

ElectroCraft's MP24 integrates a 4-pole Brushless DC motor with a 2-stage right-angle worm gearbox, designed for industrial applications, adding industrial grade cabling plus encoder feedback options to support positioning capability. The MP24 combines optimum performance with increased efficiency, reduced noise and longer-life.

ElectroCraft MobilePower™ gearmotors feature an integrated design that provides increased performance and reliability at an affordable price compared to traditional motor/gearbox combinations. As with all ElectroCraft products, MobilePower™ gearmotors are customizable to meet specific application requirements.

Features:

- Smooth, efficient motion
- Durable and highly reliable integrated worm-gear design
 - Suitable for uneven terrain and curb-climbing
- High starting torque:
 - Peak starting torque up to 98.0Nm
 - 15-minute continuous torque up to 39.4Nm
- Configurable or completely customizable designs
 - Motor, gearbox, brake, encoder, cabling

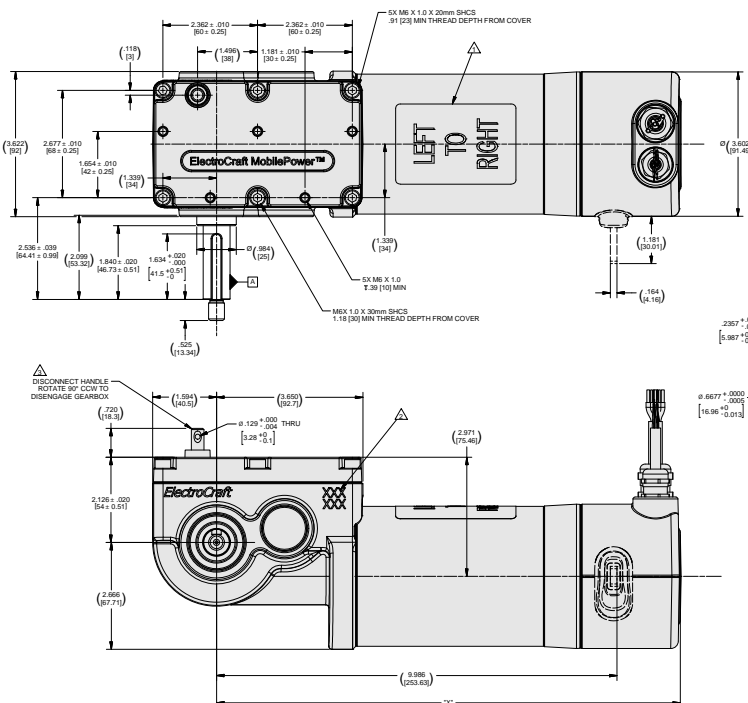


Typical applications:

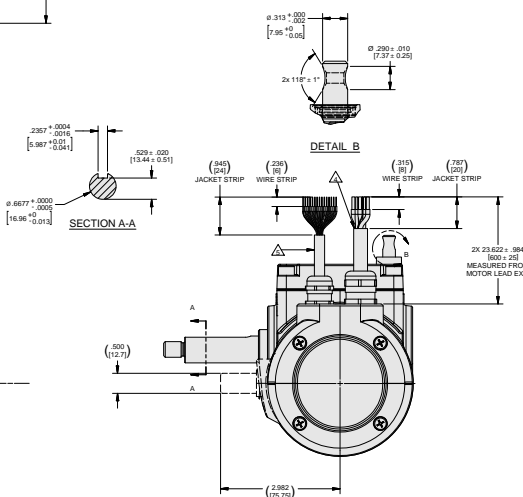
- Industrial traction applications
- Industrial lifts
- Automated Guided Vehicles
- Autonomous Mobile Robots

