



Stator lengths available:

Model	Length (in) / (mm)	Weight(g)	Continuous Watts	Base Price
3205	2.6" / 66mm	400g	1,000	439.00
3207	2.6" / 66mm	680g	1,500	549.00
3210	2.6" / 66mm	1009g	2,000	659.00
3215	3.6" / 91mm	1338g	3,000	769.00
3220	3.6" / 91mm	1538g	4,000	

Motor type: inrunner

Poles: 12p

Slots: 36s

Finned: Optional

Sealed: Optional

Sensored: No

Gearbox(es): P42, P62

Shaft size(s): 8mm

Max RPM: 15,000

3205

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.7	2.6	14.1 ozs.	1,000	2,000
mm:	94	66	399g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/kv)	Max Amps (max watts/volts)
3205/6D/198	198	0.072	0.570	48.325	6.843	76	26

3205

	Diam.	Length	Weight	Max Cont.	Max Peak
	inch:	3.7	2.6	14.1 ozs.	1,000 Watts
	mm:	94	66	399g	2,000 Watts

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3205/5.75D/207	207	0.066	0.595	46.224	6.546	72	28
3205/5.5D/216	216	0.060	0.622	44.298	6.273	69	29
3205/3Y/220	220	0.054	0.633	43.493	6.159	68	29
3205/5.25D/226	226	0.055	0.651	42.338	5.996	66	30
3205/5D/238	238	0.050	0.684	40.203	5.693	63	32
3205/2.75Y/240	240	0.045	0.691	39.868	5.646	63	32
3205/4.75D/250	250	0.045	0.720	38.274	5.420	60	33
3205/4.5D/264	264	0.040	0.760	36.244	5.133	57	35
3205/2.5Y/264	264	0.038	0.760	36.244	5.133	57	35
3205/4.25D/280	280	0.036	0.805	34.173	4.839	54	37
3205/2.25Y/293	293	0.030	0.844	32.657	4.625	51	39
3205/4D/297	297	0.032	0.855	32.217	4.562	51	40
3205/3.75D/317	317	0.028	0.912	30.184	4.274	47	42
3205/2Y/330	330	0.024	0.950	28.995	4.106	45	44
3205/3.5D/339	339	0.024	0.977	28.225	3.997	44	45
3205/3.25D/366	366	0.021	1.052	26.143	3.702	41	49
3205/1.75Y/377	377	0.018	1.086	25.380	3.594	40	50
3205/3D/396	396	0.018	1.140	24.163	3.422	38	53
3205/2.75D/432	432	0.015	1.244	22.149	3.137	35	58
3205/1.5Y/440	440	0.014	1.267	21.746	3.080	34	59
3205/2.5D/475	475	0.012	1.368	20.144	2.853	32	63
3205/2.25D/528	528	0.010	1.520	18.122	2.566	28	70
3205/1.25Y/528	528	0.009	1.520	18.122	2.566	28	70
3205/2D/594	594	0.008	1.710	16.108	2.281	25	79
3205/1Y/660	660	0.006	1.900	14.498	2.053	23	88
3205/1.75D/679	679	0.006	1.954	14.092	1.996	22	91
3205/1.5D/792	792	0.004	2.280	12.081	1.711	19	106
3205/0.75Y/880	880	0.003	2.533	10.873	1.540	17	117
3205/1.25D/950	950	0.003	2.736	10.072	1.426	16	127

3207

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.7	2.6	24 ozs.	1,500	3,000
mm: 94	66	679g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3207/6D/132	132	0.108	0.570	72.488	10.265	114	26
3207/5.75D/138	138	0.099	0.595	69.336	9.819	109	28
3207/5.5D/144	144	0.091	0.622	66.447	9.410	104	29
3207/3Y/147	147	0.081	0.633	65.091	9.218	102	29
3207/5.25D/151	151	0.083	0.651	63.367	8.974	99	30
3207/5D/158	158	0.075	0.684	60.560	8.576	95	32
3207/2.75Y/160	160	0.068	0.691	59.803	8.469	94	32
3207/4.75D/167	167	0.068	0.720	57.296	8.114	90	33
3207/2.5Y/176	176	0.056	0.760	54.366	7.699	85	35
3207/4.5D/176	176	0.061	0.760	54.366	7.699	85	35
3207/4.25D/186	186	0.054	0.805	51.443	7.285	81	37
3207/2.25Y/196	196	0.046	0.844	48.818	6.913	77	39
3207/4D/198	198	0.048	0.855	48.325	6.843	76	40
3207/3.75D/211	211	0.042	0.912	45.348	6.422	71	42
3207/2Y/220	220	0.036	0.950	43.493	6.159	68	44
3207/3.5D/226	226	0.037	0.977	42.338	5.996	66	45
3207/3.25D/244	244	0.032	1.052	39.215	5.553	61	49
3207/1.75Y/251	251	0.028	1.086	38.121	5.398	60	50
3207/3D/264	264	0.027	1.140	36.244	5.133	57	53
3207/2.75D/288	288	0.023	1.244	33.224	4.705	52	58
3207/1.5Y/293	293	0.020	1.267	32.657	4.625	51	59
3207/2.5D/317	317	0.019	1.368	30.184	4.274	47	63
3207/2.25D/352	352	0.015	1.520	27.183	3.849	43	70
3207/1.25Y/352	352	0.014	1.520	27.183	3.849	43	70
3207/2D/396	396	0.012	1.710	24.163	3.422	38	79
3207/1Y/440	440	0.009	1.900	21.746	3.080	34	88
3207/1.75D/453	453	0.009	1.954	21.122	2.991	33	91
3207/1.5D/528	528	0.007	2.280	18.122	2.566	28	106
3207/0.75Y/587	587	0.005	2.533	16.301	2.308	26	117
3207/1.25D/634	634	0.005	2.736	15.092	2.137	24	127
3207/1D/792	792	0.003	3.420	12.081	1.711	19	158

