The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004G with belt-driven coolant pump is a naturally aspirated, 4 cylinder, 4 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1004G

Diesel Engine – ElectropaK
Belt-Driven Coolant Pump

44 kWm 1500 rev/min
51 kWm 1800 rev/min

Economic power

Unique Quadram combustion system enables high power output with lower fuel consumption and noise.
Rated speed is changeable between 1500 rpm and 1800 rpm allowing standard builds to operate at either 50 Hz or 60 Hz.
One side servicing for reduced service time and cost.

Clean, effective power

Operator and environmentally friendly with low noise and emissions and rapid startability.

Durable power

Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Retains the durability and reliability of its predecessors in the Perkins family.

Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 50°C.
Fuelled starting aid for temperatures down to -20°C.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	44.5	35.5	41.0	55.0	40.0	53.5
	Standby Power	49.0	39.0	45.0	60.0	44.0	59.0
1800	Prime Power	52.0	41.5	48.0	64.0	46.5	62.5
	Standby Power	57.0	45.5	52.5	70.5	51.0	68.5

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact.
Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 89%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or CD/SD.

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series

1004G

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary fuel injection pump
- Mechanical governing conforms to ISO 8528-5 1993 (E) Class G2, ISO 3046-4M3
- Spin-on full flow fuel filter with pre filter

Lubrication system
- Rear well aluminium sump with filler and dipstick
- Spin-on full-flow oil filter

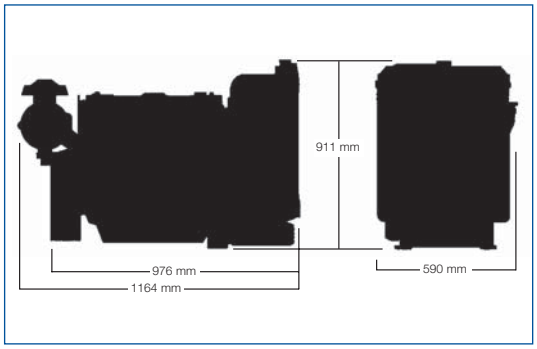
Cooling system
- Belt-driven circulating pump
- 20″ belt-driven fan and guards
- Mounted radiator and pipework

Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- 12 volt senders for oil pressure and coolant temperature
- 12 volt shutdown solenoid energised to run
- Cold start aid

Flywheel and housing
- High inertia flywheel to SAE J620 Size 10/11½
- Cast iron SAE 3 flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook
- Electronic governor (12 volt only)



ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Naturally aspirated
Combustion system	Direct injection
Cooling system	Water-cooled
Displacement	3.99 litres
Bore and stroke	100 x 127 mm
Compression ratio	16.0:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1, 3, 4, 2
Total lubrication system capacity	8.1 litres
Coolant capacity (inc radiator)	15.7 litres
Length	1164 mm
Width	590 mm
Height	911 mm
Total weight (dry)	409 kg
Total weight (wet)	429 kg

Overall dimensions and weight will depend on final specification.

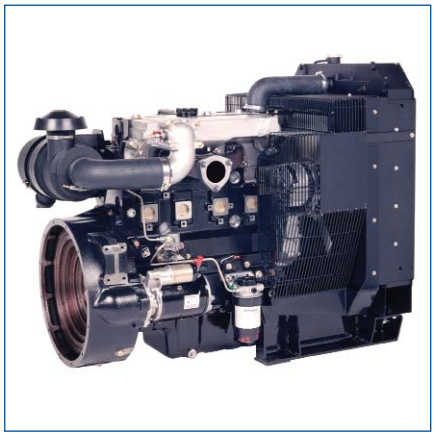
Fuel consumption litres/hour (UK gallons/hour)		
Power Rating	1500 rev/min	1800 rev/min
Standby Power	12.5 (2.7)	15.2 (3.3)
Prime Power	11.0 (2.4)	13.2 (3.0)
75% of Prime Power	8.3 (1.8)	9.5 (2.1)
50% of Prime Power	5.7 (1.2)	6.8 (1.5)

Perkins®

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

Distributed by

Publication No. 1553/10/05 Produced in England



The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004G is a naturally aspirated, 4 cylinder, 4 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1004G

Diesel Engine – ElectropaK Gear-Driven Coolant Pump

44 kWm 1500 rev/min
51 kWm 1800 rev/min

Economic power

Unique Quadram combustion system enables high power output with lower fuel consumption and noise.
Rated speed is changeable between 1500 rpm and 1800 rpm allowing standard builds to operate at either 50 Hz or 60 Hz.
One side servicing for reduced service time and cost.

Clean, efficient power

Operator and environmentally friendly with low noise and emissions and rapid startability.

Durable power

Maximum cooling efficiency is provided by a gear driven water pump and independent fan drive.
Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.

Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 46°C.
Fuelled starting aid for temperatures down to -20°C.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	44.5	35.5	41.0	55.0	40.0	53.5
	Standby Power	49.0	39.0	45.0	60.0	44.0	59.0
1800	Prime Power	52.0	41.5	48.0	64.0	46.5	62.5
	Standby Power	57.0	45.5	52.5	70.5	51.0	68.5

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact.
Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 89%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or CD/SD.

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series

1004G

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary fuel injection pump
- Mechanical governing conforms to ISO 8528-5 1993 (E) Class G2, ISO 3046-4M3
- Spin-on full flow fuel filter with pre filter

Lubrication system
- Rear well aluminium sump with filler and dipstick
- Spin-on full-flow oil filter

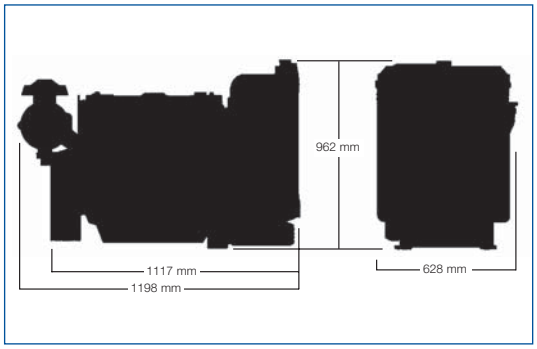
Cooling system
- Gear-driven circulating pump
- 20″ belt-driven fan and guards
- Mounted radiator and pipework

Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- 12 volt senders for oil pressure and coolant temperature
- 12 volt shutdown solenoid energised to run
- Cold start aid

Flywheel and housing
- High inertia flywheel to SAE J620 Size 10/11½
- Cast iron SAE 3 flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook
- Electronic governor (12 volt only)



ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Naturally aspirated
Combustion system	Direct injection
Cooling system	Water-cooled
Displacement	3.99 litres
Bore and stroke	100 x 127 mm
Compression ratio	16:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1, 3, 4, 2
Total lubrication system capacity	8.1 litres
Coolant capacity (inc radiator)	21 litres
Length	1198 mm
Width	628 mm
Height	962 mm
Total weight (dry)	420 kg
Total weight (wet)	447 kg

Overall dimensions and weight will depend on final specification.

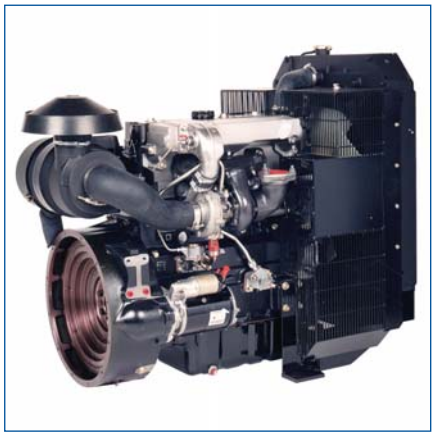
Fuel consumption litres/hour (UK gallons/hour)		
Power Rating	1500 rev/min	1800 rev/min
Standby Power	12.5 (2.7)	15.2 (3.3)
Prime Power	11.0 (2.4)	13.2 (3.0)
75% of Prime Power	8.3 (1.8)	9.5 (2.1)
50% of Prime Power	5.7 (1.2)	6.8 (1.5)

Perkins®

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

Distributed by

Publication No. 545/10/05 Produced in England



The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004TG1 is a turbocharged 4 cylinder, 4 litre engine. Its premium features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1004TG1

Diesel Engine – ElectropaK

64.0 kWm 1500 rev/min
69.5 kWm 1800 rev/min

Economic power

One side servicing for reduced service time and cost.
Unique Quadram combustion system enables high power output with lower fuel consumption and noise.
Rated speed is changeable between 1500 rpm and 1800 rpm allowing standard builds to operate at either 50 Hz or 60 Hz.

Clean, efficient power

Operator and environmentally friendly with low noise and rapid startability and low emissions.

Durable power

Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Inserted value seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 53°C (46°C if a canopy is fitted).
Fuelled starting aid for temperatures down to -20°C.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	65.0	52.0	60.0	80.5	58.0	78.0
	Standby Power	71.5	57.5	66.0	88.5	64.0	86.0
1800	Prime Power	70.5	56.5	66.5	89.0	63.0	84.5
	Standby Power	77.5	62.0	73.0	98.0	69.5	93.0

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact.
Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or CD/SD.

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series
1004TG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary fuel injection pump
- Mechanical governing conforms to ISO 8528-5 1993 (E) Class G2, ISO 3046-4M3
- Spin-on full flow fuel filter with pre filter

Lubrication system
- Rear well aluminium sump with filler and dipstick
- Spin-on full-flow oil filter

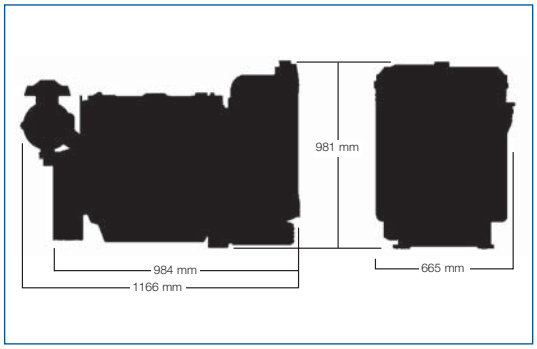
Cooling system
- Gear-driven circulating pump
- 20″ belt-driven fan and guards
- Mounted radiator and pipework

Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- 12 volt senders for oil pressure and coolant temperature
- 12 volt shutdown solenoid energised to run
- Cold start aid

Flywheel and housing
- High inertia flywheel to SAE J620 Size 10/11½
- Cast iron SAE 3 flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook
- Electronic governor (12 volt only)



ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged
Combustion system	Direct injection
Cooling system	Water-cooled
Displacement	3.99 litres
Bore and stroke	100 x 127 mm
Compression ratio	16:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1, 3, 4, 2
Total lubrication system capacity	8.1 litres
Coolant capacity (inc radiator)	18.7 litres
Length	1166 mm
Width	665 mm
Height	981 mm
Total weight (dry)	433 kg
Total weight (wet)	458 kg

Overall dimensions and weight will depend on final specification.

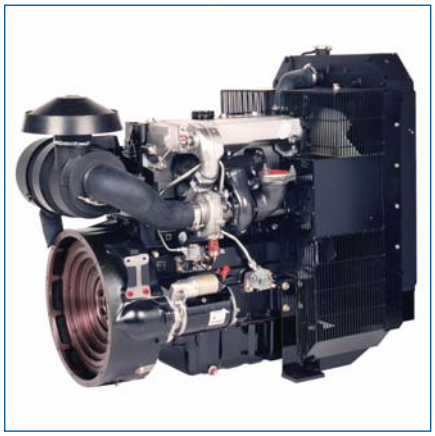
Fuel consumption litres/hour (UK gallons/hour)		
Power Rating	1500 rev/min	1800 rev/min
Standby Power	16.4 (3.6)	18.8 (4.1)
Prime Power	14.5 (3.2)	17.1 (3.7)
75% of Prime Power	10.9 (2.4)	13.2 (2.9)
50% of Prime Power	7.7 (1.7)	9.6 (2.1)

Perkins®

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

Distributed by

Publication No. 1554/10/05 Produced in England



The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004TG2 is a turbocharged 4 cylinder, 4 litre engine. Its premium features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1004TG2

Diesel Engine – ElectropaK

79.0 kWm 1500 rev/min
91.5 kWm 1800 rev/min

Economic power

One side servicing for reduced service time and cost.
Unique Quadram combustion system enables high power output with lower fuel consumption and noise.
Rated speed is changeable between 1500 rpm and 1800 rpm allowing standard builds to operate at either 50 Hz or 60 Hz.

Clean, efficient power

Operator and environmentally friendly with low noise and rapid startability and low emissions.

Durable power

Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Inserted value seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 53°C (46°C if a canopy is fitted)
Fuelled starting aid for temperatures down to -20°C.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	81.0	65.0	74.0	99.0	72.0	96.5
	Standby Power	89.0	71.0	81.0	108.5	79.0	106.0
1800	Prime Power	93.0	74.5	86.0	115.5	82.5	110.5
	Standby Power	103.0	82.5	95.0	127.5	91.5	122.5

All ratings based on operation under ISO/TR 14396/IS0 8528 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact. Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or CD/SD.

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series
1004TG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary fuel injection pump
- Mechanical governing conforms to ISO 8528-5 1993 (E) Class G2, ISO 3046-4M3
- Spin-on full flow fuel filter with pre filter

Lubrication system
- Rear well aluminium sump with filler and dipstick
- Spin-on full-flow oil filter

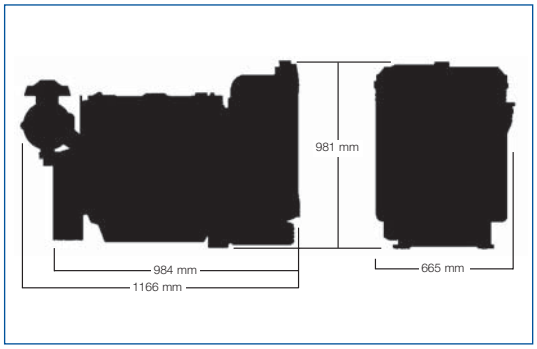
Cooling system
- Gear-driven circulating pump
- 20″ belt-driven fan and guards
- Mounted radiator and pipework

Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- 12 volt senders for oil pressure and coolant temperature
- 12 volt shutdown solenoid energised to run
- Cold start aid

Flywheel and housing
- High inertia flywheel to SAE J620 Size 10/11½
- Cast iron SAE 3 flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook
- Electronic governor (12 volt only)



ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged
Combustion system	Direct injection
Cooling system	Water-cooled
Bore and stroke	100 x 127 mm
Displacement	3.99 litres
Compression ratio	16:1
Direction of rotation	Anti-Clockwise, viewed on the flywheel
Total lubrication system capacity	8.1 litres
Coolant capacity (inc radiator)	18.7 litres
Length	1166 mm
Width	665 mm
Height	981 mm
Total weight (dry)	433 kg
Total weight (wet)	458 kg

Overall dimensions and weight will depend on final specification.

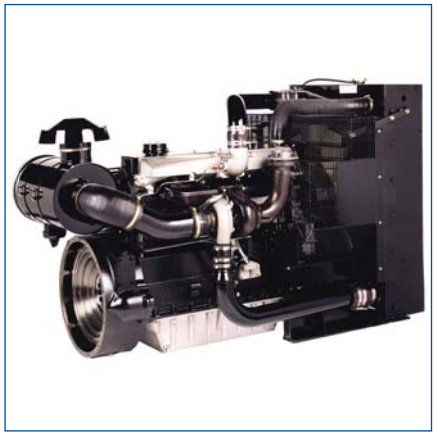
Fuel consumption litres/hour (UK gallons/hour)		
Power Rating	1500 rev/min	1800 rev/min
Standby Power	20.5 (4.5)	24.0 (5.3)
Prime Power	18.4 (4.0)	22.0 (4.8)
75% of Prime Power	14.0 (3.1)	16.9 (3.7)
50% of Prime Power	9.6 (2.1)	11.8 (2.6)

Perkins®

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

Distributed by

Publication No. 546/10/05 Produced in England



Renowned throughout the power generation industry for their superior performance and reliability, the latest Perkins 1000 Series easily satisfies the requirements of US EPA mobile off-highway legislation.

The 1006-6TA is a turbocharged, air-to-air charge cooled, 6 cylinder, 6 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1006-6TA

Diesel Engine - ElectropaK

154.0 kWm 1800 rev/min

Clean, Efficient Power

- Operator and environmentally sensitive with low noise, rapid startability and low emissions satisfying US EPA mobile off-highway legislation.

Economic Power

- Single side servicing reduces service time, cost and enhances equipment availability.
- Perkins advanced combustion system ensures high power with low specific fuel consumption and noise.
- Electronic governor gives close control at the rated speed of 1800 rpm operating at 60 Hz.

Durable Power

- Maximum cooling efficiency is provided by a high capacity gear driven water pump and independent fan drive.
- Leak free operation is ensured by Viton crankshaft seals and sophisticated controlledswell joints, giving protection in the toughest conditions.
- Inserted valve seats, oil spray cooled pistons and compact plate cooler give enhancedengine life.

Reliable Power

- Suitable for operation in ambient temperatures up to 53°C (46°C if a canopy is fitted).
- Fuelled starting aid for temperatures down to -30°C.
- Wherever a Perkins' Electropak engine is put into service, it will never be far from thesupport provided by a global network of 4,000 distributors and dealers, all backed by aparts distribution centre giving 24 hour service, 365 days a year.

Engine speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1800	Prime Power	157.5	126.0	147.0	197.0	140.0	188.0
	Standby Power	173.0	138.5	161.5	216.5	154.0	206.5

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins contact.
Derating may be required for conditions outside these; consult Perkins Engines Company Limited

Performance tolerance quoted by Perkins is ±5%.
Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.
Fuel specification: BS2869 Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or API CD/SD

Rating Definitions
Prime power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for one hour in every twelve hours of operation.
Standby power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series

1006-6TA

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Rotary fuel injection pump
- Electronic governor - speed control to BS5514 Class A0, ISO 3046-4M3
- Twin spin-on full flow fuel oil filter and pre-filter
- Cold start aid

Lubrication system
- Flat bottomed aluminium sump
- Spin-on full flow oil filters
- Oil cooler

Cooling system
- Thermostat controlled cooling system with gear-driven water pump
- Fan drive and 25” pusher fan
- Radiator (and piping) with fan guards incorporating air-to-air charge cooler

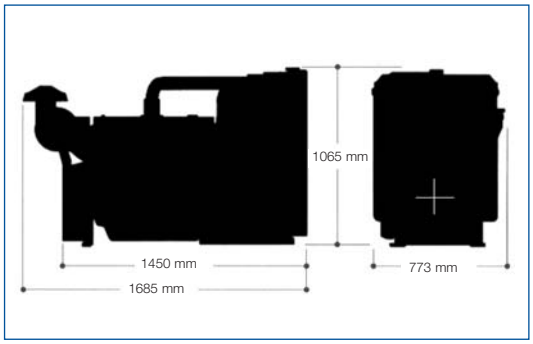
Electrical equipment
- 12 volt starter motor and 55 amp alternator
- Oil pressure switch and coolant temperature switch
- 12 volt shut off solenoid - energised to run

Flywheel and housing
- Cast iron SAE 3 flywheel housing
- Flywheel to SAE J620 Size 10/11½

Mountings
- Front engine mountings

General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Displacement	5.99 litres
Bore and Stroke	100.0 mm x 127.0 mm
Compression Ratio	17.3:1
Direction of Rotation	Clockwise, viewed from the front
Firing Order	1,5,3,6,2,4
Total Lubrication System	19.0 litres
CapacityCoolant Capacity	37.22 litres (inc radiator)
Total Weight (dry)	586 kg
Total Weight (wet)	630 kg
Length	1685 mm
Width	773 mm
Height	1065 mm



Fuel Consumption litres/hour (gallons/hour)	
Power rating %	1800 rev/min
110	41.1 (9.0)
100	37.5 (8.3)
75	29.1 (6.4)
50	20.8 (4.60

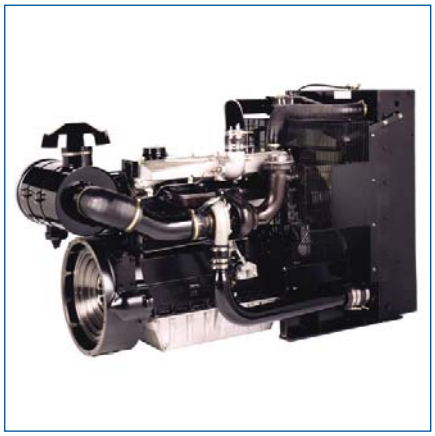
Optional equipment
- 24 volt alternator
- 24 Volt starter motor
- Water temperature gauge and sender
- Heater/starter switch
- Rear engine mountings
- Exhaust silencer
- Control panel
- Workshop manual
- Parts book
- User handbook

Perkins®

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

Distributed by

Publication No.1467/11/05 Produced in England



The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1006TAG is a turbocharged, 6 cylinder, 6 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1006TAG

Diesel Engine – ElectropaK

137.5 kWm 1500 rev/min
151.5 kWm 1800 rev/min

Economic power

Single side servicing for reduced service time and cost.
Unique Fastram combustion system enables high power output plus low fuel consumption.
Electronic governor gives close control and means that the rated speed can be set at site to either 1500 rpm or 1800 rpm allowing standard builds to operate at either 50 Hz or 60 Hz.

Clean, efficient power

Operator and environmentally friendly with low noise, rapid startability and low emissions that satisfy TA Luft requirements.

Durable power

Maximum cooling efficiency is provided by a gear driven water pump and independent fan drive.
Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Inserted valve seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable power

Wherever a perkins' ElektropaK engine is put into service, it will never be far from the support provided by a global network of 4,000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 52ºC (46ºC if a canopy is fitted).
Fuelled starting aid for temperatures down to -20ºC.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	140.5	112.5	132.0	177.0	125.0	167.5
	Standby Power	155.0	124.0	145.0	194.5	137.5	184.5
1800	Prime Power	155.0	124.0	148.0	198.5	137.5	184.5
	Standby Power	170.5	136.5	163.0	218.5	151.5	203.0

All ratings data based on operating under ISO/TR 14396/ISO 8528 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins contact. Performance tolerance quoted by Perkins is +5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2
Lubrication oil: A single or multigrade oil to ACEAE1 E2 or API CD/SD

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series
1006TAG

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Rotary fuel injection pump
- Mechanical governing conforms to ISO 8528-5 1993(E) Class G2, ISO 3046-4M3
- Spin-on full flow fuel oil filters and pre-filter

Lubrication system
- Flat bottomed aluminium sump
- Spin-on full flow oil filters
- Oil cooler

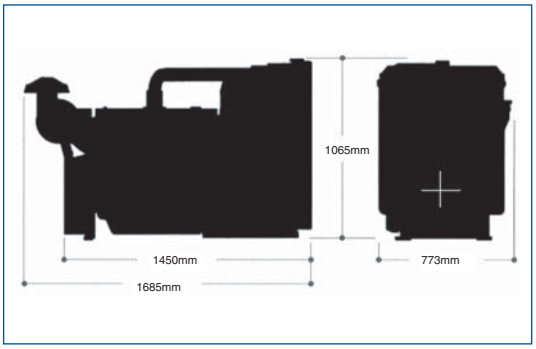
Cooling system
- Thermostat controlled cooling system with gear driven water pump
- 25″ belt-driven pusher fan and guards
- Radiator incorporating air-to-air charge cooler and piping

Electrical system
- 12 volt starter motor and 55 amp alternator with DC output
- 12 volt oil Pressure and coolant temperature switches
- 12 volt shut down solenoid – energised to run cold start aid

Flywheel and housing
- High inertia flywheel to SAE J620 size 10/11½

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook
- Electronic governor (12 volt only)



General Data

Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged, air-to-air aftercooled
Combustion system	Direct injection
Cooling system	Water-cooled
Bore and stroke	100 x 127 mm
Displacement	5.99 litres
Compression ratio	17.0:1
Direction of rotation	Anti-Clockwise, viewed on the flywheel
Total lubrication system capacity	19.0 litres
Coolant capacity (inc. radiator)	37.22 litres
Length	1685 mm
Width	773 mm
Height	1065 mm
Total weight (dry)	586 kg

Overall dimensions and weight will depend on final specification.