M P 2 4 - W R - 0 3 2 V 2 4 - 4 2 0 - D

- | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MTR-GRB Model
MP24 = Standard Duty Gearbox with BLDC 4-Pole | Gear Ratio
016 = 16.44:1
018 = 17.88:1
020 = 19.50:1
021 = 21.33:1
025 = 24.67:1
027 = 26.82:1
029 = 29.25:1
032 = 32.00:1 | Rated Voltage
24 = 24 VDC
48 = 48 VDC | Encoder Option
X = None
C = 500 Line
D = 1,000 Line |
| Gearbox Option
WR = Right Angle Worm & Spur W/ Right Hand Output Shaft
WL = Right Angle Worm & Spur W/ Left Hand Output Shaft | Connector Option
0 = None | Lead Option
2 = Shielded Cable | Disengage Option
0 = None
1 = w/o Gear Release, w/Standard Brake (No Release)
2 = w/o Gear Release, w/Manual Release Brake
3 = w/Gear Release, w/o Brake
4 = w/Gear Release, w/Standard Brake (No Release) |



MOTOR LENGTH TABLE	
VALUE ADDED	"
W/O BRAKE & W/O ENCODER	10.398 (264.05) MAX
STANDARD BRAKE	10.808 (274.96) MAX
MANUAL RELEASE BRAKE	11.508 (292.78) MAX
ENCODER	10.514 (267.95) MAX
ENCODER & STANDARD BRAKE	11.617 (295.07) MAX
ENCODER & MANUAL RELEASE BRAKE	11.617 (295.07) MAX



MP24 Right-Angle Gearmotor MobilePower™ Series Geared Motors

Low Voltage - High Torque



MP24 Mechanical / Winding Data (24VDC motor windings)

Gear Ratio	32.00:1	29.25:1	26.82:1	24.67:1	21.33:1	19.50:1	17.88:1	16.44:1
Operating Voltage (VDC)	24							
No Load Speed (RPM)	126.6	138.6	151.1	164.3	190.0	207.8	226.7	246.5
Peak Torque (5 sec) (Nm)	98.0	89.6	82.2	75.6	65.3	59.7	54.8	50.4
Peak Current (5 sec) (Amps)	58.5							
Peak Power (5 sec) (Watts)	639							
S2 Torque (15 min) (Nm)	39.4	36.0	33.0	30.4	26.2	24.0	22.0	20.2
S2 Current (15 min) (Amps)	23.5							
S2 Power (15 min) (Watts)	416							
S1 Torque (Continuous) (Nm)	19.2	17.6	16.1	14.8	12.8	11.7	10.7	9.9
S1 Current (Continuous) (Amps)	11.5							
S1 Power (Continuous) (Watts)	229							
Torque Constant (Nm/A)	0.0524							
Voltage Constant (V/KRPM)	5.48							
Motor Inertia (Armature) (kg.mm ²)	274.518							
Motor Winding Resistance (Ohms)	0.079							
Motor Winding Inductance (μH)	370							
Motor Max Winding Temp (°C)	155							
Motor Poles	4							
Motor Mass (kg)	7.12							

Notes:

Gear Motor specifications (torque, current, power) are reference values based on 25°C operating temperature.
Do not apply maximum current for more than 5 seconds or more than twice without 10 minutes between cycles
S1 continuous torque rating is based on gearbox maximum operating temperature of 90°C

MP24 Mechanical / Winding Data (48VDC motor windings)

Gear Ratio	32.00:1	29.25:1	26.82:1	24.67:1	21.33:1	19.50:1	17.88:1	16.44:1
Operating Voltage (VDC)	48							
No Load Speed (RPM)	126.6	138.6	151.1	164.3	190.0	207.8	226.7	246.5
Peak Torque (5 sec) (Nm)	98.0	89.6	82.2	75.6	65.3	59.7	54.8	50.4
Peak Current (5 sec) (Amps)	29.3							
Peak Power (5 sec) (Watts)	639							
S2 Torque (15 min) (Nm)	39.4	36.0	33.0	30.4	26.2	24.0	22.0	20.2
S2 Current (15 min) (Amps)	5.7							
S2 Power (15 min) (Watts)	416							
S1 Torque (Continuous) (Nm)	19.2	17.6	16.1	14.8	12.8	11.7	10.7	9.9
S1 Current (Continuous) (Amps)	5.7							
S1 Power (Continuous) (Watts)	229							
Torque Constant (Nm/A)	0.1047							
Voltage Constant (V/KRPM)	10.96							
Motor Inertia (Armature) (kg.mm ²)	274.518							
Motor Winding Resistance (Ohms)	0.203							
Motor Winding Inductance (μH)	1350							
Motor Max Winding Temp (°C)	155							
Motor Poles	4							
Motor Mass (kg)	7.12							

