



Genset

Model	JHP5-1320GF
Voltage	230/400V
Frequency&Speed	50HZ;1500RPM
Prime Power	1368kW/1710kVA
Standby Power	1500kW/1875kVA

Basic technical data

Number of cylinders 12
 Cylinder arrangement Vee, 60°
 Cycle 4 stroke
 Induction system Turbocharged
 Combustion system direct injection
 Compression ratio 13:1
 Bore 160 mm
 Stroke 190 mm
 Cubic capacity 45-842 litres
 Direction of rotation anti-clockwise when viewed from flywheel
 Firing order 1^A, 6^B, 5^A, 2^B, 3^A, 4^B, 6^A, 1^B, 2^A, 5^B, 4^A, 3^B
 Cylinder 1 furthest from flywheel
Note: Cylinders designated 'A' are on the right hand side of the engine when viewed from the flywheel end

Approximate weights

Description	unit	Tropical	Temperate
Engine (dry)	Kg	4400	4400
Electropak (wet) + fuel cooler	Kg	6450	6086
Electropak (wet) - fuel cooler	Kg	6425	6070

Overall dimensions of Electropak

	unit	Tropical	Temperate
Height	mm	2610	2259
Length	mm	3883	3915
Width	mm	2164	2198

Moment of inertia

Engine 9,73 kgm²
 Flywheel 9,57 kgm²

Cyclic irregularity for engine/flywheel maximum

4012-46TAG3A 1:638

➤ Engine: Perkins 4012-46TAG3A

➤ Alternator: Stamford/Leroy Somer
 /Hengsheng

➤ Controller: DeepSea/SmartGen
 /DEIF/ComAp

Ratings

Steady state speed stability at constant load ± 0.25%
 Electrical rating are based on average alternator efficiency and are for guidance only (0.8 power factor being used).

Operating point

Engine speed 1500 rev/min
 Static injection timing see engine number plate
 Cooling water exit temperature < 98 °C
 Fuel data to conform to BS2869 class A2 or BS EN590

Performance

All data based on operation to ISO 3046/1, BS 5514 and DIN 6271 standard reference conditions.

Noise

See "Noise" on page 16.
 For engines operating in ambient conditions other than the standard reference conditions stated below, a suitable de-rate must be applied.
 De-rate 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) 2,5 kPa
 Exhaust back pressure at maximum pressure (nominal) 3,0 kPa
 Fuel temperature (inlet pump) 58 °C maximum
 For test conditions relevant to data on load acceptance, refer to page 10 of this document.

4012-46TAG3A - Temperate

Designation	Units	Type of operation and application	
		Baseload power	Prime power
Gross engine power	kW/m	1260	1500
Fan and battery charging alternator power	kW	64	
Nett engine power	kW/m	1196	1436
Brake mean effective pressure (gross)	kPa	2192	2610
Combustion air flow at ISO conditions	m ³ /min	100	118
Exhaust gas temperature (max) after turbo	°C	490	
Exhaust gas flow (max) at atmospheric pressure	m ³ /min	300	
Boost pressure ratio	-	3,20	3,60
Mechanical efficiency	%	89	91
Overall thermal efficiency (nett)	%	39,5	38,5
Friction power and pumping losses	kW/m	120	
Mean piston speed	m/s	9,5	
Engine coolant flow	l/min	1020	
Typical Genset electrical output (0.8pf)	kVA	1420	1705
	kWe	1136,0	1364,0
Assumed alternator efficiency	%	95	

Electrical system

Type	insulated return
Alternator voltage.....	24 volts with integral regulator
Alternator output	40 amps, 28 volts at 20 °C ambient
Starter type	axial
Starter motor voltage.....	24 volts
Starter motor power	16,4 kW
Number of teeth on flywheel	159
Number of teeth on starter pinion.....	12
Minimum cranking speed	120 rev/min
Pull in current of starter motor solenoid @ -25 °C max ⁽¹⁾	30 amps at 24 volts
Hold in current of starter motor solenoid @ -25 °C max ⁽¹⁾	9 amps at 24 volts
Stop solenoid hold-in current	1,1 amps at 24 volts
Engine stop solenoid.....	24 volts

1. All leads to rated at 10 amps minimum

Fuel system

Recommended fuel to conform to:
BS2869 1998 Class A2 or BS EN590

Injection system	direct
Fuel injection pump and injector type	combined unit injector
Injector pressure	140 MPa
Lift pump type	Tuthill, TCH 1-089

Delivery

-4012-46TAG3A	1020 litres/hour
Heat retained in fuel to tank	8 kW
Fuel inlet temperature to be less than.....	58 °C
Delivery pressure	300 kPa
Maximum suction head at pump inlet	2,5 m
Maximum static pressure head	see installation manual for details
Fuel filter spacing.....	10 microns
Governor type	electronic
Governing to ISO 8528-12 CLASS 3 and 4; ISO 8528-5 CLASS G2	
Tolerance on fuel consumption	5%

Fuel consumption

Ratings	g/kW/hr	litres/hr
4012-46TAG3A, Temperate & Tropical		
Prime	212	380
Baseload	210	319
75% Prime	201	275
50% Prime	201	187

Note: Fuel consumption calculated on gross rated powers.

Induction system

Maximum air intake restriction of engine:

-clean filter.....	2 kPa
-dirty filter	4 kPa
-air filter type	Medium duty axial flow

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

Exhaust system

Exhaust outlet size (internal)	2 x 254 mm Table D flanges
Exhaust outlet flange size	2 x 254 mm Table D flanges
Back pressure for total system	5 kPa

For recommended pipe sizes, please refer to the Installation Manual.

Cold start recommendations

Temperature range	
5 °C down to -10 °C (41 °F to 14 °F)	Oil: 15W40 CH4 Starter: 2 x 24 volts Battery: 4 x 12V 286 Ah Max breakaway current: 1600 amps Cranking current: 810 amps Aids: block heaters Min mean cranking speed: 120 rev/min

Notes:

- The battery capacity is defined by the 20 hour rate
- The oil specification should be for the minimum ambient temperature as the oil will not be warmed by the immersion heater
- Breakaway current is dependant on battery capacity available. Cables should be capable of handling the transient current which may be up to double the steady cranking current.

Engine mounting

Maximum static bending moment at rear face of block...	1356 Nm
Maximum additional load applied to flywheel due to all rotating components	850 kg

Centre of gravity

Bare engine, dry	
-forward of the rear face of the cylinder block	771 mm
-above the crankshaft centre line	32 mm
ElectropaK, dry	
-forward of the rear face of the cylinder block	1176 mm
-above the crankshaft centre line	32 mm

- ✧ 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:5000*2150*2500mm
Weight:10000kg



Dimension:6000*2400*2900mm
Weight:12300kg
Fuel Tank Capacity:1000-3000L

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

Jiangsu Jianghao Generator Co.,Ltd

Address: No.1 Xixu Road, Medical High-tech Zone,
Taizhou city, Jiangsu, China

Contact Person: Anthony Feng

Email: jhfsale@jhgenerator.com

WhatsApp: +86 18652649673

