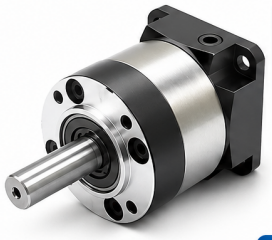
TNR35 Planetary Gearbox



Core Specifications

Technical level	L1 Stage	L2 Stage
L length	38 mm	46.5 mm
Reduction ratio	4 / 5 / 7 / 10	20 / 25 / 30 / 40 / 50 / 70
Rated output torque	3 – 8.5 Nm	5 – 8.5 Nm
Maximum output torque	6 – 17 Nm	10 – 17 Nm
Efficiency	≥ 96%	≥ 94%
Standard gap	≤ 12 arcmin	≤ 15 arcmin

- Planetary Structure
- Stable Transmission
- Multiple Ratios
- IP54 Protection

Performance Parameters

Rated input Speed	3000 rpm
Maximum input speed	6000 rpm
Allowable radial force	150 N
Allowable axial force	80 N

Other Specifications

Usage temperature	-20°C ~ +90°C
Installation method	Arbitrary
Average life span	Long life lubrication
Lubrication method	Permanent Lubrication
Service life	20000 h
Motor dimensions	For NEMA14 35mm Motor
Protection grade	IP54
Noise	58 dB

Output Torque Reference

Reduction ratio	4	5	7	10	20	25	35	40	50	70
Nominal Output Torque (Nm)	8.5	8.5	5	3	8.5	8.5	8.5	8.5	8.5	5
Fault Stop Torque (Nm)	17	17	10	6	17	17	17	17	17	10

TNR35

Precision Planetary Gearbox

Motor compatibility	**NEMA14 (35mm) stepper motor**
Motor input shaft	**5mm**
Gearbox frame	**35 x 35mm**
Gear stages	**L1 / L2**
Reduction ratios	**4:1 - 70:1**
Protection	**IP54**

Overview

Compact planetary speed reducer with single-stage and two-stage configurations.

Designed for installation with compatible NEMA14 (35mm) stepper motors.

TNR35

Technical Specifications

General Performance

Rated input speed	3000rpm
Maximum input speed	6000rpm
Allowable radial load	150N
Allowable axial load	80N
Operating temperature	-20°C to +90°C
Noise level	58dB
Service life	20000h
Protection rating	IP54
Installation orientation	Any orientation
Lubrication	Permanent lubrication

Gear Stages

L1 length	38mm
L2 length	46.5mm
L1 efficiency	≥96%
L2 efficiency	≥94%
L1 backlash	≤12arcmin
L2 backlash	≤15arcmin
L1 rated output torque	3-8.5Nm
L2 rated output torque	5-8.5Nm
L1 maximum output torque	6-17Nm
L2 maximum output torque	10-17Nm

Reduction Ratio and Torque Reference

Reduction ratio	4:1	5:1	7:1	10:1	20:1	25:1	35:1	40:1	50:1	70:1
Nominal output torque (Nm)	8.5	8.5	5	3	8.5	8.5	8.5	8.5	8.5	5
Fault-stop torque (Nm)	17	17	10	6	17	17	17	17	17	10

https://www.oyostepper.com

TNR35

Installation and Operation

Before Installation

1. Check the motor shaft diameter: 5mm.
2. Confirm the selected reduction ratio and gearbox stage.
3. Clean the mounting faces, motor shaft and coupling surfaces.
4. Check shaft alignment and inspect for mechanical damage.

Installation Procedure

1. Align the gearbox input with the motor shaft.
2. Fit the motor carefully without forcing the coupling.
3. Seat the motor flange flush against the gearbox.
4. Tighten the mounting fasteners evenly.
5. Rotate slowly by hand to check for binding.

Operation

- Start at low speed and confirm smooth rotation.
- Observe the selected speed reduction at the output shaft.
- Keep operation within the specified speed and load limits.
- Stop the drive if abnormal noise, heat or vibration occurs.

Maintenance and Storage

- Inspect fasteners and mounting interfaces periodically.
- Check output shaft condition and operating noise.
- Keep the gearbox exterior free from dust and debris.
- The unit uses permanent lubrication.
- Store in a clean, dry environment.

Troubleshooting

Excess vibration	Check shaft alignment and mounting fasteners.
Unusual noise	Inspect load, speed and mechanical connections.
Excessive heat	Reduce load and check ventilation and operating duty.

