

Slimdrive SC/
SC-FR 2M
Slimdrive SCR/
SCR-FR 2M
Slimdrive SC WK2/
SC-FR 2M WK2

GB Mounting and service instructions

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Key to symbols

In these instructions warnings are used to warn against injuries or material damage.





- ▶ Always read and observe these warnings!

The warning symbol warns you against the danger of injury.

- ▶ Observe all the measures which are identified by the safety sign in order to avoid injuries or death.

Warning symbol	Warning word	Meaning
	DANGER	Danger for persons. Non-observance results in death or serious injuries..
	WARNING	Danger for persons. Non-observance can result in death or serious injuries.
	CAUTION	Danger for persons. Non-observance can result in minor injuries.
-	CAUTION	Information in order to avoid material damage, to understand or to optimize the processes.

Important information and technical notes are emphasised in order to illustrate the correct operation.

Symbol	Meaning
	Means „Important note“
	Means „Additional information“
	Symbol for an action: Here you have to do something. ▶ Observe the sequence if there are several action steps.
	Symbol that the correspondingly marked product may not be disposed of with household waste.

Product liability

In accordance with the liability of the manufacturer for his products as defined in the German „Produkthaftungsgesetz“ (Product Liability Act), the information contained in this brochure (product information and proper use, misuse, product performance, product maintenance, obligations to provide information and instructions) is to be observed. Non-observance releases the manufacturer from his statutory liability.

1 Safety precautions

1.1 Intended use

Slimdrive SC, Slimdrive SC-FR 2M, Slimdrive SC WK2, Slimdrive SC-FR2M WK2 are only suitable for use in entrance and interior areas of pedestrian traffic in commercial plants and public areas.

Slimdrive SC, Slimdrive SC-FR 2M, Slimdrive SC WK2, Slimdrive SC-FR2M WK2 may not be used as fire- or smoke-proof door drives.

Slimdrive SC-FR 2M and Slimdrive SC-FR2M WK2 are tested and approved for use in escape and rescue routes.

Slimdrive SC and Slimdrive SC WK2 may not be used as an escape and rescue door.

1.2 Safety precautions

The prescribed mounting, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.

The country-specific laws and regulations are to be observed during safety-related tests.

GEZE shall not be liable for injuries or damage resulting from unauthorised modification of the system, and the approval for use in escape and rescue paths is voided when unauthorised changes are made (Slimdrive SC-FR 2M).

GEZE is not liable if products from other manufacturers are used with GEZE equipment.

Only original GEZE parts may be used for repair and maintenance work.

The connection to the power supply must be made by a professional electrician. Perform the power connection and equipment earth conductor test in accordance with VDE 0100 Part 610.

Use a customer-accessible 10-A overload cut-out as the line-side disconnecting device.

Protect the programme switch against unauthorised access.

The detection field of the movement detector in the exiting direction must satisfy the AutSchR directive.

In accordance with Machine Directive 98/37/EC, a danger analysis must be performed and the door system identified in accordance with CE Identification Directive 93/68/EEC before commissioning the door system.

Observe the latest versions of guidelines, standards and country-specific regulations, in particular:

- BGR 232 "Guidelines for power-operated windows, doors and gates"
- DIN 18650 "Building hardware – Powered pedestrian doors"
- VDE 0100, Part 610 "Installation of high-voltage systems with nominal voltages up to 1000 V"
- DIN EN 60335-2-103 "Safety of electrical devices for home use and similar purposes; special requirements for drives for gates, doors and windows"
- AutSchR "Directive for automatic windows, doors and gates" (for Slimdrive SC-FR 2M)
- Accident-prevention regulations, especially BGV A1 "General regulations" and BGV A2 "Electrical systems and equipment"

1.3 Safety-conscious working

Secure the workplace against unauthorised entry.

Take the swinging area of long system parts into account.

Never carry out work with a high safety risk (e.g. mounting the drive, hood or door leaf) while alone.

Secure the hood/drive shrouding against falling.

Use only cables prescribed in the cable plan. Lay screening in accordance with the wiring diagram.

Secure loose, internal drive cables with cable ties.

Before working on the electrical system:

- Disconnect the drive from the 230 V mains network, secure against restarting and check to ensure that it is not supplied with power.
- Disconnect the controller from the 24 V battery.
- Note that if an uninterruptible power supply (UPS) is used, the system will still be supplied with power despite the fact that the power supply is disconnected.

Always use insulated wire-end ferrules for wire cores.

Attach safety labels to glass door leaves.

Danger of injury by opened drive. Hair, clothing, cables, etc. can be drawn in by rotating parts!

Danger of injury by unsecured pinching, impact, drawing-in or shearing spots!

Danger of injury by broken glass!

Danger of injury by sharp edges in the drive!

Danger of injury during mounting by freely moving parts!

1.4 Inspection of the mounted system

Measures for security and prevention of crushing, impact, shearing or drawing-in spots:

- Check the functioning of safety sensors and movement detectors.
- The detection field of the movement detector in the exiting direction must cover the opening width x 1.5 m in front of the door. The movement detector in the exiting direction (see AutSchR) must detect people moving faster than 0.1 m/s.
- Check the earth connection to all metal parts which can be touched for firm seating and good contact.

1.5 Environmentally-conscious working

When disposing of the door system, separate the different materials and have them recycled.

Do not dispose of batteries and storage cells with household garbage.

Comply with the statutory regulations when disposing of the door system and the batteries and storage cells.

1.6 Information regarding the battery directive



Applicable in Germany and in all other Member States of the European Union as well as in other European countries, together with the countries' own provisions for a separate waste battery collection system.

In accordance with the Battery Directive, we are obligated to inform you of the following in connection with the sale of batteries or accumulators resp. in connection with the delivery of devices containing batteries or accumulators:

- Accumulators and batteries may not be disposed of with household waste.
- Disposal with household waste is expressly forbidden according to the Battery Directive.
- As the final consumer, you are bound by law to return spent batteries.
- Please return waste batteries to a communal collection site or retail collection location. Following use, you may return by mail any batteries received from us.

The address is: GEZE GmbH, Incoming Goods, Reinhold-Vöster-Str. 21-29, 71229 Leonberg.



Batteries which contain harmful substances are identified by a symbol of a crossed-out rubbish bin. The chemical designation of the harmful substance is specified underneath the rubbish-bin symbol: Cd for Cadmium, Pb for lead, Hg for mercury.

2 Aids

2.1 Tools

General tool equipment is required for mounting:

- Tape measure
- Marking pen
- Torque spanner
- Allen key in common sizes
- Open-ended wrench in common sizes
- Screwdriver set
- Torx wrench in common sizes
- Side-cutting pliers
- Crimping pliers for cables
- Electric drill
- Mitre saw
- Level

In addition, you need the following tools:

Tool	Size/Remark
Hammer drill	
Welding equipment	
Cordless screwdriver	
Threader for M4–M8	and corresponding drills
Glass suction device	for curved glass surfaces
Tension belts	4 piece with sufficient length (4–5 m)
Hoist unit	e.g. Genie Hoist 3.8 or GH 5.6 (min. lifting capacity 160 kg; max. lifting height 3.8 m or 5.6 m)
Levelling device	
Ladder	

2.2 Required consumables

Designation	Detailed description/Remark
Silicone	
Silicone spray	
Soap water	
Lithium soap universal lubricant on a mineral oil basis for the bearings	e.g. multi-purpose grease
Suitable underlay material/evening-out material for floor ring	

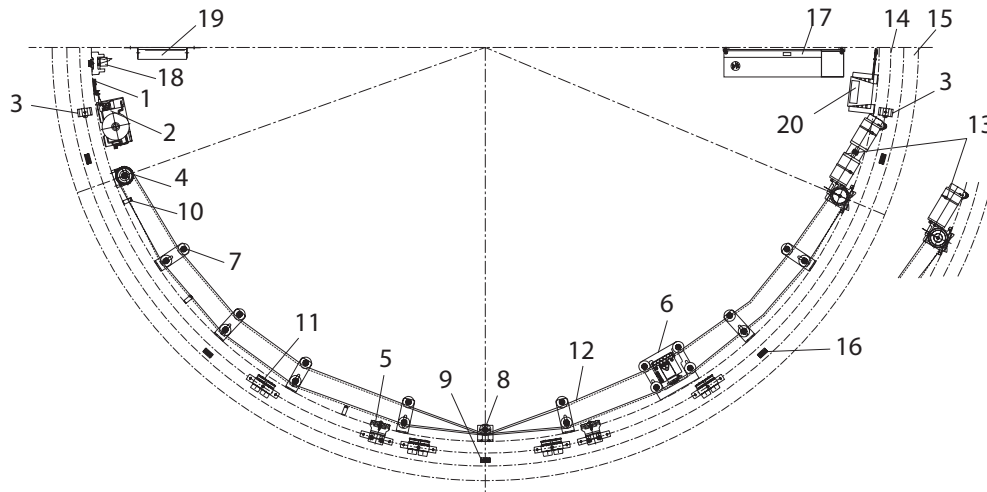
3 Components and assembly groups

3.1 Design variants



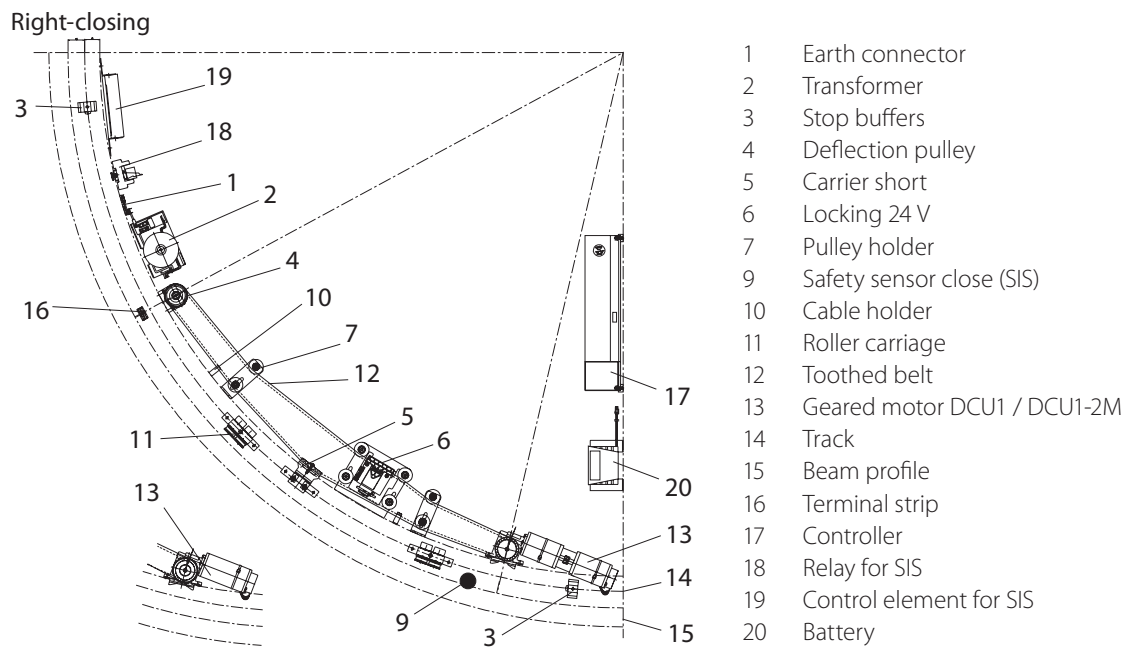
These mounting instructions encompass the Slimdrive SC, Slimdrive SC-FR 2M, Slimdrive SC WK2 and Slimdrive SC-FR 2M WK2. The Slimdrive SCR and SCR-FR 2M represent a combination of two SC or SC-FR 2M systems that can differ in form depending on the customer requirements. The representation shows the ideal case of a circular system. In order to simplify the designations, only the terms Slimdrive SC, Slimdrive SC-FR 2M, Slimdrive SC WK2 or Slimdrive SC-FR2M WK2 are used in this document.

3.2 Slimdrive SC-FR 2M assembly groups, 2-leaf with tandem roller

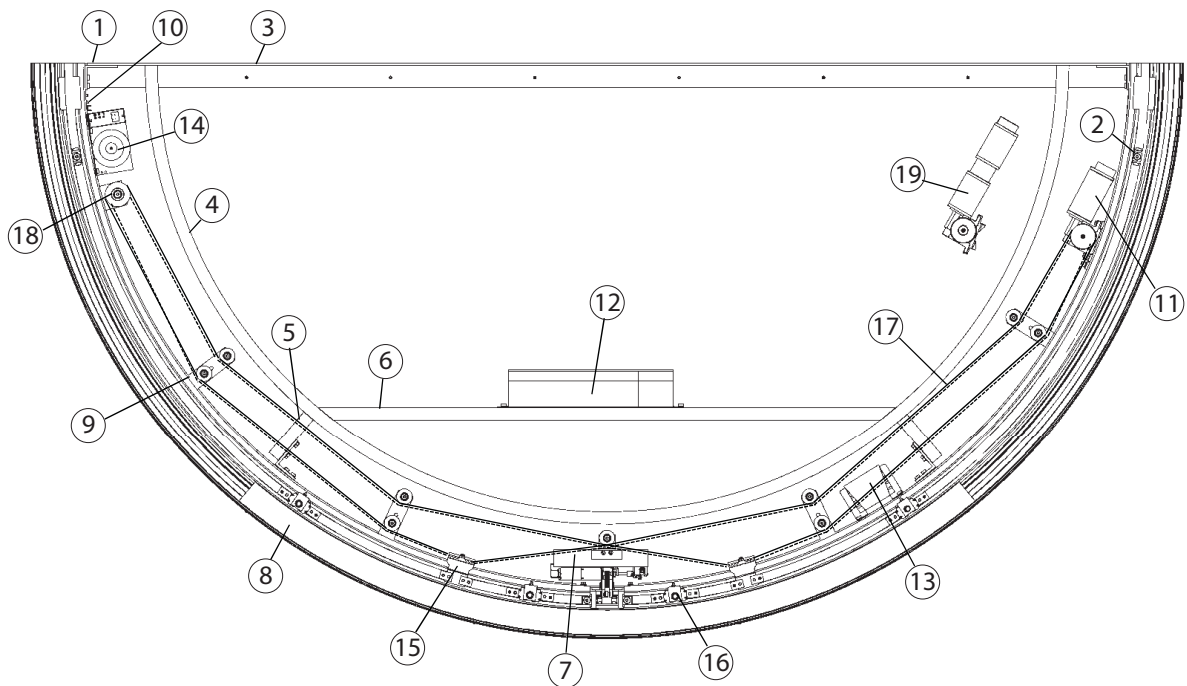


- | | | | |
|----|---------------------------|----|-----------------------------|
| 1 | Earth connector | 11 | Roller carriage |
| 2 | Transformer | 12 | Toothed belt |
| 3 | Stop buffers | 13 | Geared motor DCU1 / DCU1-2M |
| 4 | Deflection pulley | 14 | Track |
| 5 | Carrier short, 2x | 15 | Beam profile |
| 6 | Locking 24 V | 16 | Terminal strip |
| 7 | Pulley holder | 17 | Controller |
| 8 | Tandem roller | 18 | Relay for SIS |
| 9 | Safety sensor close (SIS) | 19 | Control element for SIS |
| 10 | Cable holder | 20 | Battery |

