



Brushless Motors Comparison

Park 370 Brushless Motor Features:

- Upgrade for your Speed 280 and Speed 370 applications
- Excellent Motor for small airplanes between 10 oz – 14 oz (280 g – 400 g)
- Adapter plate included for mounting to GWS and E-flite style gearboxes
- Prop adapter and gold-plated connectors included
- Slotless 2-pole design

Park 370 Specifications

Diameter: 20mm (.80 in.)
Case Length: 30mm (1.2 in.)
Weight (no gearbox): 48g (1.7 oz.)
Shaft Diameter: 2mm (.08 in)

EFLM1000

Kv: 4100 (rpms per volt)
Ic: 1A @10V (no load current)
Ri: .1ohms (resistance)
Continuous Current: 8A*
Max Burst Current: 13A*
Cells: 6-10 NiCd/NiMh or 2-3 Li-Po
Recommended Gearbox: 6.6:1
Recommended Props: 9x6 to 12x6
Brushless ESC: 10- to 25-Amp (EFLA311)
Includes: 10T & 12T Pinion Gears
E-flite Plane: Tribute, Ultimate, Yak 54F

EFLM1005

Kv: 5400 (rpms per volt)
Ic: 1.3A @10V (no load current)
Ri: .12ohms (resistance)
Continuous Current: 10A*
Max Burst Current: 15A*
Cells: 4-8 NiCd/NiMh or 2 Li-Po
Recommended Gearbox: 5.33:1 or 6.6:1
Recommended Props: 9x4.7 to 12x6
Brushless ESC: 10- to 25-Amp (EFLA311)
Includes: 10T & 12T Pinion Gears
E-flite Plane: none recommended

EFLM1010

Kv: 3600 (rpms per volt)
Ic: .8A @10V (no load current)
Ri: .29 ohms (resistance)
Continuous Current: 7A*
Max Burst Current: 11A*
Cells: 6-10 NiCd/NiMh or 2-3 Li-Po
Recommended Gearbox: 5.33:1
Recommended Props: 9x4.7 to 11x4.7
Brushless ESC: 10- to 25-Amp (EFLA311)
Includes: 10T & 12T Pinion Gears
E-flite Plane: Gypsy

* Maximum Operating Temperature: 220 degrees Fahrenheit

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

* Maximum Burst Current duration is 5 seconds. Adequate time between maximum burst intervals is required.

Tech Tips: Prop recommendations are general guidelines only. Whenever two gearboxes are specified, smaller prop sizes should be used with lower gear ratios and larger props used with higher gear ratios. Be sure to check actual current draw with your chosen set-up before the first flight to insure it falls within the recommended range of operating current. Any time you operate at the maximum prop size you must also make sure you use proper throttle management and monitor your motor temperature and watts accordingly.

4100 Kv Notes: This motor is the perfect combination to provide the Tribute and Ultimate 3D profile models with the power and efficiency they need to perform 3D. We suggest the 12x6 prop for best performance, but be aware proper throttle management is required.

5400 Kv Notes: Used most on higher gear ratios such as a 6.6:1 gearbox with a 12x6 prop and 2-Cell Li-Po battery. This is not recommended for a 3-cell Li-Po use. Choosing the right prop is very important for this motor and can make a difference in performance and life of the motor.

3600 Kv Notes: This motor is ideal for our Gypsy when using the 5.33:1 gearbox and 10 x 4.7 prop that comes with this plane. It will provide you with more power and improved efficiency compared to the stock motor included with the Gypsy.

Park 400 Brushless Motor Features:

- Upgrade for your Speed 400 applications
- Excellent motor for small airplanes between 12 oz – 26 oz (340 g – 740 g)
- Adapter plate included for mounting to GWS and E-flite style gearboxes
- Prop adapter and gold-plated connectors included
- Slotless 2-pole design

Park 400 Specifications

Diameter: 20mm (.80 in.)
Case Length: 40mm (1.6 in.)
Weight (no gearbox): 68 g (2.4 oz)
Shaft Diameter: 2mm (.08 in)

