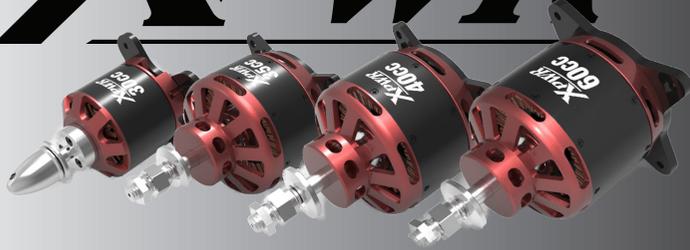


XPWR



EXTREME FLIGHT X

770-887-1794

30CC-60CC Brushless Outrunner Motors

30CC-60CC Brushless Outrunner Motors Instructions and Data

THIS IS NOT A TOY! Serious injury, destruction of property, or even death may result from the misuse of this product. Extreme Flight RC will in no way accept or assume responsibility or liability for damages resulting from the use of this user assembled product. This model aircraft component should be used in accordance with the AMA safety code. It is highly recommended that you join the Academy of Model Aeronautics in order to be properly insured and operate your model at AMA sanctioned flying fields only. If you are not willing to accept ALL liability for the use of this product, please return it to the place of purchase immediately. Extreme Flight RC, Ltd. guarantees this product to be free of defects in materials and workmanship for a period of One Year from the date of purchase. All warranty claims must be accompanied by the original dated receipt. This warranty is extended to the original purchaser of the product only. This warranty does not cover crash damage or simple overheating of the motor. The maximum operating temperature of these motors is 175F or 80C on the outside surface. PLEASE BE CAREFUL - these temperatures can cause burns to human skin, don't attempt to measure motor temperature with your fingers.

Motor Applications

The XPWR 30CC-60CC range of motors is intended to provide stellar performance in your 3D aerobatic aircraft. "Stellar" performance, in our opinion, is 250 watts of power per pound of aircraft weight or higher. Properly applied, your XPWR motor will provide this level of performance. Applications:

- XPWR 30CC motor - 3D Aerobatic aircraft 10 to 11 pounds, such as the 3DHobbyShop 74" Edge and 75" Extra.
- XPWR 35CC Motor - 3D Aerobatic aircraft 11 to 13 pounds, such as the ExtremeFlight 74" Laser and Edge 540.
- XPWR 40CC Motor - 3D Aerobatic aircraft 12 to 15 pounds, such as the ExtremeFlight 76" MXS and 78" Extra.
- XPWR 60CC motor - 3D Aerobatic aircraft 16 to 20 pounds, such as the ExtremeFlight 91" Yak 54 and Extra.

Electronic Speed Controls and Lipo Batteries

Your XPWR motor must be paired with an appropriate brushless electronic speed control. Due to the wide variety and changing nature of speed controls, we cannot test every combination and therefore make no guarantees as to compatibility between our motors and any specific ESC. Our testing was conducted on CastleCreations speed controls with version 4.22 firmware and stock ESC settings. *It is your responsibility to determine the cut-off settings programmed into your ESC. Avoid a crash caused by an unexpected motor cutoff by understanding your ESC and how to set its cutoff values for voltage and amperage.* We recommend the following ESC ratings and batteries:

- XPWR 30CC motor - 80 amp speed controller minimum, 12S 3000-3700mah lipo recommended
- XPWR 35CC Motor - 120 amp speed controller minimum, 12S 3700-4000mah lipo recommended
- XPWR 40CC Motor - 120 amp speed controller minimum, 12S 4400-5200mah lipo recommended
- XPWR 60CC motor - 160 amp speed controller minimum, 12S 5000-6000mah lipo recommended

Prop selection and temperature

Just as with a gasoline engine, cooling of your XPWR brushless outrunner motor is important, particularly when flying in hot weather. We recommended installing flow directors into your airplane's cowl to direct cooling air onto your motor. Provide adequate cooling air exit holes in your cowl and fuselage. The maximum operating temperature of your motor is 80C or 175F. Heating is caused by load - the larger the prop and more time you spend at full throttle during a flight, the hotter your motor will become. We provide a range of prop recommendations. The largest prop is intended for 3D flight where full-throttle is used intermittently. If you are sport flying the motor or spending most of the flight at or near full throttle, use the smallest prop recommendation. It is your responsibility to make sure your motor is not too hot, and choose the appropriate prop for your conditions. At any point, if you need to reduce motor temperature, use a smaller propeller. NOTE: the maximum operating temperature of these motors is more than sufficient to cause burns to human skin. *Do NOT attempt to measure your motor's temperature by touching it.* Infrared temperature sensors are widely available and are usually inexpensive.

