

Technical specification

Basic data

Type	4 stroke, direct injection diesel engine
Configuration	6 cyl inline
Cooling	liquid
Aspiration	turbocharged and charge air cooled
Speed control	mechanical governor
Bore / stroke	108mm / 134mm
Displacement	7,4 litres
Compression ratio	16,5 : 1
Mean piston speed	6,7 m/s @ 1500 rpm
Rotation seen from flywheel end	counterclockwise
Number of teeth in starter ring gear	141
Dry weight	600 kg

Standard equipment

Flywheel housing	SAE 3
Flywheel	SAE 11,5"
Fuel injection	mechanical, Stanadyne DB4
Fuel filter, pre and fine filter	
Starter	
Alternator	
Engine mounting brackets, front	

Technical data

Injection system

Injection pump	Stanadyne DB4, mechanical rotary type pump
Speed control	mechanical governor
Fuel quality standard	EN 590
Biodiesel upto 100%	EN 14214
Max suction head of feed pump	1 m
Max fuel level above feed pump	7 m
Min fuel line inside dia	8 mm

Lubrication system

Oil capacity	22 litres
Oil consumption	< 0,3 g/ kWh
Oil change interval	500 h
Oil grade requirement	Acea E2-96 / E3-96 / E4 - 98 / E5 - 99 API CF - 4 / CG - 4 / CH - 4
Oil viscosity recommendation	15 W 40

Cooling system

Coolant volume	15 litres
Thermostat range, opening / fully open	79 / 85 °C
Max coolant temperature	110 °C
Min volume of expansion tank	10% of total system volume
Max height of expansion tank	10 m
Max pressure in cooling circuit	100 kPa
Antifreeze type, min standard	BS 6580-1992, ASTM D 3306-86a

Air intake and ventilation

Permissible vacuum in engine room	0,2 kPa
Max engine room temperature	45 °C when air intake from engine room 60 °C when air intake via duct
Max air intake restriction	3,4 kPa

Exhaust system

Max backpressure	10 kPa (below 8 kPa is recommended)
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Electric system

Starter	12 V / 4 kW
Alternator	14 V / 95 A
Starter battery capacity	recommended min 200 Ah
Battery cable	min 90 mm ²

Performance data

Nominal rating: 182 kW @ 1500 rpm

Fuel consumption:

load	110%	100%	75%	50%	25%
l/h	48,5	44,7	34,6	22,9	12,1

Heat rejection at 110% load to:

Cooling water / radiator	97,3 kW
Exhaust gas	148,4 kW

Miscellaneous data:

Air temp before CAC	162 °C
Air temp after CAC	55 °C
Charge air pressure at 110% load	1,70 bar
Max allowed pressure drop over CAC	0,15 bar
Air consumption at full load	11,8 m ³ / min
Exhaust gas flow at full load	33,7 m ³ / min
Exhaust gas temperature after turbo, max	555 °C