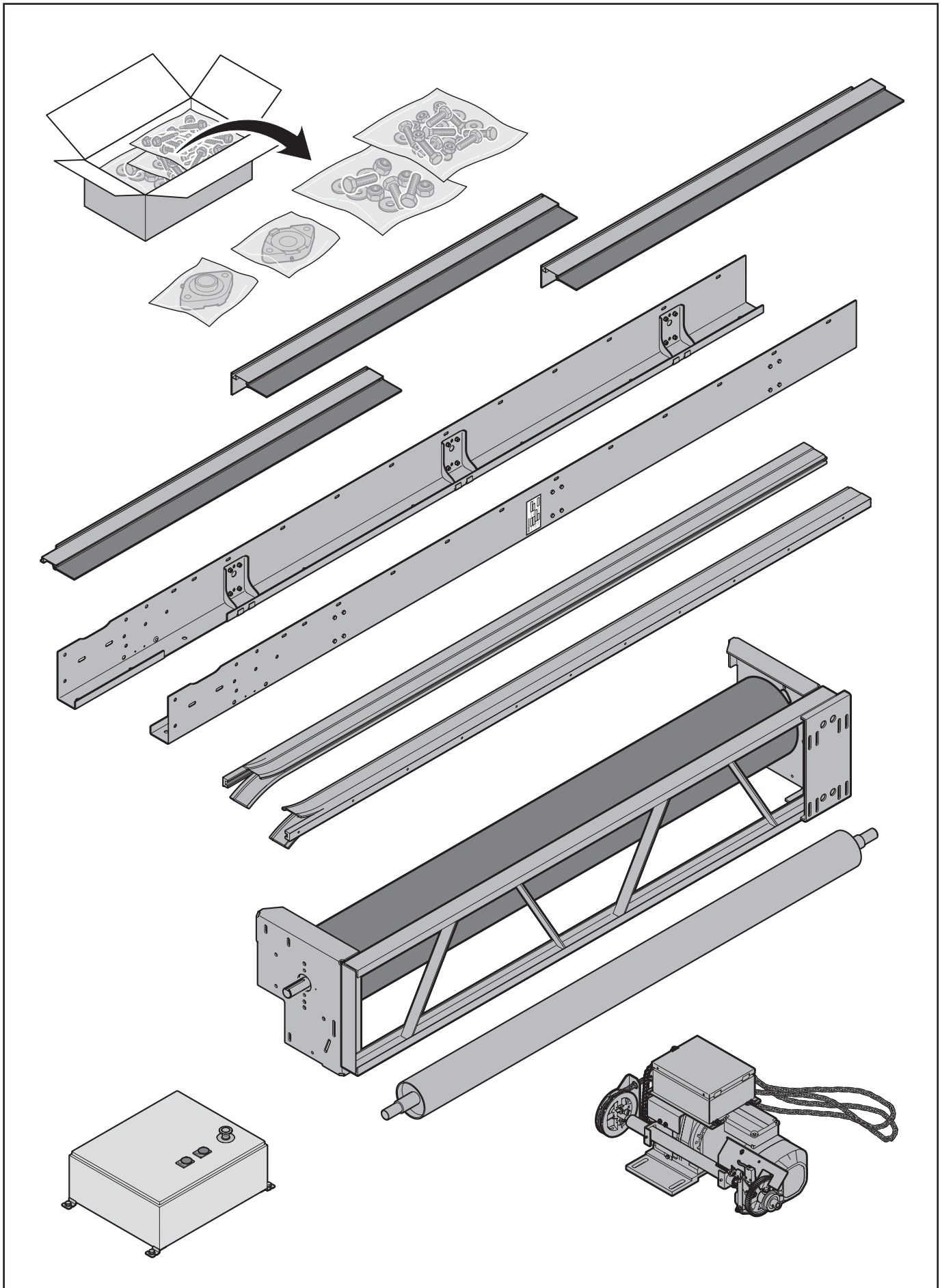


EN

Mechanical Installation Instructions for Standard Door


HD SERIES Chain Drive (HD-CD 3025, HD-SD 3020, HD-SD 3050, HD-M 1500)



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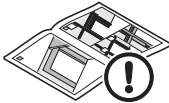
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 **Illustrated Section 10**

Dear Customer,

We are delighted that you have decided to choose a high-quality product from our company.

1 About These Instructions

These instructions are divided into a text section and an illustrated section. The illustrated section can be found after the text section.

ATTENTION
The illustrated steps throughout show the HD-CD 3025 but apply to all chain drive models, except for step 7 which shows the unique steps required for each door model Operator variation.

The information contained within this manual will allow you to install your Hörmann to maximize its life and give you years of trouble free operation.

Do not install or operate this product until you have read and understand the contents of this manual and the electrical schematic, wiring diagram.

These instructions are **original instructions** as outlined in the EC Directive 2006/42/EC. Read through all of the instructions carefully: they contain important information about the product. Pay attention to and follow the instructions provided, particularly the safety instructions and warnings.

Please keep these instructions in a safe place and make sure that they are available to all users at all times.



Proper operation and competent maintenance influence the performance and longevity of your HD SERIES door. Operating errors and inadequate maintenance lead to avoidable failures. Only competent operation and proper maintenance will guarantee satisfactory, long-term operational safety.

If you have any questions about this manual or how to install, maintain, or use the product, contact Hörmann. Refer to the serial number when contacting Hörmann. The serial number can be found on the electric operator, control box, and drive side mounting angle.

1.1 Further applicable documents

Depending on the ordered accessories, the delivery includes further instructions, e.g. instructions on how to control the door. Also read these instructions carefully and thoroughly. Pay attention to and follow the instructions provided herein, particularly the safety instructions and warnings.



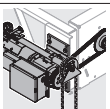
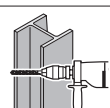
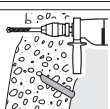
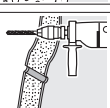

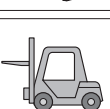


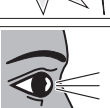
1.2 Warnings used







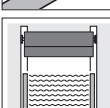


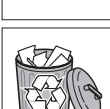
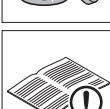
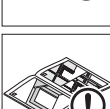


	The general warning symbol indicates a danger that can lead to injury or death . In the text, the general warning symbol will be used in connection with the caution levels described below. In the illustrated Section, an additional text instruction refers back to the illustration.
 DANGER	
Indicates a danger that leads directly to death or serious injuries.	

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⚠ WARNING
Indicates a danger that can lead to death or serious injuries.
⚠ CAUTION
Indicates a danger that can lead to minor or moderate injuries.
ATTENTION
Indicates a danger that can lead to damage or destruction of the product.

A Symbols

	Important step to verify proper installation
	Warning - dangerous electrical voltage
	Operator side
	Drilling through steel
	Drilling into concrete
	Drilling through wall panel
	Weld
	Use suitable lifting devices (e.g. forklift, crane)
	Remove residues
	Audible engagement
	Check

	Trap risk
	Warning - impact hazard
	Warning - pinch hazard
	Torque specification as per fastener manufacturer's instruction
	Warning potential safety hazard
	Grease
	For all doors with Light Curtains
	Correct positioning or action
	Incorrect positioning or action
	Remove and dispose of structural component or packaging
	See text section
	See illustrated section
	See separate manual: Electrical Diagrams and Operation Manual
	Required Hardware Kit - reference Step # printed on bag

B Abbreviations

- F** Floor to level line
- H** Height
- W** Width
- X** Inside to inside dimension

2  Safety Instructions

When used properly and for the intended purpose, HD SERIES doors are reliable and safe to operate. Nevertheless, when used incorrectly or for purposes other than those intended, they can pose a risk. We therefore expressly draw your attention to the safety instructions contained in the individual chapters.

2.1 Intended use

HD SERIES doors are used to close door openings, to save energy costs, to improve the room air conditions and to accelerate the flow of materials.

Intended use also includes paying attention to these instructions and observing inspection and maintenance conditions.

Failure to follow the procedures contained within this manual may result in injury or death, damage to property or the product. Any deviations to the procedures or alterations to the product that are not authorized by Hörmann will automatically void the warranty and may cause injury or even death.

Any other or further use is regarded as non-intended use. The manufacturer / supplier is not liable for any damage resulting from this. The risk is borne solely by the user.

2.2 Qualification of personnel

Only qualified and instructed personnel may install, operate and maintain the HD SERIES door.

Two qualified installers (Technician training is available from Hörmann)

Qualified welder

Qualified electrician

Before commencing work the assigned personnel must read these instructions, particularly chapter 2.

For safety reasons, specify distinct responsibilities for operation, maintenance and repairs to ensure that there are no unclear assignments.

2.3 Standards and regulations

All electrical work must meet local, provincial, state and federal codes.

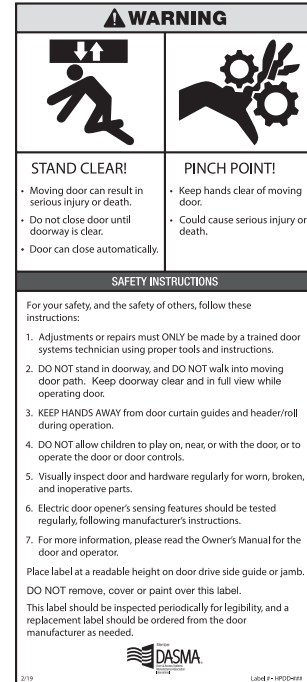
Fabricators and erectors responsible for welding structures fabricated or erected under CSA-S16 (the Design Standard for structural steel in Canada) shall be certified by the Canadian Welding Bureau to the requirements of CSA Standard W47.1 (Division 1 or Division 2) or W55.3, or both, as applicable.

Part of the work may be sublet to a Division 3 fabricator or erector; However, a Division 1 or Division 2 fabricator or erector shall retain responsibility for the sublet work. These Standards are valid in Canada only thus the local equivalents must be applied outside of Canada. The U.S.A equivalent specification is called AWS D1.1/D1.1M and erector or

fabricator should be AWS certified welding fabricator certified under AWS QC17 or AWS B5.17.

2.4 Safety warning and instructions

- It is recommended that these 2 warning labels are placed in a visible location on or near door by the installer, to warn pedestrians about the safe use of this door.




2.5 Safety instructions for maintenance and troubleshooting

- Perform inspection and maintenance work as described in chapter 6. Comply with the maintenance intervals and note the information on the replacement of parts and sub-assemblies.
- Maintenance and troubleshooting may only be carried out by qualified personnel.
- Only use spare parts that comply with the technical requirements specified by the manufacturer. This is always guaranteed when original spare parts are used.
- Only carry out welding, cutting or grinding work on the HD SERIES door if this work has been expressly approved. There may be a risk of fire and/or explosion. Prior to welding, cutting or grinding, remove dust and combustible materials from the industrial door and its surroundings and ensure that there is adequate ventilation (to reduce risk of explosion).
- Before disassembling the operator, fix the shaft on the operator side (e.g. with a forklift).

3 Installation

3.1 General

 DANGER
<p>Primary power supplies</p> <p>Contact with the primary power supplies presents the danger of a deadly electric shock. For that reason, observe the following warnings under all circumstances:</p> <ul style="list-style-type: none"> ▶ Only qualified electricians may perform work on the primary power supplies. ▶ Ensure that the on-site electrical installation complies with the applicable safety requirements. ▶ Ensure that the national regulations governing the operation of electrical equipment are complied with. ▶ Install the control box for the HD SERIES door operator within sight of the door. ▶ Before undertaking any electrical work, disconnect the system from the primary power supplies and ensure that it cannot be inadvertently turned on. ▶ Ensure that all electrical power sources have been locked out and tagged out according to OSHA regulations and local electrical codes. Test the equipment to ensure it can't start moving and that the electrical power is disconnected prior to commencing work. ▶ Ensure that any local disconnects, fuses, or breakers are sized correctly for the product.

ATTENTION
<p>External voltage</p> <p>External voltage on the connecting terminals of the control will destroy the electronics.</p> <ul style="list-style-type: none"> ▶ Do not apply any external voltage (e.g. primary power supplies) to the connecting terminals of the control unit.

ATTENTION
<p>Pull forces on electric cables</p> <p>Pull forces on electric cables will destroy the electronics.</p> <ul style="list-style-type: none"> ▶ Never pull on the connecting leads of the electrical components.

NOTE:

All mounting fasteners to be sourced and supplied by installer. Refer to fastener instructions for torque specifications.

To install the door:

1. Limit access to the work site to authorized personnel only.
2. Check the on-site conditions for the door installation (check measurements).
3. Check the quality of the structure for its strength.
4. Choose appropriate fasteners.
5. The mounting surface must be free of obstructions. If the mounting surface is uneven use shims as necessary to ensure the door mounting hardware is installed plumb and in contact to the mounting surface.
6. Unpack the door and check for damage.

7. Verify the contents of the shipment with the packing slip to ensure that there are no missing parts.
8. If there is anything missing contact Hörmann immediately to allow prompt delivery of the missing parts and minimize any delays in the installation of the product.
9. Dispose of the packaging material.
10. Install the door as shown in the illustrated section.

NOTE:

When installing multiple doors at the same time, always ensure that all of the parts correspond to the correct serial number for each specific door.


Use the shop drawing to verify the opening size and assure all clearances are adequate prior to starting with the installation of the door.

Using a water hose, laser or transit level, mark a level line on each door jamb.

Measure the distance from the floor to the level line on each jamb (dimension F). If required, place a shim on the floor by the jamb where dimension F is the greatest. The shim should be the same thickness as the difference between the left and right dimension F.

The capacity of the crane or forklift must be sufficient to hoist the header assembly into place. Minimum height capacity for crane or forklift is dependent on the door model. Contact Hörmann for door specific size and weight.





3.2 Pre-charge and Stretch Springs

 WARNING
<p>Torsion springs</p> <p>Torsion springs store mechanical energy and can be extremely dangerous.</p> <ul style="list-style-type: none"> ▶ This portion of the installation should be carried out by a qualified door service technician.

See illustrations in **Step 8**

4 Putting into Service

 WARNING
<p>Faulty door</p> <p>A faulty door may injure persons or damage objects.</p> <ul style="list-style-type: none"> ▶ Only put the door into service if it is in perfect condition.

 WARNING	
	<p>Door movements</p> <p>Door travel may injure persons or damage objects.</p> <ul style="list-style-type: none"> ▶ Make sure that no persons or objects are in the door's closing area during operation. ▶ Never use the door to lift objects or persons. ▶ Never reach into the guides.
	
	

4.1 Setting the End-of-travel Positions

The end of travel positions of the door are set up in the operator limit box.

NOTE:

Follow the instructions supplied with the operator and control box.

1. Ensure the door's power supply is locked out when setting the limits to ensure it can't start up while working near or on the operator.
2. Assure the limit cams do not engage and damage the limit switches during manual chain hoist operation.
3. Open the limit box cover on the front of the operator. Rotate the limit cams away from the close limit switches to prevent contact during manual operation.
4. Engage the manual chain hoist and lower the door to the fully closed position. Check for proper curtain tracking while manually operating the door.
5. With the bottom bar about 24" (600 mm) from the floor, adjust the close limit cam to contact the close limit switch.
6. Use the manual chain hoist to cycle the door to the open position. With the bottom bar about 24" (600 mm) below the header, adjust the open limit cam to contact the open limit switch.
7. Make sure the limit cams lock into the cam guide plate prior to operating the door.

NOTE:

Open and close limit switches are fixed in position. The advanced open and close limit switches are adjustable by loosening their mounting bolts and sliding them in the slots of the backing plate. When the advanced close limit is engaged and a safety device is activated the door will stop and not reverse. When the control panel is equipped with a variable frequency drive the advanced open and close determine where the soft stop (slow down) begins.

- 1 = Advance close limit switch, 2 = Close limit switch,
- 3 = Advanced open limit switch (where applicable),
- 4 = Open limit switch, 5 = Limit cam, 6 = Cam guide plate,
- 7 = Limit box.

(see illustration 11.2)

4.1.1 CLOSE end-of-travel position

ATTENTION
<p>Exceeding the CLOSE end-of-travel position</p> <p>If the door travels beyond the <i>Close</i> end-of-travel position, the bottom edge may be compressed. This could disrupt the function of the safety reversing edge.</p> <ul style="list-style-type: none"> ▶ Never exceed the <i>CLOSE</i> end-of-travel position.

- ▶ Set the *CLOSE* end-of-travel position so that the bottom edge makes full contact with the floor. If the floor is sloping from side to side, the *CLOSE* end-of-travel position must be determined by the higher side of the door opening.

4.1.2 OPEN end-of-travel position





ATTENTION
<p>Exceeding the OPEN end-of-travel position</p> <p>If the door travels beyond the <i>OPEN</i> end-of-travel position, there is a risk of the door curtain slipping out of the side guides and sustaining damage.</p> <ul style="list-style-type: none"> ▶ Never exceed the <i>OPEN</i> end-of-travel position.

- ▶ Set the *OPEN* end-of-travel position so that the lower edge of the bottom profile corresponds to the dimension for the door height.

5 Operation

NOTE:

It is the responsibility of the company that sold the door to the enduser to ensure that the door is set up in such a way to provide adequate protection from accidental impacts / collisions with the door. Below are Hörmann Doors minimum recommendations when setting up a door to be used by sensors and timers to automatically open, close, and reverse the door when an obstruction is present. (see picture 1a, b)

 WARNING	
	<p>Door movements</p> <p>Door travel may injure persons or damage objects.</p> <ul style="list-style-type: none"> ▶ Make sure that no persons or objects are in the door's closing area during operation. ▶ Make sure that the door has opened completely before driving in or out! Never drive or walk through doorways unless the door has reached the <i>OPEN</i> end-of-travel position. ▶ 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. ▶ Never use the door to lift objects or persons. ▶ Do not reach into the guide, guide area or curtain roll while the door is in operation.
	
	


ATTENTION
<p>Emergency operation devices</p> <p>Too frequent use of the emergency operation devices may damage them. This will also void the warranty for the door.</p> <ul style="list-style-type: none"> ▶ Only use the emergency operation devices in the case of a power failure or during repair work.

ATTENTION
<p>Abrasive / corrosive environments, wind and heat</p> <p>Abrasive / corrosive environments, wind and heat may damage the door.</p> <ul style="list-style-type: none"> ▶ Protect the door from abrasive and corrosive materials: <ul style="list-style-type: none"> - Salt, stone or concrete - Cement - Plaster - Acids - Alkali - Road salt - Aggressive paints or sealants ▶ Avoid operating temperatures below: <ul style="list-style-type: none"> -40 °C (-40 °F) for SBR black curtains -49 °C (-56 °F) for EPDM blue / grey curtains

5.1 Instructed personnel

The door may only be operated by persons who have been instructed in its proper use. A person is considered to be instructed, if he / she has received instruction as to how to operate the door safely and has received permission from the owner to use the door system.

5.2 Brake Release Adjustment

 WARNING
<p>Failure to follow Brake Release Adjustment Procedure may result in Injury or Death.</p> <ul style="list-style-type: none"> ▶ Excessively releasing the brake while the chain hoist is engaged, will cause the gears to stick. If this occurs, wiggling the hand chain will disengage the gears. Refer to step 1 below to continue with the adjustment procedure.