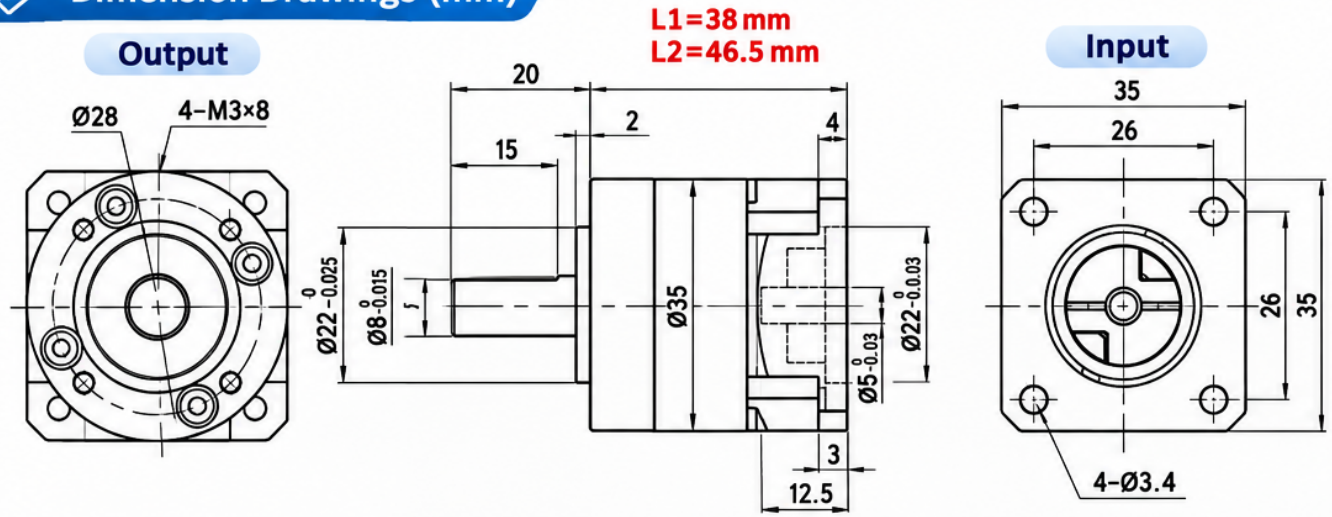
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TNR35 5mm Input for NEMA14 35mm Flange Stepper Motor



L1 Stage speed ratio:
4:1, 5:1, 7:1, 10:1
L2 Stage speed ratio:
20:1, 25:1, 30:1, 40:1, 50:1, 70:1

Dimension Drawings (mm)



- **Planetary Structure**
- **Stable Transmission**
- **Multiple Ratios**
- **IP54 Protection**

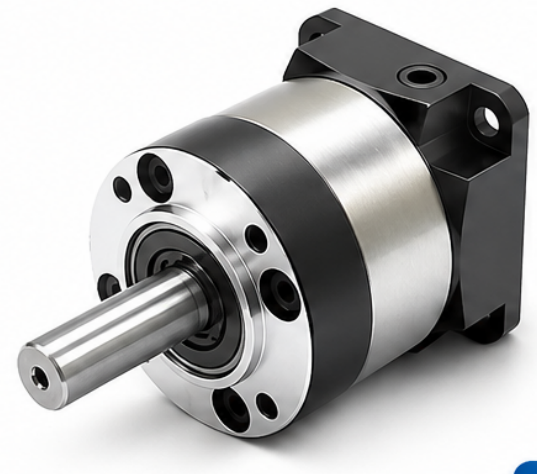
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Rated input speed	3000 rpm	
Maximum input speed	6000 rpm	
Allowable radial force	150 N	
Allowable axial force	80 N	
Usage temperature	-20°C ~ +90°C	
Installation method	Arbitrary	
Average life span	Long life lubrication	
Lubrication method	Permanten Lubrication	
Service life	20000 h	
Motor dimensions	For NEMA14 35mm Motor	
Protection grade	IP54	
Noise	58 dB	

Output Torque Reference

Reduction ratio	4	5	7	10	20	25	35	40	50	70
Nominal output torque (Nm)	8.5	8.5	5	3	8.5	8.5	8.5	8.5	8.5	5
Fault stop torque (Nm)	17	17	10	6	17	17	17	17	17	10

TNR35 Planetary Gearbox



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