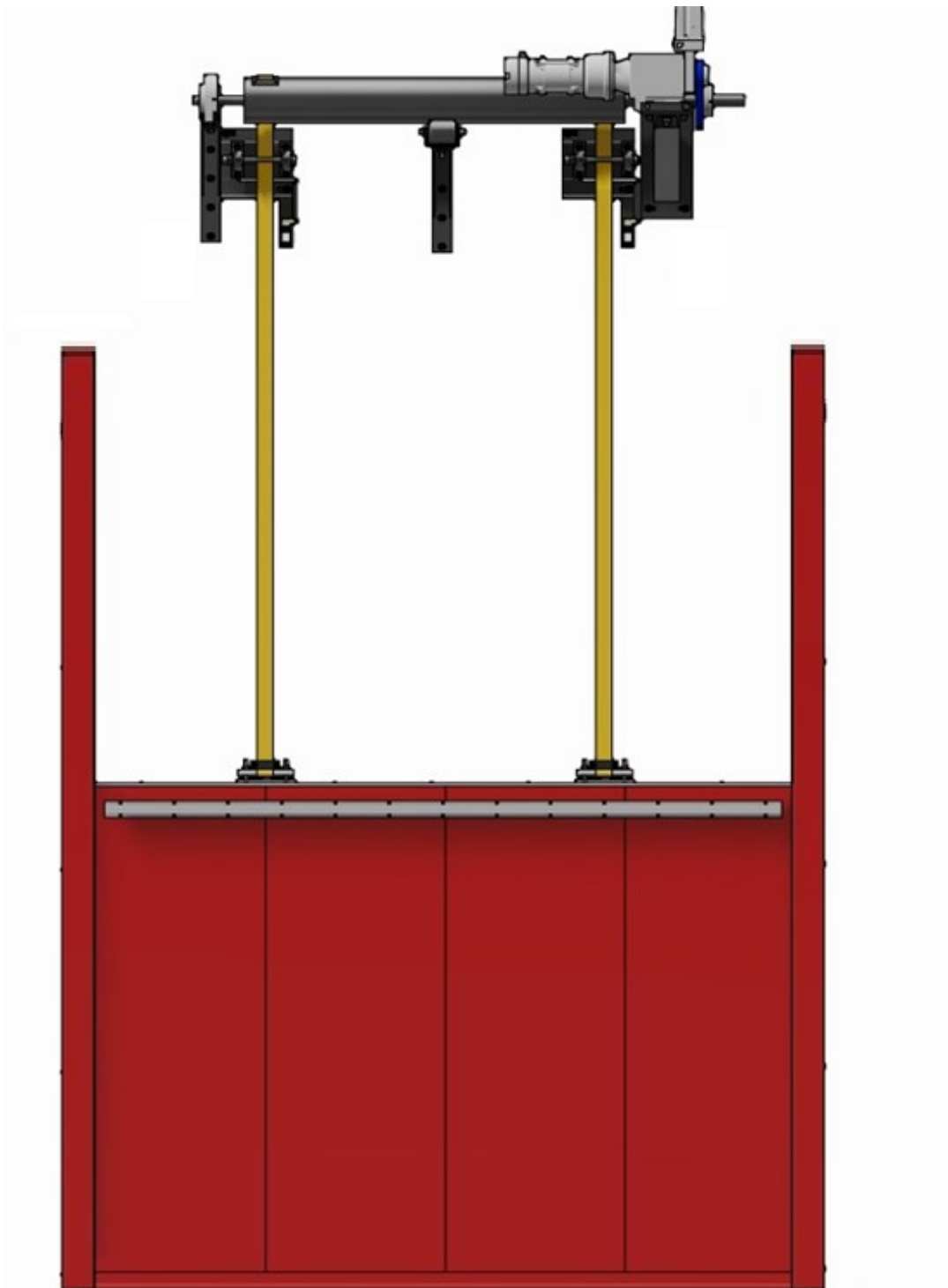


FIRE AND SMOKE BARRIER

"APOLLO" LIFTING DOOR



JANSEN TORE GMBH & CO. KG

Am Wattberg 51 | 26903 Surwold | Germany

TEL: +49 4965 8988 0 | FAX: +49 4965 8988 88 |

EMAIL: INFO@JANSENTORE.COM | WEB: WWW.JANSENTORE.COM

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2 Safety instructions

2.1 Symbols



An immediate risk to life and health. Failure to follow these instructions may result in severe harm to the user's health, up to and including life-threatening injuries.



Important instructions regarding proper use of the closure. Failure to follow these instructions may result in malfunctions and/or failure.



Manufacturer's liability arising from errors or omissions on the part of the operator or user excluded.

2.2 Safety instructions



The safety instructions in this document must be obeyed without fail. The wiring diagrams supplied with every control system must be followed. The operating instructions must be taken note of before the control system is used for the first time.



The qualified personnel must be able to assess the work, identify possible safety hazards and take appropriate safety precautions. Personal protective equipment (PPE) must be used. Work areas must be cordoned off where necessary. Work of any sort may only be carried out with the control system disconnected from the power supply.

2.3 Technically correct installation

In order to ensure operational safety and risk-free installation, the user must comply with the points specified in these installation instructions.



All components connected to the system must conform to the approval and/or test report. The use of components that do not meet these requirements is prohibited. Only use original spare parts and approved accessories.

2.4 Safety precautions for installation



Cordon off the work area before installation work commences. Please remember your personal protective equipment, if required.

Danger of death during installation of fire and smoke doors. All components and elements must always be secured against toppling, tipping, falling and crushing before and during installation.

Only use qualified and trained personnel for installation and maintenance. Only have electrical work carried out by qualified professionals who have received training in accordance with current regulations.

Do not make modifications in the form of additions and alterations that could compromise safety.

Eliminate heat-, gas-, dust-, steam-, smoke-, fire- and explosion-related risks during welding, flame cutting and grinding.

Take care that building materials that foam as a result of heat being applied do not react during welding and so become ineffective.

The safety and accident prevention regulations for the specific application must be complied with during installation, commissioning, testing, maintenance and dismantling of the "APOLLO" LIFTING DOOR.



2.5 Installer's qualifications

To ensure that the "APOLLO" LIFTING DOOR is installed correctly, only **installers trained by the manufacturer** may be used. Depending on local official regulations, electrical components may only be connected by licensed specialist companies or specially trained personnel.

2.6 Safety instructions for operation



Keep the "APOLLO" LIFTING DOOR's movement zone clear at all times. Make sure that no one, especially children or objects, is in the movement zone during operation of the "APOLLO" LIFTING DOOR. In the event of incorrect use, damage or a dangerous operational state, switch the "APOLLO" LIFTING DOOR off and, if necessary, make secure.

Arrange without delay for proper repair, which may only be carried out by qualified personnel.

2.7 Transport instructions



The door elements must always be transported upright. The surfaces and coatings, together with all components, must be adequately protected from damage. Any damage must be reported to the manufacturer immediately and may result in loss of the declared performances.