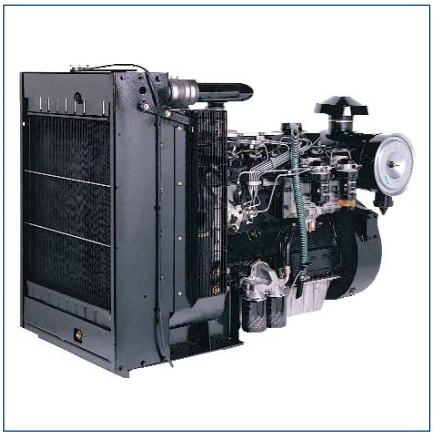
Fuel consumption litres/hour (UK gallons/hour)		
Power Rating %	1500 rev/min	1800 rev/min
110	36.6 (8.0)	41.0 (9.0)
100	33.3 (7.3)	37.7 (8.3)
75	25.2 (5.5)	29.5 (6.5)
50	16.9 (3.7)	18.9 (4.2)

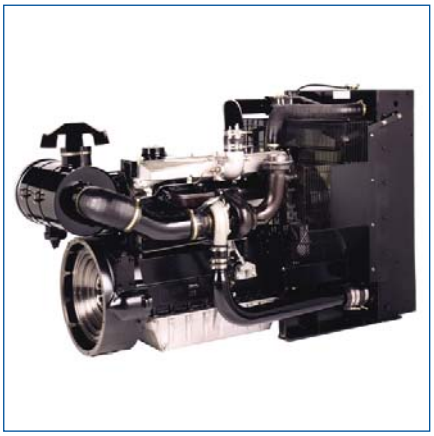
Perkins®

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

Distributed by

Publication No. 1578/10/05 Produced in England





The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1006TAG2 is a turbocharged, 6 cylinder, 6 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1006TAG2

Diesel Engine – ElectropaK

143 kWm 1500 rev/min

Economic power

Single side servicing for reduced service time and cost.
Unique Fastram combustion system enables high power output plus low fuel consumption.
Electronic governor gives close control for 50 Hz (1500 rpm) operation.

Durable power

Maximum cooling efficiency is provided by a gear driven water pump and independent fan drive.
Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Inserted valve seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable power

Wherever a Perkins' ElektropaK engine is put into service, it will never be far from the support provided by a global network of 4,000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 53ºC (46ºC if a canopy is fitted).
Fuelled starting aid for temperatures down to -20ºC.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power Standby Power	150.0 165.0	120.0 132.0	136.8 150.5	181.0 201.0	129.3 143.0	174.0 193.0

All ratings data based on operating under ISO/TR 14396/ISO 8528 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins contact. Performance tolerance quoted by Perkins is +5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.

Fuel specification: BS 2869 Part 2 1998 Class A2 or ASTM D975 D2
Lubrication oil: A single or multigrade oil to ACEAE1 E2 or API CD/SD

Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for 1 hour in every 12 hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series
1006TAG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel System
- Rotary fuel injection pump
- Electronic governor – speed control to BS 5514 Class A0, ISO 3046-4M3
- Twin spin-on full flow fuel filters and pre-filter

Lubrication system
- Flat bottomed aluminium sump
- Twin spin-on full flow oil filters
- Oil cooler

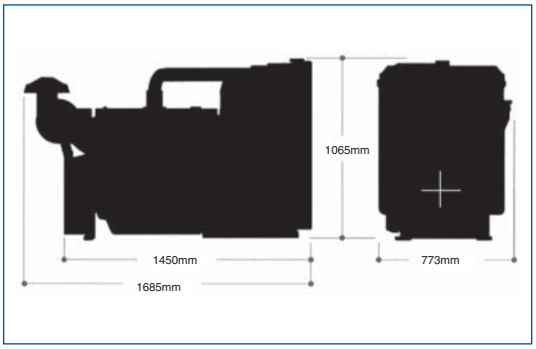
Cooling system
- Thermostat controlled cooling system with gear driven water pump
- 25″ belt-driven pusher fan and guards
- Radiator incorporating air-to-air charge cooler and piping

Electrical system
- 12 volt starter motor and 55 amp alternator with DC output
- 12 volt oil pressure and coolant temperature switches
- 12 volt shut down solenoid – energised to run cold start aid

Flywheel and housing
- Cast iron SAE 3 flywheel housing
- High inertia flywheel to SAE J620 size 10/11½

Mountings
- Front engine mounting bracket

Optional Equipment
- 24 volt alternator
- 24 volt starter motor
- Water temperature gauge and sender
- Heater/Starter switch
- Rear engine mountings
- Workshop manual
- Parts book
- User handbook



General Data

Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged, air-to-air aftercooled
Combustion system	Direct injection
Cooling system	Water-cooled
Bore and stroke	100 x 127 mm
Displacement	5.99 litres
Compression ratio	17.0:1
Direction of rotation	Anti-clockwise, viewed on the flywheel
Total lubrication system capacity	19 litres
Coolant capacity (inc. radiator)	41 litres
Length	1685 mm
Width	773 mm
Height	1065 mm
Total weight (dry)	586 kg

Overall dimensions and weight will depend on final specification.§§

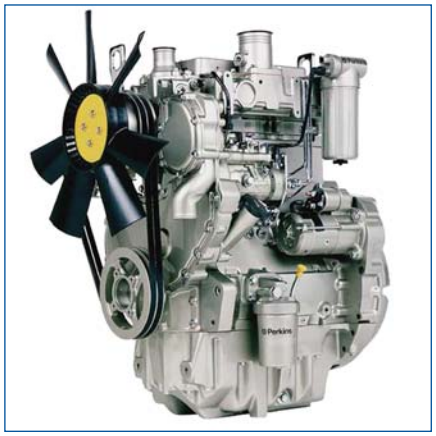
Fuel consumption litres/hour (UK gallons/hour)	
Power Rating %	1500 rev/min
110	45.0 (9.9)
100	41.0 (9.0)
75	31.0 (6.8)
50	20.0 (4.4)

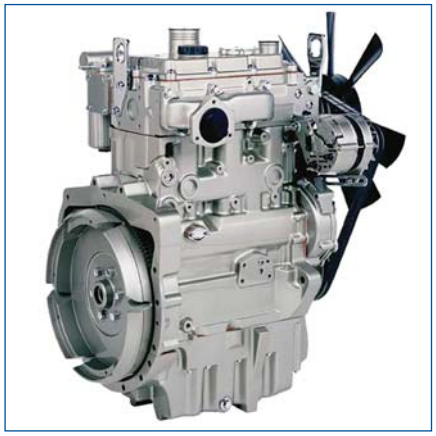
Perkins®

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

Distributed by

Publication No. 1793/10/05 Produced in England





Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.

In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1103C-33G1 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1103C-33G1 satisfies US EPA Tier 2 mobile off-highway legislation.

1100 Series see the marriage of technology to customer need. A 3.3 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1103C-33G1

Diesel Engine - ElectropaK

30 kWm 1500 rev/min
34 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1800	Prime power	34	27	31.5	42	30.5	41
	Standby (maximum)	38	30	35	47	34	45.5

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil**: API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

1100 Series

1103C-33G1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

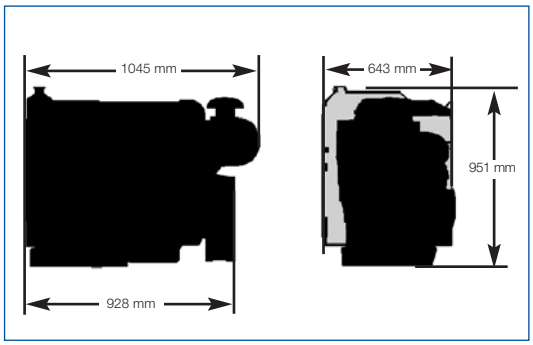
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½ SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book



General Data

Number of cylinders	3 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	3.3 litres
Aspiration	Naturally Aspirated
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	19.25:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	7.4 litres
Total coolant capacity	10.1 litres
Dimensions	Length 1045 mm Width 643 mm Height 951 mm

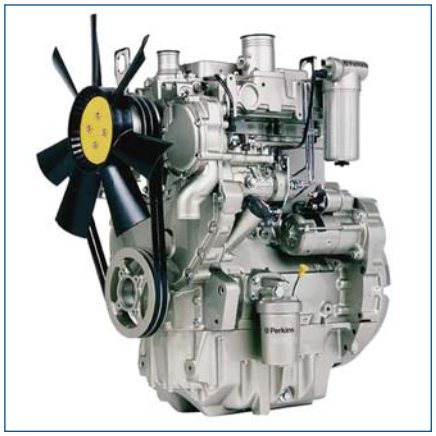
Final weight and dimensions will depend on completed specification.

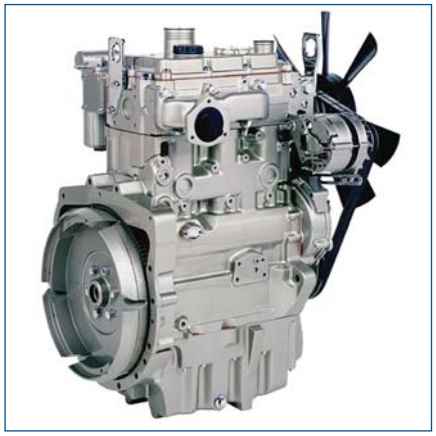
Perkins®

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

Distributed by

Publication No.1731/11/05 Produced in England





Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.

In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1103C-33G2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, the engine is designed to comply with TA Luft (1986) regulations.

1100 Series see the marriage of technology to customer need. A 3.3 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1103C-33G2

Diesel Engine - ElectropaK

30 kWm 1500 rev/min
34 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Prime Power	30	24	28.0	37.5	27	36.0
	Standby (maximum)	33	26	31.0	41.5	30.0	40.0
1800	Prime Power	34	27	31.5	42.0	30.5	41.0
	Standby (maximum)	38	30	35.0	47.0	34.0	45.5

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil**: API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

1100 Series
1103C-33G2

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel System
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

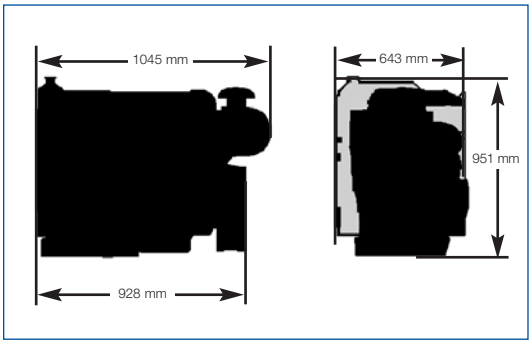
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book



Option Groups

A selection of optional items is available to enable the customer to prepare a specification precisely matched to the needs.

General Data

Number of cylinders	3 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	3.3 litres
Aspiration	Naturally Aspirated
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	19.25:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	7.4 litres
Total coolant capacity	10.1 litres
Dimensions	Length 1045 mm Width 643 mm Height 951 mm

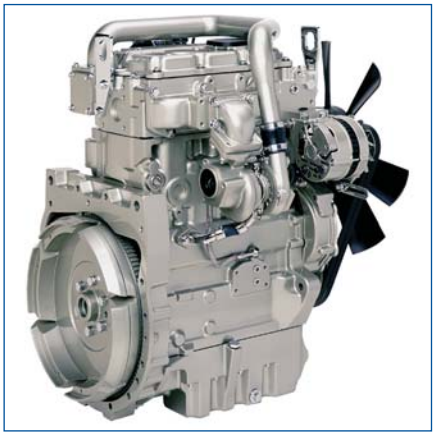
Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by

Publication No.1754/11/05 Produced in England



Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.

In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1104C-44G1 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. Crucially, bare engine noise is lower than ever before.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, the engine is designed to comply with TA Luft (1986) regulations.

1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1104C-44G1

Diesel Engine - ElectropaK

42 kWm 1500 rev/min
48 kWm 1800 rev/min

Compact and Efficient Power

- The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

- The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

- Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

- The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

- Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

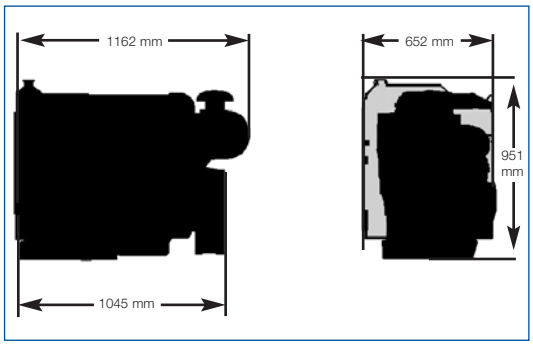
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	40	32	39.0	52.5	38	51
	Standby (maximum)	44	35	43.5	58.5	42	57
1800	Prime power	45	36	44.0	59.0	43	58
	Standby (maximum)	50	40	49.0	66.0	48	64

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

1100 Series
1104C-44G1

Standard ElectropaK Specification



Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book

General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.4 litres
Aspiration	Naturally Aspirated
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	19.25:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.5 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1162 mm
Width	Width 652 mm
Height	951 mm
Dry Weight (ElectropaK)	TBA kg

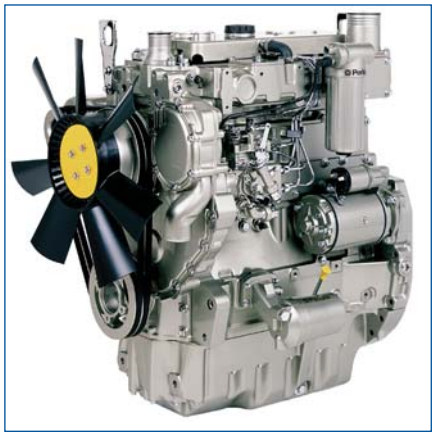
Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by

Publication No.1732/11/05 Produced in England



1100 Series

1104C-44G2

Diesel Engine - ElectropaK

53 kWm 1800 rev/min

Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.

In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1104C-44G2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. Crucially, bare engine noise is lower than ever before.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44G2 satisfies US EPA Tier 2 mobile off-highway legislation.

1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1800	Prime power	51.0	41.0	49.0	65.7	48.0	64.0
	Standby (maximum)	56.0	45.0	54.0	72.5	53.0	71.0

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

Engine Range
Engine Type

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

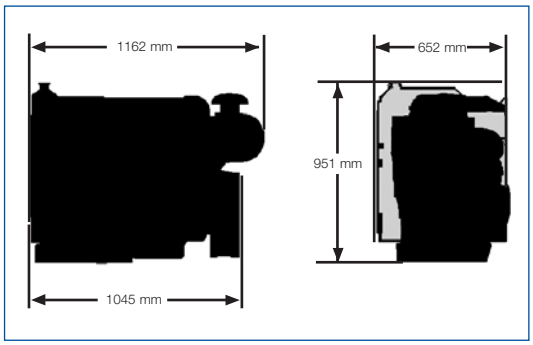
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book



General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.4 litres
Aspiration	Naturally aspirated
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	19.25:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.5 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1162 mm Width 652 mm Height 951 mm

Final weight and dimensions will depend on completed

Perkins®

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

Distributed by

Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.
In the world of power generation success is greeted for those providing more for even less. Therefore with this new 1104C-44TAG1 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. And with six cylinder capability from a four cylinder package performance increases, but crucially, bare engine noise is lower than ever before.
Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TAG1 satisfies US EPA Tier 2 mobile off-highway legislation; elsewhere the engine is designed to comply with TA Luft regulations.
1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1104C-44TAG1

Diesel Engine - ElectropaK

78 kWm 1500 rev/min
89 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine speed rev/min	Operation Type	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Prime Power	80	64.0	75	100.5	71	95.0
	Standby (maximum)	88	70.5	82	110.0	78	104.5
1800	Prime Power	90	72.0	84	112.5	80	107.0
	Standby (maximum)	100	80.0	94	126.0	89	119.0

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available for variable load in lieu of a main power network. 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. No overload is permitted.

1100 Series
1104C-44TAG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Wet steel sump with filler and dipstick
- Spin-on oil filter

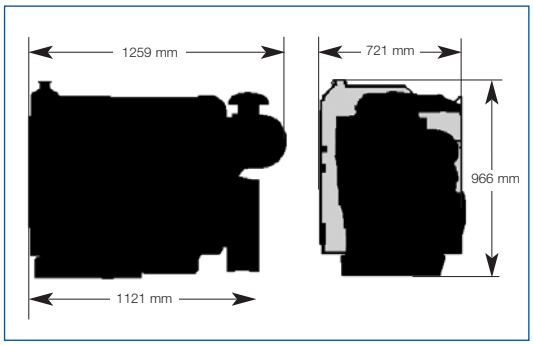
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping incorporating air-to-air charge cooler

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's handbook

Optional equipment
- 24 Volt alternator
- 24 Volt starter motor
- Workshop manual
- Parts book



Fuel Consumption litres/hour (gallons*/hour)		
Power rating	1500 rev/min	1800 rev/min
110	20.3/4.5	24.1 / 5.31 (6.37)
110	18.6 / 4.1	22.0 / 4.85 (5.81)
75	14.3 / 3.2	17.0 / 3.74 (4.49)
50	9.8 / 2.2	11.7 / 2.58 (3.09)

General Data

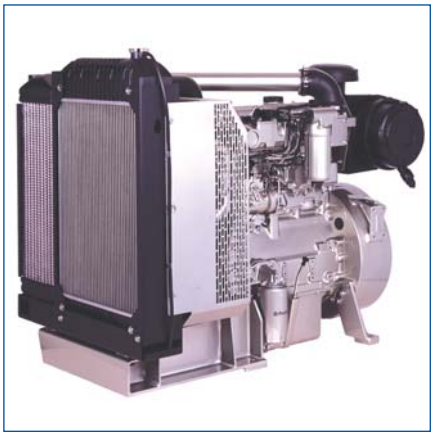
Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.41 litres
Aspiration	Turbocharged, air to air charge cooled
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	18.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.0 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1259 mm
	Width 721 mm
	Height 966 mm
Dry weight (ElectropaK)	500 kg

Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by



Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.
In the world of power generation success is greeted for those providing more for even less. Therefore with this new 1104C-44TAG2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. And with six cylinder capability from a four cylinder package performance increases, but crucially, bare engine noise is lower than ever before.
Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TAG2 satisfies US EPA Tier 2 mobile off-highway legislation; elsewhere the engine is designed to comply with TA Luft regulations.
1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1104C-44TAG2

Diesel Engine - ElectropaK

98 kWm 1500 rev/min
112 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	100.0	80.0	93.5	125.5	89.0	119.0
	Standby (maximum)	110.0	88.0	103.0	138.0	98.0	131.5
1800	Prime power	112.5	90.0	105.0	141.0	100.0	134.0
	Standby (maximum)	125.0	100.0	118.0	158.0	112.0	150.0

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor and a power factor (cos θ) of 0.8.
Rating Definitions
Prime power – Power available for variable load in lieu of a main power network. 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. No overload is permitted.

1100 Series
1104C-44TAG2

Engine Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Wet cast iron sump with filler and dipstick
- Spin-on oil filter

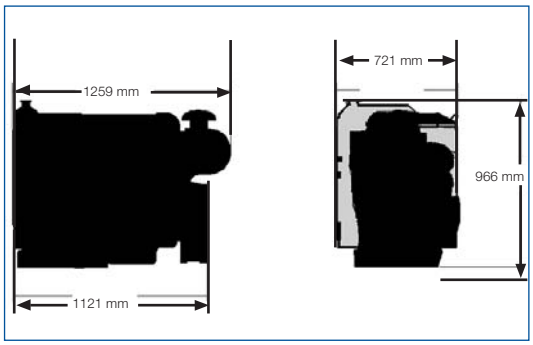
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping incorporating air-to-air charge cooler

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- 24 volt alternator
- 24 volt starter motor
- Workshop manual
- Parts book



Fuel Consumption litres/hour (gallons*/hour)		
Power rating %	1500 rev/min	1800 rev/min
110	24.9 / 5.5	29.7 / 6.6 (7.85)
100	22.6 / 5.0	26.9 / 5.9 (7.11)
75	17.1 / 3.8	20.2 / 4.5 (5.34)
50	11.2 / 2.6	14.1 / 3.1 (3.72)

* (US Gallons)

General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.41 litres
Aspiration	Turbocharged, air to air charge cooled
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	18.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.0 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1259 mm Width 721 mm Height 966 mm
Dry Weight (ElectropaK)	550 kg

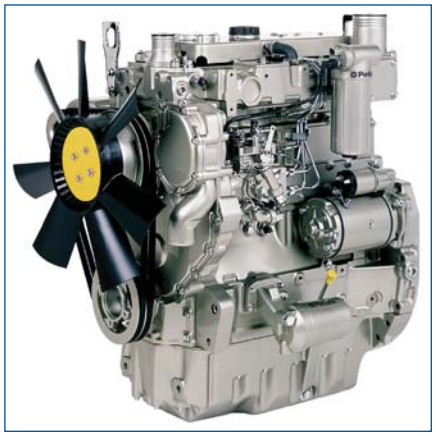
Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by

Publication No.PN1714/11/05 Produced in England



Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.

In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1104C-44TG1 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. Crucially, bare engine noise is lower than ever before.

Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TG1 satisfies US EPA Tier 2 mobile off-highway legislation.

1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1104C-44TG1

Diesel Engine - ElectropaK

59 kWm 1500 rev/min
68 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1800	Prime power	68	54	63.5	85	61	82
	Standby (maximum)	75	60	70.5	95	68	91

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil**: API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

1100 Series
1104C-44TG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

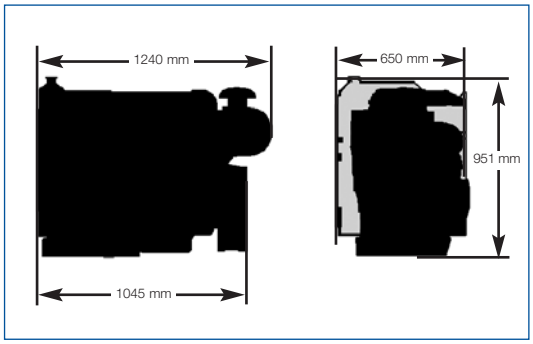
Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book



Option Groups

A selection of optional items is available to enable the customer to prepare a specification precisely matched to the needs.

General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.41 litres
Aspiration	Turbocharged
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	18.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.5 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1240 mm Width 650 mm Height 951 mm

Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by

Publication No.1734/11/05 Produced in England

Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers'.
In the world of power generation today, success is only gained by providing more for less. Therefore with this new 1104C-44TG2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership.
Crucially, bare engine noise is lower than ever before.
Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TG2 satisfies US EPA Tier 2 mobile off-highway legislation.
1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

1100 Series

1104C-44TG2

Diesel Engine - ElectropaK

59 kWm 1500 rev/min
68 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

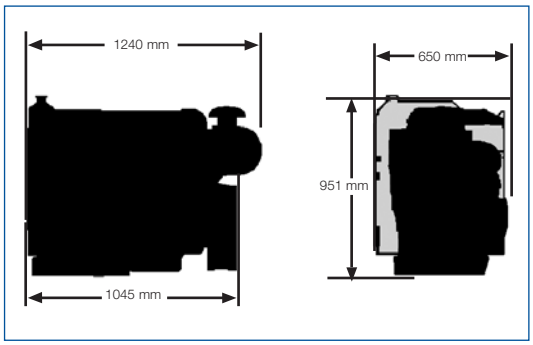
Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	60	48	56	75	53	72
	Standby (maximum)	66	53	62	83	59	79
1800	Prime power	68	54	63	85	61	82
	Standby (maximum)	75	60	70	95	68	91

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.
Fuel specification: BS 2869 Class 2 or ASTM D975 D2. **Lubricating oil:** API CH4/ACEA E5.
Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos q) of 0.8.

Rating Definitions
Prime power – Power available at variable load in lieu of a main power network. 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. Maximum use 500 hours per year. No overload is permitted.

1100 Series
1104C-44TG2

Standard ElectropaK Specification



Air inlet
- Mounted air filter

Fuel system
- Rotary type pump
- Ecoplus fuel filter

Lubrication system
- Cast iron sump with filler and dipstick
- Spin-on oil filter

Cooling system
- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment
- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing
- Flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Literature
- User's Handbook

Optional equipment
- Workshop manual
- Parts book

General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.41 litres
Aspiration	Turbocharged
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	18.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.5 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1240 mm Width 650 mm Height 951 mm

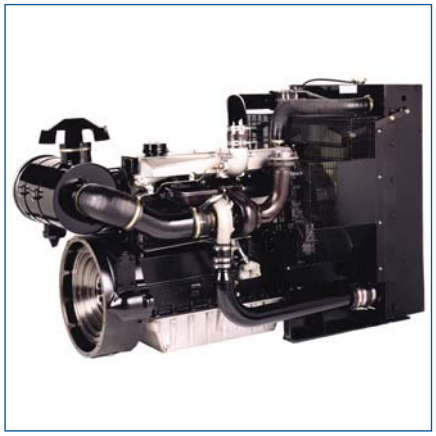
Final weight and dimensions will depend on completed specification.

Perkins®

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

Distributed by

Publication No. PN1755/11/05 Produced in England



Renowned throughout the power generation industry for their superior performance and reliability, the latest Perkins 1000 Series easily satisfies the requirements of US EPA mobile off-highway legislation.

The 1006-6TA is a turbocharged, air-to-air charge cooled, 6 cylinder, 6 litre engine. Its premium design features provide economic and durable operation offering the ideal characteristics for electrical power generation.

1000 Series

1006-6TA

Diesel Engine - ElectropaK

154.0 kWm 1800 rev/min

Clean, Efficient Power

- Operator and environmentally sensitive with low noise, rapid startability and low emissions satisfying US EPA mobile off-highway legislation.

