

Model: P300E5

Powered by PERKINS



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	275	300
Power (kW)	220	240
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	



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.

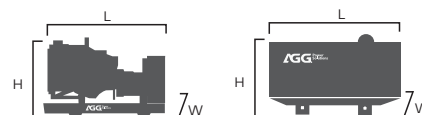
Powers Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby Amps
415/240	300	240	275	220	417.4
400/230	300	240	275	220	433.0
380/220	300	240	275	220	455.8

Performance Data

Performance Data		
Model		P300E5
Engine brand		Perkins
Engine model		1506A-E88TAG4
Speed control type		ECM
Phase		3
Control system		Digital
Starter motor voltage		24V
Frequency		50HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	66.3
	100% prime power	60.2
	75% prime power	45.8
	50% prime power	31.6

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



Dimension and Weight

Dimension	Open	Silent
Length (L)	2975mm	4120mm
Width (W)	1098mm	1350mm
Height (H)	1665mm	2252mm
Net Weight	-	3527KG
Fuel Tank (L)	-	425L

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: 1506A-E88TAG4

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Air to air after cooled turbocharged
Compression ratio	16.1:1
Bore	112mm
Stroke	149mm
Displacement	8.8L
All ratings certified to within	± 3%
Estimated total weight	1183 kg

Cooling system	
Total coolant capacity	
Engine	13.9
Radiator	15.5
Maximum top tank temp	107°C
Thermostat operation range	87-98°C
Radiator face area	0.62 m²
Rows and material	4 /aluminium
Pressure cap setting	110 kPa
Fan diameter	813 mm
Drive ratio	1 : 1
Number of blades	9

Fuel system	
Injection system	Direct
Governor type	Electronic
Injector pressure	185 MPa
Lift pump type	Gear
Fuel lift pump type	ECM
Lift pump delivery pressure	140-655 kPa
Maximum suction head at pump inlet	60.9 kPa
Lift pump fuel delivery	
@ 1500 rpm	38 L/H

Induction system	
Clean filter	3.7kpa
Dirty filter	6.2kpa
Air filter type	Dry paper element

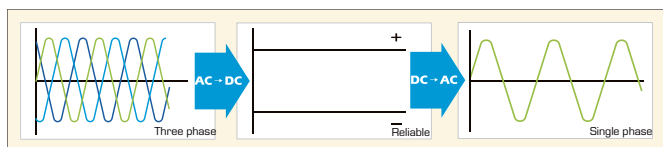
Lubrication system	
Total lub capacity	41L
Sump minimum	TBD
Sump maximum	TBD
Maximum engine operating angles	
-front up, front down, right side	
or left side	25°
Lubricating oil pressure	
-Relief valve opens	370kPa
Lubricating oil flow	200 L/min
Oil consumption	<0.1% of fuel

Electrical system	
Type	Negative ground
Alternator voltage	24 volts
Alternator output	45 amps
Starter motor voltage	24 volts
Starter motor power	5.3 kw

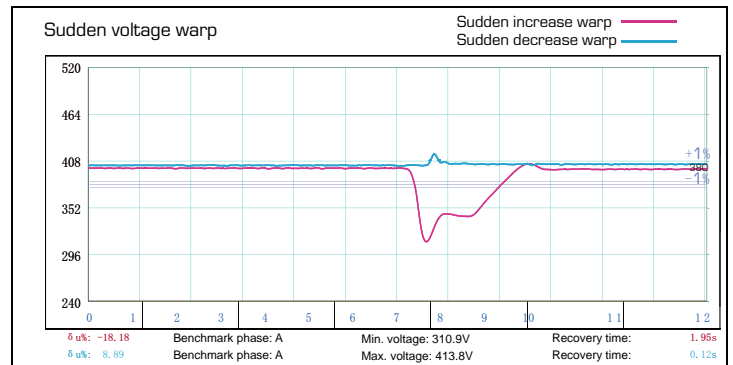
General installation	Prime power
Gross engine power	281kW
ElectropaK nett engine power	273kW
Combustion air flow	16.4m³/min
Exhaust gas temperature outlet	576°C
Energy to coolant	115kW
Energy to exhaust	193kW

■ Alternator Specification

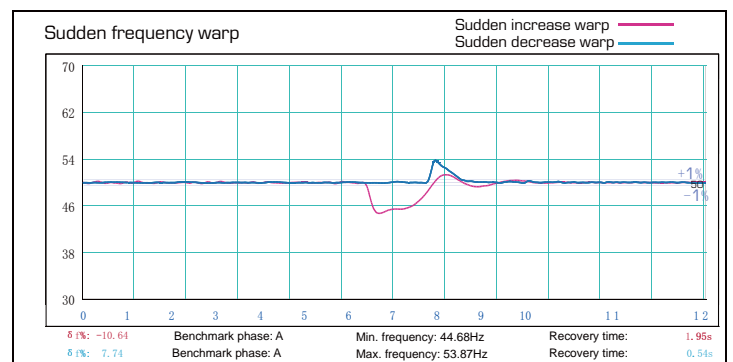
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> Water Jacket Pre-heater Fuel heater 	<ul style="list-style-type: none"> Winding Temp measuring Instrument Alternator Pre-heater PMG Anti-damp and anti-corrosion treatment Anti-condensation heater Winding and bearing RTD 	<ul style="list-style-type: none"> Tools with the machine Extended range fuel tank Bunded fuel tank 	<ul style="list-style-type: none"> Low fuel level alarm Automatic fuel feeding system Fuel T-valves
Canopy	Lub oil system	Cooling System	Control Panel
<ul style="list-style-type: none"> Rental type Canopy Trailer 	<ul style="list-style-type: none"> Oil Pre-heater Oil temp sensor 	<ul style="list-style-type: none"> Front heat protection 	<ul style="list-style-type: none"> Remote control panel ATS Synchronizing controller Adjustable earth leakage relay

■ 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 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ± 1.6 mm
5-100Hz, $a=4g$
- Shocks: $a= 500m/s^2$

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