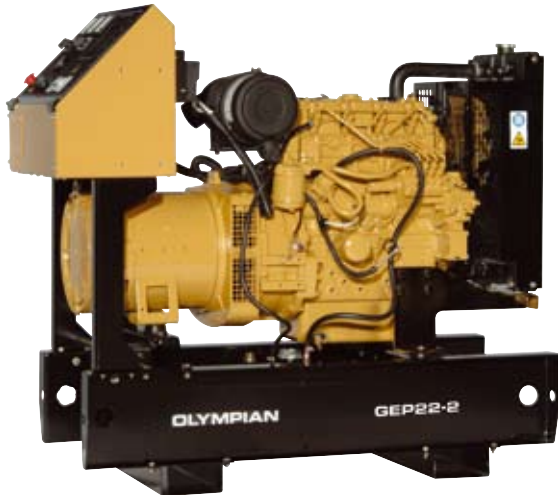


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## GEP22-2 (3-Phase)

### 50 HZ

**STANDBY** 22.0 kVA / 17.6 kW

**PRIME** 20.0 kVA / 16.0 kW

### 60 HZ

**STANDBY** 25.0 kVA / 20.0 kW

**PRIME** 22.5 kVA / 18.0 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

### ALTERNATOR

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

### CONTROL SYSTEM

- PowerWizard 1.0 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 alternator with flexible disc coupling
- Baseframe incorporates metal fuel tank, 8 hours running capacity

### EXHAUST SYSTEM

- Heavy duty industrial capacity exhaust silencer (approximately 25 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) < 100 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	22.0 kVA	/	17.6 kW
	PRIME	20.0 kVA	/	16.0 kW
60 Hz	STANDBY	25.0 kVA	/	20.0 kW
	PRIME	22.5 kVA	/	18.0 kW

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## OPTIONAL EQUIPMENT\*

<b>Engine</b>	Electronic governor
<b>Cooling System</b>	Coolant heater
<b>Fuel System</b>	Low fuel level alarm
<b>Silencer System — Open Unit</b>	Overhead mounting kit
<b>Enclosures</b>	CAE sound attenuated canopy CAL sound attenuated canopy High ambient capability
<b>Handling/Trailers</b>	Single point lift Fixed height drawbar 2 wheel trailer Adjustable height drawbar 2 wheel trailer
<b>Controls</b>	LCP0 Series panel LCP1 Series panel PowerWizard 2.0 panel
<b>Remote Annunciator</b>	PowerWizard annunciator
<b>Circuit Breaker</b>	Upgrades from 3-pole to 4-pole breaker 32A CEE Form socket 50 Hz only 63A CEE Form socket 50 Hz only Earth Leakage protection for main output 300 mA, CB trip
<b>Certification</b>	European CE certification 50 Hz only

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

Consult your Olympian representative for more information

50 Hz	STANDBY	22.0 kVA	/	17.6 kW
	PRIME	20.0 kVA	/	16.0 kW
60 Hz	STANDBY	25.0 kVA	/	20.0 kW
	PRIME	22.5 kVA	/	18.0 kW

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## SPECIFICATIONS



### ALTERNATOR

Make ..... Olympian  
 Model ..... LL1014N  
 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

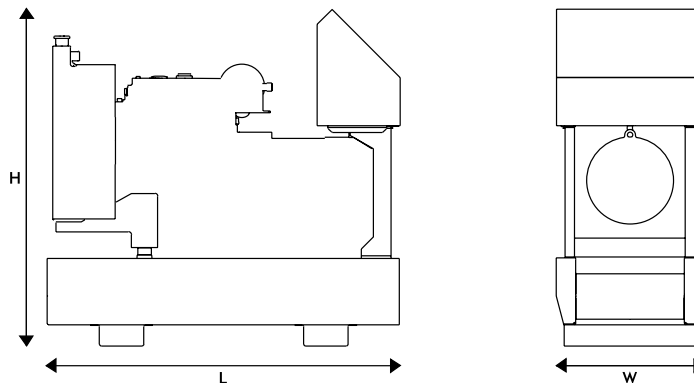


### ENGINE

Manufacturer ..... Perkins  
 Model ..... 404C-22G2  
 Type ..... 4-Cycle  
 Aspiration ..... Naturally aspirated  
 Cylinder configuration ..... In-line 4  
 Displacement — L (cu in) ..... 2.2 (135)  
 Bore/stroke — mm (in) ..... 84/100 (3.3/3.9)  
 Compression ratio ..... 23.3:1  
 Engine speed — rpm  
 50 Hz ..... 1500  
 60 Hz ..... 1800

Piston speed — m/sec (ft/sec)  
 50 Hz ..... 5.0 (16.4)  
 60 Hz ..... 6.0 (19.7)  
 Maximum power at rated rpm — kW (hp)  
 Standby  
 50 Hz ..... 20.6 (28.0)  
 60 Hz ..... 24.3 (33.0)  
 Prime  
 50 Hz ..... 18.7 (25.0)  
 60 Hz ..... 22.0 (30.0)  
 BMEP — kPa (psi)  
 Standby  
 50 Hz ..... 743 (108)  
 60 Hz ..... 731 (106)  
 Prime  
 50 Hz ..... 675 (97.9)  
 60 Hz ..... 662 (96.0)  
 Regenerative power — kW (hp)  
 50 Hz ..... 6.7 (9.0)  
 60 Hz ..... 8.6 (11.5)  
 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)
GEP22-2	1320 (52.0)	552 (21.7)	1258 (49.5)	476 (1049)

