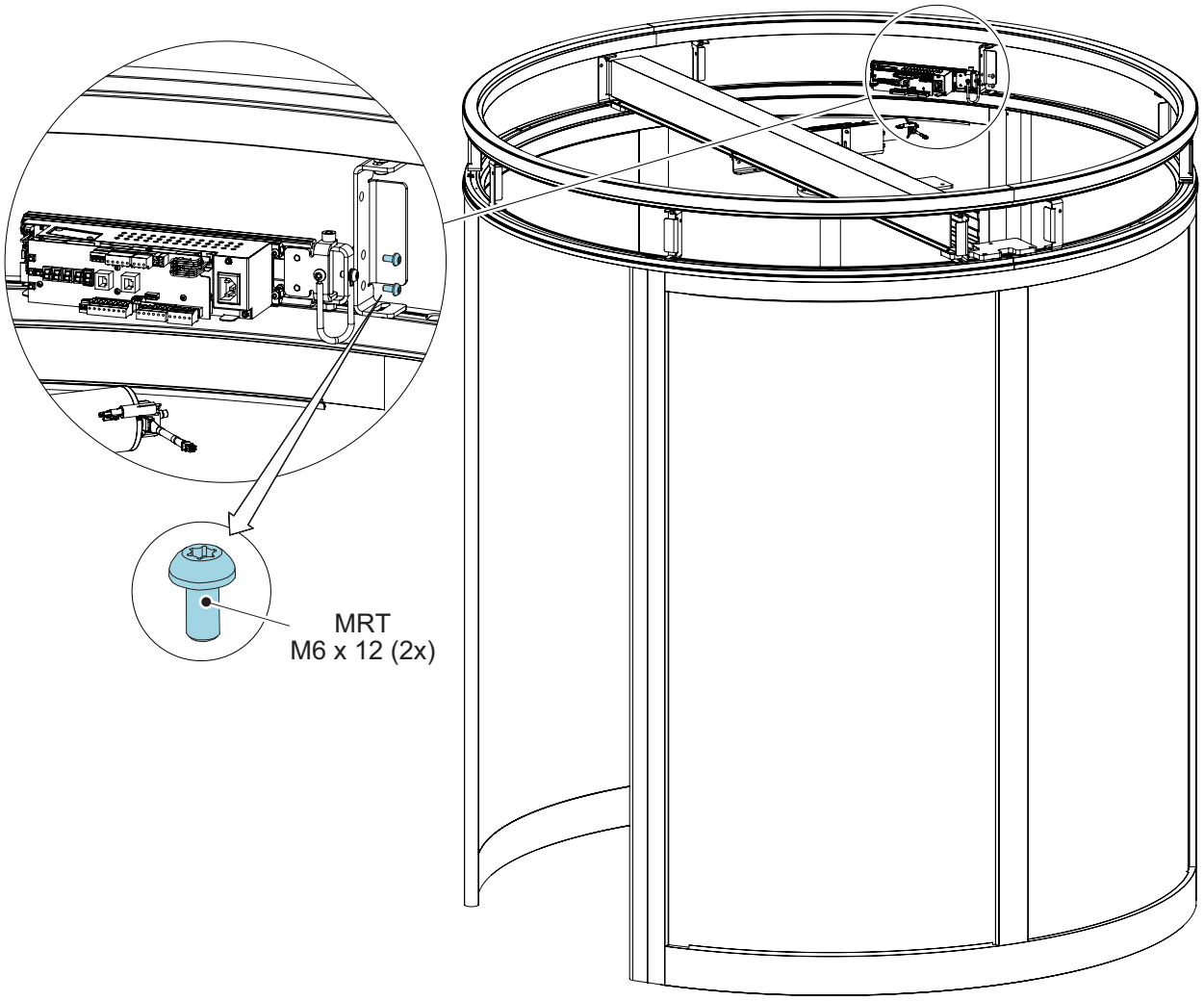
7.12.1 Connection box

a Fix the mains connection box (1) to the centre beam (2).

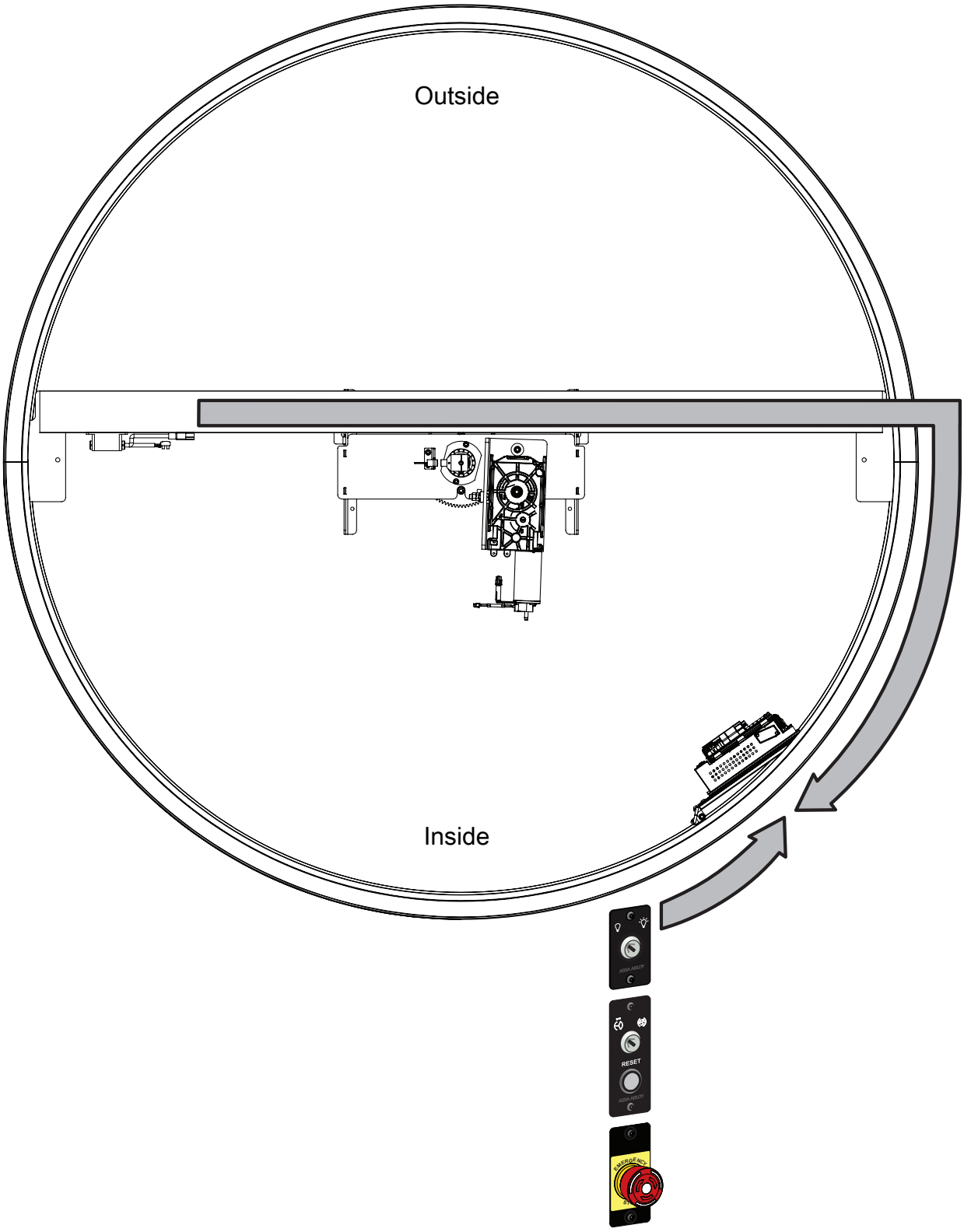


1 Mains connection box
2 Centre beam

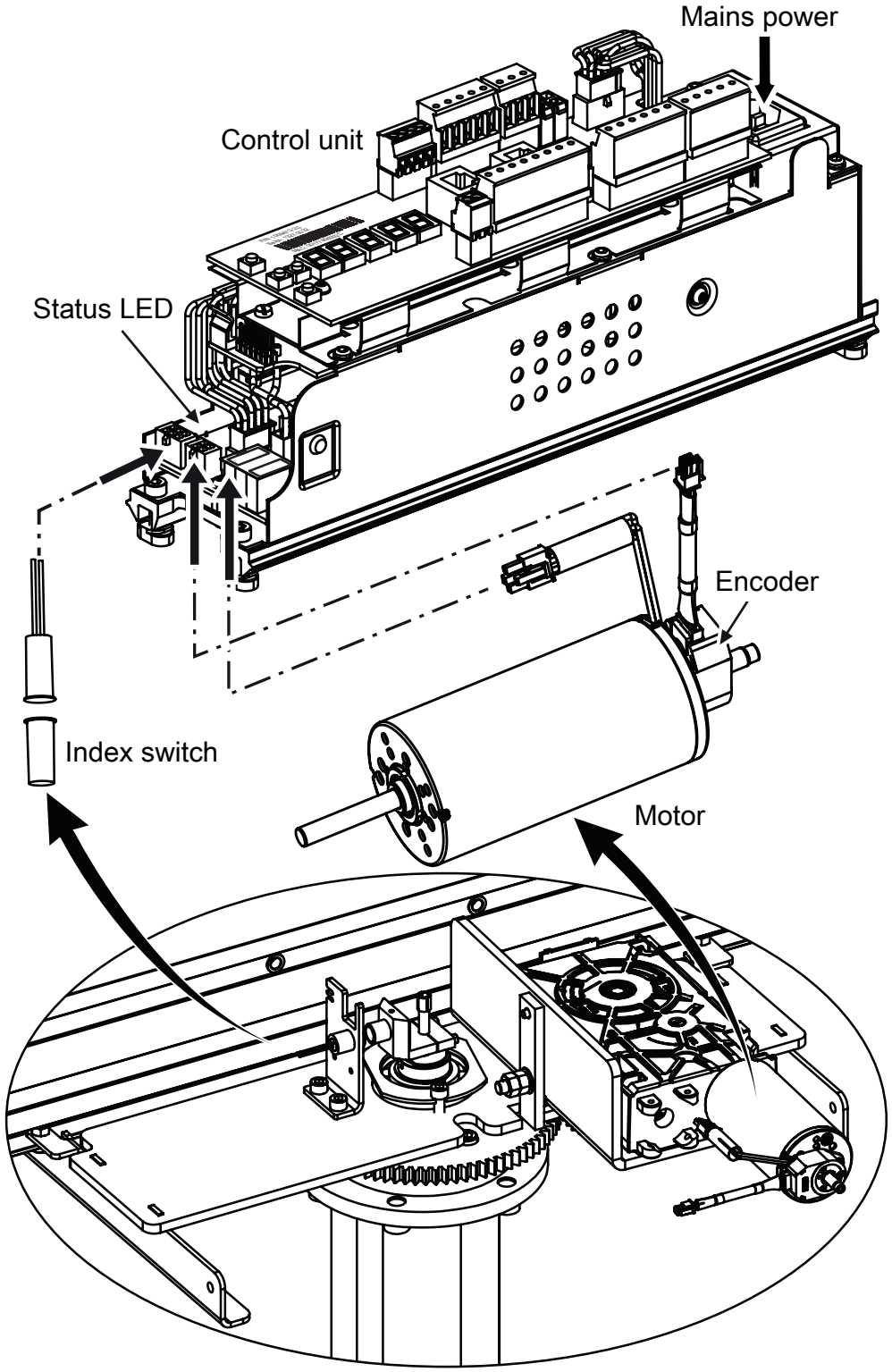
7.12.2 Control unit



7.12.3 Cabling

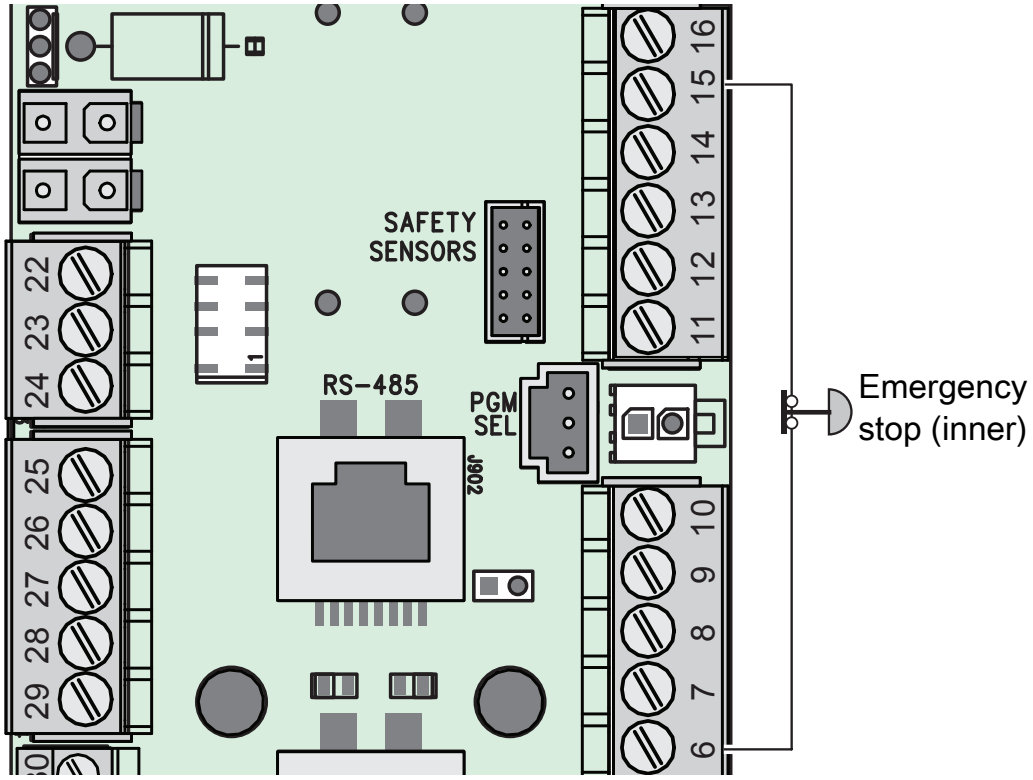


7.13 Electrical connection

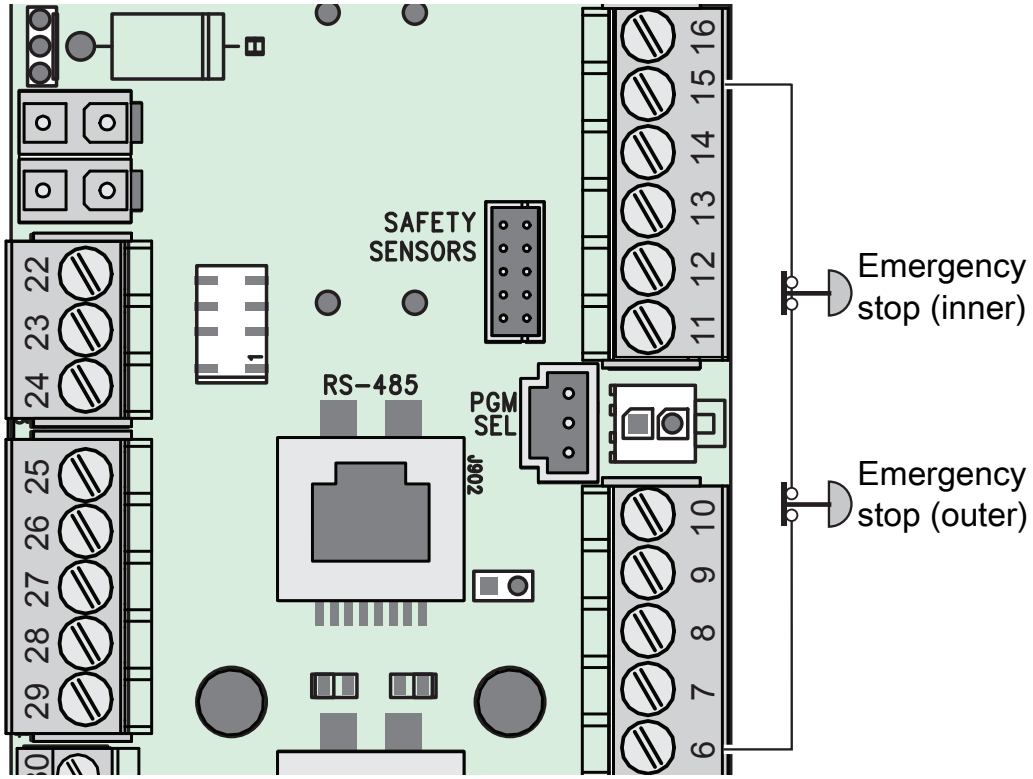


7.13.1 Connection diagram

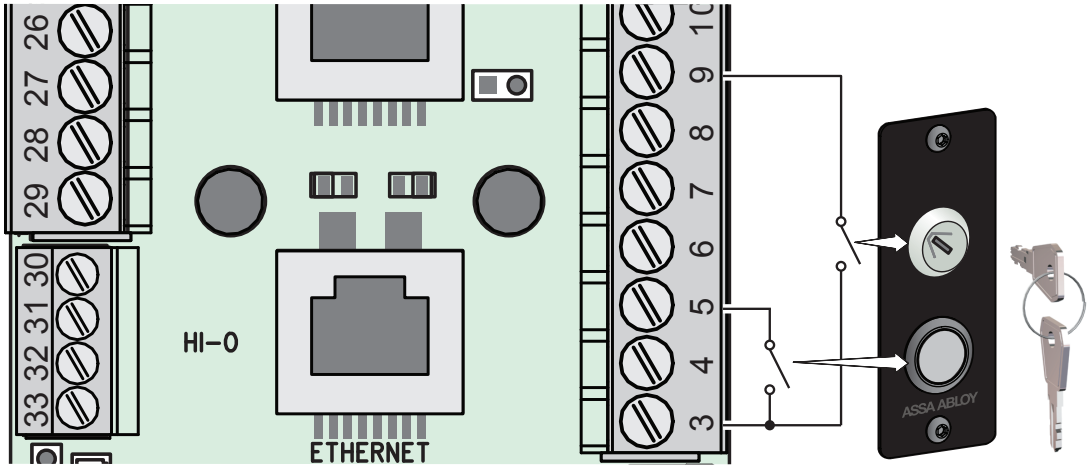
Emergency stop (standard)



