### 1103A-33 Electric Power Engines

Power range 1500 rpm 28-61 kW (engine gross power)
Power range 1800 rpm 33-71 kW (engine gross power)

Emissions Fuel optimised

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

In the world of power generation, success is only gained by providing more for less. With the 1103A products Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A engines are designed for territories that do not require compliance to EPA or EU emissions legislation. These engines are able to meet TA luft legislation.



#### Features and benefits

- Compact, efficient power is achieved from the 3.3 cylinder block maintaining bore roundness under the pressures of operation. Combustion and mechanical noise are also lowered, whilst the cylinder head delivers optimised air control.
- Compact size, low noise, lower fuel consumption and oil use and service intervals of 500 hours as standard deliver **cost effective power**.
- Quality by design and Class A manufacturing improvements enhance product reliability while maintaining Perkins reputation for durability.
- 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 finger tips, covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine.
  - Perkins actively pursues product support excellence with our distribution network investing in their territory to provide you with a consistent quality of support across the globe.
- Throughout the entire life of a Perkins engine, we provide access to genuine factory specification parts giving reassurance that you receive excellent quality for the lowest possible cost, wherever your Perkins powered machine is operating in the world.



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**Specification** 

| Specification                                   |                                      |              |             |  |  |  |  |
|---|--------------------------------------|--------------|-------------|--|--|--|--|
|   | Model                                |              |             |  |  |  |  |
|   | 1103A-33G                            | 1103A-33TG1  | 1103A-33TG2 |  |  |  |  |
| Configuration                                   | ElectropaK                           |              |             |  |  |  |  |
| Cylinders                                       | 3 vertical in-line                   |              |             |  |  |  |  |
| Displacement, litres (in³)                      | 3.3 (201)                            |              |             |  |  |  |  |
| Aspiration                                      | Naturally aspirated                  | Turbocharged |             |  |  |  |  |
| Bore and stroke, mm (in)                        | 105 × 127 (4.1 × 5.0)                |              |             |  |  |  |  |
| Combustion system                               | Direct injection                     |              |             |  |  |  |  |
| Compression ratio                               | 19.25:1 17.25:1                      |              |             |  |  |  |  |
| Exhaust aftertreatment                          | N/A                                  |              |             |  |  |  |  |
| Rotation (viewed from flywheel)                 | Anti-clockwise, viewed from flywheel |              |             |  |  |  |  |
| Total lubricating oil capacity, litres (US gal) | 8.3 (2.2)                            |              |             |  |  |  |  |
| Cooling system                                  | Watercooled                          |              |             |  |  |  |  |
| Total coolant capacity, litres (US gal)         | 10.2 (2.7)                           |              |             |  |  |  |  |

### **Technical Information**

|             |       |                      | Engine Power |           | Typical                       |     | Prime Fuel Consumption |       |       |       |
|-------------|-------|----------------------|--------------|-----------|-------------------------------|-----|------------------------|-------|-------|-------|
| Model       | Speed | Type of<br>Operation |              | Net       | Generator<br>Output*<br>(Net) |     | 110%                   | 100%  | 75%   | 50%   |
|             | rpm   |                      | kW (hp)      | kW (hp)   | kVA                           | kWe | g/kWh                  | g/kWh | g/kWh | g/kWh |
| 1103A-33G   | 1500  | Prime                | 28.2 (38)    | 27.7 (37) | 30                            | 24  | 212                    | 211   | 216   | 231   |
|             | 1500  | Standby              | 31 (42)      | 30 (41)   | 33                            | 26  |                        |       |       |       |
|             | 1000  | Prime                | 33 (45)      | 32 (43)   | 35                            | 28  | 221                    | 223   | 226   | 240   |
|             | 1800  | Standby              | 37 (49)      | 35 (48)   | 38                            | 31  |                        |       |       |       |
| 1103A-33TG1 | 1500  | Prime                | 42 (57)      | 41 (55)   | 45                            | 36  | 211                    | 207   | 209   | 220   |
|             | 1500  | Standby              | 47 (62)      | 46 (61)   | 50                            | 40  |                        |       |       |       |
|             | 1000  | Prime                | 51 (68)      | 49 (66)   | 53                            | 43  | 215                    | 212   | 218   | 237   |
|             | 1800  | Standby              | 55 (73)      | 54 (72)   | 59                            | 47  |                        |       |       |       |
| 1103A-33TG2 | 1500  | Prime                | 55 (74)      | 54 (72)   | 60                            | 48  | 217                    | 218   | 215   | 224   |
|             |       | Standby              | 61 (81)      | 59 (80)   | 66                            | 53  |                        |       |       |       |
|             | 1800  | Prime                | 63 (85)      | 61 (82)   | 68                            | 55  | 216                    | 213   | 218   | 230   |
|             |       | Standby              | 71 (94)      | 68 (91)   | 75                            | 60  |                        |       |       |       |

<sup>\*</sup>Generator powers are typical and based on typical alternator efficiencies and a power factor (cos  $\theta$ ) or 0.8.



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Standard Equipment

| standar a Equipment  | Model      |             |             |  |  |
|--|------------|-------------|-------------|--|--|
|  | 1103A-33G  | 1103A-33TG1 | 1103A-33TG2 |  |  |
| Electro unit or ElectropaK   | ElectropaK | ElectropaK  | ElectropaK  |  |  |
| Radiator fitted  | ✓          | ✓           | ✓           |  |  |
| Fuel filter, engine mounted  | ✓          | ✓           | ✓           |  |  |
| Water separator  | N/A        | N/A         | N/A         |  |  |
| Fuel priming pump (manual/electric)                                | Manual     | Manual      | Manual      |  |  |
| Fuel cooler (not required for most installations)                  | N/A        | N/A         | N/A         |  |  |
| Air filter, engine mounted   | ✓          | ✓           | ✓           |  |  |
| Engine ECM, engine mounted   | N/A        | N/A         | N/A         |  |  |
| Wiring harness to ECM  | N/A        | N/A         | N/A         |  |  |
| Wiring harness (all connectors to single customer interface)       | N/A        | N/A         | N/A         |  |  |
| Starter motor  | ✓          | ✓           | ✓           |  |  |
| Battery charging alternator  | ✓          | ✓           | ✓           |  |  |
| Flywheel housing   | ✓          | ✓           | ✓           |  |  |
| Flywheel   | ✓          | ✓           | ✓           |  |  |
| Fan  | ✓          | ✓           | ✓           |  |  |
| Fan guard  | ✓          | ✓           | ✓           |  |  |
| Temperature and oil pressure for automatic stop/alarm configurable | ✓          | <b>√</b>    | ✓           |  |  |

#### Engine package weights and dimensions

|                                | Model                                 |                                       |             |  |  |
|--------------------------------|---------------------------------------|---------------------------------------|-------------|--|--|
|                                | 1103A-33G                             | 1103A-33TG1                           | 1103A-33TG2 |  |  |
| Configuration                  | ElectropaK                            |                                       |             |  |  |
| Dimensions, H x L x W, mm (in) | 951 × 1000 × 629 (34.7 × 39.3 × 24.7) | 951 × 1049 × 634 (34.7 × 41.3 × 24.9) |             |  |  |
| Dry weight, kg (lb)            | 412 (908)                             | 420 (926)                             |             |  |  |

Prime power: Power available at variable load in lieu of a main power network. Overload of 10% is permitted for 1 hour in every 12 hours of operation. Standby (maximum): Power available at variable load in the event of a main power network failure. No overload is permitted.

