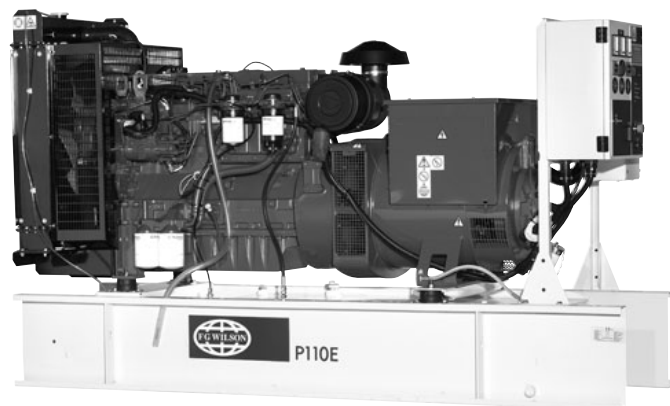


P100 / P110E



Output Ratings		
Generating Set Model	P100 Prime*	P110E Standby*
380-415V, 50 Hz	100 kVA 80 kW	110 kVA 88 kW
480V, 60 Hz	113 kVA 90.4 kW	125 kVA 100 kW

* Refer to ratings definitions on page 4.
Ratings at 0.8 pf

Technical Data	
Engine Make & Model	Perkins 1006TG2A
Alternator Model	LL3014B
Base Frame Type	Heavy Duty Fabricated Steel
Circuit Breaker Type/Rating	3 Pole MCB \leq 160 Amps 3 Pole MCCB \geq 160 Amps
Frequency	50 Hz 60Hz
Engine Speed	1500 1800
Fuel Tank Capacity: Litres (US Gal)	230 (60.8)
Fuel Consump, P100: L/hr (US Gal/hr)	22.8 (6.0) 26.4 (7.0)
Fuel Consump, P110E: L/hr (US Gal/hr)	25.4 (6.7) 29.2 (7.7)



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Engine Technical Data

Physical Data		Air System		50 Hz	60 Hz
Manufacturer:	Perkins	Air Filter Type:	Replaceable Element		
Model:	1006TG2A	Combustion Air Flow:			
No. of Cylinders/Alignment:	6 In Line	m ³ /min (cfm) -Standby:	6.00 (211)	7.79 (275)	
Cycle:	4 Stroke	-Prime:	5.74 (202)	7.38 (260)	
Induction:	Turbocharged	Max. Combustion Air Intake			
Cooling Method:	Water	Restriction: kPa (in H ₂ O)	5.0 (20.1)	5.0 (20.1)	
Governing Type:	Mechanical	Radiator Cooling Airflow:			
Class:	ISO 8528 G2	m ³ /min (cfm)	192 (6780)	246 (8687)	
Compression Ratio:	16.0:1	External Restriction to			
Displacement: L (cu.in):	5.99 (365)	Cooling Airflow: Pa (in Wg)	120 (0.48)	120 (0.48)	
Bore/Stroke: mm (in)	100 (3.9) / 127 (5.0)	Cooling System			
Moment of Inertia: kg m ² (lb/in ²)	0.2996 (1024)	Cooling System			
Engine Electrical System:		Capacity:L (US Gal)	27.7 (7.3)	27.7 (7.3)	
-Voltage/Ground	12/Negative	Water Pump Type:	Centrifugal		
-Battery Charger Amps	45	Heat Rejected to Water &			
Weight: kg (lbs) -Dry	586 (1291)	Lube Oil: kW (Btu/min)			
-Wet	623 (1373)	-Standby:	68.1 (3874)	74.6 (4243)	
		-Prime:	60.9 (3464)	66.6 (3788)	
		Heat Radiation to Room:			
		kW (Btu/min) -Standby:	44.6 (2537)	48.9 (2783)	
		-Prime:	35.4 (2014)	38.7 (2203)	
		Radiator Fan Load: kW (hp)	2.8 (3.8)	4.8 (6.4)	
		Lubrication System			
		Oil Filter Type:	Spin-On, Full Flow		
		Total Oil Capacity L (US Gal):	16.1 (4.3)		
		Oil Pan L (US Gal):	13.1 (3.5)		
		Oil Type:	API CD 15W-40		
		Cooling Method:	Water		
		Exhaust System			
		Silencer Type:	Level 1		
		Silencer Model & Qty:	SD80 (1)		
		Pressure Drop Across			
		Silencer System: kPa (in Hg)	6.0 (1.8)	tba	
		Silencer Noise Reduction			
		Level: dB	18	18	
		Max. Allowable Back			
		Pressure: kPa (in Hg)	6.0 (1.77)	6.0 (1.77)	
		Exhaust Gas Flow: m ³ /min (cfm)			
		- Standby:	17.7 (624)	22.5 (794)	
		- Prime:	16.2 (573)	20.0 (704)	
		Exhaust Gas Temperature:			
		°C (°F) - Standby:	585 (1085)	580 (1076)	
		- Prime:	550 (1022)	540 (1004)	
Performance		50 Hz		60 Hz	
Engine Speed: rpm		1500	1800		
Gross Engine Power:					
kW (hp) -Standby:	104 (139)	124 (166)			
-Prime:	94.4 (127)	112 (151)			
BMEP: kPa (psi)					
-Standby:	1404 (203)	1393 (202)			
-Prime:	1263 (183)	1253 (181)			
Regenerative Power: kW	12.6	16.2			
Fuel System					
Fuel Filter Type:	Replaceable Element				
Recommended Fuel:	Class 2 Diesel				
Fuel Consumption: L/hr (US Gal/hr)					
	110% Load	100% Load	75% Load	50% Load	
P100					
50 Hz	25.4 (6.7)	22.8 (6.0)	16.9 (4.5)	11.9 (3.1)	
60 Hz	29.2 (7.7)	26.4 (7.0)	20.1 (5.3)	14.7 (3.9)	
P110E					
50 Hz	-	25.4 (6.7)	18.6 (4.9)	12.8 (3.4)	
60 Hz	-	29.2 (7.7)	22.1 (5.8)	15.8 (4.2)	
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, class 2)					

