

TDOKU 9006840-EN / 07.2011

EN

Instructions for Fitting, Operating and Maintenance

Rolling shutter SB

Contents

1	About These Instructions.....	2
1.1	Intended use.....	2
1.2	Further applicable documents.....	2
1.3	Standards and directives to be observed	2
1.4	Warnings used.....	3
1.5	Symbols used.....	3
1.6	Abbreviations used.....	4
2	Basic Safety Instructions.....	4
2.1	Transport	4
2.2	Fitting, testing and maintenance	4
2.3	Operation.....	4
3	Warranty	4
4	Fitting.....	5
4.1	Testing prior to fitting the door	5
4.2	Fitting steps.....	6
4.3	Control system and control elements.....	36
5	Initial Start-Up.....	36
5.1	Spring tension	36
5.2	End-of-travel positions	36
5.3	Test run	36
6	Operation.....	36
6.1	Safety instructions for door operation.....	36
6.2	Emergency off.....	37
6.3	Emergency operation in the case of operator malfunctions	37
6.4	Operating conditions	37
6.5	Wind load	37
6.6	Information on the product characteristics	37
7	Inspection and Maintenance	38
7.1	Obligation to inspect and maintain.....	38
7.2	Malfunctions and damage remedy.....	38
7.3	Original spare parts	38
7.4	Tension springs and cables	38
7.5	Operator power	38
7.6	Storm damage.....	38
7.7	Inspection and maintenance plan	39
8	Cleaning and Care	40
8.1	Door curtain.....	40
8.2	Safety equipment and photocells.....	40
9	Extension and Conversion.....	40
10	Dismantling	40

1 About These Instructions

Dear Customer,

We are delighted that you have decided to choose a Hörmann product.

These instructions are original operating instructions as outlined in the EC Directive 2006/42/EC. Read and follow these instructions carefully, especially the section *Basic Safety Instructions* on page 4. They provide you with important information on the safe fitting and operation, as well as proper care and maintenance, of your door system.

Competent operation and proper maintenance influence the performance and availability of your door system to a considerable degree. Operating errors and inadequate maintenance will lead to avoidable failures. Only competent operation and proper maintenance will guarantee satisfactory, long-term operational safety.

Should you have any questions on having read through these instructions, please feel free to consult our Customer Service.

1.1 Intended use

The SB rolling shutter is only suitable for the following applications:

- Operation in industrial and commercial applications
- Closing passage openings
- Pedestrian and goods traffic
- Closing openings with a vertically guided door leaf

Using the door for purposes other than or exceeding those stated above is prohibited.

1.2 Further applicable documents

In addition to these instructions, please observe the following documents for individual accessories:

- Instructions for fitting, operating and service of the WA 300 R S4 operator
- Instructions for fitting additional electrical control elements
- Additional sheets for special components or special equipment

1.3 Standards and directives to be observed

1.3.1 Fitting and maintenance

At the least, observe the following European standards and directives, as well as country-specific safety requirements, standards and regulations.

98/106/EEC	Building Products Directive
2006/42/EC	Machinery Directive
2006/95/EEC	Low Voltage Directive
2004/108/EC	Electromagnetic Compatibility
EN 12453	Doors – Safety in use of power-operated doors – Requirements
EN 12604	Doors – Mechanical Aspects – Requirements
EN 12635	Doors – Fitting and Use
EN 13241-1	Doors – Product Standards – Part 1: Products Without Fire-Proof and Smoke-Tight Properties

EN ISO 13849-1 PL "c", cat. 2	Safety of machinery – Safety-related parts of control systems
EN 60335-1	Safety of electrical equipment/operators for doors

For safety and health at work, observe at least the following rules and regulations or comparable national regulations, e.g.:

BGR 232	Power-Operated Windows and Doors
BGV A3	General Regulations – Electrical Installations and Equipment

1.3.2 Operation

At the least, observe the following European standards, as well as country-specific safety requirements, standards and regulations.

EN 12453	Doors – Safety in use of power operated doors – Requirements
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For safety and health at work, observe at least the following rules and regulations or comparable national regulations, e.g.:

BGR 232	Power-Operated Windows and Doors
BGV A3	General Regulations – Electrical Installations and Equipment

1.4 Warnings used

ATTENTION	Indicates a danger that can lead to damage or destruction of the product.
	The general warning symbol indicates a danger that can lead to injury or death. In the text, the general warning symbol will be used in connection with the caution levels described below. In the illustrated section, an additional instruction refers back to the explanation in the text section.
 CAUTION	Indicates a danger that can lead to minor or moderate injuries.
 WARNING	Indicates a danger that can lead to death or serious injuries.
 DANGER	Indicates a danger that can immediately lead to death or serious injuries.

1.5 Symbols used



Important note for avoiding damage to property



Correct arrangement or activity



Incorrect arrangement or activity



See text section



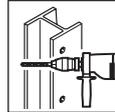
See illustrated section



See separate fitting instructions for the control or for the additional electrical control elements



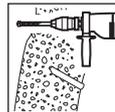
Optional components



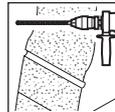
Drilling in steel



Welding on steel



Drilling in concrete



Drilling in brickwork



Drilling in timber



Remove and dispose of component or packaging



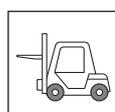
Inspect



Tighten the screws by hand



Plug-and-screw fitting: Note the data in the text section



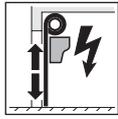
Use suitable lifting devices (e.g. forklift, crane)



Audible engagement



Manual door actuation



Door actuation via the operator



Operator engaged



Operator disengaged



Actuation type: chain hoist



Actuation type: Manual



Actuation type: WA 300 R S4



Use the provided fitting material



Use common lubrication oil

1.6 Abbreviations used

EN	European standard
FFL	Finished floor level

2 Basic Safety Instructions

Keep these instructions safe at the place of use together with all the door documentation.

⚠ WARNING
Incorrect fitting or incorrect handling
Incorrect fitting or handling of the door could result in serious injury.
▶ Follow all the instructions provided in this manual!

2.1 Transport

ATTENTION
Transport of the door curtain without a special pallet
The door may be damaged if transported without a pallet.
▶ The door curtain must only ever be transported on the special pallet.

2.2 Fitting, testing and maintenance

Fitting, testing and maintenance may only be carried out by a qualified person. According to EN 12635, a qualified person is a person with suitable training, specialist knowledge and practical experience sufficient to correctly and safely fit, test, and carry out maintenance on a door system.

- For your own safety, have the product installed by an approved specialist company.
- Do not alter or remove any functional parts! You otherwise risk putting important safety components out of action.
- Always obtain the permission of the structural engineer before fastening the door to supporting structural elements.
- Throughout fitting, protect the door system components, especially the door curtain, against dirt and damage.
- Make sure that whenever checks, maintenance work and cleaning are being carried out, the door system cannot be actuated by other persons.

⚠ WARNING
Changes to the door construction
Additional components could overload the door construction and lead to serious injuries.
▶ Do not attach any additional components.

2.3 Operation

- The door system may only be operated by persons who have been instructed in its proper use. Instruction is provided by the fitting personnel following the initial start-up procedures.
- The door system opens and closes vertically upwards and downwards. When in operation, make sure that neither persons - children in particular - nor objects are located within the door's area of travel.

⚠ WARNING
Defective door systems
A fault in the door system can lead to serious injuries.
▶ Only ever use the door when it is technically sound and in perfect working order.

3 Warranty

For the warranty, the generally recognised terms and conditions or those agreed in the delivery contract apply. The warranty will no longer apply under the following conditions:

- You damage the door due to a lack of knowledge of the information provided in these Instructions for Fitting, Operating and Maintenance.
- You carry out structural modifications without our prior approval.
- You undertake improper installation or arrange for same to be carried out by others, contrary to the installation guidelines we have set out.
- You damage the door due to improper operation (see *Operation* on page 30).
- You do not use the door as intended (see section *Intended use* on page 2).
- You fail to have the door inspected and maintained according to specifications (see section *Obligation to inspect and maintain* on page 32).

4 Fitting

NOTES:

Take note of the following documents:

- Any additionally supplied instructions and the table of fitting dimensions if using special components or special equipment
- The notes in the section *Basic Safety Instructions* on page 4
- The regulations for fitting and work safety that are described in section *Standards and directives to be observed* on page 2

All dimensions in the illustrated section are in [mm].

4.1 Testing prior to fitting the door

4.1.1 Prerequisites for the building structure

Only fit the door under the following conditions:

- There is a second exit in the room where the door is to be fitted.
- A water run-off has been installed outside in front of the bottom seal.
- A metre line is available.
- The hall floor is finished.
- The building structure is level (tolerance ± 5 mm).

4.1.2 Door components

Check the following points before fitting:

- The delivery is complete.
- All the components are damage-free.

4.1.3 Fixing material

 WARNING
Danger of damage and falling when unsuitable fixing material is used
<ul style="list-style-type: none"> ▶ The person fitting the door must check the supplied fitting material for suitability of use at the fitting location; other fitting material must be used if the supplied fitting material is suitable for concrete (≥ B15), but is not officially approved. ▶ When fastening the door system to a building structure made of gas concrete, always provide a subframe of steel posts.

NOTES:

- Check whether the fixing material intended for use with the existing building structure have been included/are available.
- Only use the fixing material listed in the following table.

Support brackets

Steel s ≤ 3 mm	Hörmann hexagonal ST8 x 22
Steel 3 < s ≤ 15 mm	DIN 6921 M8 x 30 galvanized
	Washer DIN 9021-8.4 galvanized
	Hexagonal nut DIN 6923 M8-8 galvanized
Concrete/ brickwork	Woodscrew 8 x 60-4.8-A2B
	Würth Zebra-Shark DBL 10 x 56
Timber	Hörmann 8 x 60-4.8-A2B

Operator holder

Steel	Hörmann hexagonal 6.3 x 19
Concrete/ brickwork	DIN 571 6 x 50 galvanized
	Washer DIN 9021-8.4 galvanized
	Würth Zebra-Shark KST 8 x 46
Timber	DIN 571 6 x 50 galvanized
	Washer DIN 9021-6.4 galvanized

Side guides

Steel	LK DIN 7981 C-T30 6.3 x 16
Concrete/ brickwork	Hörmann LK 6 x 60 T30
	Würth Zebra-Shark KST 8 x 46
Timber	Hörmann LK 6 x 60 T30

PVSB barrel casing

Side sheet	Arnold Taptite M5 x 16
Main sheet	Hörmann 4.8 x 13
	Würth Zebra-Shark KST 8 x 46
Holder	Hörmann LK 6 x 60 T30
	Washer DIN 9021-8.4 galvanized
	Würth Zebra-Shark KST 8 x 46
Angle plate	Self-tapping screw B 4.8 x 13
Support angle	Self-tapping screw B 4.8 x 13

Plug-and-screw fitting**NOTES:**

Only fit the plugs under the following prerequisites:

- The building structure is at least 30 mm thicker than the depth of the drill hole.
- The edge distance from the drill hole to the building structure edge is at least 50 mm.

Only use new plug sleeves.

Procedure:

1. Drill the hole at a right angle to the surface.
2. Remove the drilling dust from the drill hole.
3. Insert the plug sleeve into the drill hole by lightly hammering in with a mason's mallet until the collar is flush with the building structure or structural component.
4. Tighten the screw until the component fits snugly against the building structure.
The following conditions must be met:
 - It must be difficult to turn the screw further.
 - The plug sleeve must not turn with the screw.

4.1.4 Security bolt
 **WARNING**
Danger of falling when fitting the curtain if there are no security bolts in the side guides

Damage to the door system and serious injuries may occur if the door curtain is inserted in the side guides and the security bolts are not fitted.

- ▶ Only insert the door curtain in the side guides if the security bolts have been fitted to each side guide.
- ▶ Only remove the bolts after the spring assemblies have been fitted.

4.1.5 Door springs
 **WARNING**
Door springs

Damage to the door system and serious injuries may occur if the door springs are fitted incorrectly.

- ▶ Only fit the springs if the door curtain is in the Open end-of-travel position and the grip handle has been fitted to the bottom profile and the security bolts have been fitted in the side guides.

4.1.6 Fitting aids**NOTE:**

Use suitable tools and appropriate equipment for fitting the door system.

Have the following aids ready:

- A suitable lifting device (forklift, handlift) to position the door system in the building structure.
- A suitable lifting platform or scaffold

4.1.7 Additional door components

Before fitting the door, install the following components (if provided):

- Additional posts

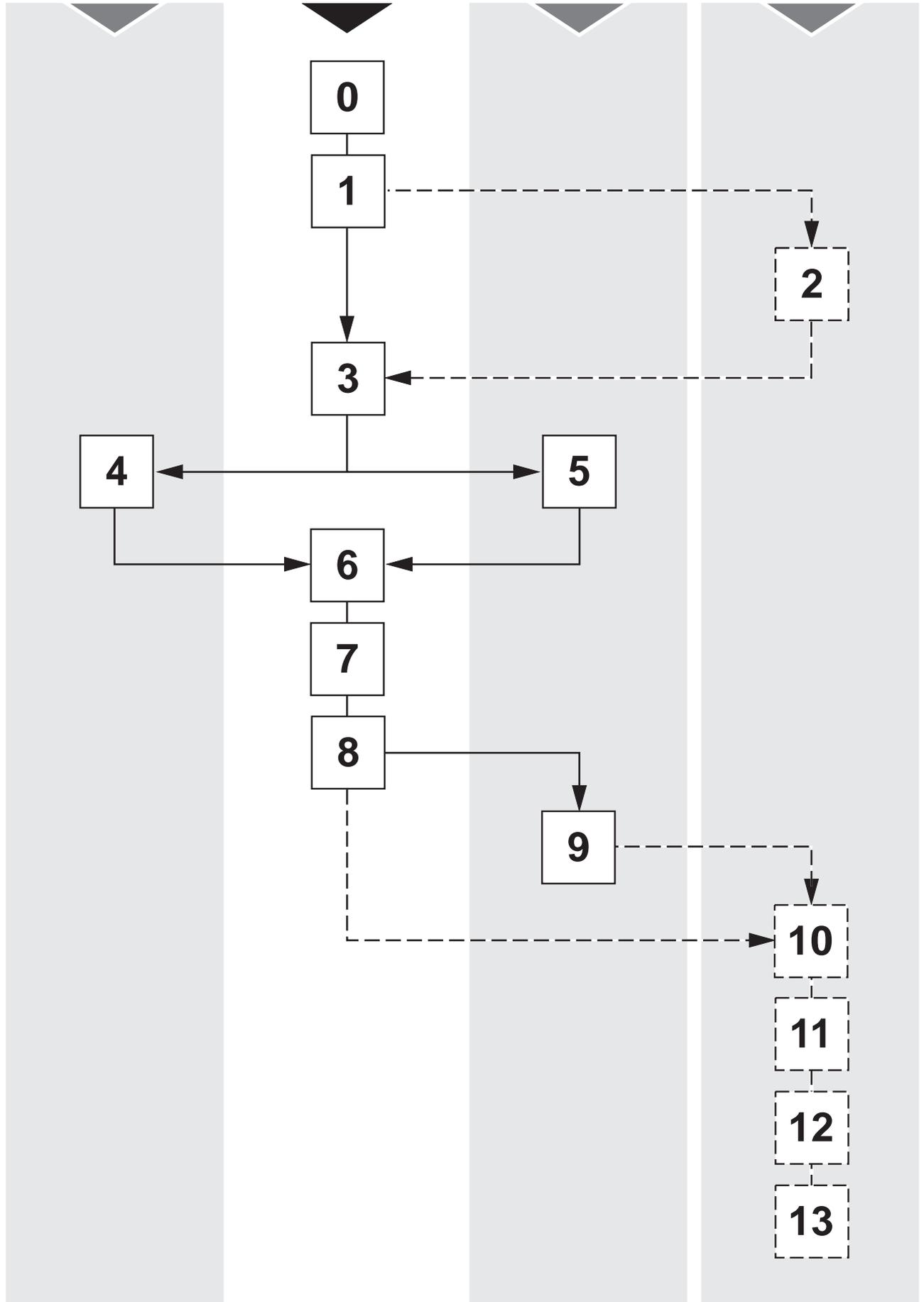
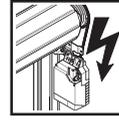
During fitting, observe the data stated in the following documents:

- Additional sheets

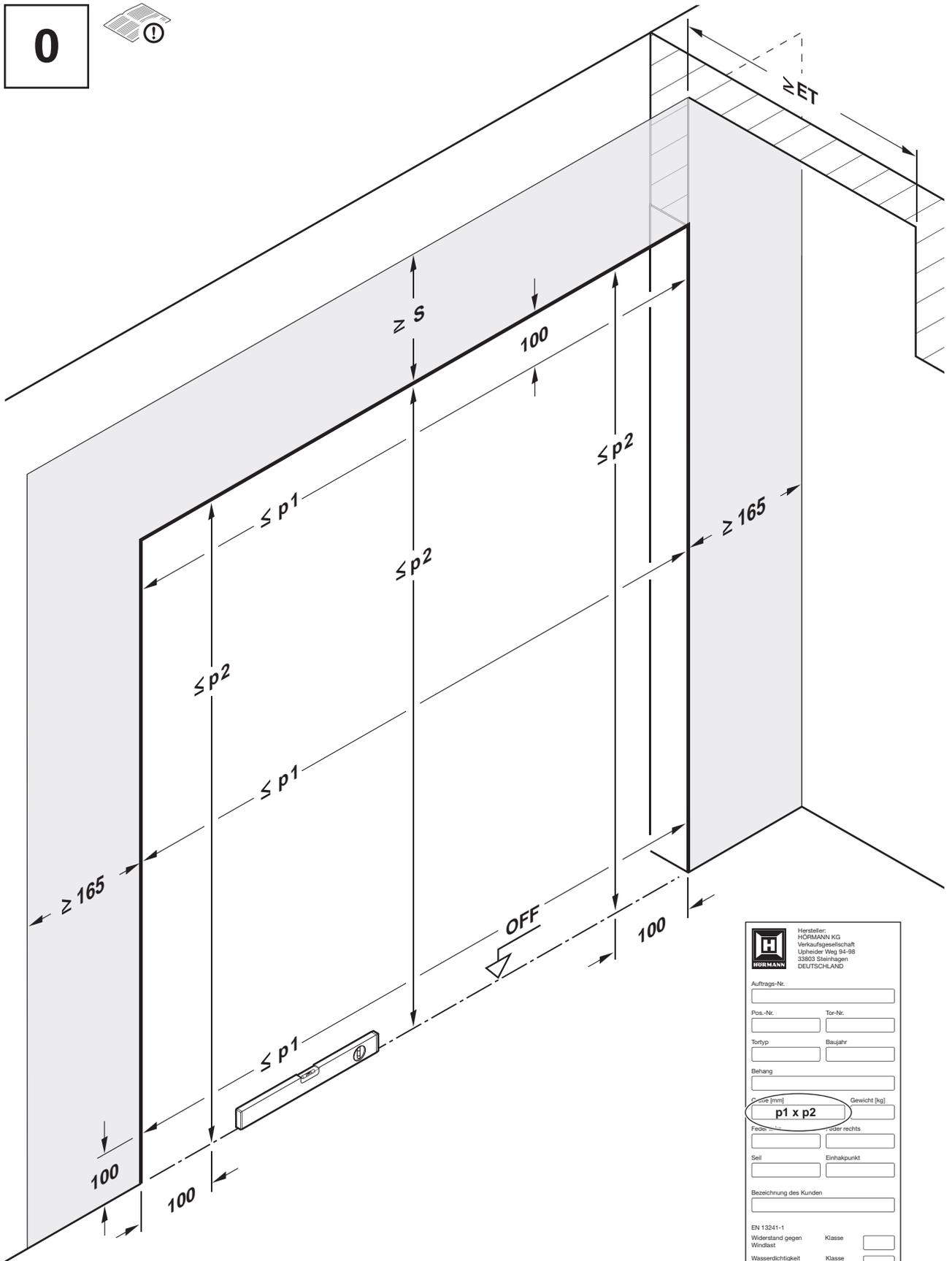
4.2 Fitting steps

Fit the door system using the following illustrations.

- Proceed carefully step by step.
- Observe all additional notes given.



0



HÖRMANN Hersteller:
HÖRMANN KG
Verkaufsgesellschaft
Lippheider Weg 94-98
33893 Steinhagen
DEUTSCHLAND

Auftrags-Nr.

Pos.-Nr. Tor-Nr.

Tortyp Baujahr

Behäng

Größe (mm) Gewicht (kg)
p1 x p2

Feder oder rechts

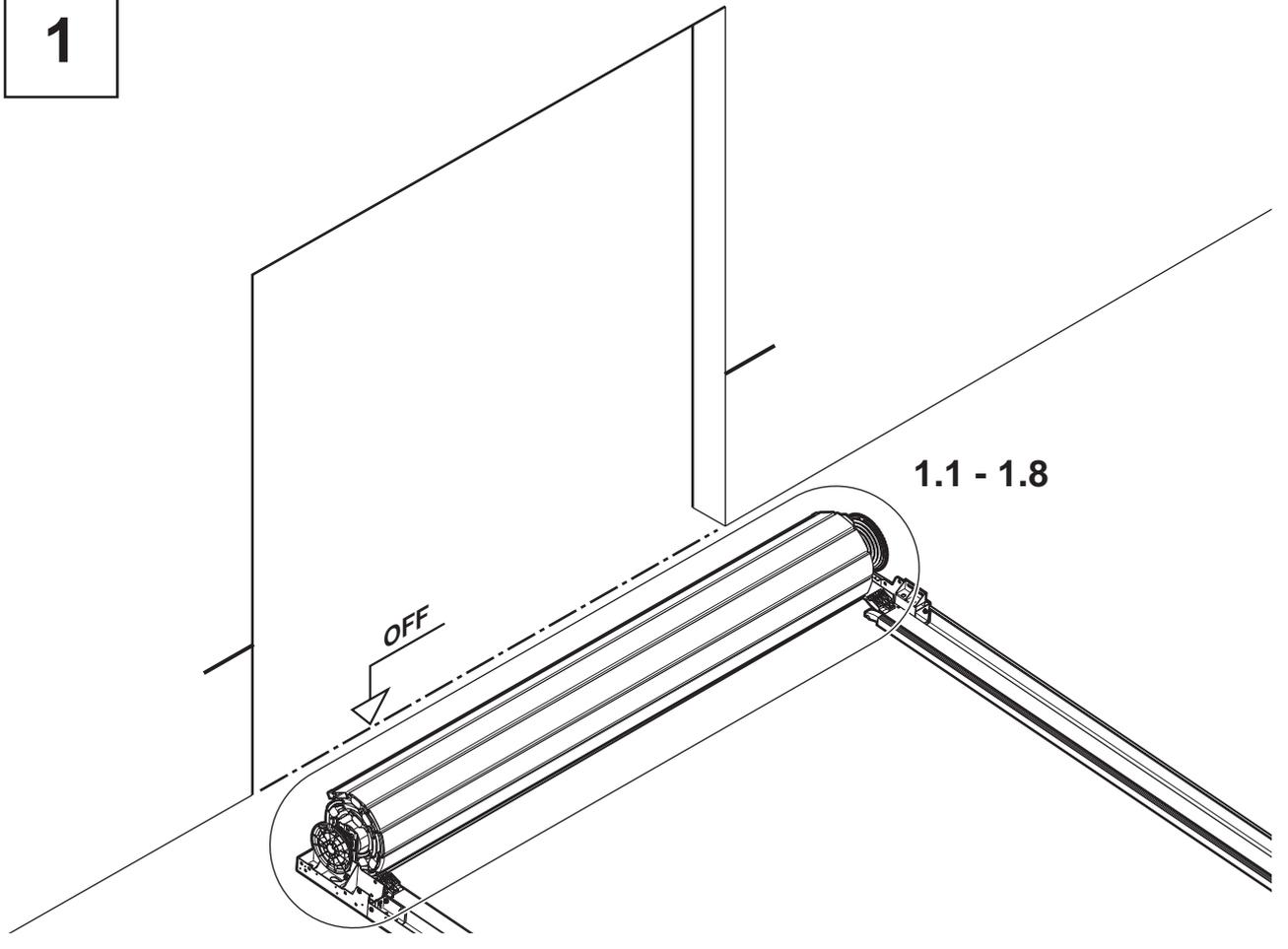
Sell Einhängpunkt

Bezeichnung des Kunden

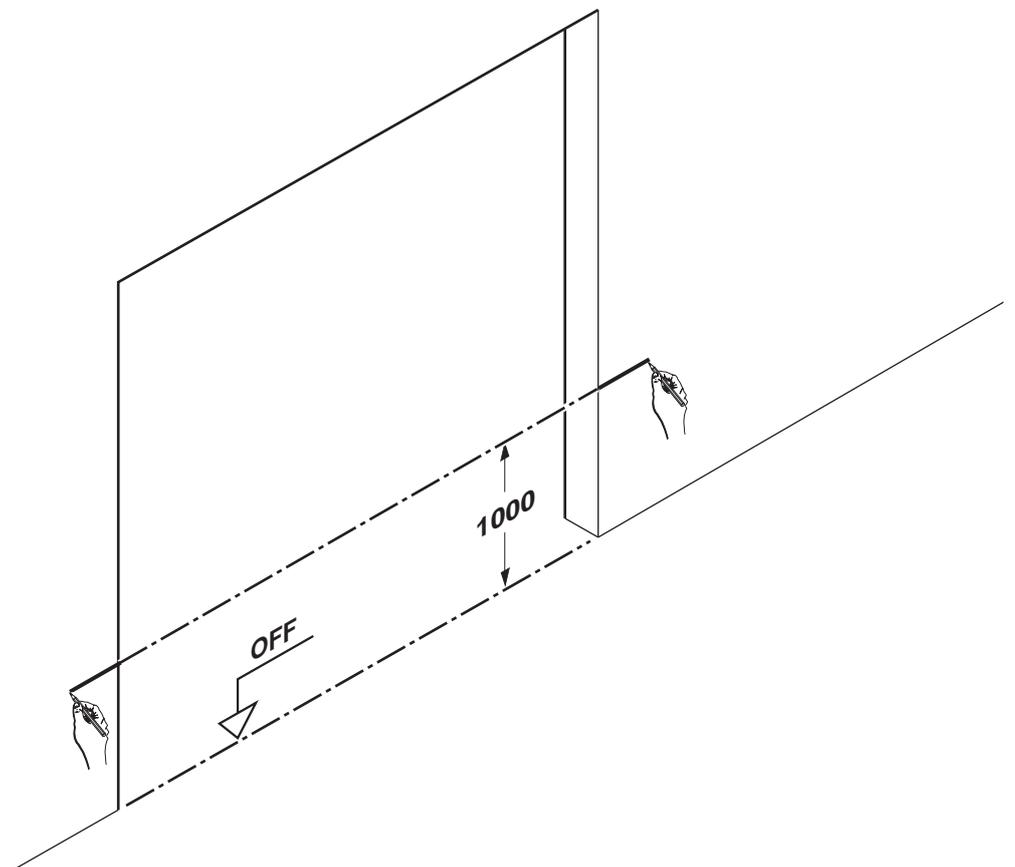
EN 13241-1
Widerstand gegen Klasse
Windlast
Wasserdichtigkeit Klasse
Wärmewiderstand W/(m²K)
Luftdurchlässigkeit Klasse

