



SCORPION POWER SYSTEM CATALOG
Motor & Speed Controller Series

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Company History

In 1987 the Scorpion Precision Industry Co., Ltd. was founded by Georges, an avid RC enthusiast, for the purpose of manufacturing the highest quality glow plugs available for both sport and competition flying. These original Scorpion products received wide acclaim throughout Europe and Asia during the late 80's, and were frequently found in the winners circles of national competitions. Over the years, the Scorpion Company grew and diversified, moving into other areas of manufacturing, but through these changes, Georges maintained his love for the RC hobby, and continued flying and competing.

As the RC hobby evolved and electric power systems became more popular, Georges became interested in electric flight and competed in electric pattern and pylon racing events. Unfortunately, the electric power systems that were commercially available at that time could not hold up the stress of competition, and many flights ended with a trail of smoke coming from the motor, speed controller, and occasionally both. After searching for several years to find a power system that could withstand the rigors of serious competition, Georges realized that there were not that many, and saw this as an opportunity to provide a quality product for electric flyers. To this end, George set aside a portion of his manufacturing facility, hired a team of design engineers, and set forth the following challenge: "Design me a motor and speed controller that I cannot burn up. Find the best materials that are available, and use them to make a motor that can take the heat of competition."

After several years of development and testing, the end result is the Scorpion Brushless Motors and Speed Controllers that we now offer to modelers worldwide. These products can take the heat of competition and come back for more. Our Motors and Speed Controllers are not limited to competition use, and perform exceptionally well in all types of electric RC models.

In the fall of 2006, Scorpion Products were introduced to the modeling public through a series of Beta test programs, and this feedback further refined the product to the finished form that is presented here in this catalog. The first Scorpion products were made available in January of 2007, and they have rapidly become the favorite motors and speed controllers for modelers all over the world.

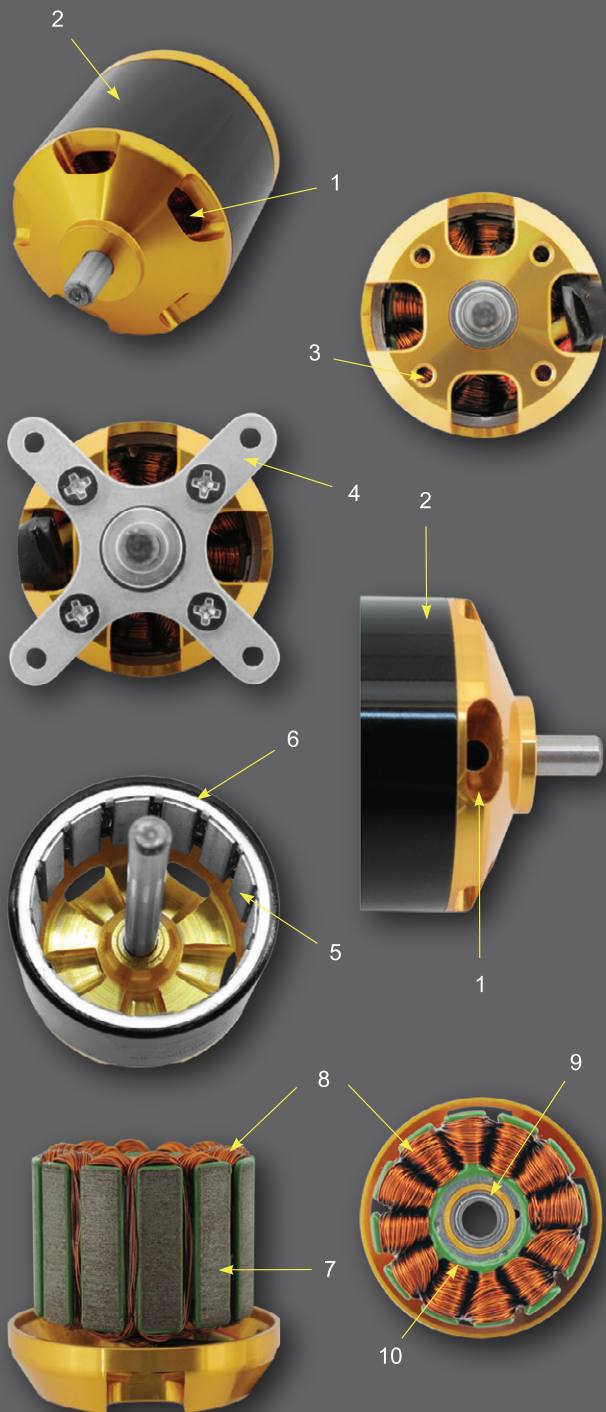
The new 377,000 square foot manufacturing facility and engineering center, where Scorpion Motors and Speed Controllers are designed and made, was established in 2006. This facility employs a staff of over 1000 workers and engineers, and is ISO 9001 certified. Our factory is also committed to maintaining ROHS (Reduction Of Hazardous Substances) compliance on all of our production lines. We still have a diverse product line in other areas of manufacturing, but RC products are what we really love. We have a long term plan to produce the largest selection of brushless motors, speed controllers and accessory products available anywhere, and our commitment to customer satisfaction is our primary goal.

We are so committed of the quality of our brushless motors and speed controllers that we back them with a full 2-year warranty against defects in materials and workmanship. We know that you have a choice when it comes to purchasing an electric power system for your next model, and we are certain that when you consider the Quality, Performance and Value that our motors and speed controllers offer, the choice is obvious: Scorpion.



The Power System of Champions!!

Scorpion Brushless Motors are built from the finest materials that are available today, with several design innovations that put them in a class all for themselves. From the moment you open the custom metal container, you will see that the attention to detail, and quality, are second to none. Scorpion Motors are built to give the highest levels of performance and reliability, and are backed with a 2-Year warranty. Let's take a look at some of the outstanding features that Scorpion Brushless Motors have to offer:



1. CNC Machined aluminum front housing with angled cooling slots or integrated axial cooling fan that pump air through the motor while it runs to keep the stator and wiring cool.

2. Durable black Electro-Coat finish on the motor casing to look good for years to come and avoid oxidation. Our part numbers and company logos are laser engraved.

3. CNC machined rear housing and bearing support, with threaded mount holes for Cross Mount or Stick mount attachment.

4. All motors come with an aluminum back plate mount and hardware. All motors, except helicopter models, also come with a threaded prop adapter.

5. Motor Magnets are rated to withstand operating temperatures of 200°C (392°F), a feature exclusive to Scorpion Brushless Motors.

6. A plated steel spacer ring locks the motor magnets firmly in place, while maintaining proper alignment for optimum performance.

