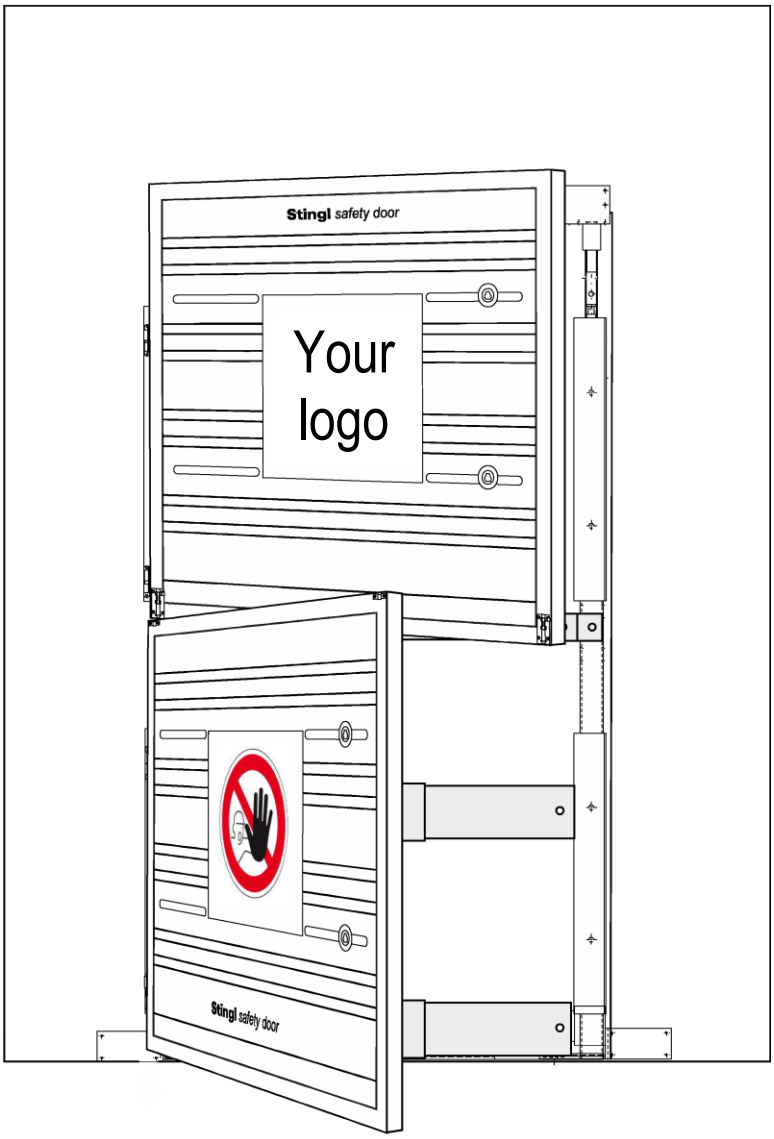
Assembly and usage manual
Stingl *safety door*



The flexible and simple shaft protection for the modernisation (MOD)/new installation of lifts

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1. General

1.1 Introduction

This assembly and usage manual is only applicable to the STINGL *safety door* shaft protection. The safety information provided in this assembly and usage manual, as well as the rules and regulations for handling the STINGL *safety door* fall protection are within the scope of this documentation.
Operators are responsible for:

- ensuring compliance with local, regional and national regulations,
- observing the rules (laws, ordinances, guidelines, etc.) concerning safe handling listed in the assembly and usage manual,
- ensuring that the assembly and usage manual is available to the operating personnel and that the information provided, such as notes, warnings and safety rules, are strictly adhered to.

1.2 Manufacturer

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1.3 Approval

The following STINGL safety door shaft protection was tested by Liftinstituut BV in accordance with the Lift Directive (2014/33/EU) and Annex 1 of the Machinery Directive (2006/42/EC) and registered with number NL20-400-1002-351-01.

1.4 Warranty

The scope and duration of the warranty are specified in the manufacturer's terms and conditions of sale and delivery. For warranty claims arising from insufficient documentation, the assembly and usage manual valid at the time of delivery is always decisive (see Section 1.5). In addition to the terms and conditions of sale and delivery, the following applies: no liability is assumed for damage to the shaft protection caused by one or more of the following reasons:

- ignorance of or non-compliance with this assembly and usage manual,
- insufficiently qualified or insufficiently trained operating personnel,
- use of non-original spare parts.

The operator is responsible for ensuring:

- that the safety rules according to Section 2 are observed,
- that improper use of the STINGL *safety door* as well as incorrect assembly and unauthorised operation are excluded and
- that the intended use of the STINGL *safety door* is guaranteed and the shaft protection is operated in accordance with the contractually agreed conditions of use.

1.5 Issue number and/or date of issue

This assembly and usage manual was issued in German on 6/7/2020.

1.6 Copyright and property rights

The manufacturer retains the copyright to this assembly and usage manual. Infringements that contradict the information provided above will require the payment of damages.

2. Safety

2.1 Basic rules

Assembly may only be carried out by **instructed personnel who are familiar with the assembly and usage manual for the Stingl *safety door***. Assembly can be carried out by the one technician alone. Ignorance of and non-compliance with the specified safety rules can result in serious injuries or death. Therefore, please observe these safety regulations before assembling, using or disassembling the shaft protection.

- If you have any doubts as to whether the STINGL shaft protection is suitable for the intended work, please contact the manufacturer. Do not take any risks.
- Never use damaged or improperly assembled STINGL shaft protection.
- Never try to force parts together.
- Never replace original STINGL *safety door* components with parts from other manufacturers.
- All users of the STINGL shaft protection must be familiar with the safety rules set out in DIN 4420-1 “Service and working scaffolds.”
- Section 12 of the German health and safety regulation for construction work (BGV C 22) must be observed.

2.2 Safety rules

1. The STINGL *safety door* should only be assembled, operated, converted or dismantled under the supervision or guidance of competent specialists. It should only be handled by experienced and trained personnel.
2. The work area should be examined with regard to the following aspects:
- surface condition,
- the strength of load-bearing parts (threshold, soffits and lintel),
- proximity to power lines.

These aspects must be checked and given due consideration.
3. The STINGL *safety door* should not be installed or operated in the immediate vicinity of power lines or electrical cables until these have been isolated, switched off or otherwise secured against accidental contact.
4. When the shaft protection is in use, make sure that the lift is not in operation.
5. Before using the shaft protection, the individual parts must be checked for damage and wear. Do not use damaged or worn parts.

6. Any STINGL shaft protection that is damaged or impaired must be taken out of service immediately, and may only be used again once the damaged or impaired parts have been completely replaced.
7. The original parts must not be changed. The operator must ensure that assembly, modification and dismantling work can be carried out without risk to workers.
8. All those who use, assemble, modify or dismantle STINGL shaft protection must wear a protective helmet.
9. Personal protective equipment (e.g. harness and fall arrester) must be used to protect workers.
10. Use of the STINGL shaft protection on snow, ice and other slippery surfaces is prohibited. However, if a safety officer can determine that the place of use poses no danger to employees, or that the employees are adequately protected by personal protective equipment, an exception can be made.
11. No parts of fully assembled STINGL shaft protection may be removed during use, except under the supervision of a qualified person. Any rejected or damaged parts should be replaced immediately.
12. The statutory safety regulations and accident prevention regulations must always be followed. Only qualified and trained specialists are permitted to assemble the shaft protection.

2.3 Important information and precautions for assembling the Stingl *safety door*

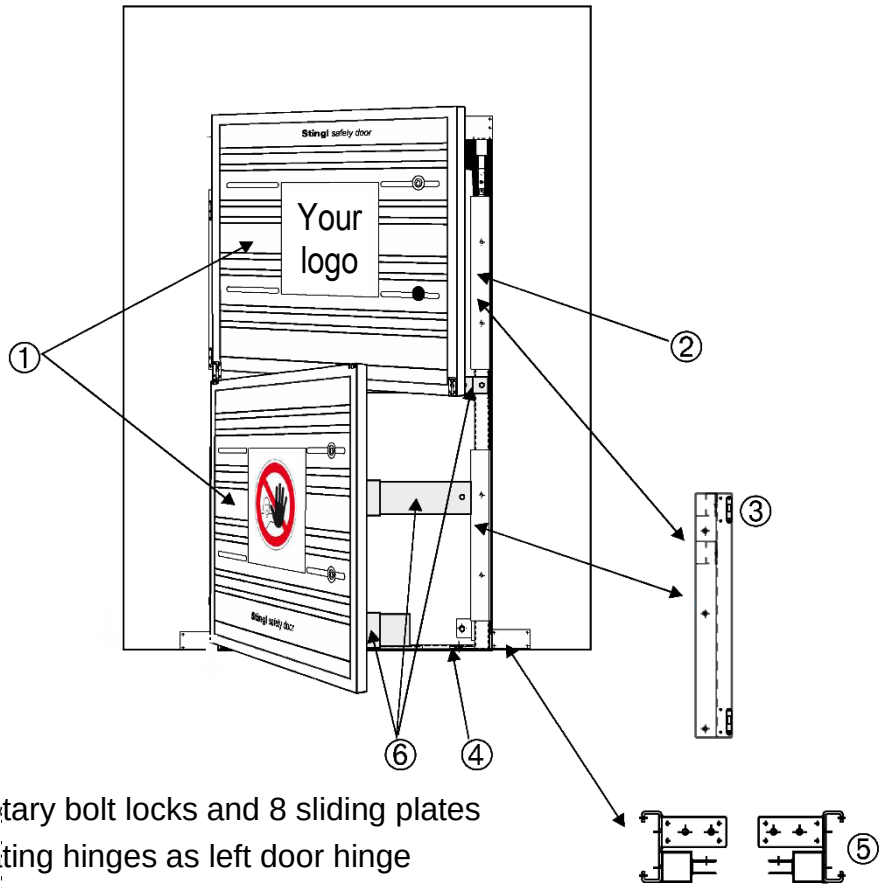
The shaft protection (revolving doors and temporary handrail) is approved for a maximum horizontal force of 1.0 kN/m².

- The STINGL *safety door* shaft protection should only be attached to sufficiently stable parts of structures. These parts must be able to absorb or redirect the forces that occur.
- The lintel must be able to bear a vertical load of 3.6 kN acting upwards on both sides and a horizontal load of 1000 N.
- The door threshold must be able to withstand vertical forces of 3.6 kN on the hinge side and horizontal forces of 1000 N.
- The lower door soffit brackets must be flush with the door soffit. Never use destabilising objects or aids, such as Styrofoam or loose bricks, to level out unevenness.
- The vertical wall to the left and/or right of the door opening can bear a horizontal load of 1000 N.
- The respective upper stop bracket of the vertically braced support must be flush with the lintel. Disc springs are used to visualise the applied tension force.
- The clear door height (top edge of the floor to lower edge of the lintel) must not exceed 2140 mm (small version) or 2240 mm (medium and large version).
- The interval of the possible, clear door width must be observed according to the selected width of the revolving doors.
- If there is no door soffit, the flat mount for the brace support must be securely screwed to the structure. The wall must be able to absorb or redirect the forces that occur.
- The height of the suitable brace supports is initially set by means of a perforated panel (6 setting options). It is then finely adjusted by unscrewing the brace sleeve. The maximum tension force is reached when the inserted disc springs lie completely flat on top of one another.

