



Shanghai BST Door System Co.,ltd

Landing Mechanism Installation

Manual

Model: T2210-T2A

Version: 2017.A

STATEMENT

Privacy statement:

This installation manual is only applicable to the installation of the T2210 landing door system device. No one shall for any reason to disclose or copy the document to a third party without the written permission of the relevant personnel of Shanghai BST Door System Co., Ltd. For those who violate the regulations, Shanghai BST Door System Co., Ltd. reserves the right to sue for violating the regulations.

Authorization statement:

The issuance of this document is for informational purposes only. Any person who applies this document to participate in the installation and construction must be a person who has been trained by the local Labor and Social Security Bureau and obtained an employment permit, and is qualified to do so. Please read this installation manual carefully before installation. If you fail to operate in accordance with the requirements of this installation manual and any damage caused by modification of this equipment, Shanghai BST Door System Co., Ltd will not take the responsibilities. All equipment installers must strictly adhere to the relevant safety regulations. Strict compliance with this installation manual will provide maximum protection for equipment performance and user safety. Equipment installers are required to receive specific training related to Shanghai BST Door System Co., Ltd and have the qualification to install by Shanghai BST Door System Co., Ltd.

Disclaimer:

Shanghai BST Door System Co., Ltd. reserves the right to change the product design, features and procedures reflected in this document at any time. Nothing contained in this document is intended to be a description or procedure for any other product; any specific purpose or quality; or any revision or representation of a purchase contract; the basis, or condition, expression or implication of the specification and suitability of the product.

Shanghai BST Door System Co., Ltd. does not take any responsibility for this document. Shanghai BST Door System Co., Ltd. does not take the consequences of mistakes, negligence or the expression of this document. The user of this document bears all risks and responsibilities for disclosure this document. Shanghai BST Door System Co., Ltd. reserves the right to change the contents of these written materials without prior consultation or prior notice. If you have any doubts about this manual, please contact Shanghai BST Door System Co., Ltd. in time.

Contents

1 Safety Regulations.	1
2 Product Introduction.	2
3 Installation Tools Preparation.	2
4 Landing Door System Wearing Parts.	2
5 Landing Door System Installation.	4
5.1 Components Description.	4
5.2 Sill Assembly.	4
5.3 Frame Installation.	6
5.4 Landing Mechanism and Frame Connection.	8
5.5 Landing Door Panels and Sliders and Hanger Door Panel Installation.	10
5.6 Landing Door Panel Adjustment.	10
5.7 Eccentric Wheel Adjustment	12
5.8 Landing Door Lock Adjustment.	12
6 Notes for Maintenance.	13
7 Trouble Shooting.	14

1. Safety Regulations

Safety Sign Description

1.1 This installation manual uses the following symbols as safety signs.



Danger

When this symbol appears, it must be noticed that there may be a significant risk of personal injury. The instructions marked with this symbol must be complied with.



Electric shock danger

When this symbol appears, it must be noticed that there is a significant risk of personal electric shock.



Warning

When this symbol appears, should be noticed that failure to follow the instructions marked with this symbol may result in personal injury or property damage. Warning sign must be complied with.



Note

This symbol should be taken seriously, the instructions marked with this symbol contain important operational instructions. Failure to comply may result in damage and fault of the elevator.



Inspection

This symbol should be taken seriously, the description of the symbol contains the inspection sequence information, it must be strictly enforced in any case, otherwise it may result in personal injury or property damage.

1.2 Safety measures under an emergency



Emergency unlock

Only those who are familiar with elevator safety regulations and trained personnel can open the landing door manually!

2. Product Introduction

2.1 Range of Application

Environmental Requirements	Working site	Free from direct sunlight, no dust, corrosive gases, flammable gases, oil mist, etc.
	Altitude	Below 1000 m
	Maximum operating temperature	-20°C ~ +50°C
	Humidity	< 90%RH, no condensing, no icing
	Vibration	<5.9m/s ² (0.6g)
	Storage temperature	-40°C ~ +70°C
	Protection grade	IP0X

2.2 Technical Specifications

Description	
Safety loop voltage and current	AC: Rated Voltage ≤AC 230V, Rated Current ≤AC 0.5A
	DC: Rated Voltage ≤DC 110V, Rated Current ≤DC 0.2A

3. Installation Tools Preparation

The Landing mechanism installation tools mainly have the following types, refer to Table 3-1.

Table 3-1 Installation tools

No.	Name	Speciafication	Quantity	Note
1	Circlip pliers	175mm	1 pc	
2	Levelling instrument	500mm	1 pc	
3	Plumb Bob	Steel material 1kg	1 pc	
4	Cross screwdriver	75-200mm (with suction)	2 pc	
5	Single-head wrench	7/13-24	2 sets/type	
6	Socket wrench	13/16/18/24	1 set /type	
7	Inner hexagonal wrench	10/13/16	1 set /type	
8	Cypriot ruler	100A21	1 pc	
9	Percussion drill		1 set	
10	Percussion bit	16	1 pc	M12 expansion bolts
11	Percussion bit	9	1 pc	M6 expansion bolts

4. Landing Door System Wearing Parts

Refer to Table 4-1

Table 4-1 Wearing parts list

Part name	Use	Note
Door Slider Assembly	Car Operator/Landing Mechanism	
Contact Switch	Landing Mechanism	AZ06

	Auxiliary contact	
Wirerope	Landing Mechanism	Door type and clear opening should be specified.
Hanger door wheel $\phi 48$	Landing Mechanism	
Eccentric wheel	Landing Mechanism	
Door cam wheel	Landing Mechanism	

