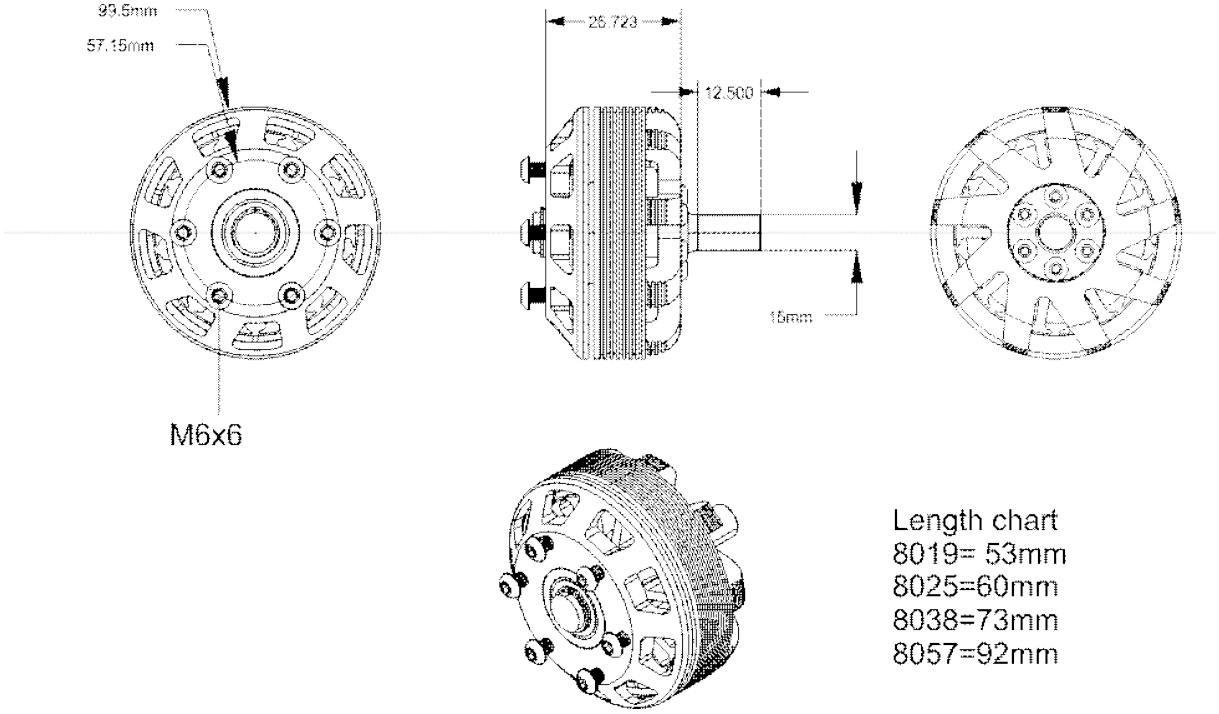

Stator lengths available:

Model	Length (in) / (mm)	Weight(g)	Continuous Watts	Base Price
8012	2.0" 51mm	590g	2,250	394.00
8012-F3A	2.0" 51mm	590g	2,250	394.00
8019	2.1" 53mm	1219g	3,500	330.00
8025	2.4" 60mm	1450g	4,600	370.00
8038	2.9" 73mm	1970g	7,125	454.00
8057	3.6" 92mm	2659g	10,600	578.00

