

Quantum Engine Series

POWER RATINGS (PRELIMINARY)

Rating	High Output*		Intermittent Duty*
Metric HP	540	500	490
BHP	533	493	484
kW	397	368	361
Rated RPM	2600	2600	2500
Max Torque FT-LBS	1273	1280	1264
Max Torque N-m	1726	1735	1713
RPM	1600	1800	1600

*Meets EPA Tier 2 recreational and commercial emission standards

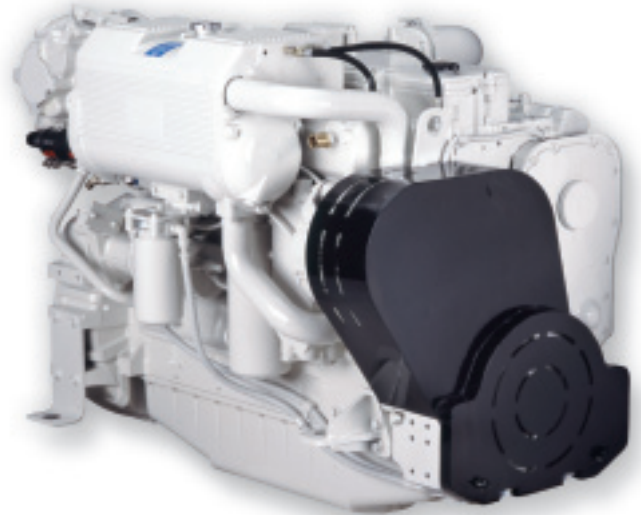
ENGINE SPECIFICATIONS

Configuration	In-line 6-cylinder, 4-stroke diesel
Bore & Stroke	114 mm x 135 mm (4.49 in x 5.31 in)
Displacement	8.3 L (505 in ³)
Rotation	Counterclockwise facing flywheel

FEATURES AND BENEFITS

Engine Design

With its roots going back to the proven 6CTA8.3, the **QSC8.3** is providing a Quantum Leap in the marine industry by incorporating the latest diesel engine technology. A high pressure common rail fuel system virtually eliminates start up white smoke and black smoke, improves fuel economy and significantly reduces noise. The engine includes a new cylinder head with four valves per cylinder, which allows the engine to breathe easier for increased acceleration and torque.



Fuel System:

Left and right engine mounted fuel filter

Lubrication System:

Left and right engine mounted lube filter
Cast aluminum oil pan

Electrical System: 12-volt and 24-volt systems available

Emissions: EPA Tier 2 and IMO Compliant

Cooling System: Sea water heat exchanger cooling system with electronic low coolant water level alarm

AVAILABLE ACCESSORIES

Air Intake System: Light duty or serviceable type air cleaner

Engine Controls: C-Cruise Package (engine synchronization, slow idle, cruise 1 and 2, RPM +/-), back-up throttles, electronic throttle

Instrumentation: SmartCraft® (digital displays, analog gauges)

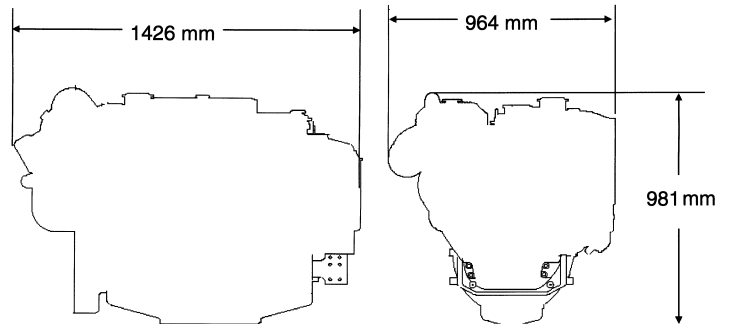
Vessel System Integration: SmartCraft® (fluid level monitoring, vessel range, depth, vessel speed, rudder position)



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ENGINE DIMENSIONS (PRELIMINARY)

Length		Width		Height		Weight (Dry)	
mm	in	mm	in	mm	in	kg	lb
1174	46.2	839	33.0	982	38.6	895	1975



FUEL CONSUMPTION (PROP CURVE: 2.7 exp.) PRELIMINARY

Rating	High Output QSC8.3-540				High Output QSC8.3-500				Intermittent QSC8.3-490			
	2600	2400	2200	2000	2600	2400	2200	2000	2500	2300	2100	1900
rpm	2600	2400	2200	2000	2600	2400	2200	2000	2500	2300	2100	1900
kW	397	320	253	196	368	296	234	181	361	288	225	172
L/hr	109.9	84	66.5	51.4	101	77	59	46	100.2	78.4	60.1	47.5

bhp	533	429	339	262	493	397	314	243	484	386	302	230
lb/hp-hr	.381	.363	.363	.363	.377	.357	.350	.351	.383	.375	.368	.383
gal/hr	29.0	22.2	17.6	13.6	26.6	20.3	15.7	12.2	26.5	20.7	15.9	12.6

Data represents performance along a 2.7 fixed pitch propeller curve. Fuel consumption has a tolerance of +5% and 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). Cummins has always been a pioneer in product improvement. Thus specifications may change without notice. Consult your local Cummins professional for further information.

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Bulletin Number: 4081927 Rev 4/05
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Rating Definitions

Ratings are based on ISO 8665 conditions of 100kPa (29.612 in Hg) and 25°C (77°F) and 30% relative humidity. Propeller shaft power represents the net power available after typical gear losses and is 97% of rated power. Power rated in accordance with IMCI procedures.

High Output (HO) Quantum Engines Only

Intended for use in variable load applications where full power is limited to one hour out of every eight hours of operation. This rating is for pleasure/non-revenue generating applications that operate less than 500 hours per year.

Intermittent Duty (INT)

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 operations must be at or below 200 rpm of the maximum rated rpm. This rating is an ISO 3046 fuel stop power rating and is intended for applications that operate less than 1,500 hours per year.

Medium Continuous Duty (MCD)

Intended for continuous use in variable load applications where full power is limited to six hours out of every twelve hours of operation. Also, reduced power operations must be at or below 200 rpm of the maximum rated rpm. This rating is an ISO 3046 fuel stop power rating and is for applications that operate less than 3,000 hours per year.

Heavy Duty (HD)

Intended for continuous use in variable load applications where full power is limited to eight (8) hours out of every ten (10) hours of operation. Also, reduced power operations must be at or below 200 rpm of the maximum rated rpm. This is an ISO 3046 fuel stop power rating and is for applications that operate 5,000 hours per year or less.