



Genset	
Model	JHP5-600GF
Voltage	230/400V
Frequency&Speed	50HZ;1500RPM
Prime Power	565kW/706kVA
Standby Power	627kW/784kVA

- Engine: Perkins 2806A-E18TTAG5
- Alternator: Stamford/Leroy Somer /Hengsheng
- Controller: DeepSea/SmartGen /DEIF/ComAp

### Basic technical data

Number of cylinders	6
Cylinder arrangement	Vertical inline
Cycle	4 stroke
Induction system	Turbocharged, air-to-air charge cooling
Compression ratio	14:1
Bore	145 mm
Stroke	183 mm
Displacement	18.1 litres
Direction of rotation (when viewed from flywheel)	Counter clockwise
Firing order (number 1 cylinder furthest from flywheel)	1, 5, 3, 6, 2, 4

### Weight of ElectropaK

Dry (estimated)	2361 kg
Wet (estimated)	2477 kg

### Overall dimensions, ElectropaK

Height	2126 mm
Length	2538 mm
Width	1691 mm

### Centre of gravity, ElectropaK

Forward from rear of block (dry)	607 mm
Above crankshaft centre line (dry)	238 mm

### Moments of inertia

Engine rotational components	1.67 kgm <sup>2</sup>
Flywheel	1.92 kgm <sup>2</sup>

### Cyclic irregularity for engine standby power

At 110%	0.293
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### Ratings

Steady state speed capability at constant load	<1.5%
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### Performance

Average sound pressure level for bare engine	
Without inlet and exhaust at 1 metre (50Hz)	103.8 dB(A)
Without inlet and exhaust at 1 metre (60Hz)	TBD dB(A)

**Note:** All data based on operation to ISO 3046/1:2002 standard reference conditions.

**Note:** For engines operating in ambient conditions other than the standard reference conditions stated below, a suitable derate must be applied.

**Note:** Derate tables for increased ambient temperature and/or altitude are available, please contact Perkins Applications Department.

### Test conditions

Air temperature	25°C
Barometric pressure	100 kPa
Relative humidity	30%
Air inlet restriction at maximum power (nominal)	5 kPa
Exhaust back pressure at maximum power (nominal)	8.5 kPa
Aftercooler restriction at maximum power (nominal)	12 kPa
Fuel temperature (inlet pump)	40°C
All ratings certified to within	±3%

### General installation

Designation	Units	1500 rpm		1800 rpm	
		Prime (50 Hz)	Standby (50 Hz)	Prime (60 Hz)	Standby (50 Hz)
Gross engine power	kWb	676	743	720	793
Gross BMEP	kPa	2997	3297	2680	2948
Mean piston speed	m/s	9.2		11	
ElectropaK nett engine power	kW	648	716	675	748
Engine coolant flow against 85 kPa restriction	litres/min	382		485	
Combustion air flow	kg/h	3885	4143	4551	4718
Combustion air flow (air inlet)	m <sup>3</sup> /min	58	62	68	71
Exhaust gas flow (maximum) at atmospheric pressure	m <sup>3</sup> /min	132	142	148	157
Exhaust gas temperature (turbo out maximum)	°C	464	474	433	455
Overall thermal efficiency	%	38		37.5	
Typical generator set electrical output (0.8 pf 25°C)	kWe	616	680	642	710
	kVA	770	850	802	888
Assumed alternator efficiency	%	95			

## Cooling system

### Total coolant capacity

ElectropaK (with radiator)	109.5 Litres
ElectropaK (without radiator)	20.8 Litres
Maximum top tank temperature	97°C
Maximum static pressure head on pump	125 kPa
Temperature rise across engine	3°C
Maximum permissible external system resistance (50 Hz)	85 kPa
Maximum permissible external system resistance (60Hz)	95 kPa
Thermostat operation range	81°C to 92°C

### Radiator

Radiator face area	1.496 m <sup>2</sup>
Material and number of rows	1 Row, Aluminium
Material and fins per inch	8.5
Width of matrix	1651 mm
Height of matrix	1610 mm
Pressure cap setting	103 kPa

### Fan

Type	Pusher
Diameter	1142 mm
Number of blades	6
Material	Composite
Drive ratio	0.92:1
Airflow at rated speed (50 Hz)	852 m <sup>3</sup> /min
Airflow at rated speed (60 Hz)	TBD m <sup>3</sup> /min

### Recommended coolant

Recommended coolant: 50% anti freeze/50% water.

For details of recommended coolant specifications, please refer to the Operation and Maintenance Manual (OMM) for this engine model.

### Duct allowance

Maximum additional restriction to cooling airflow and resultant minimum airflow					
Ambient clearance 50% Glycol		Duct allowance (Pa)		m <sup>3</sup> /sec	
50 (Hz)	60 (Hz)	50 (Hz)	60 (Hz)	50 (Hz)	60 (Hz)
52	TBD	125	125	14.2	TBD

- ✧ NEMAMG1.JIANGHAO,and ANSI standards compliance for temperature rise and motor starting.
- ✧ Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- ✧ Sustained short-circuit current enabling down stream circuit breakers to trip without collapsing the generator field.
- ✧ Self-ventilated and dripproof construction.
- ✧ Superior voltage waveform from two-thirds pitch windings and skewed stator.
- ✧ Digital solid-state.volts-per-hertz voltage regulator with +1% no-load to full-load regulation.

## Fuel system

Type of injection	Unit injection
Fuel injection pump	Not applicable
Fuel injector	MEUI
Nozzle opening pressure	38 MPa
Maximum particle size	2 microns
Fuel lift pump type	Mechanical
Flow	420 litres/hr
Pressure	700 kPa
Maximum suction head	-27 kPa
Maximum static pressure head	3.7 m
Maximum fuel temperature at lift pump inlet	79°C
Maximum fuel filter service interval	500 hours
Governor type	Electronic
Speed control conforms to	ISO 8528-5 class G3 steady state

### Fuel specification

USAFed Off Highway Low Sulfur Diesel ≤ 500 PPM Sulfur  
Europe Off Highway Low Sulfur Diesel ≤ 500 PPM Sulfur

**Note:** For further information on fuel specifications and restrictions, refer to the OMM fuels section for this engine model.

### Fuel consumption

Power rating %	676 kWm@1500 rpm Prime		720 kWm @ 1800 rpm Prime	
	g/kWh	litres/hr	g/kWh	litres/hr
25	208	48	214	56
50	194	81	197	90
75	192	118	198	130
100	200	162	206	178
110	202	179	206	196

## Cold start recommendations

### Minimum battery cold cranking amps

Minimum starting temperature	Grade of engine lubrication oil	SAEJ537 Cold Cranking amps	Starting Aids
-0°C	15W-40	1400	None
-5°C	15W-40	1400	Jacket Water Heater to 45°C
-10°C	15W-40	1400	Jacket Water Heater to 45°C
-15°C	0W-30	1400	Jacket Water Heater to 45°C
-20°C	0W-30	1400	Jacket Water Heater to 45°C
-25°C	0W-30	1400	Jacket Water Heater to 45°C

### Notes:

- for cable sizes see applications and installation manual
- jacket water heater needed below 0°C

## Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage adjust range	≅ 5%
Insulation Grade	H
Protection Grade	IP23/22
Phase / wire	3 phase 4 wires

## Control Panel



### The control module gives digital readouts of:

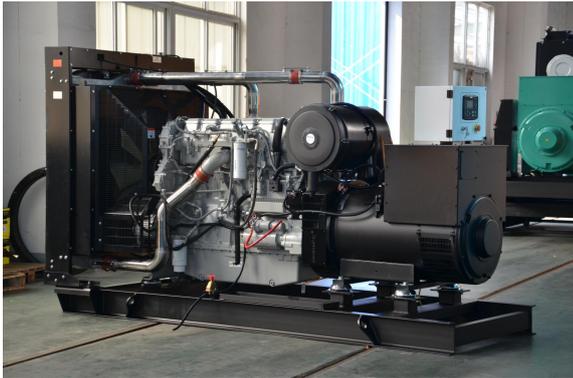
Generator voltage;  
Output frequency;  
Engine speed;  
Battery voltage;  
Engine hours run.

The **control panel** is an Digital Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the module will display warnings, shutdown and engine status information on the back-lit LCD screen and illuminated LEDs.

### The control module has indicators for failure information:

Over speed/Low speed,  
Emergency stop  
Low oil pressure;  
High water temperature  
Failure to start  
Battery charger failure



Dimension:4400\*1600\*2200mm  
Weight:5500kg

### Automatic shutdown occurs under:

Low engine oil pressure;  
High engine water temperature;  
Over speed/Low speed;  
Failure to start after three attempts.

### Electrical system

- Maintenance-free and anti-explosion battery
- Standard breaker
- ABB breaker (optional)
- ATS (optional)
- Battery charger (optional)
- GMS monitoring (optional)



Dimension:5800\*2300\*2500mm  
Weight:9400kg  
Fuel Tank Capacity:1200L

### Packing

- Wrapping film packaging
- Tray packaging
- plywood box packaging

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