

Choosing the suitable motor



Amr Ayman Elmaghraby

Choosing the suitable motor:

Suitable motor for steering:

→ Stepper motor

Reasons(pros):

1. Accurate position and speed control
2. Motion of smaller spans can happen more predictably.
Same applies for wider span motion too.
3. Overshoot in motion problem is very minimal
4. Can possibly work without position feedback device. This can be done by just referencing motion with respect to limit switches.
5. Micro stepping feature can make very fine motion possible.

Stepper motor (NEMA 23 – 12 kg.cm)

Link: <https://store.fut-electronics.com/products/stepper-motor-nema-23-9-kg-cm>



Suitable motor for shooting:

→ Brushless motor

Reasons (general pros):

- 6. High power to weight ratio
- 7. Very high speed (1,000-50,000 RPM) which make it suitable for shooting
- 8. Nearly instantaneous control of speed (RPM) and torque
- 9. High efficiency

Brushless motor A2212/10T 1400KV Brushless Outrunner Motor

Link: <https://makerselectronics.com/product/brushless-motor-1400kv>

GoolRC S3650 4300KV Sensor-less Brushless Motor

Link: https://www.amazon.com/GoolRC-S3650-4300KV-Sensorless-Brushless/dp/B07BGWRFGX/ref=cm_cr_arp_d_product_top?ie=UTF8

