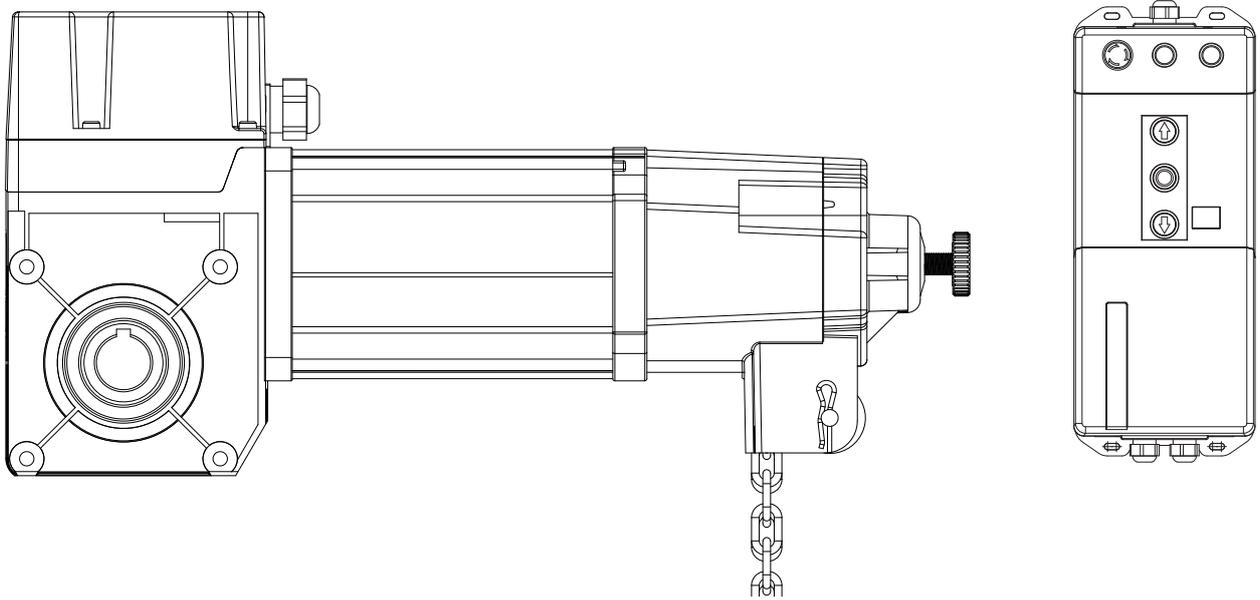


FC/AC Industrial Door Opener

Mechanical Installation and User Guide



FC90

FC120

AC90

AC140

S/N



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WARNING

- GENERAL HAZARD

The symbol indicates a hazard to the user/installer, pay attention to the content of the title.



WARNING

- ELECTRICAL HAZARD

The symbol indicates a specific hazard related to electricity.



Precautions - Important

★ The schematic diagram is based on the product example, and the delivered product may deviate.

1. General Safety Information

1. Normal Use

Industrial door openers are suitable for fully balanced industrial sliding doors.

Follow the steps in the manual for safe operation. The industrial door opener is rain-proof and moisture-proof, and can be used in generally harsh environmental conditions. Our company is not liable for any damages caused by other applications or failure to comply with the operation in the manual.

Modifications are only permitted with the consent of our company. Otherwise the manufacturer's declaration shall be invalid.

2. Safety Information

Installation and initial operating tasks are to be performed by trained skilled fitters only. Only trained electricians should work on electrical equipment. They are able to follow instructions correctly, identify potentially hazardous areas and take appropriate safety measures.

Installation can only be done with the power turned off.

Comply with applicable codes and standards during installation.

3. Safety Protection

Please wear the corresponding protective cover and safety device during installation, otherwise do not operate.

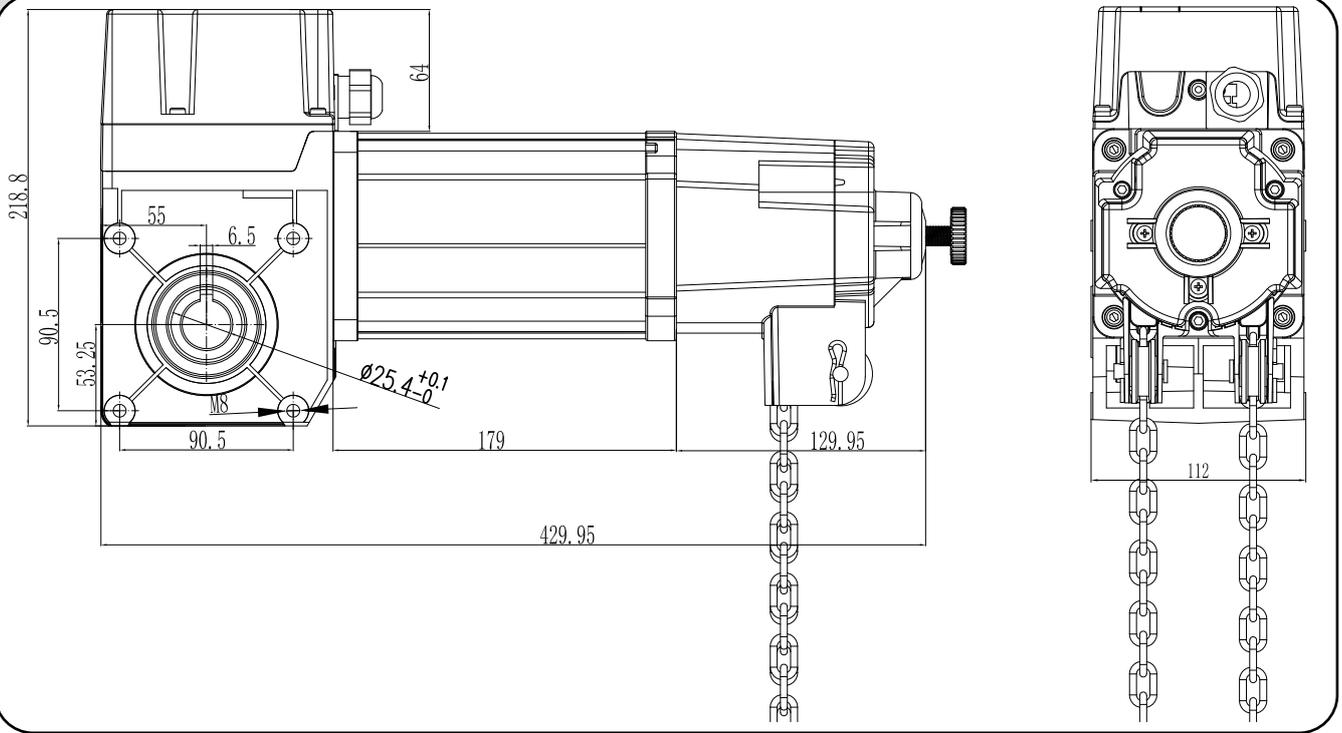
Make sure the power terminals are correctly positioned and the cable glands and watertight connectors are properly tightened.

4. Spare Parts

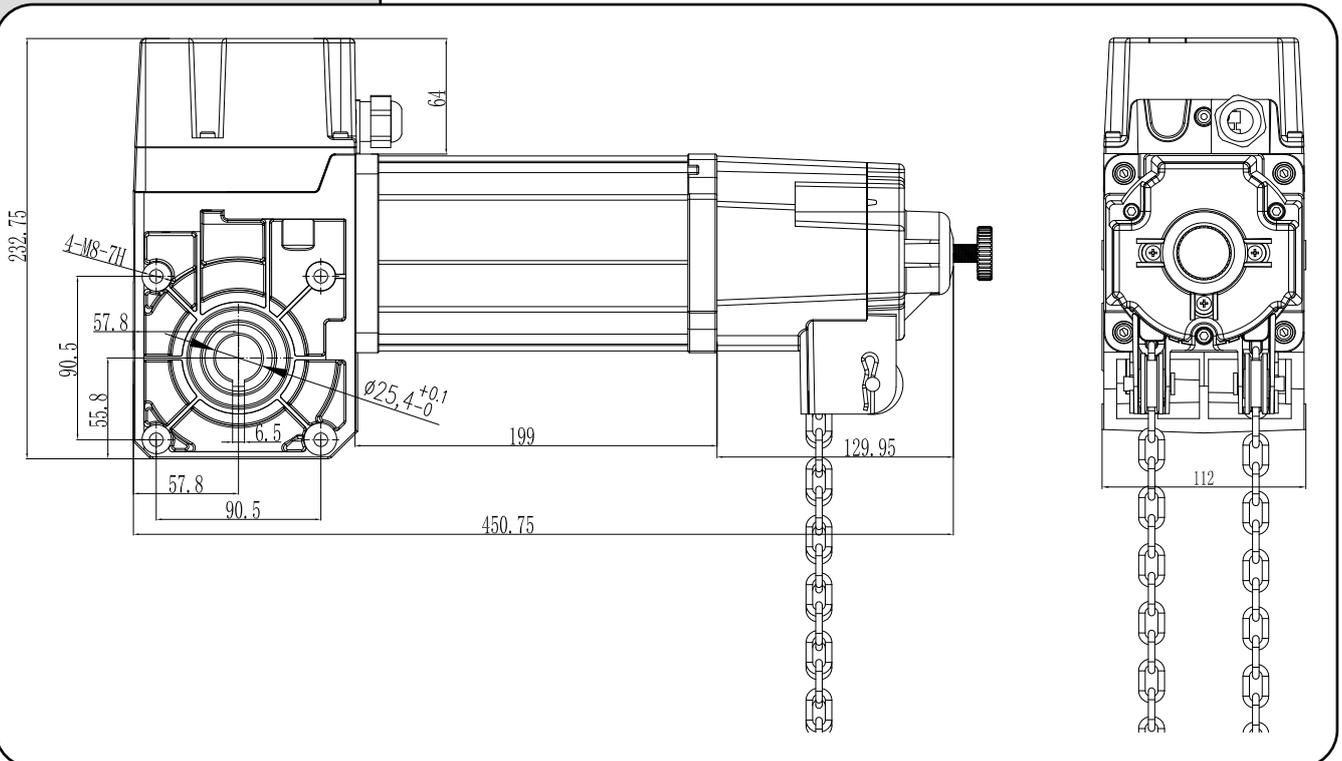
Only use original spare parts from our company.

