

# Technical Data D6-330

Rating 4 330 hp ( 243 kW )

## General

4-stroke direct injected, turbocharged and aftercooled diesel engine

Number of cylinders		6
No of valves		24
Displacement, total	litres	5,50
	in <sup>3</sup>	335,6
Firing order		1-5-3-6-2-4
Rotational direction, viewed from the front		Clockwise
Bore	mm	103
	in	4,06
Stroke	mm	110
	in	4,33
Compression ratio		17,5:1
Compression pressure at 240 rpm	MPa	
	psi	
Maximum forward inclination installed:	°	0
Maximum backward inclination installed:	°	10
Max. intermittent forward inclination while running:	°	10
Max. intermittent backward inclination while running:	°	20
Max. intermittent side tilt while running:	°	30 for max 30 sec.
Idling speed	rpm	600 - 750
Rated speed	rpm	3500
Propeller selection range	rpm	3400-3600
Dry weight engine BT	kg	580
	lb	1279
Dry weight with reverse gear: HS63AE	kg	656
	lb	1446
Dry weight with reverse gear: HS80AE	kg	677
	lb	1493
Dry weight with reverse gear: HS80VE	kg	721
	lb	1590

Performance		Rating	r/min	1500	2000	2500	3000	3500				
Crankshaft power 1), 5)	4	kW		99,1	169,3	212,2	241	243				
			hp		134,8	230,2	288,6	327,8	330,5			
Propellershaft power 1) For HS80AE (At full load)	4	kW		96,82	165,4	207,3	235,5	237,4				
			hp		131,7	225	282	320,2	322,9			
Propellershaft power at prop.load x <sup>2,5</sup>	4	kW		29	59	104	163	237				
			hp		39	81	141	222	322			
Propellershaft power at prop.load x <sup>3</sup>	4	kW		19	45	87	151	237				
			hp		26	61	118	205	322			
Torque at crankshaft 2)	4	Nm		630,9	808,3	810,5	767,1	663				
			lbf ft		465	596	598	566	489			
Mean piston speed		m/s		5,5	7,3	9,2	11,0	12,8				
			ft/s		18,0	24,1	30,1	36,1	42,1			
Effective mean pressure 2)	4	MPa		1,44	1,85	1,85	1,75	1,51				
			psi		209,1	267,9	268,6	254,2	219,7			
Max combustion pressure 2)	4	MPa		12,6	15,1	15,3	15,5	15,8				
			psi		1827	2190	2219	2248	2292			

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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## Lubricating system

Specific lubricating oil consumption.		g/kWh	0,2	
Max oil volume excl. filters at following inclination:	0°	litres	20	
		US gal	5,28	
Min oil volume excl. filters at following inclination:	0°	litres	16,5	
		US gal	4,36	

## Fuel system

	Rating	r/min	1500	2000	2500	3000	3500				
Specific fuel consumption 2)	4	g/kWh	234	210,9	203,1	214,6	230,1				
		lb/hph	0,379	0,342	0,329	0,348	0,373				
Fuel consumption at prop. load x <sup>2,5</sup>	4	l/h	7,81	15,49	27,8	43,6	66,9				
		US gal/h	2,1	4,1	7,3	11,5	17,7				
Fuel consumption at prop. load x <sup>3</sup>	4	l/h	5,71	12,15	23,48	40,68	66,88				
		US gal/h	1,5	3,2	6,2	10,7	17,7				
Fuel consumption at full load	4	l/h	27,51	42,36	51,12	61,35	66,33				
		US gal/h	7,3	11,2	13,5	16,2	17,5				

## Intake and exhaust system

	Rating	r/min	1500	2000	2500	3000	3500				
Exhaust temperature at the exhaust pipe connecting flange after the turbo charger. At prop. load exp. 2,5	4	°C	224	288	310	321	366				
		°F	455	565	590	597	716				
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa					Max	30			
		psi						4,4			
		kPa					Min	10			
		psi						1,5			
Engine air consumption at 25°C / 77°F atmospheric pressure 100kPA and relative humidity 30%.	4	m³/min					21,5				
		cu.ft./min					759,3				
Turbo charge pressure. At prop. load exp. 2,5	4	kPa	12	32	74	140	202				
		psi	1,7	4,6	10,7	20,3	29,3				
Exhaust gas flow	4	m³/min					39,7				
		cu.ft./min					1402				

## Cooling system

	Rating	r/min	1500	2000	2500	3000	3500				
Sea water pump flow.		m³/h					12,9				
		foot³/h					456				
Coolant content engine, incl. heat exchangers and air cooler		litres					16				
		U.S. gal.					4,23				
Thermostat, start open at		°C					82				
		°F					180				
Thermostat, fully open at		°C					92				
		°F					198				

## Emissions

	Rating	r/min	1500	2000	2500	3000	3500				
Smoke at prop. load x <sup>2,5</sup>	4	BSU	0,2	0,1	0,1	0,2	0,3				
Smoke at prop. load x <sup>3</sup>	4	BSU	0,2	0,2	0,1	0,2	0,3				

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5) At installed back pressure