

Powerful and Flexible

Liduro Drive Frequency Converter System



LIEBHERR

Liduro Drive LCD300-Series

The liquid-cooled LCD300 – The frequency converter series of the Liduro Drive line from Liebherr has been specially developed for reliable operation under harsh ambient conditions. It offers a maximum of requirements and benefits. The

heart of the new system are the high-power modules of the LCU300 series. The high flexibility with regard to power electronic modules and their additional components makes the system extremely versatile.



Maximum safety and quality

Efficiency and lifetime

The Liebherr-frequency converter systems are designed with optimized components and high protection level, to achieve maximum efficiency and lifetime. To fulfill these requirements, the Liebherr-frequency converters are equipped with a new innovative cooling system to keep the temperatures of all components low. This improves the lifetime of all components and their availability. The system losses are transferred directly to the cooling system and no heat is contributed to the installation room.

The completely enclosed frequency converter cabinets are protected against dust and moisture and thus maintenance effort is reduced to a minimum.

Safety and quality

The intelligent control system supervises all internal and external processes with high precision and reacts to unexpected failures in few milliseconds. Possible failures are quickly detected and the source of the failure will be isolated. The fast disconnection of the failure source will reduce collateral damages. The new developed Liduro Fast Protection System is part of the protection system. The Liduro Fast Protection System allows additional redundancy after detection and disconnection of the defective component.

All components are running through an intensive test procedure to achieve highest quality and reliable functions of all components combined with maximum availability.

Highly efficient

The liquid cooling system is a specially developed system to achieve maximum lifetime in smallest installation room.



Intelligent control

The custom developed control system enables fast, precise control processes and reliable protective functions.



High durability

All system components undergo extensive testing and quality tests.



