



LPW Series

Power Ranges: 7.5 – 40.0 kW; 10 – 54 bhp
Full Load Speed Range: 1500 – 3000r/min

Engine Characteristics:

- Lister Petter two, three, four and four cylinder turbocharged engines.
- Direct injection.
- Naturally aspirated (LPW) or turbocharged (LPWT).
- Water cooled.
- Diesel fuelled.
- Anti-clockwise rotation, looking on the flywheel end.
- Fuel filter.
- Heavy duty air cleaner.

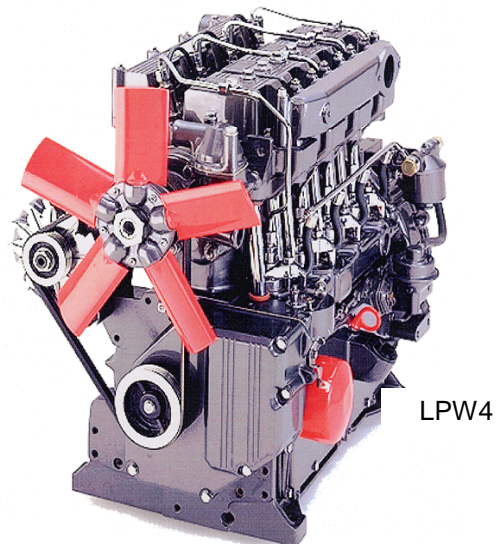
Design Features:

- Designed for continuous operation in ambients up to 52°C (122°F).
- Radiator options with a pusher or puller fan and full guarding.
- Gear driven positive displacement type lubricating oil pump.
- 500 hour service intervals.
- Self-vent fuel system with individual fuel injection pumps.

Warranty:

- Standard – two years from manufacture.
- Optional – five years from the date of sale (conditions apply).

Typical Engine Features



Standard Equipment:

- Flywheel with ring gear.
- Flywheel housing with SAE5 flange.
- Inlet and exhaust manifolds.
- Spin-on lubricating oil filter.
- Fuel filter/agglomerator.
- Fuel lift pump.
- Heater plugs.
- Low oil pressure switch.
- Operators Handbook.

Optional Items:

- A comprehensive range of options allows the customer to select a specification which matches their requirement.
- Five year warranty from the date of sale (conditions apply).

Power and Torque Performance to ISO 3046

LPW2 Variable Speed	Fuel Stop Power Continuous	r/min	1500	1800	2000	2500	3000
		kW	7.5	9.4	10.6	13.0	14.7
		bhp	10.0	12.6	14.2	17.4	19.7

LPW2 Fixed Speed	Continuous Power	r/min	1500	1800	3000
		kW	7.5	9.3	13.4
		bhp	10.1	12.5	18.0

LPW3 Variable Speed	Fuel Stop Power Continuous	r/min	1500	1800	2000	2500	3000
		kW	11.3	14.1	15.9	19.5	20.1
		bhp	15.1	18.9	21.3	26.1	29.6

LPW3 Fixed Speed	Continuous Power	r/min	1500	1800	3000
		kW	11.3	13.9	20.1
		bhp	15.2	18.6	26.9

LPW4 Variable Speed	Fuel Stop Power Continuous	r/min	1500	1800	2000	2500	3000
		kW	15.0	18.7	21.2	26.0	29.5
		bhp	18.2	22.8	25.9	31.6	39.5

LPW4 Fixed Speed	Continuous Power	r/min	1500	1800	3000
		kW	15.0	18.6	26.8
		bhp	20.1	24.9	35.9

LPWT4 Variable Speed	Fuel Stop Power Continuous	r/min	1500	1800	2000	2500	3000
		kW	22.3	28.5	31.0	36.7	40.2
		bhp	29.9	38.2	41.5	48.0	53.9

LPWT4 Fixed Speed	Continuous Power	r/min	1500	1800	3000
		kW	19.1	23.8	37.5
		bhp	25.6	31.9	50.3

Torque – fuel stop power

		r/min	1500	1800	2000	2500	3000
LPW2	Variable Speed Overload Power	Nm	47.7	49.4	50.6	49.7	46.8
		lbf ft	35.2	36.4	37.3	36.7	34.5
LPW3		Nm	71.9	74.9	75.9	74.5	70.4
		lbf ft	53.0	55.2	56.0	54.9	51.9
LPW4		Nm	95.5	99.2	101.9	99.3	93.9
		lbf ft	70.4	73.2	75.1	73.2	69.3
LPWT4		Nm	128.0	140.2	148.0	151.2	142.0
		lbf ft	69.3	73.2	74.6	73.2	70.4