Economic Power

- Single side servicing reduces service time, cost and enhances equipment availability.
- Perkins advanced combustion system ensures high power with low specific fuel consumption and noise.
- Electronic governor gives close control at the rated speed of 1800 rpm operating at 60 Hz.

Durable Power

- Maximum cooling efficiency is provided by a high capacity gear driven water pump and independent fan drive.
- Leak free operation is ensured by Viton crankshaft seals and sophisticated controlledswell joints, giving protection in the toughest conditions.
- Inserted valve seats, oil spray cooled pistons and compact plate cooler give enhancedengine life.

Reliable Power

- Suitable for operation in ambient temperatures up to 53°C (46°C if a canopy is fitted).
- Fuelled starting aid for temperatures down to -30°C.
- Wherever a Perkins' Electropak engine is put into service, it will never be far from thesupport provided by a global network of 4,000 distributors and dealers, all backed by aparts distribution centre giving 24 hour service, 365 days a year.

Engine speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1800	Prime Power	157.5	126.0	147.0	197.0	140.0	188.0
	Standby Power	173.0	138.5	161.5	216.5	154.0	206.5

All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins contact.
Derating may be required for conditions outside these; consult Perkins Engines Company Limited

Performance tolerance quoted by Perkins is ±5%.
Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.
Fuel specification: BS2869 Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or API CD/SD

Rating Definitions
Prime power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for one hour in every twelve hours of operation.
Standby power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series

1006-6TA

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Rotary fuel injection pump
- Electronic governor - speed control to BS5514 Class A0, ISO 3046-4M3
- Twin spin-on full flow fuel oil filter and pre-filter
- Cold start aid

Lubrication system
- Flat bottomed aluminium sump
- Spin-on full flow oil filters
- Oil cooler

Cooling system
- Thermostat controlled cooling system with gear-driven water pump
- Fan drive and 25” pusher fan
- Radiator (and piping) with fan guards incorporating air-to-air charge cooler

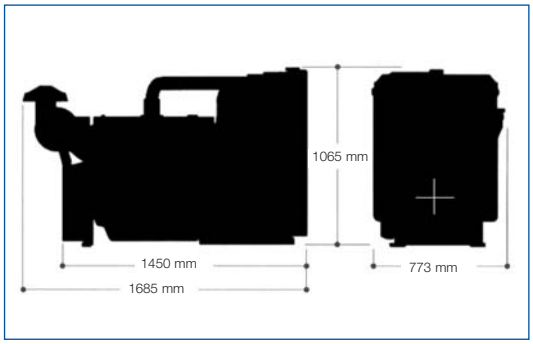
Electrical equipment
- 12 volt starter motor and 55 amp alternator
- Oil pressure switch and coolant temperature switch
- 12 volt shut off solenoid - energised to run

Flywheel and housing
- Cast iron SAE 3 flywheel housing
- Flywheel to SAE J620 Size 10/11½

Mountings
- Front engine mountings

General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Displacement	5.99 litres
Bore and Stroke	100.0 mm x 127.0 mm
Compression Ratio	17.3:1
Direction of Rotation	Clockwise, viewed from the front
Firing Order	1,5,3,6,2,4
Total Lubrication System	19.0 litres
CapacityCoolant Capacity	37.22 litres (inc radiator)
Total Weight (dry)	586 kg
Total Weight (wet)	630 kg
Length	1685 mm
Width	773 mm
Height	1065 mm



Fuel Consumption litres/hour (gallons/hour)	
Power rating %	1800 rev/min
110	41.1 (9.0)
100	37.5 (8.3)
75	29.1 (6.4)
50	20.8 (4.60

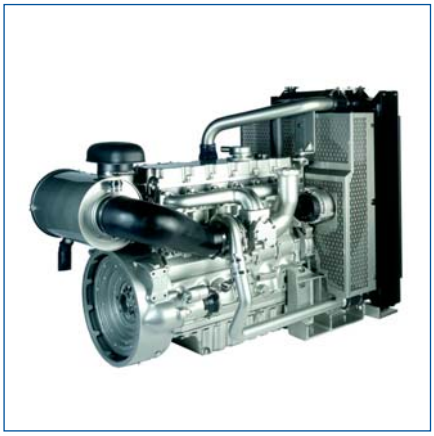
Optional equipment
- 24 volt alternator
- 24 Volt starter motor
- Water temperature gauge and sender
- Heater/starter switch
- Rear engine mountings
- Exhaust silencer
- Control panel
- Workshop manual
- Parts book
- User handbook

Perkins®

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

Distributed by

Publication No.1467/11/05 Produced in England



The 1106D-E66TAG ElectropaKs are the latest addition to Perkins 1100 Series Electric Power line-up. Offering improved power density from a compact package, these ElectropaK's build on Perkins reputation within the Power Generation Industry.

These ultra clean engines are assembled on a new high technology production line. Frequent computerised checks during the production process ensure high build quality is maintained throughout.

Hitting the key power nodes required by the market, the 1106D-E66TAG product line-up consists of three models offering a power solution for both Prime and Standby applications, in 50 Hz and 60 Hz territories.

1100 Series

1106D-E66TAG2

Diesel Engine - ElectropaK

130.5 kW @ 1500 rev/min
153.6 kW @ 1800 rev/min

Power to Meet your Needs

Hitting the key power nodes required by the market, the 1106D-E66TAG2 ElectropaK has been developed to provide a clean and cost effective power solution.

State of the Art Design

The 1106D utilises components of Caterpillar ACERT™ technology. This provides low emissions, excellent fuel economy and low heat rejection.

Worldwide power solution
The 1106D has been designed to be worldwide fuel tolerant, including kerosene, jet aviation fuel and 5% biofuel (RME). Options are available to meet local market needs.

World class Product Support

At Perkins we are constantly researching, developing and investing in our products and services. Total worldwide support is provided through a network of 4000 distributors and service outlets, providing access to over 50,000 parts and exchange units 24 hours a day, 365 days a year. This support is enhanced by TIPSS (The Integrated Parts and Service System). TIPSS enables customers to electronically specify and order parts as well as service 1106D engines with online guides and service tools.

Long-term Power Solution

The 1106D-E66TAG ElectropaK range has been designed to fully comply with stringent EPA Tier 3 / EU Stage II emissions regulations, providing an emissions compliant power solution for the future.

Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime	135.0	108.0	121.6	163.0	117.1	157.0
	Standby (maximum)	150.0	120.0	135.0	181.0	130.5	175.0
1800	Prime	156.0	125.0	144.6	193.9	136.6	183.2
	Standby (maximum)	175.0	140.0	161.6	216.7	153.6	205.9

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/5
Derating may be required for conditions outside the test conditions; consult Perkins Engines Company Limited
Generator powers are typical and are based on typical alternator efficiencies and a power factor
Fuel specification: Consult Perkins Engines Company Limited (various fuel specifications are available)
Lubricating oil: multi-grade oil conforming to API-CH4/CI4 must be used
Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted

1100 Series
1106D-E66TAG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Cooling system
- 24” belt-driven pusher fan and guards
- Radiator (incorporating air-to-air charge cooler + fuel cooler)
- Water pump

Electric system
- 12 volt starter motor
- 12 volt, 100 amp alternator with DC output

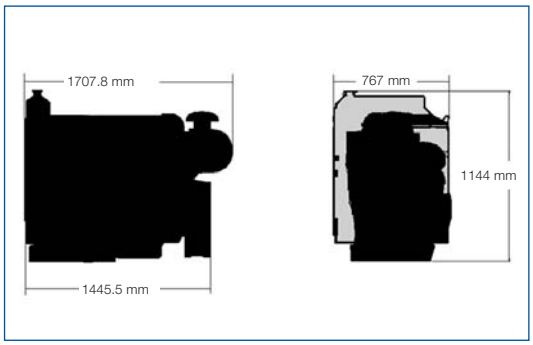
Flywheel and housing
- High inertia flywheel
- SAE3 flywheel housing

Fuel system
- Electronic governing (conforms to Class G3 ISO 8528-5)
- Fuel filter

Literature
- Users Handbook

Lubrication system
- Flat-bottomed isolated aluminium sump
- Oil filter

Start aids
- Glow plugs



General Data

Number of cylinders	6 in-line
Bore and stroke	105 mm x 127 mm
Displacement	6.6 litres
Aspiration	Turbocharged air-to-air aftercooling
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	16.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water
Dimensions	Length 1707.8 mm* Width 767 mm Height 1144 mm
Dry weight	709 kg
Wet weight	752 kg

* Length includes air cleaner
Final weight and dimensions will depend on completed specification

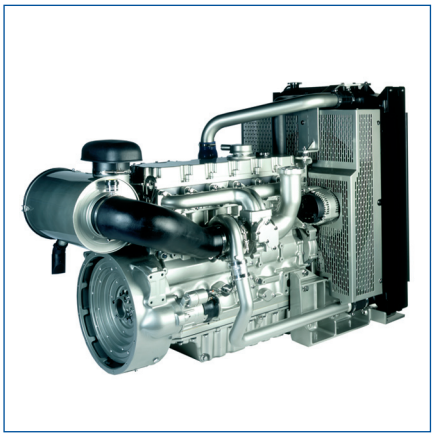
Type of Operation and Application					
Fuel Consumption		50 Hz Prime	50 Hz Standby	60 Hz Prime	60 Hz Standby
110% Load	g/kW hr	211	-	228	-
100% Load	g/kW hr	219	215	233	241
75% Load	g/kW hr	229	226	254	245
50% Load	g/kW hr	247	242	283	275
25% Load	g/kW hr	299	90	363	344

Perkins®

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

Distributed by

Publication No.1796/11/05 Produced in England



The 1106D-E66TAG ElectropaKs are the latest addition to Perkins 1100 Series Electric Power line-up. Offering improved power density from a compact package, these ElectropaK's build on Perkins reputation within the Power Generation Industry.

These ultra clean engines are assembled on a new high technology production line. Frequent computerised checks during the production process ensure high build quality is maintained throughout.

Hitting the key power nodes required by the market, the 1106D-E66TAG product line-up consists of three models offering a power solution for both Prime and Standby applications, in 50 Hz and 60 Hz territories.

1100 Series

1106D-E66TAG3

Diesel Engine - ElectropaK

143.9 kW @ 1500 rev/min
163.3 kW @ 1800 rev/min

Power to Meet your Needs

Hitting the key power nodes required by the market, the 1106D-E66TAG3 ElectropaK has been developed to provide a clean and cost effective power solution.

State of the Art Design

The 1106D utilises components of Caterpillar ACERT™ technology. This provides low emissions, excellent fuel economy and low heat rejection.

Worldwide Power Solution

The 1106D has been designed to be worldwide fuel tolerant, including kerosene, jet aviation fuel and 5% biofuel (RME). Options are available to meet local market needs.

World Class Product Support

At Perkins we are constantly researching, developing and investing in our products and services. Total worldwide support is provided through a network of 4000 distributors and service outlets, providing access to over 50,000 parts and exchange units 24 hours a day, 365 days a year. This support is enhanced by TIPSS (The Integrated Parts and Service System). TIPSS enables customers to electronically specify and order parts as well as service 1106D engines with online guides and service tools.

Long-term Power Solution

The 1106D-E66TAG ElectropaK range has been designed to fully comply with stringent EPA Tier 3 / EU Stage II emissions regulations, providing an emissions compliant power solution for the future.

Engine speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Prime	150.0	120.0	133.9	179.6	129.5	173.7
	Standby (maximum)	165.0	132.0	148.4	199.0	143.9	193.0
1800	Prime	169.0	135.0	154.4	207.0	146.4	196.3
	Standby (maximum)	188.0	150.0	171.3	229.8	163.3	219.0

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/5
Derating may be required for conditions outside the test conditions; consult Perkins Engines Company Limited
Generator powers are typical and are based on typical alternator efficiencies and a power factor

Fuel specification: Consult Perkins Engines Company Limited (various fuel specifications are available)
Lubricating oil: multi-grade oil conforming to API-CH4/CI4 must be used

Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted

1100 Series
1106D-E66TAG3

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Cooling system
- 24” belt-driven pusher fan and guards
- Radiator (incorporating air-to-air charge cooler + fuel cooler)
- Water pump

Electric system
- 12 volt starter motor
- 12 volt, 100 amp alternator with DC output

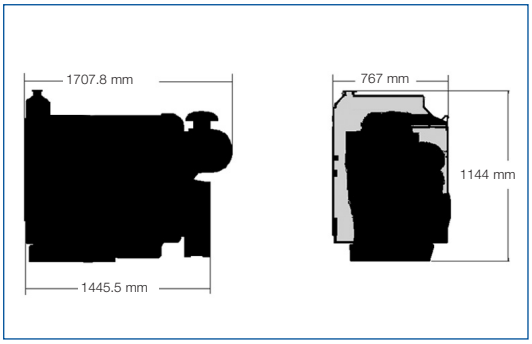
Flywheel and housing
- High inertia flywheel
- SAE3 flywheel housing

Fuel system
- Electronic governing (conforms to Class G3 ISO 8528-5)
- Fuel filter

Literature
- Users Handbook

Lubrication system
- Flat-bottomed isolated aluminium sump
- Oil filter

Start aids
- Glow plugs



General Data

Number of cylinders	6 in-line
Bore and stroke	105 mm x 127 mm
Displacement	6.6 litres
Aspiration	Turbocharged air-to-air aftercooling
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	16.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water
Dimensions	Length 1707.8 mm* Width 767 mm Height 1144 mm
Dry weight	709 kg
Wet weight	752 kg

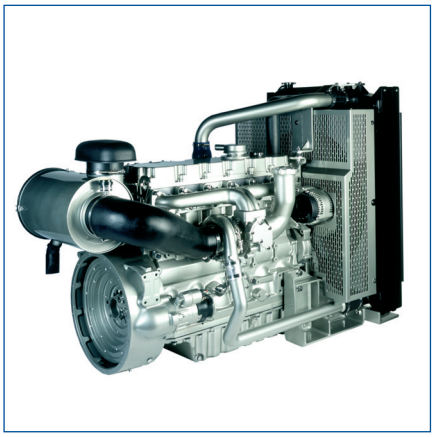
* Length includes air cleaner
Final weight and dimensions will depend on completed specification

Type of Operation and Application					
Fuel Consumption		50 Hz Prime	50 Hz Standby	60 Hz Prime	60 Hz Standby
110% Load	g/kW hr	211	-	223	-
100% Load	g/kW hr	215	211	229	223
75% Load	g/kW hr	226	223	249	241
50% Load	g/kW hr	242	239	279	271
25% Load	g/kW hr	290	283	352	335

Perkins®

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

Distributed by



The 1106D-E66TAG ElectropaKs are the latest addition to Perkins 1100 Series Electric Power line-up. Offering improved power density from a compact package, these ElectropaK's build on Perkins reputation within the Power Generation Industry.

These ultra clean engines are assembled on a new high technology production line. Frequent computerised checks during the production process ensure high build quality is maintained throughout.

Hitting the key power nodes required by the market, the 1106D-E66TAG product line-up consists of three models offering a power solution for both Prime and Standby applications, in 50 Hz and 60 Hz territories.

1100 Series

1106D-E66TAG4

Diesel Engine - ElectropaK

173.4 kW @ 1500 rev/min
192.3 kW @ 1800 rev/min

Power to Meet your Needs

- Hitting the key power nodes required by the market, the 1106D-E66TAG4 ElectropaK has been developed to provide a clean and cost effective power solution.

State of the Art Design

- The 1106D utilises components of Caterpillar ACERT™ technology. This provides low emissions, excellent fuel economy and low heat rejection.

Worldwide Power Solution

- The 1106D has been designed to be worldwide fuel tolerant, including kerosene, jet aviation fuel and 5% biofuel (RME). Options are available to meet local market needs.

World Class Product Support

- At Perkins we are constantly researching, developing and investing in our products and services. Total worldwide support is provided through a network of 4000 distributors and service outlets, providing access to over 50,000 parts and exchange units 24 hours a day, 365 days a year. This support is enhanced by TIPSS (The Integrated Parts and Service System). TIPSS enables customers to electronically specify and order parts as well as service 1106D engines with online guides and service tools.

Long-term Power Solution

- The 1106D-E66TAG ElectropaK range has been designed to fully comply with stringent EPA Tier 3 / EU Stage II emissions regulations, providing an emissions compliant power solution for the future.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	180.0	144.0	163.7	219.6	156.7	210.1
	Standby (maximum)	200.0	160.0	180.4	242.0	173.4	232.6
1800	Prime power	200.0	160.0	185.7	249.0	173.7	233.0
	Standby (maximum)	219.0	175.0	204.3	274.0	192.3	257.9

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/5
Derating may be required for conditions outside the test conditions; consult Perkins Engines Company Limited
Generator powers are typical and are based on typical alternator efficiencies and a power factor

Fuel specification: Consult Perkins Engines Company Limited (various fuel specifications are available)
Lubricating oil: multi-grade oil conforming to API-CH4/CI4 must be used

Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted

1100 Series
1106D-E66TAG4

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Cooling system
- 27” belt-driven pusher fan and guards
- Radiator (incorporating air-to-air charge cooler + fuel cooler)
- Water pump

Electric system
- 12 volt starter motor
- 12 volt, 100 amp alternator with DC output

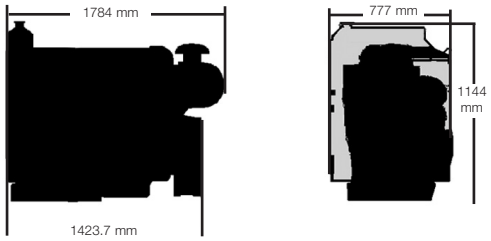
Flywheel and housing
- High inertia flywheel
- SAE2 flywheel housing

Fuel system
- Electronic governing (conforms to Class G3 ISO 8528-5)
- Fuel filter

Literature
- Users Handbook

Lubrication system
- Flat-bottomed isolated aluminium sump
- Oil filter

Start aids
- Glow plugs



General Data

Number of cylinders	6 in-line
Bore and stroke	105 mm x 127 mm
Displacement	6.6 litres
Aspiration	Turbocharged air-to-air aftercooling
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	16.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water
Dimensions	Length 1784 mm* Width 777 mm Height 1144 mm
Dry weight	714 kg
Wet weight	757 kg

* Length includes air cleaner
Final weight and dimensions will depend on completed specification

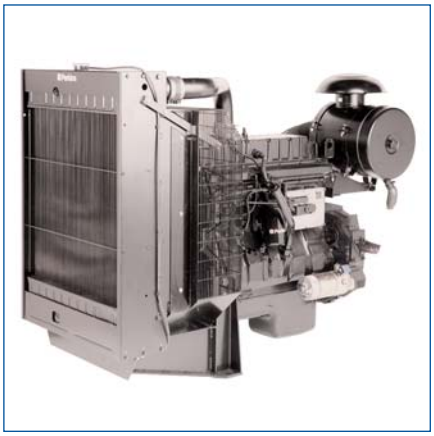
Type of Operation and Application					
Fuel Consumption		50 Hz Prime	50 Hz Standby	60 Hz Prime	60 Hz Standby
110% Load	g/kWhr	208	-	227	-
100% Load	g/kWhr	210	208	232	224.8
75% Load	g/kWhr	223	221	250	234.8
50% Load	g/kWhr	250	240	297	270.5
25% Load	g/kWhr	294	289	367	347.0

Perkins®

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

Distributed by

Publication No.1798/11/05 Produced in England



1300 Series EDi

1306-E87TAG1

Diesel engine - ElectropaK

167 kWm 1500 rev/min
180 kWm 1800 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306-E87TAG1 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	159	127	142	190	138	184
Rating Code	Prime Power	174	139	156	209	151	203
M153	Standby (maximum)	192	154	172	230	167	223
1800	Baseload Power	171	137	154	206	149	200
Rating Code	Prime Power	189	151	169	227	164	220
M156	Standby (maximum)	207	166	186	250	180	243

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications. Rating code M165 applies.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 continuous. No overload is permitted.

1300 Series EDi

1306-E87TAG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO 3046-4 with stand alone isochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

Lubrication system
- Wet rear well steel sump with filler and dipstick
- Full flow spin-on filters
- Tube-type oil cooler thermostatically controlled

Cooling system
- Thermostatically controlled with belt driven circulating pump and 28” belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

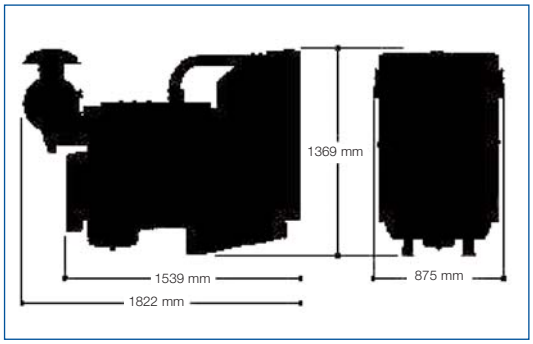
Electrical equipment
- 24 volt starter motor and 24 volt 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE 3 J620 Size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket

General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 mm x 135.9 mm
Displacement	8.7 litres
Compression Ratio	17.2:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	l/hr	Imp gal/hr	l/hr	Imp gal/hr
At standby rating	41.0	9.0	46.1	10.1
At prime power power	37.7	8.3	42.5	9.3
At 75% of prime power	29.5	6.5	33.2	7.3
At 50% of prime power	19.5	4.3	24.0	5.2

Optional equipment

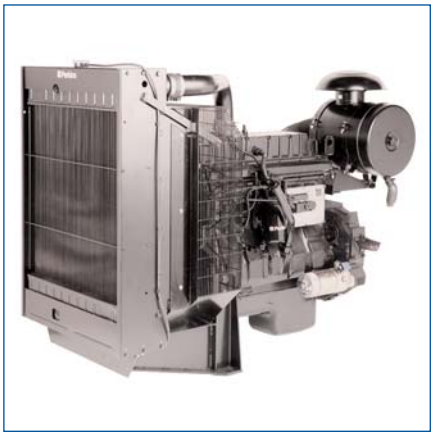
- 12 volt starter and alternator
- 12 volt ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- User’s handbook and parts manual
- Workshop manual

Perkins®

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

Distributed by

Publication No.1611/11/05 Produced in England



1300 Series EDi

1306-E87TAG6

Diesel engine - ElectropaK

239 kWm 1500 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306-E87TAG2 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	228	182	204	273	198	265
Rating Code	Prime Power	250	200	224	300	218	291
M161	Standby (maximum)	275	220	246	330	239	320

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications. Rating code M165 applies.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 continuous. No overload is permitted.

1300 Series EDi

1306-E87TAG6

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO 3046-4 with stand alone isochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

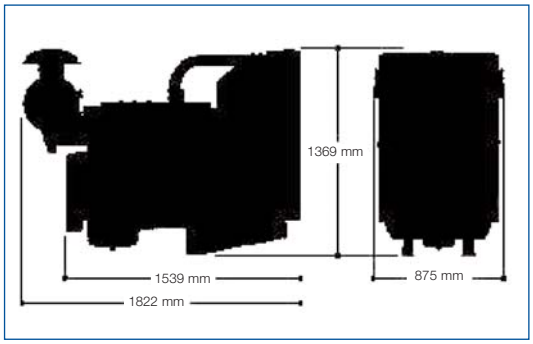
Lubrication system
- Wet rear well steel sump with filler and dipstick
- Full flow spin-on filters
- Tube-type oil cooler thermostatically controlled

Cooling system
- Thermostatically controlled with belt driven circulating pump and 28” belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

Electrical equipment
- 24 volt starter motor and 24 volt 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE 3 J620 Size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket



Fuel Consumption		
Engine Speed	1500 rev/min	
	l/hr	Imp gal/hr
At standby rating	49.7	10.9
At prime power rating	45.0	9.9
At 75% of prime power	36.0	7.9
At 50% of prime power	24.0	5.2

Optional equipment

- 12 volt starter and alternator
- 12 volt ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- User’s handbook and parts manual
- Workshop manual

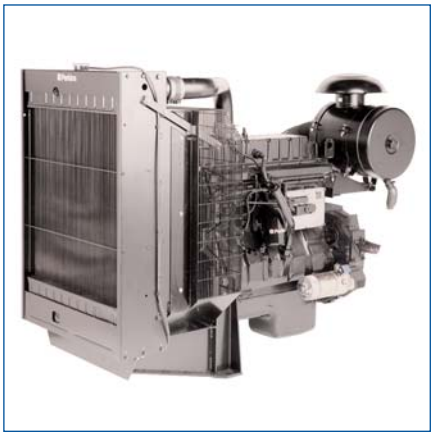
General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 mm x 135.9 mm
Displacement	8.7 litres
Compression Ratio	16.9:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm

Perkins®

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

Distributed by



1300 Series EDi

1306C-E87TAG3

Diesel engine - ElectropaK

199 kWm 1500 rev/min
220 kWm 1800 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306-E87TAG3 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	189	151	169	227	164	220
Rating Code	Prime Power	208	166	186	250	180	243
M158	Standby (maximum)	229	183	205	275	199	267
1800	Baseload Power	209	167	188	252	182	244
Rating Code	Prime Power	231	185	207	277	201	269
M160	Standby (maximum)	253	202	227	305	220	296

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications. Rating code M165 applies.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 continuous. No overload is permitted.

