

1204F-E44TA Industrial Diesel Engine

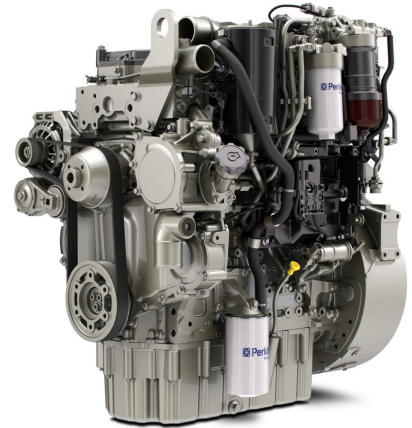
70-110.1 kW (94-147 hp) @ 2200 rpm

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.

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



Specifications

Power Rating		
Minimum power	70 kW	93.9 hp
Maximum power	110.1 kW	147.6 hp
Rated speed	2200 rpm	
Maximum torque	560 Nm @ 1400 rpm	413 lb-ft @ 1400 rpm

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

General		
Number of cylinders	4 inline	
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 litres	268.5 cubic in
Aspiration	Turbocharged aftercooled	
Cycle	4 stroke	
Compression ratio	16.5:1	
Combustion system	Direct injection	
Rotation (from flywheel end)	Anti-clockwise	
Cooling system	Liquid	

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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 litres	2.85 US gal
Total lubricating capacity	13.5 litres	3.57 US gal

Engine Weights and Dimensions*

Length	845.1 mm	33.3 in
Width	772.4 mm	30.4 in
Height	848.2 mm	33.4 in
Dry weight	400 kg	882 lb

Aftertreatment Weights and Dimensions* - DOC/SCR ≤ 92.6 kW (124.2 hp)

Length	647 mm	25.4 in
Width	453 mm	17.8 in
Height	372 mm	14.6 in
Weight	40 kg	88 lb

Aftertreatment Weights and Dimensions* - DOC/SCR > 92.6 kW (124.2 hp)

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

Disclaimer

*Final dimensions dependent on selected options	0	0
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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.

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Easy to switch

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 supplied, with a range of inlet and outlet options
- 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

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- Detailed guidance on cooling system design and validation available to ensure machine reliability
- 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

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

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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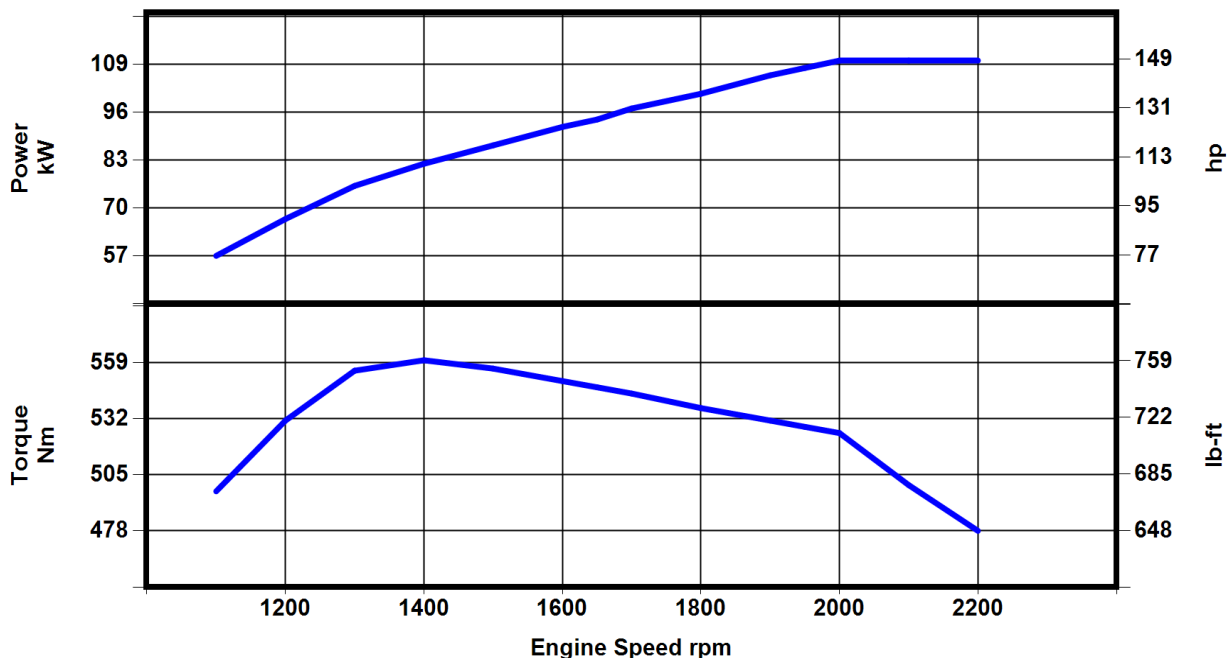
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1200 Series 1204F-E44TA INDUSTRIAL ENGINE

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

70.0-110 kW / 93.9-148 hp



Power kW	Power hp	Rated Speed (rpm)	Torque Nm	Torque lb-ft	Speed (rpm)	Rating Type
70.0	93.9	2200	450	610	1400	Industrial C intermittent rating
74.5	99.9	2200	450	610	1400	Industrial C intermittent rating
82.0	110	2200	450	610	1400	Industrial C intermittent rating
85.9	115	2200	500	678	1400	Industrial B rating
91.0	122	2200	500	678	1400	Industrial B rating
92.6	124	2200	530	718	1400	Industrial B rating
97.9	131	2200	530	718	1400	Industrial C intermittent rating
102	137	2200	560	759	1400	Industrial C intermittent rating
106	142	2200	560	759	1400	Industrial C intermittent rating
110	148	2200	560	759	1400	Industrial C intermittent rating

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70.0-110 kW / 93.9-148 hp

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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