

Technical Data D2-75

Rating

General

4-stroke indirect injected, turbocharged and aftercooled diesel engine

Number of cylinders		4
No of valves		8
Displacement, total	litres in³	2,22 135,3
Firing order		1-3-42
Rotational direction, viewed from the front		Clockwise
Bore	mm in	84 3,31
Stroke	mm in	100 3,94
Compression ratio		23,3:1
Compression pressure at 240 rpm	MPa psi	2,95 428
Maximum forward inclination:	°	
Max. intermittent backward tilt while running:	°	
Max. intermittent side tilt while running:	°	
Idling speed	rpm	850 ± 25
Rated speed	rpm	3000
Propeller selection range	rpm	2700-3000
Dry weight	kg lb	233 514

Performance	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Crankshaft power 1), 5)		kW hp	24 32,64	29 39,44	35 47,6	40 54,4	44 59,84	48 65,28	51 69,36	54 73,44	55 74,8	55 74,8
Propellershaft power 1) (At full load)		kW hp	23,04 31,33	27,84 37,86	33,6 45,7	38,4 52,22	42,24 57,45	46,08 62,67	48,96 66,59	51,84 70,5	52,8 71,81	52,8 71,81
Propellershaft power at prop.load x ³		kW hp		5,8 7,9	7,7 10,5	11,5 15,6	15,4 20,9	21,1 28,7	26,9 36,6	34,5 46,9	43,5 59,2	52,8 71,8

Performance	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Torque at crankshaft 2)		Nm lbf ft	191 141	197,8 146	208,9 154	212,2 157	210,1 155	208,3 154	202,9 150	198,3 146	187,6 138	175,1 129
Mean piston speed		m/s ft/s	4,0 13,1	4,7 15,3	5,3 17,5	6,0 19,7	6,7 21,9	7,3 24,1	8,0 26,2	8,7 28,4	9,3 30,6	10,0 32,8
Effective mean pressure 2)		MPa psi	1,08 157,0	1,12 162,6	1,18 171,8	1,20 174,5	1,19 172,7	1,18 171,3	1,15 166,8	1,12 163,1	1,06 154,2	0,99 143,9

1) ISO 3046, fuel temp 40°C.

ISO 8665 (=SAE J 1228=ICOMIA 28-83)

2) At power according to 1).

3) If reverse gear is used, 4% in heat rejection will be added for its oil cooler.

4) Acc. to ISO 3744

5) At installed back pressure

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Fuel system

	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Specific fuel consumption 2)		g/kWh lb/hph	250 0,405	239 0,387	234 0,379	235 0,381	237 0,384	242 0,392	250 0,405	257 0,416	267 0,433	280 0,454
Fuel consumption at prop. load x ³		l/h US gal/h		2,107 0,6	2,655 0,7	3,737 1,0	4,795 1,3	6,492 1,7	8,077 2,1	10,57 2,8	13,55 3,6	18,27 4,8
Fuel consumption at full load		l/h US gal/h	7,117 1,9	8,222 2,2	9,715 2,6	11,15 2,9	12,37 3,3	13,78 3,6	15,12 4,0	16,46 4,3	17,42 4,6	18,27 4,8

Intake and exhaust system

	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Exhaust temperature at the exhaust pipe		°C °F	422 792	414 777	410 770	422 792	436 817	460 860	490 914	518 964	541 1006	563 1045
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa psi							Max	15 2,2		
		kPa psi							Min			
Turbo charge pressure.		kPa psi	30 4,4	41 5,9	51 7,4	58 8,4	60 8,7	60 8,7	60 8,7	60 8,7	60 8,7	61 8,8

Cooling system

	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Sea water pump flow.		m³/h foot³/h	1,6 56	1,8 65	2,1 74	2,3 83	2,6 92	2,9 101	3,1 109	3,3 117	3,6 126	3,8 133
Cooling water circulation pump flow		m³/h foot³/h	2,9 102	3,4 120	3,9 137	4,4 154	4,9 173	5,4 192	5,9 210	6,5 228	7,0 248	7,5 266
Thermostat, start open at		°C °F	83°									
Thermostat, fully open at		°C °F	95°									

Emissions

	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Smoke at prop. load x ³		BSU		0,2	0,2	0,2	0,2	0,2	0,1	0,1	0,1	1,7

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