



# Model GS12DE

*Standby Power Range: 9.8 - 11.2 kW 60Hz*

*Prime Power Range: 8.9 - 10.2 kW 60Hz*

## Generator Set Technical Data Sheet

GS Series with optional sound attenuation and sub-base fuel tank shown



The set illustrated is not necessarily the standard build.

GS Series Open Set shown



The set illustrated is not necessarily the standard build.

### Standard Features and Options

#### Standard Features

- ◆ Lister Petter Alpha engine
- ◆ Full flow fuel and oil filters
- ◆ Self-priming fuel system
- ◆ Fuel lift pump
- ◆ Mechanical governor
- ◆ 12 volt starter and alternator
- ◆ Belt and fan guard
- ◆ Oil drain
- ◆ Fuel control solenoid
- ◆ Dry type air-cleaner
- ◆ Powder-coated finish
- ◆ Fabricated steel skid base
- ◆ Vibration isolator mounts
- ◆ DA control with safety shut-down and fault indication
- ◆ Battery hold down and cables
- ◆ 12-wire re-connectable brushless AVR
- ◆ AVR Regulated Lister Petter alternator
- ◆ Operator handbook
- ◆ Skid Base mounted radiator

#### Optional Items\*

- ◆ Full sound attenuated enclosure
- ◆ Aluminium enclosures
- ◆ Complete AC/DC instrumentation
- ◆ Variety of fuel tanks including UL142
- ◆ Main-line circuit breaker
- ◆ Critical muffler
- ◆ Auto-battery charger
- ◆ Alternator end options available
- ◆ Electronic governor
- ◆ Heavy duty air cleaner

*\*consult with factory for full list of options*

### Benefits of choosing a Lister Petter Generator Set

The Lister Petter GS series of generator sets are designed and assembled in our own facility. Drawing from several decades of generator set assembly experience our customers receive generators that are fully tested before shipment and provide stable, clean electrical power with a very steady voltage and frequency output. The Alpha series of engines are extensively used in generator sets, with tens of thousands of installations, for a proven track record in power generation demonstrating high reliability, longer maintenance intervals and a lower cost of ownership. For after-market support our customers can rely on a comprehensive network of product service centers, with single source product support and full parts availability. A wide range of options are available.

**Note:** The information in this data sheet is of a general nature and does not form part of any contract and/or warranty. We have made efforts to ensure that the information is accurate but reserve the right to amend the specification and information without notice or any obligation or liability. The set illustrated is not necessarily the standard build.

## Generator Set Model Ratings and Specifications

### GS12DE-LL

Voltage	Ph	pf	Hz	Standby Power			Prime Power		
				kW	kVA	kVA Amps	kW	kVA	kVA Amps
120/240	1	1.0	60	11.7	12	49	10.6	11	44
120/208	3	0.8	60	12.2	15	42	11.1	14	39
120/240	3	0.8	60	12.2	15	37	11.1	14	33
277/480	3	0.8	60	12.2	15	18	11.1	14	17
230	1	1.0	50	9.7	10	42	8.8	9	38
220/380	3	0.8	50	10.0	13	19	9.1	11	17
230/400	3	0.8	50	10.0	13	18	9.1	11	16
240/415	3	0.8	50	10.0	13	17	9.1	11	16

### GS12DE-LM

Voltage	Ph	pf	Hz	Standby Power			Prime Power		
				kW	kVA	kVA Amps	kW	kVA	kVA Amps
120/240	1	1.0	60	12.3	12	51	11.1	11	46
120/208	3	0.8	60	13.0	16	45	11.7	15	33
120/240	3	0.8	60	12.9	16	39	11.7	15	28
277/480	3	0.8	60	13.0	16	20	11.7	15	14
230	1	1.0	50	9.7	10	42	8.7	9	38
220/380	3	0.8	50	10.3	13	20	9.2	12	17
230/400	3	0.8	50	10.3	13	19	9.2	12	16
240/415	3	0.8	50	10.3	13	18	9.2	12	16

Rating Conditions and Factors: All ratings calculated at sea level, 77°F and 30% humidity. **Standby Rating:** The power that the generator set will deliver continuously under normal varying load factors for the duration of a power outage. **Prime Power:** Power that the generator set will deliver when used as a utility type power plant under normal varying load factors to run continuously. This rating has a maximum momentary overload capability of 10%.