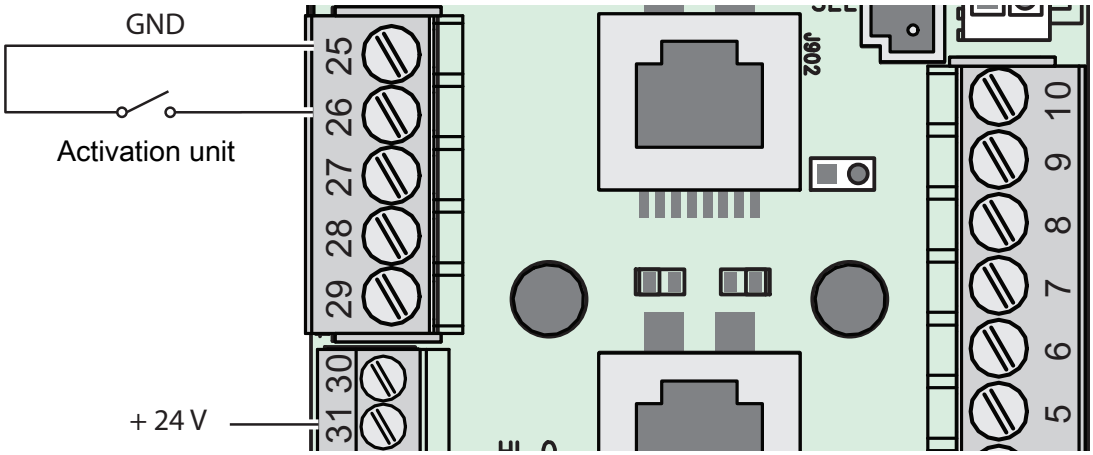
Emergency stop (option)



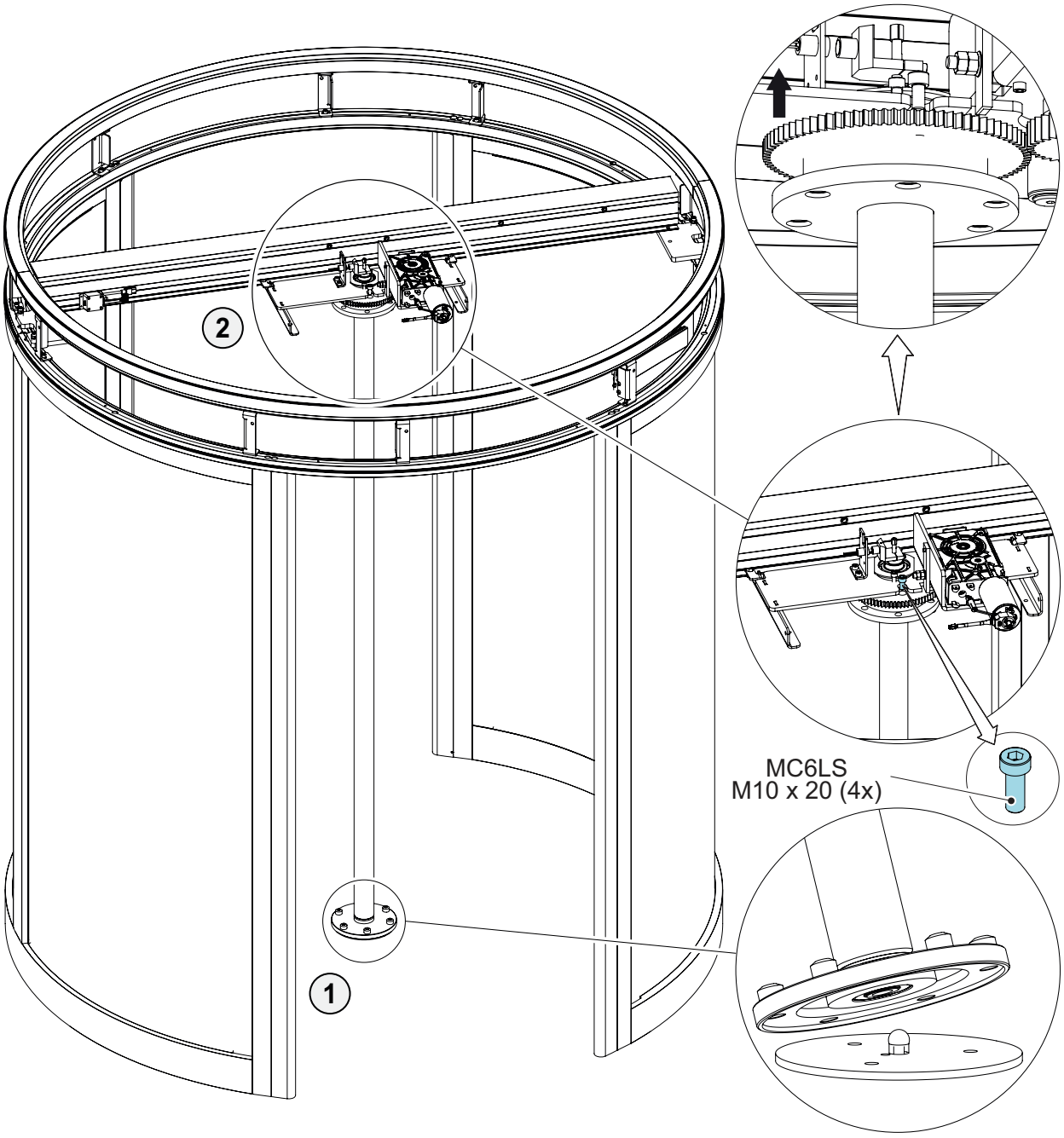
ON/OFF switch



Activation unit for torque release (option)



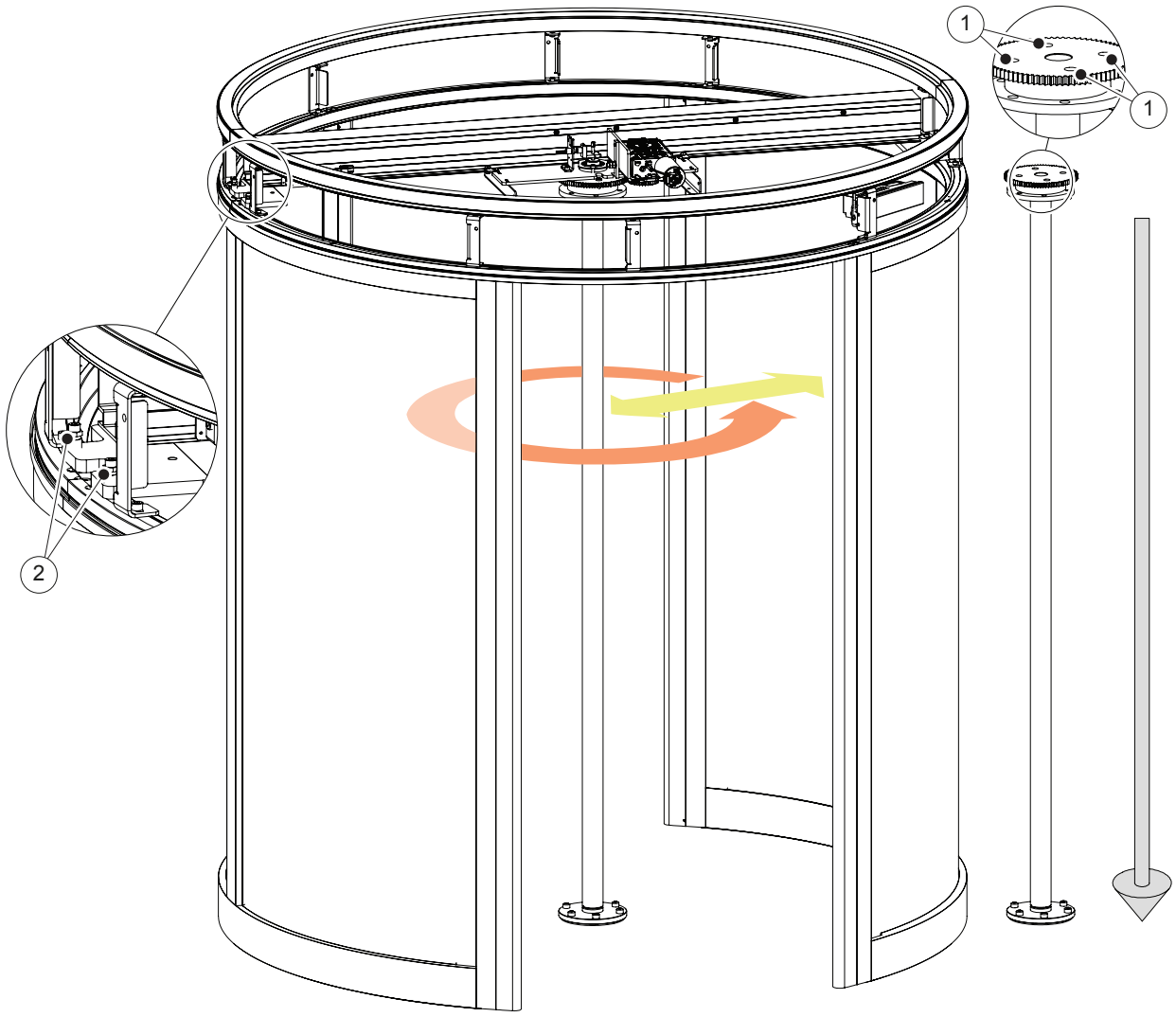
7.14 Centre shaft



Important:

a Tighten the cogwheel bolts (1).

b Make sure the centre shaft is centred to the wall before tightening the centre beam bolts (2).



1 Cogwheel bolt

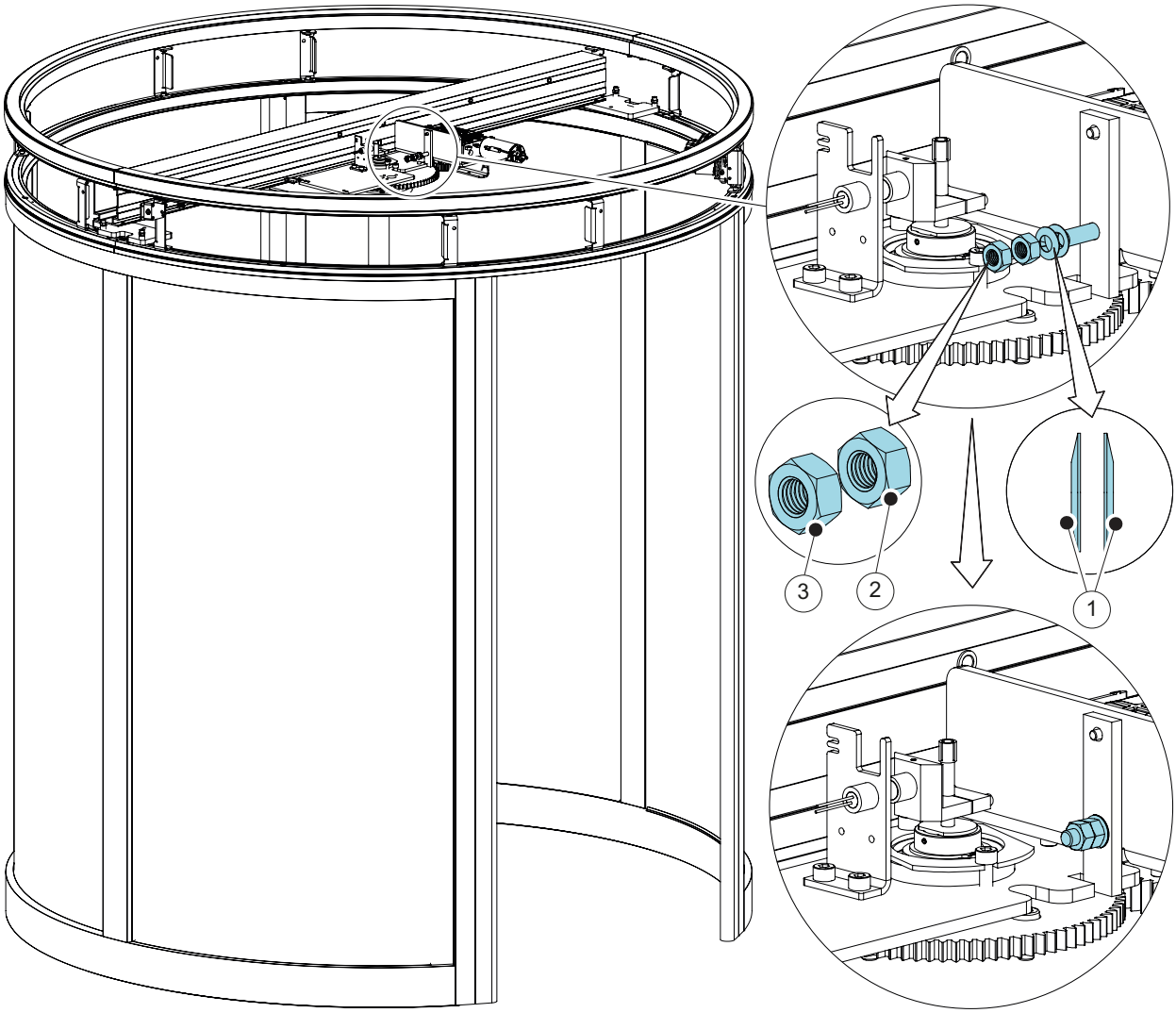
2 Centre beam bolt

7.15 Adjustment of the motor assembly

a Put the two disk springs (1) in place.

b Tighten the first nut (2) with your fingers plus a 1/2 turn extra.

c Secure the first nut (2) with the second nut (3).



1 Disk spring
2 First nut
3 Second nut

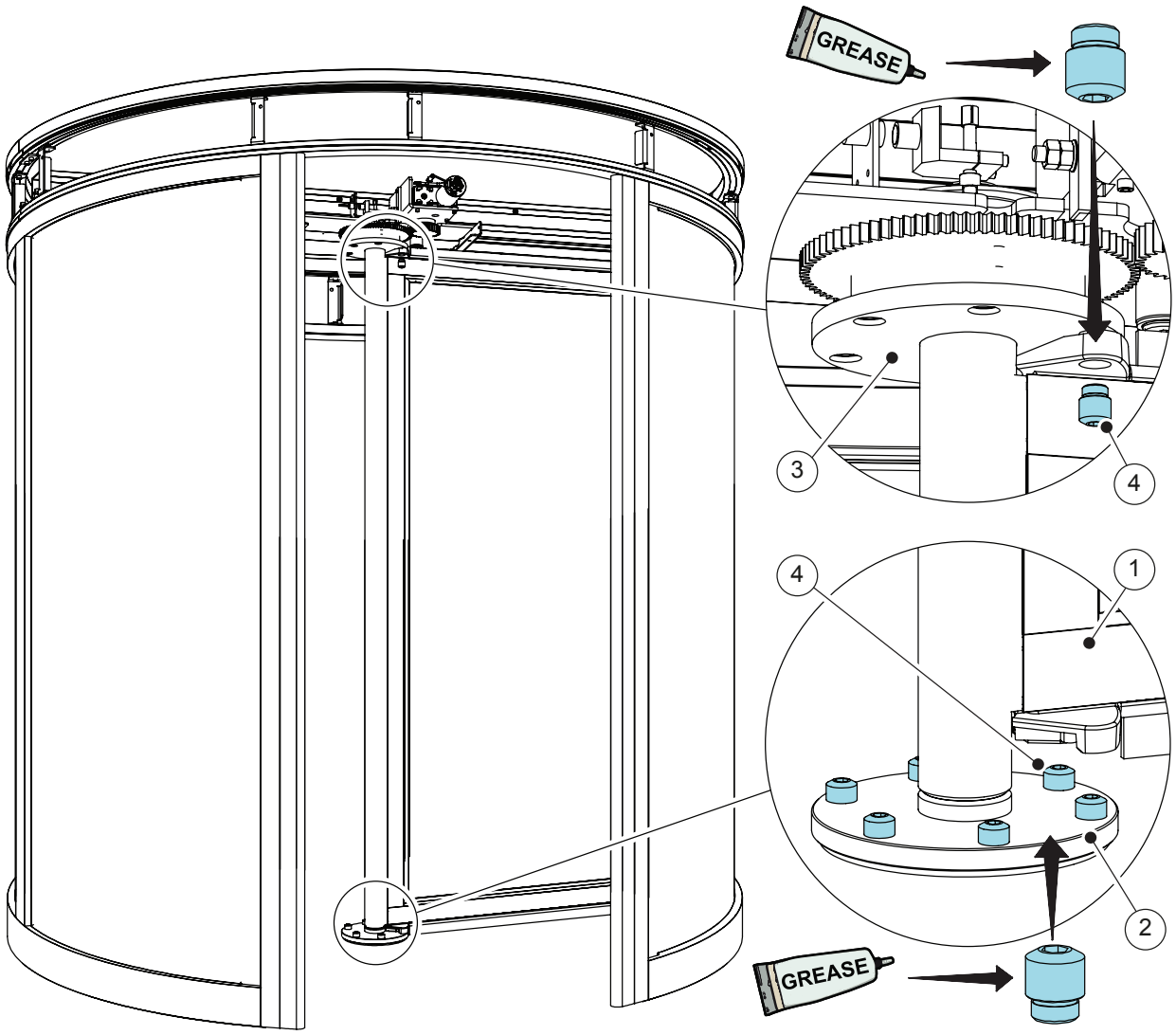
7.16 Door leaves

a Secure the special bolts (4) with Loctite 638 before putting the door leaf (1) on the bottom flange (2).

b Raise the door leaf (1).

c Fix the door leaf (1) to the top flange (3) with the special bolts (4). Secure the special bolts (4) with Loctite 638.

