Landing and car door
Model range 3.0
Liz2S/K side-opening and centre-opening
Liz3S/K side-opening
Liz4S/K centre-opening
Liz6S/K centre-opening

Installation Instructions

Operating and Maintenance Instructions

Version date: 05/18
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Liz 3.0 sliding door
1 Introduction

We are pleased that you have decided to purchase one of our products. You can be certain that your product will provide you with maximum operational safety and optimum ease of maintenance, to the level of quality that you have come to expect from Riedl.

Pre-assembled modules and an ingenious fixation system guarantee that installation times will be kept to a minimum.

Not one of our doors leaves the factory until it has undergone functional testing and is fully adjusted and ready to use. If the installation instructions are followed carefully and the door is installed fully vertical, further adjustments will only be required in the rarest of cases.

Our company was the first lift manufacturer anywhere in Germany to receive the TÜV quality mark for service quality and customer satisfaction.

We therefore wish you many years of successful and trouble-free operation.

Do you have any questions? If so, we look forward to hearing from you.

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1.1 Notice regarding these instructions

1.1.1 General notification

This operation and maintenance instruction manual contains all of the necessary instructions and descriptions that are needed in order to operate the system. This document has been compiled with the utmost care. We would be grateful for any suggestions you might have. To make these instructions easier to follow, all of the descriptions are accompanied by photos and schematic diagrams of the sliding door or your modules.

All installation steps and settings are presented with images of the Liz2 side-opening sliding doors. The version shown is the one with an opening door leaf on one side. Special features that can be found on the additional models (Liz2 centre-opening, Liz3, Liz4 centre-opening and Liz6 centre-opening) will be separately illustrated, if required.

1.1.2 Use of symbols

In these instructions, the following symbols are used:

**WARNING:** Warns of any hazard to persons or equipment. Disregarding any notifications highlighted using this symbol may result in serious injuries and material damage.

**CAUTION:** Warns of the possibility of material damage. Disregarding any notifications highlighted using this symbol may result in material damage.

**NOTIFICATION:** Technical notifications to which particular attention must be paid.

Fig. 1 Number of an illustration

(23) A reference, occurring in the text, to a number that forms part of the key to an illustration

- An action or sequence of activities

- A list
2 Safety instructions

2.1 General safety instruction

The General Accident Prevention Rules (UVV) on the construction site must be observed.

2.2 Selection and qualifications of personnel

Persons who are required to carry out work on our sliding doors for lifts must be at least 18 years of age
- have received sufficient training to carry out the activities concerned.
- be aware of the relevant technical rules and safety regulations and must adhere to them

The operator will decide on the qualifications that are required in the case of
- operators
- maintenance personnel
- servicing personnel

The operator must ensure that only staff instructed to do so carry out any type of activity on the sliding doors of the lift.

Any personnel undergoing an induction, instruction, training or any staff currently receiving any type of general training may only carry out activities on the sliding doors of the lift while under the continuous supervision of an experienced person!

Any work on electrical components may only be undertaken by suitably trained, specialist personnel, in accordance with the current accident prevention rules (UVV).

2.3 Safety instructions during installation

Risk of falling! While installation is in progress, all sliding doors leading to the lift shaft and all shaft doors should be secured using suitable equipment, such as barriers and warning signs, so that they cannot be opened by any persons not involved in the installation and so that no-one is able to pass through.

The lift system and the doors must only be activated once the work has been successfully accepted by the relevant official body.

Risk of accident! For the entire duration of the installation work, the lift system must be secured in order to prevent any unauthorised activation.

The relevant safety rules that apply when working on lift systems must be observed. Installation personnel are required to wear personal protective equipment as a matter of course.

Roller rails, rollers and door contacts must be kept free of building dust. If any of these do become dirty, the mechanism and the contacts must be cleaned before the system is activated. These should be carefully cleaned using compressed air or wiped over with a dry cloth.
2.4 Safety instructions while carrying out maintenance work

*Risk of accident!* For the entire duration of the work being carried out, the lift system must be secured in order to prevent any unauthorised activation.

2.5 Safety features of the shaft and car doors

The operator must ensure that trained personnel
• carry out regular checks on all safety features
• immediately rectify any faults identified on those safety features
• secure the lift system to prevent it being activated, if not all of the safety features are in place and fully functional.

Overview of safety components

<table>
<thead>
<tr>
<th>Name</th>
<th>Described in Section / on page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency release</td>
<td>4.3.8.4 / 40</td>
</tr>
<tr>
<td>Door leaf anti-straddle</td>
<td>4.3.8.2 / 37</td>
</tr>
<tr>
<td>Safeguards driver cable</td>
<td>6.7 / 69</td>
</tr>
<tr>
<td>Locking plates on hook bolt and strike plate</td>
<td>4.11 / 55</td>
</tr>
</tbody>
</table>

2.6 Transportation

Pre-fitted sliding doors may only be transported or carried by the frame and must not, under any circumstances, be carried by the door leaves. This would cause damage to the doors and would prevent them from working properly.
3 Proper use, guarantee

Our sliding doors are suitable for use in lift systems compliant with DIN EN 81. Any use extending beyond that will be regarded as improper use. The use of the sliding doors in an explosion-protection environment is not permitted.

3.1 Guarantee

Any
- alterations or additions
- use of non-original replacement parts
- repairs carried out by companies or individuals not authorised by the manufacturer may lead to the loss of cover under the terms of the guarantee.

No liability can be assumed in the case of damage
- resulting from a failure to observe the operation or maintenance instructions
- that can be attributed to technical faults in the lift system and to structural distortions occurring during use
- resulting from the improper upkeep of the lift shaft and its components.

The guarantee period will apply for a period of 24 months from the date on which risk is transferred. No guarantee is provided in the case of components subject to wear and tear.
4 Installation

4.1 Installation instructions

4.1.1 Basic principles

The fitting (initial installation) of the sliding doors is described step by step under each of the items below. Only limited information is given with regard to the great variety of buildings-related requirements and suitability. Suitable fixation and safety measures must be selected and taken into account in accordance with the construction description and the local requirements. (See also the fixation suggestions below)

The illustrations in these installation instructions are schematic and are to be regarded as constituting general instructions regarding the individual work stages required. Please take any details and precise dimensions from the technical drawings supplied.