Notes:

Gear Motor specifications (torque, current, power) are reference values based on 25°C operating temperature.
Do not apply maximum current for more than 5 seconds or more than twice without 10 minutes between cycles
S1 continuous torque rating is based on gearbox maximum operating temperature of 90°C



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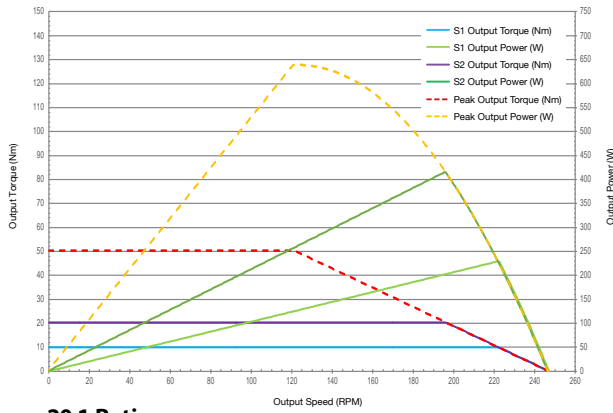
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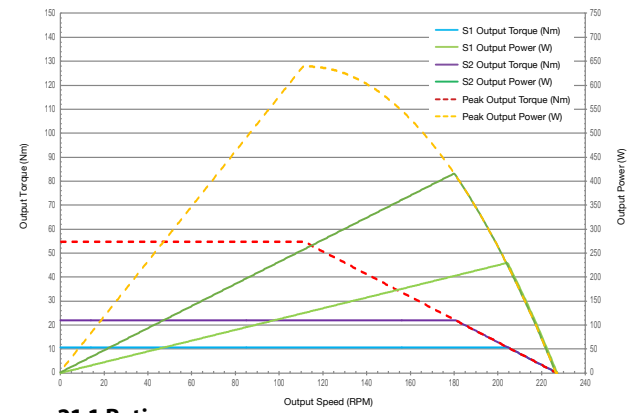
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MP24 Motor Performance