3.3 Slimdrive SC-FR 2M assembly groups, 1-leaf

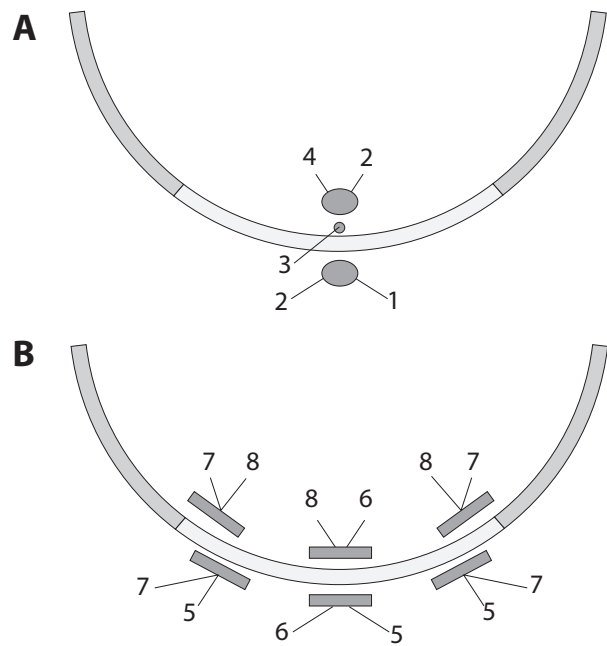
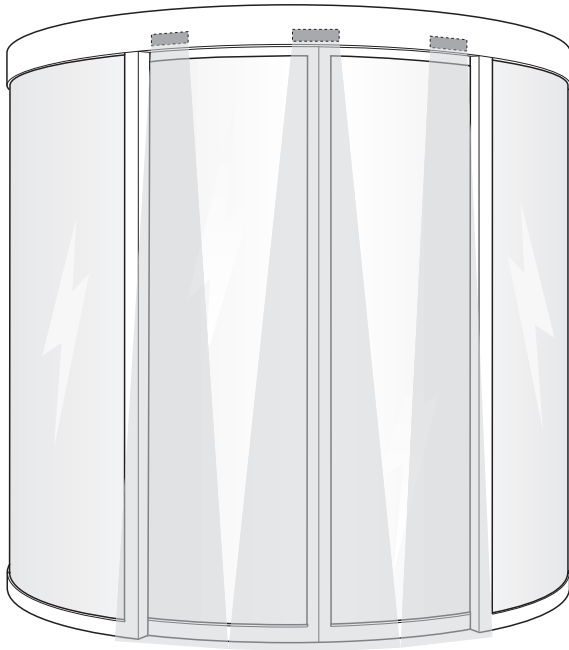


3.4 Assembly groups Slimdrive SC WK2, Slimdrive SC-FR2M WK2



- | | | | |
|---|-------------------------------------|----|-----------------------|
| 1 | Connecting bracket | 10 | Earth connector |
| 2 | Stop buffers | 11 | Geared motor DCU 1 |
| 3 | Facade bracket | 12 | Controller |
| 4 | Frame tube, inside | 13 | Battery |
| 5 | Fastening tube | 14 | Transformer |
| 6 | Reinforcing brace ceiling | 15 | Driver |
| 7 | Rod locking unit with tandem roller | 16 | Roller carriage |
| 8 | Cover profile | 17 | Toothed belt |
| 9 | Pulley holder | 18 | Deflection pulley |
| | | 19 | Geared motor DCU 1-2M |

3.5 Actuation elements safety sensor equipment



A Sensor system package for Slimdrive SC systems up to 1600 mm opening width

- 1 Rain cover to protect the radar detector outdoors (optional)
- 2 GC 304 R, GC 304 SF (in direction of emergency exit)
Radar detector for controlling the automatic doors
- 3 HZC
Ultrasound for protecting the opening width
- 4 Ceiling installation kit for integrating the radar detector in the ceiling

B Sensor system package for Slimdrive SC systems above 1601 mm opening width (only for Germany)

- 5 Rain cover to protect the combination detector/light curtain outdoors (optional)
- 6 GC 362 R, GC 362 SF (in direction of emergency exit)
Combination detector for controlling and protecting the automatic doors
- 7 GC 333
Light curtain for protecting the opening width
- 8 Ceiling installation kit for integrating the combination detector/light curtain in the ceiling

4 Mounting

4.1 Preparations to be made by the customer

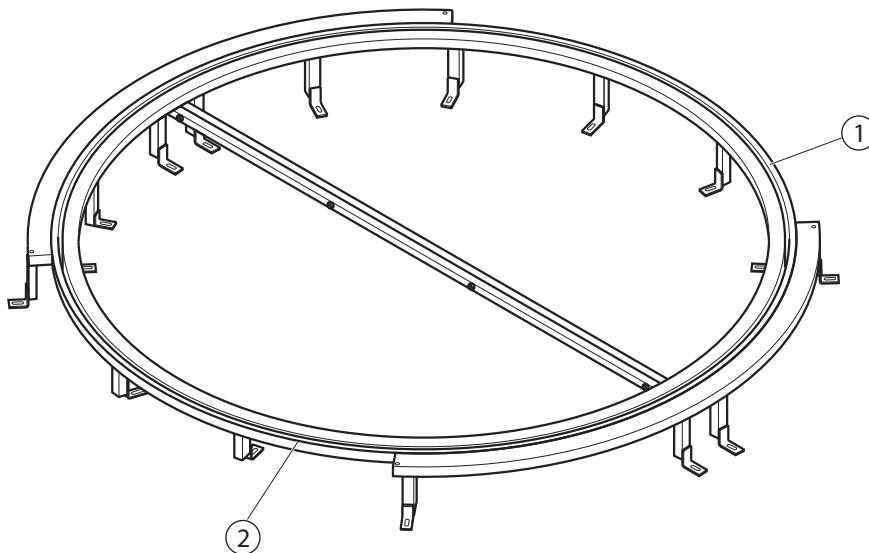
- ▶ Check the preparations to be made by the customer to ensure proper mounting:
 - Type and loading capacity of the facade structure or substructure
 - Levelness of the mounting surface
 - Requirements of the cable plan

4.2 Mounting the Slimdrive SC

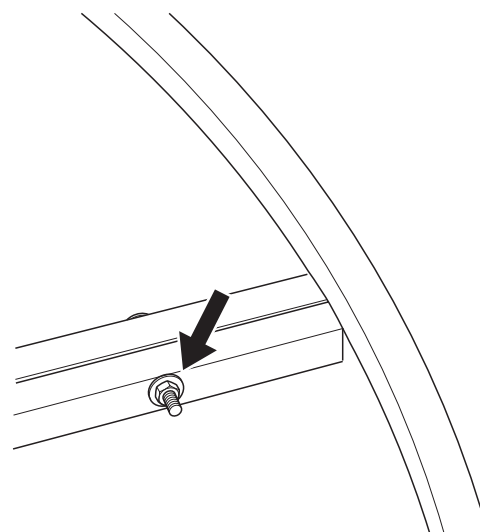
- !
 - Secure the workplace against unauthorized entry.
 - Always perform work with a 2nd technician.
 - Use stepladder or stepstool.

4.2.1 Mounting the floor ring

- ▶ Lay floor ring halves (1) and (2) together.
- ▶ Determine the position of the floor ring.



- ▶ Screw the 2 floor ring halves together using screws, nuts and washers.

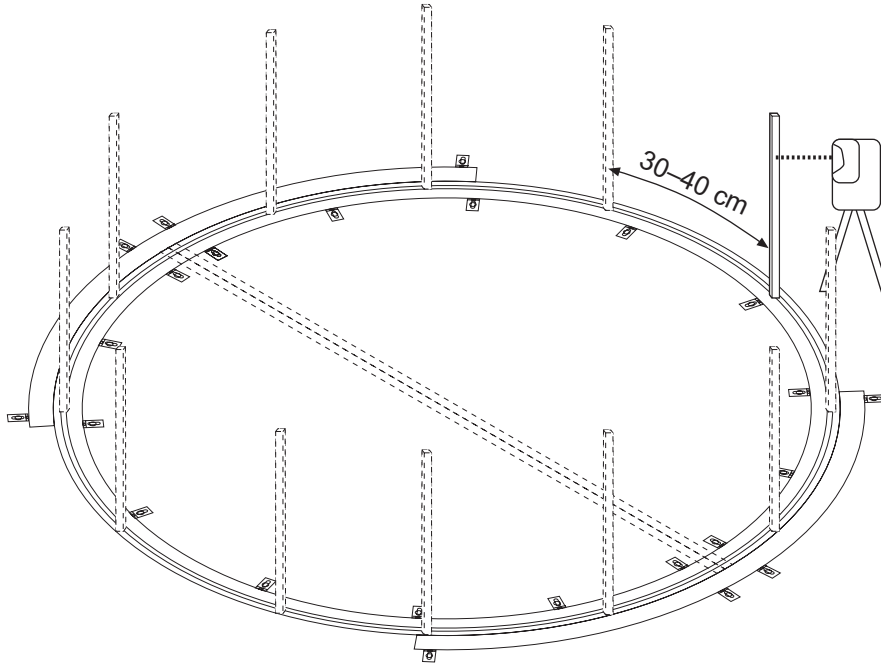


4.2.2 Aligning the floor ring



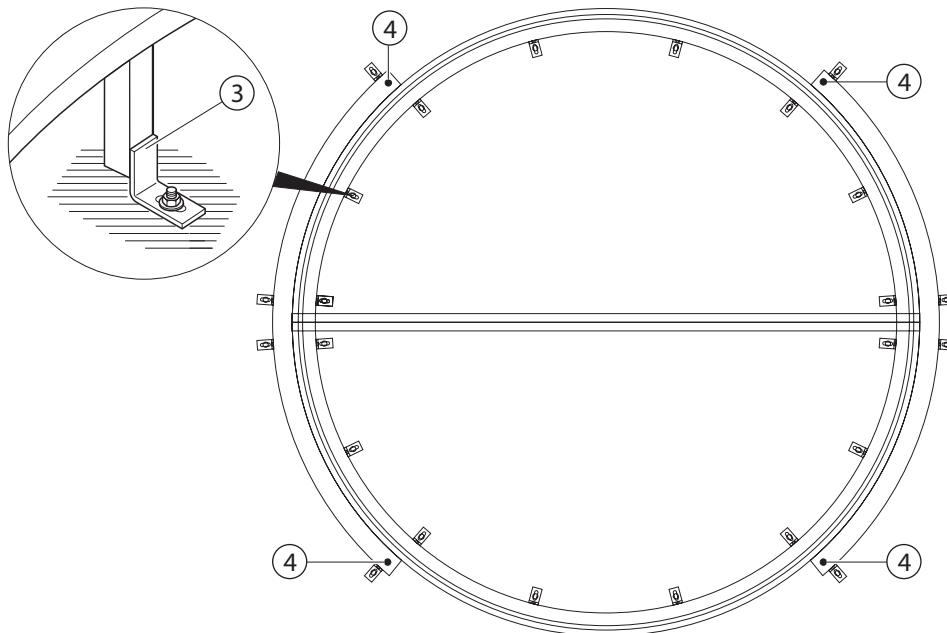
In order to ensure trouble-free functioning of the Slimdrive, the floor ring has to be aligned level exactly.

- ▶ Align the floor ring every 30–40 cm using a leveling device and underlay it.
Top edge of completed flooring = Top edge of floor ring.



4.2.3 Fastening the floor ring to the underground

- ▶ Align the bracket (3) to the floor ring and screw it to the underground.
- ▶ Align the height of the floor ring once more at these points.
- ▶ Weld the bracket (3) to the base of the floor ring.
- ▶ Put on the black caps (4) (included in the scope of delivery).

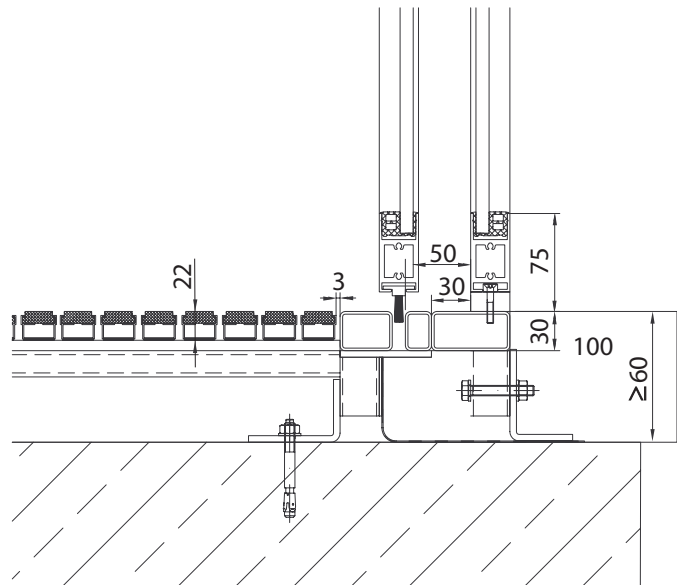


GEZE cannot accept any liability if the Slimdrive SC/SC-FR 2M is mounted without a floor ring.

