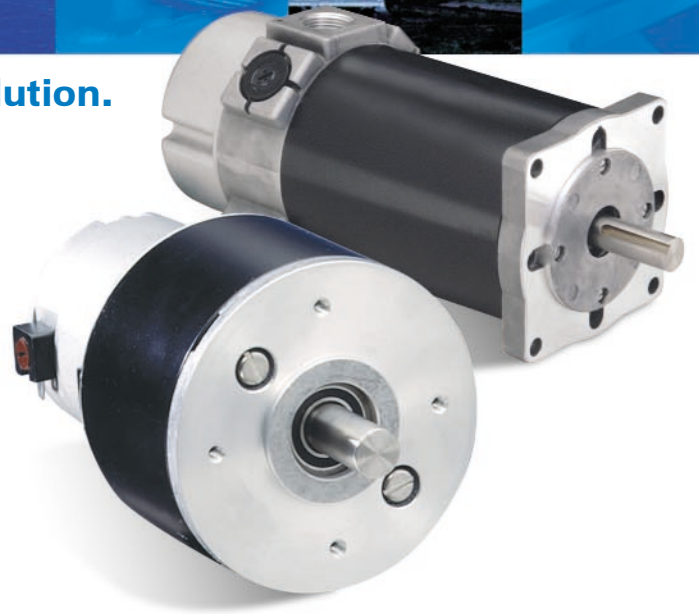


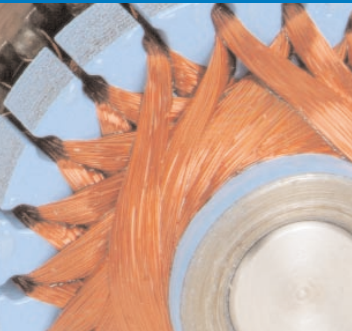
Brush Servomotor Product Guide



Guiding you towards the right solution.



A division of Cleveland Motion Controls
An IMC Company

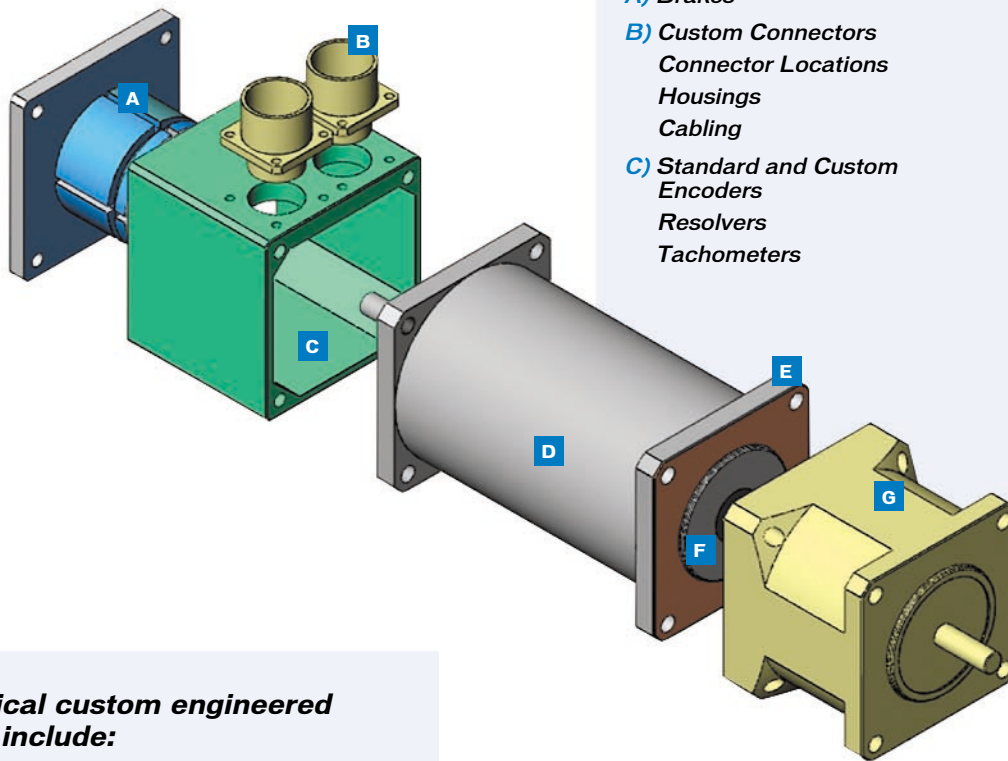


We can offer you more because we have more behind us.

