

www.FGWilson.com

# P13.5-4

Output Ratings		
Generating Set Model	Prime*	Standby*
380-415V,50Hz	12.5 kVA / 10.0 kW	13.8 kVA / 11.0 kW
220/127V, 60 Hz	15.0 kVA / 12.0 kW	16.2 kVA / 13.0 kW

Ratings at 0.8 power factor.

#### **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.

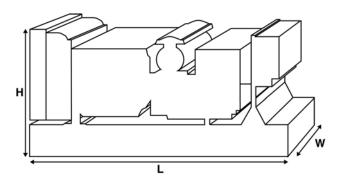




Image for illustration purposes only.

Ratings and Performance Data			
Engine Make & Model:		Perkins 403D-15	G
Alternator manufactured for FG Wilson by:		Leroy Somer	
Alternator Model:		LL1014H	
Control Panel:		LCP1	
Base Frame:		Heavy Duty Fabri	cated Steel
Circuit Breaker Type:		3 Pole MCB	
Frequency:		50 Hz	60 Hz
Engine Speed: RPM		1500	1800
Fuel Tank Capacity: litres (US gal)		45 (11.9)	
Fuel Consumption: I/hr (US gal/hr)			
(100% Load)	- Prime	3.6 (1.0)	4.3 (1.1)
-	Standby	4.0 (1.1)	4.7 (1.2)

### **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 Enclosures
- 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

Dimensions an	nd Weights			
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	<b>Dry</b> kg (lb)	<b>Wet</b> kg (lb)
1320 (52.0)	552 (21.7)	1179 (46.4)	387 (853)	393 (866)
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.

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Engine Technical Data		
No. of Cylinders / Alignment:	3 / In Line	
Cycle:	4 Stroke	
Bore / Stroke: mm (in)	84.0 (3.3)/90.0 (3.5)	
Induction:	Naturally Aspirated	
Cooling Method:	Water	
Governing Type:	Mechanical	
Governing Class:	ISO 8528 G2	
Compression Ratio:	22.5:1	
Displacement: I (cu. in)	1.5 (91.3)	
Moment of Inertia: kg m² (lb/in²)	2.17 (7415)	
Engine Electrical System:		
- Voltage / Ground	12/Negative	
- Battery Charger Amps	65	
Weight: kg (lb) - Dry	197 (434)	
- Wet	202 (445)	

Performance		50 Hz	60 Hz
Engine Speed: rpm	1	1500	1800
Gross Engine Pow	ver: kW (hp)		
	- Prime	12.2 (16.0)	14.7 (20.0)
	- Standby	13.5 (18.0)	16.2 (22.0)
BMEP: kPa (psi)			
	- Prime	652.0 (94.6)	655.0 (95.0)
	- Standby	722.0 (104.7)	722.0 (104.7)

	System	
ruei	System	1

Fuel Filter Type:Replaceable ElementRecommended Fuel:Class A2 Diesel

 $\pmb{Fuel\ Consumption:}\ \textit{I/hr}\ (\textit{US\ gal/hr})$ 

	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	4.0 (1.1)	3.6 (1.0)	2.7 (0.7)	2.0 (0.5)
60 Hz	4.7 (1.2)	4.3 (1.1)	3.3 (0.9)	2.5 (0.7)

	110%	100%	75%	50%
Standby	Load	Load	Load	Load
50 Hz		4.0 (1.1)	3.0 (0.8)	2.1 (0.6)
60 Hz		4.7 (1.2)	3.5 (0.9)	2.6 (0.7)

(Based on diesel fuel with a specific gravity of 0.84 and conforming to BS2869, Class A2)  $\,$ 

Air Systems		50 Hz	60 Hz
Air Filter Type:		Replaceable Element	
Combustion Air Flow: m <sup>3</sup> /min (cfm)			
	- Prime	1.1 (38)	1.2 (43)
	- Standby	1.1 (38)	1.2 (43)
Max. Combustion Air Intate Restriction: $kPa$ (in $H_2O$ )		3.0 (12.0)	3.0 (12.0)

Cooling System		50 Hz	60 Hz
Cooling System Capacity: I (US gal)		5.3 (1.4)	5.3 (1.4)
Water Pump Type:		Centr	ifugal
Heat Rejected to Water & Lube	e Oil:		
kW (Btu/min)	- Prime	13.3 (756)	15.4 (876)
-	- Standby	14.6 (830)	16.9 (961)
Heat Radiation to Room: Heat radiated from		ngine and alternator	
kW (Btu/min)	- Prime	3.2 (182)	4.0 (227)
	- Standby	3.5 (199)	4.3 (245)
Radiator Fan Load: kW (hp)		0.2 (0.2)	0.3 (0.4)
Radiator Cooling Airflow: m³/min	n (cfm)	31.2 (1102)	43.2 (1526)
External Restriction to Cooling Airflow: Pa (in H <sub>2</sub> O)		125 (0.5)	125 (0.5)

Cooling system 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)	6.0 (1.6)
Oil Pan: I (US gal)	4.5 (1.2)
Oil Type:	API CH4 15W-40
Oil Cooling Method:	N/A

Exhaust System	50 Hz	60 Hz
Silencer Type:	Lev	el 1
Silencer Model & Quantity:	263-0	765 (1)
Pressure Drop Across Silencer System: kPa (in Hg)	0.56 (0.165)	0.80 (0.236)
Silencer Noise Reduction Level: dB	30	18.6
Maximum Allowable Back Pressure: kPa (in Hg)	10.0 (3.0)	10.0 (3.0)
Exhaust Gas Flow: m³/min (cfm)		
- Prime	2.0 (71)	3.1 (111)
- Standby	2.2 (78)	3.4 (119)
Exhaust Gas Temperature: °C (°F)		
- Prime	436 (818)	455 (851)
- Standby	480 (896)	505 (941)

Alternator Physical Data	
Manufactured for FG Wilson by:	Leroy Somer
Model:	LL1014H
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 Reguation: (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	2.3 (131)		
- 60 Hz	2.6 (148)		

Alternator Performance Data:	50 Hz			50 Hz ata:	
Data Item	415/240V	400/230V	380/220V	220/127V	
Motor Starting Capability* kVA	25	24	22	24	
Short Circuit Capacity** %	-	-	-		
Reactances: Per Unit					
Xd	1.790	1.920	2.130	2.290	
X'd	0.130	0.140	0.160	0.170	
X"d	0.066	0.071	0.079	0.085	

Reactances shown are applicable to prime ratings.

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

\*\*With optional permanent magnet generator or AREP excitation.

Voltage Technical Data 50 Hz				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
415/240V	12.5	10.0	13.8	11.0
400/230V	12.5	10.0	13.8	11.0
380/220V	12.5	10.0	13.8	11.0

Voltage Technical Data 60 Hz				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
220/127V	15.0	12.0	16.2	13.0

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.
EU Stage II Emissions Compliant.
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:
Dedier contact details.

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