Alternator Performance Data

Data Item	50 Hz				60 Hz				
	415/240	400/230 230/115 200/115	380/220 220/110	220/127	480/277 240/139	380/220 220/110	240/120 208/120	230/115	220/127 440/254
Motor Starting Capability* kVA	187	176	160	208	206	136	160	149	177
Short Circuit Capacity** %	300	300	300	300	300	300	300	300	300
Reactances: Per Unit									
X_d	3.24	3.48	3.86	2.84	3.27	5.10	4.35	4.70	3.89
X'_d	0.12	0.13	0.14	0.11	0.12	0.19	0.16	0.17	0.14
X''_d	0.072	0.077	0.085	0.061	0.072	0.112	0.096	0.104	0.086

Reactances shown are applicable to prime ratings

* Based on 30% voltage dip. Improved motor starting capability is available with optional Permanent Magnet generator or AREP excitation

** With optional Permanent Magnet generator or AREP excitation.

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG Wilson	Overspeed: RPM	2250
Model:	LL3014B	Voltage Regulation (steady state)	+/- 0.5%
No. of Bearings:	Single	Wave Form NEMA =TIF	<50
Insulation Class:	H	Wave Form IEC=THF	<2%
Winding Pitch Code:	2/3-(No.6)	Total Harmonic Content LL/LN	<4%
Wires:	12	Radio Interference	Suppression is in line with British Standard BSEN50081 & BSEN50082
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	
Excitation System:	Shunt	-50 Hz:	9.5 (540)
AVR Model:	R230	-60 Hz:	11.2 (637)

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

3 Phase Ratings and Performance at 60 Hz, 1800 RPM

Voltage	Model: P100 Prime		Model: P110E Standby		Voltage	Model: P100 Prime		Model: P110E Standby	
	kVA	kW	kVA	kW		kVA	kW	kVA	kW
415/240	100.0	80.0	110.0	88.0	480/277	113.0	90.4	125.0	100.0
400/230	100.0	80.0	110.0	88.0	440/254	113.0	90.4	125.0	100.0
380/220	100.0	80.0	110.0	88.0	380/220	110.0	88.0	122.0	97.6
230/115	100.0	80.0	110.0	88.0	240/120	113.0	90.4	125.0	100.0
220/127	100.0	80.0	110.0	88.0	230/115	113.0	90.4	125.0	100.0
220/110	100.0	80.0	110.0	88.0	220/127	113.0	90.4	125.0	100.0
200/115	100.0	80.0	110.0	88.0	220/110	110.0	88.0	122.0	97.6
					208/120	113.0	90.4	125.0	100.0
					240/139	113.0	90.4	125.0	100.0

Definitions

Standby Rating

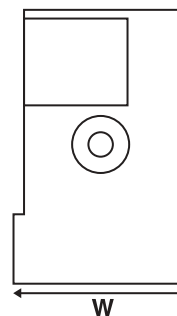
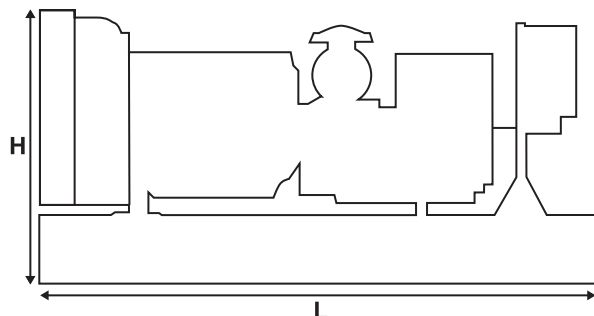
These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO8528-3).

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 27°C (80°F) Air Inlet Temp, 152.4m (500ft) A.S.L. 60% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.



Weights & Dimensions

Weights: kg (lbs)		Dimensions: mm (in)	
Net (+ lube oil)	1203 (2653)	Length	2481 (97.7)
Wet (+ lube oil & coolant)	1240 (2734)	Width	746 (29.4)
Fuel, lube oil & coolant	1433 (3160)	Height	1433 (56.4)

General Data

Documents

A full set of operation and maintenance manuals, circuit wiring diagrams, and commissioning/fault finding instruction leaflets.

Generating Set Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3406, IEC 60034, VDE 0530, NEMA MG-1.22.

FG Wilson is a fully accredited ISO9001 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