LIEBHERR

Handout

Alternative drive technologies

Study confirms: Technology neutrality reduces the most emissions

On behalf of the Liebherr Group, Frontier Economics conducted 2022 a life-cycle analysis of greenhouse gas emissions of typical construction machines equipped with various drive technologies. As evidenced by the collected data, the tested types require different drive technologies to reduce as many emissions as possible due to their different performance requirements. Liebherr therefore relies on a technology-neutral approach.

L 507 E battery-electric wheel loader

The groups first battery-electric wheel loader L 507 E combines the demonstrable advantages of a Liebherr Stereoloader with a battery-electric drive design. The performance is equal to that of a conventionally powered Liebherr wheel loader, but it emits no CO_2 onsite and noise emissions are kept to a minimum.

L 507 E

A 916 E battery-electric wheeled excavator

Liebherr’s first battery-powered wheeled excavator A 916 E combines the performance of the Liebherr standard wheeled excavator with the benefits of a battery-electric drive. The A 916 E shows clear advantages in terms of energy efficiency, pulling power and agility. It emits no CO_2 emissions locally and is quiet in operation.

A 916 E

Concrete mixing plants

The new Betomix and Mobilmix mixing plant series requires up to 30 % less energy than the previous versions. Frequency converters for the drives on the mixer and skip avoid power peaks, reduce the wear on mechanical parts and allow to change the speed of the twin-shaft mixer adapted to the recipe.

New concrete mixing plants

ETM truck mixer series

The hybrid version of the new ETM truck mixer series with electric drum drive on a chassis with a conventional diesel drive reduces fuel consumption by up to 30 %. A smart charging system recharges the battery during the outward and return journey. The EMT is also available as fully electric version, or as a semitrailer with any tractor unit.

ETM truck mixer series

Liduro Power Port

The Liduro Power Port (LPO) is a mobile energy storage system for supplying construction sites. Hybrid or electrically powered construction machinery and equipment can be operated or charged locally emission-free with the mobile energy storage system. Its constant power output is up to 160 kW.

LPO 100 with chassis

LTC 1050-3.1 mobile crane with electric power unit

The new LTC 1050-3.1 compact crane features an electric motor in addition to its conventional internal combustion engine. This enables crane movements to be powered electrically as an option. The internal combustion engine can be fuelled with HVO, enabling it to reduce its CO2 emissions by up to 90 %.

LTC 1050-3.1

MK 88-4.1 mobile construction crane

The superstructure and undercarriage of the MK 88-4.1 mobile construction crane can be powered by HVO. The crane can be operated either using site electricity or its diesel engine. This hybrid power concept enables the crane to operate locally with zero emissions and very little noise. Alternatively, Liebherr's Liduro Power Port system can take over supply.

MK 88-4.1

H966 hydrogen combustion engine

The Liebherr components product segment has recently made a significant investment into the development of its hydrogen engine and test facilities. The first machine running with a 100% hydrogen-fuelled ICE is the Liebherr R 9XX H2 crawler excavator. In it, the zero-emission 6-cylinder engine H966 fulfils the specific requirements in terms of power and dynamics.

Hydrogen engine H966