

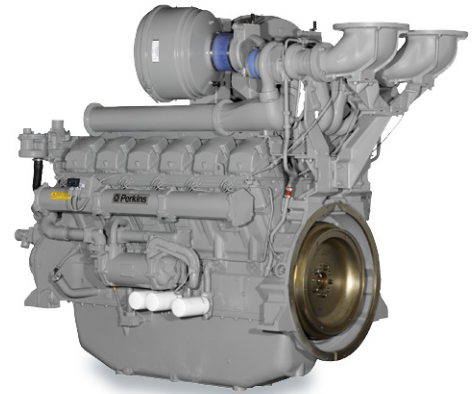
# 4000 Series 4012-46TAG0A Diesel Engine – ElectropaK

1053 kWm @ 1500 rpm

The Perkins 4000 Series family of 6, 8, 12 and 16 cylinder diesel engines was designed in advance of today's uncompromising demands within the power generation industry and includes superior performance and reliability.

The 4012-46TAG0A ElectropaK is a turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. The premium design and specification features of this engine provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability and low gaseous emissions.

This model in the Perkins 4012 diesel engine range gives our customers leading overall performance and reliability essential to the power generation market.



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 air charge cooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	13.6:1	
Rotation	Anti-clockwise, viewed from flywheel end	
Total lubricating capacity	177 litres	46.7 US gal
Cooling system	Water-cooled	
Total coolant capacity	210 litres	55.5 US gal

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Photographs are for illustrative purposes only and may not reflect final specification.  
All information in this document is substantially correct at time of printing and may be altered subsequently.  
Final weight and dimensions will depend on completed specification.

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THE HEART OF EVERY GREAT MACHINE

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## Features and benefits

### Economic power

- Individual four valve per cylinder heads give optimised gas flows, whilst digitally governed unit fuel injectors ensure ultra-fine fuel atomisation and hence controlled rapid combustion, for efficiency and economy
- Commonality of components with other engines in the 4000 Series family allows reduced parts stocking levels

### Reliable power

- Developed and tested using latest engineering techniques
- Piston temperature are controlled by an advanced gallery jet cooling system
- All engines are tolerant of a wide range of temperatures without derate

### Clean, efficient power

- Exceptional power to weight ratio and compact size for easier transportation and installation
- New designed radiator assemblies with corrosion inhibiting powder coated finish; fewer pipe joints and easier access to reduce maintenance times
- Designed to provide excellent service access for ease of maintenance
- Engines designed to comply with major international standards
- Low gaseous emissions that will satisfy the requirements of ½ TA Luft (1986)

### Product support excellence

- 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 filters and turbochargers

### Fuel system

- Direct fuel injection system with fuel lift pump
- Governing to ISO 8528-5 class G2 with isochronous capability
- Full-flow spin-on fuel oil filters

### Lubrication system

- Wet sump with filler and dipstick
- Full-flow spin-on oil filters
- Engine jacket water/oil temperature stabiliser

### Cooling system

- Two twin thermostats
- System designed for ambients up to 50°C
- Powder coated radiator comprising: water radiator; air charge cooled radiator; fuel oil cooling (optional); all pipes, hoses and clips; fan; pulleys; fan belts and safety guards

### Electrical equipment

- 24 volt starter motor and 24 volt alternator with integral regulator and DC output
- Overspeed switch and magnetic pickup
- Turbine inlet temperature shutdown switch
- Twin low oil pressure shutdown switches

### Flywheel and housing

- Flywheel to SAE J620 size 18
- SAE 00 flywheel housing

### Optional equipment

Fuel oil cooler integral to the radiator assembly

Immersion heater with thermostat

*Note: This list is not exhaustive, for further options please contact your local Perkins representative*

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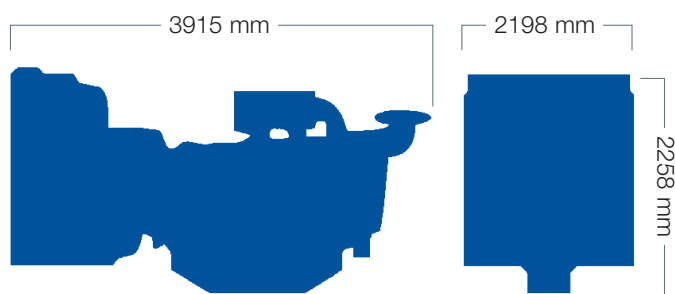
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THE HEART OF EVERY GREAT MACHINE

# 4000 Series 4012-46TAG0A Diesel Engine – Electropak

1053 kWm @ 1500 rpm



Engine package weights and dimensions

Length	3915 mm	154 in
Width	2198 mm	86.5 in
Height	2258 mm	88.9 in
Weight (dry)	6086 kg	13417 lb

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THE HEART OF EVERY GREAT MACHINE

# 4000 Series 4012-46TAG0A Diesel Engine – Electropak

1053 kWm @ 1500 rpm

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500	Baseload power	1000	800	906	1215	842	1129
	Prime power	1250	1000	1117	1497	1053	1412
	Standby (maximum)	1375	1100	1222	1638	1158	1552

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)	196	278
Prime power	197	255
Continuous baseload	199	210
75%	201	195
50%	208	135

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