3207

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.7	2.6	24 ozs.	1,500	3,000
mm: 94	66	679g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3207/0.5Y/880	880	0.002	3.800	10.873	1.540	17	176

3210

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.7	2.6	35.6 ozs.	2,000	4,000
mm: 94	66	1007g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3210/6D/99	99	0.144	0.570	96.651	13.687	152	26
3210/5.75D/103	103	0.132	0.595	92.897	13.155	146	27
3210/5.5D/108	108	0.121	0.622	88.596	12.546	139	29
3210/3Y/110	110	0.108	0.633	86.985	12.318	136	29
3210/5.25D/113	113	0.110	0.651	84.676	11.991	133	30
3210/5D/119	119	0.100	0.684	80.407	11.387	126	32
3210/2.75Y/120	120	0.091	0.691	79.737	11.292	125	32
3210/4.75D/125	125	0.090	0.720	76.547	10.840	120	33
3210/2.5Y/132	132	0.075	0.760	72.488	10.265	114	35
3210/4.5D/132	132	0.081	0.760	72.488	10.265	114	35
3210/4.25D/140	140	0.072	0.805	68.346	9.679	107	37
3210/2.25Y/147	147	0.061	0.844	65.091	9.218	102	39
3210/4D/149	149	0.064	0.855	64.217	9.094	101	40
3210/3.75D/158	158	0.056	0.912	60.560	8.576	95	42
3210/2Y/165	165	0.048	0.950	57.990	8.212	91	44
3210/3.5D/170	170	0.049	0.977	56.285	7.971	88	45
3210/3.25D/183	183	0.042	1.052	52.286	7.404	82	49
3210/1.75Y/189	189	0.037	1.086	50.626	7.169	79	50
3210/3D/198	198	0.036	1.140	48.325	6.843	76	53
3210/2.75D/216	216	0.030	1.244	44.298	6.273	69	58
3210/1.5Y/220	220	0.027	1.267	43.493	6.159	68	59
3210/2.5D/238	238	0.025	1.368	40.203	5.693	63	63
3210/2.25D/264	264	0.020	1.520	36.244	5.133	57	70

3210

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.7	2.6	35.6 ozs.	2,000	4,000
mm: 94	66	1007g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3210/1.25Y/264	264	0.019	1.520	36.244	5.133	57	70
3210/2D/297	297	0.016	1.710	32.217	4.562	51	79
3210/1Y/330	330	0.012	1.900	28.995	4.106	45	88
3210/1.75D/339	339	0.012	1.954	28.225	3.997	44	90
3210/1.5D/396	396	0.009	2.280	24.163	3.422	38	106
3210/0.75Y/440	440	0.007	2.533	21.746	3.080	34	117
3210/1.25D/475	475	0.006	2.736	20.144	2.853	32	127
3210/1D/594	594	0.004	3.420	16.108	2.281	25	158
3210/0.5Y/660	660	0.003	3.800	14.498	2.053	23	176
3210/0.75D/792	792	0.002	4.560	12.081	1.711	19	211

3215

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.1	3.6	47.2 ozs.	3,000	6,000
mm: 79	91	1336g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3215/6D/66	66	0.216	0.570	144.976	20.530	227	26
3215/5.75D/69	69	0.198	0.595	138.673	19.638	217	28
3215/5.5D/72	72	0.181	0.622	132.894	18.819	208	29
3215/3Y/73	73	0.162	0.633	131.074	18.562	205	29
3215/5.25D/75	75	0.165	0.651	127.579	18.067	200	30
3215/5D/79	79	0.150	0.684	121.119	17.152	190	32
3215/2.75Y/80	80	0.136	0.691	119.605	16.938	188	32
3215/4.75D/83	83	0.135	0.720	115.282	16.325	181	33
3215/2.5Y/88	88	0.113	0.760	108.732	15.398	170	35
3215/4.5D/88	88	0.121	0.760	108.732	15.398	170	35
3215/4.25D/93	93	0.108	0.805	102.886	14.570	161	37
3215/2.25Y/98	98	0.091	0.844	97.637	13.827	153	39
3215/4D/99	99	0.096	0.855	96.651	13.687	152	40
3215/3.75D/106	106	0.084	0.912	90.268	12.783	142	42

