

TORQUE SYSTEMS

Brush Motor Product Guide



Sold & Serviced By:

 **ELECTROMATE**

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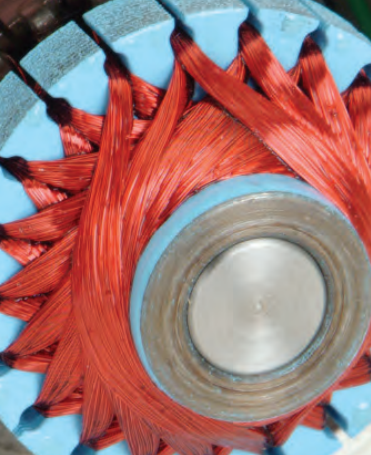
www.electromate.com

sales@electromate.com



ITT

ENGINEERED FOR LIFE



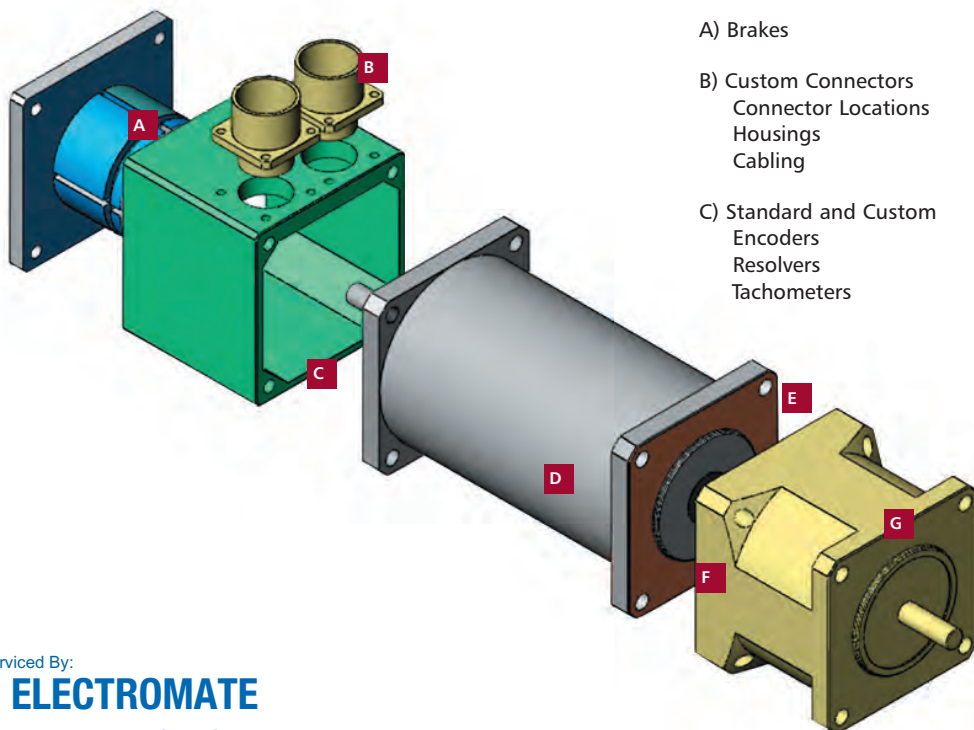
We can offer you more because we have more behind us.

At ITT Torque Systems, we have always believed in giving you more choices. After all, your application is unique, so the servomotor you choose for it should be unique too. While the competition stacks their shelves with motors and hardware, we pack ours with engineered solutions. The truth is, our shelf contains just about any type of solution you could require, from simple integration components such as brakes, encoders and tachometers, to elaborate breakthrough designs.

To complement our line of Brush Servomotors, we offer you a wide range 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



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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 ITT 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.

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

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 Sealing

Brush Servomotor Platforms


Key: ■ Continuous Duty ■ Intermittent Duty ■ Commutation

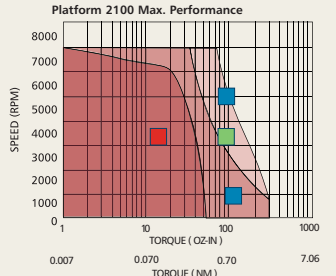
STANDARD DESIGN FEATURES:


- CE/UL and ROHS Compliant
- Multiple Winding Availability
- Sealed Bearings
- Chip Resistant Painted Steel Housings
- Superior Low Speed Performance

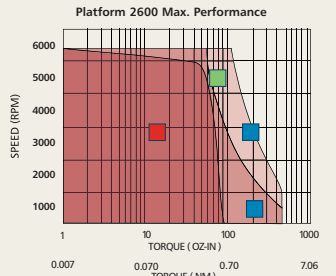
RIGID APPLICATION DEVELOPMENT PROCESS:


- Application Review
- Motion Profile Analysis
- Magnetic FEA Computer Simulation
- Prototype Design
- Performance Verification

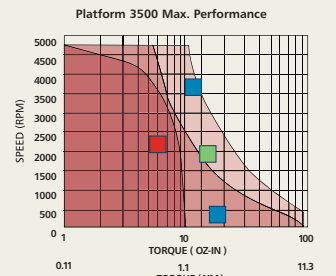
Platform 2100		8 standard available windings						
	Platform Number	Rated Power W	Cont. Stall Torque oz-in	Torque NM	Peak Torque oz-in	Torque NM	Rotor Inertia	
	2105	15	12	0.085	50	0.353	0.0018	0.1271
	2110	30	18	0.127	100	0.706	0.0031	0.2189
	2115	60	30	0.212	150	1.059	0.0044	0.3107
	2120	75	38	0.268	200	1.412	0.0057	0.4025
	2130	115	53	0.374	300	2.119	0.0083	0.5862