5. Landing Door System Installation

5.1 Components Description

The main parts of 2 panels side opening landing door refer to Figure 5-1

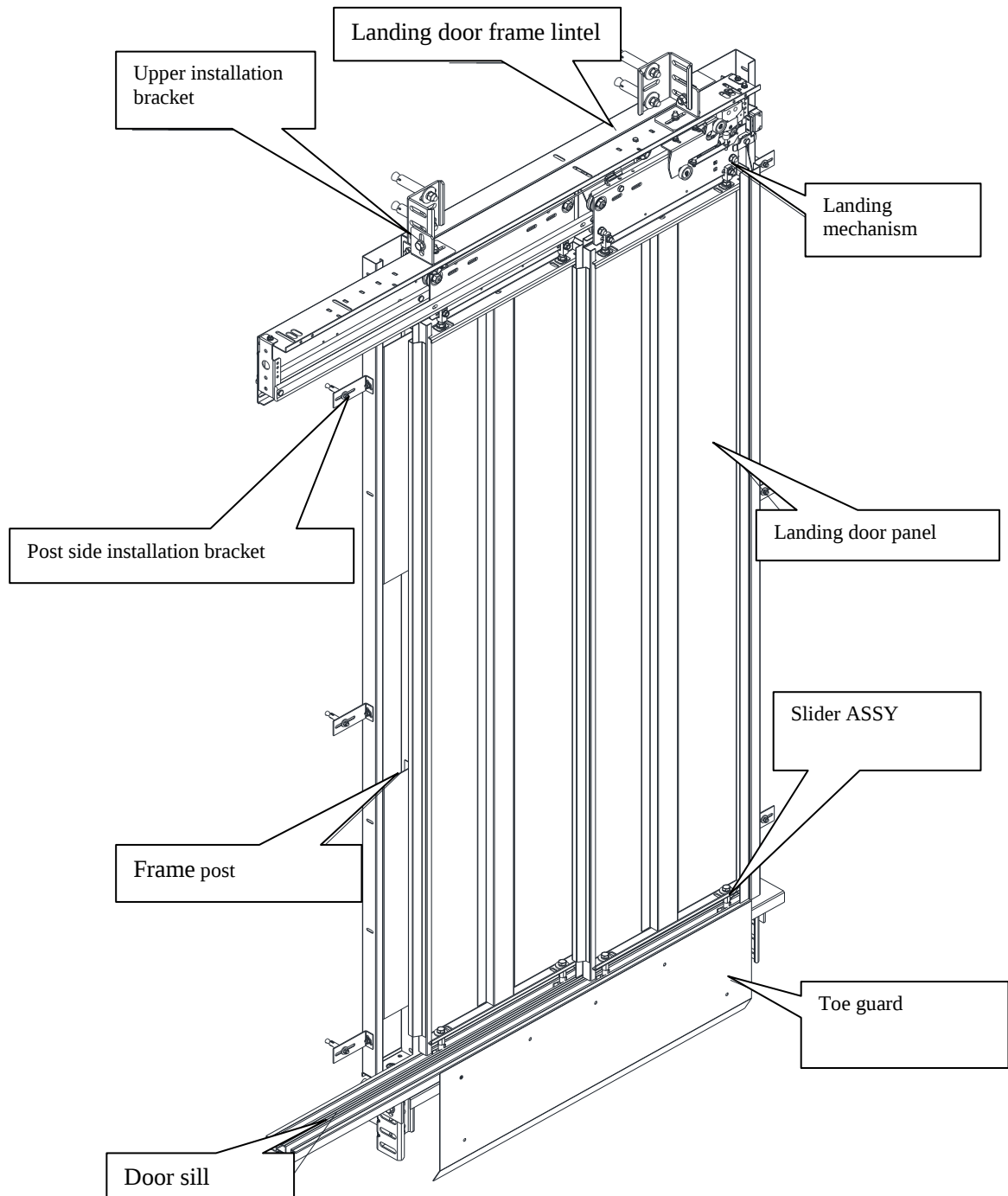


Figure 5-1 Assembly Drawing of Landing Door

5.2 Sill Assembly

- 1) Assemble the sill of car door, refer to Figure 5-2-1. Use a hammer suspension wire to find the center line of the landing door and the ground plane of the landing door. Use a percussion drill and drill 16 hole as shown in the figure (for M12 expansion bolts);

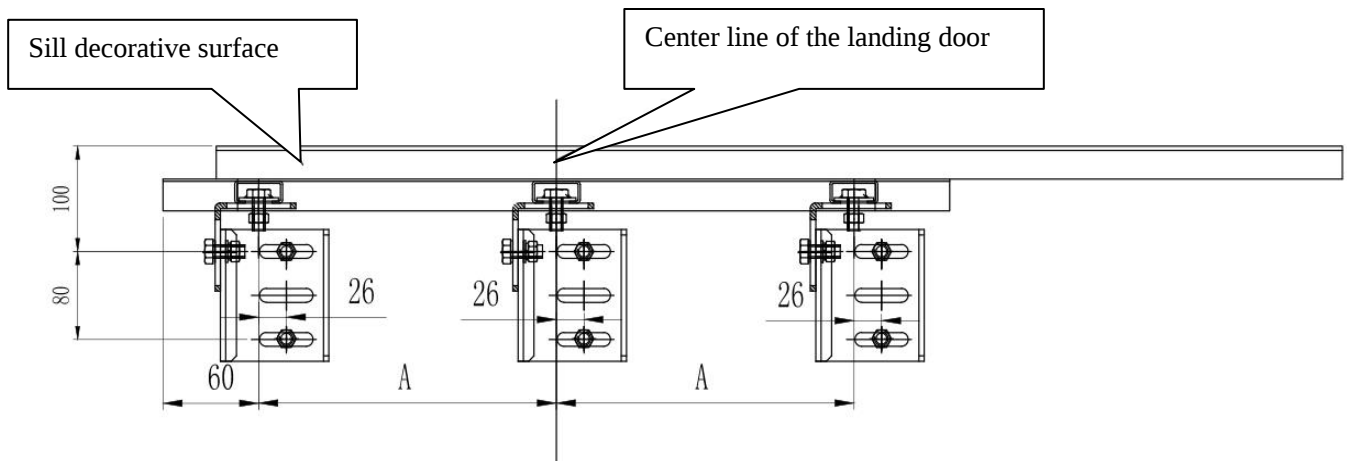


Figure 5-2-1

Table 5-1 Dimensions of expansion bolts for fixing 2 panels side opening T2210-T2A landing door systems

Clear Opening PL	700	800	900	1000	1100	1200
A	410	460	340	373.3	406.7	330
A Quantity	2	2	3	3	3	4

- 2) Refer to Figure 5-2-2, connect the sill and sill support plate, and connect the sill and sill support plate to the landing door mounting bracket, do not lock the bolts first; adjust the sill to ensure the distance between the sill line and the car door sill line is 30mm, as shown in Figure 5-2-3, tighten the bolts.

