



## Genset

Model	JHPE-10GF
Voltage	277/480V
Frequency&Speed	60HZ;1800RPM
Prime Power	9kW/11kVA
Standby Power	11kW/14kVA

### Basic technical data

Number of cylinders	3
Cylinder arrangement	Vertical in-line
Cycle	four stroke
Induction system	Naturally aspirated
Compression ratio	23:1
Bore	77 mm
Stroke	81 mm
Cubic capacity	1.131 litres
Direction of rotation	anti-clockwise when viewed from flywheel
Firing order	1, 2, 3
Estimated total weight of Electropak (dry)	129,2 kg

### Overall dimensions of Electropak

-height	700 mm
-length	776 mm
-width	449 mm

### Moments of inertia (GD<sup>2</sup>)

-engine rotational components	TBA kg m <sup>2</sup>
-flywheel	1,51 kg m <sup>2</sup>

### Centre of gravity (fan face to flywheel housing)

-forward from rear of block	98 mm
-above crank centre line	67 mm
-offset to RHS of centre line	2 mm

### Performance

#### General installation

Designation	Units	Type of operation and application	
		Prime	Stand-by
Gross engine power	kWb	10,7	11,8
Electropak net engine power	kWm	10,3	11,4
Brake mean effective pressure	kPa	TBA	TBA
Engine coolant flow (Water Pump Ratio 1.285:1)	l/min	32,5	
Combustion air flow	m <sup>3</sup> /min	0,9	
Exhaust gas flow (max.)	m <sup>3</sup> /min	2,21	2,4
Exhaust gas temperature (max. )	°C	437	515
Overall thermal efficiency (nett)	%	32	31
Typical genset electrical output (0.8 pf 25 °C)	kWe	9,0	9,9
	kVA	11,2	12,4
Assumed alternator efficiency	%	87	
<b>Energy balance</b>			
Energy in fuel	kWt	31,8	37,8
Energy in power output (gross)	kWb	10,7	11,8
Energy to cooling fan	kWm	0,4	0,4
Energy in power output (nett)	kWt	10,3	11,4
Energy to coolant and lubricating oil	kWt	10,2	12,1
Energy to exhaust	kWt	8,9	10,8
Energy to radiation	kWt	2,6	3,1

➤ **Engine: Perkins 403D-11G**

➤ **Alternator: Stamford/Leroy Somer**  
**/Hengsheng**

➤ **Controller: DeepSea/SmartGen**  
**/DEIF/ComAp**

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

Speed variation at constant load - G2..... ± 0,75%  
Cyclic irregularity  
-at 110% stand-by power..... TBA

### Test conditions

-air temperature..... 25 °C  
-barometric pressure..... 100 kPa  
-relative humidity..... 31.5%  
-air inlet restriction at maximum power (nominal)..... 3 kPa  
-exhaust back pressure at maximum power (nominal)..... 10,2 kPa  
-fuel temperature (inlet pump)..... 40 °C

### Sound level

Average sound pressure level for bare engine  
(without inlet and exhaust) at 1 metre..... 78,5 dB(A)  
-all ratings certified to within..... ± 5%  
If the engine is to operate in ambient conditions other than those of the test conditions, suitable adjustments must be made for these changes. For full details, contact Perkins Technical Service Department.

**Emissions Statement:** Certified against the requirements of EU2007 (EU 97/68/EC Stage II) and EPA Tier 4 (EPA 40 CFR Part 1039 Tier 4 legislation for non-road mobile machinery, powered by constant speed engines

## Cooling system

### Radiator

-face area .....	0,147 m <sup>2</sup>
-rows and materials .....	2 rows, Aluminium
-matrix density and material .....	14,5 FPI, Aluminium
-width of matrix .....	334 mm
-height of matrix .....	440 mm
-pressure cap setting .....	90 kPa
Estimated cooling air flow reserve .....	0,125 kPa

### Fan

-diameter .....	320 mm
-drive ratio .....	1,285:1
-number of blades .....	7
-material .....	Plastic
-type .....	Pusher

### Coolant

Total system capacity	
-with radiator .....	5,2 litres
-without radiator .....	1,9 litres
Maximum top tank temperature .....	112 °C
Temperature rise across engine .....	TBA °C
Max permissible external system resistance .....	TBA kPa
Thermostat operation range .....	75 - 87°C
Recommended coolant: 50% anti freeze / 50% water. For complete details of recommended coolant specifications, refer to the Operation and Maintenance Manual for this engine model	

### Duct allowance

Maximum additional restriction (duct allowance) to cooling airflow and resultant minimum airflow		
Ambient clearance 50% Glycol	Duct allowance Pa	m <sup>3</sup> /sec
53°C	0	0,75
46°C	125	0,59

## Electrical System

-alternator .....	15 amps, 12 V
-starter motor .....	1,1 kW, 12 V

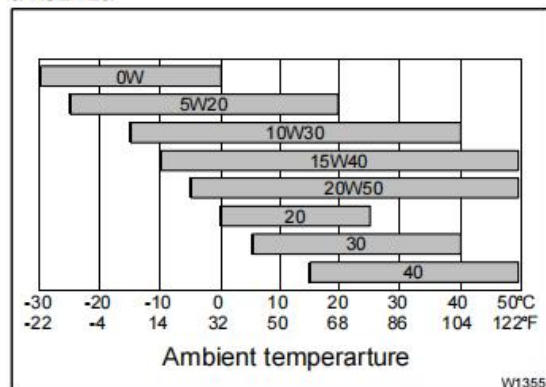
### Cold start recommendations

Minimum cranking speed. .... TBA rev/min

Minimum starting temperature °C	Grade of engine lubricating oil	Battery specifications			
		BS3911 Cold start amps	SAEJ537 Cold cranking amps	Number of batteries needed	Commercial ref number
0	20W	340	540	1	069
-15	10W	340	540	1	069
-20	5W	420	590	1	072

### Recommended SAE viscosity

A single or multigrade oil must be used which conforms API-CH-4 or ACEA E5.



## Exhaust system

Maximum back pressure .....	10,2 kPa
Exhaust outlet size	
-horizontal .....	34 mm
-vertical .....	40 mm

## Fuel system

Type of injection .....	Indirect injection
Fuel injection pump .....	Cassette type
Fuel injector .....	Pintle nozzle
Nozzle opening pressure .....	14.7 MPa

### Fuel lift pump

-flow/hour .....	63 litres/hr
-pressure .....	10 kPa
Maximum suction head .....	0,8 m
Maximum static pressure head .....	3,0 m
Governor type .....	Mechanical

### Fuel specification

USA Fed Off Highway - EPA2D 89.330-96

Europe Off Highway - CEC RF-06-99

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

### Fuel consumption

Power rating			
g/kWh			
110%	100%	75%	50%
268	248	257	280

## 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

- ✧ 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.

## 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:1100\*650\*1050mm  
Weight:300kg

**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:2200\*1000\*1550mm  
Weight:850kg  
Fuel Tank Capacity:180L

### Packing

- Wrapping film packaging
- Tray packaging
- plywood box packaging

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