Installation Guide: NexBot Drives 841-002 Parts Feeder

SKU: NXB-GEN-841-002 | Revision: 1.0 | Category: Accessories & Mounting > Workstation Equipment > Parts Feeders

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

1. Required Tools & Materials

- Mechanical lift or hoist (rated for > 50 kg)
- Torque wrench with metric socket set (M8-M12)
- Industrial-grade level
- Digital multimeter
- Wire stripper and crimping tool
- Set of metric Allen keys
- Safety glasses and steel-toed boots
- Lockout/Tagout (LOTO) kit

2. Pre-Installation Checks

1. Verify the mounting surface is clean, level, and structurally capable of supporting the 45.5 kg operational weight and dynamic vibrational loads.
2. Confirm the installation area provides adequate clearance around the unit's 650 x 550 x 700 mm dimensions for access and maintenance.
3. Check the incoming power source and confirm it matches the selected 120VAC or 240VAC configuration on the feeder's terminal block.
4. Inspect the NexBot Drives 841-002 Parts Feeder for any signs of damage that may have occurred during shipping.
5. Ensure all required control system interface cables are available and routed to the installation point.
6. Review the master control system's E-Stop circuit to plan for integration of the parts feeder.

3. Installation Procedure

Step 1: Step 1: Positioning and Mounting

Using a certified mechanical lift, carefully position the 45.5 kg feeder onto the prepared mounting surface. Align the mounting holes on the steel base with the anchor points and loosely install all mounting bolts.

> **Warning:** Crush Hazard. The unit weighs 45.5 kg. Use appropriate lifting equipment and personnel to prevent injury.

Step 2: Step 2: Leveling and Securing

Place a level across the top rim of the cast aluminum bowl. Adjust leveling feet or use shims as necessary until the unit is perfectly level in both X and Y axes, then tighten the mounting bolts to the specified torque in the main service manual.

Step 3: Step 3: Electrical Power Connection

Ensure the main power is locked out. Route the main power cable to the unit's terminal box and connect the line, neutral, and ground wires according to the wiring diagram inside the cover. Double-check that the voltage selector is set to match your source (120/240VAC).

> **Warning:** Risk of severe electrical shock. All electrical work must be performed by a qualified electrician with the power source de-energized and locked out.

Step 4: Step 4: Control System Integration

Connect the feeder's control interface cable to the designated port on your PLC or robot controller. This typically includes signals for run/stop commands, speed control, and part-level sensors.

Step 5: Step 5: Install Part Tooling and Guides

If applicable, install any custom-tooled tracks, guides, or sensors onto the feeder bowl outlet. Ensure all fasteners are secure and that there are no sharp edges that could damage parts.

> **Warning:** Pinch Hazard. Keep hands clear of tooling and moving parts during installation and testing.

Step 6: Step 6: Initial Power-On and Tuning

Remove all tools from the work area and re-energize the circuit. Power on the feeder at the lowest vibration setting and gradually increase the amplitude until a smooth, consistent part flow is achieved. This process is highly dependent on part geometry and weight.

Step 7: Step 7: Attach Safety Guarding

Install all manufacturer-supplied safety guards around the feeder bowl and moving components. Verify that any interlock switches on the guards are correctly wired into the safety circuit and are functional.

> **Warning:** The machine must not be operated without all safety guards properly installed and functional.

4. Post-Installation Verification

1. Verify the unit is securely mounted and does not exhibit excessive movement on its base during operation.
2. Confirm the electrical enclosure is sealed and meets the IP54 rating by checking all gaskets and cable glands.
3. Run the feeder with a sample batch of production parts to confirm consistent feed rate and orientation.
4. Test the integration with the master control system, ensuring it correctly starts, stops, and responds to control signals.
5. Check for any abnormal noise or heat generation from the drive unit after 15 minutes of continuous operation.

6. Confirm that all safety interlocks and E-Stop functions connected to the feeder operate as intended.

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