

Rhino Heavy Duty Planetary Geared Motor (300 RPM, 12V)

Overview

The Rhino Heavy Duty Planetary Geared Motors are designed for industrial and mobile robotic applications requiring high torque and continuous operation. Equipped with a robust 3-stage metal planetary gearbox, these motors provide excellent performance, durability, and efficiency.



Key Features

Feature	Specification
RPM	300 RPM (at 12V)
Base Motor Speed	18,000 RPM
Torque	Rated: 10 kg.cm (recommended), Stall: 40 kg.cm (not for continuous use)
Gearbox	Metal Planetary Gearbox, 3 stages
Shaft	D-type, 6 mm diameter, 16 mm total length (12 mm D-shape length)
Back Shaft Length	9 mm
Mounting	4 bolts (ensure correct bolt length to prevent gearbox damage)
Material	Metal gears and metal planetary gearbox

Feature	Specification
Weight	300 gm
Dimensions	Gearbox Diameter: 32 mm, Motor Diameter: 28.5 mm, Motor Length: 70 mm (excluding shaft)

Electrical Specifications

- **Supply Voltage:** 12V DC
- **No-Load Current:** 800 mA
- **Load Current:** Up to 7.5 A (Max)
- **Recommended Current Range:** 5-7 A

Performance and Advantages

1. **High Efficiency:** Optimal performance up to 10 kg.cm load.
2. **Durability:** Sturdy 3-stage metal planetary gearbox ensures even load distribution and better lubrication retention.
3. **Silent Operation:** Planetary gearbox provides quieter performance compared to spur gearboxes.
4. **Versatility:** Equipped with a back shaft for encoder mounting, enabling usage in DC servo applications, distance monitoring, and path planning.
5. **Easy Mounting:** Simple installation with clamps and bolts (provided in the accessories section).

Usage Guidelines

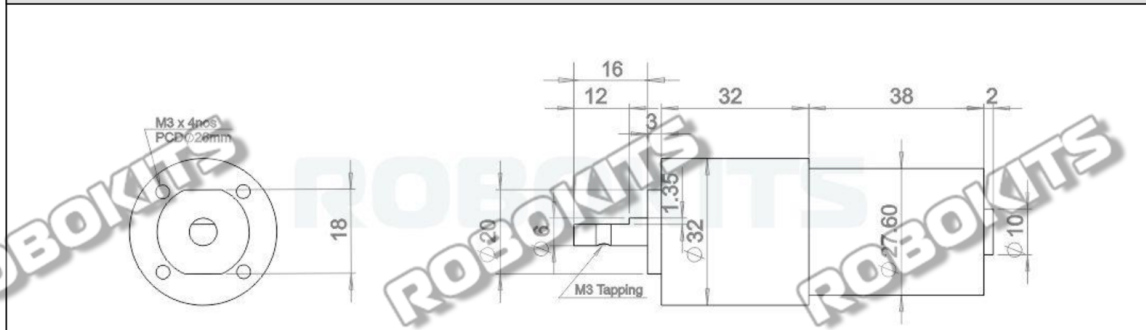
- Avoid exceeding the **stall torque** (40 kg.cm) for continuous operations to prevent overheating or damage.
 - Maintain the **motor surface temperature** within 50°C to ensure longevity.
 - Use bolts of appropriate length to avoid damaging the gearbox top plate.
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Test Results

Model Number
RMCS-3035

Rhino Heavy Duty IG32 Planetary DC Geared Motor
300RPM 10Kgcm

Mechanical Drawing (Dimensions are in mm)



Technical specifications of Motor

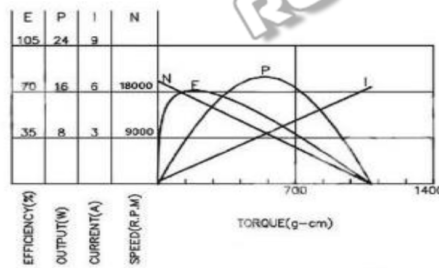
Motor Type	Planetary Geared Motor
Operating voltage	12V DC
Motor Speed at Output Shaft (RPM)	300RPM
Stall Torque(Kgcm)	40Kgcm
Rated Torque(Kgcm)	10Kgcm
Gear Ratio	1 : 60
Dimension	As per above mechanical drawing
Weight	300gm

Base Motor Specifications

Nominal voltage(V)	12V
No-Load Speed (RPM)	18000
Rated Torque (gcm)	151
No-load current (A)	0.8A
Load current(A)	up to 7.5 A(Max)



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Base Motor Characteristic Graph