

Continuous Rotation Servos

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Robotics & Mechatronics

A continuous rotation servo is a servo modified (or built) to spin continuously, with speed and direction set by the PWM signal instead of a limited angle. It gives students simple, cheap drive wheels for robots while keeping the familiar 3-wire servo control.

Key Features

- Standard 180 degree servos in continuous form
- Speed set by the pulse width
- Reverse and stop at the centre pulse
- Same 3-wire connection as servos
- Often come with wheel kits

Typical Uses in the Workshop

- Drive wheels for small line-following robots
- Power conveyors and spinning mechanisms
- Build walking and rolling automata
- Create servo-controlled rollers

Safe Operation

1. Identify or program the neutral pulse for stop
2. Send pulse widths either side for direction
3. Adjust the centre trim if it drifts
4. Mount the wheel or horn securely
5. Test speed control before building the body

SAFETY NOTES

- Do not exceed the working voltage
- Keep fingers clear of the wheel and gears
- Do not stall the servo for long
- Check the current draw at stall
- Keep wires clear of the rotating shaft

Maintenance & Consumables

- Check the output shaft and gears
- Clean the case and shaft
- Retest the neutral point occasionally
- Keep spare horns, wheels and screws
- Store with the wheel removed

Specification & Buying Notes

Buy continuous rotation servos sold as a pair with wheels and mounting hardware. Genuine servos have a wider speed range and better centre calibration than cheap clones.