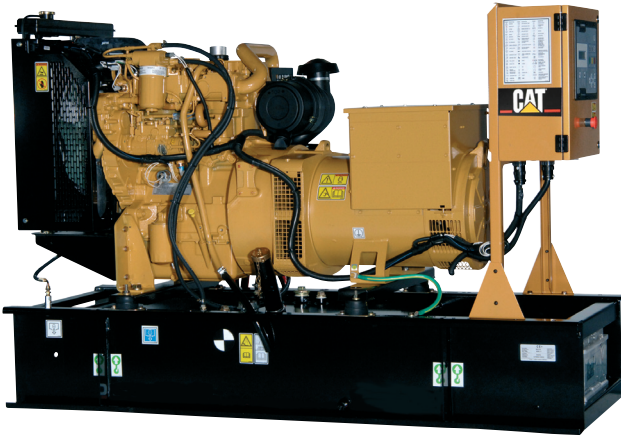


Exclusively from your Caterpillar® dealer



## GEP65-7 (3-Phase)

### 50 HZ

STANDBY 65.0 kVA / 52.0 kW

PRIME 60.0 kVA / 48.0 kW

### 60 HZ

STANDBY 75.0 kVA / 60.0 kW

PRIME 68.8 kVA / 55.0 kW

## FEATURES

### GENERATOR SET

- Complete system designed and built at ISO 9001 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 Alternator
- Insulation system, class H
- Drip proof generator air intake (IP23)
- Electrical design in accordance with BS5000 Part-99, IEC 60034-1, VDE 0530, UTE 51100

### 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, IEC 60034, VDE 0530

### DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

### WARRANTY

- All equipment carries full manufacturer's warranty

50 Hz	STANDBY	65.0 kVA	/	52.0 kW
	PRIME	60.0 kVA	/	48.0 kW
60 Hz	STANDBY	75.0 kVA	/	60.0 kW
	PRIME	68.8 kVA	/	55.0 kW



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## OPTIONAL EQUIPMENT\*

<b>Engine</b>	Electronic governor (fully adjustable) Lube oil drain Lube oil drain valve Lube oil temperature shutdown and panel circuitry
<b>Generator</b>	Anti-condensation heater Quadrature droop upgrade Permanent magnet generator (PMG) AREP Excitation system
<b>Cooling System</b>	Coolant heater Low coolant temperature-alarm Low coolant level shutdown Radiator transition flange Coolant drain 50% Anti-Freeze (Protection to -36°C)
<b>Fuel System</b>	Manual fuel pump Low fuel level shutdown Low fuel level alarm High fuel level alarm
<b>Silencer System — Open Unit</b>	Level 2 silencer with mounting kit (approximately 25 dB reduction) Level 1 and 2 silencer installation kits
<b>Enclosures</b>	Sound attenuated (EC) canopy
<b>Handling/Trailers</b>	Single point lift (sound attenuated enclosure)
<b>Controls</b>	EMCP 3.1 Panel EMCP 3.2 Panel
<b>Remote Annunciators</b>	EMCP 3 Annunciator
<b>Circuit Breaker</b>	Upgrades from 3-pole Circuit breaker deduct

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

50 Hz	STANDBY	65.0 kVA	/	52.0 kW
	PRIME	60.0 kVA	/	48.0 kW
60 Hz	STANDBY	75.0 kVA	/	60.0 kW
	PRIME	68.8 kVA	/	55.0 kW



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## SPECIFICATIONS



### ALTERNATOR

Make ..... Leroy Somer  
 Model ..... LL2014H  
 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

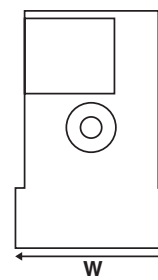
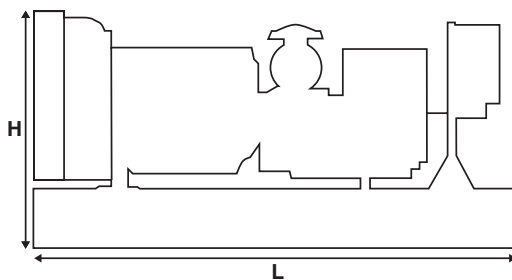


### ENGINE

Manufacturer ..... Perkins  
 Model ..... 1104A-44TG1  
 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 (21.0)  
 60 Hz ..... 7.6 (24.9)  
 Maximum power at rated rpm — kW (hp)  
 Standby  
 50 Hz ..... 65.6 (88.0)  
 60 Hz ..... 77.8 (104)  
 Prime  
 50 Hz ..... 59.6 (80.0)  
 60 Hz ..... 70.7 (95.0)  
 BMEP — kPa (psi)  
 Standby  
 50 Hz ..... 1193 (173)  
 60 Hz ..... 1179 (171)  
 Prime  
 50 Hz ..... 1084 (157)  
 60 Hz ..... 1071 (155)  
 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)
GEP65-7	2149 (84.6)	752 (29.6)	1366 (53.8)	1012 (2231)

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

\*Includes oil and coolant

50 Hz STANDBY 65.0 kVA / 52.0 kW  
PRIME 60.0 kVA / 48.0 kW  
60 Hz STANDBY 75.0 kVA / 60.0 kW  
PRIME 68.8 kVA / 55.0 kW



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### GEP65-7 (3-Phase)