EFLM1100

Kv: 4200 (rpms per volt)
Ic: 1.8A @ 10V (no load current)
Ri: .24 ohms (resistance)
Continuous Current: 18A*
Max Burst Current: 24A*
Cells: 6-10 NiCd/NiMh or 2-3 Li-Po
Recommended Gearbox: 6.6:1
Recommended Props: 10x4.7 to 12x6
Brushless ESC: 20- to 25-Amp (EFLA311)
Includes: 10T & 12T Pinion Gears
E-flite Plane: Mini Funtana, Mini Edge

EFLM1105

Kv: 3700 (rpms per volt)
Ic: .8A @10V (no load current)
Ri: .11 ohms (resistance)
Continuous Current: 15A*
Max Burst Current: 20A*
Cells: 6-10 NiCd/NiMh or 2-3 Li-Po
Recommended Gearbox: 5.33:1 or 6.6:1
Recommended Props: 9x7 to 12x6
Brushless ESC: 20- to 25-Amp (EFLA311)
Includes: 10T & 12T Pinion Gears
E-flite Plane: Mini Funtana, Mini Edge

* Maximum Operating Temperature: 220 degrees Fahrenheit

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

* Maximum Burst Current duration is 5 seconds. Adequate time between maximum burst intervals is required.

Tech Tips: Prop recommendations are general guidelines only. Whenever two gearboxes are specified, smaller prop sizes should be used with lower gear ratios and larger props used with higher gear ratios. Be sure to check actual current draw with your chosen set-up before the first flight to insure it falls within the recommended range of operating current. Any time you operate at the maximum prop size you must also make sure you use proper throttle management and monitor your motor temperature and watts accordingly.

4200 Kv Notes: A recommended motor for the Mini Funtana, the 4200Kv motor and 6.6:1 gearbox with a 12x6 prop should only be used by experienced pilots who manage throttle appropriately. This motor will provide even better vertical performance at the expense of flight duration due to the increased current draw. It is extremely important to monitor gearbox wear and motor temperature when using the 4200Kv motor. Lack of proper throttle management using this motor may result in damage to the motor, gearbox, esc, and battery.

3700 Kv Notes: An alternative motor for the Mini Funtana and other similar airplanes, the 3700Kv motor provides plenty of power for sport and entry level 3D pilots with the ability to hover and climb vertically using the stock 6.6:1 gearbox and 12 x 6 propeller. This motor will draw less current and provide longer flight duration.

Park 370 Outrunner Features:

- Upgrade your Speed 280 and Speed 370 applications
- Excellent motor for small 3D airplanes 7 oz – 14 oz (200 g – 400 g)
- Motor mount included
- Prop adapter and gold-plated connectors included
- Slotted 12-pole outrunner design

Park 370 Outrunner Specifications

Diameter: 28 mm (1.1 in)
Case Length: 25 mm (1 in)
Weight: 45 g (1.6 oz.)
Shaft Diameter: 3.2 mm (1/8 in)

EFLM1200

Kv: 1080 (rpms per volt)
I_o: .7A @ 10V (no load current)
R_i: .19 ohms (resistance)
K_t: 1.275 (in/oz per amp)
Continuous Current: 7A*
Max Burst Current: 10A*
Cells: 6-10 Ni-Cd/Ni-Mh, 2-3 Li-Po
Recommended Props: 9x4.7 to 10x4.7
Brushless ESC: 10- to 25-Amp
E-flite Plane: Tensor 4D

EFLM1205

Kv: 1360 (rpms per volt)
I_o: 1A @10V (no load current)
R_i: .1 ohms (resistance)
K_t: 1.010 (in/oz per amp)
Continuous Current: 9A*
Max Burst Current: 13A*
Cells: 6-8 Ni-Cd/Ni-Mh, 2 Li-Po
Recommended Props: 8x6 to 10x4.7
Brushless ESC: 10- to 25-Amp
E-flite Plane: Tensor 4D

* Maximum Operating Temperature: 220 degrees Fahrenheit
* Adequate cooling is required for all motor operation at maximum current levels.
* Maximum Burst Current duration is 5 seconds. Adequate time between maximum burst intervals is required.

