

Model: P275E5

Powered by PERKINS



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	250	275
Power (kW)	200	220
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.

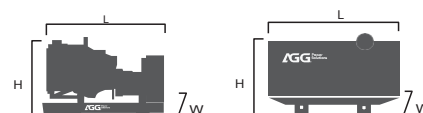
Powers Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby Amps
415/240	275	220	250	200	382.6
400/230	275	220	250	200	396.9
380/220	275	220	250	200	417.8

Performance Data

Model	P275E5	
Engine brand	Perkins	
Engine model	1206A-E70TTAG3	
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	60.7
	100% prime power	55.5
	75% prime power	41.6
	50% prime power	28.9

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	1130mm
Height (H)	1665mm	2207mm
Net Weight	2402KG	3137KG
Fuel Tank (L)	460L	320L

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: 1206A-E70TTAG3

Basic technical data

No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Air to air after cooled turbocharged
Compression ratio	15.8:1
Bore	105mm
Stroke	135mm
Displacement	7.01L
All ratings certified to within	± 3%
Estimated total weight	1135 kg

Cooling system

Total coolant capacity	
Engine	13.7L
Radiator	11.3L
Maximum top tank temp	108°C
Thermostat operation range	82-93°C
Radiator face area	0.49 m²
Rows and material	4 /aluminium
Pressure cap setting	100 kPa
Fan diameter	724 mm
Drive ratio	1.33 : 1
Number of blades	7

Fuel system

Injection system	Common Rail
Governor type	Electronic
Injector pressure	-
Lift pump type	-
Fuel lift pump type	-
Lift pump delivery pressure	60.9 kPa
Maximum suction head at pump inlet	75°C
Lift pump fuel delivery	
@ 1500 rpm	

Induction system

Clean filter	3 kPa
Dirty filter	8 kPa
Air filter type	Dry paper element

Lubrication system

Total lub capacity	41L
Sump minimum	13
Sump maximum	16
Maximum engine operating angles	
-front up, front down, right side or left side	30°
Lubricating oil pressure	300 kPa
-Relief valve opens	
- at maximum no-load speed	700 kPa
Oil consumption at full load as a % of fuel consumption	< 0.1% of fue

Electrical system

Type	Negative ground
Alternator voltage	12 volts
Alternator output	100 amps
Starter motor voltage	12 volts
Starter motor power	5 kw

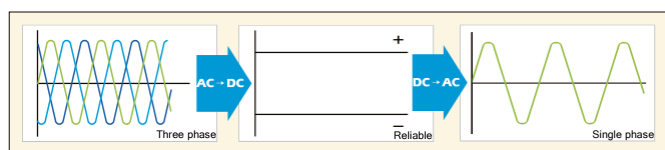
General installation

Prime power

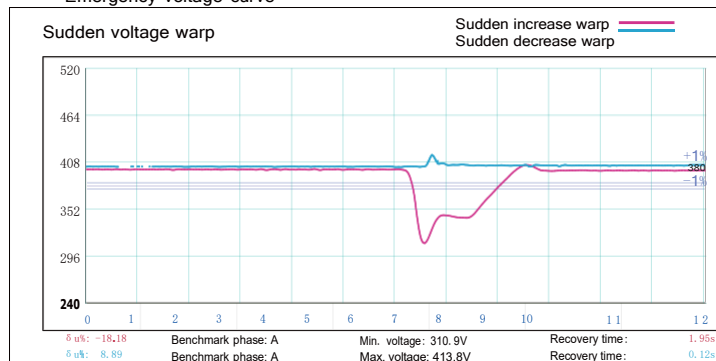
Gross engine power	226,2kW
ElectropaK nett engine power	217,2kW
Combustion air flow	13,5m³/m
Exhaust gas temperature outlet	in515°C
Energy to coolant	41,9kW
Energy to exhaust	286,9kW

■ Alternator Specification

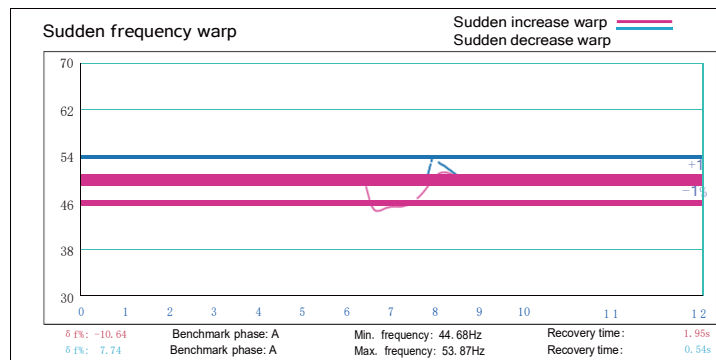
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-series
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Coupling	Flexible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



Emergency voltage curve



Emergency frequency curve



■ 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

■ 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