

The REV NEO 550 Brushless Motor is newest member in the NEO family of brushless motors, specifically designed to meet the unique needs of the *FIRST* Robotics Competition (FRC) community. Its output power and small size are specifically designed to make NEO 550 the perfect motor for intakes and other non-drivetrain robot mechanisms. Mounting holes and pilot match a standard 550 series motor, making it natively mount to many existing off-the-shelf gearboxes. The built-in hall-effect encoder guarantees low-speed torque performance while enabling smart control without additional hardware.

NEO 550 has been optimized to work with REV SPARK MAX Motor Controller (REV-21-2158) to deliver incredible performance and feedback.

FEATURES

- Mounting features match 550 series DC motors
 - 4 - M3 holes on the face of the motor
- Out-runner construction
- Rotor housing compatible with REV Motion Pattern
 - Mount REV Gears, Sprockets, and Pulleys
- Front and rear ball bearings
- High temperature neodymium magnets
- High-flex silicon motor wires
- Integrated motor encoder
 - 3-phase hall-effect sensors
 - Motor temperature sensor

APPLICATION INFORMATION

The REV NEO 550 Brushless Motor runs a 0.125" output shaft which, when combined with its 550-style mounting features, allows for easy installation in many off-the-shelf gearboxes.

Its small size and weight make it easy to put power where you need it, on intakes, end-effectors, and other weight-sensitive mechanisms. However, due to its lower thermal mass than a NEO, CIM or Mini CIM, it may not be ideal for drivetrain applications.



SPECIFICATIONS

The following specifications for the NEO 550 Brushless Motor are measured with the SPARK MAX Motor Controller configured with its default settings. Motor curves can be found on the following page.

NEO 550 Brushless Motor Specifications	
Nominal Voltage	12 V
Motor Kv	917 Kv
Free Speed	11000 RPM
Free Running Current	1.4 A
Stall Current	100 A
Stall Torque	0.97 Nm
Peak Output Power	279 W
Motor Wire Gauge	16 AWG
Hall-Sensor Encoder Resolution	42 counts per rev.
Mounting Holes	M3 x 0.5
Output Shaft Diameter	0.125" (3.175 mm)
Output Shaft Length	0.267" (7 mm)
Output Pilot	0.512" (13 mm)
Body Length	1.752" (44.5 mm)
Body Diameter	1.378" (35 mm)
Weight	0.142 kg (0.313 lbs)

CAUTION

DO NOT connect the NEO 550 direct to a battery. Only for use with a compatible brushless motor controller.

NEO 550 - SPARK MAX Default Configuration - Constant Voltage Supply