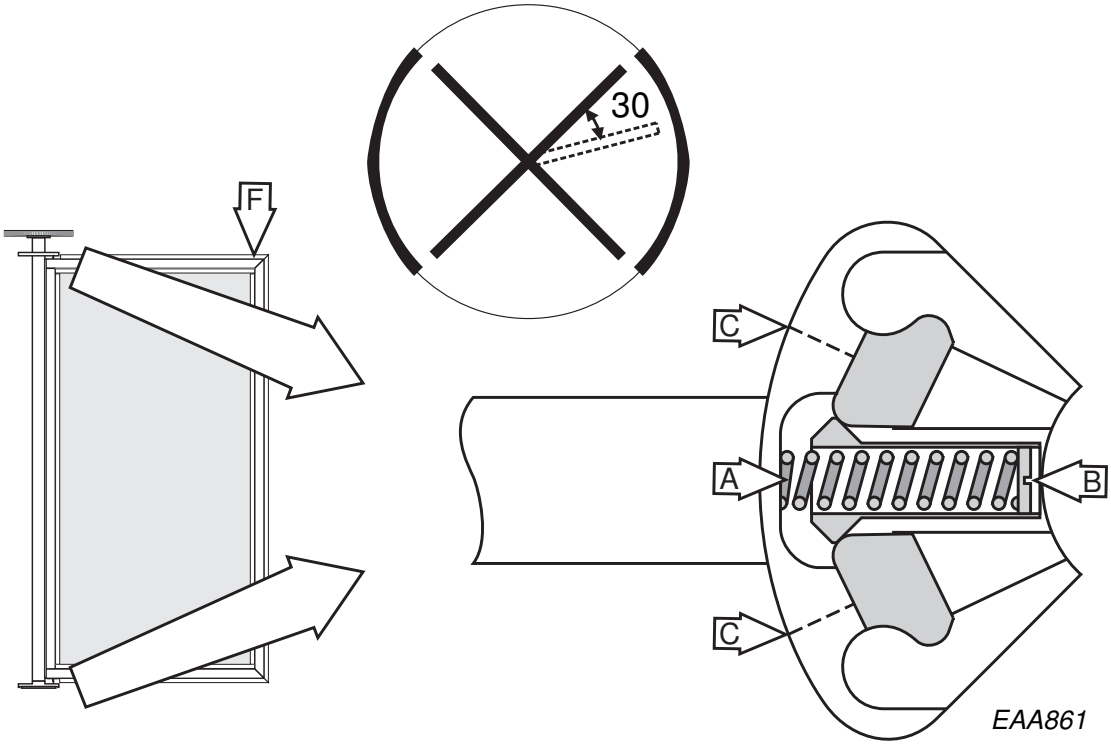
d Lubricate the special bolts and all unpainted surfaces on the door arms with grease.



1 Door leaf
2 Bottom flange
3 Top flange
4 Special bolt

7.16.1 Adjustment of emergency break-out kit (Not EN16005 compliant)

Door leaves



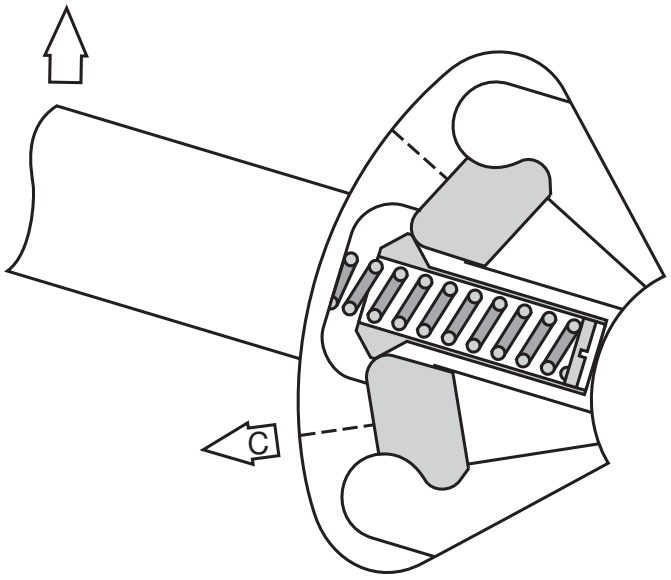
Put the door leaf in app. 30° break-out position (see illustration above).

Tighten the spring marked A with the screw marked B equally at the top and the bottom. The door leaf shall be able to take a load of 60 kg (F).

Close the door leaf. Check the break-out force (570N) and adjust if necessary with the screw marked B equally at the top and the bottom.

Note! After making this adjustment re-check that the door leaf can still take the load of 60 kg.

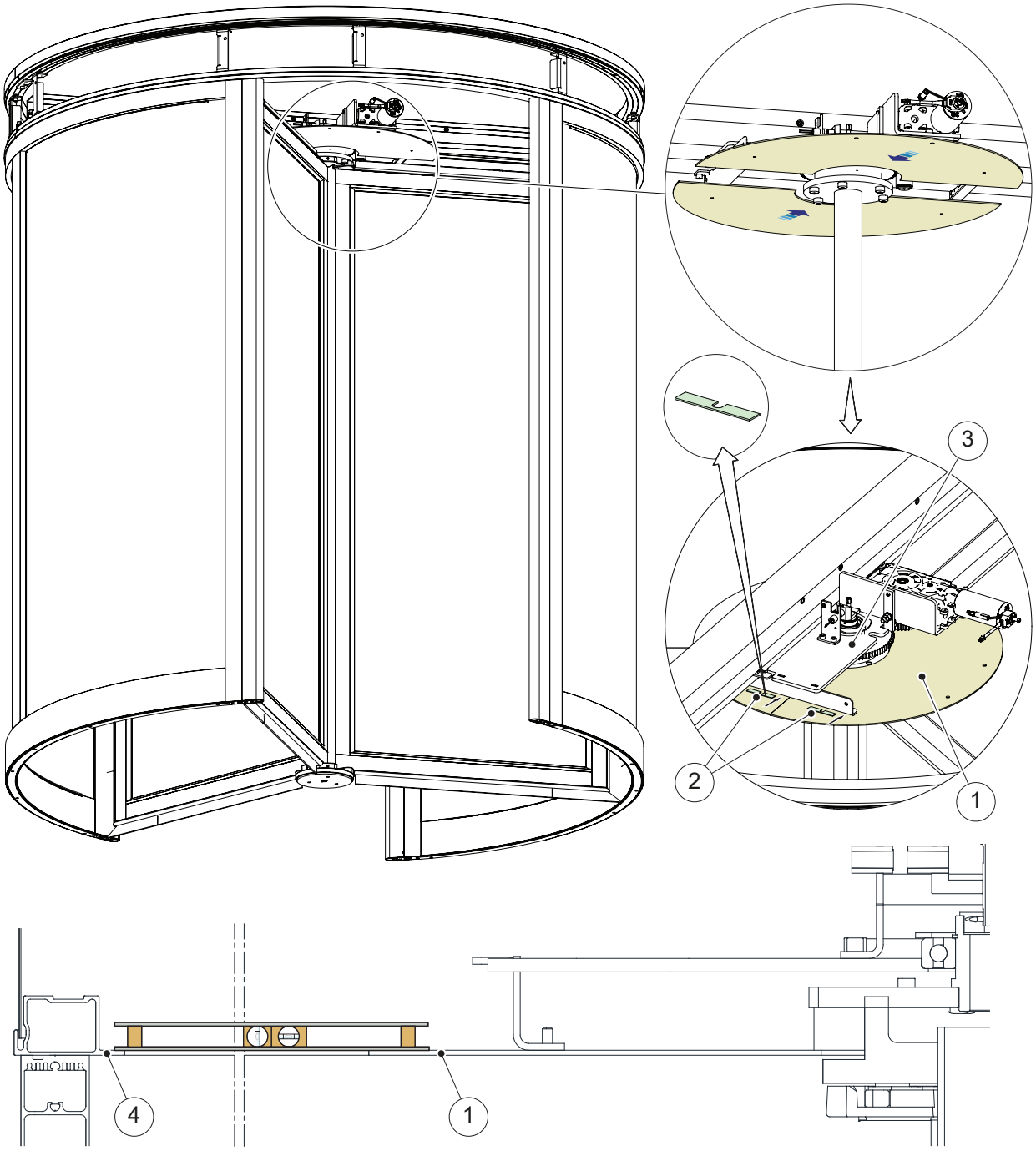
If the door is not equipped with the emergency break-out kit, tighten the stop screw marked C on the side to which the door leaf shall be broken out to and remove the other one. The door leaves shall be broken out in the opposite to the direction of rotation (backwards).



7.17 Centre plates

a Adjust the internal height to the centre plates (1) by putting shims (2) between the drive unit (3) and the centre plates (1).

b Top surface of the centre plates (1) shall be in level with the wall ring (4).



1 Centre plate
2 Shim
3 Drive unit
4 Wall ring

7.18 Ceiling

a Put all parts of the ceiling in place using the edge strips. Use the 100 mm edge strips (1) for the inspection hatches (2) and the 300 mm edge strips (3) for the others.

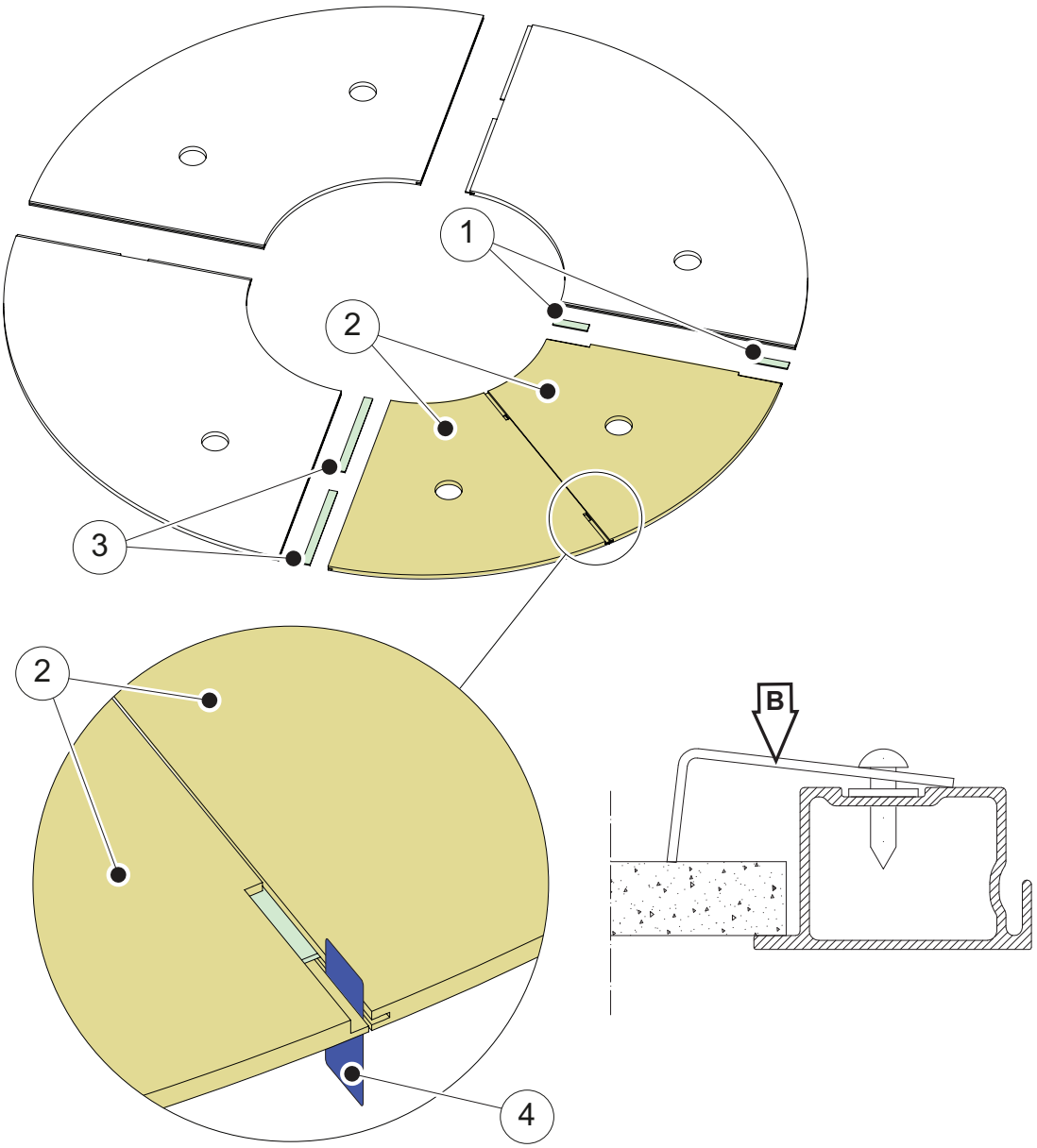
b The inspection hatches (2) shall be towards the inside of the building.

c Adjust and get even joints.

d Secure with fixing angle (B).

e To prevent damage during operation or service, secure one of the inspection hatches also with fixing angle (B).

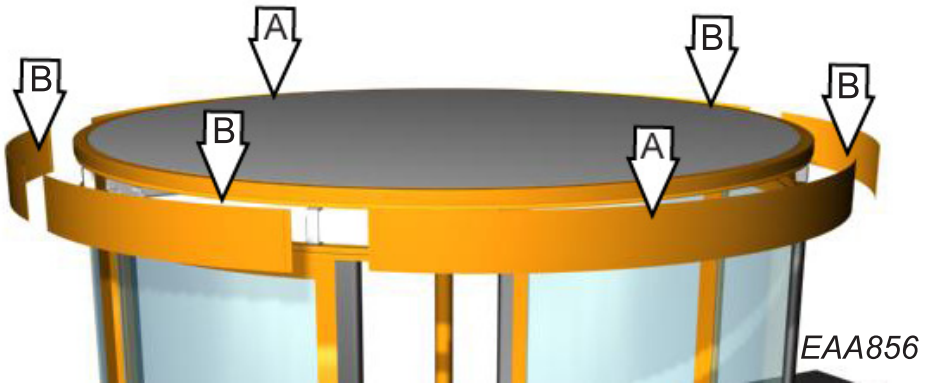
f Use a credit card (4) to lock and unlock the inspection hatches (2).



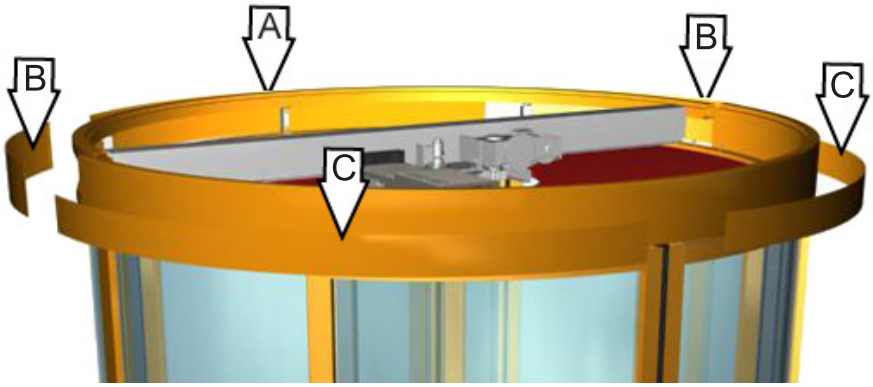
1 100 mm edge strip
2 Inspection hatch
3 300 mm edge strip
4 Credit card

