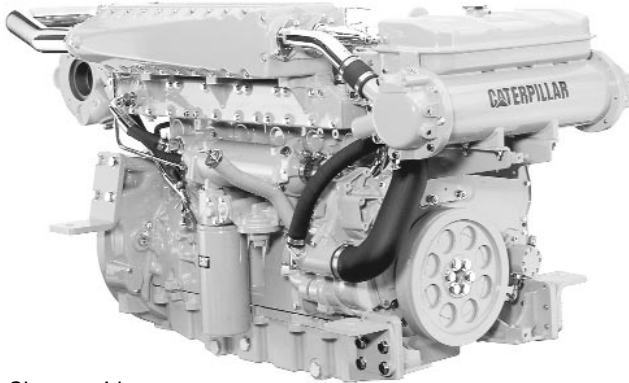




# Marine Engine

**3176C**  
448 bkW/600 bhp  
2300 rpm

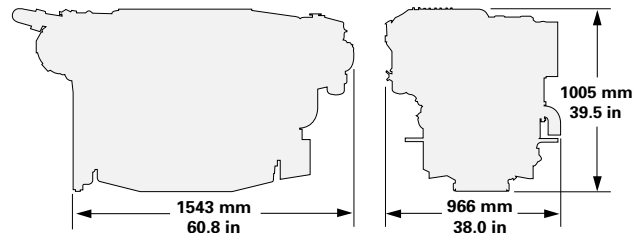


Shown with  
Accessory Equipment

## CATERPILLAR® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel	
Emissions	IMO Compliant
Bore — mm (in)	125 (4.92)
Stroke — mm (in)	140 (5.51)
Displacement — L (cu in)	10.3 (629)
Rotation (from flywheel end)	Counterclockwise
Compression Ratio	16:1
Capacity for Liquids — L (U.S. gal)	
Cooling System (engine only)	45 (12)
Lube Oil System (refill)	28 (7.5)
Oil Change Interval — L (gal)	9475 (2500)/fuel
Engine Weight, Net Dry	
(approx) — kg (lb)	1177 (2590)
Governor	Electronic

## DIMENSIONS



## STANDARD EQUIPMENT

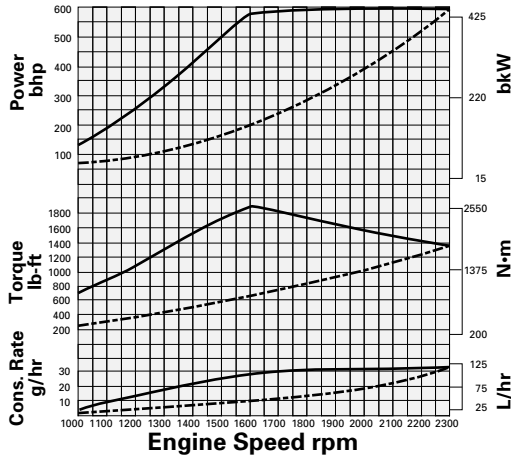
Air inlet system <ul style="list-style-type: none"><li>aftercooler</li><li>air cleaner/fumes disposal (closed system)</li></ul>	Governor <ul style="list-style-type: none"><li>electronic control system</li></ul>
Cooling system <ul style="list-style-type: none"><li>thermostat</li><li>jacket water pump</li><li>sea water pump</li><li>integral heat exchanger/expansion tank</li></ul>	Lube system <ul style="list-style-type: none"><li>crankcase breather</li><li>oil cooler</li><li>oil filter</li><li>oil pan, center sump</li><li>oil filler</li><li>dipstick</li><li>oil pump</li></ul>
Exhaust system <ul style="list-style-type: none"><li>manifold &amp; turbocharger, water cooled</li><li>152 mm (6 in) round flanged outlet</li></ul>	Mounting system <ul style="list-style-type: none"><li>front support</li></ul>
Flywheel & flywheel housing <ul style="list-style-type: none"><li>SAE No. 1</li></ul>	Power take-offs <ul style="list-style-type: none"><li>hydraulic pump drive — SAE A, 11 tooth spline</li></ul>
Fuel system <ul style="list-style-type: none"><li>fuel filter</li><li>fuel transfer pump</li><li>fuel priming pump</li><li>flexible fuel lines</li></ul>	Service <ul style="list-style-type: none"><li>service per top level PAs</li></ul>

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 70° C (158° 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

**E Rating – 2300 rpm**  
448 bkW (600 bhp) 608 mhp



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2300	448	1858	227	121.3
2200	448	1943	223	118.7
2000	448	2137	217	115.8
1800	448	2374	218	116.2
1600	429	2561	219	111.8
1400	312	2128	218	81.2
1200	187	1487	221	49.1
1000	99	941	222	26.1

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2300	600	1370	.374	32.0
2200	600	1433	.366	31.4
2000	600	1576	.357	30.6
1800	600	1751	.358	30.7
1600	575	1889	.359	29.5
1400	418	1570	.359	21.5
1200	251	1097	.362	13.0
1000	132	694	.366	6.9

**TMI — DM3388-00**

**Max Power Curve Data**

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
448	1858	227	121.3
392	1700	214	100.0
294	1405	204	71.6
215	1138	206	52.6
151	899	213	38.2
101	688	220	26.5
64	506	223	16.9
37	351	232	10.2

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
600	1370	.374	32.0
525	1254	.352	26.4
395	1036	.336	18.9
288	839	.338	13.9
202	663	.350	10.1
135	507	.362	7.0
85	373	.366	4.5
49	259	.381	2.7

**E RATING** – Planing hull vessels such as pleasure craft, harbor patrol, harbor master, and some fishing and pilot boats.

- Prop Demand ----- 3.0 Exponent (for displacement hulls only)
- Engine Performance Parameters: Power +/- 3%;  
Specific Fuel Consumption +/- 3%; Fuel Rate +/- 5%.

## RATING DEFINITIONS AND CONDITIONS

**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.

**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).

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