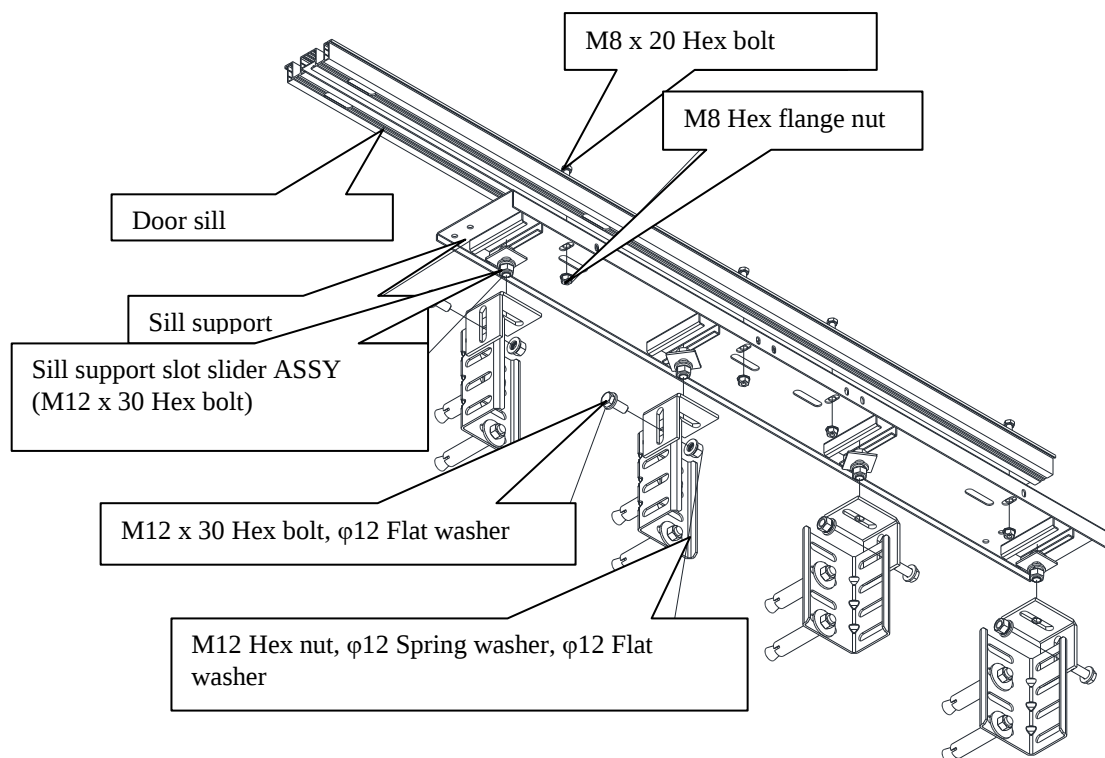
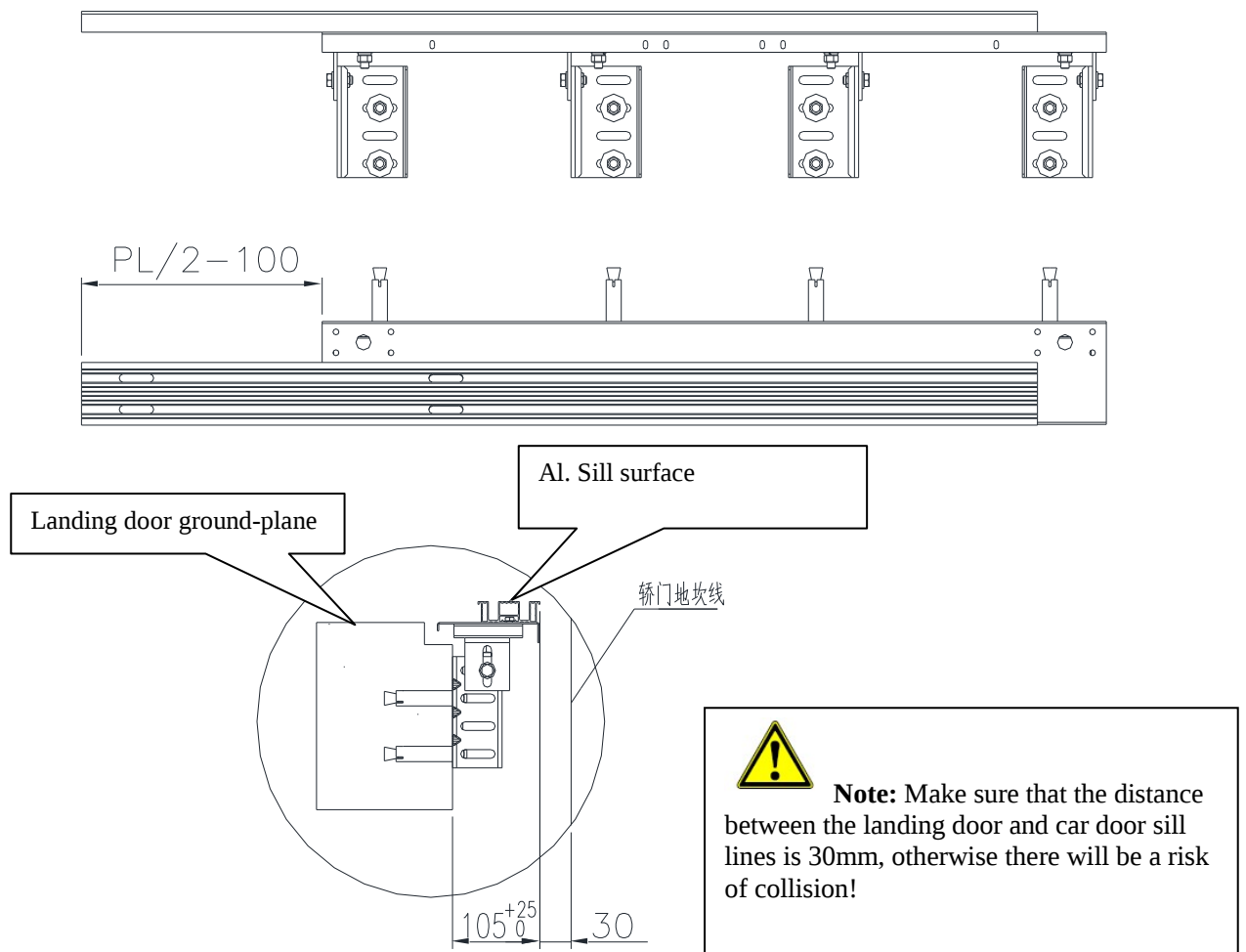