- All locking pins used must be secured with a split pin.
- A detailed assembly and usage manual issued by the manufacturer must always be available during the assembly, modification, use or disassembly of the shaft protection.
- Personal protective equipment, (e.g. safety harness, fall arrester, suitable anchor points, etc.) must be used during the assembly and disassembly of the work platform in accordance with local safety regulations.
- Care must be taken when assembling and disassembling the inner and outer tubes (three-piece guard rail). The inner tubes can easily slip out, resulting in personal injury and property damage.

3. Model-specific information

3.1 Model overview



① Revolving doors, incl. 4x Rotary bolt locks and 8 sliding plates
② Brace supports, incl. renovating hinges as left door hinge
③ Alternative angle brackets, screwable, incl. renovating hinges as right door hinge
④ Form-fitting door threshold to accommodate the brace supports
⑤ Alternative flat mount for the left/right brace support
⑥ Three-piece guard rail, consisting of a handrail and two-part knee and foot rails

3.2 Location of identification markings

The signs described in the assembly and usage manual can be attached to the front of the revolving doors.

3.3 Applications

3.3.1 Intended use

The shaft protection mentioned in this assembly and usage manual may only be used as shaft protection for lift shaft doorways in accordance with the model overview (see Section 3.1).

3.3.2 Improper use

Improper use - i.e. a deviation from the information provided in Section 3.3.1 regarding the shaft protection documented in this assembly and usage manual - is considered improper use. This is also the case if the standards and guidelines listed in this assembly and usage manual are not observed.

4. Assembly instructions

4.1 General

Caution:
The shaft protection may only be assembled if the SAFETY RULES described in Section 2 have been read through completely and their meaning has been understood. Therefore, first read Section 2 and only then continue with the following explanations.
The three-piece guard rail is attached by inserting the pins. Split pins prevent the locking pins from accidentally coming loose. The locking pins must be inserted in the same direction from the outside to the inside.

Caution:
Before starting any assembly work, always fully read through the relevant job description (e.g. according to Section 4.2) and only then carry out the assembly work step by step.

4.2 Basic setup

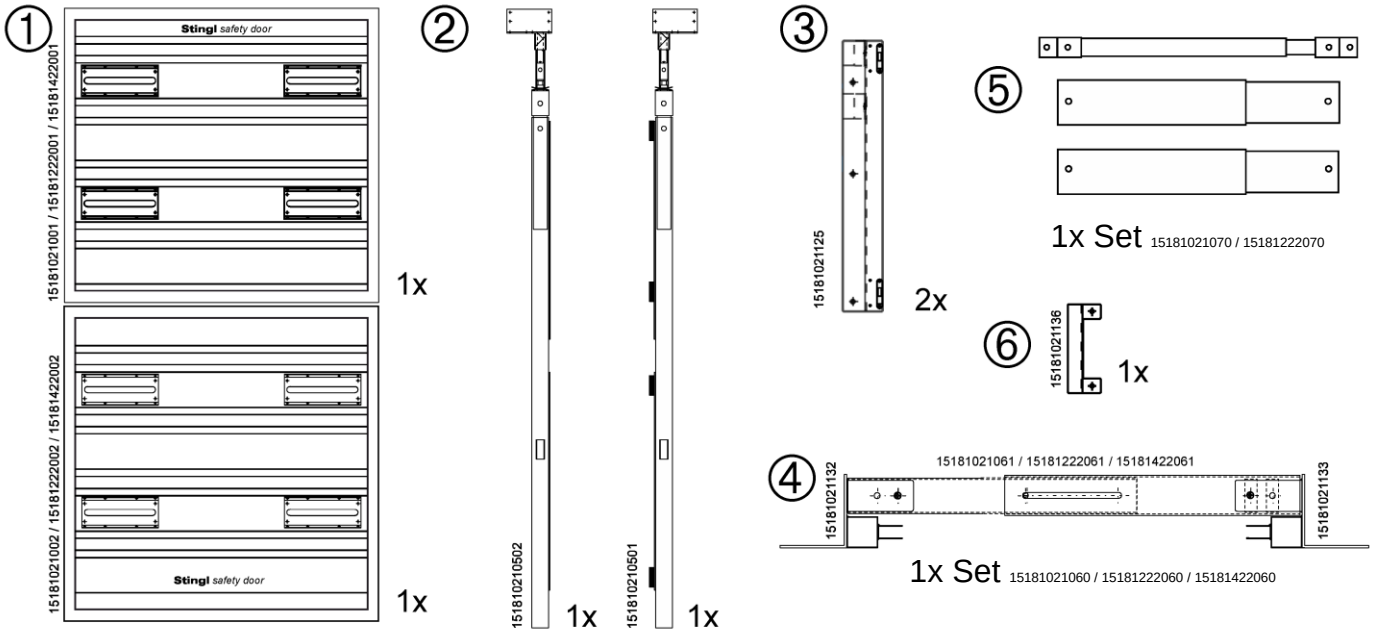
4.2.1 Preparation

Unpack all component parts of the shaft protection to be erected, and dispose of any packing material according to the instructions. Check that all component parts of the shaft protection according to Section 6 are present.
Read through the assembly instructions listed in section 4.1, and refer to them whenever necessary when carrying out the steps below.

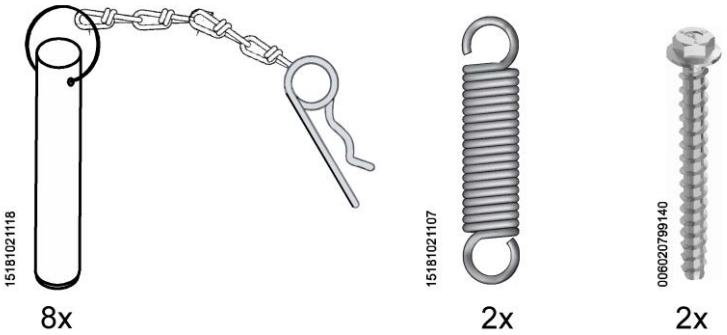
4.2.2 Assembly

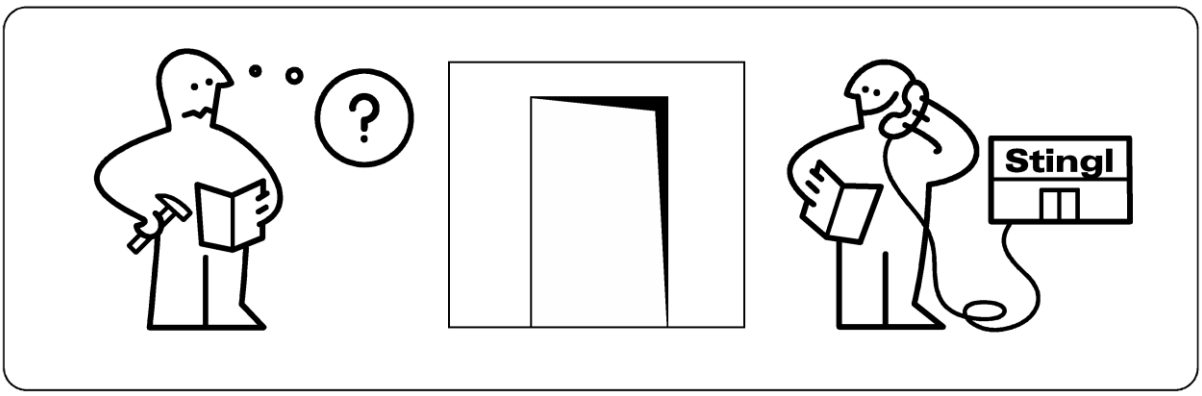
Scope of delivery:

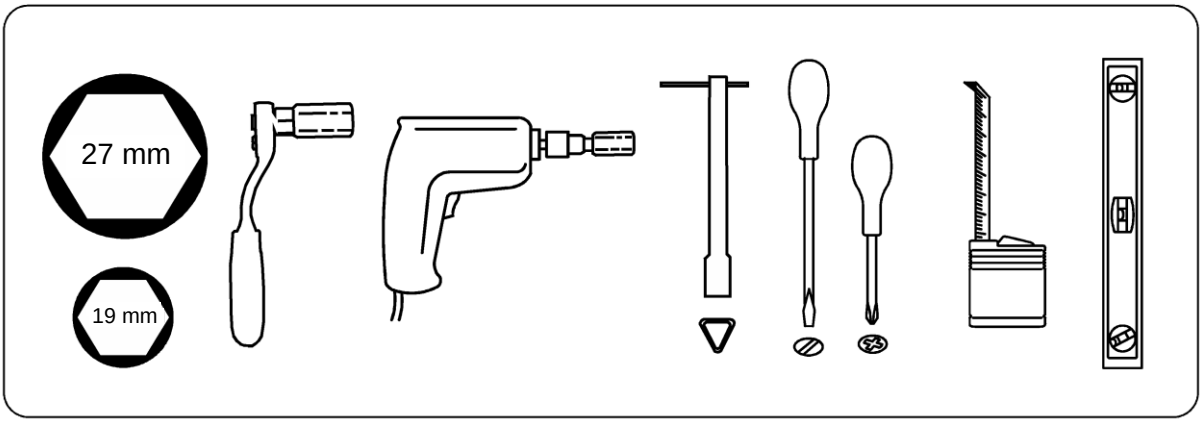
2x	Revolving doors, incl. 4x Rotary bolt locks and 8 sliding plates	①
2x	Brace supports, incl. renovating hinges as left door hinge	②
2x	Angle brackets, screwable, incl. renovating hinges as right door hinge	③
1x	Form-fitting door threshold to accommodate the brace supports	④
1 Set	three-piece guard rail, consisting of a handrail and two-part knee and foot rails	⑤
1x	Angle bracket as intermediate element	⑥



Small parts

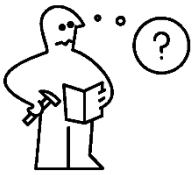




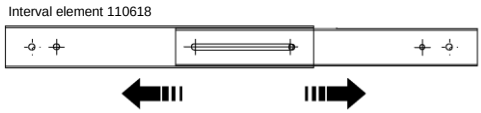


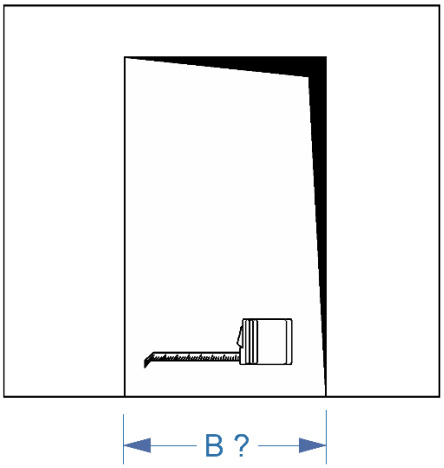
Planning

Step 1



How wide is my doorway?
What flexible interval do I need?

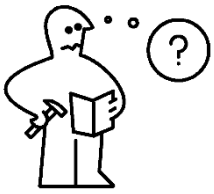




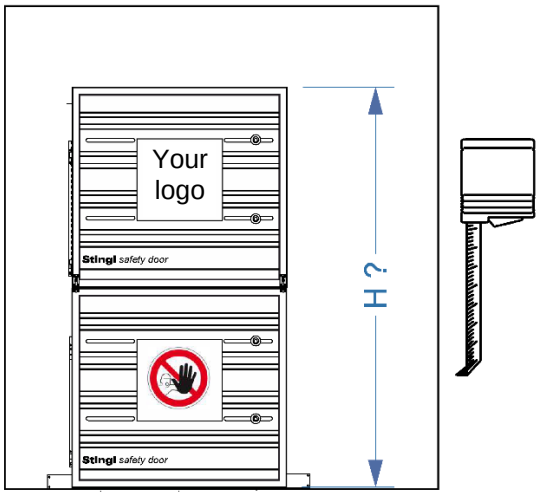
Width (W):

- ☐ from 790 to 1000 mm ➡ revolving doors W = 1040 mm
- ☐ from 940 to 1200 mm ➡ revolving doors W = 1240 mm
- ☐ from 1180 to 1400 mm ➡ revolving doors W = 1440 mm

Step 2



How high is my doorway?
What flexible interval do I need to press in the brace supports?

