

PRODUCTIVITY GAINS, FUEL CONSUMPTION AND CO2 EMISSION REDUCTION



INDUSTRY

Construction equipment, Off road mobile machinery

CHALLENGE / OBJECTIVE

Volvo CE is committed to its position as a driver of change in the construction industry. Strict targets set to reach net zero value chain greenhouse gas emissions by 2040 – with a 30% reduction in CO₂ emissions across product use as by 2030.

SOLUTION

The NorrDigi[®] Multi-Chamber Cylinders and control software replaced the excavator's conventional hydraulics in EC300E model. Main control valve removed – along with excessive pump capacity, piping and hoses. In addition, the system enabled downsizing of engine without impacting machine performance. High and low pressure lines installed with accumulators supplying power boost and storing excessive energy for reuse.

RESULTS

Significant fuel efficiency improvement by -50% compared to same size conventional machine and excellent maneuverability. Potential CO₂ emission reduction 300-350 tons CO₂ during machine lifetime (12.000h)

KEY PRODUCT

Norrdigi MCC cylinders, accumulators, control units and software logic.

VOLVO CE

Volvo Construction Equipment - Volvo CE is a major international company which develops, manufactures, and markets equipment for construction and related industries. It is a subsidiary and business of the Volvo Group.



KEY FIGURES

50 % Fuel saving

30 % Reduction in CO₂ emissions

55-60% Increase in productivity