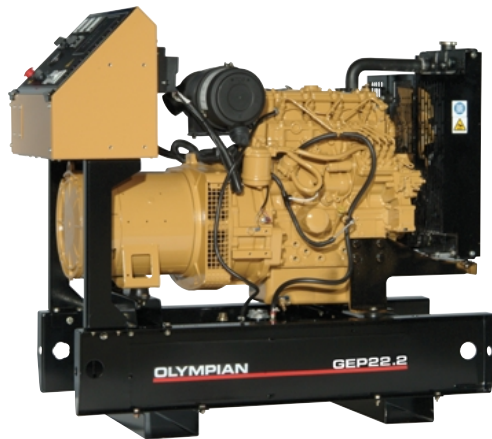


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GEP22-2 (3-Phase)

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(s), 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

- LCP2 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. Extended warranty terms available.

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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OPTIONAL EQUIPMENT*

Cooling System	Coolant heater 50% Anti-Freeze (Protection to -36°C)
Fuel System	Low fuel level alarm
Silencer System — Open Unit	Engine mounted level 2 silencer Overhead mounting kit
Enclosures	Sound attenuated enclosure Perspex control panel viewing in lockable access door
Handling/Trailers	Single point lift Fixed height drawbar 2 wheel trailer Adjustable height drawbar 2 wheel trailer
Controls	LCP0 Series panel LCP1 Series panel Access 2000 panel Access 4000 panel Lube oil pressure gauge Coolant temperature gauge Battery charger
Circuit Breaker	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
Certification	European CE certification

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

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 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

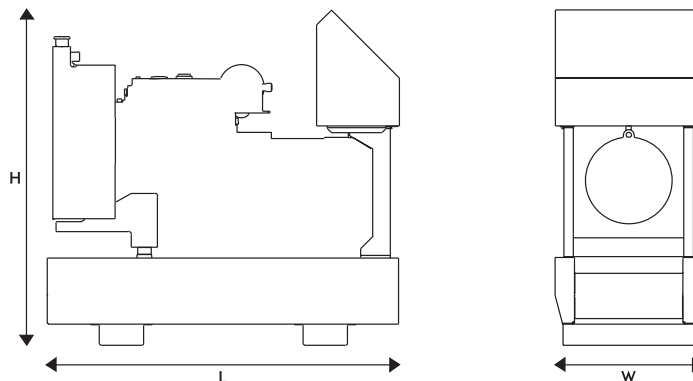


ENGINE

Manufacturer.....	Perkins
Model.....	404C-22G2
Type.....	4-Cycle
Aspiration.....	Naturally aspirated
Cylinder configuration.....	In-line 3
Displacement — L (cu in).....	2.22 (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 (27.6)
60 Hz.....	24.3 (32.6)
Prime	
50 Hz.....	18.7 (25.1)
60 Hz.....	22.0 (29.5)
BMEP — kPa (psi)	
Standby	
50 Hz.....	TBA
60 Hz.....	TBA
Prime	
50 Hz.....	669 (97.0)
60 Hz.....	658 (95.4)
Regenerative power — kW (hp)	
50 Hz.....	6.67 (8.94)
60 Hz.....	8.64 (11.58)
Motor starting capability — kW (hp)	
50 Hz.....	17.6 (23.6)
60 Hz.....	20.1 (27.0)
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
Package Performance Power rating	kVA (kW)	22.0 (17.6)	20.0 (16.0)	25.0 (20.0)	22.5 (18.0)
Lubricating System 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 (2.35)		10.6 (2.8) 8.9 (2.35)	
Fuel System 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 (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 (11.9) 6.9 (1.8) 5.0 (1.3) 3.6 (1.0)	6.1 (1.6) 4.6 (1.3) 3.4 (0.9)
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)	7.0 (1.8) 3.1 (10.2) 2418 (639) 76 (169) 7.5 (45.5) 18.7 (1064) 7.0 (398) 0.23 (0.3)	17.0 (968) 6.5 (370)	7.0 (1.8) 3.1 (10.2) 2910 (769) 76 (169) 7.4 (45.3) 22.2 (1264) 8.1 (461) 0.40 (0.5)	19.9 (1133) 7.3 (416)
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)	1.45 (51.2) 3 (12) 29.4 (1038) 9 (318)	TBA	1.74 (61.4) 3 (12) 39.6 (1398) 10.8 (382)	TBA
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)	10.2 (3.0) 3.94 (139) 505 (941)	TBA	10.2 (3.0) 4.76 (168) 510 (950)	TBA
Generator Set Noise Rating* (without attenuation) at 1 m (3.28 ft)	dBA	TBA		TBA	

*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
Motor Starting Capability: Self Excited (kVA)	46	44	39	43
Full Load Efficiency				
Standby %	86.6	86.7	86.5	87.5
Prime %	86.6	86.9	86.8	88.1
Reactances (per unit)				
X _d	1.92	2.06	2.29	2.32
Saturated X' _d	0.12	0.130	0.14	0.14
Reactances X'' _d	0.059	0.063	0.070	0.071
are shown X _q	0.96	1.03	1.14	1.16
applicable to the X'' _q	0.082	0.088	0.098	0.099
standby rating X ₂	0.70	0.076	0.084	0.085
X ₀	0.005	0.006	0.006	0.006
Time Constants:	t' _d 25ms.	t'' 25ms.	t' _{do} 408ms.	t _a 4ms.

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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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.

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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