### Application Air, Exhaust and Cooling Requirements US (Metric)

Cooling data and requirements	Standby Rating		Prime Power Rating	
	60 Hz	50 Hz	60 Hz	50 Hz
Total coolant including radiator US gal (liters)	1.84 (7.0)	1.84 (7.0)	1.84 (7.0)	1.84 (7.0)
Coolant flow rate US gal/min (Liters/min)	10.8 (41)	8.7 (33)	10.8 (41)	8.7 (33)
Heat rejection to coolant Btu/min (kW)	615 (10.8)	518 (9.1)	558 (9.8)	473 (8.3)
Heat rejection to surroundings Btu/min (kW)	205 (3.6)	171 (3.0)	188 (3.3)	154 (2.7)
<b>Application Air-Flow Requirements</b>				
Maximum static pressure for radiator out inH <sup>2</sup> O (mmH <sup>2</sup> O)	0.5 (13)	0.5 (13)	0.5 (13)	0.5 (13)
Maximum air cleaner air-restriction inH <sup>2</sup> O (mmH <sup>2</sup> O)	10 (254)	10 (254)	10 (254)	10 (254)
Radiator cooling-air cfm (m <sup>3</sup> /min)	2207 (1.04)	1919 (0.9)	2207 (1.07)	1919 (0.9)
Combustion-air cfm (m <sup>3</sup> /min)	37.7 (1.0)	31.4 (0.9)	37.7 (1.0)	31.4 (0.9)
Alternator cooling-air cfm (m <sup>3</sup> /min)	250 (7.1)	200 (5.7)	250 (7.1)	200 (5.7)
<b>Exhaust Gas Data</b>				
Exhaust gas flow cfm (m <sup>3</sup> /min)	105.3 (3.0)	87.7 (2.5)	95.8 (2.7)	79.7 (2.3)
Maximum back pressure inH <sup>2</sup> O (mmH <sup>2</sup> O)	20 (508)	20 (508)	20 (508)	20 (508)
Exhaust temperature °F (°C)	950 (510)	842 (450)	865 (464)	788 (420)



\* Noise Data dB(A) @ 7 meters (8 position average) 60 Hz (100%Stand-By Rating)

Configuration of set Noise rating: dB(A)	Open	Enclosed	Sound Attenuated	
			Level 1	Level 2
		79.6	76.9	69.4

\* With critical muffler option

### Fuel, Lube Oil and De-Ratings Data

	Standby Power Rating		Prime Power Rating	
	60Hz	50Hz	60Hz	50Hz
<b>Fuel consumption US gal/Hr (Liters/Hr) 100%</b>	1.0 (3.8)	0.8 (3.1)	0.96 (3.65)	0.7 (2.8)
75%	0.8 (3.0)	0.6 (2.4)	0.72 (2.74)	0.5 (2.2)
50%	0.6 (2.2)	0.5 (1.8)	0.5 (1.8)	0.4 (1.6)
<b>Recommended oil change @ ambient temp:</b>	Up to 95°F (35°) 250 hours Above 95°F (35°) 125 hours			
<b>De-Rating conditions and factors:</b>	<b>Altitude:</b> 4.5% for every 1000ft (300m) above 325ft (150m) <b>Temperature:</b> 2.5% for every 9°F (5°C) above 77°F (25°C) <b>Humidity:</b> Derate up to a maximum of 10% above 30% humidity. Contact Lister Petter for specific amounts.			

