

# LLG LIQUID COOLED GENSETS

**LLG 50(A), LLG 70(A), LLG 100(A), LLG 110(A), LLG 140(A)**

50 Hz; 1500 r/min; power outputs: 38—138 kVA

60 Hz; 1800 r/min; power outputs: 43—150 kVA

## LIQUID COOLED GENERATING SETS WITH ELECTRONIC CONTROL MODULE

### CHOICE OF:

- 50 Hz, 1500 r/min or 60 Hz, 1800 r/min
- Lister Petter Gamma Series liquid cooled, direct injection, diesel engine
- open set (LLG) or acoustic set (LLGA)
- manual / remote start and automatic mains failure operating modes
- Lister Petter or Stamford alternator

### STANDARD FEATURES

- continuous operation in ambient temperatures up to 45°C (113°F)
- control system with electronic digital control module
- 250 litre fuel tank with contents gauge for LLG 50(A) and LLG 70(A)
- 400 litre fuel tank with contents gauge for LLG 100(A), LLG 110(A) and LLG 140(A)
- galvanised steel base-plate with forklift pockets
- anti vibration mountings
- 12V starter battery and leads
- mechanical or electronic governing
- emergency stop button (lock-down type)
- pusher fan
- operators' handbook
- electrical diagrams



### ACOUSTIC GENSET (LLGA)

**Please note:** This photograph is for illustrative purposes only. Actual product received may change depending on the agreed specification.

### OPEN SETS ONLY:

- remote mounting silencer kit (silencer & flexible bellows)

### ACOUSTIC SETS ONLY:

- acoustic canopy
- residential exhaust silencer
- central point lifting eye for LLG 50(A) and LLG 70(A)
- lifting points on base frame for LLG 100(A), LLG 110(A) and LLG 140(A)
- external emergency stop button

**ENGINE FEATURES**

- 12 volt electric starting
- oil and fuel filters
- air cleaner
- fuel solenoid, energised to run

**ALTERNATOR SPECIFICATION**

- single bearing brushless alternator
- solid state AVR with  $\pm 1.5\%$  voltage regulation as standard
- class 'H' insulation on the rotor and stator
- IP23 protection class

**OPTIONAL ITEMS**

- acoustic canopy kit (including residential silencer kit) for retro fitting to open sets
- battery charger unit for electric start sets (standard as part of AMF mode)
- engine mounted exhaust silencer for open gensets

**CONTROL CUBICLE**

- 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 coolant temperature
- battery voltage
- engine hours run

**The control module has indicators for:**

- overspeed / underspeed

- emergency stop
- low engine oil pressure
- high 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 cooldown
- solid state automatic battery charger that maintains charge when set is not running

**The wall mounted cubicle features:**

- mains monitoring unit to control set operation
- load transfer contactors, mechanically and electrically interlocked (rated for set output)
- indicator for mains-on-load or plant-on-load

POWER OUTPUTS TO ISO 8528-1						
Genset Model	Engine Model	Rating	50 Hz, 1500 r/min		60 Hz, 1800 r/min	
			Three Phase		Three Phase	
			380/220 V 400/230 V 415/240 V		220/127 V 230/133 V	
			kVA	kWe	kVA	kWe
LLG 50(A)	GW4	Prime	38	30	43	34
		Standby	42	33	47	37
LLG 70(A)	GWT4	Prime	63	50	69	55
		Standby	69	55	75	60
LLG 100(A)	GWT6 - 1A	Prime	90	72	94	75
		Standby	100	80	106	85
LLG 110(A)	GWT6 - 2A	Prime	100	80	113	90
		Standby	110	88	125	100
LLG 140(A)	GWTA6	Prime	125	100	138	110
		Standby	138	110	150	120

**Please note:** Ratings will vary slightly depending on alternator model choice and requested voltage output.

SOUND PRESSURE			
Acoustic sets, 75% load at 7m			
Genset	Engine	50Hz, 1500 r/min	60Hz, 1800 r/min
LLG 50(A)	GW4	66.0 dBA	66.0 dBA
LLG 70(A)	GWT4	66.0 dBA	66.0 dBA
LLG 100(A)	GWT6 - 1A	66.0 dBA	68.3 dBA
LLG 110(A)	GWT6 - 2A	66.0 dBA	68.3 dBA
LLG 140(A)	GWTA6	66.0 dBA	68.3 dBA

APPROXIMATE FUEL CONSUMPTION				
Values refer to litres/hour				
Genset	Engine	Load	50Hz, 1500 r/min	60Hz, 1800 r/min
LLG 50(A)	GW4	100%	12	13
LLG 70(A)	GWT4	100%	15	18
LLG 100(A)	GWT6 - 1A	100%	21	24
LLG 110(A)	GWT6 - 2A	100%	24	29
LLG 140(A)	GWTA6	100%	29	33

### RATING DEFINITIONS TO ISO 8528-1

Ratings are in accordance with ISO 8528-1.  
Power Factor: Single phase, 1.0 pf; three phase, 0.8 pf.  
Other voltages may be available on request.

#### Rating Conditions

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

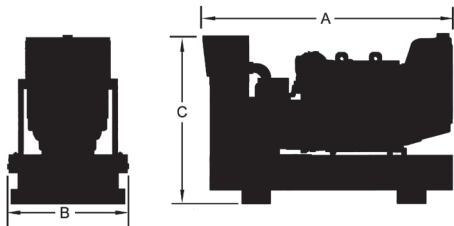
#### Prime Power

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.

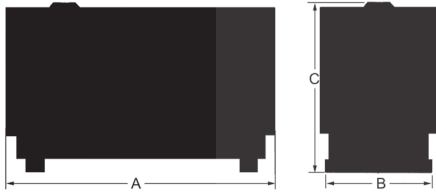
#### Standby Power

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.

**APPROXIMATE WEIGHT AND DIMENSIONS**

	Open sets		LLG 50	LLG 70	LLG 100	LLG 110	LLG 140
	Length (A)	mm	2200	2200	2640	2640	2640
		in	86.6	86.6	103.9	103.9	103.9
	Width (B)	mm	996	996	1093	1093	1093
		in	39.2	39.2	43.0	43.0	43.0
	Height (C)	mm	1527	1527	1677	1677	1677
in		60.1	60.1	66.0	66.0	66.0	
Dry Weight	kg	1193	1431	1860	1860	1876	
	lb	2630	3155	4101	4101	4136	

Please note: Height does not include silencer arrangement

	Acoustic sets		LLG 50A	LLG 70A	LLG 100A	LLG 110A	LLG 140A
	Length (A)	mm	2645	2645	3366	3366	3366
		in	104.1	104.1	132.5	132.5	132.5
	Width (B)	mm	1000	1000	1100	1100	1100
		in	39.4	39.4	43.3	43.3	43.3
	Height (C)*	mm	1643	1643	1949	1949	1949
in		64.7	64.7	76.7	76.7	76.7	
Dry Weight	kg	1686	1921	2493	2493	2509	
	lb	3717	4235	5496	5496	5531	

\*Height includes lifting eye where applicable.

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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