4.2.4 Fill the floor ring space with screed (not included in performance)

! Take the screed height in the floor ring into account. The dimension of 22 mm in the drawing below refers to the standard floor mats of GEZE. Alternatively floor covering as desired by the customer can be used.

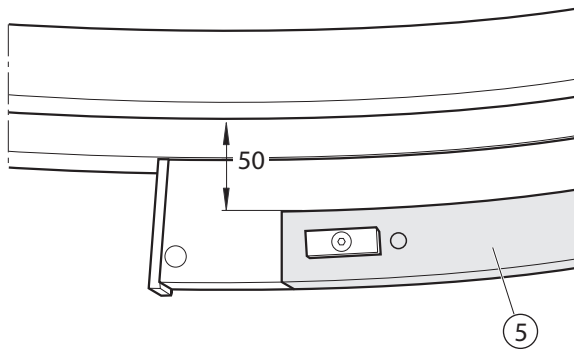
- Fill the floor ring space (4) with screed.



4.2.5 Laying profile rails for side elements

! The space between the profile rail and the track must amount to at least 50 mm, even if the profile rail projects over the floor rail.

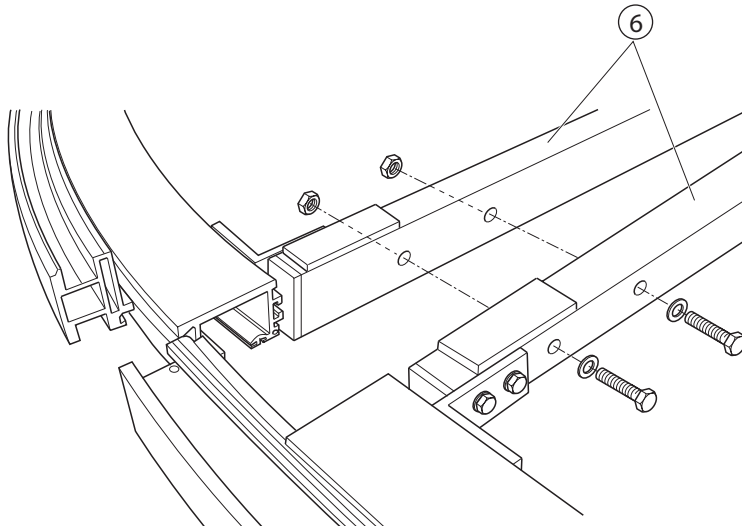
- Mount the profile rail (5) at a distance of at least 50 mm from the track.
- Check the dimensions on site.



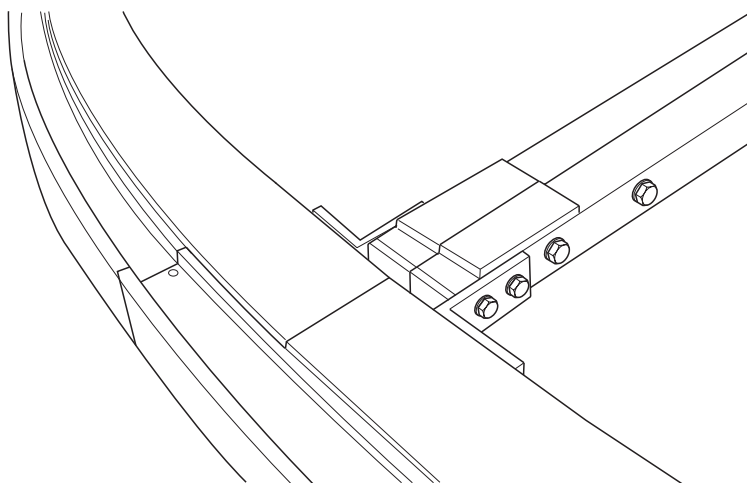
4.2.6 Mounting the ceiling ring

! Lay the ceiling ring on supports during mounting.

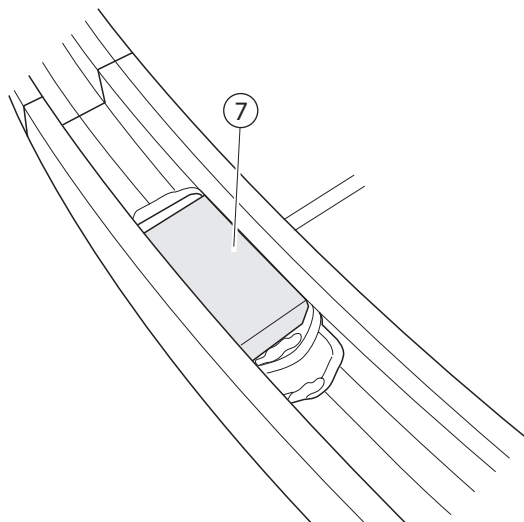
► Connect the 2 half-shells (6) of the ceiling ring.



► Screw the 2 half-shells together.



► If necessary, bond a sealing (7) into the water gutter.



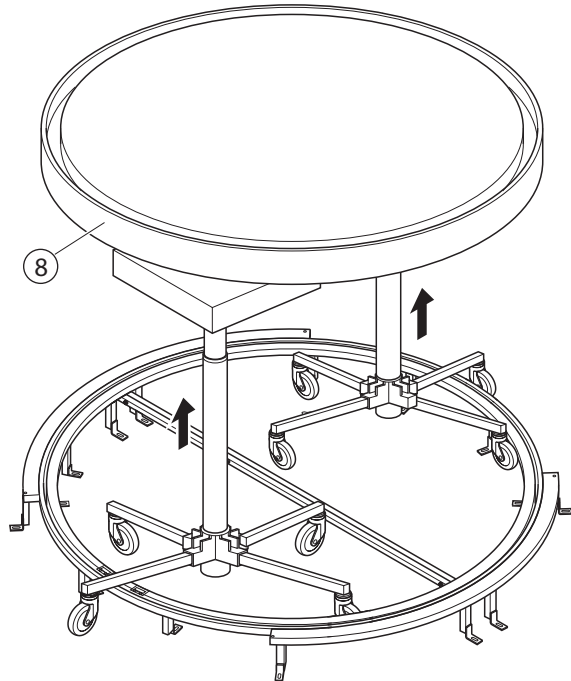
4.2.7 Lifting the ceiling ring

**WARNING!**

The ceiling ring is very heavy.

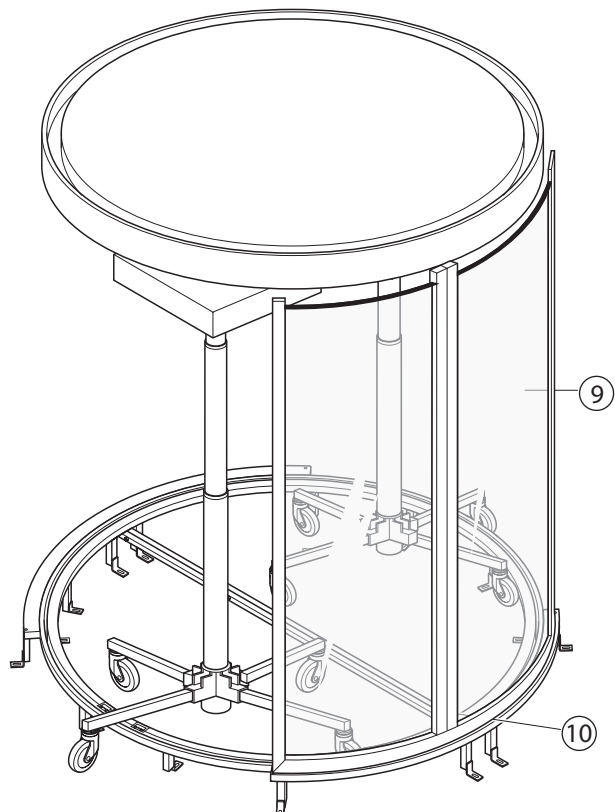
- ▶ Wear a hard hat when lifting the ceiling ring.
- ▶ Only lift the ceiling ring by means of suitable aids (e.g. pneumatic press).
- ▶ Do not stand under the raised ceiling ring.

- ▶ Use hoist units in the passage area and raise the ceiling ring (8) at least 40 mm over the side element height.

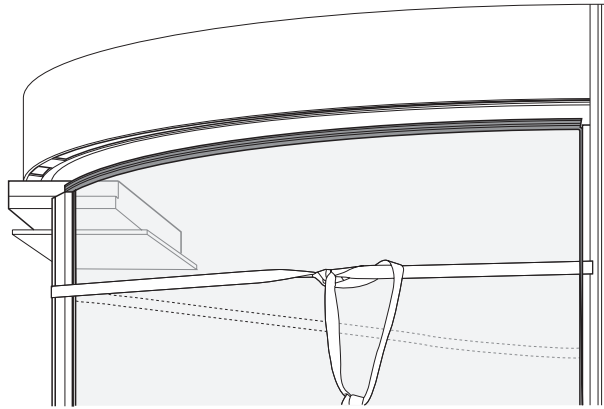


4.2.8 Inserting a side element

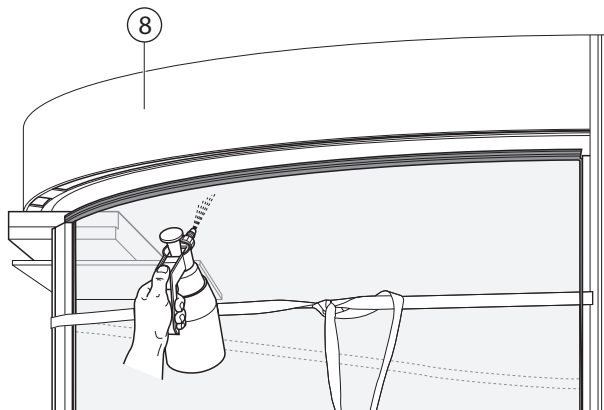
- ▶ Insert and align the side elements (9) into the profiles in the floor ring.
- ▶ Bond the glass blocks into the H profile.
- ▶ Insert the H profile (10) between the side elements.



- ▶ Secure the inserted side elements against falling over by using a strap in the upper third.



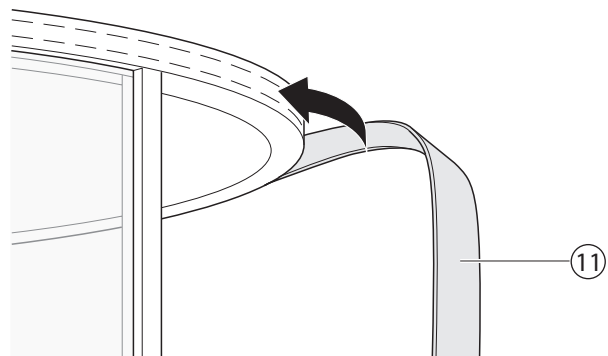
- ▶ Spray soap water or silicone spray onto the upper rubber of the side elements and ceiling ring (8).
- ▶ Lower the ceiling ring (8) carefully onto the side element profiles and screw it on.



! The ceiling ring has to lie evenly on all the side element profiles.

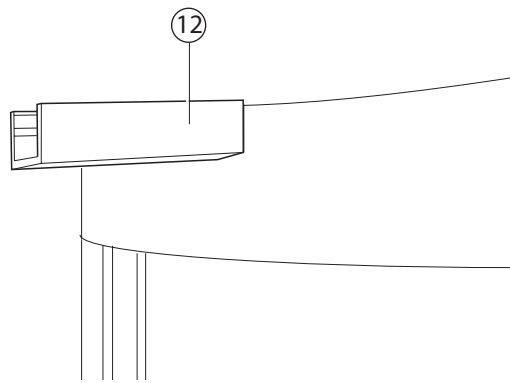
4.2.9 Attaching the ring cover and ceiling panels

- ▶ Cut the ring profile (11) to the required length and clip in at the drive ring.
- ▶ If necessary, release the ring cover at the water-spout outlet.



- ▶ Bond the ceiling panels onto the inner and outer ceiling halves.

- ▶ If it exists, bond on the waterspout cover (12).



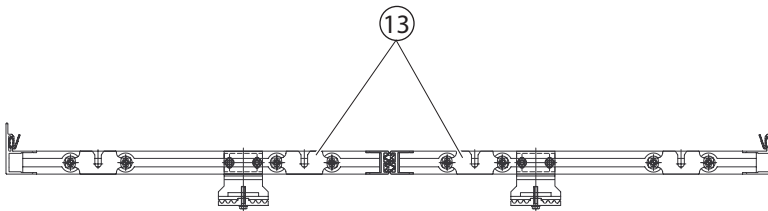
4.2.10 Inserting the moving leaf



WARNING!

Danger of injury by broken glass.

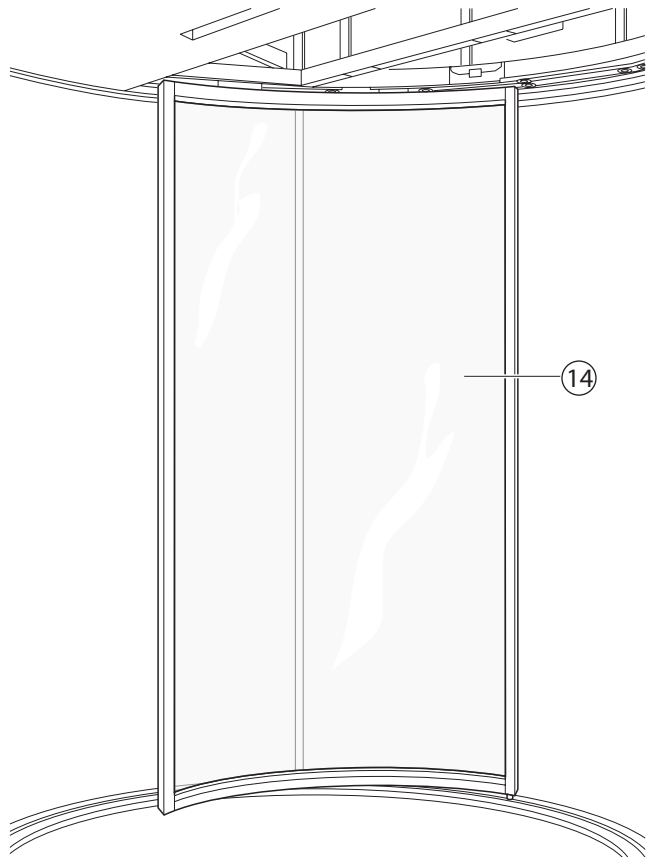
- ▶ Always mount the door leaf together with another person.
- ▶ If not already mounted, mount 2 door suspensions (13) at each door leaf.



