

# 1000 Series

# 1004TG1

Diesel Engine –  
ElectropaK

**64.0 kWm 1500 rev/min**  
**69.5 kWm 1800 rev/min**

**The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.**

The 1004TG1 is a turbocharged 4 cylinder, 4 litre engine. Its premium features provide economic and durable operation offering the ideal characteristics for electrical power generation.



## Economic power

- **One side servicing** for reduced service time and cost.
- **Unique Quadram combustion system** enables high power output with lower fuel consumption and noise.
- **Rated speed is changeable** between 1500rpm and 1800rpm allowing standard builds to operate at either 50Hz or 60Hz.

## Clean, efficient power

- **Operator and environmentally friendly** with low noise and rapid startability and low emissions.

## Durable power

- **Leak free operation is ensured by Viton crankshaft seals** and sophisticated controlled swell joints, giving protection in the toughest conditions.
- **Inserted valve seats, oil spray cooled pistons and compact plate cooler** give enhanced engine life.

## Reliable power

- **Wherever a Perkins' ElectropaK engine** is put into service, it will never be far from the support provided by the Perkins global network of 4000 distributors and dealers, backed by a parts distribution centre giving 24 hour service, 365 days a year.
- **Suitable for operation** in ambient temperatures up to 53°C (46°C if a canopy is fitted).
- **Fuelled starting aid** for temperatures down to -20°C.

| Engine Speed<br>rev/min | Type of Operation | Typical Generator Output (Net) |             | Engine Power |      |      |      |
|-------------------------|-------------------|--------------------------------|-------------|--------------|------|------|------|
|                         |                   | kVA                            | kWe         | Gross        |      | Net  |      |
|                         |                   |                                |             | kWm          | bhp  | kWm  | bhp  |
| 1500                    | Prime power       | <b>65.0</b>                    | <b>52.0</b> | 60.0         | 80.5 | 58.0 | 78.0 |
|                         | Standby power     | <b>71.5</b>                    | <b>57.5</b> | 66.0         | 88.5 | 64.0 | 86.0 |
| 1800                    | Prime power       | <b>70.5</b>                    | <b>56.5</b> | 66.5         | 89.0 | 63.0 | 84.5 |
|                         | Standby power     | <b>77.5</b>                    | <b>62.0</b> | 73.0         | 98.0 | 69.5 | 93.0 |

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside these conditions please consult your Perkins Engines Company contact. Performance tolerance is ±5%.

Electrical ratings assume generator efficiency of 90% and a power factor of 0.8.

### Rating Definitions

**Prime power** – Power available for variable load in lieu of main power network. An overload of 10% is 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. No overload is permitted.

## Standard Electropak Specification

- Base engine
- Cast iron SAE 3 flywheel housing
- Flywheel
- Flat bottomed pressed steel sump
- Mechanical governor – speed control to BS5514 Class A1, ISO 3046-4M3
- Rotary fuel injection pump
- 12V shut off solenoid – energised to run
- Cold start aid
- Spin-on full flow fuel oil filter
- Fuel pre-filter
- Spin-on full flow oil filter
- Thermostat controlled cooling system
- Belt-driven water pump
- Fan drive and 20" pusher fan
- Radiator (and piping)
- Fan guards
- Front engine mountings
- 12V engine alternator
- 12V starter motor
- Air filter
- Oil pressure switch
- Coolant temperature switch

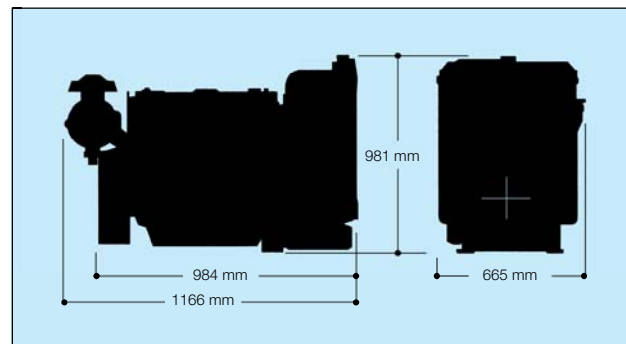
## Optional Equipment

- 24V alternator
- 24V starter motor
- Water temperature gauge and sender
- Heater/starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User's handbook

## Electropak General Data

|  |                                  |
|--|----------------------------------|
| <b>Number of cylinders</b>               | 4                                |
| <b>Cylinder arrangement</b>              | Vertical, in-line                |
| <b>Cycle</b>                             | 4-stroke                         |
| <b>Induction system</b>                  | Turbocharged                     |
| <b>Combustion system</b>                 | Direct injection                 |
| <b>Cooling system</b>                    | Water-cooled                     |
| <b>Displacement</b>                      | 3.99 litres                      |
| <b>Bore and stroke</b>                   | 100.0 mm x 127.0 mm              |
| <b>Compression ratio</b>                 | 16.0:1                           |
| <b>Direction of rotation</b>             | Clockwise, viewed from the front |
| <b>Firing order</b>                      | 1,3,4,2                          |
| <b>Total lubrication system capacity</b> | 8.1 litres                       |
| <b>Coolant capacity (inc radiator)</b>   | 18.7 litres                      |
| <b>Total weight (dry)</b>                | 433 kg                           |
| <b>Total weight (wet)</b>                | 458 kg                           |
| <b>Length</b>                            | 1166 mm                          |
| <b>Width</b>                             | 665 mm                           |
| <b>Height</b>                            | 981 mm                           |

| Fuel consumption litres/hour (UK gallons/hour) |              |              |
|--|--------------|--------------|
| Power rating                                   | 1500 rev/min | 1800 rev/min |
| Standby power                                  | 16.4 (3.6)   | 18.8 (4.1)   |
| Prime power                                    | 14.5 (3.2)   | 17.1 (3.7)   |
| 75% of prime power                             | 10.9 (2.4)   | 13.2 (2.9)   |
| 50% of prime power                             | 7.7 (1.7)    | 9.6 (2.1)    |



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