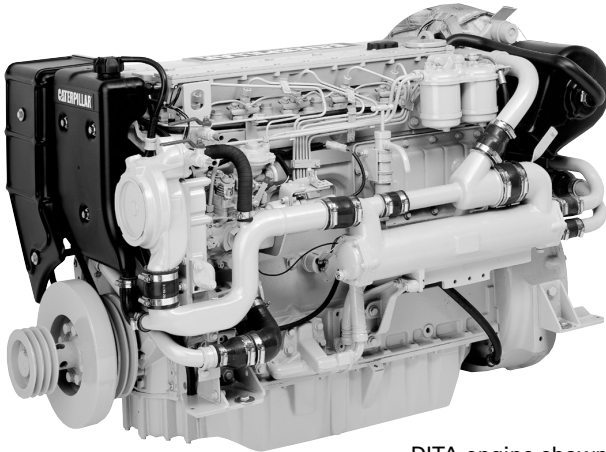




Marine Engine

3056

153 bkW @ 2500 rpm
205 bhp @ 2500 rpm
Preliminary



DITA engine shown with Accessory Equipment

SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel

Emissions	IMO Compliant
Bore—mm (in)	100 (3.94)
Stroke—mm (in)	127 (5.0)
Displacement—L (cu in)	6 (365)
Aspiration	DITA
Rotation (from flywheel end)	Counterclockwise
Compression Ratio	16.0:1
Capacity for Liquids—L (U.S. gal)	
Cooling System	25.3 (6.5)
Lube Oil System (refill)	15 (3.9)
Oil Change Interval — hrs	400
API CF-4, 15W40, 10W30	
Engine Weight (approx) — kg (lb)	609 (1,342)

STANDARD ENGINE EQUIPMENT

Air Inlet System

air cleaner with closed system fumes disposal, sea water aftercooler, dry insulated turbocharger, thermostart air inlet heater

Charging System

charging alternator (12-volt, 70 ampere or 24-volt, 40 ampere)

Control System

mechanical governor

Cooling System

gear-driven centrifugal jacket water pump and self-priming sea water pump, heat exchanger with cupro-nickel tube bundle or keel cooling connections, de-aeration expansion tank, integral plate-type engine oil cooler, sea water strainer, thermostat and housing

Exhaust System

dry insulated turbocharger, watercooled exhaust manifold

Flywheel and Flywheel Housing

SAE No. 3 (126 teeth)

Fuel System

twin fuel filter

Lube System

crankcase breather (closed system), twin oil filter, engine-mounted oil sump drain pump, RH service oil level gauge

Mounting System

adjustable mounts

Protection System

shutoff solenoid (ETS), alarm switches (high jacket water temperature, low oil pressure)

Starting System

electric starting motor (12-volt and 24-volt)

