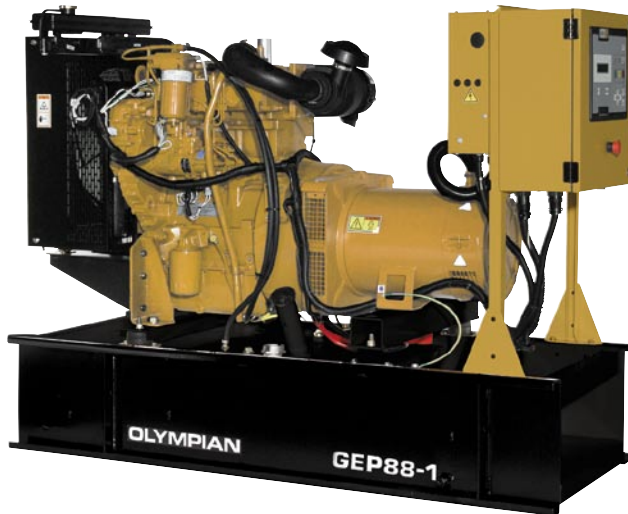


Exclusively from your Caterpillar® dealer



GEP88-1 (3-Phase)

50 HZ

STANDBY 88.0 kVA / 70.4 kW

PRIME 80.0 kVA / 64.0 kW

60 HZ

STANDBY 100 kVA / 80.0 kW

PRIME 90.0 kVA / 72.0 kW

FEATURES

GENERATING 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(ies), 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 keystart 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 heavy-duty fabricated steel 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 $\pm 0.5\%$
- 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

- All equipment carries full manufacturer's warranty

50 Hz	STANDBY	88.0 kVA / 70.4 kW
	PRIME	80.0 kVA / 64.0 kW
60 Hz	STANDBY	100 kVA / 80.0 kW
	PRIME	90.0 kVA / 72.0 kW

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OPTIONAL EQUIPMENT*

Engine	Electronic governor (fullyadjustable) Lube oil drain Lube oil drain valve Lube oil drain pump
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 valve
Fuel System	Manual fuel pump Low fuel level shutdown Low fuel level alarm High fuel level alarm Remote fuel 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
Handling	Oil field skid Single point lift
Controls	PowerWizard 1.0 panel PowerWizard 2.0 panel Baseframe mounted terminal box 6000 series digital synchronizing control panels
Remote Annunciators	PowerWizard Annunciator
Circuit Breaker	Upgrades from 3-pole to 4-pole breaker
Transfer Switches	TM Series manual load transfer panels ATI Series load transfer panels and bypass switches
Certification	European CE certification (not available on 60 Hz models)

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

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Consult your Olympian representative for more information

50 Hz	STANDBY	88.0 kVA	/	70.4 kW
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	PRIME	90.0 kVA	/	72.0 kW

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SPECIFICATIONS



GENERATOR

Make Olympian
 Model LL2014L
 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 EN61000-6
 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

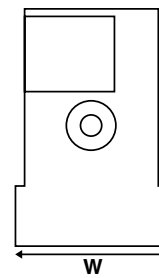
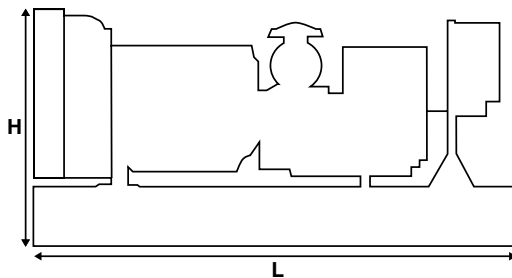


ENGINE

Manufacturer Perkins
 Model 1104A-44TG2
 Type 4-Cycle
 Aspiration Turbocharged
 Cylinder configuration In-line 4
 Displacement — L (cu in) 4.4 (269)
 Bore/stroke — mm (in) 105/127 (4.1/5.0)
 Compression ratio 17.25:1
 Engine speed — rpm
 50 Hz 1500
 60 Hz 1800

Piston speed — m/sec (ft/sec)
 50 Hz 6.4 (20.8)
 60 Hz 7.6 (25.0)
 Maximum power at rated rpm — kW (hp)
 Standby
 50 Hz 80.7 (108)
 60 Hz 92.6 (124)
 Prime
 50 Hz 73.4 (98.0)
 60 Hz 84.2 (113)
 BMEP — kPa (psi)
 Standby
 50 Hz 1468 (213)
 60 Hz 1403 (204)
 Prime
 50 Hz 1335 (194)
 60 Hz 1276 (185)
 Regenerative power — kW (hp)
 50 Hz 7.0 (9.4)
 60 Hz 9.0 (12.1)
 Governor
 Type Mechanical
 Class ISO 8528 G2

GENERATING SET DIMENSIONS AND WEIGHTS



Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight* kg (lb)
GEP88-1	2149 (84.6)	752 (29.6)	1366 (53.8)	1074 (2368)

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

*Includes oil and coolant

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GEP88-1 (3-Phase)

