ZCM185 Hollow Rotary Table

USER MANUAL | ZCM185-L1 / ZCM185-L2

Motor-driven hollow rotary positioning platform with side-mounted motor interface. This manual covers the ZCM185-L1 and ZCM185-L2 variants and the motor interfaces illustrated in the accompanying drawings.

1. Product Overview

• Central hollow opening provides a path for cables and air tubing.

• Cross roller bearing construction supports rotary motion under axial and radial loading.

• Side-mounted motor interface is available in configurations for selected stepper and AC servo motors.

• Typical integration includes rotary indexing, inspection equipment, assembly fixtures, and industrial positioning systems.

2. Motor Interface Options

Motor type	Nominal frame	Input shaft
NEMA 34 stepper motor	86 mm	12.7 mm (1/2 in) or 14 mm
AC servo motor	80 mm	19 mm
AC servo motor	100 mm	19 mm
AC servo motor	130 mm	22 mm

Select the motor adapter/flange and input bore that match the motor actually used. Interface dimensions vary by configuration. Motor is not assumed to be included.

3. Reduction Ratio Options

Model	Available ratios	Net weight
ZCM185-L1	15:1, 21:1, 30:1	17 kg
ZCM185-L2	60:1, 75:1, 105:1, 120:1, 150:1, 210:1, 300:1	19 kg

4. Safety and Handling

• Disconnect motor power before installation, wiring, adjustment, or maintenance.

• Secure the platform and attached load using suitable mounting hardware.

• Keep hands, cables, and loose objects away from moving components.

• Do not exceed the applicable load, torque, or speed rating for the selected configuration.

• Verify motor shaft and mounting fit before operation; avoid forcing parts together.

Technical Specifications

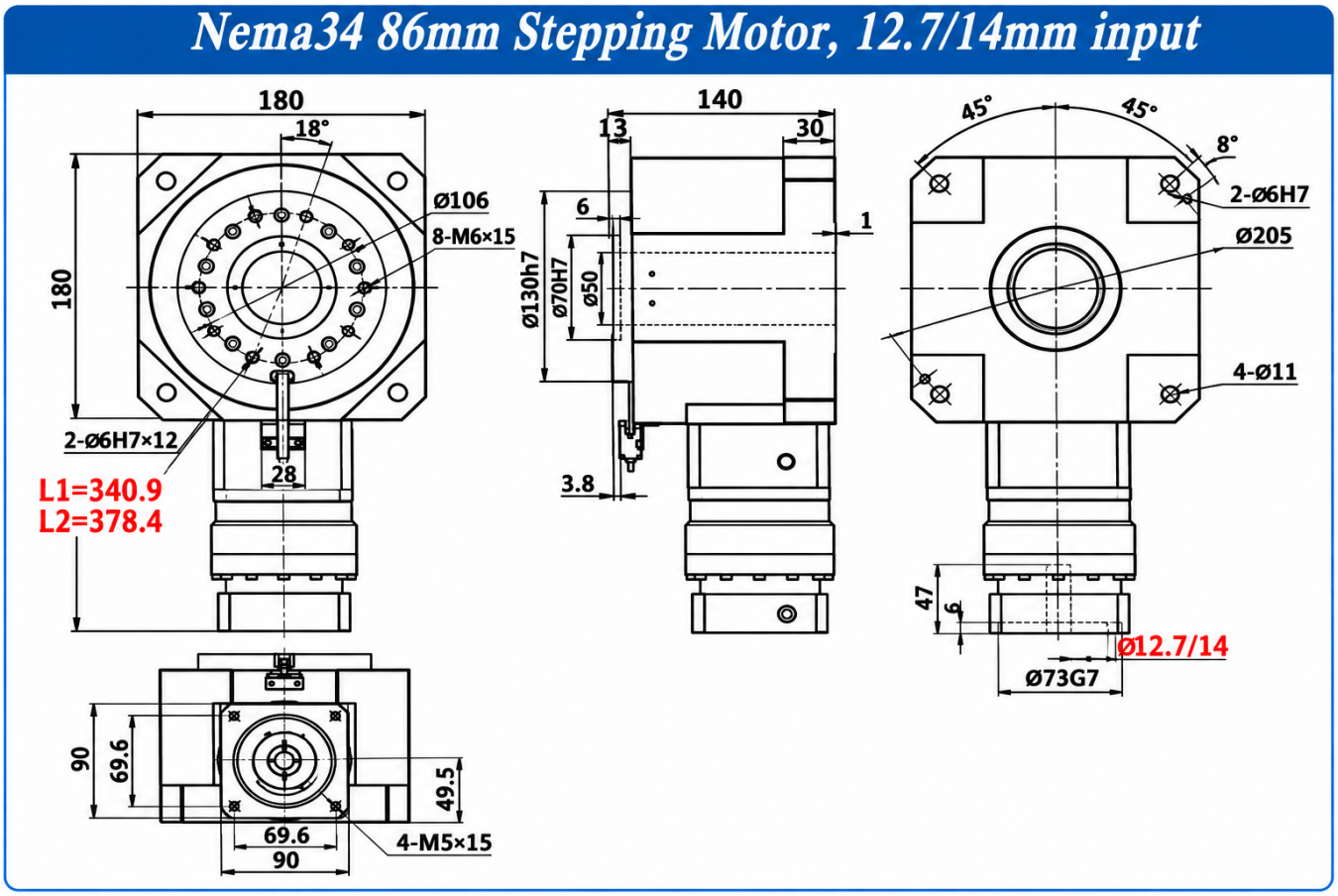
Values below are reproduced from the supplied ZCM185 specification chart. Ratings are configuration-dependent where noted.

