

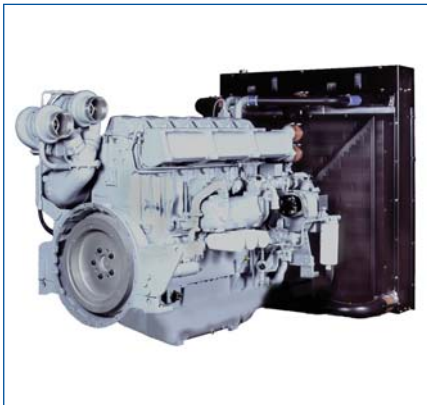


# 4000 Series

## 4006-23TAG3A

Diesel Engine – Electropak

760 kWm at 1500 rpm  
795 kWm at 1800 rpm



### 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 ½ TA Luft (1986)

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 offered with either temperate or tropical cooling. 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.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload	640	512	566	759	540	724
	Prime Power	800	640	705	945	679	911
	Standby (maximum)	900	720	786	1054	760	1019
1800	Continuous Baseload	675	540	614	823	570	764
	Prime Power	844	675	759	1018	715	959
	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, 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. 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.

# 4000 Series

## 4006-23TAG3A

### 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 ISO 8528-5 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 35°C or 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
- High coolant temperature switch
- Low oil pressure switch

#### Flywheel and Housing

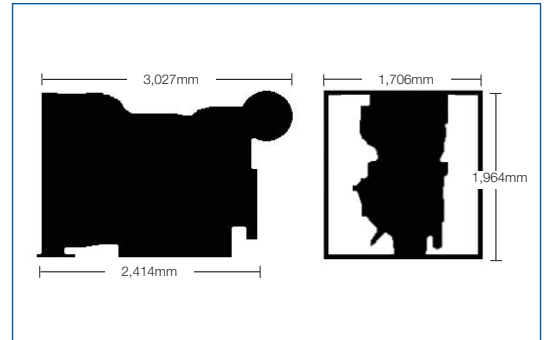
- SAE J620 size 18 flywheel
- SAE '0' flywheel housing

#### 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
- Tropical or temperate radiator kit
- Temperate fan



### 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 x 190 mm
Displacement	22.921 litres
Compression ratio	13.6:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Firing order	1, 5, 3, 6, 2, 4
Total lubrication system capacity	113.4 litres
Total coolant capacity	105 litres
Length	3,027 mm
Width	1,706 mm
Height	1,964 mm
Dry weight (engine)	2,524 kg

Engine Speed	Fuel Consumption			
	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	212	194	230	224
At Prime Power Rating	210	172	226	200
At Baseload Power Rating	208	137	213	152
At 75% of Prime Power Rating	210	130	214	144
At 50% of Prime Power Rating	213	90	205	96



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