



# ■ Model: C1000

## **Powered by CUMMINS**





## **Generator Specification**

Service	PRP(1)	ESP <sub>(2)</sub>
Power (kVA)	900	1000
Power (kW)	720	800
Rated speed ( r.p.m)	150	00
Standard voltage (V)	400/2	30 V
Rated at power factor(cos phi)	0.8	3





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):

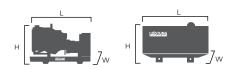
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

Powers	ES	P	PRF	•	Standby
Voltage (V)	KVA	KW	KVA	KW	Amps
415/240	1000	800	900	720	1391.2
400/230	1000	800	900	720	1443.4
380/220	1000	800	900	720	1519.4

Performan	ce Data	
	Model	C1000D5
Er	igine brand	Cummins
En	igine model	KTA38G2A
Spee	d control type	Electronic
	Phase	3
Cor	ntrol system	Digital
Starte	r motor voltage	24 V
F	requency	50 HZ
Engin	e speed (RPM)	1500
	100% standby power	215
Fuel	100% prime power	191
Consumption	75% prime power	147
(L/H)	50% prime power	98

#### Standard reference Conditions

Note: Standard reference condition  $25^{\circ}C[77^{\circ}F]$  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)	4180mm	6058mm
Width (W)	2000mm	2438mm
Height (H)	2240mm	2591mm
Net Weight	7517 KG	12717 KG
Fuel Tank (L)	/	/



## ■ Engine Specification: KTA38G2A

Basic technical data	
No. of cylinders	12
Cylinder arrangement	60° Vee
Cycle	4 stroke
Induction system	Turbocharger & Aftercooled
Compression ratio	14.5:1
Bore	159mm
Stroke	159mm
Displacement	37.8 L
Engine idle speed	/
Approximate engine weght	3723kg

Cooling system	
Coolant capacity-engine	118 L
Maximum coolant friction	
head external to engine:	
-1800 rpm	/
-1500 rpm	35 kPA
Maximum static head of coolant	
above engine crank centerline	7.6m
Standard Thermostat	
(Modulating) Range	82 - 93 ℃
Minimum Pressure Cap	69 kPA
Maximum Top Tank Temperature	
for Standby / Prime Power	/

Fuel system	
Injection system	Cummins PT
Governor type	Electronic
Maximum restriction at lift pump	/
Maximum fuel inlet temperature	/
Maximum Fuel Flow to Injection Pump	
USgph (liter/hr)	606 L/H

Air intake system	
Maximum intake air restriction	
with heavy duty air cleaner:	
-Dirty element	25 in H₂O
-Clean element	15 in H₂O

Lubrication system		
Engine oil pressure for engine		
protection devices:		
— Idle speed (Minimum)	193 kPA	
— Governed speed (Maximum)	297-483 kPA	
Maximum oil temperature	121 ℃	
Minimum required lube system		
capacity-sump plus filters	/	

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

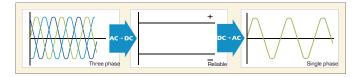
General installation	Prime power
Gross engine power output	813 kW
Piston speed	7.9 m/s
Friction horsepower	86 kW
Engine water flow to engine	/
Intake air flow	1041 l/sec
Exhaust gas flow	2936 I/min
Exhaust gas temperature	527.6 ℃
Radiated heat to ambient	124 kW
Heat rejection to coolant	626 kW
Heat rejection to fuel	/



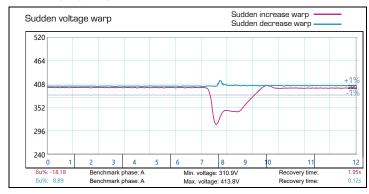


## **Alternator Specification**

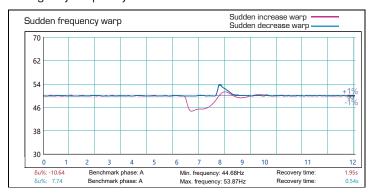
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating Va	cuum impregnation
Voltage regulator	A.V.R
Couping	Flexible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



### Emergency voltage curve



## Emergency frequency curve



## **O**ptions

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





## 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 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration: 5-25Hz, ±1.6mm
  - 5-100Hz, a=4q
- Shocks: a= 500m/s<sup>2</sup>

### **O**ptions

- 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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