

# 1000 Series

## Diesel Engine - ElectropaK Belt-Driven Coolant Pump

### 1004G

**44.0 kWm 1500 rev/min**  
**51.0 kWm 1800 rev/min**

The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004G with belt-driven coolant pump is a naturally aspirated, 4 cylinder, 4 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

### Economic power

Unique Quadram combustion system enables high power output with lower fuel consumption and noise.

Rated speed is changeable between 1500rpm and 1800rpm allowing standard builds to operate at either 50Hz or 60Hz.

One side servicing for reduced service time and cost.

### Clean, effective power

Operator and environmentally friendly with low noise and emissions and rapid startability.

### Durable power

Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.

Retains the durability and reliability of its predecessors in the Perkins family.

### Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.

Suitable for operation in ambient temperatures up to 50°C.

Fuelled starting aid for temperatures down to -20°C.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	44.5	35.5	41.0	55.0	40.0	53.5
	Standby power	49.0	39.0	45.0	60.0	44.0	59.0
1800	Prime power	52.0	41.5	48.0	64.0	46.5	62.5
	Standby power	57.0	45.5	52.5	70.5	51.0	68.5

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact. Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 89%.

**Fuel specification:** BS2869 Part 2 1998 Class A2 or ASTM D975 D2.

**Lubricating oil:** A single or multigrade oil to ACEA/E1 E2 or CD/SD.

#### Rating Definitions

**Prime power:** Power available at variable load in lieu of main power network. An overload of 10% is permitted for one hour in every twelve hours of operation.

**Standby power:** Power available at variable load in the event of a main power network failure. No overload is permitted.

# 1000 Series 1004G

## Standard ElectropaK Specification

### Air Inlet

Mounted air filter

### Fuel System

Rotary fuel injection pump  
Mechanical governing conforms to ISO8528-5 1993 (E)  
Class G2, ISO3046-4M3  
Spin-on full flow fuel filter with pre filter

### Lubrication System

Rear well aluminium sump with filler and dipstick  
Spin-on full-flow oil filter

### Cooling System

Belt-driven circulating pump  
20" belt-driven fan and guards  
Mounted radiator and pipework

### Electrical Equipment

12 Volt starter motor and 12 Volt 55 Amp alternator with DC output  
12 Volt senders for oil pressure and coolant temperature  
12 Volt shutdown solenoid energised to run  
Cold start aid

### Flywheel and Housing

High inertia flywheel to SAE J620 Size 10/11 $\frac{1}{2}$   
Cast iron SAE 3 flywheel housing

### Mountings

Front engine mounting bracket

## Optional Equipment

24V alternator  
24V starter motor  
Water temperature gauge and sender  
Heater/starter switch  
Rear engine mountings  
Workshop manual  
Parts book  
User handbook  
Electronic governor (12V only)



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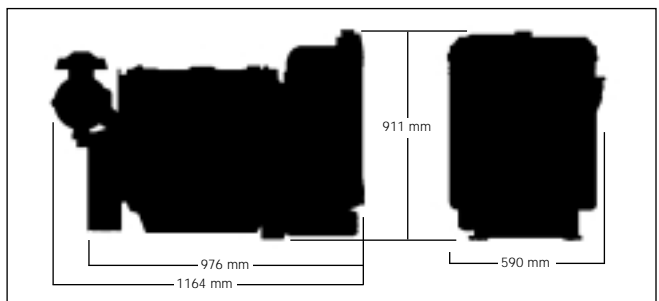
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## ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical, in-line
Cycle	4-stroke
Induction system	Naturally aspirated
Combustion system	Direct injection
Cooling system	Water-cooled
Displacement	3.99 litres
Bore and stroke	100 mm x 127.0 mm
Compression ratio	16.0:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1, 3, 4, 2
Total lubrication system capacity	8.1 litre
Coolant capacity (inc radiator)	15.7 litres
Length	1164 mm
Width	590 mm
Height	911 mm
Total weight (dry)	409 kg
Total weight (wet)	429 kg

Fuel consumption litres/hour (UK gallons/hour)		
Power rating	1500 rev/min	1800 rev/min
Standby power	12.5 (2.7)	15.2 (3.3)
Prime power	11.0 (2.4)	13.2 (3.0)
75% of prime power	8.3 (1.8)	9.5 (2.1)
50% of prime power	5.7 (1.2)	6.8 (1.5)



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