



**Stator lengths available:**

Model	Length (in)	mm	Cont. Watts
8012-F3A	2.0	51mm	3,000
8019	2.1	53mm	7,500
8025	2.4	60mm	8,000
8038	2.9	73mm	11,000
8057	3.6	92mm	15,000

Neu 80xx series outrunners are perfect for many UAV, industrial, and commercial, applications where medical grade performance and quality are required.

The motor shafts are modular, and front or rear mounting options are available. The 18 slot 16 pole magnetic design is optimized for the 4,000-8,000 RPM range. There are 3 lengths available with 2 winding options for each.

The 8019 is perfect for 12S(44.4v) projects and the 8038 and 8057 will reach full potential on 14S(51.8v) to 18S(66.6v.)

A special 18mm O.D. collet adapter is available.

- Industrial blowers
- UAV multicopter heavy lift
- Off-road tricycles
- battlebots
- industrial jackhammers

**Motor type:** outrunner

**Poles:** 16p

**Finned:** Optional

**Sealed:** No

**Gearbox(es):** call

**Shaft size(s):** prop adapter

Slots: 18s

Sensored: No

Max RPM: 8,000

**8012-F3A**

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 4.0	2.0	24.3 ozs.	3,000	6,000
mm: 102	51	688g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A inOz/A	Max Volts	Max Amps
8012/205	205	0.024	0.8	46.675 6.610	39	154
8012/225	230	0.021	0.9	41.602 5.891	35	173

**8019**

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 4.0	2.1	43 ozs.	7,500	15,000
mm: 102	53	1217g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A inOz/A	Max Volts	Max Amps
8019/150	150	0.024	1.4	63.789 9.033	53	281
8019/180	180	0.015	1.8	53.158 7.528	44	338

**8025**

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 4.0	2.4	51.1 ozs.	8,000	16,000
mm: 102	60	1446g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A inOz/A	Max Volts	Max Amps
8025/150	150	0.017	1.6	63.789 9.033	53	300

**8038**

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 4.0	2.9	69.5 ozs.	11,000	22,000
mm: 102	73	1967g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A inOz/A	Max Volts	Max Amps
8038/100	100	0.019	2.0	95.684 13.550	80	275
8038/140	140	0.010	2.7	68.346 9.679	57	385

**8057**

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 4.0	3.6	93.8 ozs.	15,000	30,000
mm: 102	92	2655g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps
				mNm/A	inOz/A		
<b>8057/75</b>	75	0.024	1.6	127.579	18.067	107	281
<b>8057/100</b>	100	0.015	1.8	95.684	13.550	80	375

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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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