

# Technical Data D12D-E 500

## Rating 2

### General

4-stroke direct injected, turbocharged and aftercooled diesel engine

Number of cylinders		6
No of valves		24
Displacement, total	litres in <sup>3</sup>	12,13 740,2
Firing order		1-5-3-6-2-4
Rotational direction, viewed from the front		Clockwise
Bore	mm in	131 5,16
Stroke	mm in	150 5,91
Maximum forward inclination:	°	0
Max. intermittent backward tilt while running:	°	20
Max. intermittent side tilt while running:	°	30
Idling speed	rpm	525 ± 25
Propeller selection range	rpm	1800-1850
Dry weight engine BT	kg lb	1400 3086

Performance	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Crankshaft power 1), 5)	2	kW			185	277	301	335	367			
					hp	251,6	376,7	409,4	455,6	499,1		
Propeller shaft power 1) (At full load)	2	kW			177,6	265,9	289	321,6	352,3			
					hp	241,5	361,7	393	437,4	479,2		
Propellershaft power at prop.load x <sup>3</sup>	2	kW			60	104	166	247	352			
					hp	82	141	235	336	479		
Torque at crankshaft 2)	2	Nm			1767	2204	2053	1999	1947			
					lbf ft	1303	1626	1514	1475	1436		
Mean piston speed		m/s	3,0	4,0	5,0	6,0	7,0	8,0	9,0			
			ft/s	9,8	13,1	16,4	19,7	23,0	26,2	29,5		
Effective mean pressure 2)	2	MPa			1,83	2,28	2,13	2,07	2,02			
					psi	265,4	331,2	308,5	300,4	292,5		

Fuel system	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Specific fuel consumption 2)	2	g/kWh			226,1	204,3	199,1	203,8	216,7			
					lb/hph	0,366	0,331	0,323	0,33	0,351		
Fuel consumption at prop. load x <sup>3</sup>	2	l/h			16,19	25,27	39,12	59,77	90,48			
					US gal/h	4,3	6,7	10,3	15,8	23,9		
Fuel consumption at full load	2	l/h			49,62	67,13	71,09	80,99	94,34			
					US gal/h	13,1	17,7	18,8	21,4	24,9		

Intake and exhaust system	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa psi								Max	15kPa	
										Min	0kPa	
Turbo charge pressure.	2	kPa psi			78 11,3	151 21,9	182 26,4	222 32,2	251 36,4			
Exhaust gas flow	2	m <sup>3</sup> /min cu.ft./min			9,73 343,6	15,91 561,9	20,48 723,2	26 918,2	31,25 1104			

Emissions	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Smoke at prop. load x <sup>3</sup>	2	*BSU			0,3	0,3	0,2	0,2	0,5			

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

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