Work and adjustment extending beyond what is described in these instructions may result in the loss of the type examination (TÜV). If in doubt, please contact us.

Adjustment work can be avoided by careful preparation of the work to be carried out and by working conscientiously. If the installation is not carried out with care, faults and distortions may arise and it may not be possible to correct them later!

4.1.2 Available versions

Our sliding doors are available in the following versions:

<table>
<thead>
<tr>
<th>Side-opening</th>
<th>Centre-opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liz2S side-opening</td>
<td>Liz6S centre-opening</td>
</tr>
<tr>
<td>Liz3S side-opening</td>
<td>Liz4S centre-opening</td>
</tr>
</tbody>
</table>

Picture shows right-opening
Left opening: Constructed as a mirror image of the above

Fig. 2
4.1.3 Fixation suggestions

4.1.3.1 Standard, EN 81-20, without fire protection

To ensure tension-free fixation to the shaft wall, four points (A.1) must be created on each jamb.

a) Installation using hammer head screw rails and hammer head screws
- Sill brackets A.2 and A.3, tightening torque 30 Nm

b) Installation in concrete shafts
- Sill brackets A.1
  Segment anchors min. M6x65
  (e.g. HILTI HSA M6x65 20/10/- and/or MKT B 6-10-20/67 or similar)
- Sill brackets A.2 and A.3
  Bolt anchors M8/10 min. 75 mm
  (e.g. Hilti HST2 M8x75/10, HST3 M8x75/-/10, MKT BZ plus 8-10-21/75 or similar)

c) Installation in aerated concrete shafts and masonry shafts
- Sill brackets A.1
  Screw anchors 6x100 mm
  (e.g. Hilti HUS-6x100 or similar)
- Sill brackets A.2 and A.3
  Screw anchors 8x100 mm
  (e.g. HUS3-H 8x75 25/15/5 or similar)

→ Only use authorised plugs!

The figures in these assembly instructions show the assembly on Halfen rails.
4.1.3.2 EN 81-20, with fire protection compliant to EN 81-58

To ensure tension-free fixation to the shaft wall, 5 points (A.1) must be created on each jamb.

The jambs, headers and door threshold must be fixed to the shaft fall as follows:

1. Screw on the fixation brackets supplied (4 of each).
   If other fixings have been selected, the following minimum requirements apply:
   Bracket, made from steel, minimum cross section of 80 mm² and a minimum thickness of 2 mm (jamb).

2. Fasten the brackets to the shaft wall. (see also fig. 16 on page 25)

3. Completely fill and seal the connection gap between door jamb and shaft wall using a class A construction product compliant with DIN 4102 Part 1.

The current, valid version of the range reports suitable for the door model including the use of fire protection compliant to EN 81-58 also forms part of these operating and maintenance instructions.

a) Installation in concrete shafts
   - Sill brackets A.1
     Segment anchors min. M6x65
     (e.g. HILTI HSA M6x65 20/10/- and/or MKT B 6-10-20/67 or similar)
   - Sill brackets A.2 and A.3
     Bolt anchors M8/10 min. 75 mm
     (e.g. Hilti HST2 M8x75/10, HST3 M8x75/-/10, MKT BZ plus 8-10-21/75 or similar)

b) Installation in aerated concrete shafts and masonry shafts
   - Sill brackets A.1
     Screw anchors 6x100 mm
     (e.g. Hilti HUS-6x100 or similar)

   - Sill brackets A.2 and A.3
     Screw anchors 8x100 mm
     (e.g. HUS3-H 8x75 25/15/5 or similar)

Do not use any plastic plugs!
4.1.4 Tools required

4.1.4.1 Important - not all door leaves are the same

A leaf on the lowest landing door is fitted at the factory with an emergency release, which can be activated from inside the pit (Aramid, attached to the door surface, see also 4.5, page 42). Do not confuse this particular door leaf with the other doors.
4.2 **Recommended installation procedure**

The following measures will ensure trouble-free installation.

4.2.1 **Establish and check the installation dimensions**

- Check the openings of all landing doors for alignment
- Make sure that the location of the car floor is suitably in line with the openings for the landing doors
- Apply a mark (R) to the car floor at the point corresponding to the centre of the car door. The landing doors will be aligned to that mark

Alternatively, the threshold of the car door can already be fitted to the car floor. It can then serve as a transfer aid for the thresholds of the landing doors.
4.2.2 Establishing/drawing on the installation positions of the sill brackets

- Determine the installation positions for the two outer sill brackets and transfer them to the car floor.

Tip: Position the threshold (D) of a landing door on the car floor in such a way that the mark (41) is in alignment with the mark (R, see also fig. 6). Important: Make sure that the threshold is aligned to the correct point!
Transfer the fixation points (R2) (long holes) to the car floor.
4.2.3 Sequence of tasks

It is recommended that you carry out the installation in the following order:

4. Install all landing doors, except for one. Select the level on which there are no landing doors at the moment, so that you can use the lift car later on as a working platform.

5. Install the car door.

6. Fix the final landing door.

7. Carry out functioning tests (interaction of the landing doors with the car door)
4.3 Installing the first landing door

4.3.1 Fitting the two sill brackets

- Of the four sill brackets, fit the two outermost sill brackets to the shaft wall, as follows:
  - Transfer the installation positions in accordance with the markings on the car floor (see 4.2.2)
  - Determine the installation height (A4) of the sill brackets: Upper edge of finished floor (A3), minus 20 mm
  - Install the sill brackets at right angles
  - Align support bracket (12) horizontally

For fixing the brackets (A2), other fixings can be used in addition to the Halfen rails shown (see 4.1.3).
4.3.2 Installing the landing door

If the landing door is pre-assembled, go to 4.3.4 to continue.

If the landing door is supplied in pieces, go to the next paragraph (4.3.2.1) to continue.

