

# OLYMPIAN™



## GEP80SP2

*Diesel Generator Set  
Exclusively from your Caterpillar® dealer*

Output Ratings		
Generating Set Model	Prime*	Standby*
220-240V, 50 Hz	72.0 kVA 72.0 kW	80.0 kVA 80.0 kW
240V, 60 Hz	- -	- -

\* Refer to ratings definitions on page 4.  
Ratings at 1.0 power factor.

Technical Data		
Engine Make & Model:	Perkins 1104C-44TAG2	
Alternator Model:	LL3014F	
Base Frame Type:	Heavy Duty Fabricated Steel	
Circuit Breaker Type:	3 Pole MCB	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	1500	-
Fuel Tank Capacity: litres (US gal)	230 (60.8)	
Fuel Consumption, Prime: l/hr (US gal/hr)	21.0 (5.5)	-
Fuel Consumption, Standby : l/hr (US gal/hr)	23.5 (6.2)	-

# Engine Technical Data

Physical Data	
Manufacturer:	Perkins
Model:	1104C-44TAG2
No. of Cylinders/Alignment:	4 / In Line
Cycle:	4 Stroke
Induction:	Turbocharged Air To Air Charge Cooled
Cooling Method:	Water
Governing Type:	Electronic
Governing Class:	ISO 8528 G2
Compression Ratio:	18.3:1
Displacement: l (cu.in)	4.4 (268.5)
Bore/Stroke: mm (in)	105.0 (4.1)/127.0 (5.0)
Moment of Inertia: kg m <sup>2</sup> (lb. in <sup>2</sup> )	1.51 (5160)
Engine Electrical System:	
-Voltage/Ground:	12/Negative
-Battery Charger Amps:	65
Weight: kg (lb) - Dry:	500 (1102)
- Wet:	520 (1146)

Air System	50 Hz	60 Hz
Air Filter Type:	Replaceable Element	
Combustion Air Flow:		
m <sup>3</sup> /min (cfm)	-Standby: 6.0 (212)	-
	-Prime: 5.6 (198)	-
Max. Combustion Air Intake		
Restriction: kPa (in H <sub>2</sub> O)	8.0 (32.1)	-
Radiator Cooling Air Flow:		
m <sup>3</sup> /min (cfm)	187.8 (6632)	-
External Restriction to		
Cooling Air Flow: Pa (in H <sub>2</sub> O)	125 (0.5)	-

Cooling System	50 Hz	60 Hz
Cooling System Capacity:		
l (US gal)	17.5 (4.6)	-
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil: kW (Btu/min)		
-Standby:	46.1 (2622)	-
-Prime:	44.5 (2531)	-
Heat Radiation to Room:		
kW (Btu/min)	-Standby: 6.8 (387)	-
	-Prime: 6.5 (370)	-
Radiator Fan Load: kW (hp)	2.8 (3.8)	-

Cooling system designed to operate in ambient conditions up to 50°C (122°F). Contact your local Olympian dealer for power ratings at specific site conditions.

Lubrication system	
Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity l (US gal):	8.0 (2.1)
Oil Pan l (US gal):	7.0 (1.8)
Oil Type:	API-CC/SE
Cooling Method:	Water

Performance	50 Hz	60 Hz
Engine Speed: RPM	1500	-
Gross Engine Power: kW (hp)		
-Standby:	103.0 (138.0)	-
-Prime:	93.6 (126.0)	-
BMEP: kPa (psi)		
-Standby:	1873.0 (271.7)	-
-Prime:	1702.0 (246.9)	-
Regenerative Power: kW	8.2	-

Fuel System				
Fuel Filter Type:	Replaceable Element			
Recommended Fuel:	Class A2 Diesel			
Fuel Consumption: l/hr (US gal/hr)				
	110% Load	100% Load	75% Load	50% Load
Prime				
50 Hz	23.5 (6.2)	21.0 (5.5)	15.8 (4.2)	11.0 (2.9)
60 Hz	-	-	-	-
Standby				
50 Hz		23.5 (6.2)	17.4 (4.6)	12.0 (3.2)
60 Hz		-	-	-

(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

Exhaust System	50 Hz	60 Hz
Silencer Type:	Level 1	
Silencer Noise Reduction	SD50 (1)	
Pressure Drop Across		
Silencer System: kPa (in Hg)	2.10 (0.620)	-
Silencer Noise Reduction		
Level: dB	22	-
Max. Allowable Back		
Pressure: kPa (in. Hg)	15.0 (4.4)	-
Exhaust Gas Flow:		
m <sup>3</sup> /min (cfm)	-Standby: 16.3 (576)	-
	-Prime: 15.2 (537)	-
Exhaust Gas Temperature: °C (°F)		
m <sup>3</sup> /min (cfm)	-Standby: 543 (1009)	-
	-Prime: 514 (957)	-

## Alternator Performance Data

Data Item	50 Hz				60 Hz				
	240V	230V	220V						
Motor Starting Capability* kVA	285	269	254	-	-	-	-	-	-
Short Circuit Capacity** %	-	-	-	-	-	-	-	-	-
Reactances: Per Unit									
Xd	1.625	1.769	1.934	-	-	-	-	-	-
X'd	0.098	0.106	0.116	-	-	-	-	-	-
X''d	0.058	0.063	0.068	-	-	-	-	-	-

Reactances shown are applicable to standby 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	
Manufacturer:	OLYMPIAN
Model:	LL3014F
No. of Bearings:	1
Insulation Class:	H
Winding Pitch - Code:	2/3 - 6
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R250

Operating Data	
Overspeed: RPM	2250
Voltage Regulation (steady state) (%):	+/- 1.0
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:	12.6 (717)
-60 Hz:	-

Consult your Olympian representative for more information