### Engine

Basic Engine Data		Valve Train	
Manufacturer	Lister Petter	Lifter type	Hydraulic
Alpha model naturally-aspirated	LPWS3	Emissions	
Cylinders	3	EPA Certified	Yes (60 Hz) No (50 Hz)
Displacement Cu.in (Liters)	85.1 (1.4)	Engine Governor	
Bore inches (mm)	3.38 (86.0)	Standard mechanical system	Hz no load to full load 5.0%
Stroke inches (mm)	3.15 (80.0)	Optional electronic system	Hz no load to full load 0.5%
Compression ratio	22.0:1	Steady regulation mechanical	±0.5%
Number of main bearings	4	Steady regulation electronic	±0.25%
Connecting rods	3	Cooling System	
Piston material	Aluminium alloy	Type of system	Pressurized
Cylinder head material	Cast iron	Water pump	Sealed
Oil capacity gals (liters)	1.0 (3.79)	Type of fan	5 blade Pusher
Engine Electrical System		Fuel System	
Glow plugs	Yes 12V	Fuel	#2 Diesel Fuel
Battery charge alternator	50 amp	Fuel injection pump	Individual pump per cylinder, engine camshaft driven
Starter motor	12V		
Recommended lead acid battery	Group 34 850 CCA	Combustion	In-direct
Ground polarity	Negative	Firing order	1-2-3

### Alternator

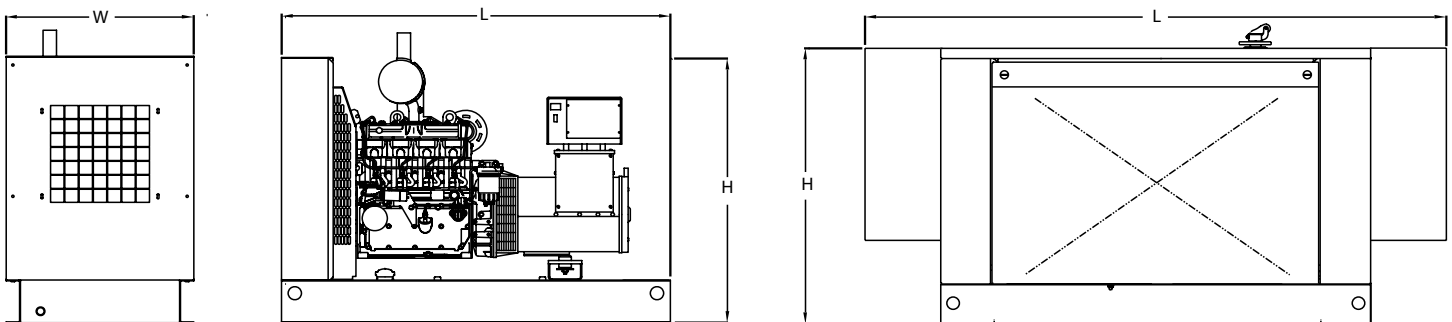
Basic Data		Coupling arrangement	
Type	4 - pole	Load capacity (standby)	110%
Rotor insulation	Class "H"	Load capacity (prime)	100%
Stator insulation	Class "H"	Excitation System	
Total harmonic factor	Less than 2%	Brushless	AVR
Telephone influence factor (TIF)	Less than 50	Volts change 100% load step	Under 3%(¼ sec)
Alternator cooling	Self ventilating	Voltage regulation	2% all loads to 100%
Bearings	Single	Temperature Rise/Amb	125°C/40°C