1300 Series EDi

1306-E87TAG3

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO 3046-4 with stand alone isochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

Lubrication system
- Wet rear well steel sump with filler and dipstick
- Full flow spin-on filters
- Tube-type oil cooler thermostatically controlled

Cooling system
- Thermostatically controlled with belt driven circulating pump and 28” belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

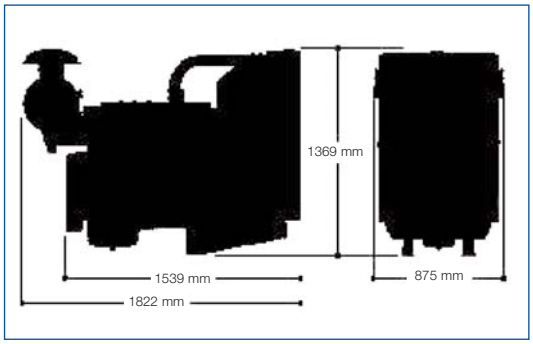
Electrical equipment
- 24 volt starter motor and 24 volt 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE 3 J620 Size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket

General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 mm x 135.9 mm
Displacement	8.7 litres
Compression Ratio	16.9:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	l/hr	Imp gal/hr	l/hr	Imp gal/hr
At standby rating	49.1	10.8	56.9	12.5
At prime power rating	45.2	9.9	51.5	11.3
At 75% of prime power	35.0	7.7	38.5	8.5
At 50% of prime power	24.0	5.3	26.5	5.8

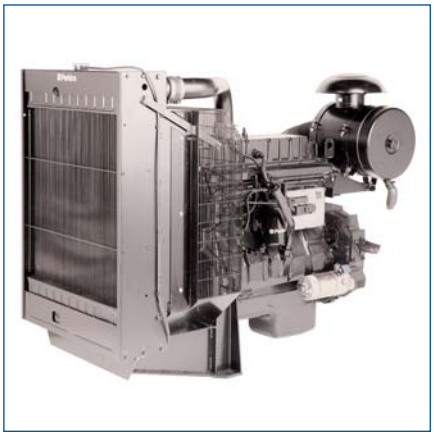
Optional equipment

- 12 volt starter and alternator
- 12 volt ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- User’s handbook and parts manual
- Workshop manual

Perkins®

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

Distributed by



1300 Series EDi

1306C-E87TAG4

Diesel engine - ElectropaK

217 kWm 1500 rev/min
235 kWm 1800 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306-E87TAG4 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Baseload Power	205	165	185	248	179	241
Rating Code	Prime Power	228	182	205	273	198	265
M159	Standby (maximum)	250	200	224	300	217	291
1800	Baseload Power	223	178	200	269	194	261
Rating Code	Prime Power	245	196	220	295	213	286
M162	Standby (maximum)	270	216	242	325	235	315

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications. Rating code M165 applies.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 continuous. No overload is permitted.

1300 Series EDi

1306-E87TAG4

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO3046-4 with stand alone isochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

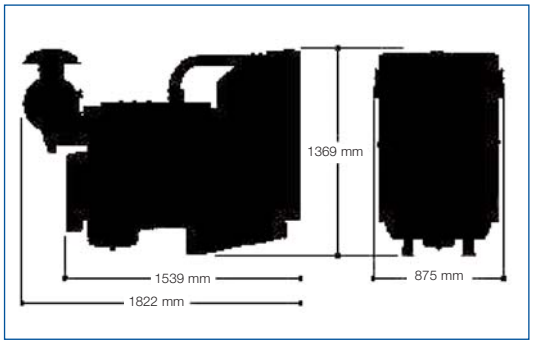
Lubrication system
- Wet rear well steel sump with filler and disptick
- Full-flow spin-on filter
- Tube-type oil cooler thermostatically controlled

Cooling system
- Thermostatically controlled cooling system with belt-driven circulating pump and 24 inch belt-driven fan
- Radiator mounted with with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

Electrical equipment
- 24 volt starter motor and 24 volt 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	l/hr	Imp gal/hr	l/hr	Imp gal/hr
At standby rating	53.0	11.7	61.0	13.4
At prime power rating	48.5	10.7	54.4	12.0
At 75% of prime power	37.5	8.3	40.3	8.8
At 50% of prime power	26.1	5.7	27.9	6.2

Optional equipment
- 12V starter and alternator
- 12V ECM
- Sensor positions for:
  - Heater/starter switch
  - Rear engine mountings
  - Exhaust silencer
- SAE 1 flywheel ousing and flywheel
- Turbocharger exhaust outlet
- User's handbook and parts manual
- Workshop manual

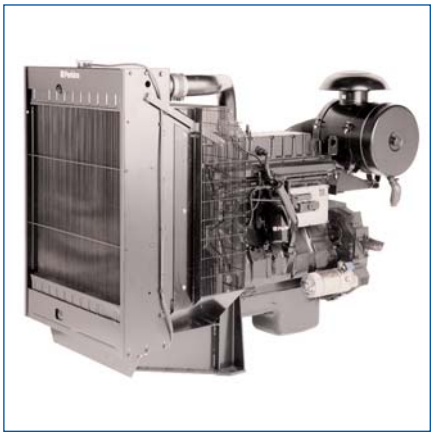
General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 mm x 135.9 mm
Displacement	8.7 litres
Compression Ratio	16.9:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm

Perkins®

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

Distributed by



1300 Series EDi

1306C-E87TAG5

Diesel engine - ElectropaK

224 kWm 1500 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry forthe engines' superior performance and reliability.The 1306C-E87TAG5 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting,fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer toauxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kW	bhp	kW	bhp
1500	Baseload Power	213	170	191	256	185	248
Rating Code	Prime Power	235	188	210	282	204	273
M161	Standby (Maximum)	258	206	231	310	224	300

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1,DIN 6271.
Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 becontinuous. No overload is permitted.

1300 Series EDi

1306C-E87TAG5

Standard ElectropaK Specification

Air inlet

Mounted air filter and turbocharger

Fuel system

- Hydraulically actuated electronically controlled unit fuelinjectors with full authority electronic control
- Electronic governing to ISO3046-4 with stand aloneisochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

Lubrication system

- Wet rear well steel sump with filler and dipstick
- Full-flow spin-on filter
- Tube-type oil cooler thermostatically controlled

Cooling system

- Thermostatically controlled system with belt-driven circulatingpump and 28 inch belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

Electrical equipment

- 24 Volt starter motor and 24 Volt 45 Amp alternator with DCoutput
- Electronic Control Module mounted on engine with wiringlooms and sensors
- 3 level engine protection system

Flywheel and housing

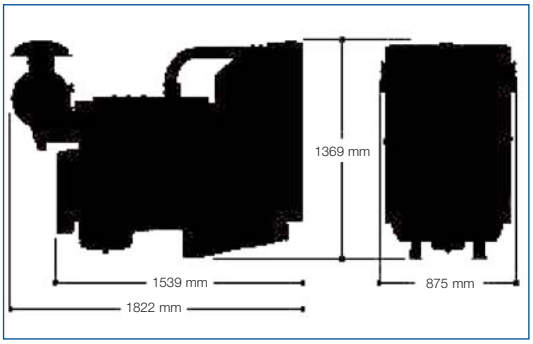
- High inertia flywheel to SAE J620 Size 11?Cast iron SAE 2 flywheel housing

Mountings

- Front engine mounting bracket

Option Groups

- 12V starter and alternator
- 12V ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- User's handbook and parts manual
- Workshop manual



General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged air/air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 x 135.9 mm
Displacement	8.7 litres
Compression Ratio	16.9:1
Direction of Rotation	Anti-clockwise viewed on fly wheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm

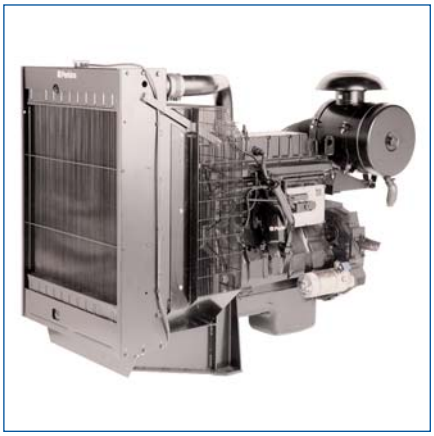
Fuel Consumption		
Engine Speed	1500 rev/min	1800 rev/min
	l/hr	Imp gal/hr
At standby Rating	55.6	12.2
At prime power	50.2	11.0
At 75% of prime power	38.5	8.5
At 50% of prime power	27.2	6.0

Perkins®

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

Distributed by

Publication No.1615/11/05 Produced in England



1300 Series EDi

1306C-E87TAG6

Diesel engine - ElectropaK

239 kWm 1500 rev/min

The Perkins 1300 Series EDi family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306-E87TAG2 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.

High Performance Productive Power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, Clean Power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable Power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable Power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy Maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of 4,000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	228	182	204	273	198	265
Rating Code	Prime Power	250	200	224	300	218	291
M161	Standby (maximum)	275	220	246	330	239	320

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications. Rating code M165 applies.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited
Generator powers are typical and are based on an alternator efficiency of 92% and a power factor (cos.) of 0.8 Performance tolerance is ± 5%
Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2
Lubricating oil: 15W40 to ACEA E3 or API CG4

Rating Definitions
Baseload power: Power available for continuous full load operation. Overload of 10% permitted for 1 hour in every 12 hours' operation
Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation
Standby power (maximum): Power available at variable load 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 continuous. No overload is permitted.

1300 Series EDi

1306-E87TAG6

Standard ElectropaK Specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO 3046-4 with stand alone isochronous or load sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

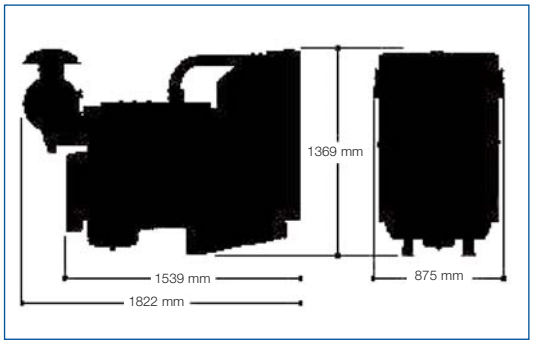
Lubrication system
- Wet rear well steel sump with filler and dipstick
- Full flow spin-on filters
- Tube-type oil cooler thermostatically controlled

Cooling system
- Thermostatically controlled with belt driven circulating pump and 28” belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

Electrical equipment
- 24 volt starter motor and 24 volt 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE 3 J620 Size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket



Fuel Consumption		
Engine Speed	1500 rev/min	
	l/hr	Imp gal/hr
At standby rating	49.7	10.9
At prime power rating	45.0	9.9
At 75% of prime power	36.0	7.9
At 50% of prime power	24.0	5.2

Optional equipment

- 12 volt starter and alternator
- 12 volt ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- User’s handbook and parts manual
- Workshop manual

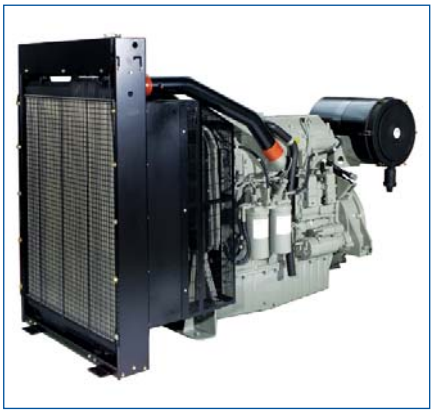
General Data

Number of Cylinders	6
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Turbocharged, air-to-air chargecooled
Combustion System	Direct injection
Cooling System	Water-cooled
Bore and Stroke	116.6 mm x 135.9 mm
Displacement	8.7 litres
Compression Ratio	16.9:1
Direction of Rotation	Anti-clockwise, viewed on flywheel
Total Lubrication System Capacity	26.4 litres
Total Coolant Capacity	37.2 litres
Dry Weight (Engine)	895 kg
Length	1822 mm
Width	875 mm
Height	1369 mm

Perkins®

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

Distributed by



The Perkins 2300 Series is a family of well-proven 6 cylinder in-line diesel engines. It is designed to address today's uncompromising demands within the power generation industry with particular focus on the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2306C-E14TAG1A is a turbocharged and air-to-air charge-cooled 6-cylinder diesel engine. It gives economic and durable operation for standby duty, low gaseous emissions, and high levels of performance and reliability.

2300 Series

2306C-E14TAG1A

Diesel Engine – ElectropaK

304 kWm at 1500 rpm
329 kWm at 1800 rpm

Economic power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging, give excellent fuel atomisation and combustion with optimum economy. Low emissions result from electronic control of fuel injected. Low emissions result from electronically controlled fuel injection.

Reliable power

Developed and tested using the latest engineering techniques and finite element analysis. This gives high reliability, low oil usage, and low wear rates.
High compression ratios ensure clean and rapid starting in all conditions.
Support comes from a worldwide network of 4000 distributors and dealers.

Compact, efficient power

Exceptional power to weight ratio and compact size give optimum power density. This makes installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.

Clean power

All engines in the 2300 Series family will meet the requirements of EU Stage 2/EPA Tier 2 emissions legislation and are capable of meeting ½ TA Luft (1986).

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	250	200	226	303	217	292
	Prime Power	300	240	270	362	261	350
	Standby Power	350	280	313	420	304	408
1800	Baseload Power	281	225	262	351	245	328
	Prime Power	344	275	316	424	299	401
	Standby Power	379	303	346	464	329	442

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. 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. Overload of 10% permitted for 1 hour in every 12 hours operation
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation
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.

2300 Series

2306C-E14TAG1A

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G3 with isochronous capability
- Replaceable 'ecoplus' fuel filter elements with primary filter/water separator
- Fuel Cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'ecoplus' filter
- Oil cooler integral with filter header

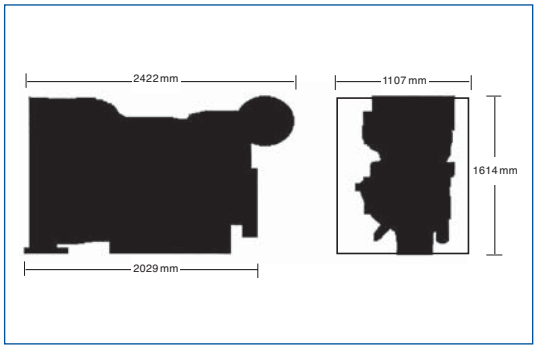
Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator supplied loose incorporating air-to-air charge cooler
- System designed for ambients up to 50ºC

Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 Size 14
- SAE ½ flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook and Parts Manual



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	137 x 165 mm
Displacement	14.6 litres
Compression ratio	15.9:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	47 litres
Length	2422 mm
Width	1107 mm
Height	1614 mm
Total weight (dry)	1690 kg

Final weight and dimensions will depend on completed specification

Optional Equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Additional manuals

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	197	70.6	218	84.2
At Prime Power Rating	201	62.4	221	77.4
At Baseload Power Rating	204	51.6	224	64.0
At 75% of Prime Power Rating	208	46.6	226	58.2
At 50% of Prime Power Rating	225	31.5	237	39.2

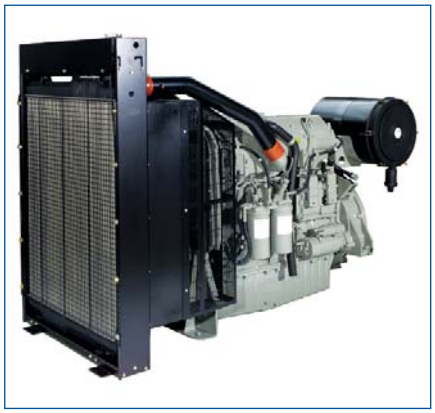
Fuel consumption figures are for EU/EPA compliant engines.
For ½ TA Luft compliance please see Perkins' Technical Data Sheet.

Perkins®

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

Distributed by

Publication No. 1651/10/05 Produced in England



The Perkins 2300 Series is a family of well-proven 6 cylinder in-line 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 heavy-duty industrial base, the engine offers superior performance and reliability.

The 2306C-E14TAG2 is a turbocharged and air-to-air charge-cooled 6-cylinder diesel engine. Its premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

2300 Series

2306C-E14TAG2

Diesel Engine – ElectropaK

344 kWm at 1500 rpm
376 kWm at 1800 rpm

Economic power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy. Low emissions result from electronic control of fuel injected.

Reliable power

Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates.
High compression ratios also ensure clean rapid starting in all conditions.
Support comes from a worldwide network of 4000 distributors and dealers.

Compact, efficient power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.

Clean power

All engines in the 2300 Series family will meet the requirements of EU Stage 2/EPA Tier 2 emissions legislation and are capable of meeting ½ TA Luft.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	275	220	248	333	239	321
	Prime Power	350	280	313	420	304	408
	Standby Power	400	320	353	473	344	461
1800	Baseload Power	313	250	289	388	272	364
	Prime Power	400	320	365	489	348	466
	Standby Power	438	350	393	527	376	505

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. 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. Overload of 10% permitted for 1 hour in every 12 hours operation
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation
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.

2300 Series

2306C-E14TAG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control.
- Governing to ISO 8528-5 class G3 with isochronous capability
- Replaceable 'ecoplus' fuel filter elements with primary filter/water separator
- Fuel Cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'ecoplus' filter
- Oil cooler integral with filter header

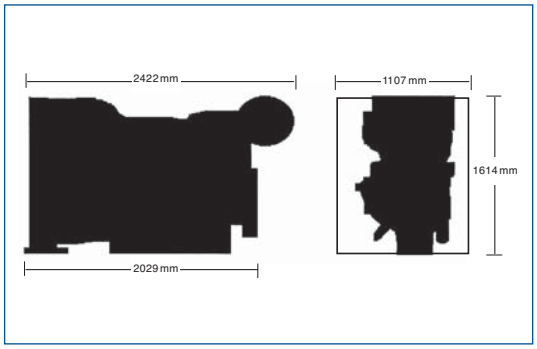
Cooling system
- Gear-driven circulating pump
- Mounted belt-driven fan
- Radiator supplied loose incorporating air-to-air charge cooler
- System designed for ambients up to 50ºC

Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 Size 14
- SAE ½ flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook and Parts Manual



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	137 x 165 mm
Displacement	14.6 litres
Compression ratio	15.9:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	47 litres
Length	2422 mm
Width	1107 mm
Height	1614 mm
Total weight (dry)	1690 kg

Final weight and dimensions will depend on completed specification

Optional Equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Additional manuals

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	201	81.1	208	91.5
At Prime Power Rating	197	70.6	211	85.7
At Baseload Power Rating	204	56.2	222	70.5
At 75% of Prime Power Rating	203	52.5	219	66.0
At 50% of Prime Power Rating	213	38.0	232	45.3

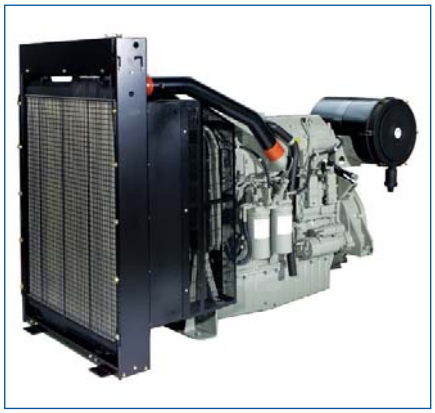
Fuel consumption figures are for EU/EPA compliant engines.
For ½ TA Luft compliance please see Perkins' Technical Data Sheet.

Perkins®

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

Distributed by

Publication No. 1652/10/05 Produced in England



2300 Series

2306C-E14TAG3

Diesel Engine – ElectropaK

387.0 kWm at 1500 rpm
430.0 kWm at 1800 rpm

The Perkins 2300 Series is a family of well-proven 6 cylinder in-line 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 heavy-duty industrial base, the engine offers superior performance and reliability.

The 2306C-E14TAG3 is a turbocharged and air-to-air charge-cooled 6-cylinder diesel engine. Its premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

Economic power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy. Low emissions result from electronic control of fuel injected.

Reliable power

Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates.
High compression ratios also ensure clean rapid starting in all conditions.
Support comes from a worldwide network of 4000 distributors and dealers.

Compact, efficient power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.

Clean power

All engines in the 2300 Series family will meet the requirements of EU Stage 2/EPA Tier 2 emissions legislation and are capable of meeting ½ TA Luft.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	300	240	270	362	261	350
	Prime Power	400	320	353	473	344	461
	Standby Power	450	360	396	531	387	519
1800	Baseload Power	344	275	316	424	299	401
	Prime Power	438	350	393	527	376	504
	Standby Power	500	400	447	599	430	577

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. 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. Overload of 10% permitted for 1 hour in every 12 hours operation
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation
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.

2300 Series

2306C-E14TAG3

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control.
- Governing to ISO 8528-5 class G3 with isochronous capability
- Replaceable 'ecoplus' fuel filter elements with primary filter/water separator
- Fuel Cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'ecoplus' filter
- Oil cooler integral with filter header

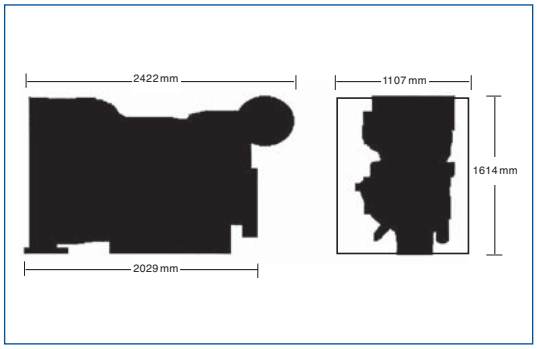
Cooling system
- Gear-driven circulating pump
- Mounted belt-driven fan
- Radiator supplied loose incorporating air-to-air charge cooler
- System designed for ambients up to 50ºC

Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 Size 14
- SAE ½ flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook and Parts Manual



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	137 x 165 mm
Displacement	14.6 litres
Compression ratio	15.9:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	47 litres
Length	2422 mm
Width	1107 mm
Height	1614 mm
Total weight (dry)	1690 kg

Final weight and dimensions will depend on completed specification

Optional Equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Additional manuals

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	199	88.3	207	103.9
At Prime Power Rating	201	81.1	214	94.2
At Baseload Power Rating	201	62.4	222	78.6
At 75% of Prime Power Rating	199	60.9	222	72.4
At 50% of Prime Power Rating	218	42.3	229	48.4

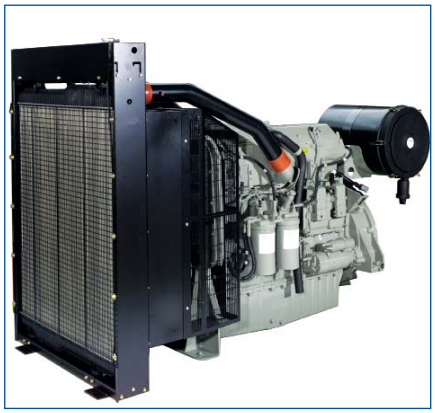
Fuel consumption figures are for EU/EPA compliant engines.
For ½ TA Luft compliance please see Perkins' Technical Data Sheet.

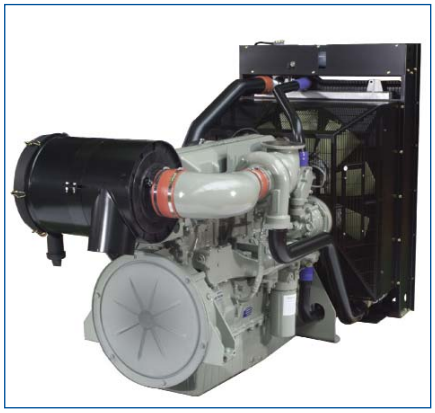
Perkins®

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

Distributed by

Publication No. 1653/10/05 Produced in England





2800 Series

2806C-E16TAG1

Diesel Engine – ElectropaK

433 kWm at 1500 rpm
542 kWm at 1800 rpm

The Perkins 2800 Series is a family of well-proven 6 cylinder in-line diesel engines, designed to address today's uncompromising demands within the power generation industry, with particular focus on the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E16TAG1 is a turbocharged and air-to-air charge-cooled, 6 cylinder diesel engine. Its premium features provide economic and durable operation for standy duty, low gaseous emissions and advanced overall performance and reliability.

Economic Power

- Mechanically operated unit fuel injectors with electronic control, combined with carefully-matched turbocharging give excellent fuel atomisation and combustion with optimum economy.
- Low emissions result from electronic control of fuel injected.

