



Genset

Model	JHP5-1000GF
Voltage	230/400V
Frequency&Speed	50HZ;1500RPM
Prime Power	1000kW/1250kVA
Standby Power	1100kW/1375kVA

The 4012-46TWG engine has been developed using the latest engineering techniques and builds on the strengths of the already very successful 4012 Series family and addresses today's uncompromising demands within the power generation industry.

Developed from a proven heavy-duty industrial base these products offer superior performance and reliability.

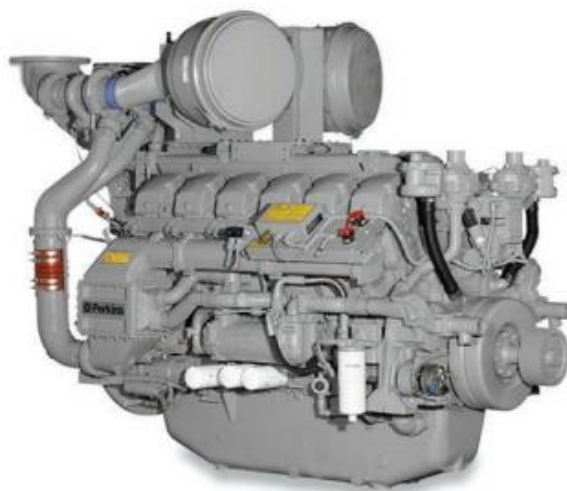
The 4012-46TWG2A is a turbocharged and air-to-water charge-cooled, 12 cylinder diesel engine which offers a choice of temperate or tropical cooling. Its premium features provide exceptional power-to-weight ratio resulting in exceptional fuel consumption.

The overall performance and reliability characteristics makes this one of the prime choices for today's power generation industry.

➤ **Engine: Perkins 4012-46TWG2A**

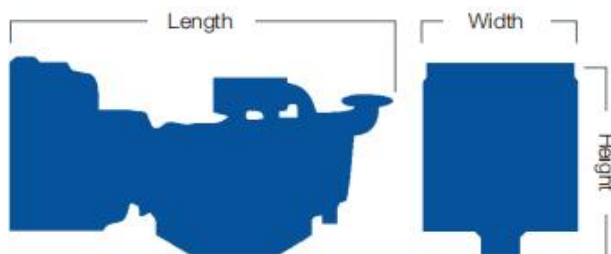
➤ **Alternator: Stamford/Leroy Somer**
/Hengsheng

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



Specification

Number of cylinders	12 60° Vee form			
Bore and stroke	160 x 190 mm		6.3 x 7.5 in	
Displacement	45.842 litres		2797 in³	
Aspiration	Turbocharged and air to water charge cooled			
Cycle	4 stroke			
Combustion system	Direct injection			
Compression ratio	13:1			
Rotation	Anti-clockwise, viewed from flywheel end			
Total lubricating capacity	177 litres		46.7 US gal	
Cooling system	Water-cooled			
	Temperate		Tropical	
Total coolant capacity	196 litres	51.7 US gal	201 litres	53 US gal



Engine package weights and dimensions

	Temperate		Tropical	
Length	3714 mm	146 in	3714 mm	146 in
Width	1780 mm	70 in	1978 mm	79 in
Height	2255 mm	89 in	2255 mm	89 in
Weight (dry)	5220 kg	11508 lb	5283 kg	11647 lb

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500	Baseload Power	989	791	891	1194	833	1117
	Prime Power	1250	1000	1113	1492	1055	1414
	Standby (maximum)	1385	1108	1224	1641	1166	1563

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, BS 5514/1.

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 g/kWh	Fuel consumption at 1500 rpm l/hr
Standby (maximum)	213	288
Prime power	212	259
Continuous baseload	214	207
75%	216	196
50%	233	143

Fuel system

- Direct fuel injection system with fuel lift pump
- Governing to ISO 8528-5 class G3 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 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:4880*2100*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

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