

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.

4000 Series

4008TAG1A/2A

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

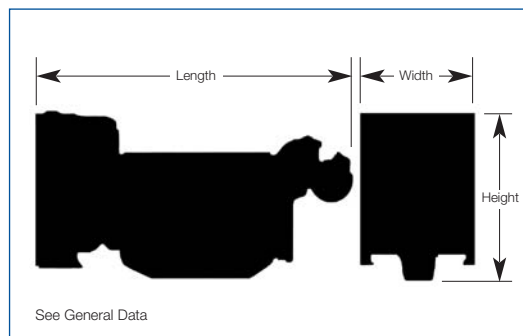


Perkins Engines Company Limited

Peterborough PE1 5NA
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240
www.perkins.com



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Optional Equipment

Other optional extra equipment available:

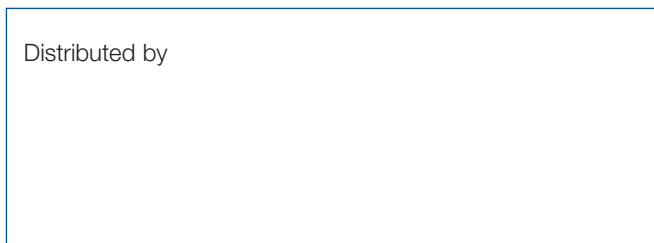
- Choice of Temperate or Tropical radiators available dependent on operational cooling requirements
- Fuel oil cooling radiator available integral to radiator assemblies
- Twin heavy duty air cleaner - paper element with pre-cleaner
- Changeover lubricating oil filter
- Changeover fuel oil filter
- Immersion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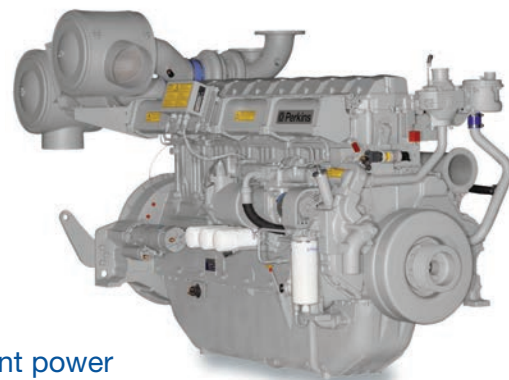


4000 Series 4008TAG1A/2A Diesel Engine – Electropak

844 kWm 1500 rev/min TAG1A
947 kWm 1500 rev/min TAG2A

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.



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
- Perkins global product support is designed to enhance the customer experience of owning a Perkins powered machine. We deliver this through the quality of our distribution network, extensive global coverage and a range of Perkins supported OEM partnership options. So whether you are an end-user or an equipment manufacturer our engine expertise is essential to your success

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

Engine Model Rated Speed Radiator Type	Type of Operation	Typical Generator Output (Net)		Engine Power			
		kVA	kWe	Gross		Net	
				kWm	bhp	kWm	bhp
4008TAG1A 1500 rev/min Tropical	Baseload Power	720	576	644	864	606	813
	Prime Power	911	728	805	1080	767	1029
	Standby (maximum)	1002	802	882	1183	844	1132
4008TAG2A 1500 rev/mim Tropical	Baseload Power	809	647	719	964	681	913
	Prime Power	1022	818	899	1206	861	1155
	Standby (maximum)	1125	900	985	1321	947	1270

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.

Photographs are for illustrative purposes only and may not reflect final specification.

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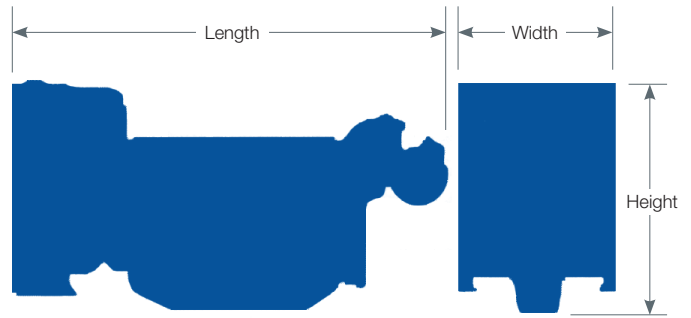
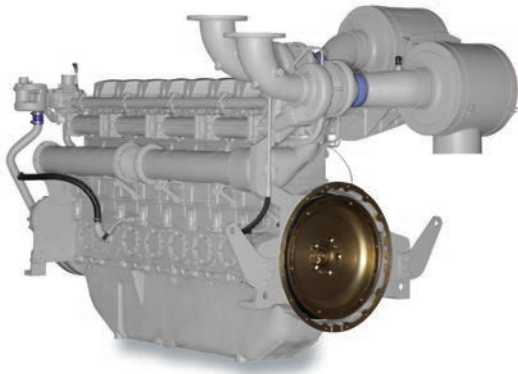
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THE HEART OF EVERY GREAT MACHINE

4000 Series 4008TAG1A/2A Diesel Engine – Electropak

844 kWm 1500 rev/min TAG1A
947 kWm 1500 rev/min TAG2A



See General data

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

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

4008TAG1A (1500 rev/min)		
Fuel Consumption for Temperate and Tropical		
Engine Speed	g/kWh	litres/hr
At Standby Maximum Power Rating	210	218
At Prime Power Rating	206	195
At Continuous Baseload Rating	203	154
At 75% of Prime Power Rating	201	143
At 50% of Prime Power Rating	207	98

4008TAG2A (1500 rev/min)		
Fuel Consumption for Temperate and Tropical		
Engine Speed	g/kWh	litres/hr
At Standby Maximum Power Rating	209	240
At Prime Power Rating	206	215
At Continuous Baseload Rating	206	172
At 75% of Prime Power Rating	206	162
At 50% of Prime Power Rating	207	111

