

1204F-E44TTA Industrial Diesel Engine

105-129.4 kW (140-173 hp) @ 2200 rpm

EU Stage IV/U.S. EPA Tier 4 Final

The Perkins 1204F, the 4 cylinder option for the 1200 Series, gives you a complete power solution that meets the latest EU Stage IV/U.S. EPA Tier 4 Final emission standards. The choice of options, engine configurations and robust technology allows you to integrate the 1204 range into your equipment with minimum re-engineering.

The innovative, compact and flexible design of the Perkins 1200 Series means it can be found in more than 800 different models of equipment.

Designed to meet EU Stage IV/U.S. EPA Tier 4 Final emission standards.



Specifications

Power Rating		
Minimum Power	105 kW	140.8 HP
Maximum Power	129.4 kW	173.5 HP
Maximum Torque	750 Nm @ 1400 rpm	553.1 lb-ft @ 1400 rpm
Rated Speed	2200 rpm	

Emission Standards	
Emissions	EU Stage IV/U.S. EPA Tier 4 Final

General		
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 l	268.5 in ³
Aspiration	Series turbocharged aftercooled	
Rotation from Flywheel End	Anti-clockwise	
Combustion System	Direct injection	
Compression Ratio	16.5:1	
Cooling System	Liquid	
Cycle	4 stroke	
Number of Cylinders	4 inline	

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Photographs are for illustrative purposes only and may not reflect final specification.
All information is substantially correct at time of printing and may be altered subsequently.
Final weights and dimensions will depend on completed specification.

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Total Coolant Capacity	10.8 l	2.85 gal (US)
Total Lubricating Capacity	13.5 l	3.57 gal (US)

Aftertreatment Dimensions* - DOC/SCR

Height	390 mm	15.3 in
Length	675 mm	26.5 in
Weight	45 kg	99 lb
Width	478 mm	18.8 in

Aftertreatment Dimensions* - DPF/SCR

Height	430 mm	16.9 in
Length	722 mm	28.4 in
Weight	80 kg	176 lb
Width	695 mm	27.3 in

Engine Dimensions*

Dry Weight	420 kg	926 lb
Height	867.6 mm	34.1 in
Length	845.1 mm	33.3 in
Width	741.6 mm	29.1 in

Features and Benefits

A lifetime of low cost

We have designed the Perkins 1204 range with optimised fuel consumption in mind, matching it to the operating cycles of a wide range of equipment and applications.

Low cost maintenance is achieved through hydraulic tappets, multi-vee belts, service free aftertreatment and 500 hour oil change intervals.

In addition, on the 1204F industrial engine, many service items can be located on either side of the engine to give you maximum access for servicing.

Easy to switch

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The 1204 range features core technologies to support your move from Stage IIIB/Tier 4 Interim to Stage IV/Tier 4 Final. Following the introduction of the latest emission standards for engines below 130 kW (175 hp), in October 2014 in the EU and in January 2015 in the U.S., our technology consistently delivers with the minimum amount of difficulty.

Like you, we believe there is no need for a trade-off between meeting emission standards and delivering on performance. The 1200 Series tackles the emissions challenge head-on and gives you improved productivity levels and fuel consumption compared to the previous generation Stage IIIB/Tier 4 Interim engines.

Ideal for downsizing

High power density, combined with excellent torque in the 1204 range allows you to select a more compact engine where previously you might have used an engine of a higher cubic capacity. This downsizing has several benefits, including saving you money and providing more space to package aftertreatment units.

Tailored for your machines

Your needs are our top priority, which is why we provide more tailored technology for OEMs than anyone else. Working closely with OEMs, we have developed the 1204 range with hundreds of variables so that it easily fits into your machine.

Our 1204 range engines come with two year warranties as standard and can also be supported by extended service contracts.

Technical Information

Aftertreatment technology

- 3" flex pipe kits available with a variety of elbow options for turbocharger connection
- DOC – Diesel Oxidation Catalyst
- DPF – Diesel Particulate Filter
- SCR - Selective Catalytic Reduction
- SCR Auxiliaries - A range of tanks and heated lines are available

Air inlet system

- Standard air cleaners

Control system

- Flexible and configurable software features and well-supported SAE J1939 CAN bus enables highly integrated machines
- Full electronic control system, all connectors and wiring looms waterproof and designed to withstand harsh off-highway environments

Cooling system

- 50:50 water glycol mix
- Detailed guidance on cooling system design and validation available to ensure machine reliability

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- Top tank temperature 108°C (226°F) as standard to minimize cooling pack size

Flywheels and flywheel housing

- Wide choice of drivetrain interfaces, including SAE No. 2 and SAE No. 3 configurations

Fuel system

- Innovative filter design to ensure maximum protection of the engine
- Electronic high pressure common rail

General

- Available with or without a balancer

Oil system

- Wide choice of sumps for different applications

Power take-off

- SAE A and SAE B flanges on left-hand side. Additional SAE A flange available on left-hand side. Engine power can also be taken from the front of the engine on some applications. Factory fitted compressors are also available.

