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P50-3

Optional Leroy Somer Alternator



Image for illustration purposes only.

Output Ratings		
Voltage, Frequency	Prime	Standby
480V, 60 Hz	50.0 kVA / 40.0 kW	56.3 kVA / 45.0 kW

Ratings at 0.8 power factor.

Please refer to the output ratings technical data section for specific generator set outputs per voltage.

Prime Rating

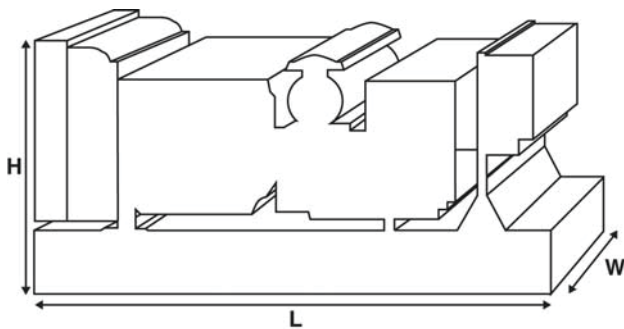
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

Standby 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 (328 ft) A.S.L. 30% relative humidity.
Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.



Ratings and Performance Data					
Engine Make & Model:	Perkins® 1103A-33TG1				
Alternator manufactured for FG Wilson by:	Leroy Somer				
Alternator Model:	LL1514L				
Control Panel:	DCP-10				
Base Frame:	Heavy Duty Fabricated Steel				
Circuit Breaker Type:	3 Pole MCB / 3 Pole MCCB				
Frequency:	60 Hz				
Engine Speed: rpm	1800				
Fuel Tank Capacity: litres (US gal)	145 (38.3)				
Fuel Consumption: l/hr (US gal/hr) (100% Load)	<table border="0"> <tr> <td>- Prime</td> <td>11.7 (3.1)</td> </tr> <tr> <td>- Standby</td> <td>12.9 (3.4)</td> </tr> </table>	- Prime	11.7 (3.1)	- Standby	12.9 (3.4)
- Prime	11.7 (3.1)				
- Standby	12.9 (3.4)				

Available Options

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

- Upgrade to CE Certification
- A wide range of Sound Attenuated Enclosures
- A variety of generator 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

Dimensions and Weights				
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)	Wet kg (lb)
1680 (66.1)	760 (29.9)	1330 (52.4)	751 (1830)	763 (1682)
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. Generator set pictured may include optional accessories.

Engine Technical Data

No. of Cylinders / Alignment:	3 / In Line
Cycle:	4 Stroke
Bore / Stroke: mm (in)	105.0 (4.1)/127.0 (5.0)
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528 G2
Compression Ratio:	17.25:1
Displacement: l (cu. in)	3.3 (201.4)
Moment of Inertia: kg m ² (lb/in ²)	1.14 (3896)
Engine Electrical System:	
- Voltage / Ground	12/Negative
- Battery Charger Amps	65
Weight: kg (lb)	
- Dry	420 (926)
- Wet	438 (966)

Performance 60 Hz

Engine Speed: rpm	1800
Gross Engine Power: kW (hp)	
- Prime	50.5 (68.0)
- Standby	55.6 (75.0)
BMEP: kPa (psi)	
- Prime	1020.0 (148.0)
- Standby	1124.0 (163.0)

Fuel System

Fuel Filter Type:	Replaceable Element			
Recommended Fuel:	Class A2 Diesel or BSEN590			
Fuel Consumption: l/hr (US gal/hr)				
	110%	100%	75%	50%
Prime	Load	Load	Load	Load
60 Hz	12.9 (3.4)	11.7 (3.1)	9.0 (2.4)	6.6 (1.7)
Standby				
	100%	75%	50%	
Standby	Load	Load	Load	
60 Hz	12.9 (3.4)	9.7 (2.6)	7.0 (1.9)	

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

Air Systems 60 Hz

Air Filter Type:	Replaceable Element
Combustion Air Flow: m ³ /min (cfm)	
- Prime	3.7 (131)
- Standby	3.9 (138)
Max. Combustion Air Intake Restriction: kPa (in H ₂ O)	8.0 (32.1)

Cooling System 60 Hz

Cooling System Capacity: l (US gal)	10.2 (2.7)
Water Pump Type:	Centrifugal
Heat Rejected to Water & Lube Oil:	
kW (Btu/min)	
- Prime	31.0 (1763)
- Standby	34.0 (1934)
Heat Radiation to Room: Heat radiated from engine and alternator	
kW (Btu/min)	
- Prime	12.6 (717)
- Standby	14.4 (819)
Radiator Fan Load: kW (hp)	0.9 (1.2)
Radiator Cooling Airflow: m ³ /min (cfm)	105.6 (3729)
External Restriction to Cooling Airflow: Pa (in H ₂ O)	120 (0.5)

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)	8.3 (2.2)
Oil Pan: l (US gal)	7.8 (2.1)
Oil Type:	API CG4/SO40
Oil Cooling Method:	Water

Exhaust System 60 Hz

Maximum Allowable Back Pressure: kPa (in Hg)	15.0 (4.4)
Exhaust Gas Flow: m ³ /min (cfm)	
- Prime	8.8 (311)
- Standby	9.5 (335)
Exhaust Gas Temperature: °C (°F)	
- Prime	510 (950)
- Standby	551 (1024)

Alternator Physical Data

Manufactured for FG Wilson by:	Leroy Somer
Model:	LL1514L
No. of Bearings:	1
Insulation Class:	H
Winding Pitch Code:	2/3 - 6
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R220

Alternator Operating Data

Overspeed: rpm	2250
Voltage Regulation: (Steady state)	+/- 1.0%
Wave Form NEMA = TIF:	50
Wave Form IEC = THF:	2.0%
Total Harmonic content LL/LN:	2.0%
Radio Interference:	Suppression is in line with European Standard EN61000-6
Radiant Heat: kW (Btu/min)	
- 60 Hz	5.4 (307)

Alternator Performance Data:

60 Hz

Data Item	480/277V	380/220V	240/120V	440/254V
	240/139V	220/110V	208/120V	220/127V
Motor Starting Capability* kVA	118	84	96	104
Short Circuit Capacity %	-	-	-	-
Reactances: Per Unit				
Xd	2.574	3.778	3.427	3.063
X'd	0.139	0.204	0.185	0.165
X''d	0.070	0.102	0.093	0.083

Reactances shown are applicable to prime ratings.

*Based on 30% voltage dip at 0.6 power factor and SHUNT excitation.

Output Ratings Technical Data 60 Hz

Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
480/277V	50.0	40.0	56.3	45.0
220/127V	50.0	40.0	56.3	45.0
380/220V	46.0	36.8	50.6	40.5
240/120V	50.0	40.0	55.0	44.0
440/254V	50.0	40.0	56.3	45.0
220/110V	46.0	36.8	50.6	40.5
208/120V	50.0	40.0	55.0	44.0
240/139V	50.0	40.0	56.3	45.0

Documentation

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

Generator 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 prime equipment carries a one year manufacturer's warranty. Standby equipment, limited to 500 running hours per year, has a two year manufacturer's warranty. For details on warranty cover please contact your local Dealer, or visit our website: FGWilson.com.

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FG Wilson manufactures product 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.

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