



BL32 Ducted Fan 2150 Kv Brushless Motor Instructions

Thank you for purchasing the E-flite BL32 DF Brushless Motor. This motor is an ideal choice for products such as E-flite's Habu 32 DF and other similar sized ducted fan airplanes when using the purpose-built Delta-V 32 80mm EDF (EFLDF32). The motor will provide great performance in 80mm diameter fan units requiring a 28mm inrunner motor.

BL32 DF 2150Kv Motor Features:

- Purpose-built for the Delta-V 32 80mm EDF unit (EFLDF32)
- Ideal for 80mm EDF units
- Up to 1,400 continuous input watts or 1,665 maximum burst
- High-quality construction with ball bearings and hardened steel shaft
- Includes mounting hardware
- 6-pole design

BL32 DF Specifications

Diameter: 28.0mm (1.10 in)

Case Length: 52.0mm (2.00 in)

Weight: 162g (5.70 oz)

Shaft Diameter: 5mm

EFLM3032DFA

Kv: 2150 (rpms per volt)

I_o: 2.60A @ 20V (no load current)

R_i: 0.026 ohms (resistance)

Continuous Current: 65A*

Max Burst Current: 75A*

Cells: 4S-6S Li-Po or 14-18 Ni-MH/Ni-Cd

Recommended Ducted Fan Unit: Delta-V 32 80mm EDF (EFLDF32)

Brushless ESC: 70A – 80A

Installed Data*

Installed Static Thrust: 4.50 lbs

RPM: 38,500

Watts: 1,400

Current: 62A

* Data measured installed in Habu 32 DF using E-flite Delta-V 32 80mm EDF & 6S 5000mAh 30C Battery (EFLB50006S30).

Static Data*

Static Thrust: 5.40 lb on 6S (21.9V)

RPM: 39,640 on 6S (21.9V)

Watts: 1,160 on 6S (21.9V)

Current: 53A on 6S (21.9V)

*Data measured in lab conditions using E-flite Delta-V 32 80mm EDF with bell mouth intake and tail pipe measuring 159mm in length with 72.0mm exit diameter

* 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:

EFLB50006S30	5000mAh 6S 22.2V 30CLi-Po, 10AWG EC5
EFLB50006S50	5000mAh 6S 22.2V 50CLi-Po, 10AWG EC5
THP50006SP45	5000mAh 6C/6S 22.2V G4 Pro Power 45C Li-Po

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 BL32 DF Brushless Motor, depending on the airplane application.

Examples of Airplane Setups:

E-flite Habu 32 DF ARF (EFL8075)

Comments – High performance ducted fan on 6S

Weight w/Battery: 7.05 - 7.40 lb (3.20 - 3.35 kg)

Ducted Fan Unit: Delta-V 32 80mm EDF (EFLDF32)

Battery: 5000mAh 6S 22.2V Li-Po (EFLB50006S30)

ESC: 80A Pro SB Brushless (EFLA1080)

Accessories and Spare Parts:

See our web site at www.E-fliteRC.com or www.horizonhobby.com for our complete line of brushless motors.

EFLDF32 Delta-V 32 80mm 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 32

EFLA1080 80A Pro Switch-mode BEC Brushless ESC

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

EFLA249 Bullet Connector Set, Gold, 4mm (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 (EFLA249), 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.

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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 cashier's 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.

Items requiring inspection or repair should be shipped to one of the following addresses (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
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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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.

Age Recommendation: Not for children under 14 years. This is not a toy.

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