Perkins®
SYNCRO

2.2 litre

Industrial

EU Stage V / U.S. EPA Tier 4 Final / Japan 2014
55 kW / 74 hp

The Perkins® Syncro 2.2 engine has been designed to help our customers meet the latest emissions standards in Europe, North America and Japan.

The engine is a 4-cylinder, 2.2 litre, turbocharged aftercooled engine that offers supreme reliability, flexibility and an easy integration process.

Benefiting from a fully electronic fuel system, the engine offers excellent transient performance and low fuel consumption. It produces 55 kW (74 hp) and delivers excellent torque at low speeds, reduced owner and operating costs and low noise and harshness.

Commonality with other engines in the range has been built into this new engine, allowing for minimum machine change and reduced development costs for Perkins customers.

We have developed a reputation for designing and building reliable and durable engines suitable for the most demanding off-highway applications. An extensive range of options is on offer, making Perkins Syncro the complete solution for compact power needs.

Emissions

EUStage V / U.S. EPA Tier 4 Final / Japan 2014

Specification	404J-E22TA	
Number of cylinders	4 vertical in-line	
Bore and stroke	84 x 100 mm	3.3 x 3.9 in
Displacement	2.2 litres	135 in^3
Aspiration	Turbocharged aftercooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	18:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	10.6 litres	2.8 US gal
Cooling system	Liquid	
Total coolant capacity	4.2 litres	1.1 US gal

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Features and benefits

Reliable, quiet, and durable power

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

Innovative design

- Improved power and torque
- Flexibility in aftertreatment mounting

Low cost of ownership

- Reduced oil consumption
- Easy maintenance and serviceability
- Improved fuel consumption
- Service-free aftertreatment system
- Transparent aftertreatment regeneration to proivde seamless operation
- 500-hour service intervals and two-year warranty as standard

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
- With highly trained Perkins distributors in thousands of communities in over 180 countries, you are never far away from expert product knowledge, genuine parts and a range of advanced diagnostic technology for keeping your engine in peak condition
- To find your local distributor: www.perkins.com/distributor

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Technical information

Core engine

- Multiple engine rating options
- Cast iron engine block
- SAE A PTO drive
- Flywheel and flywheel housing options
- Glow plug starting aid
- Block heater provision

Fuel system

- Electronic 2000 bar common rail fuel system
- Spin on fuel filter with water detector

Electrics

- Starter motor 12 volts
- Alternator 12 volts, 85 amp

Air system

- Turbocharged aftercooled

Control system

- Electronic control module – chassis mounted
- Flexible and configurable software features and well supported SAE J1939 CAN bus enables highly integrated machines
- The wiring harness, connectors and sensors are waterproof and designed to withstand harsh off-highway environments

Emissions control system

- Compact Diesel Particulate Filter (DPF) only aftertreatment system

Options group

An extensive range of options are available, enabling you to prepare a specification matched precisely to your needs.

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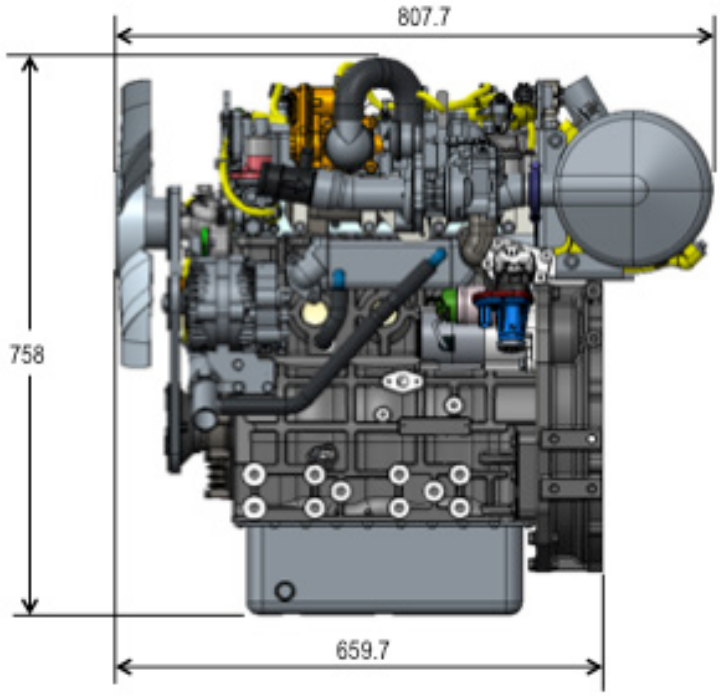

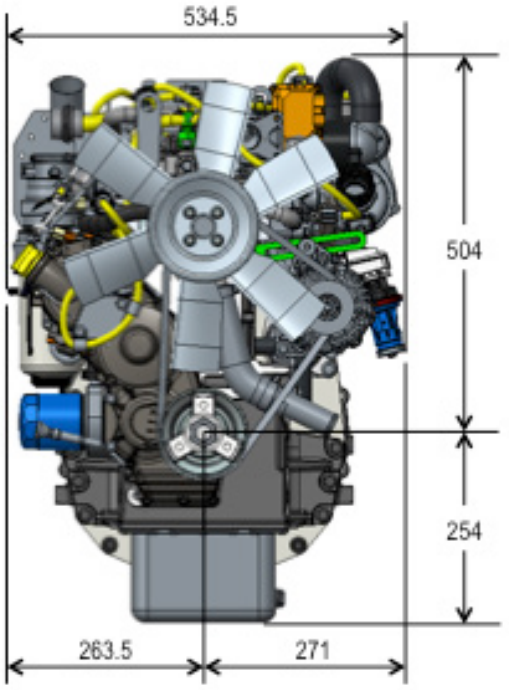

Engine package weights and dimensions – based on rear mount		
Length (including fan)	807 mm	31.7 in
Width	535 mm	21.0 in
Height	757 mm	29.8 in
Weight (dry)	242 kg	533.5 lb