With Torque Systems, you have many choices. Because instead of stacking our shelf with motors and hardware, we have one packed with engineered solutions. In fact, our shelf contains virtually any type of solution you could need, from the simplest integration components like brakes, encoders and tachometers, to the most complex white paper designs.

To complement our array of Brush Servomotors, we offer you an array of standard integration and custom engineered options to complete your solution.

Our typical standard integration options include:



A) Brakes

B) Custom Connectors
Connector Locations
Housings
Cabling

C) Standard and Custom
Encoders
Resolvers
Tachometers

D) Multiple Standard
Winding Configurations
Matched Windings
Thermostats

E) Standard Flange
Mounting
NEMA Mounting
IEC Mounting
Custom Mechanical
Interfaces

F) Standard & Custom
Shaft Configurations

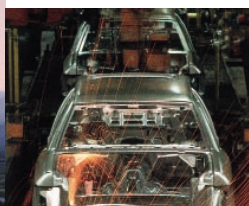
G) Multiple Gearhead
Options

Our typical custom engineered options include:

- Extended Ambient Temperature Ratings
- Custom Winding Configurations
- Special Electromagnetic Design Platforms
- Specialized Military Coatings
- Corrosion Resistant Materials
- Food Grade Materials
- Custom Bearings
- Witness Testing
- IP65 and IP67 Sealing

When you come to us for your Brush DC Servomotor solutions you also get the experience and knowledge of our highly trained sales force to guide you through the selection process. They will work side-by-side with you to fully understand your application, so they can give you an accurate appraisal of how the best solution can be created. Next, our application development engineers will step in and work directly with you to ensure you receive a reliable, high-quality working solution.

Plus, with Torque Systems, as a design engineer, you even have the opportunity to size motors and select many standard integration options using our convenient web site servomotor platform configuration feature. **Just visit www.torquesystems.com to begin the process.**



Brush Servomotor Platforms

Key: ■ Continuous Duty ■ Intermittent Duty ■ Commutation

Standard Design Features:

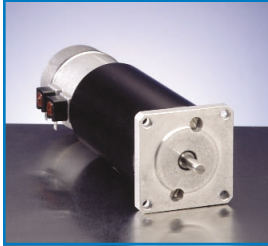
CE/UL Compliant
Multiple Winding Availability
Sealed Bearings
Chip Resistant Painted Aluminum Housings
Superior Low Speed Performance

Rigid Application Development Process:

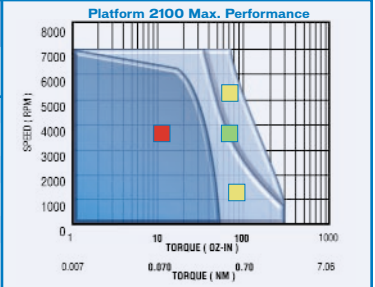
Application Review
Motion Profile Analysis
Magnetic FEA 3D Modeling & Computer Simulation
Prototype Design
Performance Verification

Platform 2100

8 standard available windings



Platform Number	Rated Power W	Cont. Stall Torque oz-in	Cont. Stall Torque NM	Peak Torque oz-in	Peak Torque NM	Rotor Inertia oz-in-sec ²	Rotor Inertia Kg(10 ⁻⁴)-m ²
2105	15	12	0.085	50	0.353	0.0018	0.1271
2110	30	18	0.127	100	0.706	0.0031	0.2189
2115	60	30	0.212	150	1.059	0.0044	0.3107
2120	75	38	0.268	200	1.412	0.0057	0.4025
2130	115	53	0.374	300	2.119	0.0083	0.5862

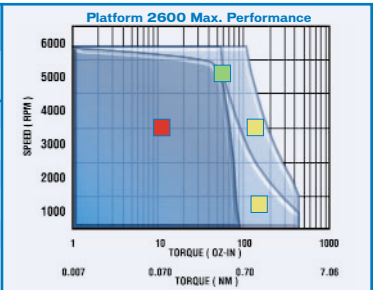


Platform 2600

8 standard available windings



Platform Number	Rated Power W	Cont. Stall Torque oz-in	Cont. Stall Torque NM	Peak Torque oz-in	Peak Torque NM	Rotor Inertia oz-in-sec ²	Rotor Inertia Kg(10 ⁻⁴)-m ²
2605	30	17	0.12	75.00	0.53	0.0018	0.1271
2610	45	29	0.20	150.00	1.06	0.0031	0.2189
2615	75	42	0.30	200.00	1.41	0.0044	0.3107
2620	90	52	0.37	300.00	2.12	0.0057	0.4025
2630	135	70	0.49	350.00	2.47	0.0083	0.5862
2640	200	90	0.64	450.00	3.18	0.0115	0.8121

