

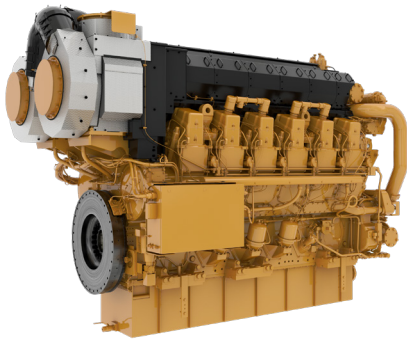


Image shown may not reflect actual configuration

Cat® C280-12

Marine Propulsion Engine

Commercial Applications

The Cat® C280 commercial propulsion engine series is engineered for high-utilization workboat applications where power, durability, and uptime matter most. Delivering up to 23% more power with increased durability, the C280 series combines high power density, proven heavy-duty build, and long service intervals to help operators move more, pull harder, and stay working longer, day after day.

Features and Benefits:

ENGINE DESIGN

- Advanced combustion design uses the optimum configurations and cylinder geometry for low visible smoke
- Market leading power to weight ratio
- Improved part load/part speed performance
- Electronic governing control unit minimizes fuel consumption and monitors engine operating parameter
- Optimal nozzle geometry and electronic injection control for improved fuel delivery
- Improved torque rise capability
- Cold mode start strategy and programmable low idle
- Ease of serviceability and maintenance
- Durable core engine design with over 100 million operating hours and thousands of engines sold

BUILT FOR EXTREME CONDITIONS

- Proven in the field: rigorous endurance testing; thermal, overspeed, cold starts, and emissions, alongside 350,000+ field hours. Heavy-duty design and marine-hardened electronics deliver uncompromising reliability.

HIGH POWER DENSITY

- Delivering 3460 - 4500 bkW at 900 - 1000 rpm, the C280 series combines exceptional power density with flexible ratings and optimized torque at low speeds, maximizing performance for diverse marine propulsion demands

SERVICEABILITY

- Maximize uptime with extended service intervals. Supported by clear maintenance plans and backed by Caterpillar's global network for fast parts, expert technicians, and lifecycle support worldwide.

Specifications

Configuration	V 12, 4 - Stroke-Cycle Diesel	Bore x Stroke	280 mm x 300 mm / 11.0 in x 11.8 in
Emissions	IMO II, U.S. EPA Tier 4, IMO III (Cat SCR required)	Refill Capacity Lube Oil System w/ Oil Filter Change	1211 L (320 gal)
Rated Engine Speed	900 / 1000 rpm	Oil Change Interval	1000 hours
Displacement	222 L (13,546 in³)	Rotation (from flywheel end)	Clockwise or Counterclockwise
Aspiration	Twin Turbocharged-Aftercooled	Cooling	Separate Circuit or Combined Circuit
Governor	Electronic (A4 ECM)		



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Ratings and Fuel Consumption

Commercial Propulsion Engines

IMO II

Rating	mhp	bhp	bkW	rpm	U.S. g/h	g/bkWh	IMO	U.S. EPA	EU	China
CS	4704	4640	3460	900	213	198.6	II	NC	NC	NC
CS	5031	4962	3700	1000	231	201.2	II	NC	NC	NC
MC	5167	5096	3800	900	233	197.6	II	NC	NC	NC
MC	5520	5444	4060	1000	252	200.0	II	NC	NC	NC
MC/FCV	6118	6035	4500	1000	288	205.7	II	NC	NC	NC

IMO III / U.S. EPS Tier 4

Rating	mhp	bhp	bkW	rpm	U.S. g/h	g/bkWh	IMO	U.S. EPA	EU	China
CS	5031	4962	3700	1000	225	196.0	III	T4C	NC	NC
MC	5520	5444	4060	1000	247	195.5	III	T4C	NC	NC

Rating Definition:

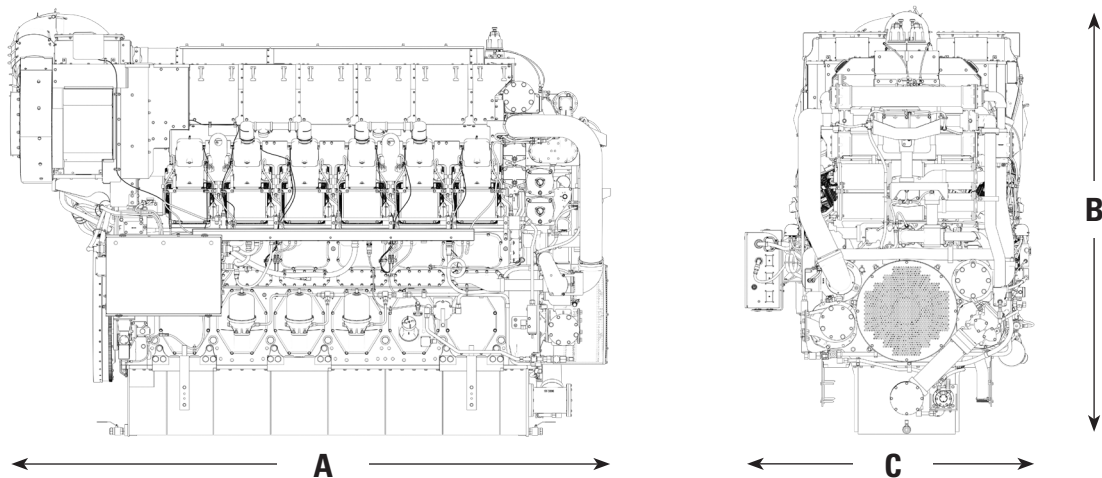
Continuous Service (CS) Rating is suitable for continuous duty applications, including dredges, for operation without interruption or load cycling.

Maximum Continuous (MC) Rating is generally used for vessel applications involving varying loads. The engine power 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 1 hour in 12 or 8.3% of total operating hours.

Fast Commercial Vessel (FCV) Rating is designed for high-speed vessel applications, with approximately 85% of operating hours at rated speed and 15% at less than 50% rated power. Typical TBO is 20,000–25,000 hours. Propulsion system design should account for heavy ship conditions, sea state, hull fouling, and power losses to ensure proper engine-to-propulsor matching and adequate operating margins.

Dimensions

All dimensions are approximate.



A Length (Approx)	4121 mm	162.2 in	C Width (Approx)	1999 mm	78.7 in
B Height (Approx)	3368 mm	132.6 in	Dry Weight (Approx)	25,980 kg	57,276 lb

Note: Do not use for installation design. See general dimension drawings for detail. Weights and dimensions are approximations.

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Standard and Optional Equipment

Standard Equipment

- SOLAS Compliant hard heat shield system
- Gear driven coolant and oil pumps
- 50 degree V engine block for reduced width
- Dual A4 ECM with rigid wiring harness
- 1.5% speed margin for waterjet specification
- EUI fuel system
- Duplex fuel and oil filters
- Centrifugal oil filters
- Explosion relief valves
- Air driven pre/post-lube pump
- Air starters
- Six point engine mounting feet

Optional Equipment

- Opposite end drive capability
- LECP II/III Panels and CMD 5/8/13 displays
- Marine alarm and protection system
- MCS Certification
- Full power stubshaft
- Air shutoff device
- Mechanical load sharing
- Cold weather boost control valve
- Auxiliary water pump
- RH/LH service options
- Oil Mist detector
- Mounting feet options (fixed or resilient)

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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