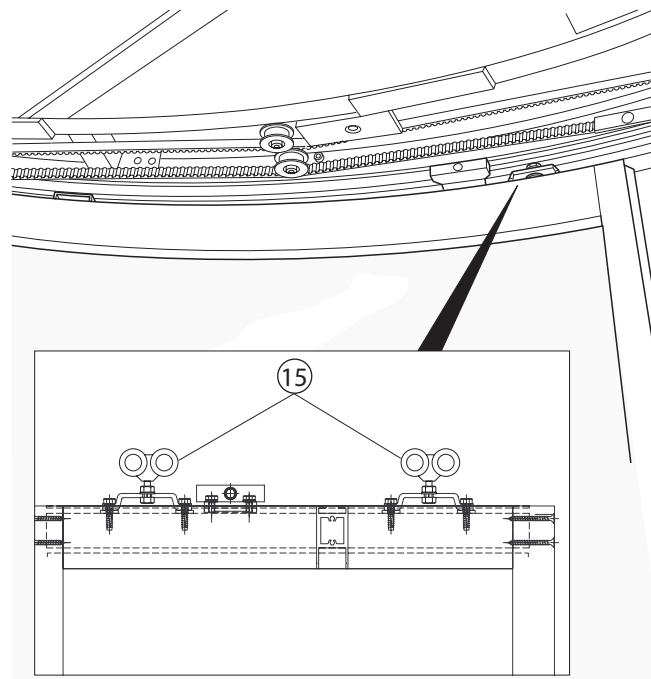
Door suspensions for 2-leaf door with tandem roller

- ▶ Observe the space between the carrier (short carriers at all the leaves) and the retainer and mount the carrier at the door leaf.
- ▶ Separate the roller carriage from the transportation lock.

- ▶ Insert the door leaf (14) into the floor guide and hang in the roller carriage.



- ▶ Hang in the door suspensions from the front into the hanger bolts of the 2 roller carriages (15).
- ▶ Secure the door leaves by means of lock nuts.



4.2.11 Aligning the door leaves

**CAUTION!****Danger of crushing.**

The door leaves are not yet secured and slide easily.

- ▶ Ensure that the door leaves are not moved accidentally or by unauthorised persons.



- Carriers may not contact the pulley holder!
- It must be possible to move the door leaves with a maximum force of 100 N.

- ▶ Set the parallel position and height of the door leaves at the hexagon of the hanger bolts:
 - Make the door leaves move smoothly individually.
 - Align the door leaves flush. Ensure the same height and parallel closing edges when doing so.
 - Lock the door leaves with the hexagon nut.
- ▶ Secure the door leaves against lateral exiting of the track: fasten the stop buffer behind the left-hand roller carriage at the left-hand door leaf.
- ▶ Set the stop buffer on the right-hand roller carriage of the right-hand door leaf.

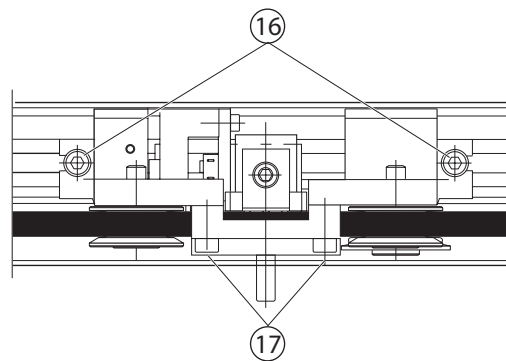
4.2.12 Connecting the door leaves to the system

- ▶ Close the door leaves and align to the centre.
- ▶ Move the toothed belt until the toothed-belt lock and carrier are positioned in line.
- ▶ Connect the carrier with the toothed-belt lock.

4.2.13 Positioning the locking 24 V

- ▶ Close the door leaves.
- ▶ Loosen the screws (16) and (17) on the locking.
- ▶ Align the locking device to the toothed belt.

After mounting the locking pin must be positioned above the hole in the hood so that it has free clearance.
- ▶ Tighten screws (16).
- ▶ Align the locking guide so that it has sufficient clearance on both sides.
- ▶ Tighten screws (17).



The carrier may not strike the locking during operation!

4.2.14 Setting the stop buffer

- ▶ Slide the door leaf to the desired opening position.
- ▶ Fasten the left- and right-hand stop buffer.

4.2.15 Mounting the safety equipment

- For the mechanical installation refer to the approval drawing
- Mounting the movement detector
- For the electrical installation see the wiring diagram. Observe the safety instructions in Chapter 1

4.2.16 Mounting switches/buttons

- For the mechanical installation refer to the approval drawing. A clarification on site with the site manager may be necessary.
- For electrical installation, see the wiring diagram

4.2.17 Mounting the button programme switch

- For electrical installation, see the wiring diagram

4.2.18 Mounting the key switch

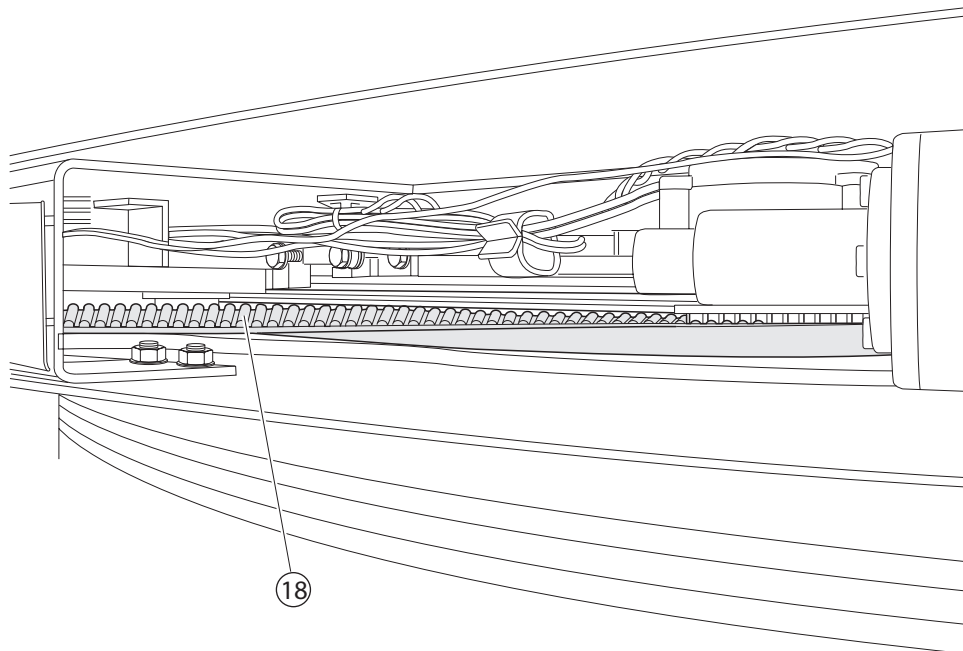
- The button programme switch can be engaged/disengaged with the key switch.
- For electrical installation, see the wiring diagram.



The key-operated switch is mandatory at the Slimdrive SC-FR 2M.
The key-operated switch can be mounted optionally at the Slimdrive SC.

4.2.19 Checking the belt guide

- ▶ Ensure that the toothed belt (18) at the motor and at the guide pulley is twisted by 180° and that the back runs over the guide pulleys.



At the peak the belt move with their back over the double roller.

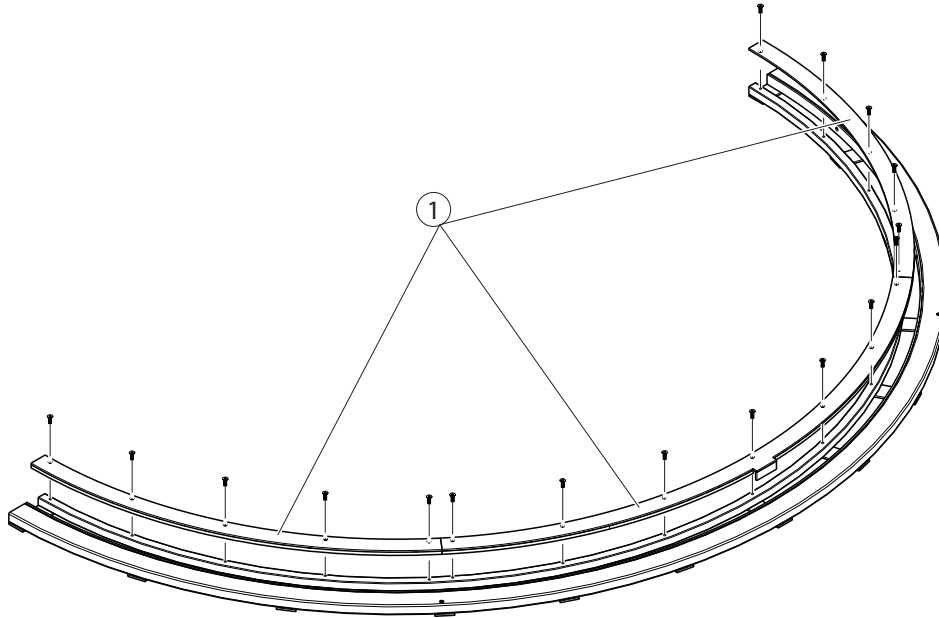
4.3 Slimdrive SC WK2

4.3.1 Preparation



The floor sickle plates (1) have to be removed before the door leaves are installed.

- ▶ Loosen the 3 floor sickle plates (1) from the floor ring.

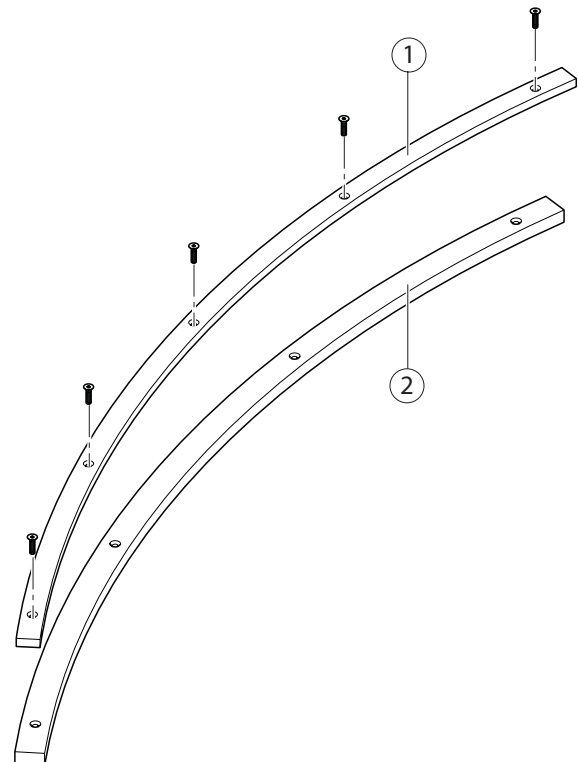


4.3.2 Mounting side elements



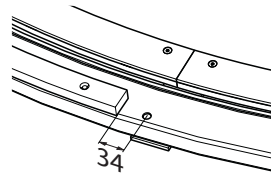
The upper floor strip (1) and lower floor strip (2) have been premounted to each other.

- ▶ Unscrew the upper floor strip (1) from the lower floor strip (2).

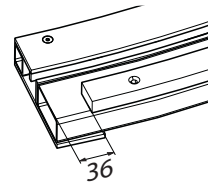


- ▶ Set the lower floor strip (2) on the floor ring (4) so that the outer edge of the floor strip is flush with the outer floor ring.

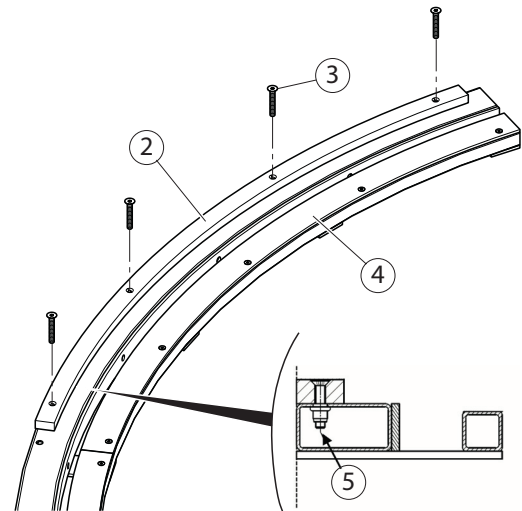
Distances for side closing edge: 34 mm



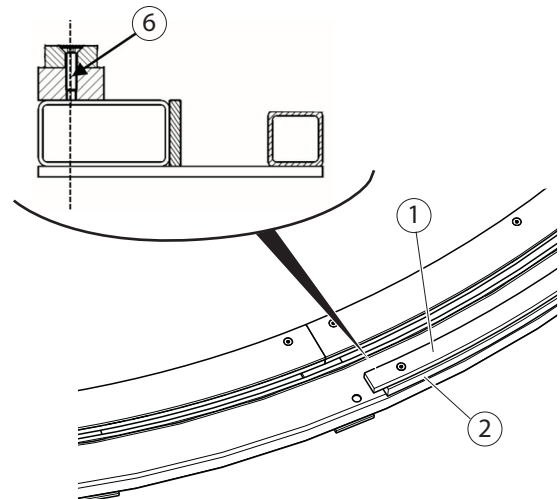
Distances for wall connection: 36 mm



- ▶ Screw the lower floor strip (2) with countersunk screws M5×30 (3) and draw-in or rivet nut (5) onto the floor ring (4).