Figure 5-2-2



3) Install the toe guard, refer to 5-2-4

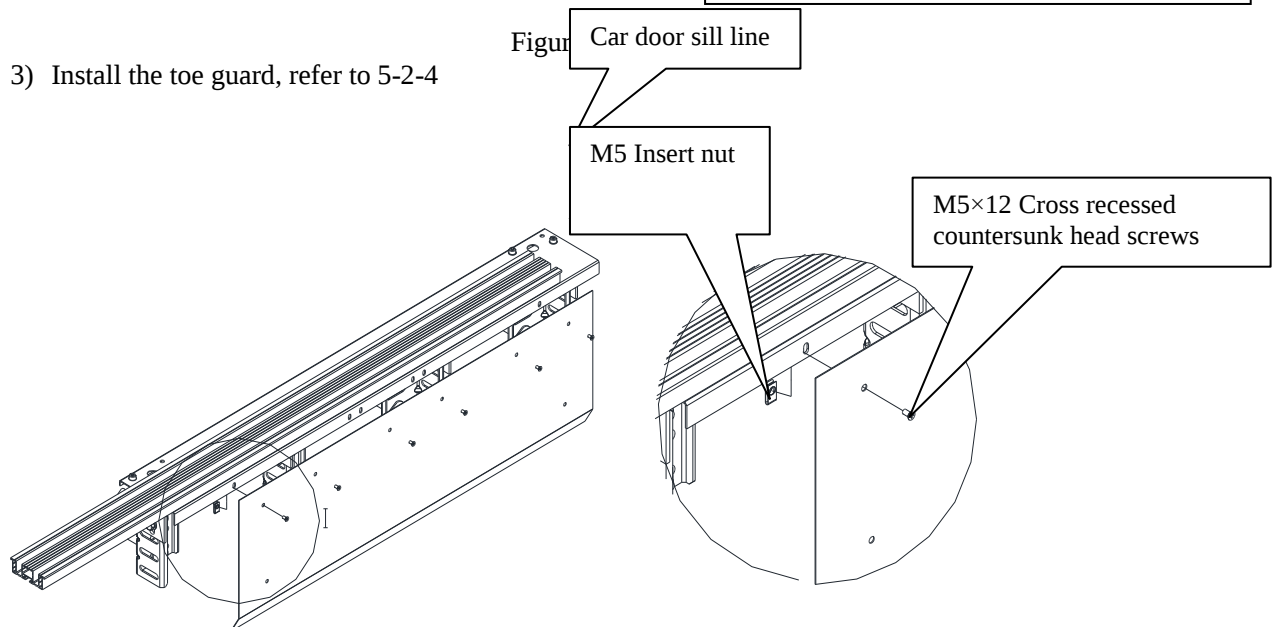


Figure 5-2-4

5.3 Frame Installation (Frame dimension: 60x120)

Please refer to Figure 5-3-1, Figure 5-3-2, and Figure 5-3-3. After ensuring the verticality of the door frame, tighten all bolts, and fix the door fram to the wall with expansion bolts.

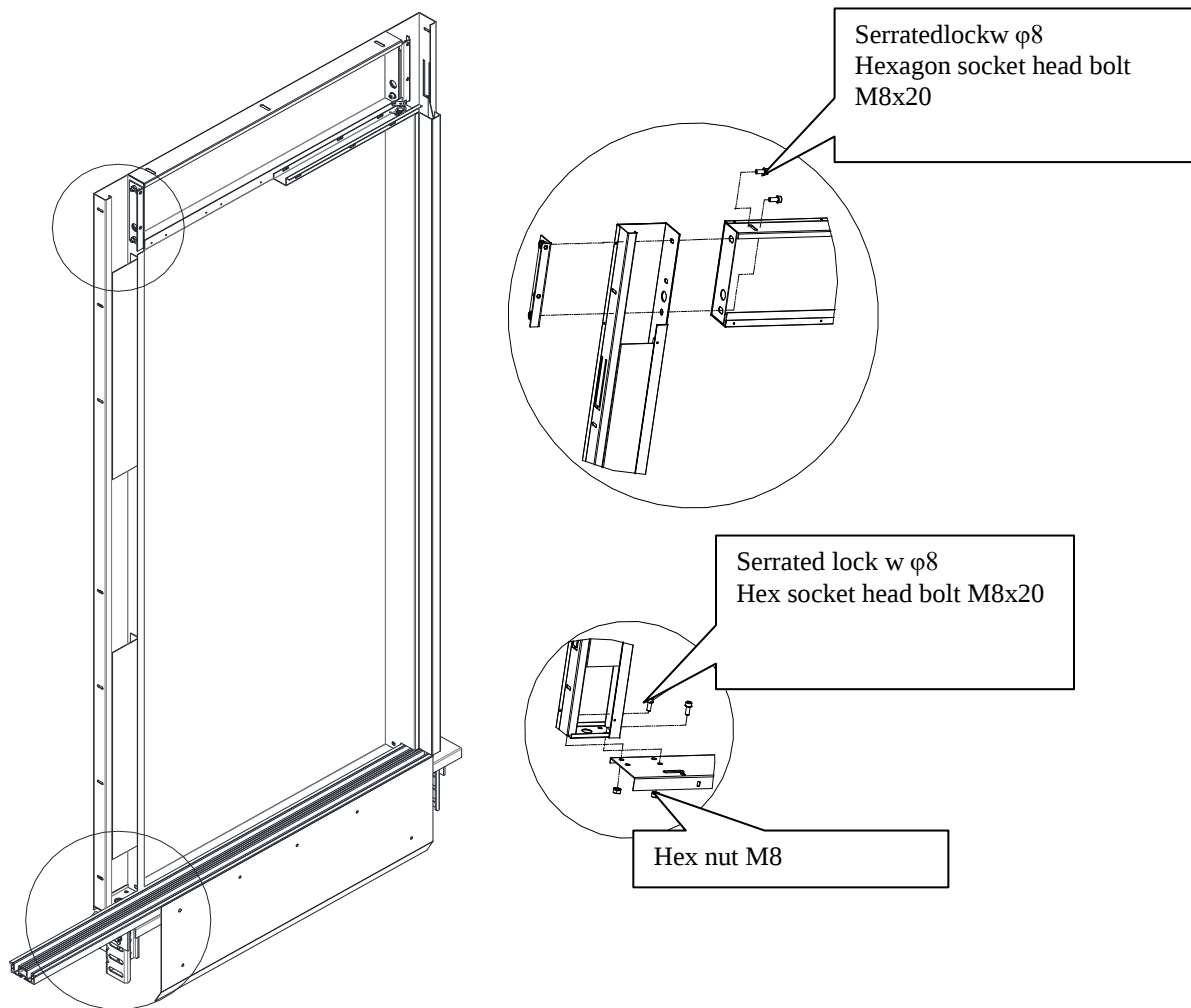


Figure 5-3-1

Note: After the door frame installation is completed, check and ensure that two diagonals A and B are equal in size before final fixing