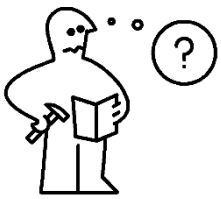


Height (H):

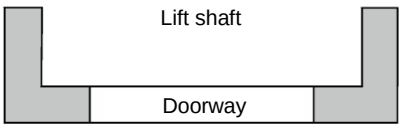
☐ max. 2140 mm ➡ hinged revolving doors H = 2115 mm
Opening width:
from 1985 to 2240 mm

☐ max. 2240 mm ➡ hinged revolving doors H = 2215 mm
Opening width:
from 1985 to 2240 mm

Step 3



What is the door/wall situation?



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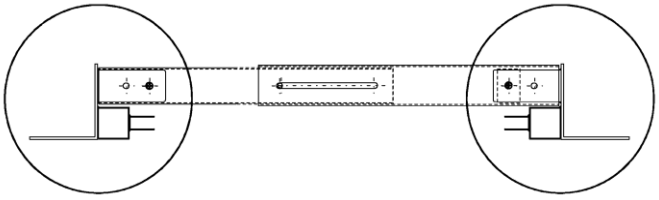
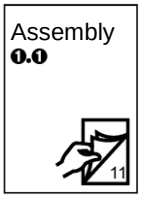
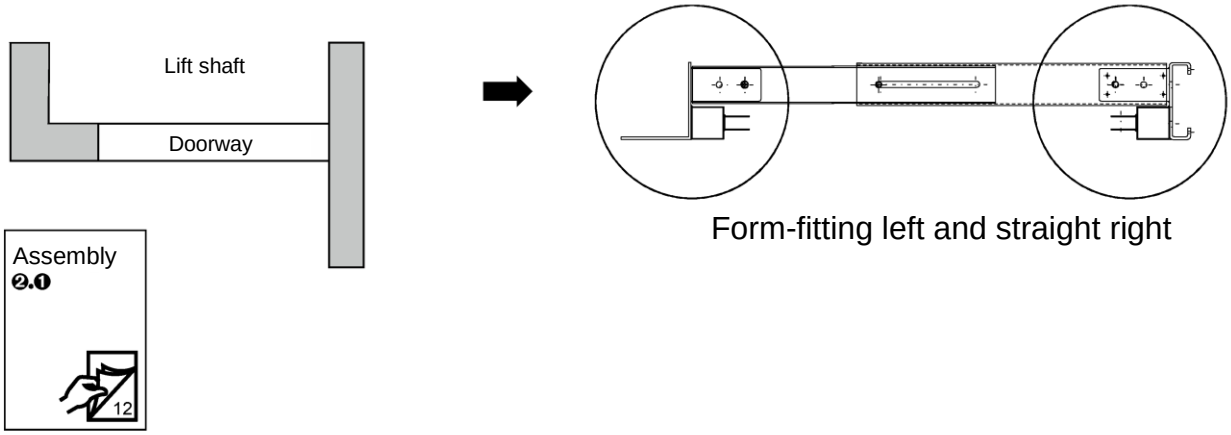


Form-fitting left and right

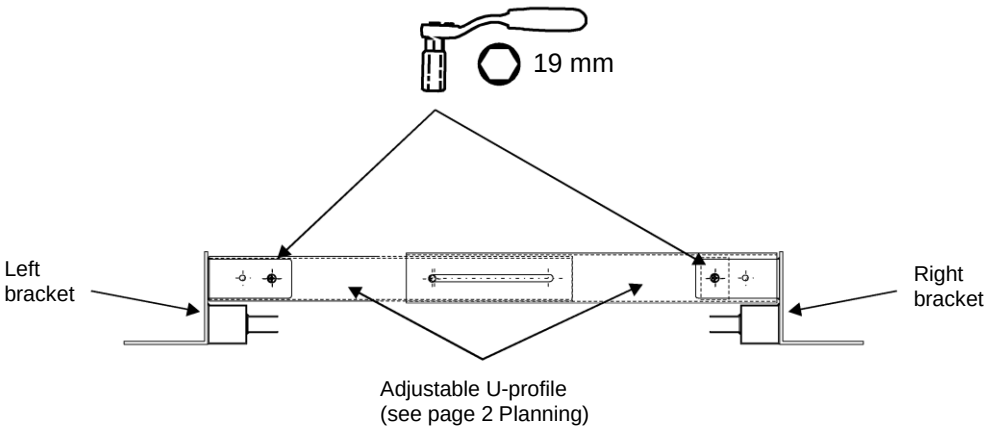




Assembly

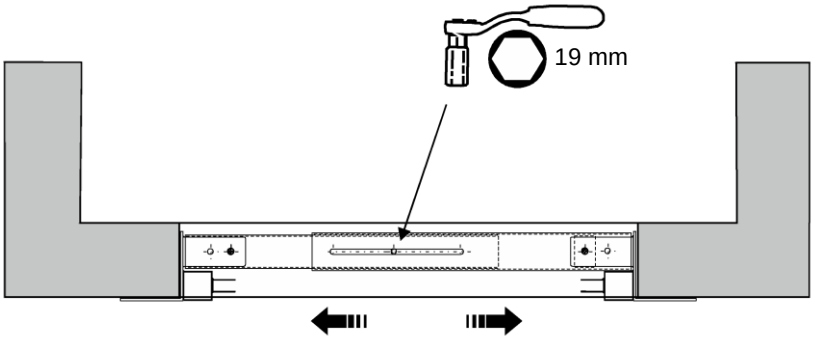
❶.❶

Example door opening, form-fitting on the left and right
Selection and screwing of suitable components for the door threshold to accommodate the brace supports



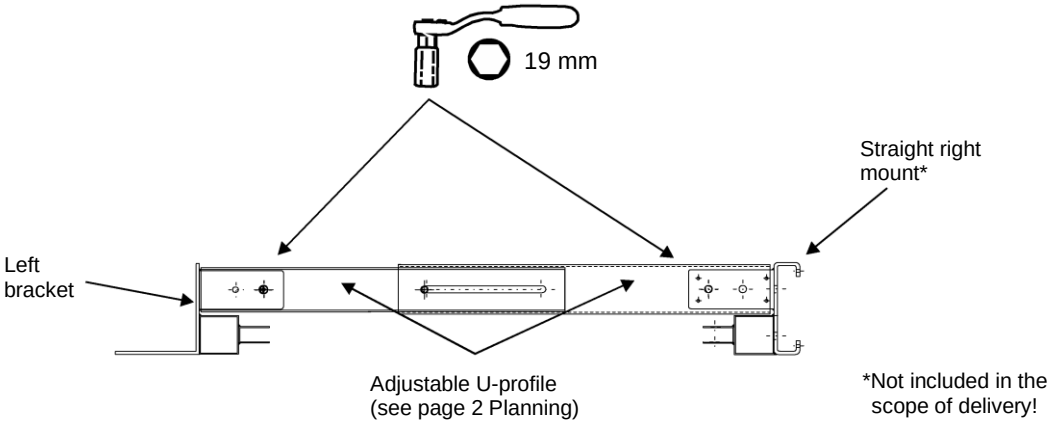
❶.❷

Position the left angle bracket flush so that it is full contact with the door soffit and lay it on the threshold.
Then adjust the width of the U-profiles and attach them using the ratchet and the 19-mm socket wrench ensuring that the right bracket is also in full contact with the door soffit.



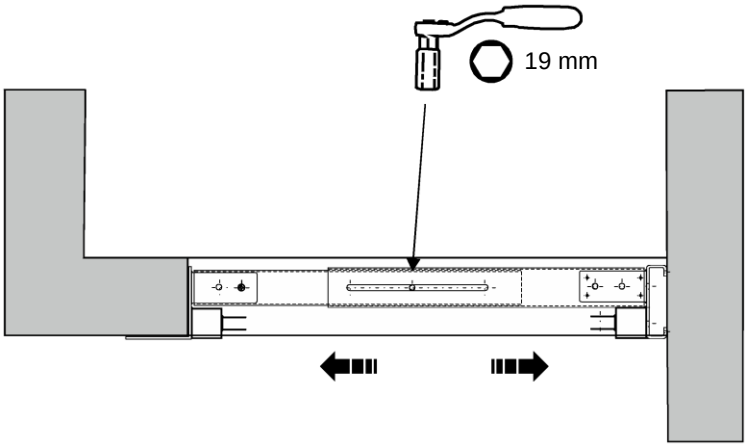
❷.❶

Example door opening, form-fitting on the left and straight on the right
Select the suitable U-profile and screw it to the left bracket and the straight right mount*.



❷.❷

Position the left angle bracket so that it is in full contact with the door soffit and lay it fully on the threshold element. Then adjust the width of the U-profiles and attach them using the ratchet and the 19-mm socket wrench.



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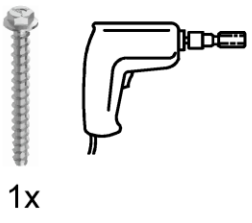
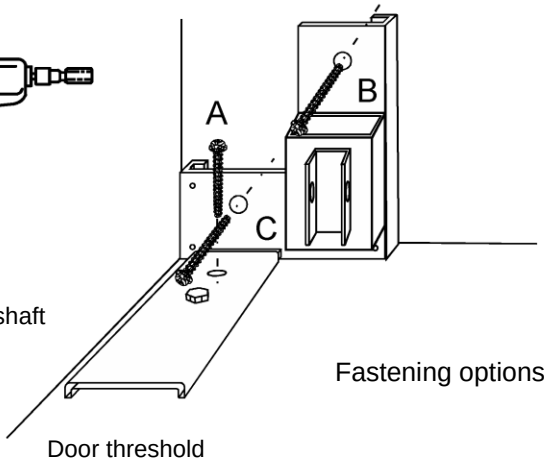
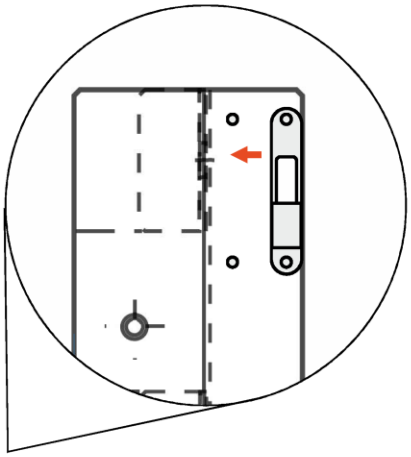