The adjustment of the brake release keeps the operator's brake partially engaged, while releasing the brake slightly to ensure proper operation of the chain hoist. Such a brake adjustment will maintain the door if the hand chain is released.

5.3 Brake Release Adjustment Procedure

1. Make sure the door is in the fully closed position.
2. Unscrew the brake release's adjustment nuts. Move the adjustment bolt towards the gears to adjust the brake release so that the brake is **NOT** released when the chain hoist is engaged. Tighten the nuts. At this point, the chain hoist will **NOT** be able to move the door.
3. Unscrew the brake release's adjustment nuts. Slowly move (by small increments) the bolt towards the motor until the brake is partially released. At this point, the door will be difficult to move with the chain hoist.

4. Repeat step 3 until the door can be moved by the chain hoist. Make sure that the chain hoist releases by itself when the handchain is released. Make sure that the brake is only released when the chain hoist is engaged.
5. Tighten the brake release's adjustment nuts.

1 = Operator brake release handle, **2** = Chain hoist brake release lever, **3** = Decrease level of brake release, **4** = Increase level of brake release, **5** = Brake release adjustment nuts.

(see illustration 7.2)


5.4 Normal wear


The design of the HD SERIES door represents state-of-the-art technology. Pressure marks and abrasive wear are normal and cannot be avoided.



5.5 Emergency-OFF

- ▶ In emergency situations, de-energise the control box by turning the main power disconnect OFF, disconnecting the primary power supplies or, if available, actuating the red **emergency-OFF** button.

6 Inspection and Maintenance

 WARNING
<p>Unmaintained doors</p> <p>There is a danger of injury or damage if the door is not regularly maintained. This will also void the warranty.</p> <ul style="list-style-type: none"> ▶ Inspect and maintain the door regularly as described in these instructions or entrust this work to the door installer's service department.

 DANGER
<p>Primary power supplies</p> <p>Contact with the primary power supplies presents the danger of a deadly electric shock.</p> <ul style="list-style-type: none"> ▶ Before undertaking any electrical work, disconnect the system from the primary power supplies and ensure that it cannot be inadvertently turned on.

 WARNING	
	<p>Falling parts</p> <p>During installation and dismantling, parts may fall and injure persons or damage property.</p> <p>Covers and hoods (option)</p> <ul style="list-style-type: none"> ▶ Secure the covers / hoods (e.g. with a forklift) before dismantling. <p>Shaft</p> <ul style="list-style-type: none"> ▶ Secure the shaft (e.g. with a forklift) before dismantling the operator.

Only inspect and maintain the door yourself if you are a qualified specialist. 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.

Observe all the applicable regulations governing work safety.

In general, we recommend entrusting maintenance / inspection to the door installer's service department.

The high-speed door is low-maintenance. In normal operating conditions, all the bearings, including the gears, are lubricated for life and are maintenance-free.

6.1 Maintenance intervals

In compliance with the local guidelines for power-operated windows, doors and gates testing and maintenance of the door must be carried out once a month, and into the future at the same intervals.

Depending on the size of the door and the annual number of door cycles, we recommend the following maintenance intervals:

In the case of a higher number of door cycles (> 50,000 per year):

Servicing of the functional elements every six months:

- Electric operator and brake

Servicing of the following elements every month:

- function of reversing edge
- function of reversing photoeye
- open and close Limit settings
- loose fasteners
- curtain tracking

In the case of a lower number of door cycles:

Annual servicing in conjunction with the stipulated test procedures according to local regulations.

- ▶ Check the function of the photoeyes every six months.

6.2 Wearing parts

If provided, the indicated maximum assumable cycles or door cycles apply to the following wearing parts:

Wearing parts	Cycles	Period
Operator with VFD (60 % ON time)	1,000,000	5 years
All other Operators	-/-	2 years
Brake	250,000	2 years
Reversing edge transmitter battery	-/-	2 years
Door Seals / Wear strips	-/-	2 years
Curtain	-/-	Limited Lifetime
Light Curtains	-/-	2 years

7 Control Box

The control system is manufactured individually for each door ordered. The applicable wiring diagram is placed in the control box.

- ▶ Add the wiring diagram and software description to these instructions.

Each control cabinet has its own identification serial number.

- ▶ Always quote this number when calling the door installer or manufacturer for parts or technical support.

8 Malfunctions and Troubleshooting

In the case of malfunctions, contact the door installer's or manufacturer's service department.

Operator power

The operating voltage must be 230 V \pm 5 % or 460 V or 600 V \pm 5 %. If the voltage deviates beyond this, there may be problems with the operator power.

9 Cleaning and Care

Rubber curtain cleaning instruction - Use RV Rubber Roof Cleaner.

10 Extension and Conversion

WARNING

Unsuitable components

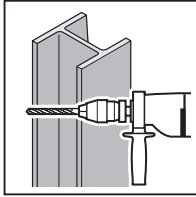
Unsuitable components could overload the door construction. This could lead to serious injury.

- ▶ Only use components approved by the manufacturer.

Only extend or convert this door system with the manufacturer's permission.

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

1A



1B

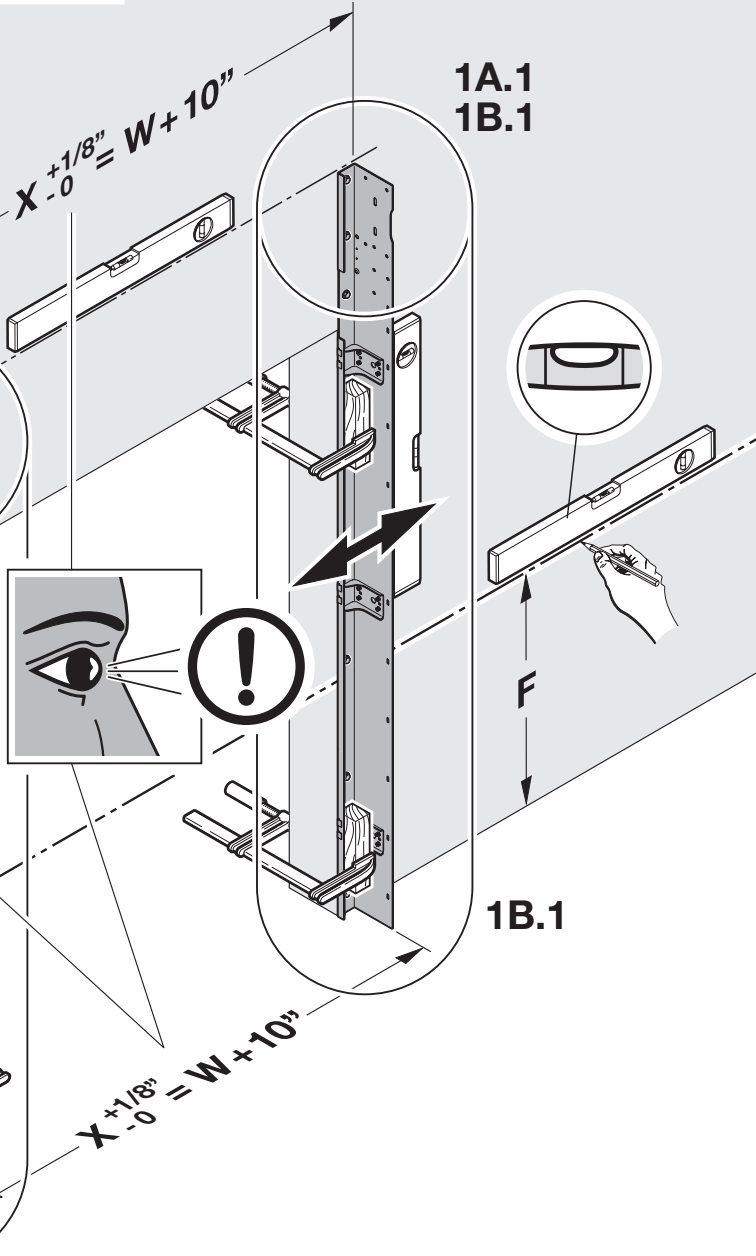


1A.1
1B.1

1A.1
1B.1

1B.1

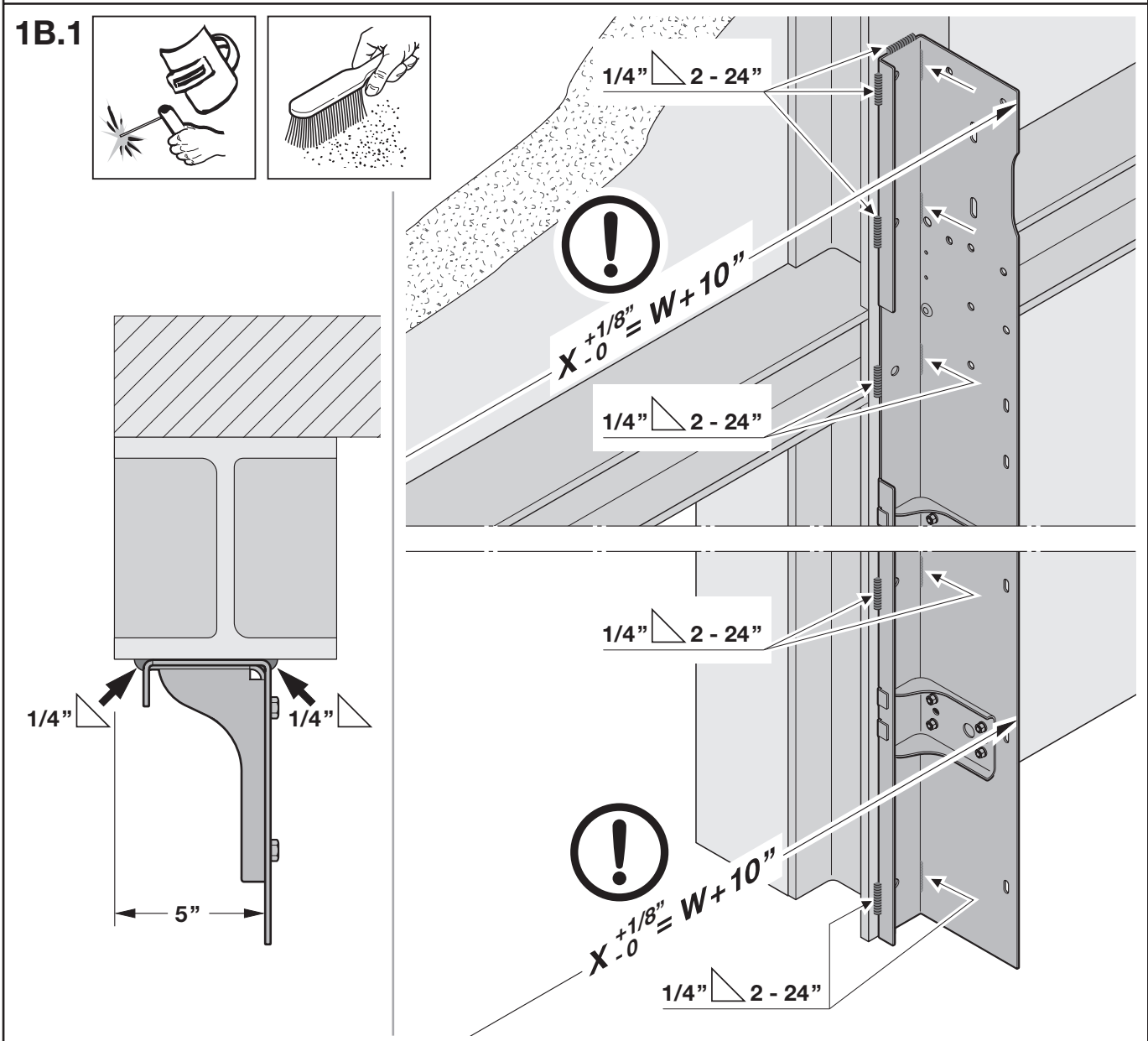
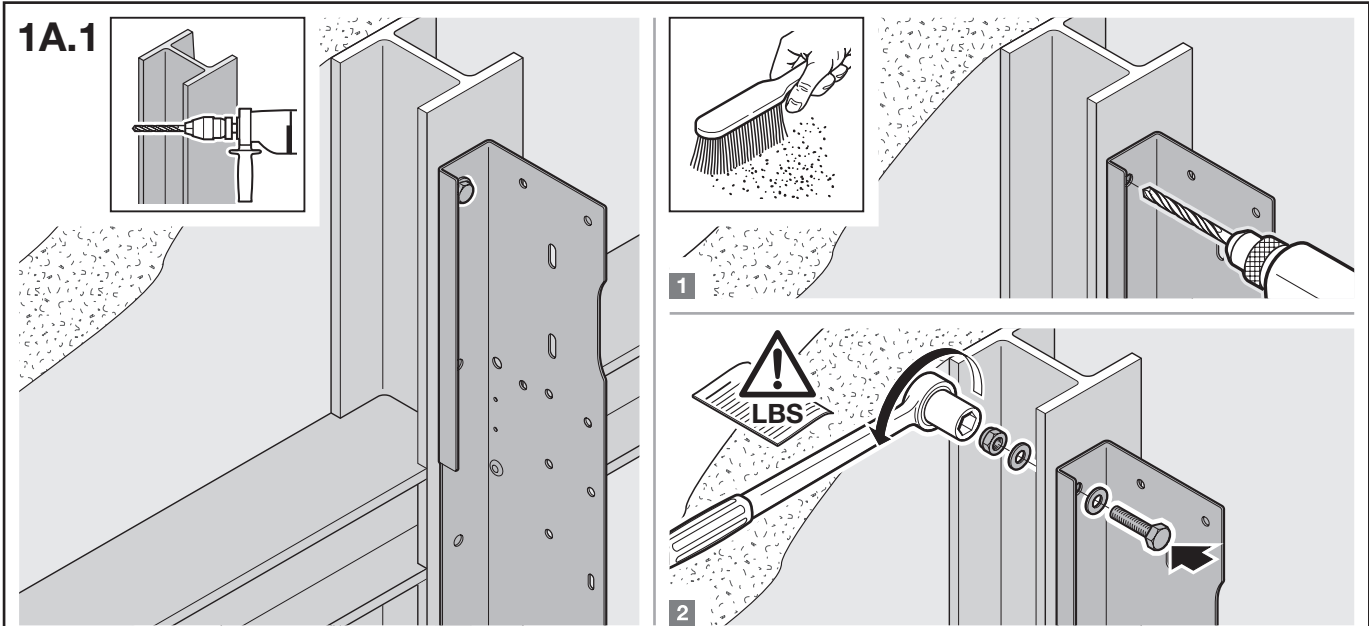
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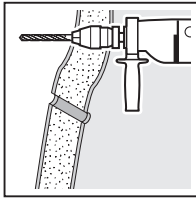
HÖRMANN

MODEL	<input type="text"/>	SERIAL #	<input type="text"/>
SIZE	<input type="text" value="XXX"/>	WIDTH x	<input type="text" value="XXX"/> HEIGHT
PRECHARGE	<input type="text"/>		
STRETCH	<input type="text"/>	MFG DATE	<input type="text"/>

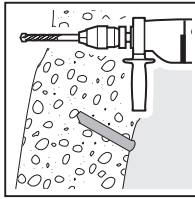




1C



1D



1C.1
1D.1

1C.1
1D.1

$X^{+1/8"}_{-0} = W + 10"$

$X^{+1/8"}_{-0} = W + 10"$

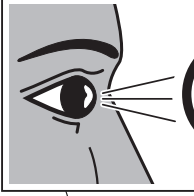
HÖRMANN

MODEL: SERIAL #:

SIZE: XXX WIDTH x XXX HEIGHT

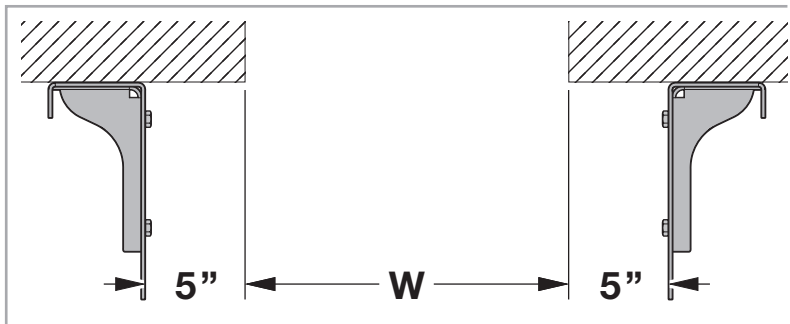
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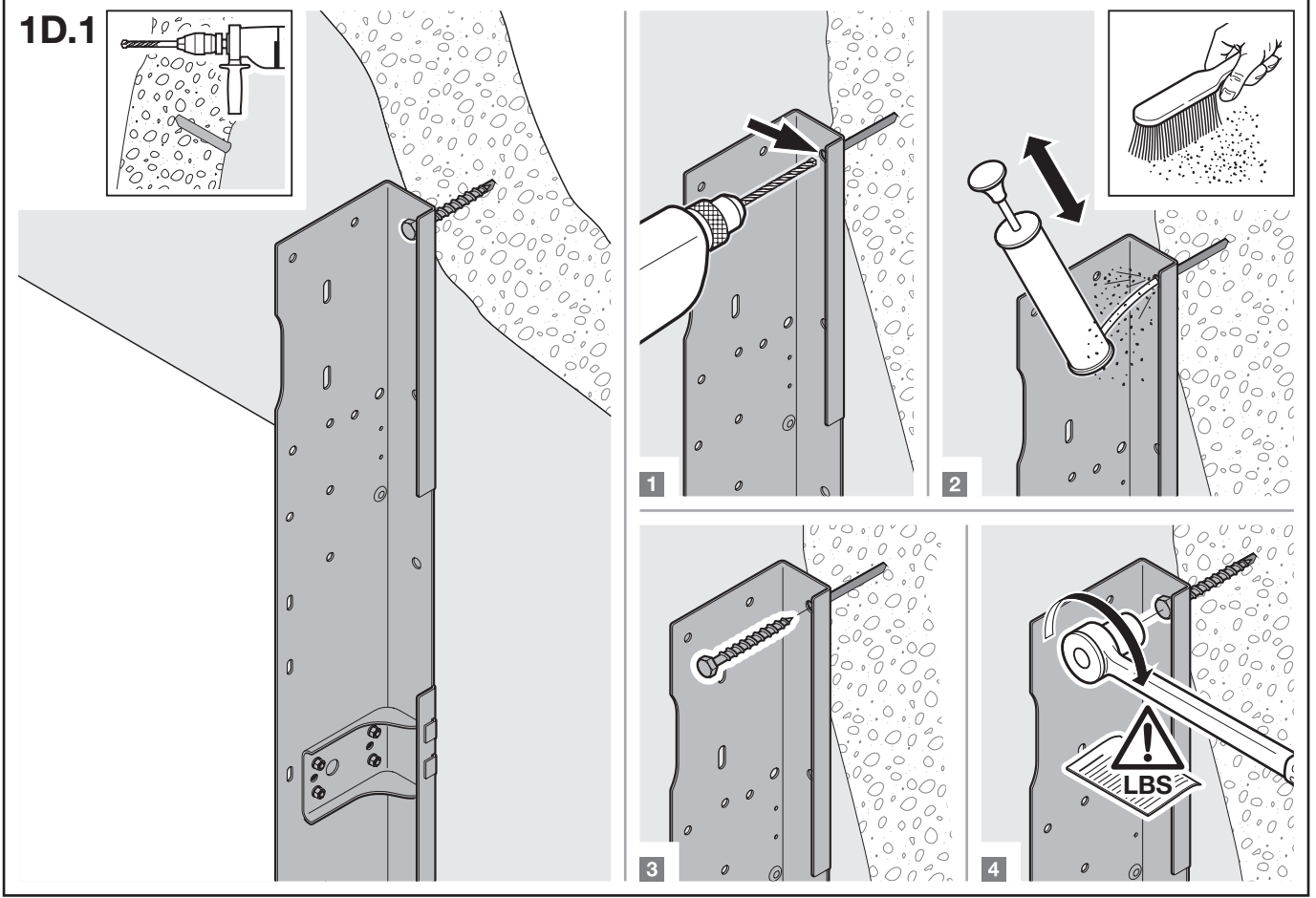
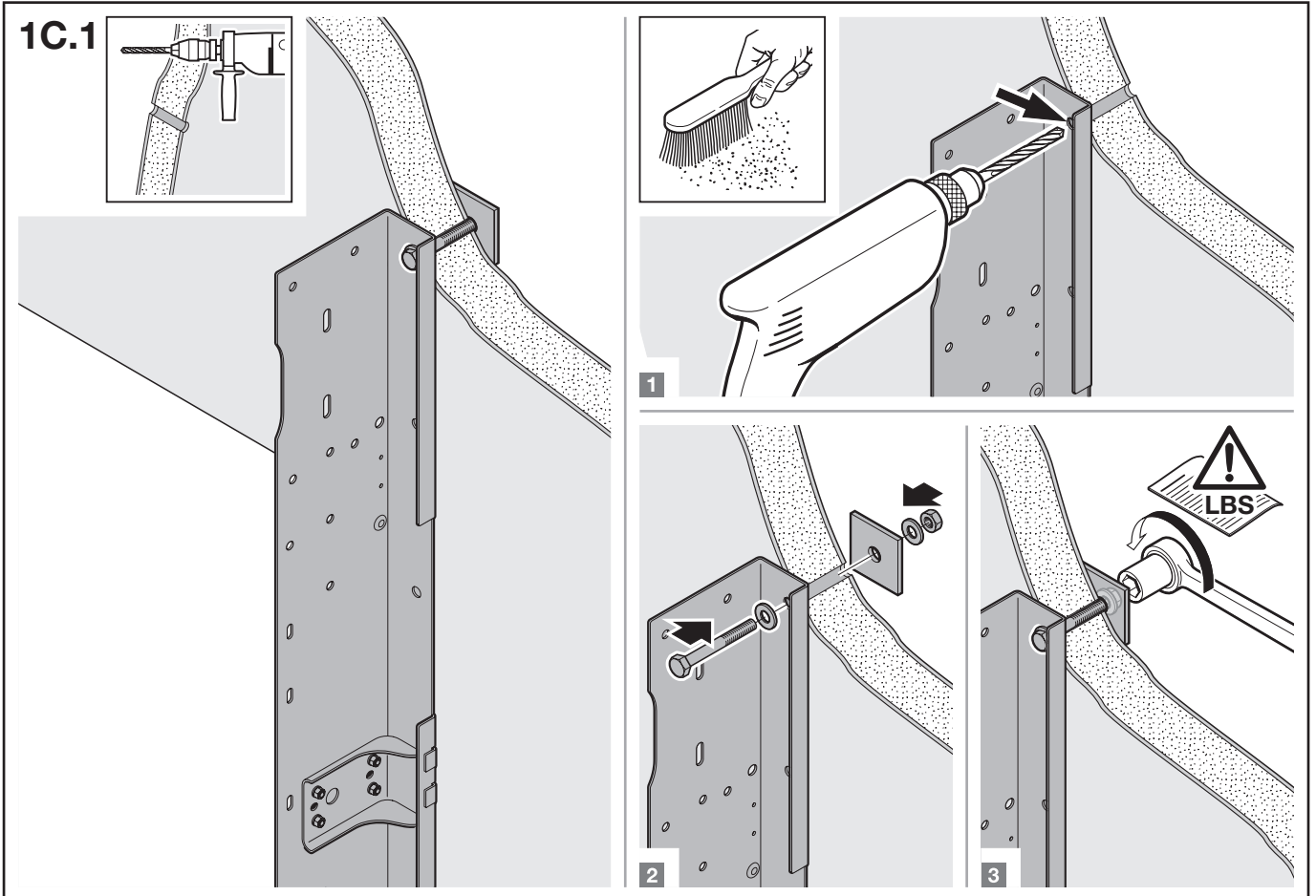
STRETCH: MFG DATE:



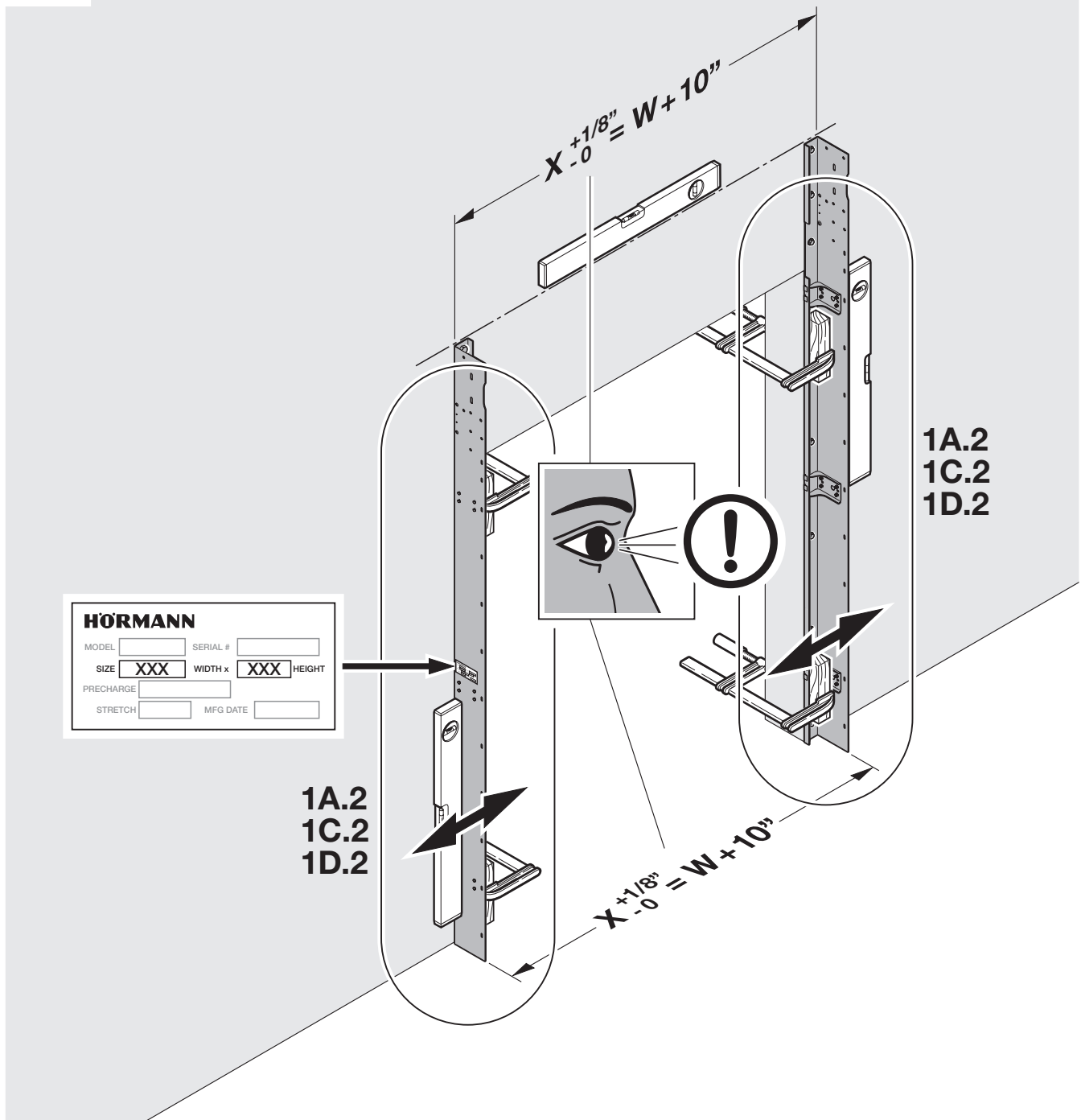
F

F





1A.2
1C.2
1D.2



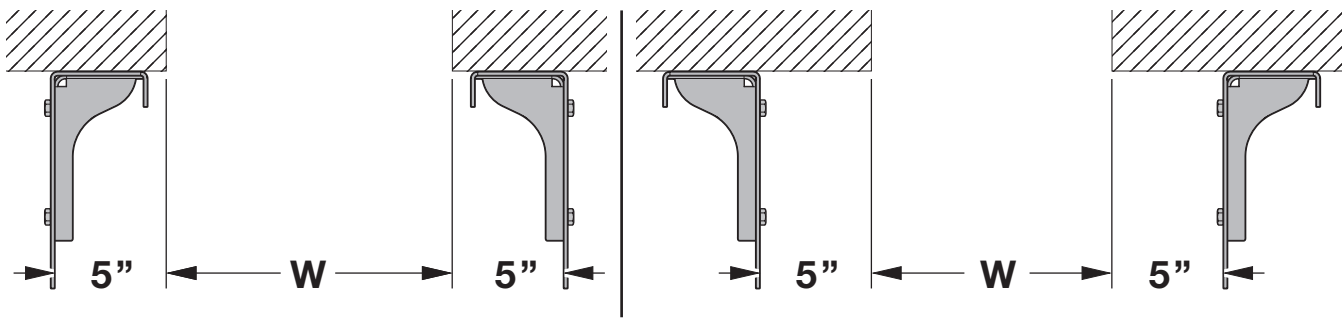
HÖRMANN

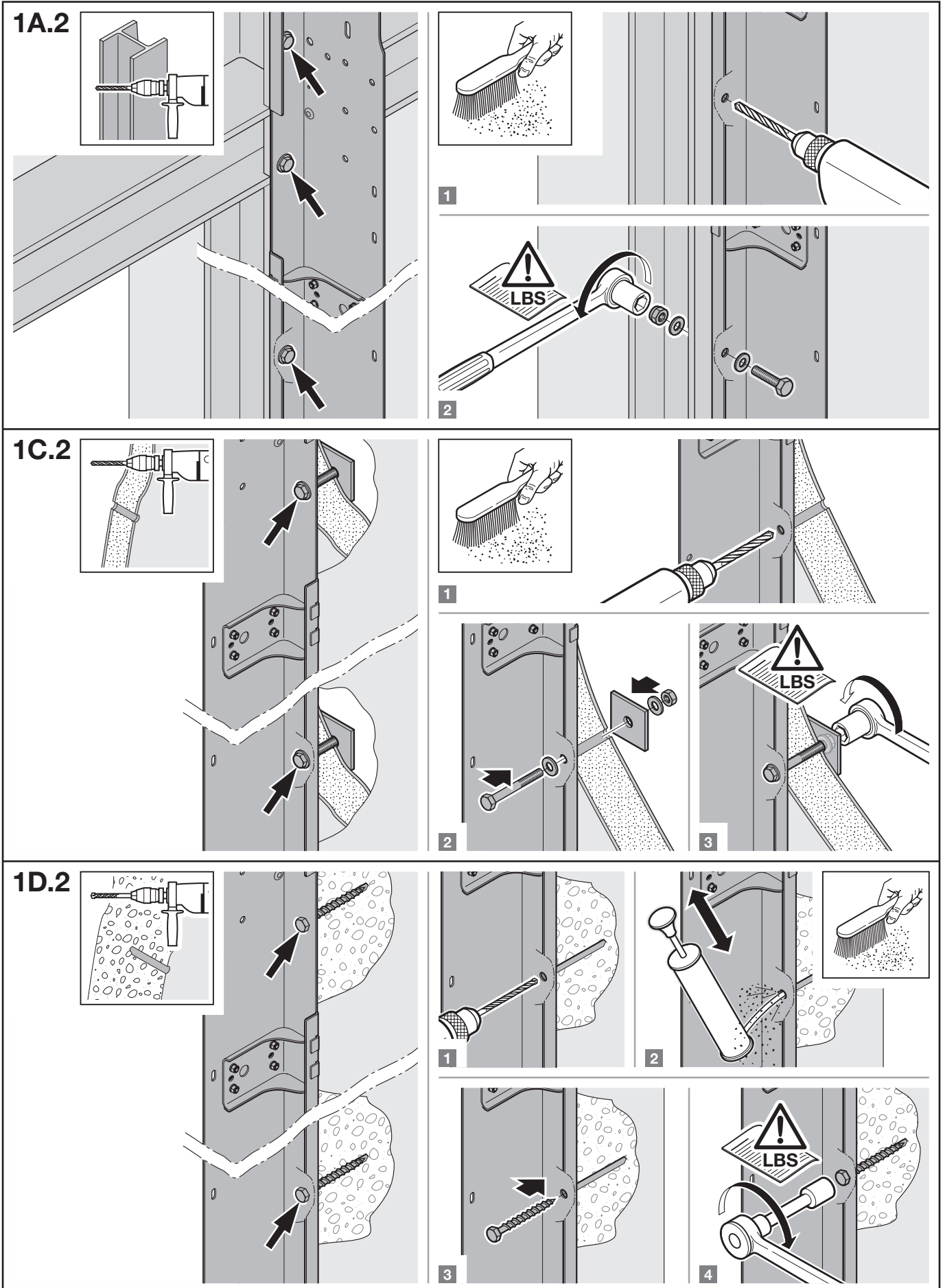
MODEL SERIAL #

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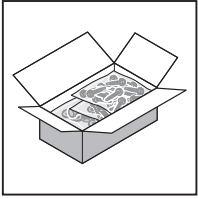
PRECHARGE

STRETCH MFG DATE

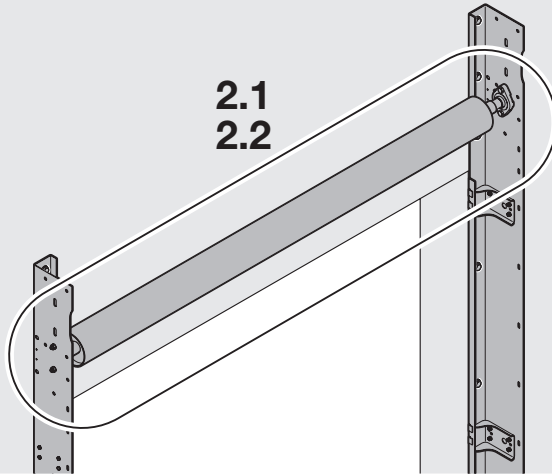




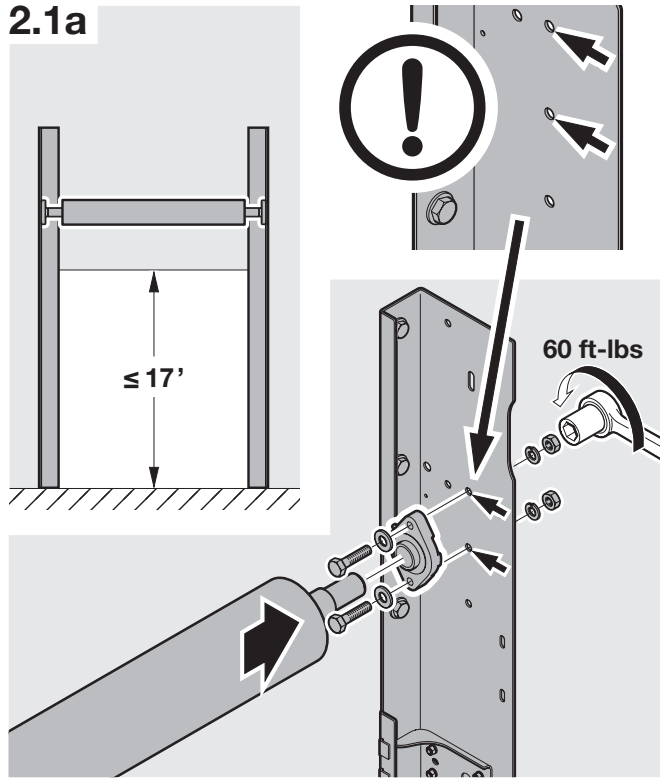
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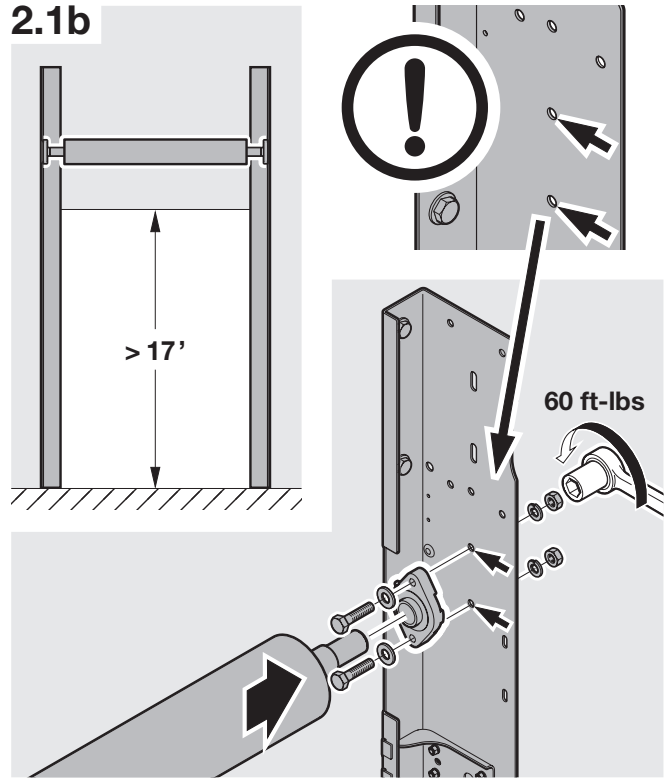
2.1
2.2



