

EMAX Brushless Motors

See – www.emax.motordiy.com

Product Range and Specifications-



EMAX BL1812 / BL1806

Very Lightweight - Ideal for Indoor Foamys :-

BL1812 – Weight: 28g (including the firewall), KV=1800

Battery (LiPo)	Current	Prop	Thrust	rpm
7.4V	10A	9 x 4.5	220 g	
11.1V	13A	10 X 4.7	380 g	

BL1806 – Weight: 18g (including the firewall), KV=1650

Battery (LiPo)	Current	Prop	Thrust	rpm
7.4V	6.0 A	7x 5	180 g	6750
11.1V	10 A	7 X 5	240 g	7550



EMAX CF2822 / 2212

Very high power delivered by these small and robust, light weight (39g) brushless motors with rotating case suitable for all models of 300-400 size . the EMAX CF2822/CF2812 motors offer extremely high efficiency and high load capability for their weight. EMAX motors with the high quality of manufacturing, reliability and performance are the best outrunners available in the market.



Model	Cell Count	RPM/V Prop	RPM	Current	Thrust
CF2822	3S	1200 10X5	7100	14.5A	710g/1.5lb.
		10X4.7(SLOW)	6100	14.5A	745g/1.64
CF2212	3S	1534 7X4	12250	10.5A	580g//1.27lb
		7X6	11000	15.5A	730g/1.61lb

Specification

No. Of cells	2-3 Li-Poly
RPM/V	1200/1534 RMP/V
zMax. efficiency	82%
Max. efficiency current	7 -16 A (>75%)
No load current / 10 V	0.9 A
Current capacity	16 A/60 s
Internal Resistance	150 mohm
Stator Dimensions	22x10 mm
Shaft diameter	3 mm
Weight	39 g
Recommended model weight	200 -600 g
Recommended prop without gearbox	APC 7X4 APC 8X3.8 APC 9X4.5 APC 10X5

EMAX CF2805

Specification

No. Of cells	2-3 Li-Poly
RPM/V	2840 RMP/V
Stator Dimensions	22x10 mm
Shaft diameter	3 mm
Weight	29 g
Recomended model weight	200 -300 g
	APC 7X4
Recomended prop without gearbox	APC 6X4



Model	Cell Count	RPM/V	Prop	RPM	Current	Thrust
CF2805	2s	2840	6X4	13000	12A	413g/0.91lb.
			7X4	9900	14.4A	381g/0.84lb




EMAX BL2205

Small, light, 28mm diameter and less than 1 oz. in weight (29g). For models from 10 -12 oz. Includes all mounting hardware, 3 gold connectors and Prop adapter.



BL2205 KV=1780 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust	
BL2205	7.9V	7X5(Thin)	8800	9.8A	320g	
BL2205	7.9V	8X3.8(Slow)	6800	10A	330g	
BL2205	7.9V	6X5.5(Thin)	10300	7.8A	260g	
BL2205	7.9V	8X6(Slow)	6500	10.7A	360g	

	Weight g Of Model	LiPo	EMAX ESC	Propeller
 TRAINER	350g./12oz.	2S 800mAH	EMAX 10A	8X6(Slow) 8X3.8(Slow)
 3D	230g./10oz.	2S 800mAH	EMAX 10A	8X3.8(Slow)
 AEROBATIC	320g./11oz.	2S 800mAH	EMAX 10A	7X5 (Thin)

Specifications








No. Of cells	2x Li-Poly
RPM/V	1780
Max. efficiency current	8 - 10.5 A (>75%)
No load current / 10 V	0,5 A
Current capacity	11 A/60 s
Dimensions	28x22 mm
Shaft diameter	3 mm
Weight	29 g
Recommended model weight	220 - 350 g
Recommended prop without gearbox	6"-8"

EMAX BL2210

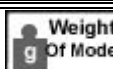






Light weight (42g) brushless motors with rotating case suitable for all models of 300-400 size .Using the latest ferromagnetic materials the EMAX 2210/xx motors offer extremely high efficiency and high load capability for their weight. Includes all mounting hardware, 3 gold connectors and Prop adapter.



