AGG Power Solutions

Model: CU1250E6

Powered by CUMMINS

Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	1138	1250
Power (kW)	910	1000
Rated speed (r.p.m)	1800	
Standard voltage (V)	440/254V	
Rated at power factor(cos phi)	0.8	

ISO 9001 BUREAU VERITAS Certification

CE

AGG 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):

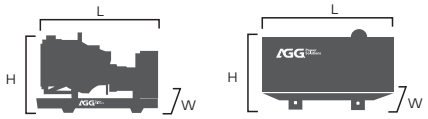
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

Powers	ESP		PRP		Standby
Voltage (V)	KVA	KW	KVA	KW	Amps
480/277	1250	1000	1138	910	1503.6
440/254	1250	1000	1138	910	1640.2
380/220	1250	1000	1138	910	1899.2
220/127	1250	1000	1138	910	3280.5
208/120	1250	1000	1138	910	3469.8

Performance Data		
Model		CU1250E6
Engine brand		Cummins
Engine model		QST30G4
Speed control type		ECM
Phase		3
Control system		Digital
Starter motor voltage		24V
Frequency		60HZ
Engine speed (RPM)		1800
Fuel Consumption (L/H)	100% standby power	267
	100% prime power	240
	75% prime power	177
	50% prime power	119

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)	4370mm	6058mm
Width (W)	2010mm	2438mm
Height (H)	2400mm	2591mm
Net Weight	8100KG	13500KG
Fuel Tank (L)	-	1000

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Engine Specification: QST30G4

Basic technical data	
No. of cylinders	12
Cylinder arrangement	50° Vee
Cycle	4 stroke
Induction system	Turbocharger
Compression ratio	14.0:1
Bore	140mm
Stroke	165mm
Displacement	30.48L
Engine idle speed	700-900 RPM
Approximate engine weght	3012kg

Cooling system	
Coolant capacity-engine	79L
Maximum coolant friction head external to engine:	
-1800 rpm	69 KPA
-1500 rpm	48 KPA
Maximum static head of coolant above engine crank centerline	14m
Standard Thermostat (Modulating) Range	82 -95℃
Minimum Pressure Cap	/
Maximum Top Tank Temperature for Standby / Prime Power	104/ 100℃

Fuel system	
Injection system	Bosch P8500 LLA
Governor type	ECM
Maximum restriction at lift pump	/
Maximum fuel inlet temperature	71° C
Total drain flow (constant for all loads)	/

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)	166kPa
— Governed speed(Maximum)	310-386kPa
Maximum oil temperature	121 ℃
Minimum required lube system capacity-sump plus filters	TBD

Electrical system	
Cranking motor (Heavy duty, positive engagement	24V
Battery charging system, negative ground	35 ampere
Maximum allowable resistance of cranking circuit	0.002 ohm
Minimum recommended battery capacity- cold soak	1800 CCA

General installation	Prime power
Gross engine power output	1007kw
Brake Mean Effective Pressure	2199kPa
Piston Speed	9.9m/s
Engine water flow to engine	TBD
Friction Horsepower	82KW
Intake Air Flow	1250l/s
Exhaust Gas Flow	3285l/s
Radiated heat to ambient	115kW
Heat Rejection to Jacket Water Coolant	340kW
Heat Rejection to Exhaust	660kW

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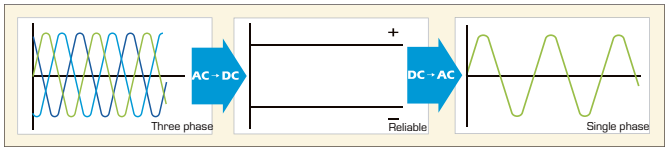
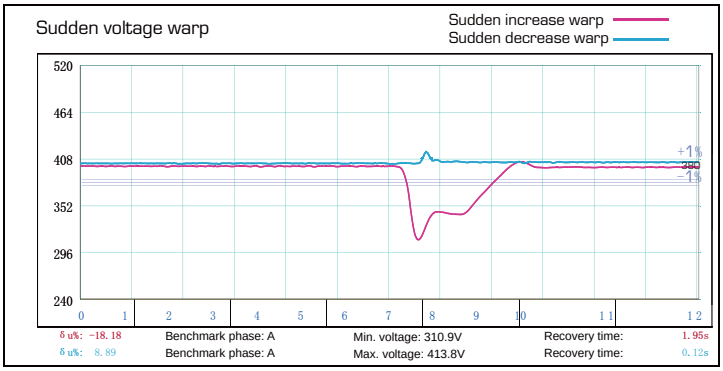
Alternator Specification

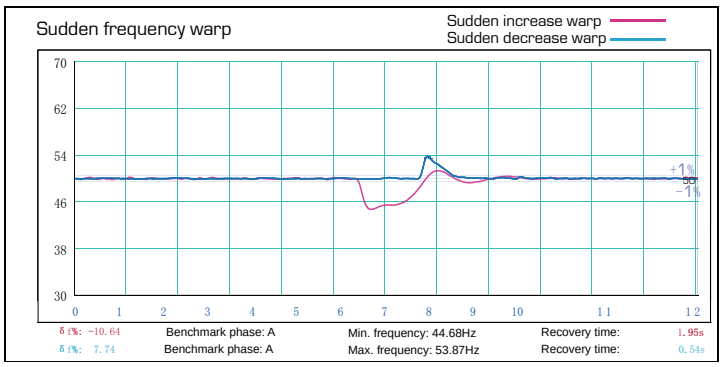
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



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

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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