4.3.2.1 Fitting the threshold to sill brackets

- Align the threshold as follows:
  - Move mark (41) of the threshold (D) until it is congruent with the mark on the car floor (see (R)4.2) fig. 6
  - Distance (L9) between the threshold of the landing door to the threshold of the car door: 25 mm ± 2 mm

Tightening the fixings of the threshold (D) on the sill brackets (B)
4.3.2.2 Fitting the jambs to the threshold

Fit each jamb (42, 43 + 43) as follows:

- Place jamb onto the thread of the screws (pre-fitted to threshold)
- Fasten the door jambs on each screw thread (A), using a self-securing nut
- Fasten the jambs at each fixation point (B) with a pan-head screw
4.3.2.3 Attaching the header to the jambs

- Place the header (44) onto the jambs (42, 43 and 45) and fix using the four Pan head screws (3)
• Screw the header (44) to the jambs (43 and 42), using the screws (2)

![Diagram showing header screws](image1)

Fig. 13

• Fix the header with 2 brackets (A) **by hand**

For fixing the brackets (A2), other fixings can be used in addition to the Halfen rails shown (see 4.1.3).

![Diagram showing bracket fixing](image2)

Fig. 14
4.3.2.4 Aligning the landing door (checking for plumb)

- Align the landing door using a suitable plumb-line (a plumb-line with magnetic fixation is recommended). Precision ± 1 mm

4.3.2.5 Screwing landing door into place

The fixing rules that form part of the fire protection stipulations must be observed. See (Section 4.1.3 on page 13)

Custom fixation brackets can be supplied upon request

- Tighten the screws on the fixation brackets (A)
• Apply all side fixings (A and B) (8 in total, 4 on each side, 10 for fire protection requirements in accordance with EN 81-58)

B1 = Standard fixing to the shaft wall on which the landing door is located
B2 = Fixing in narrow shafts

Compliance with EN 81-20 can only be achieved using the correct number and type of fixings. The side fixings must be absolutely tension-free. Tension on the jambs will restrict the operation of the sliding door.

• Remove packaging materials
• Fit 2 additional fixing brackets (A)

• Fit the remaining sill brackets (B)

4.3.3 Fitting the toe guard

• Attach the toe guard as shown, using the pre-fitted screws
4.3.3.1 Inserting door leaves

**General information**
- Depending on the version of the sliding door, the door leaves are either fitted from the shaft side and/or from the side from which the lift is accessed.
- The different types of door leaf can be distinguished from one another as follows: Slow leaf door leaves are narrower than fast leaf door leaves.*

* The door leaves, which, when the sliding door is closed, abut against the slam post (in the case of side-opening sliding doors) and/or against the opposite fast leaf door leaf (in the case of centre-opening sliding doors).

→ Make sure that the door leaf that is intended for the lowest sliding door is actually installed at that location (emergency release from inside the pit, see 4.1.4.1).

→ Hang the door leaves in the following order:

![Diagram showing door leaf installation](image)

**Install each door leaf as follows:**

- Insert sliding guide into the guide slot of the threshold
- Hang the door leaf onto the threaded bolt (36)
- Screw in the fixing screws (L)
Checking the door leaves for plumb (C-D axis):

- Open the sliding door and make sure that the door leaves (E and F) are plumb to one another and/or are aligned to the opening jamb (G). If necessary, carry out adjustments. See 7.1, page 72

- Continue at chapter 4.3.6 on page 32
4.3.4 Fitting a pre-assembled landing door

Place pre-assembled landing doors onto the two sill brackets (B) and onto the following points
• Upper sill brackets ((A), 2 of)
• Attach the threshold (D)
Fix **by hand**.

• Align the sliding door as follows:
  - Move mark (41) of the threshold (D) until it is congruent with the mark on the car floor (see (R)4.2)fig. 6
  - Distance (L9) between the threshold of the landing door to the threshold of the car door: 25 mm ± 2 mm

Tighten the fixings of the threshold (D) on the sill brackets (B)
4.3.4.1 Aligning the landing door (checking for plumb)

- Align the landing door using a suitable plumb-line (a plumb-line with magnetic fixation is recommended). Precision ± 1 mm

While aligning, make sure that no sideways displacement in excess of 3 mm occurs in the upper door area (header (44)), as this would affect the interaction between the landing door and the car door. If necessary, check or correct the installation position of the threshold on the lower sill brackets.

- Tighten the screws on the fixation brackets (A)
4.3.5 Screwing landing door into place

- Apply all side fixings (A and B) (8 in total, 4 on each side, 10 for fire protection requirements in accordance with EN 81-58)

B1 = Standard fixing to the shaft wall on which the landing door is located
B2 = Fixing in narrow shafts

The side fixings must be absolutely tension-free. Tension on the jambs will restrict the operation of the sliding door

- Remove packaging materials
• Fit 2 additional fixing brackets (A)
• Fit the remaining sill brackets (B)

4.3.6 Fitting the toe guard

• Attach the toe guard as shown, using the pre-fitted screws
4.3.7 **Fitting the closing device**

If the closing device spring force is set too high, the drive motor may no longer be able to close the door completely.

If the sliding door does not close automatically with a spring pre-tension of 50 mm, the following measures may help:

- Clean the slide rails, rollers, barrier guide
- Check whether the sliding guide runs too tightly in the barrier guide, loosen if necessary (chapter 6.3, page 63)
- Loosen the counter force rollers (chapter 6.8, page 71)
Side-opening

- Hook the closing spring transmission (1) with an end sleeve (3) onto the cable fixing (2)
- Guide the closing spring transmission (1) over the pulley (B)
- Attach the closing spring transmission to the closing spring (C) via the cable clamp (4)
- Insert the closing spring (C) into the closing spring force adjusting device (D)
- Set the spring resistance so that the spring is tensioned by approximately 10 to 50 mm. See note on page 33
Centre-opening

- Mount the closing spring transmission (1) with an end sleeve (3) onto the cable fixing (2)

- Guide the closing spring transmission (1) over the pulley (B)

- Attach the closing spring transmission to the closing spring (C) via the cable clamp (4)

- Bend out the lug (D) and hook in the closing spring (C)

- Set the spring resistance so that the spring is tensioned by approximately 10 to 50 mm. See note on page 33

Fig. 28
4.3.8 Functional checking of landing doors

4.3.8.1 Checking that doors close by themselves

- Release door
- Slide door open and release. When set in any position, the door leaves must close completely on their own. While closing the final two centimetres, no grinding noises must be heard
  If necessary, adjust the force of the closing spring at the adjusting device (D) (see 52)

During this test, the movement of the doors must always be slowed before reaching their final position (door closed). The door leaves could suffer damage due to the force of the closing spring. It is best to catch hold of the closing doors by hand (wear gloves).