Reliable Power

- Developed and tested using the latest engineering techniques and finite element analysis for high reliability
- Low oil usage and low wear rates.
- High compression ratios ensure clean rapid starting in all conditions.
- Support comes from a worldwide network of 4,000 distributors and dealers.

Compact, Efficient Power

- Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
- Designed to provide excellent service access for ease of maintenance.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload power*	353	283	316	423	304	408
	Prime power	453	363	402	538	390	523
	Standby power	503	403	445	596	433	581
1800	Baseload power*	449	359	407	546	386	518
	Prime power	575	460	510	683	489	656
	Standby power	637	509	563	754	542	727

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.
* Baseload ratings indicated are under development and will be available later.
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. q) 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. Overload of 10% permitted for 1 hour in every 12 hours operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation.
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.

2800 Series

2806C-E16TAG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G3 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven fan
- Radiator supplied loose incorporating air-to-air charge cooler
- System designed for ambients up to 50ºC

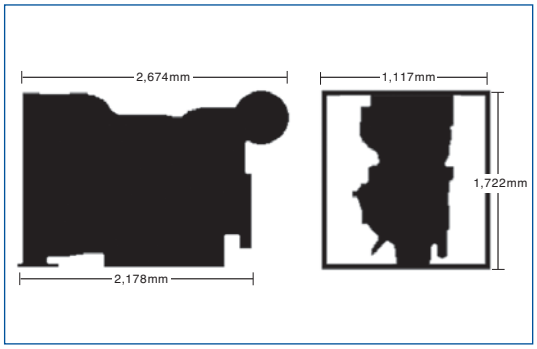
Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 14
- SAE ½ flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment

- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Additional manuals
- User's handbook and parts manual



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr*	g/kWh	l/hr*
At standby power	205	104.9	209	134.1
At prime power	206	95.0	204	117.8
At 75% of prime power	209	71.6	208	89.1
At 50% of prime power	221	49.4	230	63.6

* Assumes fuel density of 0.85 kg/litres

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	140 mm x 171 mm
Displacement	15.8 litres
Compression ratio	15.8:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	50 litres
Dimensions	Length 2674 mm Width 1117 mm Height 1722 mm
Dry weight (engine)	1,712 kg

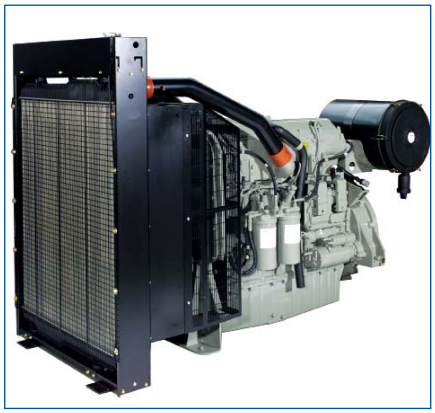
Final weight and dimensions will depend on completed specification

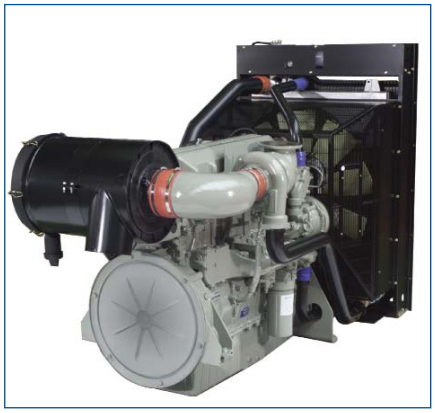
Perkins®

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

Distributed by

Publication No. 1605/11/05 Produced in England





2800 Series

2806C-E16TAG2

Diesel Engine – ElectropaK

471 kWm at 1500 rpm
595 kWm at 1800 rpm

The Perkins 2800 Series is a family of well-proven 6 cylinder in-line diesel engines, designed to address today's uncompromising demands within the power generation industry, with particular focus on the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E16TAG2 is a turbo-charged and air-to-air charge-cooled, 6 cylinder diesel engine. Its premium features provide economic and durable operation for standy duty, low gaseous emissions and advanced overall performance and reliability.

Economic Power

- Mechanically operated unit fuel injectors with electronic control, combined with carefully-matched turbocharging give excellent fuel atomisation and combustion with optimum economy.
- Low emissions result from electronic control of fuel injected.

Reliable Power

- Developed and tested using the latest engineering techniques and finite element analysis for high reliability
- Low oil usage and low wear rates.
- High compression ratios ensure clean rapid starting in all conditions.
- Support comes from a worldwide network of 4,000 distributors and dealers.

Compact, Efficient Power

- Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
- Designed to provide excellent service access for ease of maintenance.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload power*	403	323	359	481	347	465
	Prime power	503	403	445	596	433	58
	Standby power	553	443	483	647	471	632
1800	Baseload power*	512	409	461	618	440	590
	Prime power	637	509	563	755	542	727
	Standby power	699	559	616	826	595	798

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.
* Baseload ratings indicated are under development and will be available later.
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. q) 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. Overload of 10% permitted for 1 hour in every 12 hours operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation.
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.

2800 Series

2806C-E16TAG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G3 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven fan
- Radiator supplied loose incorporating air-to-air charge cooler
- System designed for ambients up to 50ºC

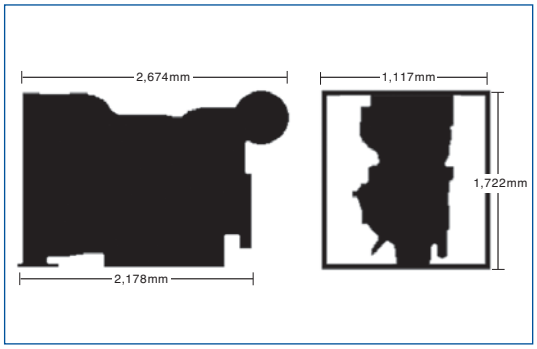
Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 14
- SAE ½ flywheel housing

Mountings
- Front engine mounting bracket

Optional Equipment

- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Additional manuals
- User's handbook and parts manual



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr*	g/kWh	l/hr*
At standby power	203	113.2	211	148.4
At prime power	205	104.9	209	134.1
At 75% of prime power	207	79.2	202	96.0
At 50% of prime power	217	54.2	226	69.9

* Assumes fuel density of 0.85 kg/litres

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	140 mm x 171 mm
Displacement	15.8 litres
Compression ratio	15.8:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	68 litres
Total coolant capacity	50 litres
Dimensions	Length 2674 mm Width 1117 mm Height 1722 mm
Dry weight (engine)	1,712 kg

Final weight and dimensions will depend on completed specification

Perkins®

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

Distributed by

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre in-line 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 heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E18TAG1 is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.

2800 Series

2806C-E18TAG1

Diesel Engine – ElectropaK

553 kWm at 1500 rpm
591 kWm at 1800 rpm

Economic Power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy.
Low emissions result from electronic control of fuel injected.

Reliable Power

Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates.
High compression ratios also ensure clean rapid starting in all conditions.
Support comes from a worldwide network of 4,000 distributors and dealers.

Compact, Clean and Efficient Power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.
The availability of a low emissions specification allows minimum environmental impact through operation, and complies with all major emissions legislation. The standard specification model provides superior fuel consumption which maximises engine efficiency.

Clean Power

The 2806C-E18TAG1 is capable of meeting the requirements of EPA Tier II, EU Stage 2, ½ TA luft (1986), TA luft (1986) and Indian emissions legislation.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload*	450	360	394	528	386	518
	Prime Power	550	440	483	648	475	637
	Standby (maximum)	635	508	561	752	553	742
1800	Continuous Baseload*	563	450	498	668	484	649
	Prime Power	625	500	552	740	538	721
	Standby (maximum)	688	550	605	811	591	793

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.
* Baseload ratings are under development and will be available later.
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. Overload of 10% permitted for 1 hour in every 12 hours operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation.
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.

2800 Series

2806C-E18TAG1

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50ºC
- Low coolant level switch

Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

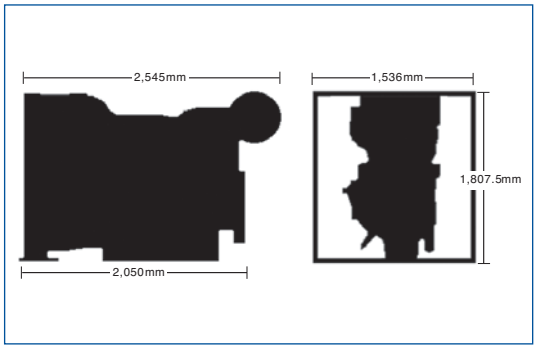
Flywheel and housing
- High inertia flywheel to SAE J620 size 18
- SAE '0' flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook

Optional Equipment

- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Parts manual/Workshop manual



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	145 mm x 183 mm
Displacement	18.1 litres
Compression ratio	14.5:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	55.5 litres
Total coolant capacity	61 litres
Length	2,545 mm
Width	1,536 mm
Height	1,807.5 mm
Dry weight (engine)	1,832 kg

Final weight and dimensions will depend on completed specification

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	199	128	204	140
At Prime Power Rating	196	108	203	127
At Baseload Power Rating	196	88	201	113
At 75% of Prime Power Rating	196	81	202	95
At 50% of Prime Power Rating	202	56	211	66

Perkins®

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

Distributed by

Publication No. 1722/10/05 Produced in England

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre in-line 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 heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E18TAG2 is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.

2800 Series

2806C-E18TAG2

Diesel Engine – ElectropaK

599 kWm at 1500 rpm
591 kWm at 1800 rpm

Economic Power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy.
Low emissions result from electronic control of fuel injected.

Reliable Power

Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates.
High compression ratios also ensure clean rapid starting in all conditions.
Support comes from a worldwide network of 4000 distributors and dealers.

Compact, Clean and Efficient Power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.

Clean Power

The 2806C-E18TAG2 is capable of meeting the requirements of TA luft (1986).

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload*	500	400	441	591	433	581
	Prime Power	635	508	550	738	542	727
	Standby (maximum)	700	560	607	814	599	803
1800	Continuous Baseload*	563	450	498	668	484	649
	Prime Power	625	500	552	740	538	721
	Standby (maximum)	688	550	605	811	591	793

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.
* Baseload ratings are under development and will be available later.
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. Overload of 10% permitted for 1 hour in every 12 hours operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation.
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.

2800 Series

2806C-E18TAG2

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50ºC
- Low coolant level switch

Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

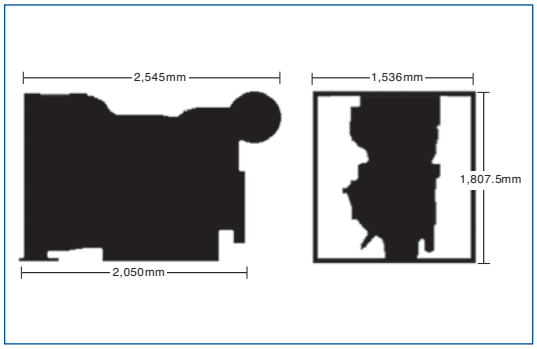
Flywheel and housing
- High inertia flywheel to SAE J620 size 18
- SAE '0' flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook

Optional Equipment

- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Parts manual/Workshop manual



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	145 mm x 183 mm
Displacement	18.1 litres
Compression ratio	14.5:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	55.5 litres
Total coolant capacity	61 litres
Length	2,545 mm
Width	1,536 mm
Height	1,807.5 mm
Dry weight (engine)	1,832 kg

Final weight and dimensions will depend on completed specification

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	202	141	204	140
At Prime Power Rating	198	125	203	127
At Baseload Power Rating	195	98	201	113
At 75% of Prime Power Rating	195	92	202	95
At 50% of Prime Power Rating	200	63	211	66

Perkins®

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

Distributed by

Publication No. 1723/10/05 Produced in England

2800 Series

2806C-E18TAG3

Diesel Engine – ElectropaK

645 kWm at 1800 rpm

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre in-line 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 heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E18TAG3 is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.

Economic power

Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy.
Low emissions result from electronic control of fuel injected.

Reliable power

Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates.
High compression ratios also ensure clean rapid starting in all conditions.
Support comes from a worldwide network of 4,000 distributors and dealers.

Compact, clean and efficient power

Exceptional power to weight ratio and compact size give optimum power density and make installation and transportation easier and cheaper.
Designed to provide excellent service access for ease of maintenance.

Clean power

The 2806C-E18TAG3 is certified for sale in EPA legislated teritories.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1800	Continuous Baseload*	563	450	499	669	485	650
	Prime Power	675	540	599	803	585	784
	Standby (maximum)	750	600	659	884	645	865

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.
* Baseload ratings are under development and will be available later.
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. Overload of 10% permitted for 1 hour in every 12 hours' operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation.
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.

2800 Series

2806C-E18TAG3

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50ºC
- Low coolant level switch

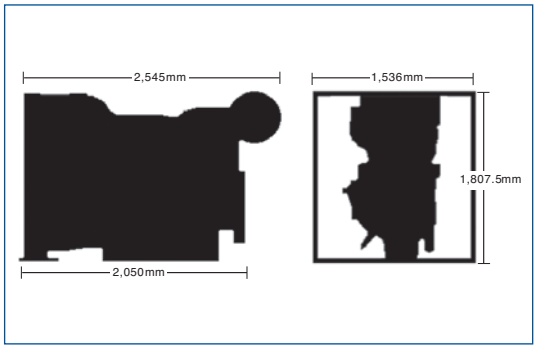
Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 18
- SAE '0' flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook

Optional Equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Parts manual/Workshop manual



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	145 mm x 183 mm
Displacement	18.1 litres
Compression ratio	14.5:1
Direction of rotation	Anti-clockwise, viewed on flywheel
Total lubrication system capacity	55.5 litres
Total coolant capacity	61 litres
Length	2,545 mm
Width	1,536 mm
Height	1,807.5 mm
Dry weight (engine)	1,832 kg

Final weight and dimensions will depend on completed specification

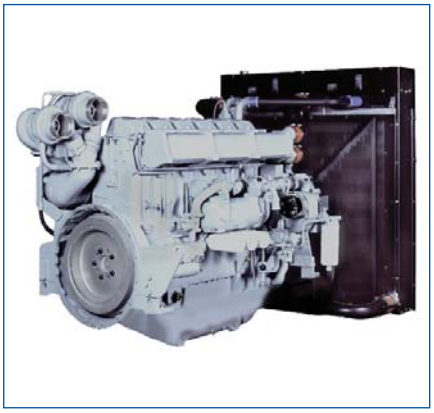
Fuel Consumption		
Engine Speed	1800 rev/min	
	g/kWh	l/hr
At Standby Power Rating	208	156
At Prime Power Rating	206	140
At Baseload Power Rating	204	115
At 75% of Prime Power Rating	204	104
At 50% of Prime Power Rating	212	72

Perkins®

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

Distributed by

Publication No. 1769/10/05 Produced in England



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 4006-23TAG1A 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.

4000 Series

4006-23TAG1A

Diesel Engine – ElectropaK

620 kWm at 1500 rpm
650 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).

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload	550	440	497	666	471	631
	Prime Power	650	520	581	779	555	744
	Standby (maximum)	725	580	646	866	620	831
1800	Continuous Baseload	563	450	529	709	485	650
	Prime Power	688	550	640	858	596	799
	Standby (maximum)	756	605	694	930	650	871

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. 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. Overload of 10% is permitted for 1 hour in every 12 hours operation.
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

4006-23TAG1A

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

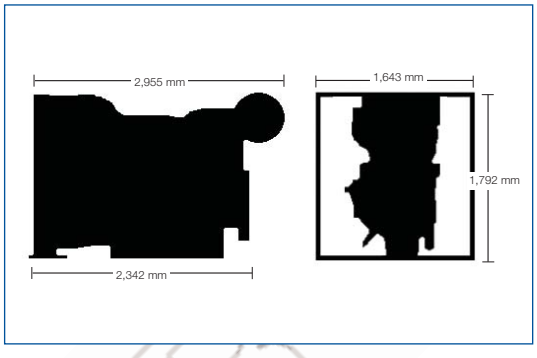
Lubrication system
- Wet sump with filler and dipstick
- Lubrication oil filters
- Oil cooler with separate filter header

Cooling system
- Twin thermostats, water pump
- System designed for ambients up to 50ºC
- 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 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

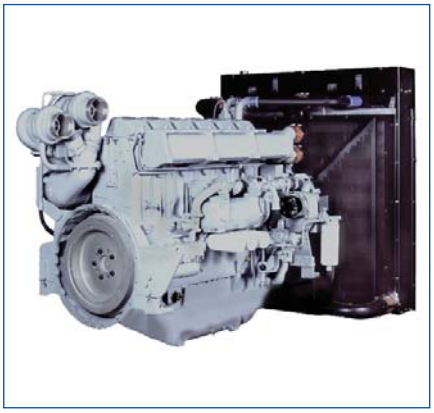
Final weight and dimensions will depend on completed specification

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	207	149	219	166
At Prime Power Rating	205	132	219	152
At Baseload Power Rating	TBA	TBA	TBA	TBA
At 75% of Prime Power Rating	TBA	TBA	TBA	TBA
At 50% of Prime Power Rating	TBA	TBA	TBA	TBA

Perkins®

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

Distributed by



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 4006-23TAG2A 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.

4000 Series

4006-23TAG2A

Diesel Engine – ElectropaK

685 kWm at 1500 rpm
715 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).

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload	585	468	521	698	495	664
	Prime Power	730	584	646	866	620	831
	Standby (maximum)	800	640	711	953	685	918
1800	Continuous Baseload	600	480	554	742	510	684
	Prime Power	750	600	684	917	640	858
	Standby (maximum)	844	675	759	1017	715	958

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. 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. Overload of 10% is permitted for 1 hour in every 12 hours operation.
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

4006-23TAG2A

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

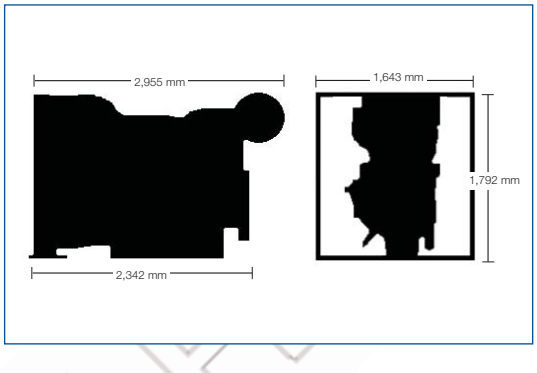
Lubrication system
- Wet sump with filler and dipstick
- Lubrication oil filters
- Oil cooler with separate filter header

Cooling system
- Twin thermostats, water pump
- System designed for ambients up to 50ºC
- 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 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

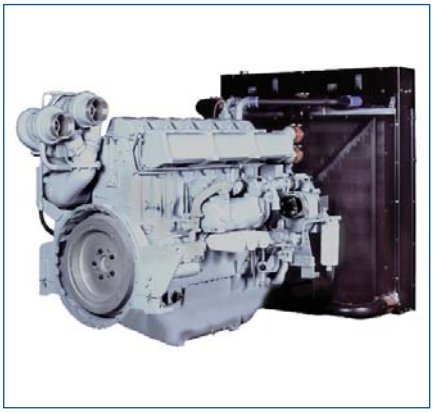
Final weight and dimensions will depend on completed specification

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	207	165	219	182
At Prime Power Rating	205	148	219	163
At Baseload Power Rating	TBA	TBA	TBA	TBA
At 75% of Prime Power Rating	TBA	TBA	TBA	TBA
At 50% of Prime Power Rating	TBA	TBA	TBA	TBA

Perkins®

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

Distributed by



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.

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).

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	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, 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. 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.

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

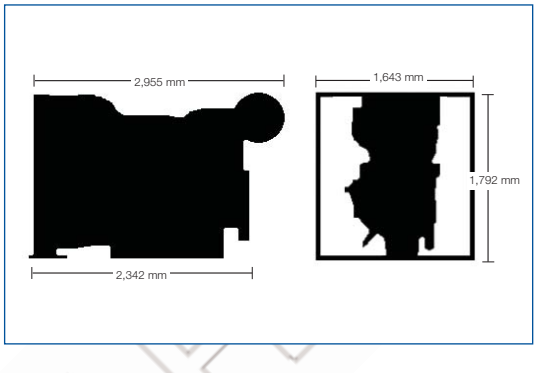
Lubrication system
- Wet sump with filler and dipstick
- Lubrication oil filters
- Oil cooler with separate filter header

Cooling system
- Twin thermostats, water pump
- System designed for ambients up to 50ºC
- 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

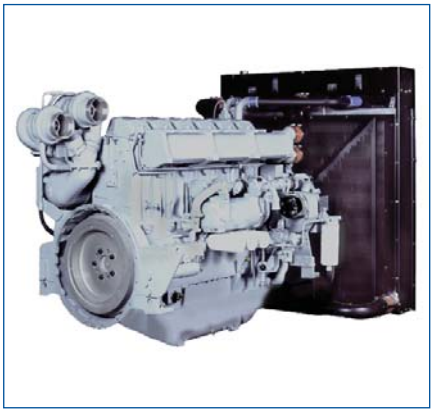
Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Turbocharged and air-to-air charge cooled
Combustion system	Direct injection
Cooling system	Water-cooled
Bore and stroke	160 x 190 mm
Displacement	22.921 litres
Compression ratio	13:1
Direction of rotation	Anti-clockwise, 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				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	207	183	219	202
At Prime Power Rating	205	162	219	182
At Baseload Power Rating	TBA	TBA	TBA	TBA
At 75% of Prime Power Rating	TBA	TBA	TBA	TBA
At 50% of Prime Power Rating	TBA	TBA	TBA	TBA

Perkins®

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

Distributed by



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 4006C-23TAG1A 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.

4000 Series

4006C-23TAG1A

Diesel Engine – ElectropaK

604 kWm at 1500 rpm
625 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.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Continuous Baseload	520	416	468	627	433	581
	Prime Power	650	520	577	773	542	726
	Standby (maximum)	725	580	639	856	604	810
1800	Continuous Baseload	538	430	486	651	448	600
	Prime Power	675	540	601	805	563	754
	Standby (maximum)	750	600	663	888	625	838

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. 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. Overload of 10% permitted for 1 hour in every 12 hours operation.
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation.
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

4006C-23TAG1A

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Direct fuel injection system, fuel lift pump and hand stop control
- Governing to ISO 8528-5 class G2 with isochronous capability

Lubrication system
- Wet sump with filler and dipstick
- Lubrication oil filters
- Engine jacket water/oil temperature stabilizer

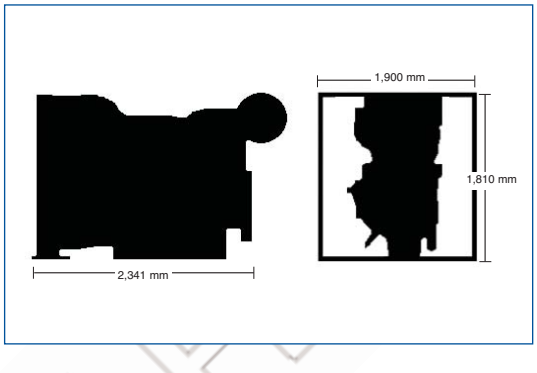
Cooling system
- Twin thermostats, water pump
- System designed for ambients up to 50ºC

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
- Water pipes, clips and hoses for radiator
- Additional manuals



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	TBC
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
Total weight (dry)	TBC kg

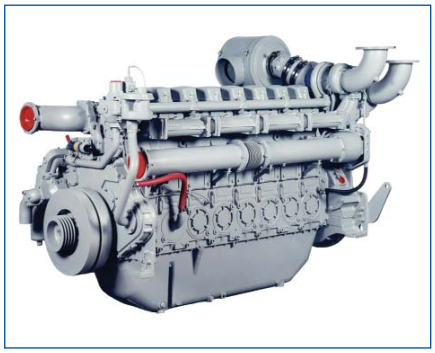
Final weight and dimensions will depend on completed specification

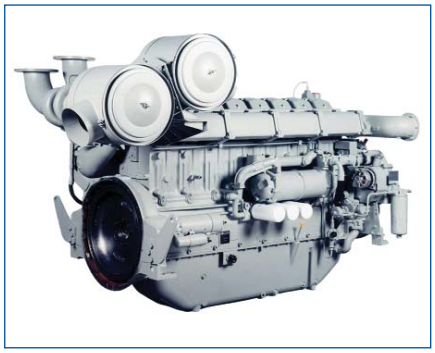
Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
At Standby Power Rating	207	TBA	219	TBA
At Prime Power Rating	205	TBA	219	TBA
At Baseload Power Rating	TBA	TBA	TBA	TBA
At 75% of Prime Power Rating	TBA	TBA	TBA	TBA
At 50% of Prime Power Rating	TBA	TBA	TBA	TBA

Perkins®

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

Distributed by





4000 Series

4008TAG2

Diesel Engine – Electro Unit

924 kWm 1800 rpm

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 4008TAG2 is a turbocharged, air-to-air charge cooled, 8 cylinder in-line 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.