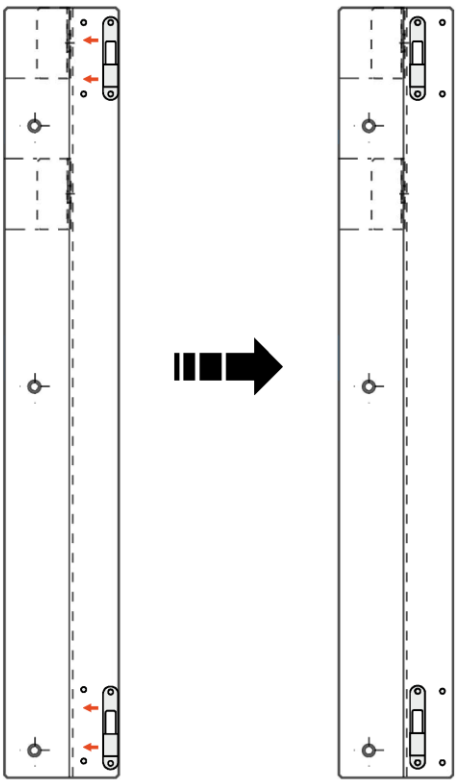


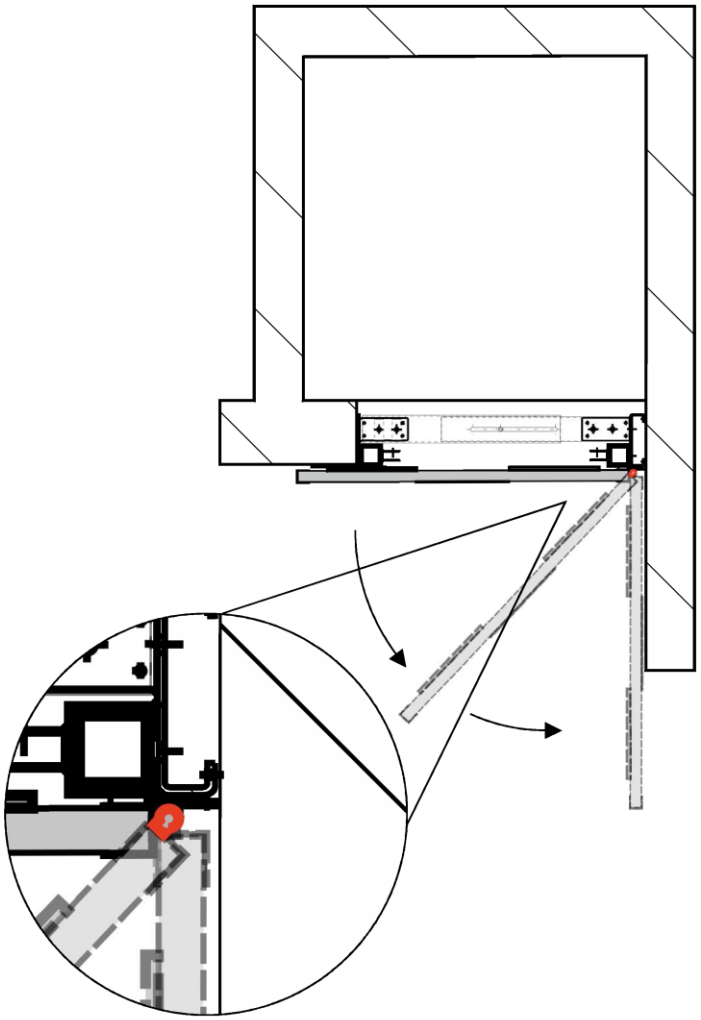
Fastening options A, B and C

❷.❹



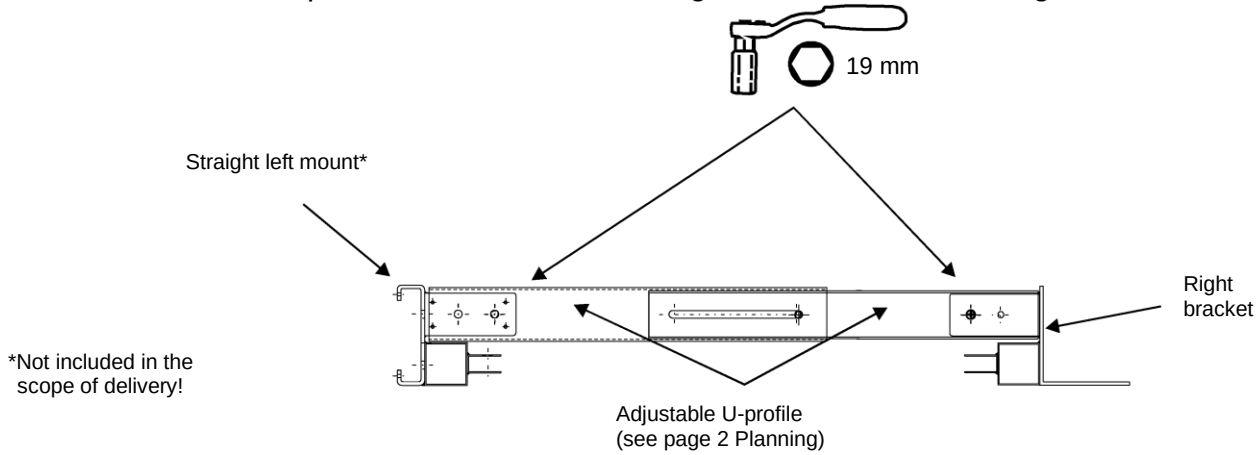
Move the rotary suspension fittings up and down to open the door 90°!





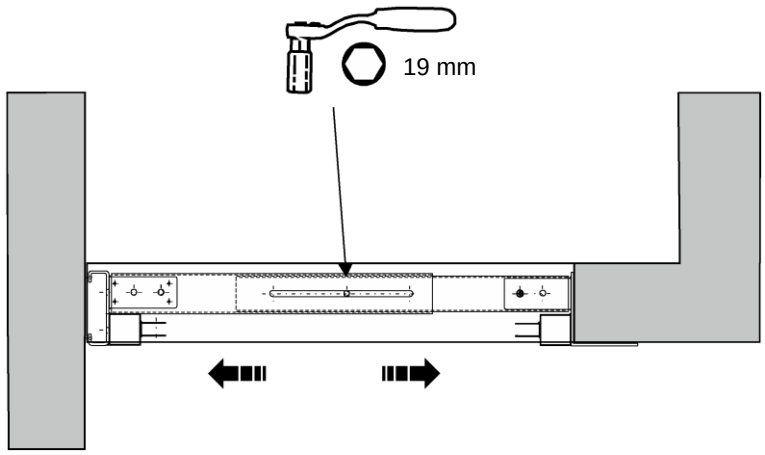
❸.❶

Example door opening, form-fitting on the right and straight on the left
Select the suitable U-profile and screw it to the right bracket and the straight left mount*.



❸.❷

Position the right angle bracket so that it is in full contact with the door soffit and lay it fully on the threshold element. Then adjust the width of the U-profiles and attach them using the ratchet and the 19-mm socket wrench.



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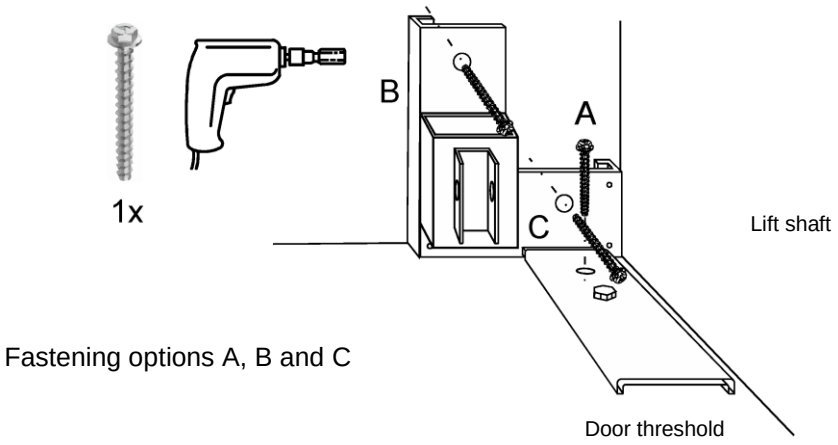
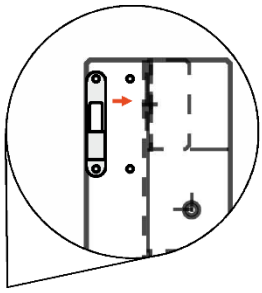
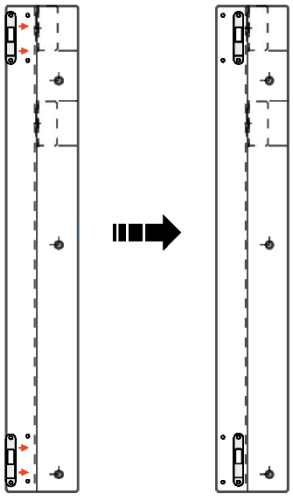


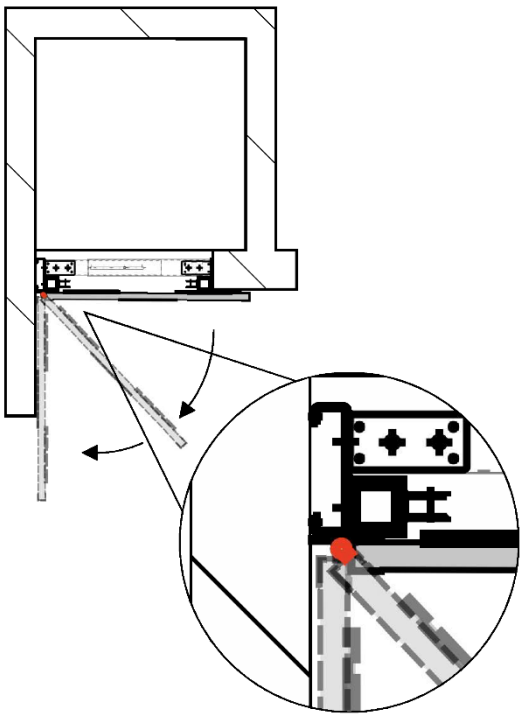
Fastening options A, B and C

❸.❹



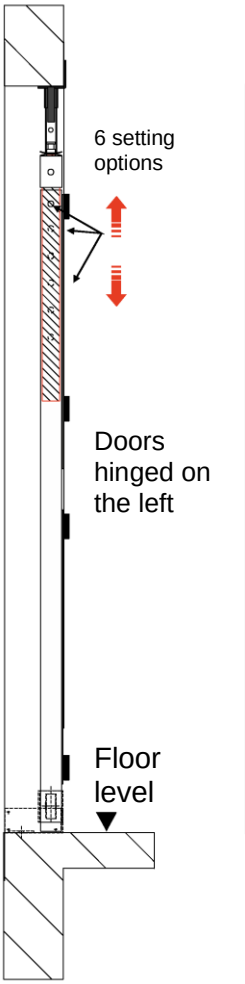


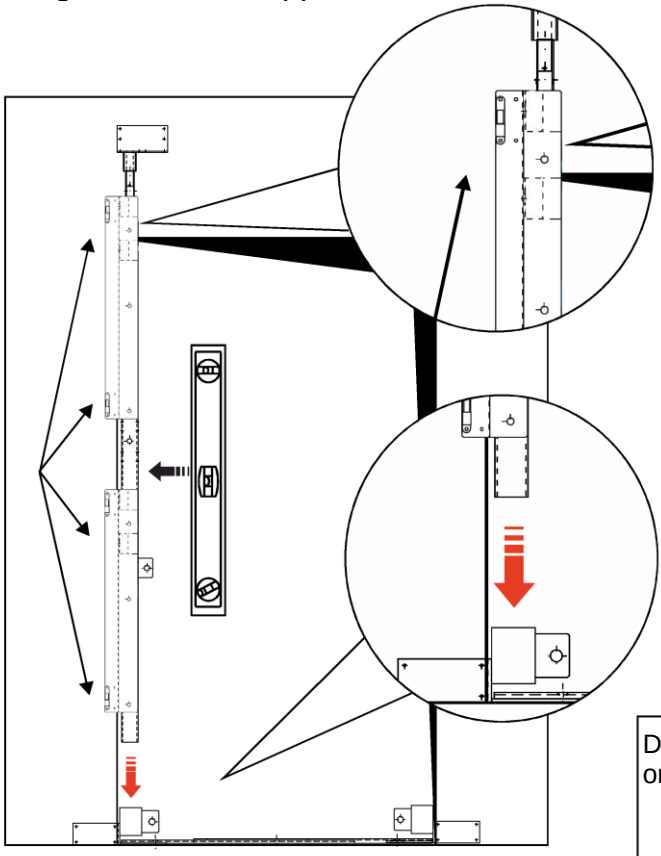
Move the rotary suspension fittings up and down to open the door 90°!