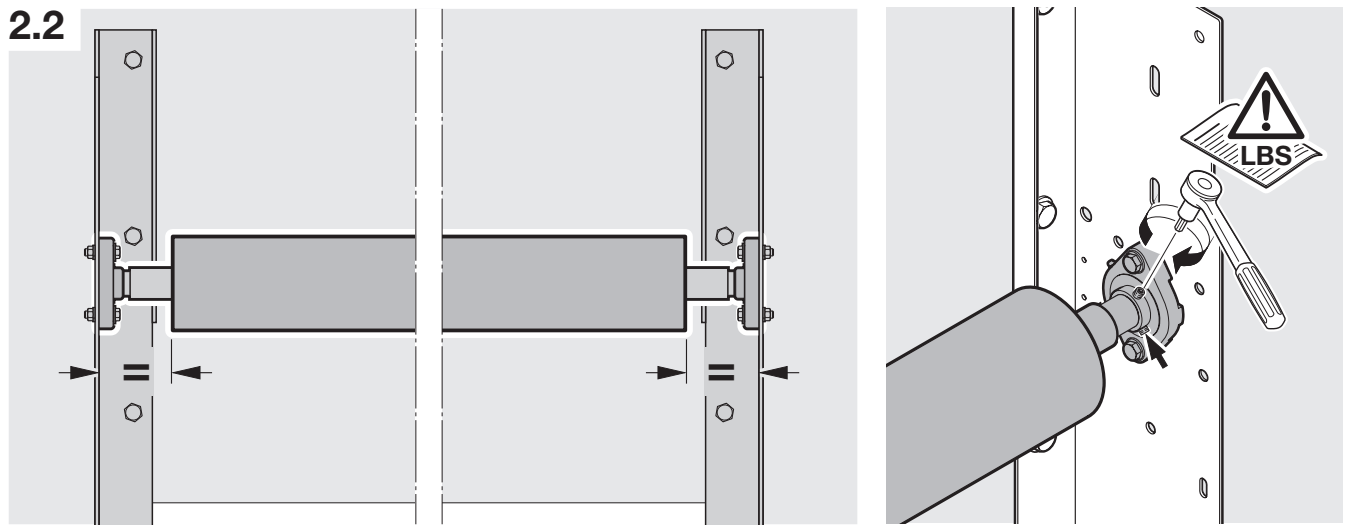
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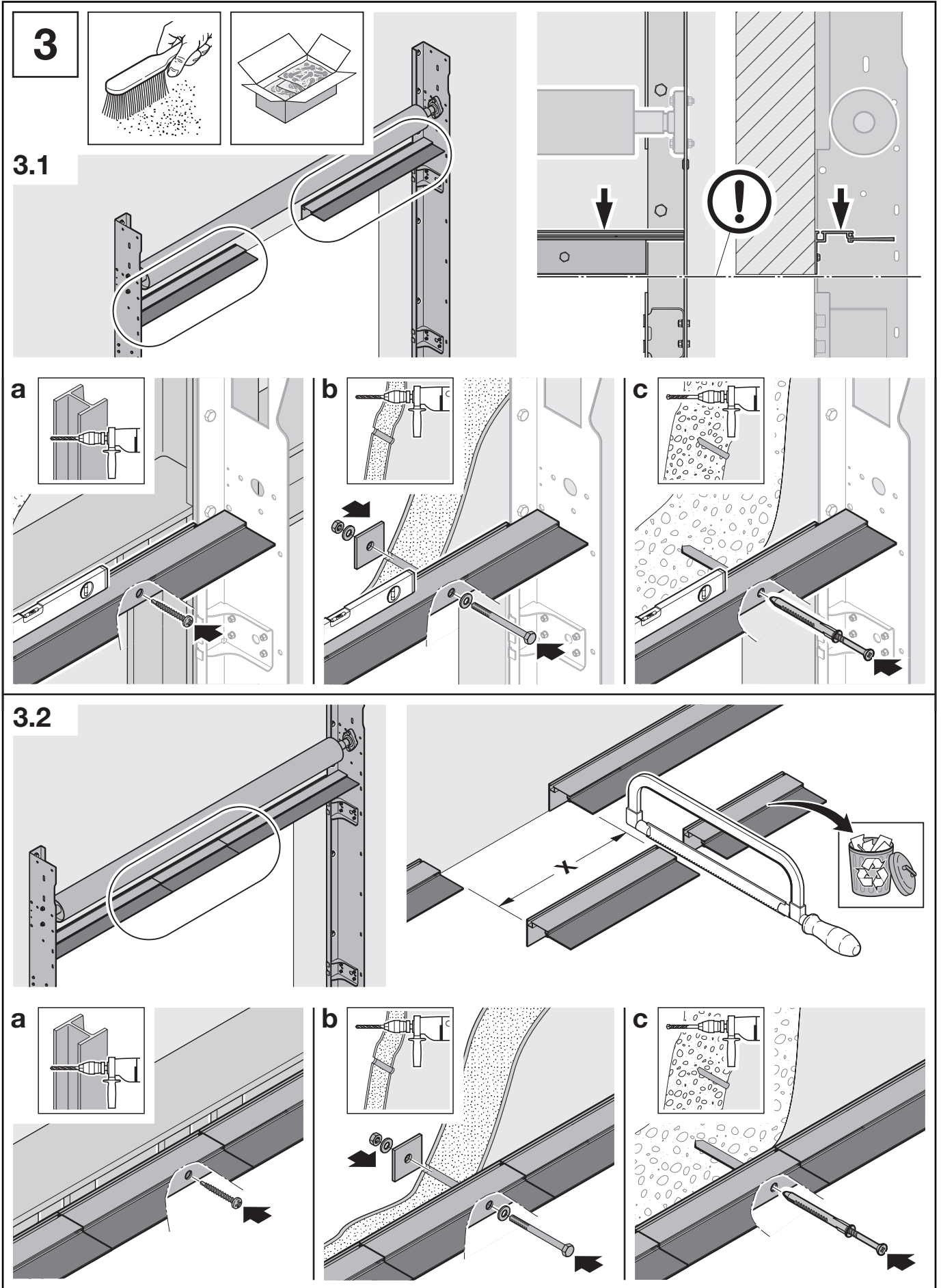


2.1b

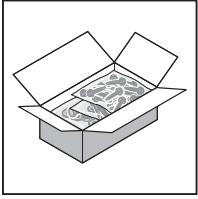


2.2





5

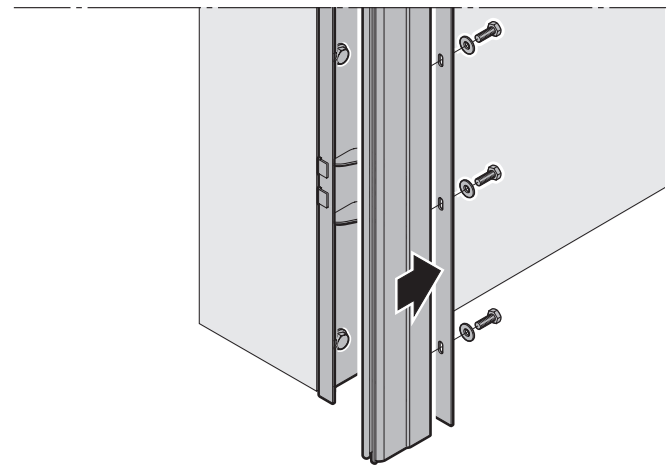
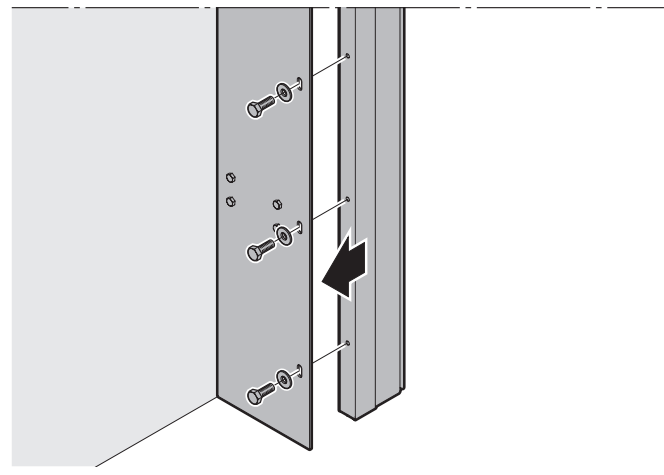
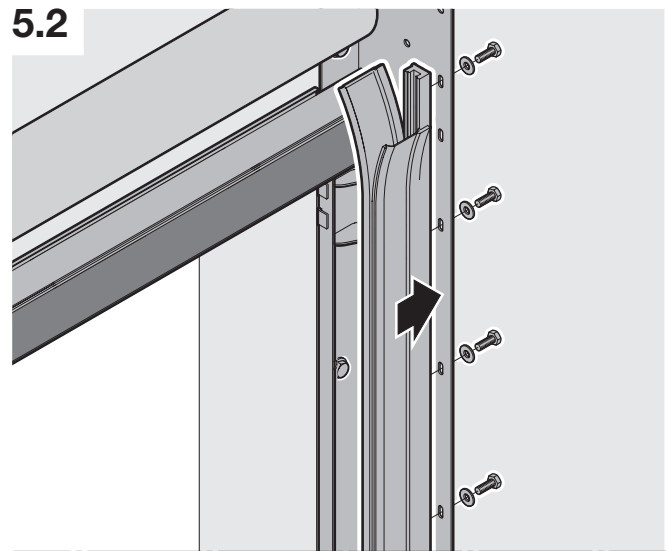
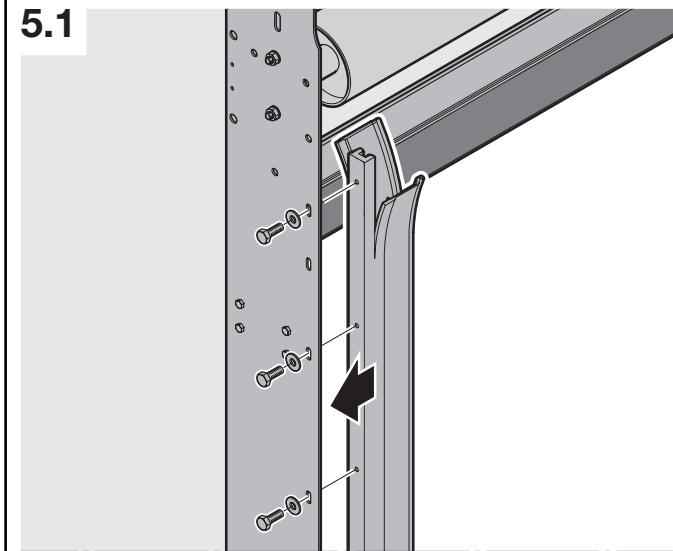


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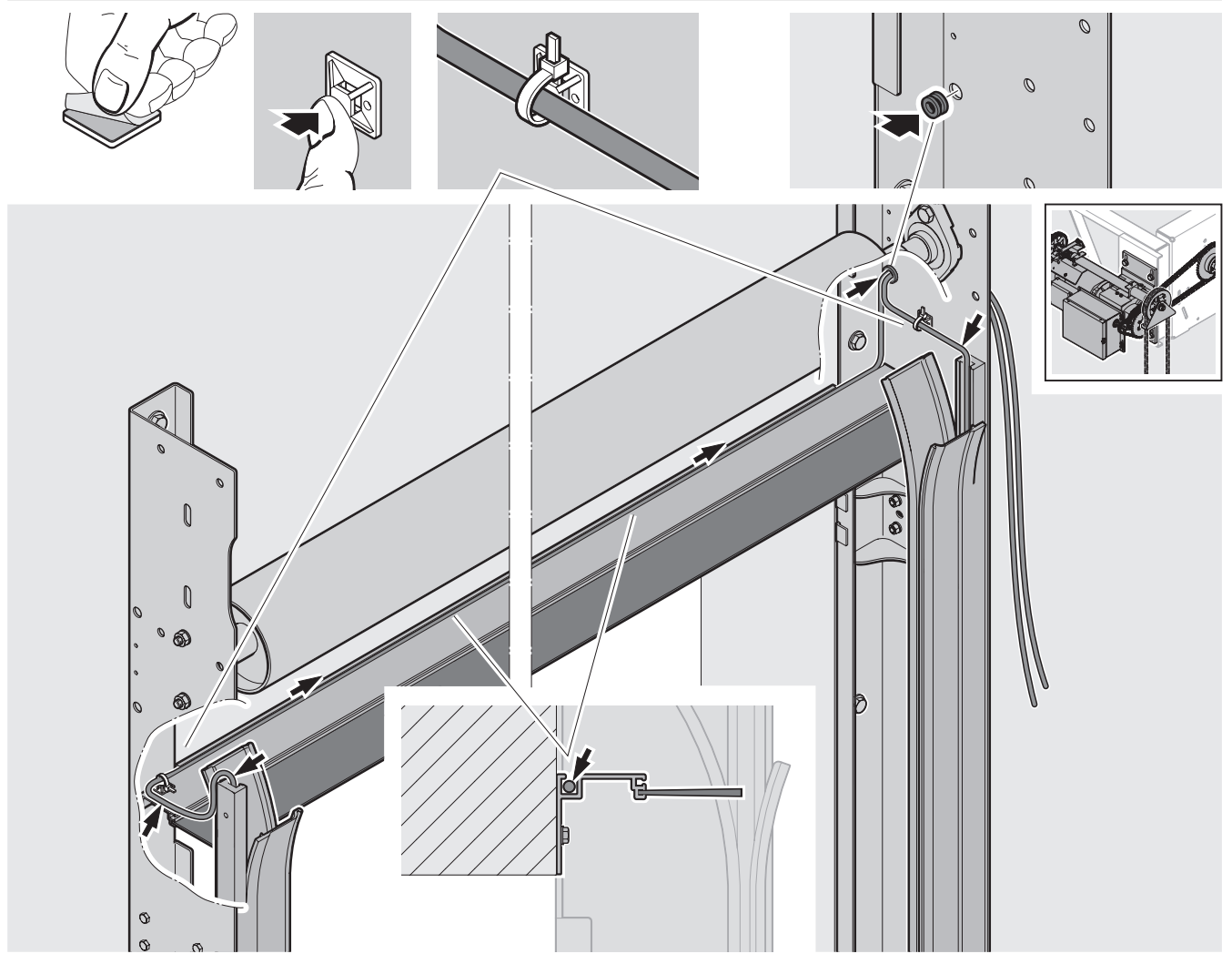
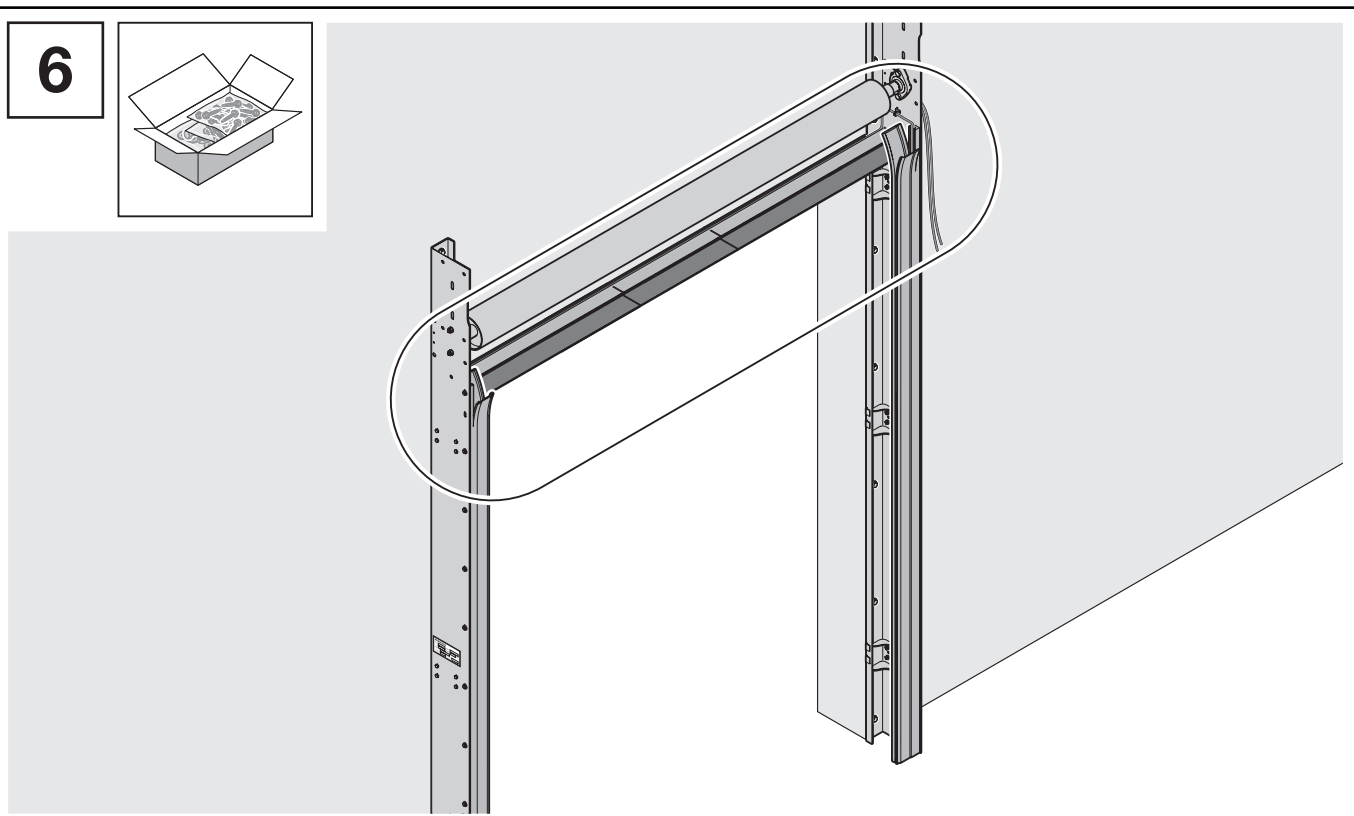
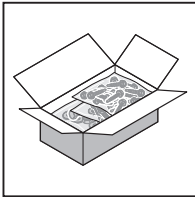
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5.1

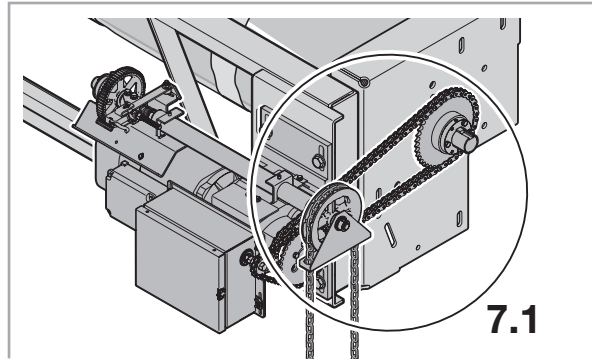
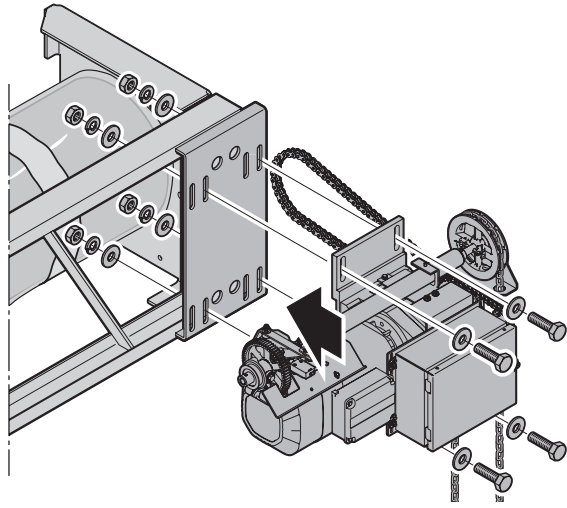
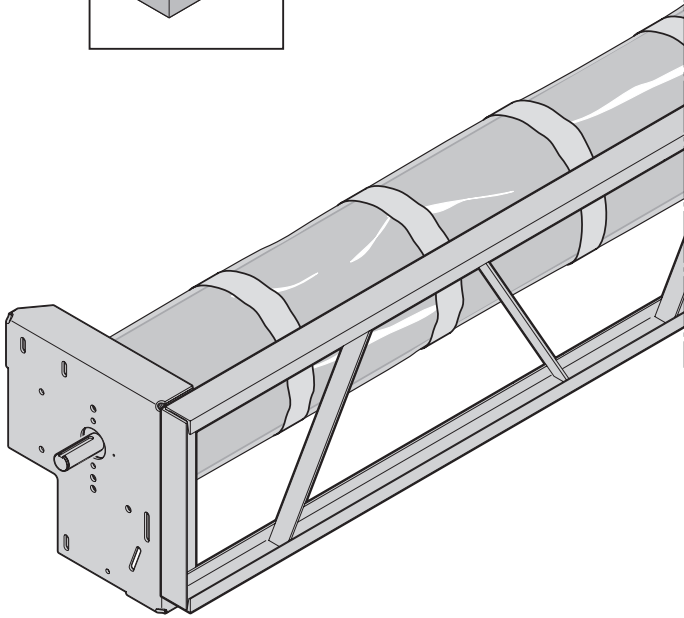
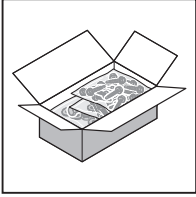
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6

