

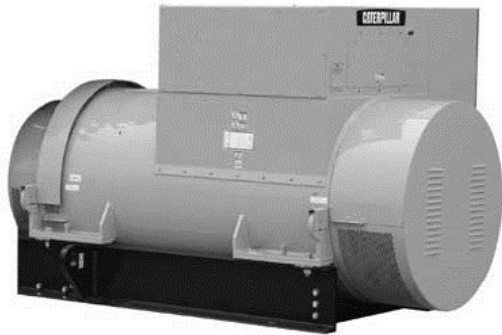


Image Shown may not Reflect Actual Package.

## SR4B — 2700 Frame

### Standby Power

50 Hz, 1500 rpm 1226 – 2813 kVA  
60 Hz, 1800 rpm 1100 – 2500 ekW

### Prime Power

50 Hz, 1500 rpm 1000 – 2500 kVA  
60 Hz, 1800 rpm 890 – 2500 ekW

### Continuous Power

50 Hz, 1500 rpm 1000 – 2500 kVA  
60 Hz, 1800 rpm 8890 – 2500 ekW

## Features

### General

- Standards: meets the requirements of NEMA, IEC, ISO, IEEE, BS, AS
- Industry leading insulation technology
- Proven mechanical and electrical design
- Reliable and durable construction
- Improved excitation system for high power quality
- Improved motor starting capability
- Radio frequency noise suppression better than industry standards
- Superior construction and testing

### Standard

- 3 Phase brushless, salient pole
- NEMA Class H insulation
- Class F Temperature rise at 40°C ambient
- 2/3 Winding pitch
- Form Wound
  - Form wound
  - Permanent magnet excitation
  - Winding temperature detectors
  - Space heater
- Standard voltages:
  - 50 Hz: 11 kV
  - 60 Hz: 12.47 kV
- Busbar connections:
  - 50 Hz models: IEC standard hole pattern
  - 60 Hz models: NEMA standard hole pattern
- Cat® Digital Voltage Regulator (Cat DVR)

### Optional

- Bearing temperature detectors
- Optional voltages:
  - 50 Hz: 3.3 kV, 6.3 kV, 6.6 kV, 6.9 kV, 10 kV, 10.5 kV
  - 60 Hz: 4.16 kV, 6.3 kV, 6.6 kV, 6.9 kV, 13.2 kV, 13.8 kV
- Oversized generators for Class B temperature rise

## Specifications

### Type

Brushless, revolving field solid-state automatic voltage regulator

### Construction

Two bearings 3 phase, series star connected

### Enclosure

Drip proof IP23, guarded

### Over-speed capability

60 Hz — 125% of synchronous speed

50 Hz — 150% of synchronous speed

### Waveform deviation, line to line, no load

Less than 3%

### Paralleling capability

Standard with adjustable voltage droop

### Voltage level adjustment

+/- 5%

### Voltage regulator

3 Phase sensing with variable Volts-Per Hertz response

### Voltage regulation, steady state

+/- 0.5%

### Voltage regulation with 3% speed change

+/- 0.5%

### Voltage gain

Adjustable to compensate for engine speed droop and line loss

**TIF** Less than 50

**Number of leads** 6

## Product Support

- Standard Caterpillar warranty
- Optional extended Caterpillar warranty
- Serviceable parts available through Caterpillar Parts System
- Service intervals agree with recommended engine practices

## Serviceability

- Stator leads exit top
- Replaceable bearing sleeve(s) for longer life and lower repair cost
- Easy access to serviceable parts
- Improved wire and terminal identification ensuring reliable connection

## Cable Entry

- Top cable entry (Standard)
- Bottom cable entry (Optional)

## Main Stator Construction

The 2700 frame generators use round lamination stator design.

Stator coil pitch, coil distribution designed to produce optimum waveform and minimum total harmonic distortion. Stator slots are insulated by slot liners and coil separators. Slot liners, coil separators, and top sticks provide a minimum of 25 mm (1 in) distance from the coil to ground. The thickness of liners, separators, and phase sheets provides superior protection between phases and ground.

## Rotor Construction

The main rotor is constructed using a precision “wet” layer winding process with epoxy painted on the bare rotor and on each layer. This ensures bonding of all the wire layers together, bonding of the coils to the rotor laminations, and a sealed insulation system. The rotor is put in the oven for curing the epoxy.

The exciter rotor is machine wound and receives a trickle coat of a fungus-resisting resin. Numerically controlled turning and grinding machines produce rotor shafts with close repeatable tolerances. Grade-8 bolts are used wherever joints are subject to induced stresses. A complete coating of red sealer is applied to protect the rotors and shaft from corrosion.

Every production rotor is dynamically balanced in two planes to within 0.0508 mm deflection peak-to-peak amplitude and run at rated speed before assembly into the stator.

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