



# QSM11

## QUANTUM SERIES ENGINE

### Features

**Fuel System:** Cummins Select, 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

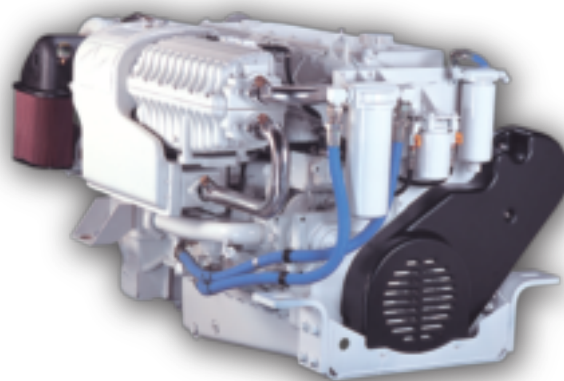
**Air System:** Cummins Turbo Technologies turbocharger optimized for marine applications. Marine grade air filter. Large capacity sea water aftercooler

**Emissions Certified:** EPA Tier 3, IMOII, and RCD certified

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

### 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 Cummins Captain's Briefing and global service network



### 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 <sup>3</sup> )
Aspiration	Turbocharged / Aftercooled
Rotation	Counterclockwise facing flywheel

### Power Ratings

Rating	Cooling type	kW	MHP	BHP	Rated RPM	Max Torque		Emissions
						N-m	RPM	
HO/GS	HX	526	715	705	2500	2373	1700	EPA Tier 3, IMO II, and RCD
HO/GS	HX	493	670	661	2300	2373	1700	
HO/ID	HX	449	610	602	2300	2135	1700	
HO/GS	HX	526	715	705	2500	2373	1700	IMO II, and RCD
HO/GS	HX	493	670	661	2300	2373	1700	
HO	HX	474	645	636	2300	2373	1700	
HO/ID	HX	449	610	602	2300	2373	1700	IMO II, RCD, EU Stage IIIa
HO/MD	HX	386	455	450	2100	1966	1400	
HO/HD	HX	298	405	400	2100	1822	1300	
HO/CD	HX	261	355	350	1800	1695	1200	
HO/CD	HX	220	300	295	1800	1573	1200	

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

## Fuel Consumption

Rating	Cooling type	kW	MHP	BHP	Fuel Consumption		Emissions
					Rated L/hr(gal/hr)	Cruise L/hr(gal/hr)	
HO/GS	HX	526	715	705	142.7(37.7)	102.9(27.2)	EPA Tier 3, IMO II, and RCD
HO/GS	HX	493	670	661	127.9(33.8)	91.0(24.0)	
HO/ID	HX	449	610	602	112(29.7)	82.6(21.8)	
HO/GS	HX	526	715	705	142.7(37.7)	110.2(29.1)	IMO II, and RCD
HO/GS	HX	493	670	661	128(33.8)	93.4(24.7)	
HO	HX	474	645	636	128(33.8)	79.7(21.1)	
HO/ID	HX	449	610	602	117(30.8)	84.3(22.3)	IMO II, RCD, EU Stage IIIa
HO/MD	HX	386	455	450	87.6(23.1)	64.6(17.1)	
HO/HD	HX	298	405	400	75.2(19.9)	56.2(14.8)	
HO/CD	HX	261	355	350	65.3(17.2)	47(12.4)	
HO/CD	HX	220	300	295	55.2(14.6)	40.3(10.6)	

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 Cummins 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® 2.5 digital displays and/or analog gauges provide data on engine speed, oil pressure, engine load and more

**Vessel System Integration:** SmartCraft® 2.5 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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