



ALPHA Series LPWG G-Build Gas Engines

LPWG2, LPWG3, LPWG4

Power range: 5.3–20.5 kW; 7.1–27.5 bhp
Full-load fixed speeds: 1500 and 1800 r/min

Durable, reliable, water-cooled, gas fuelled, fixed speed G-Build engines

Special Attributes

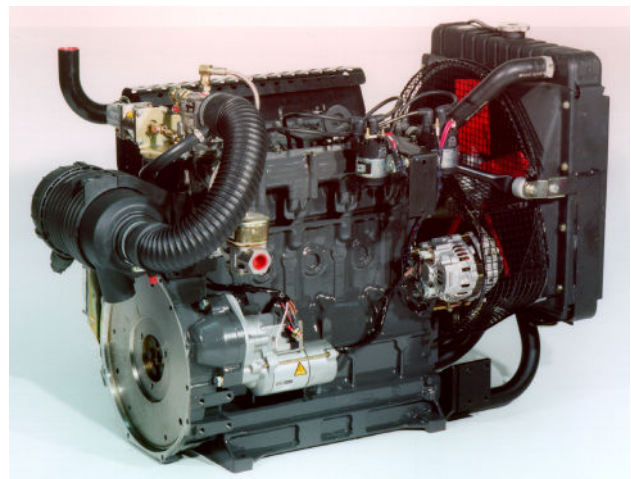
- ✓ designed for ambients up to 40 °C (104 °F)*
- ✓ lean-burn combustion system for low emissions within legislative requirements, eliminating need for catalytic converter
- ✓ low fuel consumption with efficiency enhanced by cross-flow high swirl cylinder head design
- ✓ ribbed, thin-wall cast iron crankcase for quiet operation, with service door for easy access
- ✓ closed crankcase breather system for reduced emissions
- ✓ extra large bearing surfaces for low bearing loads and long life

Basic Engine Characteristics

- gas fuelled (natural gas or propane)
- spark ignition
- 2, 3 or 4 cylinders
- liquid cooled
- naturally aspirated

Design Features and Equipment

- 12 volt starter motor and 45 Amp battery charging alternator
- carburetor
- solid state inductive ignition
- secondary gas pressure regulator
- gas fuel solenoid valve
- full flow spin-on lubricating oil filter
- gear-driven positive displacement type



lubricating oil pump

- anticlockwise rotation, looking on the flywheel
- electronic governing, fixed speed
- full power at flywheel for axial or radial drives
- flywheel drilled for automotive clutch
- flywheel housing with SAE5 flange
- medium-duty air cleaner (heavy-duty optional)
- exhaust manifold (top outlet)
- large radiator with 15" pusher type cooling fan
- water circulation pump with thermostat and long-life V belt
- service free hydraulic valve lifters
- integrated bypass system
- integral hold-down feet for base mounting
- 250-hour service intervals
- operators' handbook

* Consult Lister Petter concerning cold-start performance.

Fixed Speed: Power Outputs to ISO 3046						
			Natural Gas Nominal 1037 BTU/Ft ³ 0.601 Specific Gravity		Propane Gas Nominal 2588 BTU/Ft ³ 1.552 Specific Gravity	
Model	Power	r/min:	1500	1800	1500	1800
LPWG2	Continuous	kWm	5.3	6.8	6.2	7.9
		bhp	7.1	9.1	8.3	10.6
	Intermittent (Fuel Stop)	kWm	5.8	7.5	6.8	8.7
		bhp	7.8	10.0	9.1	11.7
LPWG3	Continuous	kWm	9.9	12.3	11.3	14.0
		bhp	13.3	16.5	15.1	18.7
	Intermittent (Fuel Stop)	kWm	10.9	13.6	12.4	15.4
		bhp	14.6	18.2	16.6	20.6
LPWG4	Continuous	kWm	13.2	16.4	15.0	18.6
		bhp	17.7	22.0	20.1	25.0
	Intermittent (Fuel Stop)	kWm	14.5	18.1	16.5	20.5
		bhp	19.5	24.2	22.1	27.5

1. Power ratings measured at the flywheel and fuel consumptions, 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.

Rating Definitions, to ISO 3046

ISO Standard Conditions

Barometric pressure100 kPa
 Relative humidity..... 30%
 Ambient temperature at air inlet manifold.....25°C

1. 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.

