

QST30

Well Servicing Applications



In demanding oil and gas applications, dependability is everything. That's where the superior uptime and productivity of the QST30 makes the difference. Dependability makes the QST30 the right engine choice. Every time. Its V-12 configuration offers up to 1500 hp (1117 kW) to easily handle high load factors.

A sophisticated electronic control system and extended maintenance features help keep fuel economy up and operating costs down. So whether you are spec'ing new equipment or repowering an existing unit, the QST30 is the best way to improve performance, productivity and profits.

General Specifications

V-12, 4-Cycle, Diesel Engine

<u>Bore</u>	<u>5.51 in (140 mm)</u>
<u>Stroke</u>	<u>6.50 in (165 mm)</u>
<u>Displacement</u>	<u>30.5 L (1861 cubic in)</u>
<u>Engine Power*</u>	<u>850-1500 hp (634-1119 kW)</u>
<u>Aspiration</u>	<u>Turbocharged and Aftercooled</u>
<u>Wet Weight**</u>	<u>7337 lb (3328 kg)</u>
<u>Coolant Capacity</u>	<u>22.2 gal (84 L)</u>
<u>Lube Oil Capacity</u>	<u>34.9 gal (132 L)</u>
<u>Rotation</u>	<u>Clockwise (viewed from the front of the engine)</u>

* Rating dependent

** Weight is approximate and varies with options.

Performance

The QST30 delivers more power and more torque in a smaller package than competitive diesels. Known for its flexible calibrations, excellent power density, economical operation and exceptional uptime, the QST30 sets the standard for rugged dependable power.

The QST30 is an excellent choice to replace a number of engines – including some of our own. It has significantly more power, as much as 50% longer life-to-rebuild and better fuel economy than the Cummins V28, even though it is virtually the same size. Repowers are available with air-to-air cooling (for equipment which has to meet emissions standards) or jacket-water aftercooling (for non-emissionized equipment).

If you have an older competitive engine, you'll find that replacing it with the QST30 gives you up to 25% more power and torque, better fuel economy and longer service intervals, for increased productivity with lower costs. Every Well.

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 QST30 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
QST30-1500	1500 (1119) @ 1900	4389 (5951) @ 1400	1-STAGE
QST30-1350	1350 (1007) @ 1900	4389 (5951) @ 1400	1-STAGE

Standard Equipment.

Base Engine Components

- Ductile Iron Pistons – Provide increased strength and durability to handle increased cylinder pressures for longer life-to-overhaul while allowing higher ratings over larger displacement engines with aluminum pistons
- Swirl-Port Cylinder Head – Provides advanced airflow to reduce emissions and increase low-end torque
- Advanced Valve Metallurgy – Exhaust valves are stellitefaced for longer life
- Intake valves have a nitride coating, with triballoy valve seats and chrome stems for reduced wear

Electronic Engine Management

- Full-Authority Electronic Controls – QUANTUM System electronic engine management provides engine control and monitoring for superior performance, fuel efficiency, diagnostics and prognostics
- Programmable parameters let you customize engine performance to equipment use

Advanced Engine Monitoring

- Advanced Engine Monitoring (AEM) provides real-time monitoring of engine performance, cylinder by cylinder-facilitating trend analysis and proactive maintenance during scheduled downtime

Fuel System

- Bosch RP39 Fuel Pump – Highly reliable, highly durable
- Provides the higher injection pressures needed for higher horsepower with lower emissions
- Electric Fuel Lift Pumps – Eliminate the need for manual priming of the fuel system and provide for quicker, more reliable starts
- Two-stage filtration system for maximum protection
- Stage one filter is available as remote mount or engine mount option

Turbocharging

- Holset HX82 Turbocharger – Designed for improved air handling with an extended life-to-rebuild

Cooling System

- Two-Pump, Two-Loop Low Temperature Aftercooling (LTA) system to deliver intake manifold temperatures required for Tier 2 emission levels

Cummins Prelub System

- Prevents starts without oil pressure and dry starts, resulting in increased life-to-overhaul

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

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 hours
- Fully integrated design modulates burn rate based on load factor
- Available with reserve tanks for continuous replenishment

Fleetguard® ES Filtration

- Can keep your equipment on the job up to 1,000 hours between filter changes if equipped with CENTINEL™ (depending on load factors)
- Full-flow and bypass design simplifies service and reduces replacement costs

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.

