

Model: C1000D5

Powered by **CUMMINS**



Generator Specification

Service	PRP ₍₁₎	ESR ₍₂₎
Power (kVA)	900	1000
Power (kW)	720	800
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230 V	
Rated at power factor(cos phi)	0.8	



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 Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby 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

Performance Data

Model	C1000D5	
Engine brand	Cummins	
Engine model	KTA38G2A	
Speed control type	Electronic	
Phase	3	
Control system	Digital	
Starter motor voltage	24 V	
Frequency	50 HZ	
Engine speed (RPM)	1500	
Fuel Consumption (L/H)	100% standby power	215
	100% prime power	191
	75% prime power	147
	50% prime power	98

Standard reference Conditions

Note: Standard reference condition 25°C[77°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 weight	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 °C
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 H ₂ O
-Clean element	15 in H ₂ O

Lubrication system

Engine oil pressure for engine protection devices:

— Idle speed (Minimum)	193 kPa
— Governed speed (Maximum)	297-483 kPa

Maximum oil temperature	121 °C
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Minimum required lube system capacity-sump plus filters

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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 l/min
Exhaust gas temperature	527.6 °C
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	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> Water Jacket Pre-heater Fuel heater 	<ul style="list-style-type: none"> Winding Temp measuring Instrument Alternator Pre-heater PMG Anti-damp and anti-corrosion treatment Anti-condensation heater Winding and bearing RTD 	<ul style="list-style-type: none"> Tools with the machine Extended range fuel tank Bunded fuel tank 	<ul style="list-style-type: none"> Low fuel level alarm Automatic fuel feeding system Fuel T-valves
Canopy	Lub oil system	Cooling System	Control Panel
<ul style="list-style-type: none"> Rental type Canopy Trailer 	<ul style="list-style-type: none"> Oil Pre-heater Oil temp sensor 	<ul style="list-style-type: none"> Front heat protection 	<ul style="list-style-type: none"> 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 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, $\pm 1.6\text{mm}$
5-100Hz, $a=4g$
- Shocks: $a= 500\text{m/s}^2$

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