



# QSZ13-G7

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



## 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, the QSZ13 engine utilizes the Cummins High Pressure Injection (XPI) fuel system and is widely accepted for its high levels of in-service reliability and performance.

The QSZ13 engine was developed using Cummins unique in-house capabilities, including adapting core technologies in electronics, fuel systems, turbo charging, filtration, and emissions. The QSZ13 engine has high derating thresholds for temperature and altitude, which are coupled with 50° C ambient capable cooling system to make 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 suitable for both open and enclosed installations as well as stationary or mobile applications.



This equipment is EU RoHS compliant and has been built to comply with CE certification requirement.



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 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	404/542	351/471	315/423	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	442/593	391/524	349/468	400	500	360	450	321	401

## General engine data

Type	4 cycle, in-line, turbocharged, air-cooled
Bore mm	130 mm (5.12 in.)
Stroke mm	163 mm (6.42 in.)
Displacement litre	13 litre (793 in. <sup>3</sup> )
Cylinder block	Cast iron, 6 cylinder
Battery charging alternator	80 amps
Starting voltage	24 volt, negative ground
Fuel system	XPI
Fuel filter	Spin-on fuel filters with water separator
Lube oil filter type(s)	Spin-on full flow filter
Lube oil capacity (l)	78
Flywheel dimensions	SAE1

## Coolpac performance data

Cooling system design	Air-air charge cooled
Coolant ratio	50% ethylene glycol; 50% water
Coolant capacity (l)	62
Limiting ambient temp. ** (°C)	50 (50 Hz); 55 (60 Hz)
Fan power (kWm)	18.5 (50Hz); 31.5 (60Hz)
Cooling system air flow (m <sup>3</sup> /s)**	8.1 (50Hz); 10.3 (60Hz)
Air cleaner type	Normal duty dry replaceable element with restriction indicator

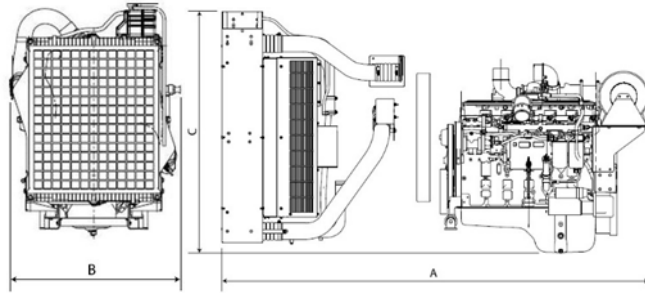
\*\* @ 13 mm H<sub>2</sub>O

## Fuel consumption 1500 (50 Hz)

%	kWm	BHP	L/ph	g/kWh
<b>Standby Power</b>				
100	419	562	101	207
<b>Prime Power</b>				
100	366	491	89	209
75	275	369	73	225
50	183	245	54	248
25	92	123	29	268
<b>Continuous Power</b>				
100	330	443	82	214

## Fuel consumption 1800 (60 Hz)

%	kWm	BHP	L/ph	g/kWh
<b>Standby Power</b>				
100	467	626	111	205
<b>Prime Power</b>				
100	409	549	102	212
75	306	410	85	231
50	204	274	61	250
25	102	137	37	302
<b>Continuous Power</b>				
100	367	492	95	220



## Weights and dimensions

Length mm	Width mm	Height mm	Weight (dry) kg
1389	1276	1050	1250

## Ratings definitions

Emergency Standby Power (ESP):	Limited-Time Running Power (LTP):	Prime Power (PRP):	Base Load (Continuous) Power (COP):
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.	Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.	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.	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.

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