USER MANUAL

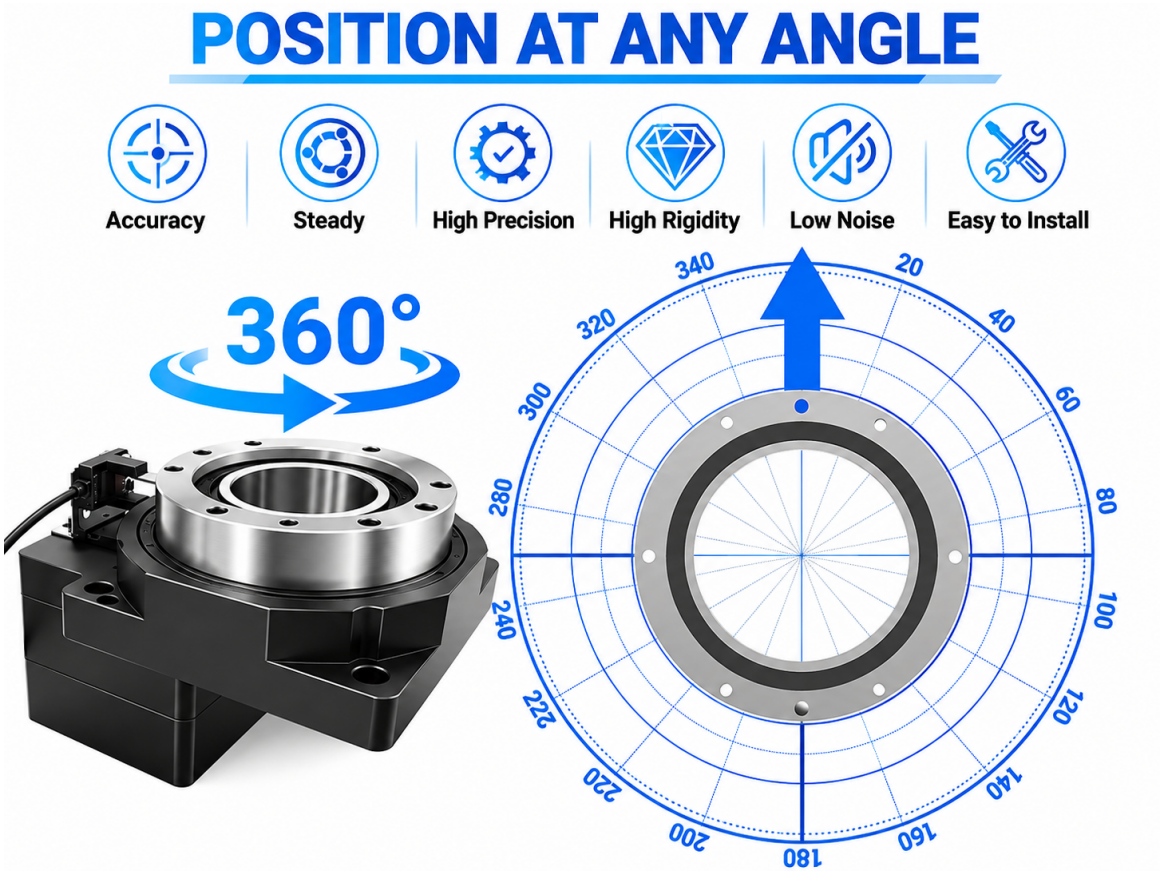
TS060

Hollow Rotary Table / Rotary Actuator

5:1 / 10:1 | NEMA17 / NEMA23 / 40 mm Servo

Product Overview

The TS060 is a compact hollow rotary positioning platform for automation and indexing applications. Its center through-hole provides a passage for cables and air tubes, while the cross roller bearing supports platform loads.



Features

Hollow Rotary Table

28 mm center through-hole allows cables and air tubes to pass through the rotating platform.

Stepper Motor Compatibility

Compatible with NEMA17 stepper motors (42 mm flange, 5 mm shaft) and NEMA23 stepper motors (57 mm flange, 8 mm shaft).