BL2210/25 KV=1500 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2210/25	8.1V	7X5(Thin)	11500	14.5A	590g
BL2210/25	10.6V	7X5(Thin)	13700	23A	870g
BL2210/25	10.6V	6X5.5(Thin)	15750	16A	595g
BL2210/25	8.1V	6X5.5(Thin)	12500	10A	350g
					
	480g./17oz.	3S 1300mAH	EMAX 18A	7X5(Thin)	
	350g./12.5oz.	3S 1300mAH	EMAX 18A	8X3.8(Slow)	
	400g./14oz.	3S 1600mAH	EMAX 18A	7X6 (Thin)	

BL2210/30 KV=1500 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2210/30	11.0V	8X3.8(Slow)	9450	15.5A	750g
BL2210/30	11.0V	9X4.7(Slow)	8750	16.5A	800g
BL2210/30	11.0V	8X6(Thin)	9050	16A	680g
					
	600g./21oz.	3S 1300mA	EMAX 18A	9X4.7(Slow)	
	420g./14.8oz.	3S 1300mA	EMAX 18A	9X4.7(Slow)	
	500g./17.6oz.	3S 1600mA	EMAX 18A	8X6 (Thin)	

Specifications

No. Of cells	2-3x Li-Poly
RPM/V	1200/1500
Max. efficiency current	8 - 10.5 A (>75%)
No load current / 10 V	0,5 A
Current capacity	18 A/60 s
Dimensions	28x27 mm
Shaft diameter	3 mm
Weight	45 g
Recommended model weight	220 - 350 g




EMAX BL2215

Light weight (60g) brushless motors with rotating case suitable for all models of 300-400 size. As a result of using the latest ferromagnetic materials the EMAX 2215/xx motors offer extremely high efficiency and high load capability for their weight. Includes all mounting hardware, 3 gold connectors and Prop adapter.






BL2215/25 KV= 950 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Thrust
BL2215/25	12.0V	10X5(Thin)	8180	14A	850g
BL2215/25	12.0V	11X7(Thin)	6280	18A	905g
BL2215/25	12.0V	1047GWS	7200	16.5A	930g
BL2215/25	12.0V	10X4.7(SLOW)	7250	16.5A	950g
BL2215/25	12.0V	1060GWS	7800	15A	850g
BL2215/25	12.0V	9X4.7(SLOW)	8750	12A	810g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
 TRAINER	800g./28oz.	3S 1800mAH	EMAX 18A	9X4.7(SLOW)
 3D	500g./18oz.	3S 1800mAH	EMAX 18A	10X4.7(Slow)
 AEROBATIC	600g./14oz.	3S 1800mAH	EMAX 18A	10X5(Thin)

BL2215/20 KV= 1200 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Thrust
BL2215/20	12.0V	10X4.7(Slow)	7250	19A	1040g
BL2215/20	12.0V	9X4.7(Slow)	9900	17.5A	1020g
BL2215/20	10.9V	10X5(Thin)	9350	24.5A	1200g
BL2215/20	10.9V	8X3.8(Slow)	11050	16.5A	960g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
 TRAINER	1000g./35.2oz.	3S 1800mAH	EMAX 25A	10X5(Thin)
 3D	600g./21oz.	3S 1800mAH	EMAX 25A	10X4.7(Slow)
 AEROBATIC	800g./28oz.	3S 1800mAH	EMAX 25A	10X5 (Thin)

Specifications

No. Of cells	2-3x Li-Poly
Max. efficiency	82%
Max. efficiency current	8 - 13 A (>75%)
No load current / 10 V	0,5 A
Current capacity	2215/25 15 A/60s 2215/20 20 A/60s
Internal Resistance	275 mohm
Dimensions	28x32 mm
Shaft diameter	3 mm

Weight	59 g/2.08oz.
Recommended model weight	300-800 g
Recommended prop without gearbox	8"-10"




EMAX BL2810

This is a high torque brushless motor with rotating drum and high power magnets suitable for models of 400-500 size, and up to 1400g in weight. The hardened steel 5mm diameter shaft and is supported by three ball bearings. Due to it's high torque characteristics this motor is capable of turning large propellers with a high level of efficiency and without the need for a gearbox. Includes all mounting hardware, 3 gold connectors and Prop adapter.