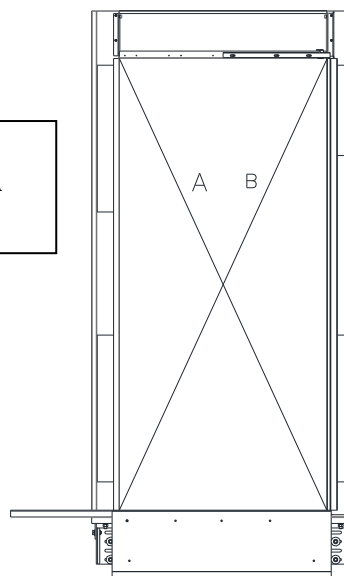


Figure 5-3-2

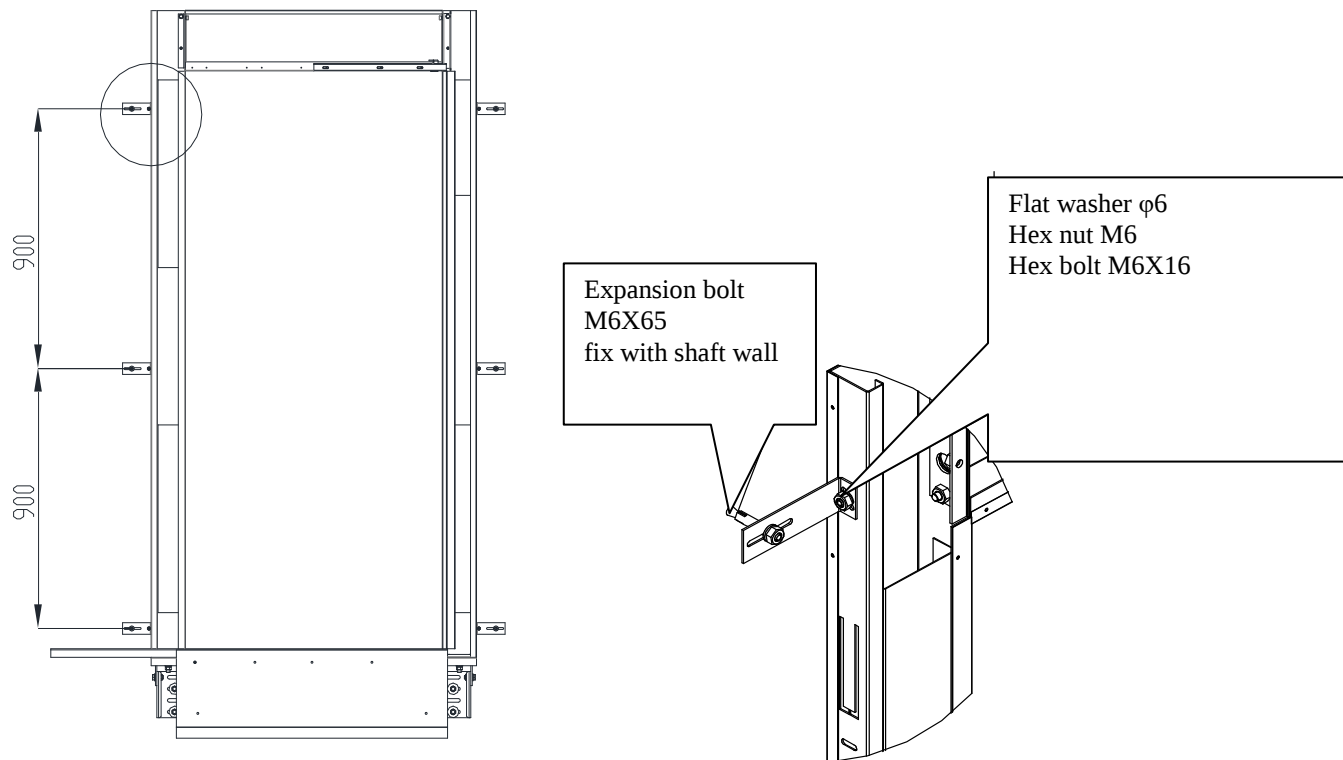


Figure 5-3-3 Fixed frame and wall surface

5.4 Landing Mechanism and Frame Connection

- 1) Preparation of the connection between the landing mechanism and the frame: before installing the landing mechanism, connect the fixed hanger and the pallet to the door lintel, do not press it, maintain a gap of 1 ~ 3mm, and then tighten it after the landing mechanism is hung, use expansion bolts M12X100 and wall fixed part to fix the two ends of the landing mechanism to the shaft wall, refer to Figure 5-4-1, and insert the release stem into the triangle lock.

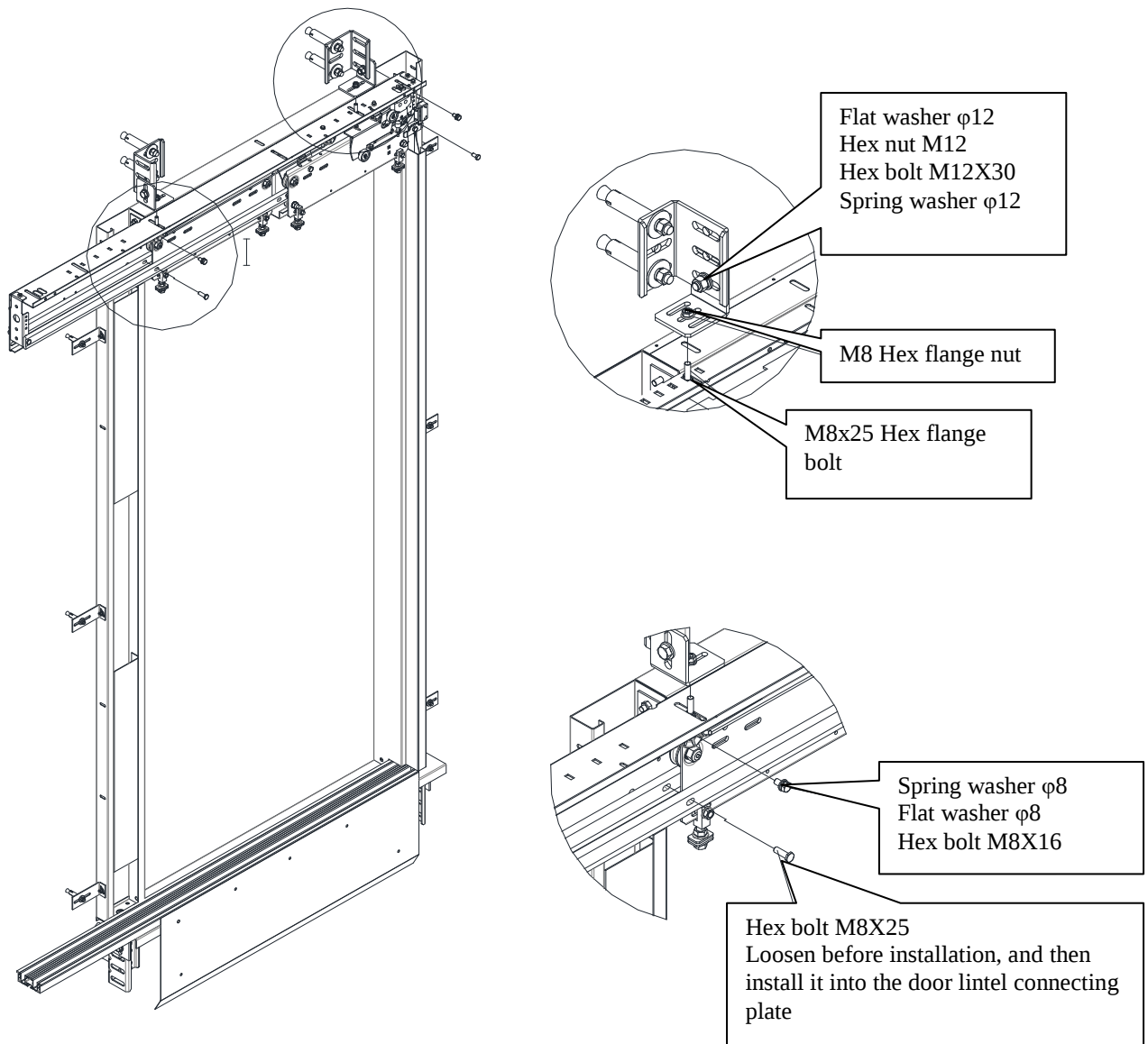


Figure 5-4-1

Note: First of all install triangle lock of the landing door, M5x10 hexagon socket screws, M20 nuts, and tighten. Then install the landing mechanism, because after installing the landing mechanism you will not be able to tighten it. Refer to Figure A-1 below.