CE

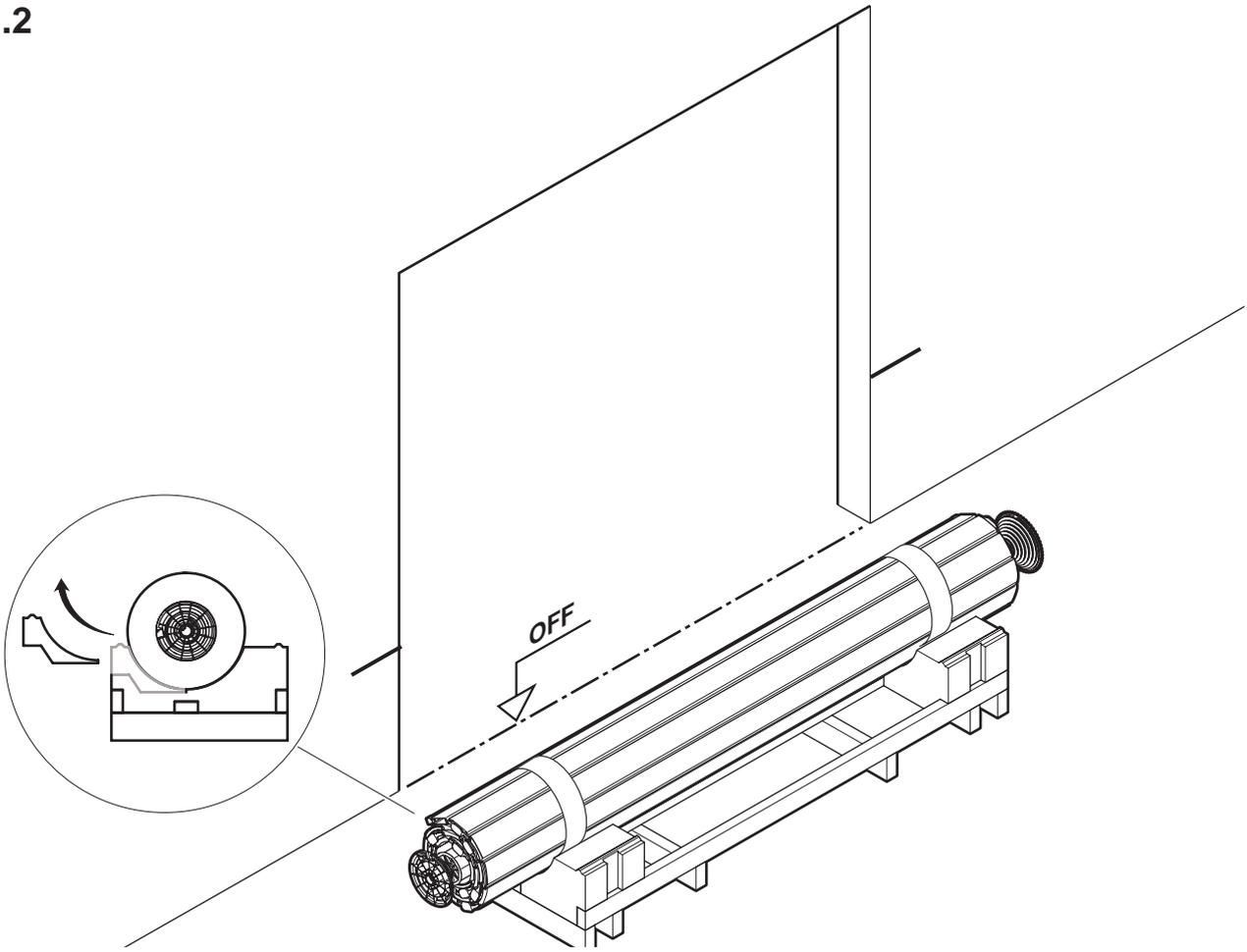
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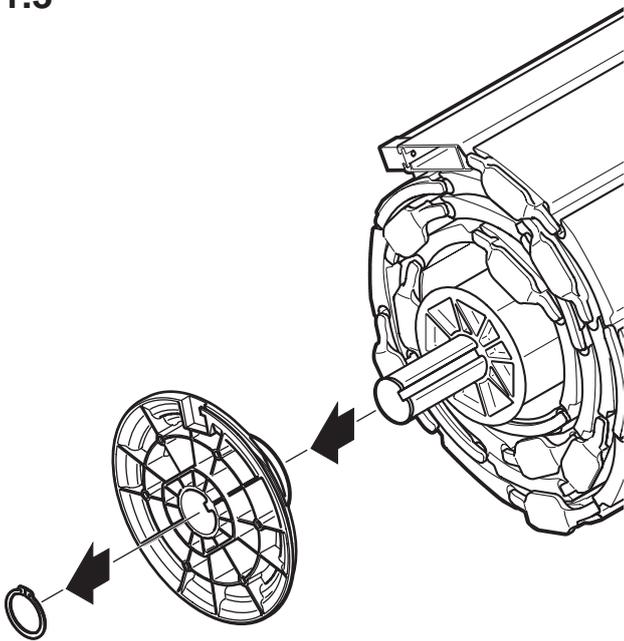
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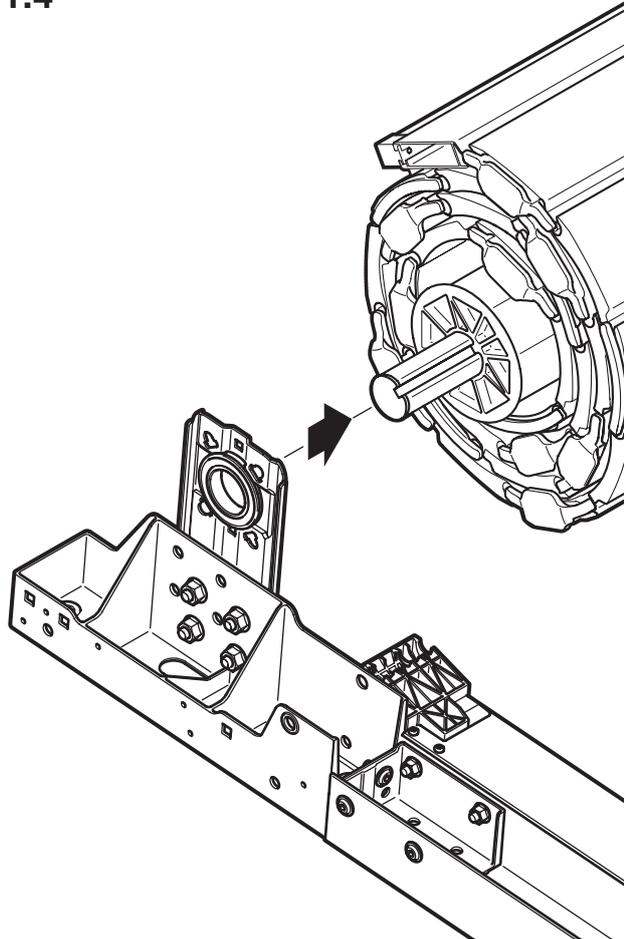
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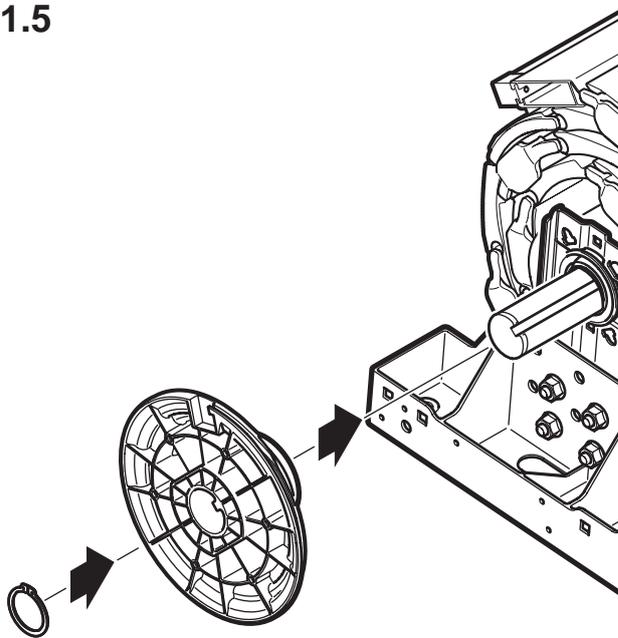
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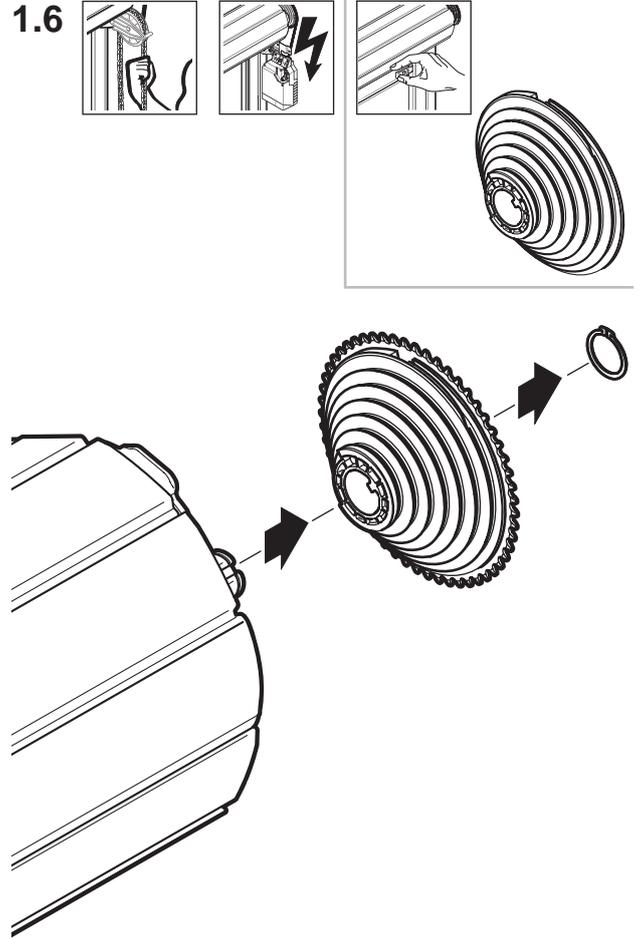
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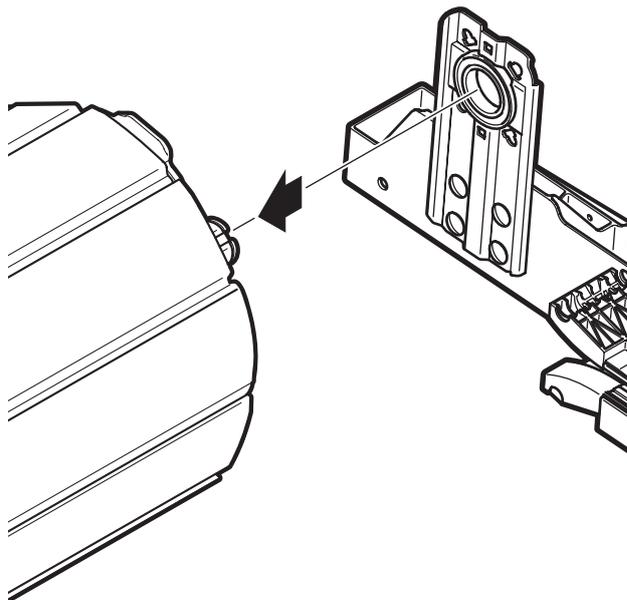
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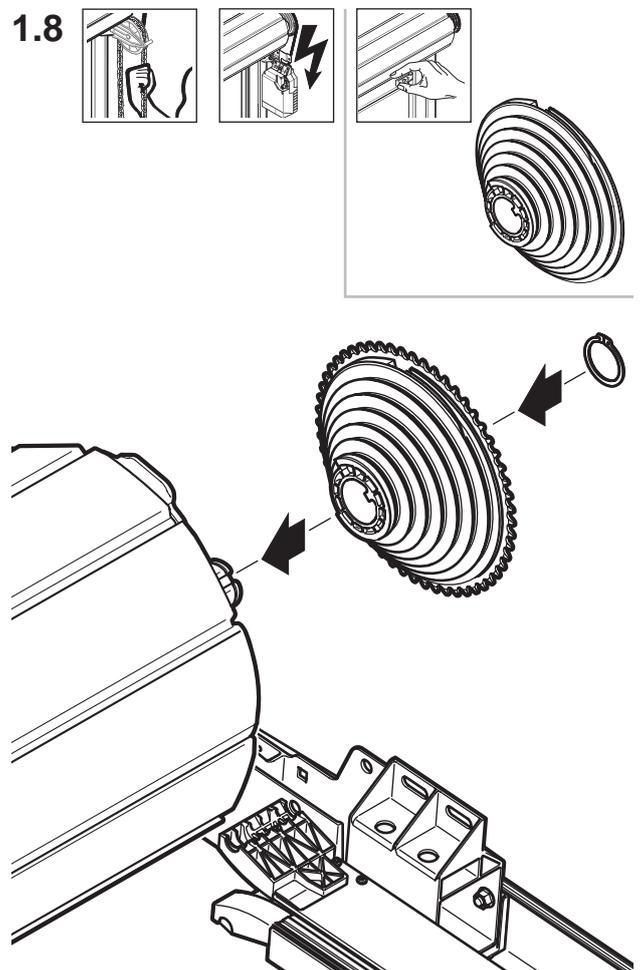
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1.7



1.8

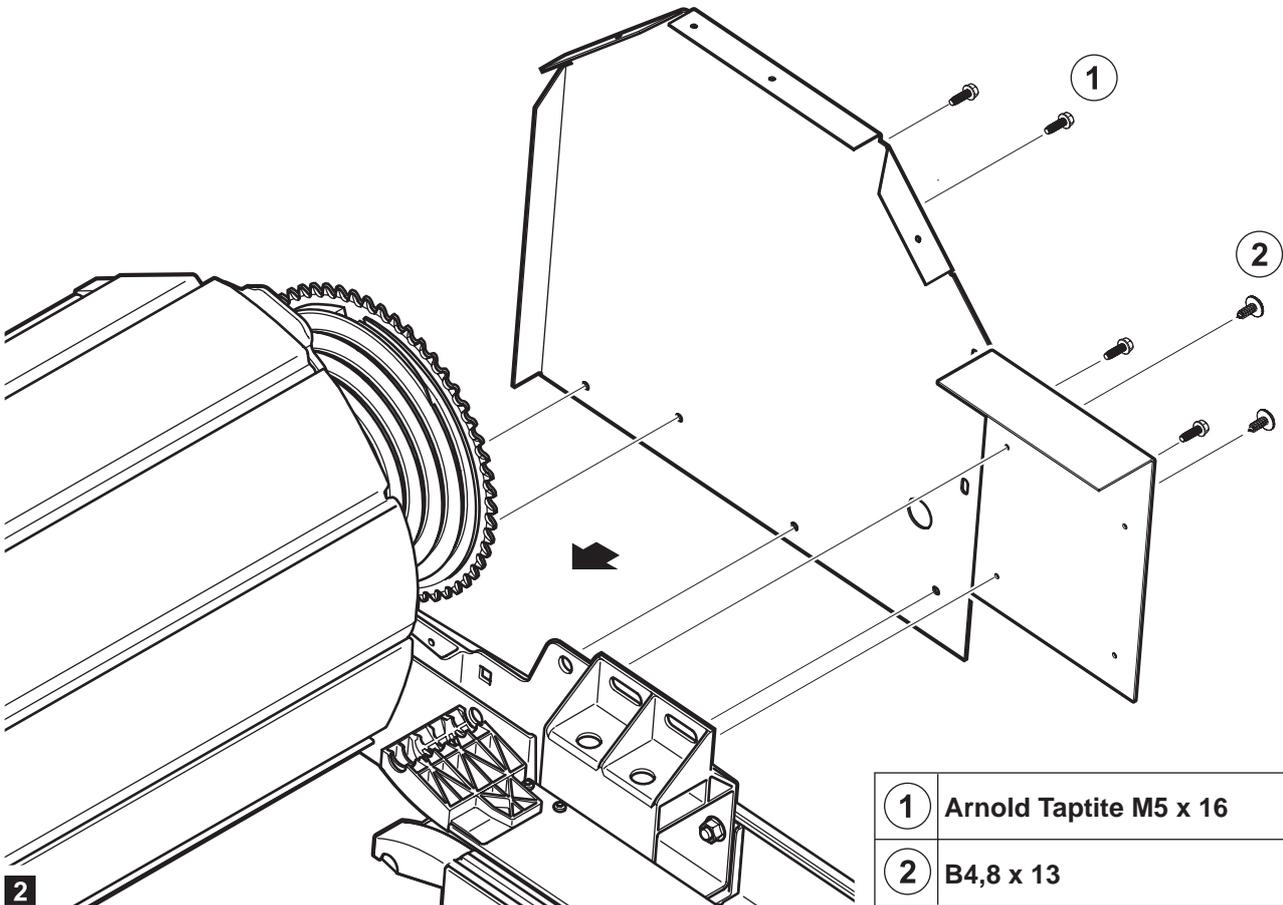


2



1

1

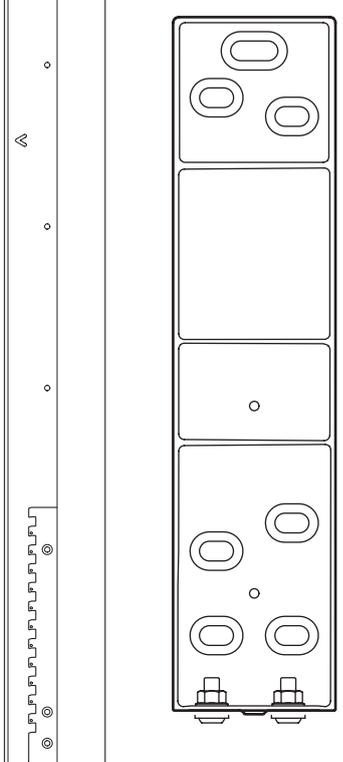
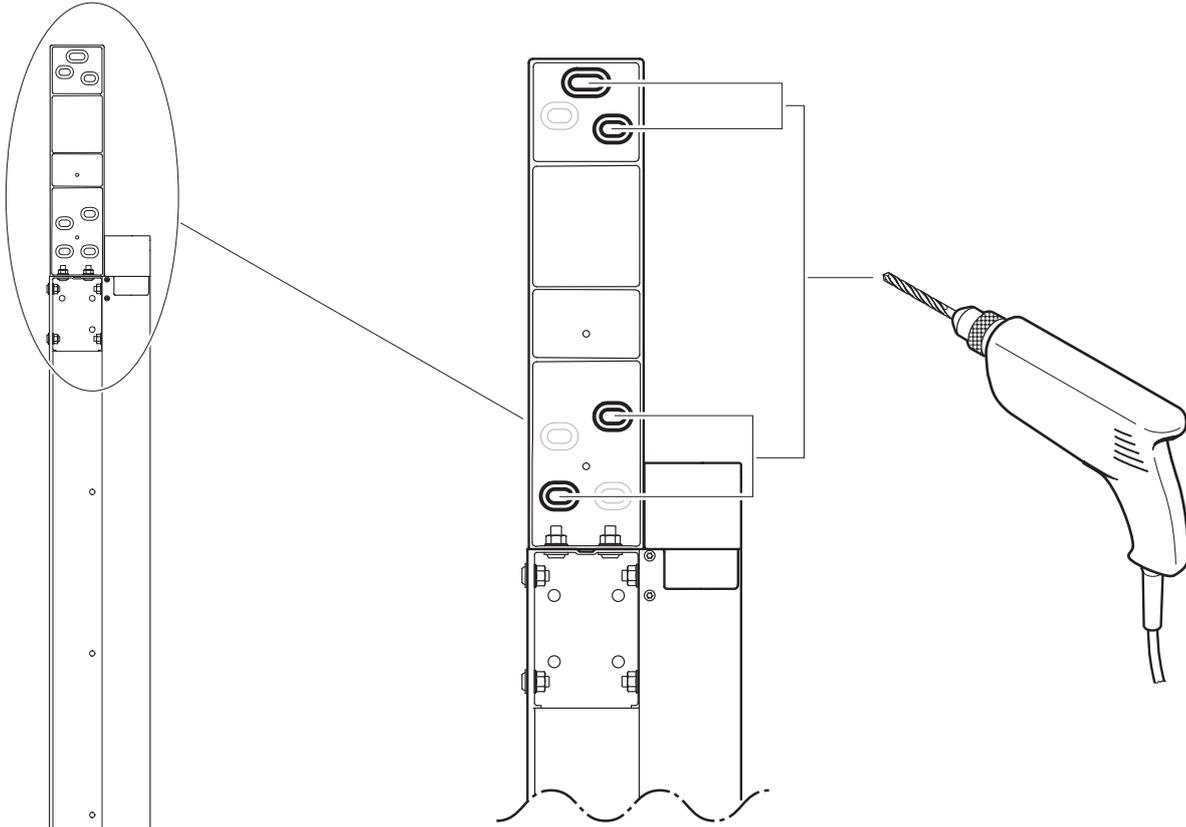


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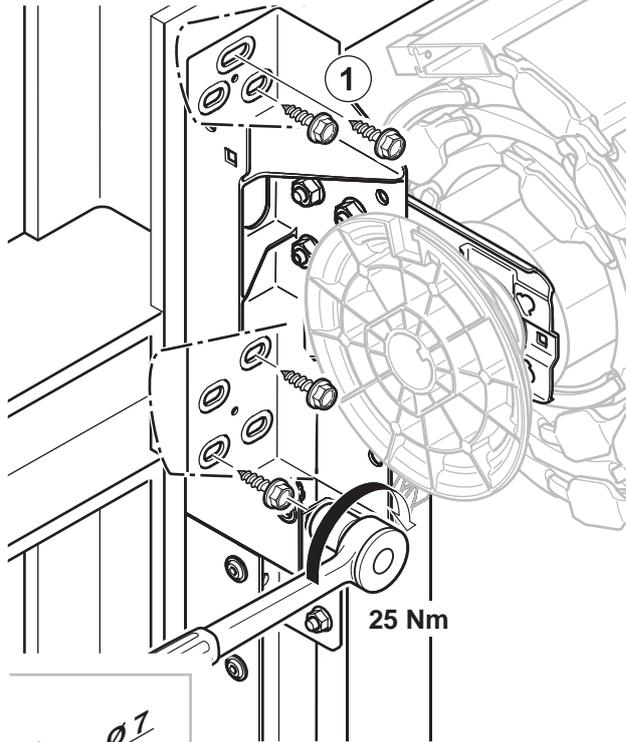
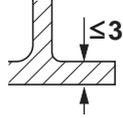
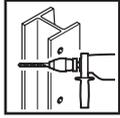
1 Arnold Taprite M5 x 16

