

100 Series

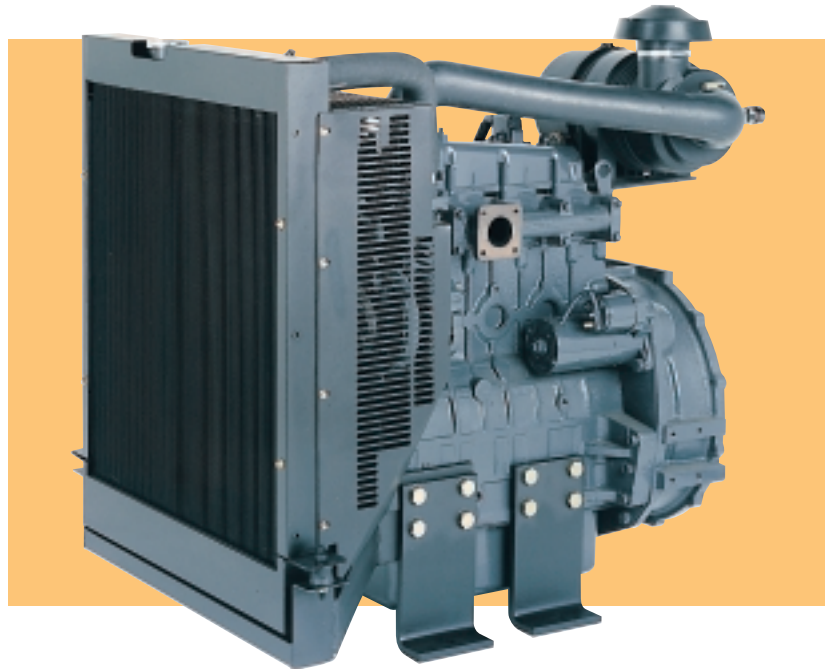
104-22

Diesel Engine –
ElectropaK

19.5 kWm 1500 rev/min
23.5 kWm 1800 rev/min

The Perkins 100 Series ElectropaK range offers convenient, reliable and cost-effective Gen Set Power with minimised running costs from a compact self-contained package.

The 104-22 is a naturally aspirated 4 cylinder, 2.2 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.



Clean, efficient power

- **Highly efficient combustion** is achieved through our indirect fuel injection system, with optimised pre-combustion swirl chambers. This same efficiency makes the 100 Series capable of exceeding all known applicable off-highway emissions standards worldwide.

Quiet power

- **Cassette fuel pump** situated inside the engine block reducing radiated noise.
- **Helically cut timing gears** reduce mechanical noise.

- **Indirect injection** for reduced combustion noise due to smoother heat release rate and less severe pressure rate change.

Economic power

- **Single side servicing** reduces service time, cost and enhances equipment availability.

Durable power

- **Forged chrome molybdenum steel crankshaft** for high strength.
- **Tunnel block design** for high strength and low noise.

- **Chrome plated piston rings** for long life.
- **Sintered valve seats** for long life and reduced servicing.

Reliable power

- **Suitable for operation** in ambient temperatures up to 47°C. Enclosed applications need to be checked for ambient clearance.
- **All engines are subject to full factory test.**
- **Over 4000 distributors and dealers** globally.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power Output (Net)	
		kVA	kWe	kWm	bhp
1500	Prime	18.0	14.5	18.0	24.0
	Standby	19.5	15.5	19.5	26.0
1800	Prime	21.5	17.0	21.5	29.0
	Standby	23.5	18.5	23.5	31.5

Performance tolerance quoted by Perkins is ±5%. Electrical ratings assume a power factor of 0.8 and an alternator efficiency of 80%.

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.

Standard ElectropaK Specification

- Base engine
- Flywheel housing SAE 4 Long
- Flywheel SAE 7½ Heavy
- Pressed steel sump
- Mechanical governor
- Cassette type fuel pump
- 12V shut off solenoid energised to run
- Glow plug cold start aid
- Spin on full flow oil filter
- Spin on full flow fuel oil filter
- Thermostat controlled cooling system
- Pusher fan
- Radiator and piping
- Fan guard
- Engine mountings
- 12V engine alternator
- 12V starter motor
- Air filter
- Oil pressure switch
- Coolant temperature switch
- Heater/starter switch
- Mounting feet
- Hoses and brackets

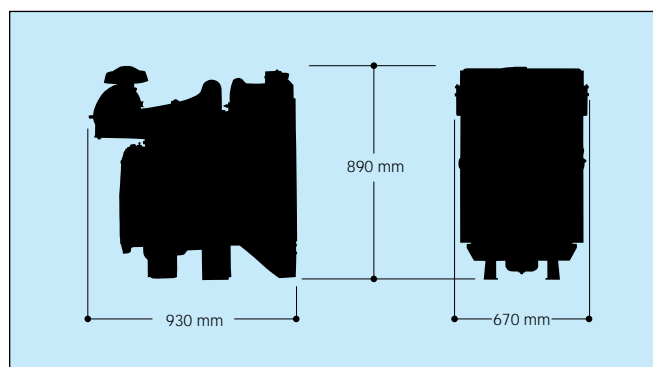
Optional Equipment

- Workshop manual
- Parts book

ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical, in-line
Cycle	4-stroke
Induction system	Natural aspiration
Combustion system	Indirect injection
Cooling system	Water-cooled
Displacement	2216cc
Bore and stroke	84 mm × 100 mm
Compression ratio	22.0:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1,3,4,2
Total lubrication system capacity	8.21 litres
Total weight (dry)	245 kg

Fuel consumption litres/hour (UK gallons/hour)		
Power rating %	1500 rev/min	1800 rev/min
Standby	4.6 (1.01)	5.1 (1.12)
Prime	4.3 (0.95)	4.8 (1.06)
75% prime	3.4 (0.75)	4.0 (0.88)
50% prime	2.5 (0.55)	3.0 (0.66)



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All information in this document is substantially correct at the time of printing but may be altered subsequently by the company.

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