General data

Number of cylinders 8 vertical in-line
Bore and stroke 160 mm x 190 mm (6.3 x 7.5 in)
Displacement 30.561 litres (1865 cu in)
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 153 litres (40.4 US gal)

	Temperate cooling	Tropical cooling
Ambient coolant clearance TAG1A	.....41°C	.....50°C
Ambient coolant clearance TAG2A	.....35°C	.....50°C
Total coolant capacity	..... 143 litres (37.8 US gal)	.. 149 litres (39.4 US gal)
Dimensions – Length	..... 3852 mm (151.7 in)	..... 3711 mm (146 in)
Width	..... 2046 mm (80.5 in)	..... 2046 mm (80.5 in)
Height	..... 2067 mm (81.3 in)	..... 2146 mm (84.5 in)
Dry weight	..... 4270 kg (9414 lb) *	..... 4320 kg (9524 lb)*

* For fuel cooler, add 6 kg

Final weight and dimensions will depend on completed specification

Photographs are for illustrative purposes only and may not reflect final specification.

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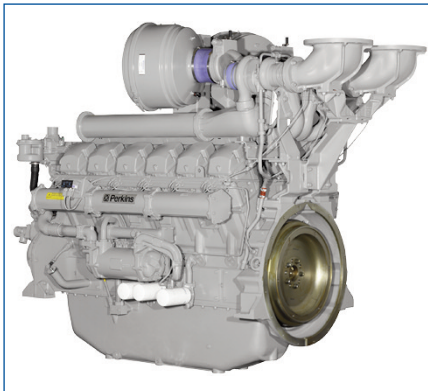
Perkins Engines Company Limited

Peterborough PE1 5FQ
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240

www.perkins.com



THE HEART OF EVERY GREAT MACHINE

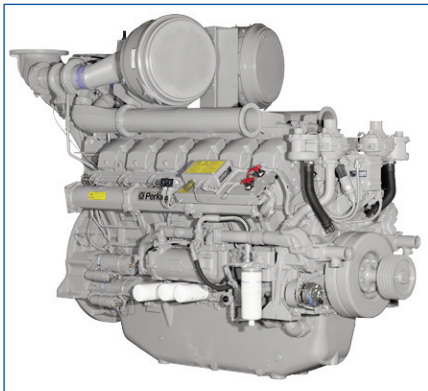


4000 Series

4012-46TAG0A

Diesel Engine – Electropak

1053 kWm 1500 rpm



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 temperature are controlled by an advanced gallery jet cooling system
- All engines are tolerant of a wide range of temperatures without derate

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 4012-46TAG0A Electropak is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. The premium design and specification features of this engine provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability and low gaseous emissions.

This latest model in the Perkins 4012 diesel engine range gives our customers leading overall performance and reliability essential to the power generation market.

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 finish; 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 that will satisfy the requirements of 1/2 TA Luft (1986)

Product support excellence

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory - strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Baseload Power	1000	800	906	1215	842	1129
	Prime Power	1250	1000	1117	1497	1053	1412
	Standby (maximum)	1375	1100	1222	1638	1158	1552

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, BS 5514/1.

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. Fuel specification:* BS2869: Class A2.

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 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.

4000 Series

4012-46TAG0A

Standard Electropak Specification

Air inlet

- Mounted air filters and turbochargers

Fuel System

- Direct fuel injection system with fuel lift pump
- Governing to ISO 8528-5 class G2 with isochronous capability
- Full-flow spin-on fuel oil filters

Lubrication System

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

Cooling System

- Two twin thermostats
- System designed for ambients up to 50°C
- Powder coated radiator comprising: water radiator; air charge cooled radiator; fuel oil cooling (optional); all pipes, hoses and clips; fan; pulleys; fan belts and safety guards

Electrical Equipment

- 24 volt starter motor and 24 volt alternator with integral regulator and DC output
- Overspeed switch and magnetic pickup
- Turbine inlet temperature shutdown switch
- Twin low oil pressure shutdown switches

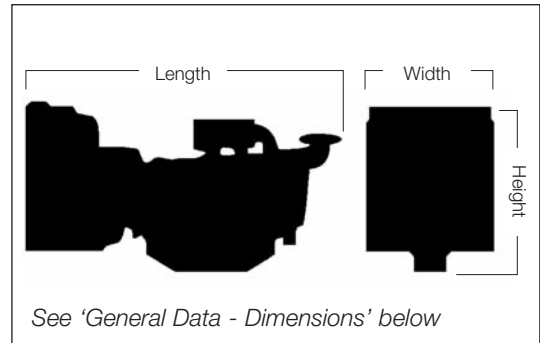
Flywheel and Housing

- Flywheel to SAE J620 size 18
- SAE 00 flywheel housing

Optional Equipment

Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat

Note: This list is not exhaustive, for further options please contact your local Perkins representative



Fuel Consumption		
Engine Speed	1500 rev/min	
	g/kWh	l/hr
Standby	220	312
Prime power	220	286
Continuous baseload	221	233
75% of prime power	222	216
50% of prime power	226	149

General Data

Number of cylinders	12
Cylinder arrangement	60° Vee form
Bore and stroke	160 x 190 mm
Displacement	45.842 litres
Induction system	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
Firing order	1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B
Total lubrication system capacity	177 litres
Total coolant capacity	210 litres
Total weight	6086 kg
Dimensions	Length 3915 mm
	Width 2198 mm
	Height 2258 mm

Final weight and dimensions will depend on completed specification



Perkins Engines Company Limited

Peterborough PE1 5NA
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240
www.perkins.com

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