General

vibration damper, Caterpillar yellow paint, lifting eyes

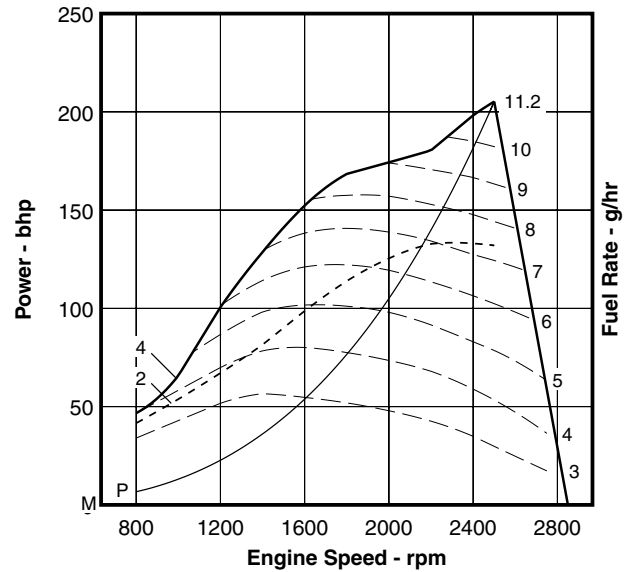
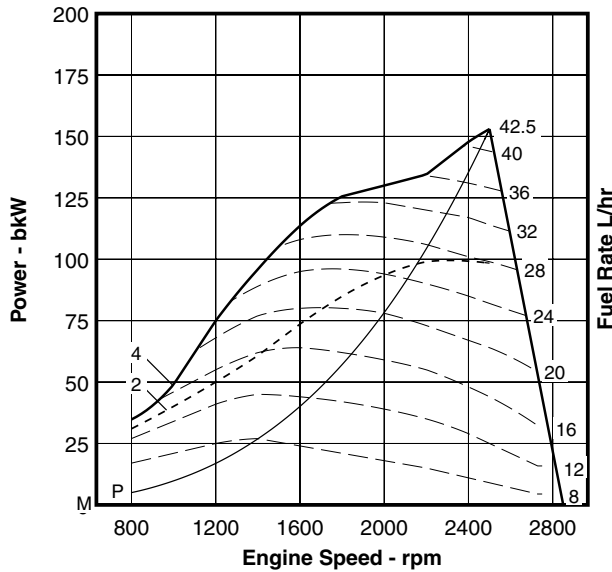
Power produced at the flywheel will be within standard tolerances up to 50° C (122° F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52° C (125° F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft power by 3% for propeller shaft power.



PERFORMANCE CURVES

C Rating — DM6309-00

IMO Compliant



153 kW

SI Metric

205 hp

English

Performance Data

Performance Data

	Engine Speed rpm	Engine Power kW	BSFC g/kW-h	Fuel Rate L/h	Boost Press kPa Gauge	Intake Air Flow m ³ /min	Exh Manif Temp °C	Exh Gas Flow m ³ /min
Zone Limit	2500	98.4	238	27.9	92.9	10.9	416	22.3
Curve: 2	2400	99.2	232	27.4	90.2	10.4	412	21.6
	2200	99.0	222	26.1	85.1	9.5	410	19.4
	2000	93.5	214	23.9	77.7	8.4	408	16.2
	1800	84.9	209	21.2	68.4	7.2	409	12.8
	1600	73.6	208	18.2	55.6	5.9	409	10.6
	1400	60.8	215	15.6	41.1	4.7	408	10.2
	1200	50.0	243	14.5	28.5	3.6	406	11.5
	1000	40.1	294	14.1	16.8	2.5	404	13.9
	800	31.0	367	13.6	6.0	1.5	400	16.4

	Engine Speed rpm	Engine Power hp	BSFC lb/hp-h	Fuel Rate gph	Boost Press in.Hg. Gauge	Intake Air Flow cfm	Exh Manif Temp °F	Exh Gas Flow cfm
Zone Limit	2500	132	.392	7.4	27.5	385	781	787
Curve: 2	2400	133	.381	7.2	26.7	367	774	762
	2200	133	.364	6.9	25.2	335	769	685
	2000	125	.352	6.3	23.0	296	766	572
	1800	114	.344	5.6	20.2	254	768	452
	1600	99	.342	4.8	16.5	208	769	374
	1400	82	.353	4.1	12.2	166	767	360
	1200	67	.399	3.8	8.4	127	763	406
	1000	54	.483	3.7	5.0	88	758	490
	800	42	.604	3.6	1.8	53	752	579

Zone Limit	2500	153.0	233	42.5	125.6	12.6	563	31.3
Curve: 4	2400	147.8	230	40.5	122.2	12.0	543	29.2
	2200	134.5	224	35.9	112.4	10.8	505	25.0
	2000	130.0	220	34.1	110.6	9.5	515	22.7
	1800	125.6	218	32.6	109.0	8.1	540	20.3
	1600	113.6	219	29.7	96.6	6.9	547	17.5
	1400	95.9	226	25.8	74.0	5.9	542	15.0
	1200	75.0	250	22.3	49.2	4.6	522	11.5
	1000	49.0	295	17.2	22.6	2.6	465	9.9
	800	34.8	365	15.2	7.8	1.5	438	13.4