Servo Motor Compatibility

Compatible with servo motors featuring a 40 mm flange and 8 mm shaft.

Two Gear Ratios

Available in 5:1 and 10:1 reduction ratios, with rated output torque of 5 N·m and 4 N·m respectively.

Cross Roller Bearing

Uses a cross roller bearing to support axial and moment loads.

Aluminum Alloy Housing

CNC-machined aluminum alloy housing with a compact 60 × 60 mm mounting base.

Positioning Accuracy

Positioning accuracy of ≤1 arcmin and repeatability of ±30 arcsec.

Flexible Installation

Supports different mounting orientations for automation equipment and rotary positioning applications.

Safety & Preparation

Read this manual before installation. Installation and operation should be performed by personnel familiar with motor-driven mechanical equipment.

Before installation

- Disconnect motor power before mounting, adjusting, or servicing the rotary table.
- Confirm the selected motor shaft diameter, flange pattern, and reduction ratio match the product variation.
- Keep hands, tools, and loose items away from the rotating assembly during operation.
- Ensure the mounting surface is rigid, flat, and clean; tighten fasteners evenly.
- Keep the rotating table within the specified torque, load, speed, and environmental limits.

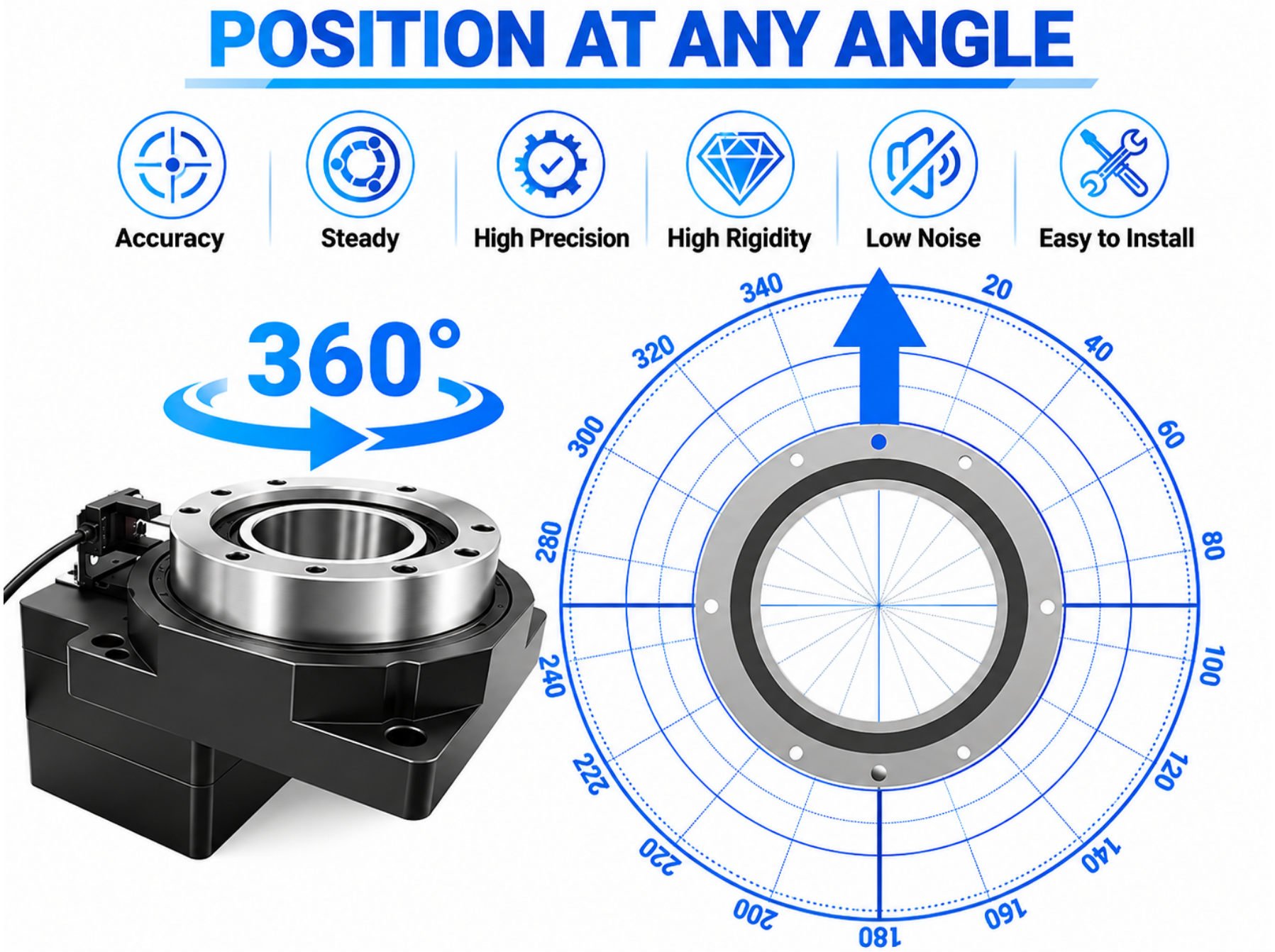
Components

Rotary table: TS060 hollow output platform with motor interface and bearing assembly.

Photoelectric sensor: Included for external sensing or homing integration, subject to the connected controller and the sensor model supplied.

Drive and motor: Select and configure a compatible external motor and drive for the chosen shaft and mounting interface.

360° Rotary Positioning

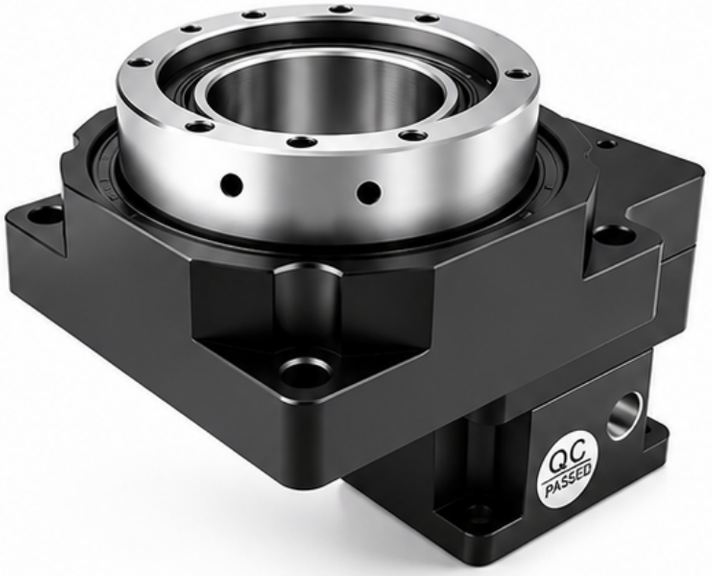


Product Views & Mounting References

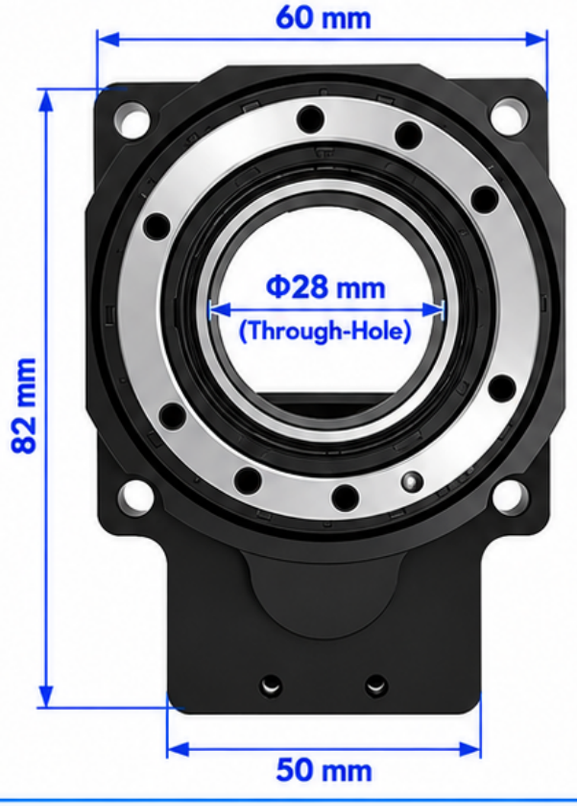
Isometric View (Top)



