

# 2300 Series

## Diesel Engine - ElectropaK

### 2306C-E14TAG1A

**304 kWm at 1500 rpm**  
**329 kWm at 1800 rpm**

The Perkins 2300 Series is a family of well-proven 6 cylinder in-line diesel engines. It is designed to address today's uncompromising demands within the power generation industry with particular focus on the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2306C-E14TAG1A is a turbocharged and air-to-air charge-cooled 6-cylinder diesel engine. It gives economic and durable operation for standby duty, low gaseous emissions, and high levels of 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. Low emissions result from electronically controlled fuel injection.

### Reliable power

Developed and tested using the latest engineering techniques and finite element analysis. This gives high reliability, low oil usage, and low wear rates. High compression ratios ensure clean and rapid starting in all conditions. Support comes from a worldwide network of 4000 distributors and dealers.

### Compact, efficient power

Exceptional power to weight ratio and compact size give optimum power density. This makes installation and transportation easier and cheaper. Designed to provide excellent service access for ease of maintenance.

### Clean power

All engines in the 2300 Series family 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	Baseload power	250	200	226	303	217	292
	Prime power	300	240	270	362	261	350
	Standby power	350	280	313	420	304	408
1800	Baseload power	281	225	262	351	245	328
	Prime power	344	275	316	424	299	401
	Standby power	379	303	346	464	329	442

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

**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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## 2306C-E14TAG1A



### 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  
Fuel Cooler

#### 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 supplied loose incorporating air-to-air charge cooler  
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 1/2 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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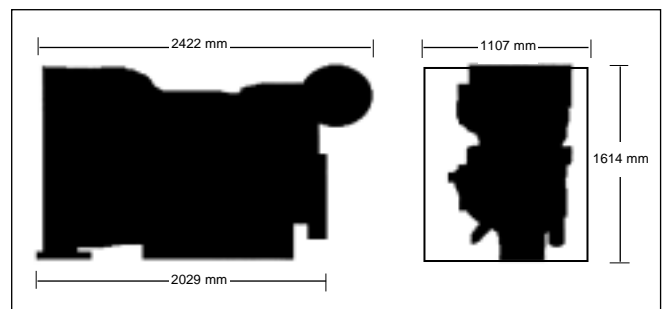
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### General Data

<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>	137 x 165 mm
<b>Displacement</b>	14.6 litres
<b>Compression Ratio</b>	15.9:1
<b>Direction of Rotation</b>	Anti-clockwise, viewed on flywheel
<b>Total Lubrication System Capacity</b>	68 litres
<b>Total Coolant Capacity</b>	47 litres
<b>Length</b>	2422 mm
<b>Width</b>	1107 mm
<b>Height</b>	1614 mm
<b>Total Weight (Dry)</b>	1690 kg

Engine speed	Fuel Consumption			
	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby power	197	70.6	218	84.2
At Prime power	201	62.4	221	77.4
At Baseload power	204	51.6	224	64.0
At 75% of prime power	208	46.6	226	58.2
At 50% of prime power	225	31.5	237	39.2

Fuel consumption figures are for EU/EPA compliant engines.  
For 1/2 TA Luft compliance please see Perkins' Technical Data Sheet



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