## GS12DE Control Panel Descriptions

<b>DA</b> <i>(standard)</i>	This control panel comes complete as a manual or auto start control with hour meter. When in "Auto" position a simple switch closure of any kind will signal the set to start. Controls provide safety shutdown protection, with LED indication for low oil pressure, high temperature, low battery voltage, over/under speed and fail to start after three attempts to start. It comes standard with two configurable input/outputs.
<b>DB</b>	This control panel includes all the features of the DA control panel but includes a back-lit LCD screen showing values for A/C voltage, amperage and hertz. These values can be easily scrolled through using a push button on the panel itself. The engine will be monitored for oil pressure, temperature, D/C battery volts, and engine hours run. It comes standard with five fully configurable inputs and three configurable outputs for either warnings or shutdowns.
<b>DC</b>	This control panel includes all the features of the DB but comes standard with six fully configurable inputs and three configurable outputs for either warnings or shutdowns. Using a push button you can easily scroll through the LCD showing the generator sets A/C voltage, amperage, hertz, kW, KVA and Cos Ø (power factor) output. This control panel is capable of monitoring fuel level % using an optional fuel tank sender. This control also has options that can be added to the base control above so that you can communicate remotely via it's standard RS2322 port with a PSTN line or a GSM using a suitable modem which can be configured to send warning and shutdown messages to a cell phone using GSM and SMS text messaging systems.
<b>DD</b>	This control panel includes all the features of the DC with a 4 line text based LCD display to provide at a glance the instrumentation, engine status and fault diagnosis and can also be configured to display in English (factory default), French, Spanish, German, etc. for international use. It comes standard with six fully configurable inputs and three configurable outputs for either warnings or shutdowns. The DD control panel can also be used in conjunction with other optional control modules (including J1939) to help meet NFPA 110 Level 1 specifications.

## Alpha GS Series Dimensions and Weights

Dimension	Unpacked dimensions						Shipping dimensions						Weights (with packing options)																
	Open		Enclosed		Attenuated		Open		Enclosed		Attenuated		Packing lb (kg)		Open		Enclosed		Attenuated										
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	None	640 (290)	730 (331)	810 (367)	690 (313)	780 (354)	860 (390)	Open Crate	765 (347)	855 (388)	935 (424)	Closed Crate	810 (367)	890 (404)	970 (440)		
"H" height	40.5	1029	41.92	1065	41.9	1065	67.5	1715	67.5	1715	79.5	2020	Pallet Only	690	(313)	780	(354)	860	(390)										
"W" width	28	713	28	713	28	713	31	787	31	787	31	789	Open Crate	765	(347)	855	(388)	935	(424)										
"L" length	58.3	1480	58.3	1490	78.0	1980	61	1549	61	1549	80	2030	Closed Crate	810	(367)	890	(404)	970	(440)										



### Distributors Addresses

#### UK

Lister Petter Limited, Dursley, Gloucestershire GL11 4HS England  
Tel: +44 (0)1453 544141; Fax: +44 (0)1453 546732; E-mail: [sales@lister-petter.co.uk](mailto:sales@lister-petter.co.uk) <http://www.lister-petter.co.uk>

#### USA

Lister Petter Americas Inc. 815 E. 56 Highway, Olathe, Kansas 66061 USA  
Tel: +1 913 764-3512; Fax: +1 913 764-5493; E-mail: [info@lister-petter.com](mailto:info@lister-petter.com); <http://www.lister-petter.com>

#### FRANCE

Lister Petter France, 17 Avenue de L'escouvrier, Zone d'Activites, 95842 Sarcelles, Cedex France  
Tel: +33 (0)1 39330420; Fax: +33 (0)1 34195760; E-mail: [commercial@lister-petter-france.fr](mailto:commercial@lister-petter-france.fr)

#### INDIA

Lister Petter India Pvt Ltd, 32/2/5/1, Kondhawa Budruk, Pune 411 048 India  
Tel: +91 20 2693 2688 / 3644 / 3645 / 4138 ; Fax: +91 20 2693 3286

#### CHINA

Lister Petter China, Jinan Fuqiang Power Co. Ltd. 159 Ying Xiong Shan Street, Jinan PC 250002. P.R. China  
Tel: +86 531 271 0148; Fax: +86 531 297 1113

