QSC8.3 Quantum Engine Series

Power Ratings

Rating	HO/GS	HO	HO/GS	HO/INT	HO	INT/HO
Metric hp	600*	550*	540	500*	500	490
bhp	593	542	533	493	493	484
kW	442	404	398	368	368	361
Rated rpm	3000	3000	2600	2600	2600	2500
Max Torque ft-lbs Max Torque N-m rpm	1327 1799 1800	1327 1799 1800	1273 1726 1600	1300 1763 1800	1280 1735 1800	1265 1715 1700

* Preliminary data for 600, 550, and 500 hp ratings.

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)
Aspiration	Turbocharged/Aftercooled
Rotation	Counterclockwise facing flywheel

Features and Benefits

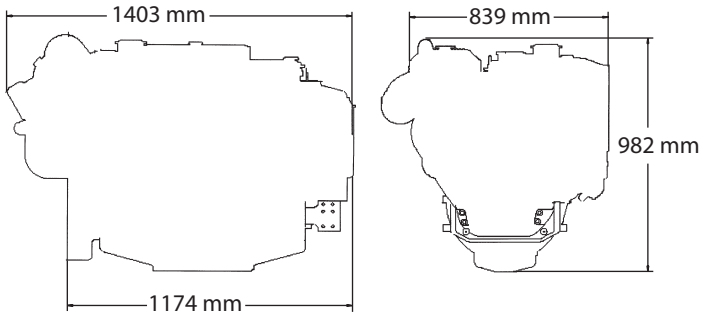
Engine Design
With its roots going back to the proven 6CTA8.3, the **QSC8.3** is providing a Quantum Leap in the marine industry by incorporating the latest diesel engine technology. A high pressure common rail fuel system virtually eliminates start up white smoke and black smoke, improves fuel economy 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. All QSC8.3 ratings use a wastegated turbocharger.

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, IMO and RCD 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 and shift
Instrumentation: SmartCraft® digital displays and/or analog gauges provide data on engine speed, oil pressure and engine load.
Vessel System Integration: SmartCraft monitors fluid level, vessel range, depth, vessel speed, rudder position, temperatures and more.

QSC8.3 Quantum Engine Series



Engine Dimensions

Length*		Width*		Height		Weight (Dry)	
mm	in	mm	in	mm	in	kg	lb
1174	46.2	839	33.0	982	38.7	896	1975

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

Fuel Consumption (2.7 Prop Curve)

Rating	QSC8.3-600 HO/GS				QSC8.3-550 HO				QSC8.3-540 HO/GS			
rpm	3000	2800	2600	2400	3000	2800	2600	2400	2600	2400	2200	2000
kW	442	367	301	242	404	335	275	221	398	320	253	196
l/hr	125.1	101.4	78.4	64.2	115.1	85.4	66.6	51.7	109.4	85.4	66.6	51.7
bhp	593	492	403	325	542	449	368	296	533	430	340	263
gal/hr	33	26.8	20.7	17.0	30.4	22.6	17.6	13.6	28.9	22.6	17.6	13.6

Rating	QSC8.3-500 HO/INT				QSC8.3-500 HO				QSC8.3-490 HO/INT			
rpm	2600	2400	2200	2000	2600	2400	2200	2000	2500	2400	2200	2000
kW	368	296	234	181	368	296	234	181	361	323	256	198
l/hr	98.1	78.4	60.1	47.5	100.6	76.7	59.3	46.1	100.2	87.9	68.8	53.0
bhp	493	397	314	243	493	397	314	243	484	433	343	265
gal/hr	25.9	20.7	15.9	12.6	26.6	20.3	15.7	12.2	26.5	23.2	18.2	14.0

* Preliminary data for 600, 550, and 500 hp ratings.

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). CMD has always been a pioneer in product improvement. Thus specifications may change without notice. Consult your local CMD professional for further information.

Rating Definitions
Ratings are based on ISO 8665 conditions of 100kPa (29.612 in Hg) and 25ºC (77ºF) 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.

Government Services (GS)
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 Federal, State and local non-revenue generating applications that operate less than 500 hours per year.

Cummins MerCruiser Diesel
www.cmdmarine.com
4500 Leeds Ave. #301
Charleston, SC 29405
email: wavemaster@cummins.com
Bulletin Number: 4081927 Rev 02/07