2 B4,8 x 13

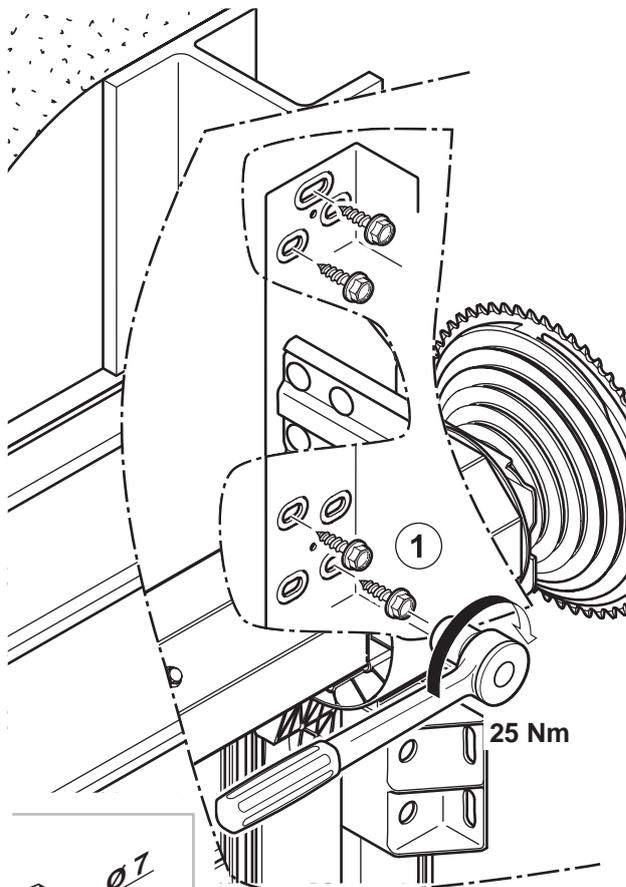
3.3



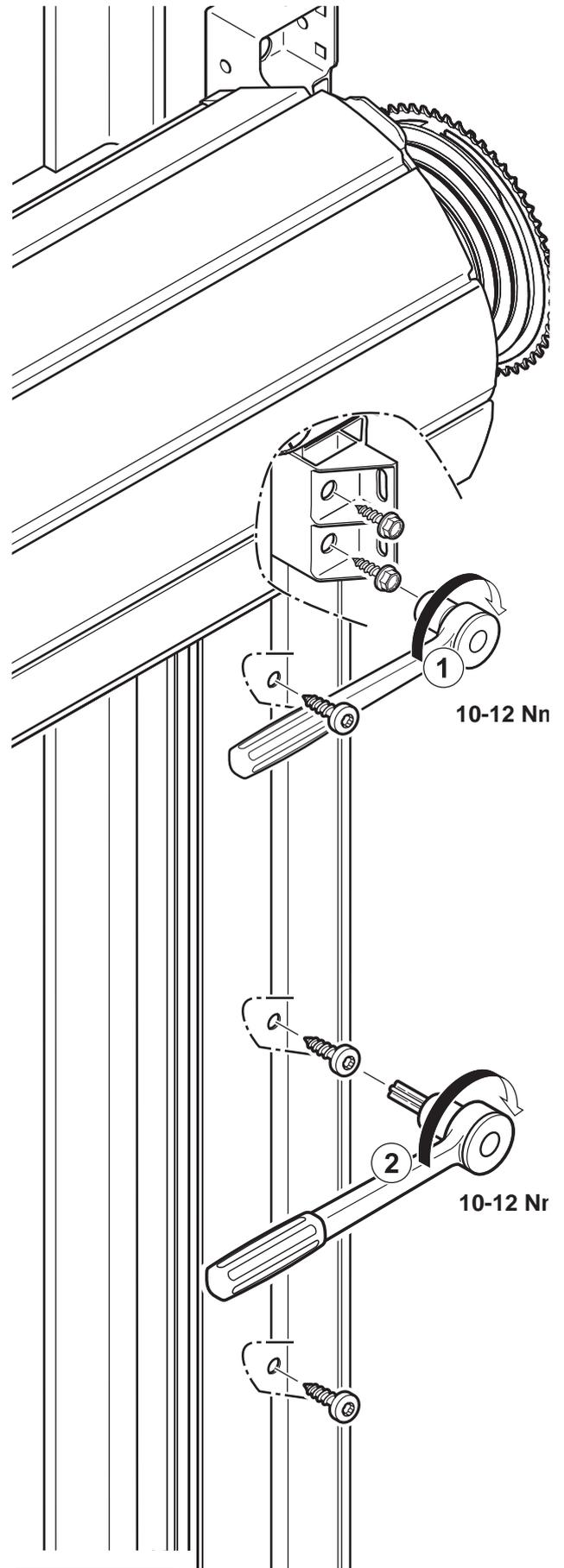
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1 6-kant ST8 x 22



1 6-kant ST8 x 22



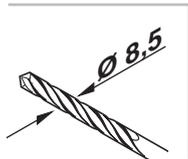
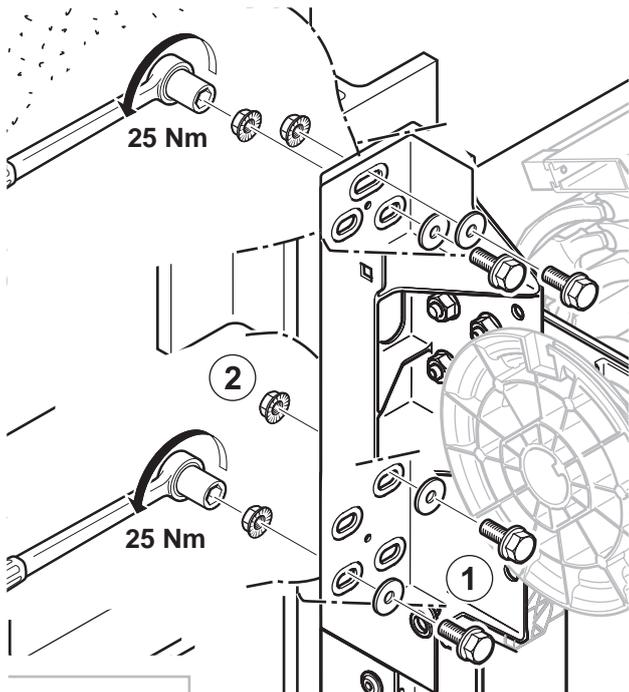
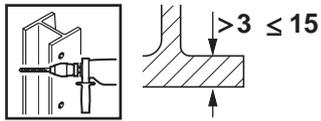
10-12 Nm

10-12 Nm

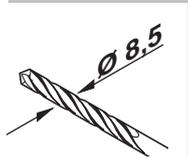
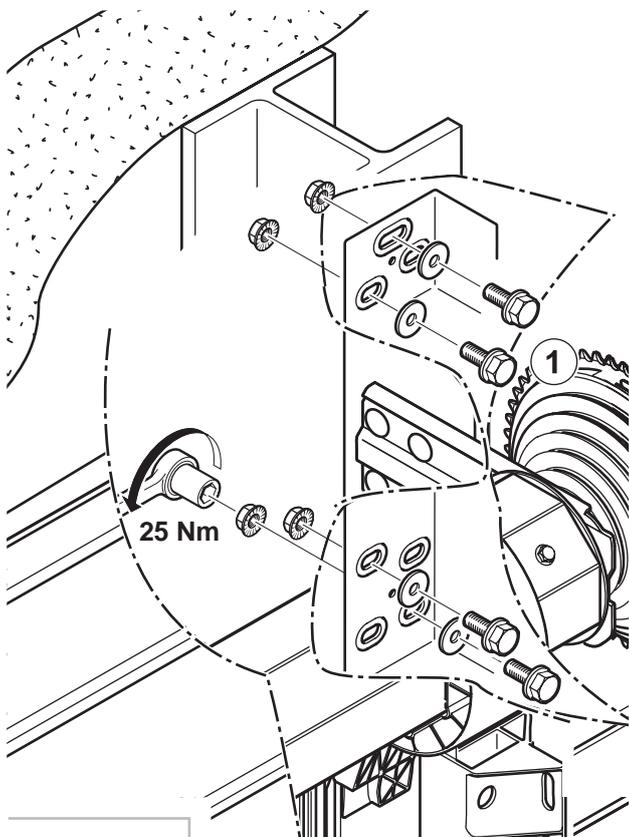
1 6-kant 6,3 x 19

2 LK DIN 7981 C-T30 6,3 x 16

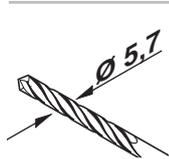
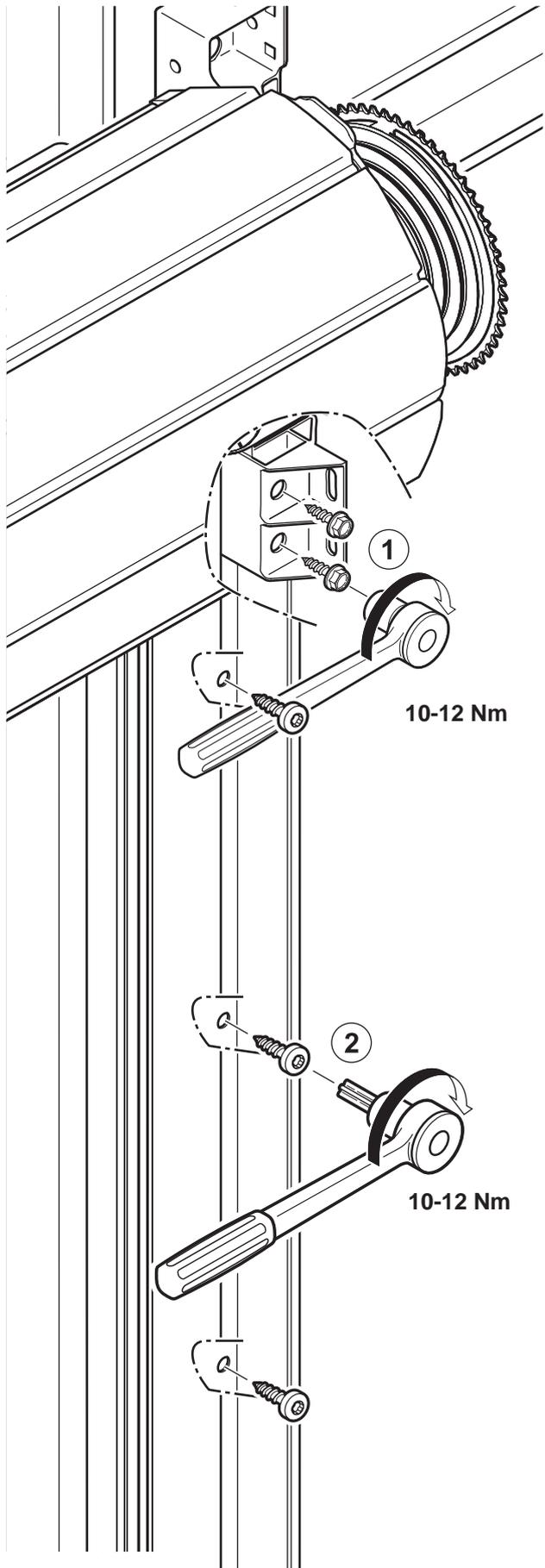
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1	DIN 6921 M8 x 30 vz
2	6-kant DIN 6923 M8-8-vz

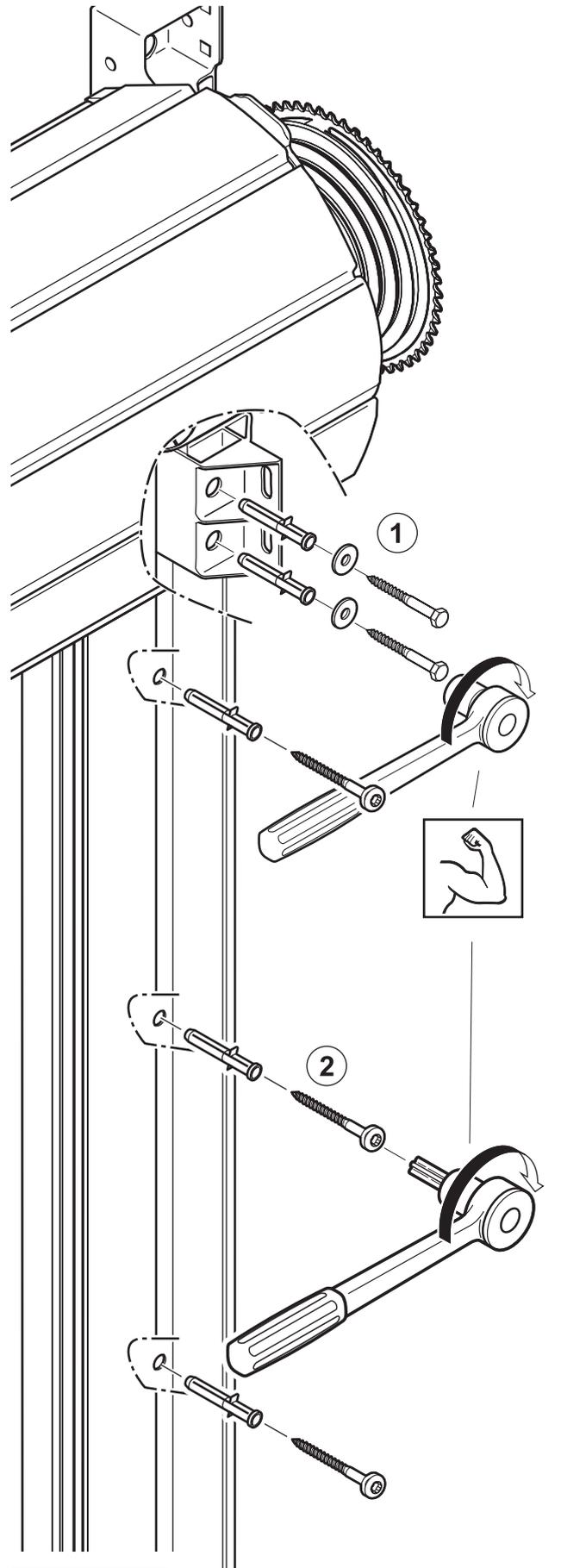
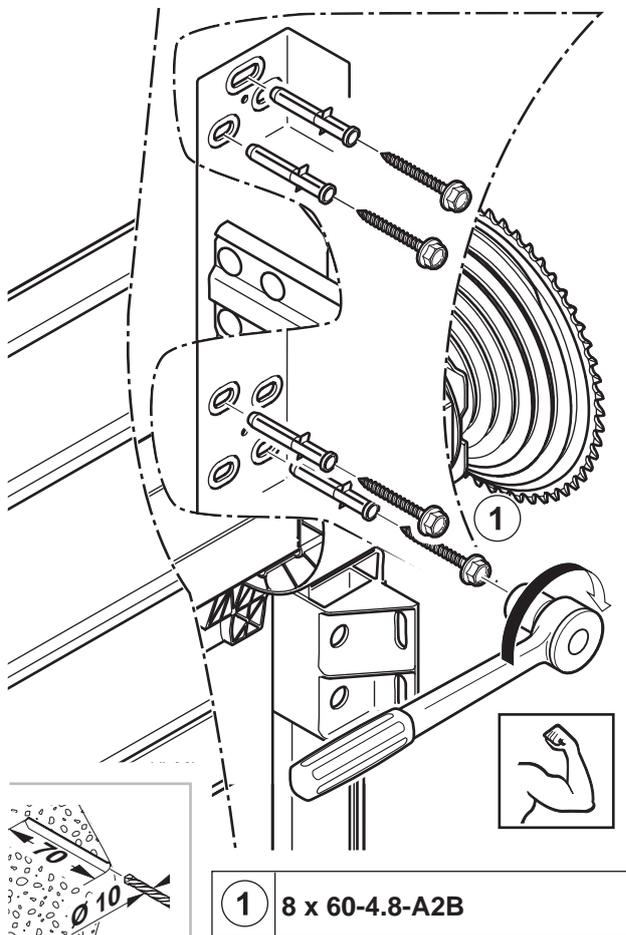
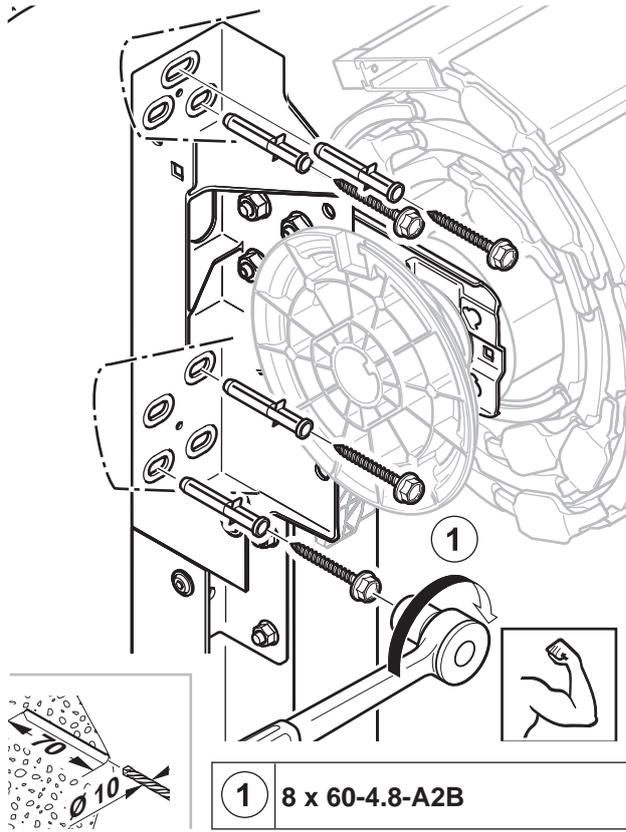
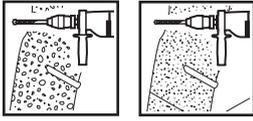


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2	6-kant DIN 6923 M8-8-vz



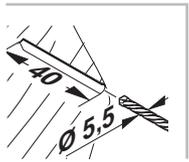
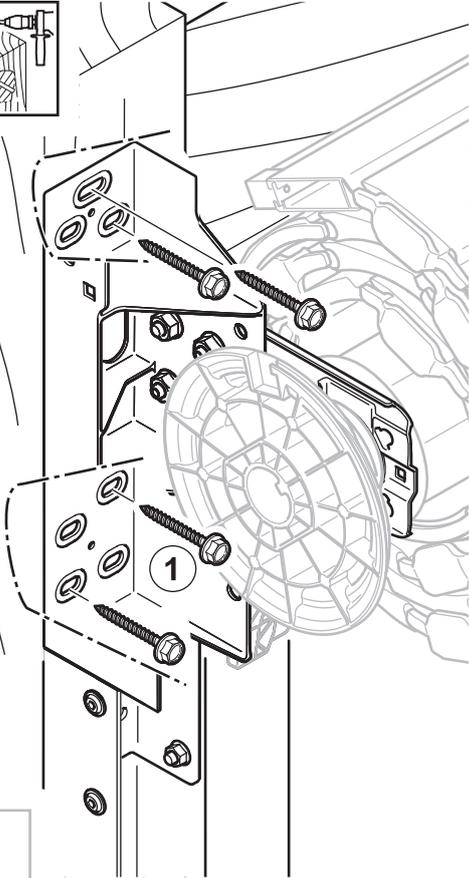
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3.3c

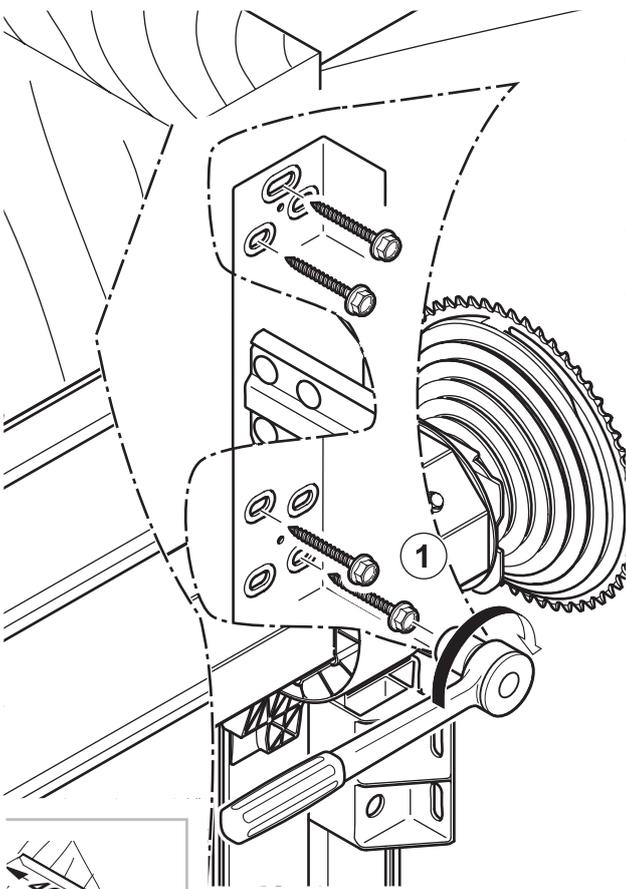
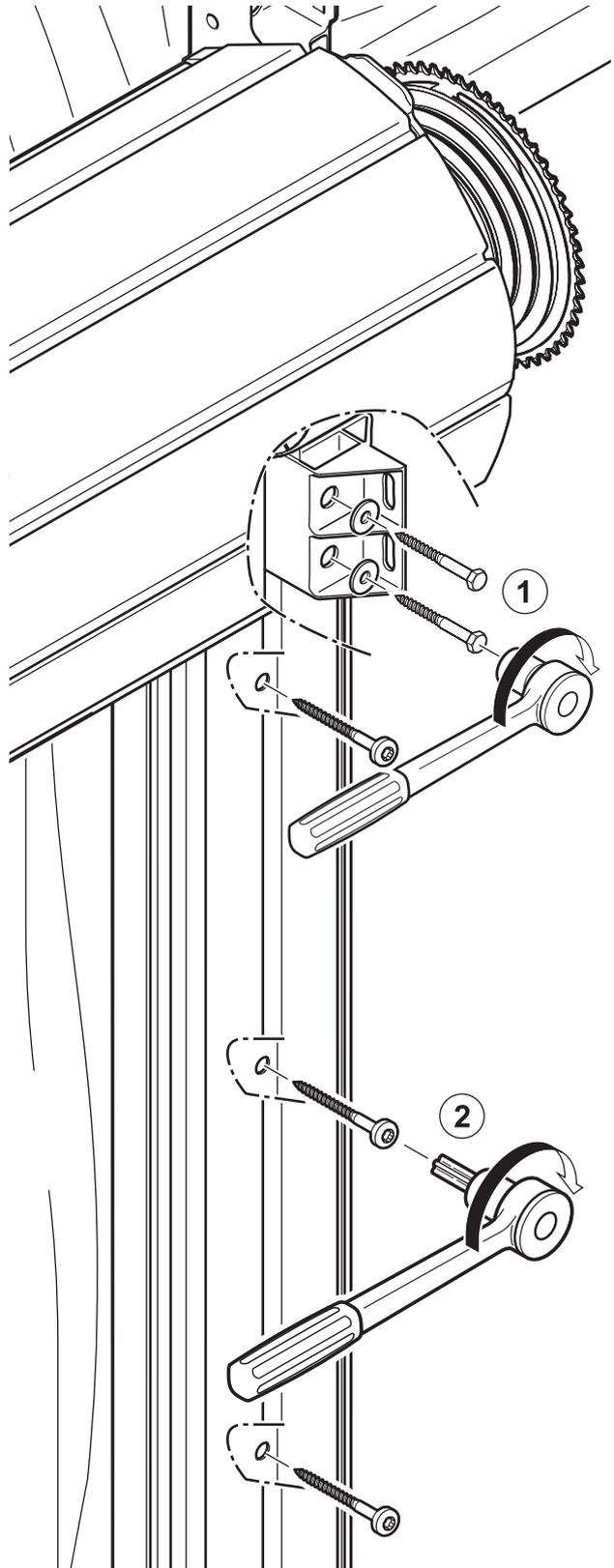


- | | |
|---|----------------|
| 1 | DIN 571 6 x 50 |
| 2 | LK 6 x 60 T30 |

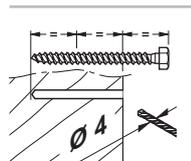
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1 8 x 60-4.8-A2B



