

400 Series 402D-05G Electro Unit

5.1 kWm @ 1800 rev/min
8.8 kWm @ 3000 rev/min

The Perkins® 400 Series engine family continues to set new standards in the compact engine market. Developed alongside customers to fulfill their needs in the gen set, compressor, agricultural and general industrial markets.

These new electro units provide compact power, from a robust family of 2, 3 and 4 cylinder diesel engines designed to provide economic and durable operation at prime and standby duties, hitting the key power nodes required by the power generation industry.

Powered by your needs

- The Perkins 400D range has been developed in consultation with our marketplace. This 0.5 litre, 2 cylinder engine is the smallest engine offered by Perkins. However, this ultra-compact, lightweight power unit still maintains all the customer benefits experienced from this exciting product range

Compact, clean, efficient power

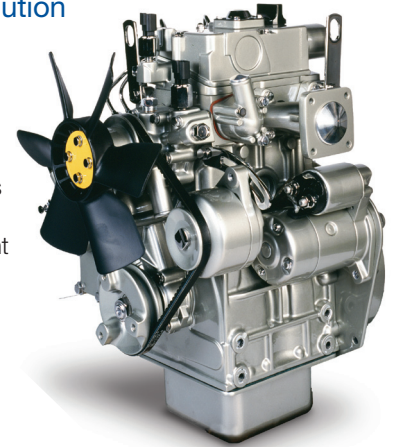
- Design features on the 400D range of ElectropaKs and Electro Units ensure clean rapid starting in all conditions whilst delivering impressive performance with low operating costs in a small, efficient package size

Lower operating costs

- Approved for operation on biodiesel* concentrations of up to 20%
- Oil and filter changes are 500 hours, dependent on load factor
- Engine durability and reliability, the warranty offering and ease of installation combine to drive down the cost of ownership

Long-term power solution

- The 400D range of electropaKs and electro units have been designed to fully comply with stringent EU and EPA emissions regulations, providing an emissions compliant power solution for the future



Product support

- With highly trained Perkins distributors in thousands of communities in over 180 countries, you are never far away from expert product knowledge, genuine parts and a range of advanced diagnostic technology for keeping your engine in peak condition
- **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.com
www.tier4air.com

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| Engine Speed | Type of Operation | Typical Generator Output Net | | Engine Power | | | | Low Idle |
|--------------|-------------------|------------------------------|-----|--------------|------|-----|------|----------|
| | | | | Gross | | Net | | |
| | | kVA | kWe | kWm | hp | kWm | hp | |
| 1800 | Prime power | 4.8 | 3.9 | | | 4.5 | 6.1 | n/a |
| | Standby power | 5.4 | 4.3 | 5.1 | 6.8 | 5.0 | 6.7 | n/a |
| †3000 | Prime power | 8.3 | 6.6 | | | 7.7 | 10.3 | 1600 ±25 |
| | Standby power | 9.1 | 7.3 | 8.8 | 11.8 | 8.5 | 11.4 | 1600 ±25 |

†Regarding gen sets ≥ 3000 rev/min: *The U.S. EPA has certified this engine as a constant speed engine, with engine speed controlled by a solenoid that allows operation only at idle or full power position.

The solenoid is a required element of design. It is the responsibility of the equipment manufacturer to install the proper solenoid. Installation of this engine in equipment without the required solenoid (or in any manner that allows variable speed operation) is not covered by EPA certification, voids the emissions warranty, and may subject the equipment manufacturer to penalties under U.S. law.

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.

*Subject to conformance with ASTM D6751 and EN14214.

400 Series 402D-05 Electro Unit

5.1 kWm @ 1800 rev/min
 8.8 kWm @ 3000 rev/min
 10.2 kWm @ 3600 rev/min

Air inlet

- Mounted air filter

Fuel system

- Mechanically governed cassette type fuel injection pump
- Split element fuel filter

Lubrication system

- Wet steel sump with filler and dipstick
- Spin-on full-flow lub oil filter

Cooling system

- Thermostatically-controlled system with belt driven coolant pump and pusher fan

Electrical equipment

- 12 volt starter motor and 12 volt 14 amp alternator with DC output
- Oil pressure and coolant temperature switches
- 12 volt shut-off solenoid energised to run
- Glow plug cold start aid and heater/starter switch

Flywheel and housing

- 1500/1800 rev/min
 High inertia flywheel to SAE J620 Size 6½ Heavy
 Flywheel housing SAE 5 Long
- 3000 rev/min
 High inertia flywheel to SAE J620 Size 6½ Light
 Flywheel housing SAE 5 Short

Cooling pack

- Radiator and hoses supplied separately

Optional equipment

- Parts book

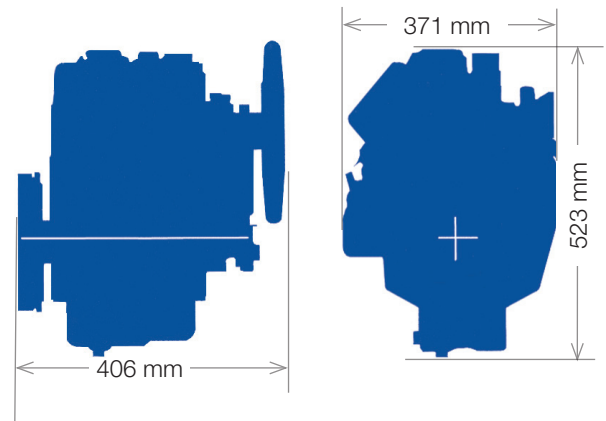
Option groups

A selection of optional items is available to enable you to prepare a specification precisely matched to your needs.

Emissions statement

Industrial and IOPU Engines: Certified against the requirements of EU Stage IIIB (Directives 97/68/EC as last amended, and 2004/26/EC, as last amended); and US EPA Tier 4 Final (40 CFR Part 1039).

Constant Speed engines for use in Industrial, IOPU and ElectropaK applications: Certified against the requirements of EU Stage IIIA (Directive 97/68/EC, as last amended for mobile applications; and US EPA Tier 4 Final (40 CFR Part 60 for stationary applications and 40 CFR Part 1039 for mobile applications).



| Fuel Consumption - full load | | |
|------------------------------|-------|------|
| Rated speed | g/kWh | l/hr |
| 2800 | 275 | 2.7 |
| 3000 | 274 | 2.9 |
| 3600 | 299 | 3.7 |

Engine data

Number of cylinders 2 in-line
 Bore and stroke..... 67 x 72 mm (2.6 x 2.8 in)
 Displacement 0.51 litres (31 cubic in)
 Aspiration Naturally aspirated
 Cycle.....4 stroke
 Combustion system..... Indirect injection
 Compression ratio 23.5:1
 Engine rotation Anti-clockwise viewed on flywheel
 Governing..... All speed mechanical
 Cooling system..... Liquid
 Total lubrication capacity..... 2.01 litres (0.5 US gals)
 Total coolant capacity 1.1 litres (0.3 US gals)
Dimensions
 Length 406 mm (16.0 in)
 Width..... 371 mm (14.6 in)
 Height..... 523 mm (20.6 in)
 Dry weight 57 kg (126 lb)
 Final weight and dimensions will depend on completed specification.

Photographs are for illustrative purposes only and may not reflect final specification.

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