Rectifying any factors that may possibly be causing the doors to close incorrectly:
- “Adjusting the hook bolt” on page 80
- “Position of doors open, end position” on page 77
- “Fitting the closing device” on page 33
4.3.8.2 Checking the door leaf anti-straddle

Doors of a specific size or above must be fitted with a door leaf anti-straddle (see table in Section 9.1, page 83). This is fitted at the factory (fitted as standard). If no screws are present (50), no door leaf anti-straddle is fitted (see also 9.1 at page 83).

The door leaf anti-straddle illustrated is intended to prevent a closed landing door from being pushed open:

**The door leaf anti-straddle can be checked as follows:**

- Slide the sliding door open, until you can make certain that the locking bolt (49) has reached its point of engagement (51) and is preventing the door from being slid open any further. Make adjustments if necessary, as described under 7.2 at page 75

**Make sure that**
- in the case of centre-opening sliding doors, the **door leaf anti-straddle** is fully functional.
- in the case of side-opening doors, the device is fully functional on the fast leaf.

Side-opening sliding doors

![Fig. 29](image_url)
Centre-opening sliding doors

Fig. 30
4.3.8.3  Checking sliding door leaves for dimensional accuracy

Note: In the case of doors supplied in parts, the header mechanism is preset. Doors supplied in assembled form are fully preset and aligned at right angles to the door frame, within the set dimensions.

The check should be carried out as follows:

Vertical alignment of slow leaf
• Open sliding doors fully
• Check that the slow leaf (F) and the opening jamb (G) are parallel to one another

(Settings see “and alignment of the door leaves (C-D axis)” on page 72)

Position of doors open, end position
• Open sliding doors fully
Check, whether both door leaves (E+F) are in line with the opening jamb (G) (detail A1, fig. 31)
(Settings see “Position of doors open, end position” on page 77)
4.3.8.4 Checking the emergency release

- Insert the emergency release key onto the emergency release triangle and turn. It should then be possible for the landing door to be pushed open.

4.3.8.5 Checking stabilisation when doors are closed

Doors in the version compliant with EN81-58
- The opening jamb (G) interlocks itself with the door leaf (F) via the door leaf interlock.
- The door leaf (F) interlocks itself with the door leaf (E).

All door versions
The door leaf (E) overlaps the slam post (C).

- Close the sliding door fully
- Check: Lightly moving back and forth (in the operating direction of the doors) must not cause any grinding noises to be heard.

The set-up of the door leaf interlock as supplied from the factory can be adjusted by slightly loosening the fixing screws (1). Set to the ideal measurement (even play between fast leaf and slow leaf). After that, it is essential to check all of the functions of the sliding door.
4.4 Fitting additional landing door(s)

- Proceed as described from chapter 4.3 on page 19 onwards

If the recommended sequence of tasks is observed (4.2.3), the final landing door will be fitted after the car door.
4.5 Emergency release from below, from inside the pit

In accordance with EN81-20, the lowest landing door must be capable of being released from inside the pit. The emergency release cable is fitted to the door leaf at the factory and is attached to the door leaf using adhesive tape. If the emergency release cable has to be replaced, only an original replacement cable may be used (fire protection).

4.5.1 Landing doors

- Insert the loop of the pre-fitted emergency release cable (1) to the bearing pin (2) of the hook bolt roller

- Bring the emergency release cable up to tension and extend it approx. 100 mm below the threshold

- Tie the lower end of the emergency release cable, which has a double knot, into a loop

Fig. 35
4.5.2 Functional testing of the emergency release

- Make sure that no part of the emergency release cable lies within the area secured by the light curtain (details of how to install the light curtain can be found on page 51)

- Make sure that the hook bolt moves into its open position when the emergency release cable is pulled and that this allows the sliding door to be opened
4.6 Electrical installation of landing doors

4.6.1 Landing door side-opening

The route for the cable for the door contact switch (28) must be selected so that the functioning of the hook bolt is not affected. The cable (1) must be sufficiently secured using cable ties or other securing materials suitable for the purpose.

Fig. 36

4.6.2 Landing door centre-opening

The route for the cable for the two door contact switches (28) must be selected so that the functioning of the hook bolt is not affected. The cable (1) must be sufficiently secured using cable ties or other securing materials suitable for the purpose.

Fig. 37
4.7  **Installation of car door**

**Installation suggestions**

4.7.1  **Fixing at the bottom**

- (1) Hexagonal bolt with tooth lock washer
- (2) Fixation bracket
- (3) Hexagonal bolt

4.7.2  **Fixing at the top**

- (1) Securing bolt with washer
- (2) Attachment to the car roof
4.8 Fitting the car door(s)

Fitting the car door(s) involves the skills and expertise required for a full installation of the landing doors.

If the car door is pre-assembled, go to 4.8.4 to continue.

If the car door is supplied in pieces, go to the next paragraph (4.8.1) to continue.