Standard emissions control equipment

- NRS – NOx Reduction System

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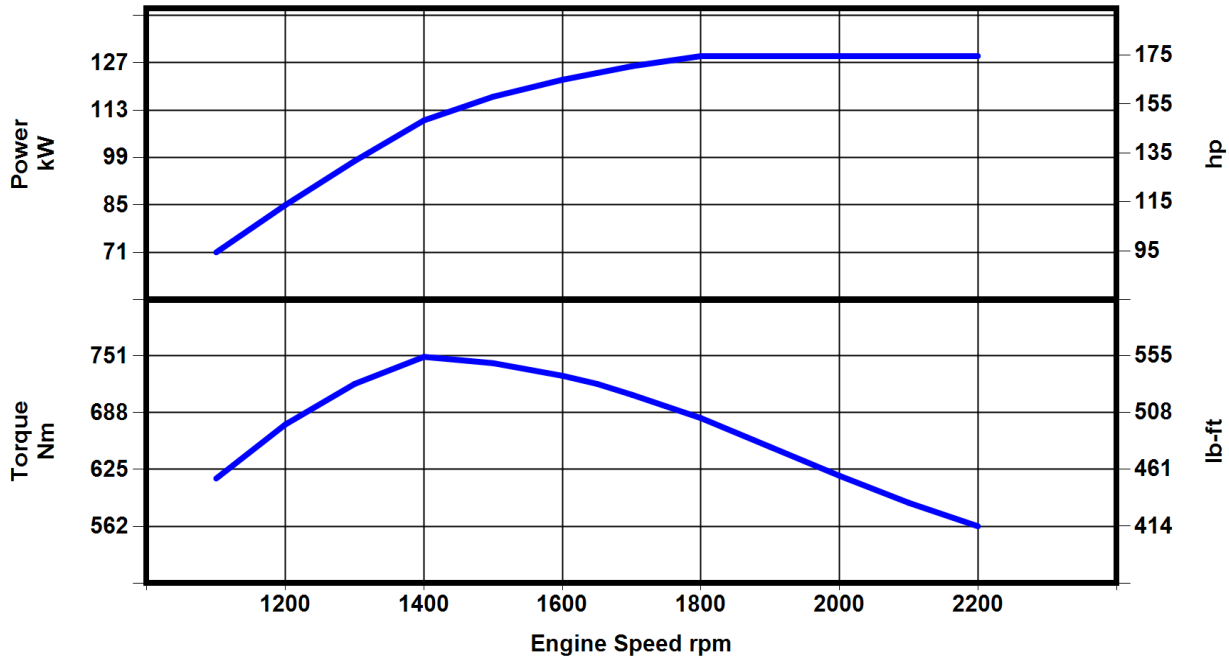
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1200 Series 1204F-E44TTA INDUSTRIAL ENGINE

EU Stage IV/U.S. EPA Tier 4 Final

.0-129 kW / .0-174 hp



Power kW	Power hp	Rated Speed (rpm)	Torque Nm	Torque lb-ft	Speed (rpm)	Rating Type
105	141	2200	630	465	1400	Industrial B rating
112	150	2200	650	480	1400	Industrial B rating
117	157	2200	683	504	1400	Industrial C intermittent rating
129	174	2200	750	554	1400	Industrial C intermittent rating

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Rating Standard ISO 14396:2002

Additional ratings are available for specific customer requirements. Consult your Perkins distributor.

Unless otherwise specified, all stated data is for maximum rated speed and 100% load.

B rating performance data will be added upon availability

Rating Definitions and Conditions

IND B Rating

For service where power and/or speed are cyclic (time at full load not to exceed 80%).

IND-C (Intermittent) Rating

Is the horsepower and speed capability of the engine where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

Rating Conditions for Diesel Engines – up to 7.1 liters are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in. Hg), with a vapor pressure of 1 kPa (0.295 in Hg) and 25°C (77°F). Performance is measured using fuel to specification EPA 2D 89.330-96 with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

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