



Stator lengths available:

Model	Length (in)	mm	Continuous Watts	Base Price
6510		mm		
6514	1.9	47mm	2,500	140.00
6521	2.0	51mm	3,000	155.00
6530	2.4	61mm	3,500	
6542	2.9	74mm	4,000	
6560	3.2	81mm	7,000	

Motor type: outrunner

Poles: 22p

Slots: 24p

Finned:

Sealed:

Sensored: optional

Gearbox(es): call

Shaft size(s): 8mm

Max RPM: 12,000

6510

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0		ozs.		
mm: 76		g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts	Max Amps	Stock Status
6510/100	27	4.653	0.0	354.385	50.185	444		

6510

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0		ozs.		
mm: 76		g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6510/80	33	2.989	0.1	289.952	41.061	364		
6510/75	35	2.631	0.1	273.383	38.714	343		
6510/70	38	2.295	0.1	251.800	35.658	316		
6510/65	41	1.982	0.1	233.376	33.049	293		
6510/60	44	1.692	0.1	217.464	30.795	273		
6510/55	48	1.425	0.1	199.342	28.229	250		
6510/50	53	1.181	0.1	180.536	25.566	226		
6510/45	59	0.960	0.1	162.176	22.966	203		
6510/40	66	0.762	0.1	144.976	20.530	182		
6510/38	70	0.689	0.1	136.691	19.357	171		
6510/36	74	0.619	0.1	129.303	18.311	162		
6510/34	78	0.554	0.1	122.672	17.372	154		
6510/32	83	0.492	0.2	115.282	16.325	145		
6510/30	89	0.434	0.2	107.510	15.225	135		
6510/28	95	0.379	0.2	100.720	14.263	126		
6510/26	102	0.328	0.2	93.808	13.284	118		
6510/24	111	0.281	0.2	86.202	12.207	108		
6510/22	121	0.237	0.2	79.078	11.198	99		
6510/20	133	0.197	0.2	71.943	10.188	90		
6510/19	140	0.179	0.3	68.346	9.679	86		
6510/18	148	0.161	0.3	64.651	9.155	81		
6510/17	156	0.144	0.3	61.336	8.686	77		
6510/16	166	0.129	0.3	57.641	8.163	72		
6510/15	177	0.114	0.3	54.059	7.655	68		
6510/14	190	0.100	0.4	50.360	7.132	63		
6510/13	204	0.087	0.4	46.904	6.642	59		
6510/12	221	0.075	0.4	43.296	6.131	54		
6510/11	242	0.063	0.4	39.539	5.599	50		
6510/10	266	0.053	0.5	35.971	5.094	45		
6510/9.5	280	0.048	0.5	34.173	4.839	43		
6510/9	295	0.044	0.5	32.435	4.593	41		

6510

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0		ozs.		
mm: 76		g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6510/8.5	313	0.039	0.6	30.570	4.329	38		
6510/8	332	0.035	0.6	28.820	4.081	36		
6510/7.5	354	0.031	0.7	27.029	3.828	34		
6510/7	380	0.027	0.7	25.180	3.566	32		
6510/6.5	409	0.024	0.8	23.395	3.313	29		
6510/6	443	0.021	0.8	21.599	3.059	27		
6510/5.5	483	0.018	0.9	19.810	2.805	25		

6514

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.0	1.9	16.5 ozs.	2,500	5,000
mm: 76	47	467g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6514/100	19	5.943	0.0	503.600	71.316	632	8	
6514/85	22	4.303	0.1	434.927	61.591	545	9	
6514/75	25	3.356	0.1	382.736	54.200	480	10	
6514/65	29	2.527	0.1	329.945	46.724	414	12	
6514/60	32	2.156	0.1	299.013	42.344	375	13	
6514/55	35	1.815	0.1	273.383	38.714	343	15	
6514/50	38	1.503	0.1	251.800	35.658	316	16	
6514/45	42	1.221	0.1	227.819	32.262	286	18	
6514/40	47	0.968	0.1	203.583	28.830	255	20	
6514/38	50	0.875	0.1	191.368	27.100	240	21	
6514/36	53	0.786	0.1	180.536	25.566	226	22	
6514/34	56	0.703	0.1	170.864	24.196	214	23	
6514/32	59	0.624	0.2	162.176	22.966	203	25	
6514/30	63	0.550	0.2	151.879	21.508	190	26	
6514/28	68	0.480	0.2	140.712	19.926	176	28	
6514/26	73	0.415	0.2	131.074	18.562	164	30	
6514/24	79	0.355	0.2	121.119	17.152	152	33	

