



Stator lengths available:

Model	Length (in) / (mm)	Weight(g)	Continuous Watts	Base Price
6521	2.0" 51mm	579g	3,000	246.00
6530	2.4" 61mm	743g	3,500	290.00
6542	2.9" 74mm	969g	4,000	350.00
6560	3.2" 81mm	1305g	7,000	440.00

Motor type: outrunner

Poles: 22p

Slots: 24p

Finned:

Sealed:

Sensored: optional

Gearbox(es): call

Shaft size(s): 8mm

Max RPM: 12,000

6521

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	2.0	20.4 ozs.	3,000	6,000
mm: 76	51	577g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6521/95/13	13	7.403	0.052	736.031	104.231	923	8
6521/80/16	16	5.259	0.061	598.025	84.688	750	9

6521

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	2.0	20.4 ozs.	3,000	6,000
mm: 76	51	577g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6521/60/21	21	2.969	0.082	455.638	64.524	571	12
6521/50/25	25	2.068	0.098	382.736	54.200	480	14
6521/45/28	28	1.678	0.109	341.729	48.393	429	16
6521/40/32	32	1.329	0.123	299.013	42.344	375	18
6521/36/35	35	1.079	0.136	273.383	38.714	343	20
6521/32/40	40	0.855	0.153	239.210	33.875	300	22
6521/28/45	45	0.657	0.175	212.631	30.111	267	26
6521/26/49	49	0.568	0.189	195.274	27.653	245	28
6521/24/53	53	0.485	0.204	180.536	25.566	226	30
6521/22/58	58	0.409	0.223	164.972	23.362	207	33
6521/20/63	63	0.339	0.245	151.879	21.508	190	36
6521/19/67	67	0.307	0.258	142.812	20.224	179	38
6521/18/70	70	0.276	0.272	136.691	19.357	171	40
6521/17/74	74	0.247	0.288	129.303	18.311	162	42
6521/16/79	79	0.219	0.306	121.119	17.152	152	45
6521/15/84	84	0.194	0.327	113.910	16.131	143	48
6521/14/90	90	0.169	0.350	106.316	15.056	133	51
6521/13/97	97	0.147	0.377	98.643	13.969	124	55
6521/12/105	105	0.126	0.408	91.128	12.905	114	60
6521/11/115	115	0.106	0.446	83.204	11.783	104	65
6521/10/127	127	0.088	0.490	75.342	10.669	94	72
6521/9.5/133	133	0.080	0.516	71.943	10.188	90	76
6521/9/141	141	0.072	0.544	67.861	9.610	85	80
6521/8.5/149	149	0.065	0.577	64.217	9.094	81	85
6521/8/158	158	0.058	0.613	60.560	8.576	76	90
6521/7.5/169	169	0.051	0.653	56.618	8.018	71	96
6521/7/181	181	0.045	0.700	52.864	7.486	66	103
6521/6.5/195	195	0.039	0.754	49.069	6.949	62	111
6521/6/211	211	0.034	0.817	45.348	6.422	57	120
6521/5.5/230	230	0.029	0.891	41.602	5.891	52	131
6521/5/253	253	0.024	0.980	37.820	5.356	47	144

6521

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	2.0	20.4 ozs.	3,000	6,000
mm: 76	51	577g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6521/4.5/281	281	0.020	1.089	34.051	4.822	43	160
6521/4/316	316	0.016	1.225	30.280	4.288	38	180
6521/3.5/362	362	0.012	1.400	26.432	3.743	33	206
6521/3/422	422	0.009	1.633	22.674	3.211	28	240

