

■ Model: P880D5

Powered by PERKINS

Output Rating

MODEL		Power rating		Voltage available
		PRIME(1)	STANDBY(2)	
P880D5	400V/50HZ PF:0.8	640KW 800KVA	704KW 880KVA	380/220V 400/230V 415/240V

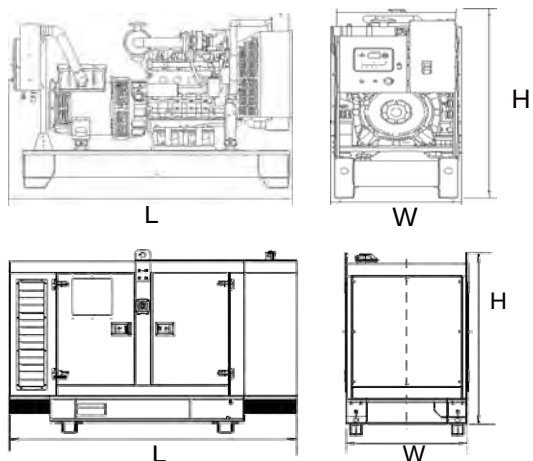
General Information

Model		P880D5
Engine		4006-23TAG3A
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)	203
	Prime Power(1)	175
	75% prime power	132
	50% prime power	88



Dimension and Weight

Dimension	Open	Silent
Length (L)	4320mm	6050mm
Width (W)	1730mm	2438mm
Height (H)	2180mm	2591mm
Net Weight	5422KG	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 carried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.



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):

	TAG2A	TAG3A
1500 rev/min	1:67	1:62
1800 rev/min	1:105	1:97

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.

Temperate

Maximum additional restriction (duct allowance) to cooling airflow. (TAG2A and TAG3A standby power) and resultant minimum airflow					
Ambient clearance: 50% Glycol		Duct allowance mm H ₂ O		Min airflow m ³ /sec	
rev/min		rev/min		rev/min	
1500	1800	1500	1800	1500	1800
36 °C	39 °C	25	25	13	16

Tropical

Maximum additional restriction (duct allowance) to cooling airflow. (TAG2A and TAG3A standby power) and resultant minimum airflow					
Ambient clearance: inhibited coolant		Duct allowance mm H ₂ O		Min airflow m ³ /sec	
rev/min		rev/min		rev/min	
1500	1800	1500	1800	1500	1800
50 °C	50 °C	13	20	20	22

The above information at 1500 rev/min applies for ½ TA Luft and Best SFC ratings.

Radiator

Face area..... 2,569 m²
 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

General installation

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	531	658	721	555	682	746
Fan power	kWm	26			44		
Net engine power	kWm	505	632	695	511	638	702
BMEP gross	kPa	1854	2295	2516	1609	1977	2163
Combustion air flow	m ³ /min	60	64	71	62	65	72
Exhaust gas temperature max. after turbo	°C	430					
Exhaust gas flow (max)	m ³ /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	m ³ /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		



■ 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



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	Description	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