Tech Tips: Prop recommendations are general guidelines only. As a general suggestion, you will want to use smaller props with higher cell counts and larger props with lower cell counts. Be sure to check actual current draw with your chosen set-up before the first flight to insure it falls within the recommended range of operating current. Any time you operate at the maximum prop size you must also make sure you use proper throttle management and monitor your motor temperature and watts accordingly.

1080 Kv Notes: Saving weight by eliminating the need for a gearbox makes the small outrunners the popular choice for small indoor foam 3D models. This is the recommended Outrunner for the E-flite Tensor with 2-cell Li-Po batteries that will provide the most efficient and longest run-time. For more vertical power, we suggest you use a 3-cell Li-Po battery, but your run-time will be reduced. This motor is also ideal on other small 3D foam airplane such as the Ikarus Shockflyer series.

1360 Kv Notes: Saving weight by eliminating the need for a gearbox makes the small outrunners the popular choice for small indoor foam 3D models. This motor can also be used with the Tensor 4D and other small indoor 3D foamies. However, it is recommended for 2-cell use only. You will find you have more power with a 2-cell Li-Po battery than the 1080 Kv motor but run-time will be much less.

Park 400 Outrunner Features:

- Replacement for Speed 370 and some Speed 400 applications
- Excellent motor for small 3D and scale park flyers 10 oz – 20 oz (280 g – 560 g)
- Motor mount included
- Prop adapter (EFLM1923) and gold-plated connectors (EFLA241) included
- Slotted 12-pole outrunner design

Park 400 Outrunner Specifications

Diameter: 28 mm (1.1 in)
Length: 29 mm (1.13 in)
Weight: 56 g (2 oz)
Shaft Diameter: 3.17 mm (1/8 in)

EFLM1300

Kv: 740 (rpms per volt)
I_o: .54 @ 10V (no load current)
R_i: .26 ohms (resistance)
Continuous Current: 7A*
Max Burst Current: 10A*
Cells: 6-10 Ni-Cd/Ni-Mh, 2-3 Li-Po
Recommended Props: 10x7 to 12x3.8
Brushless ESC: 10- to 25-Amp
E-flite Plane: none specified

EFLM1305

Kv: 920 (rpms per volt)
I_o: .7A @10V (no load current)
R_i: .1 ohms (resistance)
Continuous Current: 10A*
Max Burst Current: 13A*
Cells: 6-10 Ni-Cd/Ni-Mh, 2-3 Li-Po
Recommended Props: 9x7 to 11x4.7
Brushless ESC: 10- to 25-Amp
E-flite Plane: Yak 54F

* Maximum Operating Temperature: 220 degrees Fahrenheit
* Adequate cooling is required for all motor operation at maximum current levels.
* Maximum Burst Current duration is 5 seconds. Adequate time between maximum burst intervals is required.

Tech Tips: Prop recommendations are general guidelines only. As a general suggestion, you will want to use smaller props with higher cell counts and larger props with lower cell counts. Be sure to check actual current draw with your chosen set-up before the first flight to insure it falls within the recommended range of operating current. Any time you operate at the maximum prop size you must also make sure you use proper throttle management and monitor your motor temperature and watts accordingly.

740 Notes: Saving weight by eliminating the need for a gearbox makes this outrunners the popular choice for indoor foam 3D models and scale park flyers.

920 Kv Notes: Saving weight by eliminating the need for a gearbox makes this outrunners the popular choice for indoor foam 3D models. This motor can also be used with the Yak 54F and other small indoor 3D foamies with similar weight

Hacker E-Series Features:

- Precision engineered in Germany by proven World Champions
- Excellent Motor for small airplanes between 10 oz – 18 oz (280 g – 510 g) and 3D models between 12 oz – 15 oz (340 g – 425 g)
- Specifically designed for use with Li-Po batteries (2S-3S/1200-1320mAh)
- Combines ultra-high power & super-efficient design
- State-of-the-art 2-pole slotted stator design for high power output
- Precision machine-wound stator for consistent rpms under load
- Robust all-metal construction featuring high-grade alloys throughout
- Machined heat sink fins and ventilation holes on each end bell provide excellent heat dissipation at high levels of power for maximum reliability
- Large diameter rotor for higher torque
- Multiple mounting hole spacing to fit into most GWS & E-flite™ gearboxes – 14 mm and 17 mm spacing
- Ideal for park flyers, miniature helis and Team Losi's Mini-T™

