

New Scorpion Series 2 30mm Motors!!

The new SII-30mm motors have undergone several design improvements over the original model motors. These include:

1. A re-designed front housing with a centrifugal style blower fan, similar to that used in the Scorpion helicopter motors. This fan works equally well in either direction of motor rotation, so that if you use the motor in a reverse pitch prop or pusher application, the cooling fan still works well.
2. The Stator laminations are made from a new material that has better magnetic qualities, and the shape of the stator has been modified to concentrate more of the magnetic force towards the magnets, where it can do more work.
3. The material used in the flux ring has changed, and the thickness modified to contain more of the magnetic flux field. This increases the efficiency of the motor as well as the power output.
4. The above changes work together to make the motor more efficient, but they also lower the Kv of the motor. To compensate for this, the new motors actually have fewer turns of wire to get the desired Kv. For example the original 3014-18 motor had 18 turns per pole pair and had a Kv of 1064. The motor that replaces it, the SII-3014-1040 motor has a similar Kv, but uses only 16 turns of wire per pole pair. This difference lowers the Rm of the motor and increases it's current handling ability and its power output.
5. The final change is the actual part number of the motor. Instead of having the -number be the number of turns, it is now the Kv value of the motor. Here is a listing of the old style motor part number and Kv, along with the new replacement motor part number, which contains the Kv.

Series 1 30mm	Series 2 30mm Equivalent
SC3008-28 = 1253kv	SC3008-1220kv
SC3008-32 = 1090kv	SC3008-1090kv
SC3014-16 = 1187kv	SC3008-1220kv
SC3014-18 = 1064kv	SC3014-1040kv
SC3014-22 = 892kv	SC3014-890kv
SC3020-12 = 1088kv	SC3020-1100kv
SC3020-14 = 931kv	SC3020-890kv
SC3020-16 = 812kv	SC3020-780kv
SC3026-8 = 1212kv	SC3026-1190kv
SC3026-12 = 830kv	SC3026-710kv
SC3032-8 = 988kv	SC3032-990kv
SC3032-10 = 823kv	SC3032-880kv
SC3932-12 = 686kv	SC3032-690kv

Here is a side by side photo of the original 3014-22 motor and it's replacement, the Scorpion SII-3014-830 motor so you can see the difference.