❹ Left door hinge

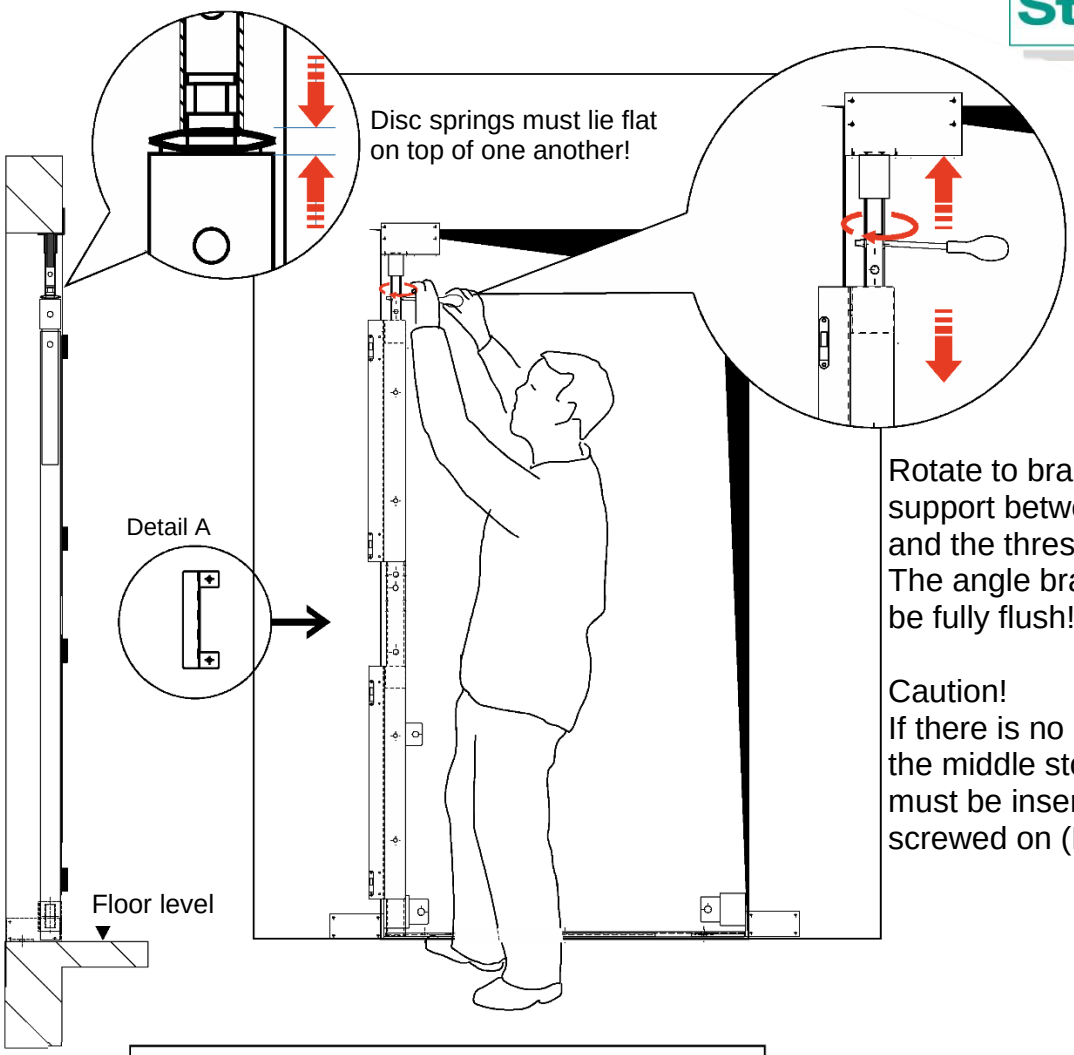
Roughly adjust the height of the left support!





Doors hinged on the right ❹.❶

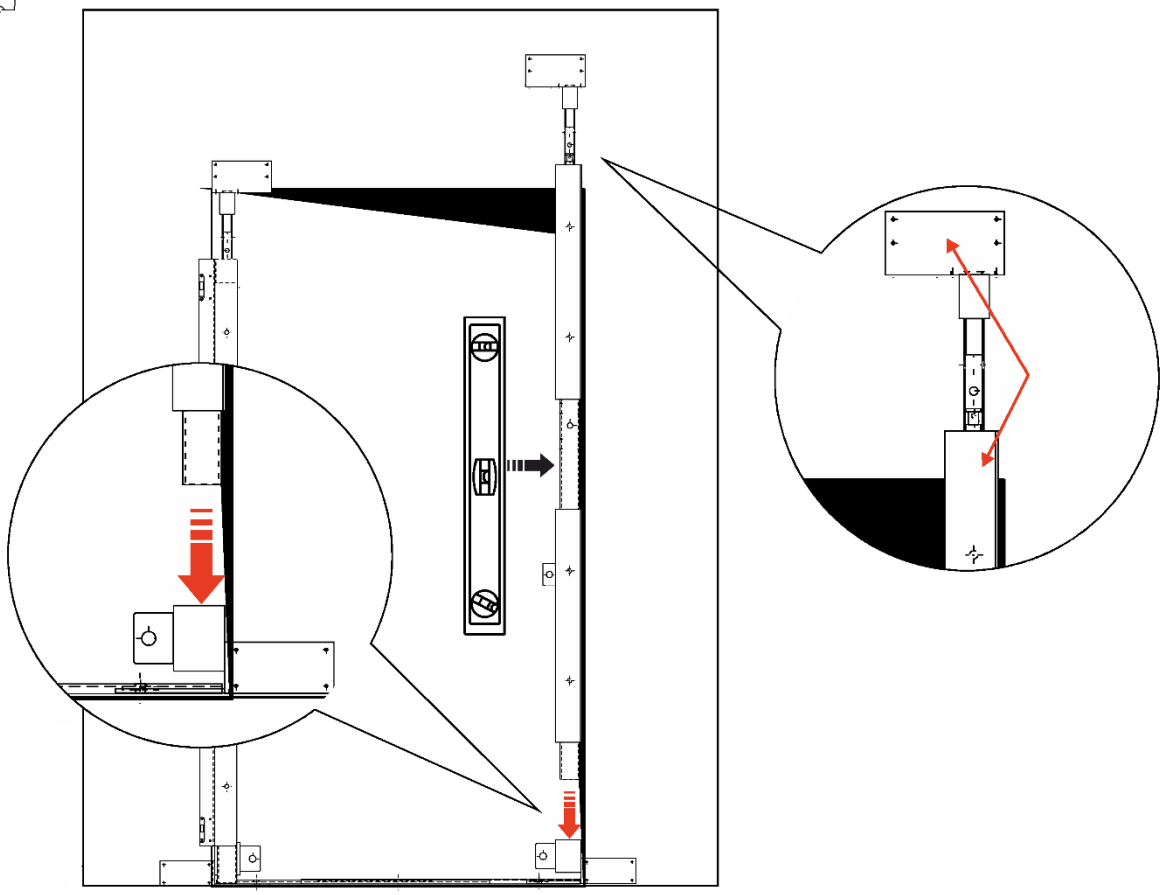
❺



Rotate to brace the support between the lintel and the threshold!
The angle bracket must be fully flush!

Caution!
If there is no door soffit, the middle stopper plate must be inserted and screwed on (Detail A).

❻



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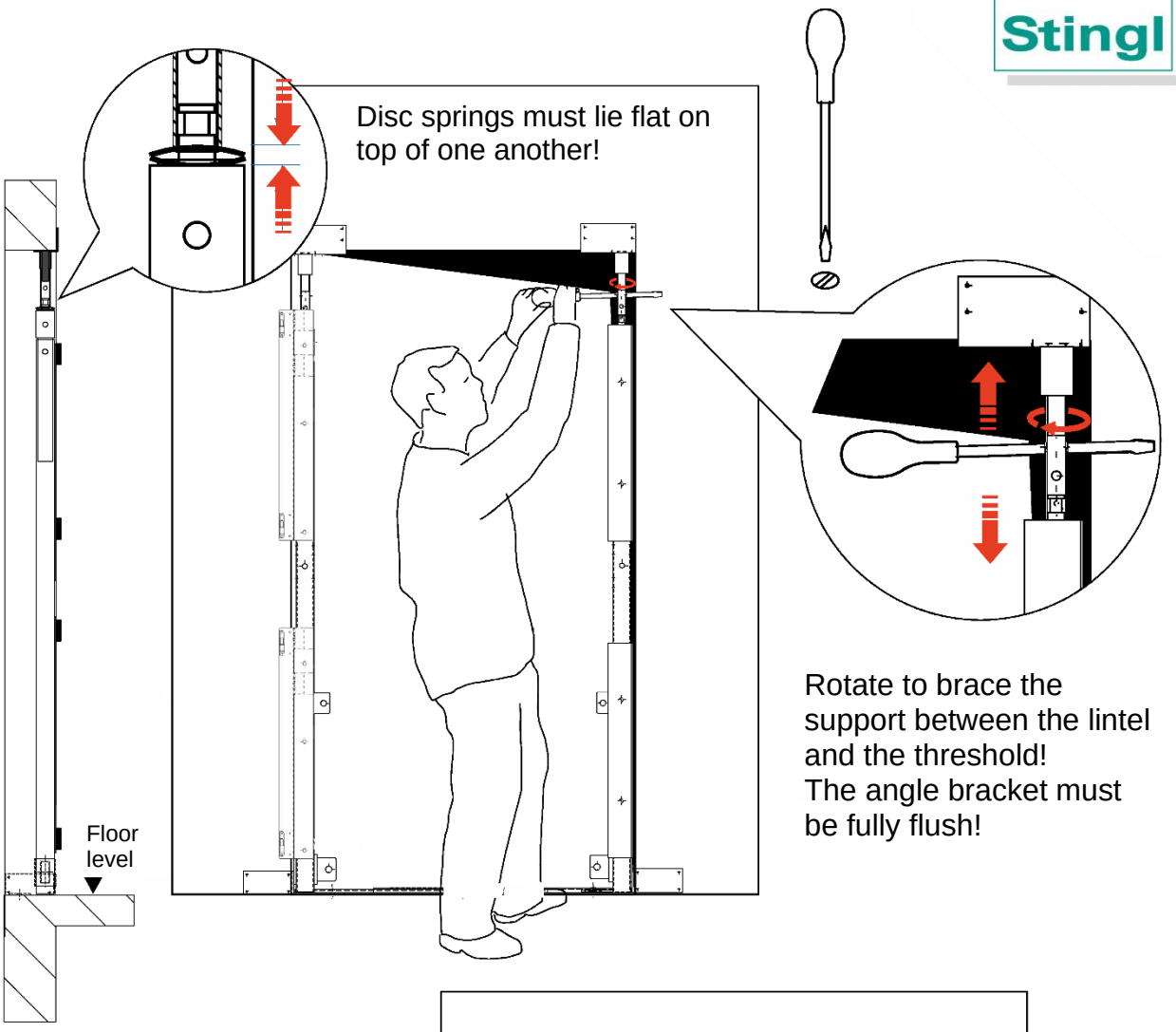