7.19 Fascia

Without NCD



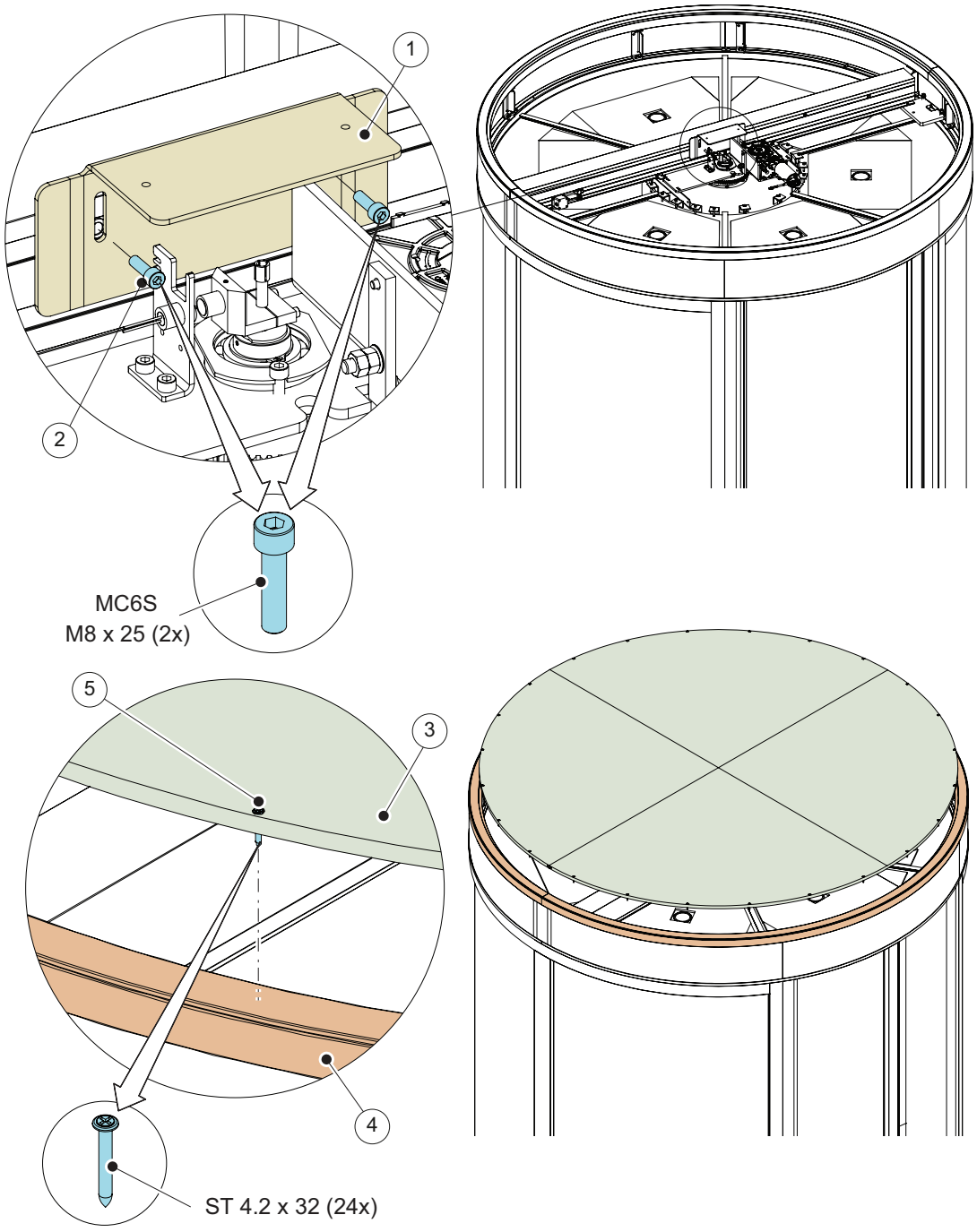
With NCD



7.20 Dust protection roof

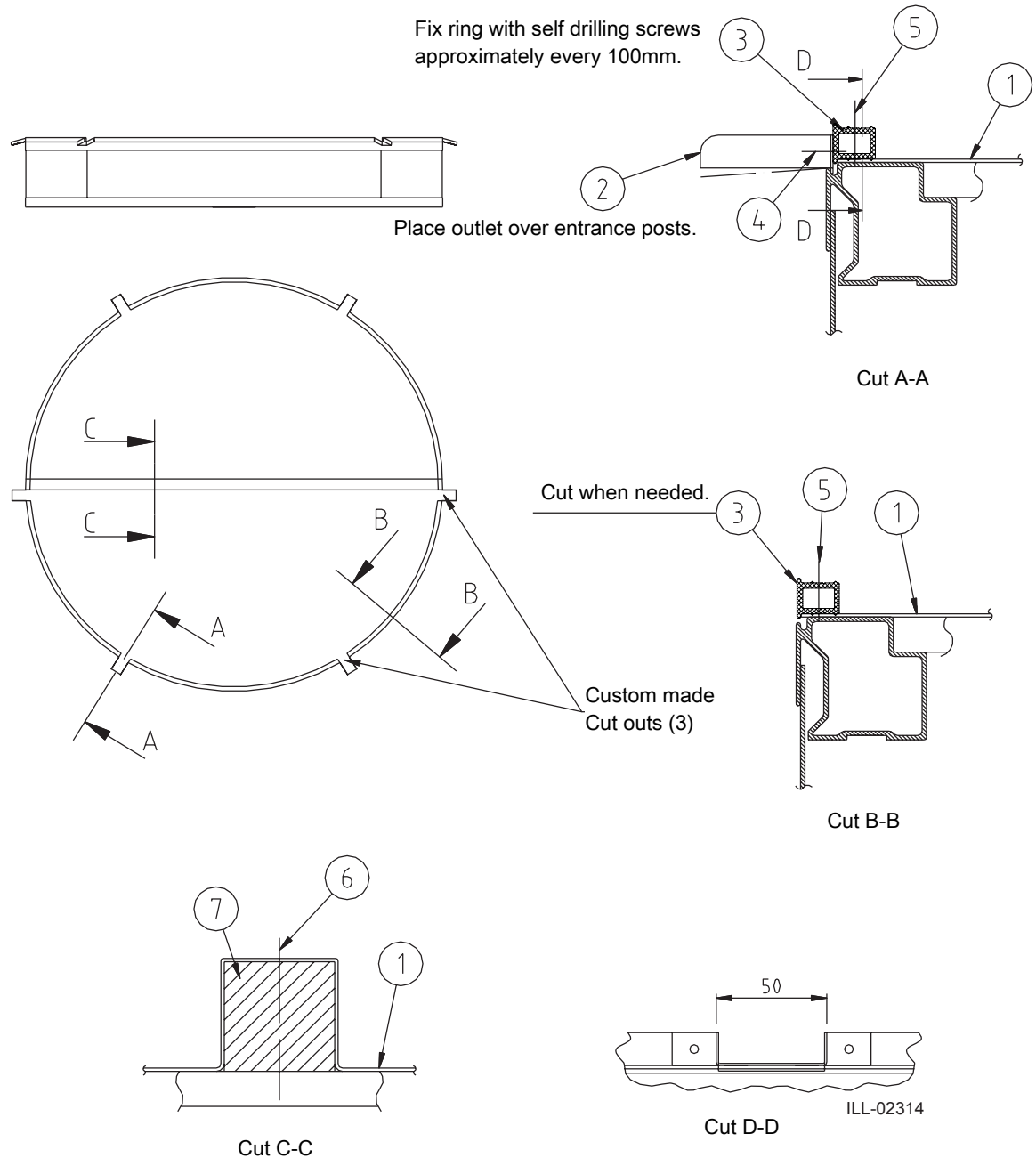
a Fix the bracket (1) with screws (2).

b Fix the dust roof (3) to the top ring (4) with screws (5).



1 Bracket
2 Screw
3 Dust roof
4 Top ring
5 Screw

7.21 Water resistant roof (option)

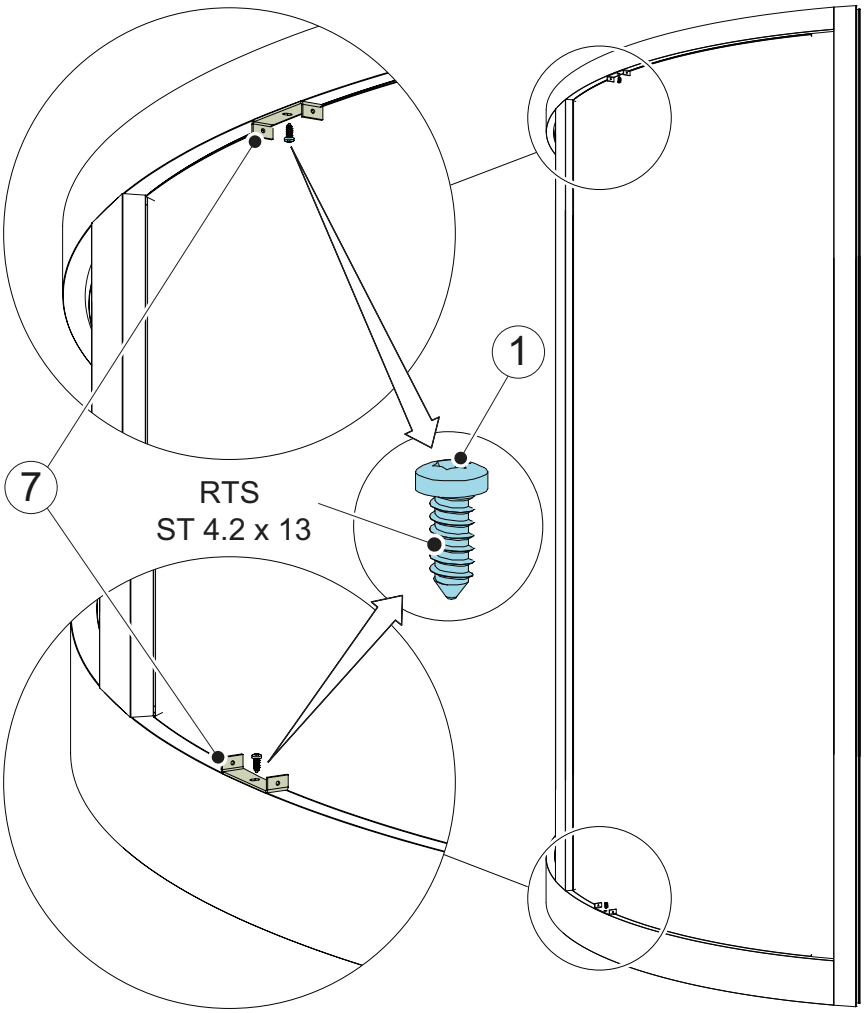


Place wooden beam in connection with outer wall to ease transition between roof and ceiling.

1 Rubber blanket
2 Outlet
3 Ring
4 Screw RXB ST 4.8 x 13
5 Screw RXB ST 4.2 x 32
6 Screw SPAX-S 6.0 x 60
7 Wooden beam

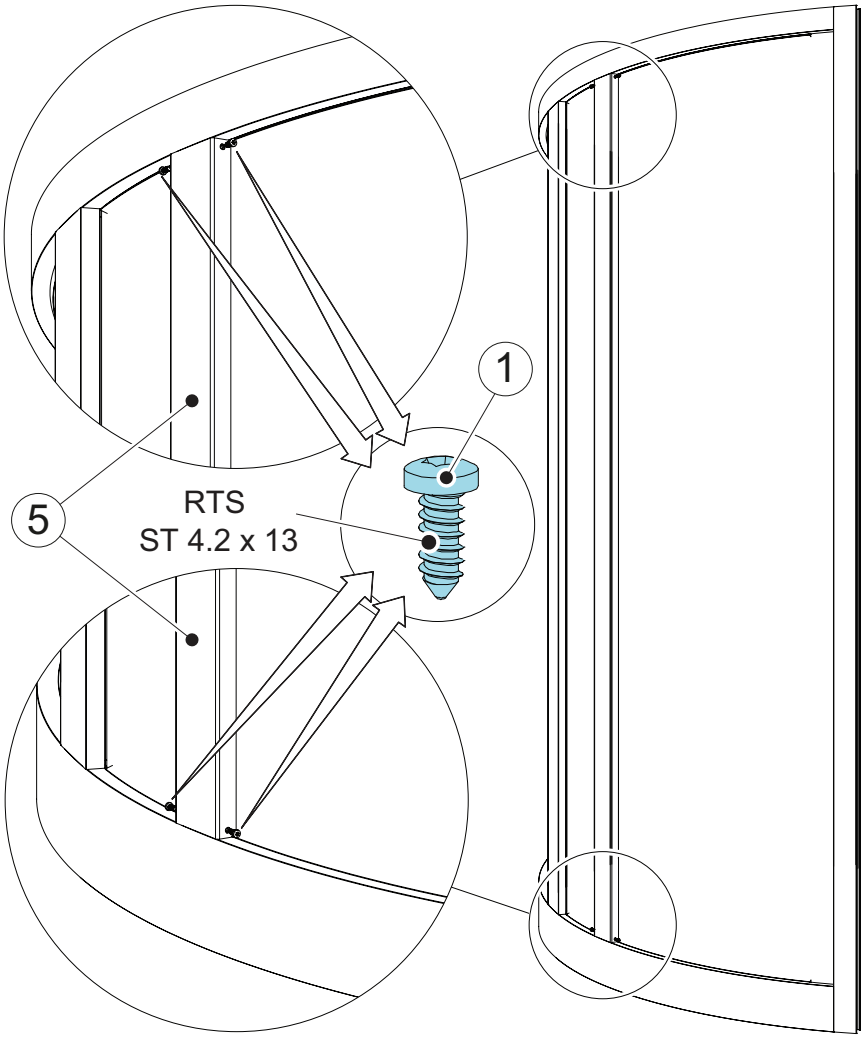
7.22 Fixed screen joint section (option)

a Fix the brackets (7) with screws (1).



1 Screw
7 Bracket

b Fix the outer profiles (5) with screws (1).



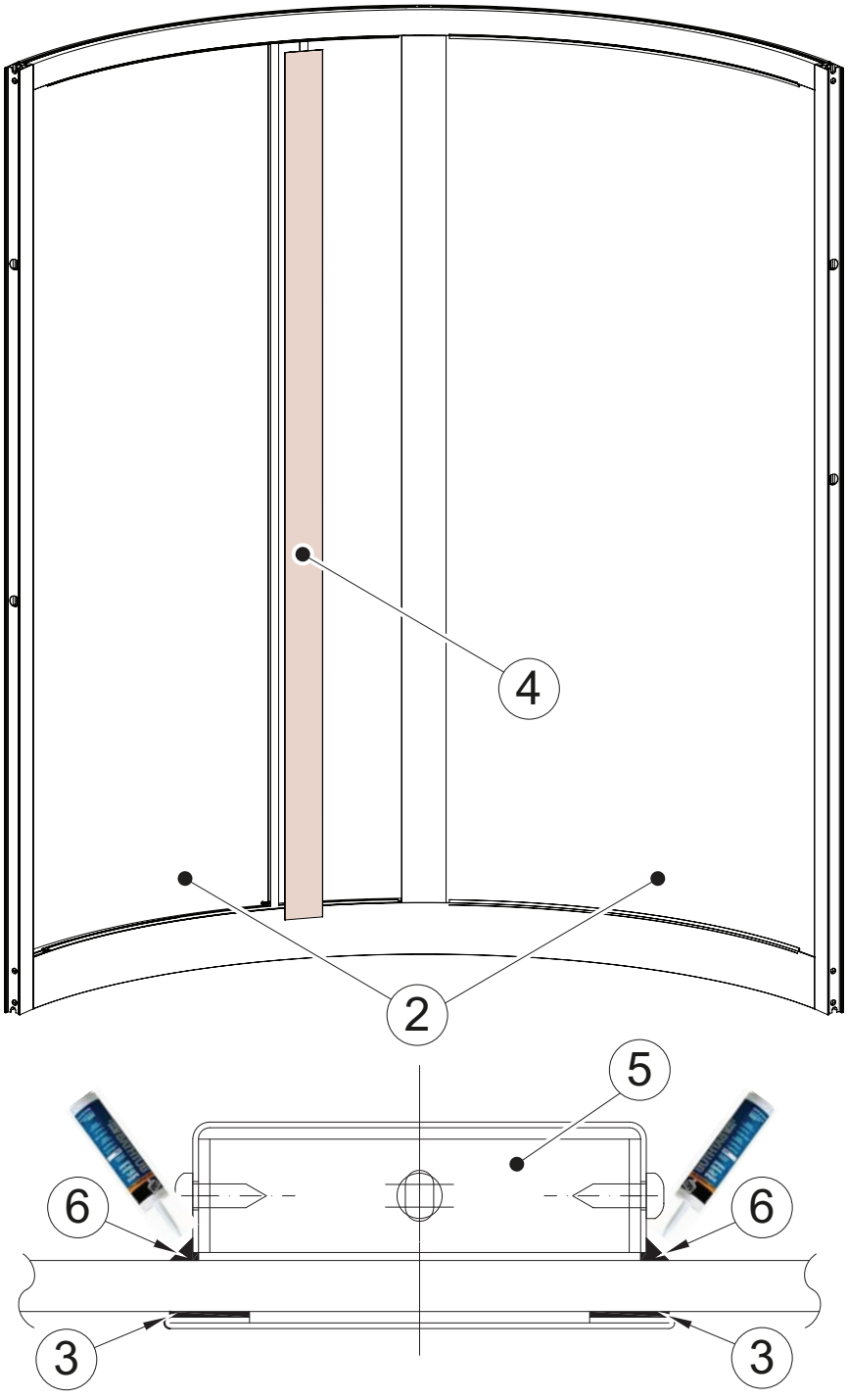
1 Screw

5 Outer profile

c Clean the glass (2) inside.

d Stick tapes (3) on the side of the inner profiles (4).

e Glue the outer profiles (5) with silicon (6).



2 Glass

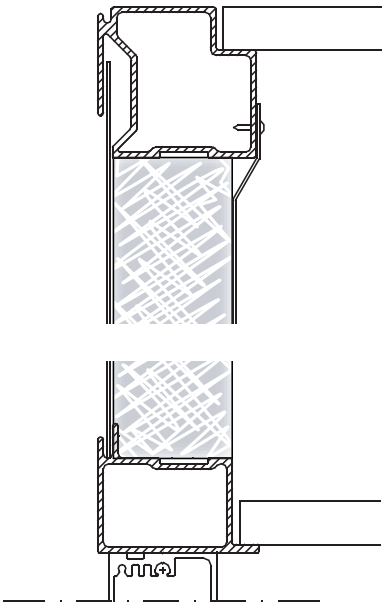
3 Tape

4 Inner profile

5 Outer profile

6 Silicon

7.23 Insulated fascia (option)

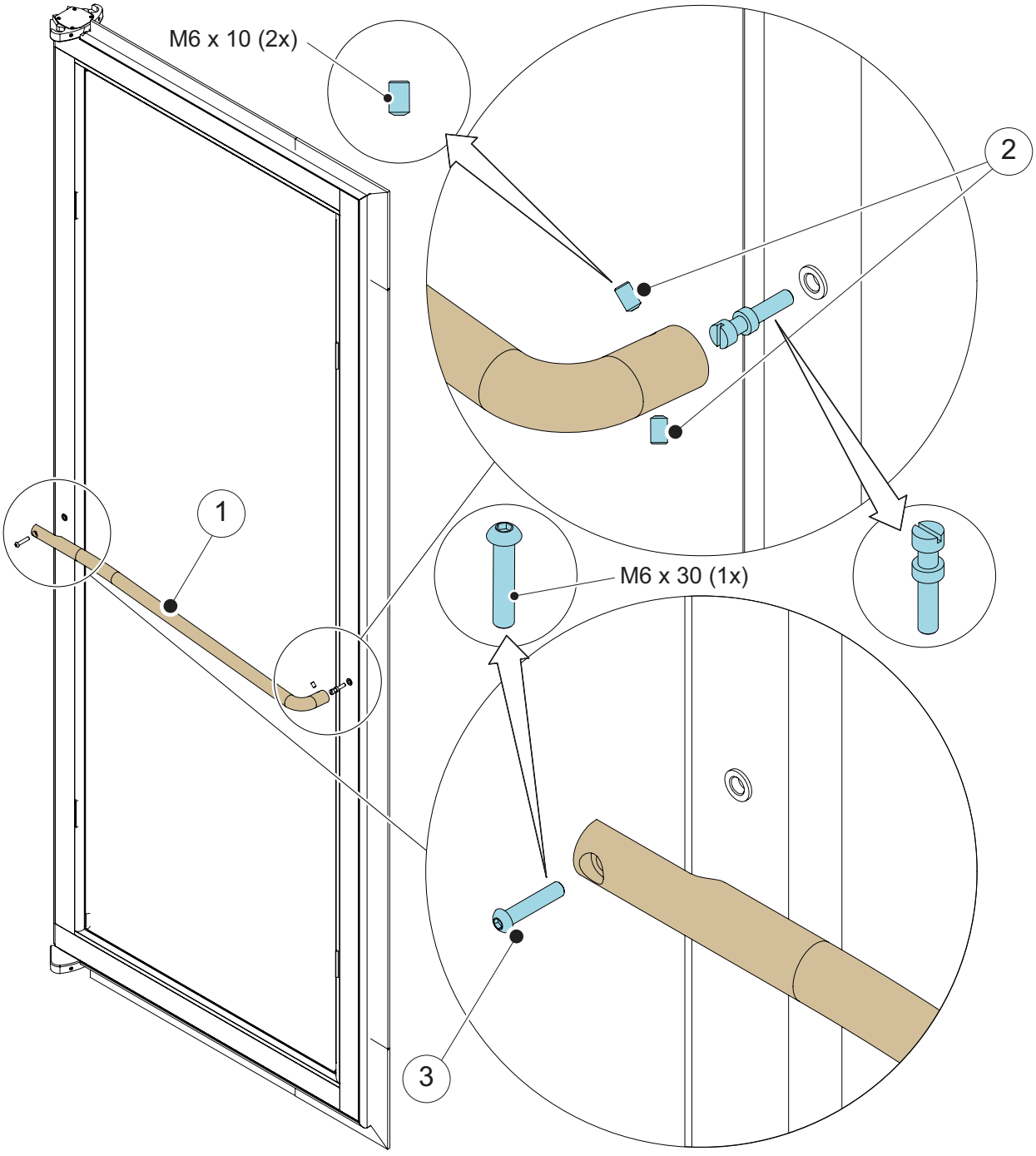


7.24 Push bar kit (option)

Horizontal

a Fix the right of the push bar (1) to the frame, do not tighten the screw (2).

b Tighten the screw (3), and then tighten the screw (2).