7. To minimize Eddy current losses, high quality magnetic core stator plates are used on all our motors.

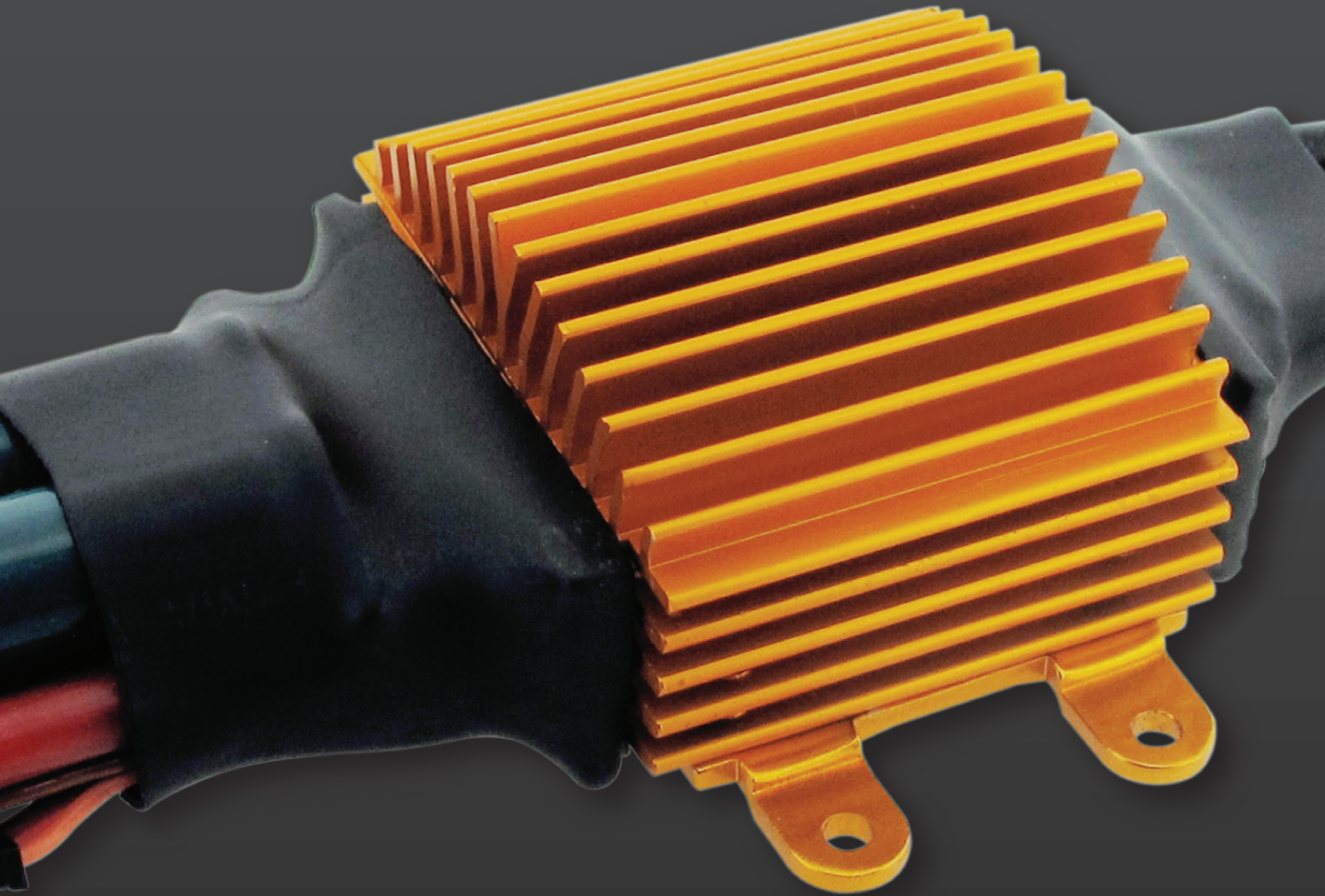
8. High temperature wire, which is rated for operation at 180°C (356°F), is utilized in the construction of all Scorpion brushless motors.

9. High quality Japanese double shielded, permanently lubricated, ball bearings are used to support the main shaft in all of our motors.

10. Our stators are powder coated, or special high temp paper insulated both inside the wire channels and on the ends, to prevent winding shorts during manufacturing & operation.

Scorpion Motors Offer Quality, Both Inside and Out

Scorpion Brushless Motor Speed Controllers™



Scorpion designed the Commander Series Brushless Motor Speed Controller to offer flyers the perfect blend of Performance, Quality and Value. They are designed to work with any brushless motor and represent one of the best values in the speed controller market today. They are perfect match for the entire range of Scorpion Brushless Motors. At Scorpion, we believe that every Speed Controller should have complete functionality right out of the box, so every one of our Commander Series Speed Controllers package come with an IR remote Programming Card plus an IR receiver unit with no extra charge and there is no need to hook up to a computer to change your controller settings. Scorpion Speed Controllers not only perform well, they also look great with gold anodized aluminum heat sink plates that are thermally bonded to the FET output transistors. The heavy duty heat shrink covering used on our Speed Controllers protects the sensitive electronic components which are located on the back side of the controller. On the front side of the Controller, this covering is cut away to expose the surface area to help enhance the cooling effectiveness of the heat sink assembly. All of the Scorpion Commander Series Speed Controllers are manufactured from top quality components, in a state of the art manufacturing facility, and are designed to provide years of trouble free operation.

*All Scorpion product specifications & photos presented in this catalogue are subject to change as a result of product updates and or improvements.

22mm HK-Series Brushless Motors (V2)

The Scorpion HK-Series 22mm Brushless Motors are designed to provide reliable power for your smaller RC aircraft and helicopter. These motors feature replaceable 3.175mm prop shafts with dual ball bearings. All Scorpion HK-Series motors come with 3.5mm bullet style connectors already installed, and include a complete hardware package containing 3 matching female bullet connectors for your Speed Controller, heatsink to cover the bullet connectors and mounting screws, all in an attractive metal can package.

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Power	Max Lipo Cell	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-2206-3900KV**	3900	0.83*	0.064	14A	150 W	3s	1.12	31.9	27.9 mm	22.6 mm	9n6p
HK-2206-5300KV***	5300	2.12*	0.031	18A	130 W	2s	1.21	34.0	27.9 mm	22.6 mm	9n6p
HK-2208-24	3590	1.21	0.061	21 A	220 W	3s	1.38	39.0	27.9 mm	20.5 mm	9n6p
HK-2208-28	3125	1.15	0.081	18 A	200 W	3s	1.38	39.0	27.9 mm	20.5 mm	9n6p
HK-2208-34	2660	1.64	0.043	18 A	190 W	3s	1.42	40.0	27.9 mm	20.5 mm	9n6p
HK-2213-14	3585	1.74	0.038	32 A	330 W	3s	1.90	54.0	27.9 mm	25.6 mm	9n6p
HK-2213-16	3200	1.60	0.040	30 A	310 W	3s	1.90	54.0	27.9 mm	25.6 mm	9n6p
HK-2213-20	2640	1.10	0.063	26 A	280 W	3s	1.90	54.0	27.9 mm	25.6 mm	9n6p
HK-2216-12	3350	1.87	0.033	35 A	375 W	3s	2.26	64.0	27.9 mm	28.6 mm	9n6p
HK-2216-14	2920	1.35	0.040	32 A	340 W	3s	2.26	64.0	27.9 mm	28.6 mm	9n6p
HK-2216-16	2608	1.19	0.048	30 A	320 W	3s	2.26	64.0	27.9 mm	28.6 mm	9n6p
HKII-2221-6	4400	2.89	0.016	52 A	525 W	3s	2.79	79.0	27.9 mm	33.6 mm	9n6p
HKII-2221-8	3595	2.31	0.024	45 A	475 W	3s	2.79	79.0	27.9 mm	33.6 mm	9n6p
HKII-2221-10	3000	1.79	0.031	42 A	440 W	3s	2.79	79.0	27.9 mm	33.6 mm	9n6p
HKII-2221-12	2580	1.50	0.038	38 A	400 W	3s	2.79	79.0	27.9 mm	33.6 mm	9n6p

* Io@6V

** feature replaceable 2.5mm prop shafts with dual ball bearings

*** feature replaceable 2.3mm prop shafts with dual ball bearings



HKII-2216

HKII-2213

HKII-2208

HKII-2221



22mm S-Series Brushless Motors

The Scorpion S-Series 22mm Brushless Motors are designed to provide reliable power for your smaller RC aircraft. These motors feature replaceable 3mm prop shafts with dual ball bearings. All Scorpion S-Series motors come with 3.5mm bullet style connectors already installed, and include a complete hardware package contains 3 matching female bullet connectors for your Speed Controller, a cross style back plate mount with screws, and a prop adapter, all in an attractive metal can package.