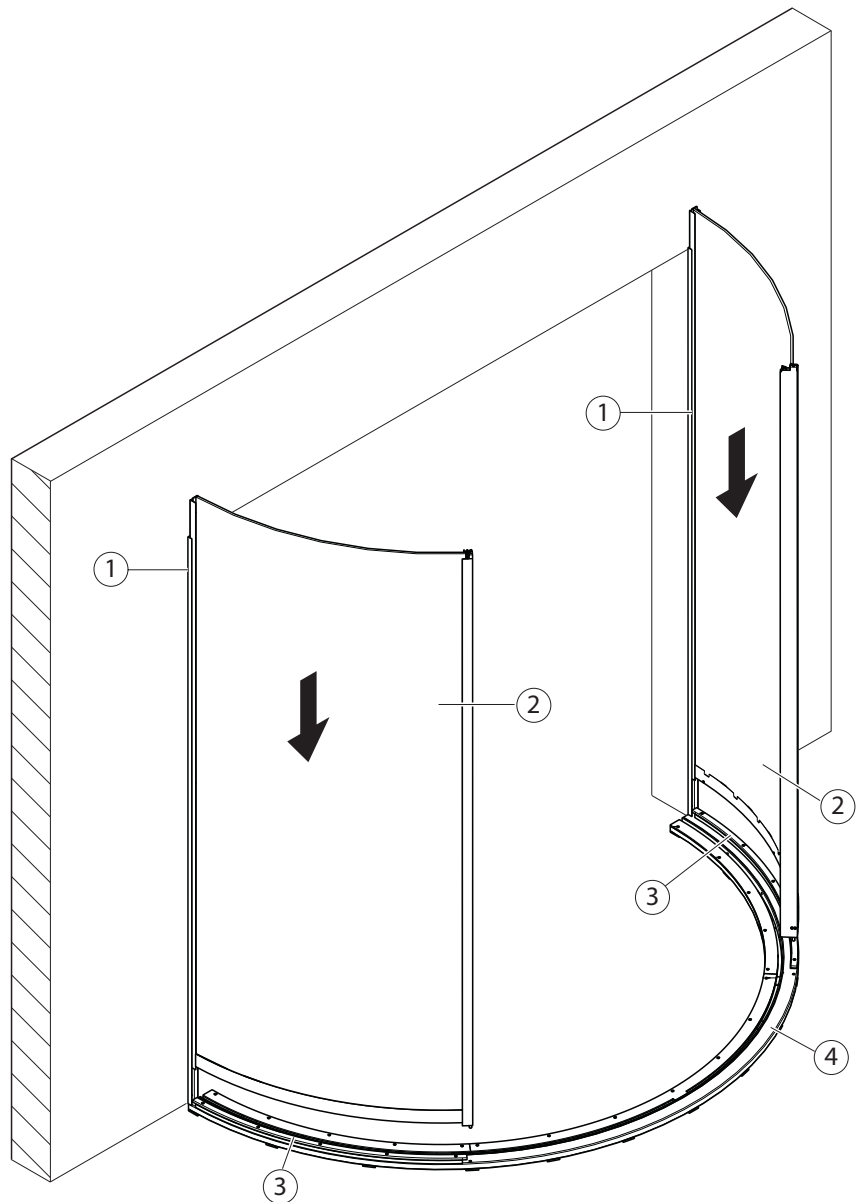
- ▶ Screw the upper floor strip (1) back onto the lower floor strip (2) with countersunk screws M5×20 (6).



Sliding in the side elements

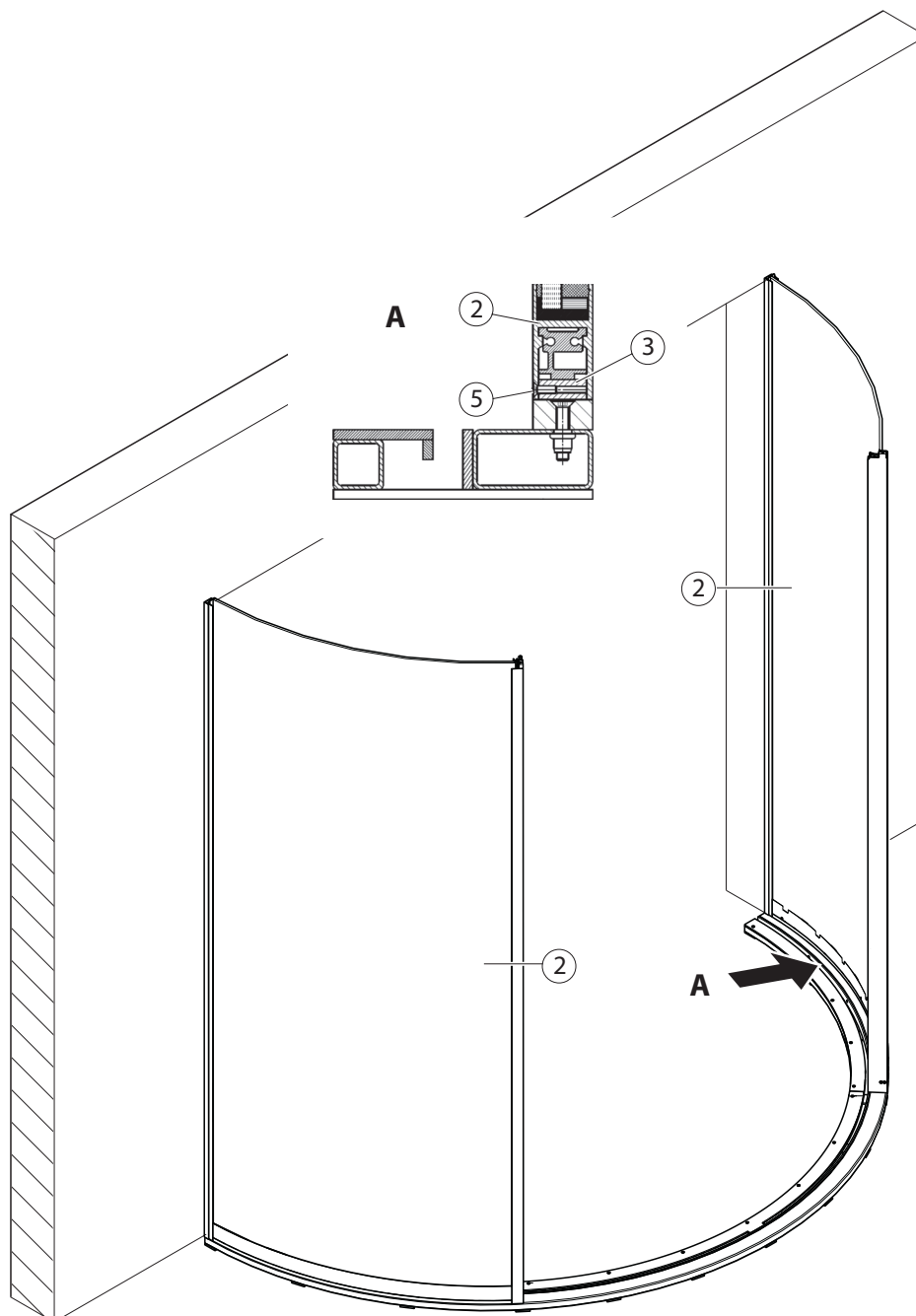
- ▶ Slide the side elements (2) into the wall holding profiles (1) and place them on the upper floor strips (3).

- 1 Wall holding profile
- 2 Side element
- 3 Upper floor strip
- 4 Floor ring



Screwing on the side elements

- ▶ Pre-drill the drill holes and cut the thread (M4).
- ▶ Screw the side elements (2) to the upper floor strip (3) using 3 countersunk screws M4x16 (5) each.



4.3.3 Mounting the roof

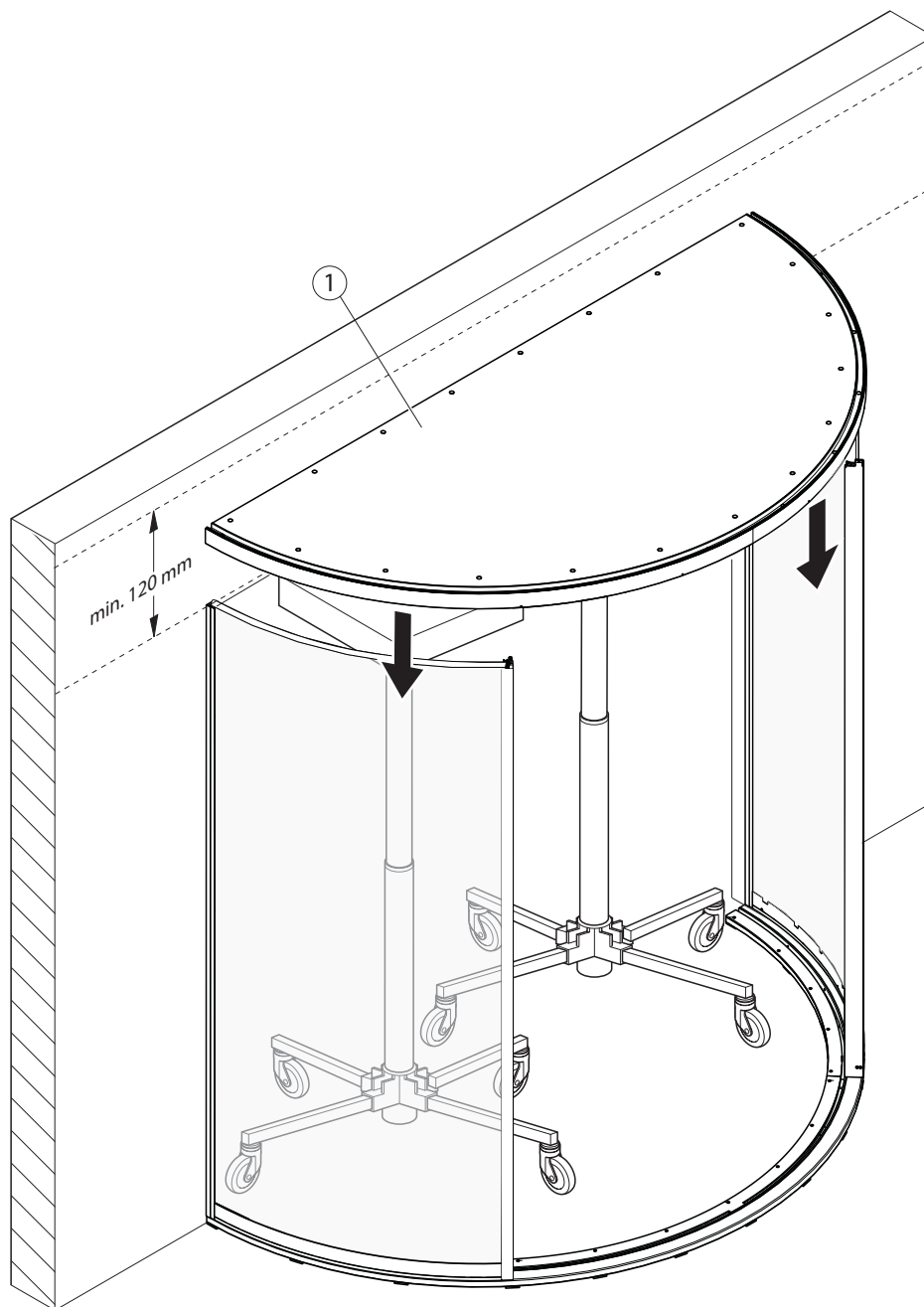
**WARNING!****The roof is very heavy.**

- ▶ Wear a hard hat when lifting the roof.
- ▶ Lift the roof only by means of suitable aids (e.g., pneumatic press).
- ▶ Do not stand under the raised roof.

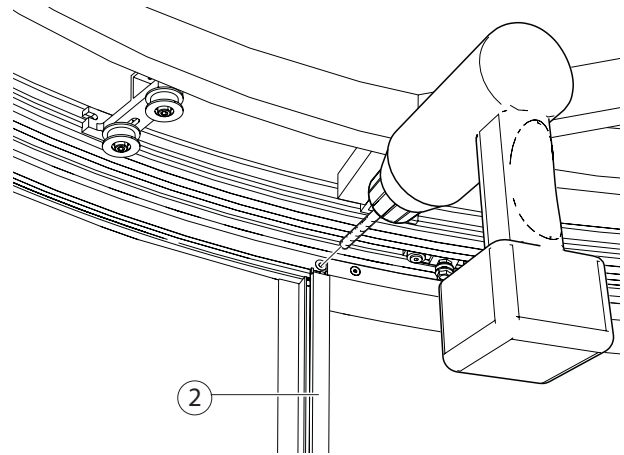


- The hoisting height for placing the roof must amount to at least 120 mm above the side elements.

- ▶ Place the roof (1) on the side elements.

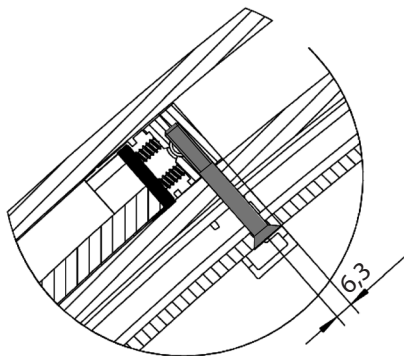


- ▶ Pre-drill the drive unit of the roof and the side closing edge (2) and cut the thread (M6).