1 8 x 60-4.8-A2B

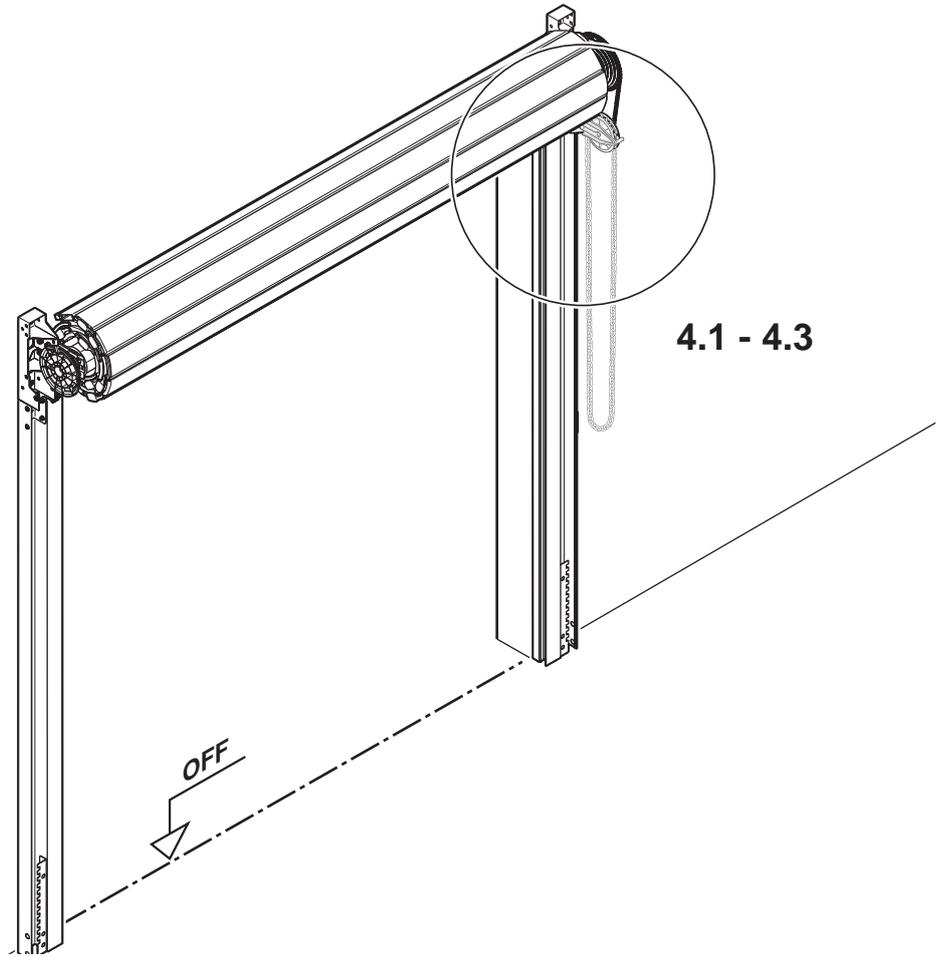


1 6 x 50 DIN 571

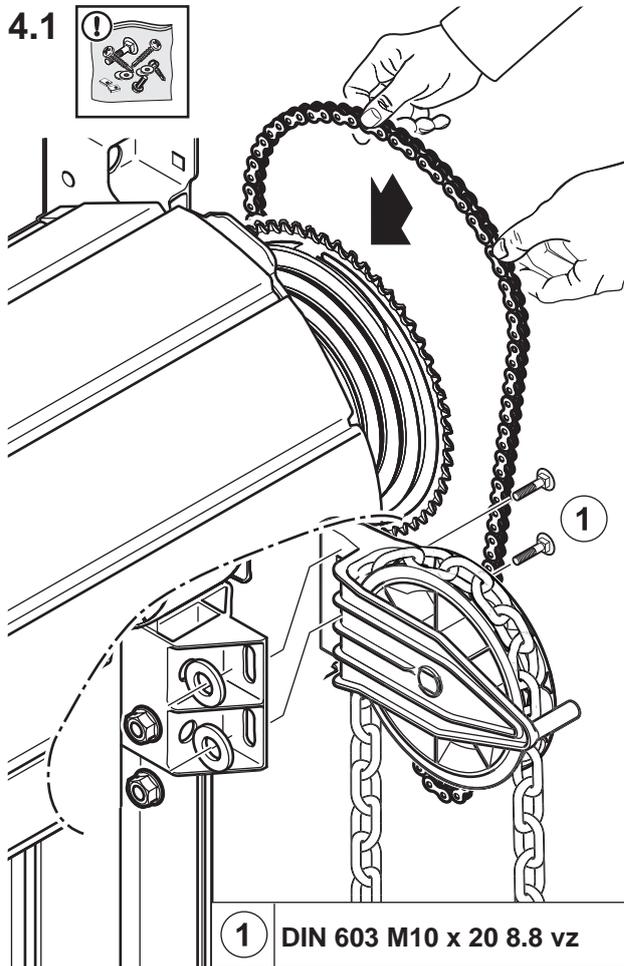


2 LK 6 x 60 T30

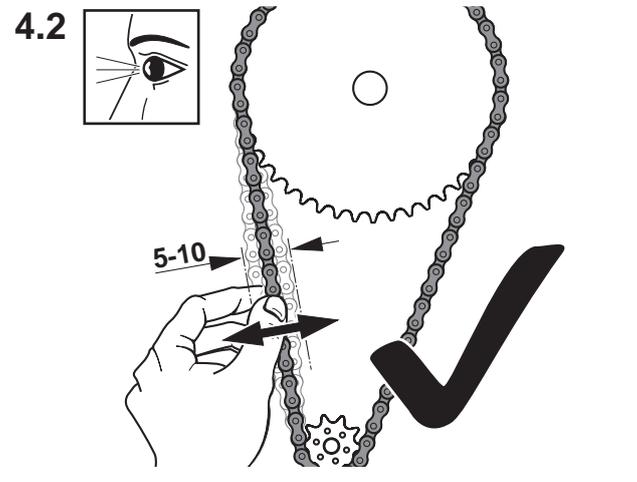
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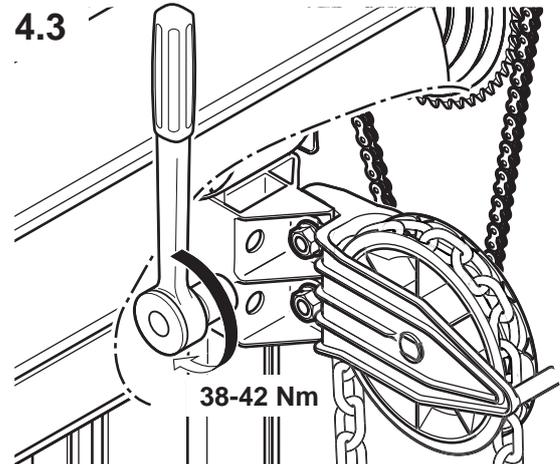
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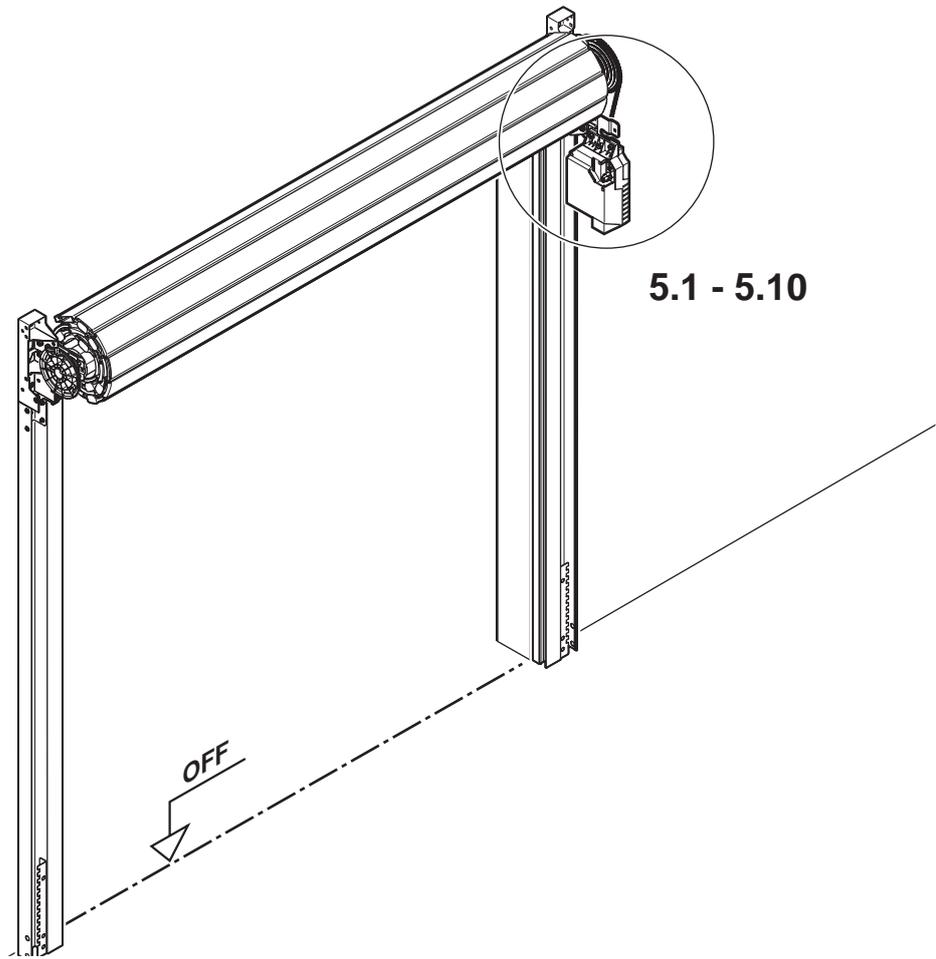
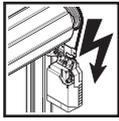
4.2



4.3

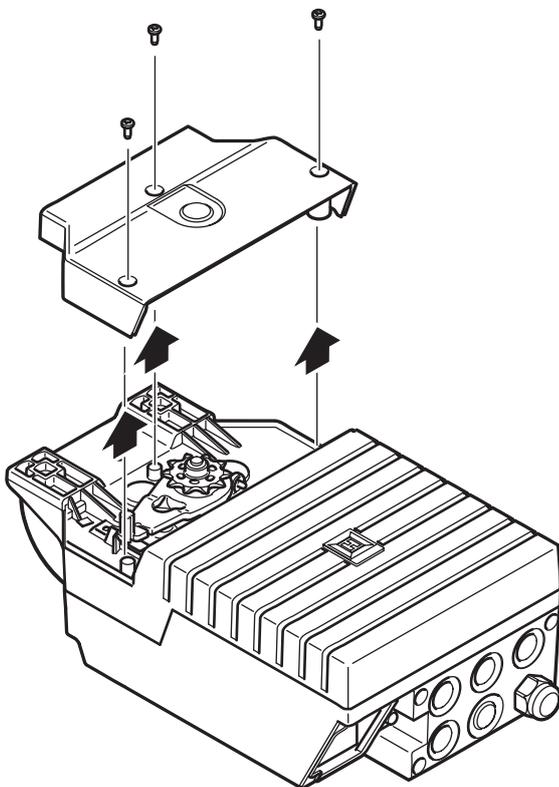


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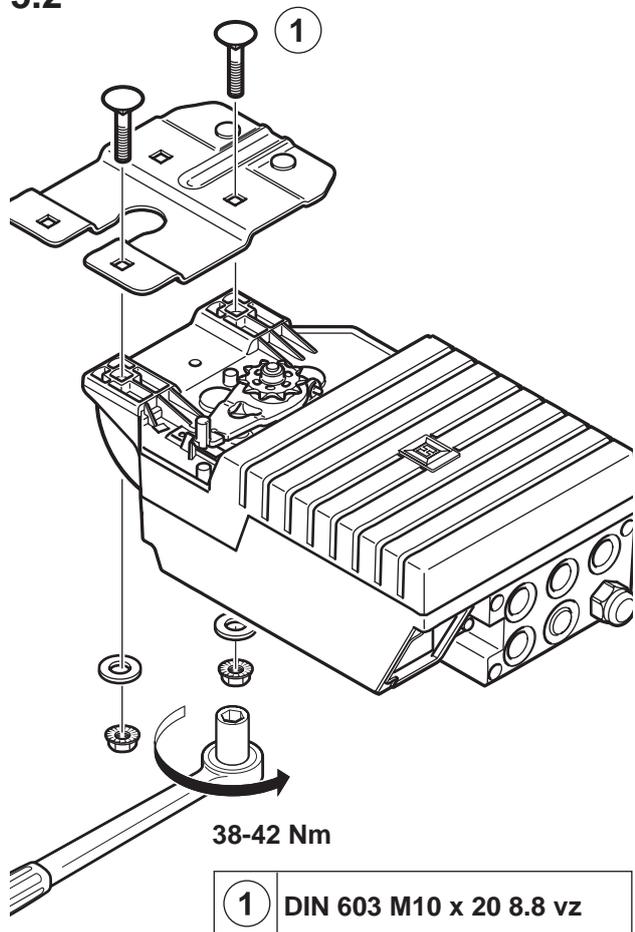


