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	81 kW [110 hp]	20,3	40,5	60,8	81	89,1
Torque	430 Nm [318 lbf ft]	104	210	318	430	475
Mean piston speed	7,8 m/s [25,6 ft/sec]					
Effective mean pressure	1,13 Mpa [165 psi]	0,27	0,55	0,84	1,13	1,25
Max combustion pressure	Mpa [psi]	7,1	8,2	9,2	10,5	11,1

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)	108

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]				450	
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]	4,53	5,05	5,77	6,6	6,9
Max permissible air intake restriction	kPa [in H2 O]				2,5	
Exhaust system						
Heat rejection to exhaust	kW [BTU/min]	16,4	26,7	38,6	51,8	57,7
Exhaust gas temperature after turbine	oC [oF]	205	280	340	385	400
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]	8	10,4	13,3	16,4	17,3
Heat rejection the surrounding						
Heat rej. from engine to surrounding	kW [BTU/min]	2,4	3,3	4	5,3	5,9
Cooling water circuit						
Heat rejection to water	kW [BTU/min]	28,5	40,5	55,1	72,2	79,7
Maximum permissible fresh water temp to engine	65 oC [141 oF]					
Maximum temperature increase across circuit of engine	oC [oF]	3	5	6	8	9
Thermostat, start to open	83 oC [154 oF]					
Thermostat, fully open	95 oC [176 oF]					
Maximum permissible test pressure	100 kPa [402 in H2 O]					
Cooling water flow at fully open thermostat	m3/h [cu.ft/h]				11,4	
Highest permissible pressure drop over external cooling water circuit	90 kPa [361 in H2 O]					
Cooling water capacity	11 liters [2,9 US gal]					

Power take off

Look in technical data for propulsion