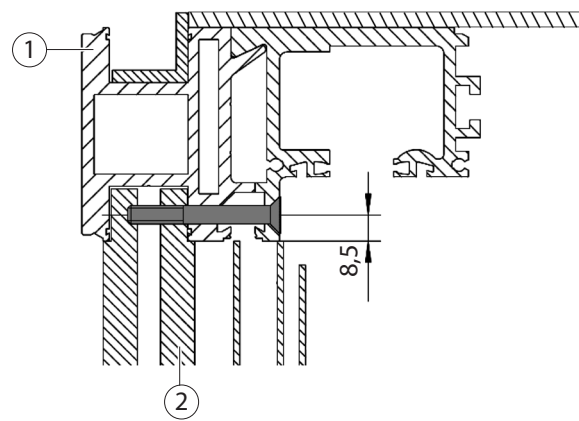


Position of the fixing screws

Top view (sectional view)



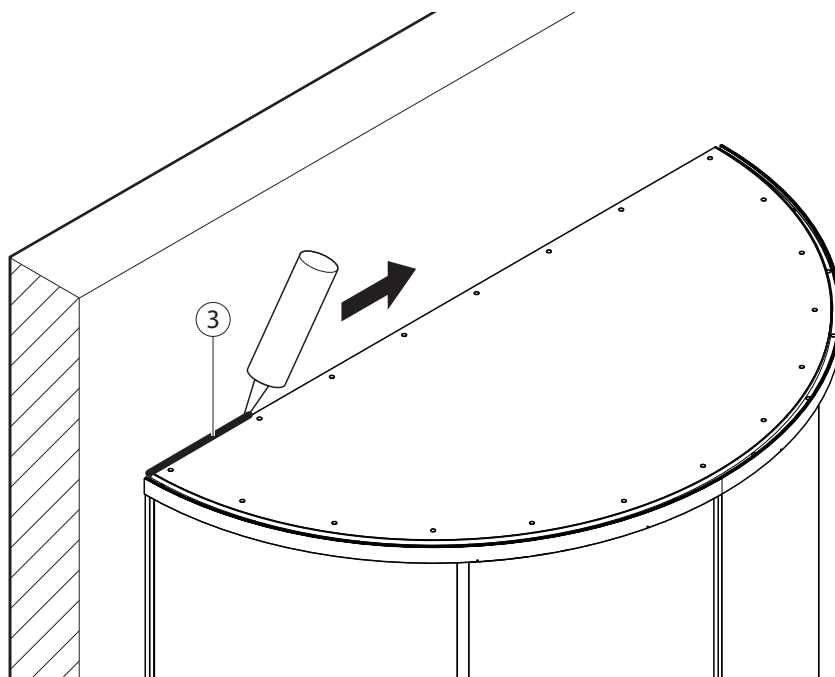
Side view (sectional view)



- 1 Roof/beam profile
- 2 Side closing edge

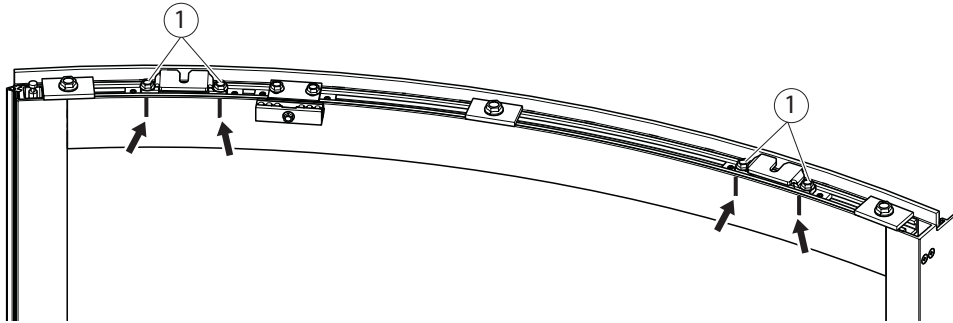
Joining the roof edge – facade

- ▶ Use silicone (3) to joint the space between the roof edge and the facade.

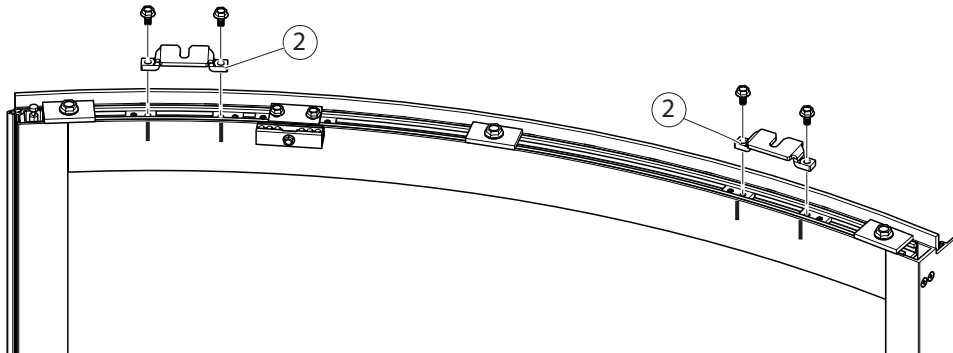


4.3.4 Mounting the door leaf

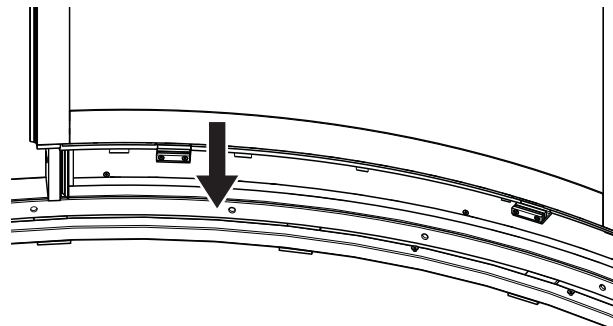
- ▶ Set markings (arrows) at the positions of the fixing screws (1).



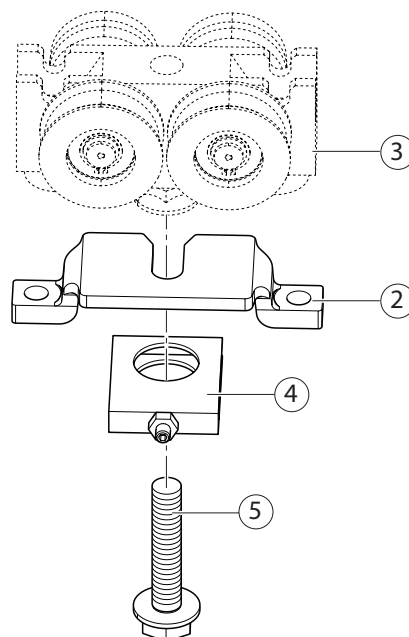
- ▶ Unscrew the hanger bracket (2).



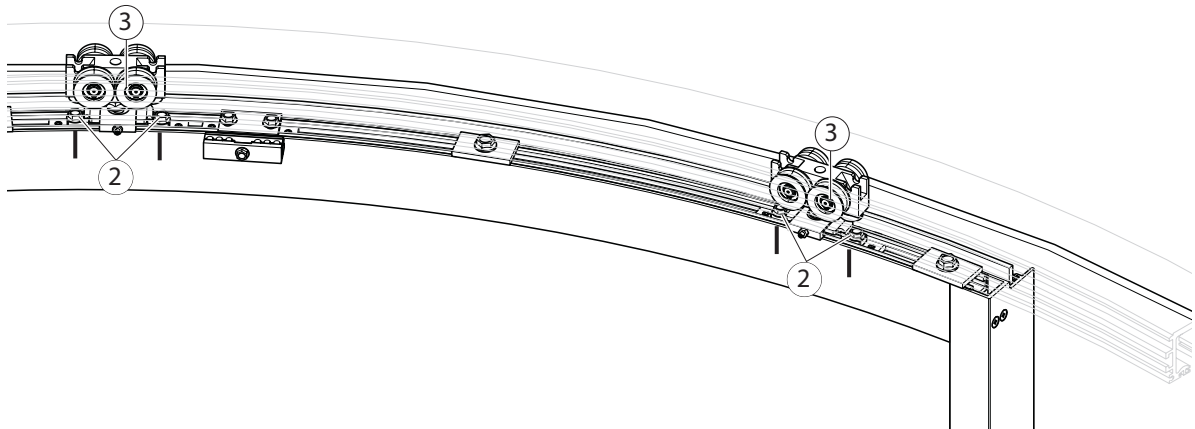
- ▶ Insert the door leaf into the floor guide.



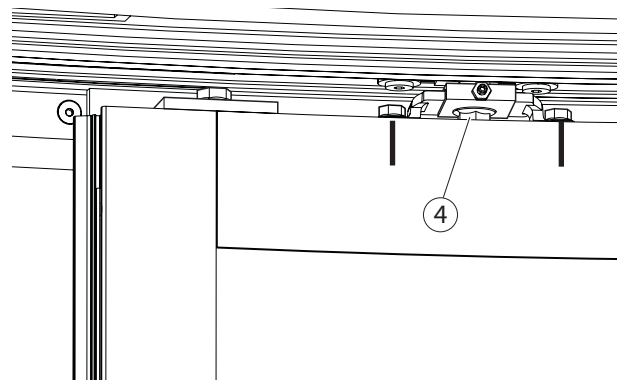
- ▶ Unscrew the hanger bolt (5) from the roller carriage (3).
- ▶ Slide the move lock (4) onto the hanger bracket (2).



- ▶ Slide the roller carriage (3) over the hanger bolts.
- ▶ Screw the hanger bracket with 2 screws (2) each at the marked positions into the sliding blocks.



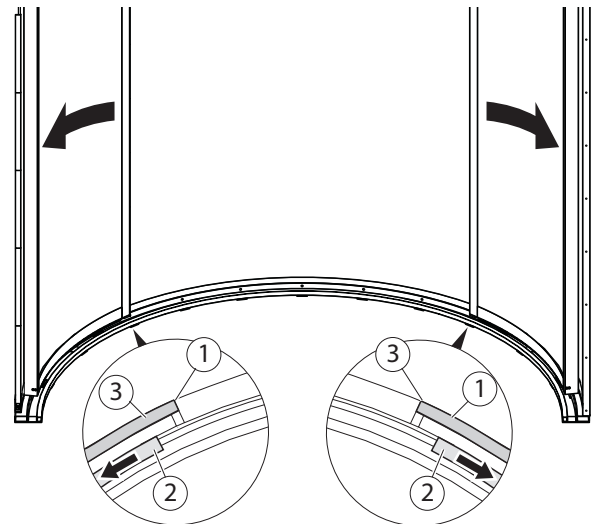
- ▶ Screw the M8 roller carriage screw (4) into the roller carriage to determine the height position of the door leaf.



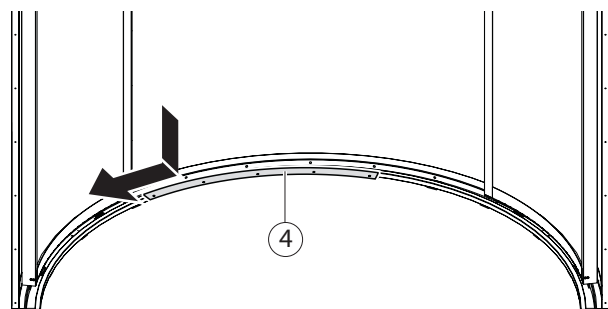
4.3.5 Mounting the sickle plates

- ▶ Slide the door leaf (2) over the vertical profile of the side closing edge (1).

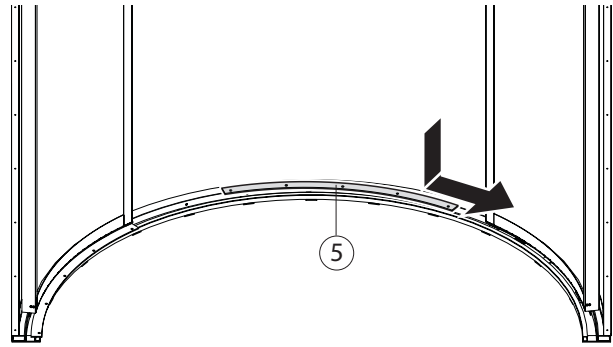
- 1 Side closing edge
- 2 Door leaf
- 3 Side element



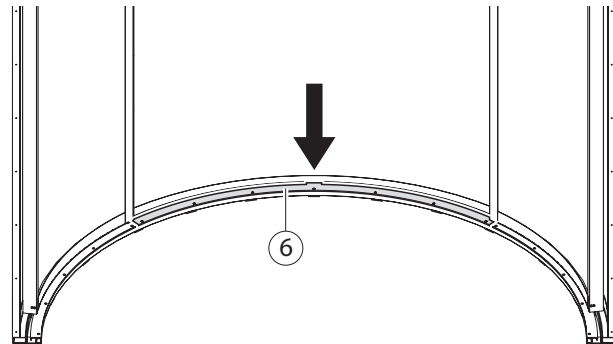
- ▶ Place the left-hand sickle plate (4) in the middle of the floor ring and slide it under the left-hand door leaf.



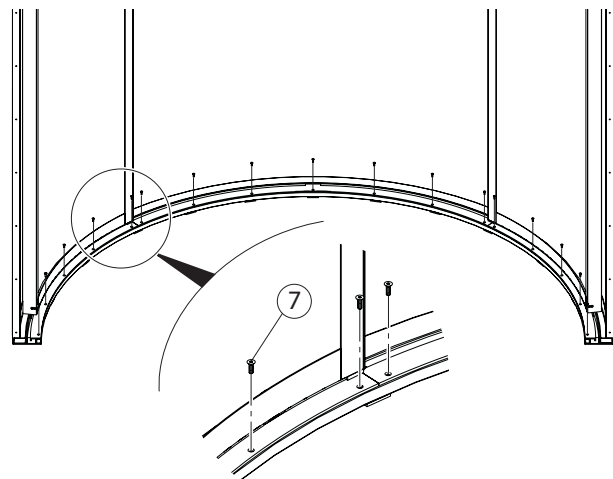
- ▶ Place the right-hand sickle plate (5) in the middle of the floor ring and slide it under the right-hand door leaf.



- ▶ Place the middle sickle plate (6) on the floor ring.



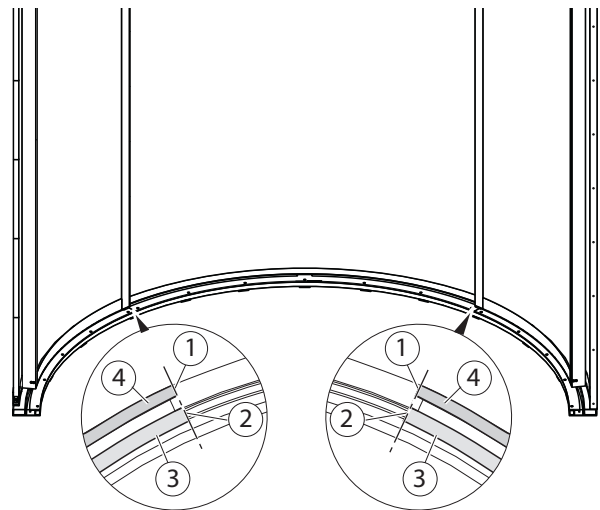
- ▶ Screw tight all three sickle plates with screws (7).



