

## STANDARD SPECIFICATIONS

### 1. ENGINE

- diesel fuelled
- direct injection
- 3 cylinders
- liquid cooled
- naturally aspirated

### 2. DESIGN FEATURES AND EQUIPMENT

- heavy duty air cleaner\*
- Polyvee fan/alternator drive belt\*
- inlet and exhaust manifolds
- inlet manifold heater plugs\*
- fuel lift pump
- self vent fuel system with individual fuel injection pumps
- fuel filter/agglomerator
- gear driven positive displacement type lubricating oil pump
- spin-on lubricating oil filter
- 12V starter motor\*
- 12V battery charge alternator\*
- safety switches\*
- fuel control solenoid (energised to run)\*
- mechanical governing
- radiator with fan and belt guard\*
- flywheel with ring gear; 7.5" heavy flywheel for 1500/1800 r/min \*\*
- SAE 5 flywheel housing (SAE4 optional)
- standard skid base packing
- operators' handbook
- deep sump (3600r/min only)

### 3. SPECIAL ATTRIBUTES

- 500-hour service intervals
- designed for continuous operation in ambient temperatures up to 52°C (122°F)
- cold start capability down to -32°C (-25.6°F)

### 4. EMISSIONS

Models under 19kW output comply with EU Stage 3A exhaust emissions regulations.

### 5. OPTIONAL ITEM

- oil cooler
- 24V battery charge alternator
- increased oil sump capacity (deep sump)

### CONTROL PANEL

Make	Deep Sea
Model	DSE4510

**The DSE4510** is an Auto Start Control Module for a wide variety of single gen-set applications. LCD display which clearly shows the status of the engine all the times. This module can either be programmed using the front panel configuration suite PC software.

## ENGINE / TECHNICAL DATA

Engine Make	LISTER PETER	
Engine Model	LPW3	
Type of fuel injection	Direct	
Number of cylinders	3	
Aspiration	Natural	
Direction of rotation (flywheel end)	Anticlockwise	
Nominal cylinder bore	mm	86.0
	in	3.39
Stroke	mm	80.0
	in	3.15
Total cylinder capacity	litre	1.395
	in <sup>3</sup>	85.13
Compression ratio	18.5:1	
Firing order (number 1 cylinder is at the gear end)	1—2—3	
Number of flywheel ring gear teeth	96	
Maximum continuous crankshaft end thrust	kgf	180
	lbf	400
Maximum permissible intake restriction at full rated speed and load	mbar	25
	in	10
Maximum permissible exhaust back pressure	mbar	75
	in	30
Lubricating oil pressure at 3000r/min and with the oil at 110°C (230°F)	bar	2.0
	lbf/in <sup>2</sup>	29
Fuel Consumption @ 50% load L/hr	1500	1800
	1.7	2.3
@ 75% load L/hr	2.2	2.8
	@ 100% load L/hr	2.8

### DIMENSIONS AND WEIGHT\*

Length mm	Width mm	Height mm	Weight* kg (Dry)
809	512	685	150

### POWER OUTPUTS

Power	r/min	1500	1800	3000	3600
Continuous	KW	11.3	13.9	20.1	21.0
	bhp	15.2	18.6	26.9	28.1
Fuel Stop	KW	12.4	15.3	22.1	N/A
	bhp	16.6	20.5	29.6	

### DSE 4510 KEY FEATURES

- Alternator frequency & CAN speed sensing in one variant
- 3 phase generator sensing
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Generator/load current monitoring and protection
- configurable analogue/digital inputs and outputs
- Engine speed, overheat and low oil pressure protection
- Engine hours counter
- Battery voltage monitoring
- Configurable remote start input
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD alarm indication
- Event log (50)

# 13.5 KVA

POWERED BY:



### ALTERNATOR DATA

Make	Stamford
Model	PI044G
No. of bearings	Single bearing
Insulation class	H
Total Harmonic Content	at no load <1.5% - on load <5%
Winding Leads	12
Ingress Protection	IP23
Excitation System	SHUNT
Winding Pitch	2/3
AVR Model	AS480
Overspeed	2250mn <sup>-1</sup>
Voltage Regulation	± 1.0%
Short Circuit Capacity	-

## 6. FUEL SYSTEM

**STANDARD SPECIFICATIONS** the baseframe design can be incorporated with an integral fuel tank with a capacity of approx. 8 hours running at Full Load. The tank is supplied complete with fill cap breather fuel feed and return lines to the Engine and drain plug.

## 7. ALTERNATOR

### 7.1 INSULATION SYSTEM

- The insulation system is Class H.
- All windings are impregnated in either a triple dipthermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin.

- Heavy coat of antitracking varnish additional protection against moisture.

### 7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)

The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at  $\pm 0.5\%$ . Nominal adjustment by means of a trim pot incorporated on the AVR.

**7.3 MOTOR STARTING** An overload capacity equivalent to 300% of the Full Load impedance at zero Power Factor can be sustained for 10 seconds.

## 8. MOUNTING ARRANGEMENT

### 8.1 BASE FRAME

The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Baseframe.

**8.2 COUPLING** The Engine and Alternator are directly coupled by means of an SAE flange. The Engine flywheel is flexibly coupled to the Alternator rotor.

**8.3 ANTI-VIBRATION MOUNTING PADS** Anti-Vibration pads are affixed between the Engine / Alternator feet and the Baseframe thus ensuring complete vibration isolation of the rotating assembly. The Fan & Fan Drive along with the Battery Charging

**8.4 SAFETY GUARDS** The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personal protection.

## 9. FACTORY TESTS

- The Generating set is load tested before dispatch
- All protective devices control functions and site load conditions are simulated. The generator and it's systems are checked before dispatch.

**10. EQUIPMENT FINISHING** All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

## RATINGS DEFINITION

Prime Power operation. power. 10% overload continuous These ratings are applicable for supplying continuous electrical power (at variable load) in hours lieu of commercially purchased power is available for 1 hour in 12.

### STANDBY POWER

These ratings are applicable for supplying electrical power (at variable load) in the continuous event of a utility power failure.

No overload is permitted on these ratings.

### STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. This generating set is designed to operate at high ambient temperatures (up to 55°C), humidity (up to 99%) and altitudes. De-rating may apply, please consult your dealer for specific site ratings.

JET Generators are assembled Some of the specifications are not standard on all Genset models. in facilities certified to ISO 9001 All information in this document is substantially correct at time of printing and may be altered subsequently.

Generating Set pictured may include optional accessories.

**11. DOCUMENTATIONS** A set of Operation & Maintenance manual, Circuit wiring diagrams and Commissioning / Fault Finding instruction leaflets accompany the Generator.

**12. QUALITY STANDARDS** The equipment meets the following standards: BS4999, BS5000, BS5514 IEC 60034, VDE0530, NEMA MG 1.22 and ISO 8528.

**13. WARRANTY** All of the Generating Sets are covered under a warranty policy for a period of 12 months. Warranty of the equipment is in line with manufacturers warranty terms & conditions.

(check warranty statement for more details, as it may vary for different countries) In line with continuous product development, we reserve the right to change specifications without notice.

**For further information on all of the standard and optional features accompanying this product please contact your local dealer or visit:**

[WWW.STAUNCHMACHINERY.COM](http://WWW.STAUNCHMACHINERY.COM)

## AVAILABLE OPTIONS & ACCESSORIES

We offer a range of optional features and accessories to tailor our generating sets to meet your power needs.

## ACCESSORIES

- switches
- Load banks
- Auxiliary fuel tanks
- Manual & automatic
- Genuine spare parts transfer



**LPW3 G BUILD ENGINE**

### 1 RATING DEFINITIONS, TO ISO 3046

ISO Standard Conditions

Barometric pressure 100 kPa

Relative humidity 30%

Ambient temperature at air inlet manifold 25°C

Fixed speed power: continuous power (ICN)

The power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under ISO standard conditions, measured at the flywheel without power-absorbing accessories, provided that the engine is overhauled and maintained in good operating condition and that fuel to BS EN 590 Class A1 or A2, and lubricating oils to the correct performance specification and viscosity classification as recommended by Lister Petter Limited, are used.

Fixed speed power: overload power (ICXN)

The maximum power in kW which the engine is capable of delivering intermittently at the stated crankshaft speed for a period not exceeding one hour in any period of twelve hours' continuous running, immediately after working at the continuous power, under ISO standard conditions and with the provisions specified for continuous power above.

Fixed speed power: continuous power, standby.

This rating is applicable for supplying emergency power in variable load applications. Overload is not allowed.

De-rating

For non-standard site conditions, reference should be made to relevant BS, ISO and DIN standards.

Notes: 1. Power ratings measured at the flywheel apply to a fully run-in, non derated engine without a radiator and fan fitted, and without power absorbing accessories or transmission equipment. 2. The overload capability applies to a fully run-in engine. This is normally attained after a running period of about 50 hours. 3. Excluding radiator.