



**ANH (NINGBO) TECHNOLOGY CO., LTD**  
**爱驰(宁波)科技有限公司**

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# **Installation instructions of Hydraulic Cargo Lift**

## I. General

1. This manual is only used for the installation of Hydraulic Cargo Lift.
2. This type of lifting equipment needs on-site installation and can only be used after the overall installation. The various structural components of the lifting equipment have already been produced before leaving the factory. After the installation according to the instructions, after the commissioning and gradually increasing the load for the test run, and observing the structure, components, etc. to ensure no problem, the rated load can be carried out.
3. Before installing the lift, the installer should carefully read the instructions and fully understand and master the structure, components, and precautions of the lift, and must not arbitrarily install and debug.

## II. Machine Structure

Main structure table and structure diagram:

### 1. Main structure table:

sn	Item	Component	Remarks
1	Guide rail	Two pcs 70×70 Square tubes combine one set of guide rail, there are two sets of guide rails.	
2	Upper guide frame	Guide frame, beam, cylinder lug, chain wheel, etc.	Installed between the two sets of guide rails
3	Lifting platform	Guide frame, chassis, chain lugs, etc.	Guide frame should be installed between the two sets of guide rails
4	Hydraulic oil cylinder	Hydraulic oil cylinder	Installed between the two sets of guide rails, The upper part is connected with the cylinder lug of the upper guide frame, and the lower part is supported by the cylinder.
5	Chain and wire rope	Chain, steel wire rope	One end of the chain is connected to the adjusting column of the lifting platform, and after being bypassed on the chain wheel, the other end is connected to the adjusting column of the chain tension adjusting plate.

### 2. Schematic diagram of the structure:

(sequence according to the table number)



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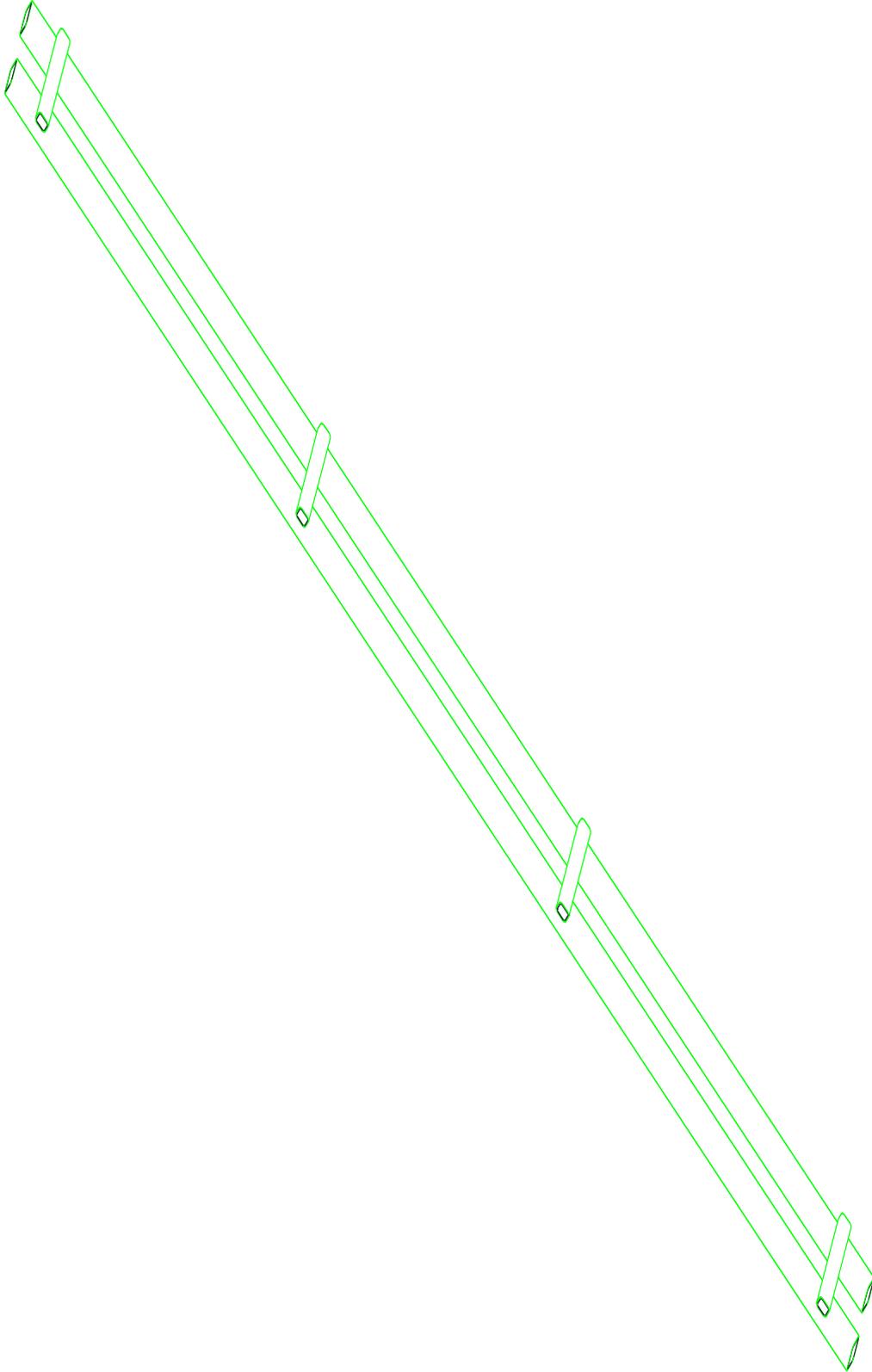
Before installation, the installer should first understand the main structural components of this type of lift, as shown in the following figures.

