1100 Series 1104C-44TAG2 Diesel Engine – ElectropaK

99.5 kWm 1500 rev/min
112.4 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-44TAG2 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-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.

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.

<table>
<thead>
<tr>
<th>Engine Speed (rev/min)</th>
<th>Type of Operation</th>
<th>Typical Generator Output (Net)</th>
<th>Engine Power</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gross</td>
<td>kWm</td>
<td>bhp</td>
</tr>
<tr>
<td>1500</td>
<td>Prime Power</td>
<td>101.4</td>
<td>81.4</td>
<td>93.6</td>
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<tr>
<td></td>
<td>Standby (maximum)</td>
<td>111.9</td>
<td>89.6</td>
<td>103.0</td>
</tr>
<tr>
<td>1800</td>
<td>Prime Power</td>
<td>114.4</td>
<td>91.5</td>
<td>106.8</td>
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<tr>
<td></td>
<td>Standby (maximum)</td>
<td>126.5</td>
<td>101.2</td>
<td>117.5</td>
</tr>
</tbody>
</table>

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.

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99.5 kWm 1500 rev/min
112.4 kWm 1800 rev/min

Engine 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

Fuel Consumption

<table>
<thead>
<tr>
<th>Engine Speed</th>
<th>1500 rev/min</th>
<th>1800 rev/min</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g/kWh</td>
<td>l/hr</td>
</tr>
<tr>
<td>Standby</td>
<td>205</td>
<td>24.9</td>
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<tr>
<td>Prime Power</td>
<td>205</td>
<td>22.6</td>
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<tr>
<td>75% of Prime Power</td>
<td>207</td>
<td>17.1</td>
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<tr>
<td>50% of Prime Power</td>
<td>204</td>
<td>11.2</td>
</tr>
</tbody>
</table>

General data

Number of cylinders ................................. 4 vertical in-line
Bore and stroke........................................ 105 x 127 mm
Displacement .......................................... 4.41 litres
Aspiration............................................... Turbocharged, air to air
Cycle.......................................................... 4 stroke
Combustion system................................. Direct injection
Compression ratio................................... 18.2:1
Rotation.................................................. Anti-clockwise viewed on flywheel
Cooling system........................................ Water-cooled
Total lubrication system capacity .............. 8.0 litres
Total coolant capacity................................ 12.6 litres
Dimensions - Length ................................ 1259 mm
Width .................................................. 721 mm
Height ................................................ 966 mm
Dry weight (ElectropaK).............................. 550 kg

Final weight and dimensions will depend on completed specification.

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All information in this document is substantially correct at time of printing and may be altered subsequently.
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