2. Product Size

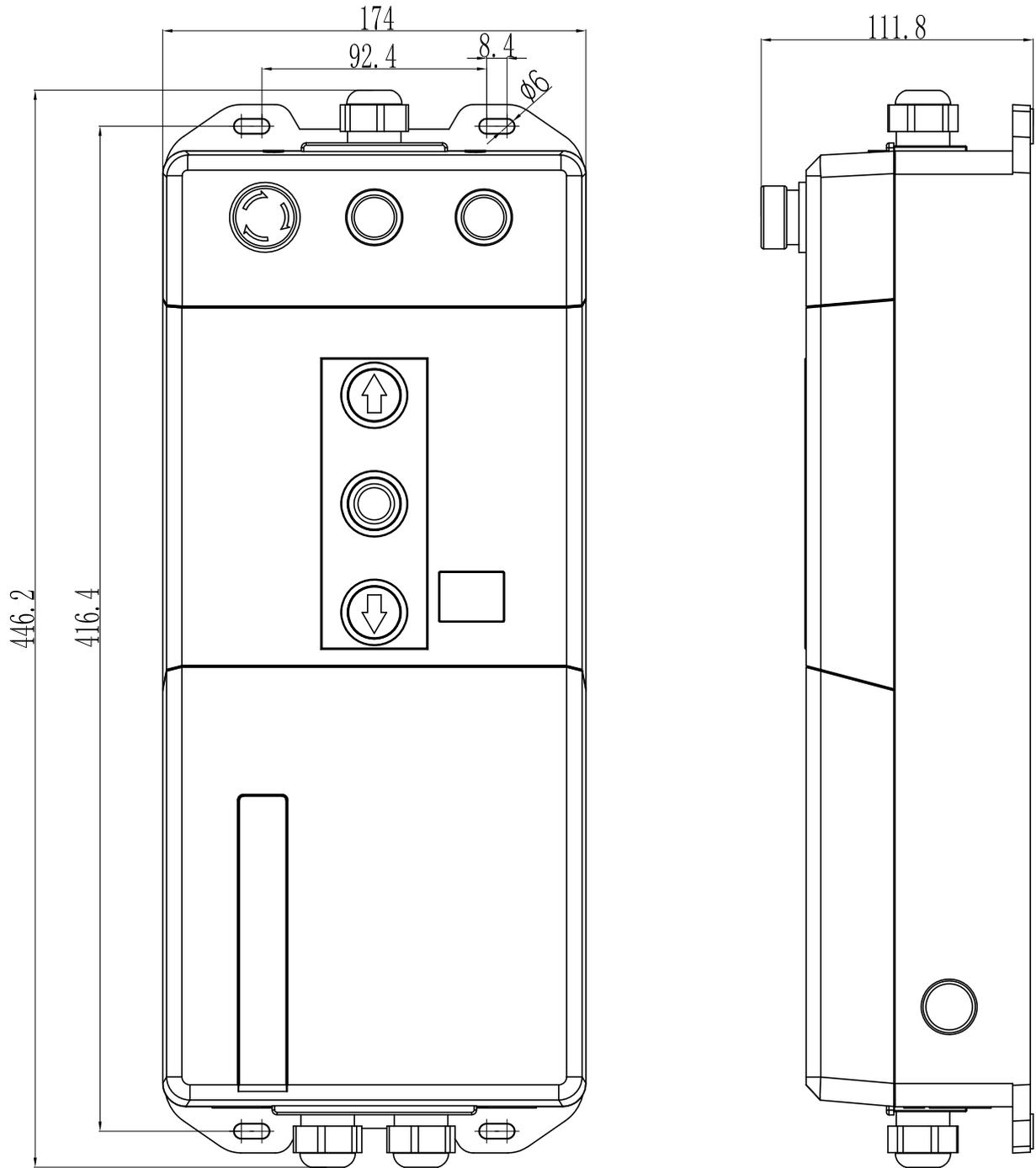
90NM



120/140NM



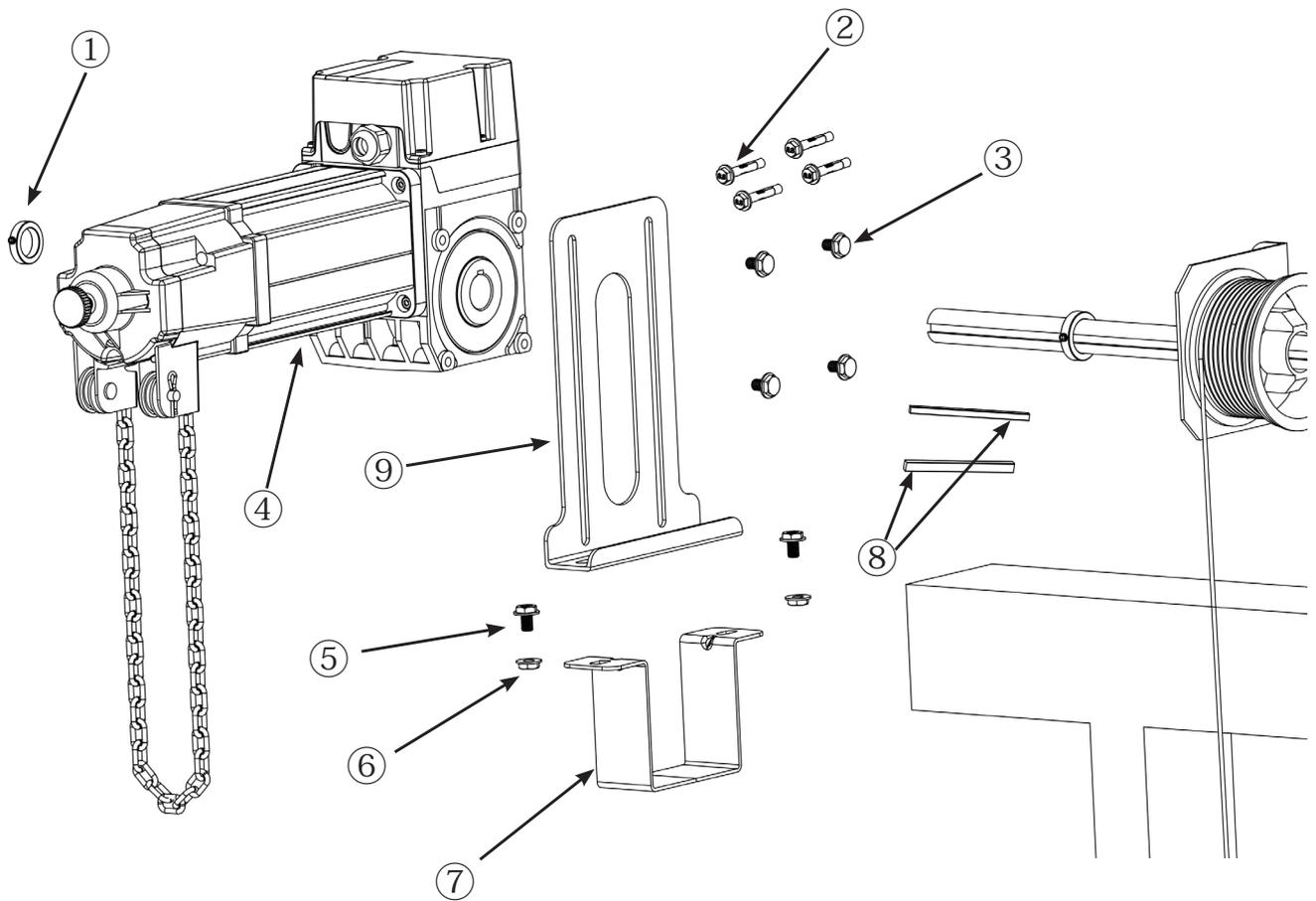
Control Box Product Size



3. Technical Specifications

Series	FC90	FC120	AC90 (220V)	AC90 (380V)	AC140 (380V)
Max. output torque (N.m)	100N.m	140N.m	100N.m	100N.m	150N.m
Rated output torque (N.m)	90N.m	120N.m	90N.m	90N.m	140N.m
Output speed (rpm) f= (20-83Hz)	12-32rpm	12-32rpm	24rpm (50Hz)	24rpm (50Hz)	24rpm (50Hz)
Output shaft/hollow shaft (mm)	φ25.4/31.8mm	φ25.4/31.8mm	φ25.4/31.8mm	φ25.4/31.8mm	φ25.4/31.8mm
Static holding torque (N.m)	400N.m	400N.m	400N.m	400N.m	400N.m
Door area (m ²)	32 m ²	40 m ²	32 m ²	32 m ²	40 m ²
Input voltage (V)	220 (1+10%) V 60Hz/50Hz 380V-420V	220 (1+10%) V 60Hz/50Hz 380V-420V	220 (1+10%) V 50Hz	380 (1+10%) V 50Hz	380 (1+10%) V 50Hz
Motor power (KW)	0.7KW	0.85KW	0.7KW	0.7KW	0.85KW
Thermal protection temperature (°C)	120°C	120°C	120°C	120°C	120°C
Max. cycles per hour (Cycle)	20 cycles	20 cycles	20 cycles	20 cycles	20 cycles
Duty rating	S3=40%ED	S3=40%ED	S3=40%ED	S3=40%ED	S3=40%ED
Class of protection	IP54	IP54	IP54	IP54	IP54
Limit switch range <small>(maximum revolutions of output shaft/hollow)</small>	15turns	15turns	15turns	15turns	15turns
Temperature range (°C)	-20°C~ +60°C	-20°C~ +60°C	-20°C~ +60°C	-20°C~ +60°C	-20°C~ +60°C