Zone Limit	2500	205	.383	11.2	37.2	445	1046	1105
Curve: 4	2400	198	.377	10.7	36.2	423	1010	1030
	2200	180	.368	9.5	33.3	381	941	882
	2000	174	.362	9.0	32.8	335	960	801
	1800	168	.358	8.6	32.3	286	1003	716
	1600	152	.360	7.8	28.6	243	1016	618
	1400	129	.372	6.8	21.9	208	1008	529
	1200	101	.410	5.9	14.6	162	972	406
	1000	66	.486	4.5	6.7	92	869	349
	800	47	.601	4.0	2.3	53	820	473

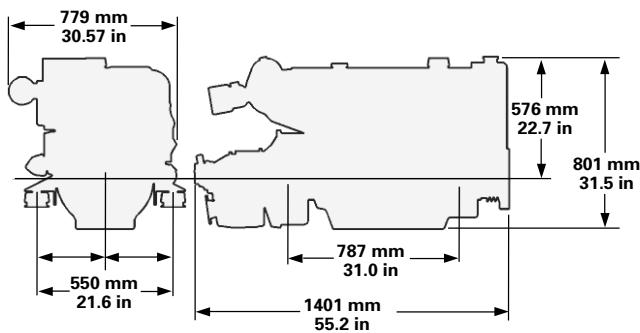
Prop Demand	2500	153.0	233	42.5	125.6	12.6	563	31.3
Curve: P	2400	135.4	229	36.9	113.8	11.6	506	27.0
	2200	104.3	222	27.6	88.8	9.7	422	20.1
	2000	78.3	219	20.4	66.4	7.8	369	13.0
	1800	57.1	221	15.0	46.9	6.2	327	6.8
	1600	40.1	229	10.9	31.6	5.0	287	7.1
	1400	26.9	246	7.9	21.3	4.0	248	6.8
	1200	16.9	308	6.2	14.6	3.0	208	4.8
	1000	9.8	471	5.5	9.9	2.2	169	3.0
	800	5.0	761	4.5	6.3	1.6	132	2.4

Prop Demand	2500	205	.383	11.2	37.2	445	1046	1105
Curve: P	2400	182	.376	9.7	33.7	409	943	953
	2200	140	.364	7.3	26.3	342	792	709
	2000	105	.360	5.4	19.7	275	696	459
	1800	77	.363	4.0	13.9	219	620	240
	1600	54	.376	2.9	9.4	176	548	251
	1400	36	.404	2.1	6.3	141	479	240
	1200	23	.506	1.6	4.3	106	406	169
	1000	13	.774	1.5	2.9	78	335	106
	800	7	1.250	1.2	1.9	56	269	85

Brake Mean Effective Pressure 1227 kPa

Brake Mean Effective Pressure 178 psi

DIMENSIONS



with ZF Hurth HSW 630 A Gearbox

RATING DEFINITIONS AND CONDITIONS

C RATING – Vessels such as ferries, harbor tugs, fishing boats moving at higher speeds out and back (e.g. lobster, crayfish, and tuna), offshore service boats, and also displacement hull yachts and short trip coastal freighters where engine load and speed are cyclical.

RATINGS are based on SAE J1228/ISO8665 standard conditions of 100 kPa (29.61 in. Hg), 25° C (77° F), and 30% relative humidity. These ratings also apply at ISO3046/1, DIN6271/3, and BS5514 conditions of 100 kPa (29.61 in. Hg), 27° C (81° F), and 60% relative humidity. Ratings are valid for air cleaner inlet temperatures up to and including 50° C (122° F) and for sea water temperatures up to and including 38° C (100° F) at sea level.

FUEL RATES are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal). Fuel consumption shown with all oil, fuel, and water pumps, engine driven. For a “without pumps” condition, deduct approximately 0.5% for each pump not engine driven.

Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for additional information.

Performance data is calculated in accordance with tolerances and conditions stated in this specification sheet and is only intended for purposes of comparison with other manufacturers' engines. Actual engine performance may vary according to the particular application of the engine and operating conditions beyond Caterpillar's control.

TMI Reference No.: DM6309-00

Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication.

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