

C280-8

MARINE AUXILIARY/DIESEL ELECTRIC PROPULSION ENGINE

2200 ekW
2420 ekW

2530 bkW
2300 bkW

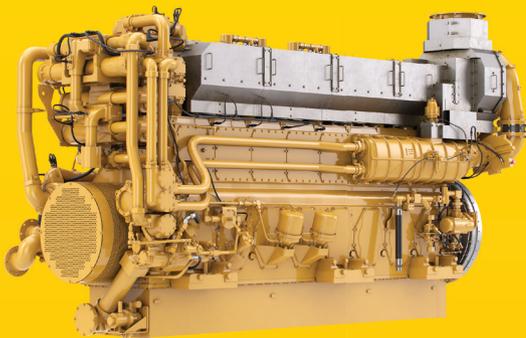


Image shown may not reflect actual engine

SPECIFICATIONS

In-line 8, 4-Stroke-Cycle-Diesel

- EPA Marine Tier 4 certified [Selective Catalytic Reduction (SCR) required]
- IMO Tier II emissions certified (SCR required)
- IMO Tier III emissions compliant (SCR required)
- 148 L (9031 in³) displacement
- 900 rpm
- 280 mm (11 in) bore x 300 mm (11.8 in) stroke
- Turbocharged-aftercooled aspiration
- Electronically governed A4 ECU
- Single or combined cooling system
- Engine-mounted freshwater and seawater pumps
- Engine coolant water drains
- Refill capacity – engine only
 - Cooling system 530 L (140 gal)
 - Lube oil system 2876 L (760 gal)
- Counterclockwise rotation
- Engine diagnostics and general alarm
- Programmable parameters



COMPLETE SOLUTIONS FOR YOUR MARINE APPLICATIONS

- Single-source for support and service
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

EFFICIENT OPERATION

- Instrument panel with cold mode start strategy and programmable low idle
- Electronic governing control unit minimizes fuel consumption and monitors engine operating parameters
- Optional alarm and protection system

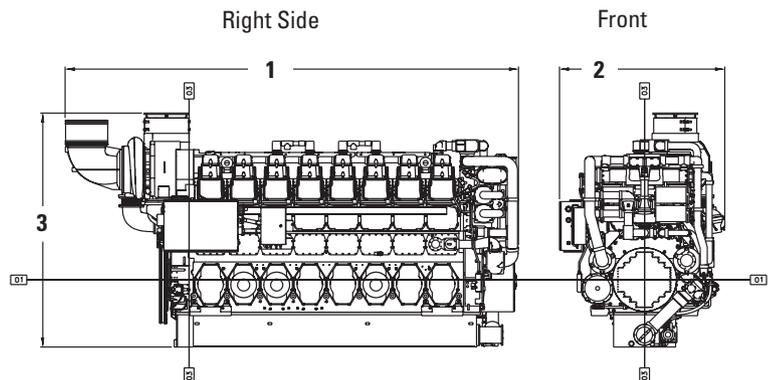
IMPROVED PERFORMANCE AND FUNCTION

- Advanced combustion design uses the optimum configurations and cylinder geometry.
- Enhanced control of fuel injection optimized through crank timing

ENVIRONMENTALLY CONSCIOUS

- Closed crankcase ventilation system and redesigned piston for improved efficiency and lower emissions
- Optimal nozzle geometry and electronic injection control for improved fuel delivery.
- EPA Marine Tier 4/IMO Tier II emissions certified

DIMENSIONS



ENGINE DIMENSIONS & WEIGHT

(1) Overall Length	4958 mm	195.2 in
(2) Overall Width	1804 mm	71.0 in
(3) Overall Height	2648 mm	104.2 in
Weight, Net Dry (approx)	19 000 kg	41,888 lb

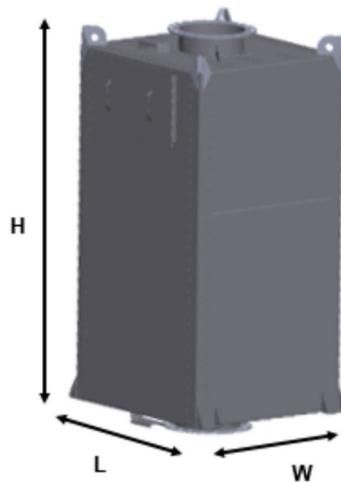
Note: Do not use these dimensions for installation design. See general dimension drawings for detail.

MARINE ENGINE PERFORMANCE

% Load	EM0840/EM0846 Fuel Consumption				DEF Consumption*	
	ekW	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr
100	2200	2300	142.7	197.0	7.7	13.8
75	1650	1725	109.3	201.3	5.4	12.8
50	1100	1150	76.2	210.4	3.5	12.7
25	550	575	43.4	239.4	2.0	14.5
10	220	230	22.6	311.5	1.0	18.6

% Load	EM0841/EM0847 Fuel Consumption				DEF Consumption*	
	ekW	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr
100	2420	2530	153.8	193.0	9.7	16.2
75	1815	1898	119.6	200.1	5.7	12.6
50	1210	1265	83.3	209.2	3.9	12.9
25	605	632	46.2	232.0	2.2	14.5
10	242	253	24.2	304.3	1.1	18.9

*Assumes 40% DEF fluid concentration



Clean Emissions Module (CEM)

This engine requires SCR technology to comply with EPA Tier 4 emission standards. The major components are shown below with dimensions, weights, and some of the installation requirements. Please refer to A&I guide LEBM0023-00.

CEM Dimensions & Weights

Length	1506.6 mm	59.3 in
Width	1681.4 mm	66.2 in
Height	3761.8 mm	148.1 in
Weight	3000 kg	6600 lb

(CEM must be installed vertically.)

Mixing Tube Dimensions

Length	3076 mm	121.1 in
Diameter	514 mm	20.2 in

Dosing Cabinet

Length	940 mm	37.0 in
Width	500 mm	19.7 in
Height	585 mm	23.0 in
Access	610 mm	24.0 in (sides)
	457 mm	8.0 in (front)
	52 mm	6.0 in (rear)

RATING DEFINITIONS AND CONDITIONS

Rating Definition

For all vessels operating with generator sets that provide power to the propulsion systems. All ratings are Prime Ratings according to ISO8528-1 for unlimited usage per year at a load factor of < 70%. 10% overload capability is required for a maximum of 1 hour out of every 12 and a maximum of 25 hours total per year.

Rating Conditions

Ratings are based on SAE J3046 and J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO8665, ISO3046-1:2002E, DIN6271-3, and BS5514 standard 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.).

Marine auxiliary engines are mainly used as generator set engines; however, they can be used for electrically driven pumps, winches, conveyors, and thrusters, when it is specified. Engines can be radiator cooled or heat exchanger/keel cooled. Typical applications of DEP engines could include but are not limited to supply vessels, cruise vessels, research vessels, or any other ship using diesel electric drive systems.

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow", the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

U.S. Sourced
LEHM0195-00 (11-15)

©2015 Caterpillar
All rights reserved.
Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.