Model:P800D5

Powered by PERKINS

Output Rating

MODEL	Power rating			Voltage available		
		PRIME(1)	STANDBY(2)			
P800D5	400V/50HZ	580KW	640KW	380/220V	400/230V	415/240V
	PF:0.8	725KVA	800KVA			

General Information

Model		P800D5
Engine		4006-23TAG2A
Speed control type		Electronic
Phase		3
Control System		Digital
System voltage		12V/24V
Frequency		50HZ
Engine Speed(RPM)		1500
Fuel Consumption L/hr	Standby power(2)	178
	Prime Power(1)	163
	75% prime power	124
	50% prime power	84

Dimension and Weight

Dimension	Open	Silent
Length (L)	4320mm	6050mm
Width (W)	1730mm	2438mm
Height (H)	2180mm	2591mm
Net Weight	5413KG	12700KG
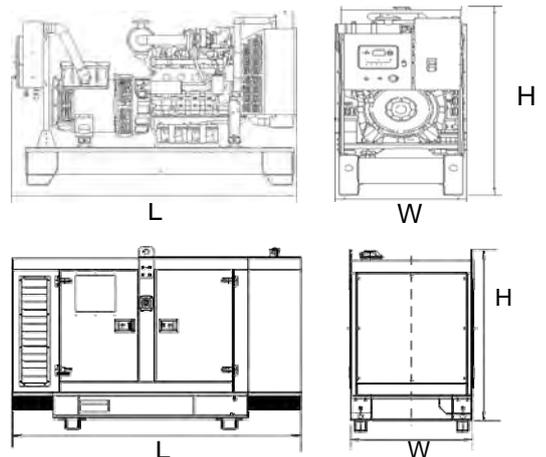
AGG POWER gensets are compliant with EC mark which include the following directives:

* 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)Prime Power(PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operation conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24h of operation shall not exceed 70% of the PRP.

(2) Standby Power (ESP):

According to ISO 8528-1:2005, standby power is the maximum power available during a variable electrical power sequence, under the stated operation conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200h of operation per year with the maintenance intervals and procedures being caried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.

ISO 9001

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Engine Specification

Basic technical data

Number of cylinders 6
Cylinder arrangement ... ... Vertical, In line
Cycle... ... ... 4 stroke, compression ignition
Induction system... ... ... Turbocharged
Compression ratio ... ... 13.6:1 nominal
Bore .. .. 160 mm
Stroke ... ... 190 mm
Cubic capacity .. .. 22,921 litres
Direction of rotation .. ..Anti-clockwise viewed on flywheel
Firing order 1, 5, 3, 6, 2, 4
Cylinder 1 ... ...furthest from flywheel
Total weight of Electrounit (engine only)
-dry ... ... 2524 kg
-wet... ... ... 2663 kg

Overall dimensions

-height... ... ...1964 mm
-length... ... ... .3027 mm
-width ... ...1706 mm

Moment of inertia

Engine .. .. .4,59 kgm²
Flywheel ... ... .6,02 kgm²
Cyclic irregularity for engine/flywheel (prime power):

Cooling system

Recommended coolant: 50% inhibited ethylene glycol or 50%
inhibited propylene glycol and 50% clean fresh water. For
combined heat and power systems and where there is no likelihood
of ambient temperature below 10 °C, then clean 'soft' water may be
used, treated with 1% by volume of Perkins inhibitor in the cooling
system. The inhibitor is available in 1 litre bottles from Perkins.
Nominal jacket water pressure in crankcase. ... ... 170 kPa
Maximum top temperature (standby) ... ... 98 °C
Maximum static pressure head on pump .. ..7 m
Draw down capacity.. ... ... .22 litres
Maximum permissible restriction to coolant pump flow. ... ..20 kPa
Thermostat operating range.. ... ... .71 - 85 °C
Ambient cooling clearance (open ElectropaK prime power) based
on air temp at fan 3 °C above ambient.