6514

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.0	1.9	16.5 ozs.	2,500	5,000
mm:	76	47	467g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6514/22	86	0.300	0.2	111.260	15.756	140	36	
6514/20	95	0.249	0.2	100.720	14.263	126	40	
6514/19	100	0.225	0.3	95.684	13.550	120	42	
6514/18	105	0.203	0.3	91.128	12.905	114	44	
6514/17	112	0.182	0.3	85.432	12.098	107	47	
6514/16	119	0.162	0.3	80.407	11.387	101	50	
6514/15	127	0.143	0.3	75.342	10.669	94	53	
6514/14	136	0.125	0.4	70.356	9.963	88	57	
6514/13	146	0.108	0.4	65.537	9.281	82	61	
6514/12	158	0.093	0.4	60.560	8.576	76	66	
6514/11	173	0.079	0.4	55.309	7.832	69	72	
6514/10	190	0.066	0.5	50.360	7.132	63	79	
6514/9.5	200	0.060	0.5	47.842	6.775	60	83	
6514/9	211	0.054	0.5	45.348	6.422	57	88	
6514/8.5	223	0.048	0.6	42.908	6.076	54	93	
6514/8	237	0.043	0.6	40.373	5.717	51	99	
6514/7.5	253	0.038	0.7	37.820	5.356	47	105	
6514/7	271	0.034	0.7	35.308	5.000	44	113	
6514/6.5	292	0.029	0.8	32.769	4.640	41	122	
6514/6	316	0.025	0.8	30.280	4.288	38	132	
6514/5.5	345	0.022	0.9	27.735	3.928	35	144	
6514/5	380	0.018	1.0	25.180	3.566	32	158	
6514/4.5	422	0.015	1.1	22.674	3.211	28	176	
6514/4	474	0.012	1.2	20.187	2.859	25	198	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6521/95	13	7.403	0.1	736.031	104.231	923	7	
6521/80	16	5.259	0.1	598.025	84.688	750	8	
6521/60	21	2.969	0.1	455.638	64.524	571	11	
6521/50	25	2.068	0.1	382.736	54.200	480	13	
6521/45	28	1.678	0.1	341.729	48.393	429	14	
6521/40	32	1.329	0.1	299.013	42.344	375	16	
6521/36	35	1.079	0.1	273.383	38.714	343	18	
6521/32	40	0.855	0.2	239.210	33.875	300	20	
6521/28	45	0.657	0.2	212.631	30.111	267	23	
6521/26	49	0.568	0.2	195.274	27.653	245	25	
6521/24	53	0.485	0.2	180.536	25.566	226	27	
6521/22	58	0.409	0.2	164.972	23.362	207	29	
6521/20	63	0.339	0.2	151.879	21.508	190	32	
6521/19	67	0.307	0.3	142.812	20.224	179	34	
6521/18	70	0.276	0.3	136.691	19.357	171	35	
6521/17	74	0.247	0.3	129.303	18.311	162	37	
6521/16	79	0.219	0.3	121.119	17.152	152	40	
6521/15	84	0.194	0.3	113.910	16.131	143	42	
6521/14	90	0.169	0.4	106.316	15.056	133	45	
6521/13	97	0.147	0.4	98.643	13.969	124	49	
6521/12	105	0.126	0.4	91.128	12.905	114	53	
6521/11	115	0.106	0.4	83.204	11.783	104	58	
6521/10	127	0.088	0.5	75.342	10.669	94	64	
6521/9.5	133	0.080	0.5	71.943	10.188	90	67	
6521/9	141	0.072	0.5	67.861	9.610	85	71	
6521/8.5	149	0.065	0.6	64.217	9.094	81	75	
6521/8	158	0.058	0.6	60.560	8.576	76	79	
6521/7.5	169	0.051	0.7	56.618	8.018	71	85	
6521/7	181	0.045	0.7	52.864	7.486	66	91	
6521/6.5	195	0.039	0.8	49.069	6.949	62	98	
6521/6	211	0.034	0.8	45.348	6.422	57	106	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6521/5.5	230	0.029	0.9	41.602	5.891	52	115	
6521/5	253	0.024	1.0	37.820	5.356	47	127	
6521/4.5	281	0.020	1.1	34.051	4.822	43	141	
6521/4	316	0.016	1.2	30.280	4.288	38	158	
6521	362	0.126	1.9	26.432	3.743	33	181	
6521/3.5	362	0.012	1.4	26.432	3.743	33	181	
6521/3	422	0.009	1.6	22.674	3.211	28	211	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6530/85	10	8.029	0.1	956.840	135.500	1,200	6	
6530/70	13	5.454	0.1	736.031	104.231	923	8	
6530/55	16	3.375	0.1	598.025	84.688	750	9	
6530/45	20	2.265	0.1	478.420	67.750	600	12	
6530/38	23	1.620	0.1	416.018	58.913	522	13	
6530/34	26	1.299	0.1	368.015	52.115	462	15	
6530/30	30	1.014	0.2	318.947	45.167	400	18	
6530/28	32	0.885	0.2	299.013	42.344	375	19	
6530/24	37	0.652	0.2	258.605	36.622	324	22	
6530/22	40	0.549	0.2	239.210	33.875	300	23	
6530/20	44	0.455	0.2	217.464	30.795	273	26	
6530/19	47	0.412	0.3	203.583	28.830	255	27	
6530/18	49	0.370	0.3	195.274	27.653	245	29	
6530/17	52	0.331	0.3	184.008	26.058	231	30	
6530/16	55	0.294	0.3	173.971	24.636	218	32	
6530/15	59	0.259	0.3	162.176	22.966	203	34	
6530/14	63	0.226	0.4	151.879	21.508	190	37	

