

# 2300 Series

## 2306C-E14TAG2

### Diesel Engine – Electropak



344 kWm at 1500 rpm  
376 kWm at 1800 rpm

#### Economic Power

- Mechanically operated unit fuel injectors with advanced electronic control, combined with carefully matched turbocharging, give excellent fuel atomisation which leads to exceptional low fuel consumption.

#### 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 ratio ensures 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 gives optimum power density for ease of installation and more cost effective transportation.

- Designed to provide excellent service access for ease of maintenance.

- 2306C-E14TAG engines are capable of meeting TA Luft (2002).

The Perkins 2300 Series is a family of well-proven 6 cylinder 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 2306C-E14TAG2 is a turbocharged and air-to-air charge-cooled 6-cylinder diesel engine. Its premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

Certified against the requirements of EU 2007 (EU 97/68/EC Stage II) legislation for non-road mobile machinery, powered by constant speed engines.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
		kVA	kWe	Gross		Net	
				kWm	bhp	kWm	bhp
1500	Baseload Power	275	220	248	333	239	321
	Prime Power	350	280	313	420	304	408
	Standby Power	400	320	353	473	344	461
1800	Baseload Power	313	250	289	388	272	365
	Prime Power	400	320	365	489	348	466
	Standby Power	438	350	394	528	376	505

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

#### 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 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 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 ½ flywheel housing

#### Mountings

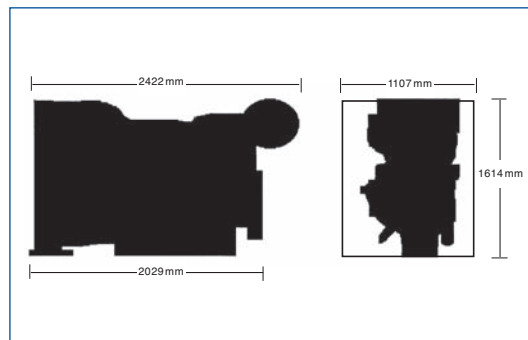
- Front engine mounting bracket

#### Literature

- User's Handbook and Parts Manual

### Optional Equipment

- 110 volt/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



Engine Speed	Fuel Consumption			
	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	213	85	208	91
Prime power	212	75	210	85
Baseload power	215	60	222	70
75% of prime power	218	58	219	66
50% of prime power	230	41	232	47

### General Data

Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged and air-to-air charge cooled
Combustion system	Direct injection
Cooling system	Water-cooled
Bore and stroke	137 x 165 mm
Displacement	14.6 litres
Compression ratio	15.9:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	47 litres
Total dry weight	1690 kg
Dimensions	Length 2422 mm Width 1107 mm Height 1614 mm

Final weight and dimensions will depend on completed specification  
 Fuel consumption figures are for EU 2007 Certified engines.  
 For ½ TA Luft compliance please see Perkins' Technical Data Sheet.



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