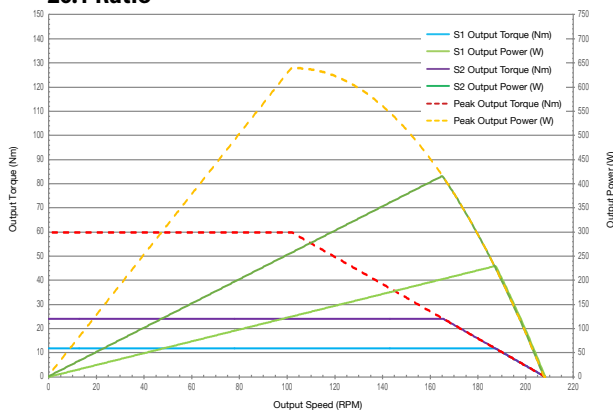
16:1 Ratio



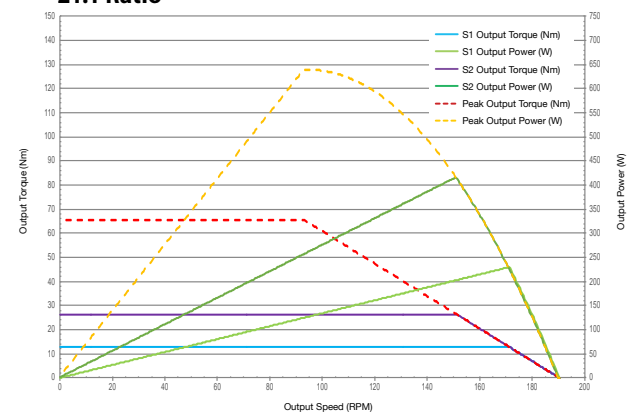
18:1 Ratio



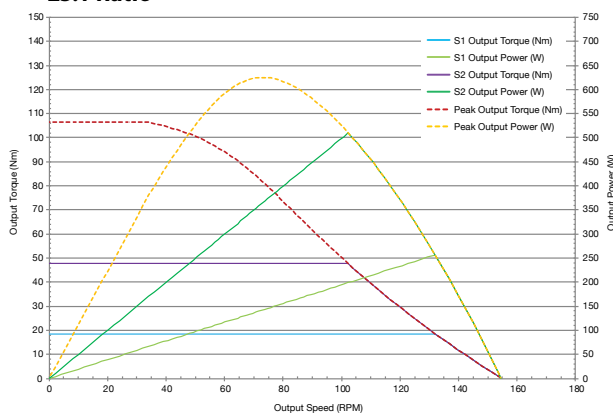
20:1 Ratio



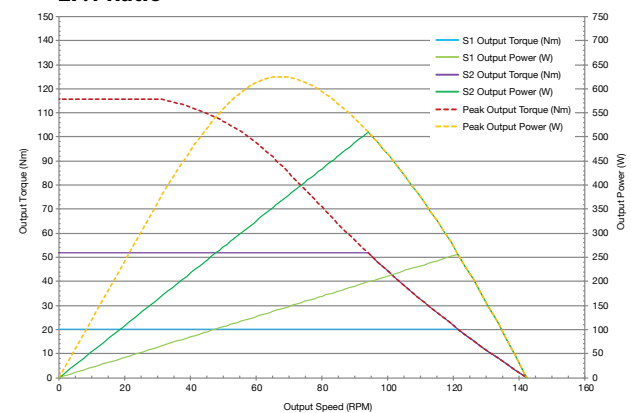
21:1 Ratio



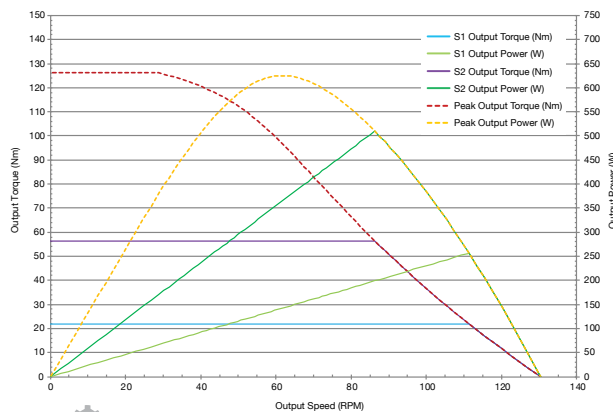
25:1 Ratio



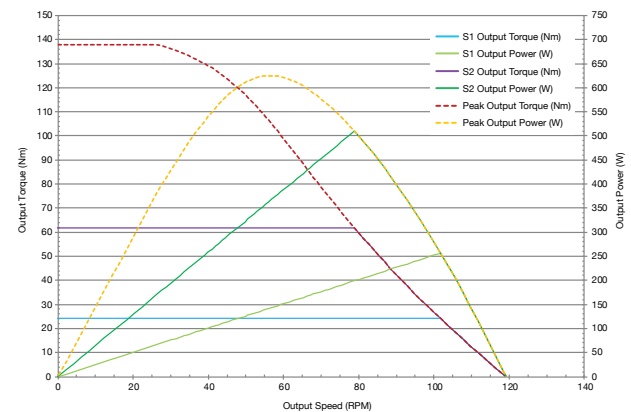
27:1 Ratio



29:1 Ratio



32:1 Ratio



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