1 Push bar

2 Screw

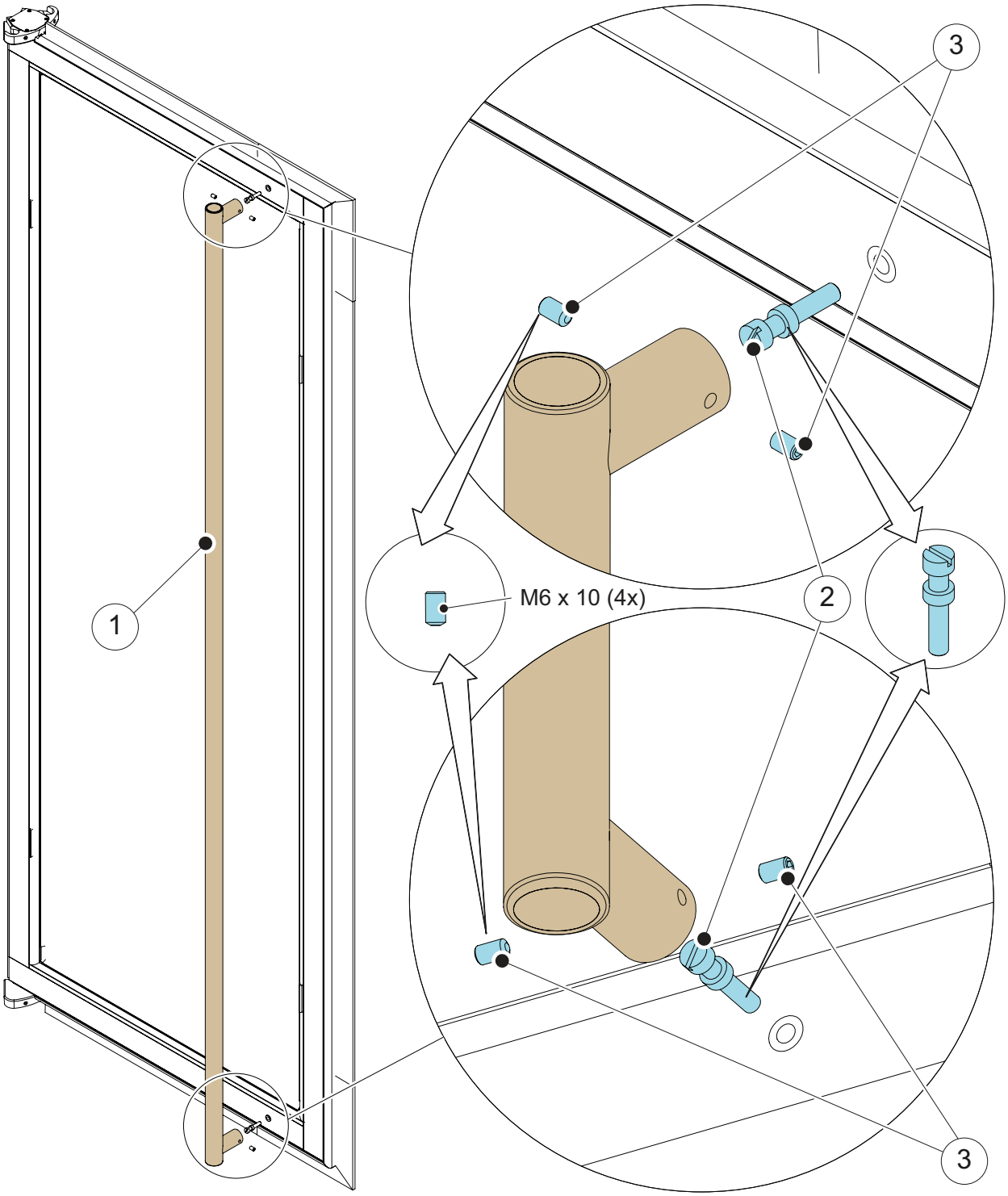
3 Screw

Vertical

a Fix the screws (2).

b Put the push bar (1) in the position.

c Tighten the screws (3).

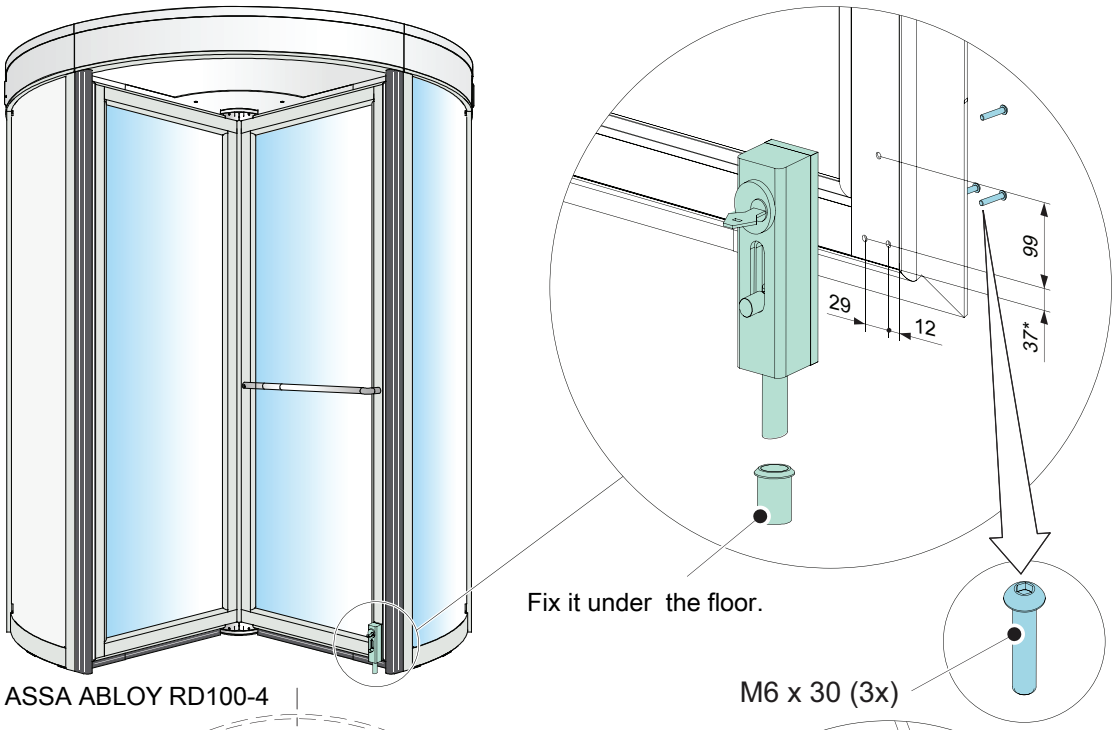


1 Push bar

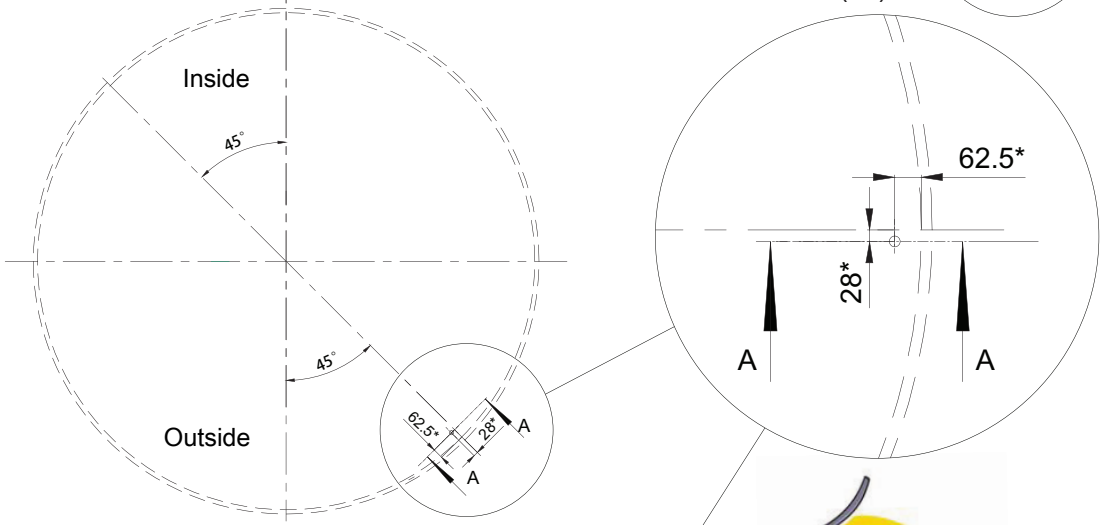
2 Screw

3 Screw

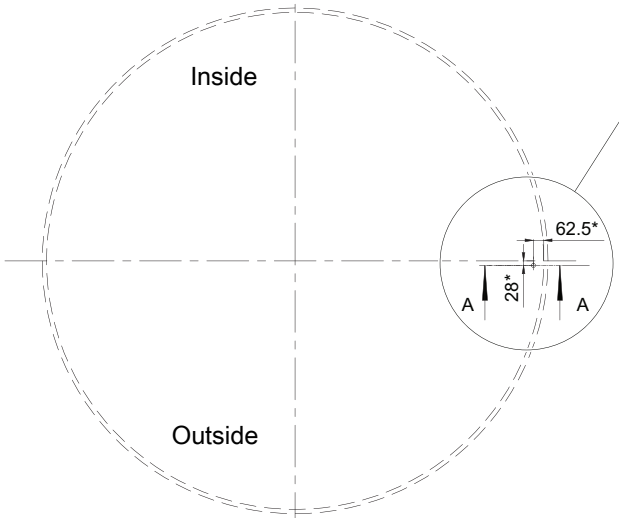
7.25 Mechanical lock (option)

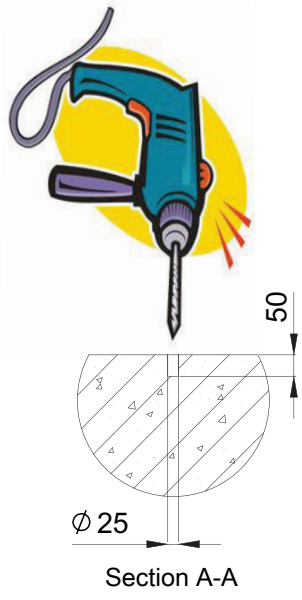


ASSA ABLOY RD100-4



ASSA ABLOY RD100-3

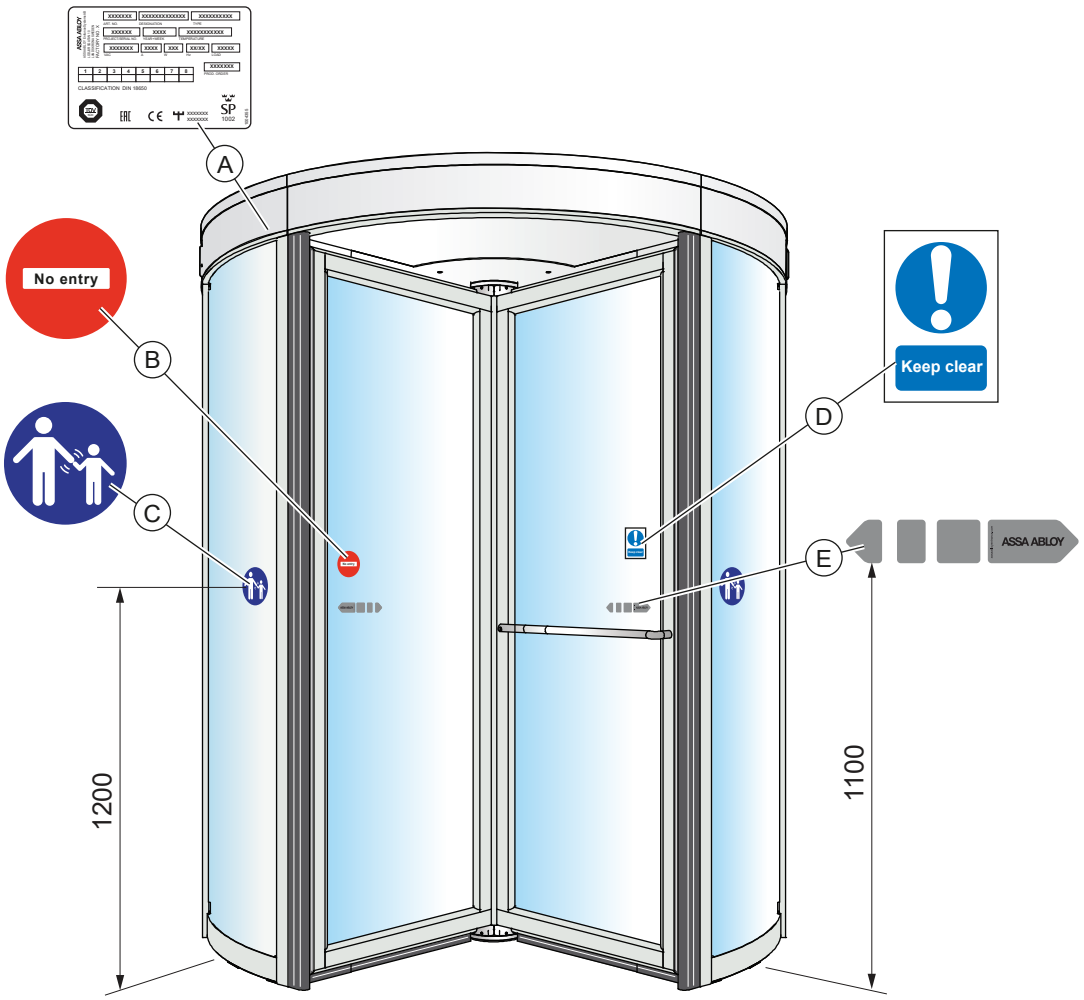




* Recommended dimension, should consider the site situation.

8 Signage

If properly installed and adjusted, attach the product label, which includes the CE mark.



The signs should be applied to both sides of the door in accordance with the illustration.

Check that all required signage is applied and intact.

Mandatory indicates that the signage is required by European directives and equivalent national legislation outside the European Union.

Ⓐ	Product label: Mandatory
Ⓑ	No entry, identifying one-way traffic: Mandatory in GB and US, if applicable, not included in the product.
Ⓒ	Supervision of child: Mandatory, if applicable (applied to both sides of the door). To be placed on entrances where the risk analysis shows use by children, elderly and disabled.
Ⓓ	Keep clear
Ⓔ	ASSA ABLOY Entrance Systems door sticker: Mandatory, if applicable to highlight the presence of the glass (applied to all glass sections that are moving).

9 ON/OFF switch

9.1 Start up (Not used in US and Canada)

- Check that the door emergency stop button is released. If not, release the emergency stop button by rotating it in the direction of the arrows and press the reset button.

9.2 ON

- Turn the ON/OFF switch to ON.
- When the door is manually pushed, it will rotate with P-Assist torque during the passage.
- If the door is pushed with excessive force, the door's speed will be limited.
- When the passage has completed, the door parks in the standby position.

Note! The P-Assist and Auto park features can be configured on/off.

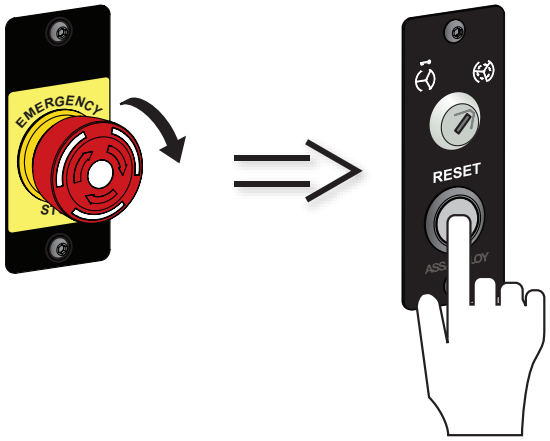
9.3 OFF

- Check there is no traffic.
- Turn the ON/OFF switch to OFF.

The door rotates to its home position.