6530

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

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6530/13	68	0.196	0.4	140.712	19.926	176	40	
6530/12	74	0.167	0.4	129.303	18.311	162	43	
6530/11	81	0.141	0.4	118.128	16.728	148	47	
6530/10	89	0.117	0.5	107.510	15.225	135	52	
6530/9.5	93	0.106	0.5	102.886	14.570	129	54	
6530/9	98	0.096	0.5	97.637	13.827	122	57	
6530/8.5	104	0.086	0.6	92.004	13.029	115	61	
6530/8	111	0.076	0.6	86.202	12.207	108	65	
6530/7.5	118	0.067	0.7	81.088	11.483	102	69	
6530/7	127	0.059	0.7	75.342	10.669	94	74	
6530/6.5	136	0.051	0.8	70.356	9.963	88	79	
6530/6	148	0.044	0.8	64.651	9.155	81	86	
6530/5.5	161	0.037	0.9	59.431	8.416	75	94	
6530/5	177	0.031	1.0	54.059	7.655	68	103	
6530/4.5	197	0.026	1.1	48.571	6.878	61	115	
6530/4	221	0.021	1.2	43.296	6.131	54	129	
6530	253	0.160	1.7	37.820	5.356	47	148	
6530/3.5	253	0.016	1.4	37.820	5.356	47	148	
6530/3	295	0.012	1.6	32.435	4.593	41	172	
6530/2.5	354	0.009	2.0	27.029	3.828	34	207	
6530/2	443	0.006	2.5	21.599	3.059	27	258	