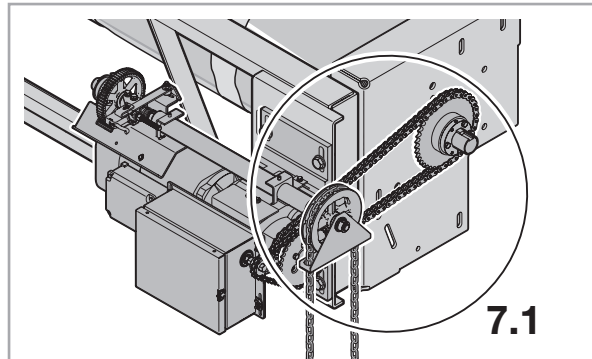
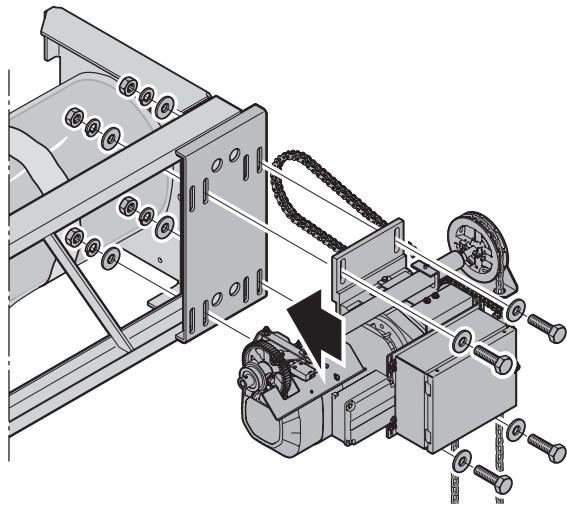
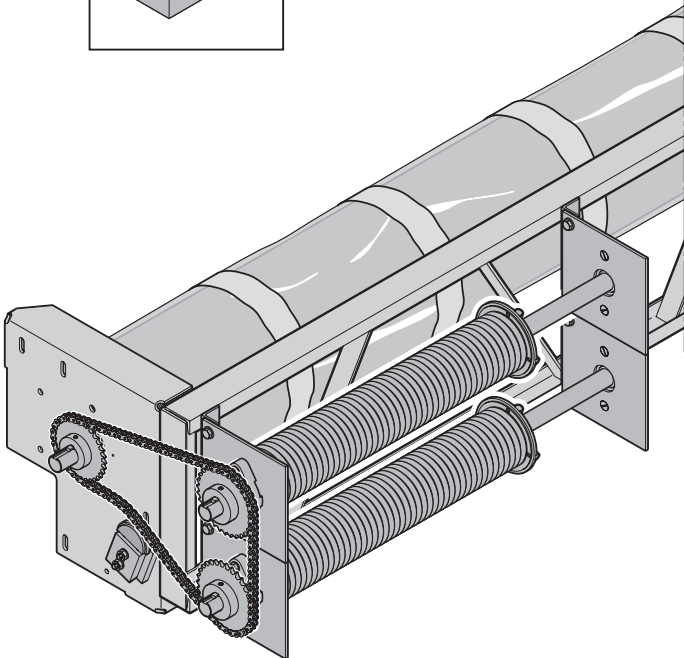


7a



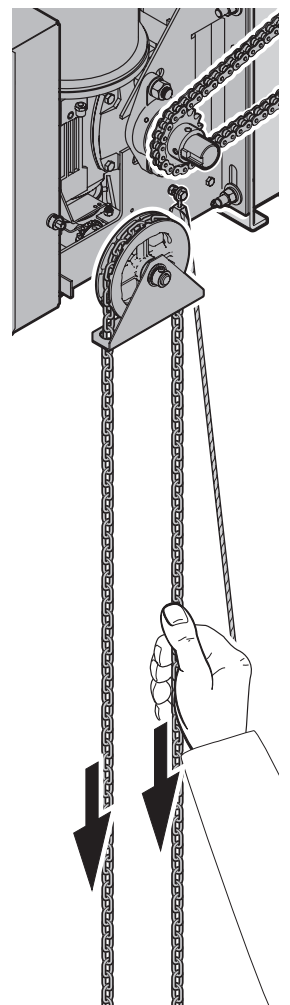
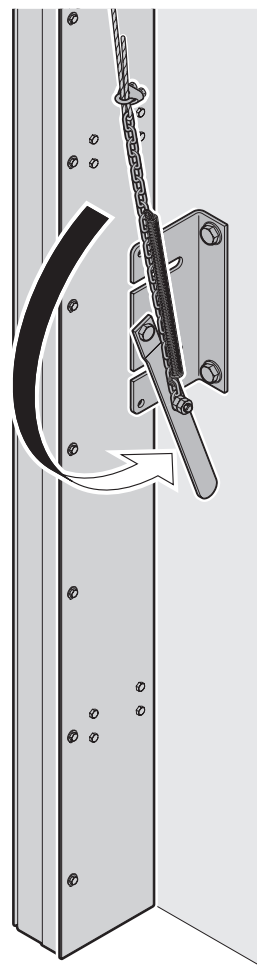
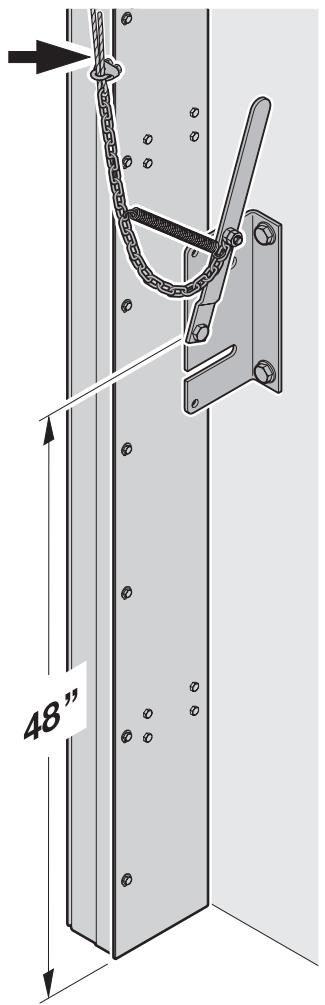
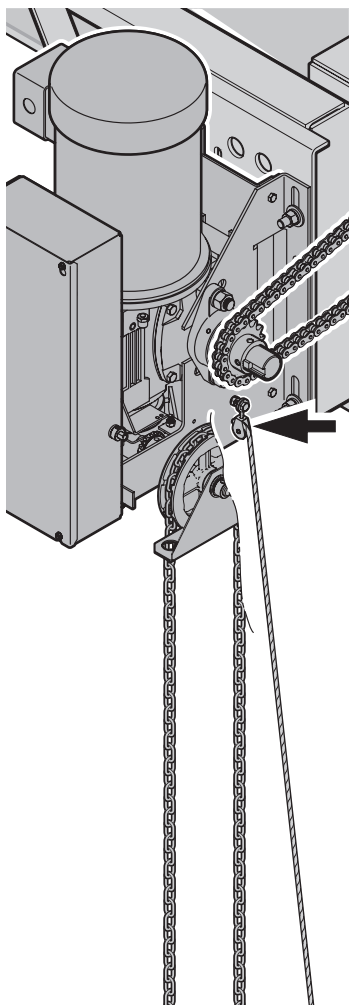
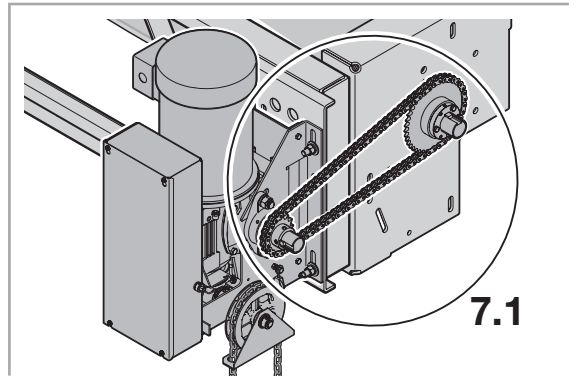
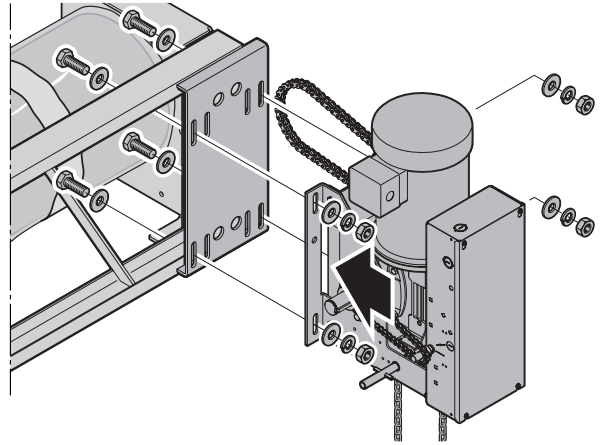
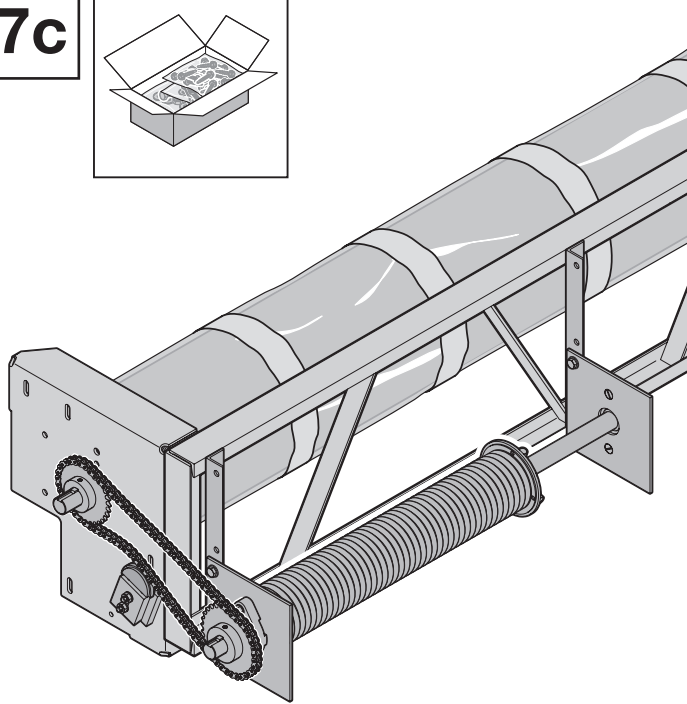
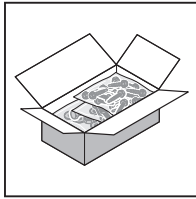
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7b

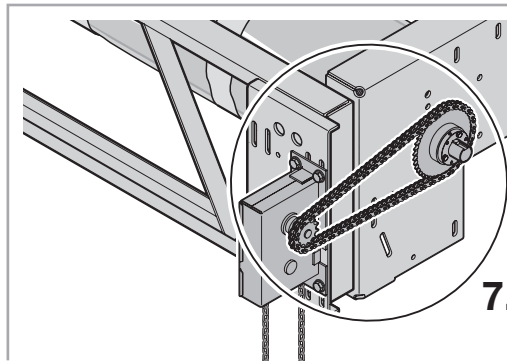
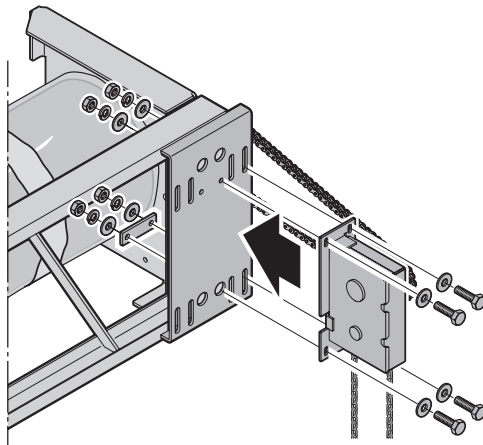
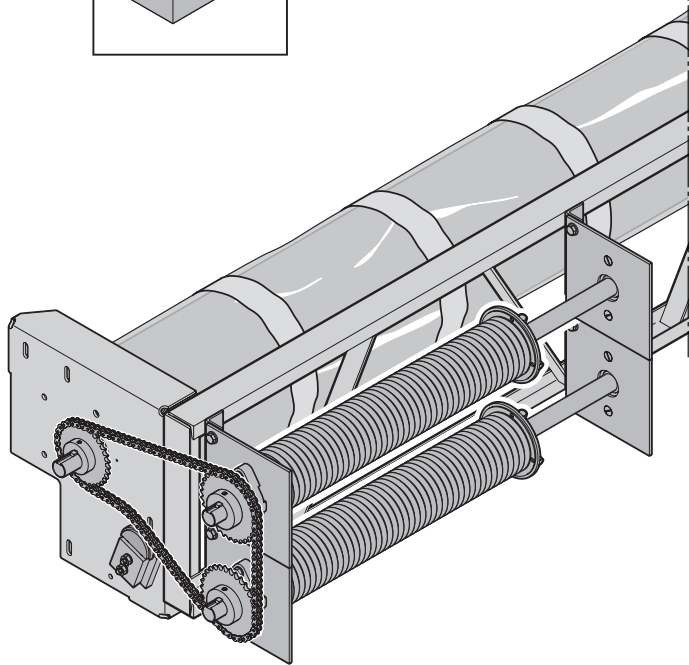
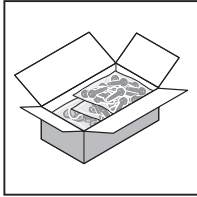


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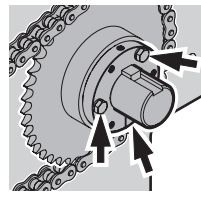
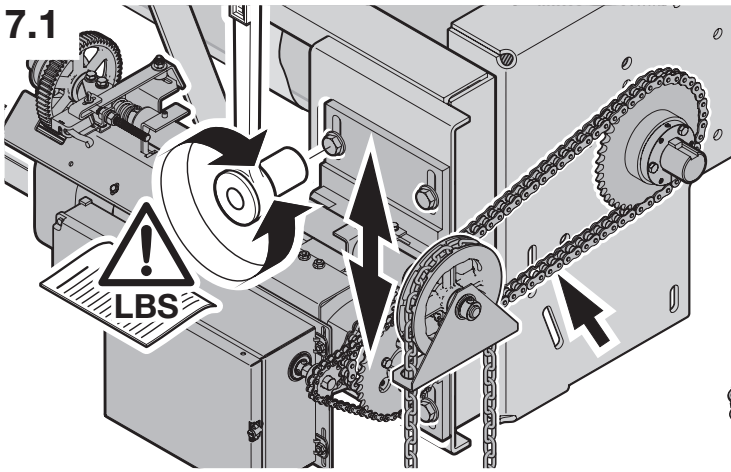
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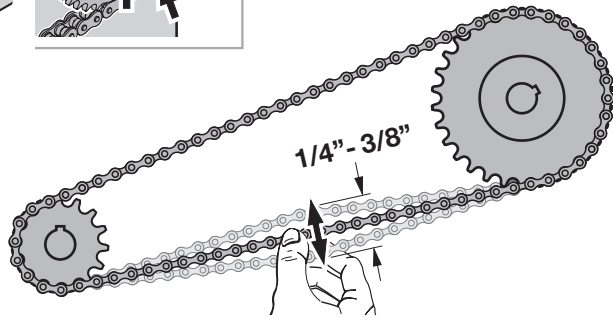
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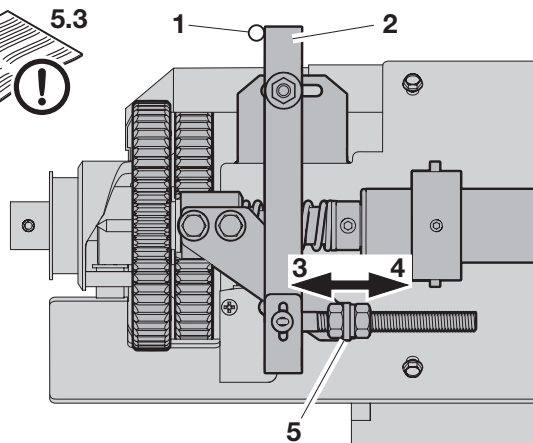
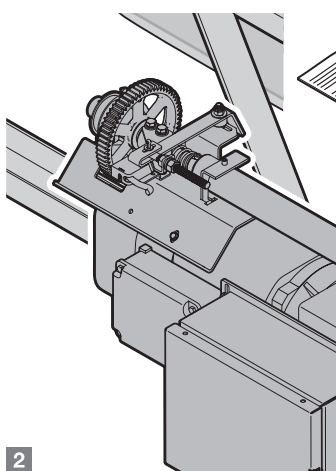
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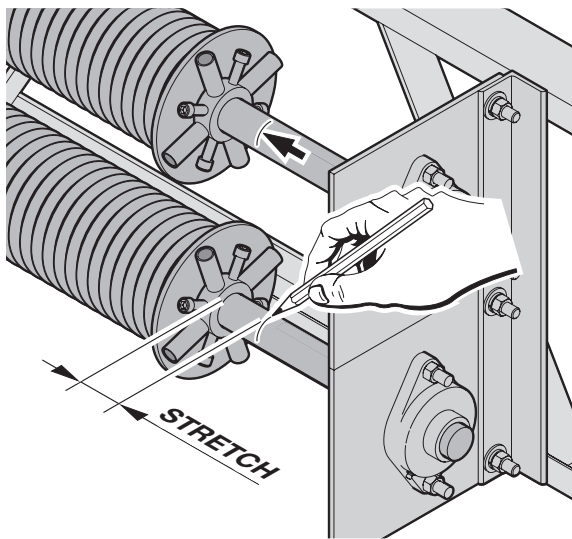
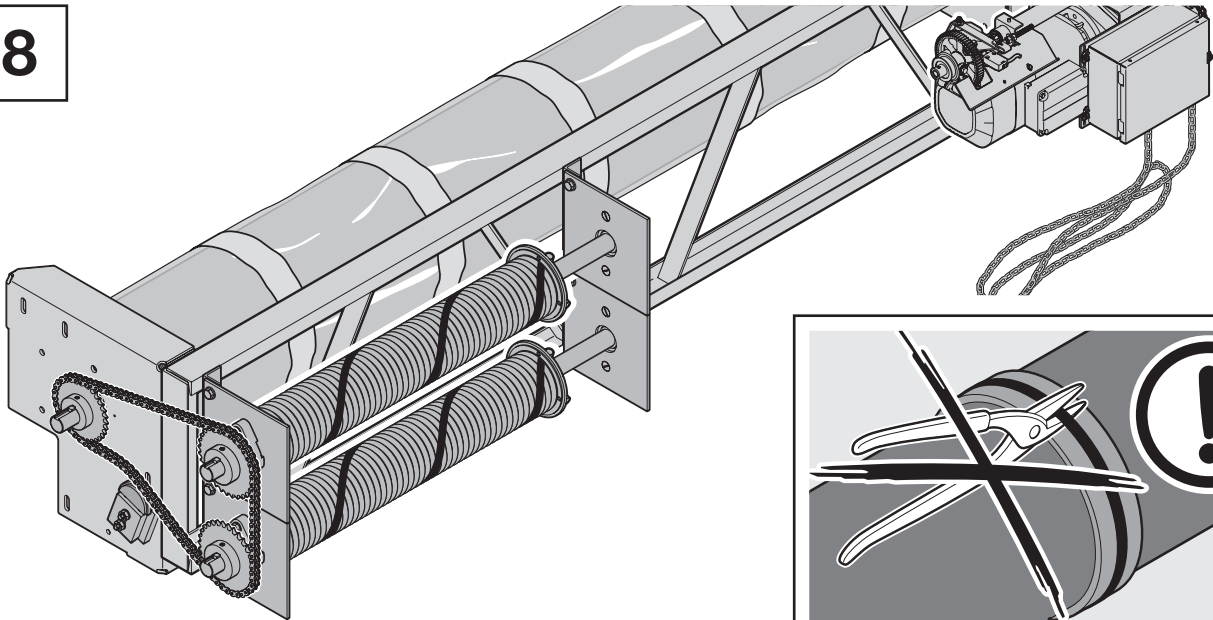
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ft-lbs	9	15	30	60



