

P230H2/P250HE2

EU Stage II Emissions Compliant



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Output Ratings		
Generating Set Model	Prime*	Standby*
380-415V, 50Hz	230.0 kVA	250.0 kVA
	184.0 kW	200.0 kW
480V, 60 Hz	240.0 kVA	265.0 kVA
	192.0 kW	212.0 kW

* Refer to ratings definitions on page 4.

Ratings at 0.8 power factor.

Technical Data		
Engine Make & Model:	Perkins 1306C-E87TAG4	
Alternator Model:	LL5014H	
Base Frame Type:	Heavy Duty Fabricated Steel	
Circuit Breaker Type:	3 Pole MCCB	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Fuel Tank Capacity: litres (US gal)	350 (92.5)	
Fuel Consumption: Prime l/hr (US gal/hr)	56.3 (14.9)	60.1 (15.9)
Fuel Consumption: Standby l/hr (US gal/hr)	61.2 (16.2)	64.0 (16.9)



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Engine Technical Data

Physical Data					Air System		50 Hz	60 Hz
Manufacturer: Perkins					Air Filter Type: Paper Element			
Model: 1306C-E87TAG4					Combustion Air Flow:			
No. of Cylinders/Alignment: 6 / In Line					m³/min (cfm)	-Standby:	14.9 (526)	20.2 (713)
Cycle: 4 Stroke						-Prime:	14.9 (526)	20.2 (713)
Induction: Turbocharged Air To Air Charge Cooled					Max. Combustion Air Intake			
					Restriction: kPa (in H₂O)		6.2 (25.0)	6.2 (25.0)
Cooling Method: Water					Radiator Cooling Air Flow:			
Governing Type: Electronic					m³/min (cfm)		424.2 (14980)	560.4 (19790)
Governing Class: ISO 8528 G2					External Restriction to			
Compression Ratio: 16.9:1					Cooling Air Flow: Pa (in H₂O)		125 (0.5)	125 (0.5)
Displacement: l (cu.in)					Cooling System		50 Hz	60 Hz
Bore/Stroke: mm (in)					Cooling System Capacity:			
Moment of Inertia: kg m² (lb. in²)					l (US gal)		45.3 (12.0)	45.3 (12.0)
Engine Electrical System:					Water Pump Type: Centrifugal			
-Voltage/Ground: 24/Negative					Heat Rejected to Water &			
-Battery Charger Amps: 45					Lube Oil: kW (Btu/min)			
Weight: kg (lb) - Dry: 671 (1479)						-Standby:	96.0 (5459)	105.0 (5971)
- Wet: 698 (1539)						-Prime:	89.0 (5061)	98.0 (5573)
Performance					50 Hz		60 Hz	
Engine Speed: RPM					1500		1800	
Gross Engine Power: kW (hp)								
-Standby:					228.5 (306.0)	246.8 (331.0)		
-Prime:					209.1 (280.0)	224.4 (301.0)		
BMEP: kPa (psi)								
-Standby:					2099.0 (304.5)	1890.0 (274.1)		
-Prime:					1922.0 (278.7)	1718.0 (249.2)		
Regenerative Power: kW					20.8		28.6	
Fuel System					Exhaust System		50 Hz	60 Hz
Fuel Filter Type: Replaceable Element					Silencer Type: Level 1			
Recommended Fuel: Class A2 Diesel					Silencer Model & Qty: SD100 (0)			
Fuel Consumption: l/hr (US gal/hr)					Pressure Drop Across			
	110% Load	100% Load	75% Load	50% Load	Silencer System: kPa (in Hg)		8.70 (2.569)	8.70 (2.569)
Prime					Silencer Noise Reduction			
50 Hz	61.2 (16.2)	56.3 (14.9)	42.6 (11.3)	29.1 (7.7)	Level: dB		12	10
60 Hz	64.0 (16.9)	60.1 (15.9)	47.8 (12.6)	33.4 (8.8)	Max. Allowable Back			
Standby					Pressure: kPa (in. Hg)		10.7 (3.2)	10.7 (3.2)
50 Hz		61.2 (16.2)	46.1 (12.2)	31.4 (8.3)	Exhaust Gas Flow:			
60 Hz		64.0 (16.9)	51.4 (13.6)	36.2 (9.6)	m³/min (cfm)	-Standby:	44.5 (1572)	58.1 (2052)
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)						-Prime:	45.9 (1621)	59.2 (2091)
					Exhaust Gas Temperature: °C (°F)			
						-Standby:	508 (946)	447 (836)
						-Prime:	480 (895)	431 (808)