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 22.0 kVA / 17.6 kW  
 PRIME 20.0 kVA / 16.0 kW  
 60 Hz STANDBY 25.0 kVA / 20.0 kW  
 PRIME 22.5 kVA / 18.0 kW

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**GEP22-2 (3-Phase)**

Generating Set Technical Data		50 Hz		60 Hz	
		Standby	Prime	Standby	Prime
<b>Package Performance</b> Power rating	kVA (kW)	22.0 (17.6)	20.0 (16.0)	25.0 (20.0)	22.5 (18.0)
<b>Lubricating System</b> Type: Oil Oil filter: Spin-on, full flow Oil cooler: Coolant Oil type required: API CH-4/ACEA E5 Total lube system capacity Oil pan capacity	L (U.S. Gal) L (U.S. Gal)	10.6 (2.8) 8.9 (2.4)		10.6 (2.8) 8.9 (2.4)	
<b>Fuel System</b> Fuel Tank Capacity Generating 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)	45.0 (11.9) 6.1 (1.6) 4.3 (1.1) 3.1 (0.8)	5.4 (1.4) 3.9 (1.0) 2.9 (0.8)	45.9 (11.9) 6.9 (1.8) 5.0 (1.3) 3.6 (1.0)	6.1 (1.6) 4.6 (1.2) 3.4 (0.9)
<b>Engine Electrical System</b> Voltage/ground: 12 vDC/negative Battery charging alternator ampere rating	amps	55		55	
<b>Cooling System</b> 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 <sub>2</sub> O (ft H <sub>2</sub> O) L/hr (U.S. gal/hr) °C (°F) °C (°F) kW (Btu/min) kW (Btu/min) kW (hp)	6.8 (1.8) 3.1 (10.2) 2418 (639) 76.0 (169) 7.5 (13.5) 19.4 (1103) 6.7 (381) 0.2 (0.3)	17.0 (967) 19.3 (1098) 5.7 (324)	6.8 (1.8) 3.1 (10.2) 2910 (769) 76.0 (169) 7.5 (13.3) 22.2 (1262) 7.9 (449) 0.4 (0.5)	19.3 (1098) 6.4 (364)
<b>Air Requirements</b> Combustion air flow Maximum air cleaner restriction Radiator cooling air External restriction to cooling airflow Generator cooling air	m <sup>3</sup> /min (cfm) kPa (in H <sub>2</sub> O) m <sup>3</sup> /min (cfm) Pa (in H <sub>2</sub> O) m <sup>3</sup> /min (cfm)	1.4 (49.0) 6.4 (25.7) 30.0 (1059) 125 (0.5) 9.0 (318)	1.4 (49.0) 6.4 (25.7) 39.0 (1377) 125 (0.5) 10.8 (381)	1.7 (60.0) 6.4 (25.7) 39.0 (1377) 125 (0.5) 10.8 (381)	1.7 (60.0) 6.4 (25.7) 39.0 (1377) 125 (0.5) 10.8 (381)
<b>Exhaust System</b> Maximum allowable backpressure Exhaust flow at rated power Exhaust temperature at rated power (dry exhaust)	kPa (in Hg) m <sup>3</sup> /min (cfm) °C (°F)	10.2 (3.0) 3.9 (139) 505 (941)	3.6 (129) 445 (833)	10.2 (3.0) 4.8 (168) 510 (950)	4.3 (153) 440 (824)
<b>Generator Set Noise Rating*</b> (without attenuation) at 1 m (3.28 ft)	dBA	91.1		85.5	

\*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.

Alternator Technical Data	50 Hz			60 Hz
	415/240V	400/230V	380/220V	220/127V
<b>Motor Starting Capability:</b> Self Excited (kVA)	46	43	39	43
<b>Full Load Efficiency</b>				
Standby %	86.6	86.7	86.5	87.9
Prime %	87.0	87.1	87.0	88.3
<b>Reactances (per unit)</b>				
X <sub>d</sub>	1.92	2.06	2.29	2.32
Saturated X' <sub>d</sub>	0.12	0.13	0.14	0.14
Reactances X'' <sub>d</sub>	0.059	0.063	0.070	0.071
are shown X <sub>q</sub>	0.96	1.03	1.14	1.16
applicable to the X'' <sub>q</sub>	0.082	0.088	0.098	0.099
standby rating X <sub>2</sub>	0.70	0.076	0.084	0.085
X <sub>0</sub>	0.005	0.006	0.006	0.006
<b>Time Constants:</b>	t' <sub>d</sub> 25 ms	t'' 2.5 ms	t' <sub>do</sub> 409 ms	t <sub>a</sub> 4 ms

Consult your Olympian representative for more information

5 0 H z    S T A N D B Y    2 2 . 0 k V A / 1 7 . 6 k W  
                   P R I M E            2 0 . 0 k V A / 1 6 . 0 k W  
 6 0 H z    S T A N D B Y    2 5 . 0 k V A / 2 0 . 0 k W  
                   P R I M E            2 2 . 5 k V A / 1 8 . 0 k W

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**RATINGS AT AVAILABLE VOLTAGES**

50 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT502	415/240	22.0	17.6	20.0	16.0
VOPT503	400/230	22.0	17.6	20.0	16.0
VOPT504	380/220	22.0	17.6	20.0	16.0

60 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT608	220/127	25.0	20.0	22.5	18.0

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.

Consult your Olympian representative for more information

50 Hz	STANDBY	22.0 kVA	/	17.6 kW
	PRIME	20.0 kVA	/	16.0 kW
60 Hz	STANDBY	25.0 kVA	/	20.0 kW
	PRIME	22.5 kVA	/	18.0 kW

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