



3000 Series

Diesel Engine – ElectropaK 3012TG

515 kWm 1500 rev/min
585 kWm 1800 rev/min



The Perkins 3000 Series is a family of well proven 8 and 12 cylinder vee form diesel engines designed in advance of today's uncompromising demands within the power generation industry including superior performance and reliability.

The 3012TG is a turbocharged 12 cylinder in-line diesel engine. Its premium design and specification features provide economic and durable operation as well as exceptional power to weight ratio, commonality of components, improved serviceability, low gaseous emissions, overall performance and reliability essential to the power generation market.

Economic power

Directed inlet ports in monobloc cylinder heads give optimised gas flows. High compression ratios combined with high injection pressures ensure ultra fine fuel atomisation and controlled rapid combustion with low emissions. Commonality of components with other engines in the 3000 Series family for reduced stocking levels.

Reliable power

Developed and tested using 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. A worldwide network of 4000 distributors and dealers.

Compact, efficient power

Exceptional power to weight ratio and compact size make for easier transportation and installation. Designed to provide excellent service access for ease of maintenance.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
		kVA	kWe	Gross		Net	
				kW	bhp	kW	bhp
1500	Baseload Power	500	400	441	591	426	571
	Prime Power	550	440	483	648	468	628
	Standby (maximum)	605	484	530	711	515	691
1800	Baseload Power	569	455	512	687	484	649
	Prime Power	625	500	560	751	532	713
	Standby (maximum)	687	550	613	822	585	784

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 – consult Perkins Engines.

Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** 15W40 to ACEA E3.
Genset Powers are typical and calculated on an average alternator efficiency, and power factor (cos ϕ) of 0.8.

Rating Definitions

Continuous Baseload – Power available for continuous full load operation. Overload of 10% is permitted for 1 hour in every 12 hours operation.

Prime Power – Power available for variable load with an average load factor not exceeding 80% of the prime power rating. 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.

3000 Series 3012TG

Standard ElectropaK Specification

Air Inlet

Mounted air filters

Fuel System

In-line fuel injection pump with mechanical governor.
Governing to ISO 3046/4: 1986 (BS 5514/4) Class A1
Spin-on fuel filters with primary filter/water separator

Lubrication System

Wet sump with filler and dipstick
Full-flow 'spin-on' filters, oil cooler incorporated in filter header

Cooling System

Gear-driven circulating pump
Mounted belt-driven fan
Radiator supplied loose
System designed for ambients up to 48% (non-glycol)

Electrical Equipment

24 Volt starter motor and 24 Volt 40 Amp alternator with DC output
24 Volt instrument senders/switches for oil pressure, coolant temperature and coolant level
24 volt stop solenoid (energised to run)

Flywheel and Housing

High inertia flywheel to SAE J620 Size 18
SAE 0 flywheel housing
Position for magnetic speed sensor

Mountings

Front mounting bracket

Literature

User's Handbook and Parts Manual

Optional Equipment

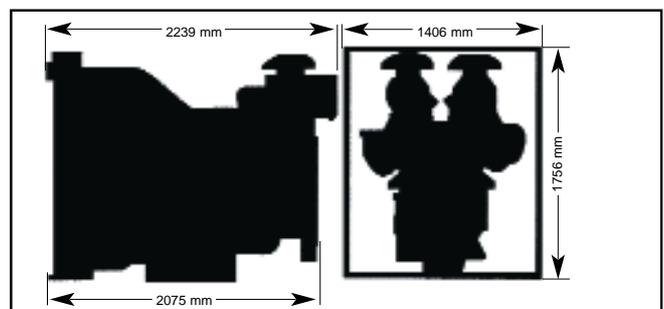
Barber-Colman Electric Governor
240 Volt/1500 Watt immersion heaters (2)
Hours Counter
Electric Tachometer with speed sensor
Radiator mounting



General Data

Number of Cylinders	12
Cylinder Arrangement	60° vee form
Cycle	4-stroke
Induction System	Turbocharged
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	135 x 152mm
Displacement	26.11 litres
Compression Ratio	14.5:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Firing Order	A1, B6, A4, B3, A2, B5, A6, B1, A3, B4, A5, B2
Total Lubrication System Capacity	73.8 litres
Total Coolant Capacity	122.7 litres
Length	2239 mm
Width	1406 mm
Height	1756 mm
Dry Weight (ElectropaK)	2315 kg

Fuel Consumption				
Engine speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Maximum rating	217	133.0	219	152.5
At Prime Power rating	216	120.3	218	138.1
At Baseload rating	215	109.0	219	126.2
At 75% of Prime Power rating	216	90.3	222	105.4
At 50% of Prime Power rating	225	62.7	237	75.1



Distributed by



Perkins Engines Company Limited
Lancaster Road Shrewsbury SY1 3NX England
Telephone +44 (0)1743 212000 Telex 35171 PESL G
Fax +44 (0)1743 212700
www.perkins.com

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