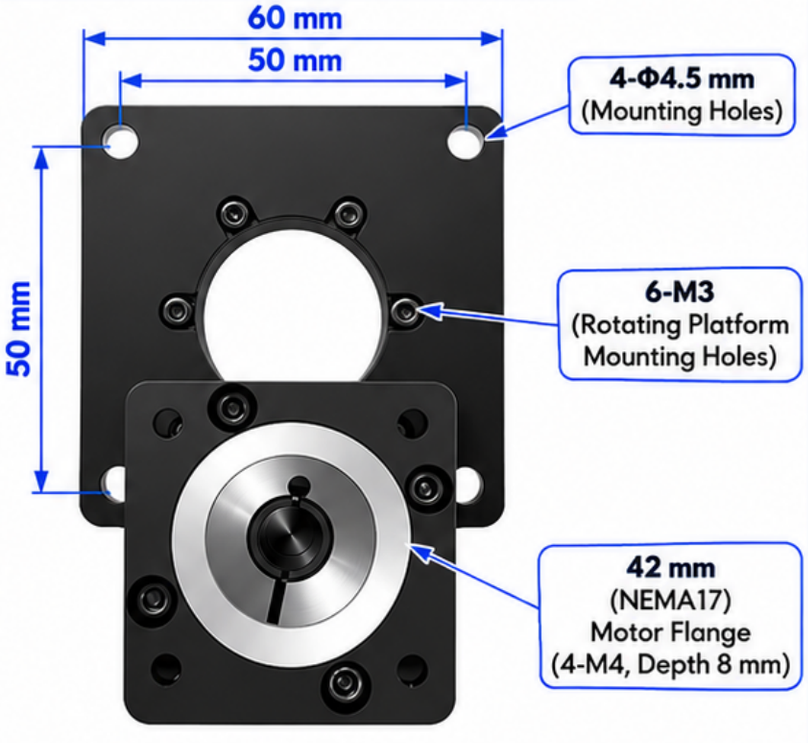
Isometric View (Side)



Front View (Key Dimensions)



Rear View (Mounting Dimensions)



Installation & Setup

1. Check compatibility

Confirm the shaft size and motor flange: NEMA17 42 mm / 5 mm shaft, NEMA23 57 mm / 8 mm shaft, or a 40 mm flange / 8 mm shaft servo motor, as applicable to your platform configuration.

2. Mount the rotary table

Install the TS060 onto a stable machine mounting surface using the mounting locations shown in the dimensional drawings. Avoid stress or distortion of the housing.

3. Attach the motor

Align the motor shaft and flange with the input coupling and mounting pattern. Insert without forcing the shaft or applying excessive side loading. Secure fasteners evenly.

4. Mount the driven load

Fasten the payload to the rotating platform using the specified rotating-platform holes. Keep the load centered where practical and check clearance through a full revolution.

5. Connect the sensor

Position the supplied photoelectric sensor for the intended detection or homing point. Wire it according to the markings or manufacturer documentation on the actual supplied sensor and the controller input specifications.

6. Test motion

With the assembly clear, set conservative motor current, acceleration, and speed on the drive. Run a short low-speed test before normal operation.

Operation & Maintenance

Operating sequence

• Check all mounting bolts, the workpiece, and the shaft connection before each operating cycle.

• Power on the motor controller and establish the machine reference position if required by the application.

• Start with low-speed incremental motion and check rotation direction, vibration, clearance, and sensor response.

• Increase toward the intended cycle speed only after verifying stable and repeatable motion.

• Stop motion and remove power before making mechanical adjustments.

Routine inspection

• Keep the platform and mounting surfaces free of debris.

• Inspect fasteners, the coupling connection, and cable or tube routing.

