



# 2800 Series

## Diesel Engine - ElectropaK

### 2806C-E18TAG1

542 kWm at 1500 rpm  
645 kWm at 1800 rpm



The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 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 2806C-E18TAG1 is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

#### 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.

Support comes from a worldwide network of 4,000 distributors and dealers.

#### Compact, clean and efficient power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.

Designed to provide excellent service access for ease of maintenance.

#### Clean power

Engines in the 2800 Series will meet the requirements of EU Stage 2/EPA Tier 2 emissions legislation and are capable of meeting 1/2 TA Luft (1986).

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Continuous Baseload*	450	360	403	540	387	519
	Prime power	550	440	489	655	473	634
	Standby (maximum)	630	504	558	748	542	727
1800	Continuous Baseload*	562	450	507	680	484	649
	Prime Power	687	550	614	823	591	792
	Standby (maximum)	750	600	668	896	645	865

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1

\* Baseload ratings are under development and will be available later.

**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.  $\theta$ ) of 0.8

**Fuel specification:** BS 2869: Part 2 1998 Class A2 or ASTM D975 D2

**Lubricating oil:** 15W40 to API CG4

#### Rating Definitions

**Baseload power:** Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation

**Prime power:** Power available at variable load with a load factor not exceeding 80% 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 100% of standby power. No overload is permitted.

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## 2806C-E18TAG1

### Standard ElectropaK Specification

#### Air Inlet

Mounted air filter

#### Fuel System

Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control  
Governing to ISO8528-5 class G3 with isochronous capability  
Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator

#### Lubrication System

Wet sump with filler and dipstick  
Full-flow replaceable 'Ecoplus' 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

#### Electrical Equipment

24 volt starter motor and 24 volt 70 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 '0' flywheel housing

#### Mountings

Front engine mounting bracket

#### Literature

User's Handbook and Parts Manual

#### Optional Equipment

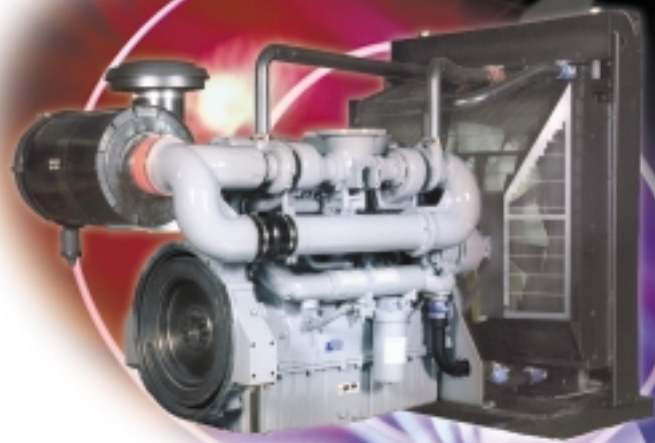
110/240 volt immersion heater  
Additional speed sensor  
Temperature and pressure sensors for gauges  
Electric hours counter  
Air filter rain hood  
Twin starters/facility for second starter  
Tool kit  
Additional manuals



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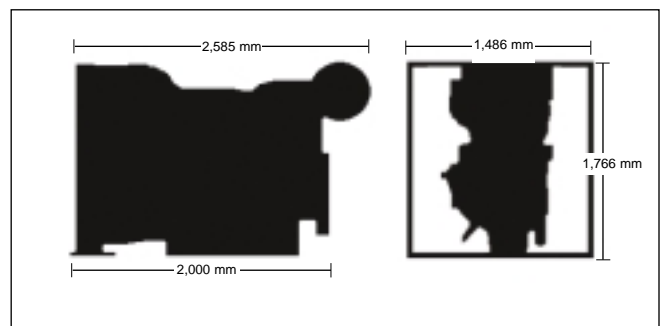
All information given in this leaflet is correct at the time of printing but it may be changed subsequently by the Company



### General Data

<b>Number of Cylinders</b>	6
<b>Cylinder Arrangement</b>	Vertical in-line
<b>Cycle</b>	4 stroke
<b>Induction System</b>	Turbocharged and air-to-air charge cooled
<b>Combustion System</b>	Direct injection
<b>Cooling System</b>	Water-cooled
<b>Bore and Stroke</b>	145 mm x 183 mm
<b>Displacement</b>	18.1 litres
<b>Compression Ratio</b>	TBC
<b>Direction of Rotation</b>	Anti-clockwise, viewed on flywheel
<b>Total Lubrication System Capacity</b>	68 litres
<b>Total Coolant Capacity</b>	50 litres
<b>Length</b>	2,585 mm
<b>Width</b>	1,486 mm
<b>Height</b>	1,766 mm
<b>Dry Weight</b>	TBC kg

Fuel Consumption Targets				
Engine speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby power	210	135.5	210	161
At Prime power	210	118.2	210	148
At Baseload power	210	96.7	210	212
At 75% of Prime power	TBA	TBA	TBA	TBA
At 50% of Prime power	TBA	TBA	TBA	TBA



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