LPW3 G BUILD ENGINE

LPW3

Power ranges: 6.8—41.3 kW; 9.1—55.4 bhp
Fixed speed; full load speed range: 1500—3600 r/min
Variable speed; full load speed range: 1500—3000 r/min

DURABLE, RELIABLE, EASY TO MAINTAIN LIQUID COOLED DIESEL ENGINES

SPECIAL ATTRIBUTES

- variable and fixed speed builds available
- 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
- 2, 3 or 4 cylinders
- liquid cooled
- naturally aspirated or turbocharged (LPWT4)

DESIGN FEATURES AND EQUIPMENT

- heavy duty air cleaner
- 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 electric start
- flywheel with ring gear **
- SAE 5 flywheel housing
- operators' handbook
- deep sump (3600r/min only)

EMISSIONS

- models under 19 kW comply with EU Stage 3A exhaust emissions regulations

ALPHA SERIES ENGINE

OPTIONAL ITEMS

- low oil pressure switch
- radiator options with choice of pusher or puller fan and full guarding
- extended warranty

POWER OUTPUTS [1]			
Power	r/min	1500	1800
Continuous	kW	11.3	13.9
	bhp	15.2	18.6
Fuel Stop	kW	12.4	15.3
	bhp	16.6	20.5

** Not available at 3600r/min*
*** LPW2 - If operating at 1500/1800 rpm in a genset application, please, refer to Applications Department for cyclic irregularity implications*

RATING DEFINITIONS, TO ISO 3046

ISO Standard Conditions

Barometric pressure	*100 kPa*
Relative humidity	*30%*
Ambient temperature at air inlet manifold	*25ºC*

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 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. Fixed speed: continuous power, standby

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

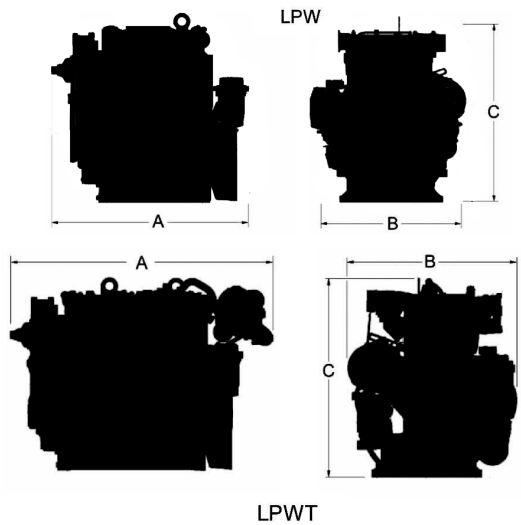
6. De-rating

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

TECHNICAL DATA

		LPW3
Type of fuel injection		Direct
Number of cylinders		3
Aspiration		Natural
Direction of rotation (flywheel end)		Anti clockwise
Nominal cylinder bore	mm	86.0
	in	3.39
Stroke	mm	80.0
	in	3.15
Total cylinder capacity	litre	1.395
Total cylinder capacity	in^3	85.13
Compression ratio		18.5:1
Firing order (number 1 cylinder is at the gear end)		1 – 2 – 3
Minimum idling speed		Dependent on build
Minimum full load speed	r/min	1500
Number of flywheel ring gear teeth		96
Gear end power take-off[3] - maximum inline	kW	12
	bhp	16
- maximum side load using a drive belt	kW	8.0
	bhp	10.7
Maximum continuous crankshaft end thrust	kgf	180
	lbf	400
Maximum permissible intake restriction at full rated speed and load	mbar	25
	in H_2O	10
Maximum permissible exhaust back pressure	mbar	75
	in H_2O	30
Lubricating oil pressure at 3000r/min and with the oil at 110°C (230°F)	bar	2.0
	lbf/in^2	29
Lubricating oil pressure at idle	bar	1.0
	lbf/in^2	14.5

APPROXIMATE DIMENSIONS AND WEIGHT



		LPW3
Dry weight	kg	150
	lb	330
Length (A)	mm	596
	in	23.5
Width (B)	mm	470
	in	18.5
Height (C)	mm	574
	in	22.6

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