• Monitor for new vibration, abnormal noise, excessive heat, or changes in positioning performance.

• The specification indicates long-term lubrication; do not dismantle the bearing assembly for routine lubrication.

Troubleshooting

Motor does not rotate: Check motor drive power, enable state, wiring, drive configuration, and mechanical obstruction.

Unexpected noise or vibration: Reduce speed and acceleration; check load balance, fastening, shaft alignment, and load limits.

Positioning error: Check for loose couplings, motor step loss or tuning issues, and sensor/reference repeatability.

Sensor does not trigger: Check the sensor supply, output type, positioning, target, and controller input configuration.

Technical Parameters: TS060

Hollow Rotating Table Technical Parameters		
Model	TS060	
Reduction ratio	5:1	10:1
Reted output torque (N.m)	5	4
Max out torque (N.m)	3 Times rated torque	
Max axial load	230N	
Max moment of inertia	5N.m	
Torsional rigidity (N.m/arcmin)	2.5	
Parallelism of rorating platform (mm)	≤0.01	
Weight (kg)	0.6	
Design load (kg) Max.	15.4lb/ 7(kg)	11lb/ 5(kg)
Bearing structure	Cross roller bearing	
Positioning accuracy	≤1 arc-min	
Repeated positioning accuracy	±30 arcsec	
Allowable disk speed	200rpm (Intermittent operation)	
Accuracy life	30000h (Intermittent operation)	
Protection level	IP50	
Lubrication method	Long-term lubrication	
Installation method	Arbitrary	
Parallelism of rotating platform	≤0.01mm	
Concentricity of rotating platform	≤0.01mm	
Transmission efficiency	95%	
Noise	≤55db	