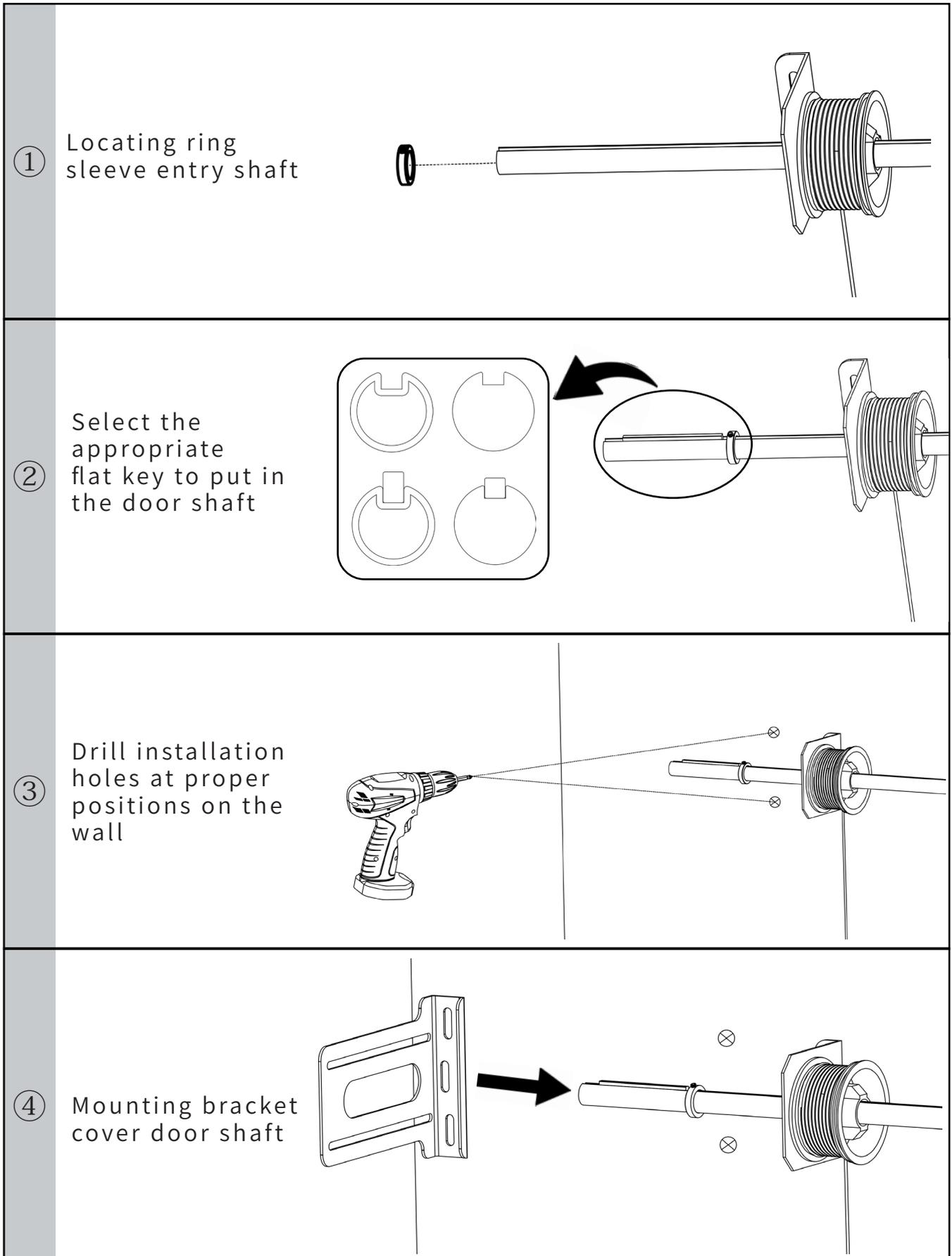
4.Product Packing List

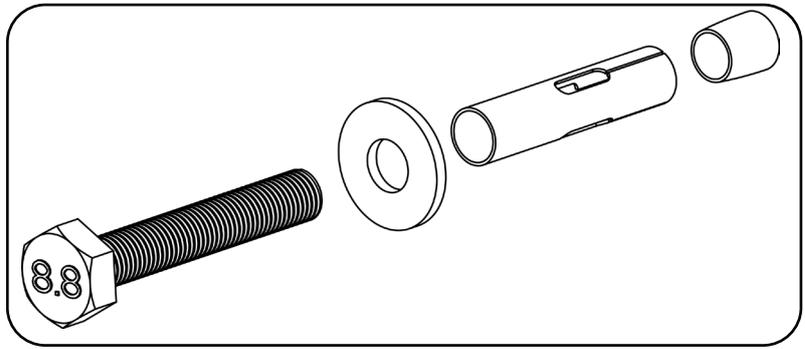


Number	Part Name	Quantity
①	Locating Ring	2
②	Metal Expansion Bolt	4
③	Hexagon Flange Bolts 8*12mm	4
④	Motor	1
⑤	Hex Bolts 8*20mm	2
⑥	Hex Flange Nuts	2
⑦	Industrial Door Opener Hoop	1
⑧	Thick Flat Key Thin Flat Key	2
⑨	Heavy Duty Mounting Bracket	1

5. Mechanical Installation

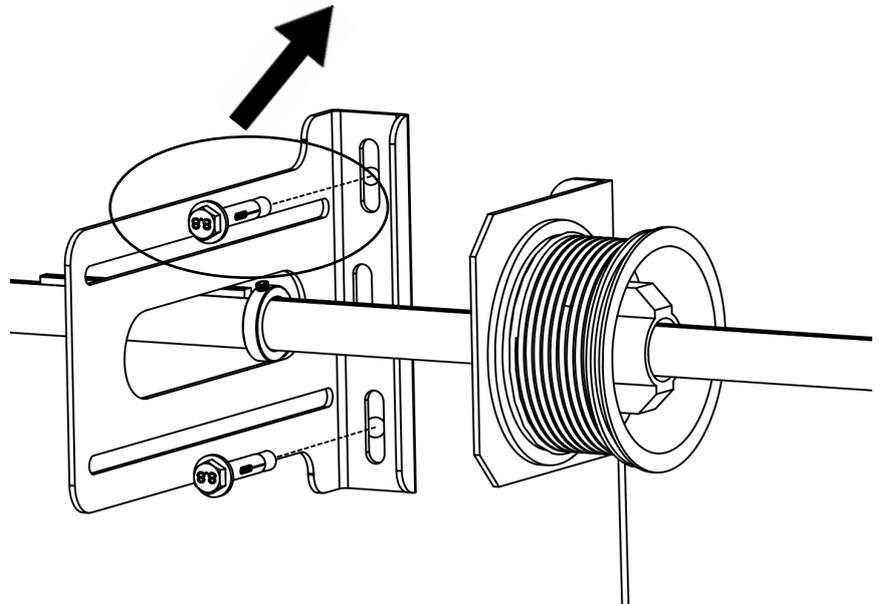
1. Mounting Bracket and Wall Fixing Method





