

AP25X robot

Quick installation guide



Applicable models

AP25X-1130-1543

AP25X-1130-1544

AP25X-1600-1543

AP25X-1600-1544

AP25X-2200-1543

AP25X-2200-1544

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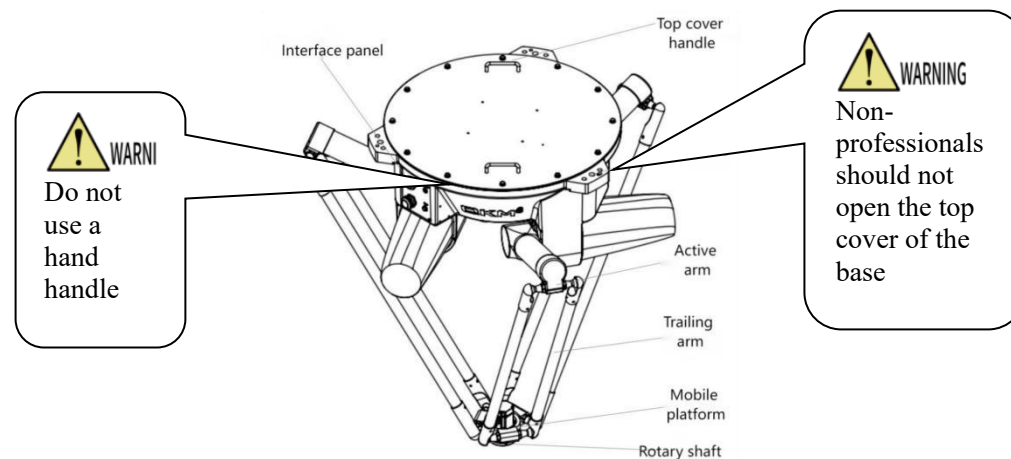
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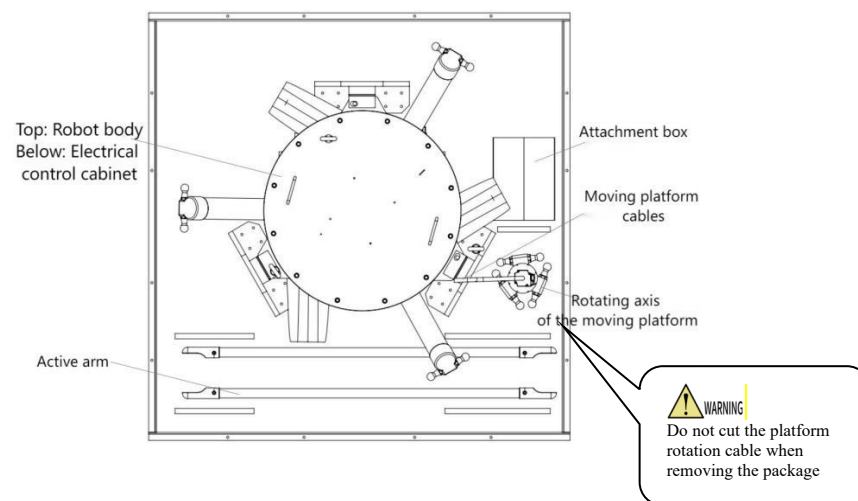
I. monolithic construction



NOTE

Four-axis robots have rotating shafts, three-axis robots have no rotating shafts; the moving platform structure of four-axis and three-axis robots is different.

