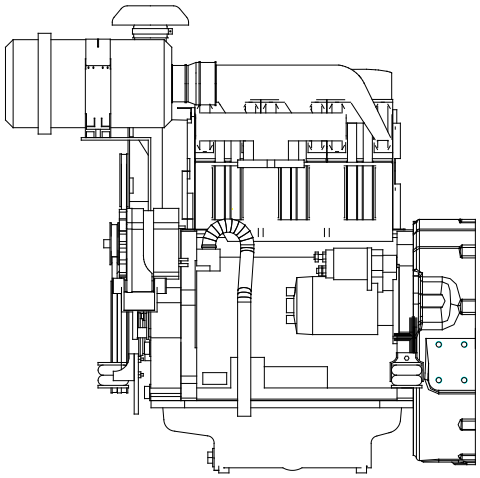
TR Series
Air-cooled Engines

TR661G2

fixed speeds
1500/1800 rpm

114 – 143 kWm | 155 – 194 bhp



DESIGN FEATURES AND EQUIPMENT

- Air cooling system
- 12V /24V Starter Motor
- 12V /24V charged generator
- Diesel engine electrical shutdown device (Generator application only)
- Automatic belt tensioner
- V-belt broken warning device
- Belt guard (Generator application only)
- 4 Engine elastic supports
- SAE Flywheel and housing
- Oil filter
- Fuel filter
- Air cleaner
- Oil temperature sensor and alarm switch
- Oil pressure sensor and alarm switch
- Electronic governing system

OVER VIEW

The engine is designed for Power Generating Application and is suitable for use in any stage II emission territory. It is durable, reliable and easy for maintenance.

Note:

For further information and approval please contact Application Department

OPTIONAL ITEMS

- Absorption type exhaust silencer suitable for remote mounting
- Spark arrestor type exhaust silencer
- Exhaust manifold-cum-silencer (Non-turbocharger engine only)
- Diesel engine supports suitable for rigidly mountings
- Pre-heating system aim for starting from -5 to -40℃
- 12V/ 24V Diesel engine electrical adjusting speed control device
- Mechanical shutdown lever
- All kinds of meter for diesel engine

Note: The final interpretation is reserved by Lister Petter Engine Company.

POWER OUTPUTS | STAGE II EMISSIONS RATINGS

Model	Speed, RPM	Power	Engine Net		Standard Generator Output*		
			kW	bhp	Power	kVA	kWe
TR661G2	1500	Prime	114	155	PRP	125	100
		Standby	125	170	ESP	138	110
TR661G2	1800	Prime	130	177	PRP	147	118
		Standby	143	194	ESP	162	130

*The suggested continuous power is 80% prime power.

DATA SHEET

General Engine Data		
Model	TR661G2	
Type	4-stroke in-line, air cooled	
	Turbo charging air cooler	
Combustion System	direct injection	
Cylinder type	replaceable cylinder liner	
Cylinder No.	6	
Bore/ Stroke	102×125mm	
Displacement	6.128L	
Compression Ratio	19：1	
Firing Order	1-5-3-6-2-4	
Injection Timing	18°BTDC	
BMEP Pressure	2.5～3.0MPa	
Direction of Rotation	Anticlockwise from flywheel housing side	
Flywheel Housing	SAE3	
Flywheel	SAE 10-11.5	
Valve system		
Type	Overhead valve type	
Number of valve	Intake 1, exhaust 1 per cylinder	
Valve lashes at cold	Intake 0.15mm	
	Exhaust 0.15mm	
Valve timing		
	Open	Close
Intake valve	52°.BTDC	73 °.ABDC
Exhaust valve	77°.BBDC	52° .ATDC

RATING DEFINITIONS TO ISO 3046

ISO Standard Conditions

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

Power Standards

The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.The technical data applies to an engine without cooling fan and operating on a fuel with calorific value of 42.7 MJ/kg (18360 BTU/ lb) and a density of 0.84 kg/liter (7.01 lb/US gal, 8.42 lb/Imp gal).

Rating definition has basis in ISO 3046 & 8258-1, the tolerance of engine power is ±3%

Standby power rating is the supply of max emergency power under running variable load for the duration of none availability of the Mains, NO OVERLOAD capacity is adopted at this rating, furthermore, this published standby rating can be operated 500 hour/ year.

Prime Power rating is available for unlimited hours per year with variable load, of which are average engine load factor is 80% of the published prime power rating, incorporation of a 10% overload for 1 hour in every 12 hours of operation is permitted.