4.8.1 Fitting the threshold

- Align the threshold (1) to the mark and attach it with the brackets (2) and suitable securing materials (3) hand-tight to the car floor (5)
4.8.2 Fitting the jambs of the car door
- Attach the jambs to the threshold

4.8.3 Placing the header onto the jambs
- Place the header onto the jambs
- Continue at 4.8.5
4.8.4 Pre-fitting the car door

- First of all, fit the car door hand-tight to the car floor

4.8.5 Aligning the car door

- Align the car door, then position the header of the car door (R5) to the header of one of the landing doors (R6), in such a way that
  - both marks (R) are congruent
  - the distance between the headers (R5 and R6) at each position is as follows:
    - (R3) = 48 mm (± 2 mm)
    - (R4) = 25 mm (± 2 mm)

Ensure parallelism! Landing door to car door max. ± 2 mm on all axes

- Tighten the fixings attaching the header to the car
- Align the car door using a suitable plumb-line (a plumb-line with magnetic fixation is recommended). Precision ± 1 mm
- Tighten the threshold
4.8.6 Functional checking of the car door(s)

As described in connection with the landing doors, the following functional checks must be carried out:

4.8.6.1 Checking that doors close by themselves

See chapter 4.3.8.1 on page 36

4.8.6.2 Checking sliding door leaves for dimensional accuracy

See chapter 4.3.8.3 on page 39

4.8.6.3 Door leaf bumpers

The rubber buffers of the door leaf bumpers must be fully functional. At the end positions, the individual rubber buffers (53) must prevent the door from impacting. If necessary, carry out adjustments (adjusting the impact point (54)).

Ensure that there is a distance of approx. 1 mm (A) between the locking roller (50) and the intake curve (51).
### 4.8.6.4 Checking the car door lock

Make sure that the car door can only be pushed open, if the car is located on the same level as one of the landing doors (unlocking zone).
4.8.7 Installing the light curtain

(Option)

4.8.7.1 Installation of light curtain

Risk of malfunction and collision with the landing door: The measurement A must not exceed 10 mm!

**Bottom**
- Attach the light curtain (4) to the jamb (3) using the hooked plate (2) as illustrated

**Top**
- Attach the light curtain (4) to the jamb (3) using the hooked plate (1) as illustrated
4.9 Fitting the car door emergency release

If the emergency release cable has to be replaced, only an original replacement cable may be used (fire protection).

- Insert the loop of the pre-fitted emergency release cable (1) to the bolt (2) of the release skate
- Bring the emergency release cable up to tension and extend it approx. 100 mm below the threshold
- Tie the lower end of the emergency release cable, which has a double knot, into a loop
4.9.1 Functional testing of the emergency release

- Make sure that no part of the emergency release cable lies within the area secured by the light curtain (details of how to install the light curtain can be found on page 51)

- Make sure that the hook bolt moves into its open position when the emergency release cable is pulled and that this allows the sliding door to be opened
4.9.2 Fitting the final landing door

- Proceed as described from chapter 4.3 on page 19 onwards

4.10 Functional testing of the car door in relation to the landing doors

Carry out a test run to check the interaction between the car door and the landing doors. It is also necessary to check:

- that the relevant landing door (R5) is correctly positioned in relation to the car door (R6). You must also check that the following dimensions and functions have been created.
  - Check both of the marks (R). If these are out of alignment with one another by more than 3 mm, the installation position of the landing door must be corrected
  - The hook bolt rollers (R4) and the spreading skate (R3) must not come into contact with one another and must be offset by at least 5 mm (R13)
  - The distance (R11) of the car threshold to the landing door threshold must be 25 mm (± 2 mm)
4.11 Bending the landing door locking plates

- Make sure that the following requirements have been met:

With the landing door locked, the penetration depth (A) of the hook bolt (22) into the strike plate (23) must be at least 10 mm.

The gap (B) must be no bigger than 2 mm.

After fitting and after the adjustments have been checked, the locking plates (17) and (18) on the hook bolt must be bent (secured) in such a way that the relevant component will not slip out of position.
4.12 Electrical installation of car door(s)

4.12.1 Liz2K and Liz3K side-opening car door

The route for the cable for the two door contact switches (28) must be selected so that the functioning of the safety circuit is not affected. The cable (1) must be sufficiently secured using cable ties or other securing materials suitable for the purpose.


The route for the cable for the two door contact switches (28) must be selected so that the functioning of the safety circuit is not affected. The cable (1) must be sufficiently secured using cable ties or other securing materials suitable for the purpose.
4.12.3 Control unit and transformer

The control unit (Riedl RQ5 and Siemens AT 12) that drives the doors is installed on the car roof in accordance with the installation instructions supplied for that purpose. (In the case of the Siemens AT40: Control unit and transformer).

- Route all protecting earth conductors to the earthing plate and connect
- Commission the door drive in accordance with the relevant operating and installation instructions

Important: Take precautionary measures to prevent damage to the components of the door drive when walking on the car roof.
4.13 Fitting the toe guard

- Attach the toe guard (1) using all of the screws for that purpose (2) and to the side (4) of the threshold (2)
5 Commissioning checklist

For low-wear operation

- Check all components for cleanliness. Thoroughly clean away any building dust if necessary.

- The hook bolt must operate without force. If necessary, clean the guide and check all moving parts, such as rollers, roller rails and the threshold.

- Check that the door contacts are clean.

- Are the door leaves correctly fitted and has the door leaf interlock been correctly adjusted?

- Have the door guides been correctly set up so that there is little play and no major resistance while running?

- Check that the door leaves operate smoothly. Check for free running, without grinding against neighbouring components.

Necessary in accordance with the requirements of relevant standards

The system is ready to operate, if all of the following settings and functions have been ensured.

