### 1100 Series 1104D-44TG3 Diesel Engine - Electropak

54 kWm (72 hp) net prime power @ 1500 rpm 59 kWm (79 hp) net standby power @ 1500 rpm

The Perkins<sup>®</sup> 1104D turbocharged ElectropaKs are the latest addition to the 1100 Series ElectropaK range. Perkins has developed this engine in line with our customer's needs by providing the options of either electronic common rail or mechanically controlled fuel systems.

These ultra clean engines are assembled on a new high technology production line. Frequent computerized checks during the production process ensure high build quality is maintained throughout.

Perkins has produced a world-class product for their customers, engineered to give even greater levels of reliability, yet with a lower cost of ownership.



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#### Emissions

Certified against the requirements of EU Stage IIIA legislation for non-road mobile machinery, powered by constant speed engines (EU 2011 97/68/EC Stage IIIA).

| Specification              |                                    |                     |  |
|----------------------------|------------------------------------|---------------------|--|
| Number of cylinders        | 4 vertical in-line                 |                     |  |
| Bore and stroke            | 105 x 127 mm                       | 4.1 x 5.0 in        |  |
| Displacement               | 4.41 litres                        | 269 in <sup>3</sup> |  |
| Aspiration                 | Turbocharged                       |                     |  |
| Cycle                      | 4 stroke                           |                     |  |
| Combustion system          | Direct injection                   |                     |  |
| Compression ratio          | 18.2:1                             |                     |  |
| Rotation                   | Anti-clockwise, viewed on flywheel |                     |  |
| Total lubricating capacity | 8 litres 2.1 US ga                 |                     |  |
| Cooling system             | Water-cooled                       |                     |  |
| Total coolant capacity     | tal coolant capacity 16.5 litres   |                     |  |

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### Features and benefits

#### Powered by your needs

• Hitting the key power nodes required by the market, the 1104D-44TG3 ElectropaK has been developed to provide a clean and cost effective power solution

#### State of the art design

• The 1104D utilises the latest diesel mechanical controlled fuel system technology. This allows the 1104D-44TG3 to deliver high power density and excellent fuel economy with low exhaust emissions and minimum heat rejection

#### Worldwide power solution

• The 1104D has been designed to be worldwide fuel tolerant, and 5% biofuel (RME) options are available to meet local market needs

#### Lower operating costs

- The 1104D maintains Tier 2 fuel economy. This will allow many customers to keep existing fuel tanks, avoiding the need for costly redesign. Service intervals are set at 500 hours as standard
- Warranties and Service Contracts

We provide one-year warranties for constant speed engines and two-year warranties for variable speed models, as standard. These are supported by multilevel Extended Service Contracts that can be bought additionally Discover more: www.perkins.esc

• Low usage warranty package is also available

#### Long-term power solution

• The 1104D-44TG3 ElectropaK has been designed to fully comply with stringent EU Stage IIIA emissions legislation, providing an emissions compliant power solution for the future

#### Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We
  give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your
  Perkins powered machine is operating in the world
- To find your local distributor: www.perkins.com/distributor

#### www.perkins.com

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### **Technical information**

#### Air inlet

• Mounted air filter and turbocharger

#### Fuel system

- Rotary type pump
- Fuel filter

#### Lubrication system

- Wet cast iron sump with filler and dipstick
- Oil filter

### Cooling system

- Belt-driven pusher fan and guards
- Mounted radiator and piping
- Water pump

### Electrical equipment

• 12 volt starter motor and 12 volt 65 amp alternator with DC output

### Flywheel and housing

- High inertia flywheel to SAE J620 size 10/11
- SAE 3 flywheel housing

#### Starting aids

• Glow plugs

#### Literature

User's Handbook

www.perkins.com

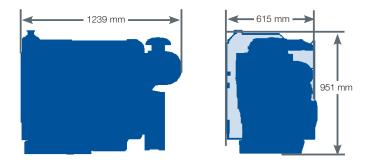
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## 1100 Series 1104D-44TG3 Diesel Engine - ElectropaK

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| Engine package weights and dimensions |         |         |  |  |
|---------------------------------------|---------|---------|--|--|
| Length                                | 1239 mm | 49 in   |  |  |
| Width                                 | 615 mm  | 24.2 in |  |  |
| Height                                | 951 mm  | 37.4 in |  |  |
| Weight (dry)                          | 401 kg  | 884 lb  |  |  |

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|              | Type of operation | Typical generator<br>output (Net) |     | Engine power |    |     |    |
|--------------|-------------------|-----------------------------------|-----|--------------|----|-----|----|
| Speed<br>rpm |                   |                                   |     | Gross        |    | Net |    |
|              |                   | kVA                               | kWe | kWm          | hp | kWm | hp |
| 1500         | Prime power       | 60                                | 48  | 56.6         | 74 | 54  | 72 |
|              | Standby power     | 66                                | 53  | 61.6         | 83 | 59  | 79 |

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 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 at variable load in lieu of a main power network. Overload of 10% permitted for 1 hour in every 12 hours operation. Standby power: Power: available at variable load in the event of a main power network failure. Maximum use 500 hours per year. No overload is permitted.

| Percent of prime power | Fuel consumption at 1500 rpm<br>g/kWh | Fuel consumption at 1500 rpm<br>I/hr |
|------------------------|---------------------------------------|--------------------------------------|
| Standby power          | 235                                   | 18.2                                 |
| Prime power            | 235                                   | 16.5                                 |
| 75%                    | 232                                   | 12.4                                 |
| 50%                    | 230                                   | 8.3                                  |
| 25%                    | 265                                   | 4.8                                  |

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