

Higher Power Rotary Servo Motors, with Low and High Inertia

The “MaxPlusPlus” (MPP) series of brushless servo motors from Parker features a new design that offers lower inertia and higher power, all in a smaller motor package. These brushless servo motors are designed for the demanding applications found in today’s high-performance servo systems.

The MPP motors feature segmented core technology, which can yield up to 40% higher torque per unit size than conventionally wound servo motors. “Potted” stators improve heat transfer for better thermal efficiency, resulting in increased torque at the motor shaft. High-energy neodymium magnets are employed for higher rates of acceleration.

The “MaxPlus-J” (MPJ) series of rotary servo motors from Parker feature the same design characteristics as the MPP, but with 3 - 8 times the inertia of the standard MPP. This is a perfect solution for your applications requiring a high inertia servo motor.

Parker will customize any MPP/MPJ motor to meet your specific system requirements. Parker does customs like no one else. We are specialists at customs, offering unrivaled custom motor solutions and support.

MPP / MPJ Motor Features

- Segmented core technology - 40% higher torque
- Potted stator design - improved thermal efficiency
- Size 92, 100, 115, 142, 190, 230, and 270
- Continuous torque: 1.3 Nm (12 lb-in) to 146 Nm (1295 lb-in)
- Continuous stall torque: 1.5 Nm (14 lb-in) to 162 Nm (1434 lb-in)
- Peak torque: 5 Nm (44 lb-in) to 513 Nm (4540 lb-in)
- Brushless construction
- High-performance neodymium magnets
- Thermistor protection
- Resolver, incremental encoder, or absolute encoder (single or multi-turn)
- 24 volt failsafe brake (optional)
- “Rotatable” right angle PS-style connectors
- Optional IP65 shaft seal
- Two-year warranty
- MPJ motor features:
Size 92,100, 115 and 142

Common Customizations Include:

- Shafts (longer, shorter, diameter change, hollow shafts)
- Front flange (bolt circle, pilot, NEMA dimensions)
- Motors coatings (white, PTFE, steel-it grey)
- Non-standard feedback devices
- Special Connectors
- Special stator windings