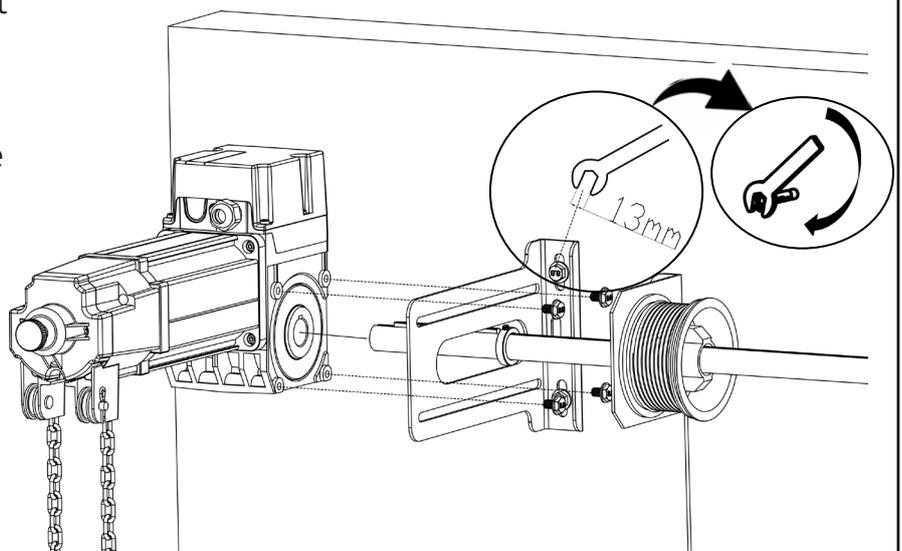
⑤

The bracket is aligned and installed into the expansion bolt



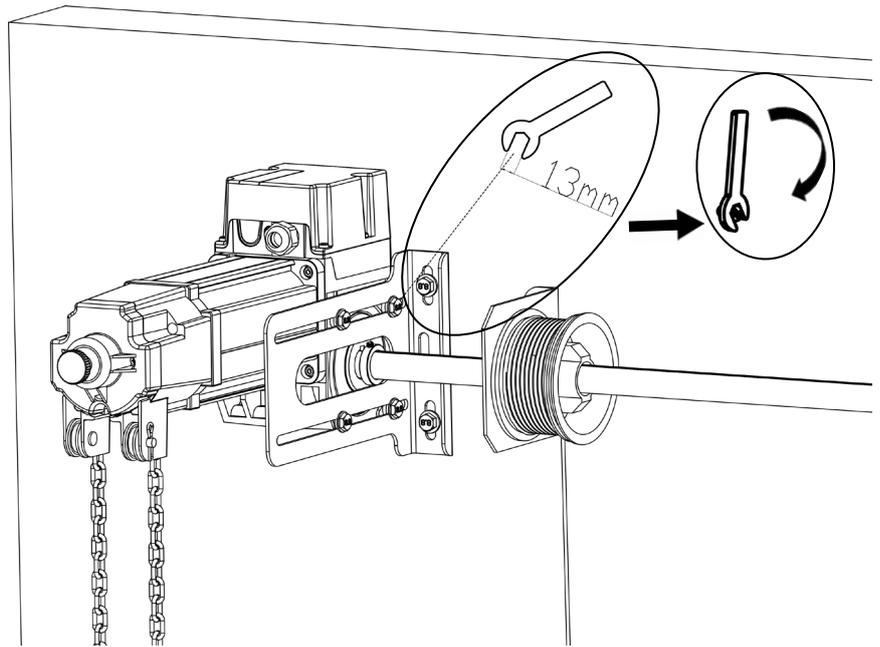
Use a 13mm locking tool on the opposite side to lock the bolt and the bracket (torque: 25Nm), put the motor on the door shaft and prepare 4 pieces of M8*12mm flange bolts

⑥



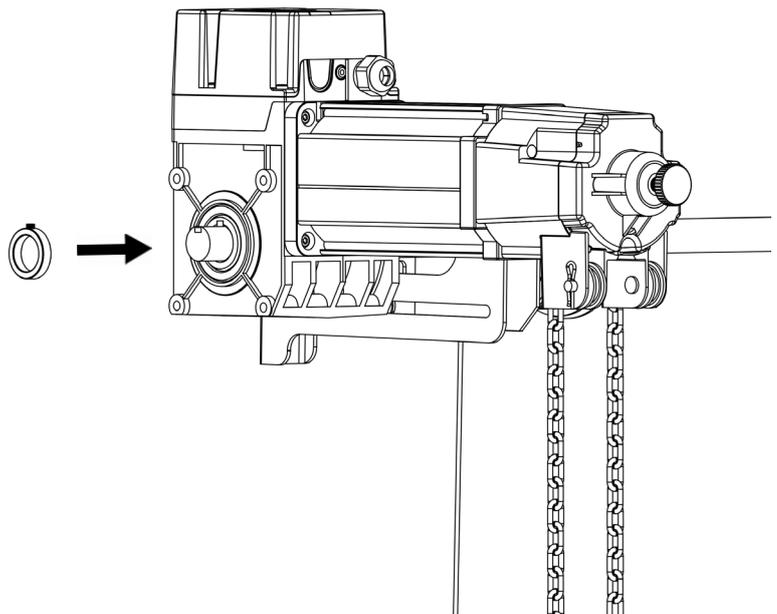
7

Tighten the bolts
with a 13mm
locking tool

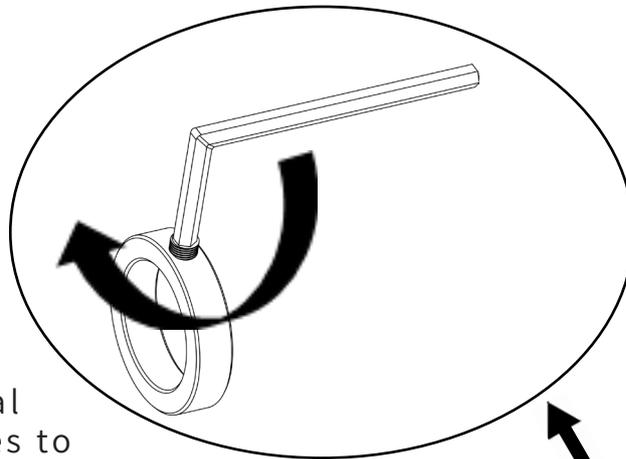
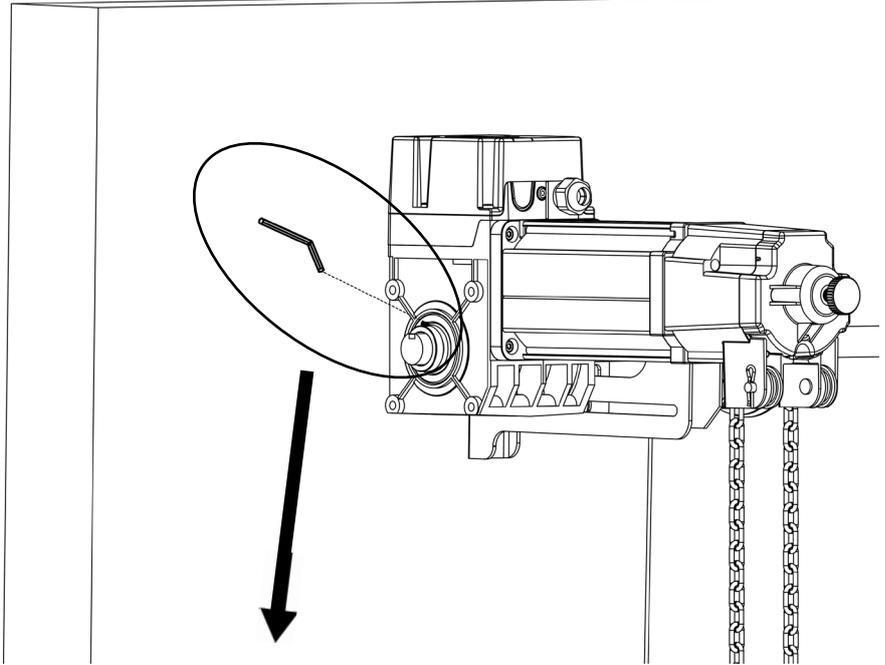


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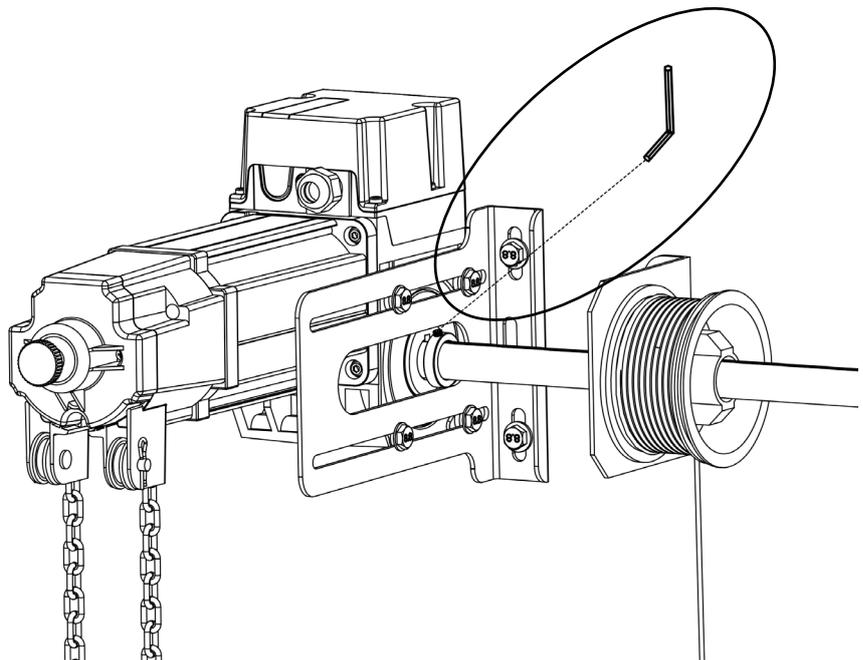
Set into the positioning
ring



9

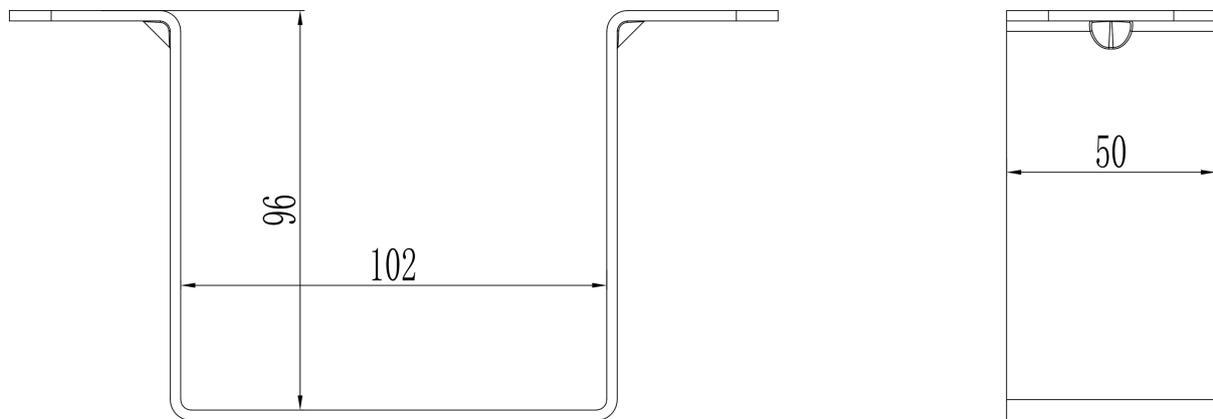


Use a 4 mm hexagonal tool on opposite sides to lock the retaining rings on both sides of the motor