BL2810 KV= 1100 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2810	12.0V	11X5.5(Thin)	8500	32A	1150g
BL2810	12.0V	11X7(Thin)	8050	38A	1260g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
 TRAINER	1100g./28oz.	3S 2250mAH	EMAX 40A	11X5.5(SLOW)
 3D	750g./26.5oz.	3S 2250mAH	EMAX 40A	10X4.7(Slow) 11X3.8(Slow)
 AEROBATIC	900g./14oz.	4S 2250mAH	EMAX 40A	11X7(Thin) 11X5.5(Thin)

Specifications	
No. Of cells	3x Li-Poly
Max. efficiency	82%
Max. efficiency current	8 - 13 A (>75%)
No load current / 10 V	0,5 A
Current capacity	40 A/60s
Dimensions	38x32mm
Shaft diameter	5 mm
Weight	86 g/3.03oz.
Recommended model weight	300-800 g
Recommended prop without gearbox	10"-11"




EMAX BL2815

This is a high torque brushless motor with rotating drum and high power magnets suitable for models of 400-500 size, and up to 1400g in weight. The hardened steel 5mm diameter shaft and is supported by three ball bearings. Due to it's high torque characteristics this motor is capable of turning large propellers with a high level of efficiency and without the need for a gearbox. Includes all mounting hardware, 3 gold connectors and Prop adapter.



BL2815 KV= 920 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2815	12.0V	11X7(Thin)	8360	39A	1420g
BL2815	14.0V	11X7(Thin)	9010	50A	1730g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
	1700g./60oz.	3S 3500mAH	EMAX 60A	11X5.5(SLOW)
	1100g./39oz.	4S 3500mAH	EMAX 60A	11X7(Thin) 11X4.8(Slow)
	1500g./53oz.	4S 3500mAH	EMAX 60A	11X7(Thin) 11X5.5(Thin)

Specifications	
No. Of cells	3-4x Li-Poly
Max. efficiency	80%
Max. efficiency current	20- 30 A (>75%)
No load current / 10 V	1,7 A
Current capacity	40 A/60s
Dimensions	38x36 mm
Shaft diameter	5 mm
Weight	112 g/3.9oz.
Recommended model weight	1000-1400 g
Recommended prop without gearbox	10"-11"




EMAX BL2820


This is a high torque brushless motor with rotating drum and high power magnets suitable for models of 600-700 size, and up to 1600g in weight. The hardened steel 5mm diameter shaft and is supported by three ball bearings. Due to it's high torque characteristics this motor is capable of turning large propellers with a high level of efficiency and without the need for a gearbox. Includes all mounting hardware + adapter.



BL2820 KV= 920 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2820	12.0V	11X7(Thin)	8680	38A	1520g
BL2820	14.0V	11X7(Thin)	9580	53A	1870g
BL2820	14.0V	12X8(Thin)	8450	59A	2105g
BL2820	12.0V	12X8(Thin)	7849	49A	1730g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
	2300g./81oz.	4S 3500mAH	EMAX 60A	12X6(Thin)
	1500g./53oz.	4S 3500mAH	EMAX 60A	12X8(Thin) 11X4.8(Slow)
	2200g./77oz.	4S 3500mAH	EMAX 60A	11X7(Thin) 12X6(Thin)

	.32 - 2stroke
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Specification	
No. Of cells	3-4x Li-Poly
Max. efficiency	80%
Max. efficiency current	20- 30 A (>75%)
No load current / 10 V	2,1 A
Current capacity	45 A/60s
Dimensions	38x42 mm
Shaft diameter	5 mm
Weight	144 g/5.07oz.
Recommended model weight	1200-1600 g
Recommended prop without gearbox	10"-12"









EMAX BL2826

Brushless motors with neodymium magnets and rotating case are manufactured using advanced technologies from finest materials. Hardened steel shaft supported by three ball bearings and overall robust but lightweight construction ensure very long lifetime. The unique design of the motors gives extremely high torque allowing to rotate large diameter and pitch propellers without need of a gearbox. Optional radial mount and propeller adaptor.



BL2826 KV= 950 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL2826	14.0V	11X7(Thin)	9360	44A	1850g
BL2826	14.8V	11X7(Thin)	9820	46A	1980g
BL2826	14.0V	13X6.5(Thin)	7600	45A	2005g
BL2826	12.0V	13X6.5(Thin)	8400	61A	2650g

	 Weight g Of Model	 LiPo	 EMAX ESC	 Propeller
 TRAINER	2800g./98.8oz.	4S 4000mAH	EMAX 60A	12X6(Thin)
 3D	1800g./63oz.	4S 4000mAH	EMAX 60A	12X8(Thin) 13X6(Thin)
 AEROBATIC	2600g./92oz.	4S 4000mAH	EMAX 60A	12X8(Thin) 13X6(Thin)
 GLOW ENGINE	.40 - 2stroke .60 - 4stroke			





Specifications	
No. Of cells	3-4x Li-Poly
Max. efficiency	86%
Max. efficiency current	20- 30 A (>78%)
No load current / 10 V	2,1 A
Current capacity	45 A/60s
Dimensions	38x48 mm
Shaft diameter	5 mm
Weight	182 g/6.41oz.
Recommended model weight	1700-2600 g

EMAX BL4020

Brushless motors with neodymium magnets and rotating case are manufactured using advanced technologies from finest materials. Hardened steel shaft supported by three ball bearings and overall robust but lightweight construction ensure very long lifetime. The unique design of the motors gives extremely high torque allowing to rotate large diameter and pitch propellers without need of a gearbox. Optional radial mount and propeller adaptor.