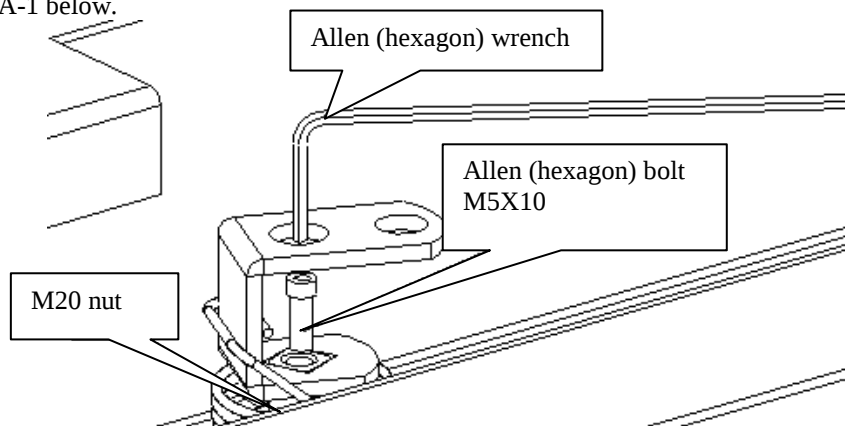


Figure A-1 Schematic diagram of triangle lock installation

5.5 Landing Door Panels and Sliders and Hanger Door Panel Installation

Refer to Figure 5-5-1

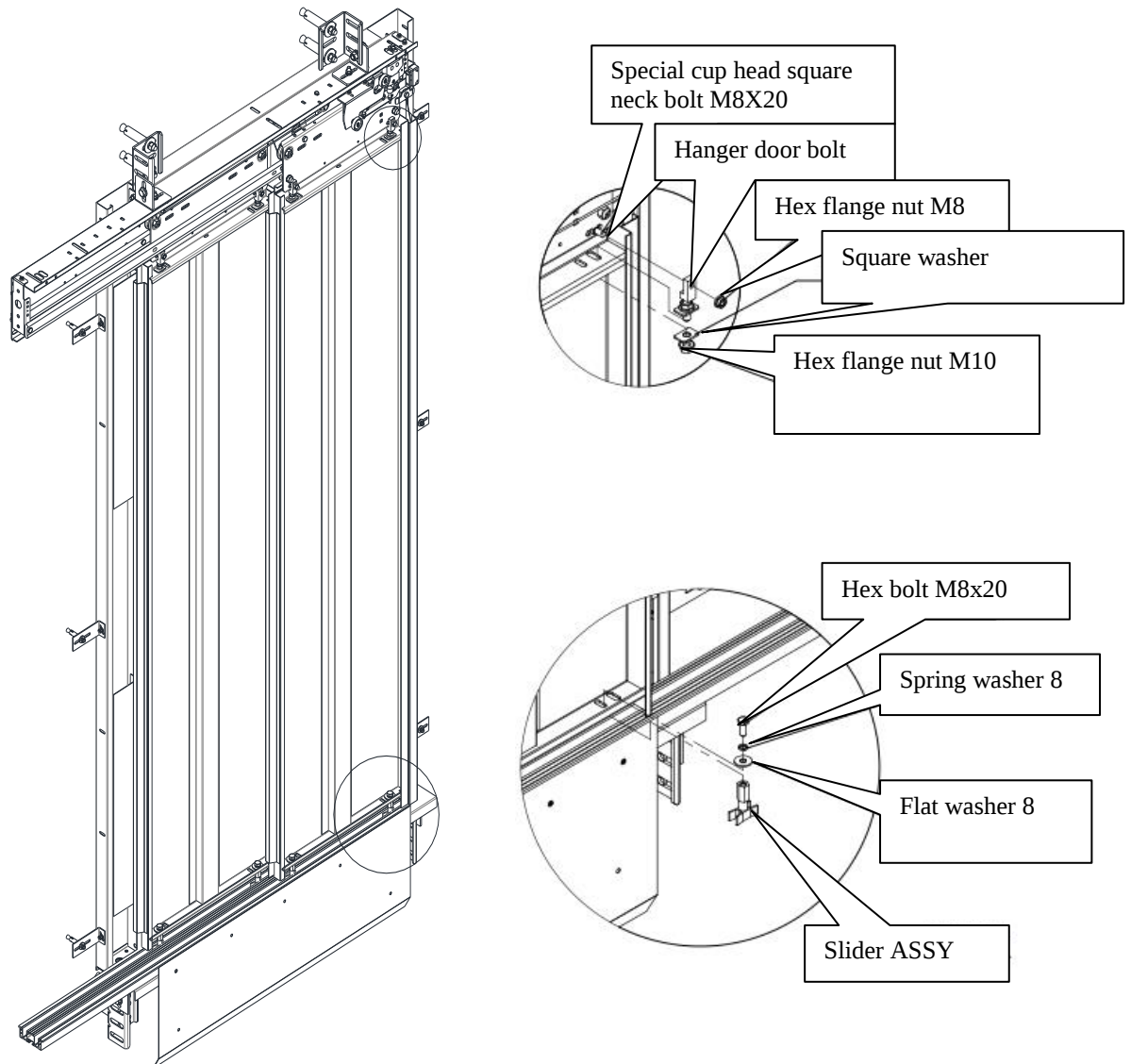
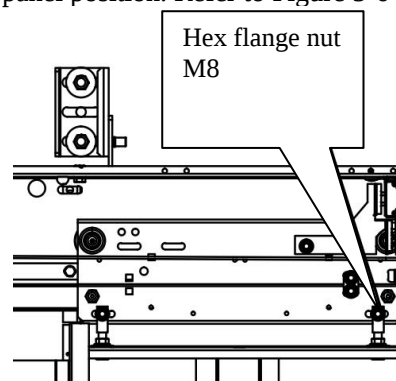


Figure 5-5-1 Landing door panel and slider and hanger door panel installation

5.6 Landing Door Panel Adjustment

- a) Horizontal adjustment: Loosen four M8 flange hex nuts on the hanger door bolt ASSY to adjust the door panel position. Refer to Figure 5-6-1.



Horizontal position adjustment



Figure 5-6-1 Horizontal position of the landing door panel adjustment

- b) Vertical and gap adjustment: Loosen four M10 flange hex nuts on the hanger door bolt ASSY to adjust the door panel position. Refer to Figure 5-6-2.

