

P800P1 / P900E1



Output Ratings		
Generating Set Model	P800P1 Prime*	P900E1 Standby*
380-415V, 50 Hz	800 kVA 640 kW	900 kVA 720 kW

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

Technical Data	
Engine Make & Model	Perkins 4006TAG3A
Alternator Model	LL7024P
Base Frame Type	Heavy Duty Fabricated Steel
Circuit Breaker Type/Rating	3 Pole ACB/MCCB
Frequency	50 Hz
Engine Speed	1500
Fuel Tank Capacity: Litres (US Gal)	1781 (471)
Fuel Consump, P800P1: L/hr (US Gal/hr)	163 (43.1)
Fuel Consump, P900E1: L/hr (US Gal/hr)	184 (48.5)

Engine Technical Data

Physical Data					Air System		50 Hz	
Manufacturer:	Perkins				Air Filter Type:	Replaceable Element		
Model:	4006TAG3A				Combustion Air Flow:			
No. of Cylinders/Alignment:	6 In Line				m ³ /min (cfm)	-Standby:	73.0 (2578)	
Cycle:	4 Stroke					-Prime:	69.0 (2437)	
Induction:	Turbocharged				Max. Combustion Air Intake			
Cooling Method:	Water				Restriction: kPa (in H ₂ O)	3.7 (14.9)		
Governing Type:	Electronic				Radiator Cooling Airflow:			
Governing Class:	ISO 8528 G2				m ³ /min (cfm)	1134 (40047)		
Compression Ratio:	13.6:1				External Restriction to			
Displacement: L (cu.in):	22.9 (1399)				Cooling Airflow: Pa (in Wg)	250 (1.0)		
Bore/Stroke: mm (in)	160 (6.3) / 190 (7.5)				Cooling System		50 Hz	
Moment of Inertia: kg m ² (lb/in ²)	10.6 (36256)				Cooling System			
Engine Electrical System:					Capacity:L (US Gal)	105 (27.7)		
-Voltage/Ground	24/Negative				Water Pump Type:	Centrifugal		
-Battery Charger Amps	40				Heat Rejected to Water &			
Weight: kg (lbs) -Dry	2524 (5564)				Lube Oil: kW (Btu/min)			
-Wet	2663 (5871)				-Standby:	300 (17061)		
					-Prime:	270 (15355)		
Performance					50 Hz		Heat Radiation to Room:	
Engine Speed: rpm	1500				kW (Btu/min)	-Standby:	87.7 (4988)	
Gross Engine Power:						-Prime:	98.9 (5574)	
kW (hp)	-Standby:	786 (1054)			Radiator Fan Load: kW (hp)	26.0 (34.9)		
	-Prime:	705 (945)						
BMEP: kPa (psi)					Lubrication System			
-Standby:	2743 (398)				Oil Filter Type:	Spin-On, Full Flow		
-Prime:	2461 (357)				Total Oil Capacity L (US Gal):	123 (32.5)		
Regenerative Power: kW	70				Oil Pan L (US Gal):	113 (30.0)		
					Oil Type:	API CG4 15W-40		
					Cooling Method:	Water		
Fuel System					Exhaust System		50 Hz	
Fuel Filter Type:	Replaceable Element				Silencer Type:	Level 1		
Recommended Fuel:	Class A2 Diesel				Silencer Model & Qty:	SD250 (1)		
Fuel Consumption: L/hr (US Gal/hr)					Pressure Drop Across			
	110% Load	100% Load	75% Load	50% Load	Silencer System: kPa (in Hg)	1.4 (0.4)		
P800P1					Silencer Noise Reduction			
50 Hz	179 (47.4)	163 (43.1)	124 (32.7)	88.2 (23.3)	Level: dB	20.0		
P900E1					Max. Allowable Back			
50 Hz	-	184 (48.5)	138 (36.4)	96.8 (25.6)	Pressure: kPa (in Hg)	7.0 (2.10)		
					Exhaust Gas Flow: m ³ /min (cfm)			
					- Standby:	193 (6816)		
					- Prime:	193 (6816)		
					Exhaust Gas Temperature:			
					°C (°F)	- Standby:	500 (932)	
						- Prime:	500 (932)	
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, class A2)								

Alternator Performance Data

Data Item	50 Hz		
	380/220	400/230	415/240
Motor Starting Capability* kVA	2228	2446	2613
Short Circuit Capacity**%	300	300	300
Reactances: Per Unit			
Xd	3.06	2.77	2.57
X'd	0.14	0.13	0.12
X''d	0.116	0.105	0.098

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:	LL7024P	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. 6S)	Total Harmonic Content LL/LN	<4%
Wires:	6	Radio Interference	Suppression is in line with European Standard EN61000-6
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	
Excitation System:	AREP	-50 Hz:	37.1 (2110)
AVR Model:	R448		

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

Voltage	Model: P800P1 Prime		Model: P900E1 Standby	
	kVA	kW	kVA	kW
415/240	800	640	900	720
400/230	800	640	900	720
380/220	800	640	900	720

Definitions

Standby Rating

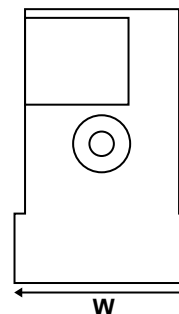
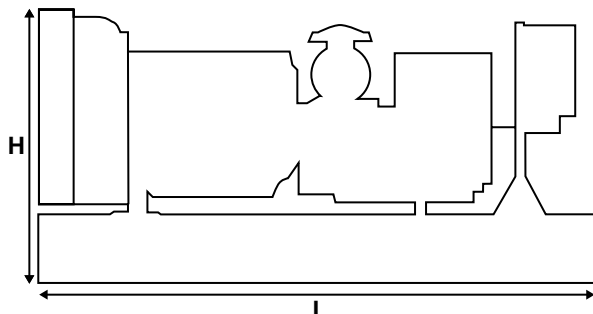
These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO8528-3).

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)	6259 (13799)	Length	4280 (169)
Wet (+ lube oil & coolant)	6370 (14043)	Width	1912 (75.3)
Fuel, lube oil & coolant	7875 (17361)	Height	2285 (90.0)

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.

Warranty

All equipment carries full manufacturer's warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer.