

ALPHA Series LPW3 G-Build Engine

LPW3

Power ranges: 11.3–22.1 kW; 15.2–29.6 bhp Fixed speeds: 1500, 1800, 3000 r/min

Durable, reliable, easy to maintain liquid-cooled G-Build diesel engine

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)

Basic Engine Characteristics

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

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 (SAE 4 optional)
- standard skid base packing
- operators' handbook



Emissions

Complies with EU Stage 3A exhaust emissions regulations.

Optional Items

- oil cooler
- 24V battery charge alternator

 increased oil sump capacity (deep sump)
See also items with asterisk under Design Features and Equipment.

A range of options allows you to select a specification that matches your requirements; please consult your Lister Petter distributor.

| Power Outputs | | | | | | | | |
|-----------------------------|-------|------|------|------|--|--|--|--|
| Power | r/min | 1500 | 1800 | 3000 | | | | |
| Continuous | kW | 11.3 | 13.9 | 20.1 | | | | |
| | bhp | 15.2 | 18.6 | 26.9 | | | | |
| Intermittent (Fuel Stop) | kW | 12.4 | 15.3 | 22.1 | | | | |
| | bhp | 16.6 | 20.5 | 29.6 | | | | |

Rating Definitions, to ISO 3046

ISO Standard Conditions

| Barometric pressure | 100 kPa |
|---|---------|
| Relative humidity | |
| 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.

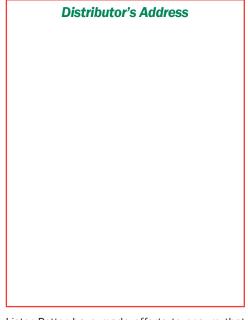
Fixed speed power: overload power (ICXN)

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.

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.



Lister Petter have made efforts to ensure that the information in this data sheet is accurate but reserve the right to amend specifications and information without notice and without obligation or liability.

Approximate Dimensions and Weight¹

| Drywoidht | kg | 150 | |
|------------|----|------|--|
| Dry weight | lb | 330 | |
| Longth (A) | mm | 809 | |
| Length (A) | in | 31.9 | |
| Width (D) | mm | 512 | |
| Width (B) | in | 20.2 | |
| Height (C) | mm | 685 | |
| | in | 27 | |

Technical Data

| Type of fuel injection | Direct | | | | | | |
|---|---------------------|-------|--|--|--|--|--|
| Number of cylinders | 3 | | | | | | |
| Aspiration | Natural | | | | | | |
| Direction of rotation (flywheel end) | Anticlockwise | | | | | | |
| Nominal evlinder here | mm | 86.0 | | | | | |
| Nominal cylinder bore | in | 3.39 | | | | | |
| Stroke | mm | 80.0 | | | | | |
| Stroke | in | 3.15 | | | | | |
| Total cylinder capacity | litre | 1.395 | | | | | |
| | in ³ | 85.13 | | | | | |
| Compression ratio | 18.5:1 | | | | | | |
| Firing order (number 1 cylinder is at the gea | 1-2-3 | | | | | | |
| Number of flywheel ring gear teeth | 96 | | | | | | |
| Maximum continuous crankshaft | kgf | 180 | | | | | |
| end thrust | lbf | 400 | | | | | |
| Maximum permissible intake restriction | mbar | 25 | | | | | |
| at full rated speed and load | in | 10 | | | | | |
| Maximum permissible exhaust | mbar | 75 | | | | | |
| back pressure | in | 30 | | | | | |
| Lubricating oil pressure at 3000r/min | bar | 2.0 | | | | | |
| and with the oil at 110°C (230°F) | lbf/in ² | 29 | | | | | |
| | | | | | | | |



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