# Installation Guide: NexBot Robotics LA013-009 6-Axis Robot Arm 120kg Payload

SKU: NXB-ROB-LA013-009 | Revision: 1.0 | Category: Robots > Articulated Robots > Large Articulated (50-200kg)

> **DANGER:** Disconnect all power sources before beginning installation. Follow lockout/tagout (LOTO) procedures per OSHA 1910.147.

## 1. Required Tools & Materials

- Certified lifting crane or forklift (rated for >1500 kg)
- Industrial-grade M24 anchor bolt kit
- Calibrated torque wrench (up to 800 Nm)
- Precision laser leveling kit
- Digital multimeter with insulated probes
- PROFINET network cable tester
- Metric Allen key and socket wrench set
- Personal Protective Equipment (PPE): Steel-toed boots, safety glasses, hard hat

## 2. Pre-Installation Checks

1. Verify the concrete foundation is cured and meets the specified thickness and strength to support the robot's 1350 kg static weight and dynamic operational loads.
2. Confirm the availability of a dedicated, lockable 400-480VAC 3-Phase power source within 5 meters of the installation point.
3. Ensure the installation area is clear of obstructions and provides adequate clearance for the robot's full 2550 mm reach.
4. Inspect the shipping crate and robot for any signs of damage that may have occurred during transit before uncrating.
5. Verify that the ambient temperature and humidity of the installation site are within the robot's specified operating range.
6. Confirm that all required tooling and personnel are present and have reviewed the safety procedures.

## 3. Installation Procedure

### Step 1: Site Preparation and Footprint Marking

Accurately mark the robot's 850 x 700 mm footprint on the prepared foundation using the provided mounting template. Drill holes for the M24 anchor bolts to the specified depth and clean them of all debris.

### Step 2: Uncrating and Lifting

Carefully uncrate the LA013-009 robot arm. Attach certified lifting straps to the designated lifting points on the robot base as indicated in the manual, and use a crane to carefully lift the 1350 kg unit.

> **Warning:** Ensure lifting equipment is properly rated and operated only by certified personnel. An unstable lift could result in catastrophic equipment damage and severe injury.

### Step 3: Mounting and Securing the Base

Slowly lower the robot onto the marked footprint, aligning the base mounting holes with the drilled anchor holes. Insert and hand-tighten the anchor bolts to secure the robot's position.

> **Warning:** Never place hands or feet under the robot base during lowering. Maintain a safe distance until the robot is resting securely on the foundation.

### Step 4: Leveling and Torquing

Use a precision laser leveling kit to adjust the leveling bolts until the robot base is perfectly level to within 0.1 degrees. Once level, use a calibrated torque wrench to tighten the M24 anchor bolts to the manufacturer's specified torque value in a star pattern.

### Step 5: Main Power Connection

With the main breaker in the OFF and locked-out position, connect the 400-480VAC 3-Phase power lines to the designated terminals in the robot's

IP54-rated base. Ensure proper phasing and connect the chassis ground wire securely.

> **Warning:** Hazardous voltage. All electrical work must be performed by a qualified electrician in accordance with local codes. Failure to do so can result in electrocution.

### Step 6: Controller and Communication Link

Connect the main data cable from the robot arm to the NexBot controller. Connect the PROFINET communication cable from your facility's PLC or network switch to the designated port on the controller.

### Step 7: End-of-Arm Tooling (EOAT) Installation

Mount the desired end-of-arm tooling to the Axis 6 mounting flange. Route all pneumatic and electrical lines for the tooling along the arm, securing them at the designated points to prevent snagging during operation.

> **Warning:** Ensure the combined weight of the tooling and workpiece does not exceed the 120 kg payload limit.

## 4. Post-Installation Verification

1. Perform a final check of all electrical, data, and pneumatic connections to ensure they are secure.
2. Power on the system and verify that no fault indicators are present on the robot controller or teach pendant.
3. Establish a communication link and confirm the robot is visible on the PROFINET network.
4. Check the functionality of all external safety circuits, including emergency stops, light curtains, and safety gates.
5. Perform a slow-speed manual jog of each of the 6 axes to verify correct movement and check for any binding or unusual noises.
6. Execute the initial calibration and mastering routine as prompted by the controller software.

> **Note:** For technical support, contact your authorized service provider or visit *https://robotics.barca.group/support*.