7.2



8



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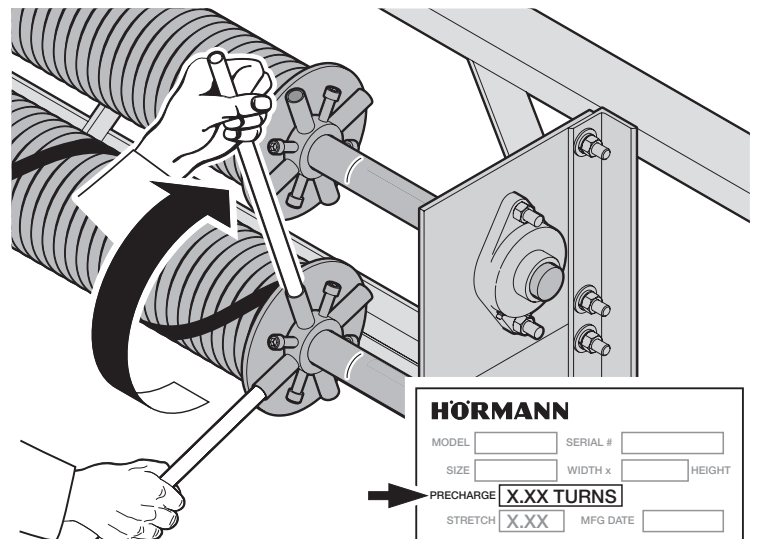
MODEL SERIAL #

SIZE WIDTH x HEIGHT

PRECHARGE X.XX TURNS

STRETCH X.XX MFG DATE

1



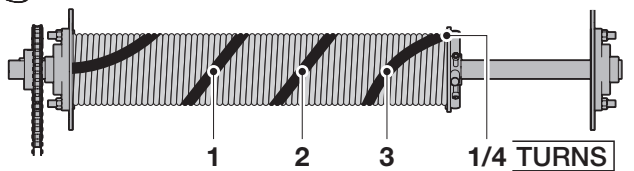
HÖRMANN

MODEL SERIAL #

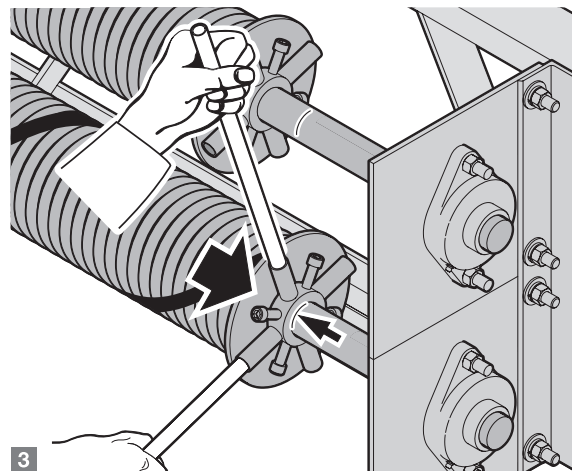
SIZE WIDTH x HEIGHT

PRECHARGE X.XX TURNS

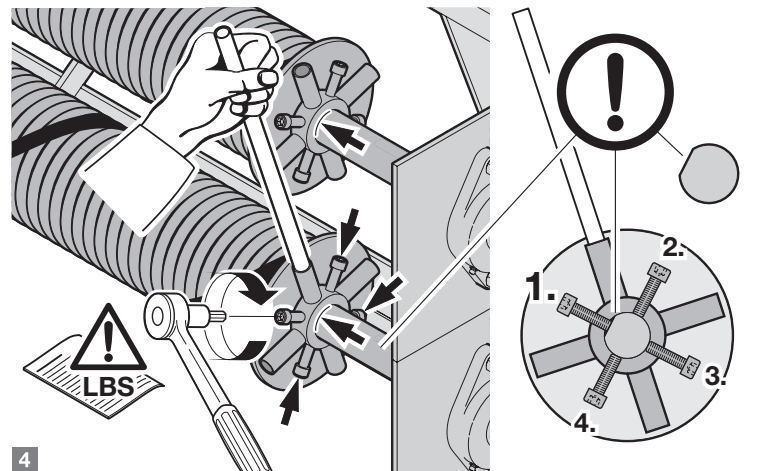
STRETCH X.XX MFG DATE



2

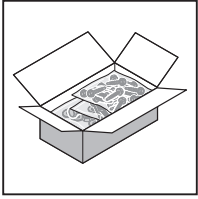


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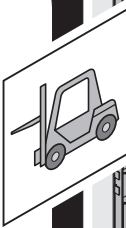
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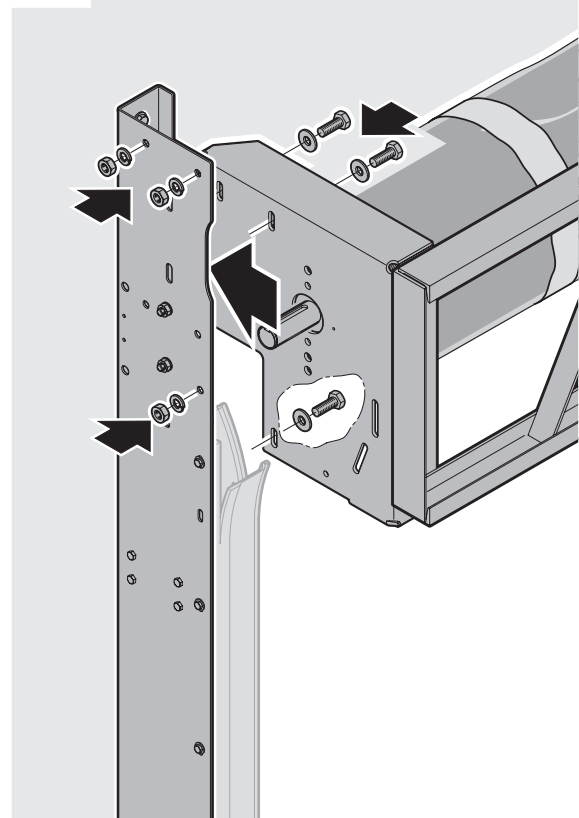


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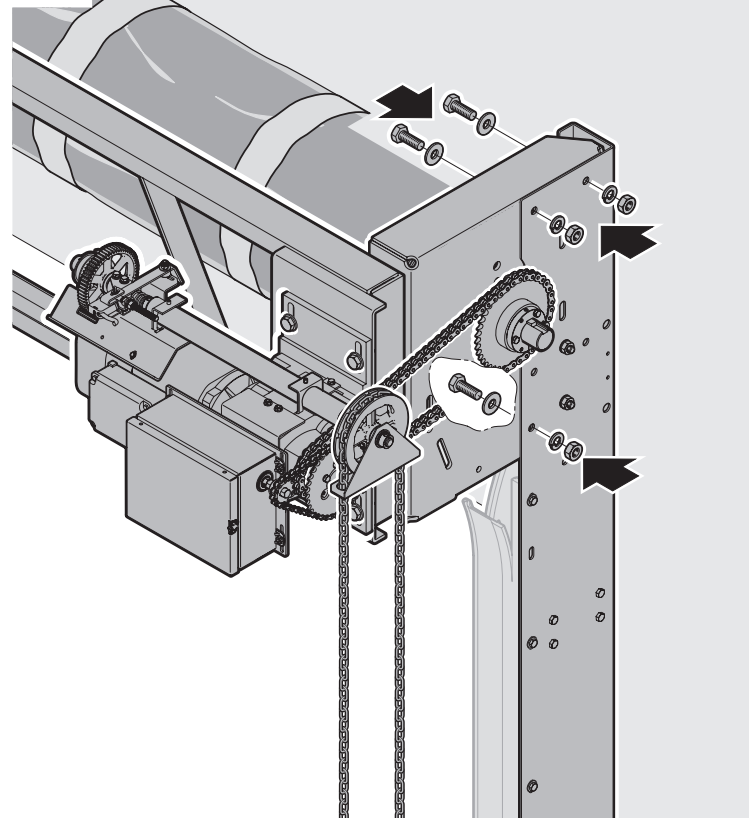
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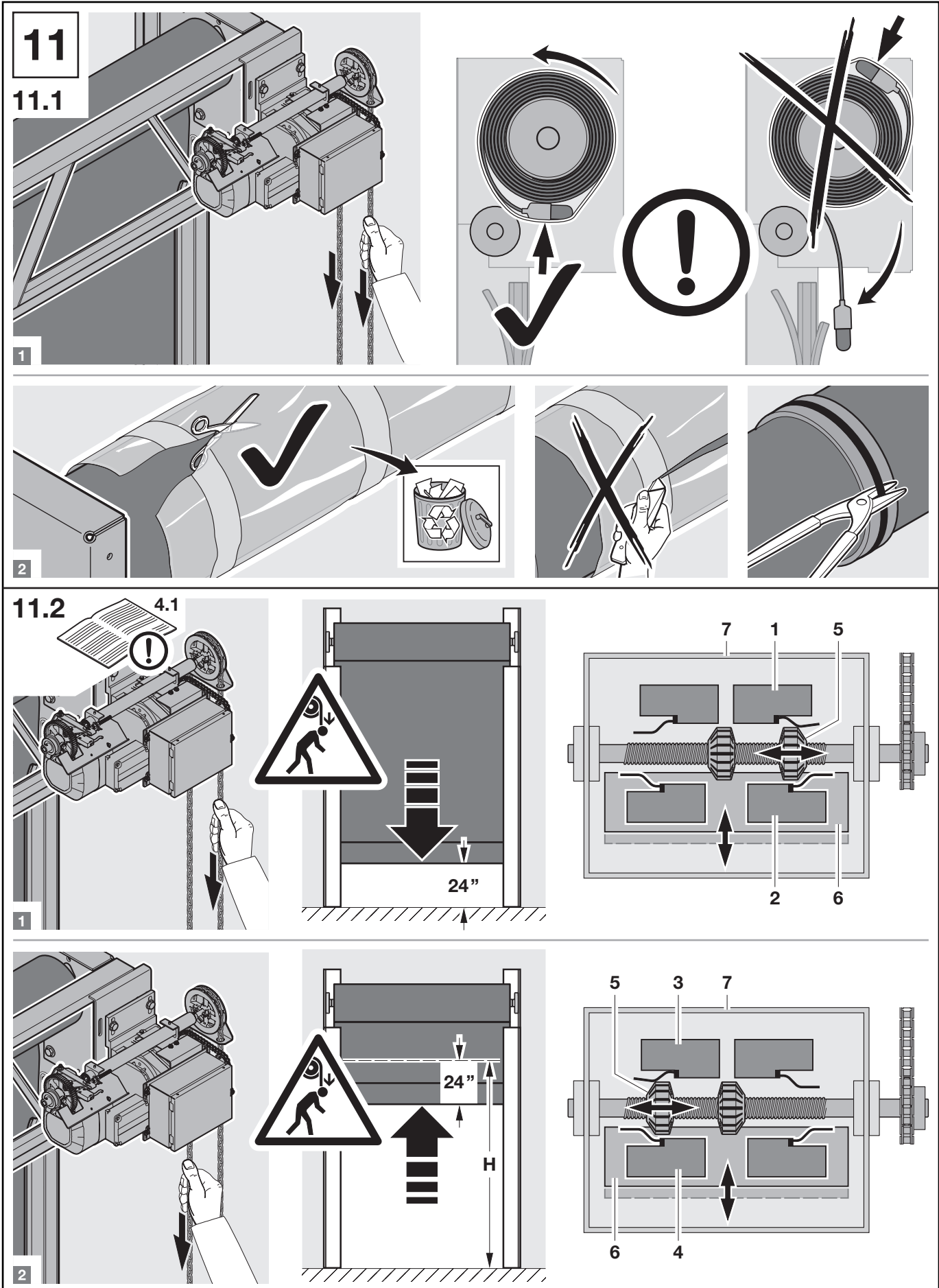


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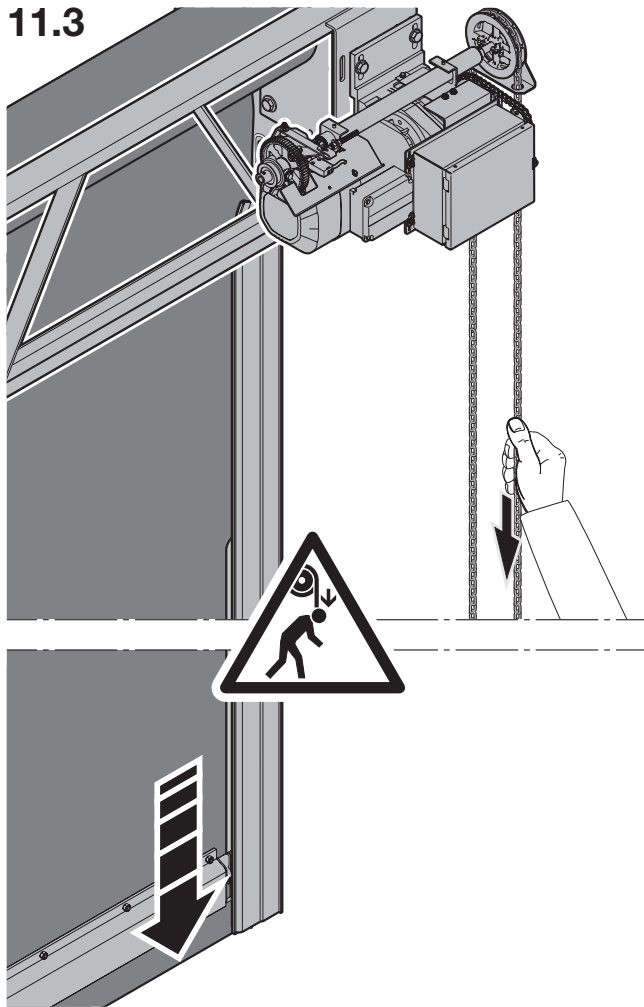


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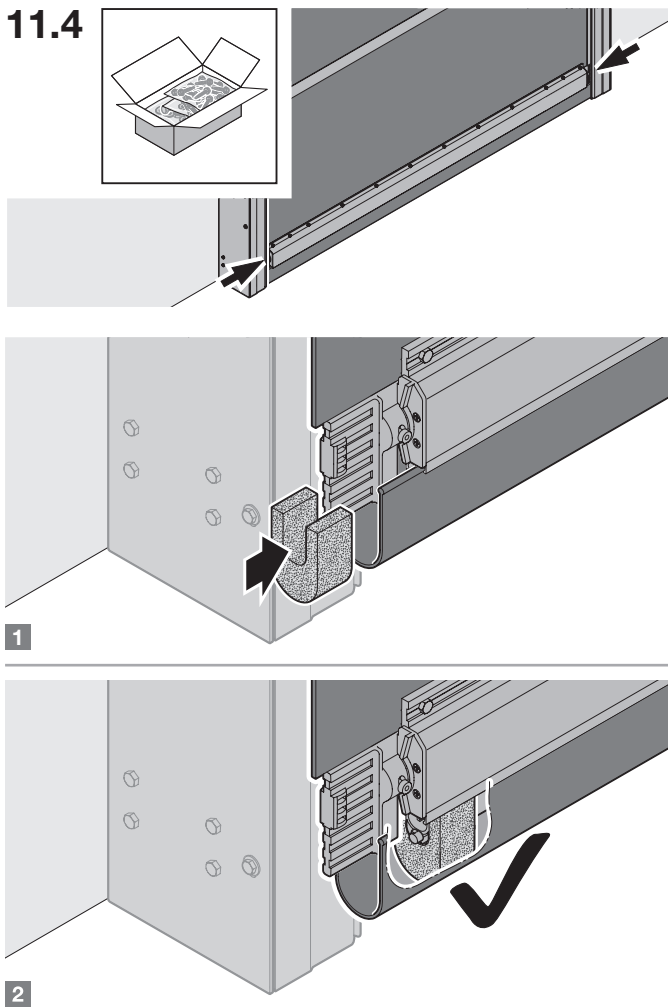