Base load is available for continuous published baseload power.

Derating

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

Notes:

1.Power ratings are measured at the flywheel end.

2.. Power ratings and fuel consumption figures apply to a fully run-in, non derated engine without a radiator and fan fitted, and without power absorbing accessories or transmission equipment.

* The power output of the generator data is calculated using a typical efficiency of the AC generator. The kVA and kWe values are converted as per standard power factor 0.8. Generator data is for reference only.

Fuel System	
Injection pump	Inline ”A” type
Governor	Electronic governing
Fuel lift pump	Mechanical
Nozzle	Multipoint
Injection pressure	250kg/cm^2
Fuel filter	Paper filter type
Fuel	Diesel
Lubrication system	
Lubrication type	Pressure supply
Oil pump	Gear driven
Oil filter	Paper filter type
Oil pan	Max. 11L min. 7.4L
Inclination	Fan side 18°
	Flywheel side 20°
	Motor side 37°
	Oil pump side 40°
Lube oil grade	According to operating manual
Cooling system	
Cooling type	Air cooled
Fan	Air suction, aluminum
Electrical system	
Alternator	14V×65A
Voltage regulation	Built-in IC regulator
Starter motor	12V×3.8kW
Intake and exhaust system	
Cooling air flow	4410m^3/h
Combustion air flow	600m^3/h
Max. intake pressure	55 (10^{2}Pa)
Max. exhaust pressure	90 (10^{2}Pa)
Exhaust temperature	570℃

APPROXIMATE FUEL CONSUMPTION

TR661G2	1500rpm		1800rpm	
LOAD	g/kWh	l/h	g/kWh	l/h
50%	241	16.45	245	19.07
75%	228	23.35	229	26.74
100%	225	30.72	226	35.19
110%	229	34.39	230	39.39