BL4020 KV= 520 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL4020	21V	13X8(Thin)	10130	44A	4650g
BL4020	17V	13X8(Thin)	8250	31A	3260g
BL4020	22V	12X8(Thin)	10800	42A	4200g
BL4020	17V	14X7(Thin)	8600	43A	3607g

	Weight g Of Model	LiPo	EMAX ESC	Propeller
 TRAINER	4500g./160oz.	5S 4000mAH	EMAX 80A	14X7(Thin)
 3D	2600g./92oz.	6S 5000mAH	EMAX 100A	13X8(Thin) 14X7(Thin)
 AEROBATIC	3600g./127oz.	6S 4000mAH	EMAX 80A	13X8(Thin) 13X6(Thin)
 GLOW ENGINE	.54 -2stroke .75 - 4stroke			

Specifications	
No. Of cells	4-7x Li-Poly
Max. efficiency	86%
Max. efficiency current	20- 40 A (>78%)
No load current / 10 V	2,1 A
Current capacity	45 A/60s
Dimensions	40x20 mm
Shaft diameter	6 mm
Weight	236g/8.32oz.
Recommended model weight	2000-4500 g
Recommended prop without gearbox	13"-15"









EMAX BL4030

These brushless motors with neodymium magnets and rotating case are manufactured using advanced technologies from finest materials. Hardened steel shaft supported by three ball bearings and overall robust but lightweight construction ensure very long lifetime. The unique design of the motors gives extremely high torque allowing to rotate large diameter and pitch propellers without need of a gearbox. Optional radial mount and propeller adaptor.



BL4030 KV= 385 Performance Chart

Model	Voltage	Propeller	RPM	Max Current	Max Trust
BL4030	21V	13X8(Thin)	11450	50A	5150g
BL4030	17V	13X8(Thin)	8650	40A	3860g
BL4030	24V	14X7(Thin)	9100	51A	4100g


	 Weight Of Model	 LiPo	 EMAX ESC	 Propeller	
 TRAINER	5500g./190oz.	5S 4000mAh	EMAX 80A	14X7(Thin)	
 3D	3000g./105oz.	6S 5000mAh	EMAX 100A	13X11(Thin) 14X7(Thin)	
 AEROBATIC	4000g./140oz.	6S 4000mAh	EMAX 80A	13X11(Thin) 13X6(Thin)	
 GLOW ENGINE	.60 -2stroke .80 - 4stroke				

Specifications	
No. Of cells	4-7x Li-Poly
Max. efficiency	86%
Max. efficiency current	20- 40 A (>78%)
No load current / 10 V	2,1 A
Current capacity	50 A/60s
Dimensions	40x30 mm
Shaft diameter	6 mm
Weight	325g/11.5oz.
Recommended model weight	3000-6000 g
Recommended prop without gearbox	13"-16"

EMAX BL5335

These brushless motors with neodymium magnets and rotating case are manufactured using advanced technologies from finest materials. Hardened steel shaft supported by three ball bearings and overall robust but lightweight construction ensure very long lifetime. The unique design of the motors gives extremely high torque allowing to rotate large diameter and pitch propellers without need of a gearbox. Optional radial mount and propeller adaptor.



BL5335 KV= 230 Performance Chart					
Model	Propeller	RPM	Max Current	Max Thrust	
BL5335	22X10	7200	78A	10.6kg	
BL5335	20X12	7600	73A	8.3kg	
Specifications					
No. Of cells				10x Li-Poly	
Max. efficiency				86%	
No load current / 10 V				2,1 A	
Current capacity				75 A/60s	
Dimensions				53x36 mm	
Shaft diameter				8 mm	
Weight				668g/23.5oz.	
Recommended model weight				5-10kg	
Recommended prop without gearbox				20'-22'	
 GLOW ENGINE				.180 -2stroke .200 - 4stroke	

EMAX HL2215

HL2215/450 is for electric helicopters- 450 class, it is designed especially for 3D flying with lots of power and a cooling fan included.