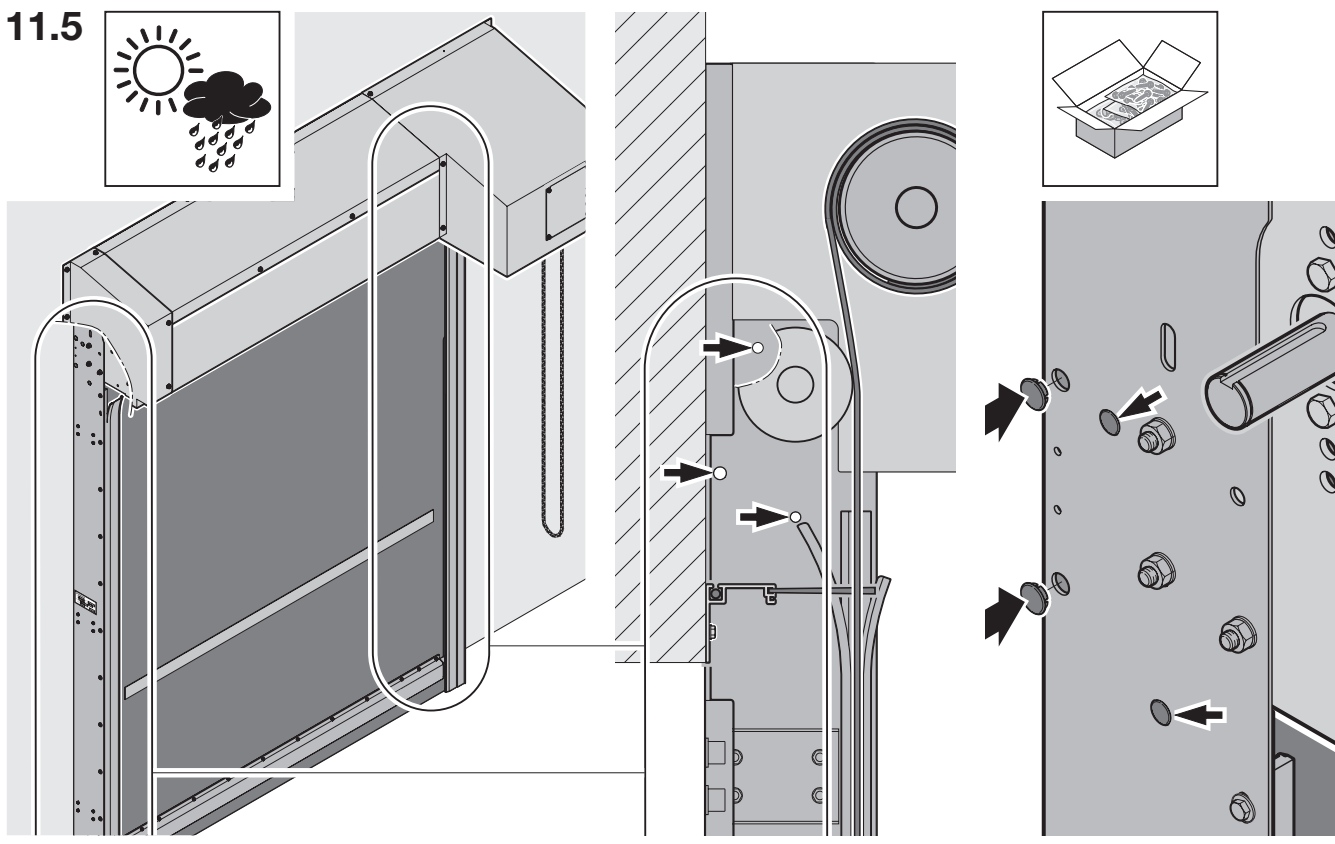
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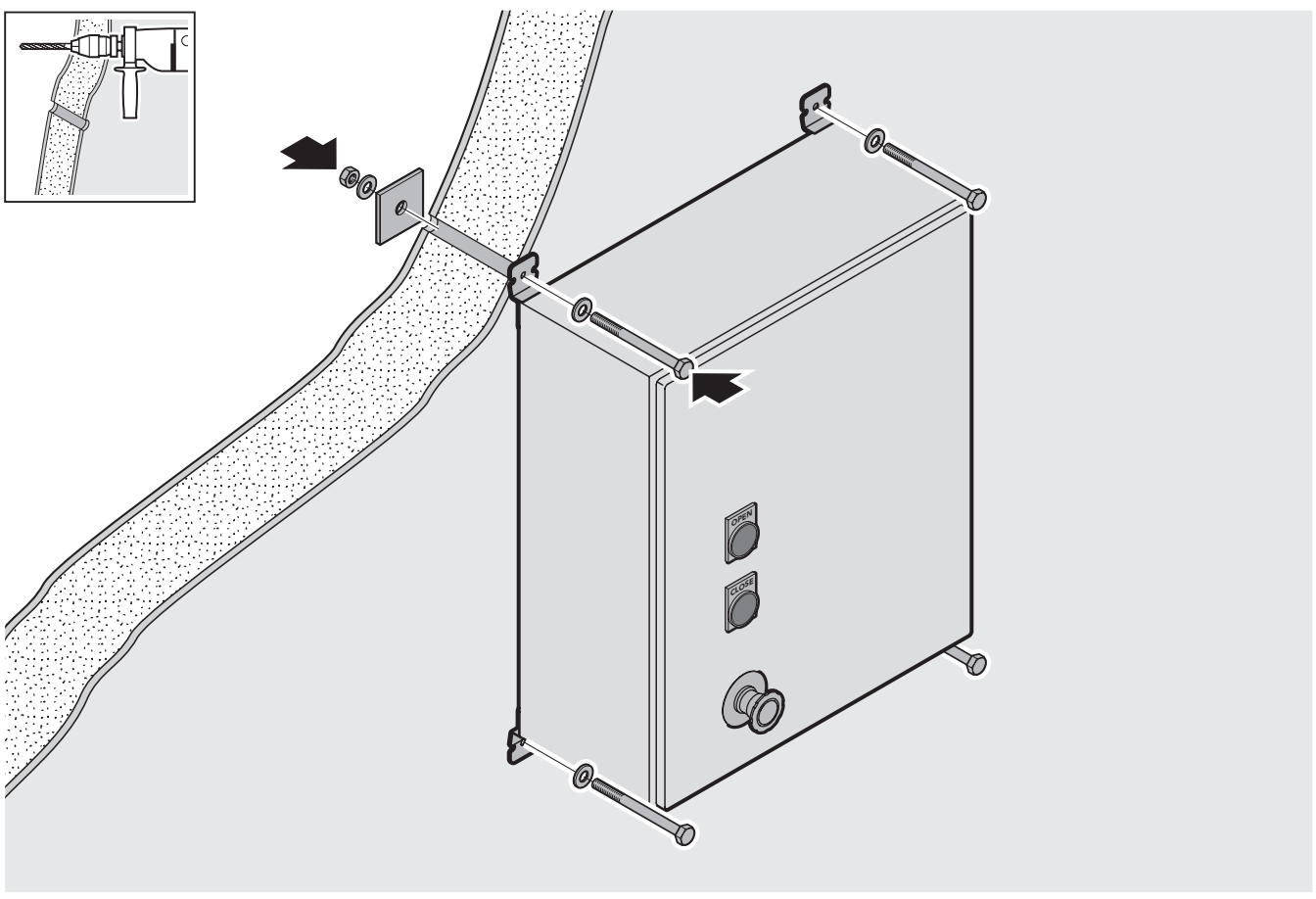
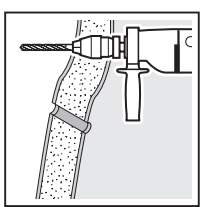
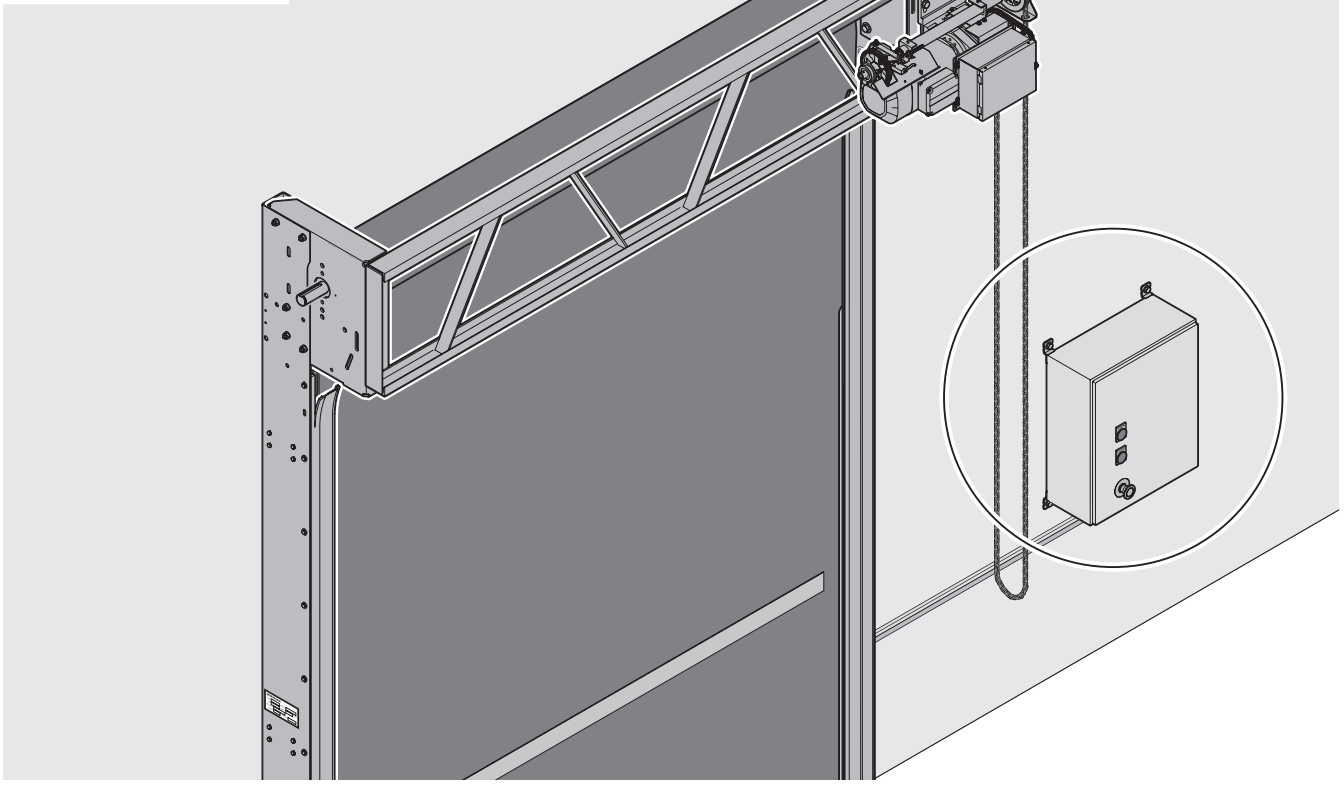
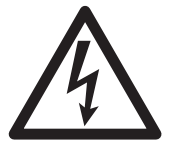
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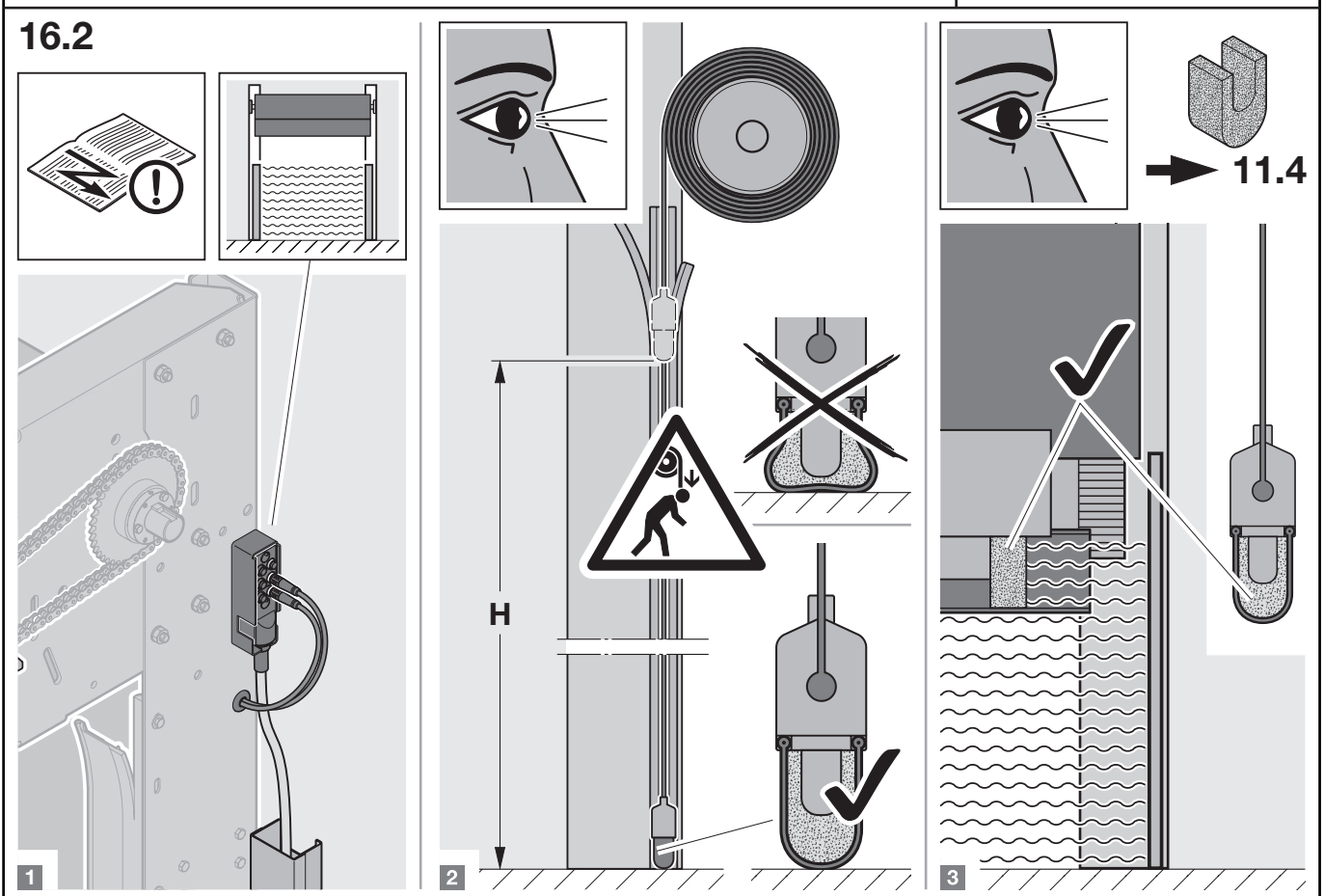
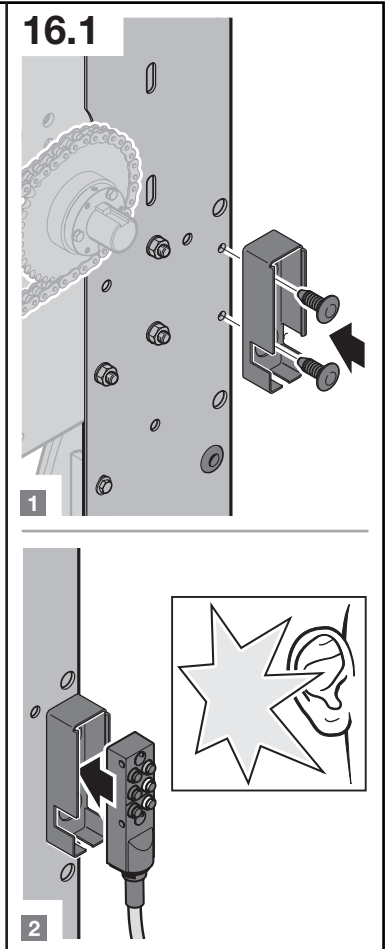
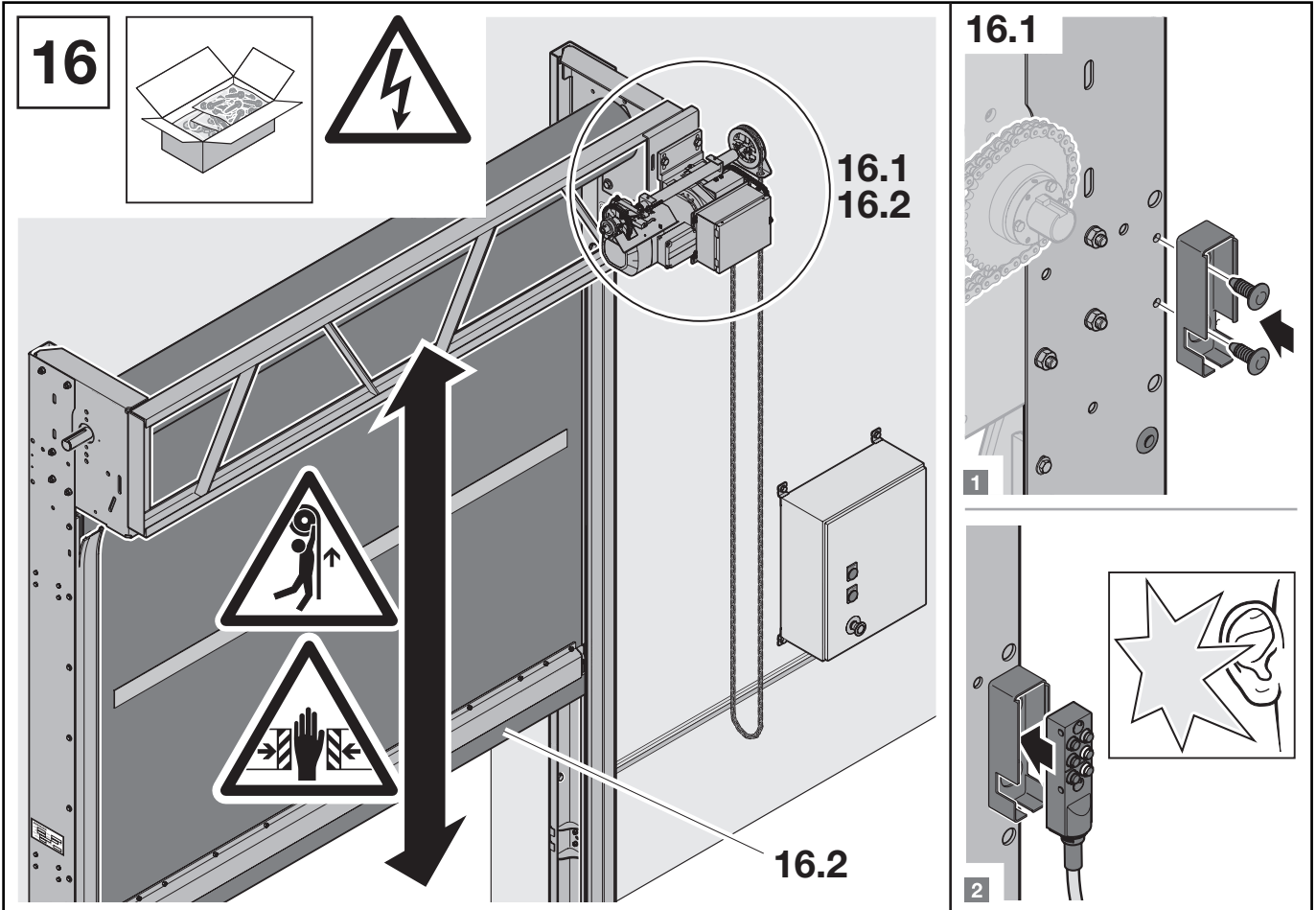