Hacker's Precision Engineering Is Competition-Proven
• 3-Time FAI F5D World Champion (2004, 2002, 2000)
• 2004 FAI F3A U.S. National Champion
• 2004 FAI F3A European National Champion

E3-37 / E3-49 Specifications

Diameter: 24 mm (.95 in)
Length: 36 mm (1.4 in)
Weight: 48 g (1.7 oz)
Shaft Diameter: 2mm (.08 in)

EFLM3000

Kv: 3700 (rpms per volt)
I_o: .9A @7.2V (no load current)
R_i: .23 ohms (resistance)
Continuous Amps: 7A*
Peak Amps: 12A*
Cells: 6-10 Ni-Cd/Ni-Mh, 2-3 Li-Po
Recommended Gearbox: 5.33:1 or 6.6:1
Recommended Props: 10x3.8 to 12x6**
Brushless ESC: 12- to 25-Amp (EFLA311)
E-flite Planes: Tribute & Ultimate

EFLM3005

Kv: 4900 (rpms per volt)
I_o: 1.4A @7.2V (no load current)
R_i: .15 ohms (resistance)
Continuous Amps: 7A*
Peak Amps: 12A*
Cells: 6-10 Ni-Cd/Ni-Mh, 2-3 Li-Po
Recommended Gearbox: 5.33:1** or 6.6:1
Recommended Props: 9x4.7 to 11x4.7
Brushless ESC: 12- to 25-Amp (EFLA311)
E-flite Planes: Tribute & Ultimate

* Maximum Operating Temperature: 220 degrees Fahrenheit

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

* Maximum Peak Current duration is 30 seconds. Adequate time between maximum peak intervals is required.

Tech Tips: Prop recommendations are general guidelines only. Whenever two gearboxes are specified, smaller prop sizes should be used with lower gear ratios and larger props used with higher gear ratios. Be sure to check actual current draw with your chosen set-up before the first flight to insure it falls within the recommended range of operating current. Any time you operate at the maximum prop size you must also make sure you use proper throttle management and monitor your motor temperature and watts accordingly.

E3-37 Notes – This motor performs best using a 1200-1320mAh or below 3-cell Li-Po battery. Most ideal set up will use the 5.33:1 gearbox and 10x4.7 prop. Ideal for all park flyers and aerobatic models under 16 ounces. The 5.33:1 gearbox with this motor will provide more power but less run time. A 6.6:1 gearbox will provide more efficient and longer flight time, but less power when you operate with 3-cell Li-Po batteries. We do not recommend you operate the 3700Kv motor with a 6.6:1 gearbox and a 2-cell Li-Po battery unless you use a larger prop (see below) or you will experience low output power. However you can still experience low output power using the larger props. This motor is a great option for use on the Tribute or Ultimate with the 6.6:1 gearbox and 12x6 prop using 3-cell Li-Po batteries. It will give you longer run times but less power than if you switch to use a 5.33:1 gearbox or use the E3-49.

*12x3.8 or 12x6 prop is needed for use with a 2-cell Li-Po battery with a 6.6:1 gearbox

E3-49 Notes – This motor performs best using a 1200-1320mAh or below 3-cell Li-Po battery. Most ideal set up will use a 6.6:1 gearbox and 10x4.7 prop for high power, good vertical and long flight. Ideal for all park flyers and aerobatic models under 16 ounces. Overall, the 6.6:1 gearbox is ideal for use with a 3-cell Li-Po battery and larger props. A 5.33:1 gearbox with 3-cell Li-Po batteries using smaller props like a 9x4.7 or 9x6 can be used on high-speed planes only, however excessive current can occur when using larger prop with this gearbox. This motor is also ideal for the Tribute and Ultimate with the 6.6:1 gearbox and 12x6 prop. It may be more powerful than if you used the E3-37 but less efficient and shorter run times.

*5.33:1 gearbox is recommended for 2-cell Li-Po use only or excessive current can occur