Guide rail

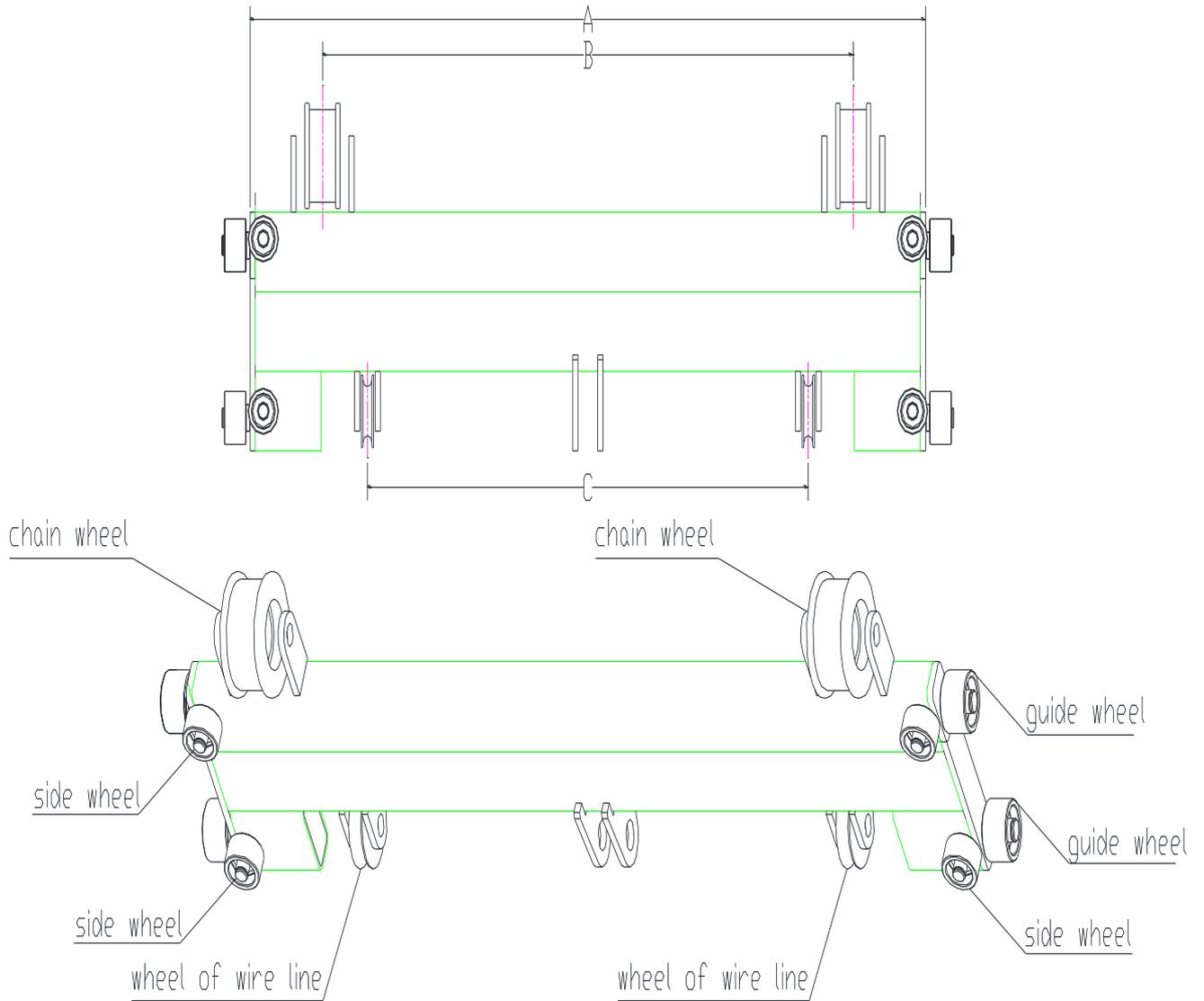


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