

4000 Series

4008TAG1A/2A

Diesel Engine - Electropak

839 kWm 1500 rev/min TAG1A

920 kWm 1500 rev/min TAG2A

Emission Compliant

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 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 by the extensive Perkins network of over 4,000 distributors and dealers worldwide

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 surfaces; 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 for cleaner operation

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 4008TAG1A/2A Electropaks are turbo-charged, air-to-air charge cooled, 8 cylinder in-line diesel engines. Offered with either Temperate or Tropical cooling packages (with or without fuel cooling). Their 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.

| Engine Model Rated Speed Radiator Type | Operation Type | Typical Generator Output (Net) | | Engine Power | | | |
|--|-------------------|--------------------------------|-----|--------------|------|-----|------|
| | | | | Gross | | Net | |
| | | kVA | kWe | kW | bhp | kW | bhp |
| 4008TAG1A 1500 rev/min Tropical | Baseload Power | 715 | 572 | 640 | 858 | 602 | 807 |
| | Prime Power | 905 | 724 | 800 | 1072 | 762 | 1022 |
| | Standby (maximum) | 996 | 797 | 877 | 1176 | 839 | 1125 |
| 4008TAG2A 1500 rev/mim Tropical | Baseload Power | 809 | 647 | 719 | 964 | 681 | 913 |
| | Prime Power | 1022 | 818 | 899 | 1206 | 861 | 1155 |
| | Standby (maximum) | 1093 | 874 | 962 | 1290 | 920 | 1234 |

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, BS5514/1.

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.

Full specification: BS2869: Class A1 + A2 or ASTM D975 No 2D.

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 one hour in every twelve 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.

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Standard ElectropaK Specification

Air inlet

- Mounted oil filters and turbochargers

Fuel system

- Unit fuel injectors with lift pump and hand stop control
- Digital 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

- Gear driven circulating pump
- Twin thermostats
- Crankshaft pulley for fan drive
- Powder coated radiator assemblies comprising: water radiator; air charge cooled radiator; fuel oil cooling (optional); all pipes, hoses and clips; fan; pulley; fan belts and safety guards

Electrical system

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

Flywheel and housing

- Flywheel to SAE J620 size 18
- SAE 0 flywheel housing

General Data

| | | |
|-----------------------------------|---|------------------|
| Number of cylinders | 8 vertical in-line | |
| Bore and stroke | 160 mm x 190 mm | |
| Displacement | 30.561 litres | |
| 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 | |
| Cooling system | Water-cooled | |
| Total lubrication system capacity | 165.6 litres | |
| | Temperate cooling | Tropical cooling |
| Ambiant coolant clearance TAG1A | 41°C | 50°C |
| Ambiant coolant clearance TAG2A | 35°C | 50°C |
| Total coolant capacity | 143 litres | 149 litres |
| Dimensions | Length 3852 mm | Length 3711 mm |
| | Width 2046 mm | Width 2046 mm |
| | Height 2067 mm | Height 2146 mm |
| Dry weight | 4270 kg * | 4320 kg * |

* For fuel cooler, add 6 kg
Final weight and dimensions will depend on completed specification

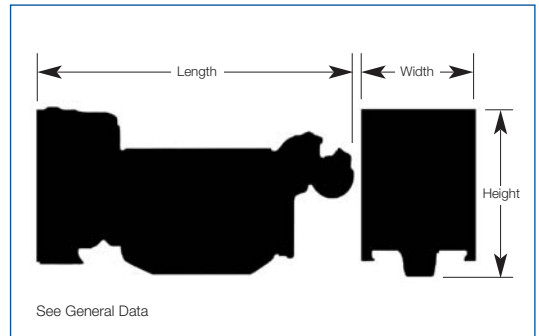


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Optional Equipment

Other optional extra equipment available:

Choice of Temperate or Tropical radiators available dependent on operational cooling requirements
Fuel oil cooling radiator available integral to radiator assemblies
Twin heavy duty air cleaner - paper element with pre-cleaner
Changeover lubricating oil filter
Changeover fuel oil filter
Immersion heater with thermostat
Air starters
Instrument panel

Note: This list is not exhaustive, further options may be available to meet particular applications on enquiry to Perkins Sales Department

| Fuel Consumption g/kWh Temperate/Tropical | |
|---|---------------------------|
| Engine speed | 1500 rev/min 4008TAG1A |
| At standby maximum power rating | 210 |
| At prime power rating | 206 |
| At continuous baseload rating | 203 |
| At 75% of prime power rating | 201 |
| At 50% of prime power rating | 207 |
| At 25% of prime power rating | 217 |

| Fuel Consumption g/kWh Temperate/Tropical | |
|---|---------------------------|
| Engine speed | 1500 rev/min 4008TAG2A |
| At standby maximum power rating | 221 |
| At prime power rating | 214 |
| At continuous baseload rating | 205 |
| At 75% of prime power rating | 203 |
| At 50% of prime power rating | 206 |
| At 25% of prime power rating | 218 |

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