# Actuator A2: Mechanical Mounting & Safety

Page • Tag

---

# Actuator A2: Mechanical Mounting & Safety

This section explains how to physically secure your Actuator A2. Proper mounting is critical to handling the high torque output of the actuator and ensuring user safety during operation.

### ⚠️ IMPORTANT SAFETY WARNING

Do not attempt to run or operate the actuator without a fixed support.

The Actuator A2 generates high torque. If you attempt to run the motor while holding it in your hand or resting it loosely on a table, the sudden movement will cause the body of the actuator to spin violently (kickback). This can lead to injury or damage to your electrical connections.

**Rule of Thumb:** To safely run the actuator, it must be fixed tightly to a test rig or table using the mounting holes provided on the actuator body.

---

### 1. Mounting the Actuator

To secure the actuator, you can use our ready-made 3D printable design or create your own custom integration.

#### Option A: Use Our 3D Printed Stand

We provide an STL file for a test stand that perfectly fits the Actuator A2 mounting pattern.

- [Icon] **Download Stand STL File**

#### Option B: Design Your Own

If you prefer to design your own mounting bracket or integrate the actuator into a robot chassis, please refer to the mechanical dimensions provided in our product brochure.

- [Icon] **View Brochure & Dimensions**

---

## 2. Required Hardware

Whether using our stand or your own design, use standard M3 screws to secure the motor.

| Component | Size | Quantity |
| --- | --- | --- |
| **Screws** | **M3 x 8mm** | Use all available holes for maximum stability. |

**Installation Tip:** Tightly secure the stand (or your custom mount) to your workbench using clamps or bolts to prevent the entire setup from sliding during testing.

---

## 3. Output Clearance (If Attaching Links)

The "Output" is the front rotating part of the motor.

**Note:** This step is only necessary if you plan to attach a shaft, arm, or external link to the actuator. If you are testing the actuator without any attachments, you may skip this section.

- **360° Freedom:** If you attach a link to the output, you must ensure it can rotate a full 360 degrees without hitting the table, the mounting stand, or any wires.
- **Edge Mounting:** To achieve this clearance, we recommend mounting the stand at the **edge of your table** so the attached link or shaft can spin freely over the side.

> **Next Steps:** Now that your actuator is mechanically secured, you are ready to proceed to the software configuration.

Ref: *Tutorial: Visualizing Rotation with a Shaft*