LCD300 Drive - The innovative drive solution

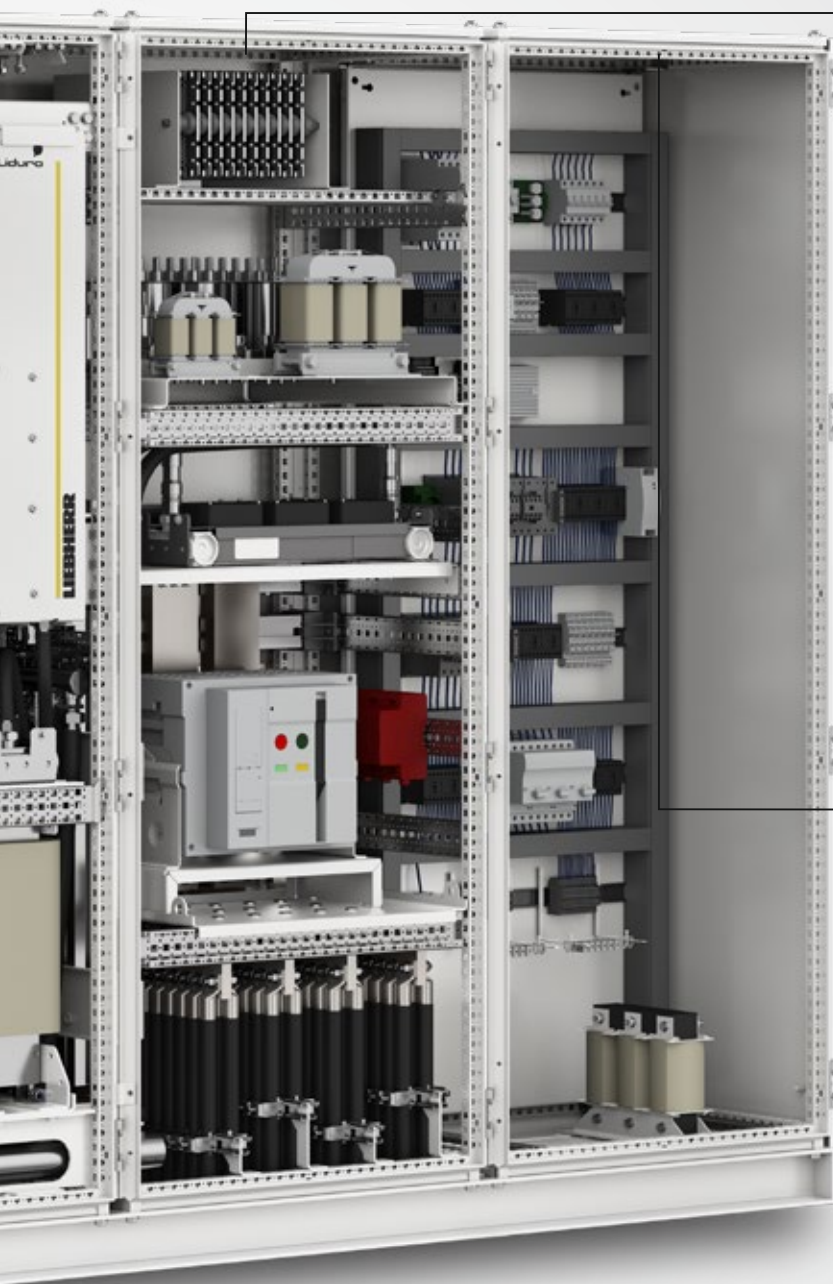
Converter Unit

- Power electronic modules
- Control module
- Air / water heat exchanger
- dU/dt filter
- Cable connection terminal

Active Rectifier Unit

- Power electronic modules
- Control module
- Air / water heat exchanger
- Line filter choke





Power Supply Infeed Unit

- Cable connection terminal
- Main circuit breakers
- Mains filter unit
- Optional braking resistor

Control

- Auxiliary power supply
- Communication
- Optional control units

The flexible system solution

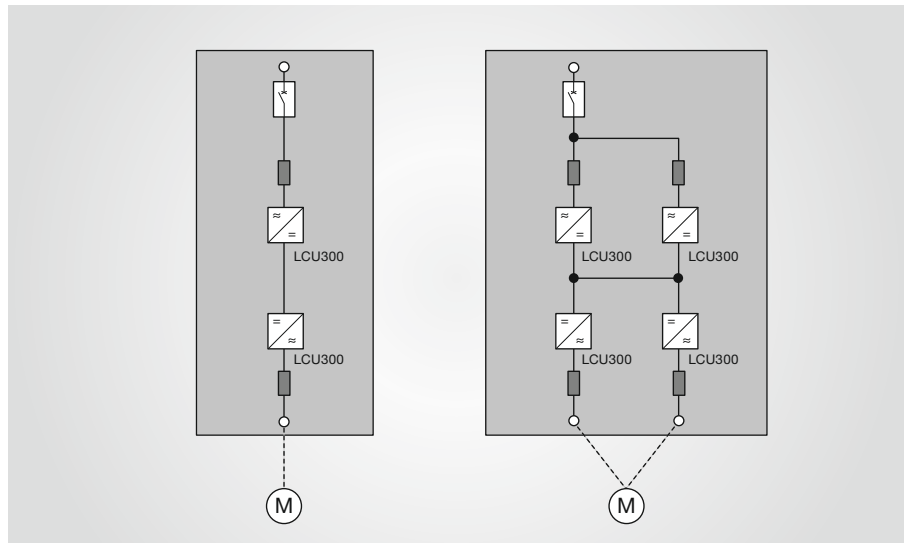
Thanks to the flexible platform architecture of the Liduro Frequency Converter System, application-specific solutions are easy implemented. Depending on requirements, different solutions are possible with regard to system topology and system architecture.

Frequency converters of the LCD300 series are used wherever reliability, high drive power and compact design are required.

- Material handling technology
- Mining
- Water/Wastewater
- Test bench technology

