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P220-3

# Optional Leroy Somer Alternator

Output Ratings		
Voltage, Frequency	Prime	Standby
400V, 50 Hz	200.0 kVA / 160.0 kW	220.0 kVA / 176.0 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  $25^{\circ}$ 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.

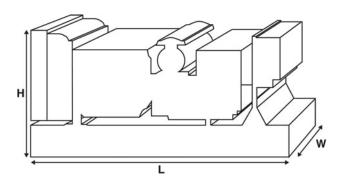




Image for illustration purposes only.

Ratings and Performance Da	ta		
Engine Make & Model:		Perkins® 1106A	-70TAG4
Alternator manufactured for FG Wilson by:		Leroy Somer	
Alternator Model:		LL5014F	
Control Panel:		DCP-10	
Base Frame:		Heavy Duty Fabri	icated Steel
Circuit Breaker Type:		3 Pole MCCB	
Frequency:		50 Hz	60 Hz
Engine Speed: rpm		1500	-
Fuel Tank Capacity: litres (US gal)		394 (1)	04.1)
Fuel Consumption: I/hr (US gal/h	nr)		
(100% Load)	- Prime	45.4 (12.0)	-
	- Standby	49.5 (13.1)	-

## **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 ar	nd Weights			
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	<b>Dry</b> kg (lb)	<b>Wet</b> kg (lb)
2510 (98.8)	1010 (39.8)	1640 (64.6)	1587 (3499)	1614 (3558)
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 / Alignme	nt:	6 / In Line
Cycle:		4 Stroke
Bore / Stroke: mm (in)		105.0 (4.1)/135.0 (5.3)
Induction:		Turbocharged Air To Air Charge Cooled
Cooling Method:		Water
Governing Type:		Electronic
Governing Class:	ISO 8528 G2	
Compression Ratio:	16.0:1	
Displacement: I (cu. in)	7.0 (427.8)	
Moment of Inertia: kg m² (lb/	1: kg m² (lb/in²) 1.26 (430	
Engine Electrical System:		
- Voltage / Gr	ound	12/Negative
- Battery Charger A	Amps	85
Weight: kg (lb)	- Dry	788 (1737)
	- Wet	822 (1812)

Performance		50 Hz	60 Hz
Engine Speed: rpm		1500	-
Gross Engine Pow	er: kW (hp)		
	- Prime	178.9 (240.0)	-
	- Standby	196.3 (263.0)	-
BMEP: kPa (psi)			
	- Prime	2041.0 (296.0)	-
	- Standby	2239.0 (324.7)	-

Fuel Filter Type: Replaceable Element

**Recommended Fuel:** Class A2 Diesel or BSEN590

Fuel Consumption: I/hr (US gal/hr)

	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	49.5 (13.1)	45.4 (12.0)	34.7 (9.2)	23.4 (6.2)
60 Hz	-	-	-	-

	100%	75%	50%
Standby	Load	Load	Load
50 Hz	49.5 (13.1)	38.0 (10.0)	25.7 (6.8)
60 Hz	-	-	-

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

Air Systems		50 Hz	60 Hz
Air Filter Type:		Paper Ele	ement
Combustion Air Flow: m³/min (cfr	m)		
	- Prime	12.6 (445)	-
	- Standby	13.2 (466)	-
Max. Combustion Air Intake Restriction: kPa (in H <sub>2</sub> O)		8.0 (32.1)	-

Cooling System	50 Hz	60 Hz
Cooling System Capacity: I (US gal)	27.0 (7.1)	-
Water Pump Type:	Cent	rifugal
Heat Rejected to Water & Lube Oil:		
kW (Btu/min) - Prim	ne 78.2 (4447)	-
- Standl	by 81.0 (4606)	-
Heat Radiation to Room: Heat radiated fro	om engine and alternato	r
kW (Btu/min) - Prim	ne 26.0 (1479)	
- Standl	oy 28.3 (1609)	
Radiator Fan Load: kW (hp)	6.3 (8.5)	-
Radiator Cooling Airflow: m³/min (cfm)	307.2 (10849)	-
External Restriction to Cooling Airflow: Pa (in H <sub>2</sub> O)	125 (0.5)	-

Designed to operate in ambient conditions up to  $50^{\circ}$ C ( $122^{\circ}$ 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: I (US gal)	16.5 (4.4)
Oil Pan: I (US gal)	14.9 (3.9)
Oil Type:	API CI4 15W-40
Oil Cooling Method:	Water

Exhaust System	50 Hz	60 Hz
	15.0 (4.4)	-
Exhaust Gas Flow: m³/min (cfm)		
- Prime	34.9 (1232)	-
- Standby	36.8 (1300)	-
Exhaust Gas Temperature: °C (°F)		
- Prime	527 (981)	-
- Standby	580 (1076)	-

Alternator Physical Data	
Manufactured for FG Wilson by:	Leroy Somer
Model:	LL5014F
No. of Bearings:	1
Insulation Class:	Н
Winding Pitch Code:	2/3 - 6
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R250

Alternator Operating Data					
Overspeed: rpm	2250				
Voltage Regulation: (Steady state)	+/- 0.5%				
Wave Form NEMA = TIF:	50				
Wave Form IEC = THF:	2.0%				
Total Harmonic content LL/LN:	4.0%				
Radio Interference:	Suppression is in line with European Standard EN61000-6				
Radiant Heat: kW (Btu/min)					
- 50 Hz	15.1 (859)				
- 60 Hz	-				

Alternator Performance Data:		50	Hz		60
Data Item	415/240V	400/230V	380/220V	220/127V	
		230/115V 200/115V	220/110V		
Motor Starting	43.4	200	25/	457	
Capability* kVA	414	389	356	457	
Short Circuit	200	200	200	200	
Capacity** %	300	300	300	300	
Reactances: Per Unit					
Xd	2.794	3.008	3.330	2.237	
X'd	0.137	0.148	0.163	0.110	
X"d	0.082	0.089	0.098	0.066	

Output Ratings Technical Data 50 Hz						
Voltage	Priı	ne:	Standby:			
	kVA	kW	kVA	kW		
415/240V	200.0	160.0	220.0	176.0		
400/230V	200.0	160.0	220.0	176.0		
380/220V	200.0	160.0	220.0	176.0		
230/115V	200.0	160.0	220.0	176.0		
220/127V	180.0	144.0	200.0	160.0		
220/110V	200.0	160.0	220.0	176.0		
200/115V	200.0	160.0	220.0	176.0		

Output Ratings Technical Data 60 Hz					
Voltage	Prime:		Standby:		
	kVA	kVA kW		kW	

Reactances shown are applicable to prime ratings.
\*Based on 30% voltage dip at 0.6 power factor and SHUNT excitation.
\*\*With optional permanent magnet generator.

# **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. Dealer contact details:

# FG Wilson manufactures product in the following locations:

Northern Ireland • Brazil • China • India • USA

General Information

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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