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	2-Cell Prop	3-Cell Prop	Configuration
S-2205-32	1980	0.76	0.168	12 A	3s	130 W	1.13	32.0	27.9 mm	17.6 mm	8x4	7x3.5	12n14p
S-2205-36	1670	0.52	0.164	11 A	3s	110 W	1.13	32.0	27.9 mm	17.6 mm	9x5	7x4	12n14p
S-2205-40	1551	0.56	0.217	10 A	3s	110 W	1.13	32.0	27.9 mm	17.6 mm	9x5	8x4	12n14p
S-2208-30	1293	0.55	0.185	14 A	3s	150 W	1.42	40.2	27.9 mm	20.6 mm	11x7	9x5	12n14p
S-2208-34	1150	0.45	0.168	12 A	3s	130 W	1.41	40.0	27.9 mm	20.6 mm	12x6	9x6	12n14p
S-2212-1920KV	1920	1.15	0.034	22 A	3s	230 W	1.95	55.0	27.9 mm	29.3 mm	7x5	6x5.5	12n14p
S-2212-22	1157	0.60	0.119	15 A	3s	160 W	1.84	52.3	27.9 mm	24.6 mm	11x7	9x5	12n14p
S-2212-26	939	0.52	0.161	13 A	3s	140 W	1.79	50.7	27.9 mm	24.6 mm	12x6	10x6	12n14p
S-2215-1860KV	1860	1.26	0.030	25 A	3s	260 W	2.27	64.0	27.9 mm	32.3 mm	8x4	6x5.5	12n14p
S-2215-18	1131	0.68	0.097	20 A	3s	210 W	2.18	61.9	27.9 mm	27.6 mm	12x6	10x6	12n14p
S-2215-22	940	0.5	0.13	16 A	3s	180 W	2.16	61.3	27.9 mm	27.6 mm	12x8	11x5.5	12n14p

* Please note that photographs may not accurately represent the number of items per package, size, color or features of a product.
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HK-3026



S-3008

30mm HK-Series Brushless Motors

The Scorpion HK-Series 30mm Brushless Motors are designed for RC Helicopters in the 500-550 size range. They also work great in aircraft needing a High-Kv motor such as Pylon Racers and Hotliners. The high efficient and cool running properties of these motors make them an excellent choice for any RC helicopter. The HK-Series motors have a 5mm diameter replaceable shafts come with the package and a 3.5mm bullet connectors installed. Also included is a matching set of female bullet connectors.

Model Number	Kv RPM/V	I _o @10v Amps	R _m Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-3026-880KV	880	2.30	0.026	52 A	8s	1450 W	7.02	199	37.5 mm	48.4 mm	12n10p
HK-3026-1000KV	1000	1.10	0.028	62 A	6s	1300 W	6.70	190	37.5 mm	48.4 mm	12n8p
HK-3026-1210KV	1210	1.43	0.018	65 A	6s	1365 W	6.80	193	37.5 mm	48.4 mm	12n10p
HK-3026-1400KV	1400	3.86	0.010	80 A	6s	1680 W	7.02	199	37.5 mm	48.4 mm	12n8p
HK-3026-1600KV	1580	1.52	0.016	70 A	6s	1470 W	6.83	196	37.5 mm	48.4 mm	9n6p
HK-3026-1900KV	1900	1.98	0.012	80 A	5s	1400 W	6.80	193	37.5 mm	48.4 mm	9n6p



S-3014

S-3020

S-3026

S-3032

30mm S-Series Brushless Motors

The Scorpion S-Series 30mm Brushless Motors are available in 5 sizes to fit a wide range of Electric powered models, and are also suitable for Glow to Electric conversion of aircraft in the .10 to .60 size range. All the Scorpion 30mm S-Series motors feature a 5mm main shaft for extra strength, with 3 ball bearings to handle the loads. The 30mm S-Series motors have an extra rear bearing that supports the back end of the flux ring for bullet-proof stability. Each motor has 3.5mm bullet connectors already installed. A matching set of female bullet connectors, a cross style back plate mount with screws, and a threaded collect style prop adapter are also included.

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	3-Cell Prop	4-Cell Prop	5-Cell Prop	Configuration
S-3008-1090KV	1090	0.79	0.058	26 A	4s	370 W	3.33	95.0	37.5 mm	33.75 mm	10x5	8x4	7x5	12n14p
S-3008-1220KV	1220	0.97	0.042	32 A	4s	425 W	3.33	95.0	37.5 mm	33.75 mm	11x5.5	9x4.5	8x4	12n14p
S-3014-830KV	830	1.06	0.042	30 A	5s	550 W	4.52	129.0	37.5 mm	39.75 mm	11x7	9x6	8x4	12n14p
S-3014-1040KV	1040	1.35	0.026	40 A	4s	600 W	4.52	129.0	37.5 mm	39.75 mm	12x6	10x5	9x4.5	12n14p
S-3014-1220KV	1220	1.64	0.018	46 A	4s	640 W	4.52	129.0	37.5 mm	39.75 mm	13x6.5	11x5.5	10x5	12n14p
S-3020-780KV	780	1.21	0.030	40 A	6s	800 W	5.81	166.0	37.5 mm	45.75 mm	12x8	10x7	9x6	12n14p
S-3020-890KV	890	1.42	0.020	45 A	5s	780 W	5.81	166.0	37.5 mm	45.75 mm	13x8	11x7	10x5	12n14p
S-3020-1110KV	1100	2.08	0.016	60 A	4s	840 W	5.81	166.0	37.5 mm	45.75 mm	14x7	12x6	11x5.5	12n14p
S-3026-710KV	710	1.56	0.022	60 A	5s	1000 W	7.18	205.0	37.5 mm	51.75 mm	12x8	10x7	9x6	12n14p
S-3026-890KV	890	2.25	0.014	70 A	4s	1025 W	7.18	205.0	37.5 mm	51.75 mm	14x7	12x6	10x7	12n14p
S-3026-1190KV	1190	3.26	0.008	80 A	4s	1050 W	7.18	205.0	37.5 mm	51.75 mm	15x8	13x6.5	12x6	12n14p
S-3032-690KV	690	2.30	0.022	60 A	5s	1025 W	9.63	275.0	37.5 mm	62.50 mm	14x8.5	12x6	10x7	12n14p
S-3032-880KV	880	3.12	0.012	70 A	4s	1050 W	9.63	275.0	37.5 mm	62.50 mm	15x10	14x7	11x8	12n14p
S-3032-990KV	990	4.25	0.010	80 A	4s	1065 W	9.63	275.0	37.5 mm	62.50 mm	18x12	15x8	12x8	12n14p

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40mm HK-Series Brushless Motors

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4020-910KV	910	1.95	0.015	65 A	8s	1820 W	9.21	284	48.9 mm	46.5 mm	12n8p
HK-4020-1100KV	1100	2.45	0.010	78 A	6s	1640 W	9.28	286	48.9 mm	46.5 mm	12n8p
HK-4020-1390KV	1390	3.45	0.007	90 A	6s	1890 W	9.21	284	48.9 mm	46.5 mm	12n8p

Model Number	Kv RPM/V	Io@8.4v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4025-630KV	630	1.10	0.024	65 A	12s	2700 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-740KV	740	1.33	0.017	75 A	10s	2600 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-890KV	890	1.80	0.013	95 A	8s	1700 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-1110KV	1110	2.40*	0.008	100 A	6s	2200 W	10.59	326	48.9 mm	51.5 mm	12n8p

* Io@10v Amps

Model Number	Kv RPM/V	Io@8.4v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4035-400KV	400	1.38*	0.010	78 A	12s	3400 W	15.23	435	48.9 mm	61.5 mm	12n8p
HK-4035-500KV	500	1.77	0.020	84 A	12s	3500 W	15.08	431	48.9 mm	61.5 mm	12n10p
HK-4035-560KV	560	2.10	0.012	100 A	12s	4200 W	15.53	444	48.9 mm	61.5 mm	12n10p
HK-4035-630KV	630	1.60	0.014	95 A	12s	4000 W	14.70	421	48.9 mm	61.5 mm	12n8p
HK-4035-800KV	800	2.50	0.010	100 A	12s	4200 W	15.23	435	48.9 mm	61.5 mm	12n8p

* Io@10v Amps

The Scorpion HK40 motors have been developed for the newer 600 and 700 class electric helicopters that are now coming onto the market. These motors are designed to provide all the power that you can use, while still maintaining excellent efficiency and cool running characteristics.