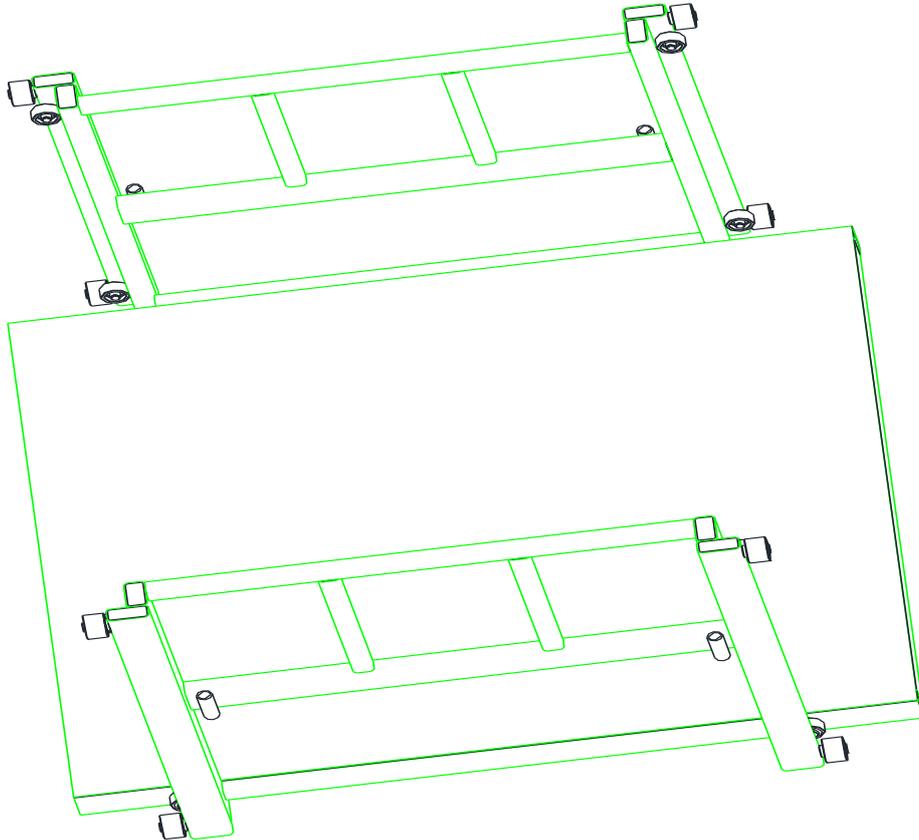
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Upper guide frame:



Lifting platform:

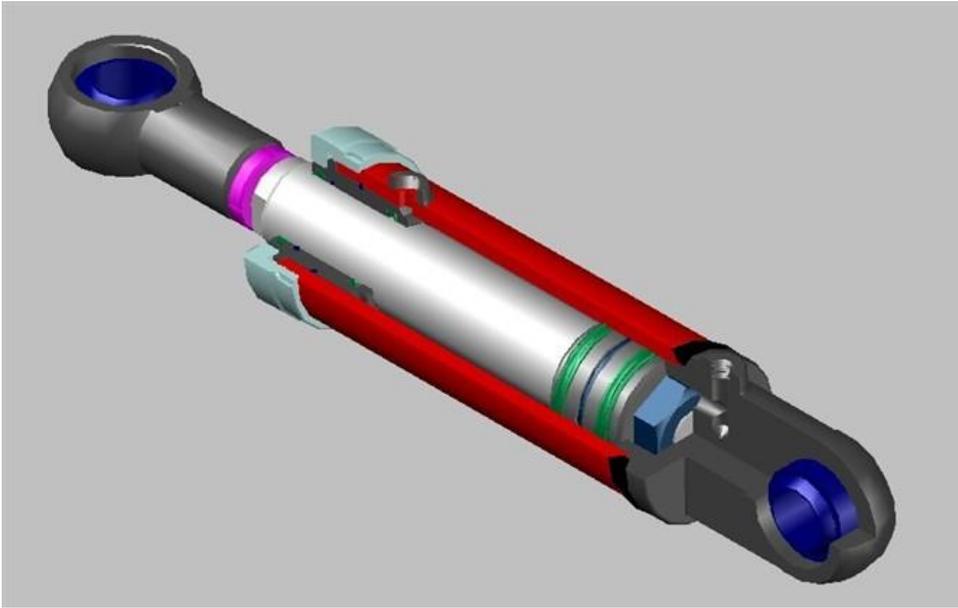


Hydraulic oil cylinder:

