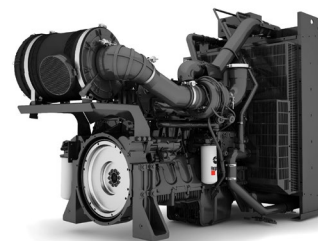




## QSG12-G2

### Fuel Optimized



### Description

The QSG12 engine is designed with fewer parts and less weight to provide higher reliability and more convenient maintenance. Featuring the Cummins High Pressure Common Rail (HPCR) fuel system, the QSG12 has evolved from the proven and successful base platform of an automotive engine, which is widely accepted for its high levels of in-service reliability and performance.

The QSG12 engine also has excellent derating performance for temperature and altitude; when coupled with 50°C ambient capable cooling system, it makes these engines the best performers in the harshest conditions.

### Features

**Cummins High Pressure Common Rail (HPCR) Fuel System** – Most capable common-rail fuel system utilized on a heavy-duty engine, enabling faster and smoother power delivery with lower fuel consumption.

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

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

**Controls** - Fitted with the Cummins CM2880 ECM that utilizes the latest in microprocessor technology. Includes the Cummins proprietary Power Generation Interface (PGI); 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.

**Fuel Filtration System** – Fleetguard two-stage fuel filtration system using NanoNet™ nanomedia can effectively block impurities as small as 5 microns and includes water in fuel (WIF) sensor. This provides reliable protection for engine fuel system components against fuel contaminated with dust, dirt or water.

**Lube Filtration System** – Fleetguard Lube Filter using patented StrataPore™ filter paper delivers best in class performance while providing high efficiency filtration for extended protection to the engine and components.

**Reduced Operating Costs** – 500 hours for standard oil and filter changes.

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



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

This equipment has been designed and tested to meet EU product safety regulations. Material compliance declaration is available upon request

## 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 |
| 409/549             | 371/498 | 334/448 | 390/523           | 356/477 | 319/428 | 364                          | 455 | 333         | 416 | 298        | 372 |

## General Engine Data

|                             |                                            |
|-----------------------------|--------------------------------------------|
| Fuel Rating                 | FR20730                                    |
| Type                        | 6 cycle, in-line, turbocharged, air-cooled |
| Bore mm                     | 132 mm (5.20 in.)                          |
| Stroke mm                   | 144 mm (5.67 in.)                          |
| Displacement litre          | 11.8 litre (721 in. <sup>3</sup> )         |
| Cylinder block              | Cast iron, 6 cylinder                      |
| Battery charging alternator | 110 amps                                   |
| Starting voltage            | 24 volt                                    |
| Fuel system                 | Cummins HPCR                               |
| Fuel filter                 | Spin-on fuel filters with water separator  |
| Lube oil filter type(s)     | Spin-on full flow filter                   |
| Lube oil capacity (l)       | 34.1                                       |
| Flywheel dimensions         | SAE 1                                      |

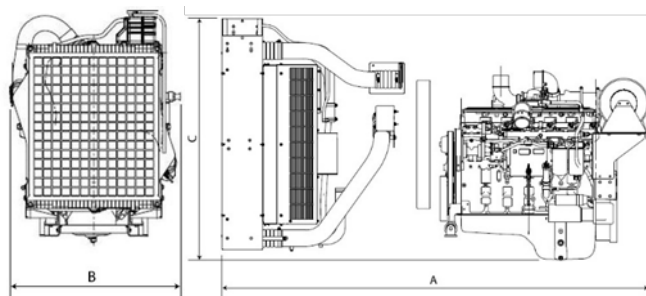
## Coolpac Performance Data

|                                               |                                                                |
|-----------------------------------------------|----------------------------------------------------------------|
| Cooling system design                         | Air-air charge cooled                                          |
| Coolant ratio                                 | 50% ethylene glycol; 50% water                                 |
| Coolant capacity (l)                          | 48.0                                                           |
| Limiting ambient temp.** (°C)                 | 50                                                             |
| Fan power (kWm)                               | 14.08                                                          |
| Cooling system air flow (m <sup>3</sup> /s)** | 7.15                                                           |
| 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/hr | US Gal./hr |
|-------------------------|-----|-----|------|------------|
| <b>Standby Power</b>    |     |     |      |            |
| 100                     | 409 | 549 | 92   | 24.2       |
| <b>Prime Power</b>      |     |     |      |            |
| 100                     | 371 | 498 | 82   | 21.5       |
| 75                      | 279 | 374 | 60   | 15.9       |
| 50                      | 186 | 249 | 41   | 10.8       |
| 25                      | 93  | 125 | 22   | 5.7        |
| <b>Continuous Power</b> |     |     |      |            |
| 100                     | 334 | 448 | 73   | 19.2       |



\*Drawing for illustration purposes only.

## Weights and Dimensions

| Length<br>mm | Width<br>mm | Height<br>mm | Weight (dry)<br>kg |
|--------------|-------------|--------------|--------------------|
| 2293         | 1083        | 1705         | 1010               |

## 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. |

For more information contact your local Cummins distributor  
or visit [power.cummins.com](http://power.cummins.com)

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