Scorpion HK Series Brushless Motors are built from the best materials available, and are designed to provide both quality and performance at an affordable price. Scorpion starts with high quality aluminum alloy parts that are produced on the latest CNC milling machines. These parts are then gold anodized to provide a beautiful, long-lasting finish. To minimize Eddy current losses, high quality magnetic core stator plates are used on all our motor. The stators are epoxy coated to prevent shorts, and are wound with wire that is rated at 180 degrees oC (356 oF). The magnets used in Scorpion Motors are rated for operation at 200 degrees oC (392 oF), making a motor that is virtually impossible to burn up in normal use.

All Scorpion HK40 series motors come with include a hardware package that contains 3 matching female Bullet connectors for your speed controller with matching heat shrink tubing. For maximum strength, the Scorpion HK40 series motors feature an 8mm motor shaft and 4mm male Bullet style connectors installed . Since the HK series motors are primarily designed for Helicopter and Ducted Fan use, they do not include a prop adapter. If you intend on running a prop on this motor, you will need to purchase a prop adapter for a 6mm shaft.

40mm HK-Series Brushless Motors

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4020-910KV	910	1.95	0.015	65 A	8s	1820 W	9.21	284	48.9 mm	46.5 mm	12n8p
HK-4020-1100KV	1100	2.45	0.010	78 A	6s	1640 W	9.28	286	48.9 mm	46.5 mm	12n8p
HK-4020-1390KV	1390	3.45	0.007	90 A	6s	1890 W	9.21	284	48.9 mm	46.5 mm	12n8p

Model Number	Kv RPM/V	Io@8.4v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4025-630KV	630	1.10	0.024	65 A	12s	2700 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-740KV	740	1.33	0.017	75 A	10s	2600 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-890KV	890	1.80	0.013	95 A	8s	1700 W	10.59	326	48.9 mm	51.5 mm	12n8p
HK-4025-1110KV	1110	2.40*	0.008	100 A	6s	2200 W	10.59	326	48.9 mm	51.5 mm	12n8p

* Io@10v Amps

Model Number	Kv RPM/V	Io@8.4v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	Configuration
HK-4035-400KV	400	1.38*	0.010	78 A	12s	3400 W	15.23	435	48.9 mm	61.5 mm	12n8p
HK-4035-500KV	500	1.77	0.020	84 A	12s	3500 W	15.08	431	48.9 mm	61.5 mm	12n10p
HK-4035-560KV	560	2.10	0.012	100 A	12s	4200 W	15.53	444	48.9 mm	61.5 mm	12n10p
HK-4035-630KV	630	1.60	0.014	95 A	12s	4000 W	14.70	421	48.9 mm	61.5 mm	12n8p
HK-4035-800KV	800	2.50	0.010	100 A	12s	4200 W	15.23	435	48.9 mm	61.5 mm	12n8p

* Io@10v Amps

The Scorpion HK40 motors have been developed for the newer 600 and 700 class electric helicopters that are now coming onto the market. These motors are designed to provide all the power that you can use, while still maintaining excellent efficiency and cool running characteristics.

Scorpion HK Series Brushless Motors are built from the best materials available, and are designed to provide both quality and performance at an affordable price. Scorpion starts with high quality aluminum alloy parts that are produced on the latest CNC milling machines. These parts are then gold anodized to provide a beautiful, long-lasting finish. To minimize Eddy current losses, high quality magnetic core stator plates are used on all our motor. The stators are epoxy coated to prevent shorts, and are wound with wire that is rated at 180 degrees oC (356 oF). The magnets used in Scorpion Motors are rated for operation at 200 degrees oC (392 oF), making a motor that is virtually impossible to burn up in normal use.

All Scorpion HK40 series motors come with include a hardware package that contains 3 matching female Bullet connectors for your speed controller with matching heat shrink tubing. For maximum strength, the Scorpion HK40 series motors feature an 8mm motor shaft and 4mm male Bullet style connectors installed . Since the HK series motors are primarily designed for Helicopter and Ducted Fan use, they do not include a prop adapter. If you intend on running a prop on this motor, you will need to purchase a prop adapter for a 6mm shaft.



S-4020



S-4025



S-4035

40mm S-Series Brushless Motors

The scorpion S-Series 40mm Brushless Motors are available in 3 sizes to fit larger electric powered models. These powerful motors are also suitable for Glow to Electric conversion of aircraft in the .60 to .90 glow to .90 to 1.20 four stroke size ranges. All of the Scorpion 40mm motors feature a 6mm main shaft for extra strength, with 3 ball bearings supporting the shaft to handle the loads. Each motor comes with 4 mm bullet connector installed. A cross style back plate mount with screws, and a threaded collect style prop adapter are also included with each motor.

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	4-Cell Prop	5-Cell Prop	6-Cell Prop	Configuration
S-4020-12	542	1.92	0.020	85 A	5s	1500 W	10.72	304	48.7 mm	41.2 mm	18x12	16x10	14x10	12n14p
S-4020-14	484	1.59	0.024	80 A	5s	1500 W	10.48	297	48.7 mm	41.2 mm	19x12	17x10	15x10	12n14p
S-4020-16	415	1.30	0.030	70 A	6s	1500 W	10.72	304	48.7 mm	41.2 mm	20x13	19x12	17x10	12n14p
S-4025-10	515	2.32	0.016	100 A	6s	2000 W	12.49	354	48.7 mm	46.2 mm	19x12	16x12	15x10	12n14p
S-4025-12	440	1.80	0.022	85 A	7s	2000 W	12.24	347	48.7 mm	46.2 mm	20x13	18x12	17x10	12n14p
S-4025-16	332	1.17	0.034	75 A	8s	2000 W	12.45	353	48.7 mm	46.2 mm	24x12	22x12	19x12	12n14p

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	6-Cell Prop	8-Cell Prop	10-Cell Prop	12-Cell Prop	Configuration
S-4035-330KV	330	1.41	0.031	65 A	11s	2400 W	15.46	442	48.9 mm	63.3 mm	19x10	16x10	14x7	13x6.5	12n10p
S-4035-380KV	380	1.52	0.025	70 A	11s	2600 W	15.04	430	48.9 mm	63.3 mm	18x10	14x7	13x8	12x6	12n10p
S-4035-460KV	460	1.70	0.020	75 A	11s	2800 W	15.21	435	48.9 mm	63.3 mm	15x10	13x8	12x8	11x5.5	12n10p

55mm S-Series Brushless Motors

The Scorpion 55mm Brushless Motors are available in 3 sizes to fit larger electric powered models. These powerful motors are suitable gas to electric conversion of aircraft in 20cc to 50cc gas range. All of the Scorpion 55mm motors features a 8mm shaft for extra strength, with 2 ball bearings to handle the loads. The 5535, 5545 series motors have an extra rear bearing that supports the back end of the flux ring for bullet-proof stability. Each motor has 4mm bullet connector installed. A matching set of female connectors, a cross style back plate mount with screws are also included.



Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	8-Cell Prop	10-Cell Prop	Configu-ration
S-5525-170KV	170	0.19	0.040	65 A	10s	2300 W	21.53	636.6	65.4 mm	67.75 mm	29 x 12	25 x 12	18n20p
S-5525-195KV	195	1.11	0.030	75 A	10s	2650 W	21.47	634.8	65.4 mm	67.75 mm	26 x 12	22 x 12	18n20p
S-5525-225KV	225	1.43	0.025	85 A	10s	2975 W	21.56	637.6	65.4 mm	67.75 mm	24 x 12	19 x 12	18n20p

Model Number	Kv RPM/V	Io@10v Amps	Rm Ohms	Max Current	Max Lipo Cell	Max Power	Weight Ounce	Weight Grams	Body Diameter	Body Length	10-Cell Prop	12-Cell Prop	Configu-ration
S-5535-160KV	160	1.18	0.032	85 A	12s	3600 W	29.04	859.9	65.4 mm	79.25 mm	27 x 12	24 x 12	18n20p
S-5535-190KV	190	1.56	0.024	90 A	12s	3800 W	28.93	855.6	65.4 mm	79.25 mm	21 x 12	18 x 12	18n20p
S-5545-150KV	150	1.31	0.030	90 A	12s	3800 W	34.69	1025.9	65.4 mm	89.25 mm	29 x 12	25 x 12	18n20p
S-5545-180KV	180	1.92	0.018	105 A	12s	4500 W	35.61	1052.7	65.4 mm	89.25 mm	24 x 12	20 x 12	18n20p

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Commander 15v Series Brushless Speed Controllers

The Commander 15V LBEC (Linear Battery Eliminator Circuit) series features a Linear BEC that will convert the voltage from your battery pack to 5.0 volts to power your receiver and servos. The Commander LBEC will deliver the amps specified on the ESC heat shrink and will operate from 6 to 15 Volts.

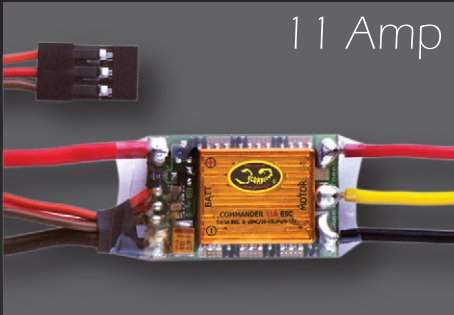
The full-featured IR Programming Card allows the user to set the following parameters:

Low Voltage Cut-off (5V to 13.8V at 0.2V increments) no need to select battery type just set the voltage the ESC should work on, by doing this, the ESC will be compatible with any future type of battery designs.

LVC	LOW VOLTAGE CUT: 050 (5V) TO 138(13.8V)
BRK	BRAKE SETTING: 1: NO BRAKE*, 2: VERY SOFT BRAKE, 3: SOFT BRAKE, 4: HARD BRAKE, 5: VERY HARD BRAKE
AIR	ACTIVATE AIR PLANE MODE*
PCT	PROGRAM CUT TYPE (LVC TYPE): 1: CUT 50%*, 2: NO CUT JUST LED WARNING, 3: PULSE WARNING
MAT	MOTOR ACCELERATION TIME DELAY: 1: 0.15* Seconds, 2: 0.3 Seconds, 3: 0.45 Seconds, 4: 0.7 Seconds, 5: 1.3 Seconds
CAR/B	CAR/B= DISABLED
COP	CURRENT OVERLOAD PROTECTION: 1: PROTECTION ON*, 2: PROTECTION OFF (CHOOSING OPTION 2 WILL VOID WARRANTY)
FREQ	DRIVE FREQUENCY: 1: 8 kHz*, 2: 18 kHz, 3: 32 kHz
SS	1: SOFT START WITH OUT GOVERNOR MODE*, 2: SOFT START WITH GOVERNOR
TIM	MOTOR TIMING: 1: AUTO TIMING*, 2: 5°, 3: 15°, 4: 20°, 5: 25°, 6: 30°
GOV	GOVERNOR CORRECTOIN: 1: SOFT*, 2: MEDIUM, 3: STRONG
SB	MOTOR STARTING BOOSTER 1: SOFT*, 2: MEDIUM, 3: STRONG
★	SOFT START DURATION: 1. SHORT 10 Seconds, 2: MEDIUM 15 Seconds*, 3:STRONG 20 Seconds

*Factory Default

Current Rating	BEC Rating*	On Resistance	Weight Ounces	Weight Grams	Size Inches	Size Millimeter	Li-Po Battery	Ni-XX Battery
11 Amp	1 Amp	6.77 mΩ	0.33	9.5	1.06 x 0.67 x 0.35	27 x17 x 9	2-3 Cells	6-10 Cells
15 Amp	2 Amp	7.11 mΩ	0.62	17.7	1.67 x 1.04 x 0.35	43 x 26 x 9	2-4 Cells	6-12 Cells
25 Amp	2 Amp	3.66 mΩ	0.72	20.3	1.89 x 1.04 x 0.35	48 x 26 x 9	2-4 Cells	6-10 Cells
35 Amp	3 Amp	2.56 mΩ	1.12	31.7	2.64 x 1.02 x 0.35	67 x 26 x 9	2-4 Cells	6-10 Cells
45 Amp	3 Amp	2.33 mΩ	1.46	41.5	2.95 x 1.18 x 0.35	75 x 30 x 9	2-4 Cells	6-10 Cells
55 Amp	3 Amp	1.56 mΩ	1.54	43.7	3.11 x 1.18 x 0.35	79 x 30 x 9	2-4 Cells	6-10 Cells
60 Amp**	3 Amp	1.38 mΩ	2.11	60.0	2.72 x 1.19 x 0.48	69 x 30 x 12	2-4 Cells	6-10 Cells
70 Amp	3 Amp	1.28 mΩ	1.66	47.0	2.72 x 1.18 x 0.47	69 x 30 x 12	2-4 Cells	6-10 Cells
90 Amp	3 Amp	1.17 mΩ	1.77	50.2	2.99 x 1.18 x 0.47	76 x 30 x 12	2-4 Cells	6-10 Cells
110 Amp	3 Amp	0.78 mΩ	1.93	54.7	3.11 x 1.18 x 0.51	79 x 30 x 13	2-4 Cells	6-10 Cells



11 Amp



15 Amp



25 Amp



35 Amp



45 Amp



55 Amp



60 Amp



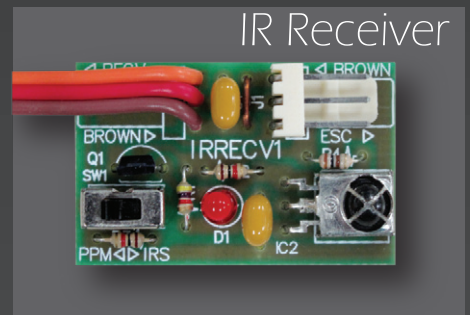
70 Amp



90 Amp



110 Amp



IR Receiver



IR Remote Programmer

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Commander 26v Series Brushless Speed Controllers

The Commander 26V SBEC (Switching Battery Eliminator Circuit) series features an inbuilt switching BEC that will convert the voltage from your battery pack to 5.7 volts to power your receiver and servos. The Commander SBEC will deliver 3 Amps of continuous current with 4 amp bursts. With a SBEC, you do not need to de-rate the BEC as the input voltage increases. The full 3 Amps of BEC current is available for any input between 2 to 6 Li-Po cells.

Low Voltage Cut-off (5V to 23V at 0.5V increments) no need to select battery type just set the voltage the ESC should work on, by doing this, the ESC will be compatible with any future type of battery designs.