II. Unbox status

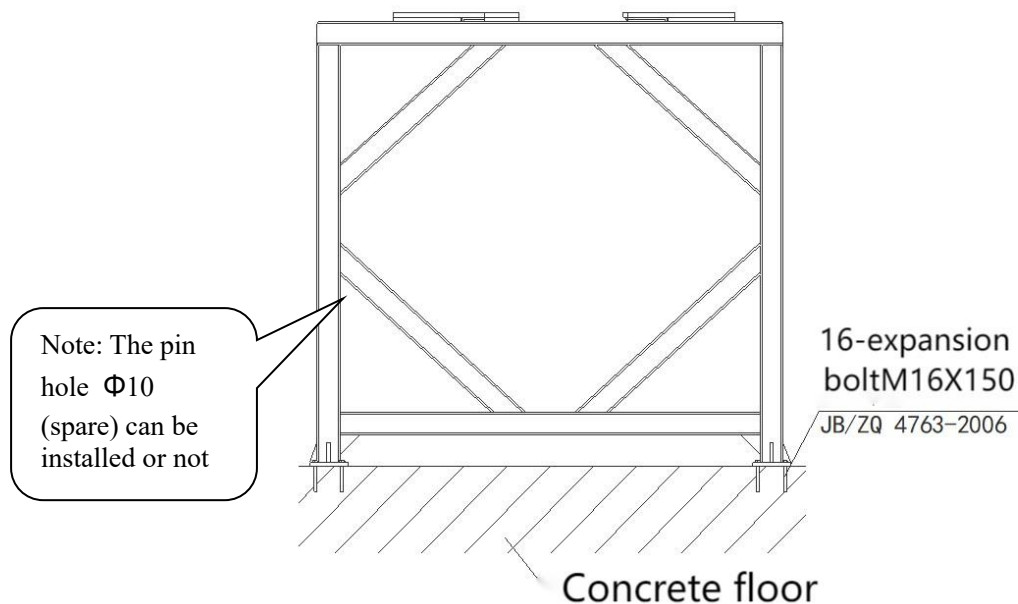


III. Installation of the rack



NOTE

The rack shown in the figure is a schematic rack, and users can choose or build the rack as needed.



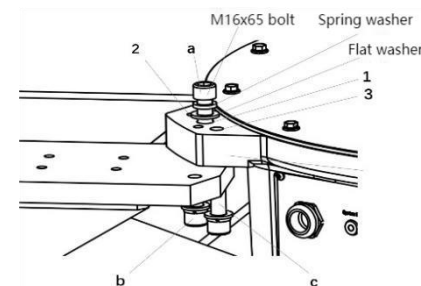
- The base frame is fixed in the required position with four M16×150 expansion bolts. It is recommended that the pre-tightening force of the bolts is 125 Nm.

IV. Installation of the base

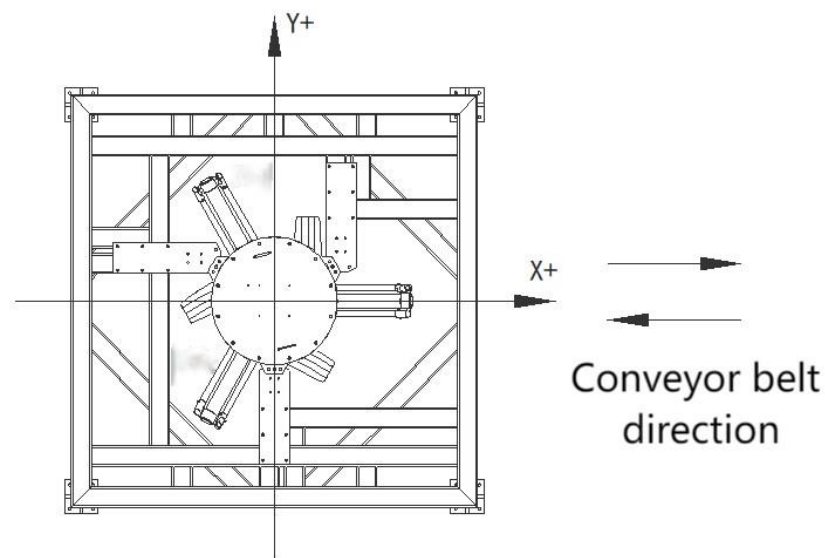
According to the size of the installation space, the installation mode is divided into two types: downward installation (the base boss is located above the rack mounting plate) and upward installation (the base boss is located below the rack mounting plate).

① Install downward

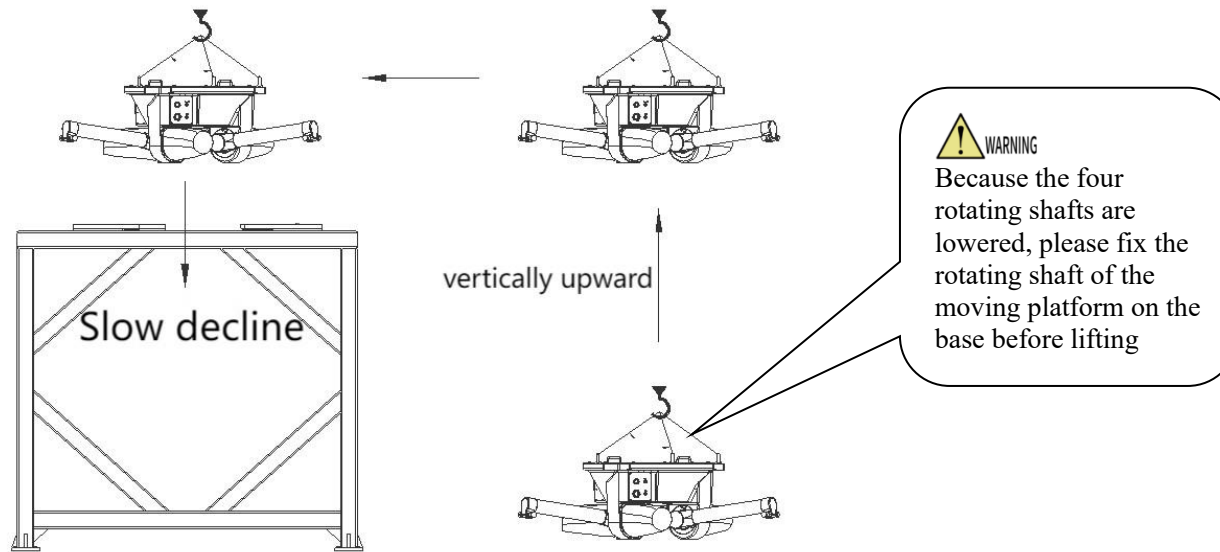
- The lower mounting base is matched with the rack as shown in the figure (bolts a, b and c correspond to holes 1, 2 and 3 respectively)