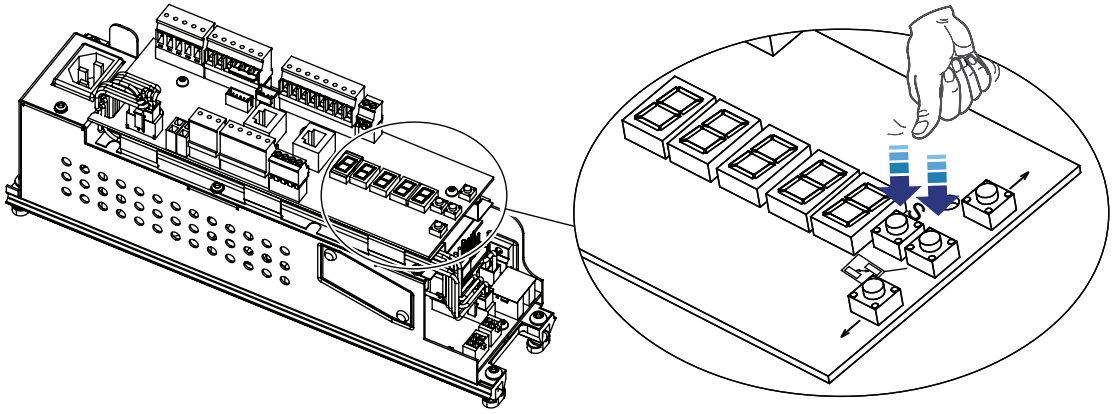
9.4 Reset (Not used in US and Canada)

To reset the door to normal operation - release the emergency stop button by rotating it in the direction of the arrows and press reset button.



10 Start-up

10.1 Starting the learning procedure



A LEARN procedure must be performed when using the control unit for the first time in a revolving door whereby the door friction, inertia and the external gear ratio parameters are measured and stored permanently.

If the door is manipulated in a way that the friction, inertia or the total gear ratio in the door system is affected, a new LEARN is required. Likewise if the door does not park properly at the posts as the reason can be that conditions have changed.

The LEARN procedure can be started at any time by pressing the two buttons (S and ⇲) at the same time for at least two seconds and then releasing them.

The text 'LEArn' is shown on the local display and the red status LED starts flashing while the door rotates until the index pulse has been detected twice or max. 2 minutes.

During the Learn procedure, the door must not be forced by any external force.

Emergency stop is enabled during the LEARN procedure.

If the LEARN procedure goes well, the door positions will be at the next post. The text 'LEArn' on the local display will disappear and the red status LED changes from flashing to be continuously lit.

After a LEARN is made, the door operator can optimize the behavior of the door.

If the LEARN procedure failed, it could have been caused by a stalled or jammed door or lack of index pulse. The LEARN error 'LEr33' appears on the local display and is indicated by 3 tiny and 3 short flashes on the red status LED. Troubleshoot and make a new LEARN.

During a LEARN error the door acts as a manual door with speed control.

The system generates a LEARN error in the below mentioned cases.

a Using the control unit for the first time on a revolving door.

b Change in parameter "Rotation Direction".

c Change in parameter "Number Of Wings".

d The external gear ratio exceeds the maximal value 4.4.

10.2 Setting home position

a Press the emergency stop button.

b Login the parameter menu with password on local interface.

c Pull the door to the target position manually.

d Set the parameter P09 to 1, then P09 returns to 0 automatically.

e Release the emergency stop button by rotating it in the direction of the arrows and press the reset button.

10.3 P-Assist function

Reduces the force required to push the door manually by applying a configurable positive torque. (P-Assist Torque parameter P28). To prevent an endless rotation if the wind has moved the door, P-Assist torque is reduced to zero after 2 or 3 door compartment distances.

P-Assist is enabled if the push is hard enough to receive a door acceleration of approx. 1.1 rpm/sec. If speed is above 7 rpm, P-Assist torque is reduced to zero.

10.4 Push & Go function (Not used in US and Canada)

The Push & Go function is enabled by setting the 'Push & Go' parameter to On. Push & Go function is activated when door is moved in forward direction with a door speed of at least 3 rpm in program modes 2 and 3.

10.5 Speed control

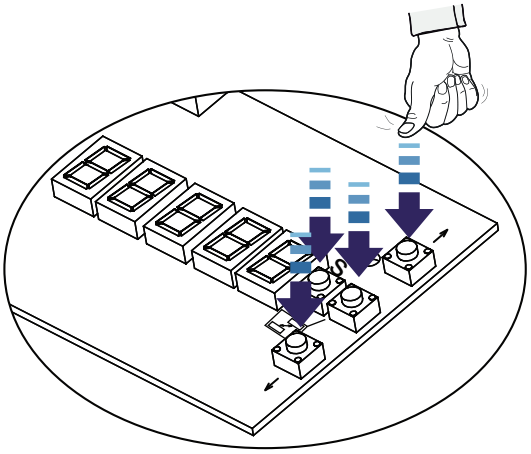
If the door is abused in a way that the speed reaches the configured "Speed Control" limit (see System parameters), the system shall brake with full available braking torque. The speed control function works in both directions and also during index pulse search at power up.

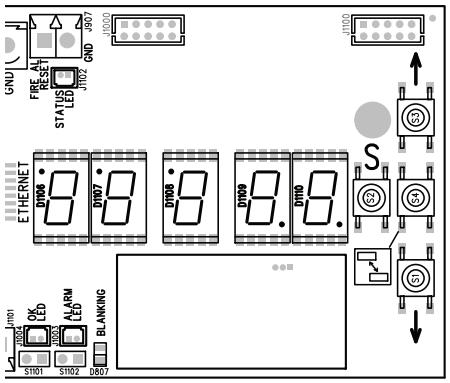
10.6 Auto Park

At start up, the system rotates the door at least one revolution to receive 2 index pulses. Once this is completed, the system has obtained the correct value on the number of encoder pulses for one door revolution. Auto Park is now possible. The door will rotate until index position is found and then go one compartment and stop.

11 Local display and key utility

11.1 General description of the local interface





What can be done with the local interface?

a Inspection of parameters

b View error information while troubleshooting

c Modify configurable parameters

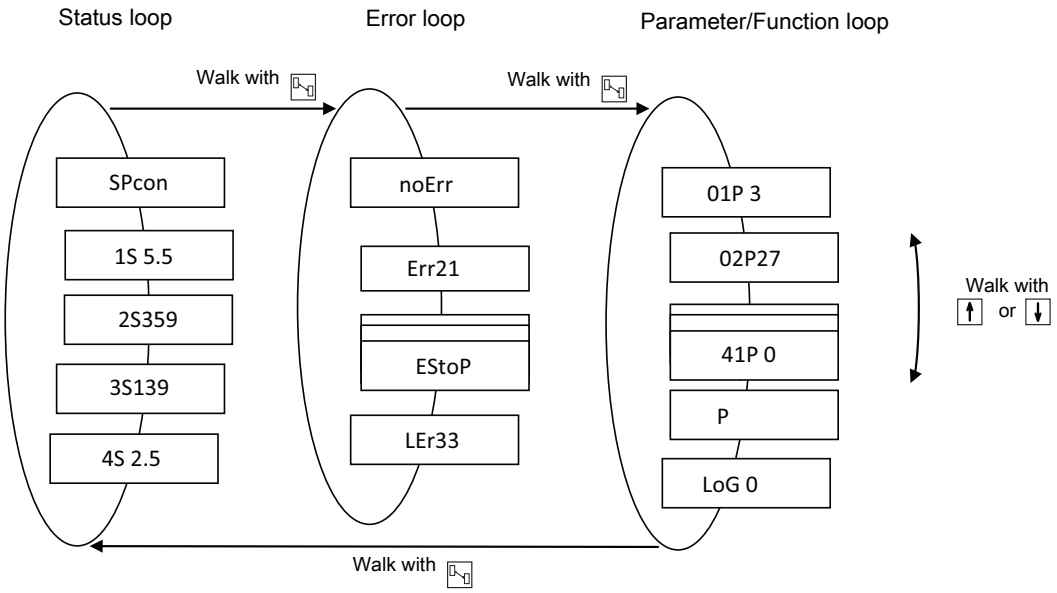
11.2 Menu system structure

For easy information search, a menu system is used.

a Status menu loop (see chapter 11.6).

b Error menu loop (see chapter 13.1).

c Parameter/Function menu loop (see chapter 14).



11.3 How to login to the operator

To modify any parameter one has to be authorized. Select the parameter that is to be modified. Login procedure as follows.

a Press key S.
The text "CodE" scrolls onto the local display for 5 seconds, then "00000" is shown.

b Enter the 5 digit password, starting with the leftmost digit.
Press key ↑ or ↓ to select the right digit (4 digit password, like the default Standard password "1613", is entered with a leading "0", i.e. "01613").
Press key S to confirm after each digit.
If the text "PASS" appears, login is granted. If incorrect password is inserted the text "FAiL" will appear and then text "00000" is shown.

c Parameter modification can be done if the login is granted.

11.4 How to modify parameters

Before any modification can be made, one has to login in accordance with previous chapter.

Press key S and press key ↑ or ↓ to choose the correct value. Press key S again to confirm the modification or press key ↩ to discard modification and return to the original value. At this time the new parameter value will become active in the operator. During the modification phase, the parameter identification text will slowly flash.

11.5 How to logout from the operator

Step to parameter LoG close to the end in the parameter/function menu.

To actively log out, press key S and ↓ to get the value "1". Press key S again and the logout is performed.

An automatic logout is made after 10 minutes of inactivity.

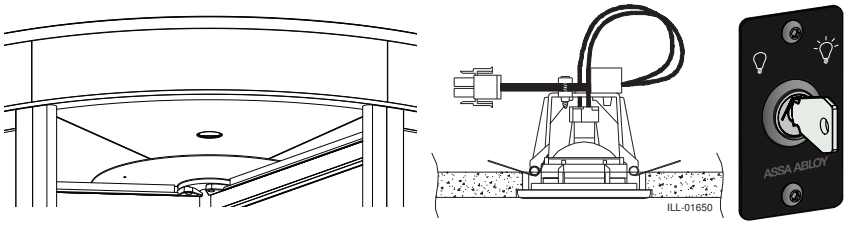
Note! Always make an active logout when modification of the parameters is done.

11.6 Status menu loop on local interface

Display value	Value number	Description
Program mode selection	SPcon AuPAr PASSt	Program selection mode is presented.
Door speed	1S	Actual door speed in rpm with one decimal.
Door position	2S	Actual door position in degrees.
Door revolution counter	3S	Number of door revolutions in Kilo-unit.
External gear ratio	4S	The external gear ratio due to the cog wheels.

12 Options

12.1 Lighting LED with control



Colour temp. 3000 K

Lifetime ≥30000 hours

Lamp 5W

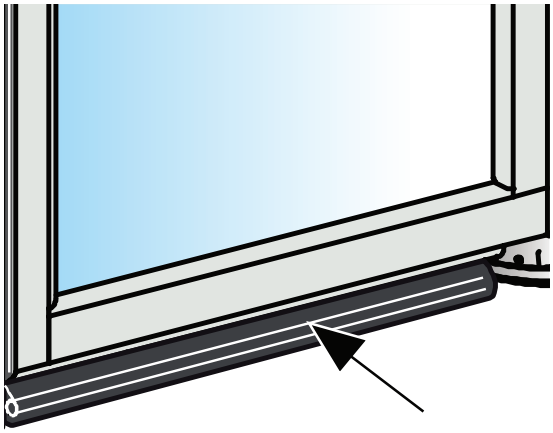
12.2 Additional emergency stop button (Not used in US and Canada)

Electrical connection, see page 39.

Standard height 1200mm (other height may be stipulated by local demands (Germany 850-1050mm)).

12.3 Passive safety edges (Not used in US and Canada)

Required when EN16005 compliant.



13 Troubleshooting

What's wrong?	Remedies
The motor does not start	Make sure that mains power to the door is on.
	Check the ON/OFF switch, see page 59.
	Check whether the emergency stop button is released.
	Check the main switch and fuse in the building.
The motor starts but door will not rotate	Check that nothing is jammed beneath the door.
	Unlock the mechanical locks.
The door does not close	Check that nothing is jammed beneath the door.
	Check whether the emergency stop button is released.
If the problem continues, please contact your ASSA ABLOY Entrance Systems representative.	

13.1 Error indication

Error	Flash code Local display texts	Description	Behavior
Emergency stop active	1 tiny,1 short 'EStoP'	Emergency stop is active.	Active brake.
Pressure sensitive safety edges on the drum edges input active	1 tiny, 3 short 'SEn13'	Pressure sensitive safety edges placed on the drum edges input is active.	Active brake.
Pressure sensitive safety edges on the door leaves input active	1 tiny, 4 short 'SEn14'	Pressure sensitive safety edges placed on the door leaves input is active.	Active brake.
Touchless presence sensors on the door leaves input active	1 tiny, 5 short 'SEn15'	Touchless presence sensors on the door leaves input is active.	Active brake.
Vertical presence photocell sensor PDR 1 (inner) input active	1 tiny, 6 short 'SEn16'	Vertical presence photocell sensor PDR 1 (inner) input is active.	Active brake.
Vertical presence photocell sensor PDR 2 (outer) input active	1 tiny, 7 short 'SEn17'	Vertical presence photocell sensor PDR 2 (outer) input is active.	Active brake.
Monitored pressure sensitive safety edges placed on the drum edges	2 tiny, 1 short 'Err 21'	Pressure sensitive safety edges placed on the drum edges input monitoring error.	Active brake.
Monitored pressure sensitive safety edges placed on the door leaves	2 tiny, 2 short 'Err 22'	Pressure sensitive safety edges placed on the door leaves input monitoring error.	Active brake.
Monitored touchless presence sensors on the door leaves	2 tiny, 3 short 'Err 23'	Touchless presence sensors on the door leaves input monitoring error.	Active brake.
Monitored vertical presence photocell sensor PDR 1 (inner)	2 tiny, 4 short 'Err 24'	Vertical presence photocell sensor PDR 1 (inner) input monitoring error.	Active brake.

Error	Flash code Local display texts	Description	Behavior
Monitored vertical presence photocell sensor PDR 2 (outer)	2 tiny, 5 short 'Err 25'	Vertical presence photocell sensor PDR 2 (outer) input monitoring error.	Active brake.
Monitored emergency stop input	2 tiny, 6 short 'Err 26'	Emergency stop input monitoring error.	Active brake.
External 24V Error	3 tiny, 1 short 'Err 31'	Low voltage on External 24V.	Correct voltage will reset.
Index Pulse Error	3 tiny, 2 short 'IPu32'	Missing index pulses.	Index pulse present to reset.
Learn error	3 tiny,3 short 'LEr33'	LEARN procedure is required.	New LEARN procedure to reset.
Control Unit Error	4 tiny, 1 short 'CU 41'	A set of internal control unit supervisions failed.	Power OFF/ON to reset.
Encoder Error	4 tiny, 2 short 'Enc42'	Missing encoder pulses.	Correct encoder pulses will reset.
Motor Overheat Error	4 tiny, 3 short 'HEA43'	High motor temperature.	Cool down to reset.
Motor polarity Error	4 tiny, 4 short 'PoL44'	Motor cable in wrong contact.	Power OFF/ON to reset.

14 Parameters configuration

Note! If it is the first time for parameters configuration, please make a load default procedure (set P35=1) before parameters configuration.

14.1 System parameters

Menu number	Parameter name	Range **Default value bold** **On=1, Off=0**	Description
1	Program Selection	1=Speed control 2=Auto park with speed control **3= P-Assist with Auto park and Speed control**	Program mode select.
2	Door Diameter	18,21, **24**, 27, 30	The diameter of the door in dm.
3	Number Of Wings	3 = 3 wing door **4 = 4 wing door**	The number of door leaves.
4	Rotation Direction	**Off = Counter clockwise** On = Clockwise	Door rotation direction.
5	Rotation Direction Control (Must remain off in US and Canada)	**Off = No Hold torque backwards** On = Hold Torque backwards	Selection hold torque backwards function on/off. In all program modes except program mode 1.
6	Push & Go (Must remain off in US and Canada)	**Off = Push & Go disable** On = Push & Go enable	Push & Go impulse disable/enable in program modes 2 and 3.
7	Safety Zone Offset (Not used in ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4)	10 - 40 door deg **Default 10**	Safety zone offset is vertical presence photocell sensor PDR active area.
8	Index Impulse In Program 1 (Speed Control)	Off = No index pulse equipment **On = Index pulse equipment connected**	Select if index pulse equipment in program mode 1 is connected.
9	Set Home Position	**Off = No action** On = Set home position	Set home position after moved the door to home position.
10	Home Position Offset	0 - 359 door deg	Index pulse adjustment in door degrees. Read-only parameter!
21	High Speed (Not used in ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4)	0.5 - 6 rpm **5.0 rpm**	Door speed setting used for normal rotation speed in program mode 4. Door diameter up to 30 dm.
22	Low Speed	0.3 - 2.5 rpm **1.5 rpm**	Door speed setting used for normal positioning speed in Auto park modes.
23	Speed Control	3 - 10 rpm **7.0 rpm**	Door speed is limited down to the value.
24	Door Rotation Torque	50 - 100 % of T_{Max} **Default 50**	Parameter controlling max normal torque in driving direction.

