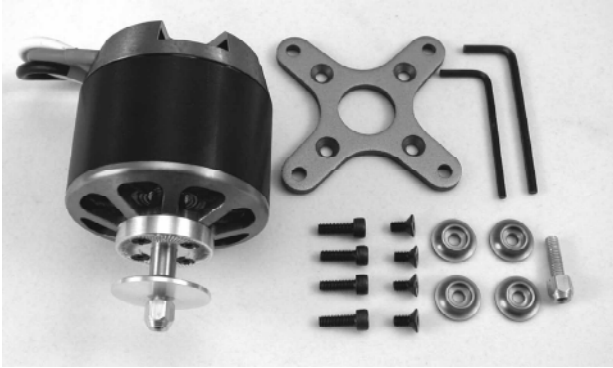


Himax Brushless Outrunner Motor

HC6330 PRO



Himax Brushless motors are manufactured to high standards for the discerning modeler. Designed for lightweight, high efficiency, high torque, and durability Himax Outrunner motors are sure to make today's radio controlled models perform. Please read the entire operating manual to ensure correct functionality and best performance. The HC6330 Pro is developed specifically for F3A pattern flying.

Accessories (included):

- 2 - M5 prop bolts with M3 & M4 center tap
- 1 - Prop washer
- 1 - Radial mount kit
- 4 - M4 mounting screws
- 4 - M4 cooling washers
- 2 - Hex Keys

Features:

High Efficiency - High Power - High Torque - Lightweight - Replacement for YS170, Plattenberg Evo 30-10 class motors

Specifications:

- Weight: 575g, (20.3oz), Motor only
- 20 Magnetic Poles
- Max Power: 2500W, (This is dependent on several factors)
- Max RPM: 10,000 RPM
- Diameter: 63mm, (2.48")
- Length: mm, 67mm(2.64")
- Shaft Diameter: 8.0mm (.315")
- Maximum Case Temperature: 65°C, (149°F)
- Mounting Pattern:
 - #1 M4x3 at 40mm dia, compatible with Plattenberg Evo 30-10
 - #2 M4x4 at 44.5mm dia, compatible with Himax HC6332 & Axi5330
- Note: Firewall to drive washer distance: 67mm, same as Plattenberg Evo 30-10

Electrical Specifications:

- Kv = 210 rpm per volt,
- Rm = .11 ohms
- Io = 2.1amps at 20V
- Efficient Operating Current = 20-75A Continuous, 80A Max 15 seconds

Operation:

1. Himax Brushless motors require brushless sensorless speed controllers. Failure to use a brushless sensorless electronic speed controller (ESC) can result in damage to the motor and/or ESC.
2. Connect the three motor wires to the three ESC output leads in any order. Check for proper motor rotation direction. If motor spins in the wrong direction, switch any **two** of the motor wires will reverse the direction. Be sure to insulate all wires and connectors to prevent shorting and/or damage to other electrical components.
3. Allow for proper motor cooling during operation. With high capacity batteries, care must be taken to prevent excessive motor temperature. Overheating of the motor is not covered under warranty. Insufficient cooling can result in overheated motors, even when operated at moderate power levels.
4. Do not disassemble the motor. Disassembling the motor voids the warranty. If service is required please return the unit to Maxx Products for service.
5. Install the propeller after proper rotation has been determined. Consult the ESC operation manual for proper arming and operating procedures. Be sure propeller is clear from any obstacles before starting the motor. Once the battery is plugged in, stay clear of the propeller; electric motors are capable of extremely high torque and can be very dangerous.
6. Verify the current draw. Excessive current draw will overheat and damage the motor. Overheating is not covered under warranty. The current must be within limits specified **at full throttle**. Verify the power consumption. Certain setups will run into the power limit before the current limit. Observe both current and power limits at full power to ensure no over limit conditions would occur. The 15-second max current rating is for 3D or limited motor run applications. Excessive use at high throttle settings when set up for the 15 second rating will overheat the motor. Allow for adequate cooling between bursts.
7. **Do not shorten the motor wires.** Shortening or cutting the motor wires voids the warranty and may cause motor failure. If the supplied connectors are not to be used, remove them by desoldering. **DO NOT CUT THE CONNECTORS OFF!**

Special note for motor mounting screws:

The included M4 mounting screws are designed for 1/4" firewall with the included special cooling washers. If cooling washers are not used or a thinner firewall is used, the mounting screw must be trimmed to proper length to ensure mounting screws will not extend too far into the motor and in contact with the motor windings. Damage to the motor winding is not repairable and is not covered under warranty.

REV: 1.2 , 10/16/2017

MAXX PRODUCTS INTERNATIONAL, INC.

815 OAKWOOD RD, UNIT D, LAKE ZURICH, IL 60047, USA

Phone: (847)438-2233 Fax: (847)438-2898 Website: www.maxxprod.com



Himax Brushless Outrunner Motor

HC6330 PRO

Recommended Accessories:

- Propeller: APC 20x15E, 20.5x14E, 21x14E or equivalent,
- ESC: Phoenix HV85, Phoenix ICE HV80, Jeti Advance Pro 77, Jeti Advance Pro 90 or equivalent,
- Battery: 10S lithium polymer battery capable of 80-100 Amps continuous discharge

Suggested Phoenix ESC settings:

Throttle

Vehicle type Airplane
Throttle type Fixed end-point
Throttle response slow

Brake (optional)

Strength 40%
Delay 0.3
Ramp very slow

Cutoffs

Voltage Auto-LiPo
Current limit Insensitive
Type Soft

Motor

Start power Low (39)
Timing Low (0)
Direction Forward
PWR Outrunner mode

Software

Firmware 3.20 for Phoenix HV85
 & Phoenix ICE HV80

Suggested OS OCA1100HV 100A 50V ESC Settings:

Vehicle type Air
Battery type LiPo
Cut off voltage Auto
Cut off type Soft
Motor direction x
Advance timing 24
Acceleration Low
Start power Low
Brake type 90%
Air brake ON
Motor pole number 20
Gear ratio 1:1

Jeti brushless ESC: set timing to HIGH or Outrunner mode

Service:

Himax motors in need of service should be sent to Maxx Products, 815 Oakwood Rd, Unit D, Lake Zurich, IL 60047. Please include a note explaining the problem. Return shipping for repair estimates must be prepaid.

Choosing a power system:

Power system can be chosen based on the type of flying expected and all up weight of the aircraft. Sedate flying from a hand launch requires 35 watts per pound(W/Lb). Taking off the ground needs approximately 50W/Lb. Aerobatics and good climb performance, 75W/Lb. Anything more than 75W/Lb will result in excellent performance. Based on the weight of the model and the flying requirement, the power required can be calculated. Select the voltage of the battery being used. It is best to use a loaded voltage of about 90% of nominal.

Propeller selection:

We recommend testing several props on the model to find the best performing prop. **Verify current draw when testing props.** A 3D model will use a prop very different than a model intended to fly very fast. Generally, 3D models will use a prop that has a pitch to diameter ratio(P/D) of 0.5 or less, like 10x5 or 12x5. Most sport models will use a prop with a P/D or 0.6-0.8. Models that are designed to fly at high speed or have other special requirements will use props in the 1.0 P/D range. The highest static thrust will be available from the 0.5 P/D props, but they have limited top speed. Highest speeds can be attained with 1.0 P/D props, however low speed thrust and acceleration is limited.

Warranty:

Himax motors have a two year limited warranty to the original owner, excluding gearboxes. All motors are guaranteed to be free from manufacturing defects within two years from the date of purchase. Not covered under warranty is crash damage, customer abuse, improper use, or overheating. Warranty claims should be handled directly with Maxx Products, 815 Oakwood Rd, Unit D, Lake Zurich, IL 60047. Be sure to include contact information and a description of the problem including which ESC, battery, and prop being used. If possible visit www.maxxprod.com to obtain a service form.

MAXX PRODUCTS INTERNATIONAL, INC.

815 OAKWOOD RD, UNIT D, LAKE ZURICH, IL 60047, USA

Phone: (847)438-2233 Fax: (847)438-2898 Website: www.maxxprod.com

MDI