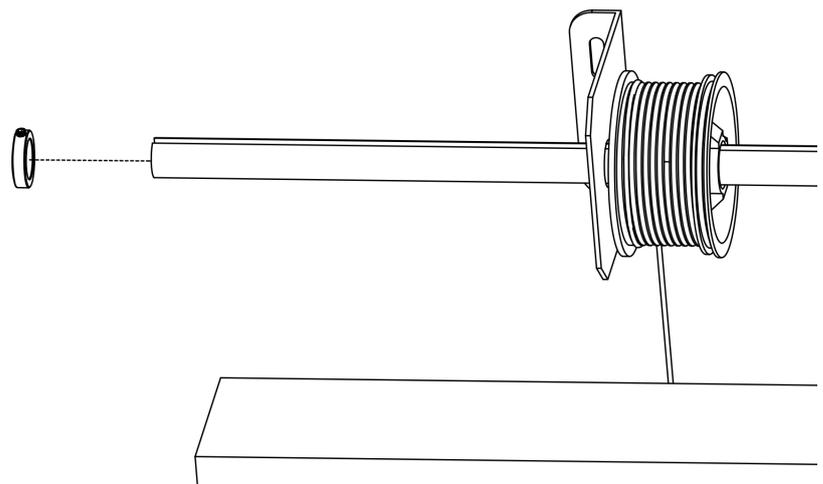


2. Mounting Bracket and Wall Fixing Method

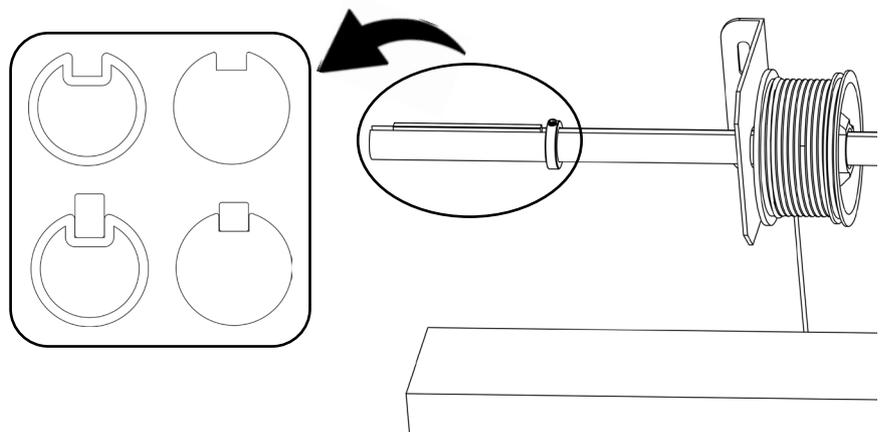
Hoop Size



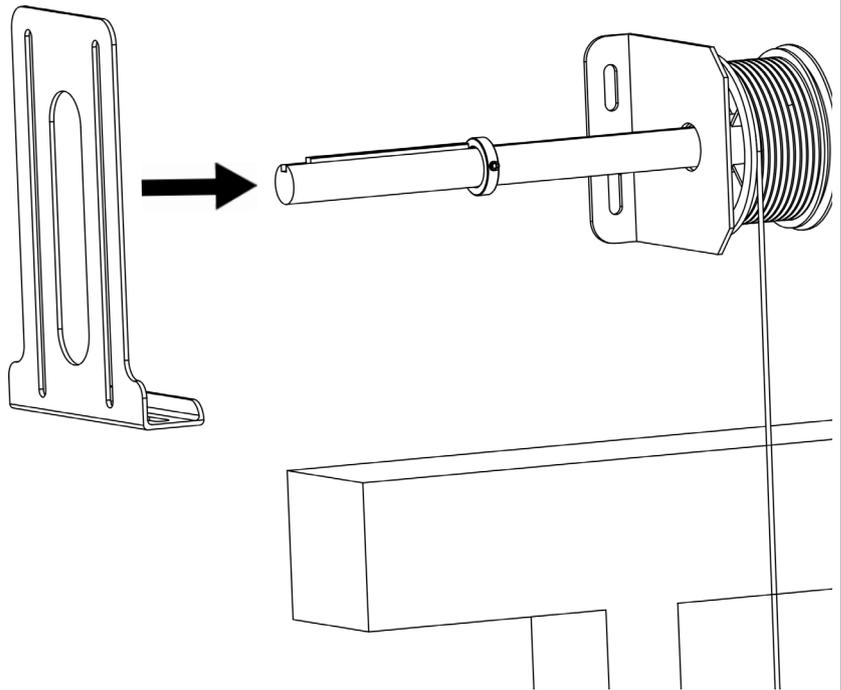
- ① Locating ring sleeve entry shaft



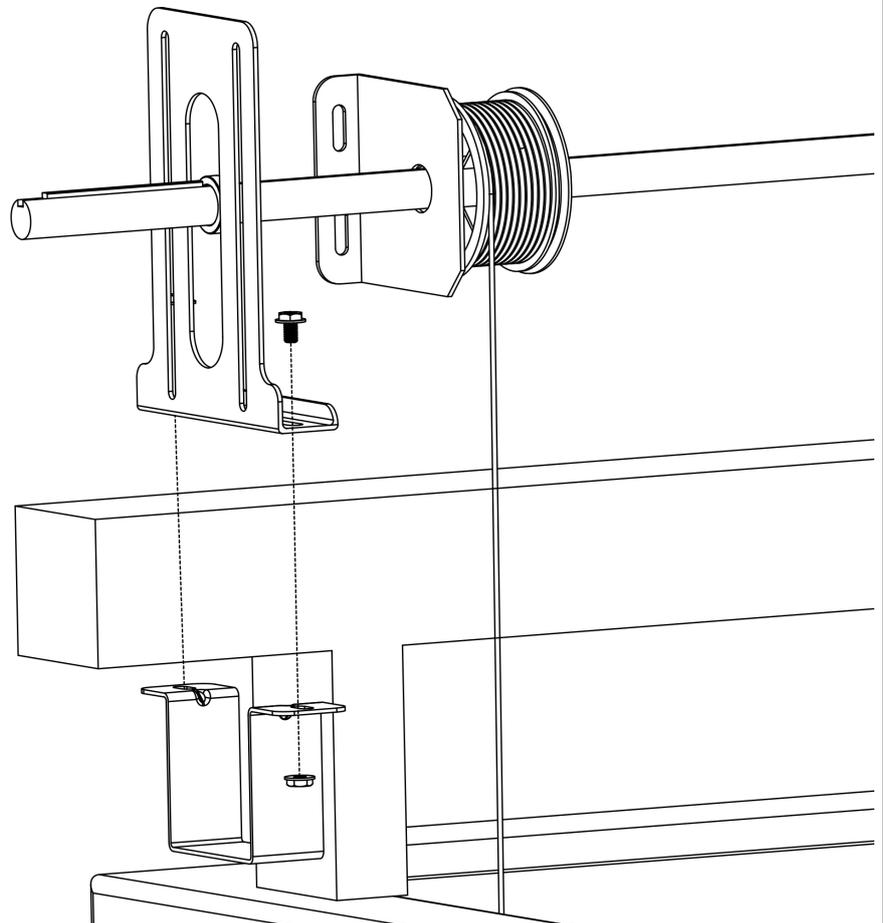
- ② Select the appropriate flat key to put in the door shaft



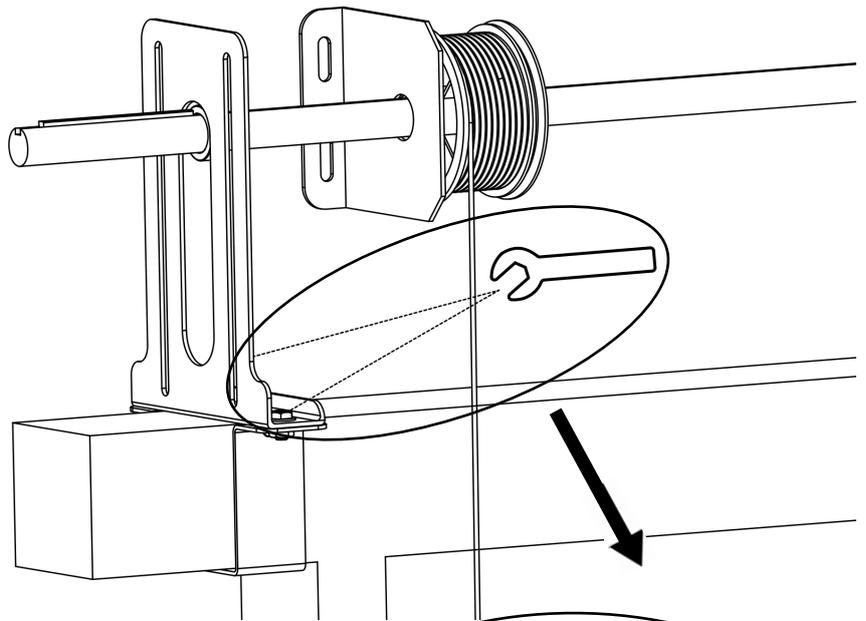
③ Mounting bracket
cover door shaft



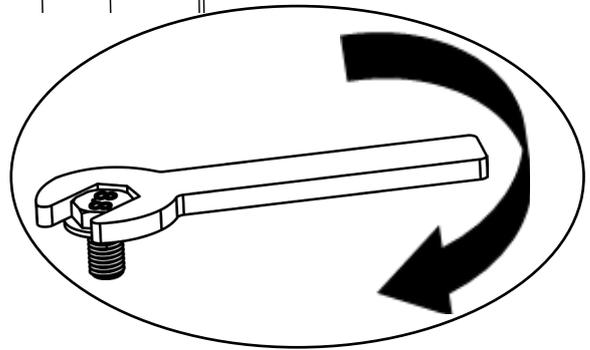
④ The mounting
bracket and the
hoop are connected
to the steel
structure, and two
M8*20mm
flange bolts and M8
nuts are
prepared