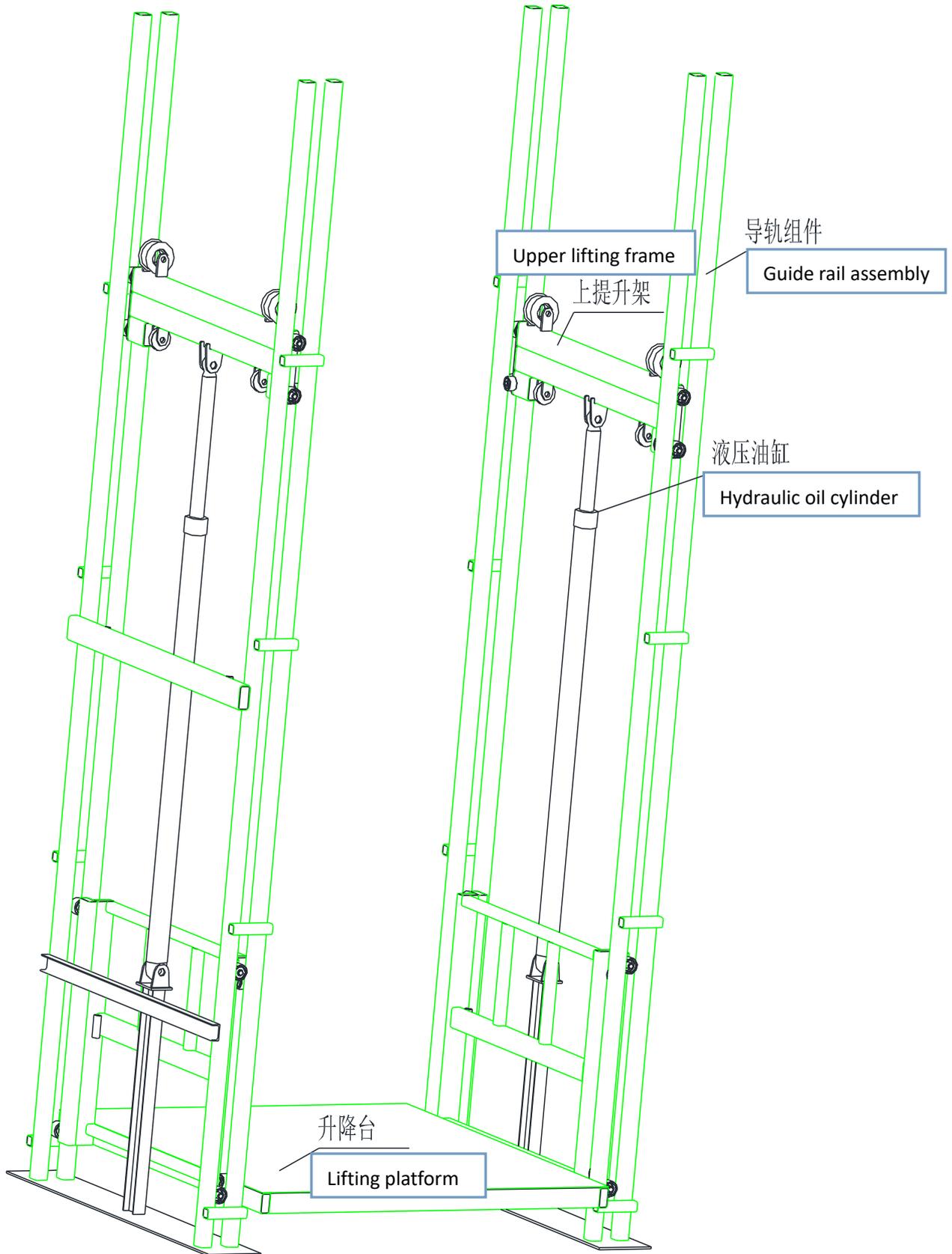


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**Finished product schematic:**



### III. Installing Steps:

#### 1. Installation order:

Guide rail  $\implies$  Upper lifting frame  $\implies$  lifting platform  $\implies$  hydraulic oil cylinder  $\implies$  Chain and wire rope