<table>
<thead>
<tr>
<th>Function</th>
<th>Section / page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hook bolt (penetration depth, gap size)</td>
<td>7.5 / 80</td>
</tr>
<tr>
<td>Automatic door-closing</td>
<td>4.3.8.1 / 36</td>
</tr>
<tr>
<td>Door leaf anti-straddle (if fitted)</td>
<td>4.3.8.2 / 37</td>
</tr>
<tr>
<td>Doors are parallel (landing door to car door), max. +-2 mm on all axes</td>
<td>4.3.8.3 / 39</td>
</tr>
<tr>
<td>Landing door:</td>
<td></td>
</tr>
<tr>
<td>- External emergency release facilities</td>
<td>4.3.8.4 / 40</td>
</tr>
<tr>
<td>- Emergency release facilities from inside the pit</td>
<td>4.5 / 42</td>
</tr>
<tr>
<td>Car door:</td>
<td></td>
</tr>
<tr>
<td>- Emergency release facilities</td>
<td>4.9 / 52</td>
</tr>
<tr>
<td>All door fixation brackets</td>
<td>4.1.3 / 13</td>
</tr>
<tr>
<td>Car door locking</td>
<td>4.8.6.4 / 50</td>
</tr>
<tr>
<td>Interaction between car door and landing doors</td>
<td>4.10 / 54</td>
</tr>
<tr>
<td>Locking plates bent once all adjustment work is completed</td>
<td>4.11 / 55</td>
</tr>
<tr>
<td>Electrical installation for car door</td>
<td>4.12 / 56</td>
</tr>
</tbody>
</table>
6 Maintenance

6.1 Basic principles

Every time the lift is maintained, which must take place at least every 6 months, it is necessary to check

- for any unusual noises
- for any wear to the sliding guides (chapter 6.3 on page 63)
- the cable tension (chapter 6.5 on page 65 and chapter 6.7 on page 69)
- that the door leaves are undamaged
- that the door leaf anti-straddle on the landing doors is fully functional (chapter 4.3.8.2 on page 37)
- that the car door lock is fully functional (chapter 4.8.6.4 on page 50)
6.2 Cord change closing device

**Side-opening**
(Sliding door with plastic cable.
Steel cable see Fig. number 27, page 34)

- Insert the closing spring transmission (1) over the tongue (2) on the bracket (3), as illustrated
- Guide the closing spring transmission (1) over the pulley (B)
- Attach the closing spring transmission to the closing spring (C) via loop through the cable clamp (4) like so
- Insert the closing spring (C) into the closing spring force adjusting device (D)
- Set the spring resistance in such a way that the spring is tensioned by approximately 10 to 50 mm
Centre-opening
(Sliding door with plastic cable, steel cable see Fig. number 28, page 35)

- Using the screw (3), attach the closing spring transmission (1) over the tongue (2) to the hanger (A), as shown
- Guide the closing spring transmission (1) over the pulley (B)
- Attach the closing spring transmission to the closing spring (C) via loop through the cable clamp (4) like so
- Bend out the lug (D) and hook in the closing spring (C)
- Set the spring resistance in such a way that the spring is tensioned by approximately 10 to 50 mm. See note on page 33
6.3 Changing the sliding guides

Note: In most cases, it is simply a case of adjusting (see 7.1.1) at least one of the sliding guides, in order to enable the sliding door to operate correctly again.

- Slacken both screws (26), remove the sliding guide (27) and the O-rings (47)
- Attach the new sliding guide with the two screws (26) and the O-rings (47)

Check that the number of O-rings is correct. At least one of the two sliding guides is always fitted with four O-rings (for adjustment, see also 7.1.1).

- Make sure that the distance between each of the door leaves and between the door leaves and the jambs remains unchanged

Fig. 54
6.4  **Changing a toothed belt**

- Unscrew clamping piece (56)
- Remove defective toothed belt
- Slacken the drive motor fastenings (57) and slide drive motor in the direction of the arrow
- Place new toothed belt onto the toothed belt disks and extend the belt, tensioning it by hand, until both ends can be brought together in the clamping piece (58)

With the sliding door closed, position the door leaf bumper (53) in such a way that it abuts the limit stop (54)

- Check that the door leaf bumper is working correctly and adjust if necessary (see 4.8.6.3)
6.5 Replacing/tensioning the transmission cable

Functional principle of transmission cable
The illustration 58 shows the interaction between the transmission cables. The movement of the fast leaf F is transferred to the slow leaves E and E2.

<table>
<thead>
<tr>
<th>E</th>
<th>F</th>
<th>F2</th>
<th>Door leaves (E fast leaf, F and F2 slow leaves)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td>Cable connecting door leaves F and F2</td>
</tr>
<tr>
<td>B1</td>
<td></td>
<td></td>
<td>Cable connecting door leaves F and F2 with E</td>
</tr>
</tbody>
</table>

A2 / B2
Cable clamp, fastening of cable A1 to the header, and/or cable B1 to door leaf E. This is used to adjust the position of the door leaf.

A4 / B4
Cable tensioner

Fig. 56

Fig. 57

Fig. 58
Tensioning the transmission cable

- Closing device (closing spring) remove
- Open sliding door
- Slacken pulley screw (24)
- Insert screwdriver (or similar) into aperture (25) and restore cable tension using a levering movement. The correct cable tension will have been achieved if the middle of the cable, when pressed, is capable of moving by no more than 10 mm (at approx. 10 N)
- Retighten the pulley screw (24)
- Close the sliding door
- Insert closing device (closing spring)
- Move the door a number of times and check the cable tension, retensioning if necessary

The picture illustrates the functional principle. The arrangement and location of the cable tensioning device differ, depending on the model of sliding door.
6.6 Replacing the driver cable

- Remove the old driver cable
- Guide the end (A) of the driver cable through the cable guide (2), the pulley (3) and the cable clamp (5)
- Place two cable safety devices (brass sleeves) (X) in position C
- Guide the end (B) of the driver cable through the cable guide (4), the pulley (1) and the cable clamp (5)

- Attach (crimp) a cable safety device on the end (B) of the driver cable (brass sleeve) (7)
- Tighten the driver cable by pulling on the end (A) with universal pliers and tighten the threaded pin of the cable clamp (5)
• Cut the end (A) of the driver cable to size and attach (crimp) cable safety devices (brass sleeves) (8)

• Align the hanger (24 mm) in the centre and fix the driver cable in place with the attachment screws (6)

• Attach (crimp) two further cable safety devices (brass sleeves) (X) with a distance of 5 mm to the cable guides

The closing spring should be set up so that it is “just capable” of closing the sliding door.

Functional test, see 4.3.8.1, page 36
6.7 Tensioning the driver cable

**Functional principle of connecting cable**
The connecting cable transfers the pulling force exerted by the tension springs (cable A2) onto the door leaf E1, to door leaf E2.

