QSZ13-G5

Emissions Compliance:
EU Stage II @ 50 Hz
U.S. EPA Tier 2 @ 60 Hz

> Specification sheet

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Description

The QSZ13 engine is designed to meet the European Union (EU) Stage II and EPA Tier 2 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.

CE — This engine has been built to comply with CE certification.

ISO 9001 — 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
470/630	411/551	370/496	452/605	393/526	352/470	400	500	364	455	330	413

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
500/670	437/586	393/527	482/645	440/589	394/528	440	550	400	500	348	435

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EMERS-5955b-EN (4/15)

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.^{3})
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^3/s)**	8.1 (50 Hz), 10.3 (60 Hz)
Air Cleaner Type	Normal Duty dry replaceable element with restriction Indicator

**** @ 13 mm H^2O duct restriction**

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.

Weight & Dimensions

Length	Width	Height	Weight (dry)
mm	mm	mm	kg
1389	1276	1050	1,245

Fuel Consumption 1500 (50 Hz)

%	kWm	BHP	L/h	US gal/h
Standby Power				
100	470	630	107	28.3
Prime Power				
100	411	551	93	24.6
75	308	413	70	18.6
50	205	275	49	13
25	103	138	30	7.9
Continuous Power				
100	370	496	84	22.2

Fuel Consumption 1800 (60 Hz)

%	kWm	BHP	L/h	US gal/h
Standby Power				
100	500	670	117	30.9
Prime Power				
100	437	586	107	28.3
75	328	440	81	21.4
50	218	293	54	14.3
25	110	147	35	9.2
Continuous Power				
100	393	527	96	25.4

Cummins G-Drive Engines

Asia Pacific
10 Toh Guan Road
#07-01
TT International Tradepark
Singapore 608838
Phone 65 6417 2388
Fax 65 6417 2399

Europe, CIS, Middle East and Africa
Manston Park Columbus Ave
Manston Ramsgate
Kent CT12 5BF. UK
Phone 44 1843 255000
Fax 44 1843 255902

Latin America
Rua Jati, 310, Cumbica
Guarulhos, SP 07180-900
Brazil
Phone 55 11 2186 4552
Fax 55 11 2186 4729

Mexico
Cummins S. de R.L. de C.V.
Eje 122 No. 200 Zona Industrial
San Luis Potosí, S.L.P. 78090
Mexico
Phone 52 444 870 6700
Fax 52 444 870 6811

North America
1400 73rd Avenue N.E.
Minneapolis, MN 55432
USA
Phone 1 763 574 5000
USA Toll-free 1 877 769 7669
Fax 1 763 574 5298

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EMERS-5955b-EN (4/15)