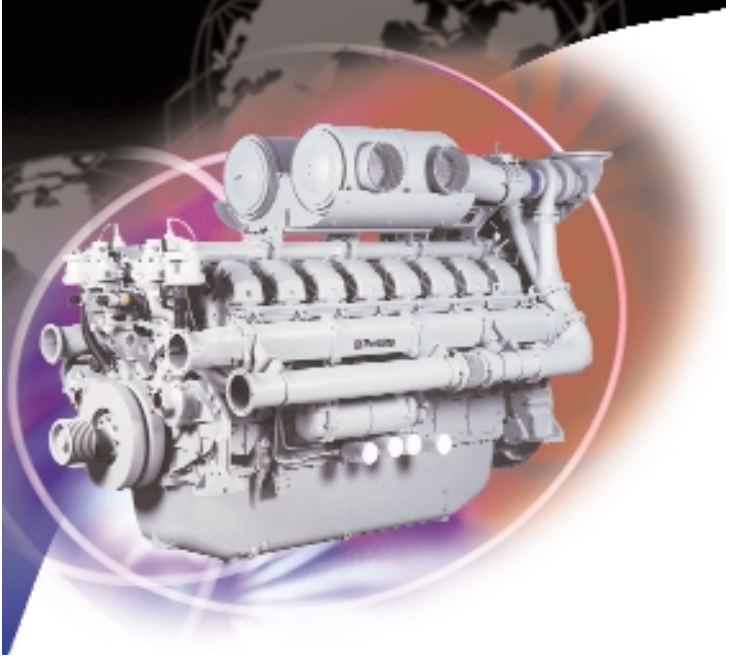


4000 Series

Diesel Engine - Electro Unit

4016TAG1A

1690 kWm 1500 rev/min

The Perkins 4000 Series family of 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 4016TAG1A is a turbocharged, air to air charge cooled, 16 cylinder vee form diesel engine. Its premium design and specification features provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability, low gaseous emissions, overall performance and reliability essential to the power generation market.
The 4016TAG1A is specially tuned for improved load acceptance response in standby duty.

Economic power

Individual 4 valve cylinder heads give optimised gas flows, while unit fuel injectors ensure ultra fine fuel atomisation and hence controlled rapid combustion for efficiency and economy.
Commonality of components with other engines in 4000 Series family allows reduced parts stocking levels.

Reliable power

Developed and tested using latest engineering techniques.
Piston temperatures are controlled by an advanced gallery jet cooling system.
All engines are tolerant of a wide range of temperatures without derate.
Service is provided through the extensive Perkins network of over 4000 distributors and dealers worldwide.

Clean, efficient power

Exceptional power to weight ratio and compact size for easier transportation and installation.
Designed to provide excellent service access for ease of maintenance.
Engines designed to comply with major international standards.
Low gaseous emissions for cleaner operation.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload power	1463	1171	1270	1703	1219	1635
	Prime power	1845	1476	1588	2130	1537	2061
	Standby (maximum)	2028	1622	1741	2334	1690	2266

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

Ratings conditions: 25ºC air inlet temperature, barometer pressure 100kPa, relative humidity 30%. Please consult your distributor or the factory for ratings in 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: BS 2869 Class A1 + A2 or ASTM D975 No 2D.

Rating Definitions

Continuous Baseload – 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 for a maximum of 500 hours per year. No overload is permitted.

4000 Series
4016TAG1A

Standard Electro Unit Specification

Air Inlet
Mounted air filters and turbochargers

Fuel System
Unit fuel injectors with lift pump and hand stop control
Electronic governor to ISO 3046 Part 4 class A1
Full-flow spin-on fuel oil filters

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

Cooling System
Twin gear driven circulating pumps
Two twin thermostats
Crankshaft pulley for fan drive

Electrical Equipment
24V starter motor and 24V/40A alternator with integral regulator and DC output
24V combined high coolant temperature/low oil pressure switch
Overspeed switch and magnetic pickup
Turbine inlet temperature shutdown switch
24V stop solenoid (energised to run)

Flywheel and Housing
Flywheel to SAE J620 size 18
SAE 00 flywheel housing

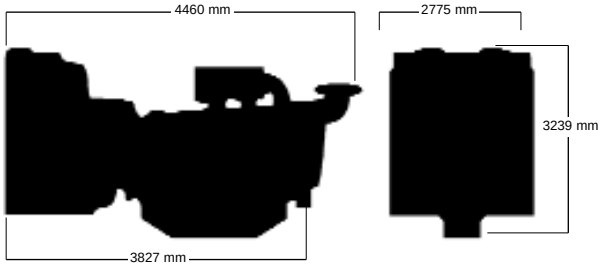
Optional Equipment

The following optional equipment is available to make up the specifications to Perkins ElectropaK specification:
Tropical radiator including: Water pipes, clips and hoses
Fan, fan guards and belts
Other optional extra equipment available
Twin heavy duty air cleaner – paper element with pre-cleaner
Changeover lubricating oil filter
Changeover fuel oil filter
Immersion heater with thermostat
Water pipes, clips and hoses for radiator
Air starters
Instrument panel
NB This list is not exhaustive, further options may be available to meet to particular applications on enquiry to Perkins Sales Department

General Data

Number of Cylinders	16	
Cylinder Arrangement	60º Vee form	
Cycle	4-stroke	
Induction System	Turbocharged Air to air charge cooled	
Combustion System	Direct injection	
Cooling System	Water-cooled	
Displacement	61.123 litres	
Bore and Stroke	160mm x 190 mm	
Compression Ratio	13.6:1	
Direction of Rotation	Anti-clockwise, viewed from flywheel end	
Firing Order	1A, 1B, 3A, 3B, 7A, 7B, 5A, 5B, 8A, 8B, 6A, 6B, 2A, 2B, 4A, 4B	
Total Lubrication System Capacity	237.2 litres	
	Electro Unit	ElectropaK
Total Coolant Capacity	95 litres	316 litres
Length	3202 mm	4460 mm
Width	1723 mm	2775 mm
Height	2128 mm	3239 mm
Total Weight (Dry)	5570 kg	8010 kg

Fuel Consumption g/kWh	
Engine speed	1500 rev/min
	4016TAG1A
At Standby Maximum rating	207
At Prime Power rating	205
At Continuous Baseload rating	199
At 75% of Prime Power rating	198
At 50% of Prime Power rating	198
At 25% of Prime Power rating	218



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