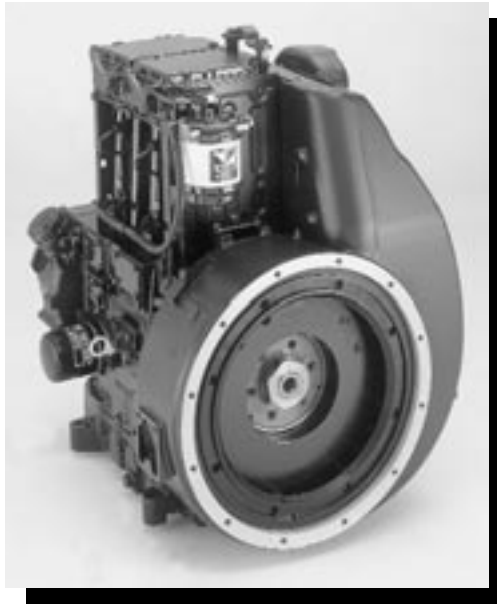


# TR1/TR2/TR3



**Air-cooled  
Direct Injection  
Diesel Engines**

## Technical Data Sheet



### Accessories

- Air cleaner - standard and heavy duty
- Engine protection switches & solenoids
- Industrial Clutch
- SAE4, SAE5 Adapter
- Exhaust silencers
- Air outlet duct adapter
- Speed and Stop/Run Controls
- Flywheel end drives, shaft extensions and couplings
- Gauges
- Hydraulic pump adapters - gear end and/or flywheel end
- Radiators - mounted or loose, with or without cooling fans
- Start panels - mounted or loose
- 12V or 24V Electric Starting
- Fuel tanks, fuel lift pump
- Tool Kit
- Starting handle

*Additional accessories available - Consult Lister-Petter*

### Product Support

- Recommended spares kits
- Special service tools
- Workshop Manual
- Master parts manual

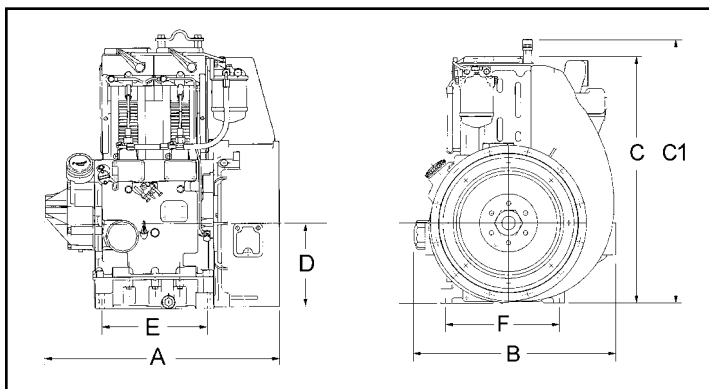
### Standard Equipment

- Flywheel housing with SAE4 flange
- Flywheel and ring gear
- Fuel filter with water trap
- Governor - fixed or variable speed
- Inlet & exhaust manifolds
- Lubricating oil filter
- Decompressor levers
- Auto excess fuel device
- Operators handbook

General Data		TR1	TR2	TR3
Bore:	mm	98.4	98.4	98.4
	inch	3.87	3.87	3.87
Stroke	mm	101.6	101.6	101.6
	inch	4.00	4.00	4.00
Cylinder Capacity:	liter	0.77	1.55	2.32
	in <sup>3</sup>	47.2	94.3	141.5
Lubricating Oil Capacity: (including filter)	liter	2.7	4.0	6.0
	US quarts	2.8	4.2	6.3
Fuel Consumption @2500 r/min: (75% Load)	l/h	2.0	3.8	5.7
	US gal/hr	0.5	1.0	1.5
Specific Fuel Consumption: (full load @ max. torque speed - 5% tol.)	g/kWh	234	235	229
	lb/hp/h	0.38	0.39	0.37
Permanent Angles of inclination:	Flywheel End Up/Down	15°	15°	15°
	Manifold Side Up	15°	15°	15°
	Manifold Side Down	10°	10°	10°
Minimum Idling Speed:	r/min	850	850	850
Combustion Air Required @2000 r/min.	l/s	11.50	22.33	33.35
	ft <sup>3</sup> /min	23.60	47.33	70.67
Dry Weight (including flywheel)	kg	153	185	230
	lb	337	408	507

