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Model: P880D5

Powered by PERKINS
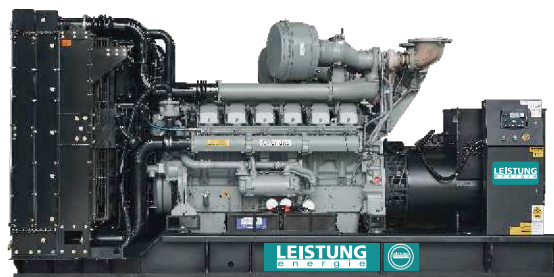
Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	800	880
Power (kW)	640	704
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230 V	
Rated at power factor(cos phi)	0.8	

ISO 9001 BUREAU VERITAS Certification CE

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.
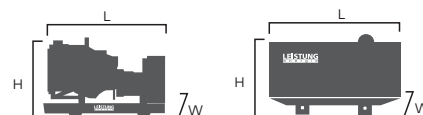
Performance Data		
Model		P880D5
Engine brand		Perkins
Engine model		4006-23TAG3A
Speed control type		Electronic
Phase		3
Control system		Digital
Starter motor voltage		24 V
Frequency		50 HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	194
	100% prime power	172
	75% prime power	130
	50% prime power	90

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

Powers	ESP		PRP		Standby
Voltage (V)	KVA	KW	KVA	KW	Amps
415/240	880	704	800	640	1224.3
400/230	880	704	800	640	1270.2
380/220	880	704	800	640	1337.1

Dimension and Weight		
Dimension	Open	Silent
Length (L)	4100mm	6058mm
Width (W)	1940mm	2438mm
Height (H)	2350mm	2591mm
Net Weight	5953 KG	-
Fuel Tank (L)	1000 L	1000 L

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: **4006-23TAG3A**

Basic technical data

No. of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged,
Compression ratio	13.6:1
Bore	160mm
Stroke	190mm
Displacement	22,921L
Firing order	1-5-3-6-2-4
Estimated total weight	2524 kg
Cylinder 1	furthest from flywheel

Cooling system

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
Fan Type	Engine mounted
Speed:-1500	1170 rev/min
Diameter	1,2 m

Fuel system

Recommended fuel	To conform to BS2869 1998 Class A1, A2
Type of injection system	Direct injection
Fuel injector	Combined unit injector
Delivery -1500 rev/min	660 litres/hour
Fuel delivery pump pressure	300 kPa
Fuel lift pump maximum suction head	2.5 m
Fuel filter spacing	10 microns
Governor type	Electronic

Induction system

Clean filter	127 mm H20
Dirty filter	380 mm H20
Air filter type	dry - paper

Lubrication system

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
Oil pump flow 1500 rev/min	3,7 litres/sec

Electrical system

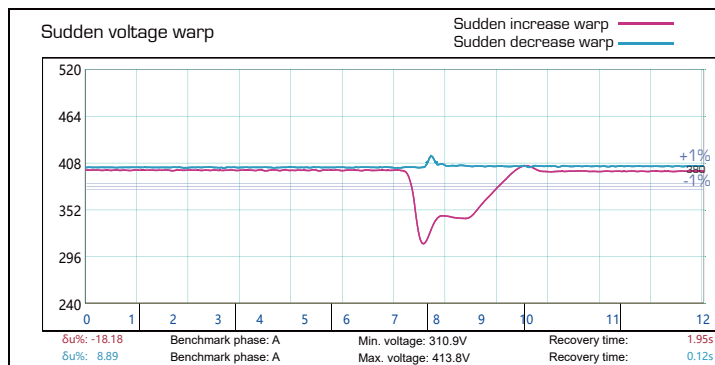|	
Type	Insulated return
Starter motor	7,5 kW
Number of teeth on flywheel	190
Number of teeth on starter motor	12
Minimum cranking speed	120 rev/min
Engine stop solenoid	24 volts

General installation

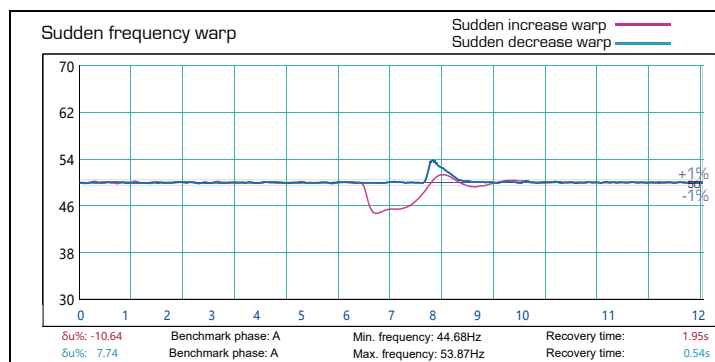| General installation	Prime power
Gross engine power	705kW
Fan power	22kW
Net engine power	683kW
BMEP gross	2452kPa
Combustion air flow	69m³/min
Exhaust gas temperature	630°C
Exhaust gas flow (max)	193m³/min
Boost pressure ration	3.5
Mean piston speed	9,5m/s
Engine coolant flow	10 l/s

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
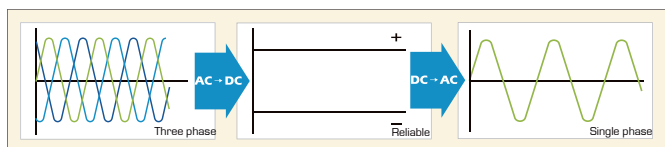
Emergency voltage curve

| δu%: -18.18 | Benchmark phase: A | Min. voltage: 310.9V | Recovery time: 1.95s |
| δu%: 8.89 | Benchmark phase: A | Max. voltage: 413.8V | Recovery time: 0.12s |

Emergency frequency curve

| δu%: -10.64 | Benchmark phase: A | Min. frequency: 44.68Hz | Recovery time: 1.95s |
| δu%: 7.74 | Benchmark phase: A | Max. frequency: 53.87Hz | Recovery time: 0.54s |

Options

Engine	Alternator	Generator Sets	Fuel System
- Water Jacket Pre-heater - Fuel heater	- Winding Temp measuring Instrument - Alternator Pre-heater - PMG - Anti-damp and anti-corrosion treatment - Anti-condensation heater - Winding and bearing RTD	- Tools with the machine - Extended range fuel tank - Bunded fuel tank	- Low fuel level alarm - Automatic fuel feeding system - Fuel T-valves
Canopy	**Lub oil system**	**Cooling System**	**Control Panel**
- Rental type Canopy - Trailer	- Oil Pre-heater - Oil temp sensor	Front heat protection	- Remote control panel - ATS - Synchronizing controller - Adjustable earth leakage relay

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■ 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 ℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz,   ±1.6mm
             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

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