

# 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	2,22
	in <sup>3</sup>	135,3
Firing order		1-3-42
Rotational direction, viewed from the front		Clockwise
Bore	mm	84
	in	3,31
Stroke	mm	100
	in	3,94
Compression ratio		23,3:1
Compression pressure at 240 rpm	MPa	2,95
	psi	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	233
	lb	514

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

Performance	Rating	r/min	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Torque at crankshaft 2)		Nm	191	197,8	208,9	212,2	210,1	208,3	202,9	198,3	187,6	175,1
		lbf ft	141	146	154	157	155	154	150	146	138	129
Mean piston speed		m/s	4,0	4,7	5,3	6,0	6,7	7,3	8,0	8,7	9,3	10,0
		ft/s	13,1	15,3	17,5	19,7	21,9	24,1	26,2	28,4	30,6	32,8
Effective mean pressure 2)		MPa	1,08	1,12	1,18	1,20	1,19	1,18	1,15	1,12	1,06	0,99
		psi	157,0	162,6	171,8	174,5	172,7	171,3	166,8	163,1	154,2	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	250	239	234	235	237	242	250	257	267	280
		lb/hph	0,405	0,387	0,379	0,381	0,384	0,392	0,405	0,416	0,433	0,454
Fuel consumption at prop. load x <sup>3</sup>		l/h		2,107	2,655	3,737	4,795	6,492	8,077	10,57	13,55	18,27
		US gal/h		0,6	0,7	1,0	1,3	1,7	2,1	2,8	3,6	4,8
Fuel consumption at full load		l/h	7,117	8,222	9,715	11,15	12,37	13,78	15,12	16,46	17,42	18,27
		US gal/h	1,9	2,2	2,6	2,9	3,3	3,6	4,0	4,3	4,6	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	422	414	410	422	436	460	490	518	541	563	
		°F	792	777	770	792	817	860	914	964	1006	1045	
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa							Max	15			
		psi							Min	2,2			
Turbo charge pressure.		kPa	30	41	51	58	60	60	60	60	60	61	
		psi	4,4	5,9	7,4	8,4	8,7	8,7	8,7	8,7	8,7	8,8	

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

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

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