

1200 Series 1204E-E44TAG1 Diesel Engine – ElectropaK

EPA Tier 4 Interim
1204E-E44TAG1 – 81.5 kWm @ 1800 rev/min

Building on its already strong EPA Tier 4 Industrial range, Perkins is pleased to announce the natural expansion of the 1200 Series to include the new 4 cylinder ElectropaK range.

The whole engine has been built around the demands of our customers and as such offers a great package with a simple integration design.

Perkins have developed a reputation for designing and building reliable and durable engines suitable for the most demanding applications.

Engine data

Number of cylinders	4 vertical in-line
Bore and stroke	105 mm x 127 mm (4.13 in x 5 in)
Displacement	4.4 litres (268.5 cu in)
Aspiration	Turbocharged aftercooled
Cycle	4 stroke
Combustion system.....	Direct injection
Compression ratio	16.5:1
Rotation.....	Anti-clockwise, viewed on flywheel
Total lubricating capacity.....	5.2-13.5 litres (1.37-3.57 US gal)
Cooling system.....	Liquid
Total coolant capacity	10.8 litres (2.85 US gal)
Dimensions TA	
Length	1433 mm (56.4 in)
Width.....	820 mm (32.3 in)
Height (incl aftertreatment)	1126 mm 44.3 in
.....	1150 mm 45.3in (>82 kW)
Dry weight	650 kg (1433 lbs)

Final weight and dimensions will depend on completed specification

Emissions

Designed to meet EPA Tier 4 Interim (US).

Dependable power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

Turbocharging with smart wastegate available on all ratings.

Flexibility

Engine mounted aftertreatment fitted as standard as well as loose supply available to optimise installation. Tropical radiator is supplied as standard although we can offer alternatives if required.

Lifetime of low cost

Fuel consumption optimized prime power and continuous running applications. No additional fluids or additives are required which lowers operating costs.

Low ownership costs are enabled by a 3000 hour service interval for the multi vee belts, service-free tappets and a service-free diesel particulate filter.

Local support, global coverage

- Perkins recognise that the customer relationship is important to machine manufacturers and we can offer a range of flexible solutions to help provide appropriate support, either to the OEM's network or directly to the machine customer.
- Perkins information systems enable our distributors to quickly diagnose engine faults and identify the right parts. The Perkins logistics operation is able to dispatch more than 45,000 different parts from stock, reaching the customer within 24 hours.
- Extended Service Contracts – protect and plan the cost of ownership.



Engine Speed (rev/min)	Type of Operation	Generator Output		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1800	Prime Power	68.2	54.5	74.1	99.4	68.6	92.0
	Standby Power	75.0	60.0	81.5	109.3	76.0	102.2

The above ratings represent the generating set performance capabilities to conditions specified in ISO 8528/5.

Generator powers are typical and are based on typical alternator efficiencies and a power factor.

Fuel specification: Ultra Low Sulphur Diesel should be used. Lubricating oil: multi-grade oil conforming to CJ4 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 Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

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Engine specification

Air inlet

- Standard air cleaners

Control system

- Full electronic control system
- All connectors and wiring looms waterproof and designed to withstand harsh off-highway environments
- Flexible and configurable software features and J1939 standard communications I/O

Cooling system

- Engine mounted radiator with top tank temperature of 108°C
- 50:50 water glycol mix
- Detailed guidance on cooling system design and validation available to ensure machine reliability

