

## Model: P880D5

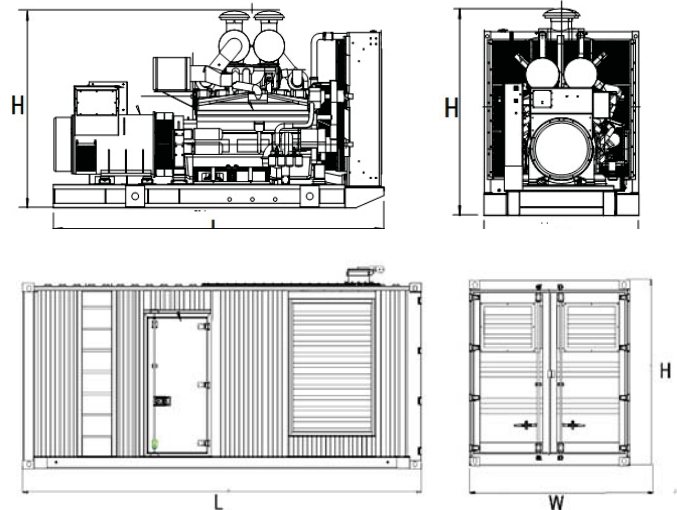
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### Output Rating

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

### 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)	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<sup>2</sup>  
 Flywheel ..... 6,02 kgm<sup>2</sup>  
 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 <sub>2</sub> O		Min airflow m <sup>3</sup> /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 <sub>2</sub> O		Min airflow m <sup>3</sup> /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 m<sup>2</sup>  
 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 <sup>3</sup> /min	60	64	71	62	65	72
Exhaust gas temperature max. after turbo	°C	430					
Exhaust gas flow (max)	m <sup>3</sup> /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 <sup>3</sup> /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"> <li>•Water Jacket Preheater</li> <li>•Oil Preheater</li> </ul>	<ul style="list-style-type: none"> <li>•Winding Temperature measuring Instrument</li> <li>•Alternator Preheater</li> <li>•PMG</li> <li>•Anti-damp and anti-corrosion treatment</li> <li>•Anti-condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>•Tools with the machine</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>	<ul style="list-style-type: none"> <li>•Rental Type Canopy</li> <li>•Trailer</li> </ul>
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> <li>•Oil with the machine</li> </ul>	<ul style="list-style-type: none"> <li>•Protection board from hotness</li> </ul>	<ul style="list-style-type: none"> <li>• Front heat protection</li> <li>• Coolant (-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>•Remote control panel</li> <li>• ATS</li> <li>• Remote controller</li> <li>• Synchronizing controller</li> </ul>	<ul style="list-style-type: none"> <li>• 415/240V</li> <li>• 380/220V</li> <li>• 220/127V</li> <li>• 220/127V</li> <li>• 200-115V</li> </ul>



■ **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<sup>®</sup> 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 <sup>2)</sup>	RS232, CAN <sup>3)</sup>	RS232 <sup>2)</sup>	RS232, CAN <sup>3)</sup>	RS232 <sup>2)</sup>	RS232, CAN <sup>3)</sup>
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