The cable safety devices (two screws (62, fig. 63)) prevent the driver cable from jumping off. Those screws are also fitted with screw locks. If unscrewed, they must always be fitted with a new screw lock. The connecting cable can be inserted without removing the screws.

<table>
<thead>
<tr>
<th>E</th>
<th>F</th>
<th>Door leaves (E fast leaf, F slow leaf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td>Cable connecting door leaves E and F</td>
</tr>
<tr>
<td>A2</td>
<td></td>
<td>Cable connecting door leaf E with spring</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>Cable clamp</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>Pulleys with cable safety devices (62)</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>Cable safety devices (brass sleeves)</td>
</tr>
</tbody>
</table>

---

**Fig. 63**

**Fig. 64**
Tensioning the driver cable

- Loosen the threaded pin of the cable clamp (5)

- Tension the driver cable by pulling on the end (7) with universal pliers and tighten the threaded pin of the cable clamp (5)
### 6.8 Changing the rollers

Some of the rollers (rear hangers) may have been secured using flat-headed screws. Do not mix the screws up. If different screws are used, there will be a risk of collision.

- Remove closing spring (If necessary see 4.3.7, page 33)
- Loosen the fastening (58) of the counter force roller (61) assigned to the roller (4)
- Unscrew and remove the screw and washer (59) on the roller (4) and use the bolt to slide the roller backwards and remove
- Insert new roller with bolt
- Insert screw and washer (59) and tighten
- Tighten the counter force roller fastening (61) again. Make sure that the following adjustments are carried out: Position the counter force roller in such a way that it only exerts just enough pressure on the sliding guide as to allow it to be rotated along with the roller
- Re-insert the closing spring (If necessary see 4.3.7, page 33)
7 Adjusting the settings

Note: In the case of doors supplied in parts, the header mechanism is preset. Doors supplied in assembled form are fully preset and aligned at right angles to the door frame, within the set dimensions.

7.1 and alignment of the door leaves (C-D axis)

- Open the sliding door and make sure that the door leaves (E and F) are plumb to one another and/or are aligned to the slam post (G), as described below. Then, proceed as described in Section 4.3.8.5, Checking stabilisation when doors are closed, on page 40.
7.1.1 Adjusting the lower section of the door leaf

The position of the door leaf can be adjusted across the location of the sliding guide, as follows:

- If the attachment screws (26) are fully unscrewed (e.g. to replace the sliding guides), they must be fitted with a screw lock when reassembling.

Evenly distributing the attachment screws (26) on the sliding guides (27) will cause a change in the positioning of the door leaf (49) in relation to the guide slot (48) in the threshold. Adjustable range is approx. 0.5 mm. The O-rings (47) will become distorted as a result.

The sliding guides must be positioned in such a way that they
- are aligned in parallel to the guide slot
- do not seize in the guide slot
- display the least possible play in the guide slot
Adjusting the sliding guides

- 1. Position the door leaf (S) (see fig. 67)
- 2. Adjust a sliding guide (A) in such a way that it achieves parallel contact in the guide slot
- 3. Adjust the second sliding guide in such a way that the door leaf can be moved within the guide slot with the least possible play
- Adjust additional sliding guides according to the same procedure

Fig. 69
7.2 Door leaf anti-straddle

Doors of a specific size or above must be fitted with a door leaf anti-straddle. This is fitted at the factory (fitted as standard, see also 9.1 at page 83)

- Remove closing spring of closing device, see also 4.3.7 at page 33

7.2.1 Adjusting the door leaf anti-straddle at the top

- Slacken both attachment screws (50A) and slide locking bolt (49A) upwards
- Lay a strip of paper (52, (office paper, 80g/m^2, 0.2 - 0.3 mm)) between the locking bolt and the door leaf (55)
- Lower the locking bolt down onto the strip of paper and tighten both attachment screws
- If necessary, adjust the door leaf anti-straddle of the other door leaf

![Diagram of door leaf anti-straddle](Fig. 70)
7.2.2 Adjusting the door leaf anti-straddle at the bottom

- Move the door leaf for adjustment (A) into the position illustrated (push it open); the locking bolt (49) must be located above the point of engagement (51)

- Slacken both attachment screws (50) and slide locking bolt (49) upwards

- Lay a strip of paper (52, (office paper, 80g/m², 0.2 - 0.3 mm)) between the locking bolt and the point of engagement

- Lower the locking bolt down onto the strip of paper and tighten both attachment screws

- If necessary, adjust the door leaf anti-straddle of the other door leaf

- Re-insert the closing spring of the closing device

- Carry out a functional check. To do that, slide the sliding door open, until you can make certain that the locking bolt (49) has reached its point of engagement (51) and is preventing the door from being slid open any further (see also 4.3.8.2 at page 37)
7.3 **Position of doors open, end position**

- Remove closing spring and open sliding doors fully (If necessary see 4.3.7, page 33)
- Loosen the threaded pin3 (fig. 73 (N))
- Set the position of the fast leaf (fig. 72 (E)) to the slow leaf (F). (Pay attention to the alignment to the opening jamb (G))
- Tighten the threaded pin3(N)
- If necessary, carry out adjustment to the next door leaf
- Re-insert the closing spring (If necessary see 4.3.7, page 33)
7.4 Adjusting closing device (changing a cable)

**Functional principle of closing device**

Cable A2 transfers the pulling force of the closing springs onto door leaf E1. After a cable has been changed, the pulling force of the closing springs should be adjusted in such a way that the doors can close automatically (7.5.2) and the interaction of the hook bolts and the strike plate (7.5.1) is operating properly (Adjust the closing force, see 4.3.7, page 33).

The closing spring should be set up so that it is “just capable” of closing the sliding door.