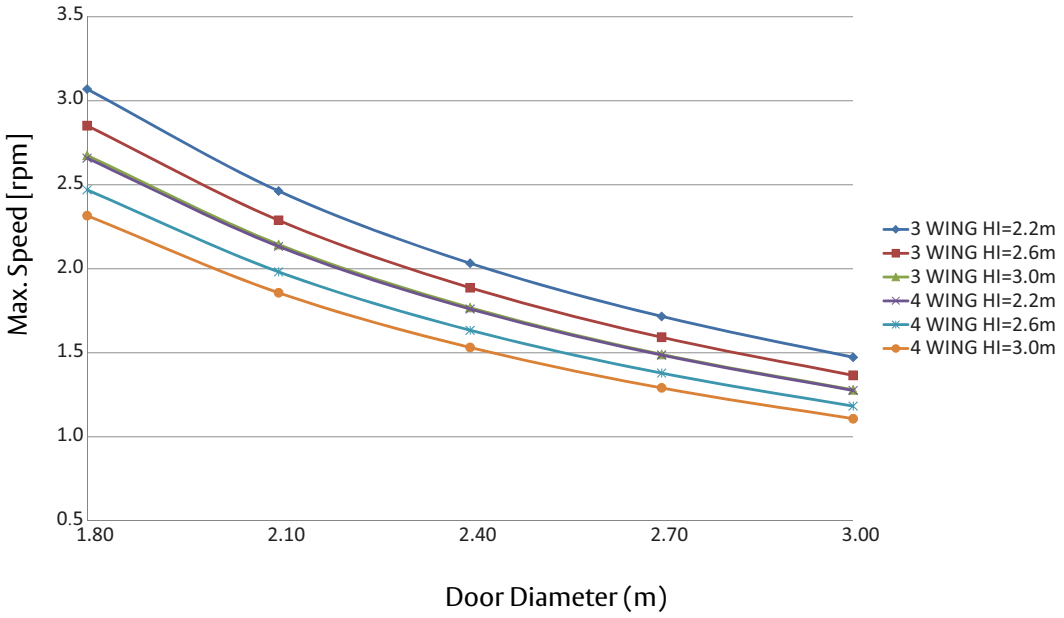
Menu number	Parameter name	Range Default value bold On=1, Off=0	Description
25	Safety Zone Torque	25 - 100 % of T_{Max} **Default 25**	Parameter controlling max reduced driving torque in safety zone.
26	Parking Brake Hold Torque	0 - 100 % of $T_{MaxParking}$ **Default 0**	Max. hold torque when parked at post (standby position). Connect activation unit for torque release, see page 40.
27	Braking Torque	25 - 100 % of T_{Max} **Default 100**	Braking torque when any safety sensor or emergency stop is activated.
28	P-Assist Torque	0 - 100 % of $T_{Friction}$ **Default 0**	Assist torque in percent of door friction torque.
29	Touchless Sensor Rotating Activation	Stop/Slow speed **Off = Stop** On = Slow speed	Stop or slow speed when touchless safety sensors on door leaves are activated.
30	Touchless Sensor Rotating Monitoring	**Off = Disable monitoring** On = Enable monitoring	Configuring if touchless presence sensors on the door leaves shall be monitored.
31	Touchless Sensor Fixed Monitoring	**Off = Disable monitoring** On = Enable monitoring	Configuring if vertical presence photocell sensors shall be monitored.
32	Safety Edges Rotating Monitoring	**Off = Disable monitoring** On = Enable monitoring	Configuring if pressure sensitive safety edges placed on the door leaves shall be monitored.
33	Safety Edges Fixed Monitoring	**Off = Disable monitoring** On = Enable monitoring	Configuring if pressure sensitive safety edges placed on the drum edges shall be monitored.
34	Emergency Stop Monitoring	Off=Disabled **On=Enabled**	Configuring if emergency stop input shall be monitored in program modes 2 and 3.
35	Reset To Default Config	**Off = No action** On = Reset all parameters	When the parameter is set to "1", all other parameters will be returned to the default values.
36	Reset To Default Password	**Off = No action** On = Initilize the password	When the parameter is set to "1", the password will be returned to "01613".
37	Touchless Sensor Rotating Slow Timer (Not used in ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4)	0.0 - 5.0 sec **Default 0.0**	This function will be enabled when P29 has selected off, the timer will start when touchless presence sensors on the door leaves are activated. The door leaves will rotate with slow speed during this time and will stop when timeout.
38	Touchless Sensor Fixed Stop Angle (Not used in ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4)	10 - 40 door deg **Default 10**	The door will stop at this angle when the vertical presence photocell sensor PDR is activated. If the value of P7 greater than the value of P38, this area will be slow speed zone from the vertical presence photocell sensor PDR is activated angle to the stop angle.

Menu num-ber	Parameter name	Range Default value bold On=1, Off=0	Description
41	Login Type	**0**	Parameter range 0-3. 0 = Normal login 1 = Challenge code 1 (Seed 1, forgotten password) 2 = Challenge code 2 (Seed 2, auto selection enable) 3 = Challenge code 3 (Seed 3, unhide selection enable)
P	Password	0 - 9999	Password in the normal in-logging.
		01613	Default value 01613.
LoG 0	Log Out Menu	0	Parameter set to "1" will make an active log out.

Below table is the max. of P24 for door type

Door type	Normal driving torque (P24)
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-18	50%
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-21	60%
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-24	69%
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-27	79%
ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4-30	88%

Kinetic Energy of Rotation - ASSA ABLOY RD100-3 and ASSA ABLOY RD100-4 Frame Doors (Max. Speed)



15 Service/Maintenance

Service and adjustments performed by your ASSA ABLOY Entrance Systems-authorized representative will ensure safe and proper operation of your door unit.

Remember to keep “Service Log Book” and “Site Acceptance Test and Risk Assessment” documents (PRA-0003) available. These are used together.

The table below shows the recommended interval in revolutions, when to replace parts during preventive maintenance. Talk to your ASSA ABLOY Entrance Systems representative to learn more about our service offering.

Minimum maintenance interval of once a year. See EN16005.

Part	Revolutions	Action
Drive unit	300.000/1.500.000	Check/Replace
Emergency stop button (Not used in US and Canada)	minimum once a year	Check

15.1 General service inspection

Things to be checked during general service inspection:

- Speed settings

Emergency stop, function

- Emergency stop button 1
- Emergency stop button 2

Drive unit

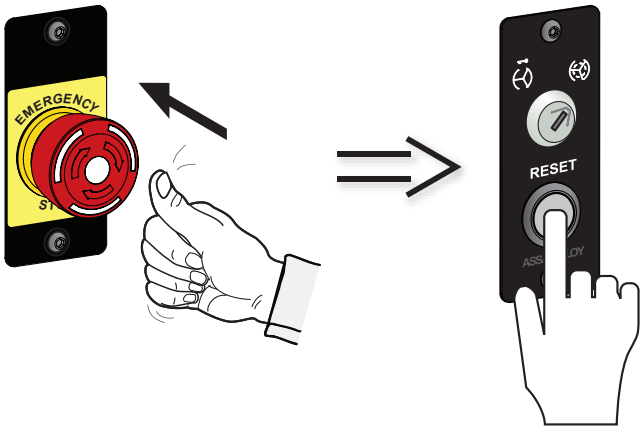
- No abnormal sound

15.1.1 Test of emergency stop button (Not used in US and Canada)

Press the emergency stop button, operation shall cease immediately and the local displaying displays "EStoP".

Release the emergency stop button, the revolving door must not start.

To reset the door to normal operation - release the emergency stop button by rotating it in the direction of the arrows and press reset button.

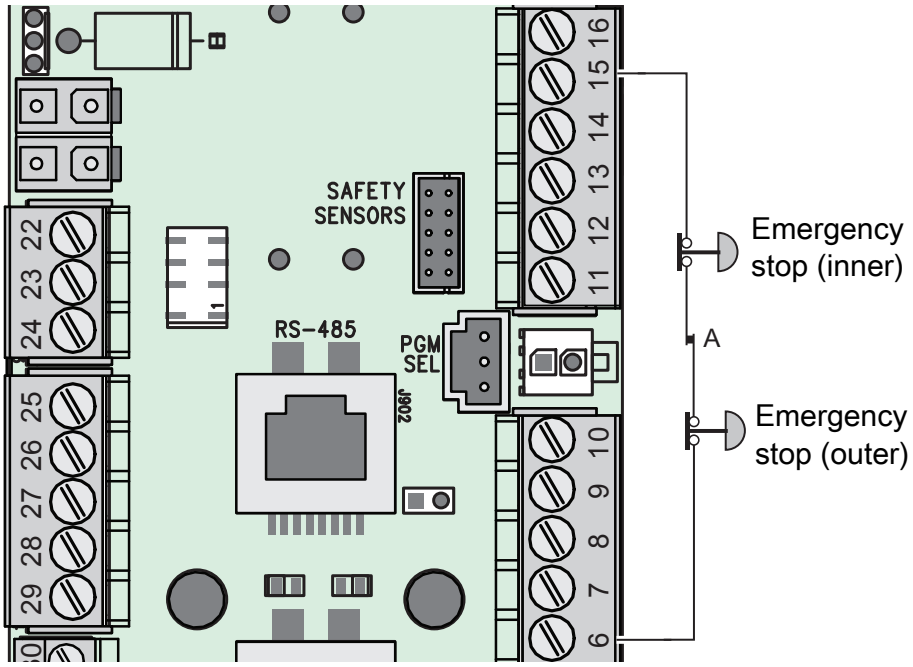


Note! The emergency stop button shall be tested once a year by a trained technician.

If the local displaying displays "EStoP", go to following steps to check.

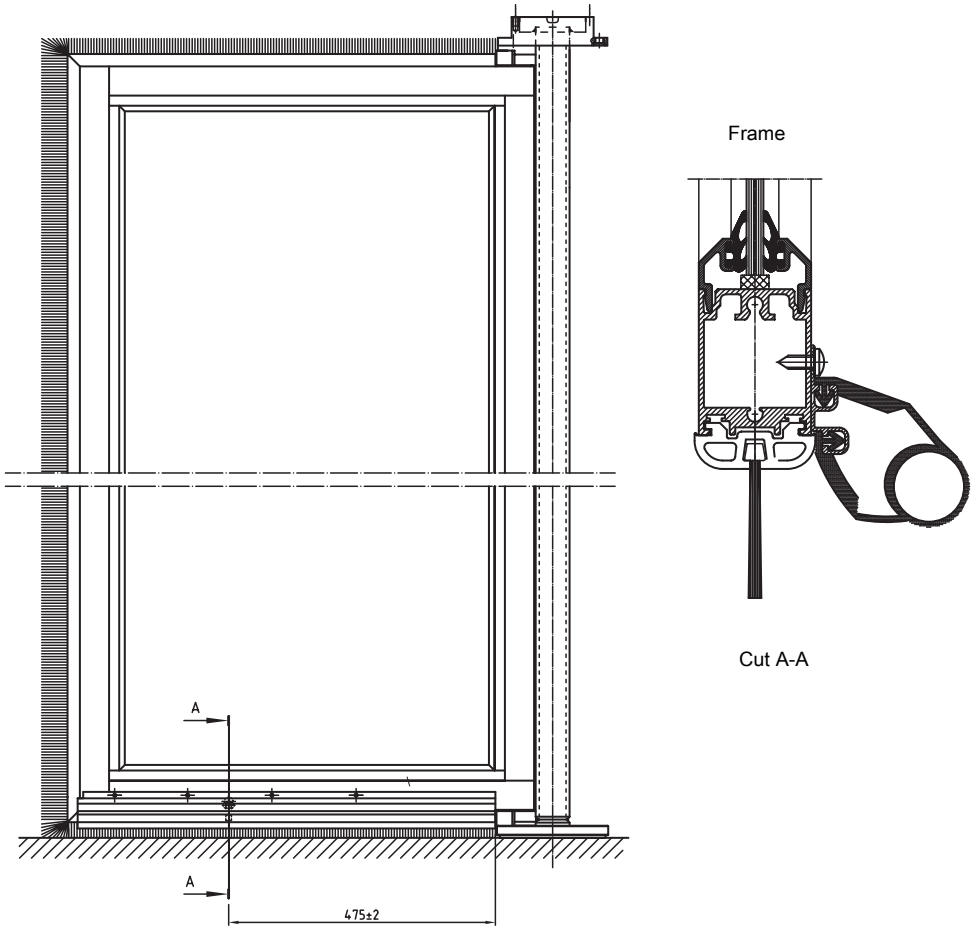
a Disconnect A, connect A of emergency stop (inner) to terminal 6 and perform the test.

b If it is OK, check the cable of emergency stop (outer) in the same way (connect A of outer to terminal 15).



15.1.2 Mechanical safety devices

Passive safety edges, door leaves



Check condition of brush.

Remove any litter from the brush.

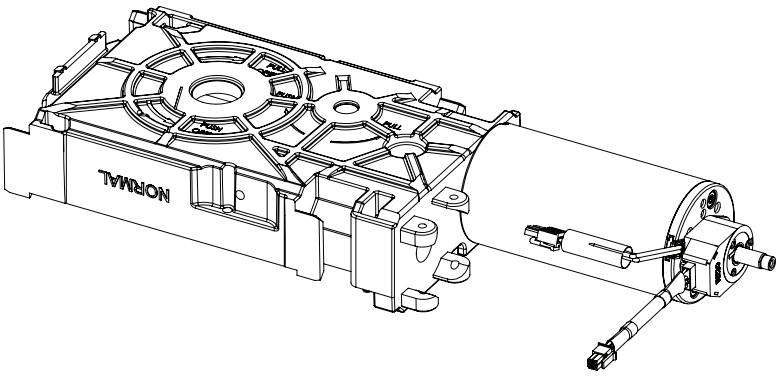
Check that the rubber is undamaged.

Check that the passive safety edges are firmly fixed.

How to replace

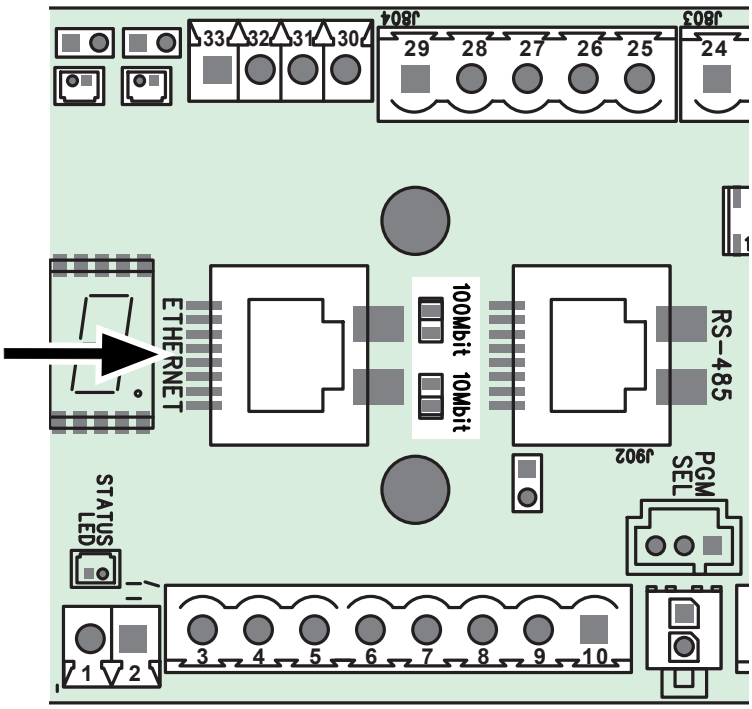
Loosen screws.

15.1.3 Drive unit



- Check the cables.
- Check and replace the drive unit (if necessary).

16 Web interface utility



To reach the web page of an operator, connect the Ethernet port of the operator to a standard Ethernet/TCP/IP network using a STP/UTP CAT5 (or better) patch cable. After one or two seconds, either the 10Mbit or the 100Mbit LED will light up. At this point, a period of about 10 seconds is required for the operator to retrieve its IP address configuration from the network before it can start communicating. Then type the operator unique web address into the address field of your web browser. The operator unique web address is printed on the control unit label, which is placed close to the five digit display, e.g.:

http://cdc1000d004e

Please note that if the operator is connected point to point (i.e. directly to a PC/laptop), the IP address auto configuration may take a little longer time to complete.

In case there are difficulties to establish a connection with the web interface, it is recommended to connect both computer and operator to a router with DHCP enabled.

(Operator connected to a LAN port and computer to another LAN port or via Wi-Fi.)

Use of Android tablets and phones is possible in combination with a Wi-Fi router, the Ethernet port of the operator is connected to a LAN port on the router.

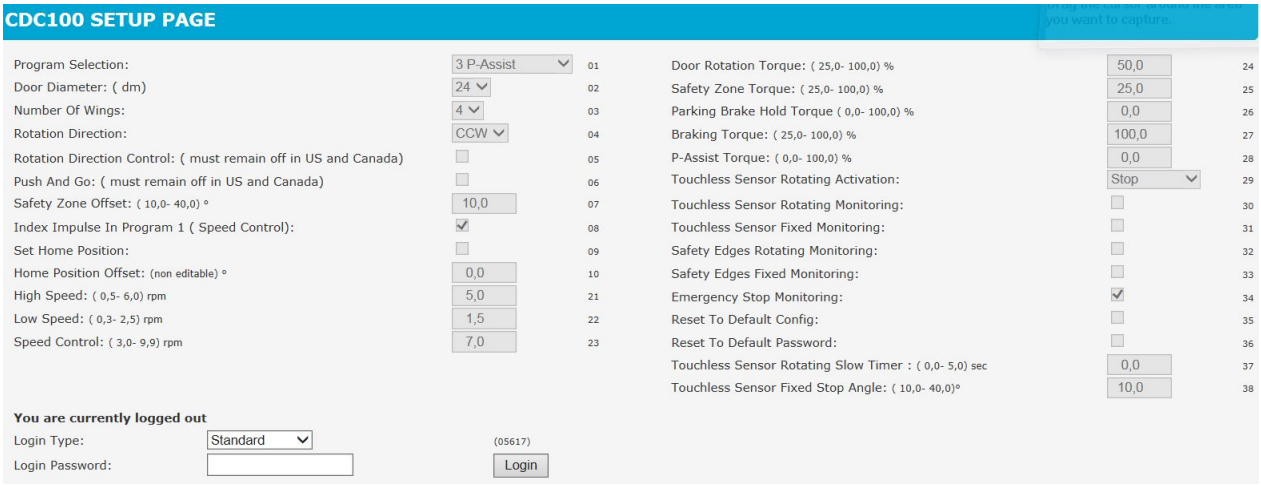
Note that on Android devices it is currently not supported to connect by typing the web address e. g. http://cdc1000d004e

Instead use the **RD Connect** app described in chapter 17.

16.1 General description of the web interface

When you type in the operator start address, you will be automatically redirected to the status page. This page shows current status and error information, e.g. selected operator program, maintenance cycle counter, current error (if any) and error log.