Parameter	ZCM185-L1	ZCM185-L2
Reduction ratio	15, 21, 30	60, 75, 105, 120, 150, 210, 300
Rated output torque (N.m)	430 (15); 360 (21, 30)	430 (60-150); 400 (210); 360 (300)
Maximum output torque	3 x rated output torque	3 x rated output torque
Bearing structure	Cross roller bearing	Cross roller bearing
Allowable axial load	13,500 N	13,500 N
Allowable radial load	13,500 N	13,500 N
Allowable disk speed	200 rpm (intermittent)	200 rpm (intermittent)
Rotating platform concentricity	<= 0.01 mm	<= 0.01 mm
Rotating platform parallelism	<= 0.01 mm	<= 0.01 mm
Overturning moment	1,420 N.m	1,420 N.m
Torsional rigidity	45 N.m/arcmin	45 N.m/arcmin
Positioning accuracy	<= 2 arcmin	<= 4 arcmin
Repeat positioning accuracy	<= 30 arcsec	<= 60 arcsec
Compatible servo motor power	750-1,500 W (listed)	750-1,500 W (listed)
Compatible stepper motor	86 mm stepper	86 mm stepper
Protection rating	IP54 (listed)	IP54 (listed)
Transmission efficiency	95%	90%
Noise	<= 63 dB	<= 63 dB
Weight	17 kg	19 kg
Design load	150 kg	150 kg

The source chart also lists 20,000 h precision life (intermittent operation) and an "allowable moment of inertia" value of 110 with unit N.m; the latter unit should be verified against the manufacturer drawing before engineering use.

Dimensional Drawing - NEMA 34 Stepper Motor

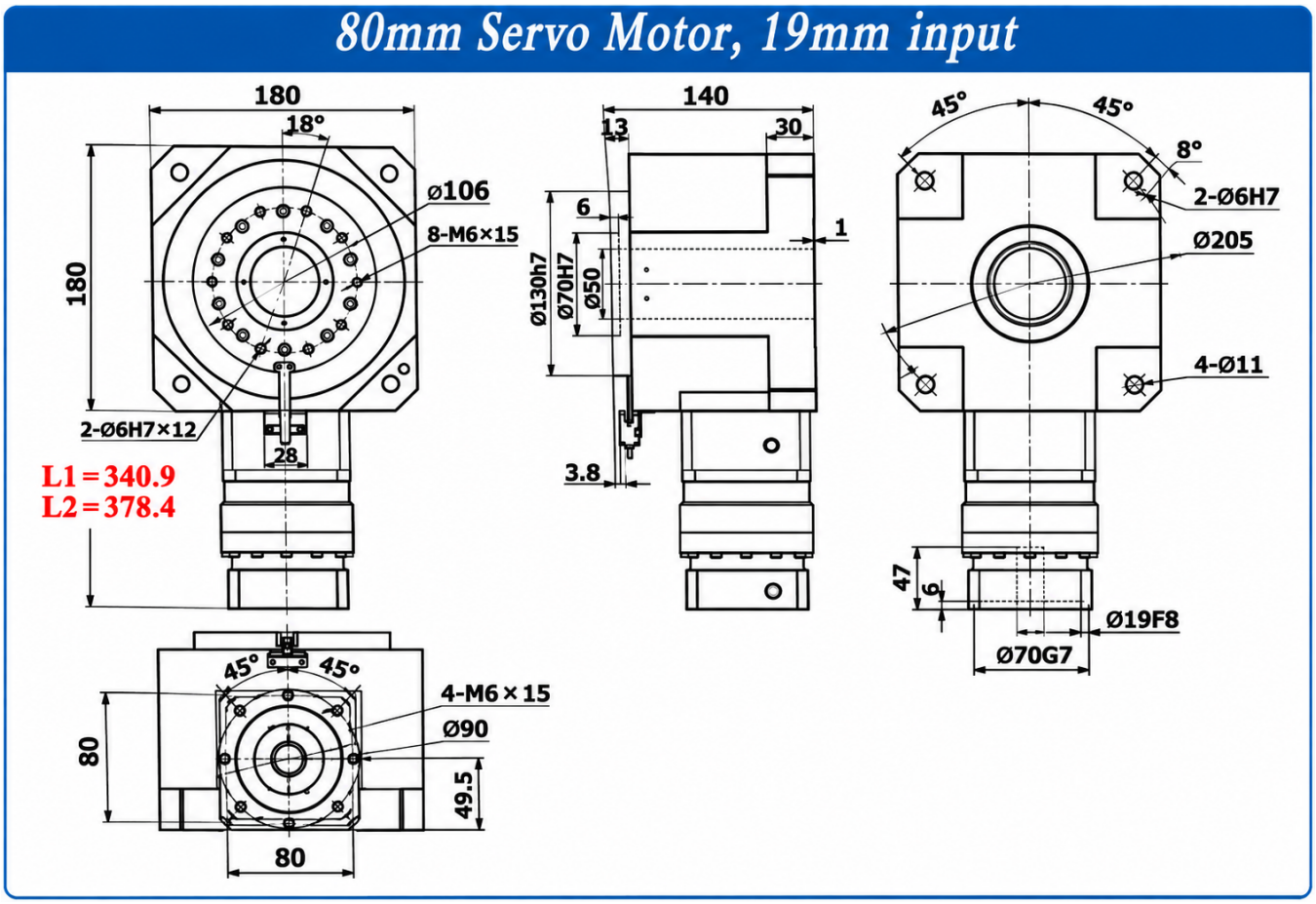
86 mm stepper motor interface; 12.7 mm or 14 mm input option. All drawing dimensions are in millimeters unless marked otherwise.