#### 2. Detailed installation method and precautions

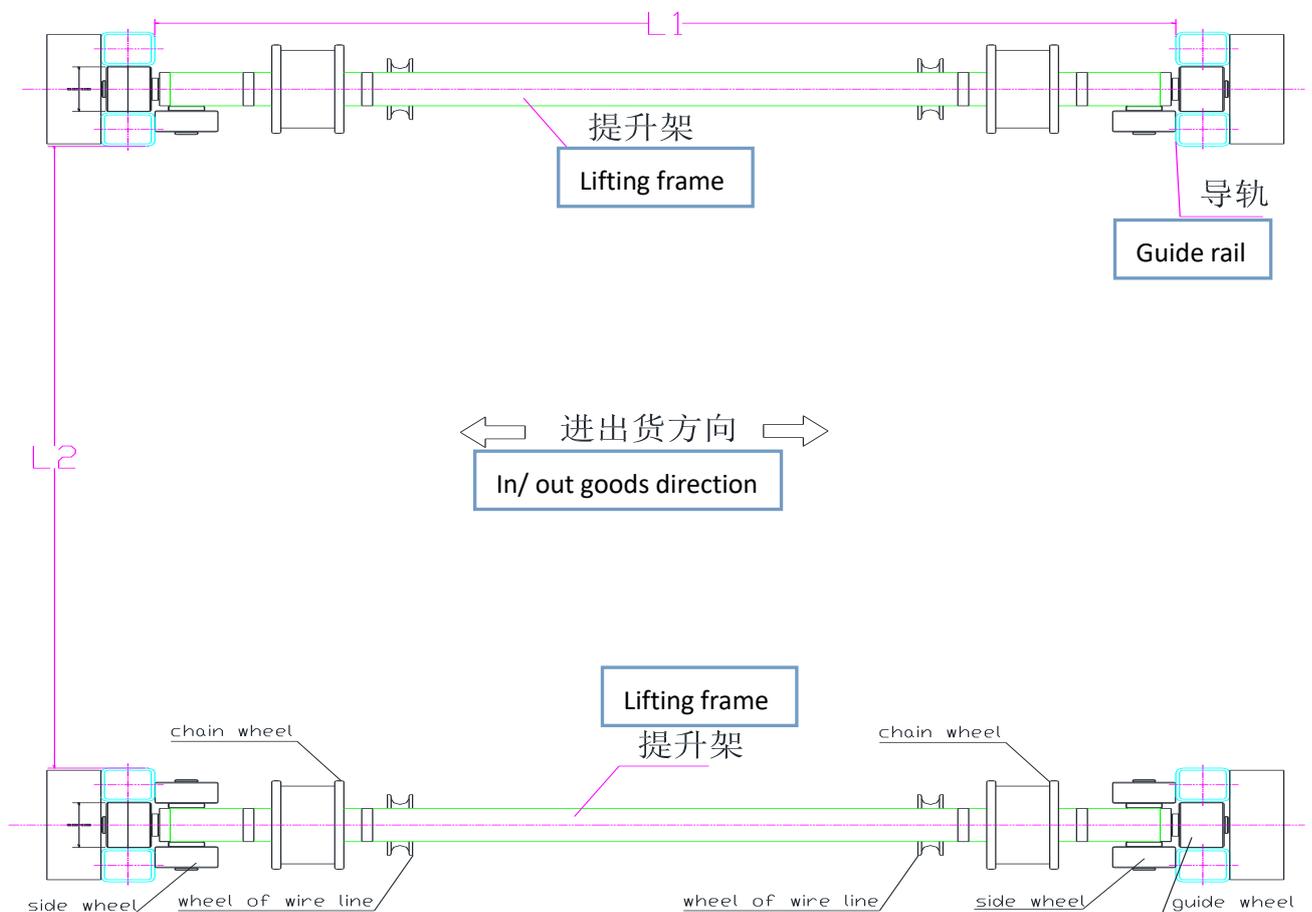
##### (1) Guide rail

##### A. Determine the wall to place the guide rail

Place the guide rails on the side that does not enter or exit goods, otherwise the guide rails will block the access of goods. The guide rails should be placed on both sides of the pit center on the side on which the rail is placed.

##### B. Determine the distance of the guide rails

The distance between the elevator guide rails is 1370mm. The placement and spacing of the guide rails are shown in the following figure:



Determine the distance of the guide rails based on the data in the figure

### C. Fix the "guide rail fixing plate" on the wall

After determining the position of the guide rail, fix the "guide rail fixing plate" on the wall contacting the guide rail, and the distance should be determined according to the quality of the foundation of the load-bearing wall. If it is a concrete wall, generally the "rail fixing plate" can be separated by 1.5 meters. If it is made of red brick wall, it is usually 1.2 meters apart. If it is a hollow brick wall, it should penetrate the wall screws and the outer part of the wall of the screw. A stiffener should be added. The "guide rail fixing plate" is a 150 mm square plate with a thickness of 10 mm, and four holes having a diameter of 16.5 mm are punched thereon for fixing with an expansion screw or a wall screw. The center line of the "rail fixing plate" is the center line of the 70 square tube above the rail. The guide rails are welded to the "guide rail fixing plate", and the "guide rail fixing plates" on each side are on the same vertical line.