- Bolt type M16×65 hex socket bolt
- Since the X-axis coordinate of the robot is parallel to the output shaft 1, it is recommended that the installation direction of the No.1 axis be parallel to the movement direction of the work object in order to facilitate cable layout and maintain good working condition of the robot, as shown in the figure. Users may also choose other axes (2 or 3) to be parallel to the movement direction of the conveyor belt.

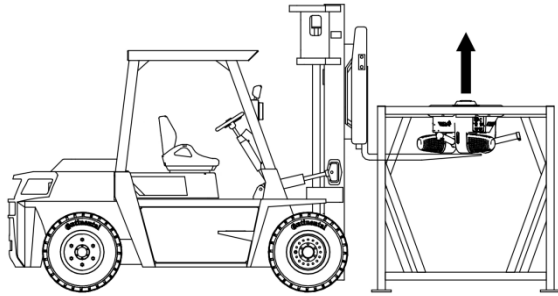


- Use lifting equipment



- 1) Use lifting equipment to lift the base above the base frame, slowly lower and adjust it to the installation position shown in the figure above.
- 2) First, install bolt 1 into the corresponding installation hole, then remove the lifting ring screw, and then install bolt 2 and 3.

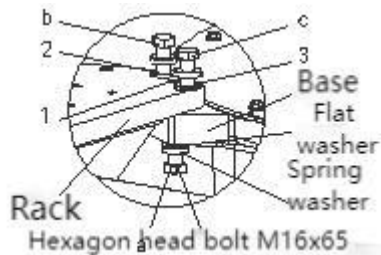
- Use a lift forklift



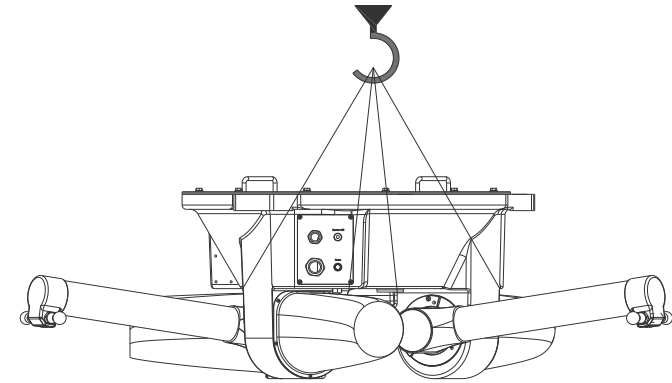
- 1) Use the lift forklift to send the base into the base frame.
- 2) Rise slowly and adjust to the installation position shown in the figure above.
- 3) Install the bolt into the corresponding installation hole. Before installing the bolt, remove the lifting ring screw first.

② Install upward

- Schematic diagram of upward installation base and bracket (bolts a, b and c correspond to holes 1, 2 and 3 respectively)



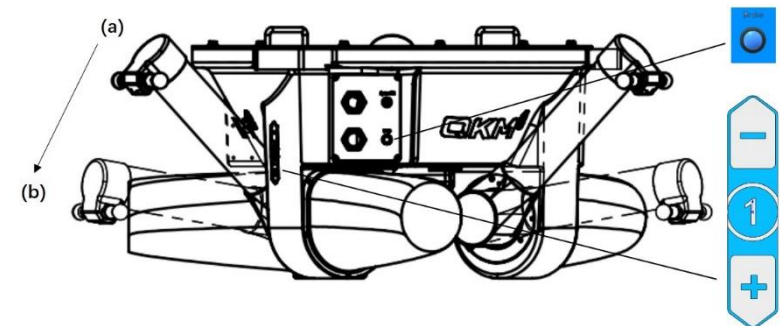
- Because the base boss is located under the base frame mounting plate, this method cannot use the lifting ring screw.
- Use the lifting belt to lift, and the winding mode is shown in the figure.