MPP / MPJ Series Servo Motors

| Model | Rated Speed RPM | Rated Output kW | Rated Output HP | MPP Rotor Inertia Kg-m ² (lb-in-sec ²) | MPJ Rotor Inertia Kg-m ² (lb-in-sec ²) | Continuous Stall Torque Nm (lb-ins) | Peak torque Nm (lb-ins) | Continuous Stall Current Amps-rms | Peak Current Amps-rms | Voltage |
|----------|-----------------|-----------------|-----------------|---------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------|-------------------------|-----------------------------------|-----------------------|---------|
| MPP0921B | 3800 | 0.5 | 0.7 | .0000441 (.00039) | .0003911 (.00346) | 1.5 (14) | 5.0 (50) | 1.8 | 6 | 230 |
| MPP0921C | 5000 | 0.6 | 0.8 | .0000441 (.00039) | .0003911 (.00346) | 1.6 (14) | 5.0 (45) | 2.9 | 9 | 230 |
| MPP0921R | 5000 | 0.6 | 0.8 | .0000441 (.00039) | .0003911 (.00346) | 1.6 (14) | 5.0 (45) | 1.4 | 5 | 460 |
| MPP0922C | 4200 | 1.1 | 1.4 | .0000780 (.00069) | .0004261 (.00377) | 2.9 (26) | 9.3 (83) | 3.7 | 12 | 230 |
| MPP0922D | 5000 | 1.2 | 1.6 | .0000780 (.00069) | .0004261 (.00377) | 3.1 (28) | 10.0 (88) | 5.6 | 18 | 230 |
| MPP0922R | 5000 | 1.2 | 1.6 | .0000780 (.00069) | .0004261 (.00377) | 3.1 (28) | 9.8 (88) | 2.8 | 9 | 460 |
| MPP0923D | 5000 | 1.6 | 2.1 | .0001130 (.0010) | - | 4.0 (36) | 12.8 (113) | 7.2 | 23 | 230 |
| MPP0923R | 5000 | 1.6 | 2.1 | .0001130 (.0010) | - | 4.0 (36) | 12.8 (113) | 3.6 | 11 | 460 |
| MPP1002D | 4900 | 1.6 | 2.1 | .0002599 (.0023) | .0008238 (.00729) | 4.6 (41) | 14.5 (129) | 7.9 | 25 | 230 |
| MPP1002R | 4900 | 1.5 | 2.0 | .0002599 (.0023) | .0008238 (.00729) | 4.6 (41) | 14.5 (129) | 3.9 | 12 | 460 |
| MPP1003C | 4200 | 1.8 | 2.4 | .0003729 (.0033) | - | 6.1 (54) | 19.1 (170) | 7.2 | 23 | 230 |
| MPP1003D | 4200 | 1.8 | 2.4 | .0003729 (.0033) | - | 6.0 (53) | 19.1 (170) | 10.3 | 32 | 230 |
| MPP1003Q | 4200 | 1.9 | 2.5 | .0003729 (.0033) | - | 6.3 (56) | 19.9 (176) | 3.9 | 12 | 460 |
| MPP1003R | 4200 | 1.9 | 2.5 | .0003729 (.0033) | - | 6.3 (56) | 20.1 (178) | 5.4 | 17 | 460 |
| MPP1152C | 4000 | 1.6 | 2.1 | .0002712 (.0024) | .0010184 (.00902) | 5.7 (51) | 18.1 (160) | 8.5 | 27 | 230 |
| MPP1152D | 4000 | 1.7 | 2.2 | .0002712 (.0024) | .0010184 (.00902) | 5.8 (52) | 18.5 (163) | 10.4 | 33 | 230 |
| MPP1152R | 4000 | 1.6 | 2.1 | .0002712 (.0024) | .0001084 (.00902) | 5.5 (49) | 17.4 (154) | 4.9 | 16 | 460 |
| MPP1153B | 3400 | 2.2 | 2.9 | .0004068 (.0036) | .0011314 (.01002) | 7.9 (70) | 25.1 (222) | 7.7 | 24 | 230 |
| MPP1153C | 4000 | 2.3 | 3.0 | .0004068 (.0036) | .0011314 (.01002) | 8.1 (71) | 25.5 (226) | 12.1 | 38 | 230 |
| MPP1153P | 3100 | 2.2 | 2.9 | .0004068 (.0036) | .0011314 (.01002) | 8.4 (74) | 26.6 (235) | 4.1 | 13 | 460 |
| MPP1153R | 4000 | 2.3 | 3.0 | .0004068 (.0036) | .0011314 (.01002) | 8.1 (72) | 25.5 (226) | 6.0 | 19 | 460 |
| MPP1154A | 1900 | 1.8 | 2.4 | .0005198 (.0046) | - | 9.8 (87) | 31.2 (277) | 5.4 | 17 | 230 |
| MPP1154B | 3800 | 2.7 | 3.5 | .0005198 (.0046) | - | 9.8 (87) | 31.3 (277) | 10.7 | 34 | 230 |
| MPP1154P | 3700 | 2.7 | 3.5 | .0005198 (.0046) | - | 9.8 (87) | 31.2 (277) | 5.4 | 17 | 460 |
| MPP1422C | 4000 | 3.4 | 4.5 | .000779 (.0069) | .007204 (.06377) | 11.1 (98) | 35.1 (311) | 14.6 | 46 | 230 |
| MPP1422R | 3800 | 3.3 | 4.5 | .000779 (.0069) | .007204 (.06377) | 11.1 (98) | 35.1 (311) | 7.3 | 23 | 460 |
| MPP1424B | 3100 | 5.0 | 6.6 | .001469 (.013) | .007882 (.06978) | 19.4 (172) | 61.5 (544) | 19.4 | 61 | 230 |
| MPP1424C | 3800 | 5.2 | 6.8 | .001469 (.013) | .007882 (.06978) | 19.5 (173) | 61.7 (546) | 24.3 | 77 | 230 |
| MPP1424R | 3700 | 5.2 | 6.8 | .001469 (.013) | .007882 (.06978) | 19.5 (173) | 61.6 (546) | 12.1 | 38 | 460 |
| MPP1426B | 3000 | 6.2 | 8.1 | .002147 (.019) | .008334 (.07378) | 26.0 (230) | 72.1 (726) | 26.2 | 83 | 230 |
| MPP1426P | 3000 | 6.2 | 8.1 | .002147 (.019) | .008334 (.07378) | 26.0 (230) | 82.1 (726) | 13.1 | 41 | 460 |
| MPP1428P | 2900 | 7.0 | 9.2 | .002599 (.023) | - | 33.2 (294) | 105.0 (931) | 16.8 | 53 | 460 |
| MPP1428Q | 2900 | 7.0 | 9.2 | .002599 (.023) | - | 33.4 (295) | 106.0 (935) | 21.0 | 66 | 460 |
| MPP1904P | 3000 | 8.3 | 10.9 | .00452 (.040) | - | 35.5 (315) | 113.0 (996) | 18.0 | 57 | 460 |
| MPP1906B | 2500 | 9.7 | 12.7 | .00627 (.055) | - | 47.3 (419) | 150.0 (1326) | 36.2 | 114 | 230 |
| MPP1906P | 3000 | 9.9 | 13.0 | .00627 (.055) | - | 45.9 (407) | 146.0 (1288) | 23.5 | 74 | 460 |
| MPP1908N | 2100 | 11.1 | 14.5 | .00774 (.068) | - | 62.4 (553) | 198.0 (1750) | 20.6 | 65 | 460 |
| MPP1908P | 2800 | 11.8 | 15.5 | .00774 (.068) | - | 60.1 (532) | 190.0 (1684) | 30.3 | 96 | 460 |
| MPP2306N | 2000 | 11.6 | 15.2 | .01690 (.150) | - | 80.3 (712) | 255.0 (2252) | 28.5 | 90 | 460 |
| MPP2308N | 1600 | 13.6 | 17.8 | .02237 (.198) | - | 106.5 (943) | 337.0 (2985) | 28.1 | 89 | 460 |
| MPP2308P | 1900 | 14.1 | 18.5 | .02237 (.198) | - | 105.7 (936) | 335.0 (2964) | 35.7 | 113 | 460 |
| MPP2706M | 1000 | 12.0 | 15.7 | .02734 (.242) | - | 124.8 (1105) | 395.0 (3497) | 24.7 | 78 | 460 |
| MPP2706N | 1400 | 14.4 | 18.9 | .02734 (.242) | - | 120.1 (1064) | 380.3 (3366) | 32.4 | 102 | 460 |
| MPP2706P | 1600 | 16.5 | 21.6 | .02734 (.242) | - | 120.9 (1071) | 382.7 (3388) | 40.5 | 128 | 460 |
| MPP2708L | 900 | 13.6 | 18.1 | .0353 (.313) | - | 161.9 (1433) | 512.7 (4538) | 26.4 | 84 | 460 |
| MPP2708M | 1300 | 17.8 | 23.3 | .0353 (.313) | - | 155.8 (1379) | 493.1 (4364) | 38.9 | 123 | 460 |
| MPP2708N | 1600 | 20.3 | 26.6 | .0353 (.313) | - | 153.0 (1354) | 484.0 (4287) | 50.1 | 158 | 460 |