

Model: P825D5

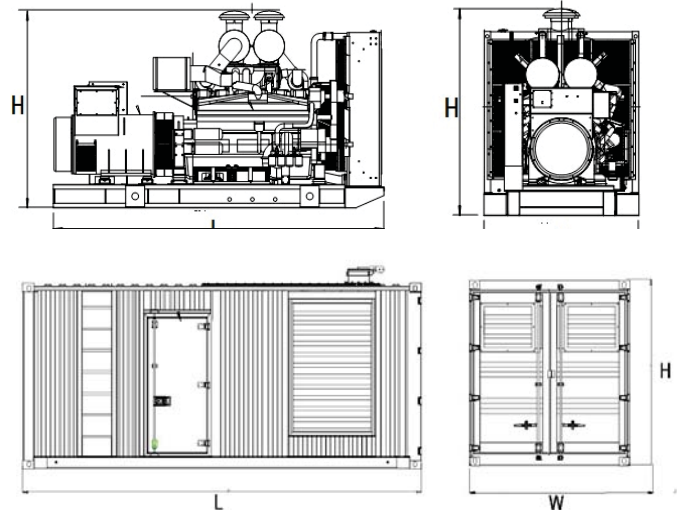
Powered by PERKINS

Output Rating

MODEL		Power rating		Voltage available		
		PRIME(1)	STANDBY(2)			
P800D5	400V/50HZ	600KW	660KW	380/220V	400/230V	415/240V
	PF:0.8	750KVA	825KVA			

General Information

Model	P825D5		
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)	3800mm	6058mm
Width (W)	1750mm	2438mm
Height (H)	2230mm	2591mm
Net Weight	5800KG	NA

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 kgm ²
Flywheel	6.02 kgm ²
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 ²
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
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Exhaust back pressure for total system

-TAG2A	610 mm H ₂ O
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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 valves 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	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.
Bearing		Single bearing
Coupling		Flexible disc
Coating type		Standard (Vacuum impregnation)

▪ Options

Engine	Alternator	Generator Sets	Fuel System	Canopy
<ul style="list-style-type: none"> •Water Jacket Preheater •Oil Preheater 	<ul style="list-style-type: none"> •Winding Temperature measuring Instrument •Alternator Preheater •PMG •Anti-damp and anti-corrosion treatment •Anti-condensation heater 	<ul style="list-style-type: none"> •Tools with the machine 	<ul style="list-style-type: none"> • Low fuel level alarm •Automatic fuel feeding system •Fuel T-valves 	<ul style="list-style-type: none"> •Rental Type Canopy •Trailer
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> •Oil with the machine 	<ul style="list-style-type: none"> •Protection board from hotness 	<ul style="list-style-type: none"> • Front heat protection • Coolant (-30°C) 	<ul style="list-style-type: none"> •Remote control panel • ATS • Remote controller • Synchronizing controller 	<ul style="list-style-type: none"> • 415/240V • 380/220V • 220/127V • 220/127V • 200-115V



■ **Control Panel: AMF20**



Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- Perfect price/performance ratio

Features

- Support of engines equipped with Electronic Control Unit (J1939 interface)
- Comprehensive diagnostic messages; SPN/FMI codes; KWP2000 support
- Automatic or manual start/stop of the gen-set
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display 128x64 pixels
- 6 LED indicators
- Parameters adjustable via keyboard or PC
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface (AT-LINK CONV cable is necessary for IL-AMF 20)
- Modem communication support (IL-AMF 25 only)
- Dimensions 180x120 mm (front panel)
- Sealed to IP65

- Mains measurements (50/60 Hz): U1-U3, Hz
- Generator measurements (50/60 Hz): U1-U3, I1-I3, Hz, kW, kVAr, kWh
- Selectable protections alarm/shutdown
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Overcurrent/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

The Chart of Functions of IntelLite[®] Controllers

FUNCTIONS/CONTROLLERS	IL-AMF 20	IL-AMF 25	IL-MRS 10	IL-MRS 15	IL-MRS 11	IL-MRS 16
Binary inputs/outputs	7 / 7	7 / 7	6 / 6	6 / 6	6 / 6	6 / 6
Analog inputs	3	3	3	3	3	3
Pick-up	•	•	•	•	•	•
AMF function	•	•	-	-	-	-
Input configuration	•	•	•	•	•	•
Output configuration	•	•	•	•	•	•
Voltage measurement Gen./Mains	3ph / 3ph	3ph / 3ph	3ph / -	3ph / -	3ph / -	3ph / -
Current measurement	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent	3ph	3ph, IDMT overcurrent
kW/kWh measurement	• / -	• / •	• / -	• / •	• / -	• / •
GCB/MCB control with feedback	• / •	• / •	- / -	- / -	• / -	• / -
Extension units (periph.)	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM
Communication interfaces	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾	RS232 ²⁾	RS232, CAN ³⁾
Modem support	-	•	-	•	-	•
Battery charging alternator circuit	•	•	•	•	•	•

Key: • included; - excluded
 1) GCB control, but without feedback
 2) For IL-AMF 20, IL-MRS 10/11 AT-LINK CONV cable necessary
 3) CAN for periph.

Legend: IG-IOM/IGS-PTM: I/O extension modules
 IGL-RA15: Remote annunciator
 I-RD: Remote display

