

# 1200 Series 1204F-E44TA/TTA Industrial Open Power Unit

EU Stage IV, EPA Tier 4 Final  
74.5-129.4 kW / 100-173.5 bhp

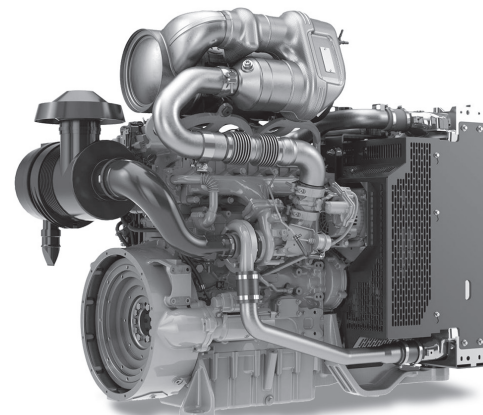
**Building on its already strong EU Stage IV and EPA Tier 4 industrial range, Perkins is pleased to announce the introduction of the 1204F Industrial Open Power Unit (IOPU).**

The Perkins four cylinder IOPU is an industry leader in flexibility. Offering a wide choice of options, the whole engine has been built around the demands of our customers and as such offers a great package with a simple integration design.

The 1204F-E44TA and 1204F-E44TTA IOPUs are turbocharged and series turbocharged respectively. They are air-to-air charge cooled, 4.4 litre, 4 cylinder units capable of producing 74.5 - 129.4 kW (100 - 173.5 bhp). These engines provide excellent power density and fast response in a compact package – allowing customers to downsize from a six cylinder engine whilst maintaining power.

The IOPUs are designed to be productive and have a new range of power ratings to ensure the customer maximizes their profitability.

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



## Emissions

Designed to meet EU Stage IV (Europe), EPA Tier 4 Final (US) and MLIT 2014 Regulations (Japan)

## Engine data

Number of cylinders ..... 4 in-line  
Bore and stroke..... 105 mm x 127 mm (4.13 in x 5 in)  
Displacement ..... 4.4 litres (268.5 cubic in)  
Aspiration 1204F-E44TA..... Turbocharged aftercooled  
Aspiration 1204F-E44TTA..... Series 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 (incl aftertreatment):

Length ..... 1433 mm (56.4 in)  
Width..... 819 mm (32.2 in)  
Height..... 1215 mm (47.8 in)

Dry weight ..... 670 kg (1477 lbs)

### Dimensions TTA (incl aftertreatment):

Length ..... 1455 mm (57.2 in)  
Width..... 870 mm (34.2 in)  
Height..... 1280 mm (50.3 in)

Dry weight ..... 700 kg (1543 lbs)

Final weight and dimensions will depend on completed specification

## Dependable power

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

## Designed to be productive

Series turbocharging with smart wastegate available on some ratings for fast response, high power, and increased torque.

## Lifetime of low cost

Fuel consumption optimized to match operating cycles of a wide range of equipment and applications.

Hydraulic tappets, multi-vee belts and 500 hour oil change intervals enable low-cost maintenance.

## Industry leading flexibility

Exceptional power density enables standardisation across numerous applications. Multiple installation options minimise total package size. Ideal for equipment with narrow engine compartments.

## 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

Discover more

[www.perkins.com](http://www.perkins.com)

[www.perkins.com/esc](http://www.perkins.com/esc)

[www.perkins.com/distributor](http://www.perkins.com/distributor)

To find your local distributor

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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

- SAE3 configuration as standard

### Fuel system

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

### Oil system

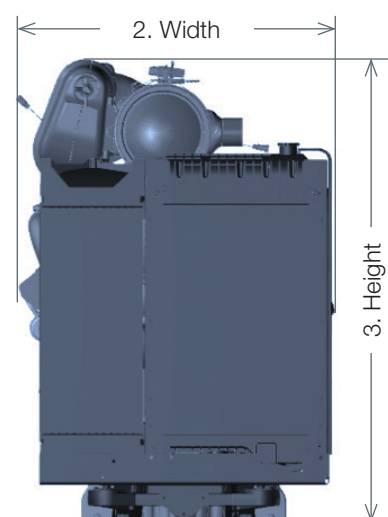
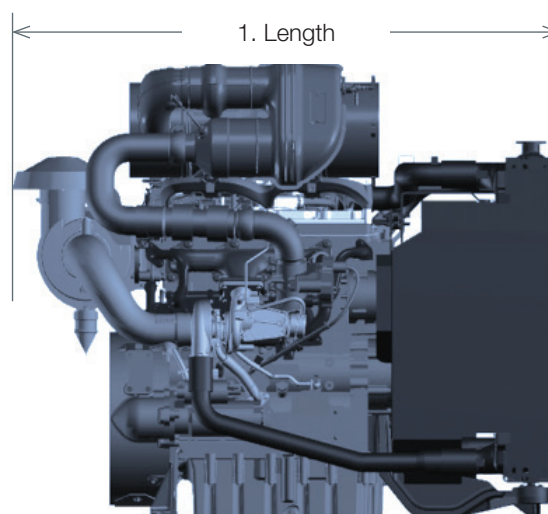
- Choice of sumps for different applications