Technical Data

		LPW2	LPW3	LPW4	LPWT4
Type of fuel injection		Direct	Direct	Direct	Direct
Number of cylinders		2	3	4	4
Aspiration		Natural	Natural	Natural	Turbocharged
Direction of rotation – looking on flywheel end		Anti-clockwise	Anti-clockwise	Anti-clockwise	Anti-clockwise
Nominal cylinder bore	mm	86.0	86.0	86.0	86.0
	in	3.8	3.8	3.8	3.8
Stroke	mm	80.0	80.0	80.0	80.0
	in	3.15	3.15	3.15	3.15
Total cylinder capacity	litre	0.930	1.395	1.860	1.860
	in ³	56.75	85.13	113.50	113.50
Compression ratio		22:1	22:1	22:1	16.2:1
Firing order (number 1 cylinder is at the gear end)		1 – 2	1 – 2 – 3	1 – 3 – 4 – 2	1 – 3 – 4 – 2
Minimum idling speed		Dependant on Build			
Minimum full load speed	r/min	1500	1500	1500	1500
Number of flywheel ring gear teeth		96	96	96	96
Gear end power take-off (see Note) - maximum inline	kW	12	12	12	12
	bhp	16	16	16	16
- maximum side load using a drive belt	kW	0.8	0.8	0.8	0.8
	bhp	10.7	10.7	10.7	10.7
Maximum continuous crankshaft end thrust	kgf	180	180	180	180
	lbf	400	400	400	400
Maximum permissible intake restriction at full rated speed and load	mbar	25	25	25	25
	in	10	10	10	10
Maximum permissible exhaust back pressure	mbar	75	75	75	50
	in	30	30	30	20
Lubricating oil pressure at 3000r/min and with the oil at 110°C (230°F)	bar	2.0	2.0	2.0	2.0
	lbf/in ²	29	29	29	29
Lubricating oil pressure at idle	bar	1.0	1.0	1.0	1.0
	lbf/in ²	14.5	14.5	14.5	14.5

Note: Subject to Lister Petter approval.

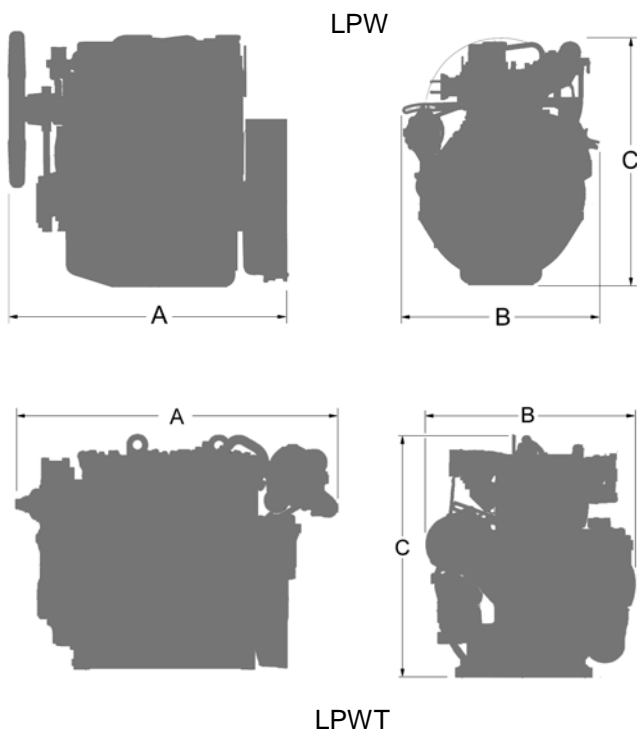
Fuel Consumption – full load, continuous power

	r/min	1500	1800	2000	2500	3000
LPW2	litre/hr	1.9	2.3	2.5	3.2	3.9
	US gal/hr	0.5	0.6	0.67	0.84	1.03
LPW3	litre/hr	2.8	3.4	3.8	4.7	5.9
	US gal/hr	0.75	0.9	1.0	1.25	1.55
LPW4	litre/hr	3.8	4.6	5.0	6.3	7.8
	US gal/hr	1.0	1.2	1.33	1.67	2.07
LPWT4	litre/hr	4.9	6.0	7.1	8.8	10.6
	US gal/hr	1.29	1.58	1.87	2.32	2.79



Approximate Dimensions and Weight

		LPW2	LPW3	LPW4	LPWT4
Dry weight	kg	112	150	180	186
	lb	247	330	396	409
Length (A)	mm	496	596	696	786
	in	19.5	23.5	27.4	30.9
Width (B)	mm	470	470	470	480
	in	18.5	18.5	18.5	18.9
Height (C)	mm	574	574	574	574
	in	22.6	22.6	22.6	22.6



Rating Definitions (ISO 3046)

1. Fixed Speed Power - continuous speed (ICN)

The power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under conditions of 100 kPa barometric pressure, 30% relative humidity and 25°C air inlet temperature, 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 Powers - 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 the conditions 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 the conditions as specified in item 1, with the fuel limited so that the fuel stop power cannot be exceeded.

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

The maximum power in kW which an engine is capable of delivering intermittently at the stated crankshaft speed, for a period not exceeding 1 hour in any period of 12 hours continuous running immediately after running at the Continuous Fuel Stop Power rating.

5. De-rating

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

Notes:

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

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