Economic power

Individual four 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 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.
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
1200	Baseload Power	650	520	584	783	547	733
4008TAG2	Prime Power	823	658	730	979	693	929
	Standby (maximum)	906	725	800	1072	763	1023
1800	Baseload Power	783	626	715	959	659	885
4008TAG2	Prime Power	995	796	894	1199	838	1124
	Standby (maximum)	1098	878	980	1314	924	1239

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.

Ratings conditions: 25ºC air inlet temperature, barometer 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: BS 2869 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 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
4008TAG2

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

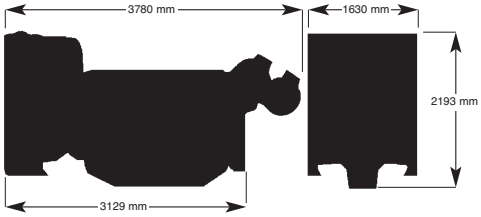
Lubrication system
- Wet sump with filler and dipstick
- Full-flow spin-on oil filters
- Engine jacket water/lub oil temperature stabiliser

Cooling system
- Gear driven circulating pump
- Twin thermostats
- Crankshaft pulley for fan drive
- Electrical Equipment
- 24 volt starter motor and 24 volt/40 amp alternator with integral regulator and DC output
- High coolant temperature switch
- 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
The following optional extra equipment is available to make up the specifications to the 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

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



General Data

Number of cylinders	8	
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	
Displacement	30.561 litres	
Bore and stroke	160 x 190 mm	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1, 4, 7, 6, 8, 5, 2, 3	
Total lubrication system capacity	165.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	48 litres	162 litres
Total weight (dry)	3250 kg	4360 kg
Length	2855 mm	3935 mm
Width	1585 mm	1870 mm
Height	1775 mm	2258 mm

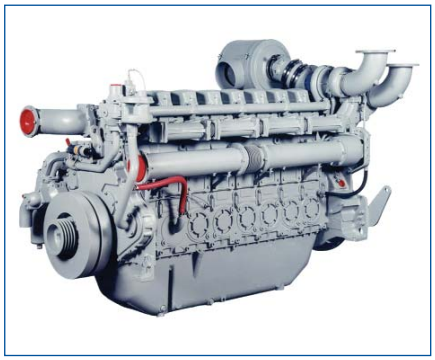
Final weight and dimensions will depend on completed specification

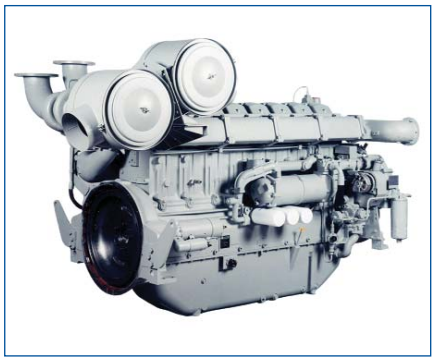
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min 4008TAG2	1800 rev/min 4008TAG2
At Standby Maximum Rating	206	216
At Prime Power Rating	202	213
At Continuous Baseload Rating	198	206
At 75% of Prime Power Rating	198	206
At 50% of Prime Power Rating	208	205
At 25% of Prime Power Rating	232	210

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

Distributed by

Publication No. 2199/10/05 Produced in England





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 4008TAG is a turbocharged, air to air charge-cooled 8 cylinder in-line 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.

4000 Series

4008TAG

Diesel Engine – Electro Unit

787 kWm 1500 rev/min
776 kWm 1800 rev/min

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	672	538	595	798	566	759
	Prime Power	849	679	744	998	715	959
	Standby (maximum)	935	748	816	1094	787	1055
1800	Baseload Power	660	528	594	796	556	745
	Prime Power	836	669	742	995	704	944
	Standby (maximum)	921	737	814	1091	776	1041

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.

Ratings conditions: 25ºC air inlet temperature, barometer pressure 100 kPa, 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
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 for a maximum of 500 hours per year. No overload is permitted.

4000 Series
4008TAG

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

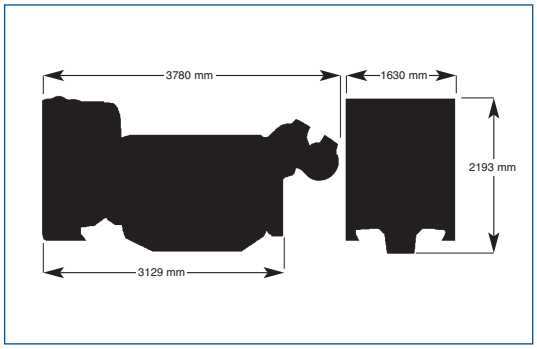
Lubrication system
- Wet sump with filler and dipstick
- Full-flow spin-on oil filters
- Engine jacket water/lub oil temperature stabiliser

Cooling system
- Gear driven circulating pump
- Twin thermostats
- Crankshaft pulley for fan drive

Electrical equipment
- 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
The following optional extras 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	8	
Cylinder arrangement	Vertical in-line	
Cycle	4 stroke	
Induction system	Turbocharged Air to air charge cooled	
Combustion system	Direct injection	
Cooling system	Water-cooled	
Displacement	30.561 litres	
Bore and stroke	160 x 190 mm	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1, 4, 7, 6, 8, 5, 2, 3	
Total lubrication system capacity	165.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	48 litres	162 litres
Total weight (dry)	3120 kg	3730 kg
Length	2855 mm	3780 mm
Width	1585 mm	1630 mm
Height	1775 mm	2193 mm

Final weight and dimensions will depend on completed specification

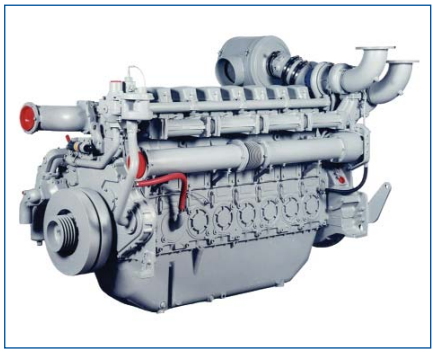
Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min	1800 rev/min
At Standby Maximum Rating	207	213
At Prime Power Rating	202	212
At Baseload Power Rating	199	205
At 75% of Prime Power Rating	196	203
At 50% of Prime Power Rating	202	210
At 25% of Prime Power Rating	218	220

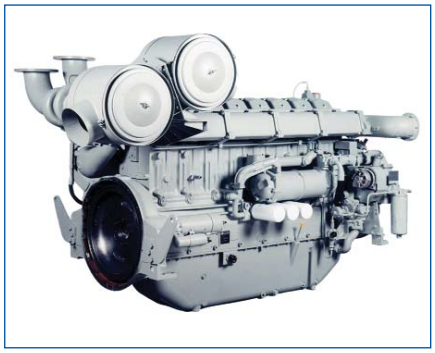
Perkins®

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

Distributed by

Publication No. 2174/10/05 Produced in England





4000 Series

4008TAG1

Diesel Engine – Electro Unit

821 kWm 1800 rpm

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 4008TAG1 is a turbocharged, air-to-air charge cooled, 8 cylinder in-line 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.

Economic power

Individual four 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 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.

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
1200 4008TAG1	Baseload Power	583	466	528	708	491	658
	Prime Power	740	592	660	886	623	835
	Standby (maximum)	815	652	723	970	686	920
1800 4008TAG1	Baseload Power	694	555	640	858	584	783
	Prime Power	884	707	800	1072	744	997
	Standby (maximum)	975	780	877	1176	821	1101

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.

Ratings conditions: 25ºC air inlet temperature, barometer 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: BS 2869 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 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
4008TAG1

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

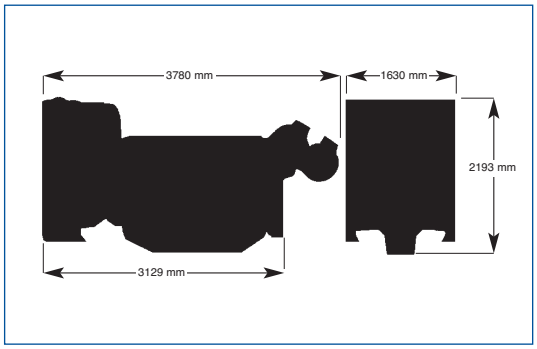
Lubrication system
- Wet sump with filler and dipstick
- Full-flow spin-on oil filters
- Engine jacket water/lub oil temperature stabiliser

Cooling system
- Gear driven circulating pump
- Twin thermostats
- Crankshaft pulley for fan drive
- Electrical Equipment
- 24 volt starter motor and 24 volt/40 amp alternator with integral regulator and DC output
- High coolant temperature swtich
- 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
The following optional extra equipment is available to make up the specifications to the 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

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



General Data

Number of cylinders	8	
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	
Displacement	30.561 litres	
Bore and stroke	160 x 190 mm	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1, 4, 7, 6, 8, 5, 2, 3	
Total lubrication system capacity	165.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	48 litres	162 litres
Total weight (dry)	3250 kg	4360 kg
Length	2855 mm	3935 mm
Width	1585 mm	1870 mm
Height	1775 mm	2258 mm

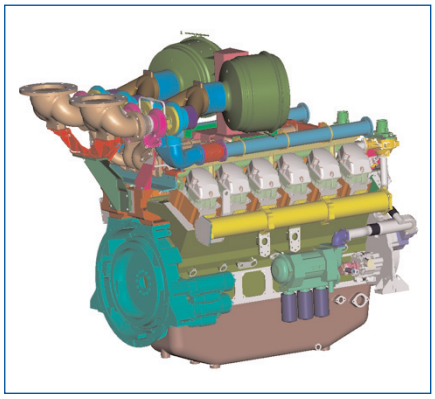
Final weight and dimensions will depend on completed specification

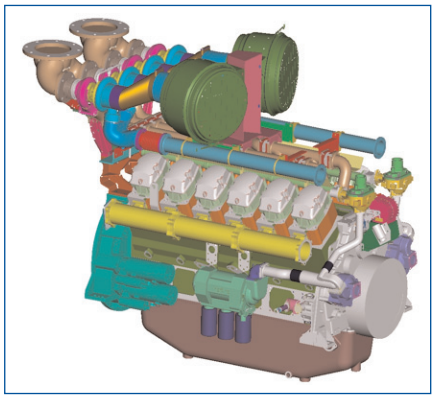
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min 4008TAG2	1800 rev/min 4008TAG2
At standby Maximum Rating	200	212
At Prime Power Rating	196	211
At Continuous baseload Rating	–	206
At 75% of Prime Power Rating	196	208
At 50% of Prime Power Rating	210	210
At 25% of Prime Power Rating	235	207

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

Distributed by

Publication No. 2175/10/05 Produced in England





4000 Series

4012-46TAG1A

Diesel Engine – ElectropaK

1250 kWm 1500 rpm
1250 kWm 1800 rpm

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. 4012-46TAG1A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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 temperature 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500 4012-46TAG1A	Baseload Power	1080	864	960	1287	900	1207
	Prime Power	1364	1091	1197	1605	1137	1524
	Standby (maximum)	1500	1200	1310	1757	1250	1676
1800 4012-46TAG1A	Baseload Power	1080	864	960	1287	900	1207
	Prime Power	1364	1091	1197	1605	1137	1524
	Standby (maximum)	1500	1200	1310	1757	1250	1676

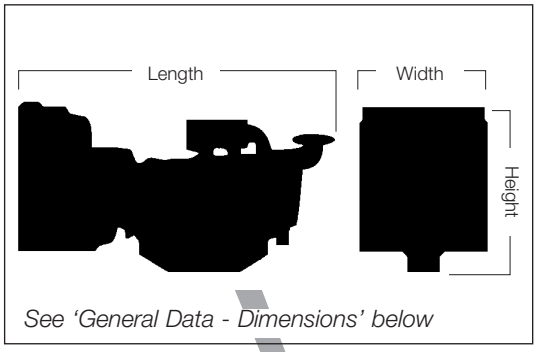
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1825/01/06 Produced in England

4000 Series
4012-46TAG1A



See 'General Data - Dimensions' below

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 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

Number of cylinders		12	
Cylinder arrangement		60º 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		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3924 mm
	Width	1798 mm	2192 mm
	Height	2287 mm	2267 mm

Final weight and dimensions will depend on completed specification

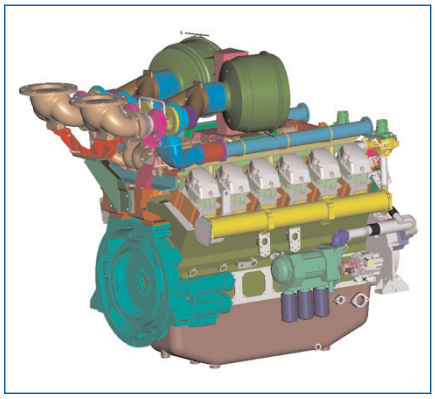
Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG1A	1800 rev/min 4012-46TAG1A
At Standby Maximum Rating	209	218
At Prime Power Rating	209	214
At Continuous Baseload Rating	210	212
At 75% of Prime Power Rating	212	209
At 50% of Prime Power Rating	215	219
At 25% of Prime Power Rating	232	233

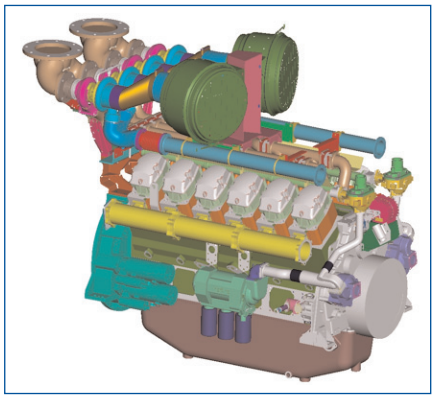
Perkins®

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

Distributed by

Publication No. 1825/01/06 Produced in England





4000 Series

4012-46TAG2A

Diesel Engine – ElectropaK

1380 kWm 1500 rpm
1380 kWm 1800 rpm

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. 4012-46TAG2A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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 temperature 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1194	955	1055	1415	995	1334
4012-46TAG2A	Prime Power	1505	1204	1314	1762	1254	1682
	Standby (maximum)	1656	1325	1440	1931	1380	1851
1800	Baseload Power	1194	955	1055	1415	995	1334
4012-46TAG2A	Prime Power	1505	1204	1314	1762	1254	1682
	Standby (maximum)	1656	1325	1440	1931	1380	1851

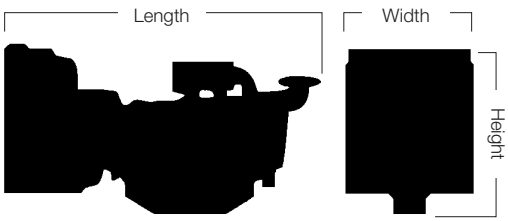
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1826/01/06 Produced in England

4000 Series
4012-46TAG2A



See 'General Data - Dimensions' below

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/lub oil temperature stabiliser

Cooling System
- Two twin thermostats
- System designed for ambients up to 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

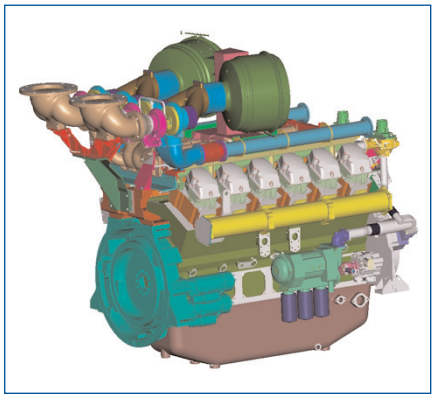
Number of cylinders		12	
Cylinder arrangement		60º Vee form	
Bore and stroke		160 x 190 mm	
Displacement		45.842 litres	
Induction system		Turbocharged and air to air charge cooled	
Cycle		4 stroke	
Combustion system		Direct injection	
Compression ratio		13.6:1	
Rotation		Anti-clockwise, viewed from flywheel end	
Cooling system		Water-cooled	
Firing order		1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B	
Total lubrication system capacity		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3924 mm
	Width	1798 mm	2192 mm
	Height	2287 mm	2267 mm

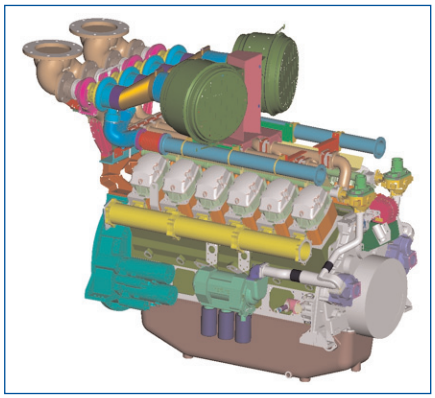
Final weight and dimensions will depend on completed specification

Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG2A	1800 rev/min 4012-46TAG2A
At Standby Maximum Rating	210	224
At Prime Power Rating	209	218
At Continuous Baseload Rating	210	210
At 75% of Prime Power Rating	211	213
At 50% of Prime Power Rating	213	206
At 25% of Prime Power Rating	230	221

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

Distributed by





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. 4012-46TAG3A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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.

4000 Series

4012-46TAG3A

Diesel Engine – ElectropaK

1563 kWm 1500 rpm
1563 kWm 1800 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
- 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1420	1136	1243	1667	1183	1587
4012-46TAG3A	Prime Power	1705	1364	1481	1986	1421	1905
	Standby (maximum)	1875	1500	1623	2176	1563	2095
1800	Baseload Power	1420	1136	1243	1667	1183	1587
4012-46TAG3A	Prime Power	1705	1364	1481	1986	1421	1905
	Standby (maximum)	1875	1500	1623	2176	1563	2095

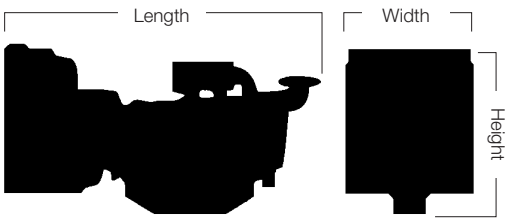
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1827/01/06 Produced in England

4000 Series
4012-46TAG3A



See 'General Data - Dimensions' below

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/lub oil temperature stabiliser

Cooling System
- Two twin thermostats
- System designed for ambients up to 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

Number of cylinders		12	
Cylinder arrangement		60º 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		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3944 mm
	Width	2192 mm	2192 mm
	Height	2267 mm	2759 mm

Final weight and dimensions will depend on completed specification

Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG3A	1800 rev/min 4012-46TAG3A
At Standby Maximum Rating	212	226
At Prime Power Rating	210	224
At Continuous Baseload Rating	208	213
At 75% of Prime Power Rating	210	214
At 50% of Prime Power Rating	213	205
At 25% of Prime Power Rating	228	220

Perkins®

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

Distributed by

4000 Series

4012TAG

Diesel Engine – Electro Unit

940 kWm 1200 rev/min
1168 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 4012TAG is a turbocharged air to air charge cooled, 12 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.

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.

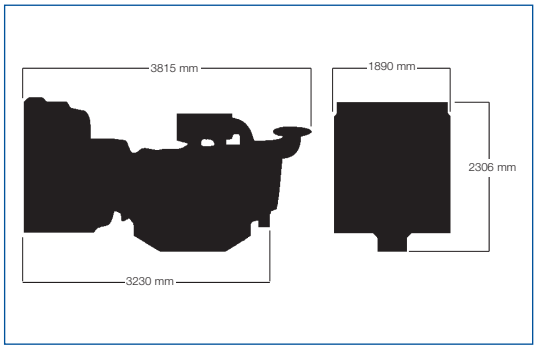
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1200	Baseload Power	814	651	702	940	679	910
	Prime Power	1025	820	877	1176	854	1145
	Standby (maximum)	1128	902	963	1291	940	1261
1500	Baseload Power	1008	807	882	1182	841	1127
	Prime Power	1274	1019	1102	1487	1061	1422
	Standby (maximum)	1401	1121	1209	1621	1168	1566

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 100 kPa, 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
4012TAG



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
- 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 00 flywheel housing

General Data

Number of cylinders	12	
Cylinder arrangement	60° Vee form	
Cycle	4 stroke	
Induction system	Turbocharged Air to air charge cooled	
Combustion system	Direct injection	
Cooling system	Water-cooled	
Displacement	45.842 litres	
Bore and stroke	160 x 190 mm	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B	
Total lubrication system capacity	177.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	73 litres	200 litres
Length	2731 mm	3815 mm
Width	1723 mm	1890 mm
Height	2118 mm	2306 mm
Total weight (dry)	4400 kg	5280 kg

Final weight and dimensions will depend on completed specification

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 filters
Changeover fuel oil filters
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

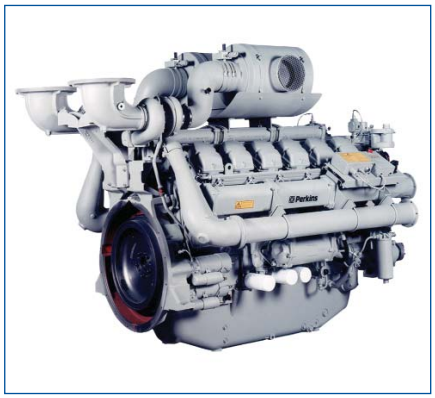
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min	1500 rev/min
At Standby Maximum Rating	214	207
At Prime Power Rating	211	206
At Continuous Baseload Rating	206	206
At 75% of Prime Power Rating	206	199
At 50% of Prime Power Rating	210	204
At 25% of Prime Power Rating	226	220

Perkins®

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

Distributed by

Publication No. 2177/10/05 Produced in England



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 4012TAG1 and 1A are turbo-charged, air-to-air charge cooled, 12 cylinder vee form diesel engines. 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.

4000 Series

4012TAG1
4012TAG1A

Diesel Engine – Electro Unit

1250 kWm 1500 rpm
1255 kWm 1800 rpm

Economic power

Individual four 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 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.
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	1080	864	942	1263	900	1208
4012TAG1A	Prime Power	1364	1091	1178	1579	1136	1523
	Standby (maximum)	1500	1200	1292	1732	1250	1676
1800	Baseload Power	1086	869	942	1263	905	1213
4012TAG1	Prime Power	1369	1095	1178	1579	1141	1529
	Standby (maximum)	1506	1205	1292	1733	1255	1682

Note: 4012TAG1A is offered for 50 hz operation only.

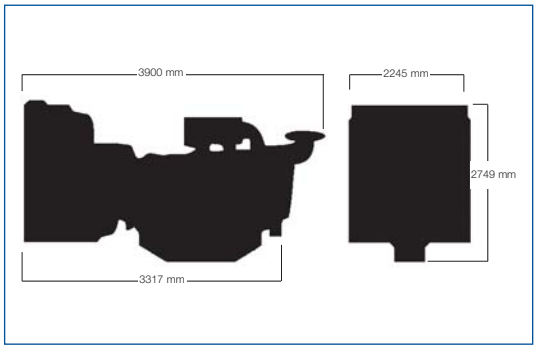
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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 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 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

4012TAG1
4012TAG1A



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
- 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 00 flywheel housing

General Data

Number of cylinders	12	
Cylinder arrangement	60° Vee form	
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	45.842 litres	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B	
Total lubrication system capacity	177.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	73 litres	235 litres
Total weight (dry)	4400 kg	5760 kg
Length	2715 mm	3900 mm
Width	1725 mm	2245 mm
Height	2120 mm	2749 mm

Final weight and dimensions will depend on completed specification

Optional Equipment

The following optional extra equipment is available to make up the specifications to the 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
Note: This list is not exhaustive, further options may be available to meet particular applications on enquiry to Perkins Sales Department

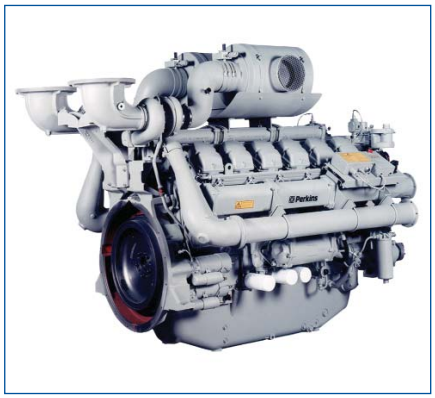
Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012TAG1A	1800 rev/min 4012TAG1
At Standby Maximum Rating	203	206
At Prime Power Rating	199	202
At Continuous Baseload Rating	197	199
At 75% of Prime Power Rating	195	198
At 50% of Prime Power Rating	194	199
At 25% of Prime Power rating	207	212

Perkins®

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

Distributed by

Publication No. 2178/10/05 Produced in England



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 4012TAG2 and 2A are turbo-charged, air-to-air charge cooled, 12 cylinder vee form diesel engines. 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.

