

QSL9 Quantum Engine Series

POWER RATINGS

| Rating | Medium Continuous*/HO | Heavy Duty*/HO | Continuous Duty*/HO |
|-------------------|-----------------------|----------------|---------------------|
| Metric HP | 405 | 330 | 285 |
| BHP | 400 | 326 | 281 |
| kW | 298 | 243 | 210 |
| Rated RPM | 2100 | 1800 | 1800 |
| Max Torque FT-LBS | 1194 | 1145 | 983 |
| Max Torque N-m | 1619 | 1553 | 1332 |
| RPM | 1400 | 1400 | 1400 |

*Meets EPA Tier 2 recreational and commercial emission standards.



ENGINE SPECIFICATIONS

| | |
|---------------|-------------------------------------|
| Configuration | In-line 6-cylinder, 4-stroke diesel |
| Bore & Stroke | 114 mm x 145 mm (4.49 in x 5.71 in) |
| Displacement | 8.9 L (542 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 **QSL9** is providing a Quantum Leap in the marine industry by incorporating the latest 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:

Handed spin on Fleetguard fuel filter

Lubrication System:

Handed spin on Fleetguard lube filter

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

Emissions: EPA Tier 2 and IMO Compliant

Coolant System: Sea water heat exchanger cooling system or keel cooled cooling system available with electronic low coolant water level alarm

AVAILABLE ACCESSORIES

Air Intake System: Light duty or serviceable type air cleaner

Breather System: Open or closed

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)

Accessory Drives: Single & dual groove pulleys, SAE A and SAE B hydraulic drives

Electrical: 80A isolated 24V alternator, isolated 12V and 24V starter



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ENGINE DIMENSIONS

| Length* | | Width* | | Height | | Weight (Dry) | |
|---------|------|--------|------|--------|------|--------------|------|
| mm | in | mm | in | mm | in | kg | lb |
| 1174 | 46.2 | 842 | 33.2 | 1086 | 42.8 | 907 | 2000 |

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

FUEL CONSUMPTION (PROP CURVE)

| Rating | Medium Continuous QSL9-405/HO | | | | Heavy Duty QSL9-330/HO | | | Continuous Duty QSL9-285/HO | | |
|----------|-------------------------------|------|------|------|------------------------|------|------|-----------------------------|------|------|
| rpm | 2100 | 1900 | 1700 | 1500 | 1800 | 1600 | 1400 | 1800 | 1600 | 1400 |
| kW | 298 | 293 | 274 | 248 | 243 | 245 | 228 | 210 | 203 | 195 |
| L/hr | 80.2 | 55.6 | 41.4 | 30.0 | 61.7 | 44.3 | 29.8 | 54.3 | 37.9 | 26.2 |
| bhp | 400 | 392 | 368 | 333 | 326 | 329 | 305 | 281 | 273 | 262 |
| lb/hp-hr | .367 | .357 | .356 | .365 | .356 | .348 | .344 | .359 | .350 | .348 |
| gal/hr | 21.2 | 14.7 | 10.9 | 7.9 | 16.3 | 11.7 | 7.9 | 14.4 | 10.0 | 6.9 |

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.

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.

Continuous Duty (CON)

Intended for continuous use in applications requiring uninterrupted service at full power. This rating is an ISO 3046 standard power rating. Typical vessel applications include: ocean-going displacement hulls such as fishing trawlers, freighters, tugboats, bottom drag trawlers, and towboats.

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.

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. The rating is for pleasure/non-revenue generating applications that operate less than 500 hours per year. 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 500 hours per year or less.