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

NEUMOTORS

80xx Series

Motor type: outrunner
Poles: 16p
Slots: 18s

Finned: Optional
Sealed: No
Sensored: No

Gearbox(es): call
Shaft size(s): prop adapter
Max RPM: 12,000

8012

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.0	24.3 ozs.	2,250	4,500
mm:	102	51	688g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8012/100/23	23	1.788	0.081	416.018	58.913	522	10
8012/85/27	27	1.295	0.095	354.385	50.185	444	12
8012/75/30	30	1.010	0.108	318.947	45.167	400	14
8012/65/35	35	0.760	0.125	273.383	38.714	343	16
8012/55/41	41	0.546	0.147	233.376	33.049	293	19
8012/50/45	45	0.453	0.162	212.631	30.111	267	20
8012/45/50	50	0.368	0.180	191.368	27.100	240	23
8012/40/57	57	0.291	0.203	167.867	23.772	211	26
8012/38/60	60	0.263	0.213	159.473	22.583	200	27
8012/36/63	63	0.237	0.225	151.879	21.508	190	28
8012/34/67	67	0.212	0.238	142.812	20.224	179	30
8012/32/71	71	0.188	0.253	134.766	19.085	169	32
8012/30/75	75	0.166	0.270	127.579	18.067	160	34
8012/28/81	81	0.145	0.289	118.128	16.728	148	36
8012/26/87	87	0.125	0.312	109.982	15.575	138	39
8012/24/94	94	0.107	0.338	101.792	14.415	128	42
8012/22/103	103	0.090	0.368	92.897	13.155	117	46
8012/20/113	113	0.075	0.405	84.676	11.991	106	51
8012/19/119	119	0.068	0.426	80.407	11.387	101	54
8012/18/126	126	0.061	0.450	75.940	10.754	95	57
8012/17/133	133	0.055	0.476	71.943	10.188	90	60
8012/16/142	142	0.049	0.506	67.383	9.542	85	64
8012/15/151	151	0.043	0.540	63.367	8.974	79	68
8012/14/162	162	0.038	0.579	59.064	8.364	74	73
8012/13/174	174	0.033	0.623	54.991	7.787	69	78
8012/12/189	189	0.028	0.675	50.626	7.169	63	85
8012/11/206	206	0.024	0.736	46.449	6.578	58	93
8012/10/226	226	0.020	0.810	42.338	5.996	53	102

email: info@neutronics.com
website: neumotors.com

8012

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.0	24.3 ozs.	2,250	4,500
mm:	102	51	688g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8012/9.5/238	238	0.018	0.853	40.203	5.693	50	107
8012/9/252	252	0.016	0.900	37.970	5.377	48	113
8012/8.5/266	266	0.015	0.953	35.971	5.094	45	120
8012/8/283	283	0.013	1.013	33.811	4.788	42	128
8012/7.5/302	302	0.012	1.080	31.683	4.487	40	136
8012/7/323	323	0.010	1.157	29.624	4.195	37	146
8012/6.5/348	348	0.009	1.246	27.495	3.894	34	157
8012/6/377	377	0.008	1.350	25.380	3.594	32	170
8012/5.5/412	412	0.007	1.473	23.224	3.289	29	185
8012/5/453	453	0.006	1.620	21.122	2.991	26	204

8012-F3A

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.0	24.3 ozs.	2,250	4,500
mm:	102	51	688g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8012/225	230	0.021	0.900	41.602	5.891	52	102

8019

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.1	43 ozs.	3,500	7,125
mm:	102	53	1217g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8019/100/14	14	2.413	0.081	683.457	96.786	857	10
8019/85/17	17	1.746	0.095	562.847	79.706	706	12
8019/80/18	18	1.548	0.101	531.578	75.278	667	13
8019/65/22	22	1.024	0.125	434.927	61.591	545	16
8019/55/26	26	0.735	0.147	368.015	52.115	462	19
8019/45/32	32	0.494	0.180	299.013	42.344	375	23

8019

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.1	43 ozs.	3,500	7,125
mm:	102	53	1217g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8019/40/36	36	0.391	0.203	265.789	37.639	333	26
8019/36/40	40	0.318	0.225	239.210	33.875	300	28
8019/32/45	45	0.252	0.253	212.631	30.111	267	32
8019/28/51	51	0.194	0.289	187.616	26.569	235	36
8019/26/55	55	0.167	0.312	173.971	24.636	218	39
8019/24/60	60	0.143	0.338	159.473	22.583	200	42
8019/22/65	65	0.121	0.368	147.206	20.846	185	46
8019/20/71	71	0.100	0.405	134.766	19.085	169	51
8019/19/75	75	0.091	0.426	127.579	18.067	160	54
8019/18/79	79	0.081	0.450	121.119	17.152	152	57
8019/17/84	84	0.073	0.476	113.910	16.131	143	60
8019/16/89	89	0.065	0.506	107.510	15.225	135	64
8019/15/95	95	0.057	0.540	100.720	14.263	126	68
8019/14/102	102	0.050	0.579	93.808	13.284	118	73
8019/13/110	110	0.043	0.623	86.985	12.318	109	78
8019/12/119	119	0.037	0.675	80.407	11.387	101	85
8019/11/130	130	0.031	0.736	73.603	10.423	92	93
8019/10/143	143	0.026	0.810	66.912	9.476	84	102
8019/9.5/151	151	0.024	0.853	63.367	8.974	79	107
8019/9/159	159	0.021	0.900	60.179	8.522	75	113
8019/8.5/168	168	0.019	0.953	56.955	8.065	71	120
8019/8/179	179	0.017	1.013	53.455	7.570	67	128
8019/7.5/191	191	0.015	1.080	50.096	7.094	63	136
8019/7/204	204	0.013	1.157	46.904	6.642	59	146
8019/6.5/220	220	0.012	1.246	43.493	6.159	55	157
8019/6/238	238	0.010	1.350	40.203	5.693	50	170
8019/5.5/260	260	0.008	1.473	36.802	5.212	46	185
8019/5/286	286	0.007	1.620	33.456	4.738	42	204
8019/4.5/318	318	0.006	1.800	30.089	4.261	38	227
8019/4/357	357	0.005	2.025	26.802	3.796	34	255
8019/3.5/409	409	0.004	2.314	23.395	3.313	29	291