2.8 Guidance and information

We are delighted that you have chosen one of our quality products. The following instructions are divided into a text section and a drawing section. Please read and follow these instructions. They contain important information on the product. In particular, please obey the safety instructions and warnings. We recommend that you keep these instructions in a safe place.

This document employs the terms door, fire and/or smoke door and lifting door in place of the product name "APOLLO" LIFTING DOOR.

The text and drawings in these instructions have been produced with the greatest possible care. For reasons of clarity, it is not possible to provide full details for all the variants or describe all conceivable installation, operation or maintenance cases. The text and drawings published in these instructions only serve as examples.

No responsibility is taken for completeness, which shall not constitute grounds for complaint. Subject to technical changes.

If, however, you require further information or if problems arise that are not covered in sufficient detail in the operating instructions, you may request the necessary information directly from the manufacturer. Contact details can be found on the first page.

3 Installation instructions

3.1 Scope

These installation instructions apply to the following door types:

- EI₂ 30 C "APOLLO" LIFTING DOOR
- EI₂ 30 C2 "APOLLO" LIFTING DOOR
- EI₂ 30 C2 S_a "APOLLO" LIFTING DOOR
- EI₂ 30 C2 S₂₀₀ "APOLLO" LIFTING DOOR
- EI₂ 90 C "APOLLO" LIFTING DOOR
- EI₂ 90 C2 "APOLLO" LIFTING DOOR
- EI₂ 90 C2 S_a "APOLLO" LIFTING DOOR
- EI₂ 90 C2 S₂₀₀ "APOLLO" LIFTING DOOR

3.1.1 Intended use

An "APOLLO" LIFTING DOOR inclusive of all parts (e.g. frame, guides, etc.) is intended, when installed and closed, to prevent the passage of fire and/or smoke through openings in walls.

Intended use also includes the following points:

- Obey operating and maintenance instructions.
- Obey inspection and maintenance requirements.
- Only operate the "APOLLO" LIFTING DOOR in a completely safe condition.
- Have repairs and maintenance on the "APOLLO" LIFTING DOOR carried out by the manufacturer or specialist firms only.
- Comply with the relevant national regulations and approvals.

3.1.2 Non-intended use

The "APOLLO" LIFTING DOOR is **not suitable for the following use:**

- As an external door (only under certain conditions and in consultation with the manufacturer)
- As a cold room door
- In wet areas (car washes, etc.)

Neither the manufacturer nor the supplier is liable for damage resulting from non-intended use. The user bears the sole risk. Such damage will result in loss of the declared performance.

3.1.3 Changes to the product

Changes made to the "APOLLO" LIFTING DOOR unilaterally will result in immediate loss of the performance designated and/or declared by the manufacturer. Changes may only be made following consultation with and approval by the manufacturer.

3.1.4 Spare parts and accessories

We expressly point out that only **original spare parts** made by Jansen Tore for the product may be used. The replacement of parts with third-party components will automatically result in loss of the product's designated performance characteristics.

The contact details for our service centre are as follows:

Tel: +49 (0) 49 65 / 89 88 - 777

Email: service@jansentore.com

You can find your direct contact at

<https://www.jansentore.com/home/ansprechpartner/finden-sie-ihren-ansprechpartner/>

3.2 Permissible walls and wall thicknesses

3.2.1 EI₂ 30 fire-retardant closures

For a fire-retardant "APOLLO" LIFTING DOOR with classification EI₂ 30 the following minimum requirements must be met for the declared performance to be retained on site:

Type	Permissible wall type and components - minimum requirements	Minimum wall thickness in mm
A	Fire-resistant masonry walls in accordance with DIN 1053-1, strength class min. 12, mortar group \geq II wall thickness	≥ 115 mm
B	Fire-resistant concrete wall in accordance with DIN 1045, min. strength class C12-15	≥ 115 mm
C	Fire-resistant walls made from aerated concrete, block or high-precision masonry units in accordance with DIN 4165, strength class 4, or walls made from reinforced - horizontal or vertical - aerated concrete slabs, in so far as general building inspectorate approval is available, strength class G4.4	≥ 175 mm
D	Clad steel supports and/or girders in accordance with DIN 4102-4:2016-05 Table 7.6 – with a minimum fire rating of F 30, designation (abbreviated) F 30-A, in so far as they are attached over their full length or width to space-enclosing components with at least the same fire rating.	

Non-conforming installation situations must be agreed with the manufacturer in order for the declared performance to be maintained, where applicable.

3.2.2 EI₂ 90 fire-resistant closures

For a fire-resistant "APOLLO" LIFTING DOOR with classification EI₂ 90 the following minimum requirements must be met for the declared performance to be retained on site:

Type	Permissible wall type and components - minimum requirements	Minimum wall thickness in mm
A	Fire-resistant masonry walls in accordance with DIN 1053-1, strength class min. 12, mortar group \geq II wall thickness	\geq 175 mm
B	Fire-resistant concrete wall in accordance with DIN 1045, min. strength class C12-15	\geq 175 mm
C	Fire-resistant walls made from aerated concrete, block or high-precision masonry units in accordance with DIN 4165, strength class 4, or walls made from reinforced - horizontal or vertical - aerated concrete slabs, in so far as general building inspectorate approval is available, strength class G4.4	\geq 175 mm
D	Clad steel supports and/or girders in accordance with DIN 4102-4:2016-05 Table 7.6 – with a minimum fire rating of F 90, designation (abbreviated) F 90-A, in so far as they are attached over their full length or width to space-enclosing components with at least the same fire rating.	

Non-conforming installation situations must be agreed with the manufacturer in order for the declared performance to be maintained, where applicable.

3.3 Permissible wall connections

The following instructions must be followed for wall connection of the "APOLLO" LIFTING DOOR:

- Gap, between seal of door construction and wall, from 1 mm to 9 mm: in this case the seal on the reveal side must be sealed to the wall using a non-shrink method.
- Gap, between profiles of door construction and wall, from 10 mm to 24 mm: these must be filled with mineral wool and then sealed using a non-shrink method.
- Gap, between profiles of door construction and wall, from 25 mm to 50 mm: these must be covered with fire-resistant plasterboard / Promatect H before the respective profiles are fitted and then sealed using a non-shrink method.
- NB: If the seal is in contact with the wall over its full length, sealing using a non-shrink method is not required.

3.4 Permissible fixtures

When using fixtures, the manufacturer's installation instructions must always be followed and given priority. Disregarding these instructions will result in loss of the declared performance.