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

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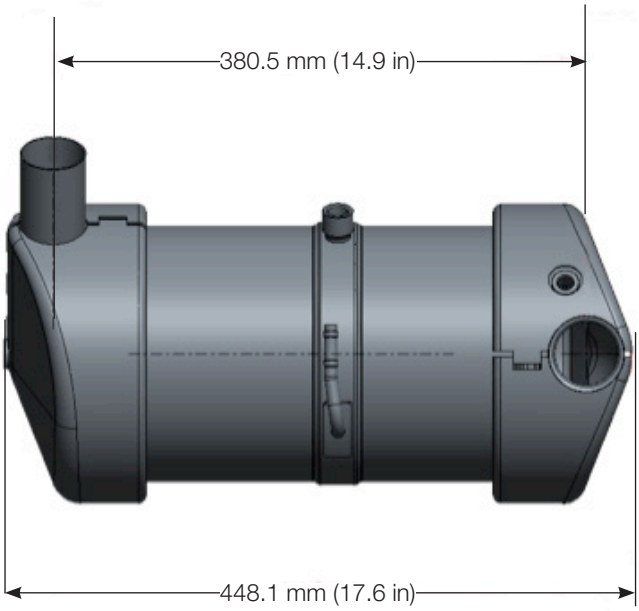

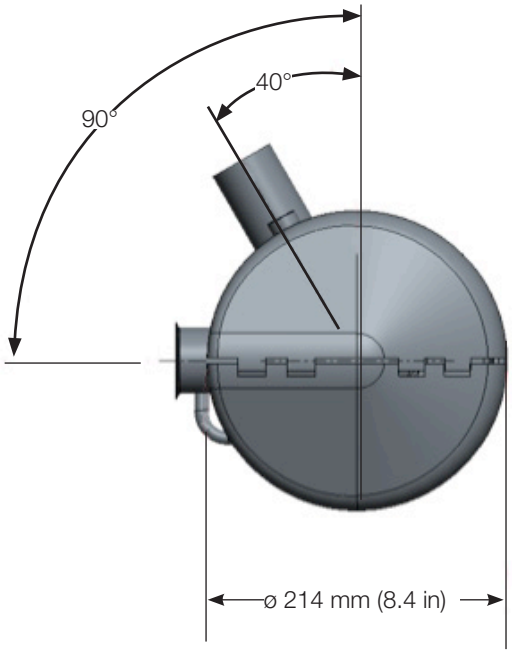

Aftertreatment

DPF - Diesel Particulate Filter.

Technology

The DPF technology provides customers with as compact as possible aftertreatment solution. The aftertreatment is transparent to the operator throughout the work cycle.

Power

Using our advanced research and development techniques, we have perfectly matched the aftertreatment system to the engine. With transparent regeneration, machine uptime is protected.

Mounting

Mounted on engine as standard, to provide low installation cost to machine manudacturer. Off engine option available for application packaging requirements.

Service

Service-free operation.

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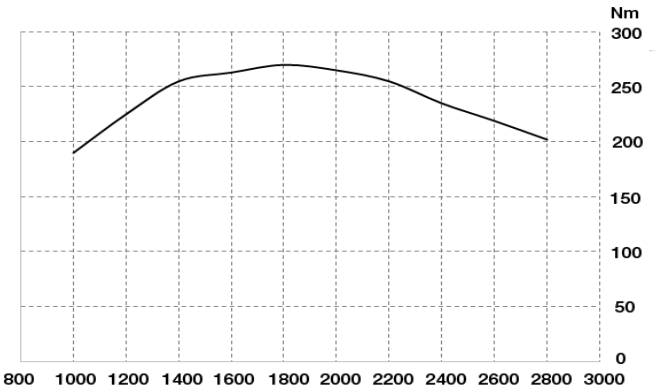

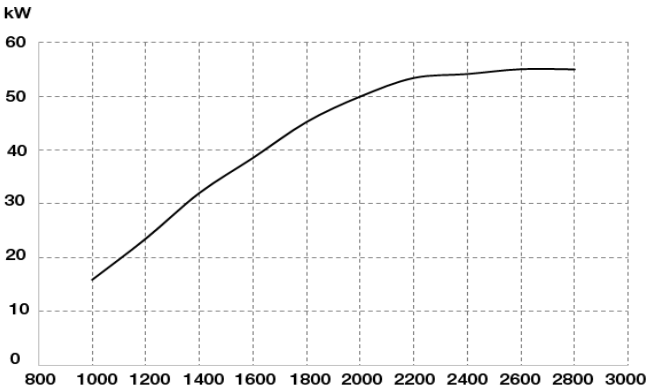

Speed rpm	Power kW	Power hp	Torque Nm	Torque lbf·ft	Rating type
2800	55	74	270	199	C

Rating definitions and conditions

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%).

We have a selection of ratings to match differing machine requirements and will work with you to find the best power solution.

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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