⑤

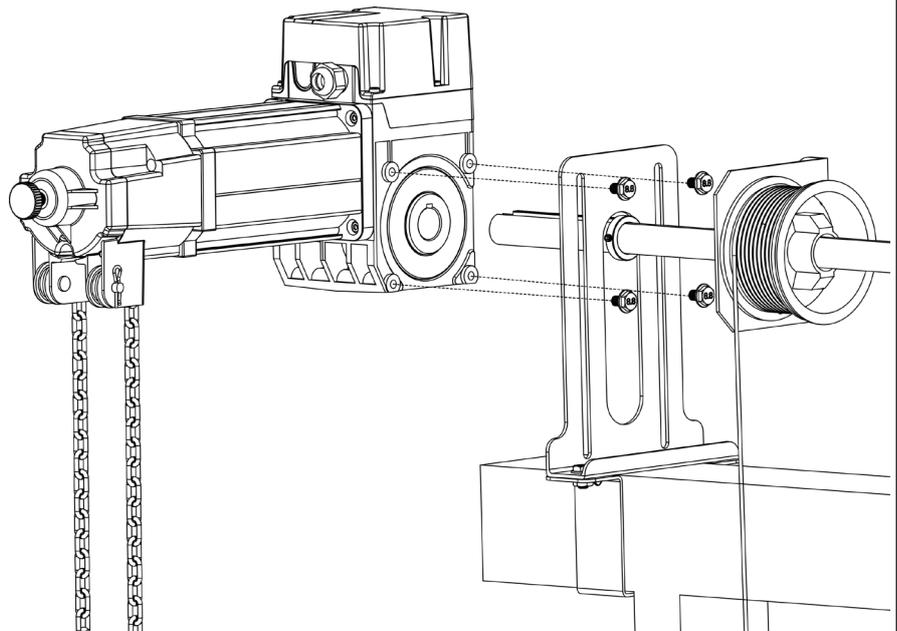


Use the 13mm locking tool on the opposite side to lock the bolts (torque: 25Nm)



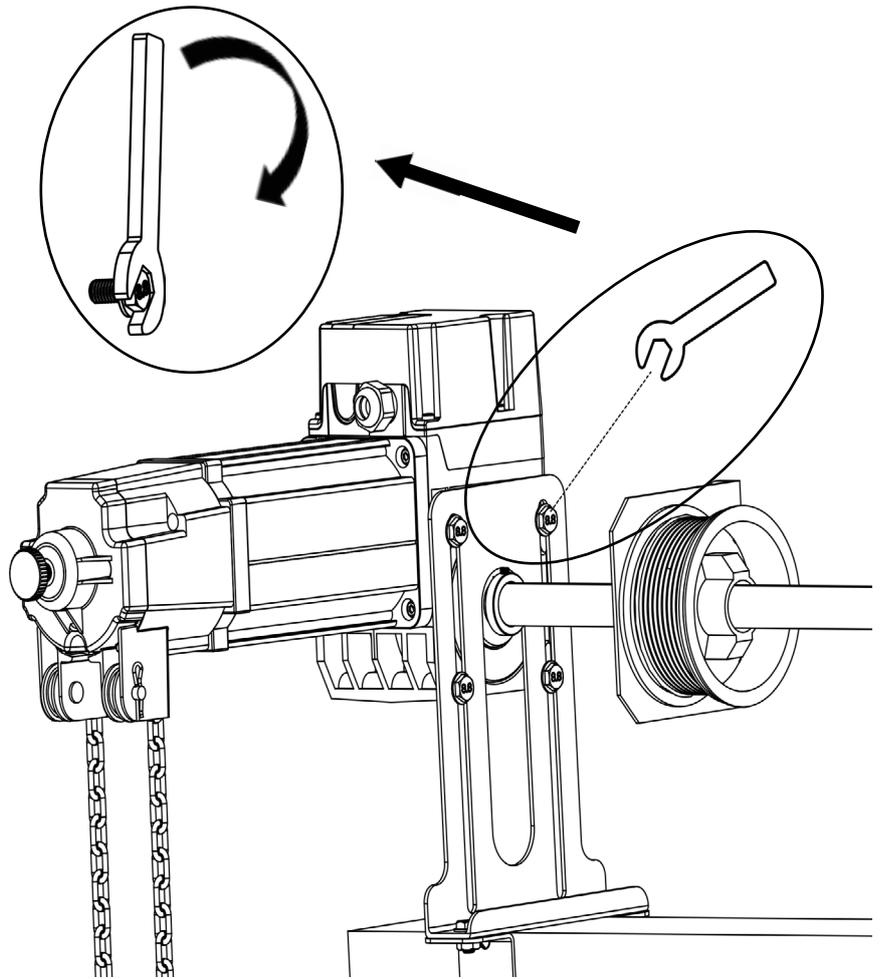
⑥

The entry shaft of the motor sleeve, prepare 4 pieces of M8*12mm flange bolts



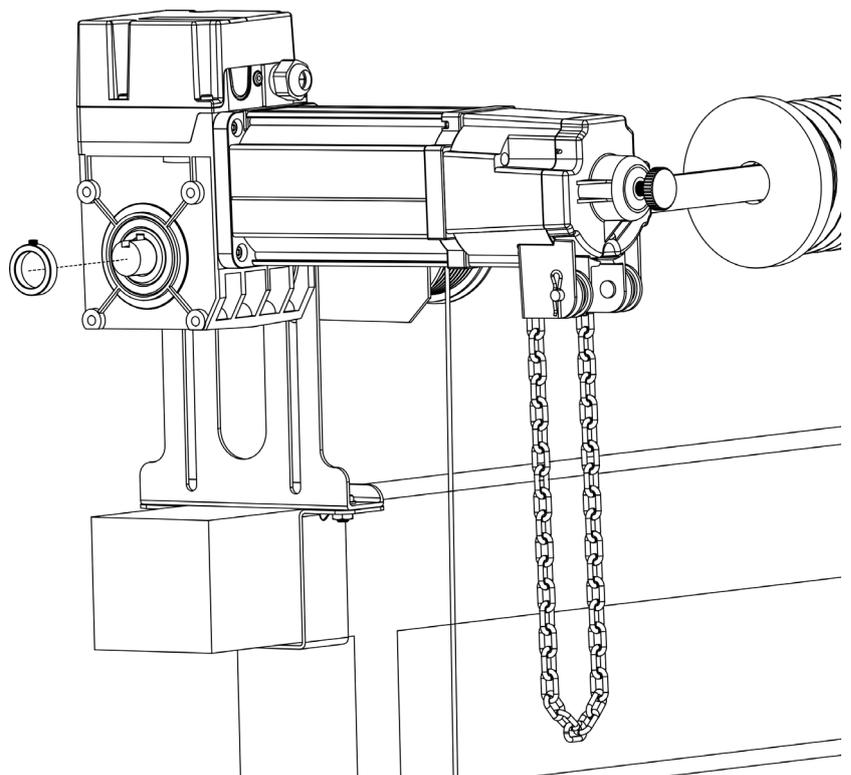
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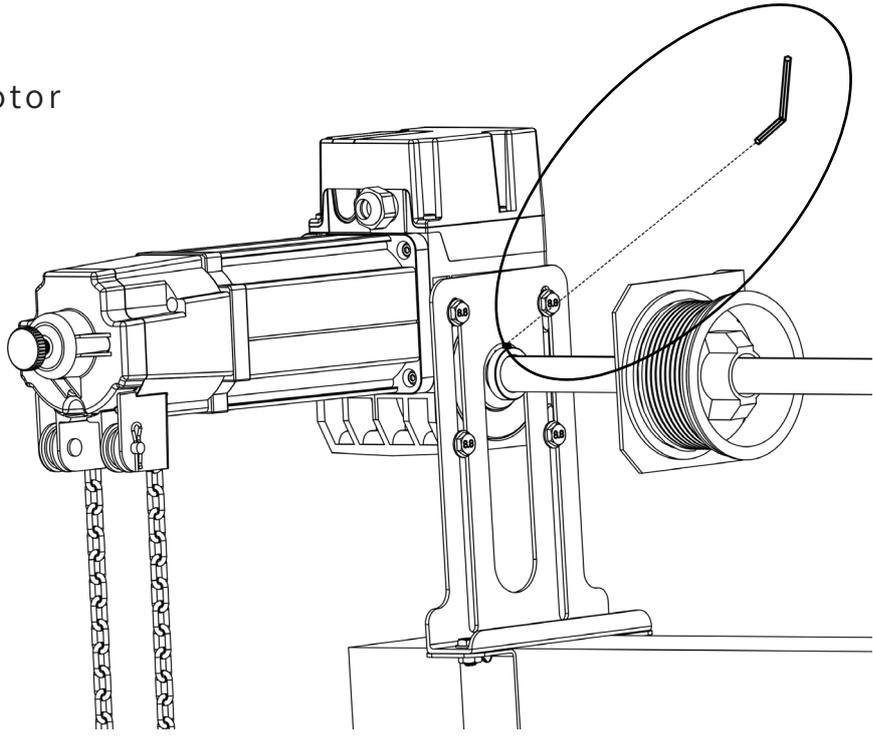
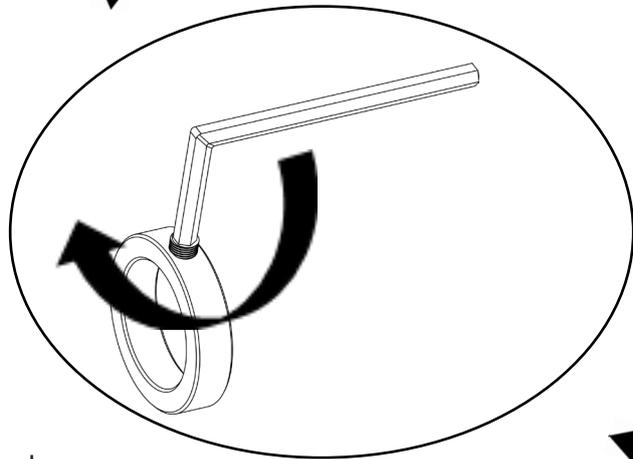
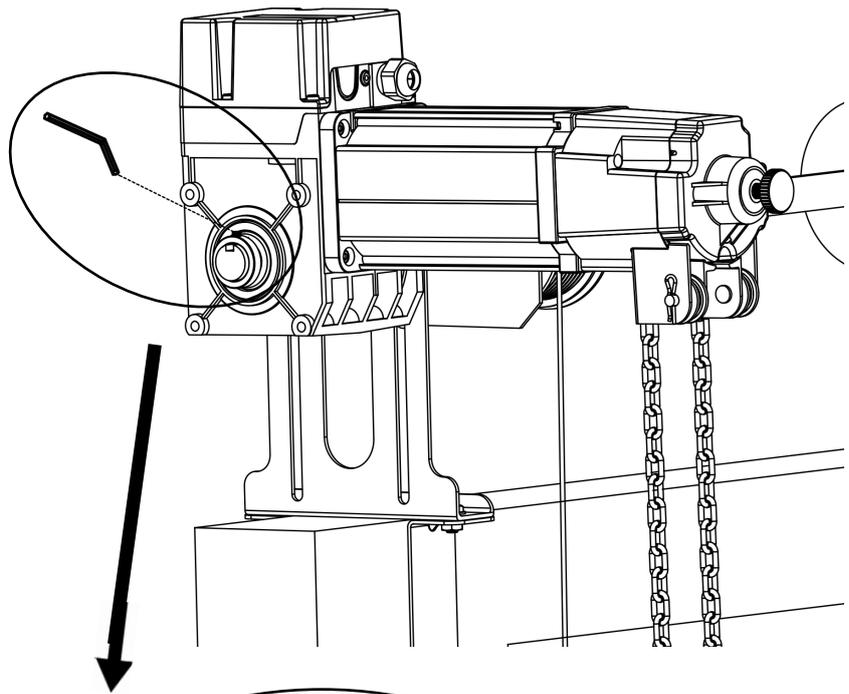
Tighten bolts with
13mm across flats
locking tool
(torque:25Nm)



