

850 Series 854F-E34TA Industrial Engine

EU Stage IV, U.S. EPA Tier 4 Final
63-90 kW / 84-121 bhp

The addition of the 854F-E34TA range to our 850 Series ensures our customers have a complete power solution ready and available when they need to change over to the next stage of emissions legislation - EU Stage IV, EPA Tier 4 Final in 2014 and 2015 respectively. These engines have been designed to give exceptional power density and low cost of ownership. Their robust technology allows our OEMs the ability to integrate these engines into their equipment with the minimum of re-engineering.

The 854F-E34TA is a single turbocharged, air-to-air charge cooled, 3.4 litre, 4 cylinder unit capable of producing 90 kW (120 bhp). Its high power density, and excellent torque enables our machine manufacturers to select this engine where previously they may have used an engine of higher cubic capacity. This downsizing represents a cost saving and creates more space to package the new aftertreatment unit.

The Perkins® 850 Series engines have the innovative design to meet the latest, stringent emissions legislation and the flexibility to integrate into hundreds of different types of equipment.

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	99 x 110 mm (3.9 x 4.3 in)
Displacement	3.4 litres (207.5 cubic in)
Aspiration	Turbocharged aftercooled
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	17:1
Rotation	Anti-clockwise, viewed on flywheel
Cooling system	Liquid
Total coolant capacity (engine only)	6 litres (1.58 US gal)
Dimensions – side turbo	
Length	739.5 mm (29.1 in)
Width	623.0 mm (24.5 in)
Height	805.5 mm (31.7 in)
Dry weight	270 kg (595.2 lbs)

Final weight and dimensions will depend on completed specification

Emissions

Designed to meet 2014 EU Stage IV (Europe) and U.S. EPA Tier 4 Final emission requirements.

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

- Leading-edge technology of the 850 Series provides significant improvements in power, torque, fuel consumption and response.
- Turbocharging – single smart wastegated turbo systems.
- Durable high pressure common rail technology.
- Centrifugal (no filter) closed circuit breathing system.

Fuel economy

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

Low cost of ownership

- Excellent fuel consumption.
- Hydraulic tappets allow service-free top end.
- Multi-vee belts for longer service intervals.
- 500 hour oil change intervals.

Product support excellence

- 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:
 - No surprises – Total protection from unexpected repair costs (parts, labour and travel).
 - Enjoy longer lasting product support from Perkins global network.
 - Genuine Perkins parts ensure continued engine performance.
 - Highly trained technicians carry out all repairs.
 - Transferable coverage should you sell your machine.

Discover more

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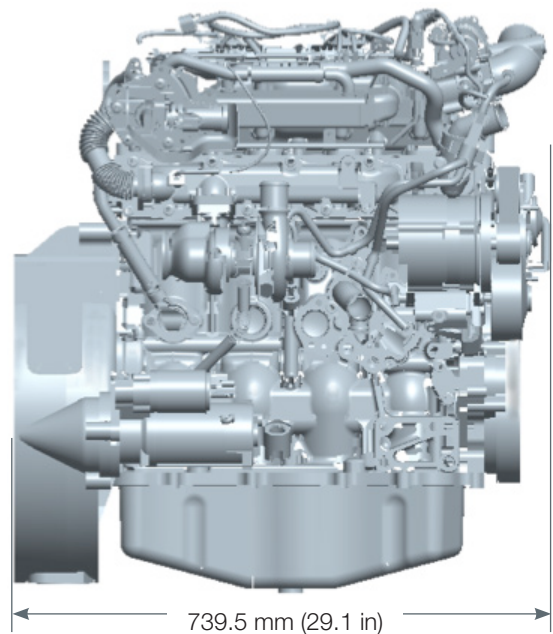
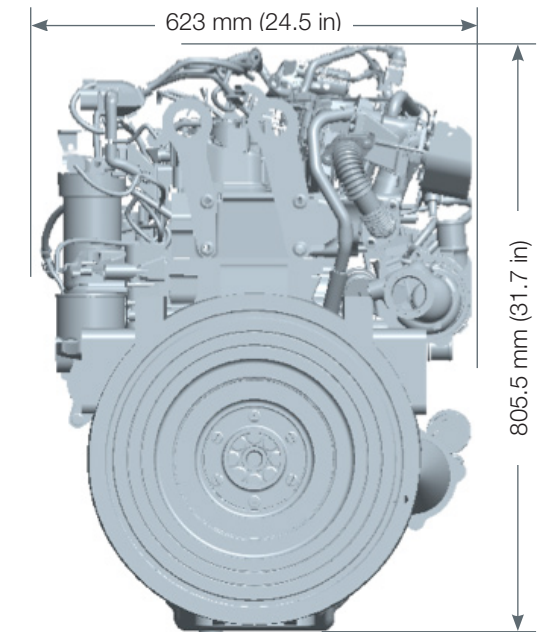
To find your local distributor