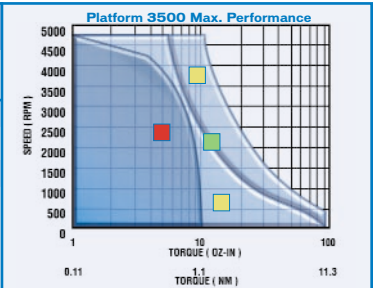


Platform 3500

8 standard available windings



Platform Number	Rated Power W	Cont. Stall Torque lb-in	Cont. Stall Torque NM	Peak Torque lb-in	Peak Torque NM	Rotor Inertia lb-in-sec ²	Rotor Inertia Kg(10 ⁻⁴)-m ²
3505	75	2.63	0.30	21.90	2.47	0.0004	0.4519
3509	100	4.25	0.48	37.50	4.24	0.0006	0.6779
3515	135	6.44	0.73	56.30	6.36	0.0008	0.9039
3528	220	10.60	1.20	93.80	10.60	0.0015	1.6948

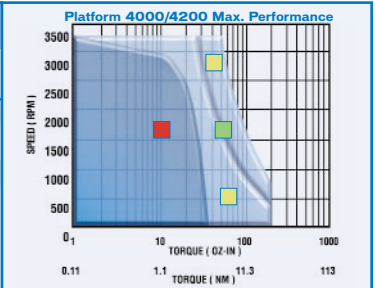


Platform 4000/4200

8 standard available windings



Platform Number	Rated Power W	Cont. Stall Torque lb-in	Cont. Stall Torque NM	Peak Torque lb-in	Peak Torque NM	Rotor Inertia lb-in-sec ²	Rotor Inertia Kg(10 ⁻⁴)-m ²
4025/4225	275	18.75	2.12	93.75	10.59	0.0062	7.0051
4037/4237	425	26.13	2.95	137.50	15.54	0.0085	9.6037
4057/4257	620	36.00	4.07	200.00	22.60	0.0120	13.558

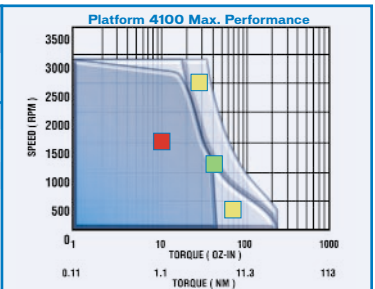


Platform 4100

7 standard available windings

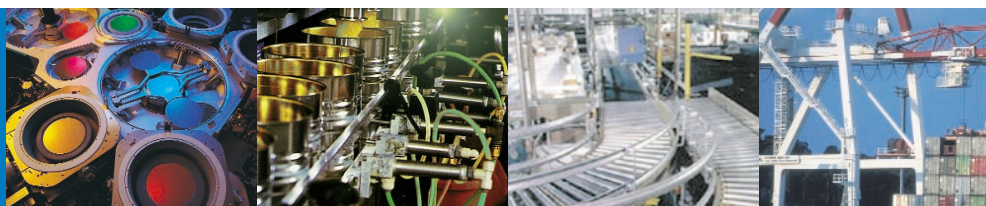


Platform Number	Rated Power W	Cont. Stall Torque lb-in	Cont. Stall Torque NM	Peak Torque lb-in	Peak Torque NM	Rotor Inertia lb-in-sec ²	Rotor Inertia Kg(10 ⁻⁴)-m ²
4101	175	12.00	1.36	60.00	6.78	0.0078	8.8128
4102	410	24.00	2.71	120.00	13.56	0.0110	12.428
4104	475	36.00	4.07	180.00	20.34	0.0180	20.337
4106	580	48.00	5.42	240.00	27.12	0.0240	27.116

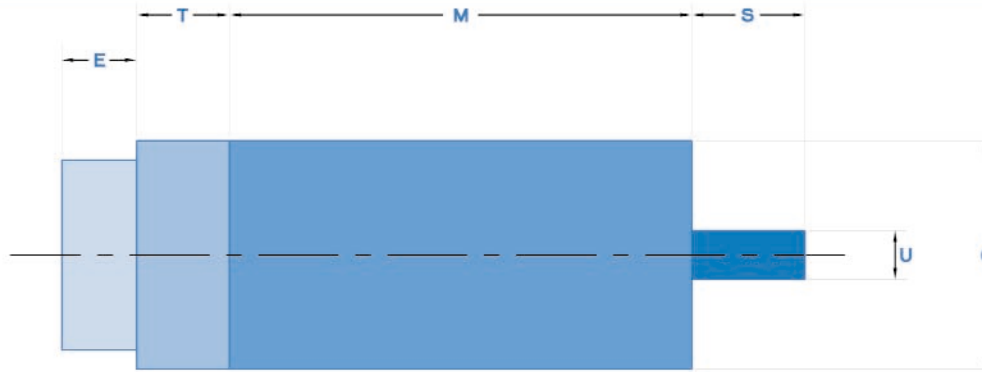


Custom design motors up to 7.25 in. (185 mm) diameter and 300 lb.-in. (34 NM) continuous torque also available.

