



BL15 Ducted Fan Brushless Motor Instructions

Thank you for purchasing the E-flite BL15 DF Brushless Motor. This motor is an ideal choice for products such as E-flite's BAe Hawk 15 DF and other similar sized ducted fan airplanes when using the purpose-built Delta-V 15 69mm EDF (EFLDF15). The motor will provide great performance in 68-70mm diameter fan units requiring a 28mm inrunner motor.

BL15 DF Motor Features:

- Purpose-built for the Delta-V 15 69mm EDF (EFLDF15)
- Ideal for 68-70mm EDF units requiring a 28mm diameter inrunner motor
- Ideal for up to 750 input watts
- High-quality construction with ball bearings and hardened steel shaft
- 6-pole design

BL15 DF Specifications

Diameter: 28mm (1.10 in)

Case Length: 40mm (1.56 in)

Weight: 106g (3.7 oz)

Shaft Diameter: 4mm (.16 in)

EFLM3015DF

Kv: 3600 (rpms per volt)

I_o: 2.80A @ 10V (no load current)

R_i: .02 ohms (resistance)

Continuous Current: 46A*

Max Burst Current: 55A*

Cells: 3S-4S Li-Po or 10-14 Ni-MH/Ni-Cd

Recommended Ducted Fan Unit: Delta-V 15 69mm EDF (EFLDF15)

Static Thrust: 1.7 lbs on 3S (11.1V) – using recommended Delta-V 15

2.8 lbs on 4S (14.8V) – using recommended Delta-V 15

RPM: 31,000 on 3S (11.1V) – using recommended Delta-V 15

40,000 on 4S (14.8V) – using recommended Delta-V 15

Brushless ESC: 50A – 60A

* Maximum Operating Temperature: 220 degrees Fahrenheit

* Adequate cooling is required for all motor operation at maximum current levels.

* Maximum Burst Current duration is 15 seconds. Adequate time between maximum burst intervals is required for proper cooling and to avoid overheating the motor.

* Maximum Burst Current rating is for full high power and limited motor run flights. Lack of proper throttle management may result in damage to the motor since excessive use of burst current may overheat the motor.

Battery Choices:

EFLB32003S 3S 11.1V 3200mAh Li-Po, 13AWG

THP33003SXV 3S 11.1V 3300mAh Li-Po, 13AWG eXtreme V2 Series

THP26004SXV 4S 14.8V 2600mAh Li-Po, 13AWG eXtreme V2 Series

There are many Li-Po battery brands on the market with several choices for consumers. We recommend either E-flite or Thunder Power batteries and list some possible choices for the BL15 DF Brushless Motor, depending on the airplane application.

Examples of Airplane Setups:

E-flite BAe Hawk 15 DF ARF (EFL7050)

Comments – Sport scale performance on 3S, with increased vertical performance when using 4S.

Weight w/Battery: 43-46 oz (1220-1305g)

Ducted Fan Unit: Delta-V 15 69mm EDF (EFLDF15)

Battery: 3200mAh 3-Cell 11.1V Li-Po (EFLB32003S)

ESC: 60A Pro SB Brushless (EFLA1060)

Accessories and Spare Parts:

See our web site at www.E-fliteRC.com or www.horizonhobby.com for our complete line of brushless motors. We have posted a specification comparison sheet on our web site so you can compare the different motors we offer.

EFLDF15 Delta-V 15 69mm EDF

EFLDF153 Center Body Fairing, 28mm: EDF

NOTE: The Center Body Fairing (tail cone) is a great accessory item for 28mm motors used in EDF units. It is included with our E-flite Delta-V 15

EFLA1060 60A Pro SB Brushless ESC

EFLA110 Power Meter (measures power output in amps, volts, watts, and capacity)

EFLA241 Bullet Connector Set, Gold, 3.5mm (3)

Operating Instructions:

1. This brushless motor requires the use of a sensorless brushless speed control. Failure to use the correct speed control may result in damage to the motor and/or speed control.
2. When mounting the motor, be sure the correct length of screws (5mm) are used so damage to the inside of the motor will not occur. **The use of long screws will damage the motor.**
3. You may connect the three motor wires directly to the controller with solder or use connectors such as gold plated brushless bullet connectors (EFLA241), which will also need to be soldered properly to your wires. The three motor wires can be connected in any order to the three output wires or output port on a sensorless brushless speed control. Be sure to use heat shrink tubing to properly insulate the wires so the wires will not short. Shorting may damage the motor and speed control.
4. If you add connectors and or you no longer wish to use them, never cut the motor wires. Remove them by properly de-soldering them. Shortening the motor wires is considered an improper modification of the motor and may cause the motor to fail.
5. When you connect the motor to the esc, check the rotation direction of the motor. If you find the rotation is reversed, switching any two motor wires will reverse the direction so the motor rotates properly.
6. Proper cooling of the motor is very important during operation. New technology has brought much higher capacity batteries with higher discharge rates, which can cause extreme motor temperatures during operation. It is the responsibility of the user to monitor the temperature and prevent overheating. Overheating of the motor is not covered under any warranty.
7. You can install the rotor/propeller on the motor shaft after you have confirmed proper rotation direction. Also consult the instruction included with your sensorless electronic speed control for proper adjustments and timing.
8. Once the battery is connected to the motor, please use extreme caution. Stay clear of the propeller/ducted fan rotor during operation. Spinning propellers/rotors are very dangerous as the motors produce high amounts of torque.
9. Never disassemble the motor. This will void any warranty.

Motor Safety Precautions:

The motor will be used in an EDF unit that contains a rotating part so use extreme caution. Please read the warning information included with your fan unit / propellers for safety information related to the operation of motors with propellers. Failure to comply with these warnings and/or improper use of propellers or EDF units may result in serious injury.

Limited Warranty Period

Horizon Hobby, Inc. guarantees this product to be free from defects in both material and workmanship for a period of 1 year from the date of purchase.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

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HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions:

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs:

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as **Horizon is not responsible for merchandise until it arrives and is accepted at our facility**. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. **Please note: non-warranty repair is only available on electronics and model engines.**

Motors requiring inspection or repair should be shipped to the following address (freight prepaid):

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

Please call 877-504-0233, or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

United Kingdom:
Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Southern Way
Harlow, Essex CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or email us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

Germany:
Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
GERMANY

Please call +49 4121 46199 66 or email us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

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www.E-fliteRC.com

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Instructions for Disposal of WEEE by Users in the European Union This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to as designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

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