



Genset

Model	JHP-90GF
Voltage	277/480V
Frequency&Speed	60HZ;1800RPM
Prime Power	92kW/114kVA
Standby Power	101kW/126kVA

1100 Series 1104C-44TAG2 Diesel Engine – ElectropaK

112.4 kWm @ 1800 rpm

Building upon Perkins proven reputation within the power generation industry, the Perkins® 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers.

With this 1104C-44TAG2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership with six cylinder capability from a four cylinder package performance. Crucially, bare engine noise is lower than ever before.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TAG2 satisfies EU 2007 Stage II mobile off-highway legislation; and also complies to TA Luft (1986) regulations.

1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.



Emissions

Certified against the requirements of EU 2007 (EU 97/68/EC Stage II) legislation for non-road mobile machinery, powered by constant speed engines.

Specification		
Number of cylinders	4 vertical in-line	
Bore and stroke	105 x 127 mm	4.3 x 5.0 in
Displacement	4.41 litres	269 in ³
Aspiration	Turbocharged, air to air charge cooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	18.2:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	8.0 litres	2.1 US gal
Cooling system	Water-cooled	
Total coolant capacity	12.6 litres	3.3 US gal

Engine package weights and dimensions		
Length	1259 mm	45.5 in
Width	721 mm	28.3 in
Height	966 mm	38.0 in
Weight (dry)	550 kg	1212 lb

➤ **Engine: Perkins 1104C-44TAG2**

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

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

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1800	Prime power	114.4	91.5	106.8	143.2	101.7	136.3
	Standby (maximum)	126.5	101.2	117.5	157.5	112.4	150.7

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on typical alternator efficiencies and a power factor and a power factor (cos θ) of 0.8.

Fuel specification: BS 2869 Class 2 or ASTM D975 D2. Lubricating oil: API CH4/ACEA E5.

Rating definitions

Prime power: Power available for variable load in lieu of a main power network. 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. No overload is permitted.

Percent of prime power	Fuel consumption at 1800 rpm g/kWh	Fuel consumption at 1800 rpm l/hr
Standby (maximum)	214	29.7
Prime power	218	26.9
75%	218	20.2
50%	228	14.1

Features and benefits

Compact and efficient power

- The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions

Cleaner and quieter power

- The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump

Cost effective power

- The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption and 500 hour service intervals
- Warranties and Service Contracts

We provide one-year warranties for constant speed engines and two-year warranties for variable speed models, as standard. These are supported by multilevel Extended Service Contracts that can be bought additionally. Discover more: www.perkins.esc

Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage adjust range	$\pm 5\%$
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 downstream 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 $\pm 1\%$ 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:1950*780*1200mm
Weight:1000kg



Dimension:3000*1100*1700mm
Weight:1900kg
Fuel Tank Capacity:280L

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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