3215

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.1	3.6	47.2 ozs.	3,000	6,000
mm:	79	91	1336g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3215/2Y/110	110	0.072	0.950	86.985	12.318	136	44
3215/3.5D/113	113	0.073	0.977	84.676	11.991	133	45
3215/3.25D/122	122	0.063	1.052	78.430	11.107	123	49
3215/1.75Y/126	126	0.055	1.086	75.940	10.754	119	50
3215/3D/132	132	0.054	1.140	72.488	10.265	114	53
3215/2.75D/144	144	0.045	1.244	66.447	9.410	104	58
3215/1.5Y/147	147	0.041	1.267	65.091	9.218	102	59
3215/2.5D/158	158	0.037	1.368	60.560	8.576	95	63
3215/1.25Y/176	176	0.028	1.520	54.366	7.699	85	70
3215/2.25D/176	176	0.030	1.520	54.366	7.699	85	70
3215/2D/198	198	0.024	1.710	48.325	6.843	76	79
3215/1Y/220	220	0.018	1.900	43.493	6.159	68	88
3215/1.75D/226	226	0.018	1.954	42.338	5.996	66	90
3215/1.5D/264	264	0.013	2.280	36.244	5.133	57	106
3215/0.75Y/293	293	0.010	2.533	32.657	4.625	51	117
3215/1.25D/317	317	0.009	2.736	30.184	4.274	47	127
3215/1D/396	396	0.006	3.420	24.163	3.422	38	158
3215/0.5Y/440	440	0.005	3.800	21.746	3.080	34	176
3215/0.75D/528	528	0.003	4.560	18.122	2.566	28	211
3215/0.5D/792	792	0.001	6.840	12.081	1.711	19	317
3215/0.25Y/880	880	0.001	7.600	10.873	1.540	17	352

3220

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	3.1	3.6	54.25 ozs.	4,000	8,000
mm:	79	91	1535g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3220/5.75D/52	52	0.264	0.595	184.008	26.058	288	28
3220/5.5D/54	54	0.242	0.622	177.193	25.093	278	29
3220/3Y/55	55	0.216	0.633	173.971	24.636	273	29

3220

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 3.1	3.6	54.25 ozs.	4,000	8,000
mm: 79	91	1535g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
3220/5.25D/57	57	0.220	0.651	167.867	23.772	263	30
3220/5D/59	59	0.200	0.684	162.176	22.966	254	31
3220/2.75Y/60	60	0.182	0.691	159.473	22.583	250	32
3220/4.75D/63	63	0.180	0.720	151.879	21.508	238	34
3220/2.5Y/66	66	0.150	0.760	144.976	20.530	227	35
3220/4.5D/66	66	0.162	0.760	144.976	20.530	227	35
3220/4.25D/70	70	0.144	0.805	136.691	19.357	214	37
3220/2.25Y/73	73	0.122	0.844	131.074	18.562	205	39
3220/4D/74	74	0.128	0.855	129.303	18.311	203	39
3220/3.75D/79	79	0.112	0.912	121.119	17.152	190	42
3220/2Y/83	83	0.096	0.950	115.282	16.325	181	44
3220/3.5D/85	85	0.098	0.977	112.569	15.941	176	45
3220/3.25D/91	91	0.084	1.052	105.147	14.890	165	49
3220/1.75Y/94	94	0.074	1.086	101.792	14.415	160	50
3220/3D/99	99	0.072	1.140	96.651	13.687	152	53
3220/2.75D/108	108	0.060	1.244	88.596	12.546	139	58
3220/1.5Y/110	110	0.054	1.267	86.985	12.318	136	59
3220/2.5D/119	119	0.050	1.368	80.407	11.387	126	63
3220/2.25D/132	132	0.040	1.520	72.488	10.265	114	70
3220/1.25Y/132	132	0.038	1.520	72.488	10.265	114	70
3220/2D/149	149	0.032	1.710	64.217	9.094	101	79
3220/1Y/165	165	0.024	1.900	57.990	8.212	91	88
3220/1.75D/170	170	0.024	1.954	56.285	7.971	88	91
3220/1.5D/198	198	0.018	2.280	48.325	6.843	76	106
3220/0.75Y/220	220	0.014	2.533	43.493	6.159	68	117
3220/1.25D/238	238	0.012	2.736	40.203	5.693	63	127
3220/1D/297	297	0.008	3.420	32.217	4.562	51	158
3220/0.5Y/330	330	0.006	3.800	28.995	4.106	45	176
3220/0.75D/396	396	0.004	4.560	24.163	3.422	38	211
3220/0.5D/594	594	0.002	6.840	16.108	2.281	25	317
3220/0.25Y/660	660	0.002	7.600	14.498	2.053	23	352

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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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