Generator Set Technical Data		50 Hz		60 Hz	
		Standby	Prime	Standby	Prime
Package Performance Power rating	kVA (kW)	88.0 (70.4)	80.0 (64.0)	100 (80.0)	90.0 (72.0)
Lubricating System Type: Oil pump & Lubrication sump Oil filter: Spin-on, full flow Oil cooler: Water Oil type required: API G4 15W-40 Total lube system capacity Oil pan capacity	L (U.S. Gal) L (U.S. Gal)	8.0 (2.1) 7.0 (1.8)		8.0 (2.1) 7.0 (1.8)	
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)	175 (46.2) 19.9 (5.3) 14.9 (3.9) 10.3 (2.7)	18.0 (4.8) 13.6 (3.6) 9.5 (2.5)	175 (46.2) 23.7 (6.3) 17.9 (4.7) 12.6 (3.3)	21.3 (5.6) 16.2 (4.3) 11.6 (3.1)
Engine Electrical System Voltage/ground: 12 vDC/negative Battery charging alternator ampere rating	amps	65		65	
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)	13.0 (3.4) 10.2 (33.5) 8520 (2251) 70.0 (158) 4.5 (8.1) 50.4 (2866) 20.8 (1183) 1.0 (1.3)	45.9 (2610) 19.0 (1081)	13.0 (3.4) 10.2 (33.5) 10200 (2695) 70.0 (158) 4.5 (8.1) 55.8 (3173) 22.7 (1291) 1.7 (2.3)	51.6 (2934) 20.5 (1166)
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air External restriction to cooling airflow Generator cooling air	m ³ /min (cfm) kPa (in H ₂ O) m ³ /min (cfm) Pa (in H ₂ O) m ³ /min (cfm)	5.1 (180) 8.0 (32.1) 121 (4280) 120 (0.5) 16.2 (572)	4.8 (170) 8.0 (32.1) 121 (4280) 120 (0.5) 16.2 (572)	6.4 (226) 8.0 (32.1) 140 (4958) 120 (0.5) 19.2 (678)	6.1 (215) 8.0 (32.1) 140 (4958) 120 (0.5) 19.2 (678)
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)	10.0 (3.0) 13.3 (470) 580 (1076)	12.5 (441) 12.5 (441) 555 (1031)	15.0 (4.4) 15.9 (560) 560 (1040)	15.0 (530) 15.0 (530) 535 (995)
Generator Set Noise Rating* (without attenuation) at 1 m (3.28 ft)	dBA	88.2		91.0	

*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 230/115V 200/115V	380/220V 220/110V	220/127V	480/277V 240/139V	440/254V 220/127V	240/120V 208/120V	230/115V	380/220V 220/110V
Motor Starting Capability: Self Excited (kVA) AREP Excited*** (kVA) PM Excited**** (kVA)	218 285 285	206 269 269	189 247 247	240 313 313	239 311 311	207 270 270	188 247 247	176 231 231	161 212 212
Full Load Efficiency Standby % Prime %	91.1 91.4	91.1 91.4	90.7 91.2	91.2 91.3	91.5 91.8	91.3 91.6	90.9 91.2	90.5 91.0	90.1 90.4
Reactances (per unit) Xd Saturated X'd Reactances X"d are shown Xq applicable to the X"q standby rating X2 X0	2.64 0.09 0.044 1.58 0.055 0.050 0.005	2.84 0.10 0.047 1.71 0.059 0.054 0.005	3.15 0.11 0.052 1.89 0.065 0.060 0.006	2.35 0.08 0.039 1.41 0.049 0.045 0.004	2.61 0.09 0.043 1.57 0.054 0.050 0.005	3.11 0.10 0.052 1.86 0.064 0.059 0.006	3.48 0.12 0.058 2.09 0.072 0.066 0.006	3.76 0.13 0.063 2.26 0.078 0.071 0.007	4.17 0.14 0.069 2.50 0.086 0.079 0.008
Time Constants:	t'd 50 ms		t" 5 ms		t'do 1480 ms		ta 8 ms		

With AREP Excited Option AR20A/AR21A *With PMG Excited Option AR18A/AR19A

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RATINGS AT AVAILABLE VOLTAGES

50 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT502	415/240	88.0	70.4	80.0	64.0
VOPT503	400/230	88.0	70.4	80.0	64.0
VOPT504	380/220	88.0	70.4	80.0	64.0
VOPT506	230/115	88.0	70.4	80.0	64.0
VOPT507	220/127	88.0	70.4	80.0	64.0
VOPT508	220/110	88.0	70.4	80.0	64.0
VOPT510	200/115	88.0	70.4	80.0	64.0

60 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT601	480/277	100	80.0	90.0	72.0
VOPT603	440/254	100	80.0	90.0	72.0
VOPT605	380/220	97.0	77.6	88.0	70.4
VOPT606	240/120	100	80.0	90.0	72.0
VOPT607	230/115	100	80.0	90.0	72.0
VOPT608	220/127	100	80.0	90.0	72.0
VOPT609	220/110	97.0	77.6	88.0	70.4
VOPT610	208/120	100	80.0	90.0	72.0
VOPT611	240/139	100	80.0	90.0	72.0

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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PRIME 80.0 kVA / 64.0 kW
60 Hz STANDBY 100 kVA / 80.0 kW
PRIME 90.0 kVA / 72.0 kW

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