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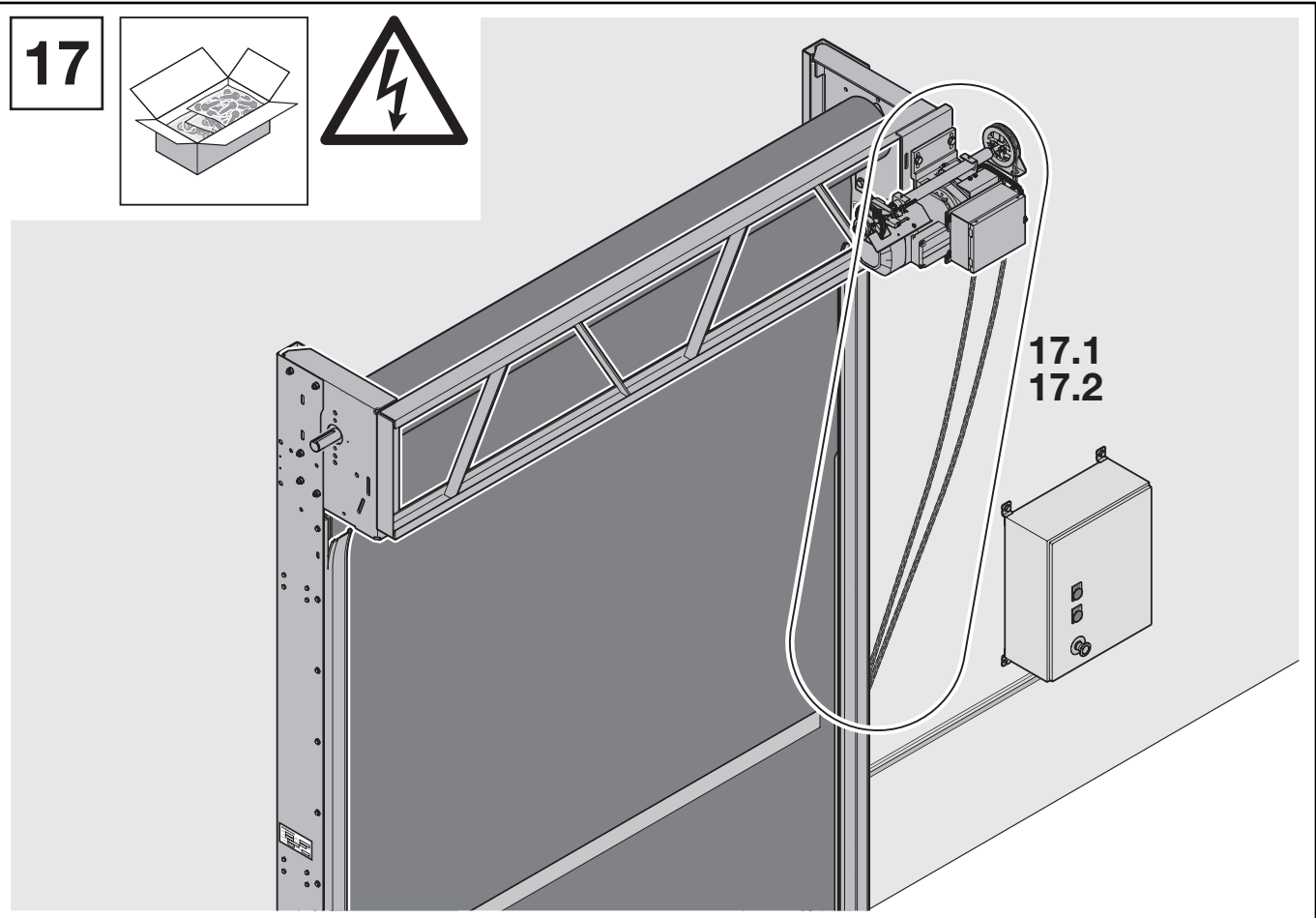
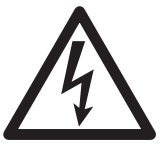
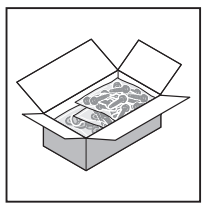


15

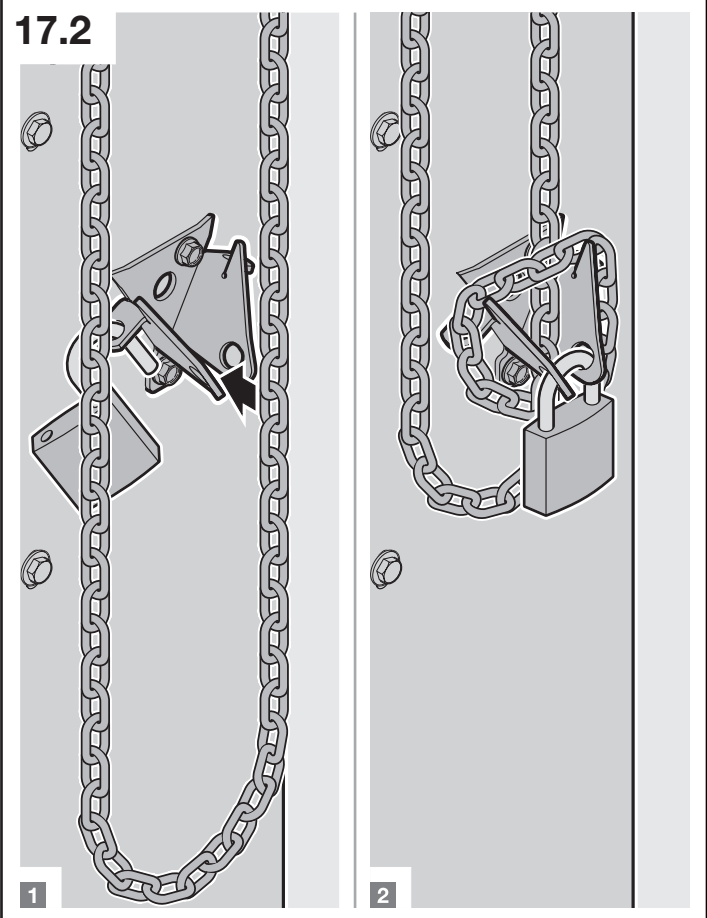
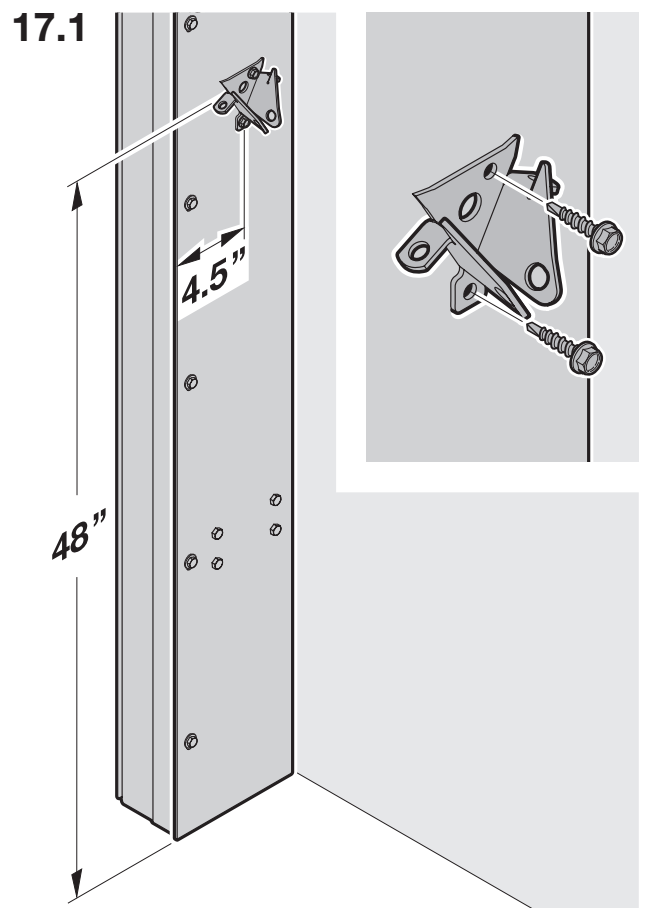




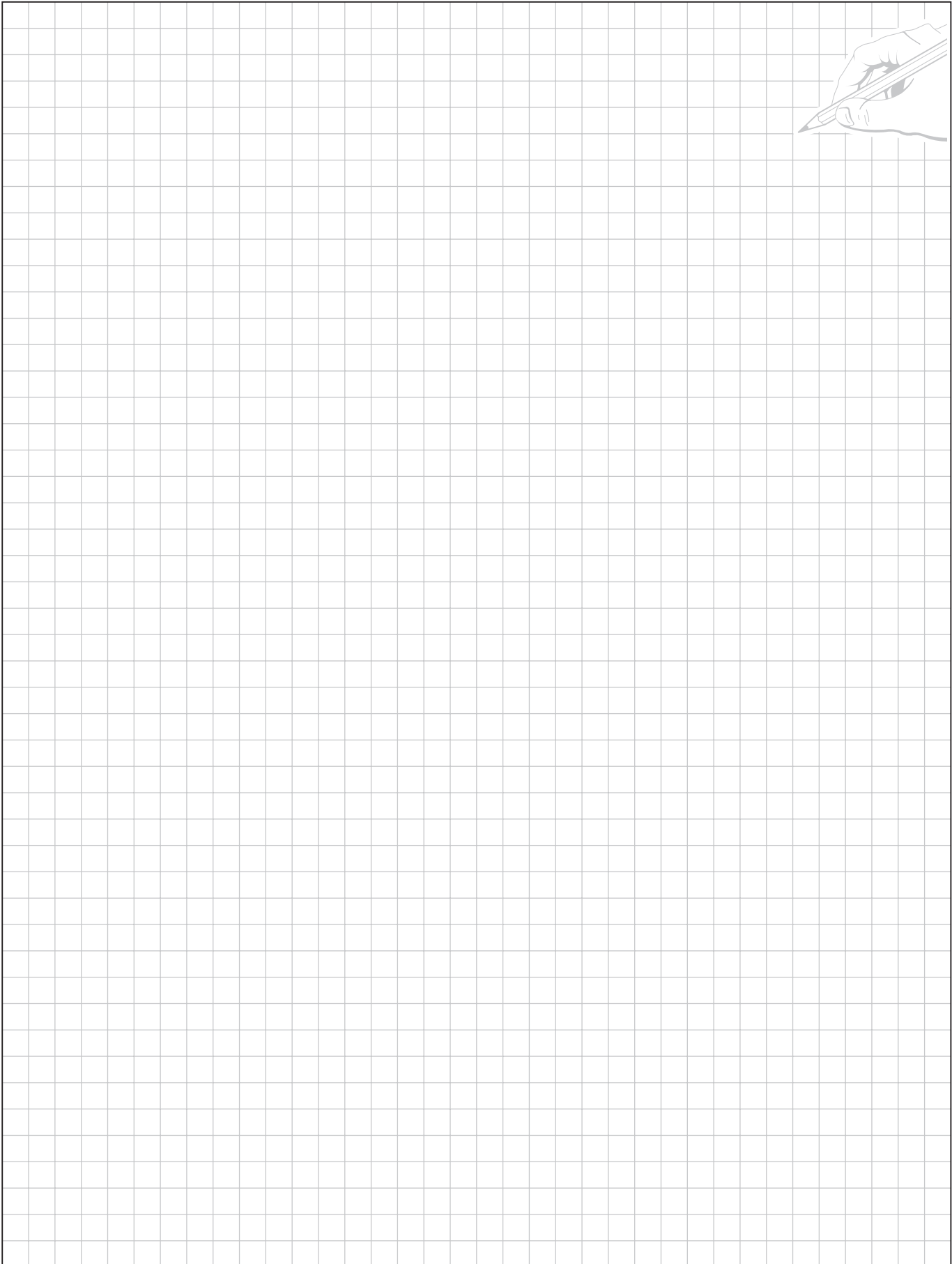
17



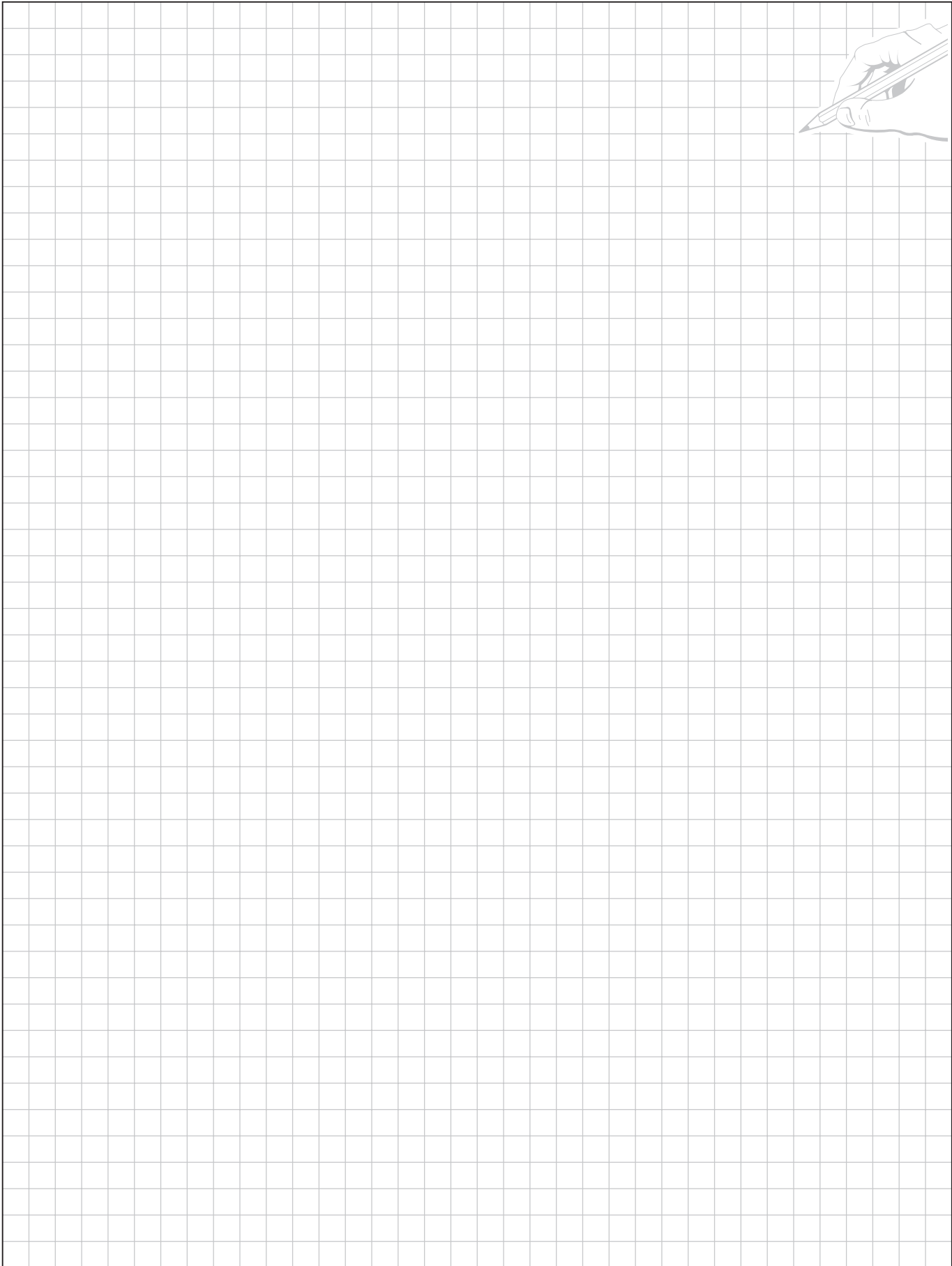
17.1
17.2



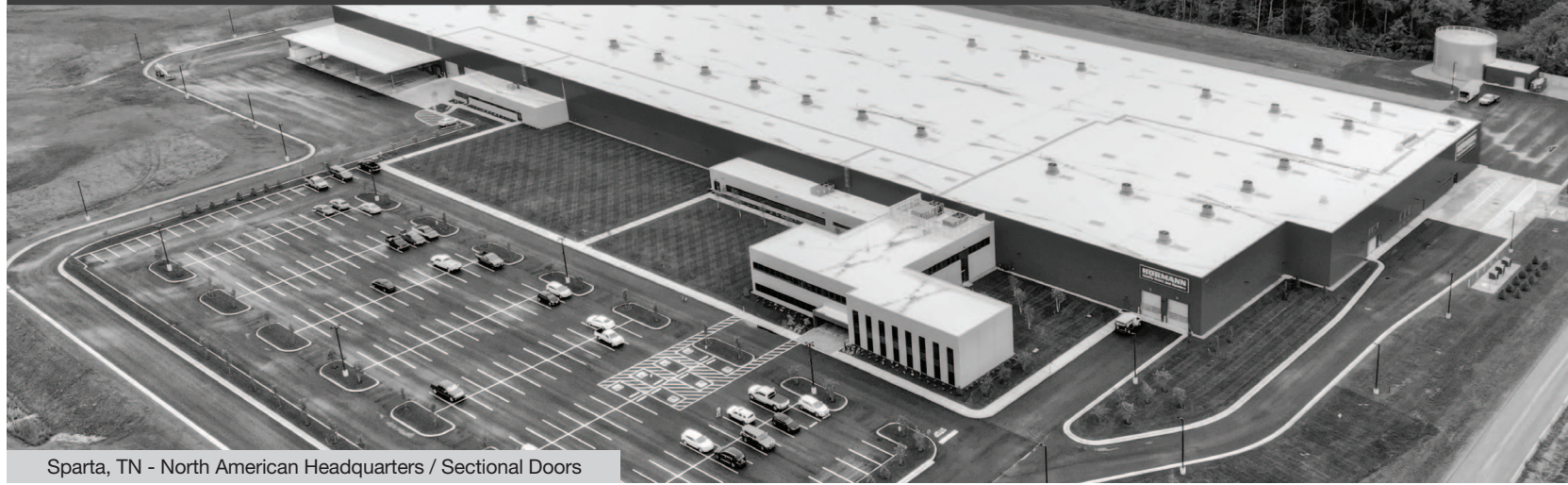
NOTES



NOTES



HÖRMANN NORTH AMERICA



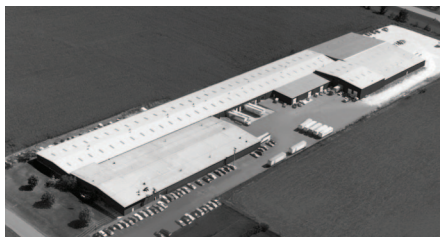
Sparta, TN - North American Headquarters / Sectional Doors

FIVE PRODUCTION PLANTS, ONE FAMILY

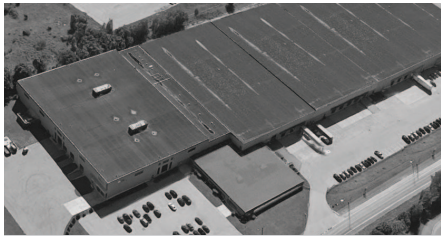
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