



LT and LV Series

Power Ranges: 1.0 – 7.4 kW; 1.3 – 9.9 bhp
Full Load Speed Range: 1000 – 3000r/min

Engine Characteristics:

- Single cylinder.
- Direct injection.
- Naturally aspirated.
- Air cooled.
- Diesel fuelled.
- Clockwise and anti-clockwise rotation builds available.
- Air cleaner.
- Hand or optional 12 volt electric starting.

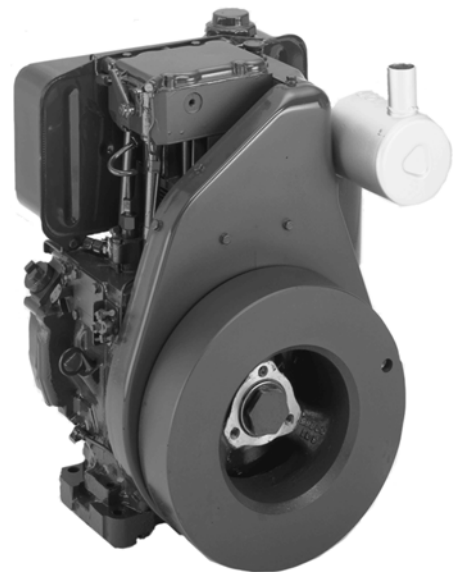
Design Features:

- Designed for continuous operation in ambients up to 52°C (122°F)
- Oil cooling by means of air flow over deep crankcase finning.
- Self regulating plunger type lubricating oil pump.
- 250 hour service intervals.
- Self-vent fuel system (LV1).
- Mechanical governing:
Variable speed – 1000-3000r/min
Fixed speed – 1800 and 3000r/min.

Warranty:

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

Typical Engine Features



Standard Equipment:

- Flywheel.
- Sheet metal or cast SAE5 fanshroud depending on build.
- Inlet and exhaust manifolds.
- Fuel filter.
- Decompressor lever.
- Operators Handbook.
- Lifting eye (LV1).

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).

Variable Speed Power and Torque Performance to ISO 3046

		r/min	1000	1500	1800	2000	2500	3000
LT1	Continuous Power	kW	1.9	3.0	3.6	4.0	5.0	5.6
		bhp	2.5	4.0	4.8	5.4	6.7	7.5
LT1	Intermittent Power	kW	2.1	3.3	4.0	4.4	5.5	6.2
		bhp	2.8	4.4	5.3	5.9	7.4	8.3

LV1	Continuous Power	kW	2.2	3.5	4.3	4.8	5.8	6.7
		bhp	2.9	4.8	5.8	6.4	7.8	9.0
LV1	Intermittent Power	kW	2.4	3.9	4.7	5.3	6.4	7.4
		bhp	3.2	5.2	6.3	7.0	8.6	9.9

LT1	Intermittent Power Torque	Nm		20.9	21.0	21.0	20.9	19.5
		lbf		15.4	15.5	15.5	15.4	14.4
LV1	Intermittent Power Torque	Nm	22.7	24.8	25.0	25.0	24.4	20.0
		lbf	16.8	18.3	18.5	18.5	18.0	14.8

Fuel Consumption – 100% load continuous power

		r/min	1000	1500	1800	2000	2500	3000
LT1	litre/hr		0.6	1.0	1.1	1.3	1.7	2.2
	US gal/hr		0.17	0.25	0.30	0.34	0.44	0.58
LV1	litre/hr		0.5	1.1	1.3	1.5	1.9	2.4
	US gal/hr		0.13	0.35	0.39	0.49	0.59	0.64

In the above table the 100% load figures are subject to 5% tolerance but all other figures are approximate and not guaranteed.

Technical Data

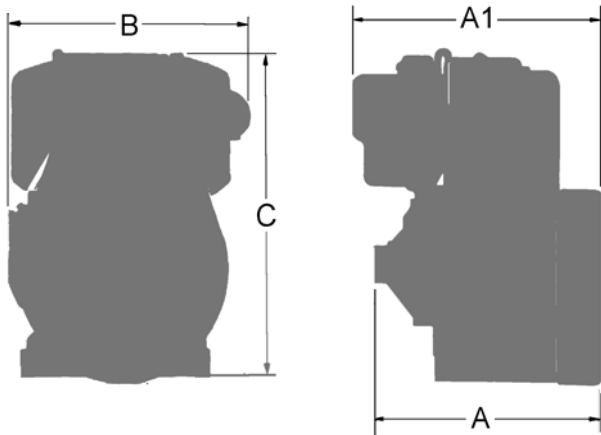
		LT1	LV1
Type of fuel injection		Direct	Direct
Number of cylinders		1	1
Aspiration		Natural	Natural
Direction of rotation – looking on flywheel end		According to Build	According to Build
Nominal cylinder bore	mm	82.55	85.73
	in	3.25	3.375
Stroke	mm	76.20	82.55
	in	3.00	3.25
Total cylinder capacity	litre	0.4078	0.4765
	in ³	24.89	29.08
Compression ratio		16.4:1	16.2:1
Sump capacity with the engine level	litre	1.3	1.3
	pint	2.3	2.3
	US	1.4	1.4
Engine mounted fuel tank capacity	litre	8.25 / 13.5	13.5
	pint	14.5 / 23.7	23.7
	US	8.7 / 14.2	14.2
Maximum permissible crankshaft end thrust	kgf	68.0	68.0
	lbf	149.9	149.9
Lubricating oil pressure – minimum	bar	0.4	0.4
	lbf ft ²	5.8	5.8



Approximate Dimensions and Weight

		LT1	LV1	LT1	LV1
		Sheet metal Fanshroud		Cast Fanshroud	
Dry weight	kg	83	83	92	92
	lb	183	183	203	203
Length (A) less fuel tank	m	354	358	359	359
	in	13.9	14.0	14.1	14.1
Length (A1) with fuel tank	m	404	398	403	403
	in	15.9	15.7	15.8	15.8
Width (B)	m	371	394	424	424
	in	14.6	15.5	16.7	16.7
Height (C)	m	503	503	503	503
	in	19.8	19.8	19.8	19.8

The figures given are for guidance and should not be used for installation purposes.



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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