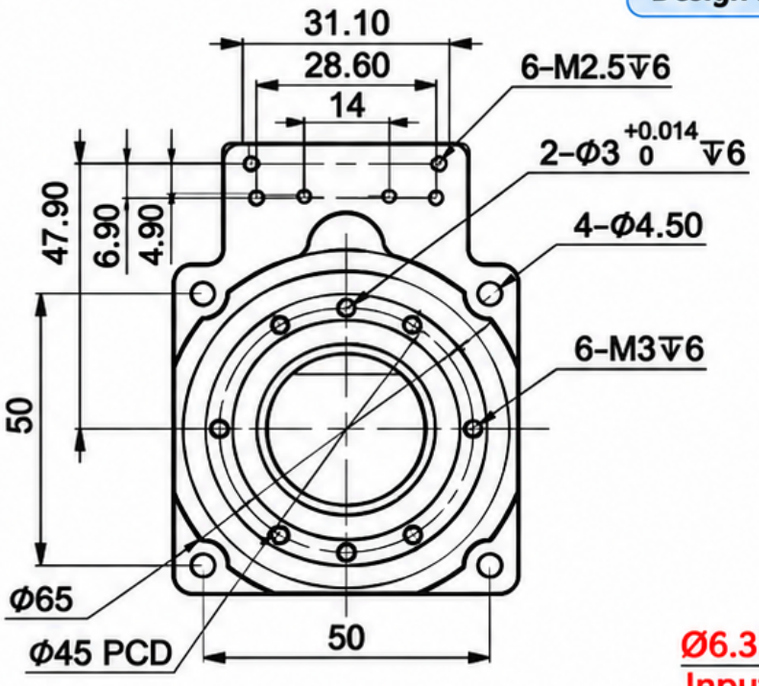
Overall Dimensions & Motor Mounting

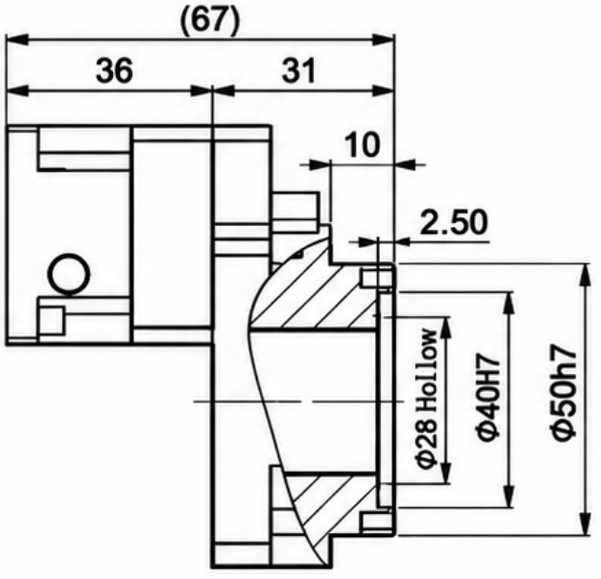
TS060

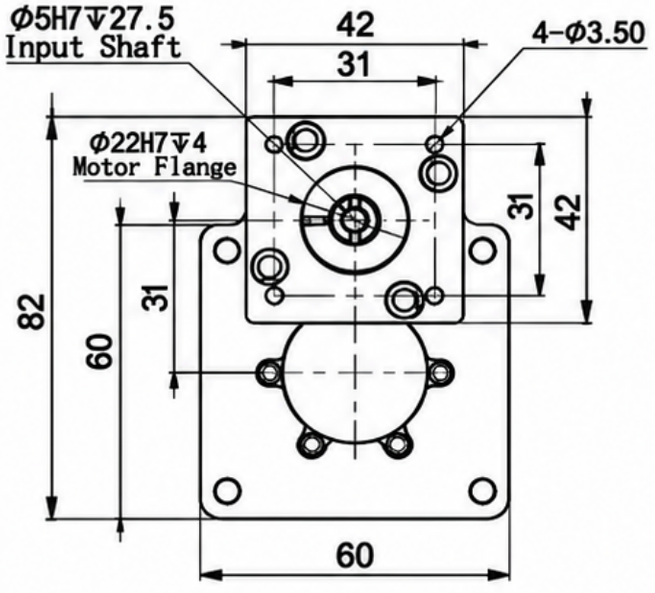
For **Nema 17** Flange Stepper Motor

For **40mm** Flange Servo Motor

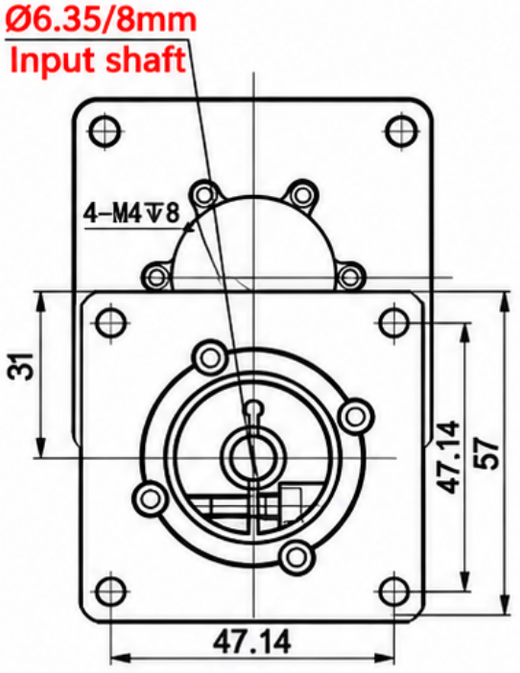
Table size	2.36*2.36 inch (60 × 60 mm)
Positioning Accuracy	≤ 1 arcmin
Through-Hole Diameter	1.1 inch (Φ28mm)
Repeatable Positioning Accuracy	±30 arcsec
Reted output torque	4N.m (Ratio10:1)
Max out torque	12N.m
Design Load(Ratio 10 to 1)	11 pound(5kg) Max.