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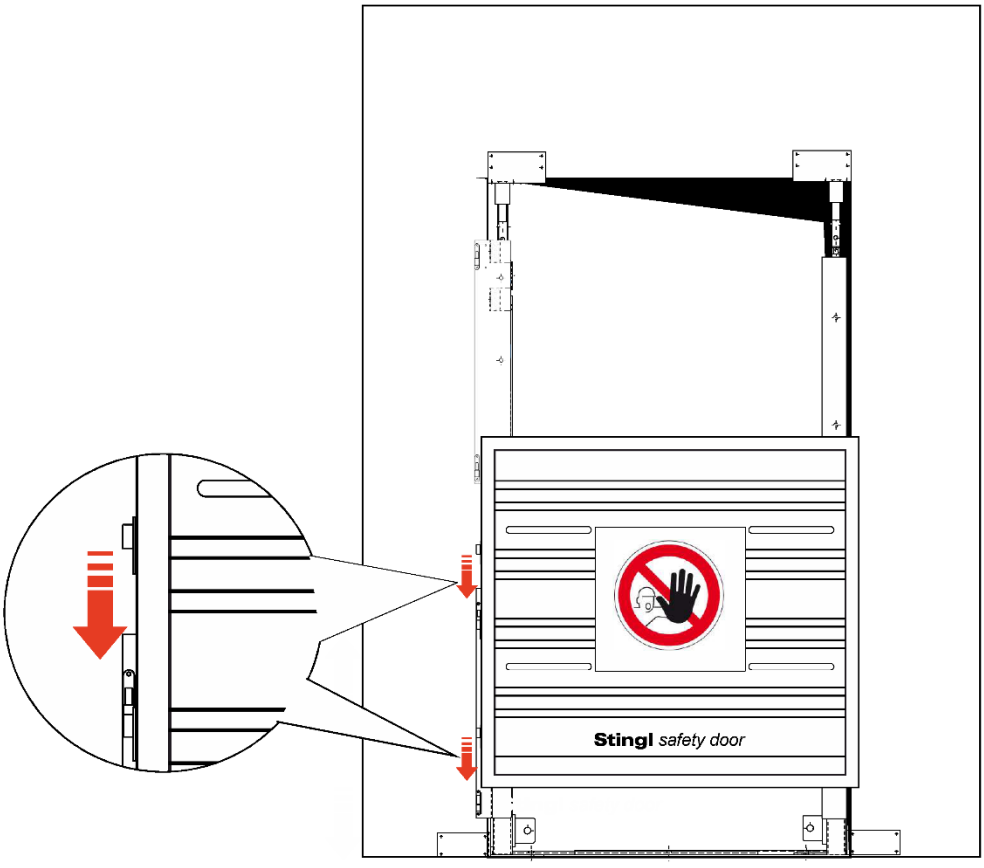

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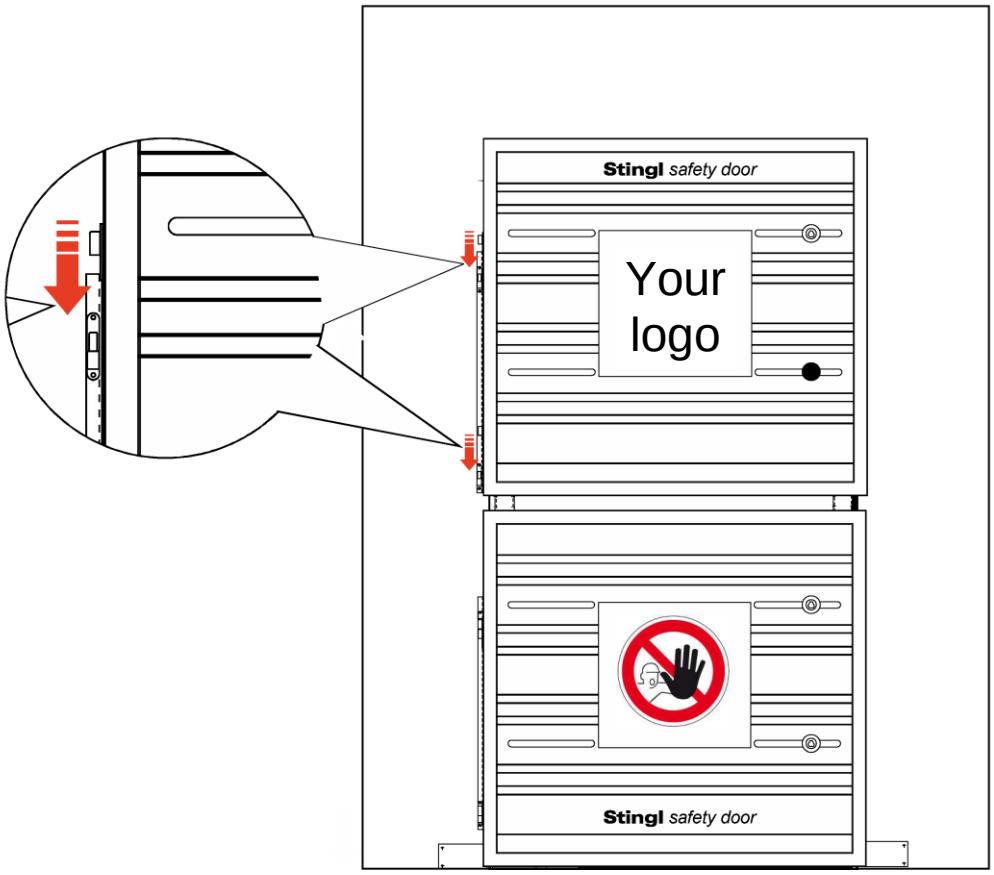
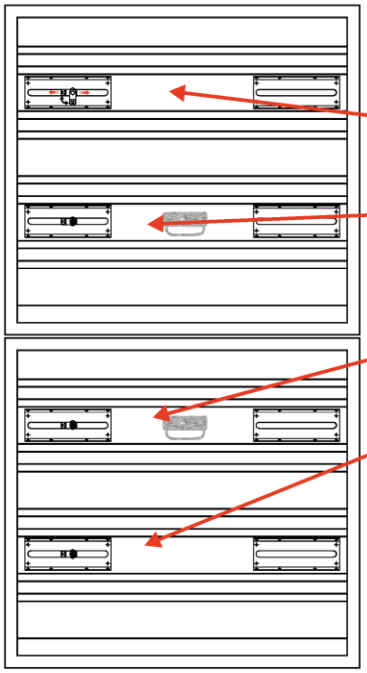
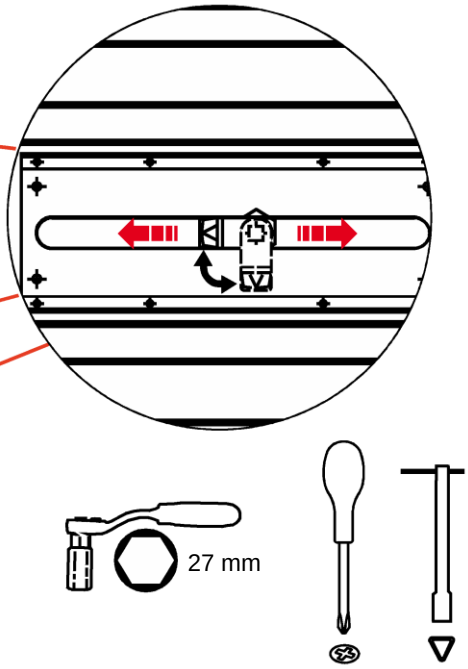


