



100 Series

Diesel engine - ElectropaK

104-22

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 4,000 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

The above ratings represent engine performance to conditions specified in ISO 8528/1, ISO 3046/1, BS5514/1, DIN6271 Performance tolerance quoted by Perkins is ±5%. Electrical ratings assume a power factor of 0.8 and an alternator efficiency of 80%.

Fuel specification: BS2869 Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W/40 to ACEAE1 or API CD

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.

100 Series 104-22

Standard Electropak Specification

Air Inlet

Mounted air filter

Fuel System

Cassette type fuel injection pump
Mechanical governing to ISO 3046-4
Spin-on full-flow fuel oil filter

Lubrication System

Pressed steel sump with dipstick
Oil filler on top cover
Spin on full-flow oil filter

Cooling System

Thermostatically-controlled system with belt driven pump and 390 mm pusher fan
Radiator mounted with pipes and guards

Electrical Equipment

12 Volt starter motor and 35 Amp alternator
Oil pressure and coolant temperature switches
Heater/starter switch and glow plug start aid
12 Volt shutdown solenoid energised to run

Flywheel and Housing

High inertia flywheel to SAE J620 size 7½ heavy
Flywheel housing SAE 4 long

Mountings

Front mounting feet
Engine mountings

Optional Equipment

Exhaust silencer
Control panel
Workshop manual
Parts book



Perkins Engines Company Limited

Peterborough PE1 5NA
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240
www.perkins.com

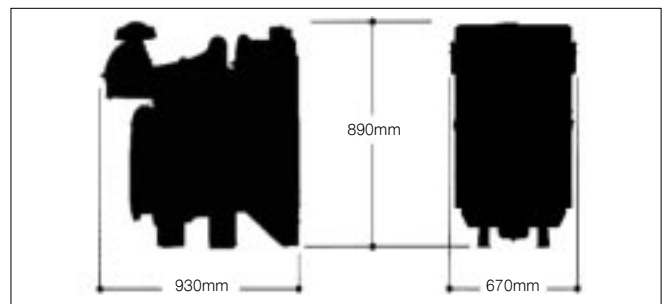
All information in this leaflet is substantially correct at the time of printing but may be changed subsequently by the Company



General Data

Number of Cylinders	4
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Naturally aspiration
Combustion System	Indirect injection
Cooling System	Water-cooled
Displacement	2216 cc
Bore and Stroke	84 mm x 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
Coolant Capacity (Inc Radiator)	7.98 litres
Length	930 mm
Width	670 mm
Height	890 mm
Total Weight (dry)	245 kg

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



Distributed by