The full-featured IR Programming Card allows the user to set the following parameters:

LVC	LOW VOLTAGE CUT: 050 (5V) TO 230(23V)
BRK	BRAKE SETTING: 1: NO BRAKE*, 2: VERY SOFT BRAKE, 3: SOFT BRAKE, 4: HARD BRAKE, 5: VERY HARD BRAKE
AIR	ACTIVATE AIR PLANE MODE*
PCT	PROGRAM CUT TYPE (LVC TYPE): 1: CUT 50%*, 2: NO CUT JUST LED WARNING, 3: PULSE WARNING
MAT	MOTOR ACCELERATION TIME DELAY: 1: 0.15* Seconds, 2: 0.3 Seconds, 3: 0.45 Seconds, 4: 0.7 Seconds, 5: 1.3 Seconds
CAR/B	CAR/B= DISABLED
COP	CURRENT OVERLOAD PROTECTION: 1: PROTECTION ON*, 2: PROTECTION OFF (CHOOSING OPTION 2 WILL VOID WARRANTY)
FREQ	DRIVE FREQUENCY: 1: 8 kHz*, 2: 18 kHz, 3: 32 kHz
SS	1: SOFT START WITH OUT GOVERNOR MODE*, 2: SOFT START WITH GOVERNOR
TIM	MOTOR TIMING: 1: AUTO TIMING*, 2: 5°, 3: 15°, 4: 20°, 5: 25°, 6: 30°
GOV	GOVERNOR CORRECTOIN: 1: SOFT*, 2: MEDIUM, 3: STRONG
SB	MOTOR STARTING BOOSTER 1: SOFT*, 2: MEDIUM, 3: STRONG
★	SOFT START DURATION: 1. SHORT 10 Seconds, 2: MEDIUM 15 Seconds*, 3:STRONG 20 Seconds

*Factory Default

Current Rating	BEC Rating*	On Resistance	Weight Ounces	Weight Grams	Size Inches	Size Millimeter	Li-Po Battery	Ni-XX Battery
30 Amp	4 Amp	6.77 mΩ	1.57	44.50	2.61 x 1.19 x 0.35	66.4 x 30.2 x 8.9	2-6 Cells	6-22 Cells
45 Amp	4 Amp	7.11 mΩ	1.63	46.35	2.85 x 1.19 x 0.37	72.5 x 30.2 x 9.4	2-6 Cells	6-22 Cells
60 Amp	4 Amp	3.66 mΩ	2.29	64.83	2.67 x 1.19 x 0.52	67.8 x 30.2 x 13	2-6 Cells	6-22 Cells
90 Amp	4 Amp	2.56 mΩ	2.32	65.90	2.69 x 1.19 x 0.55	68.4 x 30.2 x 14	2-6 Cells	6-22 Cells
120 Amp	4 Amp	2.33 mΩ	2.92	82.80	3.29 x 1.19 x 0.69	83.6 x 30.2 x 17	2-6 Cells	6-22 Cells
180 Amp	4 Amp	1.58 mΩ	3.28	93.10	3.59 x 1.19 x 0.55	91.3 x 30.2 x 21.3	2-6 Cells	6-22 Cells

30 Amp



45 Amp



60 Amp



90 Amp



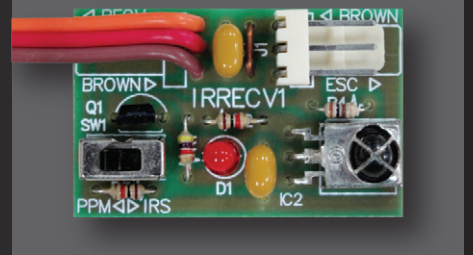
120 Amp



180 Amp



IR Receiver



IR Remote Programmer

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130 Amp

Commander 50v Series Brushless Speed Controllers

The full-featured IR Programming Card allows the user to set the following parameters:

Low Voltage Cut-off (12V to 48V at 0.5V increments) no need to select battery type just set the voltage the ESC should work on, by doing this, the ESC will be compatible with any future type of battery designs.

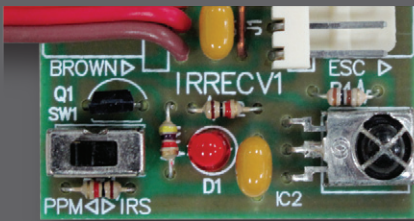
LVC	LOW VOLTAGE CUT: 120 (12V) TO 480(48V)
BRK	BRAKE SETTING: 1: NO BRAKE*, 2: VERY SOFT BRAKE, 3: SOFT BRAKE, 4: HARD BRAKE, 5: VERY HARD BRAKE
AIR	ACTIVATE AIR PLANE MODE*
PCT	PROGRAM CUT TYPE (LVC TYPE): 1: CUT 50%*, 2: NO CUT JUST LED WARNING, 3: PULSE WARNING
MAT	MOTOR ACCELERATION TIME DELAY: 1: 0.15* Seconds, 2: 0.3 Seconds, 3: 0.45 Seconds, 4: 0.7 Seconds, 5: 1.3 Seconds
CAR/B	CAR/B= DISABLED
COP	CURRENT OVERLOAD PROTECTION: 1: PROTECTION ON*, 2: PROTECTION OFF (CHOOSING OPTION 2 WILL VOID WARRANTY)
FREQ	DRIVE FREQUENCY: 1: 8 kHz*, 2: 18 kHz, 3: 32 kHz
SS	1: SOFT START WITH OUT GOVERNOR MODE*, 2: SOFT START WITH GOVERNOR
TIM	MOTOR TIMING: 1: AUTO TIMING*, 2: 5°, 3: 15°, 4: 20°, 5: 25°, 6: 30°
GOV	GOVERNOR CORRECTOIN: 1: SOFT*, 2: MEDIUM, 3: STRONG
SB	MOTOR STARTING BOOSTER 1: SOFT*, 2: MEDIUM, 3: STRONG
★	SOFT START DURATION: 1. SHORT 10 Seconds, 2: MEDIUM 15 Seconds*, 3:STRONG 20 Seconds

*Factory Default

Current Rating	On Resistance	Weight Ounces	Weight Grams	Size Inches	Size Millimeter	Li-Po Battery	Ni-XX Battery
90 Amp	TBA mΩ	6.94	196.88	3.27 x 2.67 x 0.71	83 x 67.9 x 18	2-12 Cells	6-40 Cells
130 Amp	TBA mΩ	8.76	248.4	3.27 x 2.67 x 0.71	83 x 67.9 x 18	2-12 Cells	6-40 Cells

