

QSK23-G3



> Specification sheet



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Description

The QSK23 is an in-line 6 cylinder engine with a 23 litre displacement. This Quantum series utilizes sophisticated electronics and premium engineering to provide outstanding performance levels, reliability and versatility for Standby, Prime and Continuous Power applications.



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

The QSK23 uses the Cummins High Pressure Injection (HPI) PT full authority electronic fuel system. The HPI PT fuel system is managed by a G-Drive Governor Control System (GCS) controller, which is provided for off-engine mounting in the genset control panel. The Quantum Control has a specific fuel system board to interface with the HPI-PT fuel system and provides an Engine Protection package giving greater customer flexibility and cost effective alternatives in the control design and the benefits of Full Authority electronic control.

CTT (Cummins Turbo Technologies) HX82 turbo-charging utilizes exhaust energy with greater efficiency for improved emissions and fuel consumption.

Charge Air Cooling - QSK23 engine requires the use of an Air-to-Air heat exchanger or Charge-Air-Cooler (CAC) to reduce intake manifold temperature and to meet the lower emissions requirements.

CoolPac Integrated Design - Products are supplied complete with cooling package and air cleaner kit for a complete power package. Each component has been specifically developed and rigorously tested for G-Drive products, ensuring high performance, durability and reliability.

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.

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 |
| 768/1030 | 701/940 | 537/720 | 739/991 | 682/915 | 517/693 | 720 | 900 | 648 | 810 | 491 | 614 |

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 |
| 895/1200 | 809/1085 | 652/875 | 857/1149 | 776/1041 | 621/833 | 800 | 1000 | 727 | 909 | 583 | 729 |

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General Engine Data

| | | | |
|-----------------------------|---|--|--|
| Type | 4 cycle, Turbocharged | | |
| Bore mm | 170 | | |
| Stroke mm | 170 | | |
| Displacement Litre | 23.1 | | |
| Cylinder Block | Cast iron, 6 cylinder | | |
| Battery Charging Alternator | 35A | | |
| Starting Voltage | 24V | | |
| Fuel System | Direct injection Cummins HPI | | |
| Fuel Filter | Spin on fuel filters with water separator | | |
| Lube Oil Filter Type(s) | Spin on full flow filter | | |
| Lube Oil Capacity (l) | 103 | | |
| Flywheel Dimensions | SAE 0 | | |

Coolpac Performance Data

| | | | |
|---|--|-------------|--|
| Cooling System Design | Air-air charge cooled | | |
| Coolant Ratio | 50% ethylene glycol; 50% water | | |
| Total Coolant Capacity (l) | 110 | | |
| Limiting Ambient Temp (°C)** | 50.9 (50Hz) | 55.0 (60Hz) | |
| Fan Power (kWm) | 14.4 (50Hz) | 24.2 (60Hz) | |
| Cooling System Air Flow (m ³ /s)** | 13.5 (50Hz) | 16.6 (60Hz) | |
| Air Cleaner Type | Dry replaceable element with restriction indicator | | |

** @ 13 mm H²O

Weight & Dimensions

| Length | Width | Height | Weight (dry) |
|--------|-------|--------|--------------|
| mm | mm | mm | kg |
| 2976 | 1656 | 1964 | 3245 |

Fuel Consumption 1500 (50 Hz)

| % | kWm | BHP | L/ph | US gal/ph |
|-------------------------|-----|------|------|-----------|
| Standby Power | | | | |
| 100 | 768 | 1030 | 178 | 46.9 |
| Prime Power | | | | |
| 100 | 701 | 940 | 161 | 42.5 |
| 75 | 526 | 705 | 121 | 32.0 |
| 50 | 351 | 470 | 85 | 22.4 |
| 25 | 175 | 235 | 46 | 12.2 |
| Continuous Power | | | | |
| 100 | 537 | 720 | 125 | 33.1 |

Fuel Consumption 1800 (60 Hz)

| % | kWm | BHP | L/ph | US gal/ph |
|-------------------------|-----|------|------|-----------|
| Standby Power | | | | |
| 100 | 895 | 1200 | 212 | 56.1 |
| Prime Power | | | | |
| 100 | 809 | 1085 | 189 | 49.8 |
| 75 | 607 | 814 | 139 | 36.7 |
| 50 | 405 | 543 | 97 | 25.7 |
| 25 | 202 | 271 | 56 | 14.7 |
| Continuous Power | | | | |
| 100 | 653 | 875 | 149 | 39.4 |

Cummins G-Drive Engines

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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.