2. 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 in (1) above.

3. Variable speed: fuel-stop power, continuous power (IFN)

The maximum power in kW which an engine is capable of delivering continuously at stated crankshaft speed, under ISO standard conditions and with the provisions specified in (1) above, with the fuel limited so that the fuel stop power cannot be exceeded.

4. Variable speed: fuel-stop power, intermittent power (IOFN)

The maximum power in kW which an 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, with the fuel limited so that the fuel stop power cannot be exceeded, immediately after running at the rating in (3) above, under ISO standard conditions and with the provisions specified in (1) above.

5. De-rating

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

The overload capability applies to a fully run-in engine. This is normally attained after a running period of about 50 hours.

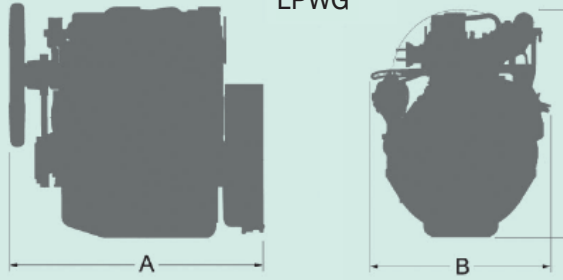
Optional Items

- radiator options with choice of pusher or puller fan and full guarding
- heavy-duty air cleaner
- exhaust flanges or mufflers
- fan drive guards
- flywheel end drives, shaft extensions, couplings, and SAE industrial clutches
- gauges (supplied loose)
- hydraulic pump drives (flywheel end)
- high temperature switch (N/C)
- low oil pressure switch (N/C, N/O)
- extended warranty (see below)

ALPHA Series: LPWG G-Build Engines Technical Data Sheet

Technical Data				
		LPWG2	LPWG3	LPWG4
Number of cylinders		2	3	4
Type of ignition		Spark ignition		
Aspiration		Natural		
Direction of rotation, looking on the flywheel end		Anticlockwise		
Nominal cylinder bore	mm	86.0	86.0	86.0
	in	3.38	3.38	3.38
Stroke	mm	80.0	80.0	80.0
	in	3.15	3.15	3.15
Total cylinder capacity	liters	0.930	1.395	1.860
	in ³	56.75	85.13	113.50
Firing order		1–2	1–2–3	1–3–4–2
Number of flywheel ring-gear teeth		96	96	96
Gear-end power take-off (subject to Lister Petter approval)	Maximum inline	kW	12	12
		bhp	16	16
	Maximum side load using a drive belt	kW	0.8	0.8
		bhp	10.7	10.7
Maximum continuous crankshaft end thrust		kgf	180	180
		lbf	400	400
Fuel consumption @ 1800 r/min; 75% load	Natural gas	ft ³ /hr	82	120
	Propane	ft ³ /hr	37	58
Lubricating oil capacity (including filter)		liters	3.2	4.4
		US quarts	3.4	4.6
Lubricating oil pressure at 3000 r/min with the oil at 110 ° C (230 ° F)		bar	2.0	2.0
		lbf/in ²	29	29
Lubricating oil pressure at idle		bar	1.0	1.0
		lbf/in ²	14.5	14.5
Angles of inclination (any direction)		Permanent	20°	20°
		Temporary	25°	30°
Combustion air required @1800 r/min		l/s	12	18
		ft ³ /min	25	38
Alternator output		Amps	45	45
Starter motor power		kW	1.4	2.0
Starter motor battery cold cranking performance rating to BS 3911 Part 2	Amp @ -8°C (18°F)		210	345
	Amp @ -18°C (0°F)		350	600
Minimum starting temperature without additional aids*		°C	-15°	-15°
		°F	5°	5°

* Consult Lister Petter concerning cold-start performance.

Approximate Dimensions and Weight					
		LPWG2	LPWG3	LPWG4	
 <p>LPWG</p>	Dry Weight	kg	112	150	180
		lb	247	330	396
Length (A)		mm	496	596	696
		in	19.5	23.5	27.4
Width (B)		mm	470	470	470
		in	18.5	18.5	18.5
Height (C)		mm	685	685	685
		in	27.0	27.0	27.0

Distributor's Address

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.



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