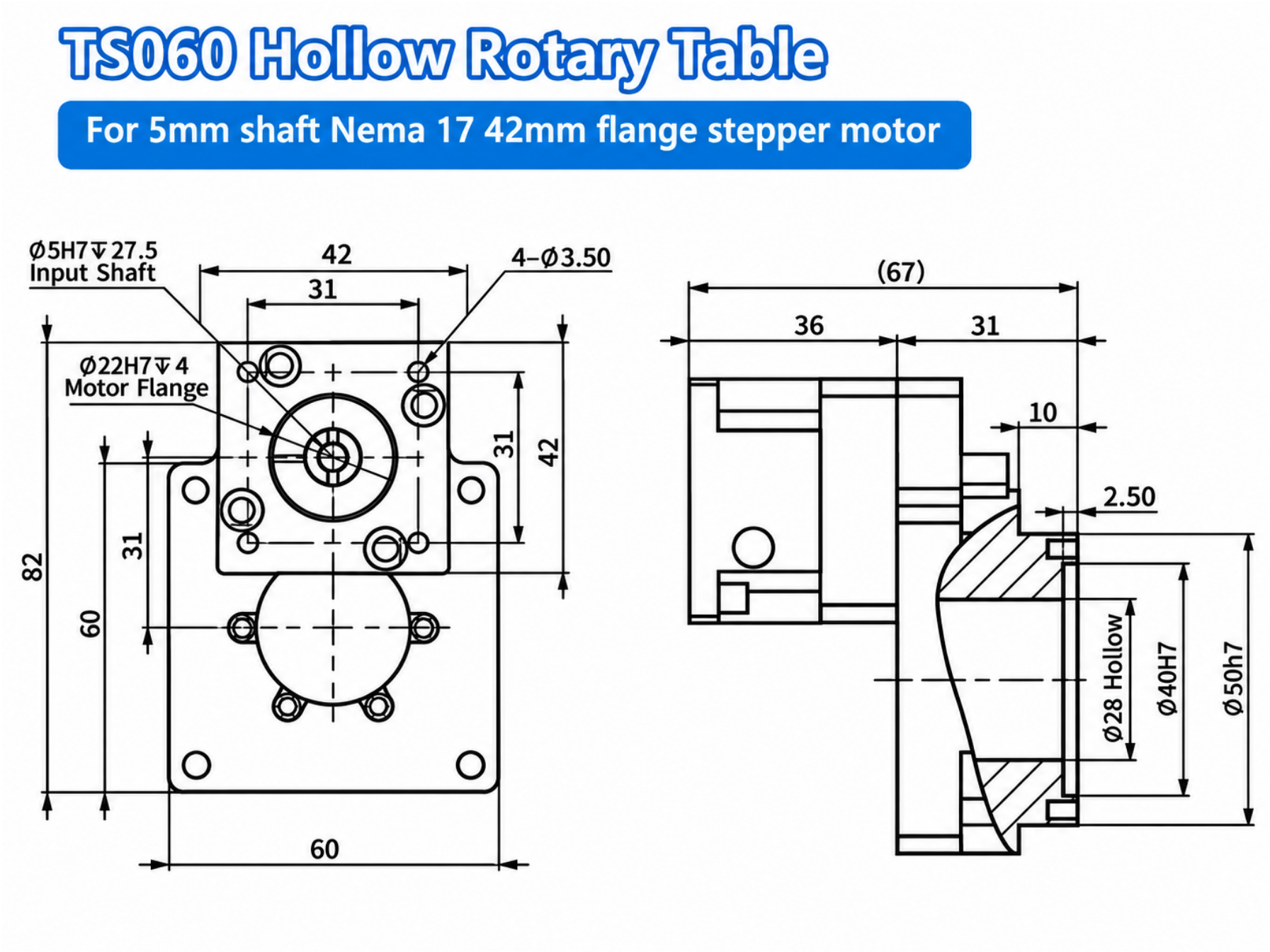
for NEMA17 stepper motor



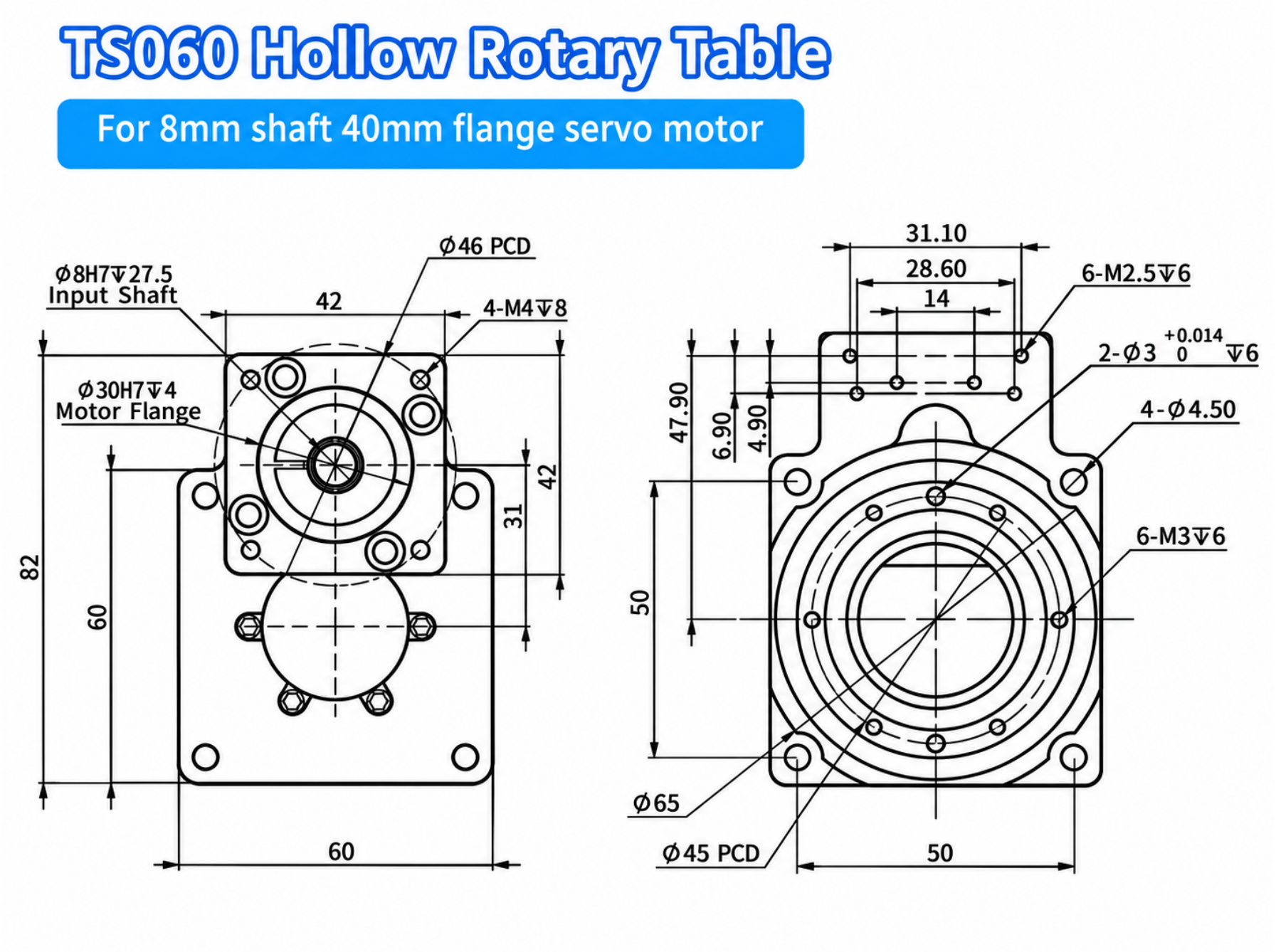
For Nema23 Stepper motor

Note: When mounting a NEMA 23 motor, it will partially cover the flangeplate,but this does not affect performance.

NEMA17 5 mm Shaft Configuration



40 mm Servo / 8 mm Shaft Configuration



Package Contents

1 × TS060 Hollow Rotary Table

1 × Photoelectric Sensor

Product Identification

Model: TS060 Reduction ratios: 5:1 or 10:1

Mounting base: 60 × 60 mm Through-hole: 28 mm

Applicable motor interfaces: NEMA17, NEMA23, or 40 mm flange servo, depending on the selected input configuration.

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