6530

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	2.4	26.2 ozs.	3,500	7,000
mm: 76	61	741g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6530/85/10	10	8.029	0.058	956.840	135.500	1,200	8
6530/70/13	13	5.454	0.070	736.031	104.231	923	10
6530/55/16	16	3.375	0.089	598.025	84.688	750	13
6530/45/20	20	2.265	0.109	478.420	67.750	600	16
6530/38/23	23	1.620	0.129	416.018	58.913	522	19
6530/34/26	26	1.299	0.144	368.015	52.115	462	21
6530/30/30	30	1.014	0.163	318.947	45.167	400	24
6530/28/32	32	0.885	0.175	299.013	42.344	375	26
6530/24/37	37	0.652	0.204	258.605	36.622	324	30
6530/22/40	40	0.549	0.223	239.210	33.875	300	33
6530/20/44	44	0.455	0.245	217.464	30.795	273	36
6530/19/47	47	0.412	0.258	203.583	28.830	255	38
6530/18/49	49	0.370	0.272	195.274	27.653	245	40
6530/17/52	52	0.331	0.288	184.008	26.058	231	42
6530/16/55	55	0.294	0.306	173.971	24.636	218	45
6530/15/59	59	0.259	0.327	162.176	22.966	203	48
6530/14/63	63	0.226	0.350	151.879	21.508	190	51
6530/13/68	68	0.196	0.377	140.712	19.926	176	55
6530/12/74	74	0.167	0.408	129.303	18.311	162	60
6530/11/81	81	0.141	0.446	118.128	16.728	148	65

6530

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.0	2.4	26.2 ozs.	3,500	7,000
mm:	76	61	741g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6530/10/89	89	0.117	0.490	107.510	15.225	135	72
6530/9.5/93	93	0.106	0.516	102.886	14.570	129	76
6530/9/98	98	0.096	0.544	97.637	13.827	122	80
6530/8.5/104	104	0.086	0.577	92.004	13.029	115	85
6530/8/111	111	0.076	0.613	86.202	12.207	108	90
6530/7.5/118	118	0.067	0.653	81.088	11.483	102	96
6530/7/127	127	0.059	0.700	75.342	10.669	94	103
6530/6.5/136	136	0.051	0.754	70.356	9.963	88	111
6530/6/148	148	0.044	0.817	64.651	9.155	81	120
6530/5.5/161	161	0.037	0.891	59.431	8.416	75	131
6530/5/177	177	0.031	0.980	54.059	7.655	68	144
6530/4.5/197	197	0.026	1.089	48.571	6.878	61	160
6530/4/221	221	0.021	1.225	43.296	6.131	54	180
6530/3.5/253	253	0.016	1.400	37.820	5.356	47	206
6530/3/295	295	0.012	1.633	32.435	4.593	41	240
6530/2.5/354	354	0.009	1.960	27.029	3.828	34	288
6530/2/443	443	0.006	2.450	21.599	3.059	27	360

6542

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.0	2.9	34.2 ozs.	4,000	8,000
mm:	76	74	968g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6542/100/6	6	14.969	0.049	1594.734	225.833	2,000	7
6542/70/9	9	7.350	0.070	1063.156	150.556	1,333	10
6542/55/12	12	4.546	0.089	797.367	112.917	1,000	13
6542/40/16	16	2.412	0.123	598.025	84.688	750	18
6542/34/19	19	1.746	0.144	503.600	71.316	632	21
6542/28/23	23	1.188	0.175	416.018	58.913	522	26
6542/24/26	26	0.875	0.204	368.015	52.115	462	30