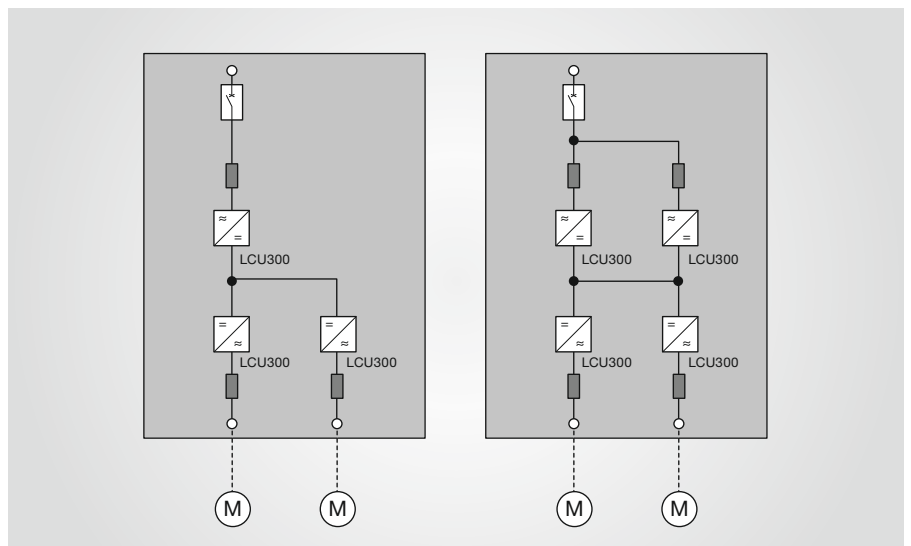
Single-Drive

Compact cabinet system for operating a drive unit.



Multi-Drive

The individual, independently controllable drive units are connected to each other via a common DC intermediate circuit.



Liduro LCD300 – cabinet system 690V

The Liduro LCD300 cabinet systems consist of three basic units: Control, power supply infeed unit, converter unit. The power level can be individually configured with LCU300 power electronic modules and the associated system components.

LCD300-0110-06 to LCD300-0800-06



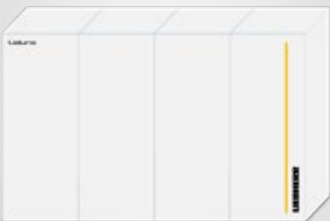
Power range	110 kW ... 800 kW
Nominal output current	114 A - 840 A
Power electronic modules	LCU300 – Type NG1
Configuration	AC / AC
Dimension (W x H x D)	2,400 mm x 2,000 mm x 600 mm
Weight	1,500 kg

LCD300-0900-06 to LCD300-2000-06



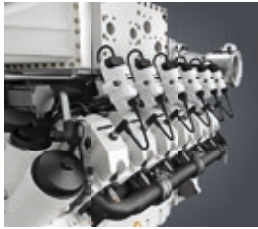
Power range	900 kW ... 2,000 kW
Nominal output current	933 A - 2,160 A
Power electronic modules	LCU300 – Type NG2
Configuration	AC / AC
Dimension (W x H x D)	2,400 mm x 2,000 mm x 600 mm
Weight	2,250 kg

LCD300-1800-06 to LCD300-4000-06



Power range	1,800 kW ... 4,000 kW
Nominal output current	1,866 A - 4,000 A
Power electronic modules	LCU300 – Type NG2
Configuration	AC / AC
Dimension (W x H x D)	3,200 mm x 2,000 mm x 600 mm
Weight	3,000 kg

Liebherr Components



Gas engines



Diesel engines



Fuel injection systems



Axial piston hydraulics



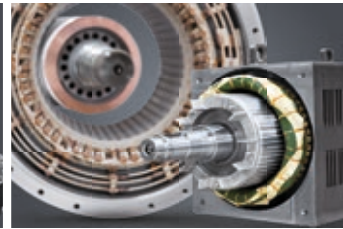
Hydraulic cylinders



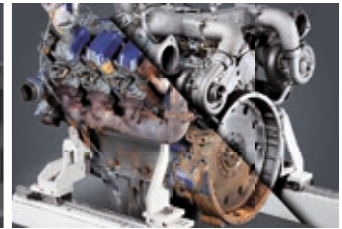
Slewing bearings



Gearboxes and winches



Electric machines



Remanufacturing



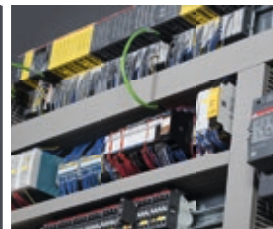
Human-machine interfaces and gateways



Control electronics and sensor technology



Power electronics



Control cabinets



Software

From A to Z – the components division of the Liebherr Group offers a broad range of solutions in the area of mechanical, hydraulic, electric and electronic drive system and control technology. The efficient components and systems are produced at a total of ten production sites around the world to the highest standards of quality. Central contact persons for all product lines are available to our customers at Liebherr-

Components AG and the regional sales and distribution branches.

Liebherr is your partner for joint success: from the product idea to development, manufacture and commissioning right through to customer service solutions like remanufacturing.

components.liebherr.com