1

2

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3.4

3.4.1 Attachment of side guiding rails

Wall type	Fixture	Min. load-bearing capacity [F_{rk}]
B	Bolt anchor / through bolt	≥ 1.5 kN
A, B, C	Plastic plug	≥ 1.5 kN
A, B, C	Threaded rod M8 / M10	Strength class ≥ 4.6
A, B	Grout	≥ 1.5 kN, strength class ≥ 4.6
D	Screw installation M8	Strength class ≥ 8.8

3.4.2 Attachment of lintel labyrinth

Wall type	Fixture	Min. load-bearing capacity [F_{rk}]
B	Bolt anchor / through bolt	≥ 8.5 kN
A, B, C*	Threaded rod M8 / M10	Strength class ≥ 4.6
A, B*	Grout	≥ 8.5 kN, strength class ≥ 4.6
D	Screw installation M8	Strength class ≥ 8.8

*Always concrete in lintel area

3.5 Permissible clearances

Floor gaps can occur when the "APOLLO" LIFTING DOOR is installed. According to point 7.3 of DIN EN 1634-1, the test standard for fire and smoke barriers, a general gap of max. 24 mm is permitted at the threshold. In the case of the "APOLLO" LIFTING DOOR with an S200 requirement, the seal must be flush with the threshold.


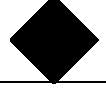
3.6 Permissible floor

The floor must always be at least B1 not easily flammable in accordance with DIN 4102-1.

4 Fitting instructions

4.1 Fitting symbols and abbreviations

The following symbols and abbreviations are used in the fitting instructions:

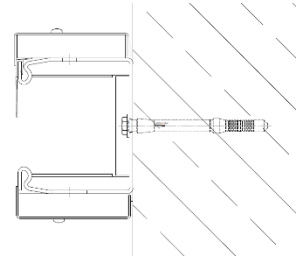
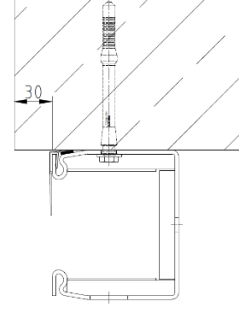
Symbol / Ab- breviation	Meaning
	Components marked with the symbol must be aligned/fitted horizontally
	Align/fit vertically
FF	Finished floor level
CH	Clear height
CW	Clear width

4.2 Instructions before fitting starts

Before actual fitting of the door can start, we recommend that you carry out the following steps in order to ensure that everything goes smoothly:

1. Read through the full installation instructions
2. Identify door's stop side
3. Check the ordered dimensions of the door against the structural reality.
4. It is recommended that you carry out fitting in the precise order set out below or discrepancies may occur. The manufacturer is not liable for any installation errors.

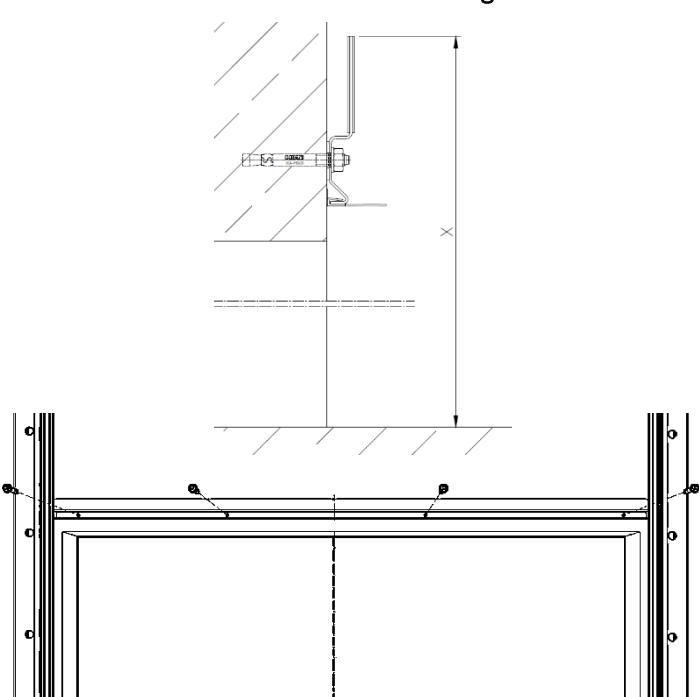
4.3 Fitting the side guiding rails

<p>Fitting situation 1</p> 	<p>Fitting situation 2</p> 
<ol style="list-style-type: none"> 1. <u>If there are irregularities:</u> <ol style="list-style-type: none"> a. Align reference marker at highest point b. Take outermost point at lintel (shim guide rails if necessary) 2. Align guiding rail vertically 3. Secure guiding rail with clamp 4. In fitting situation 2: min. 30 mm from edge 5. Pre-drill every 710 mm and attach guiding rail 	

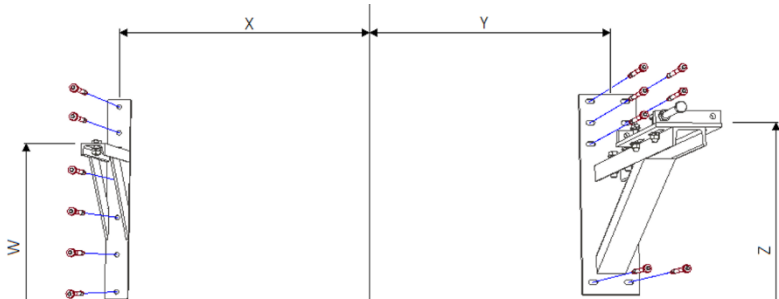
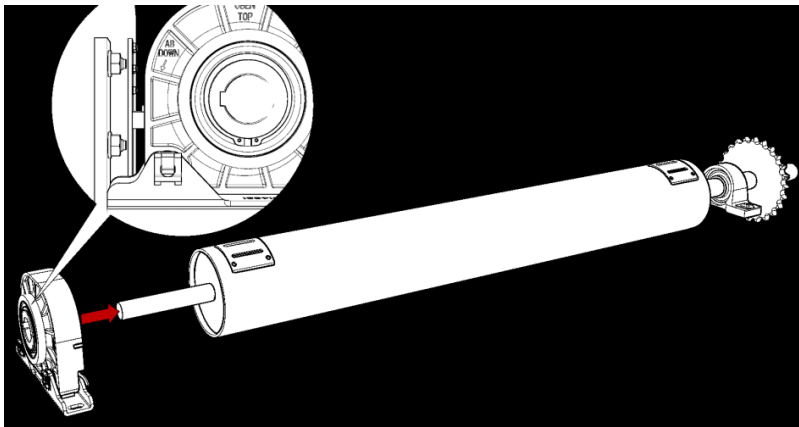
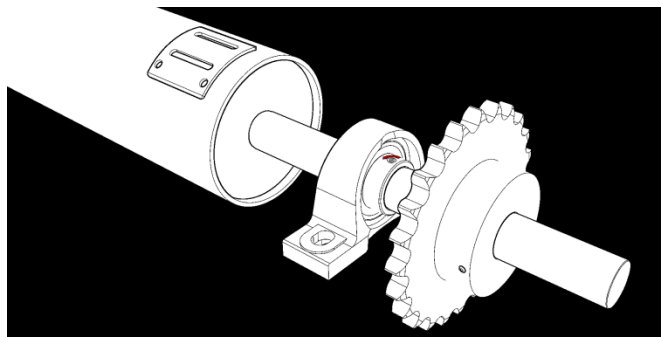
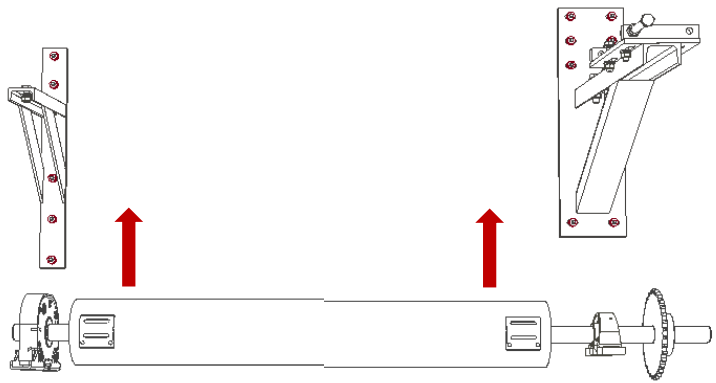
4.4 Fitting the lintel labyrinth

