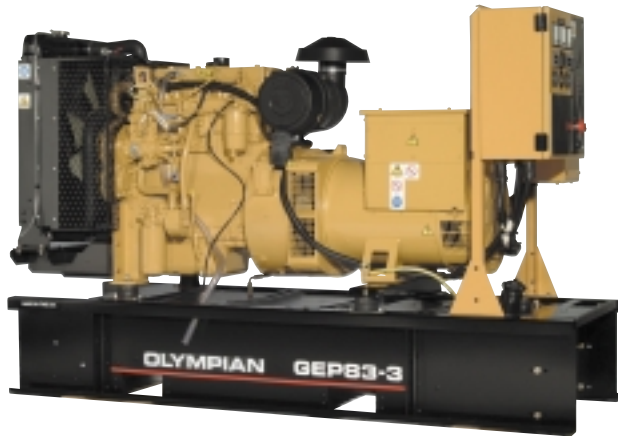


Exclusively from your Caterpillar® dealer



GEP83-3 (3-Phase)

50 HZ

STANDBY 82.5 kVA / 66 kW

PRIME 75.0 kVA / 60 kW

60 HZ

STANDBY 93.8 kVA / 75 kW

PRIME 85.0 kVA / 68 kW

FEATURES

GENERATOR SET

- Complete system designed and built at ISO9001 certified facility
- Factory tested to design specifications at full load conditions
- Fully engineered with a range of options and accessories

ENGINE

- Industrial water cooled diesel engine
- Governor, mechanical
- Electrical system, 12 VDC
- Cartridge type fuel and oil filters
- Air filter
- Battery(s), rack and cables

GENERATOR

- Self excited brushless generator
- Insulation system, class H
- Drip proof generator air intake (IP23)
- Electrical design in accordance with BS5000 Part 99, IEC60034-1, VDE0530, UTE51100

CONTROL SYSTEM

- 1001 keystack control panel
- Vibration isolated sheet steel enclosure with hinged lockable door

MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base with lifting points
- Anti-vibration pads to ensure vibration isolation
- Engine coupled to generator with flexible disc coupling
- Baseframe incorporates integral plastic fuel tank, 8 hours running capacity

EXHAUST SYSTEM

- Heavy duty industrial capacity exhaust silencer (approximately 10 dB reduction) supplied loose

COOLING SYSTEM

- Standard ambient temperatures up to 50° C (122° F)
- Fan, fan drive and charging alternator fully guarded
- Antifreeze protection coolant

CIRCUIT BREAKER

- 3-pole miniature circuit breaker (mcb) < 160 amps and 3-pole molded case circuit breaker (mccb) >= 160 amps
- Vibration isolated sheet steel enclosure with removable cover plate
- Outgoing cable stub-up area directly below circuit breaker

AUTOMATIC VOLTAGE REGULATOR

- Voltage regulation ±0.5 %
- Provides fast recovery from transient load changes

EQUIPMENT FINISH

- All electroplated hardware
- Anticorrosive paint protection
- High gloss polyurethane paint for durability and scuff resistance

QUALITY STANDARDS

- BS4999, BS5000, BS5514, IEC60034, VDE0530

DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

WARRANTY

- 12 months from date of initial start-up or 18 months from shipping, whichever occurs first

50 Hz	STANDBY	82.5 kVA / 66 kW
	PRIME	75.0 kVA / 60 kW
60 Hz	STANDBY	93.8 kVA / 75 kW
	PRIME	85.0 kVA / 68 kW

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OPTIONAL EQUIPMENT*

Engine	Electronic governor (fully adjustable) Lube oil drain Lube oil drain valve Lube oil drain pump High lube oil temperature shutdown
Generator	Anti-condensation heater Quadrature droop upgrade Permanent magnet generator (PMG) AREP Excitation system
Cooling System	Coolant heater Low coolant temperature alarm Low coolant level shutdown Radiator transition flange Coolant drain Coolant drain valve 50% Anti-Freeze (Protection to -36°C)
Fuel System	Integral metal fuel tank Extended capacity metal basetank Bunded fuel tank (not available with canopied sets) Manual fuel pump Low fuel level shutdown Low fuel level alarm Remote fuel systems Fuel transfer systems Manual Bypass Valve
Silencer System — Open Unit	Level 2 silencer with mounting kit (approximately 25 dB reduction) Level 3 silencer with mounting kit (approximately 35 dB reduction) Overhead mounting kit for level 1 silencer Level 1, 2 and 3 silencer installation kits
Enclosures	Sound attenuated (EC) canopy Super sound attenuated (EC) canopy
Handling/Trailers	Oil field skid Single point lift Fixed height chassis trailer Adjustable height chassis trailer
Controls	Baseframe mounted terminal box instead of control panel 2001 Autostart panel 4001 Autostart panel 4001E Autostart panel 6000 Series digital synchronising control panels Access 1000 modular control panel Access 2000 modular control panel Access 4000 digital control panel Automatic mains failure (AMF) upgrades for 2001, 4001, and 4001E panels Control panel upgrades — gauges, meters, battery chargers, alarms, shutdowns
Remote Annunciators	8- and 16-channel remote annunciator panel for 4001 and 4001E control systems only (supplied loose) Remote annunciator upgrade — normal/run control switch Remote annunciator upgrade — lockdown stop pushbutton
Circuit Breaker	Upgrades from 3-pole to 4-pole breaker
Transfer Switches	TM Series manual load transfer panels TC Series automatic load transfer panels TI Series load transfer panels and bypass switches TX Series load transfer panels
Certification	European CE certification