Radiator

Face area.. ... ...2,569 m°
Rows and materials... ... ...3 rows of brass tubes

Gills per inch and material

-jacket water.. ... ... Copper fin at 14 gills/in
-charge air section. ... ... Copper fin at 10 gills/in

Width and height of matrix

-height ... ... 1600 mm
-width. ... ... 1606 mm
Weight (dry) radiator . ... 570 kg
Total coolant capacity ... ...105 litres
Pressure cap setting . ...70 kPa

Exhaust system

Exhaust outlet size (internal) ... ... 2 x 152,4 mm

Exhaust back pressure for total system

-TAG2A ... ...610 mm H_2O

Lubrication system

Recommended lubricating oil to conform with the specification of
API CG4 15W/40

Lubricating oil capacity

-sump maximum . ... 113,4 litres
-sump minimum.. ... ... 90,7 litres

Lubrication oil pressure at rated speed

Minimum . ...240 kPa
Oil relief values open.. ... ...300 kPa
Oil filter spacing.. ... ... 40 microns
Sump drain plug tapping size G1
Oil pump speed and method of drive . ...1.4 x e rev/min, gear

General installation

4006-23TAG2A - Temperate

Designation	Units	50 Hz 1500 rev/min			60 Hz 1800 rev/min		
		Baseload power	Prime power	Standby power	Baseload power	Prime power	Standby power
Gross engine power	kWm	527	654	717	549	676	740
Fan power	kWm	22			38		
Net engine power	kWm	505	632	695	511	638	702
BMEP gross	kPa	1840	2281	2502	1597	1966	2152
Combustion air flow	m³/min	60	64	71	62	65	72
Exhaust gas temperature max. after turbo	°C	430					
Exhaust gas flow (max)	m³/min	180			190		
Boost pressure ration	-	3,0	3,4	3,6	3,2	3,4	3,6
Mechanical efficiency	%	90					
Overall thermal efficiency	%	43	42	41	41,5	41	40
Friction power and pumping losses	kWm	70			75		
Mean piston speed	m/s	9,5			11,4		
Engine coolant flow	l/s	10			12		
Cooling fan airflow	m³/min	1200			1320		
Typical Genset electrical output 0.8pf 25 °C (100 kPa)	kVA	600	750	825	600	750	825
	kWe	480	600	660	480	600	660
Assumed alternator efficiency	%	95			94		

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▪ Alternator

Alternator		
Poles	Num	4
Winding Connections (standard)		Star-serie
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter System		Brushless
Voltage Regulator		A.V.R. (Electronic)
Bearing		Single bearing
Coupling		Flexible disc
Coating type		Standard (Vacuum impregnation)

▪ Options

Engine	Alternator	Generator Sets	Fuel System	Canopy
●Water Jacket Preheater ●Oil Preheater	●Winding Temperature measuring Instrument ●Alternator Preheater ●PMG ●Anti-damp and anti-corrosion treatment ●Anti-condensation heater	●Tools with the machine	● Low fuel level alarm ●Automatic fuel feeding system ●Fuel T-valves	●Rental Type Canopy ●Trailer
Lubricating System	**Exhaust System**	**Cooling System**	**Control Panel**	**Voltages**
●Oil with the machine	●Protection board from hotness	● Front heat protection ● Coolant (-30°C)	●Remote control panel ● ATS ● Remote controller ● Synchronizing controller	● 415/240V ● 380/220V ● 220/127V ● 220/127V ● 200-115V

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Control Panel

Product description

- Single gen-set controller for Stand-by and Prime-power applications
- Direct communication with EFI engines
- Total remote monitoring and control

Key features

- Easy to install, configure and use
- Wide range of communication capabilities including:
  - connection via RS232, RS485, CAN and on board USB
  - internet access using Ethernet or GPRS
  - support for Modbus and SNMP protocols
- Cloud-based monitoring and control
- Active SMS and emails in different languages
- 2x 5 A binary outputs for cranking and fuel solenoid
- Option for up to 16 additional binary inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Automatic temperature based cooling/heating
- Comprehensive gen-set protections
- Multipurpose flexible timers
- True RMS measurement

Available extension modules

Product	Description	Order code
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	GSM modem / wireless internet	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

Functions and protections

Description	ANSI code	Descritption	ANSI code
Over voltage	59	**Load shedding**	32P
Under voltage	27	**Overload**	32
Voltage asymmetry and Phase rotation**	47	**Power factor**	55
Over frequency	81H	**Temperature**	49T
Under frequency	81L	**Gas (fuel) level**	71
Over current*	50 + 51	**Earth fault current**	50N + 64
Current unbalance	46		

* Short current only   ** Fixed setting

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