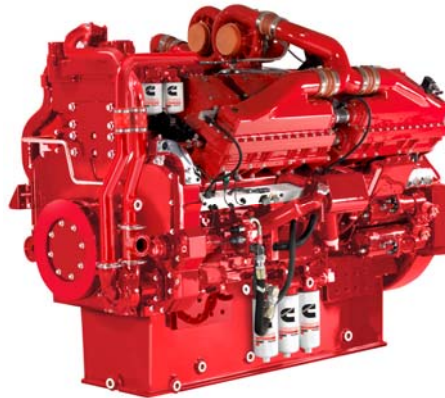


QSK45

Well Servicing Applications



In demanding oil and gas applications, dependability is everything. That's where the superior uptime and productivity of the QSK45 makes the difference. Dependability makes the new QSK45 the right engine choice. Every time.

Its V-12 configuration offers up to 2250 horsepower (1678 kilowatts), an excellent choice for high load factors. With full-authority electronic controls that provide complete engine monitoring, automatic adjustment for peak performance and fuel efficiency, plus full diagnostics and prognostics.

General Specifications V-12, 4-Cycle, Diesel Engine

Bore	6.26 in (159 mm)
Stroke	7.48 in (190 mm)
Displacement	45 L (2746 cubic in)
Engine Power*	1200-2250 hp (895-1678 kW)
Aspiration	Aftercooled/Intercooled Turbocharged
Weight (wet)**	13200 lb (5987 kg)
Coolant Capacity*	29.1 gal (110 L)
Lube Oil Capacity	48.0 gal (182 L)
Rotation	Clockwise (viewed from the front of the engine)

* Rating dependent

** Weight is approximate and varies with options.

Features

Designed for the well servicing market, the QSK45 delivers exceptional reliability and low cost of operation.

One-Piece Cast-Iron Block – Robust design with wide cylinder spacing gives long life and service capability for multiple full-life engine overhauls.

Power Cylinder Package – Proven single-piece ferrous cast ductile iron pistons for maximum durability and reliability. An advanced piston design uses nitrided liners and cast-iron top rings to handle high injection pressures with exceptional durability. Revised combustion bowl geometry developed with computer modeling allows Tier 2 emissions levels to be achieved in-cylinder. A durable seven-bolt crossflow cylinder head supports increased power output with improved breathing for higher fuel efficiency.

Long-Life Camshaft – The large-diameter camshaft with micro-finished hardened surface handles high loads, making it more reusable at rebuild.

High-Pressure Injection Fuel System (HPI) - Works at up to 29,000 psi (199,955 kPa) to optimize engine response with the best fuel economy and lowest emissions.

Warranty – The best warranty in the business, which includes full coverage for unlimited hours during the first year, extending through two years or 2,000 cumulative hours (whichever comes first). The base warranty also includes 3-year/10,000-hour standard protection on major components. Extended warranties are available as well.

*The QSK45 meets Tier 2 standards in the U.S. now, which go into effect in 2006 for engines over 750 hp (560 kW).

Rating Details.

Model	Advertised Power BHP (kW)	Peak Torque lb-ft (Nm)	Turbo Arrangement
QSK45-2250	2250 (1678) @ 1900	6300 (8542) @ 1500	1-STAGE
QSK45-2000	2000 (1491) @ 1900	5805 (7871) @ 1500	1-STAGE
QSK45-1600	1600 (1193) @ 1900	5402 (6836) @ 1500	1-STAGE

Standard Equipment.

Base Engine

- Robust block and crankshaft says everything you need to know about durability and dependability
- Ferrous Cast Ductile Iron pistons and improved cylinder head and cams for tough applications
- Camshaft and Gear Train: Large-diameter micro finished camshaft and heavy duty gear train with high contact ratio spur gears to provide higher capacities and greater durability

Electronic Engine Management

- State-of-the-art control system features enhanced electronics integrated with upgraded sensors and powerful new Electronic Control Modules (ECM) for peak performance at high altitudes and under every load condition
- Improved durable aluminum channel wiring harness allows easy servicing and prevents damage

Fuel System

- High-pressure injection (HPI) fuel system provides optimum combustion for low emissions and good fuel economy

Turbocharging

- Single-stage turbocharging for easy servicing and weight savings
- Designed and built by Cummins Turbo Technologies, they feature watercooled bearing housings for long-term reliability, and a larger compressor to provide higher airflows for maximum power and long life

Cooling System

- 2-pump, 2-loop Low Temperature Aftercooling (LTA) system delivers the intake manifold temperatures that are required for Tier 2 emission levels

Cummins Prelub System

- Prelub system distributes oil to rifles and friction surfaces before cranking, greatly extending life-to-rebuild

Oil Filtration

- Two-stage Cummins oil filters, also available as Fleetguard®, combine full-flow and bypass filtration to effectively remove harmful sludge and up to three times as many contaminants to reduce engine wear

Worldwide Service Network

- An established worldwide network with over 500 distributor facilities in nearly 190 countries, dedicated and empowered with the latest technical support tools and training to service your needs. Every hour, every day

Optional Equipment.

INSITE™

- Proprietary software with step-by-step engine diagnostics, drawings and diagrams to improve troubleshooting and repair accuracy

CENTINEL

- Advanced Engine Oil Management System that allows customers to extend oil change intervals up to 4000 hr.
- Fully integrated design modulates burn rate based on load factor. Available with reserve tanks for continuous replenishment.

