

## Model: P1000D5

Powered by PERKINS



### Generator Specification

Service	PRP <sup>(1)</sup>	ESP <sup>(2)</sup>
Power (kVA)	900	1000
Power (kW)	720	800
Rated speed ( r.p.m )	1500	
Standard voltage (V)	400/230V	
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.

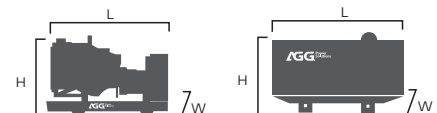
Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
415/240	1000	800	900	720	1391.2
400/230	1000	800	900	720	1443.4
380/220	1000	800	900	720	1519.4

### Performance Data

Model	P1000D5	
Engine brand	Perkins	
Engine model	4008TAG1A	
Speed control type	Electronic	
Phase	3	
Control system	Digital	
Starter motor voltage	24V	
Frequency	50HZ	
Engine speed (RPM)	1500	
Fuel Consumption (L/H)	100% standby power	218
	100% prime power	195
	75% prime power	143
	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)	4675mm	6058mm
Width (W)	2050mm	2438mm
Height (H)	2210mm	2591mm
Net Weight	-	-
Fuel Tank (L)	-	-

Note: This parameters allows for some acceptable deviations.

## ■ Engine Specification: 4008TAG1A

### Basic technical data

No. of cylinders	8
Cylinder arrangement	In-line
Cycle	4 stroke, compression ignition
Induction system	Turbocharged
Compression ratio	13.6:1
Bore	160mm
Stroke	190mm
Displacement	30.6L
All ratings certified to within	TBD
Estimated total weigh	4270kg

### Cooling system

Total coolant capacity	
tropical	149 L
temperate	143 L
Maximum top tank temp	TBD
Thermostat operation range	71-85°C
Radiator face area	TBD
Rows and material	TBD
Pressure cap setting	69 kPa
Shutdown switch setting	101 °C rising
to coolant pump flow	20 kPa
above engine crank centre line	7 m

### Fuel system

Injection system	Direct
Fuel injection pump	Combined unit injector
Fuel atomiser	TBD
Nozzel opening pressure	TBD
Fuel lift pump type	Electronic
- flow/hour	TBD
- pressure	TBD
Maximum suction head:	
-1500 rev/min	2.5 m

### Induction system

Clean filter	1.2kpa
Dirty filter	3.7kpa
Air filter type	5001-00-00 MF&T

### Lubrication system

Total lub capacity	TBD
Sump minimum	127L
Sump maximum	153L
Lubricating oil temperature	
maximum to bearings	105 °C
Lubricating oil pressure	
-Relief valve opens	TBD
- at maximum no-load speed	TBD
Oil consumption at full load	
as a % of fuel consumption	TBD

### Electrical system

Type	Insulated return
Alternator voltage	24 volts
Alternator output	40 amps
Starter motor voltage	24 volts
Starter motor power	8.2 kW

### General installation

### Prime power

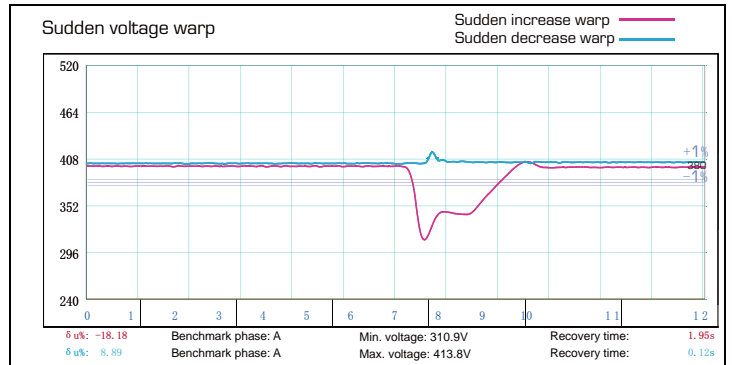
Gross engine power	805kW
Net engine power	602kW
Combustion air flow	69,4m <sup>3</sup> /min
Exhaust gas temperature	425°C
Energy to coolant	245kW
Energy to exhaust	492kW

## ■ Alternator Specification

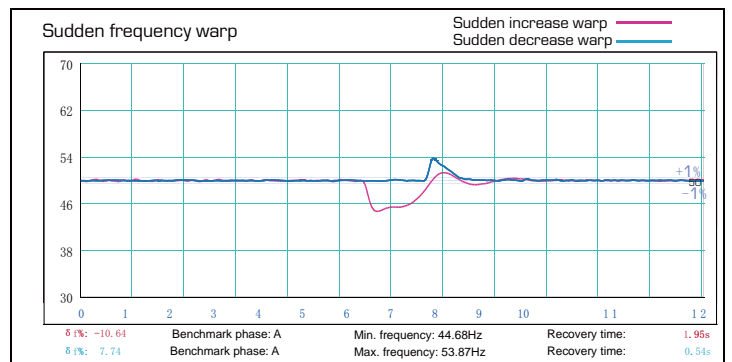
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



## ■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> <li>Water Jacket Pre-heater</li> <li>Fuel heater</li> </ul>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Tools with the machine</li> <li>Extended range fuel tank</li> <li>Bunded fuel tank</li> </ul>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Rental type Canopy</li> <li>Trailer</li> </ul>	<ul style="list-style-type: none"> <li>Oil Pre-heater</li> <li>Oil temp sensor</li> </ul>	<ul style="list-style-type: none"> <li>Front heat protection</li> </ul>	<ul style="list-style-type: none"> <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,  $\pm 1.6$  mm  
5-100Hz, a=4g
- Shocks: a= 500m/s<sup>2</sup>

### 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