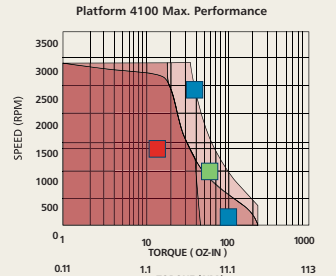
Platform 2600		8 standard available windings						
	Platform Number	Rated Power W	Cont. Stall Torque oz-in	Torque NM	Peak Torque oz-in	Torque NM	Rotor Inertia	
	2605	30	17	0.12	75.00	0.53	0.0018	0.1271
	2610	45	29	0.20	150.00	1.06	0.0031	0.2189
	2615	75	42	0.30	200.00	1.41	0.0044	0.3107
	2620	90	52	0.37	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




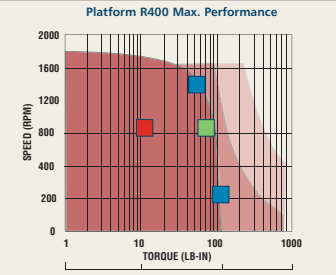
Platform 3500		8 standard available windings						
	Platform Number	Rated Power W	Cont. Stall Torque lb-in	Torque NM	Peak Torque lb-in	Torque NM	Rotor Inertia	
	3505	75	2.63	0.30	21.90	2.47	0.0004	0.4519
	3509	100	4.25	0.48	37.50	4.24	0.0006	0.6779
	3515	135	6.44	0.73	56.30	6.36	0.0008	0.9039
	3528	220	10.60	1.20	93.80	10.60	0.0015	1.6948



Platform 4100		7 standard available windings						
	Platform Number	Rated Power W	Cont. Stall Torque lb-in	Torque NM	Peak Torque lb-in	Torque NM	Rotor Inertia	
	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

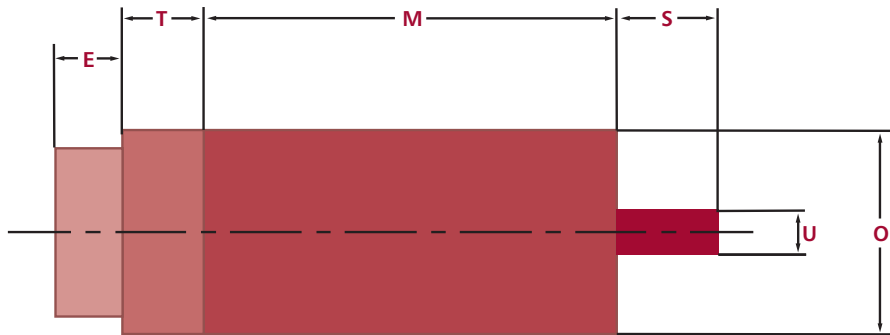


Platform R400		8 standard available windings						
	Platform Number	Rated Power W	Cont. Stall Torque lb-in	Torque NM	Peak Torque lb-in	Torque NM	Rotor Inertia	
	R401	708	34	3.83	300	33.87	0.015	16.9
	R402	1268	62	6.99	500	56.45	0.025	28.8
	R403	1988	92	10.38	710	80.15	0.036	40.6
	R404	2037	125	14.11	920	103.86	0.046	51.9



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

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 (94.0)	1 (25.4)	0.5 (12.7)
4100 4101	7.19 (182.6)	4.00 (102)	0 0	1 (25.4)	2 (43.2)	0.625 (15.9)
4102	8.19 (208.0)	4.00 (102)	0 0	1 (25.4)	2 (50.8)	0.625 (15.9)
4104	10.2 (258.8)	4.00 (102)	0 0	1 (25.4)	2 (50.8)	0.625 (15.9)
4106	12.2 (309.9)	4.00 (102)	0 0	1 (25.4)	2 (50.8)	0.625 (15.9)
R400 401	8.78 (223.01)	4.00 (102)	8.78 (223.01)	12.41 (315.2)	2 (50.8)	0.750 (19.0)
402	10.53 (267.46)	4.00 (102)	10.53 (267.46)	14.16 (359.66)	2 (50.8)	0.750 (19.0)
403	12.28 (311.91)	4.00 (102)	12.28 (311.91)	15.91 (404.11)	2 (50.8)	0.750 (19.0)
404	14.03 (356.36)	4.00 (102)	14.03 (356.36)	17.66 (448.56)	2 (50.8)	0.750 (19.0)

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

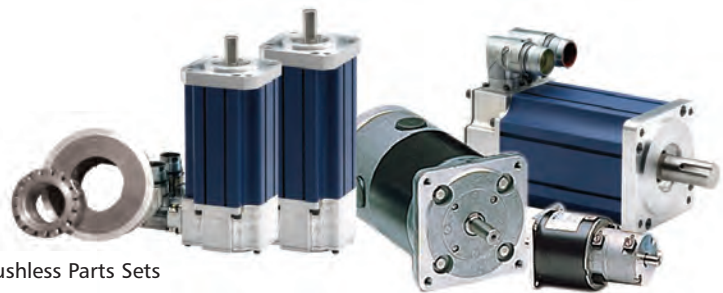
Brushless Parts Sets

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