6542

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.0	2.9	34.2 ozs.	4,000	8,000
mm:	76	74	968g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6542/22/29	29	0.737	0.223	329.945	46.724	414	33
6542/20/32	32	0.610	0.245	299.013	42.344	375	36
6542/19/33	33	0.551	0.258	289.952	41.061	364	38
6542/18/35	35	0.495	0.272	273.383	38.714	343	40
6542/17/37	37	0.443	0.288	258.605	36.622	324	42
6542/16/40	40	0.393	0.306	239.210	33.875	300	45
6542/15/42	42	0.346	0.327	227.819	32.262	286	48
6542/14/45	45	0.302	0.350	212.631	30.111	267	51
6542/13/49	49	0.261	0.377	195.274	27.653	245	55
6542/12/53	53	0.223	0.408	180.536	25.566	226	60
6542/11/58	58	0.188	0.446	164.972	23.362	207	65
6542/10/63	63	0.156	0.490	151.879	21.508	190	72
6542/9.5/67	67	0.141	0.516	142.812	20.224	179	76
6542/9/70	70	0.127	0.544	136.691	19.357	171	80
6542/8.5/74	74	0.114	0.577	129.303	18.311	162	85
6542/8/79	79	0.101	0.613	121.119	17.152	152	90
6542/7.5/84	84	0.089	0.653	113.910	16.131	143	96
6542/7/90	90	0.078	0.700	106.316	15.056	133	103
6542/6.5/97	97	0.068	0.754	98.643	13.969	124	111
6542/6/105	105	0.058	0.817	91.128	12.905	114	120
6542/5.5/115	115	0.049	0.891	83.204	11.783	104	131
6542/5/127	127	0.041	0.980	75.342	10.669	94	144
6542/4.5/141	141	0.033	1.089	67.861	9.610	85	160
6542/4/158	158	0.027	1.225	60.560	8.576	76	180
6542/3.5/181	181	0.021	1.400	52.864	7.486	66	206
6542/3/211	211	0.016	1.633	45.348	6.422	57	240
6542/2.5/253	253	0.011	1.960	37.820	5.356	47	288
6542/2/316	316	0.007	2.450	30.280	4.288	38	360
6542/1.5/422	422	0.004	3.267	22.674	3.211	28	480

6560

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	3.2	46 ozs.	7,000	14,000
mm: 76	81	1302g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Saturation Amps
6560/85/5	5	15.017	0.058	1913.681	271.000	2,400	8
6560/50/9	9	5.211	0.098	1063.156	150.556	1,333	14
6560/38/12	12	3.016	0.129	797.367	112.917	1,000	19
6560/30/15	15	1.884	0.163	637.894	90.333	800	24
6560/24/18	18	1.209	0.204	531.578	75.278	667	30
6560/20/22	22	0.842	0.245	434.927	61.591	545	36
6560/18/25	25	0.683	0.272	382.736	54.200	480	40
6560/15/30	30	0.476	0.327	318.947	45.167	400	48
6560/13/34	34	0.359	0.377	281.424	39.853	353	55
6560/11/40	40	0.258	0.446	239.210	33.875	300	65
6560/10/44	44	0.214	0.490	217.464	30.795	273	72
6560/9.5/47	47	0.194	0.516	203.583	28.830	255	76
6560/9/49	49	0.174	0.544	195.274	27.653	245	80
6560/8.5/52	52	0.156	0.577	184.008	26.058	231	85
6560/8/55	55	0.138	0.613	173.971	24.636	218	90
6560/7.5/59	59	0.122	0.653	162.176	22.966	203	96
6560/7/63	63	0.106	0.700	151.879	21.508	190	103
6560/6.5/68	68	0.092	0.754	140.712	19.926	176	111
6560/6/74	74	0.079	0.817	129.303	18.311	162	120
6560/5.5/81	81	0.067	0.891	118.128	16.728	148	131
6560/5/89	89	0.055	0.980	107.510	15.225	135	144
6560/4.5/98	98	0.045	1.089	97.637	13.827	122	160
6560/4/111	111	0.036	1.225	86.202	12.207	108	180
6560/3.5/127	127	0.028	1.400	75.342	10.669	94	206
6560/3/148	148	0.021	1.633	64.651	9.155	81	240
6560/2.5/177	177	0.015	1.960	54.059	7.655	68	288
6560/2/221	221	0.010	2.450	43.296	6.131	54	360
6560/1.5/295	295	0.006	3.267	32.435	4.593	41	480
6560/1/443	443	0.003	4.900	21.599	3.059	27	720

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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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