8

Set into the
positioning ring



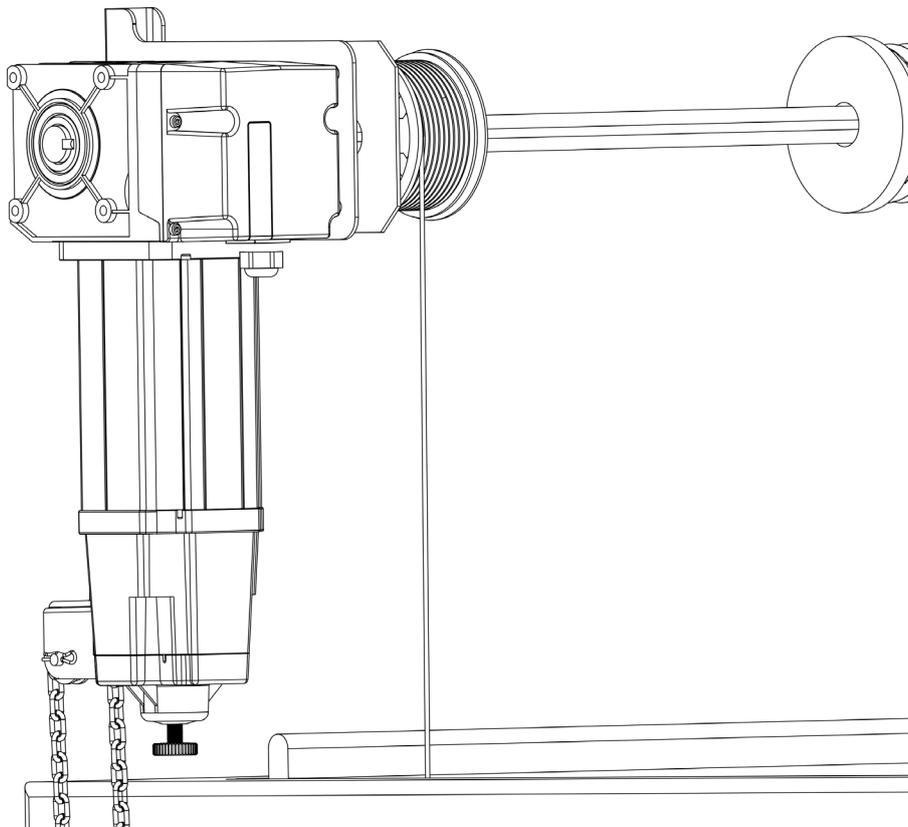


9

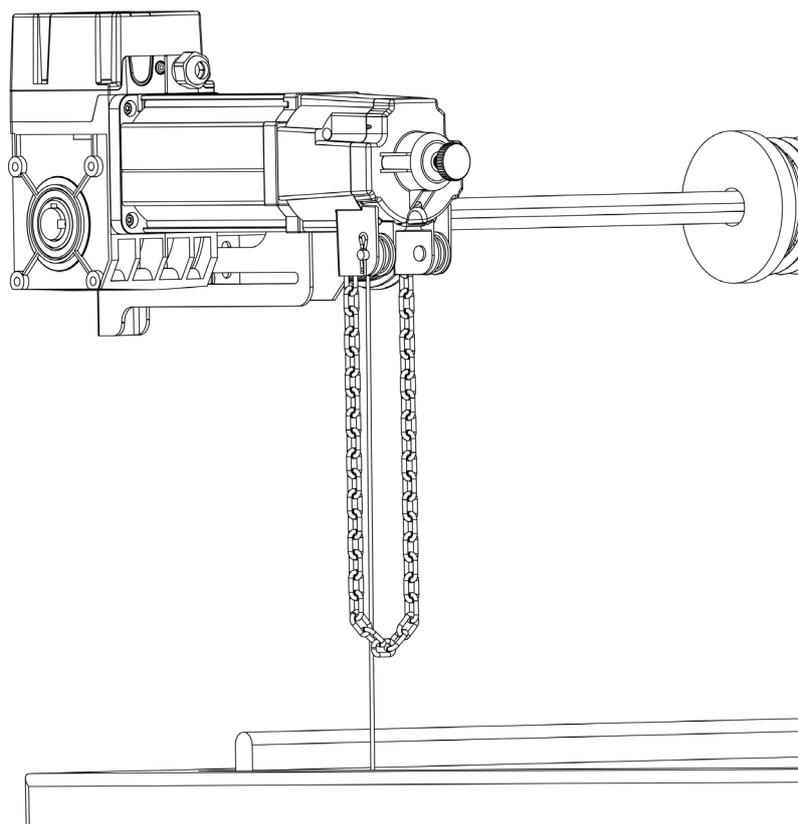
Use a 4 mm hexagonal tool on opposite sides to lock the retaining rings on both sides of the motor

3. Motor Allowed Installation Location

Vertical



Horizontal



6. Emergency Manual Operation (Rapid Hand Chain Operator)

Emergency manual operation to open or close the door without power. Immediately after activation, the control power supply is interrupted, and electrical operation will not be possible at this time.



WARNING: **Improper operation will cause injury!**

- Off voltage
- Choose a safe location
- For industrial door openers with brakes, emergency manual operation must first close the brakes



WARNING: Risk of falling door!

If you need to apply a force exceeding the permitted 390N (according to EN 12604/EN 12453) to move the door via emergency manual operation, this is an indication that the industrial door opener or the door has stalled and loosening the stop may cause the door to fall.

