



Stator lengths available:

Model	Length (in) / (mm)	Weight(g)	Continuous Watts	Base Price
1406	1.9" 48mm	178g	450	230.00
1409	2.3" 57mm	218g	700	242.00
1412	2.5" 64mm	258g	950	263.00
1415	2.8" 70mm	298g	1,100	296.00

Motor type: inrunner

Poles: 4p

Slots: 12s

Finned: Optional

Sealed: Optional

Sensored: Optional

Gearbox(es): P32

Shaft size(s): 5mm

Max RPM: 60,000

1406

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 1.0	1.9	6.3 ozs.	450	900
mm: 25	48	178g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
1406/2Y/2760	2,760	0.013	1.600	3.467	0.491	22	41
1406/1.5Y/3700	3,700	0.010	2.000	2.586	0.366	16	56

1406

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 1.0	1.9	6.3 ozs.	450	900
mm: 25	48	178g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
1406/1Y/5500	5,500	0.005	3.500	1.740	0.246	11	83
1406/1.5D/6800	6,800	0.004	5.000	1.407	0.199	9	102
1406/1D/9900	9,900	0.002	6.500	0.967	0.137	6	149

1409

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 1.0	2.3	7.7 ozs.	700	1,400
mm: 25	57	218g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
1409/2Y/1820	1,820	0.020	1.500	5.257	0.745	33	42
1409/1.5Y/2400	2,400	0.012	2.000	3.987	0.565	25	56
1409/1Y/3600	3,600	0.006	3.500	2.658	0.376	17	84
1409/1.5D/4500	4,500	0.005	5.000	2.126	0.301	13	105
1409/1D/6700	6,700	0.002	7.500	1.428	0.202	9	156

1412

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 1.0	2.5	9.1 ozs.	950	1,900
mm: 25	64	258g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
1412/2Y/1380	1,380	0.017	1.100	6.934	0.982	43	44
1412/1.5Y/1850	1,850	0.008	2.000	5.172	0.732	32	59
1412/1Y/2750	2,750	0.006	3.000	3.479	0.493	22	87
1412/1.5D/3300	3,300	0.004	3.000	2.900	0.411	18	105
1412/1D/4875	4,875	0.003	6.000	1.963	0.278	12	154

1415

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	1.0	2.8	10.5 ozs.	1,100	2,200
mm:	25	70	297g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
1415/2Y/1100	1,100	0.024	1.100	8.699	1.232	55	40
1415/1.5Y/1500	1,500	0.013	1.600	6.379	0.903	40	55
1415/1Y/2200	2,200	0.008	2.500	4.349	0.616	27	81
1415/1.5D/2700	2,700	0.005	4.500	3.544	0.502	22	99
1415/1D/4100	4,100	0.004	5.500	2.334	0.330	15	150

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DOMESTIC CONTENT / COUNTRY OF ORIGIN

Motors may be assembled with varying degrees of domestic (USA) content. Please contact to discuss content requirements, solutions, and resulting pricing variances, if any. Baseline motors are assembled and or tested in the US or Mexico from components sourced globally, including China.

QUALITY CONTROL

Our factory is ISO 9001 certified. Quality documentation available on a custom order basis.

POWER RATINGS (Watts):

Continuous rating is the power the motor can deliver while maintaining the external housing temperatures below 100C.

MAX power rating is the power the motor can deliver beginning with motor at a temp of 20C until it reaches it's limit temperature of 100C. The exact maximum power output of a motor is dependent on a number of variables including air flow, ambient air temperature, contact cooling, etc. 100C rating is measured on the outside of the case, which allows for higher internal temperatures and a small measure of overhead.

MAX VOLTAGE

Limited by kv (RPMs per volt) times the applied voltage. Max voltage must be kept below the voltage which will spin the motor over max rpm for the motor series.

MAX AMPERAGE

See power ratings above.

MTBF RATINGS:

When used within the constraints described above, BLDC motors' primary "wear" item(s) are the bearings supporting the shaft. Bearing life is inversely affected by speed, temperature, radial and axial loads. While an MTBF figure can be generated, it would be rendered invalid by excursions beyond prescribed temperatures or load limits – such as prop strikes or side loads. MTBF must be determined on a case by case basis, and even then it would be subject to numerous exceptions.

COMPONENT SPECIFICATIONS

Winding temperature: 180C
Magnet grade: 180C UH grade
Bearings: Japanese SPB bearings

Specifications subject to change without notice.

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