Simply put: Torque Systems will design a product to fit your application – rather than altering your application to fit our product.



Nominal Motor Dimensions



Platform		Frame Length M -in. (mm)	Frame Diameter O -in. (mm)	Tach Addition, max T -in. (mm)	Encoder Addition, max E -in. (mm)	Shaft Extension S -in. (mm)	Shaft Diameter U -in. (mm)
2100	2105	3.13 (79.50)	2.25 (57.2)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2110	3.63 (92.20)	2.25 (57.2)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2115	4.13 (104.9)	2.25 (57.2)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2120	4.63 (117.9)	2.25 (57.2)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2130	5.63 (143.0)	2.25 (57.2)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
2600	2605	3.13 (79.50)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2610	3.63 (92.20)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2615	4.13 (104.9)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2620	4.63 (117.9)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2630	5.63 (143.0)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
	2640	6.63 (168.4)	2.625 (66.7)	1.6 (40.6)	0.85 (21.6)	1 (25.4)	0.375 (9.5)
3500	3505	2.50 (63.50)	3.38 (85.9)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.5 (12.7)
	3509	3.25 (82.55)	3.38 (85.9)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.5 (12.7)
	3515	4.00 (101.6)	3.38 (85.9)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.5 (12.7)
	3528	5.24 (133.1)	3.38 (85.9)	1.5 (38.1)	0.85 (21.6)	1 (25.4)	0.5 (12.7)
4000	4025	8.00 (203.2)	4.00 (102)	0.45 (11.4)	3.7 (94.0)	1.7 (43.2)	0.625 (15.9)
	4037	9.55 (242.6)	4.00 (102)	0.45 (11.4)	3.7 (94.0)	1.7 (43.2)	0.625 (15.9)
	4057	11.3 (287.3)	4.00 (102)	0.45 (11.4)	3.7 (94.0)	1.7 (43.2)	0.625 (15.9)
4100	4101	7.19 (182.6)	4.00 (102)	0	1 (25.4)	2 (50.8)	0.625 (15.9)
	4102	8.19 (208.0)	4.00 (102)	0	1 (25.4)	2 (50.8)	0.625 (15.9)
	4104	10.2 (258.8)	4.00 (102)	0	1 (25.4)	2 (50.8)	0.625 (15.9)
	4106	12.2 (309.9)	4.00 (102)	0	1 (25.4)	2 (50.8)	0.625 (15.9)
4200	4225	8.00 (203.2)	4.00 (102)	3.7 (94.0)	0	1.5 (38.1)	0.625 (15.9)
	4237	9.55 (242.6)	4.00 (102)	3.7 (94.0)	0	1.5 (38.1)	0.625 (15.9)
	4257	11.3 (287.3)	4.00 (102)	3.7 (94.0)	0	1.5 (38.1)	0.625 (15.9)

Notes:

Additional including brakes, resolvers, rear shaft extensions, sealed motors will increase overall length

Shaft Extension includes motor face pilot height

Connectors, connector housings, brush housings and mounting flanges may increase overall diameter

Nema and IEC mounting standards available

Motor Dimensions Subject to Change

Ask about our other motion controls solutions & capabilities:

Brushless Servo Motors

Brushless Parts Sets

Linear Actuators

Shaft Mounted DataTorque™ Encoders

Expert application development engineering

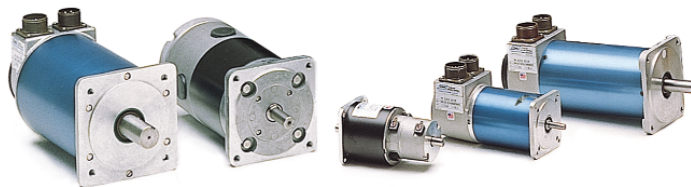
Complete repair and refurbishing services



Brushless Parts Sets



Encoders



Brush & Brushless Motors



Linear Actuators



Unique Solutions for Unique Customers.

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