

P22-4

Generating Set Mode	l Prime*	Standby*
380-415V,50Hz	20.0 kVA / 16.0 kW	22.0 kVA / 17.6 kW
220/127V, 60 Hz	22.5 kVA / 18.0 kW	25.0 kVA / 20.0 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.

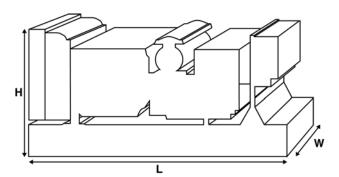




Image for illustration purposes only.

Ratings and Performance Dat	ta		
Engine Make & Model:		Perkins 404D-22	2G
Alternator manufactured for FG Wilson by:		Leroy Somer	
Alternator Model:		LL1014N	
Control Panel:		LCP1002T	
Base Frame:		Heavy Duty Fabr	ricated 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/h	r)		
(100% Load)	- Prime	5.3 (1.4)	5.8 (1.5)
	- Standby	5.9 (1.6)	6.5 (1.7)

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 and Weights				
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)	Wet kg (lb)
1320 (52.0)	552 (21.7)	1179 (46.4)	460 (1014)	467 (1030)
Dry = With Lube Oil		Wet = With Lube	e 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

Engine Technical Data	
No. of Cylinders / Alignment:	4 / In Line
Cycle:	4 Stroke
Bore / Stroke: mm (in)	84.0 (3.3)/100.0 (3.9)
Induction:	Naturally Aspirated
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528 G2
Compression Ratio:	23.3:1
Displacement: (cu. in)	2.2 (135.2)
Moment of Inertia: kg m ² (lb/in ²) 2.72 (9308)
Engine Electrical System:	
- Voltage / Grou	ind 12/Negative
- Battery Charger An	nps 65
Weight: kg (lb) - I	Dry 242 (534)
- V	Vet 251 (554)

Performance		50 Hz	60 Hz
Engine Speed: rp	m	1500	1800
Gross Engine Po	wer: kW (hp)		
	- Prime	18.7 (25.0)	22.0 (30.0)
	- Standby	20.6 (28.0)	24.3 (33.0)
BMEP: kPa (psi)			
	- Prime	675.0 (97.9)	662.0 (96.0)
	- Standby	743.0 (107.8)	731.0 (106.0)

F	Fuel System				
F	Fuel Filter Type: Replaceable Element		ment		
R	ecommend	ed Fuel:	C	Class A2 Diesel	
F	uel Consum	ption: I/hr (US	gal/hr)		
		110%	100%	75%	50%
	Prime	Load	Load	Load	Load
	50 Hz	5.9 (1.6)	5.3 (1.4)	3.9 (1.0)	2.9 (0.8)
	60 Hz	6.5 (1.7)	5.8 (1.5)	4.5 (1.2)	3.3 (0.9)
		110%	100%	75%	50%
	Standby	Load	Load	Load	Load

60 Hz 6.5 (1.7) 4.9 (1.3) 3.6 (1.0)

5.9 (1.6)

4.3 (1.1)

3.0 (0.8)

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

50 Hz

Air Systems	50 Hz	60 Hz
Air Filter Type:	Replaceab	le Element
Combustion Air Flow: m ³ /min (cfm)		
- Prime	1.5 (51)	1.7 (61)
- Standby	1.5 (51)	1.7 (61)
Max. Combustion Air Intate Restriction: kPa (in H ₂ O)	3.0 (12.0)	3.0 (12.0)

Cooling System		50 Hz	60 Hz
Cooling System Capacity: I (US	gal)	6.5 (1.7)	6.5 (1.7)
Water Pump Type:		Centrifugal	
Heat Rejected to Water & Lube Oil:			
kW (Btu/min)	- Prime	19.6 (1115)	22.2 (1262)
	- Standby	21.6 (1228)	24.2 (1376)
Heat Radiation to Room: Heat radiated from engine and alternator			
kW (Btu/min)	- Prime	5.9 (336)	6.3 (358)
	- Standby	7.1 (404)	7.5 (427)
Radiator Fan Load: kW (hp)		0.2 (0.3)	0.4 (0.5)
Radiator Cooling Airflow: m³/m	iin (cfm)	33.0 (1165)	41.4 (1462)
External Restriction to Cooling Airflow: Pa (in H_2O)		125 (0.5)	125 (0.5)

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)	10.6 (2.8)
Oil Pan: I (US gal)	8.9 (2.4)
Oil Type:	API CH4 15W-40
Oil Cooling Method:	N/A

Exhaust System	50 Hz	60 Hz	
Silencer Type:	Indu	strial	
Silencer Model & Quantity:	263-02	765 (1)	
Pressure Drop Across Silencer System: kPa (in Hg)	0.70 (0.207)	1.60 (0.472)	
Silencer Noise Reduction Level: dB	28	21	
Maximum Allowable Back Pressure: ^{kPa} (in Hg)	10.0 (3.0)	10.0 (3.0)	
Exhaust Gas Flow: m³/min (cfm)			
- Prime	4.1 (145)	4.3 (153)	
- Standby	4.5 (159)	4.8 (168)	
Exhaust Gas Temperature: °C (°F)			
- Prime	437 (819)	440 (824)	
- Standby	481 (898)	510 (950)	

Alternator Physical Data		
Manufactured for FG Wilson by:	Leroy Somer	
Model:	LL1014N	
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	2.7 (154)						
- 60 Hz	2.9 (165)						

Alternator Performance Data:	50 Hz			60 Hz		
Data Item	415/240V	400/230V	380/220V	220/127V		
Motor Starting Capability* kVA	46	43	39	43		
Short Circuit Capacity** %	300	300	300	300		
Reactances: Per Unit						
Xd	1.740	1.880	2.080	2.090		
X'd	0.110	0.120	0.130	0.130		
X"d	0.053	0.058	0.064	0.064		

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

Voltage Techr	nical Data 50 H	lz			Voltage Technical Data 60 Hz				
Voltage	Prime:		Standby:		Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW		kVA	kW	kVA	k
415/240V	20.0	16.0	22.0	17.6					
400/230V	20.0	16.0	22.0	17.6	220/127V	22.5	18.0	25.0	2
380/220V	20.0	16.0	22.0	17.6					

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:

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