

# 4000 Series 4012-46TWG2A Diesel Engine – ElectropaK

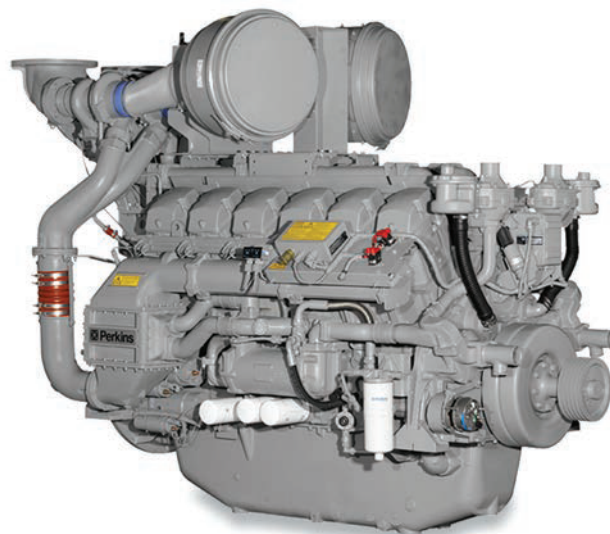
1166 kWm @ 1500 rpm net standby power

The 4012-46TWG engine has been developed using the latest engineering techniques and builds on the strengths of the already very successful 4012 Series family and addresses today's uncompromising demands within the power generation industry.

Developed from a proven heavy-duty industrial base these products offer superior performance and reliability.

The 4012-46TWG2A is a turbocharged and air-to-water charge-cooled, 12 cylinder diesel engine which offers a choice of temperate or tropical cooling. Its premium features provide exceptional power-to-weight ratio resulting in exceptional fuel consumption.

The overall performance and reliability characteristics makes this one of the prime choices for today's power generation industry.



Specification				
Number of cylinders	12 60° Vee form			
Bore and stroke	160 x 190 mm		6.3 x 7.5 in	
Displacement	45.842 litres		2797 in <sup>3</sup>	
Aspiration	Turbocharged and air to water charge cooled			
Cycle	4 stroke			
Combustion system	Direct injection			
Compression ratio	13:1			
Rotation	Anti-clockwise, viewed from flywheel end			
Total lubricating capacity	177 litres		46.7 US gal	
Cooling system	Water-cooled			
	Temperate		Tropical	
Total coolant capacity	196 litres	51.7 US gal	201 litres	53 US gal

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Final weight and dimensions will depend on completed specification.

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 **Perkins®**

THE HEART OF EVERY GREAT MACHINE

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## Features and benefits

### Dependable power

- Individual 4 valve per cylinder give optimised gas flows
- Unit fuel injectors ensure ultra fine fuel atomisation and hence controlled rapid combustion
- Commonality of components with other engines in the 4000 Series family for reduced stocking level
- Capable emissions of TA Luft (1986)

### Low operating costs

- Oil change service intervals are set at 500 hours as standard
- Designed to provide low cost of ownership, simple maintenance and reduced downtime
- Class leading warranty  
Prime power - 12 months unlimited hours. For engines that operate less than 6,000 hours the warranty is available for two years or until the application reaches 6,000 hours (whichever is sooner).  
Standby power - three years or 1,500 hours (whichever is sooner).  
See Perkins Warranty Policy for further details
- Perkins Platinum Protection - comprehensive cover from as little as 5 percent\* of the cost of your engine  
Talk to your local distributor or visit [www.perkins.com/platinum](http://www.perkins.com/platinum) for more details

### World class product support

- Our 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 disposal, covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Perkins actively pursues product support excellence by insisting our distribution network invest in their territory to provide customers with a consistent quality of support across the globe
- Throughout the entire life of a Perkins engine, we provide access to genuine parts giving 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  
To find your local distributor: [www.perkins.com/distributor](http://www.perkins.com/distributor)

\*Terms and conditions apply

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## Technical information

### Air inlet

- Mounted air filter and turbocharger

### Fuel system

- Direct fuel injection system with fuel lift pump
- Governing to ISO 8528-5 class G3 with isochronous capability
- Full-flow spin-on filters

### Lubrication system

- Wet full aluminium sump with filler and dipstick
- Full flow spin-on oil filters

### Cooling system

- Two twin thermostats
- System designed for ambient temperatures of up to 50°C

### Electrical equipment

- 24V starter motor and 24V alternator with integral regulator and DC output
- Turbine inlet temperature protection
- Twin high coolant temperature protection switch
- Twin low oil pressure protection switch

### Flywheel and housing

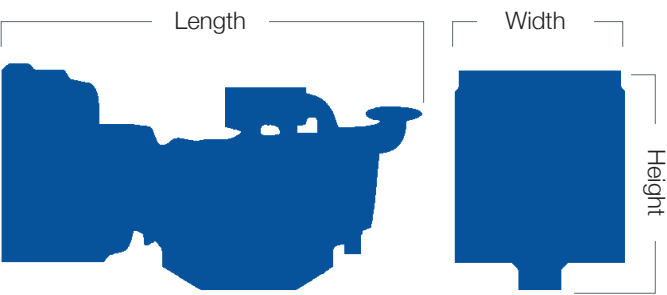
- Flywheel to SAE J620 Size 18
- SAE 0 flywheel housing

### Optional equipment

- 4 metre wiring harness
- Secondary electric start
- Immersion heater
- Single exhaust outlet pipe
- Exhaust counter flanges
- Temperate radiator kit
- 21" flywheel

4000 Series    4012-46TWG2A    Diesel Engine – ElectropaK

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Engine package weights and dimensions				
	Temperate		Tropical	
Length	3714 mm	146 in	3714 mm	146 in
Width	1780 mm	70 in	1978 mm	79 in
Height	2255 mm	89 in	2255 mm	89 in
Weight (dry)	5220 kg	11508 lb	5283 kg	11647 lb

# 4000 Series 4012-46TWG2A Diesel Engine – Electropak

1166 kWm @ 1500 rpm net standby power

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500	Baseload Power	989	791	891	1194	833	1117
	Prime Power	1250	1000	1113	1492	1055	1414
	Standby (maximum)	1385	1108	1224	1641	1166	1563

The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

**Rating conditions:** 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. Please consult your distributor or the factory for ratings in other ambient conditions. *Note: For full ratings please refer to Perkins Engines Company Limited. All electrical ratings are based on an average alternator efficiency and a power factor of 0.8.* **Fuel specification:** BS2869: Class A2.

## Rating definitions

**Baseload power:** Power available for continuous full load operation. No overload is permitted. **Prime power:** Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation. **Standby (maximum):** Power available at variable load in the event of a main power network failure up to a maximum of 500 hours per year. No overload is permitted.

Percent of prime power	Fuel consumption at 1500 rpm g/kWh	Fuel consumption at 1500 rpm l/hr
Standby (maximum)	213	288
Prime power	212	259
Continuous baseload	214	207
75%	216	196
50%	233	143