**Side-opening sliding door**

Replacing the closing spring transmission, see 4.3.7, page 33

![Diagram of closing spring to the side in the jamb](image)

(Closing spring to the side in the jamb)

Fig. 74

Functional test, see 4.3.8.1, page 36
Centre-opening sliding door

Functional principle of closing device

Cable A2 transfers the pulling force of the closing springs onto door leaf E1. After a cable has been changed, the pulling force of the closing springs should be adjusted in such a way that the doors can close automatically (7.5.2) and the interaction of the hook bolts and the strike plate (7.5.1) is operating properly (Adjust the closing force, see 4.3.7, page 33).

Replacing the closing spring transmission, see page 35
7.5 Adjusting the hook bolt

7.5.1 Adjusting the interaction between the locking bolt and the strike plate

The locking action of the locking bolt in the strike plate can be adjusted as follows.

A) Position hook bolt
   - Bend locking plates (17) open
   - Slacken screws (19); the hook bolt (22) can be moved sideward and its penetration depth altered

B) Position strike plate
   - Bend locking plates (18) open
   - Slacken screws (20); the strike plate (23) can be moved sideward

If the position of the hook bolt or the strike plate was changed, the position of the hook bolt to the strike plate must be checked and adjusted if necessary.

Fig. 76
Position of hook bolt in relation to strike plate

With the landing door locked, the penetration depth (A) of the hook bolt (22) into the strike plate (23) must be at least 10 mm.

The gap (B) must be no bigger than 2 mm.

7.5.2 Checking that doors close by themselves

Starting from any position, the doors must close by themselves due to the force exerted by the closing spring.

During this test, the movement of the doors must always be slowed before reaching their final position (door closed). The door leaves could suffer damage due to the force of the closing spring. It is best to catch hold of the closing door by hand (wear gloves).

Checking:
• Release door
• Slide door open until the location of the hook bolt (22) in relation to the strike plate (23) is as illustrated
• Release the door. The sliding door(s) must close automatically and completely and the hook bolt must engage fully in the strike plate
8 Fault-tracing/rectifying faults

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible cause / Remedy</th>
<th>Section / page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise is heard while door is moving. Noise seems to be coming</td>
<td>Check the sliding guides. The grey coating must be preserved along its entire length.</td>
<td>6.3 / 63</td>
</tr>
</tbody>
</table>
9 Technical data

<table>
<thead>
<tr>
<th>Dimensions, weight</th>
<th>See delivery documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 V</td>
</tr>
<tr>
<td>Operating voltage of motor</td>
<td>24 VDC 50 HZ</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>+5 to +40°C</td>
</tr>
<tr>
<td>Storage conditions</td>
<td>dry and protected against dust</td>
</tr>
</tbody>
</table>

9.1 Door leaf anti-straddle on landing doors

The models Liz4 and Liz6 are always fitted with door leaf anti-straddle.

As listed below, whether or not the models Liz2 and Liz3 are fitted with door leaf anti-straddle will depend on the size of the door.

<table>
<thead>
<tr>
<th>Model / Door width*</th>
<th>From a door height* of</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liz2S side-opening and centre-opening</strong></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>2200</td>
</tr>
<tr>
<td><strong>Liz3S side-opening</strong></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>1800</td>
</tr>
<tr>
<td>700</td>
<td>1900</td>
</tr>
<tr>
<td>800</td>
<td>2000</td>
</tr>
<tr>
<td>900</td>
<td>2200</td>
</tr>
<tr>
<td>1000</td>
<td>2300</td>
</tr>
</tbody>
</table>

* mm
## 9.2 Replacement parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Item number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact bridge PA 02 18 W</td>
<td>03130063</td>
</tr>
<tr>
<td>Door contact AS 03 A1</td>
<td>03130062</td>
</tr>
<tr>
<td>Inner sliding guide (each with 2 O-rings underneath)</td>
<td>02212203</td>
</tr>
<tr>
<td>Outer sliding guide (each with 1 O-ring underneath)</td>
<td>02212202</td>
</tr>
<tr>
<td>Roller/counter force roller internal Ø= 32 mm external Ø= 36 mm</td>
<td>02211437</td>
</tr>
<tr>
<td>Pulley Ø =28, t=8</td>
<td>02211436</td>
</tr>
<tr>
<td>Pulley Ø =24, t=6</td>
<td>02211742</td>
</tr>
<tr>
<td>Hook bolt – left</td>
<td>02212841</td>
</tr>
<tr>
<td>Hook bolt – right (central)</td>
<td>02212840</td>
</tr>
<tr>
<td>Product Description</td>
<td>Part Number</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Hook bolt roller Ø = 40 mm</td>
<td>02212953</td>
</tr>
<tr>
<td>Skate (short) (l=300) – left</td>
<td>02212993</td>
</tr>
<tr>
<td>Skate (short) (l=300) – right (central)</td>
<td>02212987</td>
</tr>
<tr>
<td>RQ5 motor – left (central)</td>
<td>03120127</td>
</tr>
<tr>
<td>RQ5 motor – right</td>
<td>03120126</td>
</tr>
<tr>
<td>AT 40/180 motor – left (central)</td>
<td>03120061</td>
</tr>
<tr>
<td>AT 40/180 motor – right</td>
<td>03120060</td>
</tr>
<tr>
<td>Riedl Quantum RQ5 control unit (including transformer)</td>
<td>03120125</td>
</tr>
<tr>
<td>AT 40 control unit (relay)</td>
<td>03120090</td>
</tr>
<tr>
<td>AT 40 control unit (CANopen)</td>
<td>03120124</td>
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<tr>
<td>AT40 transformer</td>
<td>03120091</td>
</tr>
<tr>
<td>94-beam light curtain</td>
<td>03140098</td>
</tr>
<tr>
<td>Power supply for 94-beam light curtain</td>
<td>03140101</td>
</tr>
<tr>
<td>154-beam light curtain</td>
<td>03140105</td>
</tr>
</tbody>
</table>

**Without illustrations**
9.3 Disassembly, disposal

The lift door must be disassembled in reverse order, in accordance with the installation instructions and must be carried out by competent personnel. It must be disposed of in an environmentally-friendly manner. Electrical or electronic components must not be disposed of with domestic waste. WEEE Directive 2012/19/EU.
Notes