



## DC Gearbox Motor – "TT Motor" – 200RPM – 3 to 6VDC

PRODUCT ID: 3777

Perhaps you've been assembling a new robot friend, adding a computer for a brain and other fun personality touches. Now the time has come to let it leave the nest and fly on its own wings– err, *wheels!*

These durable (but affordable!) plastic gearbox motors (also known as 'TT' motors) are an easy, low-cost way to get your projects moving. This is a TT DC Gearbox Motor with a gear ratio of 1:48, and it comes with 2 x 200mm wires with breadboard-friendly 0.1" male connectors. Perfect for plugging into a breadboard or terminal blocks.

You can power these motors with 3VDC up to 6VDC, they'll of course go a little faster at the higher voltages. We grabbed one motor and found these stats when running it from a bench-top supply

- At 3VDC we measured 150mA @ 120 RPM no-load, and 1.1 Amps when stalled
- At 4.5VDC we measured 155mA @ 185 RPM no-load, and 1.2 Amps when stalled
- At 6VDC we measured 160mA @ 250 RPM no-load, and 1.5 Amps when stalled

Note that these are very basic motors, and have no built-in encoders, speed control or positional feedback. Voltage goes in, rotation goes out! There will be variation from motor to motor, so a separate feedback system is required if you need precision movement.

Comes 1 x per order, with just the motor + wires. You *cannot* drive these directly from a microcontroller, a high-current motor driver is required! We recommend our DRV8833 motor driver for these motors, as it works well down to 3V and can be set up with current limiting since the stall current on these can get high. The TB6612 can also be used, it's on our shields and wings, but you'll need to supply at least 4.5V – which is what you'll likely want to run these motors at anyhow!

We have a range of wheels, add-ons and accessories for these motors so you can bling out your bot just the way you like.

#### TECHNICAL DETAILS

- Rated Voltage: 3~6V
- Continuous No-Load Current: 150mA +/- 10%
- Min. Operating Speed (3V): 90+/- 10% RPM
- Min. Operating Speed (6V): 200+/- 10% RPM
- Torque: 0.15Nm ~0.60Nm
- Stall Torque (6V): 0.8kg.cm
- Gear Ratio: 1:48
- Body Dimensions: 70 x 22 x 18mm
- Wires Length: 200mm & 28 AWG
- Weight: 30.6g

Product Weight: 30.6g / 1.1oz



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