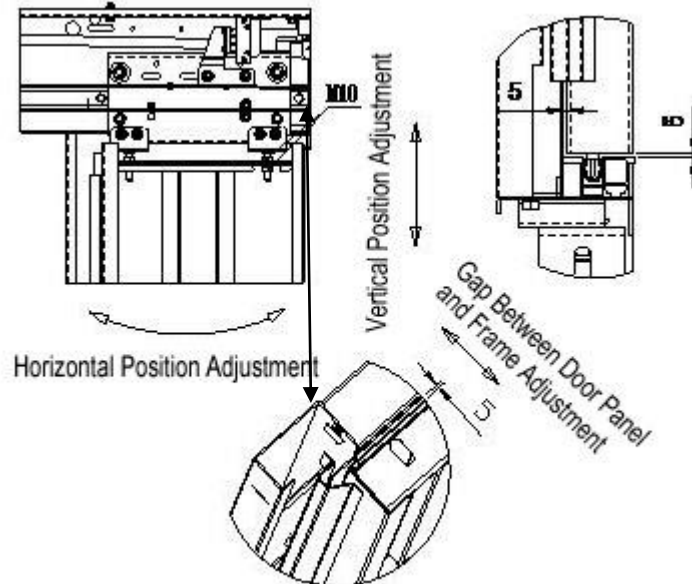


Figure 5-6-2 Vertical position of the landing door panel adjustment

- c) Landing Door Position in Door Closing State. Refer to Figure 5-6-3.

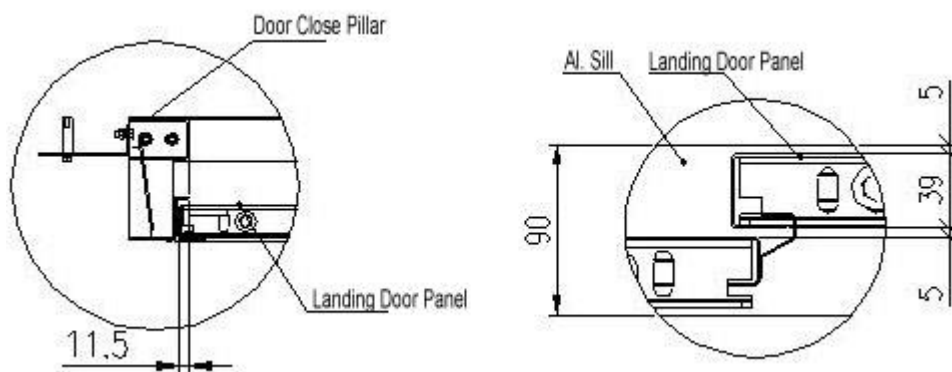
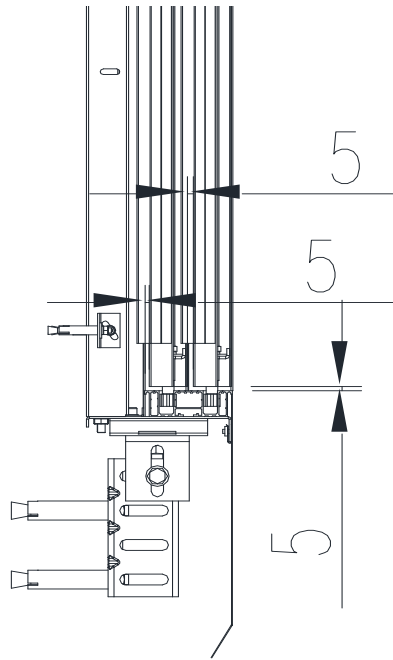


Figure 5-6-3. Landing Door Position in Door Closing State



Note: After the door panel is adjusted, the verticality of the door panel must be ensured. The gap between the door panels is 5mm, the gap between the door panel and the frame is 5mm, and the gap between the sill and the door panel is 5mm.



5.7 Eccentric Wheel Adjustment

Normally the gap between the roller and the guide rail has been adjusted before shipped from the factory. During operation, if the gap is found to be too large or too small, it can be adjusted by adjusting the lower pulley (eccentric wheel). Correct adjustment: Loosen hex nut M10, make the gap between the lower pulley (eccentric wheel) and the guide rail in 0.2 -0.5 mm, and then tighten the M10 nut. Refer to Figure 5-7-1.

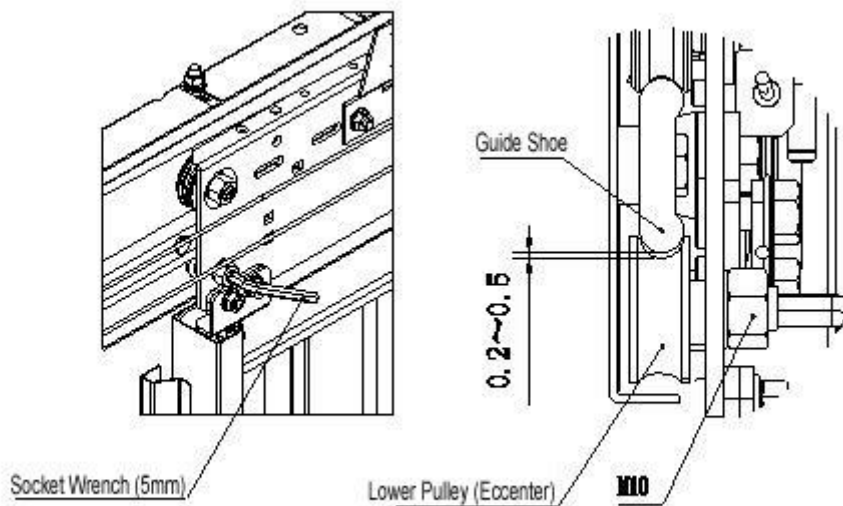


Figure 5-7-1 Adjustment of Eccentric Wheel

5.8 Landing Door Lock Adjustment



Note: Ensure that the safety circuit is not energized when installing and adjusting.

- 1) Loosen the two M8 nuts on the limit rubber bracket, gently move the bracket, and adjust the center of the rotating shaft to 100mm from the edge of the hanger door panel. Tighten nut. Refer to Figure 5-8-1.

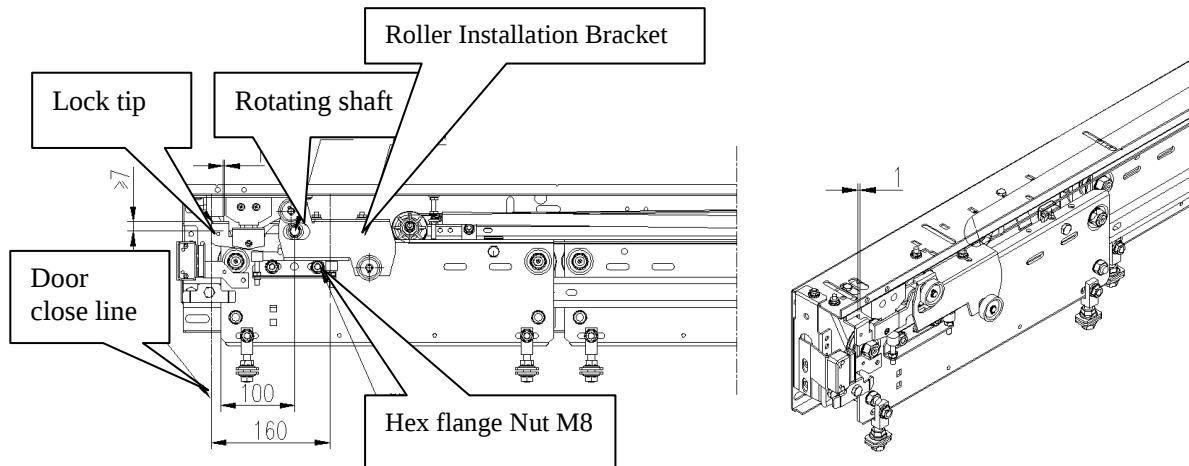


Figure 5-8-1 Landing Door Lock Adjustment

- 2) Loosen two M6 (A, B) nuts on the limit rubber, slowly rotate the limit rubber screw M6 (A), so that when the door lock is completely closed, the lock tip and the contact switch bracket engage will not less than 7mm, tighten nut M6 (A). Adjust the limit rubber screw M6 (B) to reserve enough space to facilitate the release of the lock tip when opening the door. Tighten nut M6 (B), refer to Figure 5-8-2.