8019

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.1	43 ozs.	3,500	7,125
mm:	102	53	1217g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8019/3/477	477	0.003	2.700	20.060	2.841	25	340

8025

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.4	51.1 ozs.	4,600	9,375
mm:	102	60	1446g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8025/100/11	11	2.948	0.081	869.855	123.182	1,091	10
8025/80/14	14	1.890	0.101	683.457	96.786	857	13
8025/60/18	18	1.067	0.135	531.578	75.278	667	17
8025/50/22	22	0.743	0.162	434.927	61.591	545	20
8025/40/27	27	0.477	0.203	354.385	50.185	444	26
8025/36/30	30	0.387	0.225	318.947	45.167	400	28
8025/32/34	34	0.307	0.253	281.424	39.853	353	32
8025/28/39	39	0.236	0.289	245.344	34.744	308	36
8025/26/42	42	0.204	0.312	227.819	32.262	286	39
8025/24/45	45	0.174	0.338	212.631	30.111	267	42
8025/22/49	49	0.147	0.368	195.274	27.653	245	46
8025/20/54	54	0.121	0.405	177.193	25.093	222	51
8025/19/57	57	0.110	0.426	167.867	23.772	211	54
8025/18/60	60	0.099	0.450	159.473	22.583	200	57
8025/17/64	64	0.088	0.476	149.506	21.172	188	60
8025/16/68	68	0.078	0.506	140.712	19.926	176	64
8025/15/72	72	0.069	0.540	132.894	18.819	167	68
8025/14/78	78	0.060	0.579	122.672	17.372	154	73
8025/13/84	84	0.052	0.623	113.910	16.131	143	78
8025/12/91	91	0.045	0.675	105.147	14.890	132	85
8025/11/99	99	0.038	0.736	96.651	13.687	121	93
8025/10/109	109	0.031	0.810	87.784	12.431	110	102
8025/9.5/114	114	0.029	0.853	83.933	11.886	105	107

8025

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.4	51.1 ozs.	4,600	9,375
mm:	102	60	1446g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8025/9/121	121	0.026	0.900	79.078	11.198	99	113
8025/8.5/128	128	0.023	0.953	74.753	10.586	94	120
8025/8/136	136	0.021	1.013	70.356	9.963	88	128
8025/7.5/145	145	0.018	1.080	65.989	9.345	83	136
8025/7/155	155	0.016	1.157	61.732	8.742	77	146
8025/6.5/167	167	0.014	1.246	57.296	8.114	72	157
8025/6/181	181	0.012	1.350	52.864	7.486	66	170
8025/5.5/198	198	0.010	1.473	48.325	6.843	61	185
8025/5/217	217	0.008	1.620	44.094	6.244	55	204
8025/4.5/241	241	0.007	1.800	39.703	5.622	50	227
8025/4/272	272	0.006	2.025	35.178	4.982	44	255
8025/3.5/310	310	0.004	2.314	30.866	4.371	39	291
8025/3/362	362	0.003	2.700	26.432	3.743	33	340
8025/2.5/435	435	0.002	3.240	21.996	3.115	28	408

8038

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.9	69.5 ozs.	7,125	14,250
mm:	102	73	1967g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8038/75/10	10	2.315	0.108	956.840	135.500	1,200	14
8038/40/18	18	0.663	0.203	531.578	75.278	667	26
8038/34/21	21	0.480	0.238	455.638	64.524	571	30
8038/30/24	24	0.374	0.270	398.683	56.458	500	34
8038/24/30	30	0.241	0.338	318.947	45.167	400	42
8038/20/36	36	0.168	0.405	265.789	37.639	333	51
8038/18/40	40	0.136	0.450	239.210	33.875	300	57
8038/16/45	45	0.108	0.506	212.631	30.111	267	64
8038/15/48	48	0.095	0.540	199.342	28.229	250	68
8038/14/51	51	0.083	0.579	187.616	26.569	235	73