### Power take-off

- SAE A or SAE B flanges on left-hand side, additional SAE A flange available on front of the engine on some applications

### General

- Balancer option available
- Pusher or puller fan options



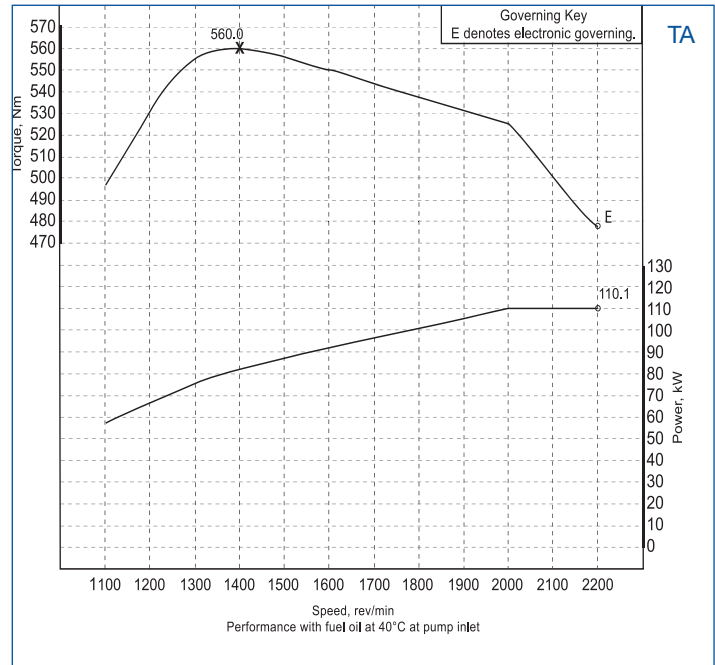
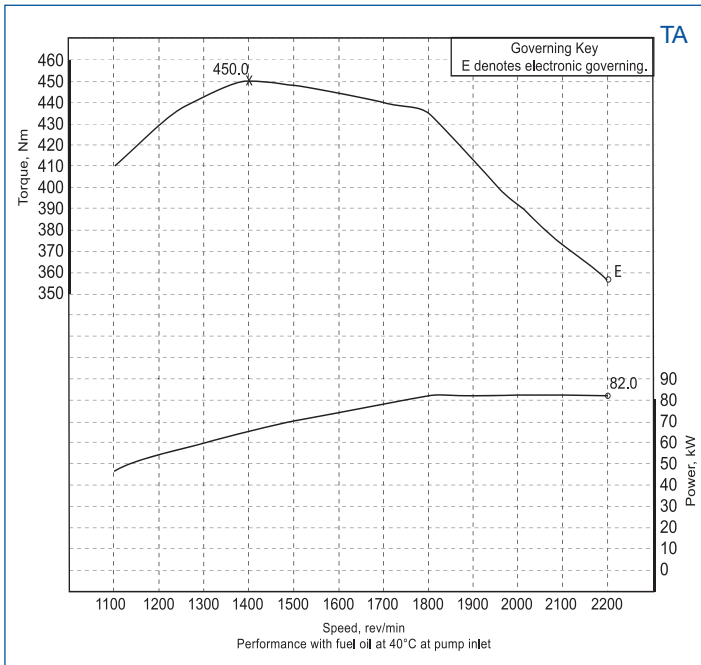
Final weight and dimensions will depend on completed specification

Dimensions	1204F-E44TA		1204F-E44TTA	
1. Length	1433 mm	(56.4 in)	1455 mm	(57.2 in)
2. Width	819 mm	(32.2 in)	870 mm	(34.2 in)
3. Height	1215 mm	(47.8 in)	1280 mm	(50.3 in)

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## Performance data



Power kW (bhp)	Speed (rpm)	Torque Nm (lb.ft)	Speed (rpm)	Rating Type
74.5 (100.0)	2200	450 (332.0)	1400	C
*82.0 (110.0)	2200	450 (332.0)	1400	C
92.5 (124.0)	2200	530 (391.0)	1400	B
102.1 (137.0)	2200	560 (413.0)	1400	C
*110.1 (147.6)	2200	560 (413.0)	1400	C
117.0 (157.0)	2200	683 (503.8)	1400	C
*129.4 (173.5)	2200	750 (553.2)	1400	C

\* Curve shown  
Rating Standard ISO 14396:2002.  
Unless otherwise specified, all stated data is for maximum rated speed and 100% load.

