



4000 Series

Diesel Engine - Electropak

4006-23TAG3A

760 kWm at 1500 rpm
795 kWm at 1800 rpm



The Perkins 4000 Series is a family of 6, 8, 12 and 16 cylinder 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 engine range that offers superior performance and reliability.

The 4006-23TAG3A is a newly developed, turbocharged and air-to-air charge cooled, 6 cylinder diesel engine. Its premium features and design provide economic and durable operation as well as an exceptional power to weight ratio, excellent load acceptance and improved gaseous emissions, plus the overall performance and reliability characteristics essential to the power generation market.

Economic power

Individual 4 valve cylinder heads giving 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 levels.

Reliable power

Developed and tested using the latest engineering techniques.
Piston temperatures controlled by an advanced gallery jet cooling system.
Tolerant of a wide range of temperature without derate.
Over 4,000 distributors and dealers in 160 countries.

Compact, clean and efficient power

Exceptional power to weight ratio and compact size give optimum power density for easier transportation and installation.
Designed to provide excellent service access for ease of maintenance.
Engines to comply with major international standards.
Low gaseous emissions that will satisfy the requirements of 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	Continuous Baseload	640	512	566	759	540	724
	Prime power	800	640	705	945	679	910
	Standby (maximum)	900	720	786	1054	760	1019
1800	Continuous Baseload	675	540	614	823	570	764
	Prime Power	844	675	759	1017	715	958
	Standby (maximum)	938	750	839	1125	795	1066

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. θ) 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. No overload is permitted on baseload power
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. There is no overload permitted on baseload power
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

Direct fuel injection system, fuel lift pump

Fuel cooler

Governing

Heinzmann digital governor - governing to ISO8528-5

Class G2

Lubrication System

Wet sump with filler and dipstick

Lubrication oil filters

Oil cooler with separate filter header

Cooling System

Twin thermostats, water pump

System designed for ambients up to 50°C

Radiator supplied loose incorporating air-to-air charge cooler

Electrical Equipment

24-volt starter motor, 24 volt 70 amp battery charging alternator with integral voltage regulator and activating switch

Flywheel and Housing

SAE J620 size 18 flywheel

SAE '0' flywheel housing

Literature

User's Handbook and Parts Manual

Optional Equipment

Heavy-duty air cleaners – paper element with pre-cleaner

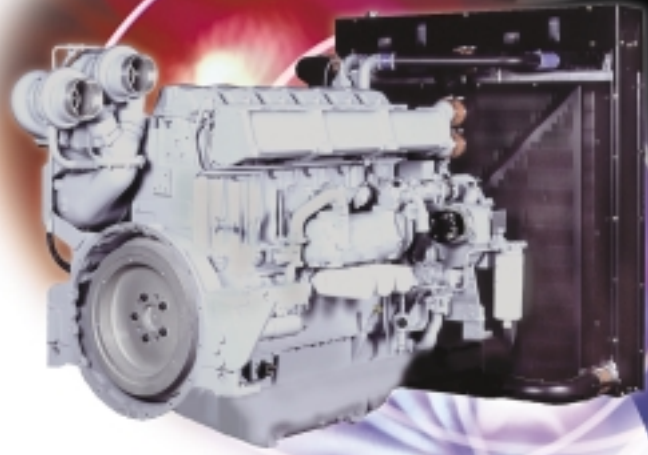
Changeover lubrication oil filter

Changeover fuel filter

Immersion heater with thermostat

Additional manuals

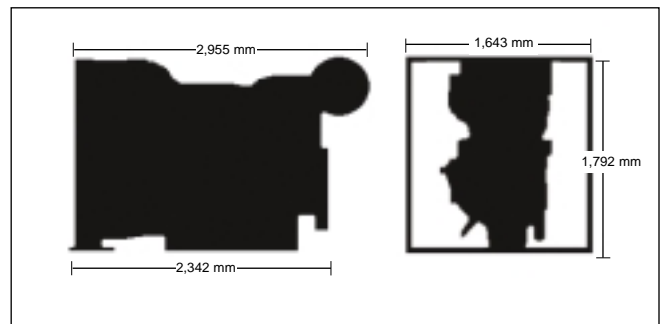
4 metre wiring harness



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	160 mm x 190 mm
Displacement	22,921 litres
Compression Ratio	13:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Firing Order	1, 5, 3, 6, 2, 4
Total Lubrication System Capacity	122.7 litres
Total Coolant Capacity	156 litres
Length	2,341 mm
Width	1,900 mm
Height	1,810 mm
Dry Weight (Engine)	2,400 kg

Fuel Consumption Targets				
Engine speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby power	207	183	219	202
At Prime power	205	162	219	182
At Baseload power	TBA	TBA	TBA	TBA
At 75% of Prime power	TBA	TBA	TBA	TBA
At 50% of Prime power	TBA	TBA	TBA	TBA



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All information given in this leaflet is correct at the time of printing but it may be changed subsequently by the Company