4000 Series

4012TAG2
4012TAG2A

Diesel Engine – Electro Unit

1380 kWm 1500 rpm
1386 kWm 1800 rpm

Economic power

Individual four 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 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.
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	1194	955	1038	1391	995	1364
4012TAG2A	Prime Power	1505	1204	1296	1737	1254	1682
	Standby (maximum)	1656	1325	1422	1906	1380	1851
1800	Baseload Power	1201	961	1038	1391	1001	1342
4012TAG	Prime Power	1512	1210	1297	1738	1260	1689
	Standby (maximum)	1663	1331	1423	1907	1386	1858

Note: 4012TAG2A is offered for 50 hz operation only.

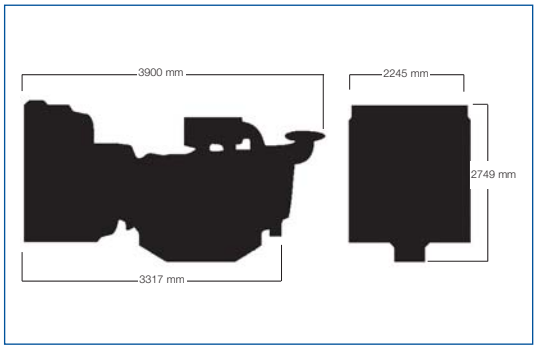
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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 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 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

4012TAG2
4012TAG2A



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
- 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 00 flywheel housing

General Data

Number of cylinders	12	
Cylinder arrangement	60° Vee form	
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	45.842 litres	
Compression ratio	13.6:1	
Direction of rotation	Anti-clockwise, viewed from flywheel end	
Firing order	1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B	
Total lubrication system capacity	177.6 litres	
	Electro Unit	ElectropaK
Total coolant capacity	73 litres	235 litres
Total weight (dry)	4400 kg	5800 kg
Length	2715 mm	3900 mm
Width	1725 mm	2245 mm
Height	2120 mm	2749 mm

Final weight and dimensions will depend on completed specification

Optional Equipment

The following optional extra equipment is available to make up the specifications to the 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
Note: This list is not exhaustive, further options may be available to meet particular applications on enquiry to Perkins Sales Department

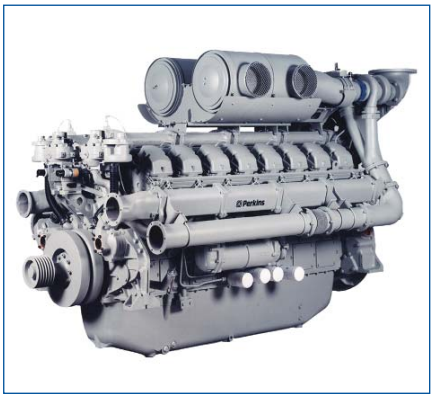
Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012TAG2A	1800 rev/min 4012TAG2
At Standby Maximum Rating	206	209
At Prime Power Rating	201	208
At Continuous Baseload Rating	197	202
At 75% of Prime Power Rating	197	204
At 50% of Prime Power Rating	195	203
At 25% of Prime Power Rating	207	221

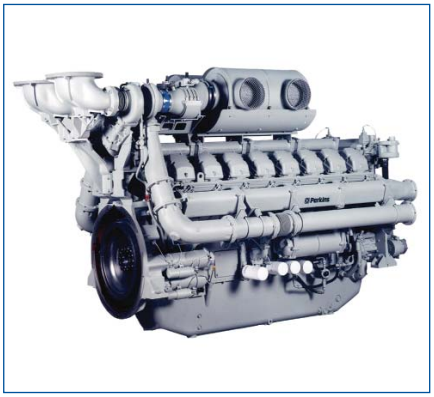
Perkins®

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

Distributed by

Publication No. 2179/10/05 Produced in England





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 4016TAG 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.

4000 Series

4016TAG

Diesel Engine – Electro Unit

1263 kWm 1200 rev/min
1607 kWm 1500 rev/min

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.

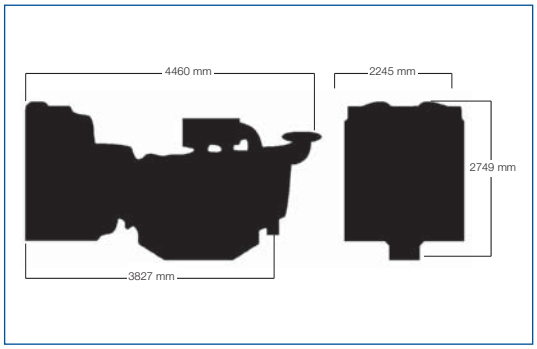
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1200	Baseload Power	1091	872	952	1276	908	1217
	Prime Power	1375	1100	1190	1595	1146	1537
	Standby (maximum)	1515	1212	1307	1752	1263	1694
1500	Baseload Power	1392	1114	1202	1611	1160	1555
	Prime Power	1752	1402	1502	2013	1460	1957
	Standby (maximum)	1928	1543	1649	2210	1607	2154

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 100 kPa, 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
4016TAG



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
- 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 00 flywheel housing

General Data

Number of cylinders	16	
Cylinder arrangement	60° 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	160 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	255 litres
Length	3302 mm	4460 mm
Width	1723 mm	2245 mm
Height	2128 mm	2749 mm
Total weight (dry)	5570 kg	6900 kg

Final weight and dimensions will depend on completed specification

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

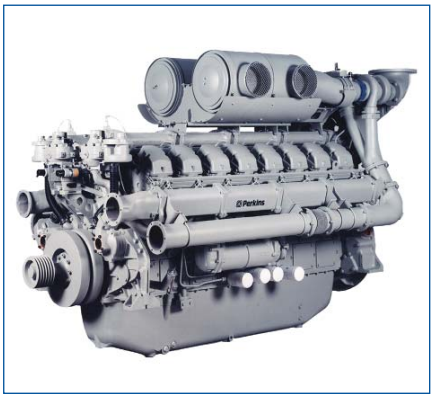
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min	1500 rev/min
At Standby Maximum Rating	205	207
At Prime Power Rating	204	205
At Continuous Baseload Rating	205	205
At 75% of Prime Power Rating	205	205
At 50% of Prime Power Rating	219	209
At 25% of Prime Power Rating	232	223

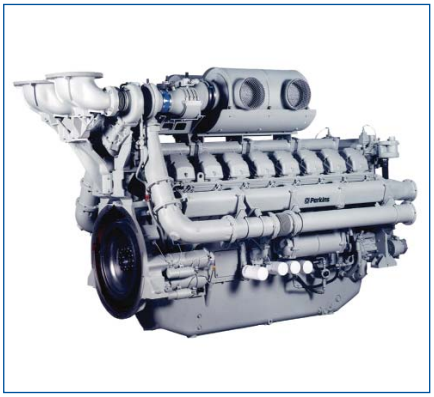
Perkins®

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

Distributed by

Publication No. 2205/10/05 Produced in England





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.

4000 Series

4016TAG1A

Diesel Engine – Electro Unit

1690 kWm 1500 rev/min

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.

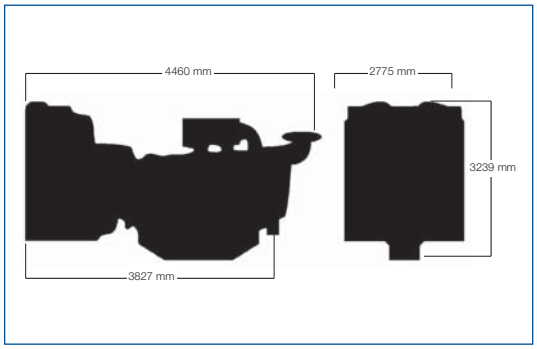
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1463	1171	1270	1703	1219	1635
	Prime Power	1845	1476	1588	2130	1537	2061
	Standby (maximum)	2028	1622	1741	2334	1690	2266

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 100 kPa, 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
- 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 00 flywheel housing

General Data

Number of cylinders	16	
Cylinder arrangement	60° 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	160 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	3302 mm	4460 mm
Width	1723 mm	2775 mm
Height	2128 mm	3239 mm
Total weight (dry)	5570 kg	8010 kg

Final weight and dimensions will depend on completed specification

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

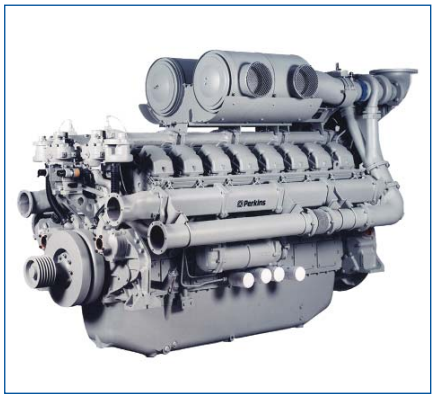
Fuel Consumption (g/kWh)	
Engine Speed	1500 rev/min 4016TAG1A
At Standby Maximum Rating	207
At Prime Power Rating	205
At Continuous Baseload Rating	199
At 75% of Prime Power Rating	198
At 50% of Prime Power Rating	198
At 25% of Prime Power Rating	218

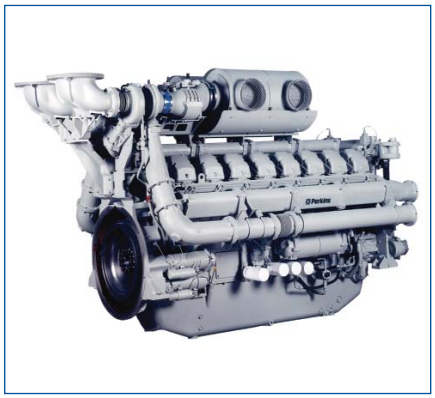
Perkins®

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

Distributed by

Publication No. 2180/10/05 Produced in England





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 4016TAG2/2A are turbocharged, air to air charge cooled, 16 cylinder vee form diesel engines. 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. The 4016TAG2A is specially tuned for improved load acceptance response in standby duty.

4000 Series

4016TAG2
4016TAG2A

Diesel Engine – Electro Unit

1540 kWm 1200 rev/min
1886 kWm 1500 rev/min

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
1200	Baseload Power	1329	1063	1166	1563	1108	1485
4016 TAG2	Prime Power	1680	1344	1458	1954	1400	1877
	Standby (maximum)	1848	1478	1598	2148	1540	2065
1500	Baseload Power	1634	1307	1413	1894	1362	1826
4016 TAG2A	Prime Power	2058	1646	1766	2367	1715	2300
	Standby (maximum)	2264	1811	1937	2596	1886	2529

Note: 4016TAG2A is offered for 50Hz operation only.

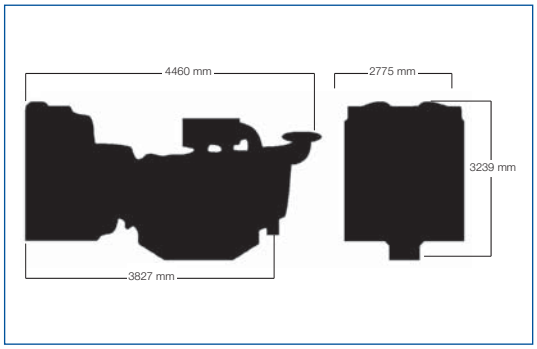
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

Ratings conditions: 25ºC air inlet temperature, barometer pressure 100 kPa, 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
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 for a maximum of 500 hours per year. No overload is permitted.

4000 Series

4016TAG2
4016TAG2A



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
- 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 00 flywheel housing

General Data

Number of cylinders	16	
Cylinder arrangement	60° 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	160 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	3302 mm	4460 mm
Width	1723 mm	2775 mm
Height	2128 mm	3239 mm
Total weight (dry)	5570 kg	8010 kg

Final weight and dimensions will depend on completed specification

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 filters
Changeover fuel oil filters
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

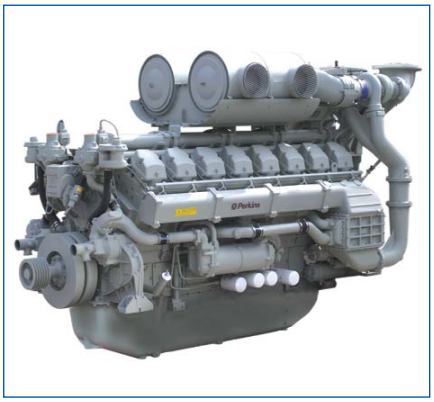
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min 4016TAG2	1500 rev/min 4016TAG2A
At Standby Maximum Rating	212	212
At Prime Power Rating	208	209
At Continuous Baseload Rating	207	205
At 75% of Prime Power Rating	207	203
At 50% of Prime Power Rating	215	202
At 25% of Prime Power Rating	251	212

Perkins®

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

Distributed by

Publication No. 2181/10/05 Produced in England



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 4016TWG is a turbocharged air to water 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.

4000 Series

4016TWG

Diesel Engine – Electro Unit

1002 kWm 1200 rev/min
1301 kWm 1500 rev/min

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.

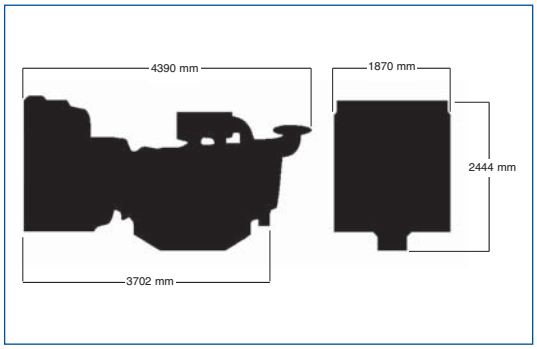
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1200	Baseload Power	858	687	771	1034	715	959
	Prime Power	1090	872	964	1293	908	1218
	Standby (maximum)	1202	962	1058	1418	1002	1344
1500	Baseload Power	1125	900	979	1313	937	1256
	Prime Power	1418	1135	1224	1641	1182	1585
	Standby (maximum)	1561	1249	1343	1801	1301	1745

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 100 kPa, 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
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 for a maximum of 500 hours per year. No overload is permitted.

4000 Series
4012TWG



Standard Electro Unit Specification

Air inlet
- Mounted air filters and turbochargers – integral charge coolers

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
- 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 00 flywheel housing

General Data

Number of cylinders	16	
Cylinder arrangement	60° Vee form	
Cycle	4 stroke	
Induction system	Turbocharged Air to water charge cooled	
Combustion system	Direct injection	
Cooling system	Water-cooled	
Displacement	61.123 litres	
Bore and stroke	160 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	225 litres
Length	3289 mm	4390 mm
Width	1547 mm	1870 mm
Height	2128 mm	2444 mm
Total weight (dry)	5940 kg	6815 kg

Final weight and dimensions will depend on completed specification

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 filters
Changeover fuel oil filters
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

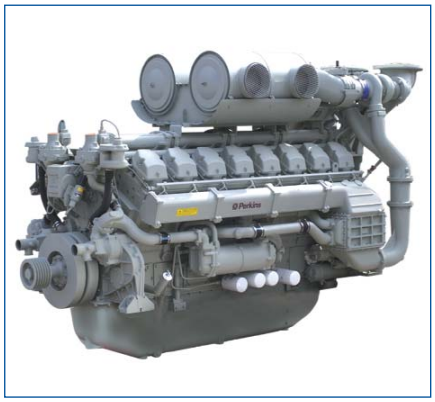
Fuel Consumption (g/kWh)		
Engine Speed	1200 rev/min	1500 rev/min
At Standby Maximum Rating	209	208
At Prime Power Rating	207	206
At Baseload Power Rating	207	207
At 75% of Prime Power Rating	208	208
At 50% of Prime Power Rating	217	217
At 25% of Prime Power Rating	236	233

Perkins®

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

Distributed by

Publication No. 2197/10/05 Produced in England



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 4016TWG2 is a turbocharged air to water 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.

4000 Series

4016TWG2

Diesel Engine – Electro Unit

1550 kWm 1500 rev/min

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.

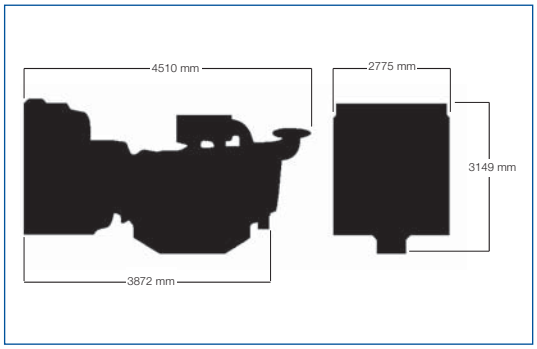
Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1335	1068	1174	1574	1112	1491
	Prime Power	1688	1350	1468	1969	1406	1885
	Standby (maximum)	1861	1488	1612	2162	1550	2079

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 100 kPa, 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
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 for a maximum of 500 hours per year. No overload is permitted.

4000 Series
4016TWG2



Standard Electro Unit Specification

Air inlet
- Mounted air filters and turbochargers – integral charge coolers

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
- 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 00 flywheel housing

General Data

Number of cylinders	16	
Cylinder arrangement	60° Vee form	
Cycle	4 stroke	
Induction system	Turbocharged Air to water charge cooled	
Combustion system	Direct injection	
Cooling system	Water-cooled	
Displacement	61.123 litres	
Bore and stroke	160 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	295 litres
Length	3289 mm	4510 mm
Width	1547 mm	2775 mm
Height	2128 mm	3149 mm
Total weight (dry)	5940 kg	8240 kg

Final weight and dimensions will depend on completed specification

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 filters
Changeover fuel oil filters
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

Fuel Consumption (g/kWh)	
Engine Speed	1500 rev/min
At Standby Maximum Rating	210
At Prime Power Rating	208
At Baseload Power Rating	210
At 75% of Prime Power Rating	207
At 50% of Prime Power Rating	209
At 25% of Prime Power Rating	227

Perkins®

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

Distributed by

Publication No. 2193/10/05 Produced in England

The Perkins 400 Series provides compact power from a robust family of 2, 3 and 4 cylinder diesel engines, designed to meet today's uncompromising demands within the power generation industry.

The 403C-11G is a compact 3-cylinder naturally aspirated diesel engine. Its premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

400 Series

403C-11G

Diesel Engine – ElectropaK

9.3 kWm 1500 rev/min
11.4 kWm 1800 rev/min
17.9 kWm 3000 rev/min
*22.3 kWm 3600 rev/min

*gross standby power

Compact, efficient power

A class-leading engine package coupled with an innovative, newly designed cooling pack provides optimum power density, making installation and transportation easier and cheaper. This package has been specially designed to hit the key power nodes required by the power generation industry.

Quiet, clean power

The 403C-11G has an exceptionally low noise signature making it the ideal choice for power generation in any environment. A high compression ratio also ensures clean rapid starting in all conditions. Design features ensure maximum cleanliness in terms of emissions throughout the engines operating life.

Reliable power

Developed and tested using the latest engineering techniques this engine reliably provides power when you need it.
Operating and maintenance costs are reduced through excellent fuel and oil economy whilst whole-life costs are enhanced by a 500 hour service interval and a 2 year warranty.
Excellent service access further improves maintenance and support is provided by a worldwide network of 4000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	9.1	7.3	8.6	11.5	8.4	11.4
	Standby (maximum)	10.0	8.0	9.5	12.7	9.3	12.6
1800	Prime Power	11.4	9.1	10.7	14.3	10.3	13.9
	Standby (maximum)	12.4	9.9	11.8	15.8	11.4	15.4
3000	Prime Power	17.5	14.0	17.9	24.0	16.1	22.8
	Standby (maximum)	18.9	15.1	19.7	26.4	17.9	25.2
3600	Prime Power	18.4	14.7	20.2	27.1	TBA	TBA
	Standby (maximum)	20.4	16.3	22.3	29.9	TBA	TBA

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 typical alternator efficiencies and a power factor (cos θ) of 0.8.

Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: To API CH4/ACEA E5.

Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted.

400 Series

403C-11G

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically governed cassette type fuel injection pump
- Split element fuel filter

Lubrication system
- Wet steel sump with filler and dipstick
- Spin-on full-flow lub oil filter

Cooling system
- Thermostatically-controlled system with belt driven circulating pump and pusher fan
- Mounted radiator piping and guards

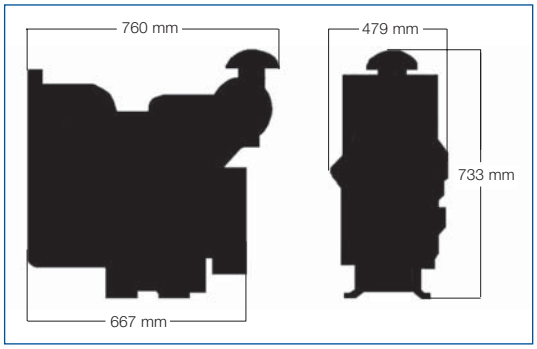
Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- Oil pressure and coolant temperature switches
- 12 volt shut off solenoid energised to run
- Glow plug cold start aid and heater/starter switch

Flywheel and housing
1500/1800 rev/min
- High inertia flywheel to SAE J620 Size 6½ Heavy
- Flywheel housing SAE 5 Long

3000/3600 rev/min
- High inertia flywheel to SAE J620 Size 6½ Light
- Flywheel housing SAE 5 Short

Mountings
- Front and rear engine mounting bracket

Literature
- User's Handbook



General Data

Number of cylinders	3
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Natural aspiration
Combustion system	Indirect injection
Cooling system	Water-cooled
Bore and stroke	77 x 81 mm
Displacement	1131cc
Compression ratio	23:1
Direction of rotation	Anti-clockwise viewed on flywheel
Total lubrication system capacity	4.9 litres
Total coolant capacity	5.21 litres
Length	760 mm
Width	479 mm
Height	733 mm
Dry weight (engine)	134 kg (1500/1800 rev/min) 116 kg (3000/3600 rev/min)

Final weight and dimensions will depend on completed specification.

Optional Equipment
- Exhaust silencer
- Workshop manual
- Parts book

Fuel Consumption								
Engine Speed	1500 rev/min		1800 rev/min		3000 rev/min		3600 rev/min	
	g/kWh	l/hr	g/kWh	l/hr	g/kWh	l/hr	g/kWh	l/hr
At Standby Power	261	2.9	269	3.8	280	6.5	278	7.4
At Prime Power	256	2.6	259	3.3	277	5.9	273	6.5
At 75% of Prime Power	258	2.0	257	2.4	284	4.5	281	5.1
At 50% of Prime Power	285	1.5	279	1.8	320	3.4	324	3.9

Perkins®

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

Distributed by

Publication No. 1662/10/05 Produced in England

The Perkins 400 Series provides compact power from a robust family of 2, 3 and 4 cylinder diesel engines, designed to meet today's uncompromising demands within the power generation industry.

The 403C-15G is a compact 3-cylinder naturally aspirated diesel engine. It's premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

400 Series

403C-15G

Diesel Engine – ElectropaK

13.3 kWm 1500 rev/min
15.9 kWm 1800 rev/min
22.9 kWm 3000 rev/min

Compact, efficient power

A class-leading engine package coupled with an innovative, newly designed cooling pack provides optimum power density, making installation and transportation easier and cheaper. This package has been specially designed to hit the key power nodes required by the power generation industry.

Quiet, clean power

The 403C-15G has an exceptionally low noise signature making it the ideal choice for power generation in any environment. A high compression ratio also ensures clean rapid starting in all conditions. Design features ensure maximum cleanliness in terms of emissions throughout the engines operating life.

Reliable power

Developed and tested using the latest engineering techniques this engine reliably provides power when you need it.
Operating and maintenance costs are reduced through excellent fuel and oil economy whilst whole-life costs are enhanced by a 500 hour service interval and a 2 year warranty.
Excellent service access further improves maintenance and support is provided by a worldwide network of 4000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	13.3	10.6	12.2	16.4	12.0	16.1
	Standby (maximum)	14.5	11.6	13.5	18.1	13.3	17.8
1800	Prime Power	16.1	12.9	14.7	19.7	14.4	19.3
	Standby (maximum)	17.5	14.0	16.2	21.7	15.9	21.2
3000	Prime Power	22.4	17.9	21.7	29.1	20.7	27.8
	Standby (maximum)	24.1	19.2	23.9	32.1	22.9	31.0

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 typical alternator efficiencies and a power factor (cos θ) of 0.8.

Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: To API CH4/ACEA E5.

Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted.

