

# ACOUSTIC GENSETS (50 & 60 HZ)

**LLG 30A, LLG 50A, LLG 70A, LLG 100A, LLG 110A, LLG 140A**

*50 Hz, 1500 r/min; 60 Hz, 1800 r/min*

*Prime power outputs: 30-138 kVA; 24-110 kW*

*Standby power outputs: 33-150 kVA; 26-120 kW*

## LIQUID COOLED ACOUSTIC GENSET WITH ELECTRONIC CONTROL MODULE

### SPECIAL ATTRIBUTES

- continuous operation in ambient temperatures up to 40°C (104°F)
- cold start down to -20°C (-4°F)
- low fuel consumption
- shutdown fault protection
- easy maintenance

### DESIGN FEATURES

- Lister Petter Gamma Series diesel engine
- Leroy Somer single bearing, 4-pole, brushless alternator
- control system with electronic digital control module
- choice of manual/remote start and AMF operating modes
- integral fuel tank: 190-litre for 3-cylinder engines; 300-litre for 4-cylinder engines; 400-litre for 6-cylinder engines
- external emergency stop button
- emergency stop button (lock-down type)
- lifting points
- steel base frame
- mechanical or electric governing
- 12V or 24V DC isolation switch
- battery leads
- anti vibration mountings



**GAMMA ACOUSTIC GENSET**

- residential exhaust silencer
- flexible exhaust pipe
- pusher fan
- operators' handbook
- basic tool kit
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### OPTIONAL ITEMS

- automatic transfer switch (standard with AMF)
- battery charger
- output voltage of 220/127V for 60Hz

### ENGINE SPECIFICATION

- Gamma Series diesel engine
- three, four or six cylinders
- water cooled
- direct injection
- LLGA 30: naturally aspirated (GW3 engine)
- LLGA 50: naturally aspirated (GW4 engine)
- LLGA 70, LLGA 100, LLGA 110: turbocharged (GWT4, GWT6 engines)
- LLGA140: turbocharged and intercooled (GWTA6 engine)
- cyclonic dry-type air cleaner
- standard oil and fuel filters
- fuel-lift pump
- 12V electric starting system with battery-charge alternator (24V optional)

### ALTERNATOR SPECIFICATION

- Leroy Somer
- single bearing, 4-pole, brushless
- solid state AVR with  $\pm 1.5\%$  as standard
- class H insulation on the rotor and stator
- IP23 protection class

### CONTROL SYSTEM FEATURES

#### CONTROL CUBICLE

The control cubicle has the following features:

- three position key start
- electronic digital control module with monitoring/control facility and warning indicators
- automatic shutdown protection
- emergency stop button (lock-down type)
- AC output circuit breaker with over-current protection
- DC circuit control switch and overload circuit breaker

**The control module gives digital readouts of:**

- generator voltage (phase-to-phase and

phase-to-neutral)

- generator current (each phase displayed separately)
- output frequency
- engine speed
- engine oil pressure
- engine coolant temperature
- battery voltage
- engine hours run

**The control module has indicators for:**

- overspeed / underspeed
- emergency stop
- engine oil pressure
- engine temperature
- failure to start
- battery charger failure

**Automatic shutdown occurs under:**

- low engine oil pressure
- high engine temperature
- overspeed / underspeed
- failure to start after three attempts

### MANUAL/REMOTE START SETS

These sets have the flexibility of either manual or remote automatic operation:

- manual operation is by **START** and **STOP** push-buttons on the control module
- remote operation is achieved by connecting a 2-wire circuit to the relevant terminals on the control module and is activated by setting the control module to **AUTO**

### AUTOMATIC MAINS FAILURE SETS (AMF)

In the event of a mains failure, the generating set will automatically operate to supply the electrical load. In addition to the standard features, automatic mains failure sets have:

- wall mounted cubicle governing automatic mains failure operation
- control module timer circuits set to delay start, delay transfer back to mains and delay stop to allow for engine cool down

POWER OUTPUTS						
			50 Hz, 1500 r/min		60 Hz, 1800 r/min	
			Three phase		Three phase	
Model	Engine	Rating	kVA	kWe	kVA	kWe
LLG 30A	GW3	Prime	30	24	31	25
		Standby	33	26	34	27
LLG 50A	GW4	Prime	45	36	48	38
		Standby	50	40	53	42
LLG 70A	GWT4	Prime	63	50	69	55
		Standby	69	55	75	60
LLG 100A	GWT6-1A	Prime	90	72	94	75
		Standby	100	80	106	85
LLG 110A	GWT6-2A	Prime	100	80	113	90
		Standby	110	88	125	100
LLG 140A	GWTA6	Prime	125	100	138	110
		Standby	138	110	150	120

Power factor: 0.8. Voltages available: 380 V/220 V, three-phase, four-wire. Other voltages available on request.

APPROXIMATE FUEL CONSUMPTION			
		Litres/hour at 100% load	
		50 Hz, 1500 r/min	60 Hz, 1800 r/min
Model	Engine		
LLG 30A	GW3	7.0	7.5
LLG 50A	GW4	10.8	11.5
LLG 70A	GWT4	14.7	15.9
LLG 100A	GWT6-1A	20.5	22.0
LLG 110A	GWT6-2A	22.6	26.0
LLG 140A	GWTA6	27.7	30.9

**RATING DEFINITIONS TO ISO 8528-1**

All ratings are in accordance with ISO 8528-1. Power outputs are based on the optimum make of alternator for the set. Generators fitted with other manufacturers' alternators may not achieve the above ratings

**Rating Conditions**

A standard generating set is designed to operate in environmental reference conditions of 25 °C, 100 kPa and 30% humidity.

**Prime Power**

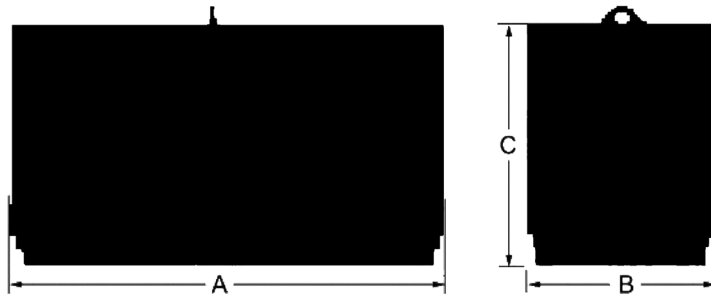
This rating is for the supply of continuous electrical power (at variable load). There is no limit on the annual hours of operation and 10% overload power can be supplied for 1 hour in 12.

**Standby Power**

This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted.

AVERAGE SOUND PRESSURE LEVEL	
Acoustic housing	75% load at 7m
LLG 70A (50HZ)	73.5 dBA

**APPROXIMATE WEIGHT AND DIMENSIONS**



"Silent" sets		LLG 30A	LLG 50A	LLG 70A	LLG 100A	LLG 110A	LLG 140A
Dry Weight	kg	1280	1608	1688	2100	2168	2298
	lb	2820	3545	3721	4630	4780	5066
Length (A)	mm	1950	2200	2200	2800	2800	2800
	in	77	87	87	110	110	110
Width (B)	mm	1050	1000	1000	1150	1150	1150
	in	41	39	39	45	45	45
Height (C)	mm	1600	1615	1615	1750	1750	1750
	in	63	64	64	69	69	69

A comprehensive range of options allows you to select a specification that matches your requirements. Please ask your Lister Petter distributor (see panel below right).

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