Commander 50v Series Brushless Speed Controllers

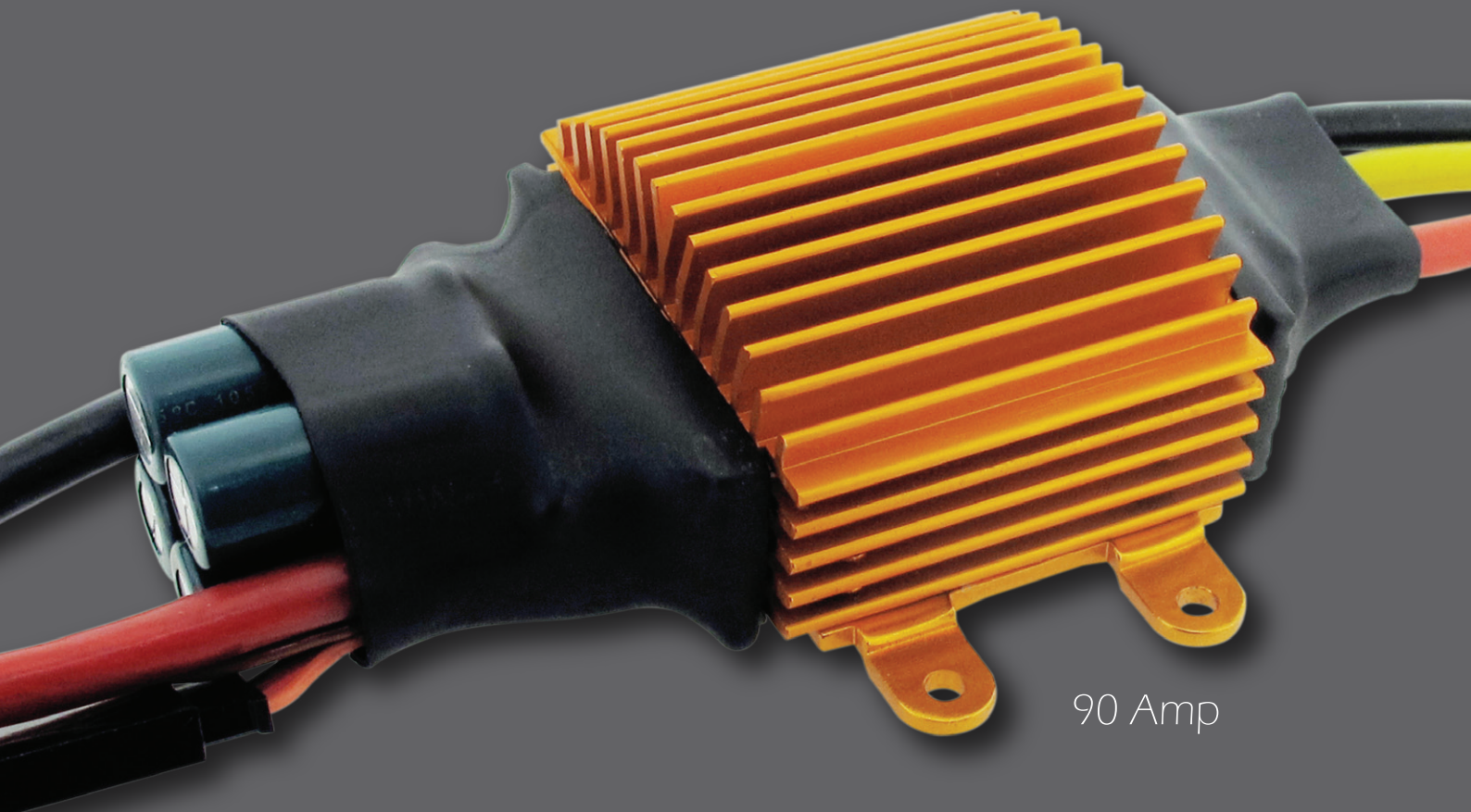
The Commander 50V OPTO (Optical Isolation) series features a system isolates the “noise” and interference from the receiver for increased stability and safety. It is especially necessary in high voltage and current systems. The Commander 50V OPTO series does not supply power to your receiver. It requires 4.8 to 7.4 volts separate receiver power pack attached (depending on servo voltage rating).



IR Receiver



IR Remote Programmer



90 Amp

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22mm HK-Series Brushless Motors

HK-2206 Brushless Motor Kit

HK-2208 Brushless Motor Kit

HK-2213 Brushless Motor Kit

HK-2216 Brushless Motor Kit

HK-2221 Brushless Motor Kit

22mm S-Series Brushless Motors

S-2205 Brushless Motor Kit

S-2208 Brushless Motor Kit

S-2212 Brushless Motor Kit

S-2215 Brushless Motor Kit

30mm HK-Series Brushless Motors

HK-3026 9N6P Brushless Motor Kit

HK-3026 12N8P Brushless Motor Kit

HK-3026 12N10P Brushless Motor Kit

HK-3026 12N14P Brushless Motor Kit

30mm S-Series Brushless Motors (V2)

SII-3008 Brushless Motor Kit (V2)

SII-3014 Brushless Motor Kit (V2)

SII-3020 Brushless Motor Kit (V2)

SII-3026 Brushless Motor Kit (V2)

SII-3032 Brushless Motor Kit (V2)

40mm HK-Series Brushless Motors

HK-4020 12N8P Brushless Motor Kit

HK-4025 12N8P Brushless Motor Kit

HK-4035 12N8P Brushless Motor Kit

HK-4035 12N10P Brushless Motor Kit

40mm S-Series Brushless Motors

S-4020 Brushless Motor Kit

S-4025 Brushless Motor Kit

S-4035 Brushless Motor Kit

55mm S-Series Brushless Motors

S-5525 Brushless Motor Kit

S-5535 Brushless Motor Kit

S-5545 Brushless Motor Kit



22mm HK-Series Brushless Motors



22mm S-Series Brushless Motors



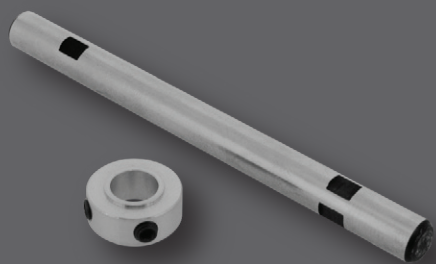
30mm HK-Series Brushless Motors



40mm HK-Series Brushless Motors



40mm S-Series Brushless Motors



Shaft Kits

- Scorpion S-2205 Motor Shaft Kit
- Scorpion S-2208 Motor Shaft Kit
- Scorpion S-2212 Motor Shaft Kit
- Scorpion S-2215 Motor Shaft Kit
- Scorpion S-3008 Motor Shaft Kit
- Scorpion S-3014 Motor Shaft Kit
- Scorpion S-3020 Motor Shaft Kit
- Scorpion S-3026 Motor Shaft Kit
- Scorpion S-3032 Motor Shaft Kit
- Scorpion S-4020 Motor Shaft Kit
- Scorpion S-4025 Motor Shaft Kit
- Scorpion S-4035 Motor Shaft Kit
- Scorpion S-5525 Motor Shaft Kit
- Scorpion S-5535 Motor Shaft Kit
- Scorpion S-5545 Motor Shaft Kit
- Scorpion HK-2206 Motor Shaft Kit (2.3mm Output Shaft)
- Scorpion HK-2206 Motor Shaft Kit (2.5mm Output Shaft)
- Scorpion HK-2208 Motor Shaft Kit
- Scorpion HK-2213 Motor Shaft Kit
- Scorpion HK-2216 Motor Shaft Kit
- Scorpion HK-2221 Motor Shaft Kit
- Scorpion HK-3026 Motor Shaft Kit
- Scorpion HK-4020 Motor Shaft Kit (5mm)
- Scorpion HK-4025 Motor Shaft Kit (5mm)
- Scorpion HK-4025 Motor Shaft Kit (6mm)
- Scorpion HK-4035 Motor Shaft Kit (5mm)
- Scorpion HK-4035 Motor Shaft Kit (6mm)
- Scorpion HK-4035 Motor Shaft Kit (8mm)



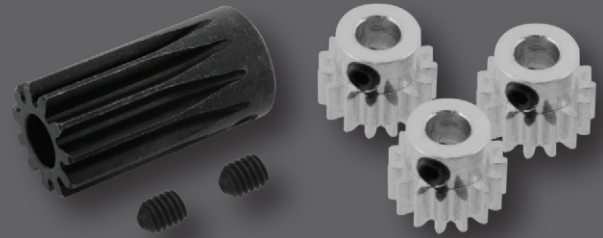
Prop Adaptors

- Scorpion Prop Saver 3mm
- Scorpion 3mm Threaded Prop Adapter
- Scorpion 5mm Threaded Prop Adapter
- Scorpion 6mm Threaded Prop Adapter
- Scorpion 8mm Threaded Prop Adapter