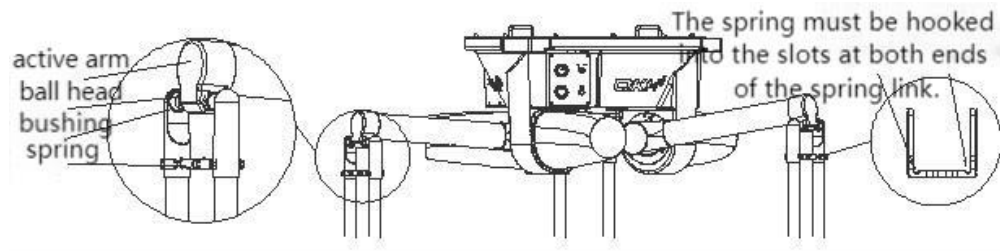
- The lifting method is similar to that of downward installation. Refer to the steps of downward installation.

V. Install the follower arm

- Connect the robot to the control cabinet, and connect the power supply to the control cabinet to power the robot.
- Hold down the "Brake" button on the interface panel. At this point, the three active arms on the base are in a freely movable state. Manually move the robot's three active arms from the initial position (a) to the installation position (b), as shown in the figure. Then power off the system. Note the labels on each axis, specifically at the right end of the active shaft.

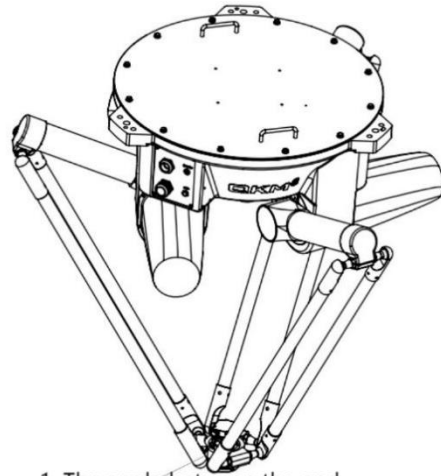


- Pull out the end spring of the driven arm, fasten the ball joint of the driven arm to the ball head of the active arm, and let the driven arm hang naturally.

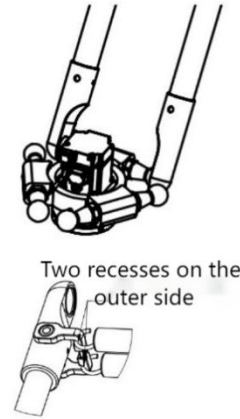


VI. Installation of mobile platform (Quattro axes)

- Align the motor lead-out end at the end of the moving platform with the direction corresponding to the angle between the first and second axes of the active arm.
- The driven arm is connected to either end of the moving platform. Confirm that both springs are installed in the two grooves on the outside of the spring connector. The ball socket of the driven arm is engaged with the corresponding ball head of the moving platform



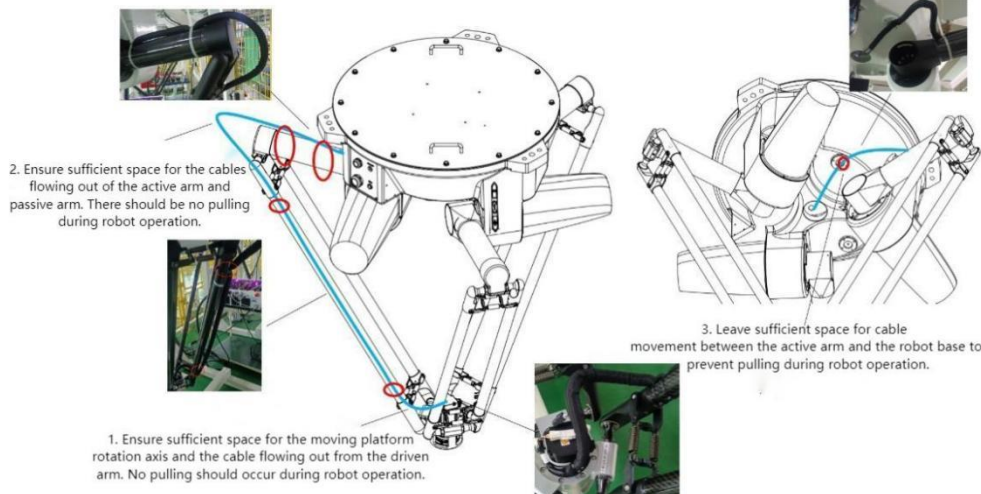
1. The angle between the end of the fourth axis and the first and second axes of the active arm.



Two recesses on the outer side

VII. Cable binding on the moving platform

- Because the robot is designed with four rotating shafts moving down, the four-axis motor cables need to be bound to the driven arm and active arm;
- Binding notes are shown in the figure below



VIII. Electrical connections

- The main body M/C connection cable is inserted into the control cabinet M/C connector;
- Connect the Ethernet interface on the front panel of the control cabinet to the computer, and connect the MCP interface to the cable connector of the emergency stop button;
- Connect the POWER port on the control cabinet to the 220 V ac power supply.

