

## Sriya D80C

# Sriya 80mm Chuck Rotating Shaft CNC Milling Machine Driving Head User Manual

Model: D80C

## 1. IMPORTANT SAFETY INFORMATION

Please read and understand all safety instructions before operating the Sriya 80mm Chuck Rotating Shaft. Failure to follow these instructions may result in serious injury or damage to the equipment.

- **Power Supply:** Ensure the power supply is DC 24V as specified. Using an incorrect voltage can damage the unit and pose a safety hazard.
- **Work Area:** Operate the unit in a clean, well-lit, and organized work area. Keep children and unauthorized personnel away.
- **Personal Protective Equipment (PPE):** Always wear appropriate safety glasses, gloves, and other necessary PPE when operating or maintaining the unit.
- **Secure Mounting:** Ensure the rotating shaft is securely mounted to your CNC machine before operation to prevent movement or vibration.
- **Emergency Stop:** Familiarize yourself with the emergency stop procedures of your CNC machine and the rotating shaft system.
- **Maintenance:** Disconnect power before performing any maintenance or adjustments.
- **Modifications:** Do not modify the rotating shaft or its components. Unauthorized modifications can void the warranty and create safety risks.

## 2. PRODUCT OVERVIEW

The Sriya D80C 80mm Chuck Rotating Shaft is a universal rotating fixture designed for CNC milling machines. It enhances the versatility of your CNC machine by enabling precise rotation for intricate and complex part processing. Constructed from durable stainless steel and aluminum alloy, this unit offers high machining accuracy and production efficiency.

### 2.1 Components

- **80mm Chuck:** For securely holding workpieces.

- Rotating Shaft Mechanism: Provides controlled rotation.
- Motor/Driving Head: Powers the rotation.
- Mounting Base: For stable attachment to the CNC machine.
- Connection Cable: For power and control signals.



Figure 2.1: Overview of the Sriya 80mm Chuck Rotating Shaft components, including the chuck, motor housing, and interchangeable jaws.

### 3. SETUP INSTRUCTIONS

Follow these steps for the proper installation and initial setup of your Sriya 80mm Chuck Rotating Shaft.

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any signs of damage during transit.
2. **Mounting:** Securely attach the rotating shaft's base to the bed or designated fixture point of your CNC milling machine. Use appropriate fasteners to ensure stability.
3. **Power Connection:** Connect the provided cable from the rotating shaft to a compatible DC 24V power supply driver. Ensure correct polarity. **Note:** The product requires a driver with 24V output voltage for power supply.
4. **Control Connection:** Connect the control signals from the rotating shaft to your CNC controller according to your CNC machine's documentation. This typically involves connecting stepper motor control signals (pulse, direction, enable).
5. **Chuck Installation (if separate):** If the chuck is not pre-installed, carefully attach it to the rotating shaft spindle. Ensure it is tightened securely.
6. **Jaw Installation:** Install the appropriate jaws into the 80mm chuck for your workpiece. Ensure they are properly seated and tightened.



Figure 3.1: The Sriya 80mm Chuck Rotating Shaft assembled and ready for mounting, showing the chuck and the base with angle markings.

## 4. OPERATING INSTRUCTIONS

This section outlines the general operating procedures for the Sriya 80mm Chuck Rotating Shaft. Refer to your CNC machine's specific software and controller manual for detailed programming instructions.

1. **Power On:** After ensuring all connections are secure, power on your CNC machine and the 24V power supply for the rotating shaft.
2. **Workpiece Loading:** Open the chuck jaws and carefully insert your workpiece. Tighten the chuck jaws securely to hold the workpiece firmly. Ensure the workpiece is centered and balanced to prevent vibration during operation.
3. **CNC Program Setup:** Load or create the CNC program that incorporates the rotating axis (often referred to as A-axis or 4th axis) movements. Define the rotation angles, speeds, and synchronization with other axes.
4. **Tool Path Verification:** Before running the program with a workpiece, perform a dry run or simulation to verify the tool paths and rotating axis movements.
5. **Operation:** Initiate the CNC program. Monitor the operation closely, especially during the initial runs.

6. **Emergency Stop:** Be prepared to use the emergency stop function on your CNC machine or controller if any unexpected behavior occurs.
7. **Workpiece Unloading:** Once the operation is complete and the machine has stopped, carefully loosen the chuck jaws and remove the finished workpiece.



Figure 4.1: Close-up of the 80mm chuck, demonstrating how it securely holds a workpiece.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Sriya 80mm Chuck Rotating Shaft.

- **Cleaning:** Keep the unit clean from dust, chips, and debris. Use compressed air or a soft brush. Avoid using harsh chemicals that could damage the finish or internal components.
- **Lubrication:** Periodically lubricate the chuck jaws and any exposed moving parts with appropriate machine oil to ensure smooth operation and prevent rust. Consult your chuck's specific maintenance guidelines.
- **Inspection:** Regularly inspect the chuck jaws for wear or damage. Replace worn jaws to maintain secure workpiece gripping. Check all fasteners for tightness.
- **Cable Integrity:** Inspect the power and control cables for any signs of wear, cuts, or damage. Replace damaged cables immediately.
- **Storage:** When not in use for extended periods, store the unit in a clean, dry environment, protected from extreme temperatures and humidity.



Figure 5.1: Rear view of the rotating shaft, highlighting the mounting points and cable connection area for maintenance checks.

## 6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with the rotating shaft.

| Problem                 | Possible Cause                                                                      | Solution                                                                                        |
|-------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Unit does not power on. | Incorrect power supply voltage; loose power connection; faulty power supply driver. | Verify power supply is DC 24V. Check all power cable connections. Test the power supply driver. |

| Problem                               | Possible Cause                                                                    | Solution                                                                                                          |
|---------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Chuck does not rotate.                | No control signal from CNC; incorrect wiring of control signals; motor fault.     | Check CNC program for rotating axis commands. Verify control signal wiring. Consult CNC controller manual.        |
| Excessive vibration during operation. | Workpiece not securely clamped; unbalanced workpiece; loose mounting of the unit. | Ensure workpiece is tightly secured in the chuck. Balance the workpiece if possible. Re-check mounting fasteners. |
| Inaccurate rotation.                  | Incorrect steps per degree setting in CNC software; mechanical play.              | Calibrate the rotating axis steps per degree in your CNC software. Inspect for any mechanical looseness.          |

## 7. SPECIFICATIONS

Detailed technical specifications for the Sriya D80C 80mm Chuck Rotating Shaft.

| Feature            | Specification                   |
|--------------------|---------------------------------|
| Item Type          | 80mm Chuck Rotating Shaft       |
| Material           | Stainless Steel, Aluminum Alloy |
| Model              | D80C                            |
| Rated Voltage      | DC 24V                          |
| Package Dimensions | 12.99 x 11.02 x 7.48 inches     |
| Item Weight        | 18.7 pounds                     |
| Manufacturer       | Sriya                           |

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Sriya customer service. Keep your purchase receipt as proof of purchase.

For further assistance, please visit the official Sriya website or contact your local distributor.