

# 1150 to 4500 Watt Brushless Alternator S675-600

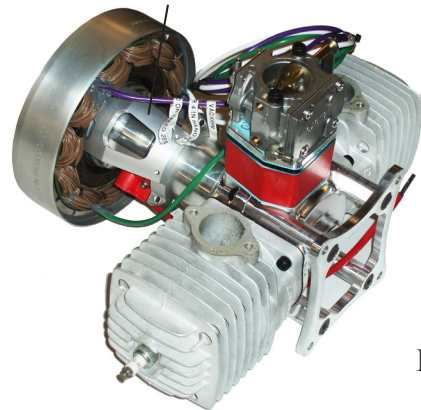
## Features:

- Brushless PM Design
- Reversible
- Only one moving part (a sealed ball bearing) when direct driven
- NdFeB Magnets
- 200C Class Insulation
- Coated for humidity and moisture protection

MODEL NUMBER	S675-600
Diameter	152 mm
Thickness	37 mm
Standard Weight	1880 g
Typical Engine Sizes (Generating)	100 cc to 240 cc
Rated Output Power at 2500 RPM	1150 Watts
Rated Output Power at 7500 RPM	4500 Watts
Standard Wind Type	Single Phase
Standard Voltage Curve, VAC RMS	13.7VAC/1000 RPM
Aluminum Spinner	Mating 152 mm Aluminum Spinner available
Options	Custom Voltage Curve Modified Shell Design