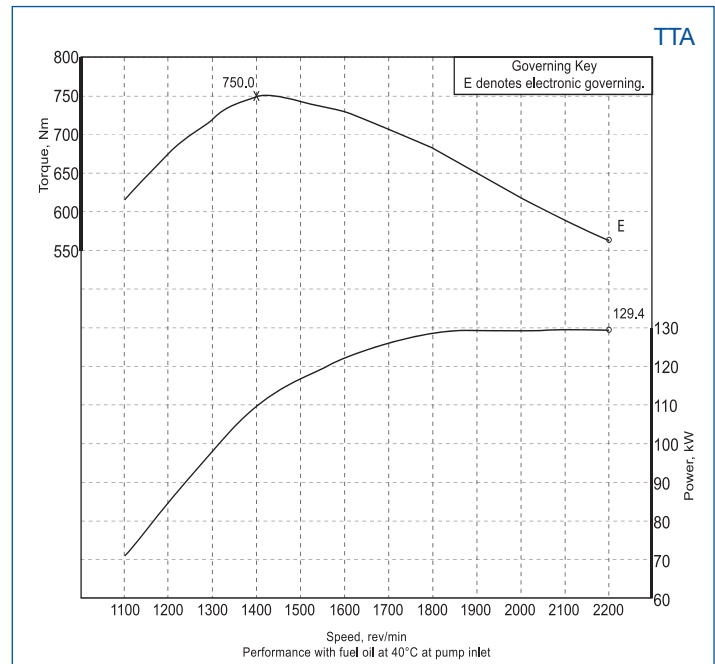
## Rating definitions and conditions

**IND-B** for service where power and/or speed are cyclic (time at full load not to exceed 80%).

**IND-C (Intermittent)** 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%).

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

**Rating Conditions for Diesel Engines** – up to 7.1 litres are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in. Hg), with a vapour 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).



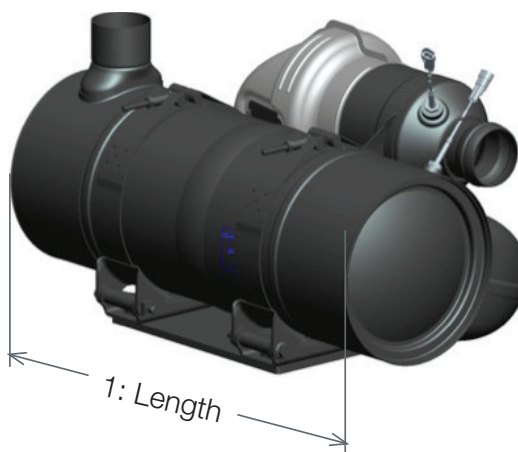
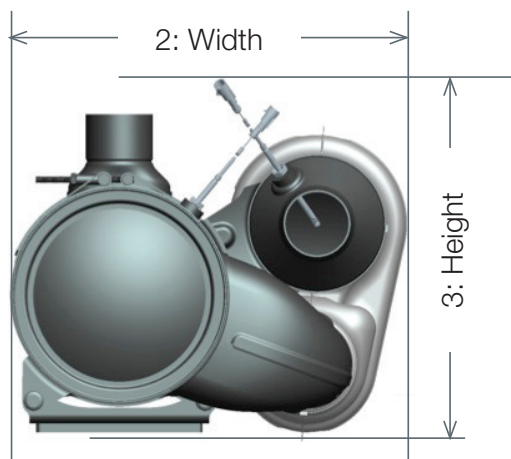
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# 1200 Series 1204F-E44TA/TTA Industrial Open Power Unit

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## Aftertreatment configuration



		≤ 92.6 kW (124.2 bhp)	> 92.6 kW (124.2 bhp)
1	Length	647 mm (25.4 in)	675 mm (26.5 in)
2	Width	453 mm (17.8 in)	478 mm (18.8 in)
3	Height	372 mm (14.6 in)	390 mm (15.3 in)
	Weight	40 kg (88 lbs)	45 kg (99 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment module factory fitted to engine as standard.

### Aftertreatment

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

### Technology

The DOC/SCR technology provides a compact aftertreatment solution, whilst still providing the performance our customers require.

### Power

Using our advanced research and development techniques, we have perfectly matched the aftertreatment system to the engine. The engine performance has then been optimised to give the application maximum productivity whilst the aftertreatment remains invisible to the equipment operator when in use

### Mounting

Engine mounted installation simplifies customers integration and manufacturing requirements.

### Service

Service free for the life of the engine.

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