QSM11 QUANTUM SERIES ENGINE

Engine Overview

- Proven acceleration and torque performance in thousands of boats from this dependable, four-valve-per-cylinder workhorse
- Quiet and fuel efficient operation from innovative four-cycle design
- Excellent, virtually smoke-free sociability ensures a pleasurable boating experience
- Extended engine life from heavy-duty design elements
- Peace of mind delivered by the CMD Captain's Briefing and global service network

Features

Fuel System: Cummins Celect, a full authority electronic unit injection fuel system optimizes combustion for increased engine performance and fuel efficient operation

Lubrication System: Cast aluminum oil pan designed to resist corrosion, spin-on Fleetguard oil filters

Electrical System: 12-volt and 24-volt systems available, marine grade wiring harness and instrument panels

Cooling System: Low profile, heat exchanger configuration with standard closed crankcase ventilation system

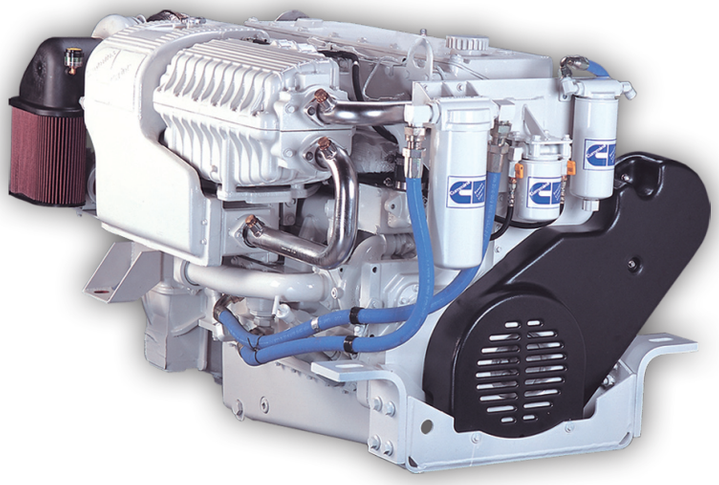
Air System: Cummins Turbo Technologies turbocharger optimized for marine applications. Marine grade air filter. Large capacity sea water aftercooler

Emissions Certified: EPA Tier 2, IMO, and RCD certified

Marine Society Certification: ABS, LR, DNV, BV, CCS, KR approval certificates available on commercial ratings

Engine Specifications

Configuration	In-line 6-cylinder, 4-stroke diesel
Bore & Stroke	125 mm x 147 mm (4.92 in x 5.79 in)
Displacement	10.8 L (661 in^3)
Aspiration	Turbocharged / Aftercooled
Rotation	Counterclockwise facing flywheel



Power Ratings

Rating	HO/GS	HO/GS	HO	ID/HO	MD/HO	HD/HO	CD/HO	CD/HO
Metric hp	715	670	645	610	455	405	355	300
bhp	705	661	636	602	450	400	350	295
KW	526	493	474	449	336	298	261	220
Rated rpm	2500	2300	2300	2300	2100	2100	1800	1800
Max Torque ft-lbs	1750	1750	1750	1575	1450	1344	1250	1160
Max Torque N-m	2373	2373	2373	2135	1966	1822	1695	1573
rpm @ max torque	1700	1700	1700	1700	1400	1400	1400	1300
Exhaust manifold	Dry	Dry	Dry	Dry	Wet	Wet	Wet	Wet

Ratings and specifications subject to change without notice. Not responsible for typographical errors.

Cummins MerCruiser Diesel

PEACE OF MIND IN AN UNFORGIVING ENVIRONMENT

1-800-DIESELS

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Fuel Consumption

Engine Ratings	715	670	645	610
Fuel Consumption (Rated)	2500 rpm @ 142.7 l/hr	2300 rpm @ 127.9 l/hr	2300 rpm @ 127.9 l/hr	2300 rpm @ 116.6 l/hr
Fuel Consumption (Rated)	2500 rpm @ 37.7 g/hr	2300 rpm @ 33.8 g/hr	2300 rpm @ 33.8 g/hr	2300 rpm @ 30.8 g/hr
Fuel Consumption (Cruise)	2300 rpm @ 110.2 l/hr	2100 rpm @ 93.4 l/hr	2000 rpm @ 79.7 l/hr	2100 rpm @ 84.3 l/hr
Fuel Consumption (Cruise)	2300 rpm @ 29.1 g/hr	2100 rpm @ 24.7 g/hr	2000 rpm @ 21.1 g/hr	2100 rpm @ 22.3 g/hr
Crankshaft mhp (kW)	715 (526)	670 (493)	645 (474)	610 (449)
Compression Ratio	16.3:1	16.3:1	16.3:1	16.3:1