⑩

Door inside on shaft side

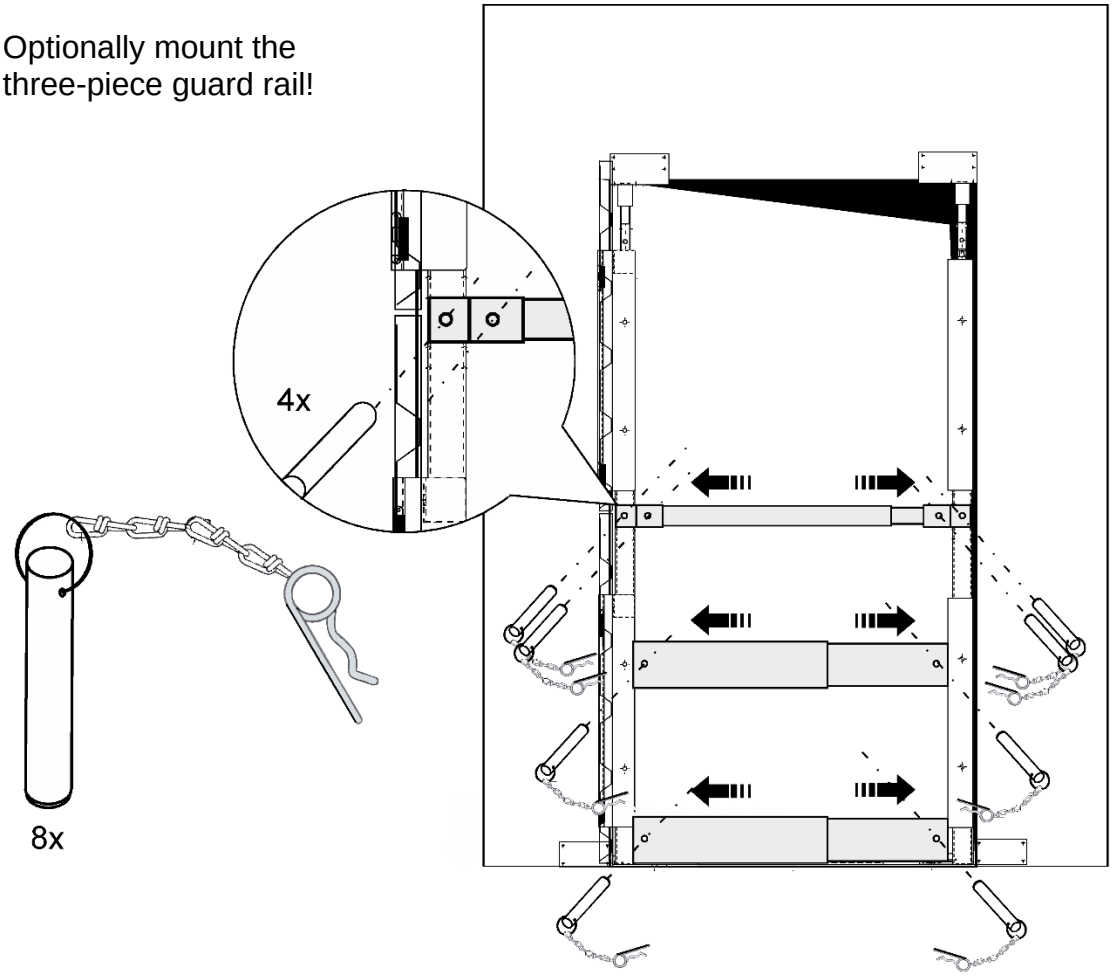


Horizontal adjustment of the rotary bolt locks



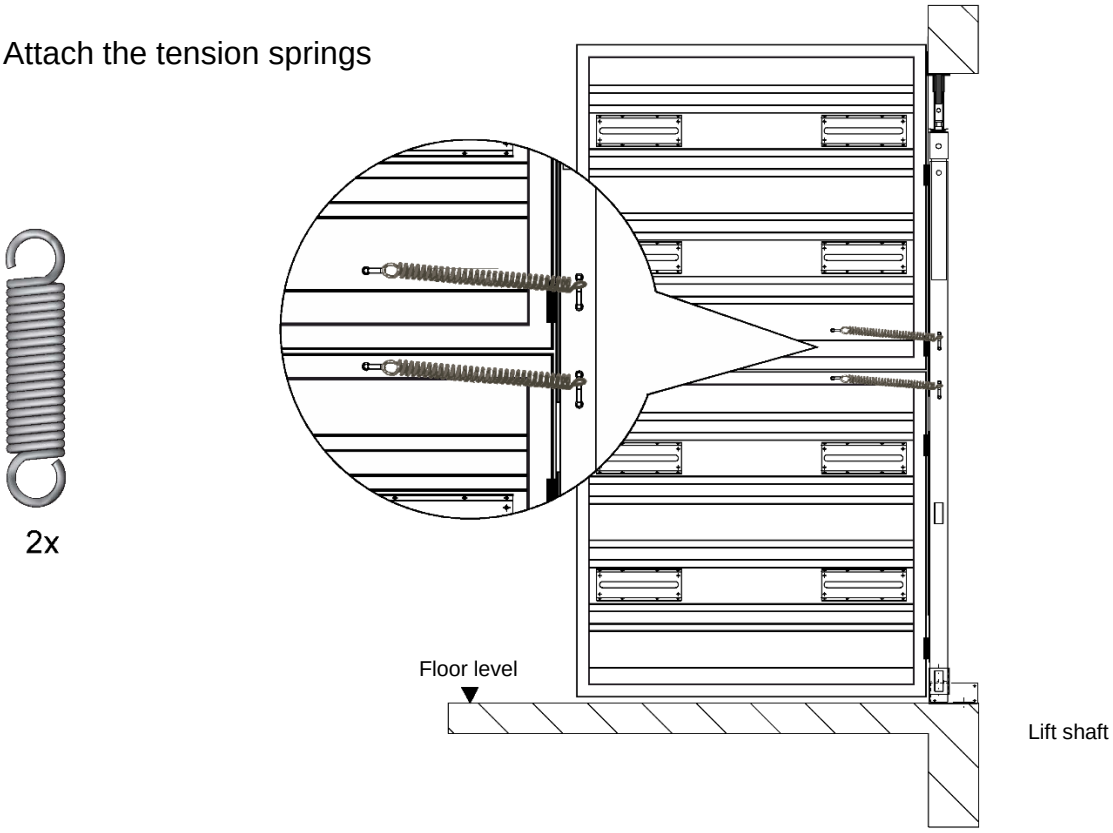
11

Optionally mount the three-piece guard rail!