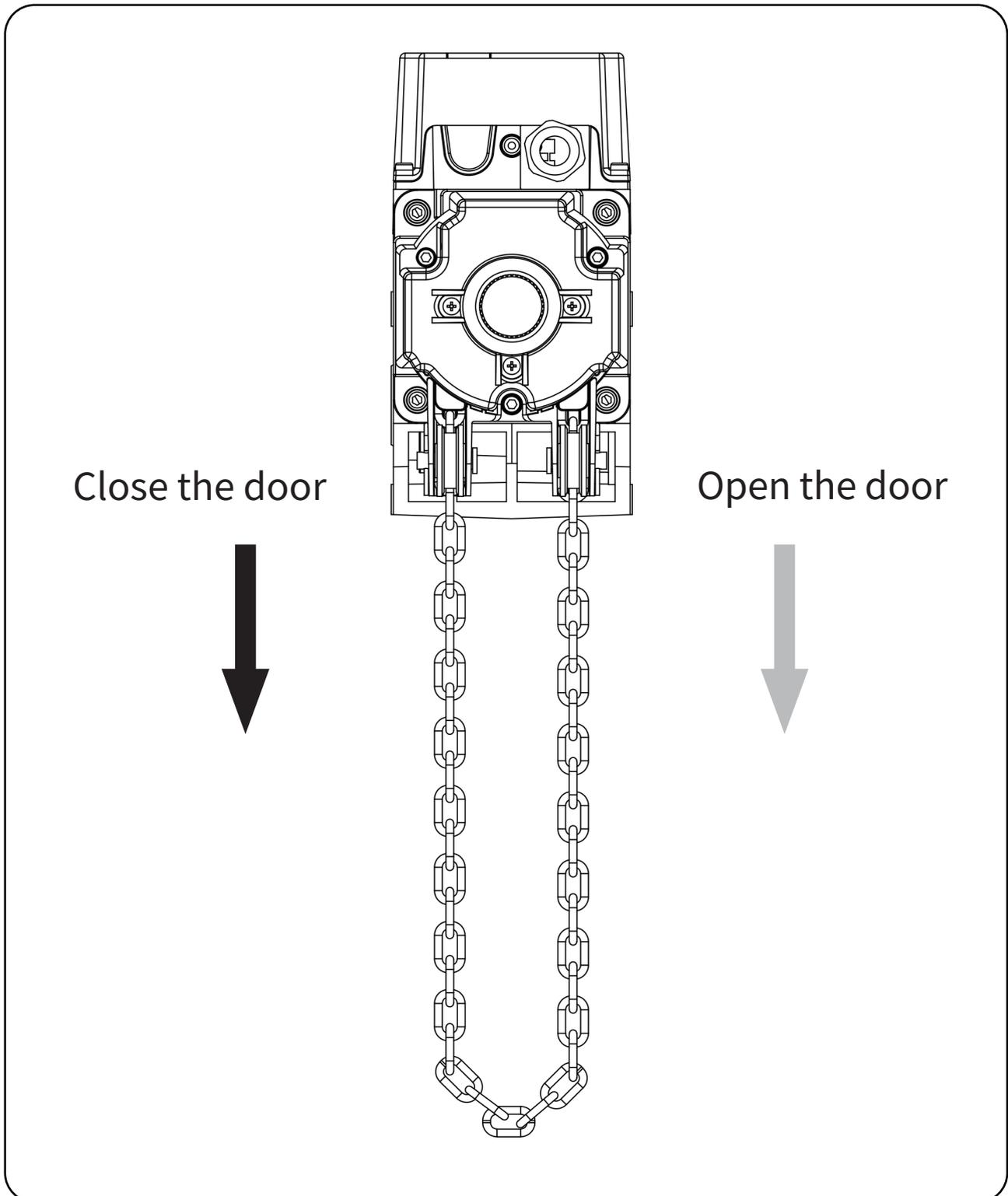
- Choose a safe location
- For industrial door openers with brakes, emergency manual operation must first close the brakes



WARNING - PARTS DAMAGED!

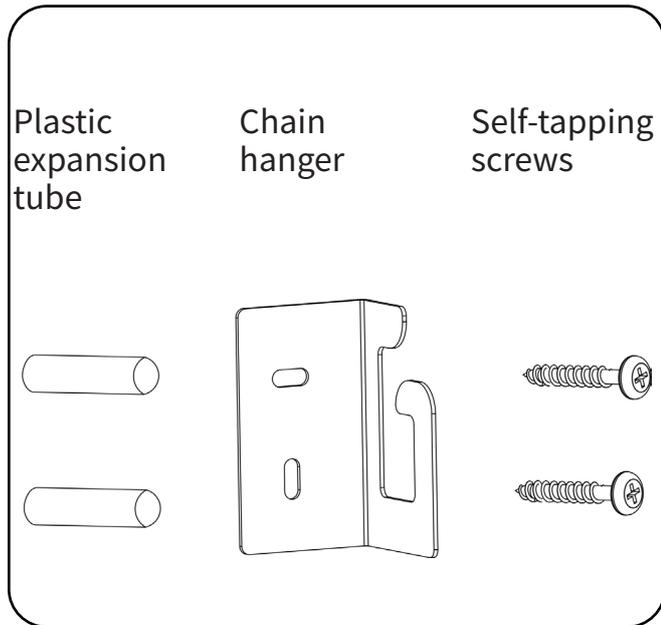
- Do not move the door beyond the final limit position.

- ☞ Pull any end of the chain, the motor stops working ;
- ☞ At this point, if you trigger the motor, the digital display will show 
- ☞ Pull the chain on the left and the door will close.
- ☞ Pull the chain on the right and the door will open.
- ☞ Loosen the chain, the motor returns to normal, and the control box can control the motor.

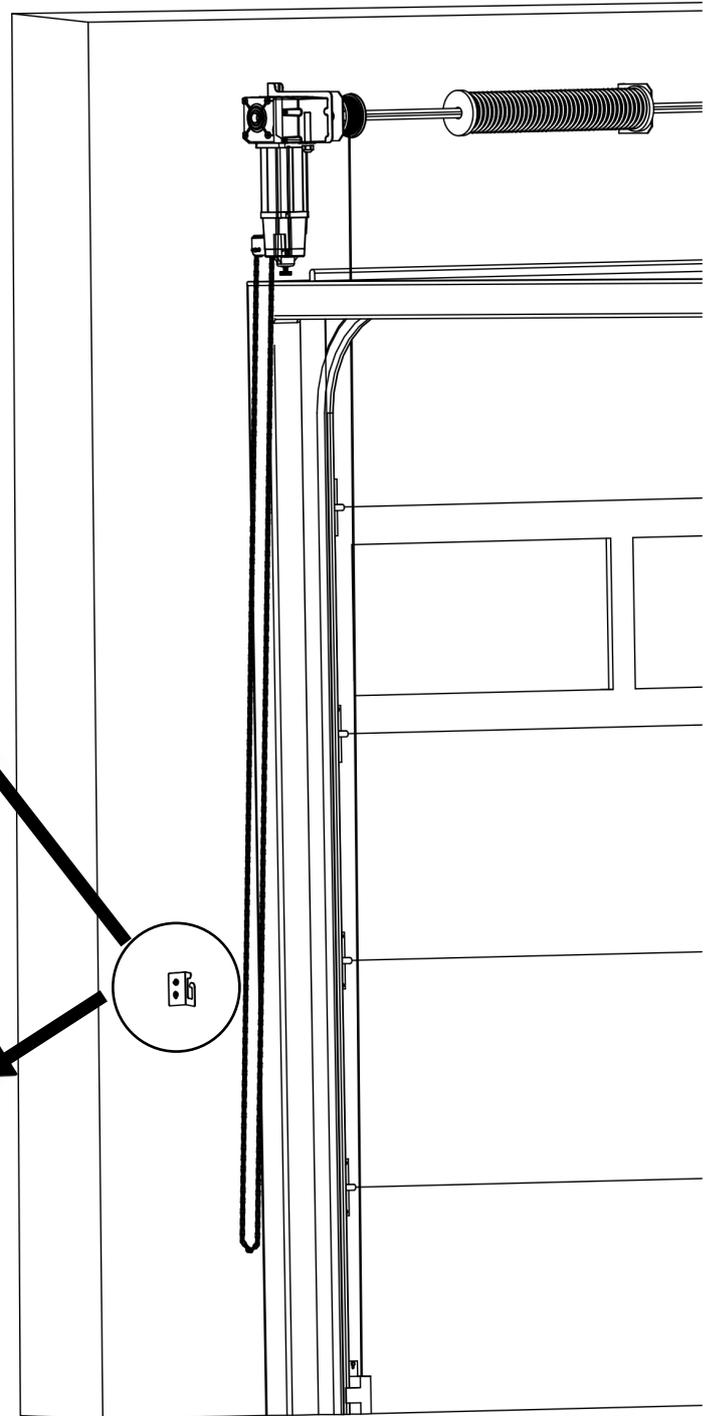
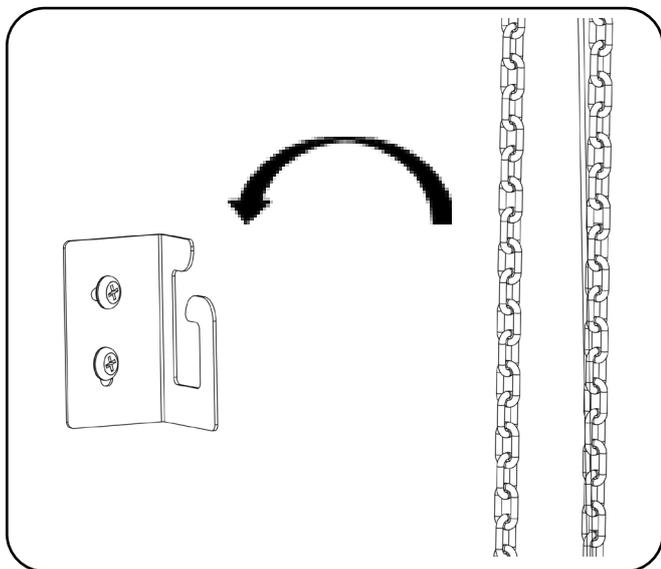


7.Chain Hanger

Chain hanger installation: Drill installation holes on the wall, put the expansion tube in, and fix the chain hanger to the wall with two 5*25mm self-tapping screws.



When the chain is not used daily, hang the chain in the chain hanger.



8. Complete Commissioning/Inspection

Check the following parts, then install all enclosures.

Gearbox

Check the industrial door opener for oil leaks (a few drops are negligible). The output shaft is protected against corrosion.

Connectors, Fasteners

Check that all connections, fasteners (motor, mounting brackets, bolts, retaining rings, etc.) are properly installed and in the correct position.

Electric Wire

Check the connection and power cords for damage or crushing. Check that the connector and power plug connections are installed correctly.

Emergency Manual Operation

In the case of power failure, check the function, and the door body cannot exceed the set upper and lower limit range.

Limit Switch

Check the set limit position by fully opening and closing. It cannot exceed the limit range of the door body, and cannot exceed the maximum limit circle of the product.

Industrial Door Opener

In the case of power failure, check the function, and the door body cannot exceed the set upper and lower limit range.



Notice

Have a qualified engineer inspect the drives annually, applying shorter inspection intervals to frequently operated doors.