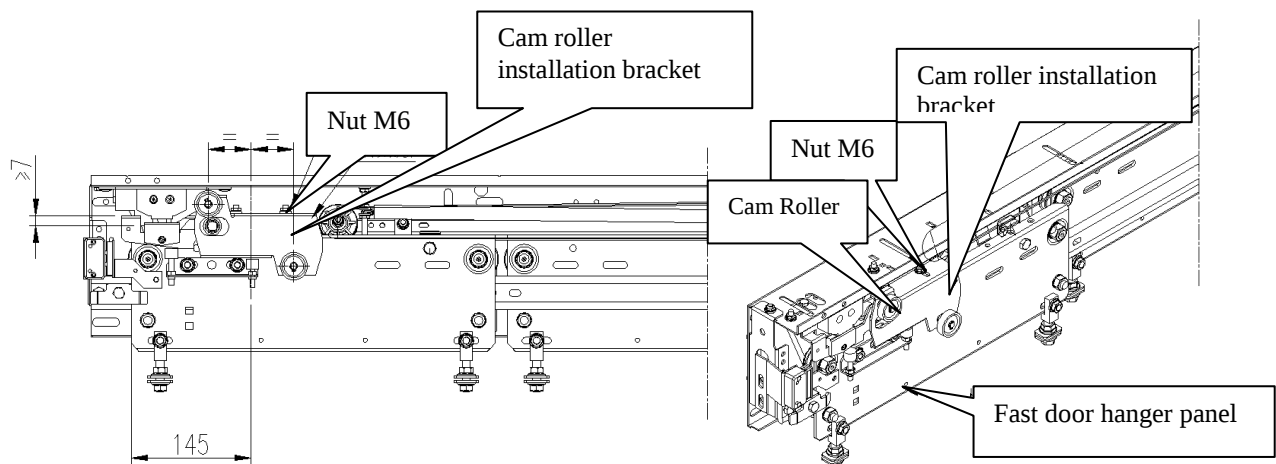


Figure 5-8-2 Landing door adjustment diagram

6. Notes for Maintenance

- 6.1 Wipe the guide rail of the landing door once for each maintenance, check the wear of the door roller, and replace it immediately if it exceeds 1.5mm.
- 6.2 Check the tension of the wire rope for each maintenance, refer to Figure 6-1.



Note: When checking the length of the wire tension spring after compression exceeds $17 \pm 1\text{mm}$, you should first loosen the two hex toothed nuts M8, and then adjust the length of the tension spring to $17 \pm 1\text{mm}$.

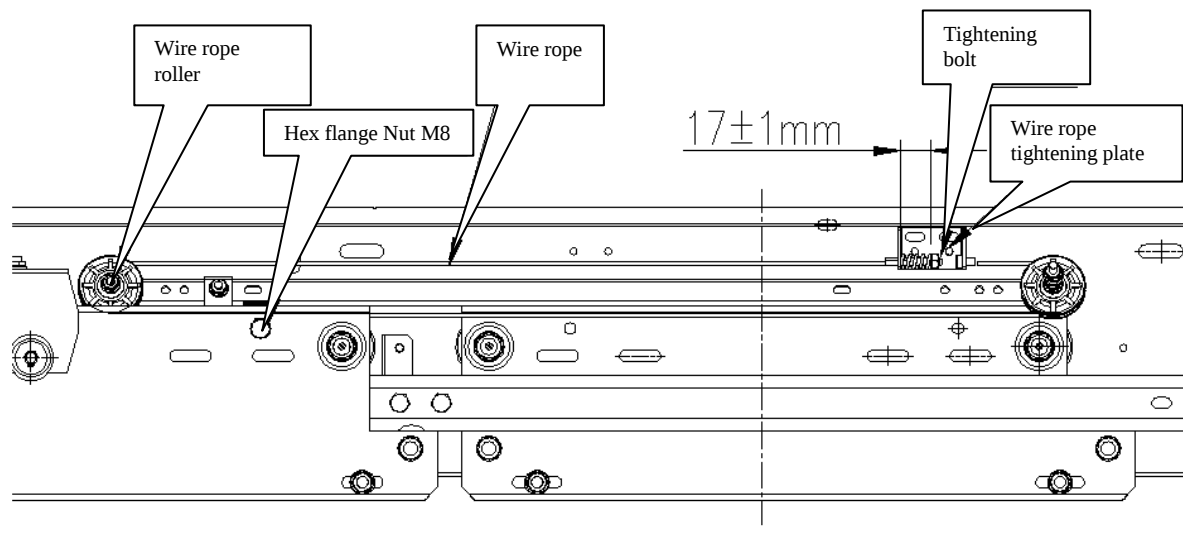


Figure 6-1 Wire rope tension adjustment drawing

6.3 The tightness of the standard parts should be checked during each maintenance.

6.4 Each maintenance should check the smooth movement of the landing door lock.

6.5 Correct use method of triangle key.



Note: The opening of the landing door triangle lock must follow the following steps.

- 6.5.1 When open the landing door, should first confirm the position of the car; prevent cause accidents of falling down
- 6.5.2 Turn on the lighting at the entrance of the shaft, remove all kinds of debris, and pay attention to no other unrelated people around;
- 6.5.3 Insert the triangular key into the unlocking hole and confirm the unlocking direction;
- 6.5.4 The operator should stand well, keep the center of gravity, and then unlock slowly according to the direction of unlocking;
- 6.5.5 After the door lock is opened, first push the landing door through a slit about 100mm wide, remove the triangular key, observe the situation in the shaft, especially pay attention to the fact that the landing door cannot be opened too much at once;
- 6.5.6 After the unlocking is completed, the operator should confirm that the landing door has been reliably locked.

6.6 The slider wear and tear does not exceed 0.7mm, otherwise it is replaced immediately.

7. Trouble Shooting

Refer to 《J2511-T2A AC Permanent-magnet Synchronous Car Door System Installation Manual》 relative content about trouble shooting.