



➤ **Engine: Perkins 2806J-E18TAG1**

➤ **Alternator: Stamford/Leroy Somer**

/Hengsheng

➤ **Controller: DeepSea/SmartGen**

/DEIF/ComAp

Genset

Model	JHPE5-480GF
Voltage	230/400V
Frequency&Speed	50HZ;1500RPM
Prime Power	444kW/555kVA
Standby Power	480kW/600kVA

Basic technical data

Number of cylinders	6
Cylinder arrangement	Vertical, in line
Cycle	4 stroke, compression ignition
Induction system	Turbocharged
Compression ratio	15.9:1 Nominal
Bore	140 mm
Stroke	171 mm
Cubic capacity	15.8 litres
Direction of rotation	Anti-clockwise viewed on flywheel
Firing order	1, 5, 3, 6, 2, 4
Cylinders 1 furthest from flywheel	
Total weight ElectropaK	(dry) 1712 kg
.....	(wet) 1818 kg
Overall dimensions	Height 1732 mm
.....	Length 2674 mm
.....	Width 1117 mm
Moment of inertia	Flywheel 1,95 kgm ²
Moment of inertia	Engine 1,965 kgm ²
Cyclic irregularity for engine/flywheel (Prime power):	
1500 rev/min	0.0238
1800 rev/min	0.0152

Ratings

Steady state speed stability at constant load $\pm 0.25\%$

Electrical ratings are based on average alternator efficiency and are for guidance only (0.8 power factor being used).

Operating point

Engine speed 1500/1800 rev/min
Cooling water exit temp. 88 - 103 °C

Fuel data

Fuel conform to BS2869 Class A2.

Performance

Estimated average sound pressure level, without inlet or exhaust, at 1 metre (target figures) 1500/1800 rev/min 102/105 dBA
Estimated average sound power level, without inlet or exhaust 1500/1800 rev/min..... 114/116 dBA
Note: All data based on operation to ISO 3046/1, BS 5514 and DIN 6271 standard reference conditions.

Test conditions

Air temperature.....	25 °C
Barometric pressure.....	100 kPa
Relative humidity.....	50%
Air inlet restriction at maximum power (nominal).....	2.5 kPa
Exhaust back pressure.....	6.8 kPa
Fuel temperature (inlet pump).....	40 °C

For test conditions relevant to data on load acceptance, refer to the Applications department.

[illegible]

Cooling system

Recommended coolant: 50% inhibited ethylene glycol or 50% inhibited propylene glycol and 50% clean fresh water. For cooling systems and where there is no likelihood of ambient temperature below 10 °C then clean 'soft' water may be used, treated with 1% by volume of Perkins inhibitor in the cooling system. The inhibitor is available in bottles under Perkins Part No. 21825 735 (1 litre).

Maximum jacket water pressure in crankcase ... 2,76 bar
Radiator

Face area ... 1,239 m²

Rows and material ... 2 Aluminium

Fins per inch and material ... 15 Aluminium

Width and height of matrix ... 1050 x 1180 mm

Weight (dry) ... 120 kg

Total system coolant capacity ... 50 litres

Pressure cap setting ... 0,7 bar

Charge cooler, integral with radiator

Face area ... 1,006 m²

Rows and material ... 1 Aluminium

Fins per inch and material ... 14 Aluminium

Width and height of matrix ... 915 x 1100 mm

Fan ... Pusher type

Diameter ... 965 mm

Drive ratio ... 0.92:1

Number of blades ... 9

Material ... Plastic

Ambient cooling clearance (Standby power) based on:

- air temp at fan 6 °C above ambient
- 12 mm H₂O duct allowance inhibited coolant
- 20 mm H₂O duct allowance 50% glycol

... 50 °C (inhibited coolant)

... 43 °C (50% glycol)

Maximum top tank temperature (Standby) ... 103 °C

Coolant pump speed and method of drive

... 1.081 x e rev/min gear

Maximum static pressure head on pump ... 1,73 bar

Draw down capacity ... 8,0 litres

Maximum permissible external circuit

restriction to coolant pump flow ... 0,3 bar

Thermostat operating range ... 88 - 98 °C

Temperature rise across engine (Standby) Inhibited coolant	Units	1500 rev/min	1800 rev/min
	°C	8.0	7.5

Coolant immersion heater capacity ... 1500 W

Lubrication system

Recommended lubricating oil: ... To be a multigrade oil (15W/40) which adequately meets the specifications of API CG4.

Lubricating oil capacity:

Total system ... 68 litres

Sump maximum ... 60 litres

Sump minimum ... 45 litres

Lubricating oil temperature (sump):

Normal ... 95 °C

Maximum ... 113 °C

Lubricating oil pressure:

At rated speed ... 4,6 bar

Minimum ... 2 bar

Oil relief valve opens ... 6,1 bar

Oil filter spacing ... 30 µm

Oil consumption	
As a percentage of full load fuel consumption	0.1%

Sump drain plug tapping size ... M24

Oil pump speed and method of drive ... 1.16 x engine speed, gear

Oil pump flow 1500/1800 rev/min ... 2,90/3,48 litres/sec

Normal operating angles:

Fore and aft ... 7°

Side tilt ... 7°

Fuel consumption calculated on engine net rated powers						
Rating	g/kWh			Litres/hr		
	1500 1/2 TA Luft*	1500 EPA Certified**	1800 EPA Certified**	1500 1/2 TA Luft*	1500 EPA Certified**	1800 EPA Certified**
Standby	220,0	211,6	209,1	110	106	131
Prime Power	220,5	212,1	204,1	100	96	116
At 75% of Prime Power	226,1	217,4	207,4	77	74	88
At 50% of Prime Power	233,6	233,6	228,4	53	53	65

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 drip-proof 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:4100*1600*2200mm
Weight:4800kg

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)

Packing

- Wrapping film packaging
- Tray packaging
- plywood box packaging



Dimension:5800*2300*2500mm
Weight:8700kg
Fuel Tank Capacity:1200L

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