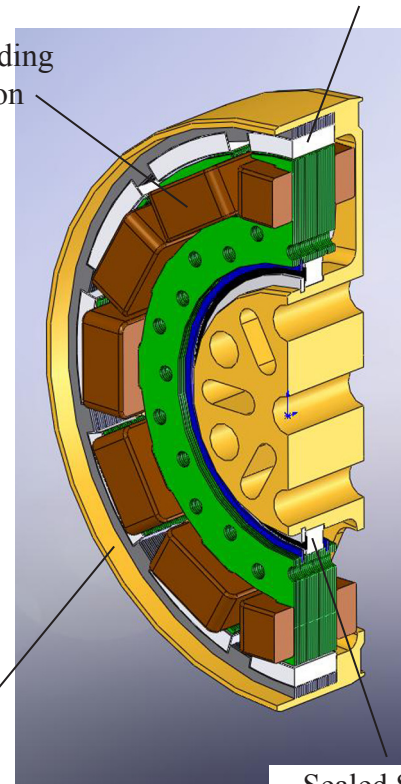


Typical Mounting  
Brackets

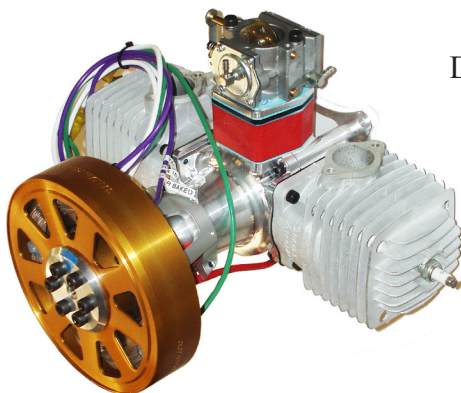


Rare Earth  
Magnets

200C Winding  
Insulation



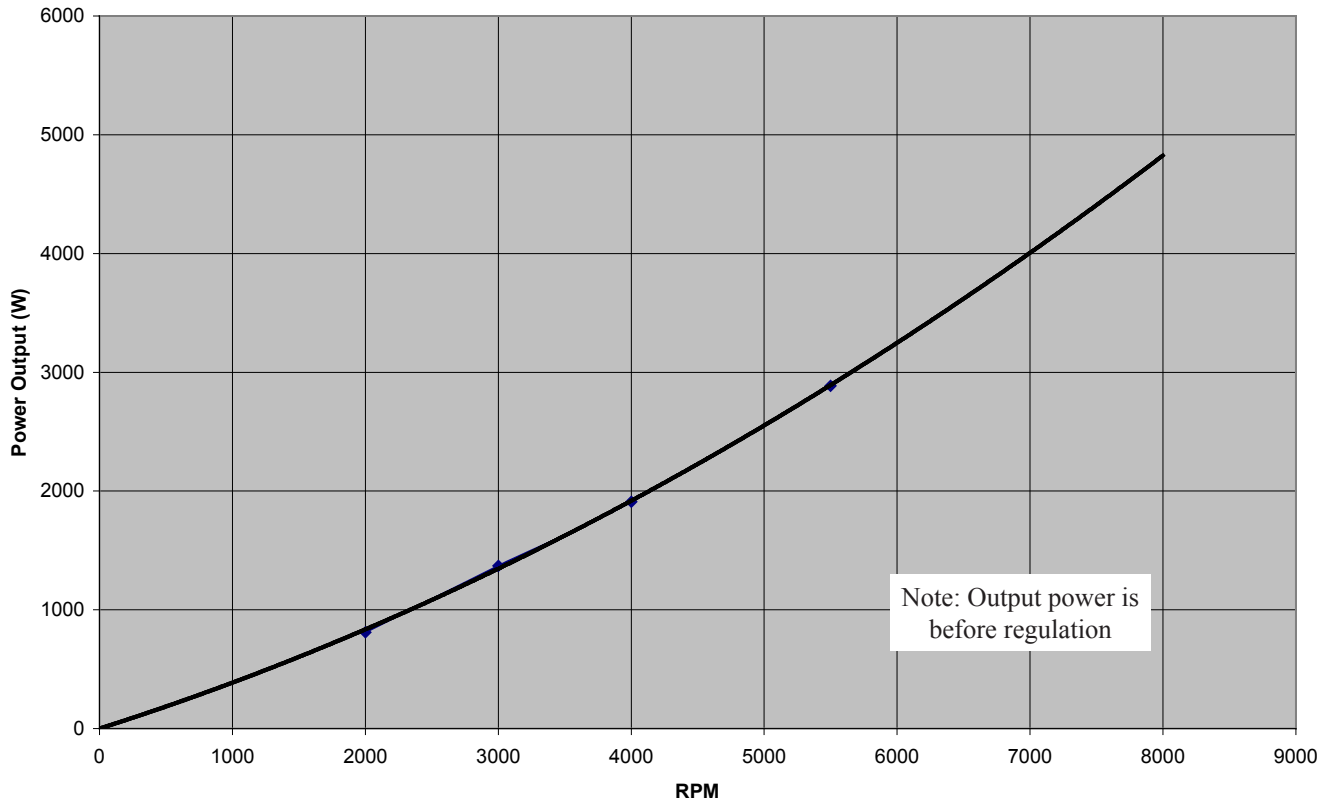
Sealed Stator  
Bearing



DA-170

Aluminum Alloy  
Shell

**S675-600 Rated Power vs RPM**  
(120C Max Stator Temp)



### Mounting

Generally, the alternator mounts directly to the engine's prop hub or rear output shaft. It can also be driven by a secondary shaft or belt. The stator is kept from turning by a mounting bracket.

We machine the stator bracket to fit the specific engine model or mounting situation.

It is possible to mount the stator directly to a machined ring on the engine. This eliminates the bracket and the sealed ball bearing, reducing weight.

### Engine load calculations before regulation

Engine load = Output power / Efficiency.

Example: A 600 Watt electrical load at 88% efficiency requires  $600 / 0.88 = 682$  watts of engine power. At 746 Watts/HP, this is .914 HP.

$Ft\text{-}Lbs\text{ of Torque} = Horsepower * 5252 / RPM.$

At 3000 RPM, a 600 Watt load at 88% efficiency will have a torque load of  $.914 HP * 5252 / 3000 = 1.600$  Ft-Lbs.

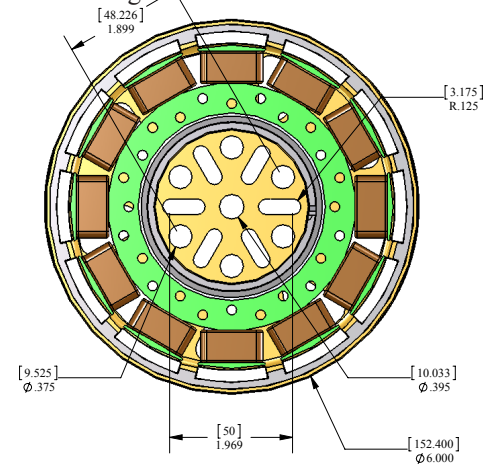
$1 Ft\text{-}Lb = 1.3558 N\text{-}M.$  1.600 Ft-Lbs of torque is 2.169 N-M.

### Starting

To properly match the engine's required starting wattage, we need the starting torque vs RPM curve of the engine. If this is not available from the engine manufacturer, we can measure it at our facilities.

S675-600

Outline Drawing



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