ELIMINATOR™

- Self cleaning filter core which helps to eliminate oil filter change and disposal headaches. Saves up to 90% of lube system maintenance costs and increase productivity. Requires servicing only every 1,500 hours.

Cummins QuickCheck III

- QuickCheck III software, together with your handheld device, reads and captures engine data quickly and conveniently from any Cummins electronic diesel engine or other engines you run (via J2587 and J1939).
- Even logs fault codes, which can be used with Cummins INSITE to get detailed repair instructions for faster service.

QuickServe® Online

- QuickServe Online (quickserve.cummins.com) gives you easy access to parts and service information for all Cummins engines
- You can find the information you need in seconds with our high-speed search function and your engine's serial number.

Engine Technical Data.

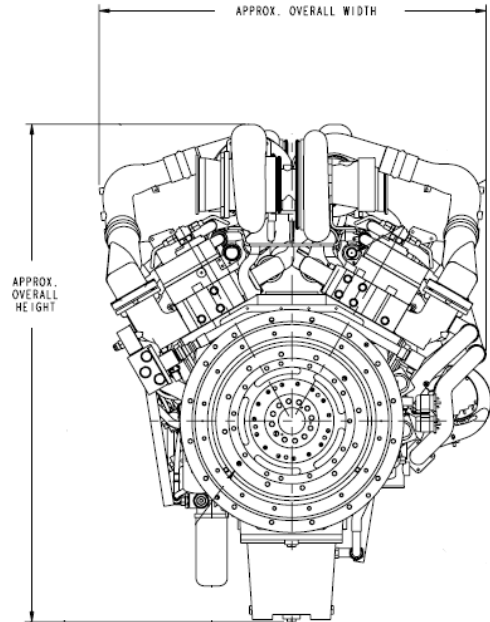
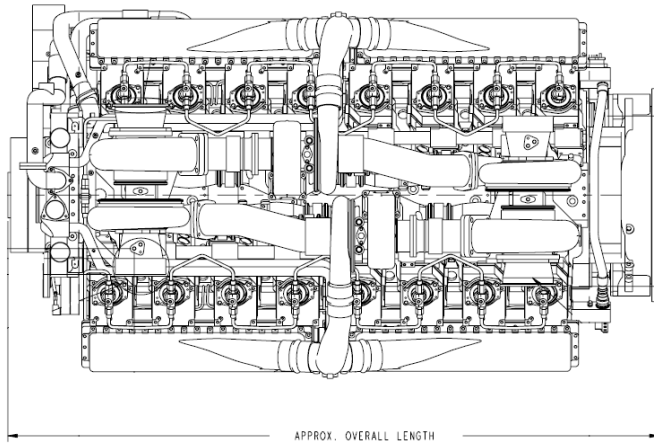
Model: QSK45 - 2250
Output Power: 2250 bhp

Engine Speed		Torque Output		Power Output		BSFC	
RPM	lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1500	6,300	8,542	1,799	1,342	0.327	199	
1600	6,298	8,539	1,919	1,431	0.329	200	
1700	6,262	8,490	2,027	1,512	0.334	203	
1800	6,227	8,443	2,134	1,591	0.339	206	
1900	6,129	8,432	2,250	1,678	0.345	210	

Model: QSK45 - 2000
Output Power: 2000 bhp

Engine Speed		Torque Output		Power Output		BSFC	
RPM	Lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1500	5,805	7,871	1,658	1,236	0.324	197	
1600	5,800	7,864	1,767	1,318	0.325	198	
1700	5,750	7,796	1,861	1,388	0.330	201	
1800	5,675	7,694	1,945	1,450	0.337	205	
1900	5,528	7,495	2,000	1,491	0.343	209	

General Dimensions.



	English Units	SI
Length	94.5 in	2,399 mm
Width	58.4 in	1,483 mm
Height	74 in	1,880 mm
Weight (Wet)	13,200 lbs	5,987 kg

Definitions and Conditions.

Drawings are just for illustration purpose, do not represent actual engine. Data shown above represent gross engine performance capabilities obtained and corrected in accordance with SAE J1995 conditions of 29.61 in Hg (100 kPa) barometric pressure [300ft (91m) altitude] 77 deg F (25 deg C) inlet air temperature, and 0.30 in Hg (1kPa) water vapor pressure with No. 2 diesel fuel. Not included are alternator, fan, optional equipment and driven components. Electronic derate based on altitude applies.

All data is subject to change without notice. Consult your authorized Cummins Distributor for details.

Load Rating

Maximum Rating. May be used for intermittent load applications (full throttle operation is cyclically interrupted) where the average load factor does not exceed the continuous rating, and where full throttle operation does not exceed 60 minutes without interruption.

International Rating Guidelines

These ratings represent gross engine performance capabilities obtained and corrected in accordance with SAE J1995 and the conditions as stated above. The ratings are in conformance with the requirements specified in ISO 3046, BS 5514 and DIN 6271. The Maximum Rating conforms to ISO 3046 overload power and fuel stop power. Reference standards: BS 5514 and DIN 6271 standards are based on ISO 3046.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

Phone: 1-800-DIESELS
Fax: 1-812-232-6393
Internet: www.CumminsOilandGas.com

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