6542

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

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6542/100	6	14.969	0.0	1594.734	225.833	2,000	4	
6542/70	9	7.350	0.1	1063.156	150.556	1,333	6	
6542/55	12	4.546	0.1	797.367	112.917	1,000	8	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6542/40	16	2.412	0.1	598.025	84.688	750	11	
6542/34	19	1.746	0.1	503.600	71.316	632	13	
6542/28	23	1.188	0.2	416.018	58.913	522	15	
6542/24	26	0.875	0.2	368.015	52.115	462	17	
6542/22	29	0.737	0.2	329.945	46.724	414	19	
6542/20	32	0.610	0.2	299.013	42.344	375	21	
6542/19	33	0.551	0.3	289.952	41.061	364	22	
6542/18	35	0.495	0.3	273.383	38.714	343	23	
6542/17	37	0.443	0.3	258.605	36.622	324	25	
6542/16	40	0.393	0.3	239.210	33.875	300	27	
6542/15	42	0.346	0.3	227.819	32.262	286	28	
6542/14	45	0.302	0.4	212.631	30.111	267	30	
6542/13	49	0.261	0.4	195.274	27.653	245	33	
6542/12	53	0.223	0.4	180.536	25.566	226	35	
6542/11	58	0.188	0.4	164.972	23.362	207	39	
6542/10	63	0.156	0.5	151.879	21.508	190	42	
6542/9.5	67	0.141	0.5	142.812	20.224	179	45	
6542/9	70	0.127	0.5	136.691	19.357	171	47	
6542/8.5	74	0.114	0.6	129.303	18.311	162	49	
6542/8	79	0.101	0.6	121.119	17.152	152	53	
6542/7.5	84	0.089	0.7	113.910	16.131	143	56	
6542/7	90	0.078	0.7	106.316	15.056	133	60	
6542/6.5	97	0.068	0.8	98.643	13.969	124	65	
6542/6	105	0.058	0.8	91.128	12.905	114	70	
6542/5.5	115	0.049	0.9	83.204	11.783	104	77	
6542/5	127	0.041	1.0	75.342	10.669	94	85	
6542/4.5	141	0.033	1.1	67.861	9.610	85	94	
6542/4	158	0.027	1.2	60.560	8.576	76	105	
6542	181	0.207	1.4	52.864	7.486	66	121	
6542/3.5	181	0.021	1.4	52.864	7.486	66	121	
6542/3	211	0.016	1.6	45.348	6.422	57	141	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6542/2.5	253	0.011	2.0	37.820	5.356	47	169	
6542/2	316	0.007	2.5	30.280	4.288	38	211	
6542/1.5	422	0.004	3.3	22.674	3.211	28	281	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6560/85	5	15.017	0.1	1913.681	271.000	2,400	6	
6560/50	9	5.211	0.1	1063.156	150.556	1,333	11	
6560/38	12	3.016	0.1	797.367	112.917	1,000	14	
6560/30	15	1.884	0.2	637.894	90.333	800	18	
6560/24	18	1.209	0.2	531.578	75.278	667	21	
6560/20	22	0.842	0.2	434.927	61.591	545	26	
6560/18	25	0.683	0.3	382.736	54.200	480	29	
6560/15	30	0.476	0.3	318.947	45.167	400	35	
6560/13	34	0.359	0.4	281.424	39.853	353	40	
6560/11	40	0.258	0.4	239.210	33.875	300	47	
6560/10	44	0.214	0.5	217.464	30.795	273	51	
6560/9.5	47	0.194	0.5	203.583	28.830	255	55	
6560/9	49	0.174	0.5	195.274	27.653	245	57	
6560/8.5	52	0.156	0.6	184.008	26.058	231	61	
6560/8	55	0.138	0.6	173.971	24.636	218	64	
6560/7.5	59	0.122	0.7	162.176	22.966	203	69	
6560/7	63	0.106	0.7	151.879	21.508	190	74	
6560/6.5	68	0.092	0.8	140.712	19.926	176	79	
6560/6	74	0.079	0.8	129.303	18.311	162	86	
6560/5.5	81	0.067	0.9	118.128	16.728	148	95	
6560/5	89	0.055	1.0	107.510	15.225	135	104	

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		Max Volts	Max Amps	Stock Status
				mNm/A	inOz/A			
6560/4.5	98	0.045	1.1	97.637	13.827	122	114	
6560/4	111	0.036	1.2	86.202	12.207	108	130	
6560/3.5	127	0.028	1.4	75.342	10.669	94	148	
6560/3	148	0.021	1.6	64.651	9.155	81	173	
6560/2.5	177	0.015	2.0	54.059	7.655	68	207	
6560	181	0.028	1.3	52.864	7.486	66	211	
6560/2	221	0.010	2.5	43.296	6.131	54	258	
6560/1.5	295	0.006	3.3	32.435	4.593	41	344	
6560/1	443	0.003	4.9	21.599	3.059	27	517	

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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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