*Diesel fuel density 0.835 g/ cm³

POWER DERATING

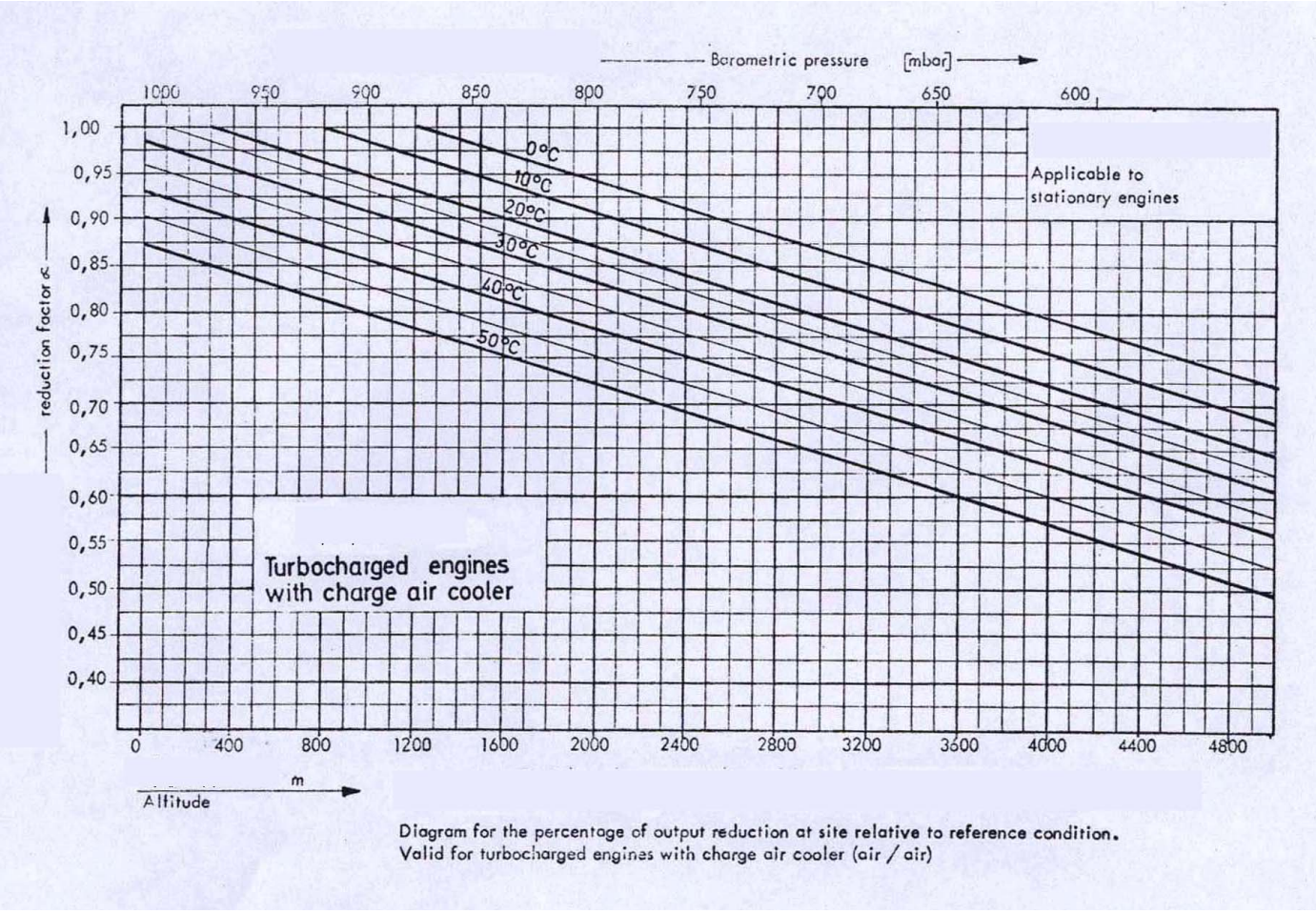


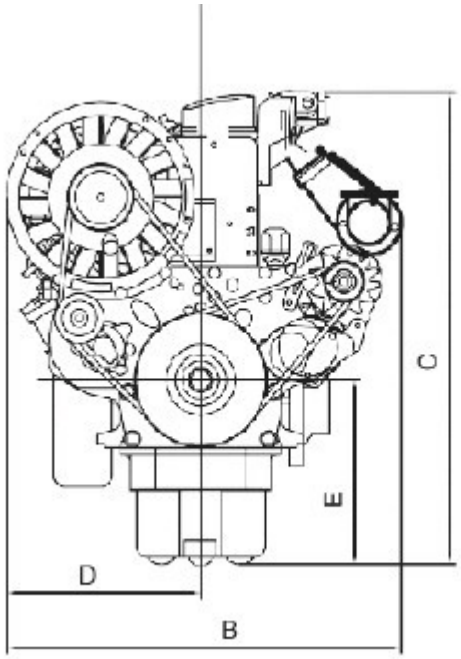
Diagram for the percentage of output reduction at site relative to reference condition.
Valid for turbocharged engines with charge air cooler (air / air)

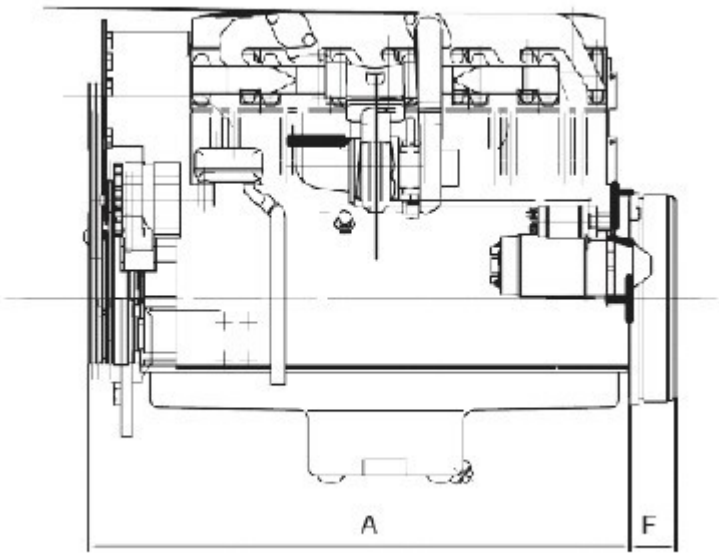
* Estimating the effect of altitude & temperature for the engine output relative to ISO reference condition at sea level.
* Inquiry should always be made to the technical department of the respective manufacturer if the attitude is higher than the diagram.

ENGINE NOISE LEVELS

Parameter	Engine Model
	TR661G2
Sound pressure level at 1m	≤100 dB(A)

APPROXIMATE DIMENSIONS AND WEIGHT





Engine Size(mm)	A	B	C	D	E	F	
						SAE 8-10	SAE 10-11.5
TR661G2	1003	711	920	363	278	105	88

Engine Dry Weight	535kg

TYPICAL PACKING CASE DIMENSIONS

Engine packing case dimensions	Container quantities		
L*W*H(mm)	20FT	40FT	40HQ
TBA	TBA	TBA	TBA

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