Generator Set Technical Data		50 Hz		60 Hz	
		Standby	Prime	Standby	Prime
<b>Package Performance</b> Power rating	kVA (kW)	65.0 (52.0)	60.0 (48.0)	75.0 (60.0)	68.8 (55.0)
<b>Lubricating System</b> 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)	8.0 (2.1) 7.0 (1.8)		8.0 (2.1) 7.0 (1.8)	
<b>Fuel System</b> 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) 14.6 (3.9) 11.0 (2.9) 7.9 (2.1)	13.4 (3.5) 10.2 (2.7) 7.5 (2.0)	175 (46.2) 17.3 (4.6) 13.1 (3.5) 9.5 (2.5)	15.8 (4.2) 12.1 (3.2) 9.0 (2.4)
<b>Engine Electrical System</b> Voltage/ground: 12v DC/negative Battery charging alternator ampere rating	amps	65		65	
<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)	13.0 (3.4) 10.2 (33.5) 8520 (2251) 70.0 (158) 4.5 (8.1) 41.0 (2332) 11.0 (626) 1.0 (1.3)	37.0 (2104) 10.0 (569)	13.0 (3.4) 10.2 (33.5) 10200 (2695) 70.0 (158) 4.5 (8.1) 48.0 (2730) 13.0 (739)	43.0 (2445) 12.0 (682) 1.7 (2.3)
<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)	4.2 (148) 8.0 (32.1) 121 (4280) 120 (0.5) 16.2 (572)	4.0 (141)	5.5 (194) 8.0 (32.1) 140 (4958) 120 (0.5) 19.2 (678)	5.3 (187)
<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)	10.0 (3.0) 11.4 (403) 550 (1022)	10.5 (371)	15.0 (4.4) 14.3 (505) 535 (995)	13.5 (477) 505 (941)
<b>Generator Set Noise Rating*</b> (without attenuation) at 1 m (3.28 ft)	dBA	87.7		90.4	

\*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.

**5 0 H z    S T A N D B Y    6 5 . 0 k V A / 5 2 . 0 k W**  
**P R I M E            6 0 . 0 k V A / 4 8 . 0 k W**  
**6 0 H z    S T A N D B Y    7 5 . 0 k V A / 6 0 . 0 k W**  
**P R I M E            6 8 . 8 k V A / 5 5 . 0 k W**



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**GEP65-7 (3-Phase)**

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
<b>Motor Starting Capability:</b>									
Self Excited (kVA)	148	139	128	164	163	140	127	119	109
AREP Excited*** (kVA)	194	183	167	214	212	184	167	156	143
PM Excited**** (kVA)	194	183	167	214	212	184	167	156	143
<b>Full Load Efficiency</b>									
Standby %	90.2	90.0	89.8	90.3	90.6	90.3	89.7	89.3	88.7
Prime %	90.5	90.4	90.1	90.5	90.9	90.6	90.1	89.7	89.2
<b>Reactances (per unit)</b>									
Saturated Xd	2.67	2.87	3.18	2.37	2.76	3.28	3.67	3.97	4.40
X'd	0.10	0.11	0.12	0.09	0.10	0.12	0.14	0.15	0.16
Reactances are shown X"q	0.049	0.053	0.059	0.044	0.051	0.061	0.068	0.074	0.082
applicable to the standby rating X2	1.60	1.72	1.91	1.42	1.66	1.97	2.20	2.38	2.64
X0	0.061	0.065	0.072	0.054	0.063	0.075	0.084	0.091	0.100
	0.055	0.060	0.066	0.049	0.057	0.068	0.076	0.083	0.092
	0.004	0.005	0.005	0.004	0.005	0.006	0.006	0.007	0.007
<b>Time Constants:</b>	t'd 50 ms		t" 5 ms		t'do 1354 ms		ta 8 ms		

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

50 Hz STANDBY 65.0 kVA / 52.0 kW  
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 60 Hz STANDBY 75.0 kVA / 60.0 kW  
 PRIME 68.8 kVA / 55.0 kW



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## RATINGS AT AVAILABLE VOLTAGES

50 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT502	415/240	65.0	52.0	60.0	48.0
VOPT503	400/230	65.0	52.0	60.0	48.0
VOPT504	380/220	65.0	52.0	60.0	48.0
VOPT506	230/115	65.0	52.0	60.0	48.0
VOPT507	220/127	65.0	52.0	60.0	48.0
VOPT508	220/110	65.0	52.0	60.0	48.0
VOPT510	200/115	65.0	52.0	60.0	48.0

60 Hz					
Voltage Code	Voltage	Standby		Prime	
		kVA	kW	kVA	kW
VOPT601	480/277	75.0	60.0	68.8	55.0
VOPT603	440/254	75.0	60.0	68.8	55.0
VOPT605	380/220	75.0	60.0	68.8	55.0
VOPT606	240/120	75.0	60.0	68.8	55.0
VOPT607	230/115	75.0	60.0	68.8	55.0
VOPT608	220/127	75.0	60.0	68.8	55.0
VOPT609	220/110	75.0	60.0	68.8	55.0
VOPT610	208/120	75.0	60.0	68.8	55.0
VOPT611	240/139	75.0	60.0	68.8	55.0

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 ISO 8528-3).

### 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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 The International System of Units (SI) is used in this publication.