### D. Place the upper guide frame and the lifting platform

After the "rail fixing plate" is fixed, the guide rail on one side is first adjusted to the vertical state. In the process of adjusting the guide rail, various spacers such as thin iron pieces can be adjusted until the guide rail is in a vertical state in both directions. After adjustment, the rails are firmly welded to the "rail fixing plate".

Before adjusting the guide rails on the other side, place the rollers on the lifting platform in the guide rails of the fixed guide rails so that the side wheels fit snugly against the inner surface of the guide rails and adjust the state of the lifting platform. Then, the guide rail to be adjusted is moved in, so that the roller of the lifting platform is caught in the slot of the guide rail, so that the side wheel just fits on the inner surface of the guide rail.

At the same time, put in the "upper guide frame". Make the side wheels on both sides of the "upper guide frame" close to the inner surface of the guide rail (Note: Before inserting the "upper guide frame", the "chain wheel" and "side wheel" should be installed).

Adjust and fix the rail to be adjusted in the same way. The rail is firmly welded on the "guide rail fixing plate", and the two guide rails are adjusted and installed.

### E. Place hydraulic oil cylinder

After the guide rail is adjusted, First, the hydraulic cylinder pad is raised and welded to the embedded part of the guide rail, and the verticality is high. Push the upper guide frame along with the guide rail to a height which is greater than the total length of the cylinder. Then fixed, the upper guide frame can be tied to the guide rail with a thicker wire. Bundle firmly and pay attention to safety. Move the cylinder to the "Hydraulic Cylinder Pad" and adjust it to the vertical position. Use a "U" type clip to fix it on the wall. A "U" type clip is usually installed at a distance of 1 m. When adjusting the cylinder to vertical, the cylinder and the wall should be padded with a pad, and then fixed with a "U" type clamp. Similarly, the cylinder must be fixed firmly. After the hydraulic cylinder is adjusted, connect the cylinder lugs on the "upper guide frame" with the pin of the cylinder earrings. After the connection is completed, the cylinder is fully contracted.

## **F. Install chain and wire rope**

First insert one end of the chain into the "chain adjustment column" of the "adjustment plate", screw the nut, then pass the chain around the chain wheel on the "upper guide frame", connect it to the chain tension adjustment stud, and then raise Tightening screws are attached to the rail or wall.

After fixing the chain tension adjusting screw, adjust the tightening screw so that the tension of the two chains is basically the same. In this way, the lifting platform can be smoothly and synchronously in the process of lifting, so that the lifting platform can be lifted normally.

Therefore, adjusting the tightening of the two chains is the key link for the normal operation of the elevator. This link must be carefully adjusted.

## **G. Installation control section and power supply**

Next step is the elevator's control circuit and power supply. This step is relatively simple. The control circuit is installed in one (or more) control boxes, as long as the control box is fixed in the appropriate position. Connect the power supply according to the requirements of the power supply voltage.

## **H. Equipment commissioning**

At this point, the lifting equipment has been initially installed and can be tested at no-load.

During the test run, it is important to note that there must be a person responsible for switching the control box. One person observes the lifting and lowering of the lifting platform. If any abnormality occurs while the lifting platform is rising, the person in charge of the control box must immediately turn off the power.

After the no-load test run is normal, the test run can be gradually increased, and one-fifth of the rated load can be added each time.

## **IV. Precautions:**

1. Strictly follow the steps in the instructions to install, otherwise some structure may not be installed.
2. Try to adjust the tension of the chain and the wire rope to make it consistent.
3. When testing, strictly follow the instructions in the instructions.
4. The picture data in this description is used as an example only and does not necessarily correspond to the actual device.