Standard emissions control equipment

- NRS – NOx Reduction System

Flywheels and flywheel housing

- Wide choice of drivetrain interfaces, SAE2 and SAE3 configurations

Fuel system

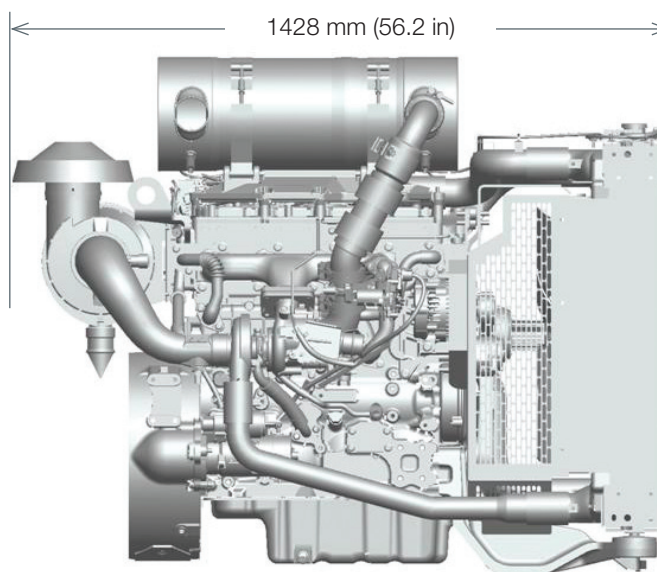
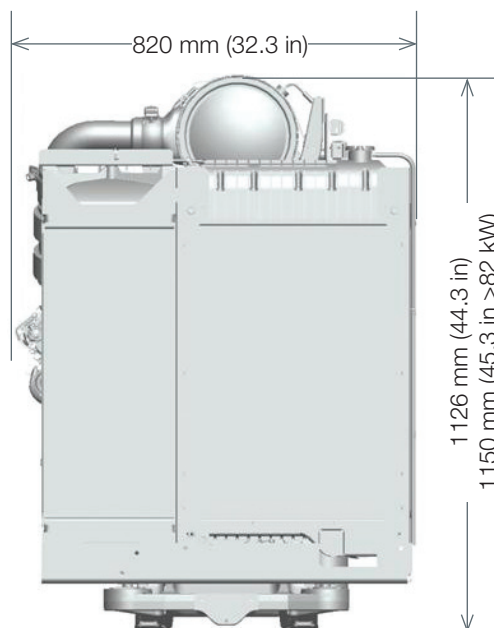
- Electronic high pressure common rail
- Standard and heavy duty fuel filtration

Oil system

- Choice of sumps for different applications

General

- Pusher as standard



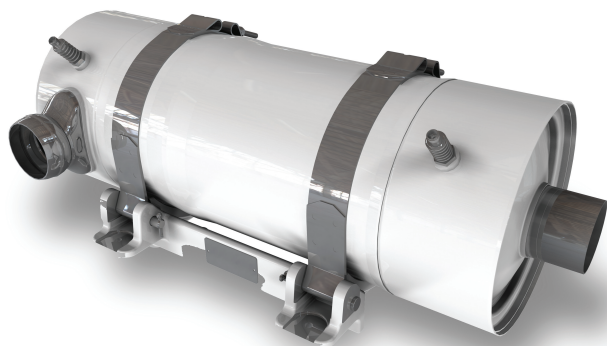
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Aftertreatment configuration



		≤ 82 kW (110 hp)	> 82 kW (110 hp)
1	Length	802.5 mm (31.6 in)	828 mm (32.6 in)
2	Width	365 mm (14.3 in)	365 mm (14.3 in)
3	Height	279 mm (11 in)	300.5 mm (11.8 in)
4	Diameter	244.9 mm (9.6 in)	270.3 mm (10.6 in)
Weight		34 kg (75 lbs)	37 kg (81.6 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment can be module shipped as separate part to be assembled by customer.

Technology

The DPF technology chosen is a wall flow filter configuration that performs through the whole work cycle of the engine thus allowing it to work efficiently.

Power

Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and the regeneration is invisible to the operator.

Mounting

Remote and engine-mounted installation options provide OEM flexibility for many applications.

Service

Aftertreatment designed to be service-free (minimum 8,000 hours).

Aftertreatment

- DOC – Diesel Oxidation Catalyst
- DPF – Diesel Particulate Filter supplied, with a range of inlet and outlet options
- No ash service requirement, low temperature regeneration
- 3" flex pipe kits available with a variety of elbow options for turbocharger connection

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