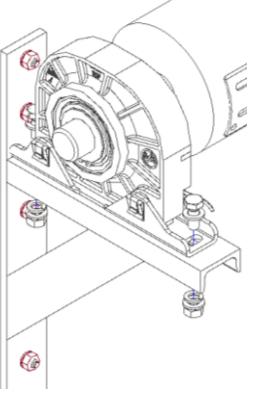
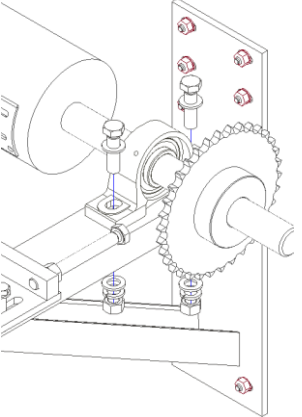
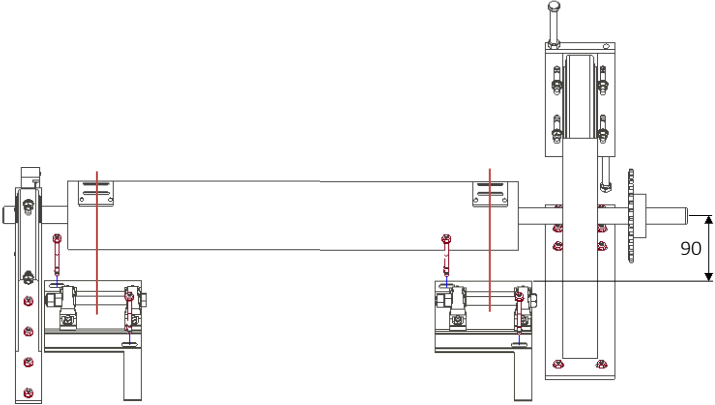
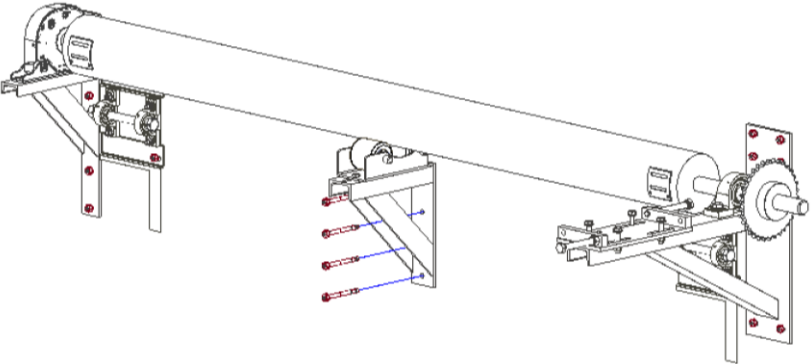
Check working drawing to see whether door leaf can be opened above height of lintel labyrinth:

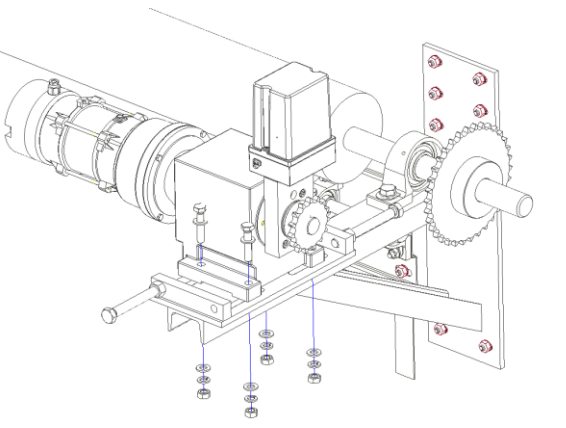
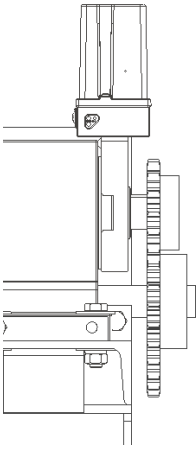
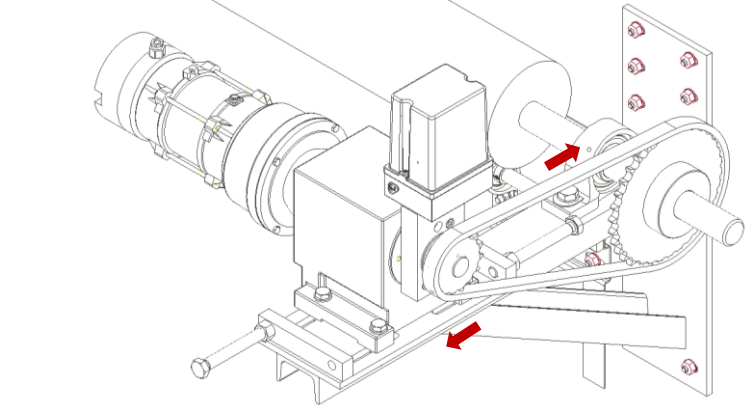
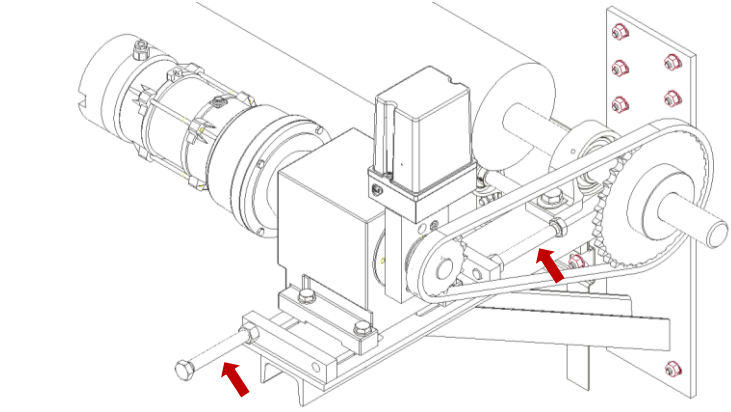
- **If yes**, then proceed with **fitting of drive unit** and fit lintel labyrinth later.
- **If no**, fit lintel labyrinth now:

