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## P1500P3/P1650E3



Image for illustration purposes only.

Output Ratings		
Voltage, Frequency	Prime*	Standby*
400V, 50 Hz	1500.0 kVA / 1200.0 kW	1650.0 kVA / 1320.0 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.

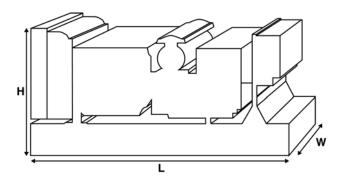
#### Standby Rating

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 D	ata		
Engine Make & Model:		Perkins® 4012-46	STAG2A
Alternator manufactured fo FG Wilson by:	r	Leroy Somer	
Alternator Model:		LL8224N	
Control Panel:		PowerWizard 1.1	+
Base Frame:		Heavy Duty Fabri	icated Steel
Circuit Breaker Type:		3 Pole ACB - Opt	tion
Frequency:		50 Hz	60 Hz
Engine Speed: RPM		1500	-
Fuel Tank Capacity: litres (US gal)		-	
Fuel Consumption: I/hr (US gal	l/hr)		
(100% Load)	- Prime	296.6 (78.4)	-
	- Standby	326.3 (86.2)	-

#### **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	d Weights			
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	<b>Dry</b> kg (lb)	<b>Wet</b> kg (lb)
5095 (200.6)	1900 (74.8)	2435 (95.9)	10178 (22439	10385 (22895
Dry = With Lube	Oil	Wet = With Lub	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.

Engine Technical Data			
No. of Cylinders / Alignment:		12 / Vee	
Cycle:		4 Stroke	
Bore / Stroke: mm (in)		160.0 (6.3)/190.0 (7.5)	
Induction:		Turbocharged Air To Air Charge Cooled	
Cooling Method:		Water	
Governing Type:		Electronic	
Governing Class:		ISO 8528	
Compression Ratio:		13.0:1	
Displacement: I (cu. in)		45.8 (2797.5)	
Moment of Inertia: kg m² (II	b/in²)	19.30 (65951)	
Engine Electrical System:			
- Voltage / Ground		24/Negative	
- Battery Charger Amps		40	
Weight: kg (lb)	- Dry	4400 (9700)	
	- Wet	4604 (10150)	

Performance		50 Hz	60 Hz
Engine Speed: rpm		1500	-
Gross Engine Powe	er: kW (hp)		
	- Prime	1331.0 (1785.0	-
	- Standby	1459.0 (1957.0	-
BMEP: kPa (psi)			
	- Prime	2323.0 (336.9)	-
	- Standby	2546.0 (369.3)	-

### Fuel System

Fuel Filter Type:Replaceable ElementRecommended Fuel:Class A2 Diesel

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

	•	*		
	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	326.3 (86.2)	296.6 (78.4)	225.7 (59.6)	159.8 (42.2)
60 Hz	-	-	-	-

	110%	100%	75%	50%
Standby	Load	Load	Load	Load
50 Hz		326.3 (86.2)	246.4 (65.1)	172.6 (45.6)
60 Hz		-	-	-

(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: m³/min (	cfm)		
	- Prime	120.0 (4238)	-
	- Standby	128.0 (4520)	-
Max. Combustion Air Intate Restriction: $kPa$ (in $H_2O$ )		4.0 (16.1)	-

Cooling System	50 Hz	60 Hz
Cooling System Capacity: I (US gal)	207.0 (54.7)	-
Water Pump Type:	Centrif	ugal
Heat Rejected to Water & Lube Oil:		
kW (Btu/min) - Prime	428.0 (24340)	-
- Standby	485.0 (27581)	-
Heat Radiation to Room: Heat radiated from	engine and alternator	
kW (Btu/min) - Prime	147.9 (8411)	
- Standby	171.6 (9759)	
Radiator Fan Load: kW (hp)	42.0 (56.3)	-
Radiator Cooling Airflow: m <sup>3</sup> /min (cfm)	1212.0 (42801)	-
External Restriction to Cooling Airflow: Pa (in H <sub>2</sub> O)	250 (1.0)	-

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)	177.0 (46.8)
Oil Pan: I (US gal)	159.0 (42.0)
Oil Type:	API CH4 15W-40
Oil Cooling Method:	Water

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industi	rial
Silencer Model & Quantity:	IND-Option	on (1)
Pressure Drop Across Silencer System: kPa (in Hg)	-	-
Silencer Noise Reduction Level: dB	12.2	-
Maximum Allowable Back Pressure: kPa (in Hg)	5.0 (1.5)	-
Exhaust Gas Flow: m³/min (cfm)		
- Prime	315.0 (11124)	-
- Standby	315.0 (11124)	-
Exhaust Gas Temperature: °C (°F)		
- Prime	450 (842)	-

- Standby

450 (842)

Alternator Physical Data	
Manufactured for FG Wilson by:	Leroy Somer
Model:	LL8224N
No. of Bearings:	1
Insulation Class:	Н
Winding Pitch Code:	2/3 - 6S
Wires:	6
Ingress Protection Rating:	IP23
Excitation System:	AREP
AVR Model:	R450M

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:	3.5%				
Radio Interference:	Suppression is in line with European Standard EN61000-6				
Radiant Heat: kW (Btu/min)					
- 50 Hz	66.6 (3787)				
- 60 Hz	-				

Alternator Performance Data:	50 Hz		60 Hz		
Data Item	415/240V	400/230V	380/220V		
Motor Starting	3924	3658	3316		
Capability* kVA					
Short Circuit	200	200	200		
Capacity** %	300	300	300		
Reactances: Per Unit					
Xd	3.510	3.778	4.186		
X'd	0.226	0.244	0.270		
X"d	0.126	0.136	0.151		

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.

Output Ratings Technical Data 50 Hz					
Voltage	Prime:		Standby:		
	kVA	kW	kVA	kW	
415/240V	1500.0	1200.0	1650.0	1320.0	
400/230V	1500.0	1200.0	1650.0	1320.0	
380/220V	1500.0	1200.0	1650.0	1320.0	

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

# **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 prime equipment carries a one year manufacturer's warranty with unlimited hours or two year manufacturer's warranty limited to 6,000 running hours. Standby equipment, limited to 500 running hours per year, has a three year manufacturer's warranty. Dealer contact details:

#### 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.

FG Wilson is a trading name of Caterpillar (NI) Limited.

**General Information**