8038

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	2.9	69.5 ozs.	7,125	14,250
mm:	102	73	1967g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8038/13/55	55	0.072	0.623	173.971	24.636	218	78
8038/12/60	60	0.062	0.675	159.473	22.583	200	85
8038/11/65	65	0.052	0.736	147.206	20.846	185	93
8038/10/71	71	0.043	0.810	134.766	19.085	169	102
8038/9.5/75	75	0.039	0.853	127.579	18.067	160	107
8038/9/79	79	0.035	0.900	121.119	17.152	152	113
8038/8.5/84	84	0.031	0.953	113.910	16.131	143	120
8038/8/89	89	0.028	1.013	107.510	15.225	135	128
8038/7.5/95	95	0.025	1.080	100.720	14.263	126	136
8038/7/102	102	0.022	1.157	93.808	13.284	118	146
8038/6.5/110	110	0.019	1.246	86.985	12.318	109	157
8038/6/119	119	0.016	1.350	80.407	11.387	101	170
8038/5.5/130	130	0.014	1.473	73.603	10.423	92	185
8038/5/143	143	0.011	1.620	66.912	9.476	84	204
8038/4.5/159	159	0.009	1.800	60.179	8.522	75	227
8038/4/179	179	0.007	2.025	53.455	7.570	67	255
8038/3.5/204	204	0.006	2.314	46.904	6.642	59	291
8038/3/238	238	0.004	2.700	40.203	5.693	50	340
8038/2.5/286	286	0.003	3.240	33.456	4.738	42	408
8038/2/357	357	0.002	4.050	26.802	3.796	34	510
8038/1.5/477	477	0.001	5.400	20.060	2.841	25	680

8057

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	3.6	93.8 ozs.	10,600	21,375
mm:	102	92	2655g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8057/100/5	5	5.804	0.081	1913.681	271.000	2,400	10
8057/55/9	9	1.761	0.147	1063.156	150.556	1,333	19
8057/40/12	12	0.934	0.203	797.367	112.917	1,000	26

8057

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	4.0	3.6	93.8 ozs.	10,600	21,375
mm:	102	92	2655g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	Torque Constant inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
8057/32/15	15	0.599	0.253	637.894	90.333	800	32
8057/24/20	20	0.338	0.338	478.420	67.750	600	42
8057/20/24	24	0.236	0.405	398.683	56.458	500	51
8057/17/28	28	0.171	0.476	341.729	48.393	429	60
8057/15/32	32	0.133	0.540	299.013	42.344	375	68
8057/13/37	37	0.101	0.623	258.605	36.622	324	78
8057/12/40	40	0.086	0.675	239.210	33.875	300	85
8057/11/43	43	0.072	0.736	222.521	31.512	279	93
8057/10/48	48	0.060	0.810	199.342	28.229	250	102
8057/9.5/50	50	0.054	0.853	191.368	27.100	240	107
8057/9/53	53	0.049	0.900	180.536	25.566	226	113
8057/8.5/56	56	0.044	0.953	170.864	24.196	214	120
8057/8/60	60	0.039	1.013	159.473	22.583	200	128
8057/7.5/64	64	0.034	1.080	149.506	21.172	188	136
8057/7/68	68	0.030	1.157	140.712	19.926	176	146
8057/6.5/73	73	0.026	1.246	131.074	18.562	164	157
8057/6/79	79	0.022	1.350	121.119	17.152	152	170
8057/5.5/87	87	0.019	1.473	109.982	15.575	138	185
8057/5/95	95	0.016	1.620	100.720	14.263	126	204
8057/4.5/106	106	0.013	1.800	90.268	12.783	113	227
8057/4/119	119	0.010	2.025	80.407	11.387	101	255
8057/3.5/136	136	0.008	2.314	70.356	9.963	88	291
8057/3/159	159	0.006	2.700	60.179	8.522	75	340
8057/2.5/191	191	0.004	3.240	50.096	7.094	63	408
8057/2/238	238	0.003	4.050	40.203	5.693	50	510
8057/1.5/318	318	0.002	5.400	30.089	4.261	38	680
8057/1/477	477	0.001	8.100	20.060	2.841	25	1,020

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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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