

Technical Data D12D-E 350

Rating 1

General

4-stroke direct injected, turbocharged and aftercooled diesel engine

Number of cylinders		6
No of valves		24
Displacement, total	litres	12,13
	in ³	740,2
Firing order		1-5-3-6-2-4
Rotational direction, viewed from the front		Clockwise
Bore	mm	131
	in	5,16
Stroke	mm	150
	in	5,91
Compression ratio		17,5:1
Maximum forward inclination:	°	0
Max. intermittent backward tilt while running:	°	20
Max. intermittent side tilt while running:	°	30
Idling speed	rpm	525 ± 25
Rated speed	rpm	1800
Propeller selection range	rpm	1800-1850
Dry weight engine BT	kg	1400
	lb	3086

Performance	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Crankshaft power 1), 5)	1	kW			161,8	200	229	245	256			
					hp	220	272	311,4	333,2			
Propeller shaft power 1) (At full load)	1	kW			155,3	192	219,8	235,2	245,8			
					hp	211,2	261,1	299	319,9			
Propellershaft power at prop.load x ³	1	kW			42	73	116	173	246			
					hp	57	99	158	235			
Torque at crankshaft 2)	1	Nm			1545	1592	1562	1462	1358			
					lbf ft	1140	1174	1152	1078			
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			
Effective mean pressure 2)	1	MPa			1,60	1,65	1,62	1,51	1,41			
					psi	232,2	239,1	234,7	219,7			

Fuel system	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Specific fuel consumption 2)	1	g/kWh			221	203	198	201	210			
					lb/hph	0,358	0,329	0,321	0,326			
Fuel consumption at prop. load x ³	1	l/h			8,73	14,14	21,66	31,29	44,23			
					US gal/h	2,3	3,7	5,7	8,3			
Fuel consumption at full load	1	l/h			42,42	48,16	53,79	58,42	63,77			
					US gal/h	11,2	12,7	14,2	15,4			

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							Max	15 kPa			
			psi							Min			
Turbo charge pressure.	1	kPa			59	87	120	148	167				
					psi	8,6	12,6	17,4	21,5				24,2
Exhaust gas flow	1	m ³ /min			8,68	12,05	16,1	20,48	24,33				
					cu.ft./min	306,5	425,5	568,6	723,2				859,2

Emissions	Rating	r/min	600	800	1000	1200	1400	1600	1800			
Smoke at prop. load x ³	1	*BSU			0,1	0,3	0,3	0,2	0,2			

*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