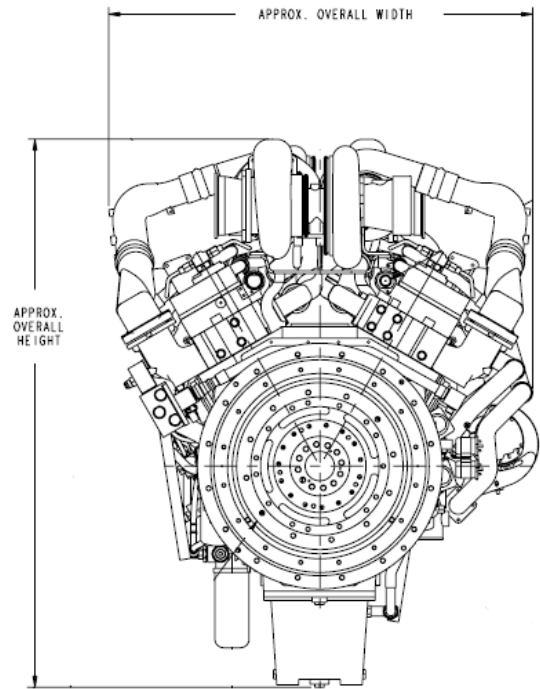
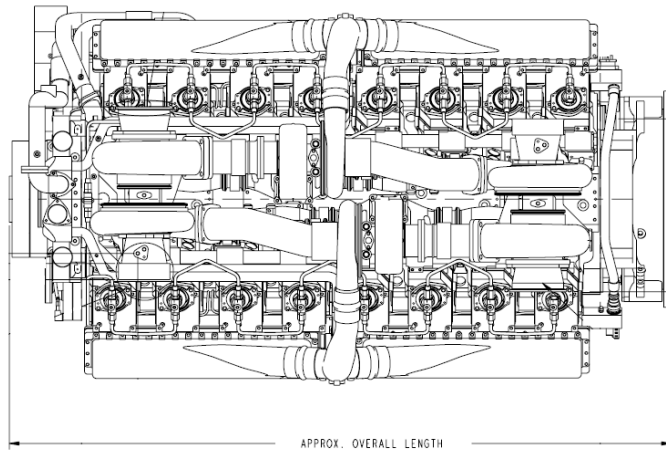
Model: QST30 - 1500
Output Power: 1500 bhp

Engine Speed		Torque Output		Power Output		BSFC	
RPM	lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1400	4,877	6,612	1,300	969	0.324	197	
1600	4,596	6,231	1,400	1,044	0.324	197	
1800	4,377	5,934	1,500	1,119	0.335	204	
1900	4,146	5,621	1,500	1,119	0.342	208	
2000	3,786	5,133	1,442	1,075	0.350	213	

Model: QST30 - 1350
Output Power: 1350 bhp

Engine Speed		Torque Output		Power Output		BSFC	
RPM	lb-ft	N-m	hp	kW	lb/hp-hr	g/kW-hr	
1400	4,389	5,951	1,170	872	0.326	198	
1600	4,136	5,608	1,260	940	0.319	194	
1800	3,939	5,341	1,350	1,007	0.325	198	
1900	3,732	5,060	1,350	1007	0.333	203	
2000	3,380	4,583	1,287	960	0.337	205	

General Dimensions.



	English Units	SI
Length	75.2 in	1,910 mm
Width	55.9 in	1,419 mm
Height	65.0 in	1,652 mm
Weight (Wet)	7,337 lbm	3,328 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.



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