<p>$X = \text{measured door leaf height} + 38$</p> 	<ol style="list-style-type: none"> 1. Align lintel labyrinth horizontally in centre of reveal 2. Measure door leaf height 3. Use all available holes and fix lintel labyrinth in place with dowels.
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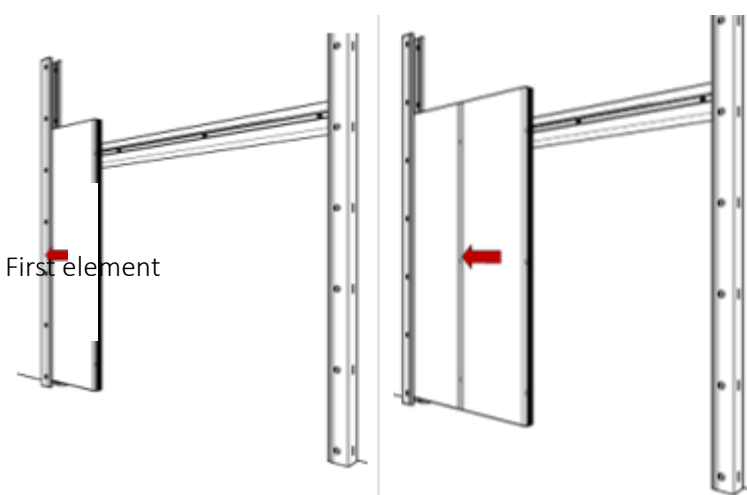
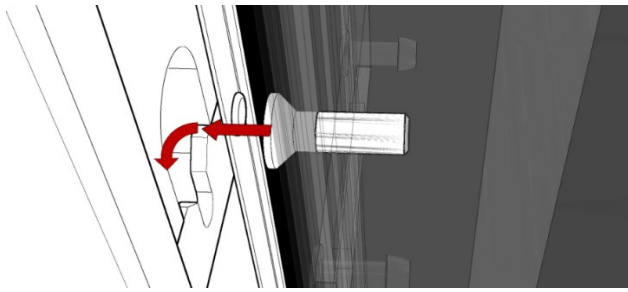
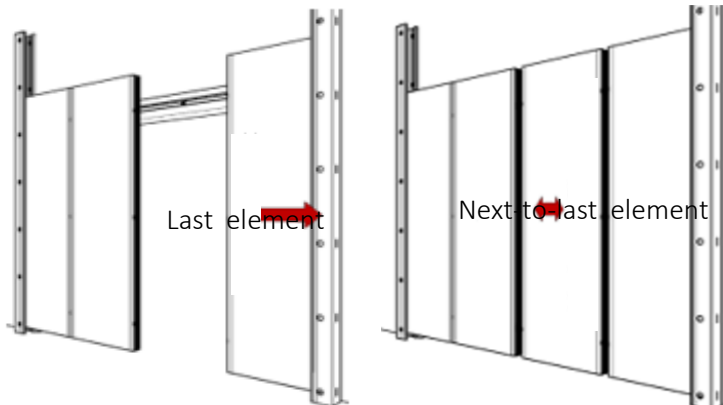
4.5 Fitting the drive unit

	<ol style="list-style-type: none"> 4. Mark centre of guiding rails 5. Dimensions W-Z of respective bracket must be taken from order-specific drawing 6. Align brackets and fix in place
	<ol style="list-style-type: none"> 7. Slide retainer loosely onto shaft end 8. The AB/DOWN arrow on the retainer must point to the opening side when unrolling
	<ol style="list-style-type: none"> 9. Loosen grub screw on pedestal bearing slightly so that bearing can be slid along shaft
	<ol style="list-style-type: none"> 10. Raise roll shaft with a suitable lifting aid and lift onto brackets 11. Align roll shaft in centre of both guiding rails

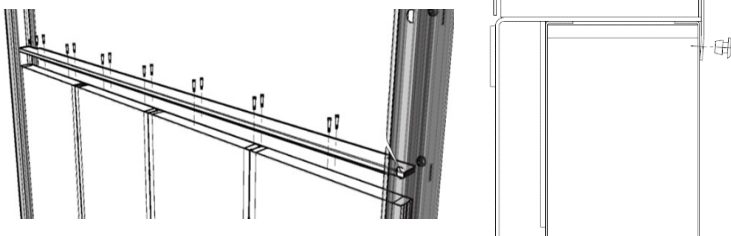
		<ol style="list-style-type: none"> 12. Bolt retainer and bearing to each bracket 13. Remove bearing's grub screw and tap shaft journal with a suitable bit 14. Fit grub screws
		<ol style="list-style-type: none"> 15. Fit belt deflector below roll shaft in alignment (centre of belt deflector = centre of belt connection) 16. Centre of shaft - top edge of belt deflector = 90 mm 17. See order-specific drawing for number
		<p>OPTION:</p> <ol style="list-style-type: none"> 18. A pipe support must be fitted above a certain size 19. Fit pipe support in such a way that roll shaft is supported cleanly over the pulleys

		<p>20. Place motor on bracket and fit loosely in centre of elongated holes</p> <p>21. Position sprockets in alignment</p> <p>22. Remove sprocket's grub screw on roll shaft and tap shaft journal with a suitable bit</p> <p>23. Fit grub screws</p> <p>24. Cut chain to length</p>
		<p>25. Slide motor towards wall</p> <p>26. Put chain on loosely</p> <p>27. Tighten by moving motor along elongated hole</p>
		<p>28. Using the individual tensioning devices, tension the chain in such a way that the lower run can be pressed in by the thickness of the chain</p> <p>29. Bolt motor in place</p>

