

Danfoss Press Release

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Field trial of new Danfoss Dextreme system in Volvo excavators expected to show greater productivity, reduction in fuel use

- *U.K.-based building materials supplier Ashcourt Group to compare performance of three excavators fitted with Dextreme Swap system to standard excavators*

EDINBURGH, Scotland – [Danfoss Power Solutions](#), a leading global supplier of mobile and industrial hydraulics as well as electric powertrain systems, has partnered with Ashcourt Group to test the Danfoss Dextreme system in three Volvo excavators. Ashcourt, a building materials supplier based in East Yorkshire, England, expects the system to increase the productivity of its machines while reducing fuel consumption.

The excavators were fitted with the Dextreme Swap system in collaboration with U.K. Volvo dealership SMT. The system replaces the excavator's main hydraulic pump with a Digital Displacement® pump, custom software, and controller. Dextreme Swap is the first level within the Dextreme system solution pathway. As the simplest configuration of the Dextreme system, it is predicted to lower fuel consumption by 15%. The pathway consists of three levels — Swap, Flex, and Max — and is predicted to deliver fuel savings of up to 50% in excavators of all sizes.

Ashcourt is thoroughly testing the system on three 20-ton diesel-powered Volvo EC200 excavators. Two of the machines will be used at the company's Partridge Hall Quarry in East Yorkshire. The third will operate at a nearby material washing facility. Each machine is forecast to complete 2,000 operating hours over the next 12 months. To compare operating data with

Ashcourt's existing fleet of standard Volvo EC200 machines, each excavator has been fitted with data logging equipment.

Commenting on the trials, which began in February, Ashcourt Group plant director John Hood said: "Our goal is to see how the Danfoss Dextreme-equipped machines perform in terms of productivity and fuel use in a tough quarrying and material moving environment. So far, the feedback from our operators has been uniformly positive. The fuel savings I can't speak to yet, but my team is telling me the new machines are very responsive and strong, with the EC200 performing more like an EC250."

A study by Danfoss Power Solutions revealed that excavators account for 50% of all carbon dioxide emissions generated by construction machinery. Around 90% of those emissions come from excavators of ten tons or more, which is why the Dextreme system solution is specifically targeted at the excavator market.

According to Danfoss calculations, an excavator utilizing the Dextreme system will have a lower total cost of ownership than a standard diesel machine. For excavator owners more interested in reducing cycle times than reducing fuel consumption, Dextreme Swap can deliver up to 25% higher productivity.

The Dextreme system can be integrated into diesel, hybrid, and fully electric excavators and will work with any machine control system. Its integral digital pump controller provides extensive data, providing fleet operators with real-time performance monitoring and diagnostics.

Leif Bruhn, head of Digital Displacement, Danfoss Power Solutions, said: "Today's excavator systems are only 30% efficient, with around 70% of the engine's energy wasted as heat in the hydraulic system. We've designed the Dextreme system to radically reduce hydraulic system losses, leading to increased productivity and lower fuel consumption. We are excited to be working with the Ashcourt Group in such a challenging environment to demonstrate that Dextreme-equipped excavators deliver more productivity while consuming less fuel."

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About Danfoss

Danfoss engineers solutions that increase machine productivity, reduce emissions, lower energy consumption and enable electrification. Our solutions are used in such areas as refrigeration, air conditioning, heating, power conversion, motor control, industrial machinery, automotive, marine, and off- and on-highway equipment. We also provide solutions for renewable energy, such as solar and wind power, as well as district-energy



infrastructure for cities. Our innovative engineering dates back to 1933. Danfoss is family-owned, employing more than 42,000 people, and serving customers in more than 100 countries through a global footprint of 95 factories.

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