Electrical System		TR1	TR2	TR3
Alternator Output:	amp	16	16	16
Starter Motor Power:	kW	(12V) 2.1	(12V) 2.1	(12V) 2.1
		(24V) 4.0	(24V) 4.0	(24V) 4.0
Starter Motor Battery Cold Cranking Performance Rating: (BS3911-Part 2)	amp @ -8°C (18°F)	(12V) 180	(12V) 220	(12V) 265
		(24V) 120	(24V) 210	(24V) 238
	amp @ -18°C (0°F)	(12V) 300	(12V) 385	(12V) 485
		(24V) 195	(24V) 335	(24V) 400
Minimum Starting Temperature*: (without additional aids)	°C	-10°	-10°	-10°
	°F	14°	14°	14°

\* Consult Lister-Petter concerning performance at lower temperatures.



Principle Dimensions						
	TR1		TR2		TR3	
	mm	inch	mm	inch	mm	inch
A	444	17.5	571	22.5	698	27.5
A1	473	18.6	600	23.6	757	28.6
B	521	20.5	521	20.5	521	20.5
C	639	25.2	639	25.2	639	25.2
C1	683	26.9	683	26.9	683	26.9
D	207	8.2	207	8.2	207	8.2
E	180	7.1	258	10.2	385	15.2
F	290	11.4	290	11.4	290	11.4

Power Output							
Engine Speed r/min		Continuous Power			Intermittent Power		
		BS5514/ISO3046/DIN627					
		TR1	TR2	TR3	TR1	TR2	TR3
2500	kW	8.6	17.3	25.9	9.5	19.0	28.5
	hp	11.5	23.2	34.7	12.7	25.5	38.2
2000	kW	7.3	14.5	22.2	8.0	16.0	24.4
	hp	9.8	19.4	29.8	10.7	21.5	32.7
1800	kW	6.7	13.1	20.2	7.4	14.4	22.2
	hp	9.0	17.6	27.1	9.9	19.3	29.8
1500	kW	5.5	11.0	16.8	6.1	12.1	18.5
	hp	7.4	14.8	22.5	8.2	16.2	24.8

Torque - Variable Speed				
Engine Speed r/min		Intermittent Power		
		BS5514/ISO3046/DIN6271		
		TR1	TR2	TR3
2500	Nm	36.3	72.6	108.9
	Ft Lbs	26.8	53.5	80.3
2000	Nm	38.2	76.4	116.5
	Ft Lbs	28.2	56.3	85.9
1800	Nm	39.2	76.4	117.8
	Ft Lbs	28.9	56.3	86.9
1500	Nm	38.8	77.0	117.8
	Ft Lbs	28.6	56.8	86.9

For further information, contact:

### Engine Data

**Construction:**

Cast iron crankcase for durability. Large bearing surfaces for low bearing loads and long life.

**Rotation:**

Counter-clockwise, looking at the flywheel end.

**Cooling:**

Air cooling by means of a highly efficient flywheel mounted fan. Designed for continuous operation in ambients up to 52°C (125°F). Oil cooling by means of air flow over deep crankcase finning.

**Lubrication:**

Self regulating plunger type pump supplies oil under pressure to all important bearing surfaces. Full flow spin-on cartridge oil filter. Oil service interval is 250 hours.

**Fuel & Combustion Systems:**

Direct injection combustion system easy starting and low fuel consumption. Individual fuel injection pumps per cylinder increases reliability and lowers service costs.

**Starting:**

Hand starting on the camshaft at the gear end. Starting handles are available in both limited or non limited kick back versions. Optional 12V electric starting.

**Governing:**

Mechanical governing is provided for either variable or constant speeds depending on build. Generator set governing is available for 1500 & 1800 r/min.

**Drives:**

Full power is normally taken from the flywheel end. Auxiliary drives are available for the gear end. Hydraulic pump adapters are available.

**Mounting:**

Hold-down feet are integral with the crankcase for base mounting.

*The information in this data sheet is of a general nature and does not form part of any contract or warranty. We have made efforts to ensure that the information is accurate but reserve the right to amend specification and information without notice or any obligation or liability. The set illustrated is not necessarily the standard build.*



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