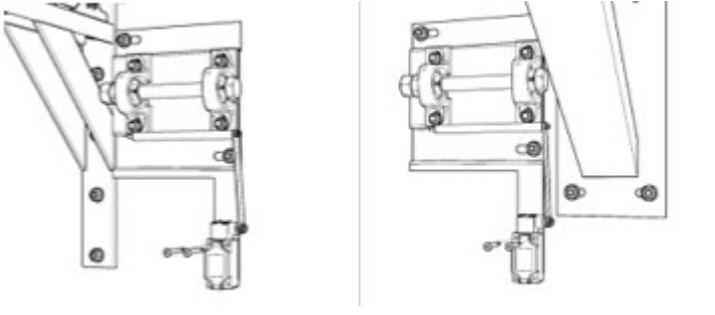
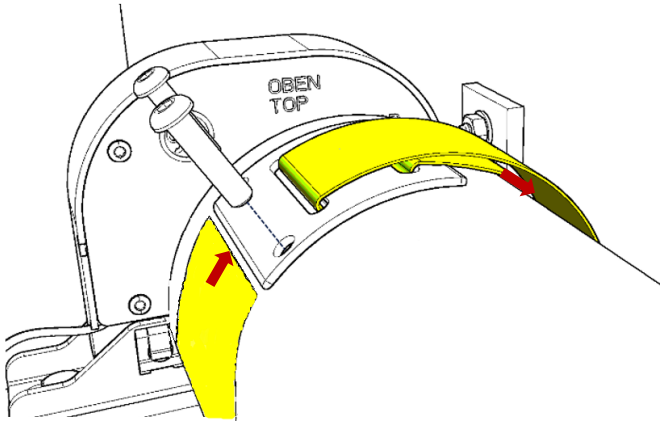
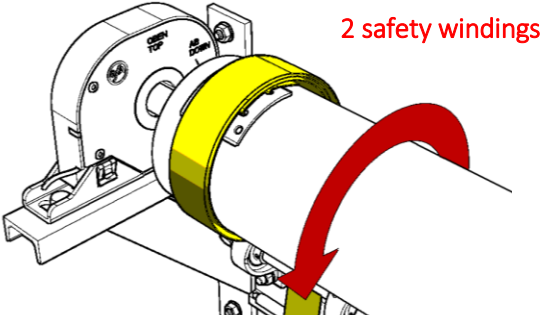
4.6 Installing the door leaf

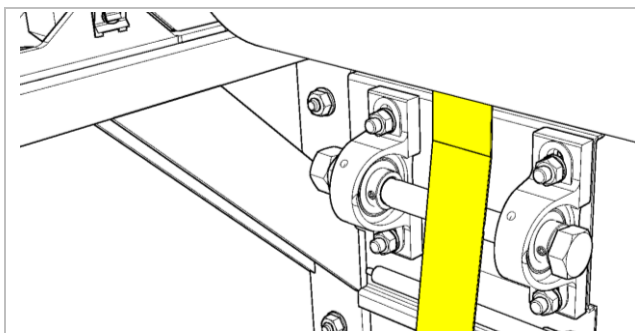
 <p>First element</p>	<p>30. Only if the lintel labyrinth has already been fitted, all the door elements must be shimmed at least 60 mm off the floor</p> <p>31. Insert first door element on left in guiding rail as far as stop. Start on left with highest number</p> <p>32. Hook in further door elements (apart from last two) using push-fit system</p>
	<p>33. The elements are connected to each other using a push-fit system</p> <p>34. The elements are hooked into the next element one after the other from the top</p>
 <p>Last element</p> <p>Next to last element</p>	<p>35. Insert last door element on right in guiding rail as far as stop</p> <p>36. Edge next-to-last door element in between and connect on both sides using push-fit system</p>

4.7 Fitting the door leaf labyrinth

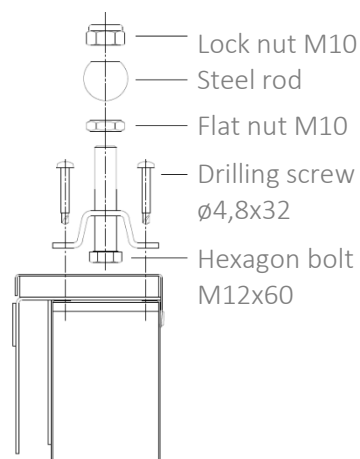
	<p>37. Place door leaf labyrinth flush on elements</p> <p>38. Bolt and rivet in all available holes ($\varnothing 4.8 \times 32$ self-tapping screw) ($\varnothing 4 \times 10$ blind rivet)</p>
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4.8 Fitting the belt / belt guide

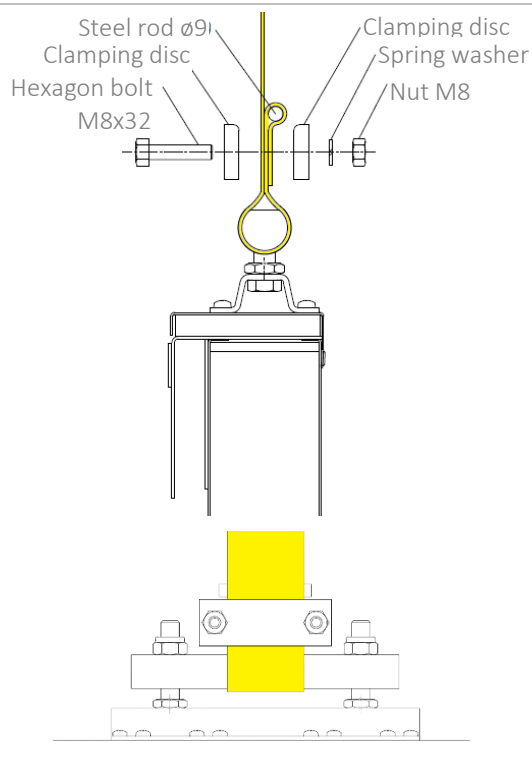
	<p>39. Fit pulley limit switch on both fish-plates with bolts provided</p>
	<p>40. Undo bolts on belt feed-through</p> <p>41. Guide belt through belt feed-through as shown in illustration</p> <p>42. Let belt end protrude 1x round roll shaft as far as belt feed-through</p> <p>43. Bolt belt feed-through back together with roll shaft (spring washer + flathead bolt M8x25)</p> <p>44. Repeat for remaining belt feed-throughs / belts</p>
	<p>45. Wire motor and retainer up to control system</p> <p>46. Roll up shaft with 2 safety windings</p>



47. Guide belt down over centre of belt deflector
48. Repeat for remaining belts

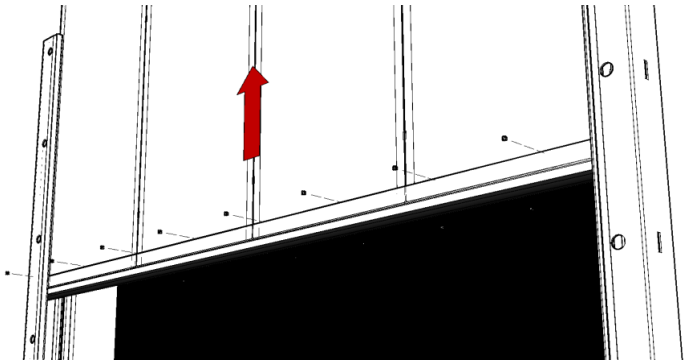
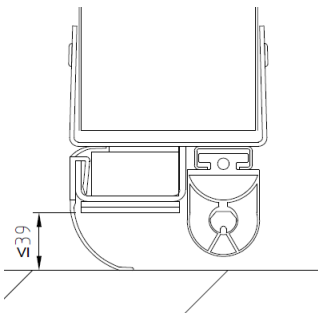
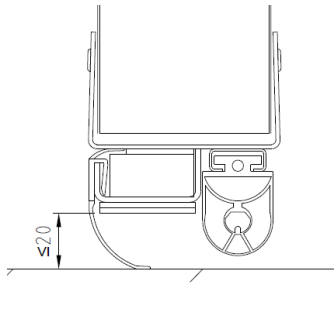