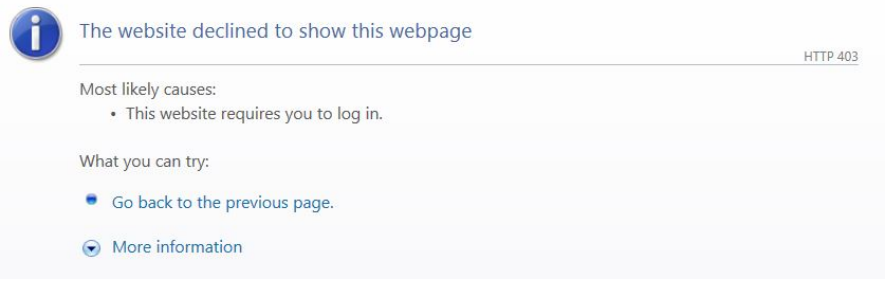
On the left pane, there are two clickable links which always can be used for navigating between the status and the settings page. On the settings page, you can inspect and/or modify configurable parameters. For modifying any parameter, a login is required. For inspection only, no login is needed.



16.2 How to login to the operator

To modify any parameter you have to be authorized. Select "Standard" from the radio button, type the password (1613) in the password field and click Login. Login is granted if the password is correct and if no other user has logged in on the local interface.

If another user has logged in on the local interface, web interface can not be logged in at the same time, and web page shall show as following.



When you are logged in as standard, it is possible to change and save all editable parameters. When finished, press the "Logout" button. If there's a period of 10 minutes or more of inactivity, the user will automatically be logged out.

Step 1

Select "Standard" from the radio button, type in the password (1613) in the password field and click Login. If the password is correct and if no local personal has logged in on the local interface, the next step is entered.

Step 2

Parameter modification can now be done.

Step 3

Press the "Save" button on the web page. The modified parameters are sent to the operator to be saved and activated. Then the complete setup page with updated parameters will again be shown on the web browser.

Note! Do not change parameters from a remote location!

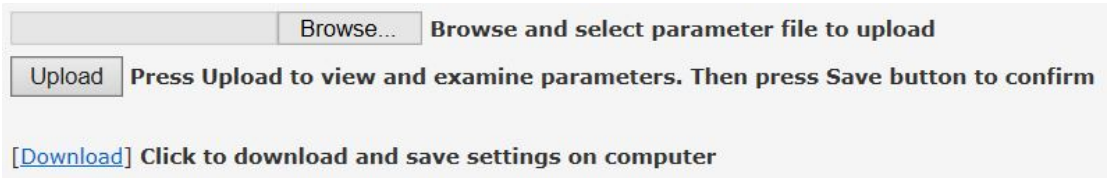
16.3 Correction of out of range data

The operator will only accept changed parameter values that are within range. For all parameter value fields on the web page, the entered value will be checked against minimum and maximum allowed value, when the "Save" button is pressed. Any entered value that are out of range will be marked with a red frame around the value field, and the save procedure will be inhibited. The user should now correct these values, and then press "Save" again.

The range checking is performed using a javascript which is executed by the web browser. It is most common that javascript is enabled, but some users may prefer to disable scripts, and then the range check can't be executed by the web browser. In such cases the operator's web server will still perform range checking for all parameters when they are saved, and if any out of range data is found, it will automatically correct the value to fall between min. and max. limits.

16.4 Download/Upload a full configuration via the web interface

A useful function is the 'Copy' and 'Paste' utility. It is possible to download a full configuration (set of parameters) from the operator to a PC and save it in a file. This setup file can later be uploaded into another operator (or several operators consecutively), which may come in handy in large installation.



To access the download functionality, you need to be logged in. When the setup procedure is finished for a particular operator and all parameters are saved and activated, click the download link at the bottom of the settings page, and the setup will be saved to a file on your PC. Different web browsers handle this situation in different ways, please refer to your browser's manual if any doubt. A general tip, however, is to give the parameter file a suitable name, and to remember in which hard drive folder it was saved. Then it can be reused later at any time.

Click the "Browse" button next to the text field and select the correct setup file. Then click the "Upload" button. Now the values from the file are shown on the setup page, **but they are not yet saved and activated**. All values must now be thoroughly examined, and if everything is correct, click the "Save" button.

16.5 Web browser compatibility

Note! When using Windows 7 together with Internet Explorer 9, we have found some trouble that can cause the operator's web pages to be delayed, and occasionally not shown at all. While this problem is investigated, it's recommended for Windows 7 clients to use Google Chrome instead.

17 **RD Connect** app

The **RD Connect** app makes it easy to access the CDC100 control unit's web interface with an Android tablet and a Wi-Fi router.

The router is connected by cable to the CDC100 Ethernet port and wireless to the tablet.

Note! Only connect one control unit at a time to the router.

Most commercial off-the-shelf Wi-Fi routers can be used, provided they have at least one

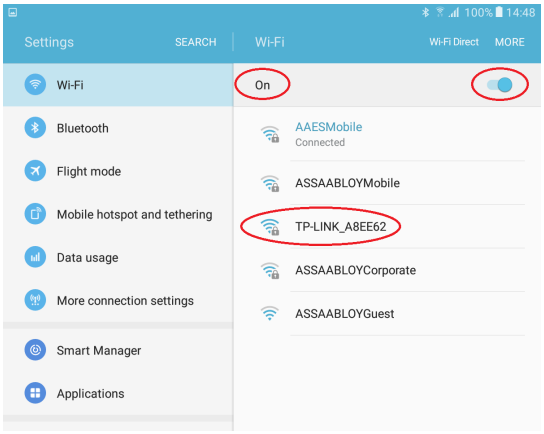
dedicated Ethernet LAN port and are configured so that LAN port and Wi-Fi are assigned IP addresses within the same subnet through DHCP. (Default setting for most routers)

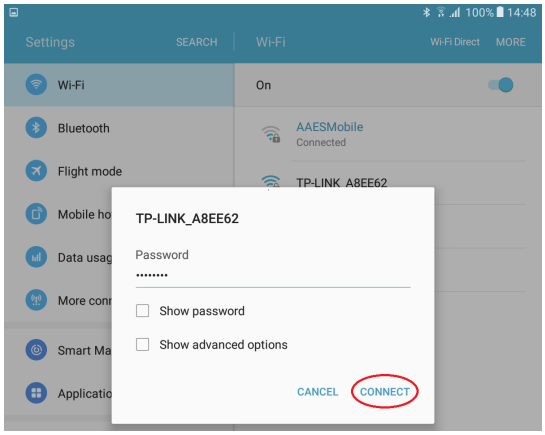
Tested and recommended models are: **TP-LINK TL-WR710N and TL-WR810N**.

If the router has a mode selector switch, it shall be set to 'Router'.

Connection to the wireless network is managed through Android system settings.

Select the wireless network name (SSID) of the router and enter the wireless password when prompted, then tap CONNECT.





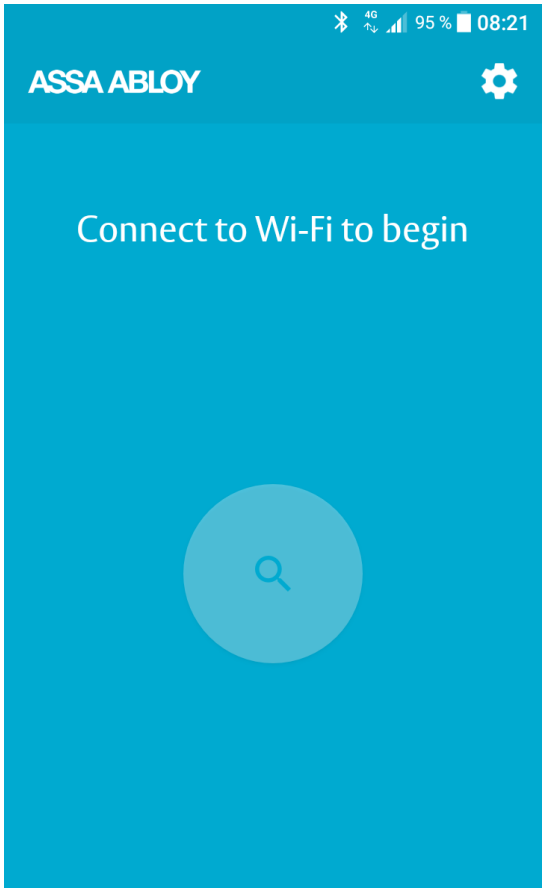
17.1 Alternatives for installation of the **RD Connect** app

Note! The **RD Connect** app requires Android version 5.0 or higher to install.

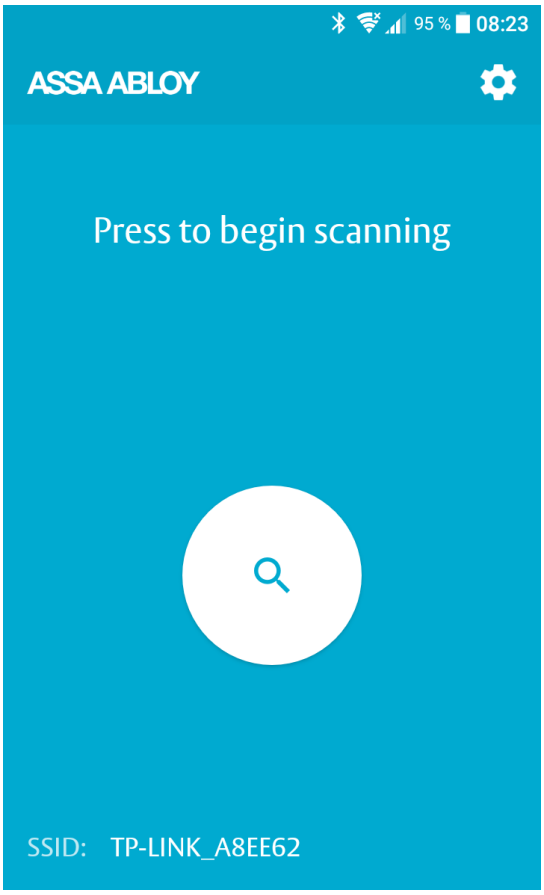
a Entrance Systems tablets managed through MDM (Mobile Device Management)
Send a request to ServiceDesk and provide email address or user group of the person(s) to receive the app, which will be installed automatically.

b Non MDM tablets
Request the file "*1016987-1.0-Software RD Connect.apk*" from technical support and copy it to the tablet (or send it to an email address that can be accessed from the tablet).
Install by tapping the file and follow the instructions. A prompt to enable 'Unknown sources' might appear, which is normal when installing apps from other sources than Google Play. This option is found under 'Lock screen and security' settings.

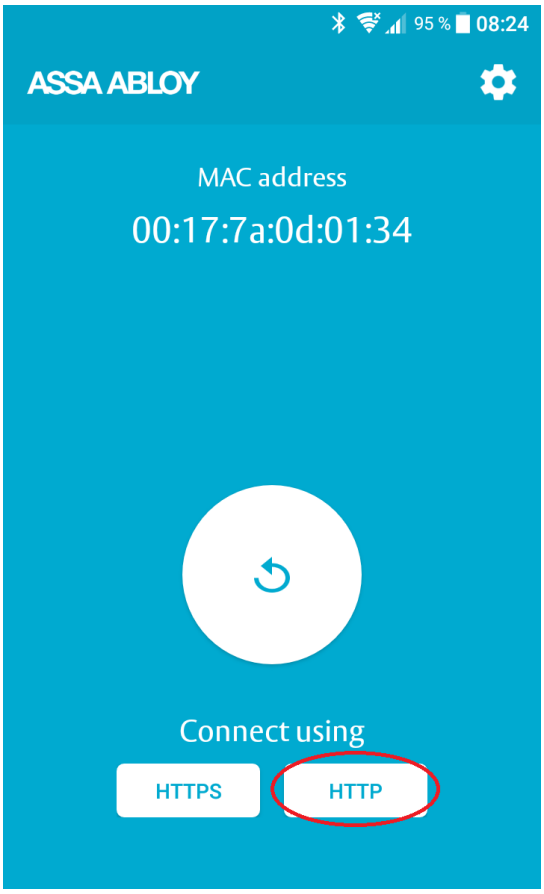
17.2 Run the **RD Connect** app



In case 'Connect to Wi-Fi to begin' is displayed. Make sure that the tablet's Wi-Fi is switched on and that the router is powered and connected to the CDC100 control unit.

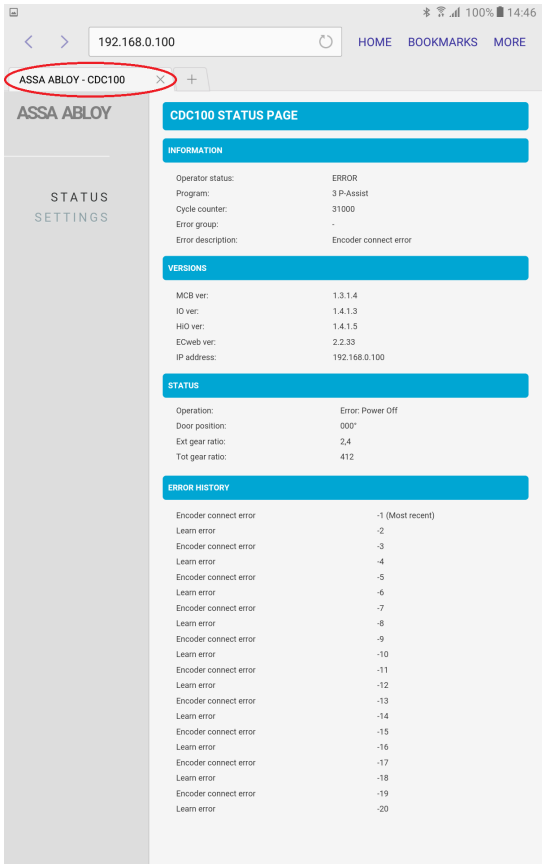


When a wireless network connection has been established, verify that the network name (SSID) is the same as the router's.
(In this example TP-LINK_A8EE62.)
Then tap the scan button (magnifying glass).



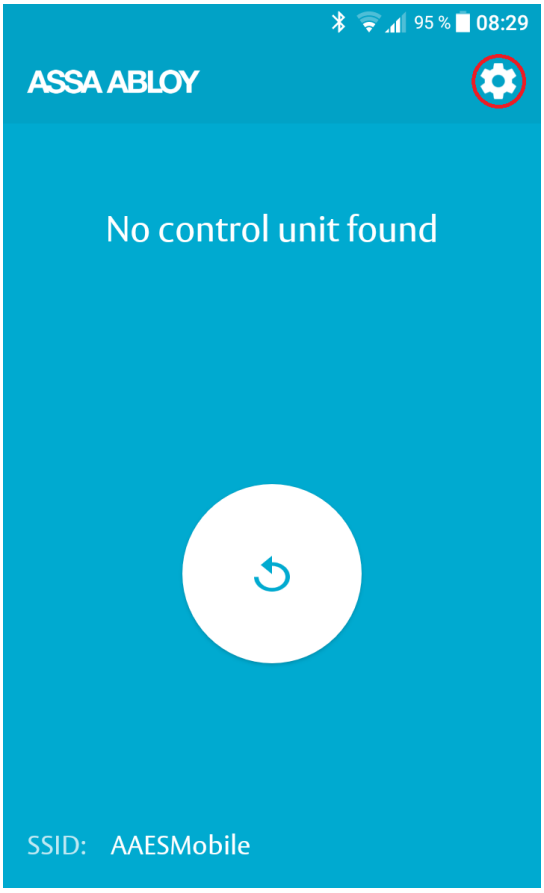
When the MAC address of the control unit is displayed, tap the HTTP button which will open the control unit's web interface in a browser.
Tap the repeat scan button (arrow) if another control unit has been connected.

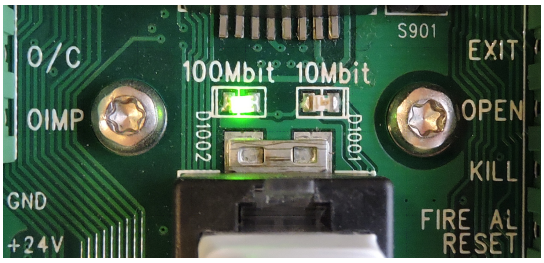
Note! The HTTPS button shall not be used to connect with a CDC100 control unit.



The web interface opens in a new browser tab each time the **RD Connect** app is used.

To prevent multiple open tabs, make a habit of closing the tab after each session.



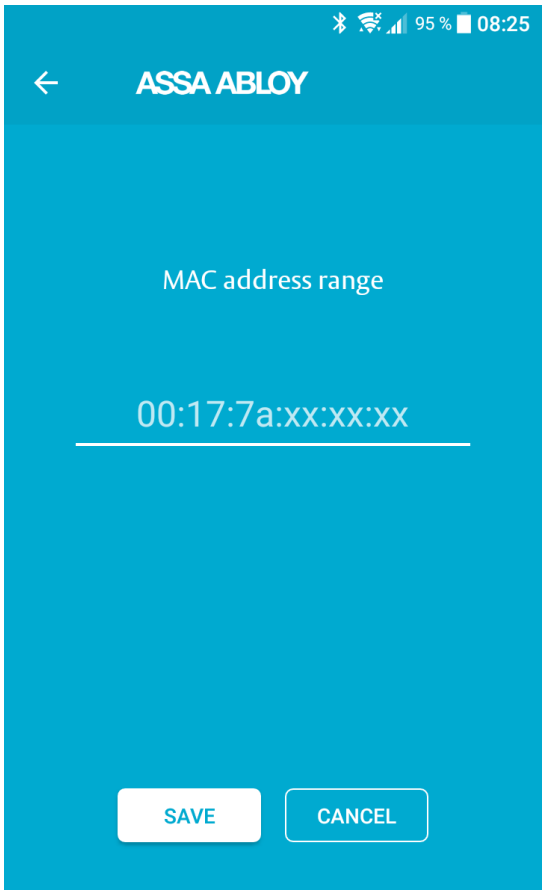


If no control unit is found:

a Check that the tablet is connected to the router's wireless network. In this example the tablet has connected to another network (AAESMobile).

b Be patient, after power up of control unit or router, it can take a couple of minutes before the connection is established.
Tap the repeat scan button (arrow) to try again.

Also check that the 10 or 100 Mbit LED, near the control unit's Ethernet port, is lit.



Tapping the settings icon (cogwheel) opens the MAC address range settings page.

The first six digits (00:17:7a) are used to identify ASSA ABLOY units.

Leave unchanged or else the control units cannot be found!

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