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Engine specification

- Multiple engine ratings
- SAE A PTO drive
- Timing case gear driven auxiliaries
- Flywheel housings
- Flywheel and starter rings
- Fuel filter positions
- Adapter plates
- Starter motors
- Fan drives and locations
- Lubricating oil filters
- Front end drives
- Alternators
- Belt driven auxiliaries
- Induction manifolds
- Exhaust manifolds
- Cold start aids
- Engine mountings
- Cooling packs
- Electronic Control Module
- Common rail fuel pump and injectors
- Wiring harness
- Sensors for:
 - Engine speed
 - Oil pressure
 - Coolant temperature

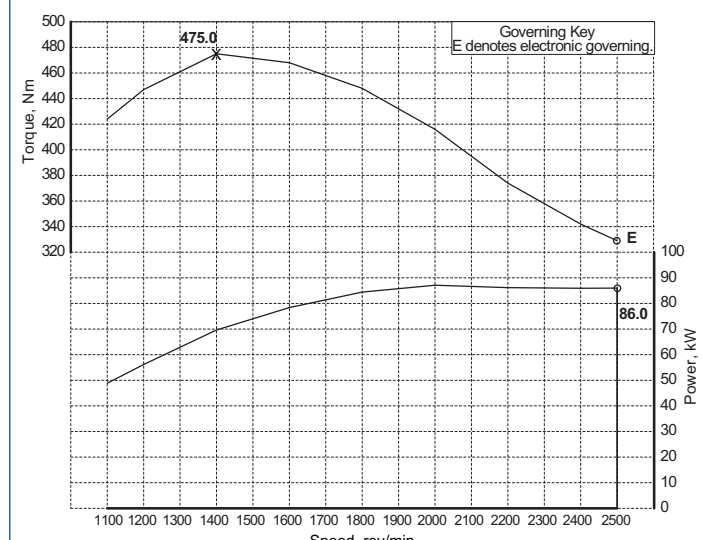
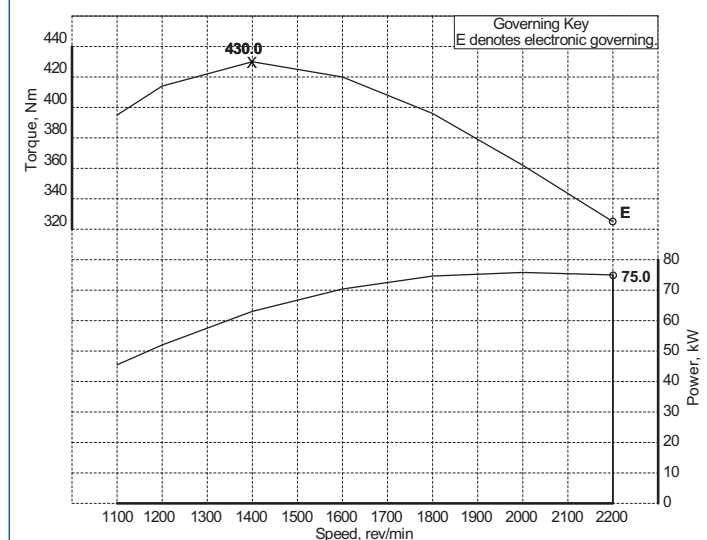
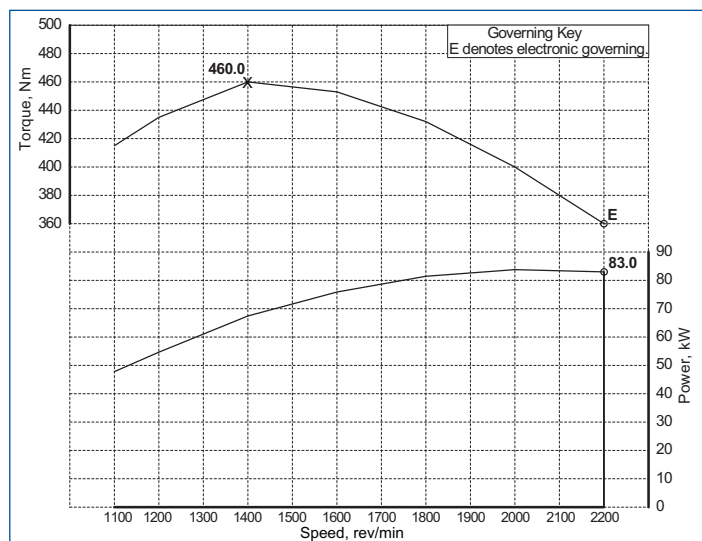
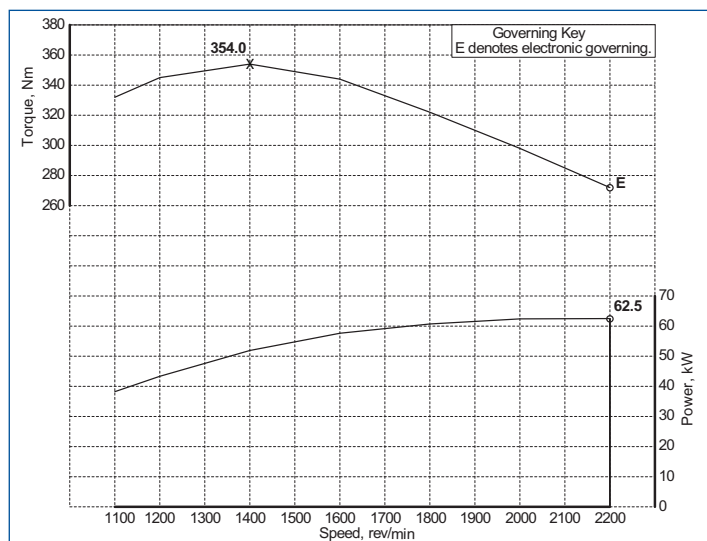


