

General

Number of cylinders	4
Displacement, total	4,76 liters [290,7 cu. in]
Firing order	1-3-4-2
Bore	108 mm [4,25 in]
Stroke mm	130 mm [5,12 in]
Compression ratio	17,6:1

Performance

	25% load	50% load	75% load	100% load	Overload 110% load	
ISO Standard Power	77 kW [105 hp]	19,3	38,5	57,8	77	84,7
Torque	490 Nm [362 lbf ft]	118	239	363	490	542
Mean piston speed	6,5 m/s [21,3 ft/sec]					
Effective mean pressure	1,29 Mpa [187 psi]	0,3	0,6	1,0	1,3	1,4
Max combustion pressure	Mpa [psi]	7,1	8,1	9,4	10,7	11,2

Engine noise emission

Measured sound power Lw at no load	85,5 dB(A)	
Measured sound power Lw	dB(A)	88,5

Unsilenced exhaust noise emission

Data calculated as sound pressure Lp. Assumed microphone distance 1m.	dB(A)	107
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Lubrication system

Lubricating oil consumption at ISO Standard Power	liter/h [US Gal/h]	0,05
Lubricating oil system capacity including filters	liters [US Gal]	13

Fuel system

Specific fuel consumption	g/kWh [lb/hph]	255	219	217	222	225
Total fuel flow	liter/h [US Gal/h]				375	
Maximum return flow	liter/h [US Gal/h]					
Feed pump pressure	kPa [in H2 O]				500	
Feed pump max suction head	m				1	
Max allowable back pressure in fuel return line	kPa [H2 O]				50	

Intake system

Air consumption, (at 27oC)	m3/min [cu.ft/min]	3,7	4,02	4,5	5,1	5,4
Max permissible air intake restriction	kPa [in H2 O]				2,5	

Exhaust system

Heat rejection to exhaust	kW [BTU/min]	13,9	22,7	35	49	54,5
Exhaust gas temperature after turbine	oC [oF]	210	300	385	455	480
Max allowable back pressure in exhaust line	kPa [H2 O]				3	
Exhaust gas flow at Exhaust gas temperature after turbine	m3/min [cu.ft/min]	6,6	8,6	11,2	14,1	15,2

Heat rejection the surrounding

Heat rej. from engine to surrounding	kW [BTU/min]	2,3	3,3	4,2	5,7	6,4
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Cooling water circuit

Heat rejection to water	kW [BTU/min]	23	35,9	52,3	71,8	81,4
Maximum cooling water temp to engine	65 oC [141 oF]					
Maximum temperature increase across circuit of engine	oC [oF]	3	5	7	9	10
Thermostat, start to open	83 oC [154 oF]					
Thermostat, fully open	95 oC [176 oF]					
Maximum permissible test pressure	kPa [in H2 O]					
Cooling water flow at fully open thermostat	m3/h [cu.ft/h]				9,5	
Highest permissible pressure drop over external fresh water circuit	90 kPa [361 in H2 O]					
Engine coolant capacity	11 liters [2,9 US gal]					

Power take off

Look in technical data for propulsion

Power Standards

The engine performance corresponds to ISO 3046, BS 5514, DIN 6271 and in general SAE J 1349. The technical data applies to an engine operation on a fuel with calorific value of 42,7 MJ/ kg (18360 BTU/ lb) and a density of 0,84 kg/ liters (7,01 lb/ US gal, 8,42 lb/Imp gal), also where this involves a deviation from the standards. Engine speed governor in accordance with ISO 3046/IV, class A1 and ISO 8528-5 G2 (G3 with electronic speed governor).

Rating Guidelines

ISO Standard Power for continuous operation with 10% overload capability for 1 hour of 12.