

Model: P1100D5

Powered by PERKINS



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	1000	1100
Power (kW)	800	880
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.

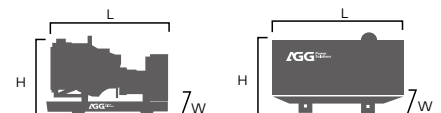
Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
415/240	1100	880	1000	800	1530.4
400/230	1100	880	1000	800	1587.8
380/220	1100	880	1000	800	1671.3

Performance Data

Model	P1100D5	
Engine brand	Perkins	
Engine model	4008TAG2A	
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	248
	100% prime power	220
	75% prime power	160
	50% prime power	108

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)	4840mm	6058mm
Width (W)	2135mm	2438mm
Height (H)	2480mm	2591mm
Net Weight	7552KG	-
Fuel Tank (L)	2000L	-

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: 4008TAG2A

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
Firing order	1, 4, 7, 6, 8, 5, 2, 3
Cylinder 1	furthest from flywheel
Weight	4270 kg

Cooling system	
Total coolant capacity	
Engine only	48 litres
-tropical	149 litres
temperate	143 litres
Pressure cap setting	69 kPa
Fan	Incorporated in radiator
Diameter	
tropical	1400 mm (pusher)
temperate	1214 mm (pusher)

Fuel system	
Type of injection system	Direct injection
Fuel injection pump	Combined unit injector
Delivery/hour at 1500 rev/min	660 litres
Heat retained in fuel to tank	4,5 kW
Temperature of fuel at lift pump to be less than	58 °C
Fuel lift pump pressure	300 kPa
Fuel lift pump maximum suction head	2.5 m
Fuel filter spacing	10 microns
Governor type	Electronic
Torque at the governor output shaft	0,917 kgm
Static injection timing	See engine number plate

Induction system	
Clean filter	127 mm H ₂ O
Dirty filter	380 mm H ₂ O
Air filter type	cylinder paper pleat

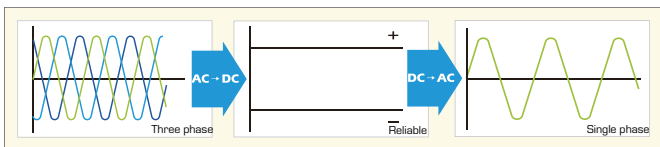
Lubricating oil pressure	
Lubricating oil capacity	
sump maximum	153 litres
sump minimum	127 litres
Lubricating oil temperature	
maximum to bearings	105 °C
Lubricating oil pressure	
-at 80 °C temperature to bearing gallery (minimum)	0,34 MPa

Electrical system	
Type	Insulated return
Alternator	24 volts with integral regulator
Starter motor	24 volts
Starter motor power	8,2 kW
Number of teeth on flywheel	190
Number of teeth on starter motor	12

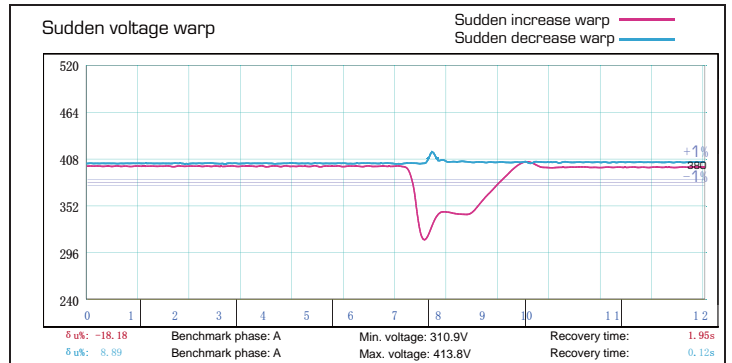
Designation	Prime power
Gross engine power	899kWb
Fan power	27kWm
Net engine power	872kWm
BMEP gross	23,2bar
Combustion air flow	75m ³ /min
Boost pressure ratio	3,70°C
Mechanical efficiency	92%
Overall thermal efficiency	41%
Friction power and pumping losses	80kWm
Mean piston speed	9,5m/s
Engine coolant flow (minimum)	10,0l/s

■ Alternator Specification

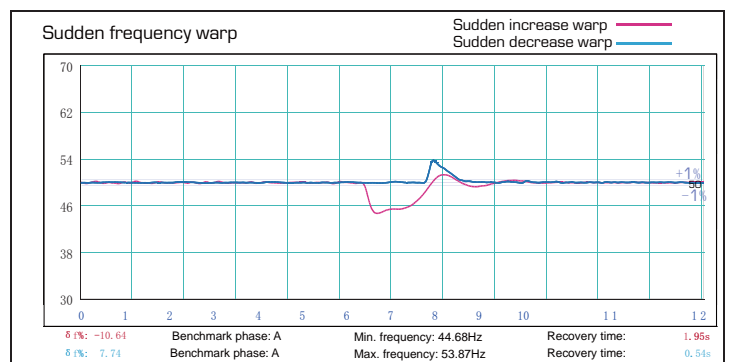
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



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, ±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