Engine Ratings	455	405	355	300
Fuel Consumption (Rated)	2100 rpm @ 87.6 l/hr	2100 rpm @ 75.4 l/hr	1800 rpm @ 65.3 l/hr	1800 rpm @ 55.2 l/hr
Fuel Consumption (Rated)	2100 rpm @ 23.1 g/hr	2100 rpm @ 19.9 g/hr	1800 rpm @ 17.2 g/hr	1800 rpm @ 14.6 g/hr
Fuel Consumption (Cruise)	1900 rpm @ 64.6 l/hr	1900 rpm @ 56.2 l/hr	1600 rpm @ 47.0 l/hr	1600 rpm @ 40.3 l/hr
Fuel Consumption (Cruise)	1900 rpm @ 17.1 g/hr	1900 4pm @ 14.8 g/hr	1600 rpm @ 12.4 g/hr	1600 rpm @ 10.6 g/hr
Crankshaft mhp (kW)	455 (336)	405 (298)	355 (261)	300 (220)
Compression Ratio	15.9:1	15.9:1	15.9:1	15.9:1

Fuel consumption data represents performance along a 2.7 fixed pitch propeller curve (for HO, ID, MCD, 3.0 for HD and CON ratings). Fuel consumption is based on fuel of 35° API gravity at 16°C (60°F) 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 lb/US gal). Observed horsepower is certified within ±5% of rated horsepower. Consult your local CMD professional for further information.

Engine Dimensions 715, 670, 645, 610

Length		Width		Height		Weight (Dry)*	
mm	in	mm	in	mm	in	kg	lb
1328	43.15	1079.8	42.5	1012	39.9	1188	2620

*Does not include exhaust connection. Weights vary by rating. Length to flywheel housing.

Engine Dimensions 455, 405, 355, 300

Length		Width		Height		Weight (Dry)*	
mm	in	mm	in	mm	in	kg	lb
1289.7	50.78	973.7	38.34	1142.8	44.99	1184	2610

*Does not include exhaust connection. Weights vary by rating.

Available Accessories

Engine Controls: Digital Throttle and Shift; Electronic Throttle and Shift (ETS) and optional potentiometer for mechanical controls

Instrumentation: SmartCraft® 2.2 digital displays and/or analog gauges provide data on engine speed, oil pressure, engine load and more

Vessel System Integration: SmartCraft® 2.2 monitors fluid level, vessel range, depth, vessel speed, rudder position, temperatures and more

Accessory Drive Pulley: Belt or gear driven

Hydraulic Pump Drive: SAE A or SAE B flange

Wet and Dry Exhaust Connections

Ratings Definitions

Continuous (CD): Intended for use in applications requiring uninterrupted and unlimited service at full power.

Heavy Duty (HD): Intended for nearly continuous use in variable load applications, where full power is limited to eight hours out of every ten hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 5000 hours per year.

Medium Continuous (MD): Intended for moderate use in variable load applications, where full power is limited to six hours out of every twelve hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 3000 hours per year.

Intermittent (ID): Intended for intermittent use in variable load applications, where full power is limited to two hours out of every eight hours of operation. Also, reduced power operation must be at or below cruise rpm, which is 200 rpm below the maximum rated speed. This rating is for applications operating less than 1500 hours per year.

Government Service (GS): Intended for infrequent use in variable load applications, where full power is limited to one hour out of every eight hours of operation. Also, reduced power operation must be at or below cruise speed (rpm). Cruise speed (rpm) is dependent on the engine rated speed (rpm), Refer to Table 1 below. For applications operating less than 500 hours per year. Engines with this rating are restricted to non-revenue generating government service propulsion applications. It is not to be used in any revenue generating commercial applications, nor is it to be used in recreational/pleasure applications

High Output (HO): Intended for infrequent use in variable load applications, where full power is limited to one hour out of every eight hours of operation. Also, reduced power operation must be at or below cruise speed (rpm). Cruise speed (rpm) is dependent on the engine rated speed (rpm), Refer to Table 1 below. For applications operating less than 500 hours per year. Engines with this rating are intended for powering recreational/pleasure use vessels only. Commercial use is defined as any work or employment related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes.

Rating Conditions: Declared power ratings are based upon ISO 15550 reference conditions/ air pressure of 100kPa (29.612 in Hg) air temperature of 25° C (77°F) and 30% relative humidity. Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power. Power rated in accordance with IMCI procedures.

Table 1

Rated Speed	Cruise Speed (reduction from rated)
2000 to 2800 rpm	200 rpm
2801 to 3500 rpm	300 rpm
3501 to 4500 rpm	400 rpm

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