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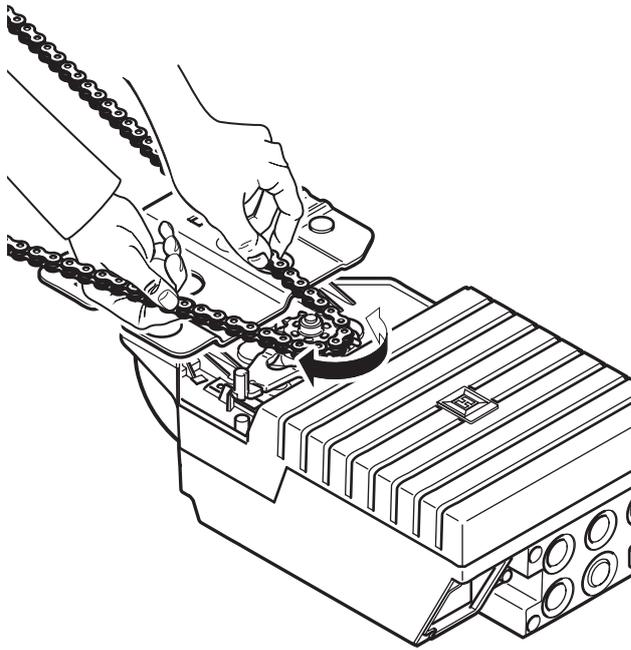
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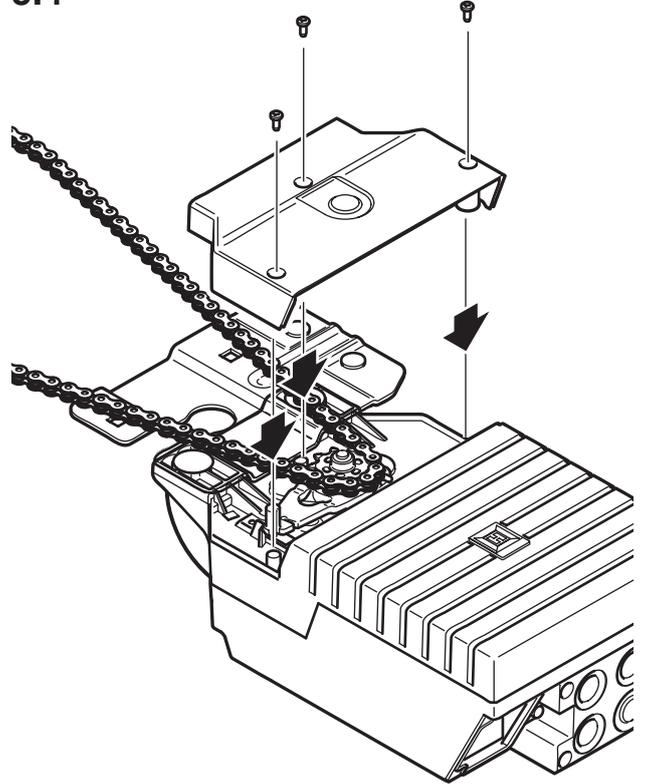
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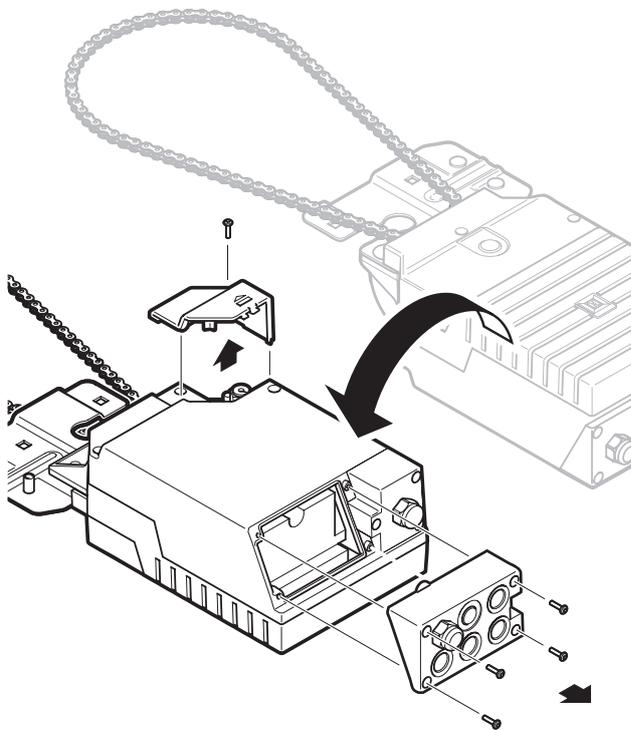
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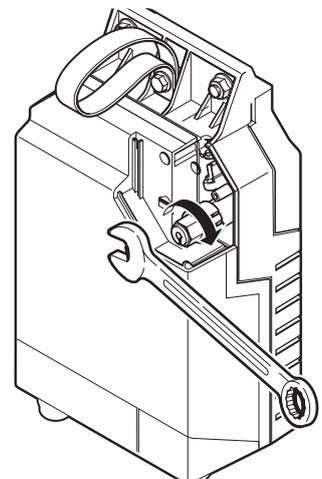
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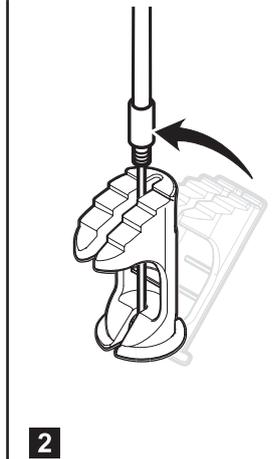
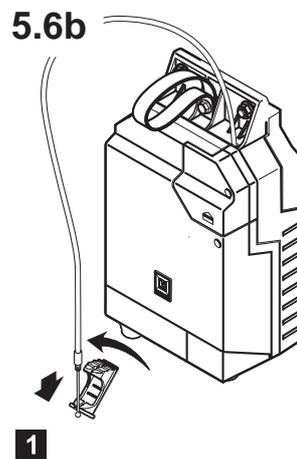
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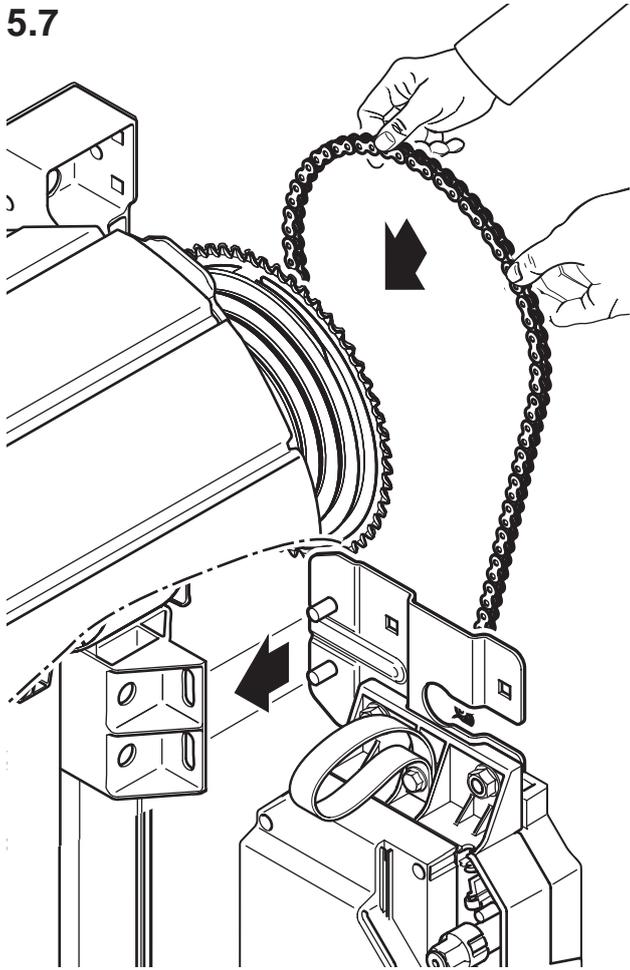
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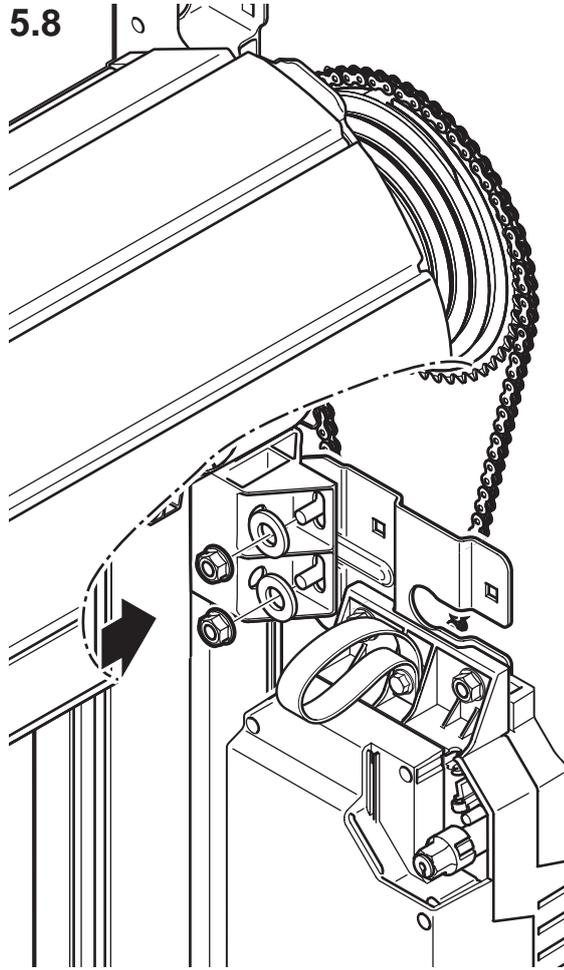
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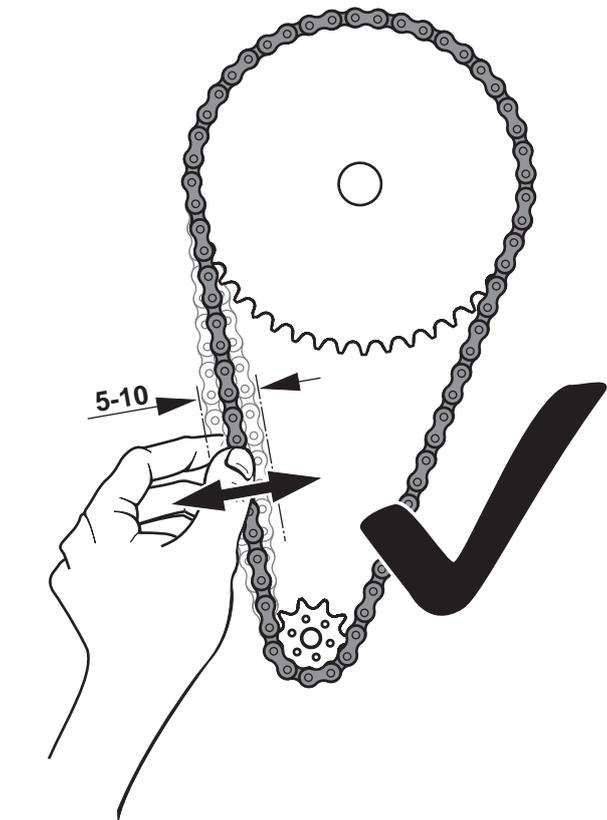
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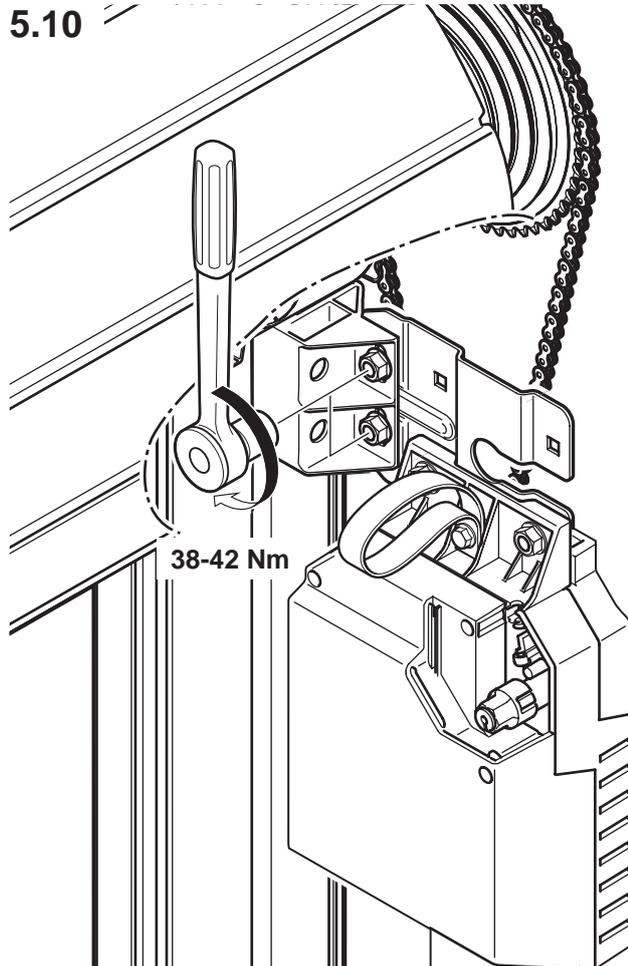
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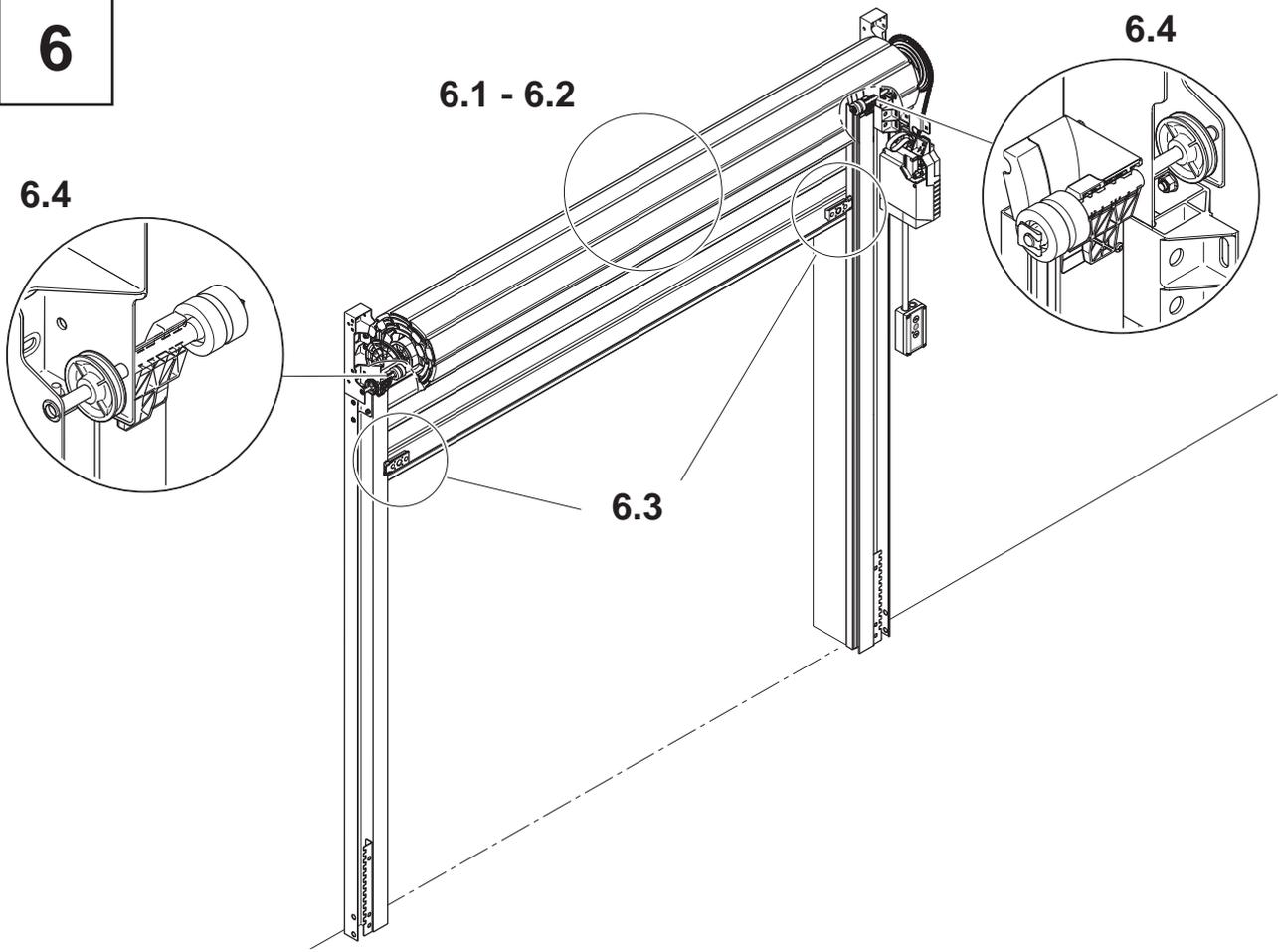
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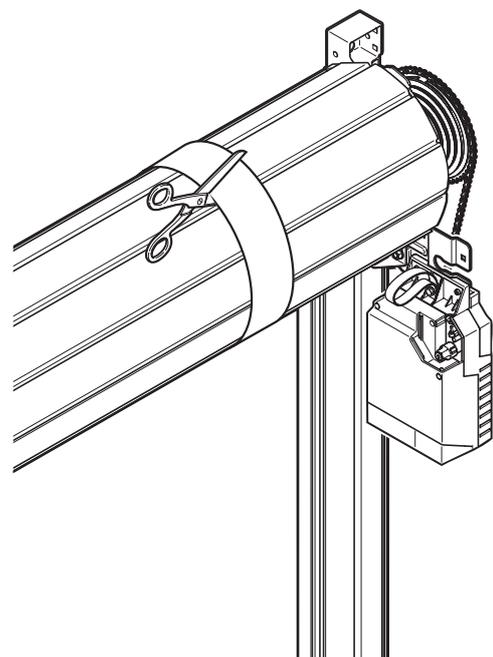
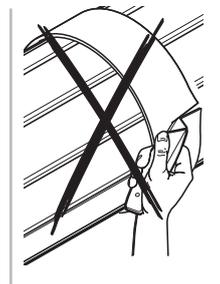
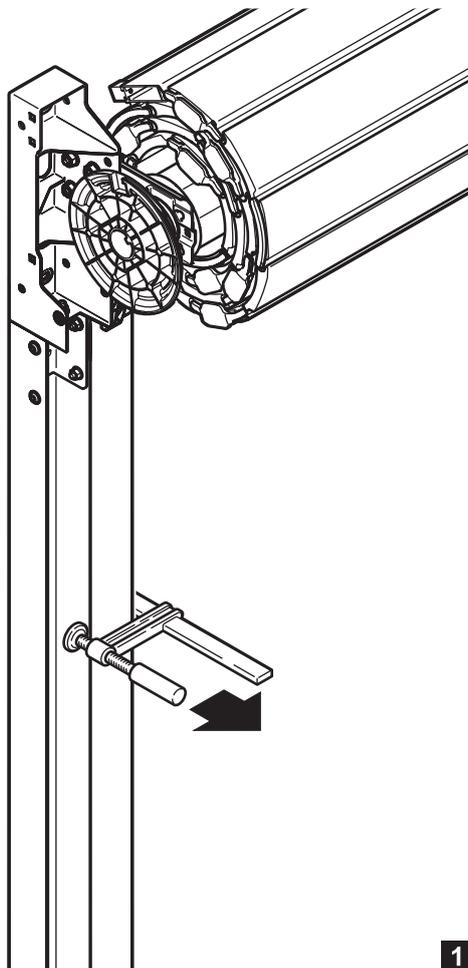
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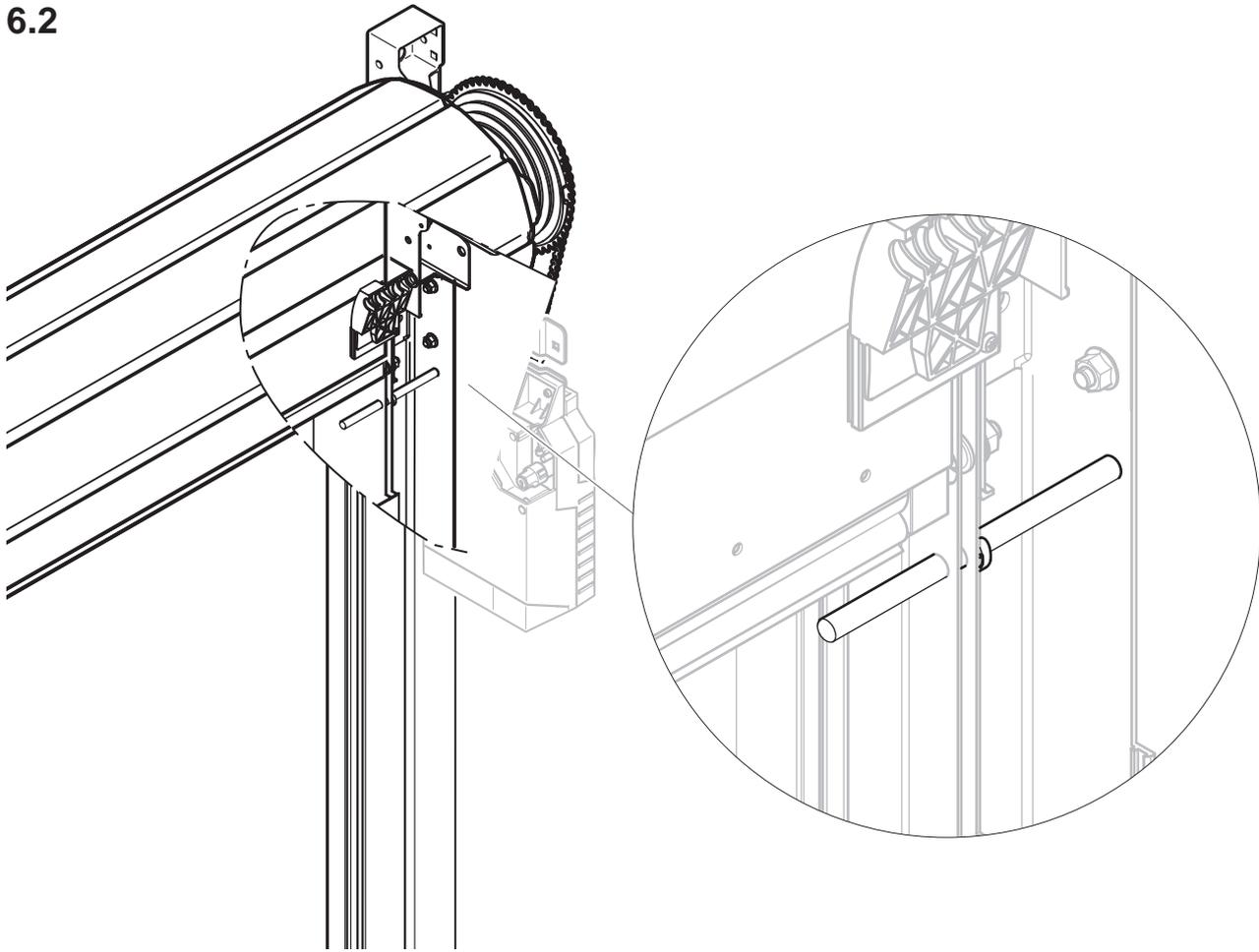
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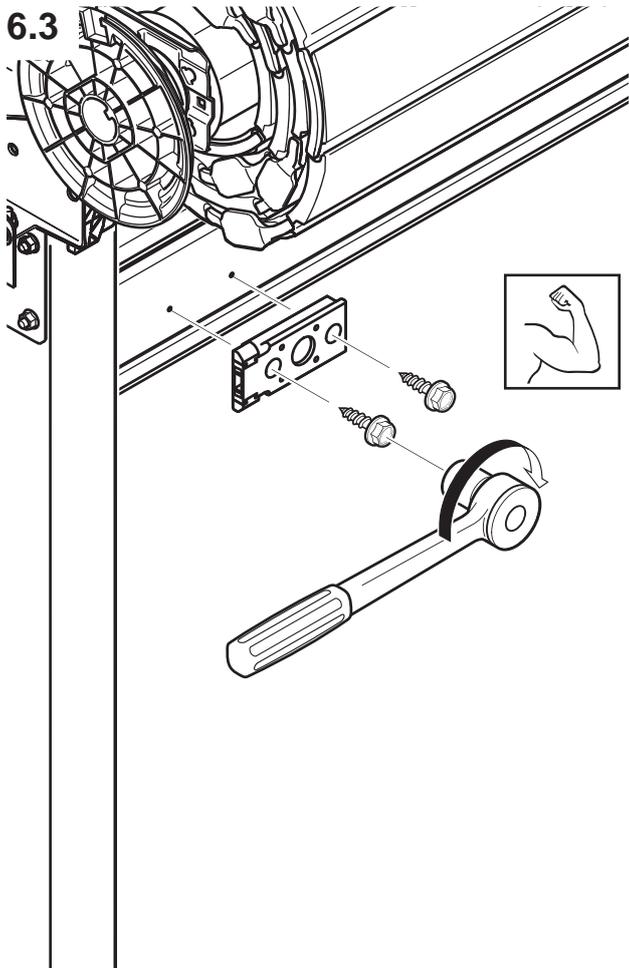
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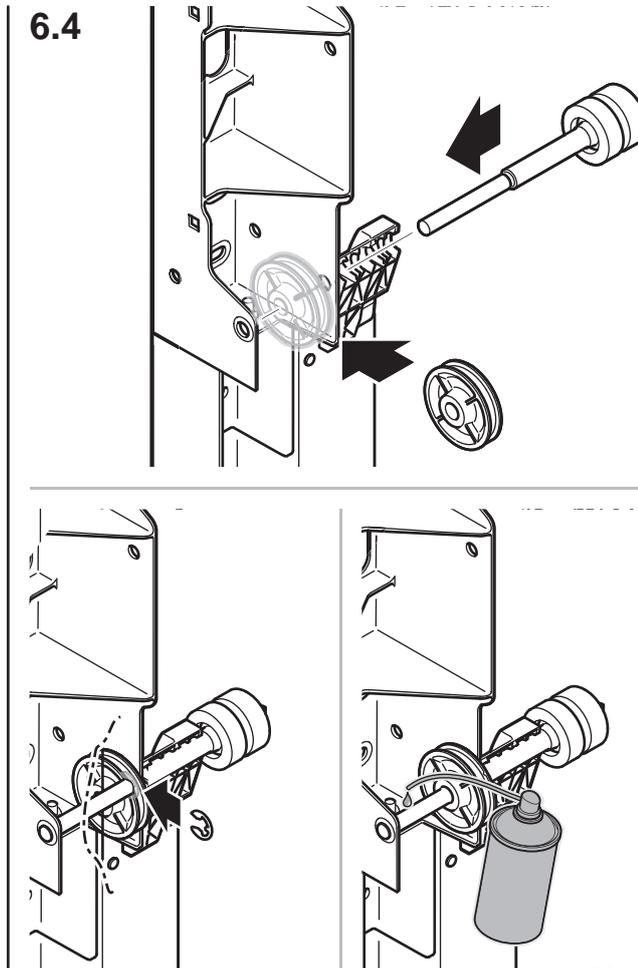
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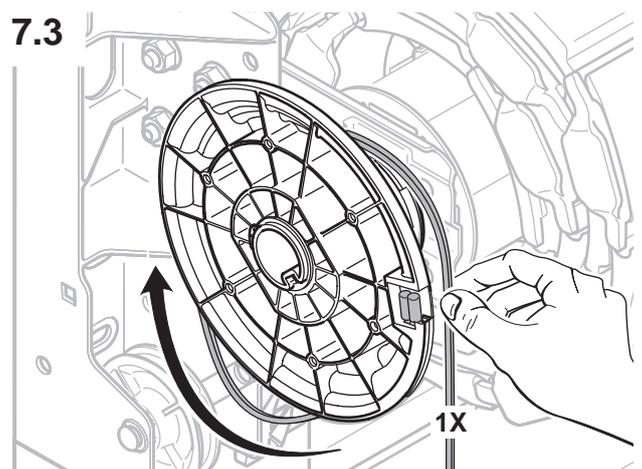
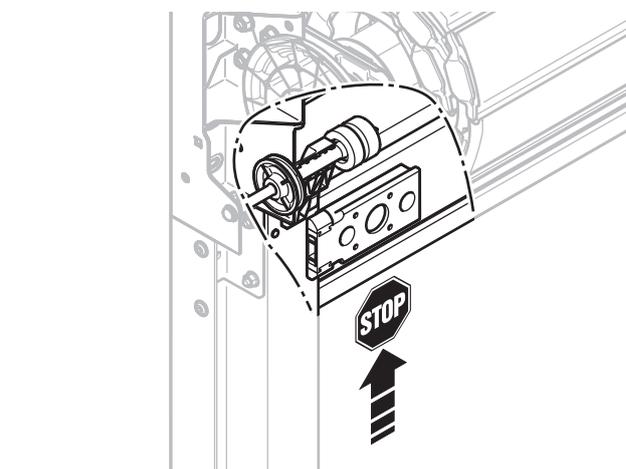
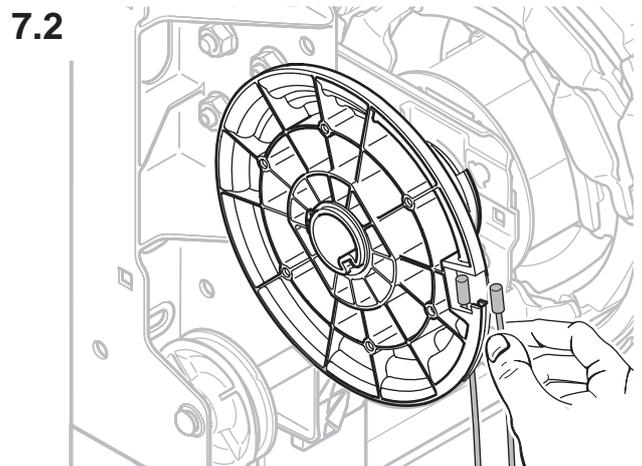
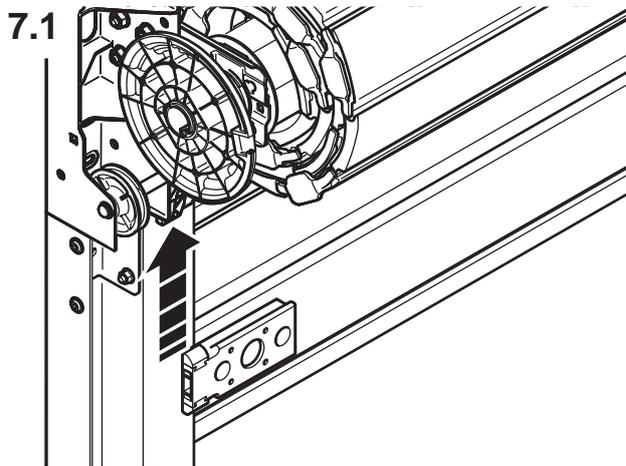
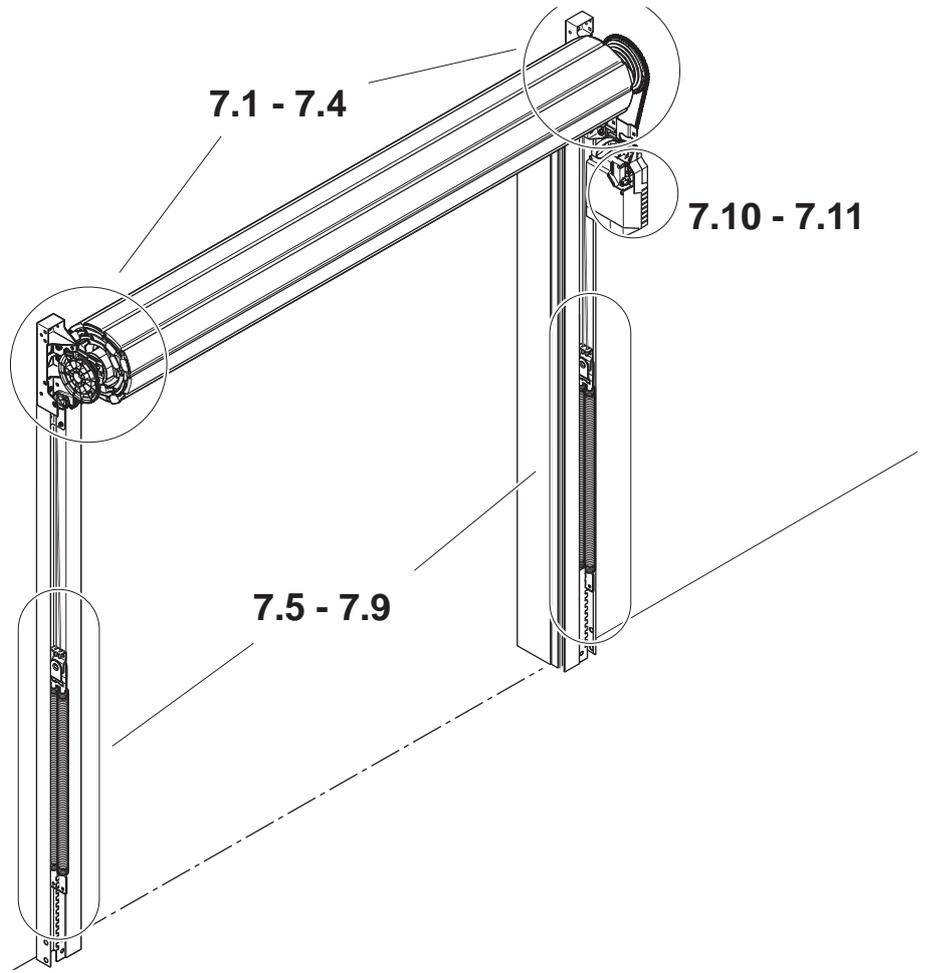
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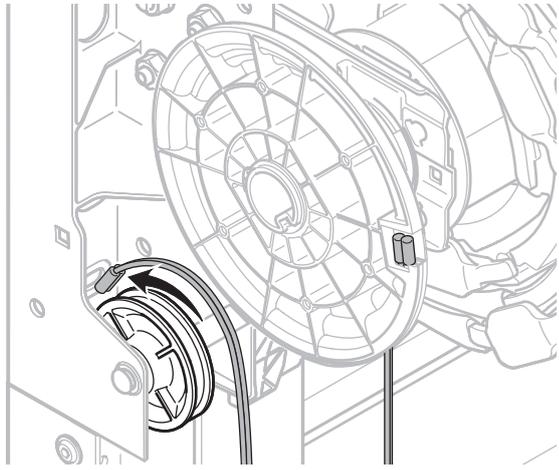
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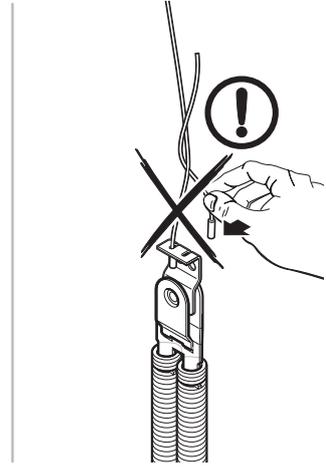
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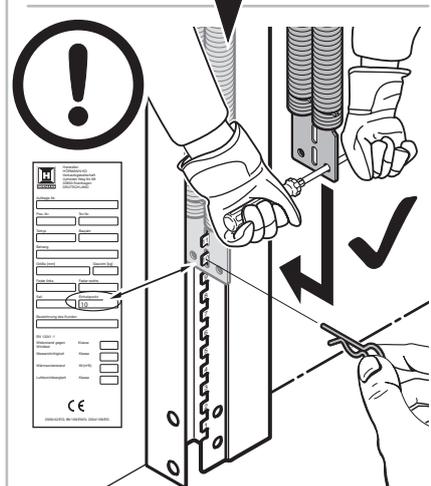
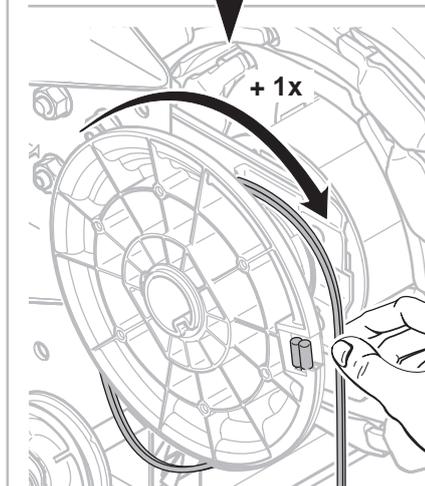
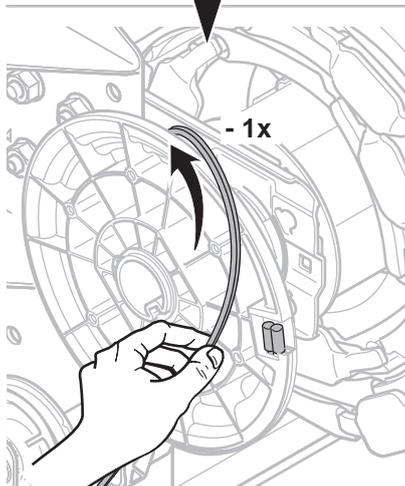
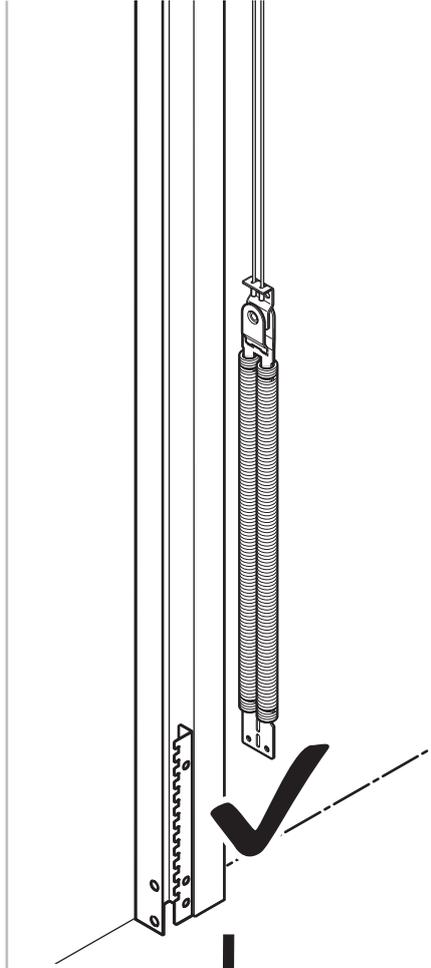
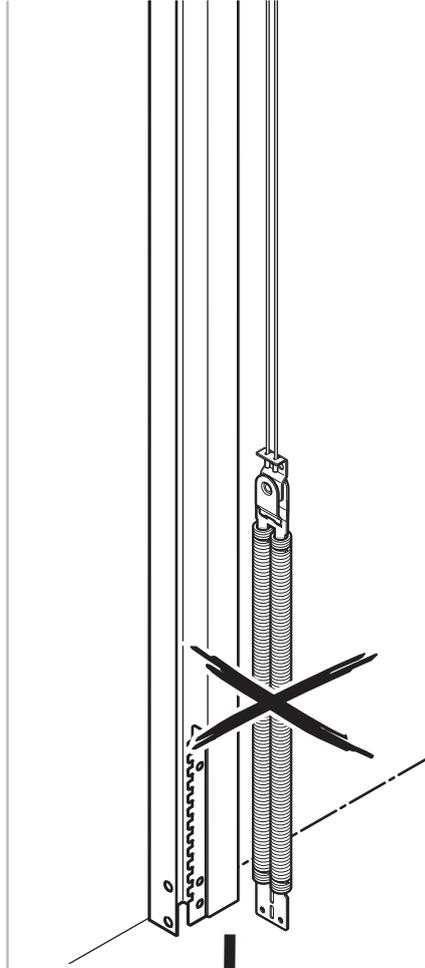
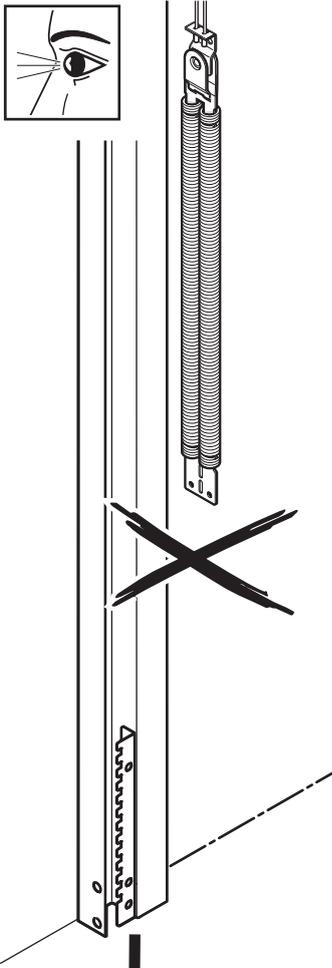
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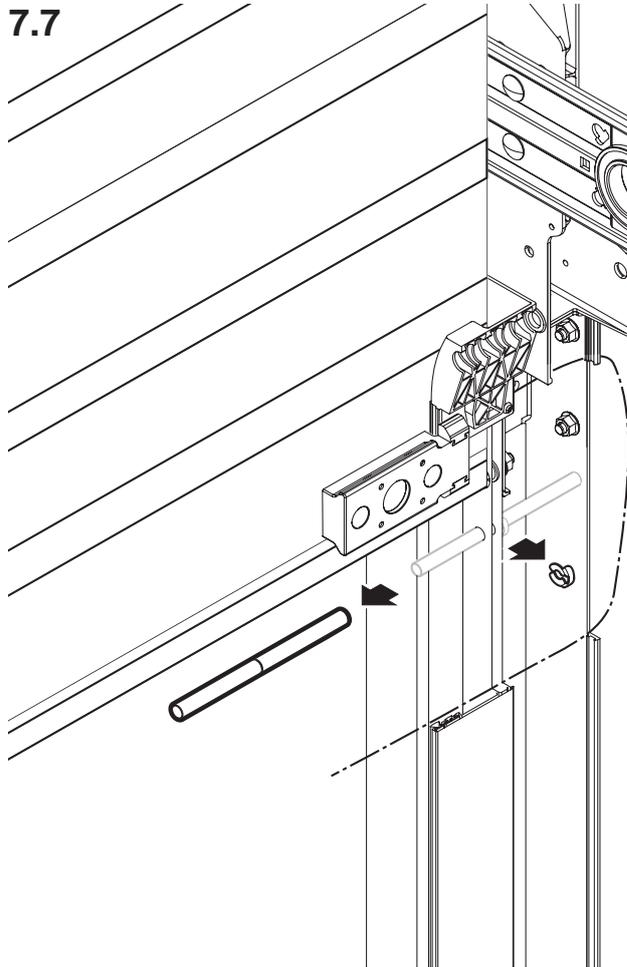
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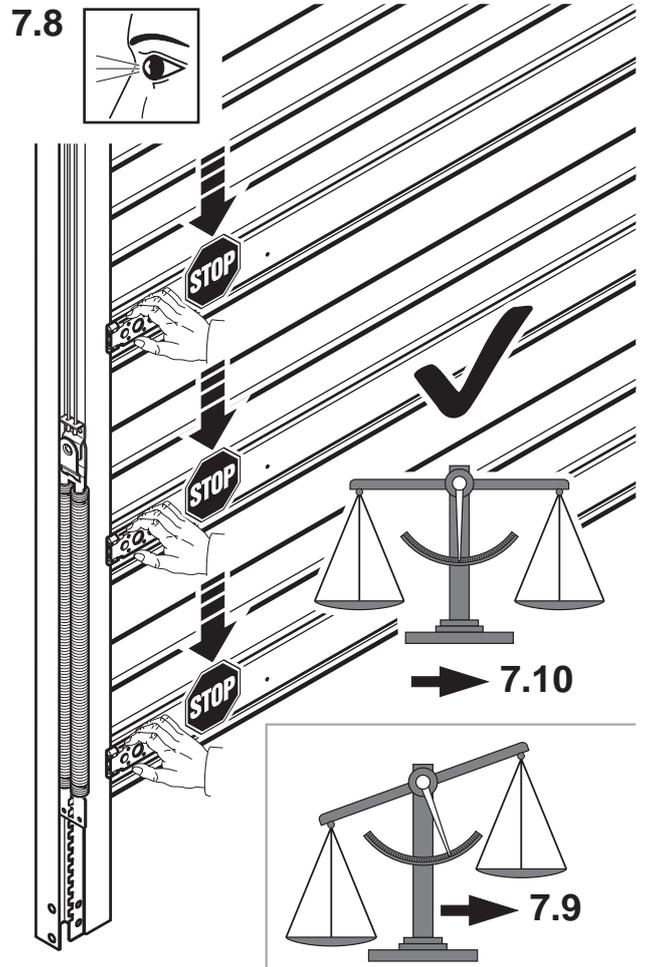
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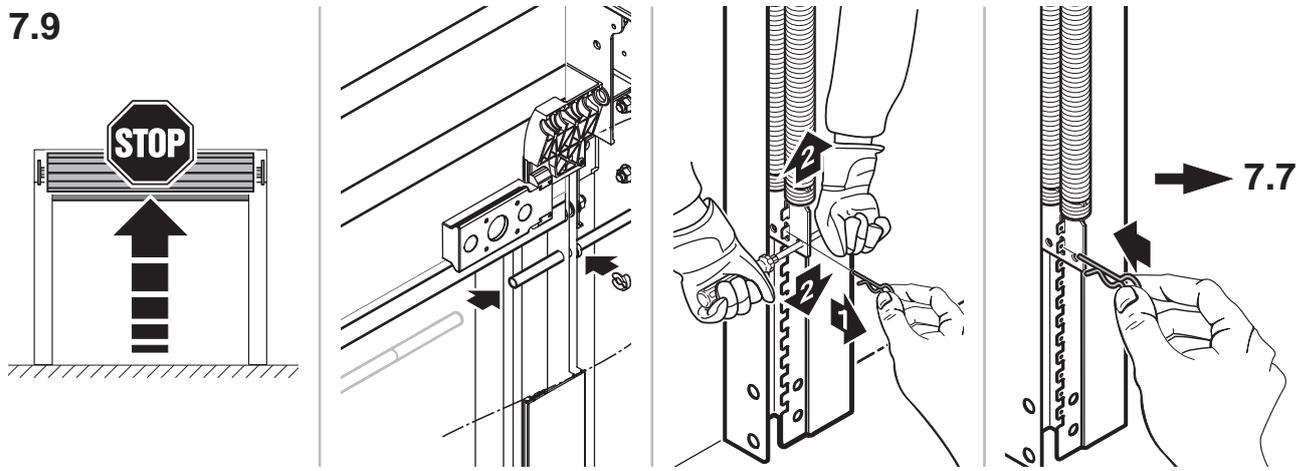
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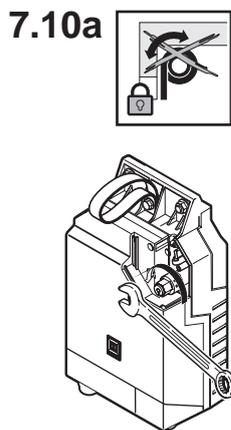
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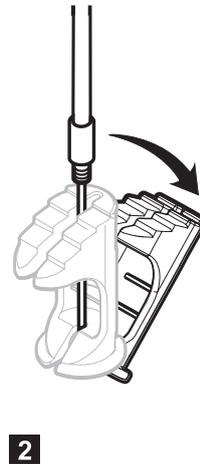
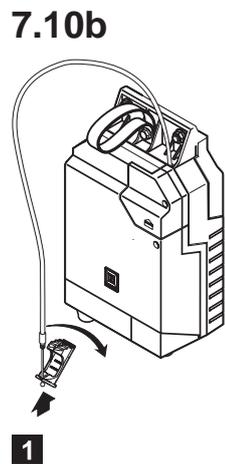
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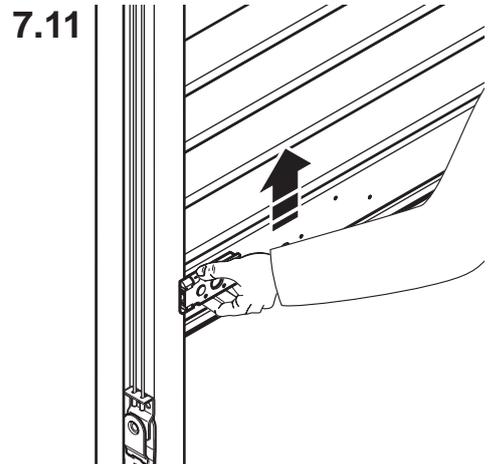
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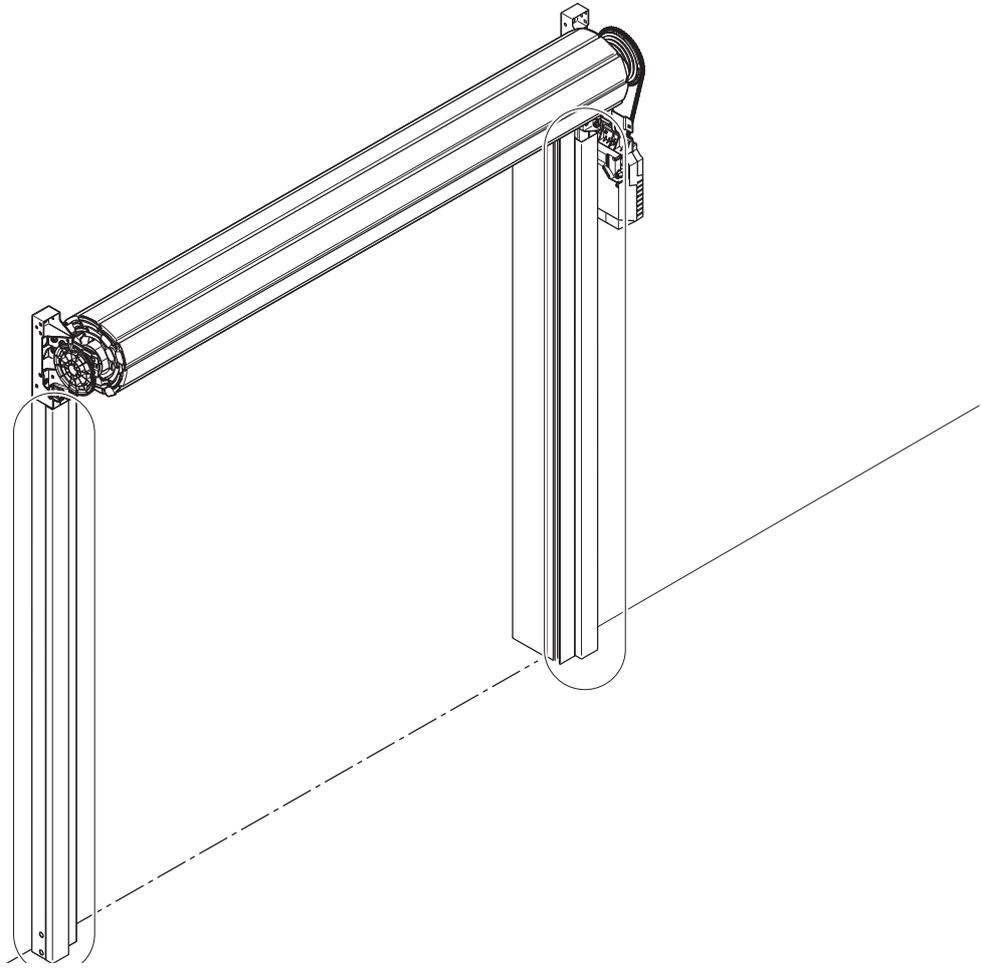
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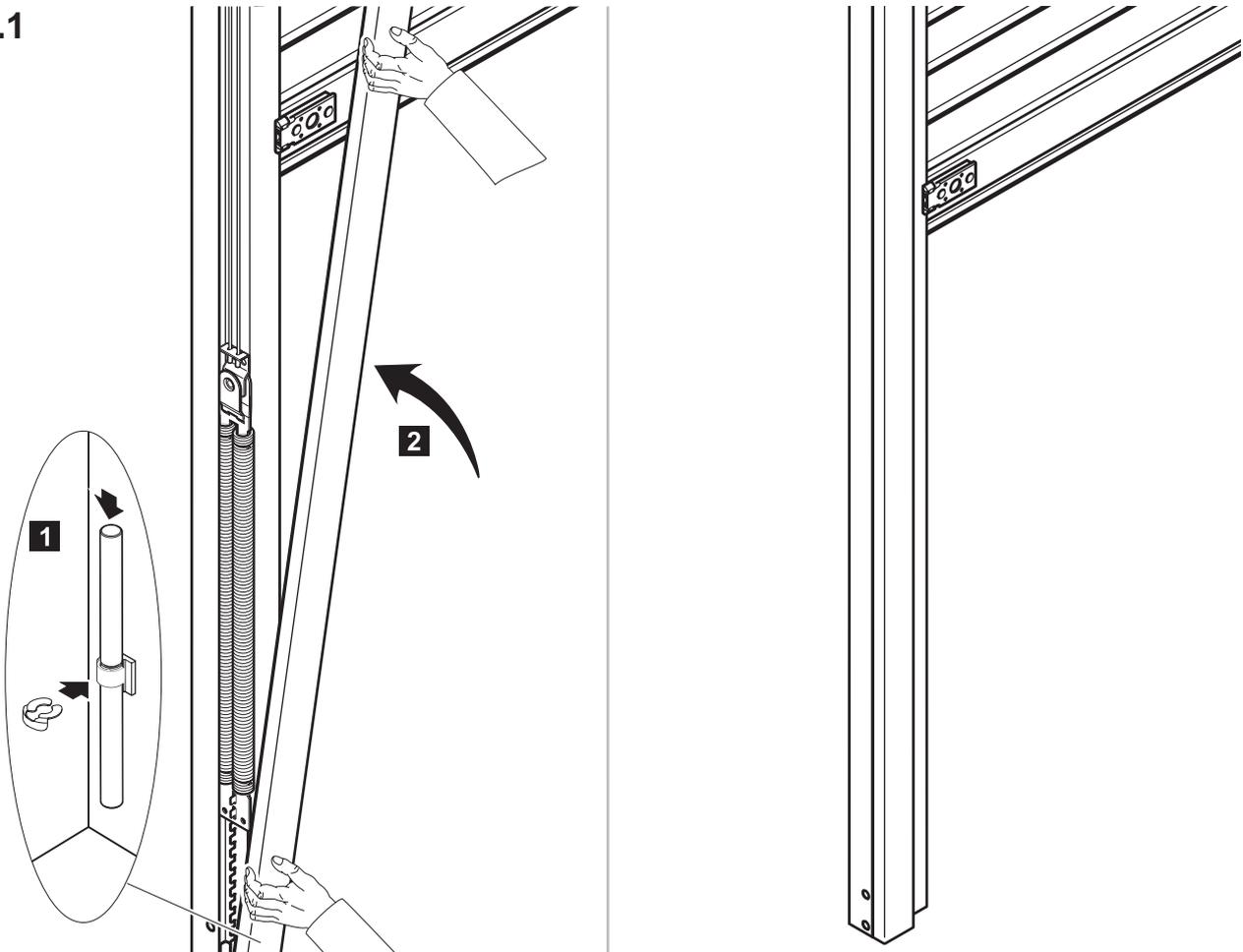
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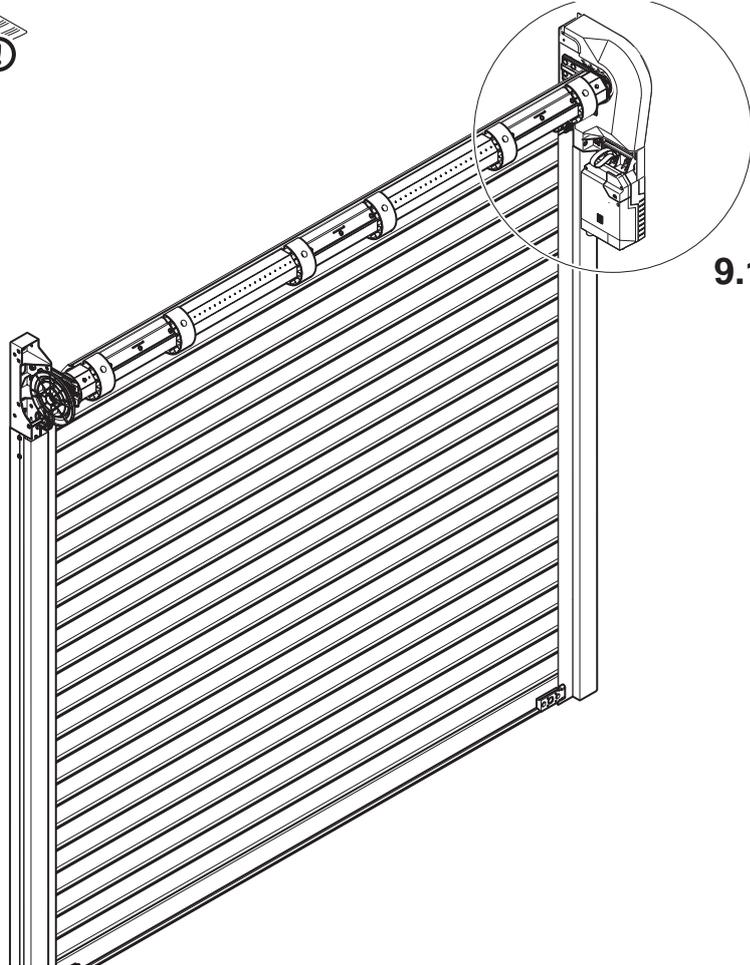
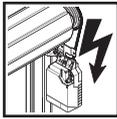
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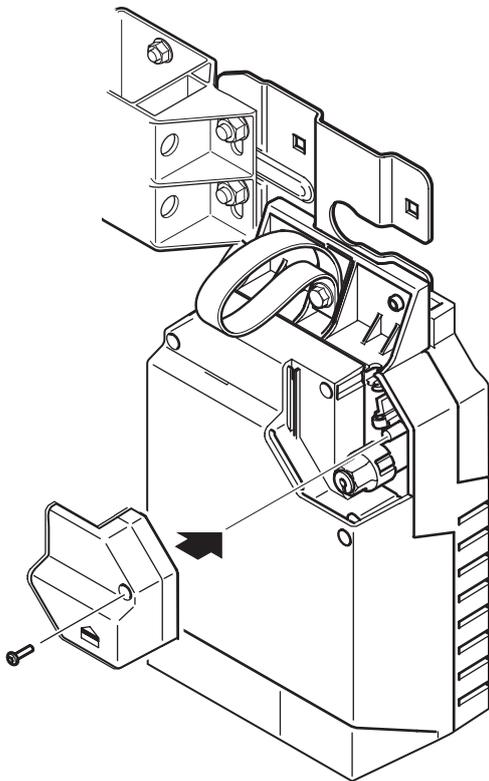