400 Series

403C-15G

Standard ElectropaK Specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically governed cassette type fuel injection pump
- Split element fuel filter

Lubrication system
- Wet steel sump with filler and dipstick
- Spin-on full-flow lub oil filter

Cooling system
- Thermostatically-controlled system with belt driven circulating pump and pusher fan
- Mounted radiator piping and guards

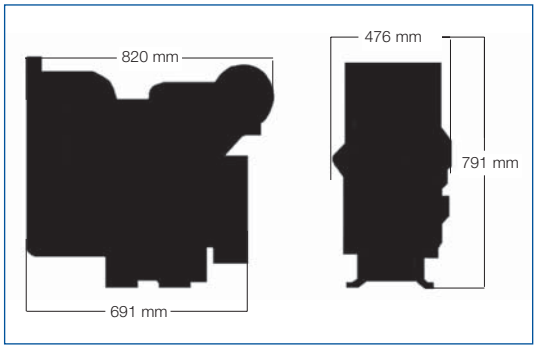
Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- Oil pressure and coolant temperature switches
- 12 volt shut off solenoid energised to run
- Glow plug cold start aid and heater/starter switch

Flywheel and housing
1500/1800 rev/min
- High inertia flywheel to SAE J620 Size 7½ Heavy
- Flywheel housing SAE 4 Long

3000/3600 rev/min
- High inertia flywheel to SAE J620 Size 7½ Light
- Flywheel housing SAE 4 Short

Mountings
- Front and rear engine mounting bracket

Literature
- User's Handbook



General Data

Number of cylinders	3
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Natural aspiration
Combustion system	Indirect injection
Cooling system	Water-cooled
Bore and stroke	84 x 90 mm
Displacement	1496cc
Compression ratio	22.5:1
Direction of rotation	Anti-clockwise viewed on flywheel
Total coolant capacity	5.98 litres
Length	820 mm
Width	476 mm
Height	791 mm
Dry weight (engine)	197 kg (1500/1800 rev/min) 175 kg (3000/3600 rev/min)

Final weight and dimensions will depend on completed specification.

Optional Equipment
- Exhaust silencer
- Workshop manual
- Parts book

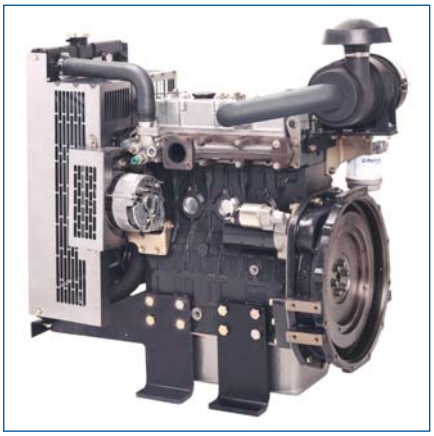
Fuel Consumption						
Engine Speed	1500 rev/min		1800 rev/min		3000 rev/min	
	g/kWh	l/hr	g/kWh	l/hr	g/kWh	l/hr
At Standby Power	258	4.1	249	4.8	264	7.5
At Prime Power	254	3.7	247	4.3	264	6.8
At 75% of Prime Power	258	2.8	249	3.3	284	5.5
At 50% of Prime Power	291	2.1	275	2.4	338	4.4

Perkins®

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

Distributed by

Publication No. 1663/10/05 Produced in England



The Perkins 400 Series provides compact power from a robust family of 2, 3 and 4 cylinder diesel engines, designed to meet today's uncompromising demands within the power generation industry.

The 404C-22G is a compact 4-cylinder naturally aspirated diesel engine. It's premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

400 Series

404C-22G

Diesel Engine – ElectropaK

20.3 kWm 1500 rev/min
23.9 kWm 1800 rev/min
33.4 kWm 3000 rev/min

Compact, efficient power

A class-leading engine package coupled with an innovative, newly designed cooling pack provides optimum power density, making installation and transportation easier and cheaper. This package has been specially designed to hit the key power nodes required by the power generation industry.

Quiet, clean power

The 404C-22G has an exceptionally low noise signature making it the ideal choice for power generation in any environment. A high compression ratio also ensures clean rapid starting in all conditions. Design features ensure maximum cleanliness in terms of emissions throughout the engines operating life.

Reliable power

Developed and tested using the latest engineering techniques this engine reliably provides power when you need it.
Operating and maintenance costs are reduced through excellent fuel and oil economy whilst whole-life costs are enhanced by a 500 hour service interval and a 2 year warranty.
Excellent service access further improves maintenance and support is provided by a worldwide network of 4000 distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	20.3	16.3	18.7	25.1	18.4	24.6
	Standby (maximum)	22.7	18.2	20.6	27.6	20.3	27.2
1800	Prime Power	23.4	18.7	22.0	29.5	21.6	28.9
	Standby (maximum)	25.3	20.2	24.3	32.6	23.9	32.1
3000	Prime Power	33.8	27.0	31.2	41.8	30.2	40.5
	Standby (maximum)	36.7	29.3	34.4	46.1	33.4	44.8

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 typical alternator efficiencies and a power factor (cos θ) of 0.8.

Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: To API CH4/ACEA E5.

Rating Definitions
Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted.

400 Series

404C-22G

Standard ElectropaK Specification

Air inlet
- Mounted air filters

Fuel system
- Mechanically governed cassette type fuel injection pump
- Split element fuel filter

Lubrication system
- Wet steel sump with filler and dipstick
- Spin-on-full-flow lub oil filter

Cooling system
- Thermostatically-controlled system with belt driven circulating pump and pusher fan
- Mounted radiator and piping

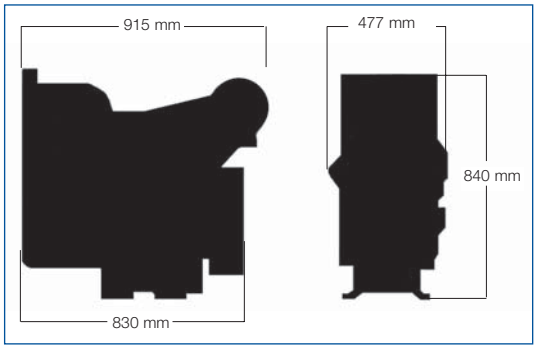
Electrical equipment
- 12 volt starter motor and 12 volt 55 amp alternator with DC output
- Oil pressure and coolant temperature switches
- 12 volt shut off solenoid energised to run
- Glow plug cold start aid and heater/starter switch

Flywheel and housing
1500/1800 rev/min
- High inertia flywheel to SAE J620 Size 7½ Heavy
- Flywheel housing SAE 4 Long

3000/3600 rev/min
- High inertia flywheel to SAE J620 Size 7½ Light
- Flywheel housing SAE 4 Short

Mountings
- Front and rear mounting bracket

Literature
- User's Handbook



General Data

Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	4 stroke
Induction system	Natural aspiration
Combustion system	Indirect injection
Cooling system	Water-cooled
Bore and stroke	84 x 100 mm
Displacement	2216cc
Compression ratio	23.3:1
Direction of rotation	Anti-clockwise viewed on flywheel
Total lubrication system capacity	10.6 litres
Total coolant capacity	6.98 litres
Length	915 mm
Width	477 mm
Height	840 mm
Dry weight (engine)	242 kg (1500/1800 rev/min) 218 kg (3000 rev/min)

Final weight and dimensions will depend on completed specification.

Optional Equipment
- Exhaust silencer
- Workshop manual
- Parts book

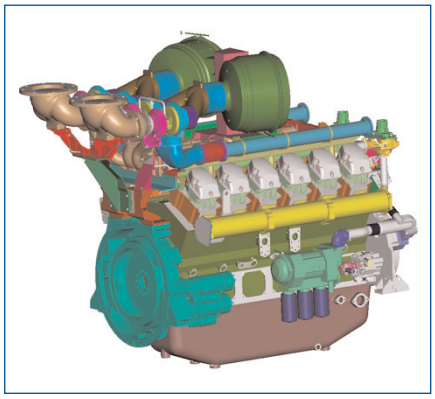
Fuel Consumption						
Engine Speed	1500 rev/min		1800 rev/min		3000 rev/min	
	g/kWh	l/hr	g/kWh	l/hr	g/kWh	l/hr
At Standby Rating	254	6.2	252	7.3	254	10.4
At Prime Power	243	5.4	245	6.4	256	9.5
At 75% Prime Power	243	4.0	247	4.8	269	7.5
At 50% Prime Power	265	2.9	269	3.5	313	5.8

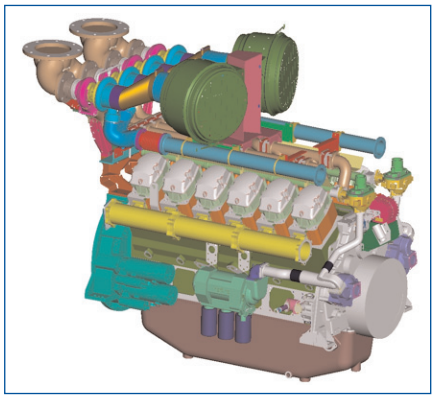
Perkins®

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

Distributed by

Publication No. 1664/10/05 Produced in England





4000 Series

4012-46TAG1A

Diesel Engine – ElectropaK

1250 kWm 1500 rpm
1250 kWm 1800 rpm

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. 4012-46TAG1A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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 temperature 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500 4012-46TAG1A	Baseload Power	1080	864	960	1287	900	1207
	Prime Power	1364	1091	1197	1605	1137	1524
	Standby (maximum)	1500	1200	1310	1757	1250	1676
1800 4012-46TAG1A	Baseload Power	1080	864	960	1287	900	1207
	Prime Power	1364	1091	1197	1605	1137	1524
	Standby (maximum)	1500	1200	1310	1757	1250	1676

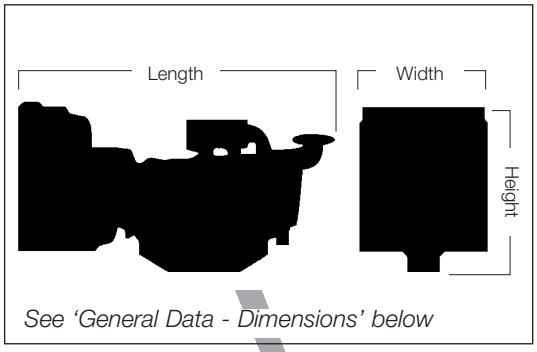
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1825/01/06 Produced in England

4000 Series
4012-46TAG1A



See 'General Data - Dimensions' below

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 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

Number of cylinders		12	
Cylinder arrangement		60º 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		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3924 mm
	Width	1798 mm	2192 mm
	Height	2287 mm	2267 mm

Final weight and dimensions will depend on completed specification

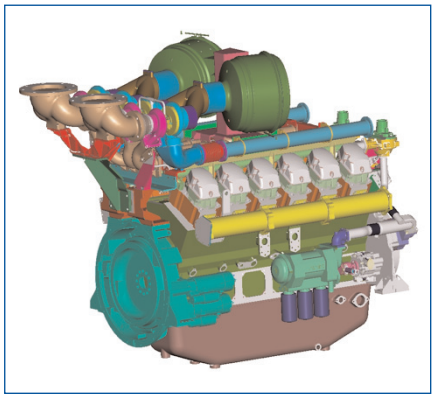
Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG1A	1800 rev/min 4012-46TAG1A
At Standby Maximum Rating	209	218
At Prime Power Rating	209	214
At Continuous Baseload Rating	210	212
At 75% of Prime Power Rating	212	209
At 50% of Prime Power Rating	215	219
At 25% of Prime Power Rating	232	233

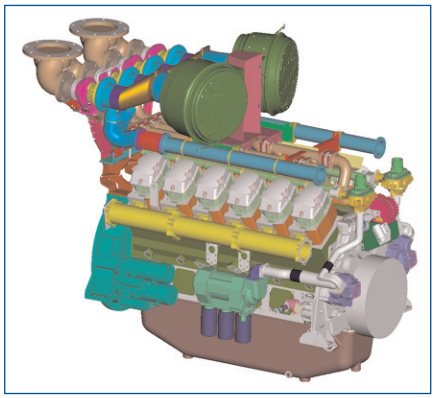
Perkins®

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

Distributed by

Publication No. 1825/01/06 Produced in England





4000 Series

4012-46TAG2A

Diesel Engine – ElectropaK

1380 kWm 1500 rpm
1380 kWm 1800 rpm

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. 4012-46TAG2A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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 temperature 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1194	955	1055	1415	995	1334
4012-46TAG2A	Prime Power	1505	1204	1314	1762	1254	1682
	Standby (maximum)	1656	1325	1440	1931	1380	1851
1800	Baseload Power	1194	955	1055	1415	995	1334
4012-46TAG2A	Prime Power	1505	1204	1314	1762	1254	1682
	Standby (maximum)	1656	1325	1440	1931	1380	1851

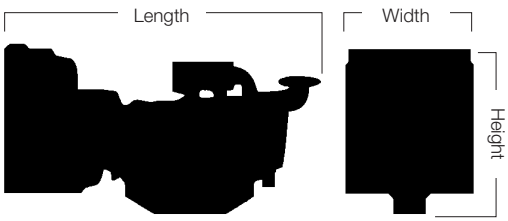
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1826/01/06 Produced in England

4000 Series
4012-46TAG2A



See 'General Data - Dimensions' below

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/lub oil temperature stabiliser

Cooling System
- Two twin thermostats
- System designed for ambients up to 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

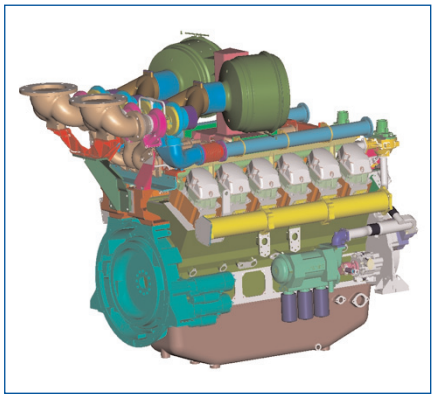
Number of cylinders		12	
Cylinder arrangement		60º Vee form	
Bore and stroke		160 x 190 mm	
Displacement		45.842 litres	
Induction system		Turbocharged and air to air charge cooled	
Cycle		4 stroke	
Combustion system		Direct injection	
Compression ratio		13.6:1	
Rotation		Anti-clockwise, viewed from flywheel end	
Cooling system		Water-cooled	
Firing order		1A, 6B, 5A, 2B, 3A, 4B, 6A, 1B, 2A, 5B, 4A, 3B	
Total lubrication system capacity		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3924 mm
	Width	1798 mm	2192 mm
	Height	2287 mm	2267 mm

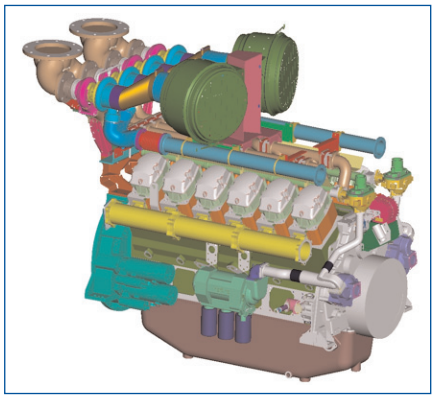
Final weight and dimensions will depend on completed specification

Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG2A	1800 rev/min 4012-46TAG2A
At Standby Maximum Rating	210	224
At Prime Power Rating	209	218
At Continuous Baseload Rating	210	210
At 75% of Prime Power Rating	211	213
At 50% of Prime Power Rating	213	206
At 25% of Prime Power Rating	230	221

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

Distributed by





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. 4012-46TAG3A ElectropaK is a newly developed turbocharged, air-to-air charge cooled, 12 cylinder diesel engine. Offered with either Temperate or Tropical cooling packages (with or without fuel oil 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.

4000 Series

4012-46TAG3A

Diesel Engine – ElectropaK

1563 kWm 1500 rpm
1563 kWm 1800 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
- 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 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 ½ TA Luft (1986)

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Baseload Power	1420	1136	1243	1667	1183	1587
4012-46TAG3A	Prime Power	1705	1364	1481	1986	1421	1905
	Standby (maximum)	1875	1500	1623	2176	1563	2095
1800	Baseload Power	1420	1136	1243	1667	1183	1587
4012-46TAG3A	Prime Power	1705	1364	1481	1986	1421	1905
	Standby (maximum)	1875	1500	1623	2176	1563	2095

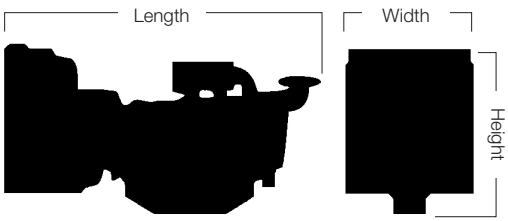
The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

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.

Publication No. 1827/01/06 Produced in England

4000 Series
4012-46TAG3A



See 'General Data - Dimensions' below

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/lub oil temperature stabiliser

Cooling System
- Two twin thermostats
- System designed for ambients up to 50ºC
- 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 high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches

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

Optional Equipment
Choice of temperature or tropical radiators available dependant on operational cooling requirements
Fuel oil cooler integral to the radiator assembly
Immersion heater with thermostat
Note: This list is not exhaustive, further options will be available at the product's introduction

General Data

Number of cylinders		12	
Cylinder arrangement		60º 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		177.6 litres	
		Temperate	Tropical
Total coolant capacity		225 litres	240 litres
Total weight		5540 kg	5650 kg
Dimensions	Length	3924 mm	3944 mm
	Width	2192 mm	2192 mm
	Height	2267 mm	2759 mm

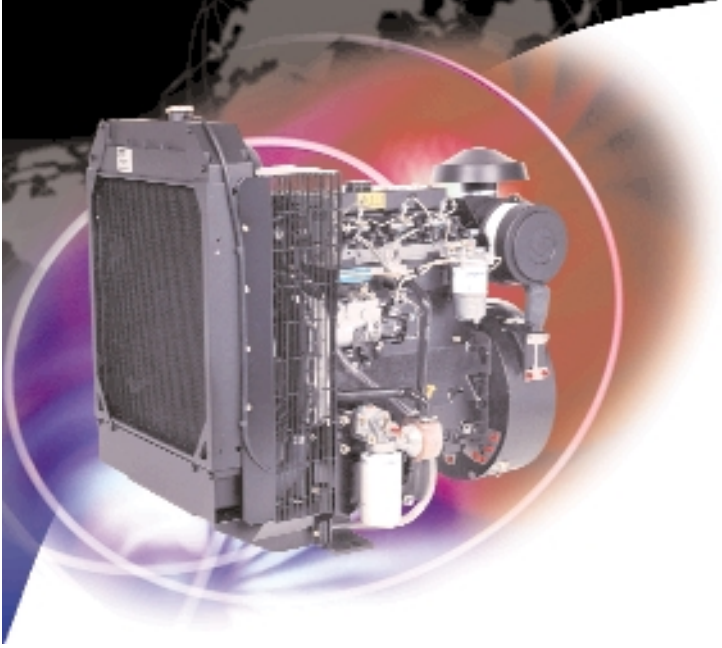
Final weight and dimensions will depend on completed specification

Fuel Consumption (g/kWh)		
Engine Speed	1500 rev/min 4012-46TAG3A	1800 rev/min 4012-46TAG3A
At Standby Maximum Rating	212	226
At Prime Power Rating	210	224
At Continuous Baseload Rating	208	213
At 75% of Prime Power Rating	210	214
At 50% of Prime Power Rating	213	205
At 25% of Prime Power Rating	228	220

Perkins®

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

Distributed by



1000 Series

Diesel Engine - ElectropaK

1004TG1

64.0 kWm 1500 rev/min
69.5 kWm 1800 rev/min

The Perkins 1000 Series family of ElectropaK engines are renowned throughout the power generation industry for their superior performance and reliability.

The 1004TG1 is a turbocharged 4 cylinder, 4 litre engine. Its premium features provide economic and durable operation offering the ideal characteristics for electrical power generation.

Economic power

One side servicing for reduced service time and cost.
Unique Quadram combustion system enables high power output with lower fuel consumption and noise.
Rated speed is changeable between 1500rpm and 1800rpm allowing standard builds to operate at either 50Hz or 60Hz.

Clean, efficient power

Operator and environmentally friendly with low noise and rapid startability and low emissions.

Durable power

Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions.
Inserted value seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable power

Wherever a Perkins' ElectropaK engine is put into service, it will never be far from the support provided by a global network of 4000 distributors and dealers, all backed by a parts distribution centre giving 24 hour service, 365 days a year.
Suitable for operation in ambient temperatures up to 53°C (46°C if a canopy is fitted)
Fuelled starting aid for temperatures down to -20°C.

Engine Speed rev/min	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power	65.0	52.0	60.0	80.5	58.0	78.0
	Standby power	71.5	57.5	66.0	88.5	64.0	86.0
1800	Prime power	70.5	56.5	66.5	89.0	63.0	84.5
	Standby power	77.5	62.0	73.0	98.0	69.5	93.0

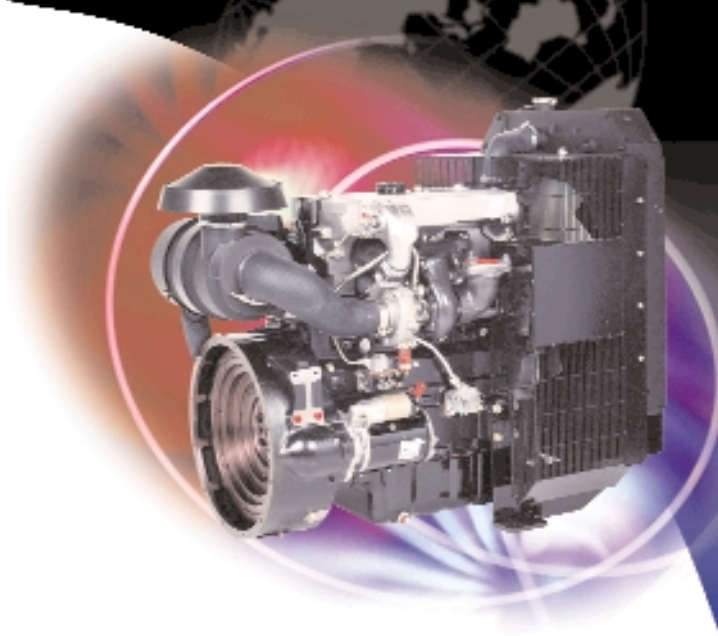
All ratings data based on operation under ISO 3046 conditions using typical fan sizes and drive ratios. For operation outside of these conditions please consult your Perkins Engines contact. Performance tolerance quoted by Perkins is ±5%.

Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.

Fuel specification: BS2869 Part 2 1998 Class A2 or ASTM D975 D2.
Lubricating oil: A single or multigrade oil to ACEAE1 E2 or CD/SD.

Rating Definitions
Prime power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for one hour in every twelve hours of operation.
Standby power: Power available at variable load in the event of a main power network failure. No overload is permitted.

1000 Series
1004TG1



Standard ElectropaK Specification

Air Inlet
Mounted air filter

Fuel System
Rotary fuel injection pump
Mechanical governing conforms to ISO8528-5 1993 (E)
Class G2, ISO3046-4M3
Spin-on full flow fuel filter with pre filter

Lubrication System
Rear well aluminium sump with filler and dipstick
Spin-on full-flow oil filter

Cooling System
Gear-driven circulating pump
20” belt-driven fan and guards
Mounted radiator and pipework

Electrical Equipment
12 Volt starter motor and 12 Volt 55 Amp alternator with DC output
12 Volt senders for oil pressure and coolant temperature
12 Volt shutdown solenoid energised to run
Cold start aid

Flywheel and Housing
High inertia flywheel to SAE J620 Size 10/11 1/2
Cast iron SAE 3 flywheel housing

Mountings
Front engine mounting bracket

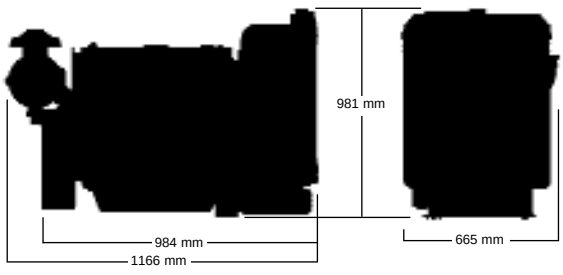
Optional Equipment

24V alternator
24V starter motor
Water temperature gauge and sender
Heater/starter switch
Rear engine mountings
Workshop manual
Parts book
User handbook
Electronic governor (12V only)

ElectropaK General Data

Number of cylinders	4
Cylinder arrangement	Vertical, in-line
Cycle	4-stroke
Induction system	Turbocharged
Combustion system	Direct injection
Cooling system	Water-cooled
Displacement	3.99 litres
Bore and stroke	100 mm x 127 mm
Compression ratio	16:1
Direction of rotation	Clockwise, viewed from the front
Firing order	1, 3, 4, 2
Total lubrication system capacity	8.1 litre
Coolant capacity (inc radiator)	18.7 litres
Length	1166 mm
Width	665 mm
Height	981 mm
Total weight (dry)	433 kg
Total weight (wet)	458 kg

Fuel consumption litres/hour (UK gallons/hour)		
Power rating	1500 rev/min	1800 rev/min
Standby power	16.4 (3.6)	18.8 (4.1)
Prime power	14.5 (3.2)	17.1 (3.7)
75% of prime power	10.9 (2.4)	13.2 (2.9)
50% of prime power	7.7 (1.7)	9.6 (2.1)



Distributed by

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

Publication Number: 1554/02/02 Printed in England © Perkins Engines Company Limited 2002