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Performance data



Rating	Power		Speed rpm	Torque		Speed rpm
	kW	hp		Nm	lbf-ft	
C	63	84	2200	354	261.0	1400
C	66	89	2500	370	272.9	1400
C	70	94	2200	395	291.3	1400
C	75	101	2200	430	317.1	1400
C	75	101	2500	430	317.1	1400
D	83	111	2200	460	339.2	1400
D	86	115	2500	475	350.3	1400
D	90	121	2200	490	361.4	1600

Rating definitions and conditions

ww (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%).

IND-D For service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

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

Rating Standard ISO 14396:2002

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

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).

Photographs are for illustrative purposes only and may not reflect final specification.

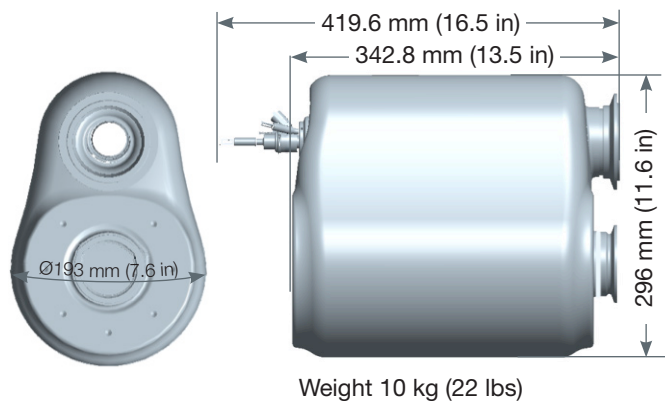
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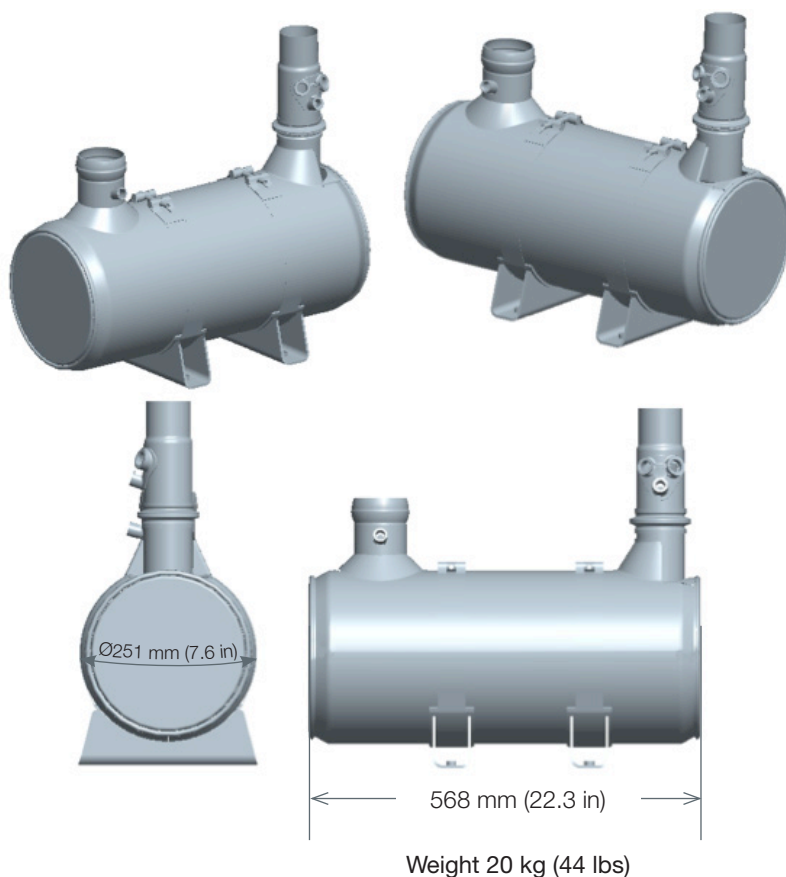
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Aftertreatment configuration

DOC Mixer



SCR Can



Technology

The DOC/SCR technology provides customer's with as compact as possible aftertreatment solution.

Power

Using our advanced research and development techniques we have perfectly matched the aftertreatment to the engine. The DOC/SCR is invisible to the operator whilst the machine is being used

Mounting

Multiple on engine mounting positions for DOC/Mixer. Flexibility of remote mounting of SCR can in various orientations.

Service

Aftertreatment is designed to be service free for the life of the engine.

Aftertreatment

- DOC Diesel Oxidation Catalyst
- SCR Selective Catalytic Reduction supplied with a range of inlet and outlet options
- SCR Auxiliaries A range of tanks and heated lines are available

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