

OLYMPIAN™



GEH250-4

***Diesel Generator Set
Exclusively from your Cat® dealer***

EU Stage II Emissions Compliant
Suitable for Mobile Applications in the European Community

Image shown may not reflect actual package

Output Ratings		
Generating Set Model - 3 Phase	Prime*	Standby*
380-415V,50Hz	230.0 kVA 184.0 kW	250.0 kVA 200.0 kW
480V, 60 Hz	240.0 kVA 192.0 kW	265.0 kVA 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)	50.0 (13.2)	54.9 (14.5)
Fuel Consumption, Standby: l/hr (US gal/hr)	53.9 (14.2)	58.2 (15.4)

Engine Technical Data

Physical Data	
Manufacturer:	Perkins
Model:	1306C-E87TAG4
No. of Cylinders/Alignment:	6 / 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:	16.9:1
Displacement: l (cu.in)	8.7 (530.9)
Bore/Stroke : mm (in)	116.6 (4.6)/135.9 (5.4)
Moment of Inertia: kg m ² (lb. in ²)	1.54 (5266)
Engine Electrical System:	
-Voltage/Ground:	24/Negative
-Battery Charger Amps:	45
Weight: kg (lb) - Dry:	671 (1479)
- Wet:	698 (1539)

Lubrication system	
Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity l (US gal):	26.4 (7.0)
Oil Pan l (US gal):	22.7 (6.0)
Oil Type:	API CI-4
Cooling Method:	Water

Performance	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Gross Engine Power: kW (hp)		
-Standby:	228.0 (306.0)	255.0 (342.0)
-Prime:	209.0 (280.0)	233.0 (312.0)
BMEP: kPa (psi)		
-Standby:	2095.0 (303.8)	1953.0 (283.2)
-Prime:	1920.0 (278.5)	1784.0 (258.8)
Regenerative Power: kW	20.8	28.6

Air System	50 Hz	60 Hz
Air Filter Type:	Paper Element	
Combustion Air Flow:		
m ³ /min (cfm) -Standby:	20.6 (727)	24.2 (855)
-Prime:	19.2 (678)	23.5 (830)
Max. Combustion Air Intake Restriction: kPa (in H ₂ O)	6.2 (25.0)	6.2 (25.0)
Radiator Cooling Air Flow:		
m ³ /min (cfm)	349.8 (12353)	435.6 (15383)
External Restriction to Cooling Air Flow: Pa (in H ₂ O)	125 (0.5)	125 (0.5)

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	53.9 (14.2)	50.0 (13.2)	39.5 (10.4)	29.9 (7.9)
60 Hz	58.2 (15.4)	54.9 (14.5)	45.9 (12.1)	35.5 (9.4)
Standby				
50 Hz		53.9 (14.2)	42.1 (11.1)	31.5 (8.3)
60 Hz		58.2 (15.4)	48.9 (12.9)	37.8 (10.0)
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)				

Cooling System	50 Hz	60 Hz
Cooling System Capacity:		
l (US gal)	24.7 (6.5)	24.7 (6.5)
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil: kW (Btu/min)		
-Standby:	104.0 (5914)	106.0 (6028)
-Prime:	101.0 (5744)	103.0 (5858)
Heat Radiation to Room: Heat radiated from engine and alternator		
kW (Btu/min) -Standby:	25.3 (1439)	26.9 (1530)
-Prime:	22.4 (1274)	23.6 (1342)
Radiator Fan Load: kW (hp)	9.9 (13.3)	16.9 (22.7)
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.		

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industrial	
Silencer Model & Quantity:	SD100 (1)	
Pressure Drop Across Silencer System: kPa (in Hg)	8.70 (2.569)	8.70 (2.569)
Silencer Noise Reduction Level: dB	12	10
Max. Allowable Back Pressure: kPa (in. Hg)	10.7 (3.2)	10.7 (3.2)
Exhaust Gas Flow:		
m ³ /min (cfm) -Standby:	40.3 (1423)	51.3 (1812)
-Prime:	36.6 (1293)	46.5 (1642)
Exhaust Gas Temperature: °C (°F)		
-Standby:	576 (1069)	527 (981)
-Prime:	530 (986)	477 (891)

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	2.320	2.606	4.140	3.470	3.737	3.100
X'd	0.132	0.142	0.158	0.110	0.124	0.196	0.165	0.178	0.147
X''d	0.080	0.086	0.095	0.066	0.075	0.119	0.099	0.107	0.089

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.

Alternator Technical Data

Physical Data	
Manufacturer:	OLYMPIAN
Model:	LL5014H
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) (%):	+/- 0.5
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:	16.3 (927)
-60 Hz:	16.9 (961)

Technical Data

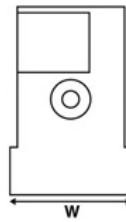
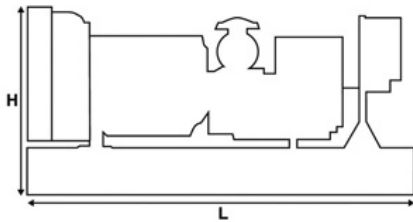
Voltage 50 Hz	Prime		Standby	
	kVA	kW	kVA	kW
415/240V	230.0	184.0	250.0	200.0
400/230V	230.0	184.0	250.0	200.0
380/220V	230.0	184.0	250.0	200.0
230/115V	230.0	184.0	250.0	200.0
220/127V	215.0	172.0	240.0	192.0
220/110V	230.0	184.0	250.0	200.0
200/115V	230.0	184.0	250.0	200.0

Voltage 60 Hz	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

Weights & Dimensions

Weights: kg (lb)	
Net (+ lube oil)	2050 (4519)
Wet (+ lube oil & coolant)	2072 (4568)
Fuel, lube oil & coolant	2368 (5221)

Dimensions: mm (in)	
Length	2989 (117.7)
Width	990 (39.0)
Height	1789 (70.4)



Note: General configuration not to be used for installation. See general dimension drawings for detail.

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.

General Data

Documents

A full set of operation and maintenance manuals and circuit wiring diagrams.

Quality Standards

BS4999, BS5000, BSEN60034, BSEN61000, IEC60034.

Warranty

All equipment carries full manufacturer's warranty.

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