## JIANGHAO GENERATOR

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## Genset

| Model           | JHP5-1200GF    |
|-----------------|----------------|
| Voltage         | 230/400V       |
| Frequency&Speed | 50HZ;1500RPM   |
| Prime Power     | 1200kW/1500kVA |
| Standby Power   | 1320kW/1650kVA |

The Perkins 4000 Series family of 6, 8, 12 and 16 cylinder diesel engines was designed in advance of today's uncompromising demands within the power generation industry and includes superior performance and reliability.

The 4012-46TAG2A ElectropaK is a turbocharged, air-toair charge cooled, 12 cylinder diesel engine.

Offered with either temperate or tropical cooling packages (with or without fuel oil cooling). Their premium design and specification features provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability, low gaseous emissions, overall performance and reliability essential to the power generation market.

## Engine: Perkins 4012-46TAG2A

► Alternator: Stamford/Leroy Somer

## /Hengsheng

➢Controller:DeepSea/SmartGen

## /DEIF/ComAp



| Specification              |   |                           |            |                    |  |
|----------------------------|---|---------------------------|------------|--------------------|--|
| Number of cylinders        | 12 60° Vee form                           |                           |            |                    |  |
| Bore and stroke            | 160 x                                     | 160 x 190 mm 6.3 x 7.5 in |            |                    |  |
| Displacement               | 45.84                                     | 12 litres                 | 279        | 97 in <sup>a</sup> |  |
| Aspiration                 | Turbocharged and air to air charge cooled |                           |            |                    |  |
| Cycle                      | 4 stroke                                  |                           |            |                    |  |
| Combustion system          | Direct injection                          |                           |            |                    |  |
| Compression ratio          | 13:1                                      |                           |            |                    |  |
| Rotation                   | Anti-clockwise, viewed from flywheel end  |                           |            | d                  |  |
| Total lubricating capacity | 177 litres                                |                           | 46.7       | US gal             |  |
| Cooling system             | Water-cooled                              |                           |            |                    |  |
|                            | Temperate                                 |                           | Tro        | pical              |  |
| Total coolant capacity     | 207 litres                                | 54.6 US gal               | 210 litres | 55.5 US gal        |  |



|              | Engine pa | ackage weights and di | mensions |         |
|--------------|-----------|-----------------------|----------|---------|
|              | Temp      | erate                 | Trop     | ical    |
| Length       | 3916 mm   | 154 in                | 3915 mm  | 154 in  |
| Width        | 1775 mm   | 70 in                 | 2198 mm  | 86.5 in |
| Height       | 2255 mm   | 88.8 in               | 2258 mm  | 88.9 in |
| Weight (dry) | 4400 kg   | 9700 lb               | 4400 kg  | 9700 lb |



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|---|----------------------|-----------------------------------|------|--------------|------|------|------|
| Speed<br>rpm                              | Type of<br>operation |                                   |      | Gross        |      | Net  |      |
| ipin operation                            | operation            | kVA                               | kWe  | kWm          | hp   | kWm  | hp   |
|   | Baseload power       | 1194                              | 955  | 1069         | 1434 | 1005 | 1348 |
| 1500                                      | Prime power          | 1505                              | 1204 | 1331         | 1785 | 1267 | 1700 |
|   | Standby (maximum)    | 1656                              | 1325 | 1459         | 1957 | 1395 | 1870 |

The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, IS

Rating conditions: 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. Please consult your distributor or the factory for ratings in other ambient conditions. Note: For full ratings please refer to Perkins Engines Company Limited. All electrical ratings are based on an average alternator efficiency and a power factor of 0.8. Fuel specification: BS2869: Class A2.

#### Rating definitions

Baseload power: Power available for continuous full load operation. No overload is permitted. Prime power: Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation. Standby (maximum): Power available at variable load in the event of a main power network failure up to a maximum of 500 hours per year. No overload is permitted.

| Percent of prime power | Fuel consumption at 1500 rpm<br>g/kWh | Fuel consumption at 1500 rpm<br>Vhr |
|------------------------|---------------------------------------|-------------------------------------|
| Standby (maximum)      | 201                                   | 341                                 |
| Prime power            | 200                                   | 310                                 |
| Continuous baseload    | 200                                   | 249                                 |
| 75%                    | 201                                   | 234                                 |
| 50%                    | 203                                   | 157                                 |

#### Fuel system

- · Direct fuel injection system with fuel lift pump
- Digital governing to ISO 8528-5 Class G2 with isochronous capability
- Full flow spin-on filters

#### Lubrication system

- · Wet full aluminium sump with filler and dipstick
- · Full flow spin-on oil filters

#### Cooling system

- Two twin thermostats
- System designed for ambient temperatures of up to 50°C

#### Alternator

| Pole No.         | 4-Pole                     |  |  |
|------------------|----------------------------|--|--|
| Exciter Type     | Single bearing, Brushless, |  |  |
|                  | Self-excited               |  |  |
| Power factor     | 0.8                        |  |  |
| Voltage adjust   | $\leq 5\%$                 |  |  |
| range            |                            |  |  |
| Insulation Grade | Н                          |  |  |
| 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.



Dimension:5000\*2150\*2500mm Weight:10000kg



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

#### 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

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