*Some options may not be available on all models.
Not all options are listed.

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SPECIFICATIONS



GENERATOR

Make.....	Olympian
Model.....	LL2014J
Type.....	Self-excited, brushless
Voltage regulation.....	±0.5% at steady state from no load to full load
Frequency.....	±0.8% for constant load from no load to full load
Waveform distortion.....	THD <4%
Radio interference.....	Compliance with BS800 and VDE Class G&N
Telephone Interference.....	TIF <50, THF <2%
Overspeed limit.....	2250 rpm
Insulation.....	Class H
Temperature rise.....	Within Class H limits
Deration.....	Consult factory for available outputs

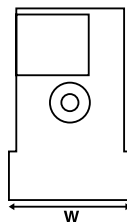
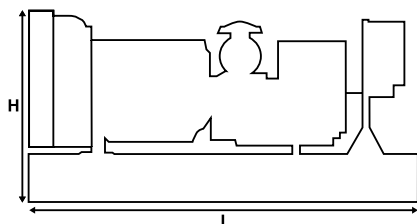


ENGINE

Manufacturer.....	Perkins
Model.....	1004TG2
Type.....	4-Cycle
Aspiration.....	Turbocharged
Cylinder configuration.....	In-line 4
Displacement — L (cu in).....	3.99 (243)
Bore/stroke — mm (in).....	100/127 (3.94/5.0)
Compression ratio.....	16.0:1
Engine speed — rpm	
50 Hz.....	1500
60 Hz.....	1800

Piston speed — m/sec (ft/sec)	
50 Hz.....	6.35 (20.8)
60 Hz.....	7.62 (25.0)
Maximum power at rated rpm — kW (hp)	
Standby	
50 Hz.....	77.5 (104)
60 Hz.....	87.0 (117)
Prime	
50 Hz.....	70.4 (94.4)
60 Hz.....	79.0 (106)
BMEP — kPa (psi)	
Standby	
50 Hz.....	1503 (218)
60 Hz.....	1453 (211)
Prime	
50 Hz.....	1369 (199)
60 Hz.....	1320 (191)
Regenerative power — kW (hp)	
50 Hz.....	9.5 (12.7)
60 Hz.....	12.7 (17.0)
Motor starting capability — kW (hp)	
50 Hz.....	61.0 (81.8)
60 Hz.....	71.0 (95.2)
Governor	
Type.....	Mechanical
Class.....	ISO 8528 G2

GENERATOR SET DIMENSIONS AND WEIGHTS



Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight* kg (lb)
GEP83-3	2149 (84.6)	710 (28.0)	1341 (52.8)	945 (2084)

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

*Includes oil and coolant

Consult your Olympian representative for more information

50 Hz	STANDBY	82.5 kVA / 66 kW
	PRIME	75.0 kVA / 60 kW
60 Hz	STANDBY	93.8 kVA / 75 kW
	PRIME	85.0 kVA / 68 kW

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GEP83-3 (3-Phase)