Specification	
No. Of cells	3-4x Li-Poly
RPM/V	3850
Max. efficiency current	8 - 10.5 A (>75%)
No load current / 10 V	0,5 A
Current capacity	40 A/60 s
Dimensions	22x15 mm
Shaft diameter	3 mm
Weight	59 g
Recommended model weight	450 class Ele. Heli.
Recommended prop without gearbox	6"-8"

Choose Matching EMAX Adaptors and Accessories, ESC's and LiPo Batteries.....



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Type Model	Specifications for 20C	Dimensions (L x W x D)	Weight
LP20-800-2	20C, 800 mAh - 2s1p - 2 cell - 7.4V	62X35X11mm (2.44X1.37X0.4in)	1.24oz (35g)
LP20-800-3	20C, 800 mAh - 3s1p - 3 cell - 11.1V	62X35X14mm (2.44X1.37X0.5in)	1.76oz (50g)
LP20-1000-2	20C, 1000 mAh - 2s1p - 2 cell - 7.4V	62X35X11mm (2.44X1.37X0.4in)	1.87oz (53g)
LP20-1000-3	20C, 1000 mAh - 3s1p - 3 cell - 11.1V	62X35X16mm (2.44X1.37X0.6in)	2.75oz (78g)
LP20-1300-2	20C, 1300 mAh - 2s1p - 2 cell - 7.4V	80X32X11mm (3.15X1.26X0.4in)	2.33oz (66g)
LP20-1300-3	20C, 1300 mAh - 3s1p - 3 cell - 11.1V	80X32X15mm (3.15X1.26X0.5in)	3.42oz (97g)
LP20-1600-2	20C, 1600 mAh - 2s1p - 2 cell - 7.4V	96X34X11mm (3.77X1.33X0.4in)	3.14oz (89g)
LP20-1600-3	20C, 1600 mAh - 3s1p - 3 cell - 11.1V	96X34X16mm (3.77X1.33X0.6in)	4.62oz (131g)
LP20-1800-3	20C, 1800 mAh - 3s1p - 3 cell - 11.1V	96X34X17mm (3.77X1.33X0.6in)	5.86oz (166g)
LP15-2250-3	15C, 2250 mAh - 3s1p - 3 cell - 11.1V	96X34X18mm (3.77X1.33X0.7in)	5.86oz (166g)

All EMAX ESC's have the following Features and Programming Functions-

Safety Arming Feature: Regardless the Throttle Stick position, the motor will not run after the battery is connected. This will avoid any injuries.

Throttle Calibration: Throttle range can be configured to provide best throttling linearity, fully compatible with all available transmitters.

Programmable Features (Program card Available) -

Brake Settings : brake enabled / brake disabled, default is brake disabled

Battery Type : Li-xx(Li-ion or Li-poly) / Ni-xx(NiMH or Nicd), default is Li-xx.

Low Voltage Protection Mode (Cutoff Mode) : power reducing / power cutoff, default is power reducing.

Low Voltage Protection Threshold (Cutoff Threshold) : low / medium / high, default is medium cutoff voltage. For Li-xx battery, number of battery cells are judged automatically, low / medium / high cutoff voltage for each cell are: 2.6V/2.85V/3.1V. For example: 3 Cells Li-Poly, when medium cutoff voltage is set, the cutoff voltage is: $2.85 \times 3 = 8.55V$. For Ni-xx battery, low / medium / high cutoff voltages are 0/45%/60% of the startup voltage. (0% means the low voltage cutoff function is disabled). For example: 10 cells NiMH battery, fully charged voltage is $1.44 \times 10 = 14.4V$, when medium cutoff voltage is set, the cutoff voltage is : $14.4 \times 45\% = 6.5V$

Startup mode: normal / soft / super-soft, default is normal startup.

Timing: low / medium / high, default is medium timing. In normal cases, low timing can be used for most motors. But for high efficiency, we recommend the Low timing for 2 poles motor and Medium timing for 6 poles and above. For higher speed, High timing could be used.

ESC. Protection Features: Low-voltage cutoff protection / over-heat protection / throttle signal lost protection .

Design Features - Capacitors with extremely low resistance used on voltage input section, this will improve the ability to prevention unwanted RF Noise / Interference during flying. Extreme low resistance, super high current endurance. Microprocessor and BEC use separate voltage regulator IC, with good anti-jamming capabilities.