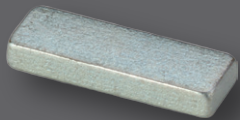
Bearing Kits

- Scorpion 22mm Bearing Kit
- Scorpion 30mm Bearing Kit
- Scorpion 40mm Bearing Kit
- Scorpion 50mm Bearing Kit
- Scorpion HK-2221 Bearing Kit
- Scorpion HK-3026 Bearing Kit
- Scorpion HK-40mm Bearing Kit



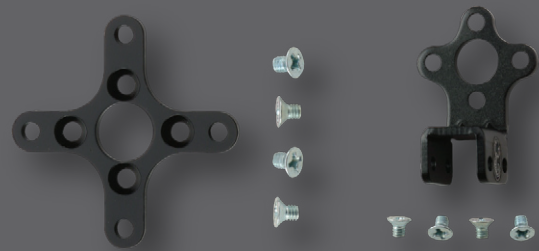
Pinion Gear

- Pinion Gear 10T 6mm Module 1.0
- Pinion Gear 11T 6mm Module 1.0
- Pinion Gear 12T 6mm Module 1.0
- Pinion Gear 14T 2.5mm Module 0.4
- Pinion Gear 15T 2.5mm Module 0.4
- Pinion Gear 16T 2.5mm Module 0.4



Motor Magnets

- Scorpion S-2205 Replacement Magnets
- Scorpion S-2208 Replacement Magnets
- Scorpion S-2212 Replacement Magnets
- Scorpion S-2215 Replacement Magnets
- Scorpion S-3008 Replacement Magnets
- Scorpion S-3014 Replacement Magnets
- Scorpion S-3020 Replacement Magnets
- Scorpion S-3026 Replacement Magnets
- Scorpion S-3032 Replacement Magnets
- Scorpion S-4020 Replacement Magents
- Scorpion S-4025 Replacement Magents
- Scorpion S-4035 Replacement Magents
- Scorpion S-5525 Replacement Magents
- Scorpion S-5535 Replacement Magents
- Scorpion S-5545 Replacement Magents
- Scorpion HK-2206 Replacement Magnets
- Scorpion HK-2208 Replacement Magnets
- Scorpion HK-2213 Replacement Magnets
- Scorpion HK-2216 Replacement Magnets
- Scorpion HK-2221 Replacement Magnets
- Scorpion HK-3026 9N6P Replacement Magnets
- Scorpion HK-3026 12N8/10/14P Replacement Magnets
- Scorpion HK-4020 12N8P Replacement Magnets
- Scorpion HK-4025 12N8P Replacement Magnets
- Scorpion HK-4035 12N8P Replacement Magnets
- Scorpion HK-4035 12N10P Replacment Magnets



Motor Mount

- Scorpion 22mm Stick Mount
- Scorpion 22mm Cross Mount
- Scorpion 30mm Cross Mount
- Scorpion 40mm Cross Mount

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Team Accessories

Scorpion Cap

Free Size

High quality, high stitch count baseball cap with adjustable velcro strap.

Embroidered with front and back.

One size fits most.

Licensed Merchandise



Scorpion Polo Shirt

Show your Scorpion Pride at the flying field with the new Official Team Scorpion Flying Shirt!

These high quality polo shirts are made from 100% cotton, and feature the Team Scorpion logo embroidered on the front, and a large silver Scorpion emblem on the back.

The trim on the collar and sleeves is white with a black stripe, and also has a cool checkerboard pattern on the left sleeve.

The Team Scorpion Flying shirts are available in both Blue and Yellow, and come in Small, Medium, Large and Extra-Large sizes.



Front

Back



Scorpion Decal Sticker

Create your unique canopy on the field!

This A4-Size Scorpion is a perfect match for your canopy, they are including 4 pairs of different size of Scorpion die cut stickers plus the text of (The Power System of Champions!!).

It is made with anti-UV and Water-Proof material.



Scorpion Keychain

Scorpion Key chain is made by Zinc Alloy based on our HK4025 Motor series designs.

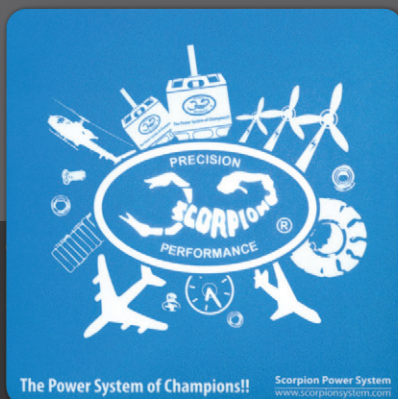
This impressive key chain makes great gifts for people of all ages especially for all R/C enthusiasts.

Scorpion Mouse Pad

Show the power of Scorpion while you are at home or office!

The new Scorpion Mouse Pad is made by durable cover and is dust and stain resistant.

The non-slip backing RS material keeps your mouse moving while the Scorpion Mouse Pad stays in place.



I go out and fly every Friday at a club - There were more airplanes with Scorpion motors than pilots today. We're turning into a "Scorpion Club" and really putting a lot of time on various sizes of motors. It's good to see the products being put through the paces week after week.

I flew my new Scorpion powered Extra 300 today and it looks like I may have found a new motor line to stick with. To say performance is great would be an understatement. I have been flying this Scorpion 3026-10 for one week, 45 flights now and I am truly impressed. It never goes over 115°F (windings) according to my rather expensive Ray-tech IR gun, and it still feels like brand new. I have had some similar priced motors develop bearing problems with less usage.

I just wanted to write and say what an incredible motor the Scorpion HK-2221-8 is! It flies like a dream and is barely warm after hovering for 7 minutes. The ESC is great too, and incredibly failsafe for a "newbie" like myself! Both of them look just killer in my T-REX 450SE V2, and I am the envy of the field!

Today in the mail I got my Scorpion motor. I unpacked it and almost passed out. It's packaged like a Rolex watch! I've got to post pictures of the packaging. First the shrink wrap, then a beautiful cardboard sleeve, next a tin box inside the sleeve with a hinge and more beautiful painting. Inside a clear plastic lid cover the motor. Next, a foam interior cut out to hold all the pieces. Mind boggling. I haven't seen anything like this in years. You have to buy one of these just to see the packaging!

The Power System of Champions!!



Coming Soon

37mm HK-Series (600 Class Heli Motor) 6s - 8s

65mm S-Series (50cc to 100cc Glow. Gas Conversion)

90mm S-Series (Giant Scale)

68V 200A ESC

68V 300A ESC



Warranty Information

All Scorpion Motors and Speed Controller are covered by a 2-Year manufacturers warranty against defects in materials and workmanship*. During the warranty period Scorpion will repair motor or speed controller that is found to be defective, providing that it has no signs of damage or abuse. The user will be responsible for shipping charges back to an authorized Scorpion Repair Facility, and Scorpion will pay the return shipping charges. If the damage is the result of a crash or mis-use, the return item will be repaired, but the cost of repairs will be billed to the user. Repairs will never exceed 50% of the cost of a new motor, and if the motor is badly damaged or non-repairable, a brand new motor will be offered at 50% discount of the current retail price for the motor plus a nominal shipping charge. If the motor returned is no longer in production, Scorpion reserves the right to substitute another motor of equal or better quality.

*Due to the high RPM of Scorpion Motors, and the fact that we have no control of the user's installation and setup, the bearings are not covered by the 2-year warranty, nor is any subsequent damage caused to the motor by a bearing failure. Bearing are considered to be a normal wear item, and as such, need to be maintained and changed periodically. For maximum life usage, we recommend users make sufficient gap between pinion and main gear during installation to avoid binding, and put a small drop of lubrication oil on each bearing for every 5-6 flights. It is the responsibility of the pilot to ensure that the bearings are maintained properly.