Generator Set Technical Data		50 Hz		60 Hz	
		Standby	Prime	Standby	Prime
Package Performance Power rating	kVA (kW)	82.5 (66)	75 (60)	93.8 (75)	85 (68)
Lubricating System Type: Oil pump & Lubrication sump Oil filter: Spin-on, full flow Oil cooler: Water Oil type required: API CD 15W-40 Total lube system capacity Oil pan capacity	L (U.S. Gal) L (U.S. Gal)	8.5 (2.25) 6.9 (1.82)		8.1 (2.14) 6.9 (1.82)	
Fuel System Fuel Tank Capacity Generator set fuel consumption** 100% load 75% load 50% load	L (U.S. Gal) L/hr (U.S. g/hr) L/hr (U.S. g/hr) L/hr (U.S. g/hr)	176 (46.5) 20.4 (5.39) 15.3 (4.04) 10.2 (2.69)	18.6 (4.9) 13.9 (3.68) 9.3 (2.45)	176 (46.5) 23.3 (6.16) 17.5 (4.62) 11.7 (3.08)	21.2 (5.6) 15.9 (4.2) 10.6 (2.8)
Engine Electrical System Voltage/ground: 12 vDC/negative Battery charging alternator ampere rating	amps	55		55	
Cooling System Water pump type: Centrifugal Cooling system capacity Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L (U.S. Gal) m H ₂ O (ft H ₂ O) L/hr (U.S. gal/hr) °C (°F) °C (°F) kW (Btu/min) kW (Btu/min) kW (hp)	19.7 (5.2) 2.0 (6.6) 5520 (1458) 70 (158) 7 (13) 47 (2673) 27.6 (1570) 2.8 (3.8)	43 (2446) 25.0 (1422)	19.7 (5.2) 3.0 (9.9) 7080 (1871) 70 (158) 6 (11) 52 (2958) 29.6 (1684) 4.5 (6.0)	47 (2673) 26.2 (1490)
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air Generator cooling air	m ³ /min (cfm) kPa (in H ₂ O) m ³ /min (cfm) m ³ /min (cfm)	4.7 (166) 3 (12.0) 160 (5657) 16.2 (572)	4.5 (160)	6.2 (218) 3 (12.0) 194 (6843) 19.2 (678)	5.9 (207)
Exhaust System Maximum allowable backpressure Exhaust flow at rated power Exhaust temperature at rated power (dry exhaust)	kPa (in Hg) m ³ /min (cfm) °C (°F)	6.0 (1.77) 14.0 (494) 596 (1105)	13.1 (462)	6.0 (1.77) 17.0 (599) 548 (1018)	15.9 (561) 511 (952)
Generator Set Noise Rating* (without attenuation) at 1 m (3.28 ft)	dBA	94.7		97.2	

*dBA levels are for guidance only

**Fuel consumption data at indicated load with diesel fuel with a specific gravity of 0.85 and conforming to BS2869:1998 Class A2.

Generator Technical Data	50 Hz				60 Hz				
	415/240V	400/230V	380/220V	220/127V	480/277V	440/254V	208/120V	230/115V	380/220V
Motor Starting Capability:									
Self Excited (kVA)	189	176	158	212	210	176	158	145	132
AREP Excited*** (kVA)	244	228	206	276	273	230	206	190	171
PM Excited**** (kVA)	244	228	206	276	273	230	206	190	171
Full Load Efficiency									
Standby %	90.3	90.2	89.9	90.2	91.1	90.7	90.2	89.9	89.2
Prime %	90.6	90.8	90.8	90.4	91.3	91.6	91.2	90.9	90.5
Reactances (per unit)									
Saturated X'd	2.79	3.00	3.33	2.48	2.85	3.39	3.18	4.10	4.54
Reactances are shown	0.10	0.11	0.12	0.09	0.10	0.12	0.14	0.15	0.17
X'd	0.049	0.053	0.059	0.044	0.050	0.060	0.067	0.072	0.080
X'q	1.68	1.80	2.00	1.49	1.71	2.03	2.29	2.46	2.73
applicable to the standby rating	0.060	0.065	0.072	0.054	0.061	0.073	0.082	0.089	0.098
X2	0.054	0.058	0.065	0.048	0.055	0.066	0.074	0.080	0.088
X0	0.005	0.006	0.006	0.005	0.005	0.006	0.007	0.008	0.008
Time Constants:	t'd 50 ms		t'' 5.0 ms		t'do 1431 ms			ta 8 ms	

***With AREP Excited Option AR20A/AR21A

****With PMG Excited Option AR18A/AR19A

Consult your Olympian representative for more information.

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60 Hz	STANDBY	93.8 kVA / 75 kW
	PRIME	85.0 kVA / 68 kW

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RATINGS AT AVAILABLE VOLTAGES

50 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT502	415/240	82.5	66	75	60
VOPT503	400/230	82.5	66	75	60
VOPT504	380/220	82.5	66	75	60
VOPT506	230/115	82.5	66	75	60
VOPT507	220/127	82.5	66	75	60
VOPT508	220/110	82.5	66	75	60
VOPT510	200/115	82.5	66	75	60

60 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT601	480/277	93.8	75.0	85	68.0
VOPT603	440/254	93.8	75.0	85	68.0
VOPT605	380/220	93.8	75.0	85	65.0
VOPT606	240/120	93.8	75.0	85	68.0
VOPT607	230/115	93.8	75.0	85	68.0
VOPT608	220/127	93.8	75.0	85	68.0
VOPT609	220/110	93.8	75.0	85	68.0
VOPT610	208/120	93.8	75.0	85	68.0
VOPT611	240/139	93.8	75.0	85	68.0

Ratings at 27° C (80° F), 152.4 m (500 ft), 60% humidity, 0.8 pf

RATING DEFINITIONS

STANDBY

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. When used at standby rating the alternator will be peak continuous rated (as defined in ISO8528-3).

PRIME POWER

These ratings are applicable for supplying continuous 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.

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