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5:1, 28mm Planetary Gearmotor, RS-385 Motor

Code: **MP-28005-385**Price: **\$28.93**Quantity:

These gearmotors are custom made for robotic applications. They feature all metal planetary gears and use two ball bearings to support the shaft. The integrated motor mounts and extra long shafts make them easy to integrate into your design and eliminate the cost and complexity of separate motor mounts and shaft extenders. These gearboxes may have some residue on them as a result of the manufacturing process, it is purely cosmetic and easily removed.

A durable, 5-pole balanced armature, RS-385 (Speed 400 size) motor comes standard with these gearboxes. If this motor does not meet your needs, it can be easily replaced with any motor having a 2.3mm shaft and a standard Speed 400 mounting pattern. You can pull the pinion off the included motor with our [GWS Standard Gear Puller](#) or purchase a [new pinion](#). We also carry [replacement motors](#) if you need one. Note: The stock motor comes with a flux ring that makes the overall diameter of the motor slightly larger than the mounting square. The flux ring is easily removed if this is an issue with your design.

IMPORTANT NOTE:

Mounting a large load to the end of an unsupported shaft may damage the gearmotor!!!

The shafts on these motors are supported by two ball bearings making them fairly rugged; however, we do not recommend them to be used with large overhung loads. We recommend using a design that supports the end of the shaft. If it is not possible to support the end of the shaft, we recommend mounting the load as close to the face of the gearmotor as possible and cutting the shaft to length.

Gearmotor Specifications**Physical**

Type : Planetary
Reduction : 5:1
Stages : 1
Gear Material : All Metal
Weight (Gearbox only) : 2.2 oz (63g)
Weight (with motor) : 4.7 oz (134g)
Length (Gearbox only) : 1 in (25mm)
Length (with motor) : 2.6 in (66mm)
Width (Square) : 1.1 in (28mm)
Shaft Diameter : 0.24 in (6mm)
Shaft Length : 1.9 in (48mm)
Shaft Key : 0.125 in (3.2mm)
Shaft End Tap : #4-40
Mounting Holes (12) : #4-40

Calculated Performance*

Motor : [RS-385 \(Pinion\)](#)
Operating v : 3v - 9v
Nominal v : 7.2v
No Load RPM : 3272
No Load A : 1A
Stall Current : 17A
Stall Torque : 48 oz-in 336 mN-m
Kt : 2.8 oz-in/A 20 mN-m/A
Kv : 454 rpm/v

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