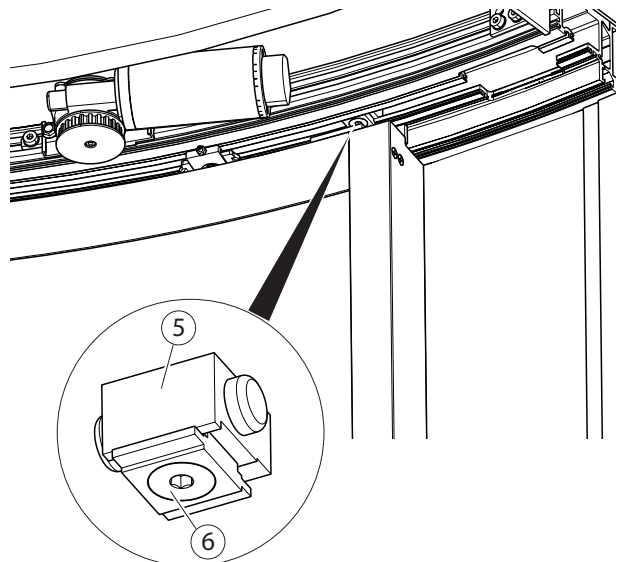
4.3.6 Mounting the stop buffers

- ▶ Position the main closing edge door leaf (2) flush with the side closing edge (1).

- 1 Side closing edge
- 2 Main closing edge door leaf
- 3 Door leaf
- 4 Side element

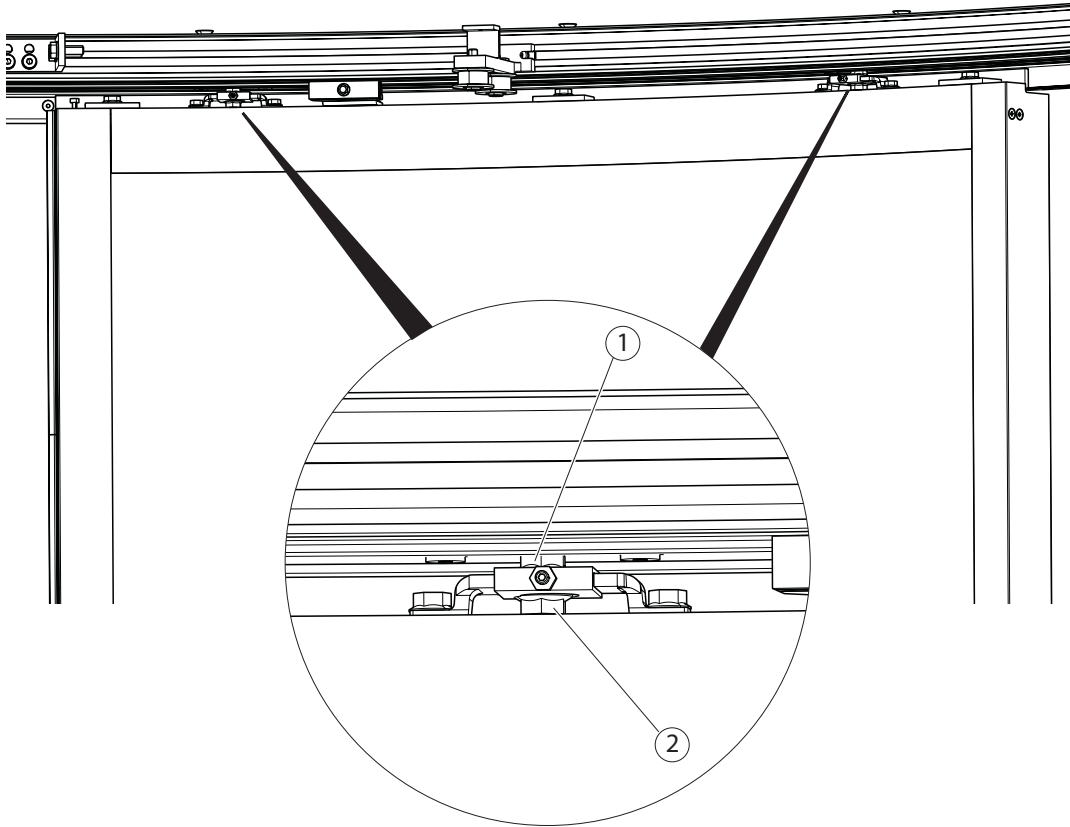


- ▶ Align the door stop (5) to the outer roller carriage.
- ▶ Tighten the screw (6).

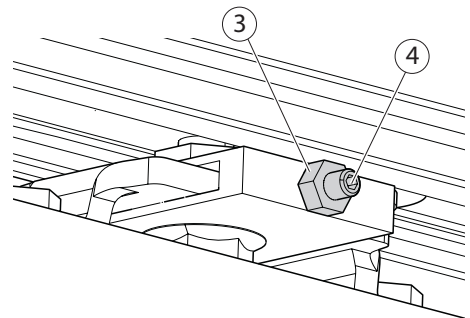


4.3.7 Adjusting the door leaves

- ▶ **!** Observe the applicable standards and guidelines on crushing, shearing and drawing-in spots.
 - ▶ Align the door leaves flush. Ensure the same height and parallel closing edges when doing so.
-
- ▶ Fine-adjust the height and parallel position of the door leaves at the hexagon of the hanger bolts (2).
 - ▶ Tighten the lock nut (1).



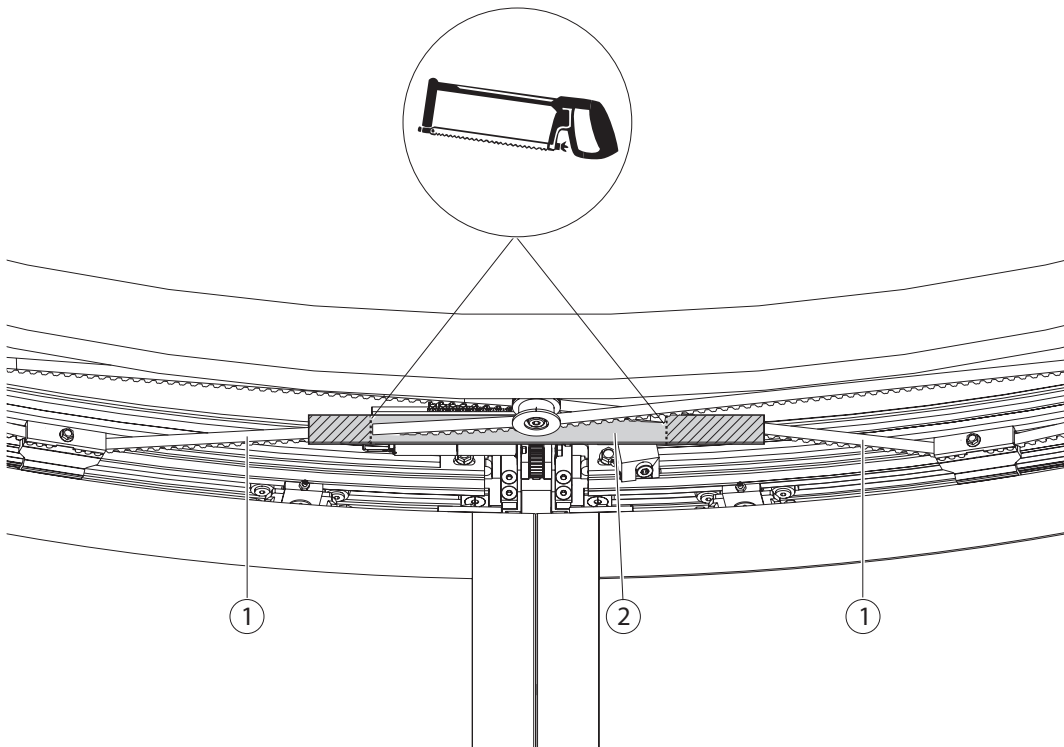
- ▶ When the position of the door leaves is correct, tighten the hexagon socket-head screws (4) lightly and secure with lock nuts (3).



4.3.8 Shortening the toothed belt – cut protection

If the toothed belt collides with the cut protection:

- ▶ Shorten the cut protection (2) so that the toothed belt (1) passes the cut protection without contact.



4.3.9 Adjusting the bolt lock

See Supplementary mounting instructions Slimdrive SL WK2 (Mat. No. 136308).

4.4 Commissioning



DANGER!

Danger of fatal injury through electric shock.

- ▶ The electrical system (230 V) may only be connected by a professional electrician.
- ▶ Perform the power connection and equipment earth conductor test in accordance with VDE 0100 Part 610.

4.4.1 Connecting cable

- ▶ Disconnect the system from the 230 V mains network.
- ▶ Carry out cable routing in an orderly manner in accordance with the cable plan:
 - Use cable holders.
- ▶ Make connections to the controller based on the wiring diagram.



If flexible cables are used, attach insulated wire-end ferrules.

- ▶ Remove cables from the sliding path of the leaves and driver before commissioning and secure them with cable ties.



The accumulator has to be charged completely.

4.4.2 Starting the Learning function



WARNING!

Danger of crushing. The door leaves move.

All the safety systems at the door are switched off.

- ▶ Move away from the door moving path.



WARNING!

Danger of injury by opened drive.

Hair, clothing, cables, etc. can be drawn in by rotating parts!

- ▶ When working on open drive, be cautious of rotating parts.



Use the display programme switch DCU1 (Mat. No. 103940) for commissioning!

- ▶ Insert the display programme switch in the terminal field of the plug connector.
- ▶ Clear out detection field of all the sensors.
- ▶ Connect the system to the 230 V mains network.
The control unit jumps to the Learning function during the initial commissioning.
The display programme switch shows LE .
 SE is then displayed for a DCU1 controller (SE = standard door) or FE for a DCU1-2M controller (FE = escape door).
A version number, e.g. 14 for Version 1, Revision 4, is displayed.

If the control unit was already operating, the Learning mode is started by selecting LE in the service menu.



To perform the Learning function correctly, the door leaves must be closed.

- ▶ Close the door leaves.
- ▶ Press the \downarrow button.
 - Door leaves open and close again.
 - Run parameters are determined and saved.
 - Learning programme is executed.
- ▶ If the display programme switch shows LE , manually push door leaves to reduced opening width and press the \downarrow button twice.



With Slimdrive SC-FR 2M, the reduced opening width is only permissible if it is greater than the required width of the escape route.

- Door leaves open and close.

When the display programme switch displays LE or FE , the Learning programme has been completed. The door is ready to operate.

Change the parameters or make changes in the Service mode, if necessary.

- ▶ Remove the display programme switch and insert the button programme switch.
- ▶ Close hood and screw locking pin back into locking.

4.4.3 Checking operation

- ▶ Switch the system off.
- ▶ Switch the system on again.
- ▶ Set display programme switch to Automatic.
Diagnosis runs automatically.
- ▶ Check function of assembly groups and peripherals:
 - Safety sensor close (SIS)
When the light barrier/light curtain/ultrasound sensor is interrupted, the door may not close following actuation. The door closes slowly after 4 minutes, with a fault message.
 - Safety sensor open (SIO)
e.g. test fixed-field sensor operation and actuation area.
 - Inside contactor (KI)
 - Contactor authorised (KB)
 - Outside contactor (KA)
 - Use the Diagnosis function in Service mode to check whether the controller has learnt all the connected assembly groups/safety systems.
 - Check locking function and reset locking position, if necessary.
- ▶ If the system does not function, check the power supply.
See also troubleshooting and elimination, fault table.

4.4.4 Setting inside movement detectors

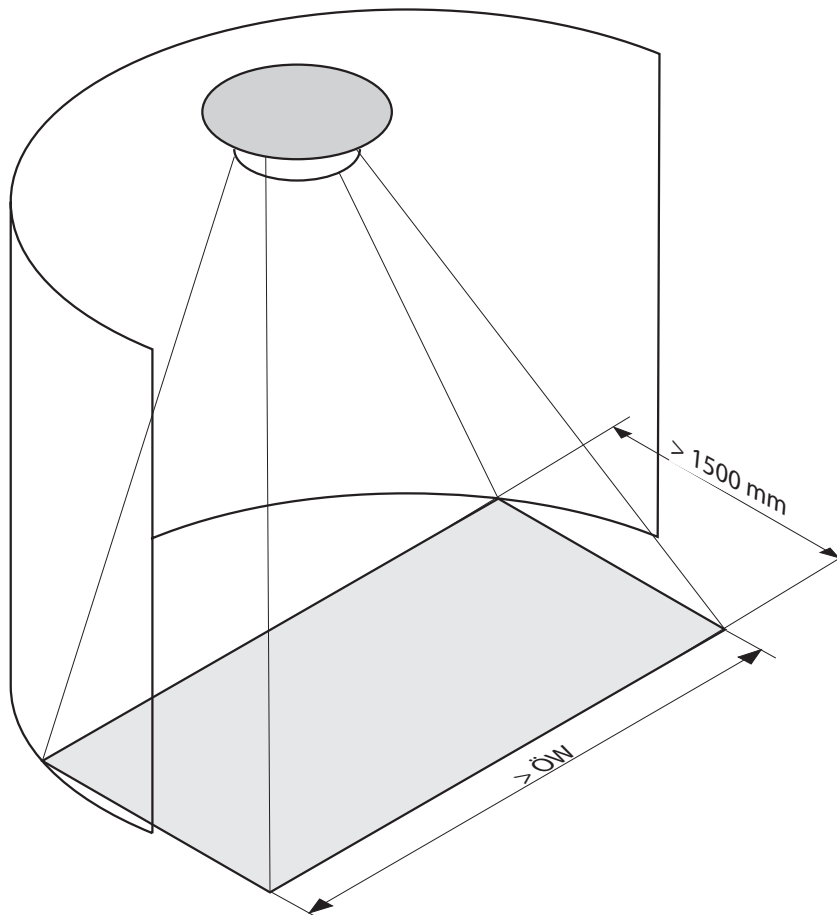
Slimdrive SC-FR 2M:

- ! Inside movement detectors have to detect movements from a speed of 0.1 m/s on (AutSchR). To cover the prescribed detection area, two self-monitoring inside movement detectors may be necessary in case of large opening widths, depending on the type.
 - ▶ When adjusting the movement detector, ensure that the complete opening area is detected (see drawing) and encompasses at least 1.5 m before the door.
 - ▶ Adjust the sensitivity of the sensor and the detection field accordingly.