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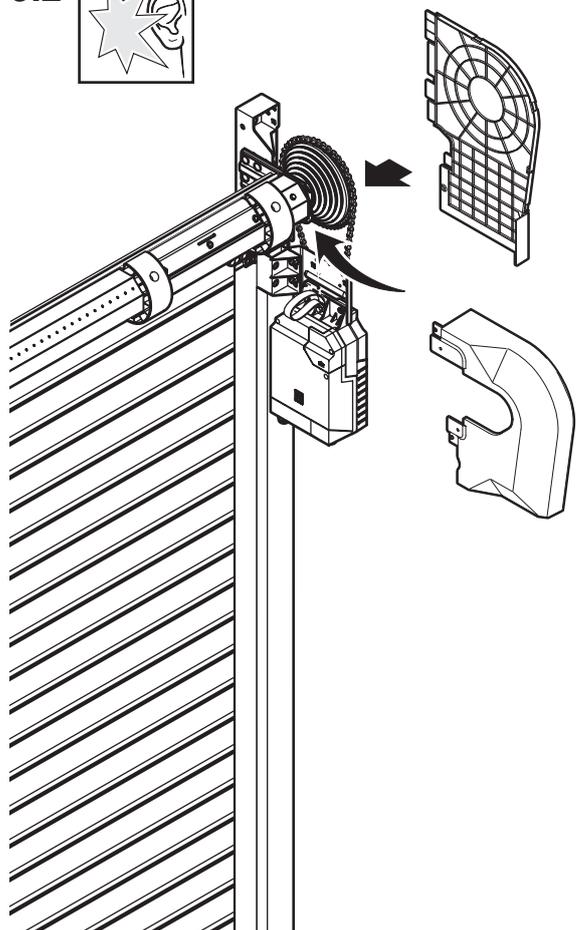


9.1 - 9.2

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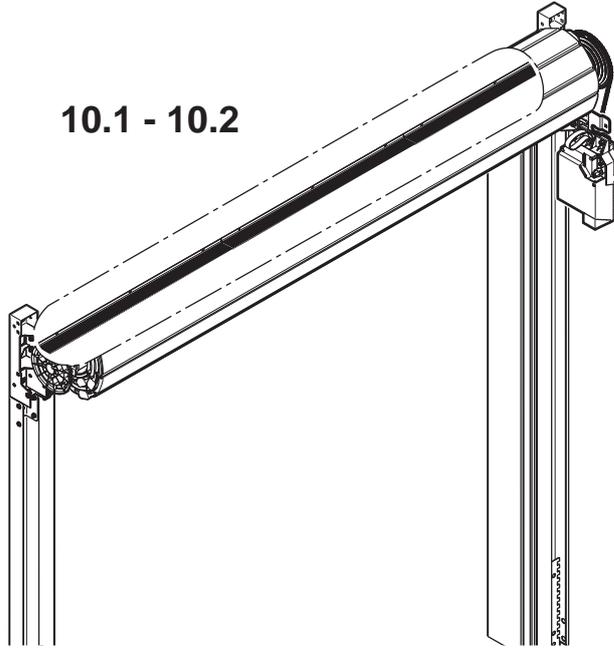


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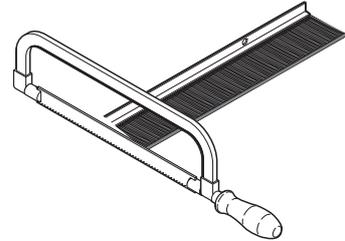
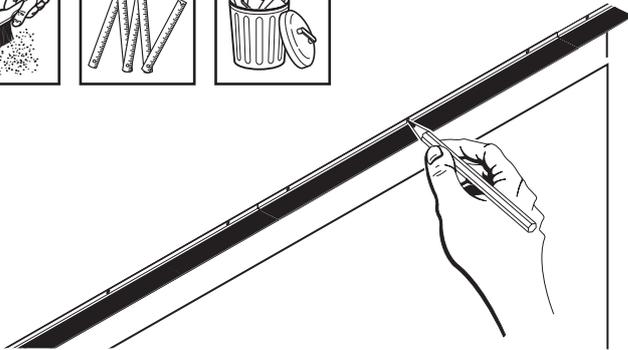