Alternator Performance Data

Data Item	50 Hz				60 Hz				
	415/240V	400/230V 230/115V 200/115V	380/220V 220/110V	220/127V	480/277V 240/139V	380/220V 220/110V	240/120V 208/120V	230/115V	440/254V 220/127V
Motor Starting Capability* kVA	495	465	425	546	543	362	425	397	468
Short Circuit Capacity** %	300	300	300	300	300	300	300	300	300
Reactances: Per Unit									
Xd	2.784	2.997	3.321	2.477	2.606	4.140	3.470	3.737	3.100
X'd	0.132	0.142	0.158	0.117	0.124	0.196	0.165	0.178	0.147
X''d	0.080	0.086	0.095	0.071	0.075	0.119	0.099	0.107	0.089

Reactances shown are applicable to prime ratings

* Based on 30% voltage dip.

** With optional Permanent Magnet generator or AREP excitation.

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG WILSON	Overspeed: RPM	2250
Model:	LL5014H	Voltage Regulation (steady state) (%):	+/- 0.5
No. of Bearings:	1	Wave Form NEMA = TIF:	50
Insulation Class:	H	Wave Form IEC = THF:	2.0%
Winding Pitch Code:	2/3 - 6	Total Harmonic Content LL/LN:	4.0%
Wires:	12	Radio Interference:	Supression is in line with European Standard EN61000-6
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	
Excitation System:	SHUNT		
AVR Model:	R448		
		-50 Hz:	16.3 (927)
		-60 Hz:	16.9 (961)

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

Voltage	Prime		Standby	
	kVA	kW	kVA	kW
415/240V	230.0	184.0	250.0	200.0
400/230V	230.0	184.0	250.0	200.0
380/220V	230.0	184.0	250.0	200.0
230/115V	230.0	184.0	250.0	200.0
220/127V	230.0	184.0	250.0	200.0
220/110V	230.0	184.0	250.0	200.0
200/115V	230.0	184.0	250.0	200.0

3 Phase Ratings and Performance at 60 Hz, 1800 RPM

Voltage	Prime		Standby	
	kVA	kW	kVA	kW
480/277V	240.0	192.0	265.0	212.0
220/127V	240.0	192.0	265.0	212.0
380/220V	239.0	191.2	263.8	211.1
240/120V	240.0	192.0	265.0	212.0
230/115V	240.0	192.0	265.0	212.0
440/254V	240.0	192.0	265.0	212.0
220/110V	239.0	191.2	263.8	211.1
208/120V	240.0	192.0	265.0	212.0
240/139V	240.0	192.0	265.0	212.0

Definitions

Standby Rating

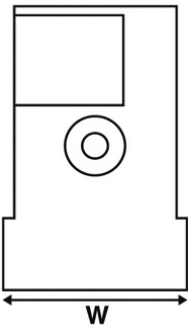
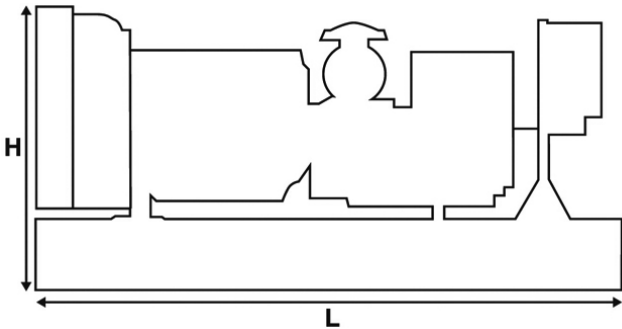
These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

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.

Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328ft) 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.



Weights and Dimensions

Weights: kg (lb)		Dimensions: mm (in)	
Net (+ lube oil)	2100 (4630)	Length	2960 (116.5)
Wet (+ lube oil & coolant)	2137 (4711)	Width	1003 (39.5)
Fuel, lube oil & coolant	2433 (5364)	Height	1718 (67.6)

General Data

Documents

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 equipment carries full manufacturer's warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer, or visit our website: www.FGWilson.com