



1100 Series

Diesel Engine - ElectropaK 1104C-44TAG1

78 kWm 1500 rev/min
89 kWm 1800 rev/min



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

In the world of power generation success is greeted for those providing more for even less. Therefore with this new 1104C-44TAG1 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. And with six cylinder capability from a four cylinder package performance increases, but 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-44TAG1 satisfies US EPA Tier 2 mobile off-highway legislation; elsewhere the engine is designed to comply with TA Luft 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.

Compact and efficient power

1100 Series is the fruit of an intensive period of customer research with which to guide the development of the range. A new 4.4 litre, 4 cylinder block ensures bore roundness is maintained under the pressures of operation, it also ensures combustion and mechanical noise is lowered. A new cylinder head re-established Perkins mastery of air control to match with charged cooled turbocharged performance hitting generator output nodes previously requiring 6 litres or more.

Cleaner and quieter power

The 1104-44TAG1 has a structure that has led to an exceptionally low noise signature, useful to both packager and the environment. To meet other environmental needs, high pressure fuel from an advanced technology rotary distribution pump is cleanly burned with air charge cooled, swirl conditioned and delivered through a cross flow head.

Quality by design

Product design and Class A manufacturing improvements have been implemented to enhance product reliability to the needs of today, while maintaining Perkins legendary reputation for durability.

Cost effective power

The compact package and low noise brings benefit to the manufacturer, while lower fuel consumption and oil use, along with 500 hour service intervals and a two year warranty are set to match user needs now, and into the future.

Product support

Total worldwide service continues to be provided through a network of 4000 distributors and dealers. This is now enhanced by the introduction of TIPSS (The Integrated Parts and Service System), which represents a step change in diesel engine support. TIPSS enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

| Engine speed rev/min | Type of Operation | Typical generator output (net) | | Engine power | | | |
|----------------------|-------------------|--------------------------------|------|--------------|-------|-----|-------|
| | | | | Gross | | Net | |
| | | kVA | kWe | kWm | bhp | kWm | bhp |
| 1500 | Prime power | 80 | 64 | 75 | 100.5 | 71 | 95 |
| | Standby (maximum) | 88 | 70.5 | 82 | 110 | 78 | 104.5 |
| 1800 | Prime power | 90 | 72 | 84 | 112.5 | 80 | 107 |
| | Standby (maximum) | 100 | 80 | 94 | 126 | 89 | 119 |

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.

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

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

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.

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1104C-44TAG1



Standard ElectropaK Specification

Air Inlet

Mounted air filter

Fuel System

Rotary type pump
Ecoplus fuel filter

Lubrication System

Wet cast-iron sump with filler and dipstick
Spin-on oil filter

Cooling System

Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
Mounted radiator and piping incorporating air-to-air charge cooler

Electrical Equipment

12 Volt starter motor and 12 Volt 65 Amp alternator with DC output
12 Volt shutdown solenoid energised to run
Glow plug cold start aid

Flywheel and Housing

Flywheel to SAE J620 size 10/11½
SAE 3 flywheel housing

Literature

User's Handbook

Optional Equipment

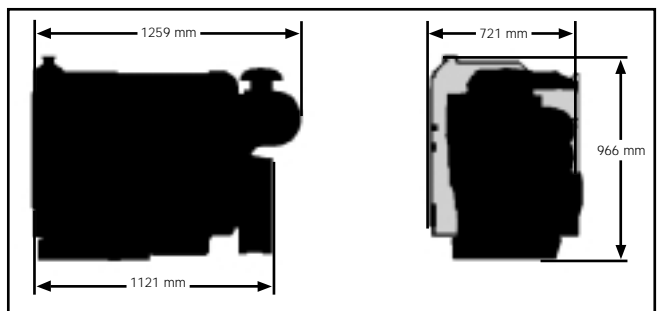
24 Volt alternator
24 Volt starter motor
Workshop manual
Parts book

General Data

| | |
|--|--|
| Number of Cylinders | 4 |
| Cylinder Arrangement | Vertical in-line |
| Cycle | 4 stroke |
| Induction system | Turbocharged, air to air charge cooled |
| Combustion System | Direct injection |
| Cooling System | Water-cooled |
| Bore & Stroke | 105 x 127 mm |
| Displacement | 4.41 litres |
| Compression Ratio | 18.2:1 |
| Direction of Rotation | Anti-clockwise viewed on flywheel |
| Total Lubrication System Capacity | 8.0 litres |
| Total Coolant Capacity | 12.6 litres |
| Length | 1259 mm |
| Width | 721 mm |
| Height | 966 mm |
| Dry Weight (ElectropaK) | 550 kg |

| Fuel consumption litres/hour (gallons*/hour) | | |
|--|--------------|--------------------|
| Power rating % | 1500 rev/min | 1800 rev/min |
| 110 | 20.3 / 4.5 | 24.1 / 5.31 (6.37) |
| 100 | 18.6 / 4.1 | 22.0 / 4.85 (5.81) |
| 75 | 14.3 / 3.2 | 17.0 / 3.74 (4.49) |
| 50 | 9.8 / 2.2 | 11.7 / 2.58 (3.09) |

* (US Gallons)



Distributed by



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