49. Do up hexagon bolts, nuts and steel rod (see illustration)
50. Fit adjustable belt guide at pre-drilled points on door leaf labyrinth with 8 self-tapping screws
51. Repeat for remaining guides

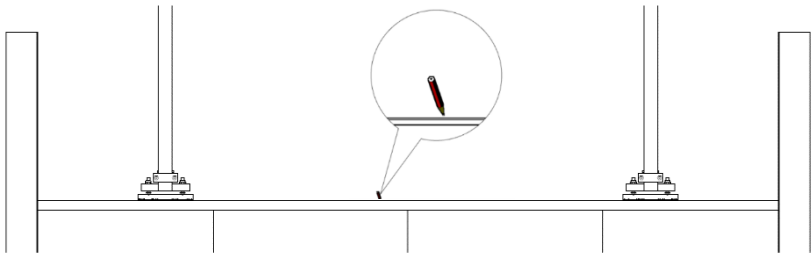
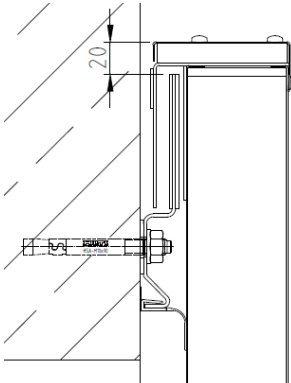


52. Place belt once around belt guide's steel rod and loop at end
53. Pull $\varnothing 9$ steel rod through loop
54. Secure belt with clamping discs
55. The adjustable belt guide makes it possible to readjust the belt height

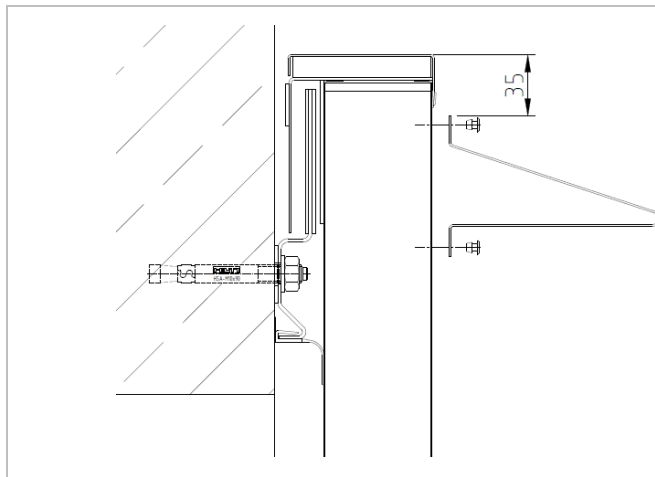
4.9 Fitting the end cover and stiffening profile

	<p>56. Open door 57. Centre end cover 58. Rivet to door element (blind rivet $\varnothing 4 \times 10$)</p>	
		<p>OPTION: Also possible without safety contact strip</p> <p>59. It is imperative that the floor gaps are complied with</p>


4.10 Fitting the lintel labyrinth (where there is an adequate park zone)

	<p>60. Close door 61. Comply with floor gap 62. Mark at top on edge of element 63. Open door leaf until mark is visible</p>
	<p>64. Position lintel labyrinth horizontally 20 mm offset from mark in direction of clear opening.</p> <p>65. Use all available holes and fix lintel labyrinth in place with dowels.</p>

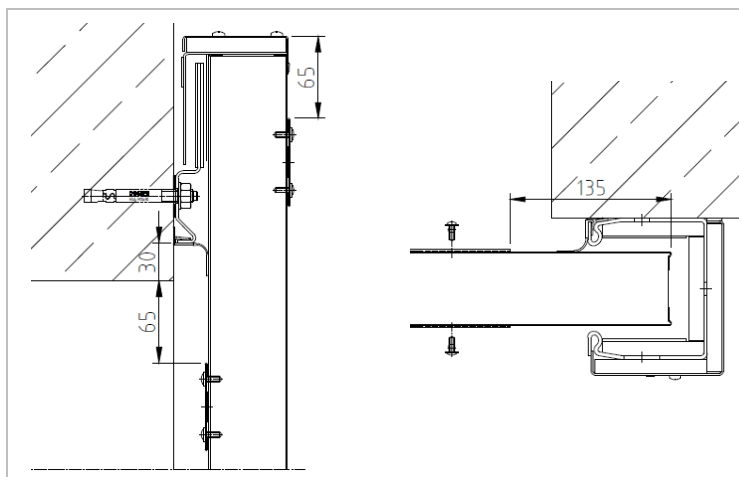
4.11 OPTION: Mounting the stiffening profile




OPTION:

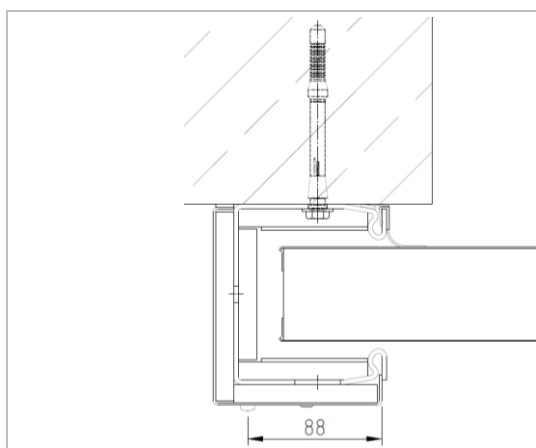
66. Fit stiffening profile centrally below protective cover.
67. Fit profile horizontally approx. 35 mm offset from door leaf labyrinth.
68. **Steel rivets $\varnothing 4.8 \times 10$** in  holes on outside, **aluminium rivets $\varnothing 4.8 \times 10$** in all other holes.

4.12 Fitting the cleats



12. Align cleats  horizontally
13. Comply with dimensions (See illustrations)
14. Rivet in all holes (**flathead self-tapping screw $\varnothing 4.2 \times 13$**)

4.13 Fitting the casing

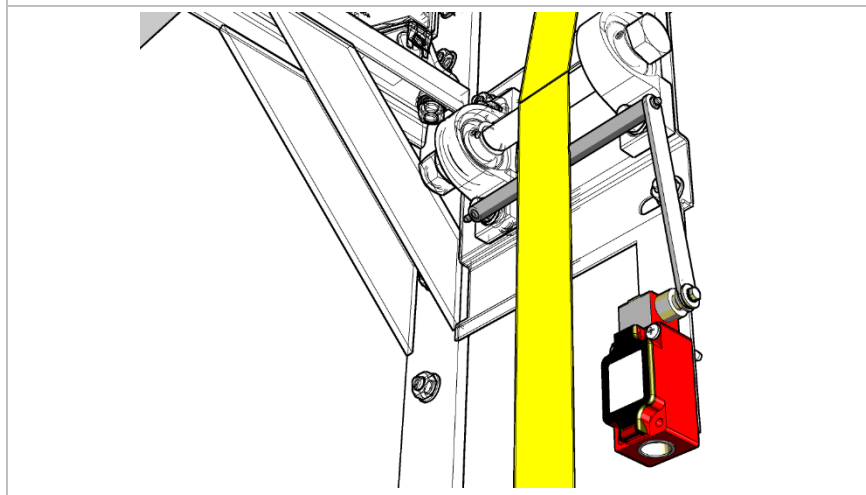


69. Position casing as shown in illustration
70. Bolt together 100 mm from top every 600 mm (**$\varnothing 4.8 \times 45$ self-tapping screws**)

