QGS - 1.875 | INDUSTRIAL RANGE POWER BY CUMMINS

No quality - No born

Model: QGS - 1.875

Powered by CUMMINS

Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	1875	2063
Power (kW)	1500	1650
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	

QNG Power gensets are compliant with ISO 9001 and CE standard, which include the following directives:

- 2006/42/EC Machinery safety.
- 2006/95/EC Low voltage
- EN 60204-1: 2006+A1: 2009, EN ISO 12100: 2010, EN ISO 13849-1: 2008, EN 12601 : 2010

(1) PRP (Prime Power):

According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

(2) ESP (Standby Power):

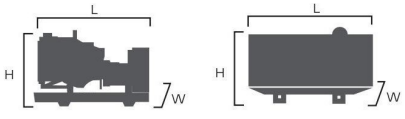
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

Powers Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby Amps
415/240	2063	1650	1875	1500	2870.1
400/230	2063	1650	1875	1500	2977.8
380/220	2063	1650	1875	1500	3134.5

Performance Data		
Model		QGS - 1.875
Engine brand		Cummins
Engine model		QSK60G3
Speed control type		ECM
Phase		3
Control system		Digital
Starter motor voltage		24V
Frequency		50HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	406
	100% prime power	363
	75% prime power	270
	50% prime power	190

Standard reference Conditions

Note: Standard reference condition 25℃ (77℉) air inlet temp, 100m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998 , Class A2



Dimension and Weight		
Dimension	Open	Silent
Length (L)	REQ	12192mm
Width (W)	REQ	2438mm
Height (H)	REQ	2896mm
Net Weight	REQ	/
Fuel Tank (L)	REQ	/

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Engine Specification: QSK60G3

Basic technical data	
No. of cylinders	16
Cylinder arrangement	60° Vee
Cycle	4 stroke
Induction system	Turbocharger
Compression ratio	14.5:1
Bore	159mm
Stroke	190mm
Displacement	60.2L
Engine idle speed	700-900 RPM
Approximate engine weght	7185kg

Cooling system	
Coolant capacity-engine	157L
Maximum coolant friction head external to engine:	
-1800 rpm	/
-1500 rpm	48KPA
Maximum static head of coolant above engine crank centerline	18.3m
Standard Thermostat (Modulating) Range	82 -93℃
Minimum Pressure Cap	76 KPA
Maximum Top Tank Temperature for Standby / Prime Power	104/ 100℃

Fuel system	
Injection system	Cummins HPI-PT
Governor type	ECM
Maximum Fuel Flow to Injection Pump	1515l/h
Maximum fuel inlet temperature	70° ℃
Maximum Drain Flow	1400l/h

Air intake system	
Maximum intake air restriction with heavy duty air cleaner:	
-Dirty element	25 in H_2O
-Clean element	15 in H_2O

Lubrication system	
Engine oil pressure for engine protection devices:	
— Idle speed(Minimum)	138kPa
— Governed speed(Maximum)	345-483kPa
Maximum oil temperature	121 ℃
Minimum required lube system capacity-sump plus filters	/

Electrical system	
Cranking motor (Heavy duty, positive engagement	24V
Battery charging system, negative ground	40 ampere
Maximum allowable resistance of cranking circuit	0.002 ohm
Minimum recommended battery capacity- cold soak	2200 CCA

General installation	Standby power
Gross engine power output	1790kw
Piston speed	9.5m/s
Friction horsepower	146KW
Engine water flow to engine	26.5L/S
Intake air flow	2255L/S
Exhaust gas flow	5525L/min
Exhaust gas temperature	440℃
Radiated heat to ambient	160KW
Heat rejection to Exhaust	1120KW
Heat rejection to fuel	35KW

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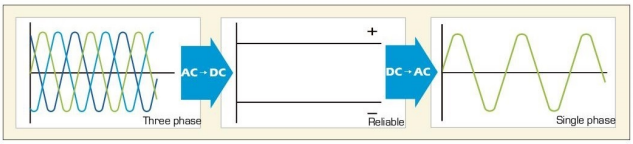
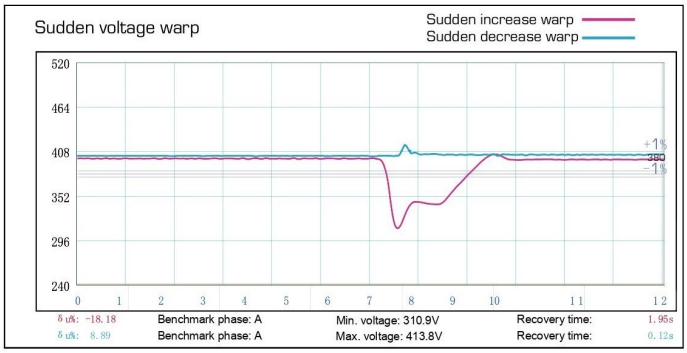
Alternator Specification

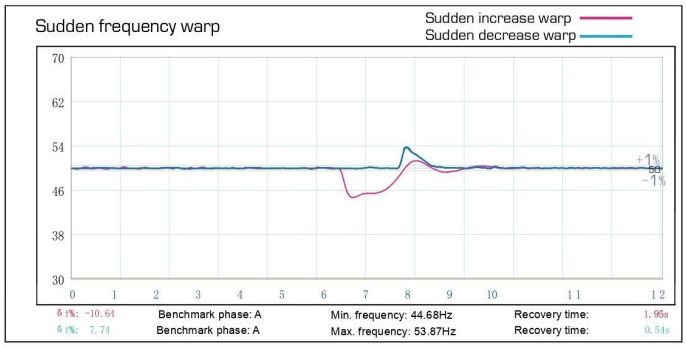
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



Options

Engine	Alternator	Generator Sets	Fuel System
• Water Jacket Pre-heater • Fuel heater	• Winding Temp measuring Instrument • Alternator Pre-heater • PMG • Anti-damp and anti-corrosion treatment • Anti-condensation heater • Winding and bearing RTD	• Tools with the machine • Extended range fuel tank • Bunded fuel tank	• Low fuel level alarm • Automatic fuel feeding system • Fuel T-valves
Canopy	**Lub oil system**	**Cooling System**	**Control Panel**
• Rental type Canopy • Trailer	• Oil Pre-heater • Oil temp sensor	• Front heat protection	• Remote control panel • ATS • Synchronizing controller • Adjustable earth leakage relay

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Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements (50HZ/60HZ)
- Generator measurements (50HZ/60HZ)
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
  - Over-/under voltage
  - Over-/under frequency
  - Current/voltage asymmetry
  - Over current/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 ℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ±1.6 mm
  5-100Hz, a=4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs

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