XPWR 30CC motor - 17x10,18x10, 19x8, or 20x8

Because of differences in batteries, props, and atmospheric conditions, amp and wattage numbers are variable. However, in general, we expect approximately 65 amps peak for 3d flight on the 30CC motor, and approximately 3000W peak. Note, this is for 3d flight, where full throttle is intermittent. If you need to reduce current draw on any motor to keep temperature under the maximum of 175F, use a smaller size prop.

XPWR 35CC Motor - 19x10, 20x10, or 21x10

in general, we expect approximately 75 amps peak for 3d flight on the 30CC motor, and approximately 3500W peak. Note, this is for 3d flight, where full throttle is intermittent.

XPWR 40CC Motor - 20x10, 21x10, 21x12, or 22x10

in general, we expect approximately 90 amps peak for 3d flight on the 40CC motor, and approximately 4100W peak. Note, this is for 3d flight, where full throttle is intermittent.

XPWR 60CC motor - 22x10, 23x10, 24x10, or 24x12

in general, we expect approximately 130 amps peak for 3d flight on the 60CC motor, and approximately 6000W peak. Note, this is for 3d flight, where full throttle is intermittent.

Warranty and Service

If you need your motor serviced, or you need it inspected for a potential warranty claim, please send the motor to Extreme Flight RC Ltd. in the USA. Outside of the USA, please inquire of your dealer for the correct procedure to obtain service.

NOTE: In the USA *PLEASE REFER TO THE EXTREME FLIGHT WEBSITE www.ExtremeFlightRC.com FOR INSTRUCTIONS AND ADDRESS TO SEND THE MOTOR FOR INSPECTION*. The address we direct you to may change depending on our service center and may not be the same as our office address. Please refer to the website for the latest information, or call us at 770-887-1794 for the service address.

Note that warranty service is available to the original purchaser of the product only, for a period of one year, and does not cover crash damage or simple overheating. To have your motor inspected for service of any kind, you will need to ship your motor to us via a carrier that offers tracking information. We cannot be responsible for lost packages en route to us.

Data

Motor	Kv	weight(g)	Inductance(uH)	Resistance (mΩ)	Io (8.4V)
30CC	214	536	94.5	53.3	1.2A
35CC	221	774	35.4	23.7	2.1A
40CC	200	871	32.4	21.0	2.2A
60CC	190	1168	21.3	14.8	3.0A

What about service?

Extreme Flight offers complete service on our XPWR motors. Whether your motor is still under factory warranty, or the warranty period has expired, we can service it for you. Service during the warranty period, for conditions covered by the warranty, is done free-of-charge. You will need to pay for shipping for your motor from your location to our service center. **PLEASE NOTE:** that our service center is not currently located at our warehouse headquarters. Our current service address is:

XPWR service
C/o Ben Fisher
13728 CR 468
Tyler, TX 75704

YOU MUST use a shipping method which provides a tracking number. We cannot and will not be responsible for lost packages on their way to us. If the carrier loses your package on the way to our facility, the matter is between you and the carrier. **YOU MUST INCLUDE** the following with your motor when returning it for any service:

Your name
Your Email address
Your phone number
Your shipping address

Please type! Handwriting often leads to errors.

If your motor is outside the warranty period, or if you are not the original purchaser, or if the damage is not covered by warranty, such as:

CRASH DAMAGE or OVERHEATING

...we can still repair your motor for you, and we will do so as inexpensively as possible. Our repair facility can replace any individual part of your motor. If your motor is not being repaired under warranty, we will provide you with an estimate for repairs before proceeding, and we will include return shipping in the total charges.

Testing:

We test all motors after any service to determine proper operation and power output. We won't ship out any motor until it has met our standards and runs just like new.

Time and schedule:

We attempt to complete all service on a motor within one week of receiving it. Sometimes, we are required to travel to China or to an extended RC event such as Joe Nall, and this can result in delayed service.