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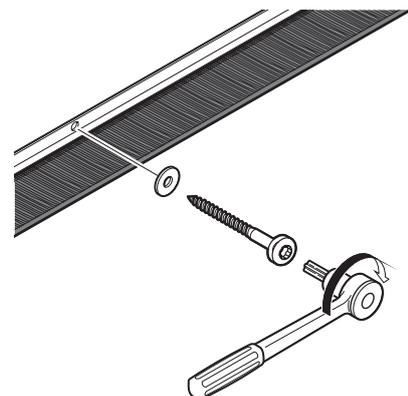
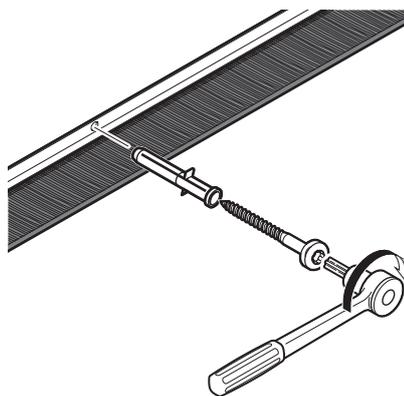
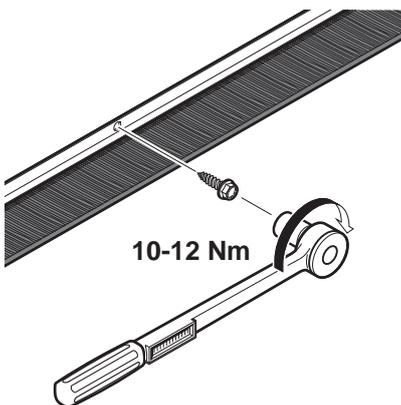
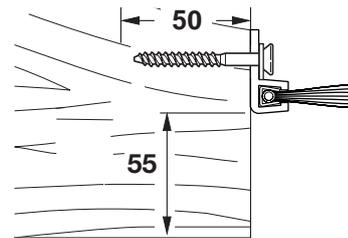
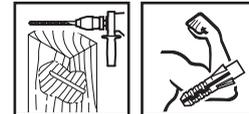
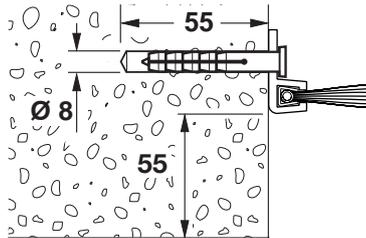
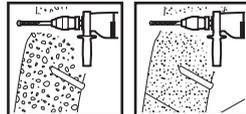
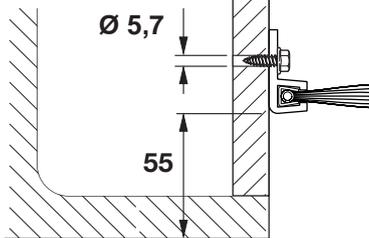
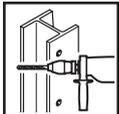
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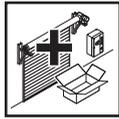
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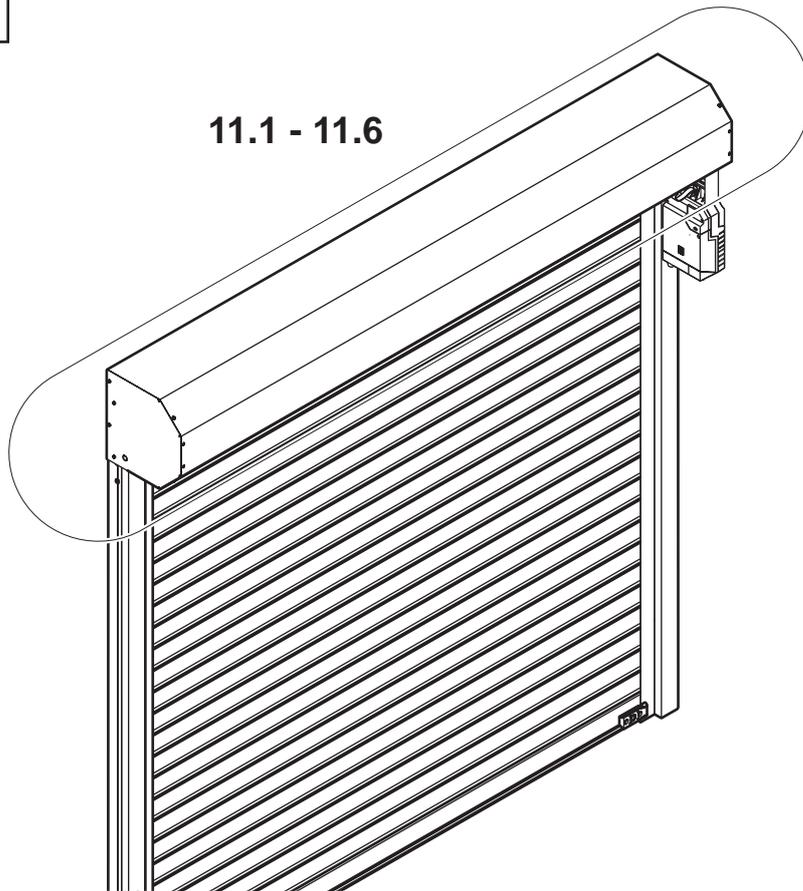
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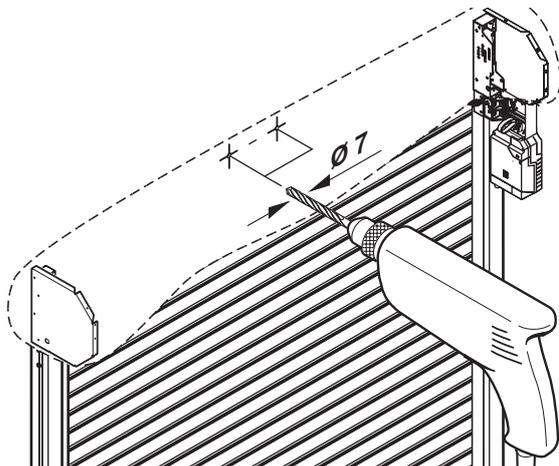
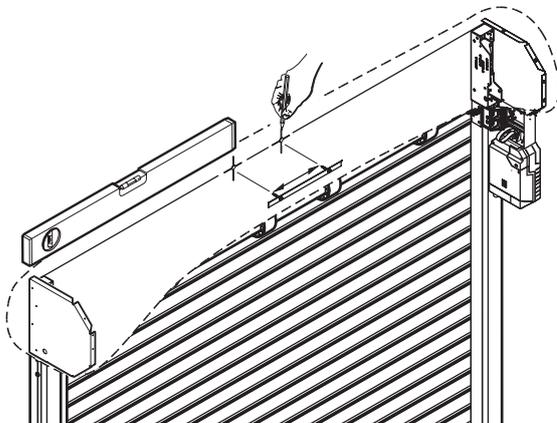
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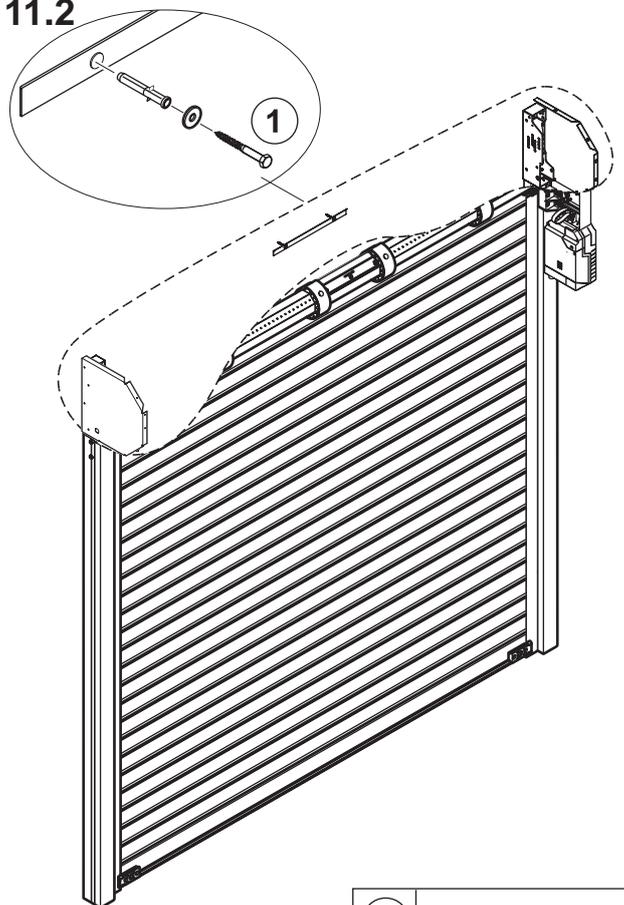
11.1 - 11.6



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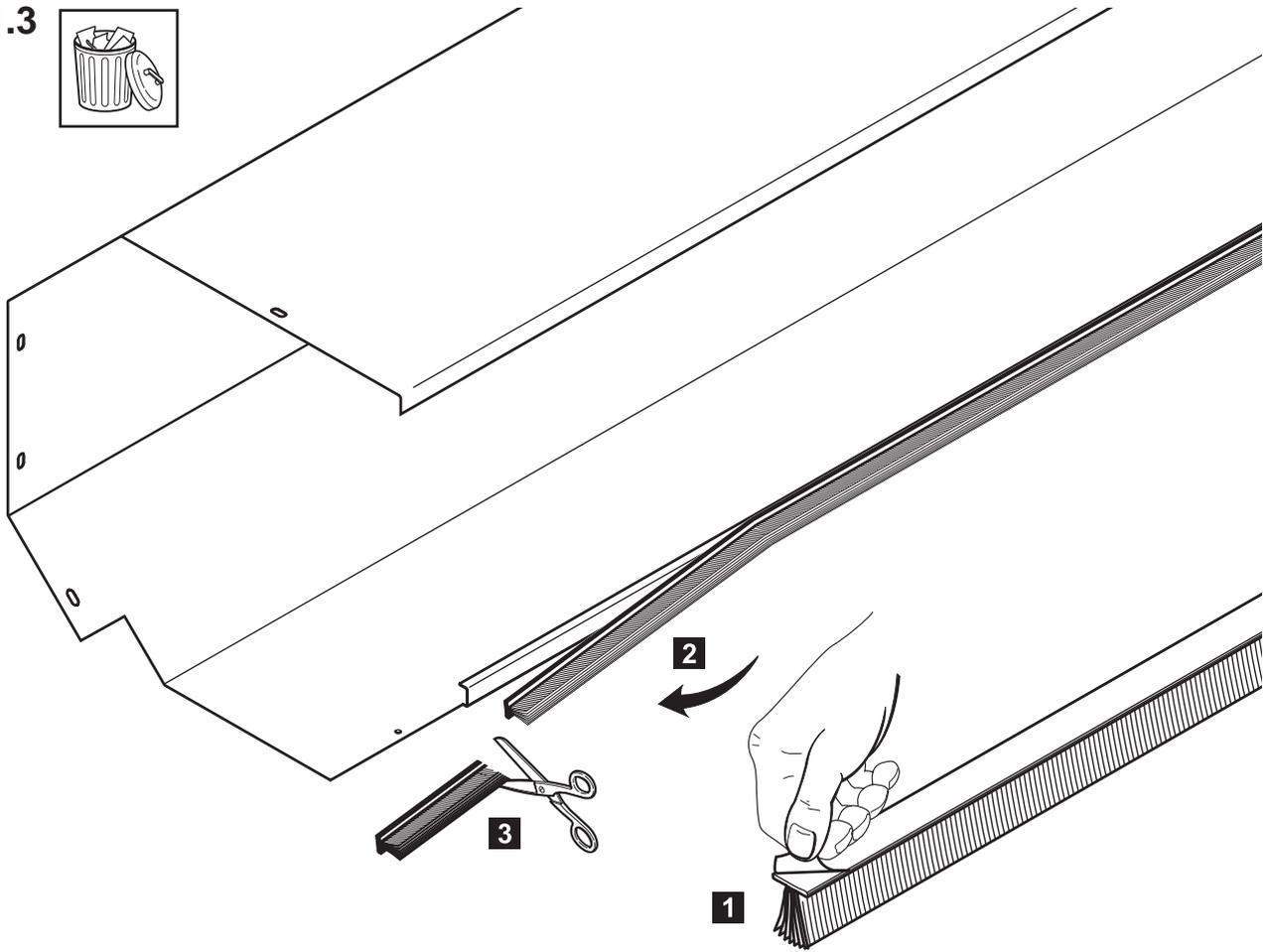


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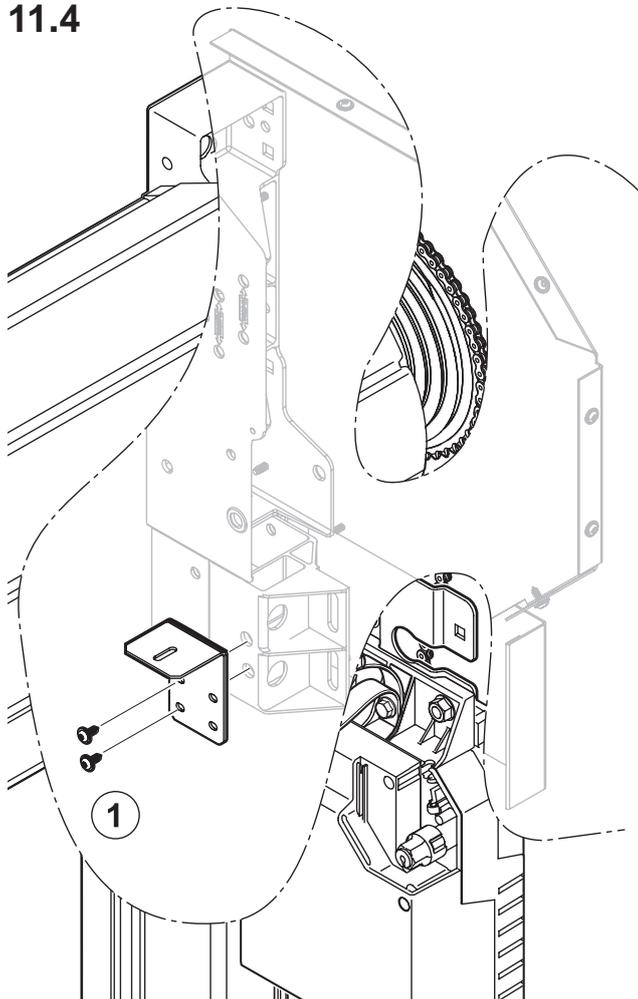


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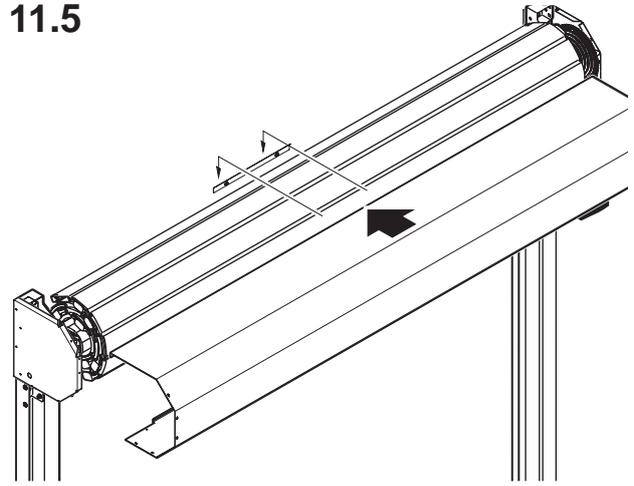
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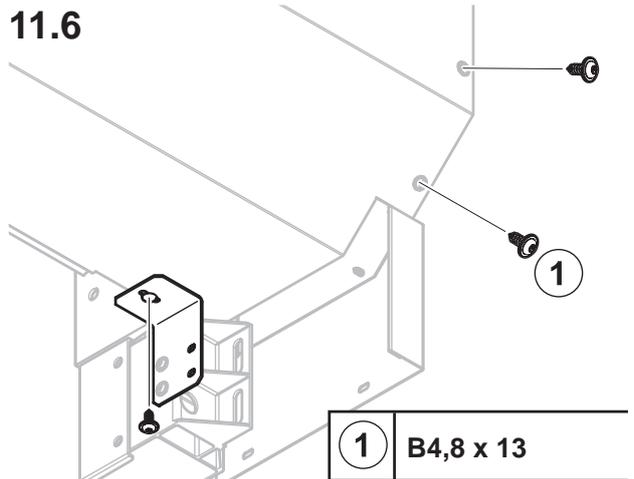
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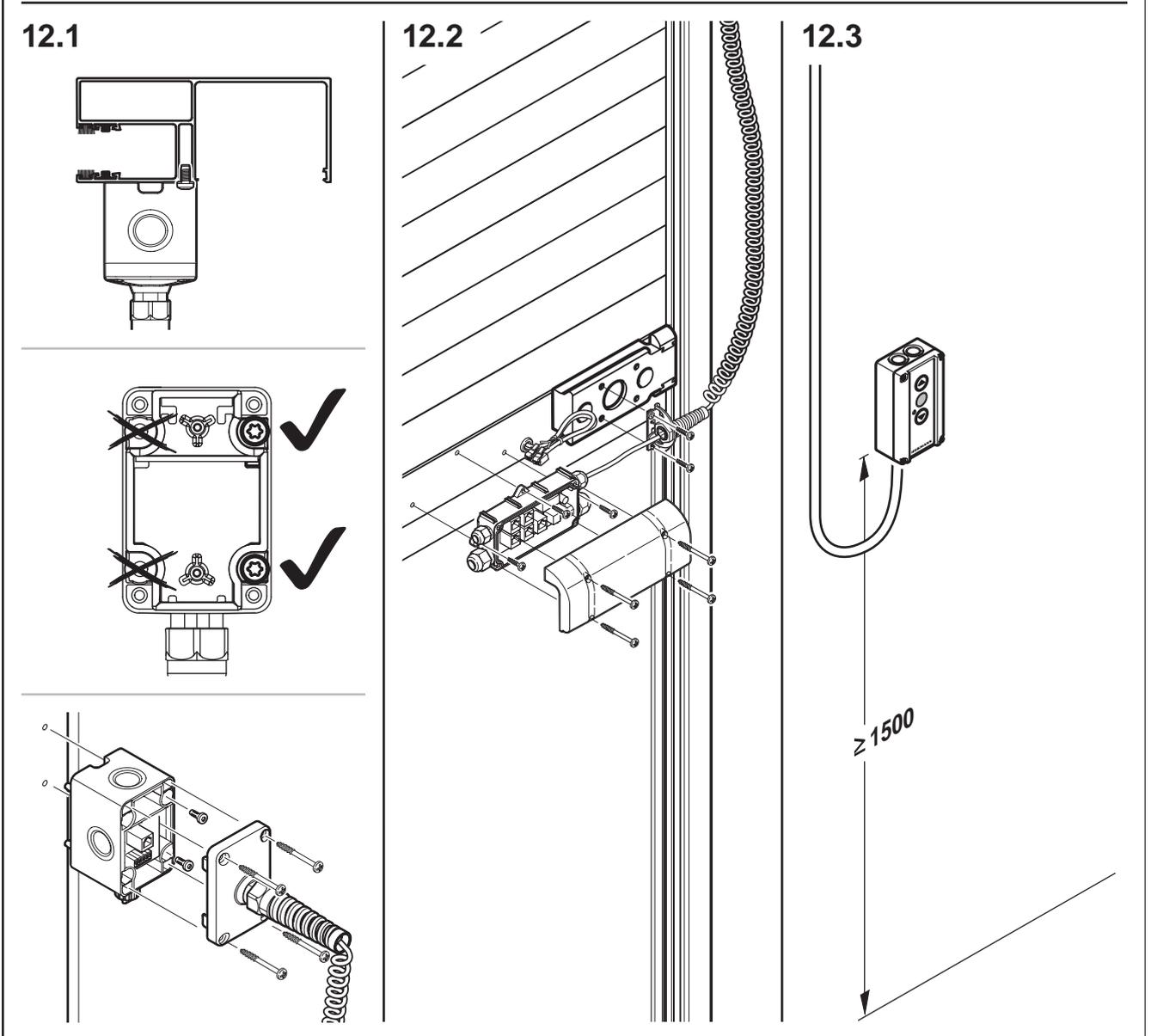
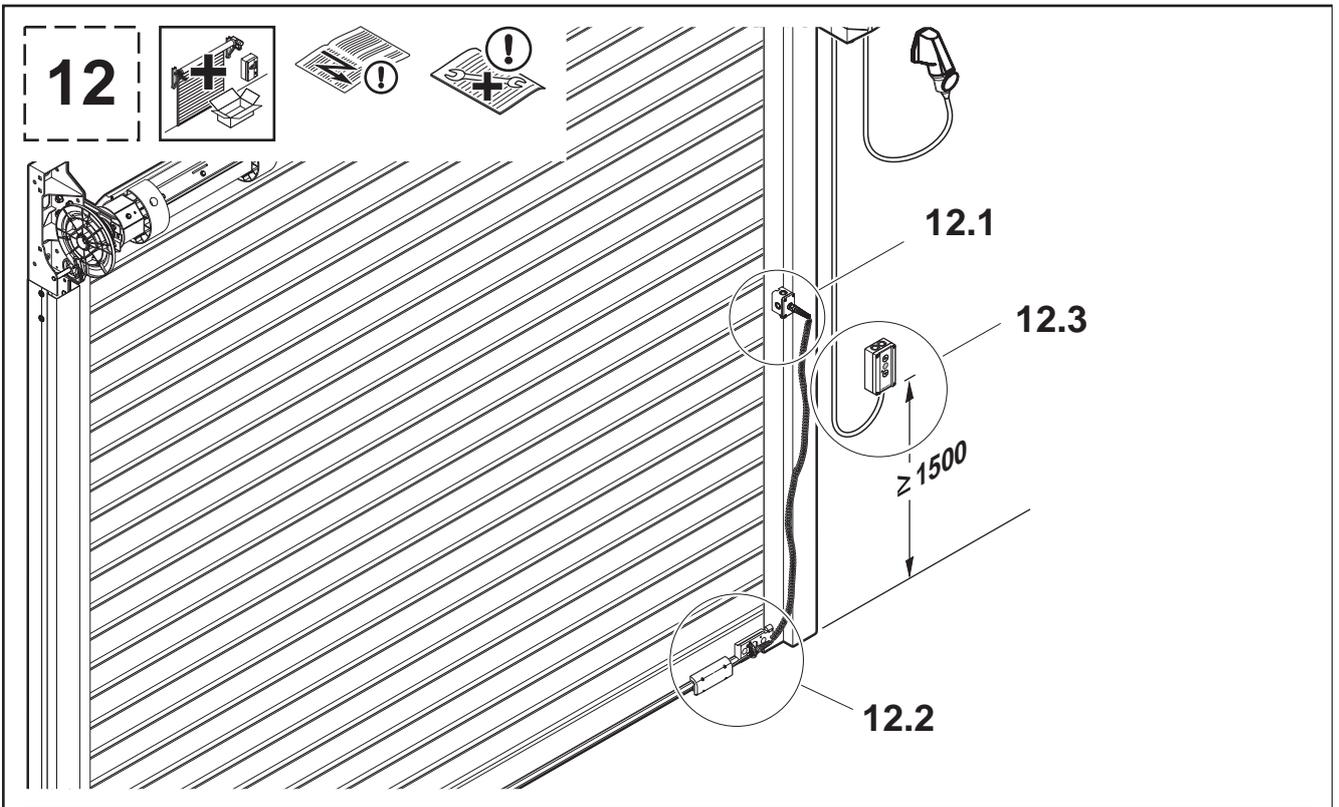
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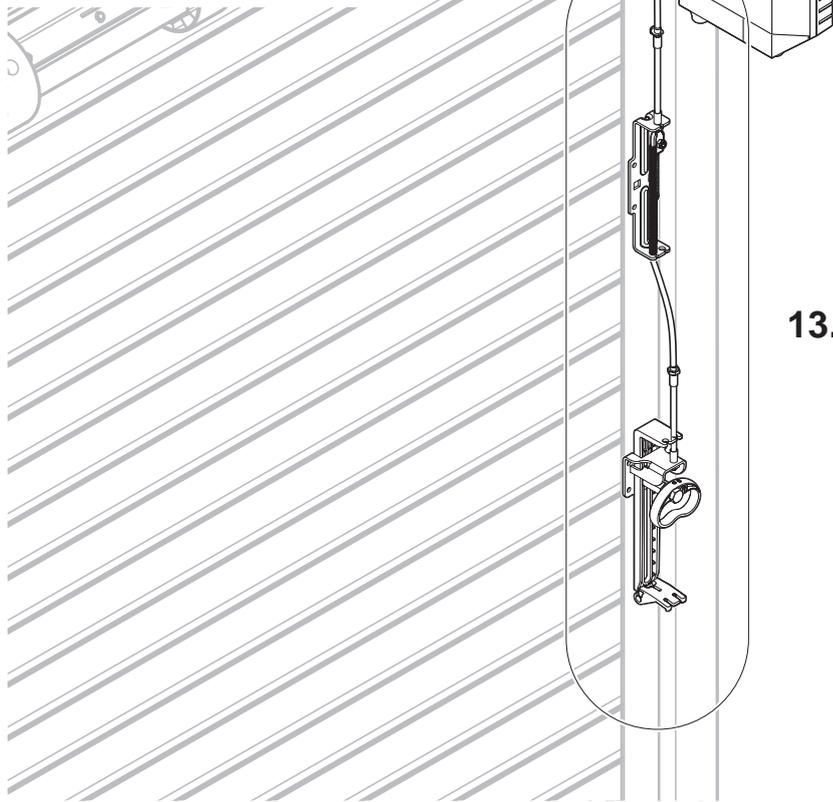
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① B4,8 x 13

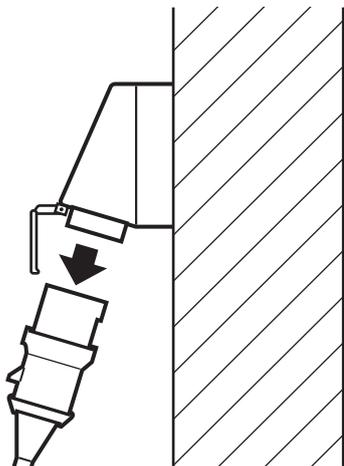
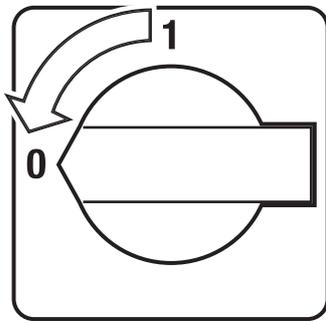


