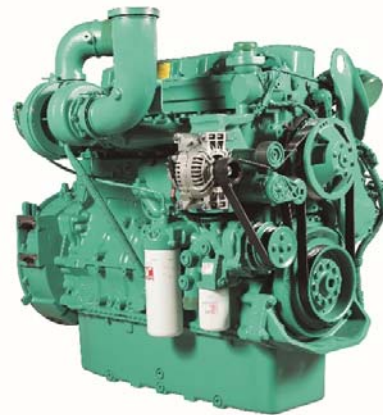


# QSZ13-G7

Emissions Compliance:  
EU Stage IIIA @ 50 Hz  
U.S. EPA Tier 3 @ 60 Hz



> Specification sheet

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## Description

The QSZ13 engine is designed to meet the European Union (EU) Stage IIIA and EPA Tier 3 generator set emission standards. Evolved from the proven and successful base engine platform of an automotive engine, which is widely accepted for its high levels of in-service reliability and performance, the QSZ13 engine utilizes the Cummins High Pressure Injection (XPI) fuel system.

The QSZ13 engine was developed using Cummins unique in-house capability, adapting core technologies in electronics, fuel systems, turbo charging, filtration, and emissions. The QSZ13 engine has low derating thresholds for temperature and altitude, coupled with 50°C ambient capable cooling system makes these engines top performers in the harshest conditions.

Robust, clean, resilient and capable of matching the duty cycle and operating conditions of many applications, the QSZ13 engine is ideally suited for both open and enclosed applications in either static or mobile equipment.



This engine has been built to comply with CE certification.



This engine has been designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

## Features

**Coolpac Integrated Design** - Products are supplied complete with cooling package and air cleaner kit for a complete power package. A Heavy duty air cleaner is offered as an option.

**Full Authority Electronic Dual Speed Engine** - Advanced engine monitoring, diagnostics, protection and control, coupled with the XPI fuel system, capable of delivering extreme fuel injection pressures with multiple injection events, results in reduced emissions, improved fuel efficiency, lower noise and enhanced engine performance.

**Fuel Filtration System** – Three-stage fuel filtration system provides high levels of protection against fuel becoming contaminated with dust, dirt, or water.

**Controls** - Fitted with a Power Generation Interface (PGI) to improve emissions, the widely accepted SAE J1939 industry standard CAN based communication network provides advanced engine protection, ensuring faster connectivity along with a superior fault finding capability.

**Crankcase Breather** – Cummins patented variable impactor breather design and coalescing filter removes emissions as required by regulations, with the added benefit of eliminating oil drips and mist while keeping the surroundings clean.

**Reduced Operating Costs** – Extended service intervals for the oil and filter changes.

**Service and Support** – G-Drive products are backed by an uncompromising level of technical support and after sales support, delivered through a world class service network.

## 1500 rpm (50 Hz Ratings)

Gross Engine Output			Net Engine Output			Typical Generator Set Output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
419/562	367/492	330/442	401/537	348/466	312/417	360	450	327	409	293	366

## 1800 rpm (60 Hz Ratings)

Gross Engine Output			Net Engine Output			Typical Generator Set Output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
467/626	409/548	367/492	449/601	397/531	356/476	400	500	364	455	323	404

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## General Engine Data

Type	4 Cycle, In-line, Turbocharged and Charge Air Cooled
Bore	130 mm (5.12 in.)
Stroke	163 mm (6.42 in.)
Displacement	13 litre (793 in. <sup>3</sup> )
Cylinder Block	Cast iron, 6 cylinder
Battery Charging Alternator	35 amps
Starting Voltage	24 volt
Fuel System	XPI
Fuel Filter	Engine mounted, primary spin-on fuel filter, 7 micron, with water separator & Water in Fuel (WIF) sensor and secondary 3 micron spin-on fuel filter. Remote mounted 10 micron pre fuel filter supplied as standard scope.
Lube Oil Filter Type(s)	Spin-on full flow filter
Lube Oil Capacity	78 litre
Flywheel Dimensions	SAE1

## Coolpac Performance Data

Cooling System Design	Air to Air, Charge Air Cooled
Coolant Ratio	50% ethylene glycol; 50% water
Total Coolant Capacity	62 litre
Limiting Ambient Temp. **	50° C
Fan Power (kWm)	18.1 (50 Hz), 31.5 (60 Hz)
Cooling System Air Flow ** (m <sup>3</sup> /s)	8.1 (50 Hz), 10.3 (60 Hz)
Air Cleaner Type	Normal Duty dry replaceable element with restriction Indicator

\*\* @ 13 mm H<sup>2</sup>O duct restriction

## Engine Weight & Dimensions

Length	Width	Height	Weight (dry)
mm	mm	mm	kg
1389	1276	1050	1,250

## Fuel Consumption 1500 (50 Hz)

%	kWm	BHP	L/h	US gal/h
<b>Standby Power</b>				
100	419	562	101	26.7
<b>Prime Power</b>				
100	367	492	89	23.5
75	275	369	73	19.2
50	183	246	54	14.2
25	92	123	29	7.7
<b>Continuous Power</b>				
100	330	442	82	21.7

## Fuel Consumption 1800 (60 Hz)

%	kWm	BHP	L/h	US gal/h
<b>Standby Power</b>				
100	467	626	111	29.4
<b>Prime Power</b>				
100	409	548	102	26.9
75	306	411	85	22.5
50	204	274	61	16.1
25	102	139	37	9.9
<b>Continuous Power</b>				
100	367	492	95	25.1

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## Ratings Definitions

### Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Limited-Time Running Power (LTP):

Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

### Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Base Load (Continuous) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.