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# SG240



## Output Ratings

Generating Set Model	SG240
	Continuous
380-415V, 50 Hz	240 kVA / 192 kW

Ratings at 0.8 pf

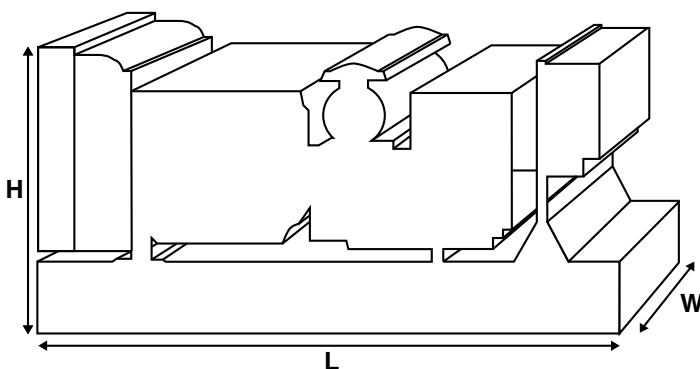
## Definitions

### Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

### Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328ft) A.S.L. 30% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load using gas fuel with a lower calorific value of 34.71MJ/m<sup>3</sup>.



## Ratings and Performance Data

Engine Make and Model	Scania SGI-12A
Alternator manufacturer for FG Wilson by:	Leroy Somer
Alternator Model:	LL5014J
Control Panel:	PowerWizard 2.0
Base Frame:	Heavy Duty Fabricated Steel
Circuit Breaker Type/Rating:	Optional
Frequency:	50 Hz
Engine Speed: RPM	1500
Fuel Consumption: m <sup>3</sup> /hr (ft <sup>3</sup> /hr)	61 (2145)

## Available Options

FG Wilson offer a range of optional features to tailor our generating sets to meet your power needs. Options include:

- Upgrade to CE Certification
- A wide range of Sound Attenuated Containers
- A variety of generating set control and synchronising panels
- Additional alarms and shutdowns
- A selection of exhaust silencer noise levels

For further information on all of the standard and optional features accompanying this product please contact your local Dealer or visit: [www.FGWilson.com](http://www.FGWilson.com)

## Dimensions and Weights

Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Wet kg (lb)
3519 (139)	1575 (62.0)	1994 (78.5)	2600 (5733)

Dry = With Lube Oil Wet = With Lube Oil and Coolant

Ratings in accordance with ISO 8528, ISO 3046, IEC 60034, BS5000 and NEMA MG-1/22. Generating set pictured may include optional accessories.

**FG Wilson has manufacturing facilities in the following locations:**

Northern Ireland • Brazil • China • India • USA

With headquarters in Northern Ireland, FG Wilson operates through a Global Dealer Network. To contact your local Sales Office please visit the FG Wilson website at [www.FGWilson.com](http://www.FGWilson.com)

## Engine Technical Data

No. of Cylinders/Alignment:	6 in-line
Cycle:	4 Stroke
Bore/Stroke: mm (in)	115 (4.5) / 144 (5.7)
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Electronic
Governing Class:	ISO 8528 G2
Compression Ratio:	11.0:1
Displacement: l (cu.in):	11.7 (714)
Moment of Inertia: kg m <sup>2</sup> (lb/in <sup>2</sup> )	1.21 (4135)
Engine Electrical System:	
-Voltage/Ground	24/Negative
-Battery Charger Amps	65
Weight: kg (lb)	- Wet 2600 (5733)

## Performance

Engine Speed: rpm	1500
Gross Engine Power: kW (hp)	210 (282)
BMEP: kPa (psi)	1430 (207)

## Fuel Systems

Fuel Filter Type:	Replaceable Element
Permitted Fuel:	Natural gas with lower calorific value of 34.7 MJ/m <sup>3</sup> and minimum methane number of 70

Fuel consumption varies widely within each gas type stated. This is because these gases are available (naturally or produced) with variances in their physical properties.

## Air Systems

Air Filter Type:	Replaceable Element
Combustion Air Flow: m <sup>3</sup> /min (cfm)	18.4 (650)
Max. Combustion Air Intake Restriction: kPa (in H <sub>2</sub> O)	2.97 (12)
Radiator Cooling Airflow: m <sup>3</sup> /min (cfm)	241 (8510)
External Restriction to Cooling Airflow: Pa (in Wg)	190 (0.75)

## Cooling System

Cooling System Capacity: l (US gal)	33.0 (8.71)
Water Pump Type:	Centrifugal
Heat Rejected to Water & Lube Oil: kW (Btu/min)	102 (5801)
Heat Radiation to Room: kW (Btu/min)	24.0 (1366)
Radiator Fan Load:	7.5 (10.0)

Designed to operate in ambient conditions up to 50°C (122°F). Contact your local FG Wilson Dealer for power ratings at specific site conditions.

## Lubrication System

Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity: l (US gal)	33.0 (8.71)
Oil Pan: l (US gal)	7.0 (1.85)
Oil Type:	SAE 15W-40
Oil Cooling Method:	Water

## Exhaust System

Silencer Type:	Level 1
Silencer Model & Qty:	SD100
Silencer Noise Reduction Level: dBA	12
Max. Allowable Back Pressure: kPa (in Hg)	4.97 (20)
Exhaust Gas Flow: m <sup>3</sup> /min (cfm)	22.0 (777)
Exhaust Gas Temperature: °C (°F):	510 (950)
Heat Rejected to Exhaust System: kW (Btu/min)	183 (10416)

## Alternator Physical Data

Manufactured for FG Wilson by:	Leroy Somer
Model:	LL5014J
No. of Bearings:	Single
Insulation Class:	H
Winding Pitch Code:	2/3 (No. 6)
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	Shunt
AVR Model:	R450

## Alternator Operating Data

Overspeed: RPM	2250
Voltage Regulation (steady state):	+/- 0.5%
Wave Form NEMA = TIF:	<50
Wave Form IEC = THF:	<2%
Total Harmonic Content LL/LN:	<4%
Radio Interference:	Suppression is in line with European Standard EN61000
Radiant Heat: kW (Btu/min)	50 Hz: 17.4 (990)

## Alternator Performance Data

Data Item	415/240V	400/230	380/220
<b>Motor Starting</b>			
Capability* kVA	625	585	536
Short Circuit Capacity** %	300	300	300
<b>Reactances:</b>			
Per Unit			
X <sub>d</sub>	2.45	2.63	2.92
X' <sub>d</sub>	0.11	0.11	0.13
X'' <sub>d</sub>	0.064	0.072	0.076

Reactances shown are applicable to baseload ratings

\* Based on 30% voltage dip at 0.6 power factor.

\*\* With optional Permanent Magnet generator or AREP excitation.

## Voltage Technical Data

	SG240 Continuous	
	kVA	kW
415/240	240	192
400/230	240	192
380/220	240	192

## General Information

### Documentation

A full set of operation and maintenance manuals and circuit wiring diagrams.

### Generating Set Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.  
FG Wilson is a fully accredited ISO 9001 company.

### Warranty

All equipment carries full manufacturer's warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer, or visit our website: [www.FGWilson.com](http://www.FGWilson.com)

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