4.14 Fitting the cushioned end stops and adjusting the monitoring switches

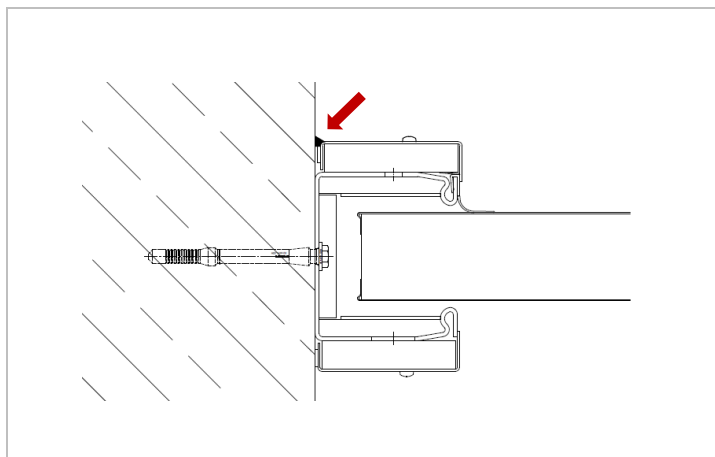


71. Move door leaf to approx. 10-20 mm above clear opening
72. Place cushioned end stop at top of door leaf labyrinth
73. Position and fit cushioned end stop centrally between end of door leaf and last belt guide



74. Adjust monitoring switches so that they press on belt
75. Check functioning of switch by triggering manually

4.15 Sealing (doors with S_a or S_{200} requirement)



15. In the case of flush fitting, the lead-in profile casing must be sealed to the wall over its full length using a non-shrink method.

4.16 Fitting the electrical components

Directions for fitting the electrical components can be found in the respective manufacturer's installation instructions.

4.17 Function test

4.17.1 Opening and closing process



People, body parts or objects can be trapped by the door elements when the "APOLLO" LIFTING DOOR is opening and closing.

1. Make sure that there are no people or objects in the "APOLLO" LIFTING DOOR's movement zone.
2. Check whether the "APOLLO" LIFTING DOOR can be fully opened and closed without difficulty and check the end positions
3. Check the smoke detector and safety contact strip for correct functioning

4.17.2 Test report

The test report must be completed in full by the expert during commissioning.

4.17.3 Information sign

1. Mount the "Fire Barrier" information signs on both sides of the door in such a way that they are clearly visible when the door is open.
2. Affix the rating plate in the immediate vicinity of the opening.
3. Affix the inspection sticker in the space provided on the rating plate in such a way that the test month is below the arrow. Delete the year dates below that do not apply.

5 Information regarding maintenance

The safety requirements for power-operated windows, doors and gates are laid down in the current EU standards, national standards and the "Guidelines for Power-Operated Windows, Doors and Gates". These guidelines supplement section 9, 10 and 11 of the current Workplaces Ordinance, and section 28 and 29 of the "General Regulations" relating to accident prevention (VBG1). ASR A 1.7 applies to industrial and commercial use as a matter of principle.

5.1.1 Annual maintenance

Statutory maintenance for power-operated doors (in accordance with ASR 1.7) must be performed annually by a competent specialist door company. To prevent damage to the drive technology and door mechanism,

the drives and wearing parts (belts, element dogs, bolts, etc.) should be checked and maintained regularly by qualified technicians.

The checks carried out must be documented. This can take the form of entries in a test log or an attached test report, for example. A test seal specifying the next check must also be affixed to the installation where it can be read with ease. Maintenance must not be regarded as equivalent to accident prevention regulation testing.

It is advisable to take out a service contract with the manufacturer, the installer or an establishment with comparable expertise and experience to ensure the upkeep of the installation.

5.1.2 Monthly function testing by operator

According to the guidelines for hold-open systems and requirements in the state-specific Technical Building Regulations, testing of all devices for proper and problem-free interaction and maintenance of the hold-open system must be carried out at least once a year by a competent person. The hold-open system must be kept in working order by the operator at all times and tested at least once a month for correct functioning. This must be documented.

If the "APOLLO" LIFTING DOOR suffers malfunctions or damage during operation, you must immediately engage a specialist company to inspect and/or repair it.

The owner or their representative is responsible for service and maintenance of the "APOLLO" LIFTING DOOR. Any failure in this respect will result in loss of the declared performance.

To ensure the proper functioning of the "APOLLO" LIFTING DOOR, you must carry out and document technically correct maintenance at regular intervals. The guidelines for the inspection and replacement of components can be found in the inspection plan and the operating, maintenance and care instructions.

5.1.3 Cleaning and care

Please note that pressure washers and highly acidic or caustic solutions will damage the surface of the door elements and cause damage to the door system. Such cleaning methods must not be used. Any failure in this respect will result in loss of the product's declared performance.

Only use cleaning materials that have been identified as suitable by the manufacturer.

Refrain from vigorous rubbing on the surface.

In order to reduce exposure to corrosion, affected components must be thoroughly cleaned on a regular basis.

5.1.4 Galvanised surfaces

To ensure that galvanised surfaces are looked after properly, the "APOLLO" LIFTING DOOR must be cleaned in accordance with the RAL-GZ 632 or SZFF 61.01 regulations at least once a year, and more frequently where there is more severe environmental pollution.

Only use clean cold or lukewarm water and soft, non-abrasive cloths, rags or industrial cotton wool for cleaning. If necessary, stubborn dirt can be removed by adding small quantities of a neutral cleaning agent.

5.1.5 Painted surfaces

Cleaning implements that contain metal will leave rusting particles of tramp iron on the stainless steel rust-proof surface, which may lead to corrosion damage. Never use scouring sponges that contain metal, wire wool or wire brushes. Unsuitable cleaning agents can attack and damage the stainless steel rustproof surface. Never use products that contain chloride, especially those containing hydrochloric acid, bleach or silver polish. Clean rustproof surfaces with a damp cloth or leather.

6 Dismantling and disposal

Generally speaking, the "APOLLO" LIFTING DOOR is dismantled in reverse order.



All components and elements must always be secured against toppling, tipping, falling and crushing before and during installation.

The door must be fully disconnected from the power supply before dismantling.

The safety and accident prevention regulations that apply to the specific application must be complied with during dismantling.



To ensure proper disposal, the "APOLLO" LIFTING DOOR must be separated into its individual components following dismantling and disposed of in accordance with local official regulations.