

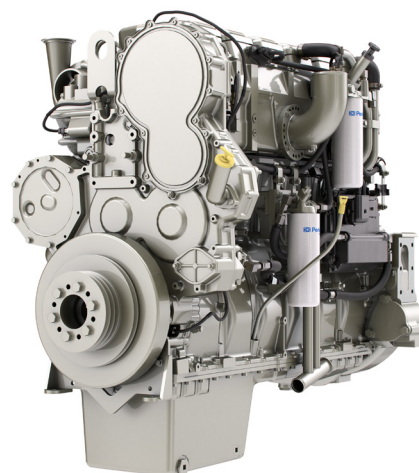
2800 Series 2806A-E18TTAG4 Diesel Engine – ElectropaK

623 kWm at 1500 rpm gross prime power

720 kWm at 1800 rpm gross prime power

The Perkins 2800 Series is a family of well-proven 6 cylinder, 18 litre in-line diesel engines, designed to address today's uncompromising demands within the power generation industry with particular aim at the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806A-E18TTAG4 is a series turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.



| Specification | | |
|----------------------------|--|----------------------|
| Number of cylinders | 6 vertical in-line | |
| Bore and stroke | 145 x 183 mm | 5.7 x 7.2 in |
| Displacement | 18.1 litres | 1104 in ³ |
| Aspiration | Series turbocharged and air-to-air charge cooled | |
| Cycle | 4 stroke | |
| Combustion system | Direct injection | |
| Compression ratio | 14:1 | |
| Rotation | Anti-clockwise, viewed on flywheel | |
| Total lubricating capacity | 68 litres | 18 US gal |
| Cooling system | Water-cooled | |
| Total coolant capacity | 110 litres | 29.1 US gal |

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THE HEART OF EVERY GREAT MACHINE

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720 kWm at 1800 rpm gross prime power

Features and benefits

Economic power

- Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy
- Low emissions result from electronic control of fuel injected

Reliable power

- Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates
- High compression ratios also ensure clean rapid starting in all conditions
- Perkins global product support is designed to enhance the customer experience of owning a Perkins powered machine. We deliver this through the quality of our distribution network, extensive global coverage and a range of Perkins supported OEM partnership options. So whether you are an end-user or an equipment manufacturer our engine expertise is essential to your success

Compact, clean and efficient power

- Exceptional power to weight ratio and compact size give optimum power density with easier installation and cost effective transportation
- Designed to provide excellent service access for ease of maintenance
- The availability of a low emissions specification allows minimum environmental impact through operation, and complies with US EPA emissions legislation. The standard specification model provides superior fuel consumption which maximises engine efficiency

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

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Technical information

Air inlet

- Mounted air filter

Fuel system

- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system

- Wet sump with filler and dipstick
- Full-flow replaceable filter
- Oil cooler integral with filter header

Cooling system

- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50°C
- Low coolant level switch

Electrical equipment

- 24 volt starter motor and 24 volt 50 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing

- High inertia flywheel to SAE J620 size 14
- SAE '1' flywheel housing

Mountings

- Front engine mounting bracket

Literature

- Operation and Maintenance Manual

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623 kWm at 1500 rpm gross prime power

720 kWm at 1800 rpm gross prime power

| Engine package weights and dimensions | | |
|---------------------------------------|---------|---------|
| Length | 2538 mm | 100 in |
| Width | 1691 mm | 67 in |
| Height | 2126 mm | 84 in |
| Weight (dry) | 2361 kg | 5205 lb |

| Speed rpm | Type of operation | Typical generator output (Net) | | Engine power | | | |
|-----------|-------------------|--------------------------------|-----|--------------|------|-----|------|
| | | | | Gross | | Net | |
| | | kVA | kWe | kWm | hp | kWm | hp |
| 1500 | Prime power | 700 | 560 | 623 | 835 | 596 | 799 |
| | Standby power | 770 | 616 | 685 | 919 | 655 | 878 |
| 1800 | Prime power | 826 | 727 | 720 | 965 | 693 | 929 |
| | Standby power | 909 | 909 | 793 | 1063 | 766 | 1027 |

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:2002. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. Fuel specification: EN590 or ASTM D975 Grades No. 1-D or No. 2-D. Lubricating oil: 15W40 to API CH4.

Rating definitions

Prime power: Power available at variable load with a load factor not exceeding 70% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation. **Standby power:** Power available in the event of a main power network failure up to a maximum of 500 hours per year of which up to 300 hours may be run continuously. Load factor may be up to 70% of standby power. No overload is permitted.

| Percent of prime power | Fuel consumption at 1500 rpm g/kWh | Fuel consumption at 1500 rpm l/hr | Fuel consumption at 1800 rpm g/kWh | Fuel consumption at 1800 rpm l/hr |
|------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| Standby power | 196 | 162 | 206 | 197 |
| Prime power | 196 | 147 | 206 | 179 |
| 75% | 194 | 109 | 198 | 129 |
| 50% | 200 | 75 | 201 | 87 |

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