Drawing identifies L1 = 340.9 mm and L2 = 378.4 mm; confirm which length applies to the selected assembly.

Dimensional Drawing - 80 mm Servo Motor

80 mm AC servo motor interface with 19 mm input option. Other servo interfaces require their corresponding mounting drawings.



Drawing identifies L1 = 340.9 mm and L2 = 378.4 mm. Dimensions are in millimeters unless noted.

Original Specification Chart

Reference chart for ZCM185-L1 and ZCM185-L2.

Model		ZCM185-L1			ZCM185-L2						
Reduction ratio:		15	21	30	60	75	105	120	150	210	300
Rated Output torque	N·m	430	360	360	430					400	360
Max Output torque	N·m	3 times rated output torque									
Bearing structure		Cross roller bearing									
Allowable axial load	N	13,500									
Allowable radial load	N	13,500									
Allowable disk speed	rpm	200 (Intermittent operation)									
Concentricity of rotating platform	mm	≤0.01									
Parallelism of rotating platform	mm	≤0.01									
Overturning moment	N·m	1,420									
Allowable moment of inertia	N·m	110									
Torsional rigidity	N·m/arcmin	45									
Precision Life	H	20,000 (Intermittent operation)									
positioning accuracy	arcmin	≤2			≤4						
Repeated positioning accuracy	arcsec	≤30			≤60						
Adaptive servo motor	W	750–1500									
Adaptive stepper motor		86 Stepper Motor									
Protection level	IP	54									
Lubrication method		Long-lasting lubrication									
Transmission efficiency	%	95%			90%						
Noise	dB	≤63									
weight	kg	17			19						
Design load bearing	kg	150									

Installation and Operation

5. Before Installation

• Confirm the model, reduction ratio, motor frame, input shaft diameter, and mounting interface.

• Inspect the rotary table and motor interface for visible damage or debris.

• Check that mounting surfaces are flat and free from burrs.

• Plan cable and air-line routing through the hollow opening without interference.

6. Mechanical Installation

• Place the rotary table on a suitable rigid mounting surface.

• Align the mounting holes and fasten the base using hardware appropriate to the equipment design.

• Fit the matching motor flange and shaft interface without forcing the connection.

• Mount the application fixture to the rotary output interface and verify clearance throughout rotation.

• Route and secure cables or tubing so they cannot catch on rotating parts.

7. Initial Operation

• Connect the motor and controller in accordance with their respective manuals.

• Before applying a production load, command a slow test movement and check the direction of rotation.

• Confirm smooth motion and check for unusual noise, vibration, or cable interference.

• Set controller speed and acceleration for the selected ratio and load.

• Use a suitable homing or position-reference method if required by the application.

8. Maintenance

• Periodically inspect mounting screws, motor coupling, and cable routing.

• Keep external surfaces clean and avoid contamination of moving interfaces.

• Follow the equipment supplier's lubrication and service instructions; do not disassemble the bearing or gear mechanism without service guidance.

9. Package Contents

1 x Hollow Rotary Table. A photoelectric sensor may be supplied depending on the ordered configuration; verify against the order packing list.

10. Notes

Published specifications may vary by reduction ratio and motor interface. Verify the selected model and its mechanical drawing before machining mating parts or setting operating limits.

Contact Us
E-mail:support@oyostepper.com
Telephone Number: +86-023-68438829
Official Site:https://www.oyostepper.com