Slimdrive SC:

- ! The movement detector(s) should be set so that the detection field covers the entire door opening width and up to 1.5 m in front of the door. We recommend that you install two movement detectors for door opening widths greater than 2 m. Inside movement detectors should detect movements from a speed of 0.1 m/s on.

Movement detector with self-monitored radar, e.g. GC 304 SF with round ceiling installation kit:



After setting the movement detector(s), check the detection field on the floor.

4.4.5 Filling in the user manual

- ▶ Record mounted options in the user manual for the owner.
- ▶ Draw up a safety analysis and have it signed by the builder-owner.

4.5 Dismantling

**CAUTION!****Danger of injury due to impact and crushing!**

- ▶ Secure door leaves against accidental movement.
 - ▶ Secure loose components against falling.
-

**DANGER!****Danger of fatal injury via electric shock!**

- ▶ Before working on electrical system, disconnect the system from the 230 V mains network, secure it against restarting and check to ensure that it is not supplied with power.
-

- ▶ Disconnect the system from the mains network.
 - ▶ Disconnect the battery.
- Removal is carried out in the reverse order of mounting.

4.6 Disposal

see Chapter 1.4.

5 Service mode


5.1 Operation

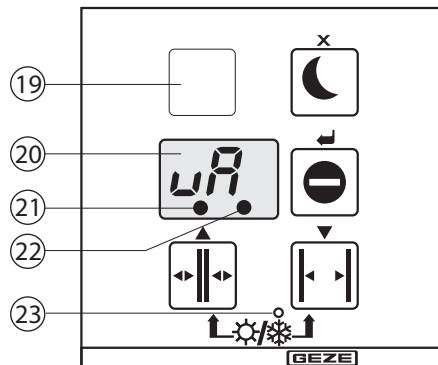


Access to the Service mode:

- only possible with a display programme switch DCU1 (Mat. No. 103940)
- not in the "Night" operating mode
- operation only at an operated key-operated switch (at DCU1-2M)

5.1.1 Switching the Service mode on/off

- ▶ Press the Service button (19) and  button simultaneously.



- 19 Service button
- 20 Display
- 21 Zero position unknown (door not completely initialised yet, not a fault)
- 22 Maintenance indicator
- 23 LED for reduced opening width

If no key is pressed for a period of 5 minutes, the control unit returns to the normal operating mode. Exceptions: in the Learning mode, in the Diagnostic mode and with an isolated motor.

5.1.2 Operating the Service mode



The Service mode starts with the first function in the 1st menu (ωR function).





The Service mode consists of 4 menus which are divided into individual functions. Different settings are possible within the functions.

The door leaves open and close after every change.

In the Service mode the door maintains the current operating state and opens and closes accordingly.

Exception: Functions LE and Fo .


The keys of the display programme switch have the following assignment in Service mode:

Key	Assignment in Service menu	Description
	▲	Change to previous function/setting or increase value
	▼	Change to next function/setting or decrease value
	↵	Confirm function and change to the settings/accept setting and return to the current menu
	✕	Abort and return to the 1st menu (ωR function)

5.2 Functions

The functions of the Service mode are described in the wiring diagram.

5.3 Learning

 Close the door leaves before Learning.


The door calculates its running parameters by using the Learning function in the Service mode. The display programme switch shows the following steps:

Display	Description	Possible settings
L0	Learning programme starts	—
L1	Rotary transducer is being checked	—
L2	Locking is being tested	—
L3	Opening width is being learnt	—
L4	Door mass and friction are being determined	—
L5	Reduced opening width is being set	↵ Slide the door to the desired position Accepting the setting After 30 seconds: automatic acceptance
L7	Learning has been terminated	↵ Accepting the setting
EL	Error during Learning	Restart the Learning programme (see Chapter 4.3.2)

 The displays do not appear in ascending order.

5.3.1 Learning a reduced position at escape doors (DCU1-2M)



Learning a reduced opening width is possible in the course of the Learning programme.

 To learn a reduced opening size, the operator must submit the escape route width specified for the escape route in writing. Only when this document has been submitted is it permitted to learn a reduced opening width. The set reduced opening width must be at least as large as the required escape path width. A copy of the document must be included with the service or test log.


The reduced opening width may not be less than 60% of the opening width. The controller does not learn a smaller reduced position.

- ▶ Before starting the Learning programme, install a jumper between terminals 2 and 6 on the control unit.
- ▶ Start Learning programme.
- ▶ When L5 is displayed at the display programme switch, move the door until the desired position of the reduced opening width has been reached.
- ▶ Accept the position of the door with the ↵ button.
- ▶ Terminate the Learning programme with the ↵ button.
- ▶ Remove the jumper between terminals 2 and 6 again.

Check:

- ▶ Switch over the "Automatic" *RU* programme.
- ▶ Press the  and  buttons simultaneously to bring the door into the Winter operating mode.
- ▶ Check the position of the reduced opening width with a tape measure by actuation or with "reduced continuous open".

5.3.2 Canceling Learning mode

- ▶ Press the Service button and  button simultaneously.

5.4 Draught lobby or vestibule via a programme switch (only at DCU1)

The draught lobby or vestibule functions are only available at standard sliding doors (DCU1). These functions are not allowed with sliding doors in escape paths (DCU1-2M).

Air lock

Two sliding doors use the same programme switch. A door only opens if the other one is closed.

Vestibule

Two sliding doors use the same programme switch.



With the draught lobby and vestibule, the programme switch only displays the fault messages of the master door.



During operation of both systems only connect the voltage supply of the button programme switch at the inner door.
While the outer door is being commissioned, supply the voltage of the outer door to the button programme switch.

5.4.1 Commissioning a draught lobby or vestibule system

- ▶ Commission the inner door (master) as with a single system. During this process the outer door (slave) is de-energised.
- ▶ Switch off the inner door.
- ▶ Commission the outer door (slave) as with a single system. During this process the inner door is de-energised.
- ▶ Enter the following value at the outer door in the menu item
 - 01 for a draught lobby or
 - 02 for a vestibule.
- ▶ Check whether the value is set to 00 in the 5L menu item at the inner door.
- ▶ Switch off the system and commission both systems simultaneously.

6 Service and maintenance

6.1 Mechanical service

**CAUTION!****Danger of injury from falling hood or ceiling panel!**

- ▶ Only remove and place on the hood or ceiling panel with two persons.
- ▶ When removing the hood or ceiling panel lower it cautiously using the hood safeguard.
- ▶ When placing on the hood or ceiling panel always latch in the hood safeguard.

**DANGER!****Danger of fatal injury via electric shock!**

- ▶ Before working on electrical system, disconnect the system from the 230 V mains network, secure it against restarting and check to ensure that it is not supplied with power.

**CAUTION!****Danger of injury due to impact and crushing!**

- ▶ Secure door leaves against accidental movement.
- ▶ Disconnect the battery.

**WARNING!****Danger of injury by opened drive.**

Hair, clothing, cables, etc. can be drawn in by rotating parts!

- ▶ When working on open drive, be cautious of rotating parts.



Keep inside area of runner clean.

Three teeth of the toothed belt must engage on each side of toothed belt lock.

6.1.1 Checking the toothed belt tension



Excessive toothed belt tension can result in the door leaves not moving smoothly.

- ▶ Start up the door.
Toothed belt may not lift up from the motor gear or skip when braking toward the open position.
- ▶ If the toothed belt lifts up or skips, increase the toothed belt tension:
 - Mark motor position at the runner.
 - Move motor to the right in 1 mm increments.

6.2 Maintenance

! After completing the maintenance work, always execute the Learning function for the door (see Chapter 4.3.2).

i The prescribed maintenance work on the Slimdrive SC and Slimdrive SC-FR 2M is to be carried out by properly trained personnel at least once a year or when the service display on the display programme switch lights up (see figure below).

- ▶ Keep the test documents up-to-date and make them available.
- ▶ In the *SR* menu item of the 2nd Service menu query the number of openings (*LD*), the operating hours (*HD*) and the number of FR self tests (*Fa*) and document them in the maintenance manual.

! Always replace toothed belts after 500,000 cycles.

Test object	Action	Remarks
Track	Check for cleanliness	Clean the runner
Roller carriage	Check the wear of the rollers	Remove the wear
Floor guide area	Check for smooth operation	Clean floor guide area
Floor guide area (brushes)	Check for soiling and hardness	Clean or replace
Door leaf	Check for smooth movement	See Chapter 7.1
Toothed belt	Check for wear and damage Check tension Check the locking for damage	Replace toothed belt, if necessary Tighten the toothed belt, if necessary Replace toothed belt, if necessary
Locking	Check for operation	Reposition the locking, if necessary (see Chapter 4.2.14)
Battery	Check the battery voltage	Replace battery, if necessary
Bolts	Check for firm seating	Tighten the bolts, if necessary
Assembly groups and peripherals	Check for correct operation	Replace assembly group, if necessary
Cables	Check for damage and correct fastening	Fasten or replace cables, if necessary
Tandem roller	Check for damage and soiling Check for correct fastening	Replace or clean the tandem roller, if necessary Fasten and set the tandem roller correctly

7 Troubleshooting



DANGER!

Danger of fatal injury via electric shock!

- ▶ Before working on electrical system, disconnect the system from the 230 V mains network, secure it against restarting and check to ensure that it is not supplied with power.



CAUTION!

Danger of injury due to impact and crushing!

- ▶ Secure door leaves against accidental movement.
- ▶ Disconnect the battery.




WARNING!

Danger of injury by opened drive.

Hair, clothing, cables, etc. can be drawn in by rotating parts!

- ▶ When working on open drive, be cautious of rotating parts.

7.1 Mechanical faults

Cause	Remedy
Door leaf binds	▶ Check the door leaf (see below)
Roller carriage jammed or defective, high wear at the carrier rollers	▶ Check that the toothed belt at the carrier is positioned at right angles ▶ Guide the toothed belt parallel ▶ Replace the roller carriage (see below)
Toothed belt damaged	▶ Replace the toothed belt
Assembly group defective	▶ Replacing the assembly group
Carrier touches the pulley holder	▶ Adjust the belt guide roller
	 ▶ Observe the belt tension!

7.1.1 Checking the door leaf

- ▶ Loosen the carrier from the toothed belt lock.
- ▶ Move door leaves and check for smooth movement.
 - If the door leaves do not move smoothly, reduce the toothed belt tension.
 - The toothed belt may not skip.
 - The door leaf can also be separated from the toothed belt for checking.
- ▶ If door leaves move smoothly:
Check the geared motor and replace it if necessary.

7.1.2 Replacing the roller carriage

- ▶ Loosen the carrier from the toothed belt lock.
- ▶ Loosen the lock nut at the hanger bolt of the roller carriage.
- ▶ Remove the door leaf.
- ▶ Remove the buffer from the track.
- ▶ Replace the roller carriage.
- ▶ Reinstall the roller carriage in the reverse order.

7.2 Electrical faults

Current active fault messages are briefly displayed cyclically every 10 s at the display programme switch during operation. In addition, they are also entered in the E - and aE fault memories.

If the dot lights up in the left half of the display programme switch, the system was unable to completely initialise.

Either there is an obstruction or something in the system itself has become jammed.

The dot disappears as soon as the door has been opened completely and closed again once.



Information about troubleshooting and elimination is available in the wiring diagram DCU1/DCU-2M.

If no fault is indicated during a malfunction or if the display programme switch is not functioning:

- Check whether the power supply is connected.
- Check cables and cable connections.
- Check fuses in the controller and transformer, and replace if necessary (see below).

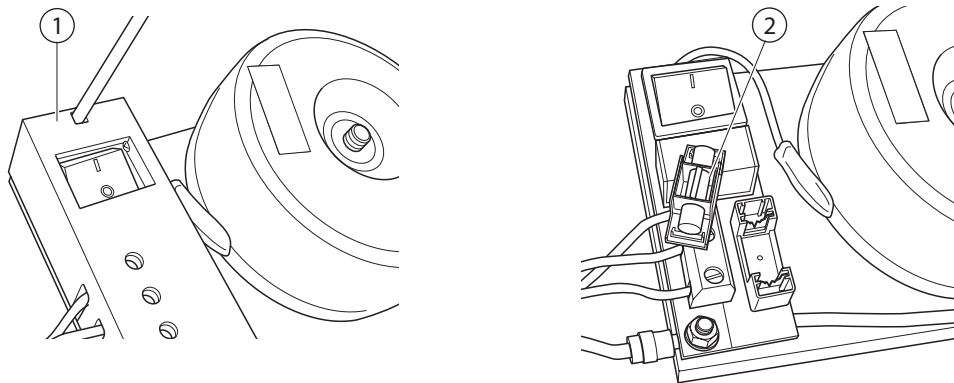
7.2.1 Replacing fuse in transformer



DANGER!

Danger of fatal injury via electric shock!

- ▶ Before working on electrical system, disconnect the system from the 230 V mains network, secure it against restarting and check to ensure that it is not supplied with power.



- ▶ Insert a suitable insulated screwdriver into the opening of the PCB cover (24) above the switch.
- ▶ Carefully press end wall of PCB cover upward with the tip of the screwdriver (this releases the snap catch).
- ▶ Remove the cover.
- ▶ Pull off the fuse retainer (25) toward the front and replace the defective fuse.
- ▶ Attach the fuse retainer.
- ▶ Set the PCB cover in place and snap it in.



Cables may not be clamped when setting the cover in place.

7.2.2 Fault messages

For a list of the error messages refer to the wiring diagram DCU1, DCU1-2M.

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