



Stator lengths available:

Model	Length (in) / (mm)	Weight(g)	Continuous Watts	Base Price
2215-12S	3.3" / 84mm	709g	2,500	714.00
2217-12S	3.5" / 89mm	822g	2,800	800.00
2220-12S	4.7" / 119mm	964g	3,200	880.00
2225-12S	4.7" / 119mm	1134g	4,200	985.00
2230-12S	4.7" / 119mm	1361g	5,000	1,098.00

Motor type: inrunner

Poles: 4p

Slots: 12s

Finned: Optional

Sealed: Optional

Sensored: Optional

Gearbox(es): P42, P62

Shaft size(s): 8mm

Max RPM: 30,000

2215-12S

	Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch:	2.3	3.3	25 ozs.	2,500	5,000
mm:	58	84	708g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2215/12/3Y/480	480	0.018	0.900	19.934	2.823	63	80

2215-12S

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 2.3	3.3	25 ozs.	2,500	5,000
mm: 58	84	708g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2215/12/2.5Y/600	600	0.013	1.200	15.947	2.258	50	100
2215/12/2Y/750	750	0.008	1.400	12.758	1.807	40	125
2215/12/1.5Y/1020	1,020	0.004	1.600	9.381	1.328	29	170
2215/12/1Y/1440	1,440	0.002	3.000	6.645	0.941	21	240

2217-12S

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 2.3	3.5	28.9 ozs.	2,800	5,600
mm: 58	89	818g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2217/12/3Y/425	425	0.023	0.950	22.514	3.188	71	79
2217/12/2.5Y/510	510	0.015	1.250	18.762	2.657	59	95
2217/12/1.5Y/850	850	0.011	1.500	11.257	1.594	35	159
2217/12/1Y/1275	1,275	0.002	3.100	7.505	1.063	24	238

2220-12S

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 2.3	4.7	34 ozs.	3,200	6,400
mm: 58	119	962g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2220/12/3Y/360	360	0.023	1.000	26.579	3.764	83	77
2220/12/2.5Y/430	430	0.018	1.250	22.252	3.151	70	92
2220/12/2Y/550	550	0.014	1.700	17.397	2.464	55	117
2220/12/1.5Y/725	725	0.005	1.700	13.198	1.869	41	155
2220/12/1Y/1190	1,190	0.002	3.200	8.041	1.139	25	254

2225-12S

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 2.3	4.7	40 ozs.	4,200	8,400
mm: 58	119	1132g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2225/12/3Y/315	315	0.030	1.000	30.376	4.302	95	88
2225/12/2.5Y/385	385	0.020	1.300	24.853	3.519	78	108
2225/12/2Y/480	480	0.016	1.500	19.934	2.823	63	134
2225/12/1.5Y/640	640	0.005	1.750	14.951	2.117	47	179
2225/12/1Y/960	960	0.002	3.300	9.967	1.411	31	269

2230-12S

Diam.	Length	Weight	Max Cont. Watts	Max Peak Watts
inch: 2.3	4.7	48 ozs.	5,000	10,000
mm: 58	119	1358g		

Motor	KV	Rm Ohms	Io @ 10v	Torque Constant mNm/A	inOz/A	Max Volts (max rpm/Kv)	Max Amps (max watts/volts)
2230/12/3Y/240	240	0.035	1.000	39.868	5.646	125	80
2230/12/2.5Y/290	290	0.023	1.300	32.994	4.672	103	97
2230/12/2Y/365	365	0.018	1.500	26.215	3.712	82	122
2230/12/1.5Y/485	485	0.007	1.800	19.729	2.794	62	162
2230/12/1Y/725	725	0.003	3.500	13.198	1.869	41	242

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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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