

General

4-stroke direct injected, turbocharged and aftercooled diesel engine

Number of cylinders		6
No of valves		24
Displacement, total	litres in ³	9,36 571,4
Firing order		1-5-3-6-2-4
Rotational direction, viewed from the front		Clockwise
Bore	mm in	120 4,72
Stroke	mm in	138 5,43
Compression ratio		16,5 : 1
Max installed forward inclination:	°	0
Max installed backward inclination:	°	7
Max. intermittent forward tilt while running:	°	10
Max. intermittent backward tilt while running:	°	12
Idling speed	rpm	550 (- 50 / + 200)
Rated speed	rpm	2600
Recommended WOT range	rpm	2400-2650
Dry weight engine BT	kg lb	1075 2370

Performance	Rating	r/min	800	1000	1200	1400	1600	1800	2000	2200	2400	2600
Crankshaft power 1), 5)	5	kW	67	114	178	239	274	307	342	368	368	368
		hp	91,1	155	242	325	373	418	465	500	500	500
Propeller shaft power 1) (At full load)	5	kW	65	111	173	232	266	298	332	357	357	357
		hp	88,4	150	235	315	361	405	451	485	485	485
Propellershaft power at prop.load x ^{2,5}	5	kW	19	33	52	76	106	142	185	235	292	357
		hp	25	44	70	103	144	193	252	319	397	485
Torque at crankshaft 2)	5	Nm	800	1089	1416	1630	1635	1629	1633	1597	1464	1350
		lbf ft	590	803	1045	1202	1206	1201	1204	1178	1080	996
Mean piston speed		m/s	3,7	4,6	5,5	6,4	7,4	8,3	9,2	10,1	11,0	12,0
		ft/s	12,1	15,1	18,1	21,1	24,1	27,2	30,2	33,2	36,2	39,2
Effective mean pressure 2)	5	MPa	1,07	1,46	1,90	2,19	2,19	2,19	2,19	2,14	1,96	1,81
		psi	155,7	211,9	275,7	317,3	318,3	317,0	317,8	310,9	285,0	262,8
Max combustion pressure 2)	5	MPa	11,6	13,1	16,8	19	19,7	19,5	19,7	19,8	19,7	19,4
		psi	1682	1900	2437	2756	2857	2828	2857	2872	2857	2814

Lubricating system

Specific lubricating oil consumption.		g/kWh	0,1
Max oil volume incl. filters at following inclination:	0°	litres	38
		US gal	10,04
Max oil volume excl. filters at following inclination:	0°	litres	33
		US gal	8,72
Min oil volume excl. filters at following inclination:	0°	litres	29
		US gal	7,66
Max oil volume incl. filters at following inclination:	7°	litres	30
		US gal	7,93
Max oil volume excl. filters at following inclination:	7°	litres	25
		US gal	6,60
Min oil volume excl. filters at following inclination:	7°	litres	21
		US gal	5,55

Fuel system	Rating	r/min	800	1000	1200	1400	1600	1800	2000	2200	2400	2600
Specific fuel consumption 2)	5	g/kWh lb/hph	256 0,41	242 0,39	227 0,37	211 0,34	200 0,32	196 0,32	199 0,32	203 0,33	208 0,34	214 0,35
Fuel consumption at prop. load x ^{2,5}	5	l/h US gal/h	6,01 1,6	9,83 2,6	14,6 3,9	20,7 5,5	28,8 7,6	37,4 9,9	48,2 12,7	61 16,1	76,9 20,3	94,1 24,8
Fuel consumption at full load	5	l/h US gal/h	20,5 5,4	32,9 8,7	48,3 12,7	60,2 15,9	65,3 17,3	71,9 19,0	81,2 21,4	89,2 23,6	91,4 24,1	94,1 24,9

Intake and exhaust system	Rating	r/min	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	
Specific exhaust heating effect in percent of crankshaft power	5	%	64,2	73,7	74,7	68,2	65	65,8	68,7	73,4	75,8	76,7	
Exhaust temperature at the exhaust pipe connecting flange after the turbo charger.	5	°C °F	456 853	564 1047	605 1121	555 1031	489 912	455 851	440 824	442 828	437 819	429 804	
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa psi kPa psi							Max	15 2,2			
									Min	0			
Engine air consumption at 25°C / 77°F atmospheric pressure 100kPA and relative humidity 30%.	5	m³/min cu.ft./min	4,12 145	6,25 221	9,23 326	12,6 444	16 565	19,8 700	24,1 851	27,7 977	29 1024	29,9 1056	
Turbo charge pressure.	5	kPa psi	23 3,3	51 7,4	88 12,8	120 17,4	143 20,7	169 24,5	196 28,4	212 30,7	205 29,7	197 28,6	
Exhaust gas flow	5	m³/min cu.ft./min	11 388	19,2 679	29,5 1040	37,1 1309	42,1 1488	48,4 1710	55,6 1963	62,1 2194	63,9 2255	64,7 2285	

Cooling system	Rating	r/min	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	
Sea water pump flow.		m³/h foot³/h	5,4 191	6,6 233	8,1 286	9,3 328	10,8 381	12,3 434	13,5 477	15,0 530	16,2 572	17,4 614	
Fresh water circulation pump flow		m³/h foot³/h	14,0 494	18,2 643	22,5 795	26,5 936	30,8 1088	34,7 1225	38,7 1367	43,0 1519	46,8 1653	51,0 1801	
Max permissible temperature on fresh water circulation outlet from the engine		°C °F							96 205				
Coolant content engine, incl. heat exchangers and air cooler		litres U.S. gal.							39 10,30				
Maximum additional coolant for cabin heater etc. with std expansion tank		litres U.S. gal.							40 10,57				
Thermostat, start open at		°C °F							82 180				
Thermostat, fully open at		°C °F							92 198				

Emissions	Rating	r/min	800	1000	1200	1400	1600	1800	2000	2200	2400	2600
Smoke at prop. load x ^{2,5}	5	*BSU	0,0	0,1	0,1	0,2	0,6	0,5	0,5	0,4	0,5	0,3
Noise at prop. load x ^{2,5} . 4)	5	dB(A)	106	107	109	110	110	112	113	115	116	120

*NB! BSU are calculated values. Measured values are acc. to ISO 10054 in FSN units