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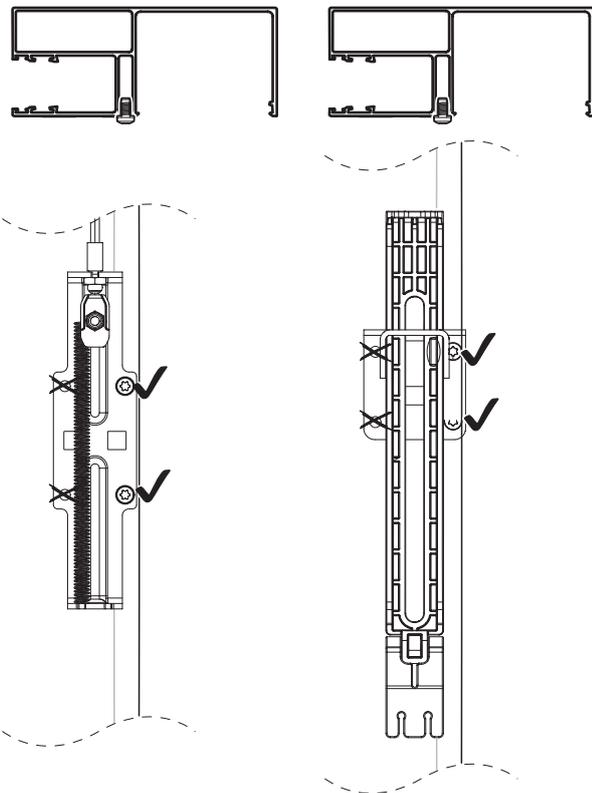


13.1 - 13.6

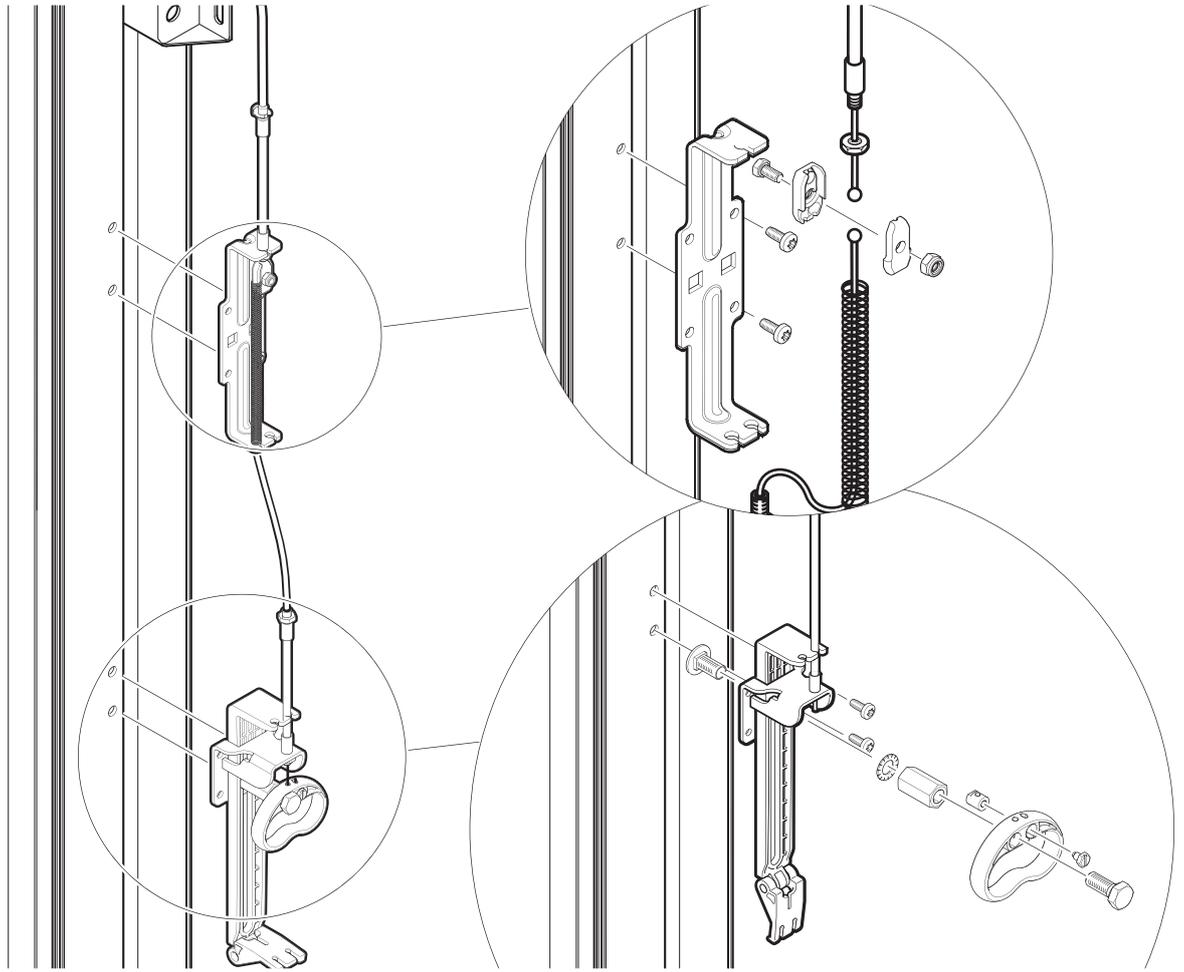
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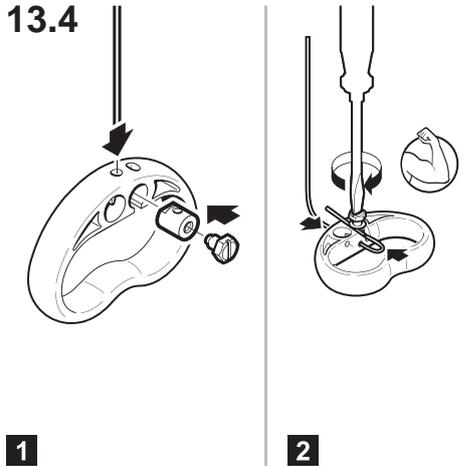
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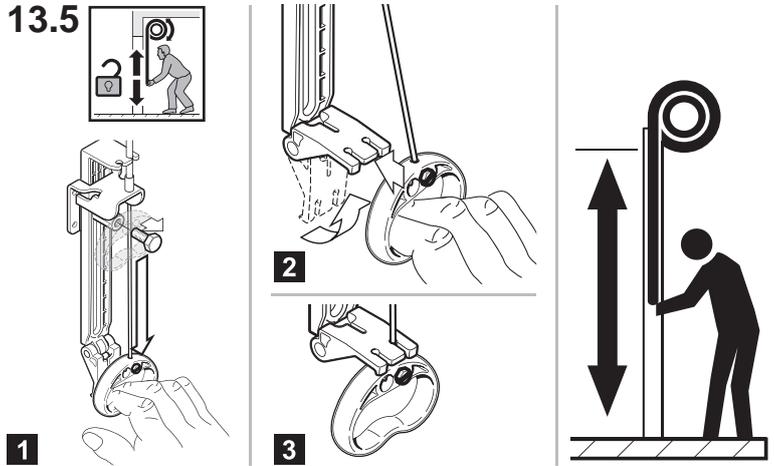
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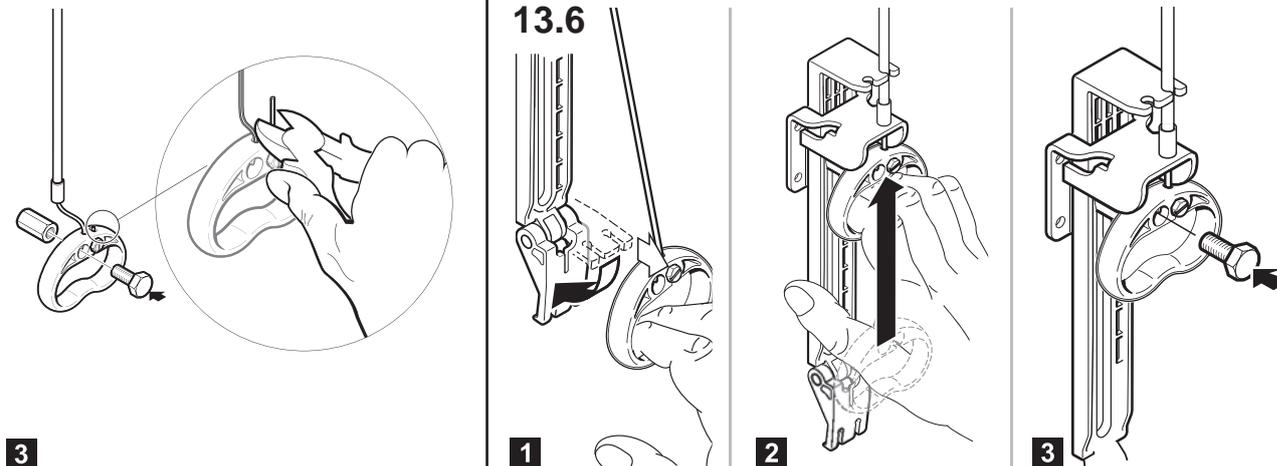
13.4



13.5



13.6



4.3 Control system and control elements

NOTE:

- Only attempt to carry out the electrical installation provided you are an electrical engineer or have received adequate instruction from an electrical engineer. More specifically, you must possess the following qualifications:
 - You must recognise the hazards that electricity can cause.
 - You must be familiar with the applicable electrotechnical regulations.
 - You must be able to use and take care of the safety equipment.
 - You know how to give first aid.
- In addition, observe the following instructions:
 - Instructions for fitting, operating and service of the door control
 - Instructions for installation of electrical connections
 - Instructions for fitting additional electrical control elements
- Make sure that the electrical installation complies with the applicable safety requirements.
- Only fit the control under the following conditions:
 - The control is within sight of the door.
 - The control is out of the reach of children at a height of at least 1500 mm.

⚠ CAUTION
<p>External voltage or lead damage</p> <p>Electronics can be destroyed by external voltage or damage to the connecting leads.</p> <ul style="list-style-type: none"> ▶ Do not apply any external voltage to the connecting terminals of the control. ▶ Never pull on the connecting leads of the electrical components.

5 Initial Start-Up

⚠ CAUTION
<p>Defective door systems</p> <p>Putting a defective door system into service can lead to injuries and door system damage.</p> <ul style="list-style-type: none"> ▶ Before putting the door into service, check that it is in good working order and free of defects. ▶ Do not put the door system into service if it is defective.

5.1 Spring tension

Open and close the door with the operator disengaged. The door must remain in place at any opening height.

⚠ CAUTION
<p>Too low spring tension</p> <p>If the spring tension is too low, the door curtain may fall down. There is a danger of injury and damage to the door system.</p> <ul style="list-style-type: none"> ▶ Move the door into the Open end-of-travel position and increase the spring tension by changing the position of the spring in the locking strip.

ATTENTION
<p>Too high spring tension</p> <p>Spring tension that is too high may lead to damage to the door system.</p> <ul style="list-style-type: none"> ▶ Move the door into the Open end-of-travel position and reduce the spring tension by changing the position of the spring in the locking strip.

5.2 End-of-travel positions

The door's end-of-travel positions are set at the operator or the control.

NOTE:

Observe the instructions for the operator and control.

5.3 Test run

After fitting is complete, test the functional safety in accordance with the inspection plan (see *Inspection and Maintenance* on page 32).

Verify in the test log book (dated and signed) that a test run has been successfully completed.

On completing installation, a test run and the inspection, hand the entire door documentation over to the owner of the door system.

6 Operation

6.1 Safety instructions for door operation

NOTE:

As the operator or owner of the door system, you are responsible for ensuring that the following regulations are observed and complied with. All applicable regulations can be found in *Standards and directives to be observed* on page 2.

CAUTION

Danger of injury due to incorrect handling of door system

Handling the door system incorrectly can lead to injury. Observe the following safety instructions.

- ▶ You are responsible for ensuring that only suitably instructed persons operate the door. An instructed person (according to EN 12453) is anyone who fulfils the following requirements:
 - Has been shown how to operate the door safely.
 - Has received permission from you to use the door system.
- ▶ You are responsible for ensuring that children cannot operate the door system, neither via the control nor the control elements.
- ▶ Wait until the door has come to a complete halt before walking/driving into the door's area of travel.
- ▶ Never use the door to lift objects and/or persons.
- ▶ Whenever driving in or out of the opening, always check that the door curtain has travelled up far enough to provide the necessary passage height.
- ▶ Only ever operate the door system when all the protective devices and safety equipment are fitted and are in perfect working order.
- ▶ Do not dismantle or alter any of the protective devices. Do not put any of the protective devices out of operation.

ATTENTION

Damage due to incorrect handling of the door system

Handling the door system incorrectly can lead to damage to the door system. Observe the following safety instructions.

- ▶ Protect the door from aggressive and caustic substances, such as:
 - Nitrous acid from stone or concrete
 - Cement, plaster
 - Acids, alkali
 - Road salt
 - Coatings/paint with an aggressive action
 - Sealants with an aggressive action

NOTE:

Make sure you are familiar with the way the door control, the control elements and the operator work, so you know how to operate these devices properly (see instructions).

6.2 Emergency off

Proceed as follows during emergency off situations for doors with a WA 300 R S4:

- ▶ Pull out the CEE mains plug to disconnect from the power supply.
or
- ▶ Actuate the red main switch or the emergency-OFF button.

6.3 Emergency operation in the case of operator malfunctions

If the operator malfunctions or fails, you can manually open and close the door in emergency operation. Disengage the operator using the maintenance release or secured release (optional).

NOTE:

In this regard, follow the instructions in the manual supplied with the WA 300 R S4.

6.4 Operating conditions

The door system is intended for the following operating conditions:

Temperature range: –20°C to +60°C
Relative humidity: 0% to 60%

6.5 Wind load

ATTENTION

Damage to the door system due to wind load

The door curtain deflects under wind loads.

Door function is not guaranteed and door parts may be damaged during heavy wind loads.

- ▶ Never open or close the door during a wind force exceeding 8 Beaufort.

The following conditions may arise due to high wind loads:

- The door curtain can deform permanently.
- The door construction can suffer damage.

Follow these steps after a heavy wind load:

- Check the operational safety of the door system (see *Malfunctions and damage remedy* on page 32).
- Repair storm damage before putting the door system back into service (see *Storm damage* on page 32).

6.6 Information on the product characteristics

6.6.1 Abrasive wear and pressure marks

The design of the SB rolling door represents state-of-the-art technology. Pressure marks and abrasive wear, particularly on the top profiles, are design-related and cannot be avoided.

- ▶ In order to avoid excessive abrasion, remove any soiling (e.g. sand, dust, plastic particles etc.) at regular intervals.

NOTE:

Follow the directions for door cleaning and care (see *Cleaning and Care* on page 34).

6.6.2 Noise

Opening and closing the door produces a certain degree of noise related to the design. The noise emission does not exceed 70 dB(A).

Increased noise emission could occur under the following conditions:

- Heavy soiling on the door curtain (see *Cleaning and Care* on page 34)
- Incorrectly fitted door system

6.6.3 Windows

If conditions are damp and temperatures unfavourable, this can cause the window panes to mist up. This moisture will eventually dissipate and does not cause any long-term damage.

6.6.4 Deflection (bowing)

The curtain is flexible. A slight deflection of the door profiles in the unloaded state does not constitute grounds for concern nor does it impair the function.

Door width [mm]	Deflection [mm]
2000	2
3000	5
4000	8
5000	13

Deflection can be significantly increased under heavy wind loads.

7 Inspection and Maintenance

7.1 Obligation to inspect and maintain

NOTE:

As the owner or operator of the door, you must have the system inspected and maintained by a specialist (competent person as defined in EN 12635) once a year – in the case of more than 50 door cycles a day, every 6 months.

 CAUTION
<p>Ignoring the obligation to inspect and maintain</p> <p>The following problems may occur if you do not have the door inspected and maintained as specified:</p> <ul style="list-style-type: none"> • Risk of injury • Risk of damage • Nullification of the warranty <p>▶ Arrange for all the inspections and maintenance work to be carried out by a specialist company.</p>

7.2 Malfunctions and damage remedy

In the case of malfunctions call in a qualified specialist (competent person in accordance with EN 12635) immediately to inspect and repair the door system.

7.3 Original spare parts

Only use original spare parts. They always meet the technical requirements laid out by us.

7.4 Tension springs and cables

NOTE:

The spring assemblies and cables are wearing parts. Exchange the spring assemblies and cables after 25000 door cycles, at the latest.

 WARNING
<p>Ignoring damaged spring assemblies and cables</p> <p>Damaged spring assemblies and cables may lead to injuries and damage.</p> <ul style="list-style-type: none"> ▶ Immediately exchange damaged spring assemblies and cables. ▶ Follow all the inspection and maintenance advice relating to accessories.

 WARNING
<p>Use of incorrect spring assemblies and cables</p> <p>The use of incorrect spring assemblies and cables may lead to injuries and damage.</p> <ul style="list-style-type: none"> ▶ Only use the spring assemblies and cables listed on the data label. ▶ Follow all the inspection and maintenance advice relating to accessories.

 WARNING
<p>Exchanging spring assemblies or cables without using the security bolts</p> <p>Exchanging spring assemblies or cables without using the security bolts in the side guides may lead to injuries and damage.</p> <ul style="list-style-type: none"> ▶ Only exchange the spring assemblies or cables if the door curtain is in the Open end-of-travel position, the grip handle has been fitted to the bottom profile and the security bolts have been inserted in the side guides. ▶ Follow all the inspection and maintenance advice relating to accessories.

7.5 Operator power

The voltage of the electricity supply must be 95% of the working voltage of the operator. Any voltage lower than this can lead to malfunctions in operating the door.

7.6 Storm damage

Examine the following parts of the door system after wind loads of 8 Beaufort or greater:

Component	Test criterion	OK
Door curtain	1. No permanent deformations which could impair operation of the door (e.g. curtain rolling up unevenly or obliquely)	

Component	Test criterion	OK
End pieces with wind locks	<ol style="list-style-type: none"> 1. No torn-out wind locks 2. No visible strain on the connection between wind lock end pieces and profile 	
Side guides	<ol style="list-style-type: none"> 1. No deformation 2. Firmly seated on the building structure 	

- ▶ If the wind locks have torn out, replace the end locks and the profiles concerned.

7.7 Inspection and maintenance plan

NOTES:

Please observe the following:

- The applicable regulations governing work safety when carrying out inspections and maintenance
- The notes in the section *Basic Safety Instructions* on page 4
- All inspection and maintenance advice relating to accessories

 WARNING
<p>Actuation by other persons</p> <p>Actuating the door system while inspecting or performing maintenance work can lead to injuries and damage.</p> <ul style="list-style-type: none"> ▶ Make sure that whenever checks, maintenance work and cleaning are being carried out, the door system cannot be actuated by other persons. ▶ Follow all the inspection and maintenance advice relating to accessories.

Only inspect and maintain this door if you are qualified to do so, i.e. are a competent person as defined in EN 12635. In other words, you have the suitable training, specialist knowledge and practical experience to allow you to carry out inspection and maintenance correctly and safely.

Component	Test criterion	OK
Side guides	<ol style="list-style-type: none"> 1. No deformation 2. Undamaged 3. Firmly seated on the building structure 4. Tightening torque of the fastenings meets the requirements 	
Slide profiles	<ol style="list-style-type: none"> 1. No deformation 2. Undamaged 3. Bristle seal fitted 4. Bristle seal has not been pulled out 	
Funnel	<ol style="list-style-type: none"> 1. Undamaged 2. Firmly seated on the side guide 	
Track rollers	<ol style="list-style-type: none"> 1. Undamaged 2. Easy to move 3. Clean 	
Data label	<ol style="list-style-type: none"> 1. Present 2. Undamaged 	

Component	Test criterion	OK
Door curtain	<ol style="list-style-type: none"> 1. No collision damage 2. No increased abrasive wear or pressure marks 3. Undamaged 4. No unusual soiling (sand, chemicals) 5. Curtain runs smoothly into the side guides 	
End pieces¹⁾	<ol style="list-style-type: none"> 1. Complete 2. Undamaged 3. Firmly seated on the profiles 4. Fixing material undamaged 	
Wind lock	<ol style="list-style-type: none"> 1. Complete 2. Do not touch each other when door curtain rolls up 	
Screw-on fixing brackets	<ol style="list-style-type: none"> 1. Complete 2. Not bent up 3. No slotted holes present 4. Firmly seated on the shaft 5. Fixing material complete 	
Bottom profile	<ol style="list-style-type: none"> 1. Undamaged 2. Grip handle is undamaged and firmly fitted 	
Bottom seal	<ol style="list-style-type: none"> 1. Undamaged 	
Support brackets	<ol style="list-style-type: none"> 1. No deformation 2. Fixing material complete 3. Tightening torque of the fastenings meets the requirements 	
Hand chain²⁾	<ol style="list-style-type: none"> 1. Easy to move 2. Snap-in hook present 3. Fixing material complete 4. Tightening torque of the fastenings meets the requirements 	
Operator²⁾	<ol style="list-style-type: none"> 1. No unusual sounds when running 2. No oil leaks 3. Undamaged control chain 4. Chain tension meets the requirements 5. Fixing material complete 6. Tightening torque of the fastenings meets the requirements 	
Barrel	<ol style="list-style-type: none"> 1. Horizontally balanced and aligned 2. Undamaged 3. Smooth running 4. No subsequent changes 5. Curtain rings undamaged 	
Shaft	<ol style="list-style-type: none"> 1. Firmly seated on the barrel 2. Locking rings present 	
Cable cone	<ol style="list-style-type: none"> 1. Undamaged 2. Firmly seated on the shaft journal 	

Component	Test criterion	OK
Pulley	<ol style="list-style-type: none"> 1. Undamaged 2. Moves smoothly on the axle 	
Cables	<ol style="list-style-type: none"> 1. Undamaged 2. Complete 3. Run parallel without twisting 	
Spring assemblies	<ol style="list-style-type: none"> 1. Undamaged 2. Complete 3. Correspond to the information on the data label 4. Spring tension has been correctly set 	
Operator WA 300 R S4²⁾	<ol style="list-style-type: none"> 1. Housing undamaged 2. No moisture in the control 3. CEE plug is easy to disconnect 4. At the CLOSE end-of-travel position no more than 3 - 4 profiles will travel into one another 	
Wiring²⁾	<ol style="list-style-type: none"> 1. Conforms to standard 2. Leads undamaged 3. Cable fixings OK 	
Closing edge safety device²⁾	<ol style="list-style-type: none"> 1. In perfect working order 2. Cable and housing undamaged 3. Setting of closing edge safety device STOP position meets the requirements 	
Radio control²⁾	<ol style="list-style-type: none"> 1. In perfect working order 	
Lockable bottom profile²⁾	<ol style="list-style-type: none"> 1. Undamaged 2. In perfect working order 3. Safety switch at correct setting and properly connected 	
Trap guard/ PVSB²⁾	<ol style="list-style-type: none"> 1. Undamaged 2. Fixing material complete 3. Tightening torque of the fastenings meets the requirements 	

1) This structural component is not used on the rolling grille or the test criterion is not applicable

2) Optional components

8 Cleaning and Care

ATTENTION
<p>High-pressure cleaner</p> <p>Cleaning the door system with a high-pressure cleaner can lead to door system malfunctions and damage.</p> <ul style="list-style-type: none"> ▶ Do not use any high-pressure cleaners for cleaning the door system.

8.1 Door curtain

- Use warm water together with a neutral, non-abrasive cleaning agent (household detergent, pH value 7).
- To clean the surface, use only a soft cloth or a window leather.
- Rinse off any dirt and dust particles with clear water.

ATTENTION
<p>Rubbing panes dry</p> <p>Scratches may occur.</p> <ul style="list-style-type: none"> ▶ Do not rub panes dry.

8.2 Safety equipment and photocells

Clean the lenses and reflectors regularly with a soft, dry, lint-free towel. Soiled optics can impair function.

9 Extension and Conversion

 WARNING
<p>Use of non-authorized components</p> <p>Non-authorized components could overload the door construction. This could lead to serious injuries and damage.</p> <ul style="list-style-type: none"> ▶ Any conversion of the door system requires the express permission of the manufacturer. ▶ Only use components that have been approved by the manufacturer.

NOTE:

Carrying out any structural alterations to the product without the manufacturer's permission renders the warranty and product liability null and void.

10 Dismantling

NOTE:

When dismantling the door, observe the applicable regulations governing work safety.

1. Open the door fully.
2. Remove the stops on the bottom profile.
3. Carefully roll up the door by hand.
4. Tape round the door curtain several times with strong adhesive tape (e.g. packing tape) to prevent it from unrolling.
5. Drive a forklift with suitable pallet underneath the door curtain so that the door curtain lies on the pallet.
6. Loosen the fastening on the support brackets and side guides.
7. Lower the door system slowly using a suitable lifting device (forklift, crane).
8. Dismantle the door into component parts and dispose of them properly.

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