Installation Guide: NexBot Drives 641-006 Robot Floor Mounting Plate

SKU: NXB-MNT-641-006 | Revision: 1.0 | Category: Safety Systems > Robot Mounts & Bases > Floor Mounting Plates

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

1. Required Tools & Materials

- Certified heavy-duty lifting equipment (e.g., overhead crane, forklift with appropriate straps) rated for at least 250 kg
- Industrial-grade hammer drill with concrete bits
- High-precision laser level or machinist's level
- Calibrated torque wrench with sockets for anchor bolts
- Non-shrink precision grout and mixing equipment
- Steel shims for leveling
- Personal Protective Equipment (PPE): steel-toed boots, safety glasses, heavy-duty gloves
- Marking tools (chalk line, industrial markers)

2. Pre-Installation Checks

1. Verify that the received part number is NXB-MNT-641-006 and inspect for any shipping damage to the powder coat finish.
2. Confirm the concrete floor slab meets the structural requirements specified in the robot's main documentation, including thickness and compressive strength.
3. Ensure the installation area is clean, dry, and free of all obstructions, with sufficient clearance for lifting equipment.
4. Review the robot's mounting pattern to confirm compatibility with the NexBot Drives 641-006 plate's pre-drilled holes.
5. Verify that all required tools, personnel, and specified anchoring hardware are present at the installation site.
6. Check the floor for flatness and levelness across the 800 x 800 mm installation footprint.

3. Installation Procedure

Step 1: Step 1: Site Marking and Preparation

Using the robot's installation template or the plate's dimensions, accurately mark the 800 x 800 mm footprint on the concrete floor. Mark the precise locations for each anchor bolt hole.

> **Warning:** Inaccurate marking can lead to robot misalignment and operational errors. Double-check all measurements before proceeding.

Step 2: Step 2: Drilling Anchor Holes

Using a hammer drill and the correctly sized concrete bit, drill holes at the marked locations to the depth specified by the anchor bolt manufacturer. Clean all dust and debris from the holes using compressed air or a vacuum.

> **Warning:** Ensure holes are drilled perpendicular to the floor surface to prevent anchor bolt misalignment.

Step 3: Step 3: Positioning the Mounting Plate

Using certified lifting equipment, carefully lift the 191.0 kg mounting plate and slowly lower it into position over the drilled holes. Never place hands or feet under the plate during this process.

> **Warning:** Crush Hazard: The NXB-MNT-641-006 plate weighs 191.0 kg. Improper lifting can cause severe injury or death. Only trained and certified personnel should operate lifting equipment.

Step 4: Step 4: Initial Leveling

Place a high-precision level on the machined top surface of the plate. Use industrial steel shims as necessary under the plate to achieve a perfectly level state in both X and Y axes. Ensure the plate is fully supported and does not rock.

Step 5: Step 5: Grouting

If specified for the application, prepare and apply non-shrink precision grout to fill any gap between the bottom of the mounting plate and the concrete floor. This ensures uniform load distribution and prevents vibration. Allow the grout to cure as per the manufacturer's instructions.

> **Warning:** Follow the grout manufacturer's safety data sheet (SDS) for proper handling and required PPE.

Step 6: Step 6: Installing and Torquing Anchors

Insert the specified concrete anchor bolts through the plate and into the drilled holes. Hand-tighten all anchors first, then use a calibrated torque wrench to tighten them in a star or crisscross pattern to the torque value specified by the anchor manufacturer.

> **Warning:** Do not over-torque the anchor bolts, as this can damage the anchors or the concrete. Do not use impact wrenches for final torquing.

Step 7: Step 7: Final Verification

After the grout has fully cured and anchors are torqued, perform a final check with the precision level to ensure the plate has remained level. Verify that the plate is immobile and firmly secured to the floor.

4. Post-Installation Verification

1. Confirm the final position of the mounting plate matches the engineering drawings for the robot cell.
2. Re-verify that the top surface of the NXB-MNT-641-006 plate is level to within the tolerance specified by the robot manufacturer.
3. Check that all anchor bolt torque values are within the specified range.
4. Ensure the area around the mounting plate is clean and free of tools, hardware, and debris.
5. Document the installation date, personnel, and torque values in the facility's maintenance log.
6. Visually inspect the powder coating for any scratches or damage that may have occurred during installation and touch up if necessary.

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