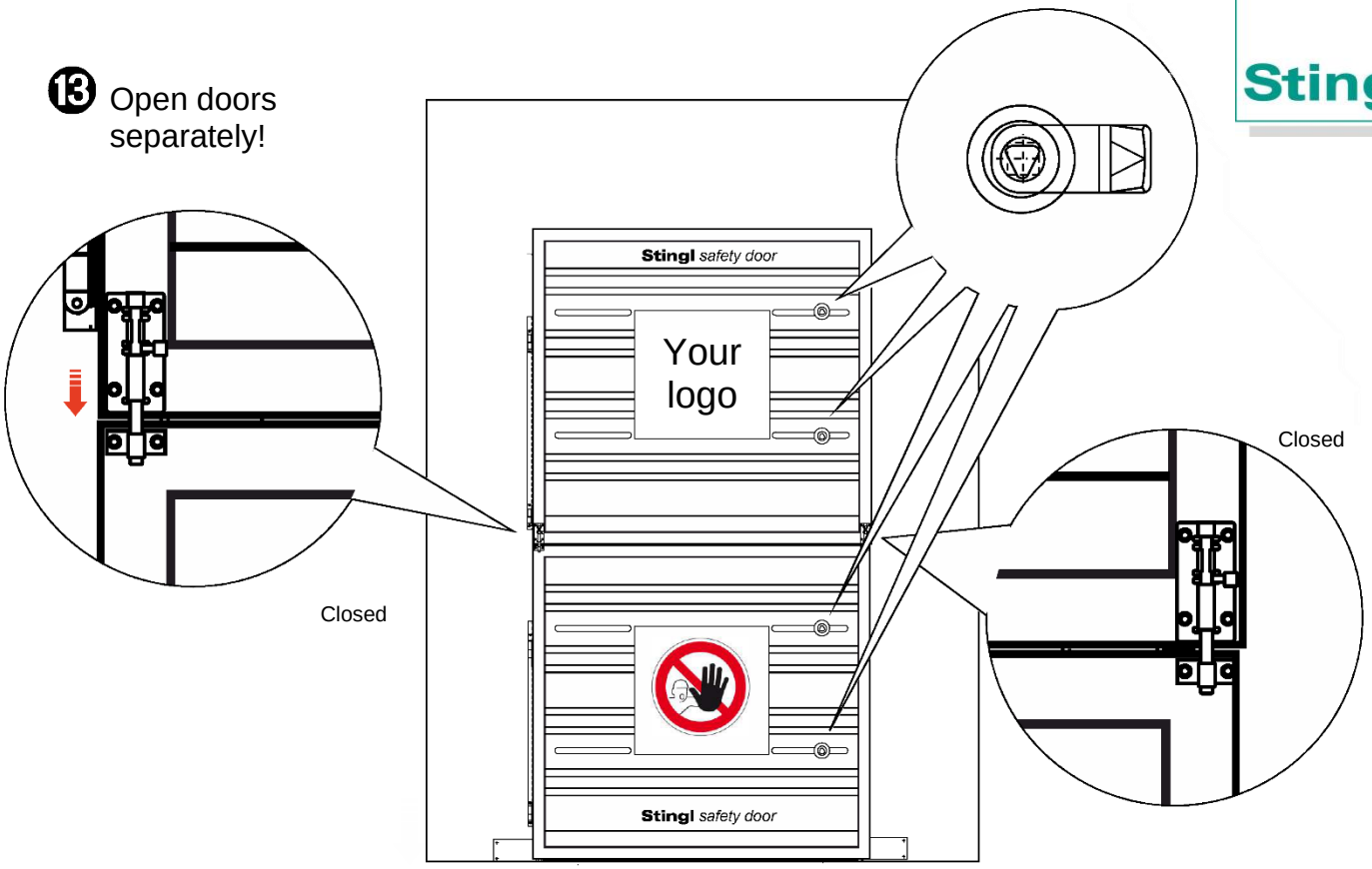


12

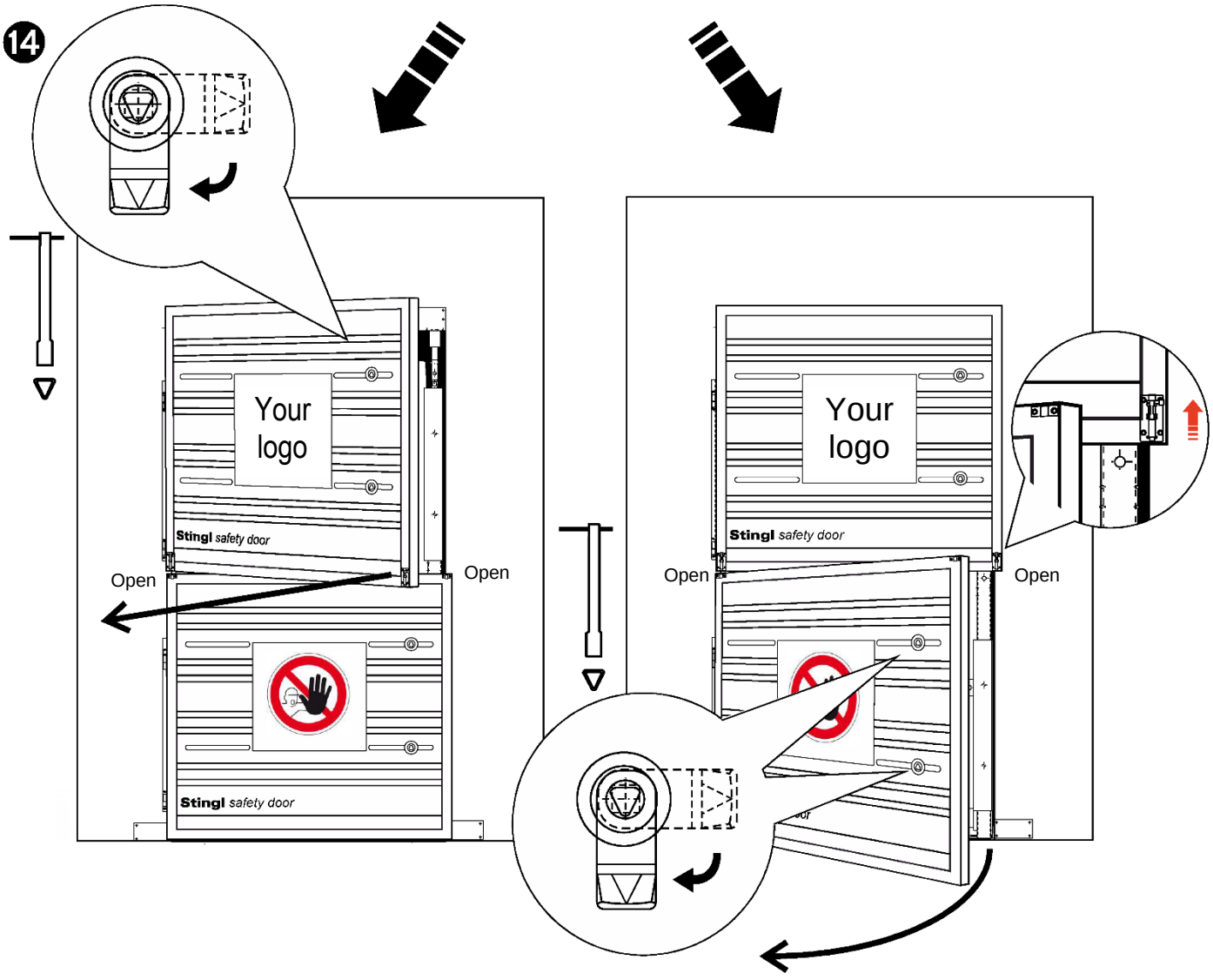
Attach the tension springs



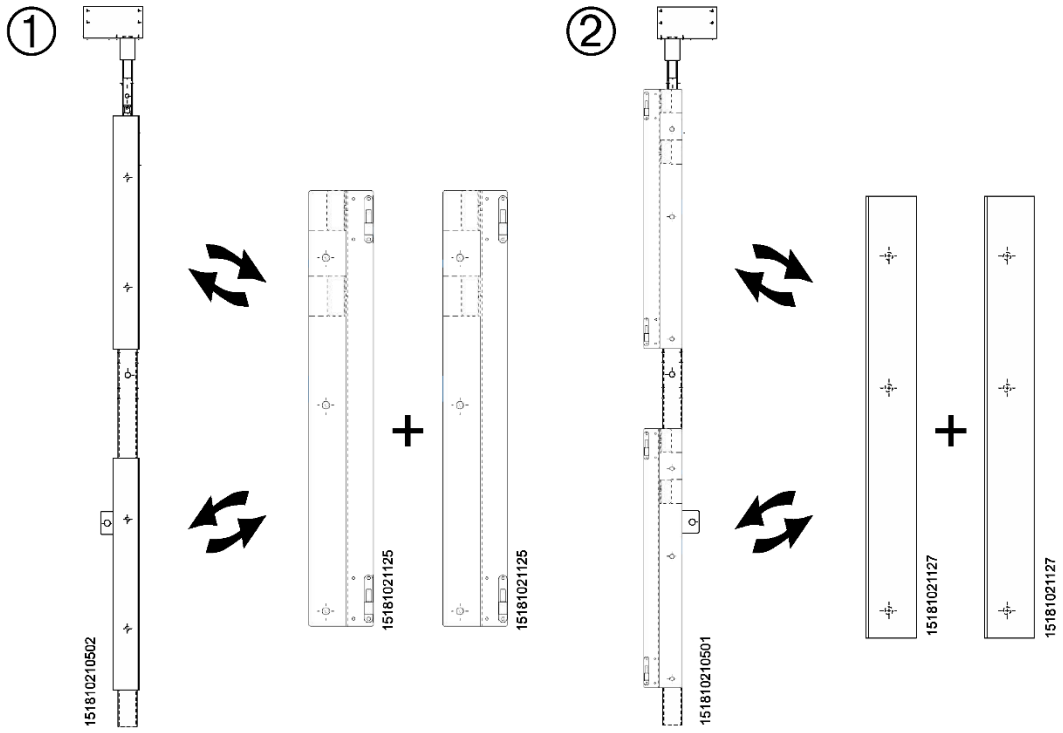
13 Open doors separately!

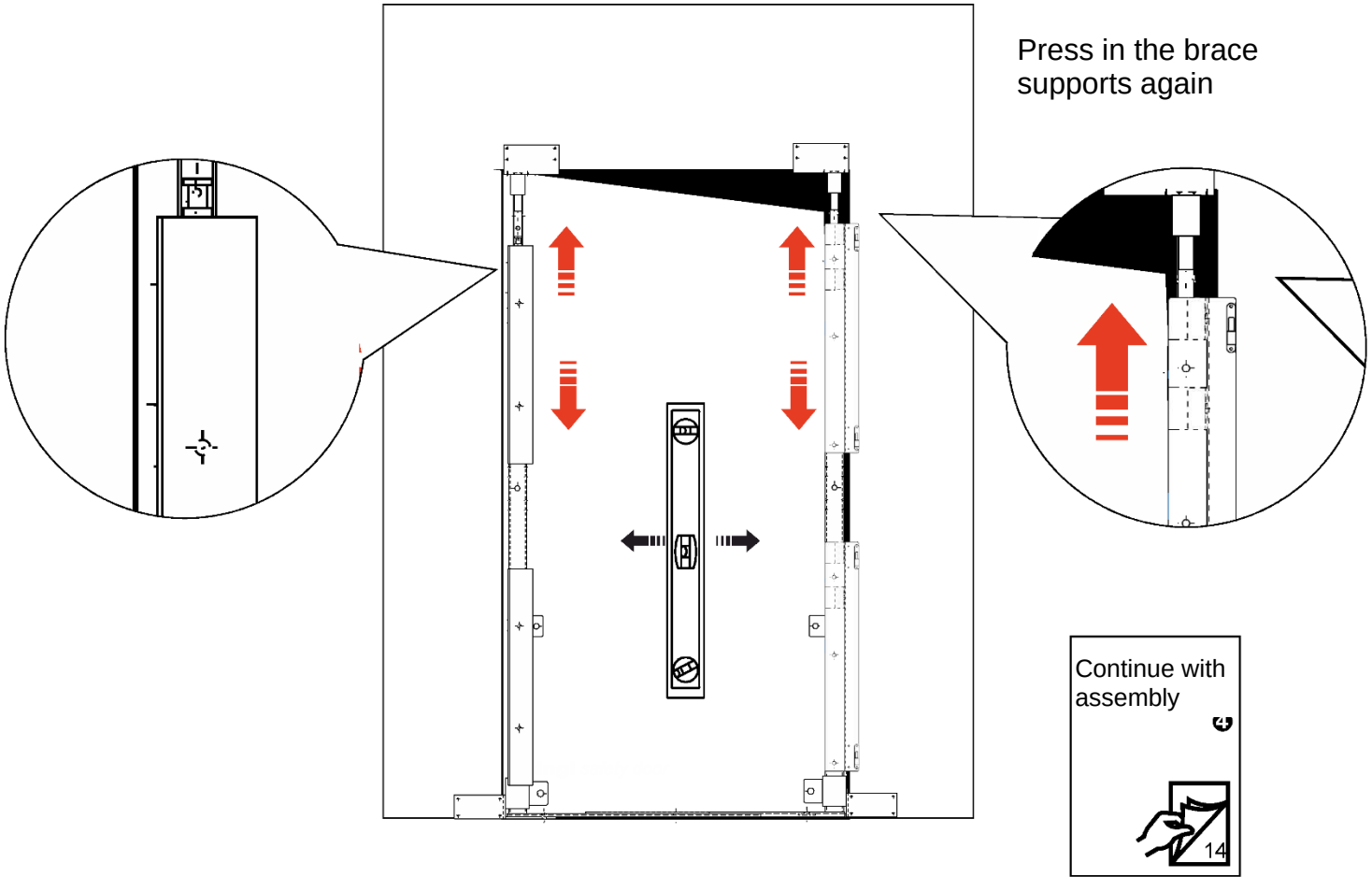


14



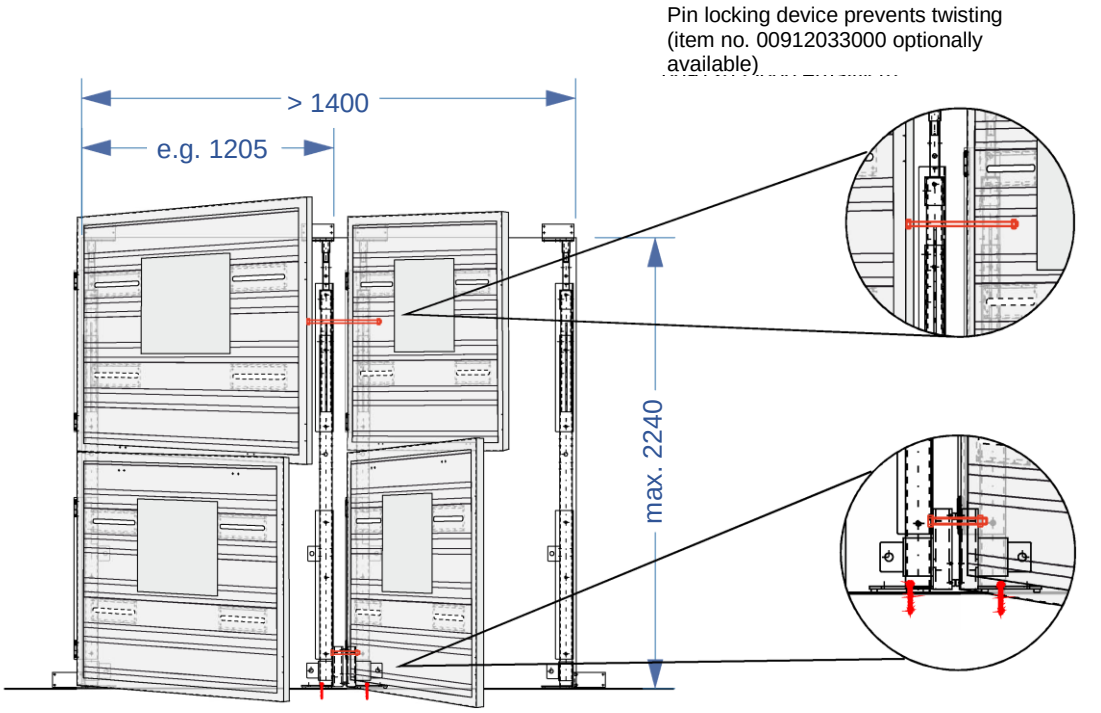
4.1 Right door hinge



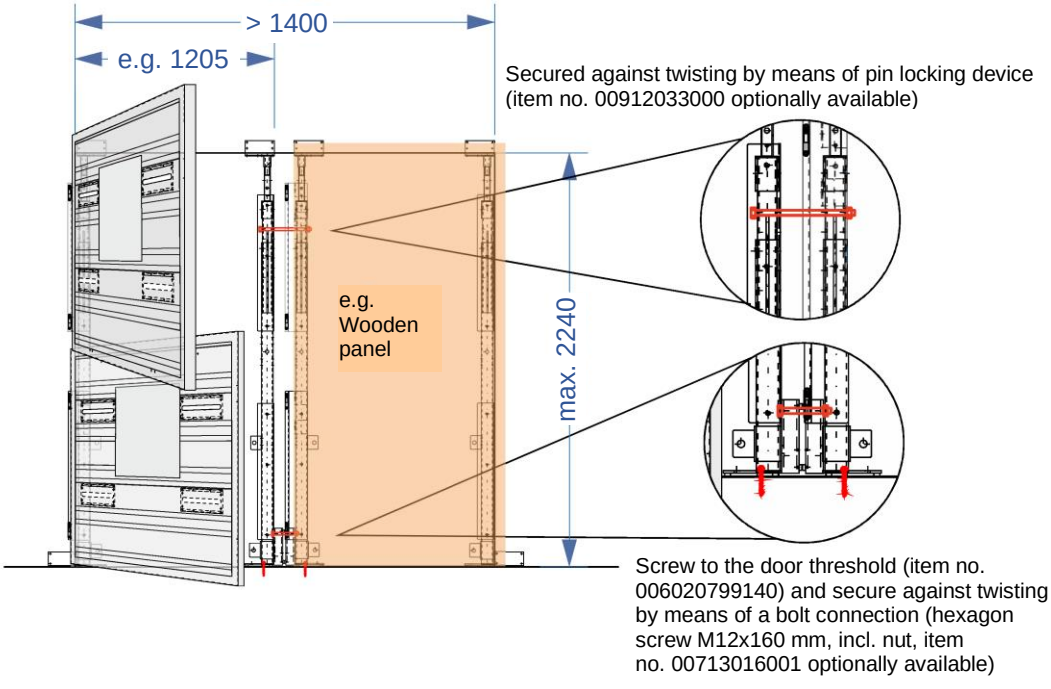


Special applications with a shaft opening with a width of > 1400 mm

Shaft opening secured with double door locking device



Shaft opening secured with door locking device and fixed element



5. Maintenance, repair and storage

5.1 Cleaning the scaffold components

Cleaning can be carried out using water with the addition of commercially available cleaning agents without added alkali.
Caution: Cleaning agents must not enter the soil, and used cleaning liquids must be disposed of in accordance with the applicable environmental protection regulations.

5.2 Inspecting component parts

Steel and aluminium parts/welds:
Check for deformation, crushing and cracking. If a defect is found, the parts must not be used.
Locking pins:
Check for deformation and completeness (chain + safety split pin). If a defect is found, the locking pins must not be used.

5.3 Storage

The components must be stored in such a way that no damage can occur. The component parts must be stored so that they are protected against the weather. Horizontal storage is preferable. During transport to or from the storage location, the components must be secured against slipping and impacts, as well as falling in wooden boxes or the like. The components must not be thrown during loading.

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