



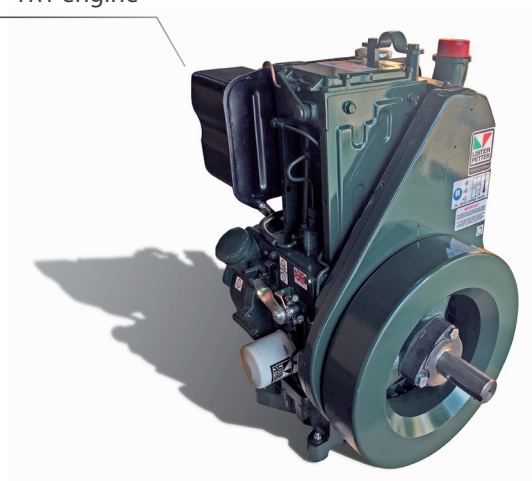
T SERIES

TR1 Build 16 Air Cooled Engines

variable speed
900 - 2000 r/min

4.1 - 8.0 kW | 5.5 - 10.7 bhp

TR1 engine



SPECIAL ATTRIBUTES

- designed for continuous operation in ambient temperatures up to 40°C (104°F)
- oil cooling by means of air flow over deep crankcase finning
- anti clockwise rotation

Note:

This engine does not comply with Harmonised International Regulated Emissions Limits.

BASIC ENGINE CHARACTERISTICS

- diesel fuelled and approved for operation on biodiesel, that conforms with ASTM D6751 and EN14214, concentrations of up to 20%

- direct injection
- single cylinder
- air cooled
- naturally aspirated
- hand start

DESIGN FEATURES AND EQUIPMENT

- medium duty air cleaner
- hand start
- combined inlet and exhaust manifold
- self vent fuel system with individual fuel injection pumps
- fuel filter
- self regulating plunger type lubricating oil pump
- spin-on lubricating oil filter
- decompressor levers
- open flywheel with cooling fan
- sheet metal fan shroud
- 250 hour service intervals
- mechanical governing:
 - variable speed 900-2000 r/min
- operators' handbook

OPTIONAL ITEMS

- pepper-pot exhaust silencer
- engine mounted fuel tank.
- PTO via flywheel shaft extension

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

POWER OUTPUTS TO ISO3046

Speed, r/min	Power	Engine Power			
		Gross		Net	
		kWm	bhp	kWm	bhp
1000	Continuous	4.1	5.5	4.1	5.5
	Fuel stop	4.5	6.0	4.5	6.0
1200	Continuous	4.7	6.3	4.7	6.3
	Fuel stop	5.2	7.0	5.2	7.0
1500	Continuous	5.6	7.5	5.6	7.5
	Fuel stop	6.2	8.3	6.2	8.3
1800	Continuous	6.6	8.8	6.6	8.8
	Fuel stop	7.3	9.8	7.3	9.8
2000	Continuous	7.2	9.6	7.2	9.6
	Fuel stop	8.0	10.7	8.0	10.7

VARIABLE SPEED | TORQUE

Variable Speed	r/min	1000	1200	1500	1800	2000
Fuel Stop	Nm	43.1	41.1	39.2	38.5	37.8
	lbf ft	31.8	30.3	28.9	28.4	27.9

TECHNICAL DATA

Type of fuel injection		Direct
Number of cylinders		1
Aspiration		Natural
Direction of rotation looking on flywheel end		Anti clockwise
Nominal cylinder bore	mm	98.42
	in	3.875
Stroke	mm	101.6
	in	4.0
Total cylinder capacity	litre	0.773
	in ³	47.17
Compression ratio		15.5:1
Minimum idling speed	r/min	850
Number of flywheel ring gear teeth		110
Crankshaft end thrust (maximum continuous)	kgf	132
	lbf	290
Crankcase vacuum (minimum)	mbar	2.0
	in H ₂ O	0.8
Crankcase vacuum (average)	mbar	3.5
	in H ₂ O	1.4
Lubricating oil pressure (mean) with the oil at 110°C (230°F)	bar	2.0
	lbf ft ²	29
Lubricating oil pressure at idle	bar	1.0
	lbf ft ²	14.5

Notes:

1. Power ratings (measured at the flywheel) and fuel consumptions, apply to a fully run-in, non-derated engine 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. Minimum continuous full load speed 1500r/min.

RATING DEFINITIONS TO ISO 3046

ISO Standard Conditions

Barometric pressure 100 kPa
Relative humidity 30%
Ambient air temperature at the inlet manifold 25°C

Fixed Speed: Continuous Power (ICN)

The power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under ISO 3046 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 (Fuel Stop): 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 of continuous running, immediately after working at the continuous power, under ISO 3046 standard conditions and with the provisions specified for continuous power in item (1) above, but with the fuel limited so that the fuel stop power cannot be exceeded.

Variable Speed (Fuel Stop): Continuous Power (IFN)

The maximum power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under ISO 3046 standard conditions, and with the provisions specified in item (1) above, but with the fuel limited so that the fuel stop power cannot be exceeded.

Variable Speed (Fuel Stop): Overload Power (IOFN)

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 of continuous running, immediately after working at the continuous power, under ISO 3046 standard conditions and with the provisions specified for continuous power in item (3) above, but with the fuel limited so that the fuel stop power cannot be exceeded.

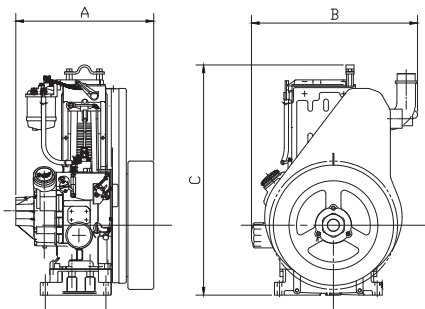
Derating

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

APPROXIMATE FUEL CONSUMPTION | 100% LOAD

Speed, r/min	g/kWh	l/h
1000	253	1.2
1200	242	1.4
1500	229	1.5
1800	238	1.9
2000	242	2.1

APPROXIMATE DIMENSIONS AND WEIGHT



Dry weight	kg	153
	lb	337
Length (A) without fuel tank	mm	448
	in	17.6
Width (B)	mm	493
	in	19.4
Height (C)	mm	683
	in	26.9

TYPICAL PACKING CASE DIMENSIONS

Model	Packing case dimensions				Container quantities	
	Length (mm)	Width (mm)	Height (mm)	Gross weight (kg)	20ft	40ft
TR1	770	550	850	155	56	120



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