

C280-12

MARINE PROPULSION ENGINE

5031 mhp (4962 bhp) 3700 bkW
5520 mhp (5444 bhp) 4060 bkW

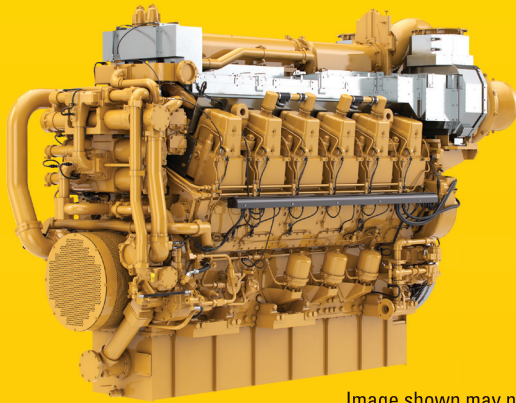


Image shown may not reflect actual engine

SPECIFICATIONS

Vee 12, 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)
- 222 L (13,456 in³) displacement
- 1000 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 800 L (210 gal)
 - Lube oil system 3445 L (910 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

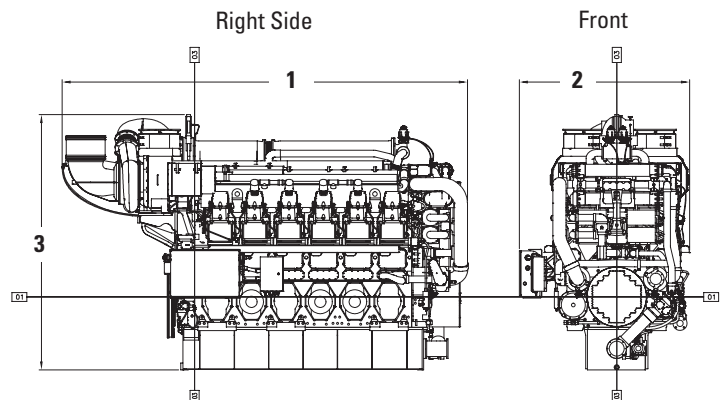
IMPROVED PERFORMANCE AND FUNCTION

- 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	4612 mm	181.6 in
(2) Overall Width	2202 mm	79.6 in
(3) Overall Height	3404 mm	134.0 in
Weight, Net Dry (approx)	25 980 kg	57,276 lb

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

MARINE ENGINE PERFORMANCE

Max Power

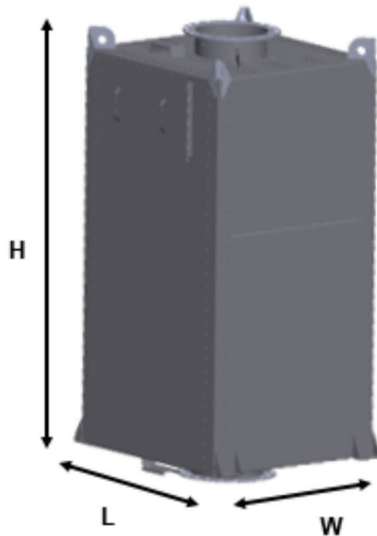
CS Rating EM0837/EM0850 Fuel Consumption DEF Consumption*							MC Rating EM0836/EM0851 Fuel Consumption DEF Consumption*						
rpm	bhp	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr	rpm	bhp	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr
1000	4962	3700	232.0	199.2	12.8	14.3	1000	5445	4060	254.2	198.8	13.6	13.8
900	4962	3700	229.1	196.6	13.7	15.3	900	5445	4060	250.3	195.8	14.9	15.2
800	3688	2750	172.6	199.3	11.3	16.9	800	4083	3045	189.5	197.6	8.8	11.9
700	2682	2000	130.0	206.4	8.4	17.1	700	2990	2230	144.0	205.0	8.9	16.4
600	1676	1250	84.5	214.6	5.6	18.3	600	1810	1350	91.5	215.2	6.0	18.4
500	1395	1040	73.6	224.6	—	—	500	1395	1040	73.6	224.6	—	—

*Assumes 40% DEF fluid concentration

Prop Demand

CS Rating EM0837/EM0850 Fuel Consumption DEF Consumption*							MC Rating EM0836/EM0851 Fuel Consumption DEF Consumption*						
rpm	bhp	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr	rpm	bhp	bkW	g/hr	g/bkW-hr	g/hr	g/bkW-hr
1000	4466	3330	209.7	200.0	12.0	14.9	1000	4628	3451	217.0	199.7	12.3	14.7
900	3256	2428	155.6	203.6	9.5	16.2	900	3374	2516	160.8	203.0	9.7	15.9
800	2286	1705	111.3	207.3	2.5	6.1	800	2370	1767	115.0	206.7	2.2	5.2
700	1531	1142	75.8	210.8	7.0	25.4	700	1588	1184	78.4	210.3	7.3	25.4
600	964	719	49.0	216.5	3.2	18.1	600	999	745	50.7	216.0	3.3	18.1
500	558	416	29.7	226.6	—	—	500	578	431	30.6	225.7	—	—

*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	1828.4 mm	71.9 in
Width	2003.2 mm	78.8 in
Height	3869.7 mm	1523 in
Weight	4500 kg	9800 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

Continuous Service (CS) Rating is suitable for continuous duty applications, including dredges, for operation without interruption or load cycling.

Maximum Continuous (MC) Rating is suitable for continuous duty applications, including dredges, generally used for vessel applications involving varying loads. The engine power actually produced is limited by application guidelines, leaving a power reserve for unusual operating conditions. Operating time at loads above the Continuous Service Rating for a given rpm is limited to one hour in 12 or 83% of total operating hours.

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