VOLVO

Customer Case Study

VOLVO FE ELECTRIC

ECON ENGINEERING

Econ Engineering has launched a versatile new Volvo FE Electric gritter which can be operated year-round, thanks to a range of demountable body options which allow it to seamlessly switch between fleet roles, all whilst ensuring zero-tailpipe emissions.

Econ is a Yorkshire-based company, which has been at the forefront of winter maintenance vehicle solutions for over 50 years. It designs and manufactures gritters and other vehicles that are widely used by local authorities and private contractors across the UK.

STATISTICS:

- Specified with four batteries, the FE Electric chassis offers a range of up to 250km.
- It has a recharging time of just 2.3 hours with a 150 kW DC charger.
- Powered by two electric motors with a two-speed gearbox.
- New Electric Quick Change Body (E-QCB) system, can be supplied with gritter body, tipper bodywork, or with a cage tipper body.

"We're excited to introduce the E-QCB to the market with Volvo. We have spent a long time developing the new E-QCB, undertaking comprehensive redesigns and trialling it, to ensure that we can offer a fully electric solution for our customers that can be used 52 weeks a year."

JONATHAN LUPTON, MANAGING DIRECTOR AT ECON ENGINEERING

Why Volvo Electric?

Econ Engineering worked closely with Volvo to develop this new fully electric gritter.

Key to the truck's flexibility is Econ's innovative new Electric Quick Change Body (E-QCB) system, which in addition to a gritter body, can be supplied with tipper bodywork for highways maintenance, or with a cage tipper for refuse collection and recycling. Developed in-house by Econ, the E-QCB uses hydraulic rams to enable the vehicle to switch between demountable bodies in just 15 minutes, all controlled via a single operator.

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The Volvo Solution

The first in this new 'Econ Zero' range is a fully operational prototype built on a 19-tonne Volvo FE Electric 4x2 chassis. Its development follows a period of close partnership working between Econ Engineering's R&D team, and product specialists from Volvo Trucks UK & Ireland, and supplying dealer Crossroads Truck & Bus.

Crucially for drivers, the new FE Electric offers an improved working environment due to less vibrations and almost silent operation, allowing them to better focus on the road ahead. The Volvo powertrain, with two electric motors combined with a two-speed gearbox, offers an ultra-smooth driving experience, with power delivery handled by a unique traction control system developed to master slippery surfaces.

Specified with four batteries, the FE Electric chassis offers a range of up to 250km, and a recharging time of just 2.3 hours with a 150 kW DC charger. The battery can also be charged more quickly up to 80 per cent capacity, in just the same way as a smartphone, because the charger slows down towards the end of the process to protect the battery cells.

The Results

Econ Engineering unveiled the new truck on its stand at Cold Comfort 2023 in Harrogate, a specialist conference and exhibition dedicated to winter highway maintenance services.

"The vehicle operates best in urban environments, where daily mileage is typically less than some longer distance motorway routes. As it is easy to switch body types with this model, customers can benefit from operating the vehicle all year-round. We are committed to continuing to evolve our Econ Zero range, and other renewable energy innovations, as the UK's infrastructure develops in support of this", says Lupton.

Christian Coolsaet, Managing Director of Volvo Trucks UK & Ireland, says: "Every part of the transport sector needs to have its sights set on achieving net zero, and gritting and snowploughing is no exception. The team at Econ has developed an exceptional new product with our FE Electric chassis at its heart; this is going to allow gritter fleets to reap the benefits of operating cleaner, quieter and more efficient trucks."