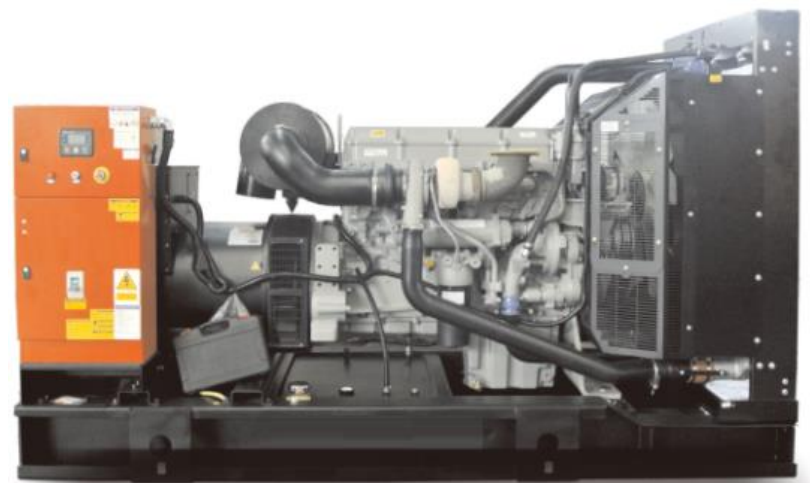




# ADC POWER CONCEPT

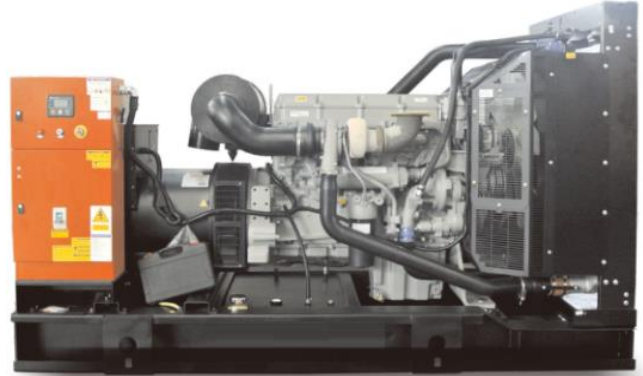
**Generator**  
Model P550E5





# Model: P550E5

Powered by PERKINS



## Generator Specification

Service	PRP <sup>(1)</sup>	ESP <sup>(2)</sup>
Power (kVA)	500	550
Power (kW)	400	440
Rated speed ( r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	

Performance Data		
Model	P550E5	
Engine brand	Perkins	
Engine model	2506C-E15TAG2	
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	114
	100% prime power	106
	75% prime power	81
	50% prime power	55



The 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.

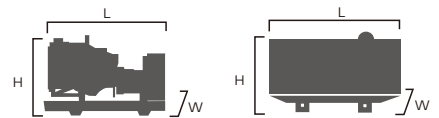
### (2) ESP (Standby Power):

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		PRP		Standby Amps
	KVA	KW	KVA	KW	
415/240	550	440	500	400	765.2
400/230	550	440	500	400	793.9
380/220	550	440	500	400	835.7

### 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)	2657mm	5200mm
Width (W)	1120mm	1420mm
Height (H)	1718mm	2520mm
Net Weight	-	5110KG
Fuel Tank (L)	-	825

Note: This parameters allows for some acceptable deviations.



ADC Power Concept  
Power Quality Specialist

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Website: <http://www.adc-pc.com>



## ■ Engine Specification: 2506C-E15TAG2

Basic technical data	
No. of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged and air-to-air charge cooled
Compression ratio	16:1
Bore	137mm
Stroke	171mm
Displacement	15L
Dry weight (ElectropaK)	1633kg
Combustion system	Direct injection
Direction of rotation	Anti-clockwise, viewed on flywheel

Cooling system	
Cooling system	Water-cooled
Total coolant capacity	58L
Maximum top tank temp	107°C
Thermostat operation range	88-98°C
Maximum pressure:	
-in crankcase water jacket	276 kPa
Maximum static pressure on pump	170 kPa
Maximum permissible restriction:	
-to coolant pump flow	30 kPa

Fuel system	
Type of injection	MEUI
Injector type	MEUI
Injector pressure	200MPa
Maximum suction head at pump inlet	3 m
Maximum static pressure head	4 m
Fuel inlet temperature to be less than	55 °C
Governor type	electronic
Fuel filtration level	
-primary	10 μm
-secondary	2 μm

Induction system	
Clean filter	3.7kpa
Dirty filter	6.2kpa
Air filter type	Paper element 457 mm diameter

Lubrication system	
Total lub capacity	62L
Sump minimum	45L
Sump maximum	53L
Maximum engine operating angles	
-front up, front down, right side or left side	TBD
Lubricating oil pressure	
-Relief valve opens	TBD
- at maximum no-load speed	TBD
Oil consumption at full load as a % of fuel consumption	0.1%

Electrical system	
Type	Negative ground
Alternator voltage	24 volts
Alternator output	70 amps
Starter motor voltage	24 volts
Starter motor power	7.5kW

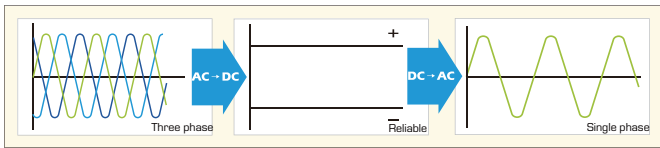
General installation	Prime power
Combustion air flow	33m <sup>3</sup> /min
Exhaust gas temp	TBD
Exhaust gas flow, wet	94m <sup>3</sup> /min
Engine coolant flow	6.1l/min
Cooling fan air flow	722m <sup>3</sup> /min



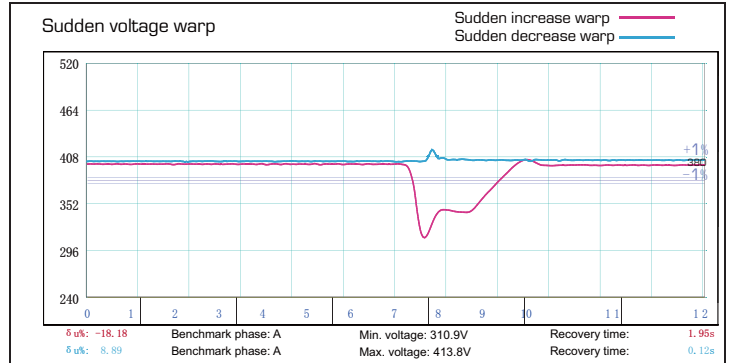


## ■ Alternator Specification

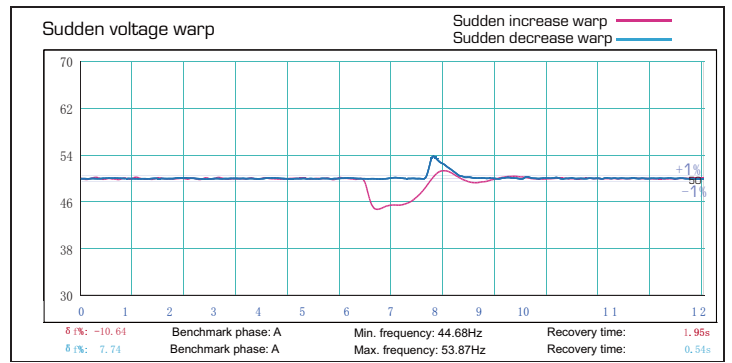
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



## ■ Options

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





## ■ 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,  $\pm 1.6$  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

