

Short description

LiDIA Diagnostics Tool



What is LiDIA?

LiDIA is a user-friendly diagnostics tool, which requires no configuration and reduces the complexity of diagnostic procedures to the bare essentials.

LiDIA offers a rapid overview of the status of all systems run by Liebherr, which are equipped with ECU2, ECU2-HD, ECU3, EDC17 and VIU1. Extensions to the control device portfolio are taken into account in the diagnostics tool and implemented transparently for the user, with the presentation in the diagnostics tool remaining strictly uniform. Many uses of the engine and exhaust gas aftertreatment system diagnostics are supported comfortably and intuitively. The integrated Access Management System enables control of user-specific access rights according to application or customer requirement. The permanent link to the Liebherr production server guarantees access to current software updates, which are supported in a user-friendly manner.

Features

- Intuitive and user-friendly diagnostics tool
- Permanent link to the production server
- Visualisation of subsystems (injection, exhaust gas aftertreatment, etc.)
- Automatic recognition of control devices
- Continuous expansion of functionalities – plug-in based system
- Clear visualisation of test sequences in system tests
- Easy production of an ECU protocol

Product Information

Functions and Fields of Application

Functions

- Information screen:
Recording of all system-relevant information (e.g., software status, dataset version, etc.), grouped according to relevance
- Overview:
All information on the system status at a glance, error codes, active limitations and error reactions
- Configuration:
Readout and modification of control device data - also via command line
- Error memory:
Display of all active and passive error codes, status flags, environmental data and recommended measures
- Measurement data:
Measurements of diagnostics data, groupings, import and export of measurement groups for the time of occurrence and the duration of error reactions
- Oscilloscope:
Graphic representation and recording of diagnostics data
- Dashboards:
Graphic representation of various subsystems, nominal and actual values, along with main diagnostics data (fuel injection, exhaust gas aftertreatment, analogue display panels)
- Possibility of controlling actuators and implementing test routines on the subsystem dashboards
- IO Control:
Direct control of actuators and simulation of sensor values
- Snapshot:
Saving of all diagnostics data with a single click (HTML format) with the possibility of filtering and language selection
- Uploader:
Updating control device software as a package from boot loader, application software and dataset. The compatibility of the software versions is guaranteed by LiDIA
- Retriever:
Download of an update package from the Liebherr production server via the diagnostics tool, with no additional authentication required
- Long-term error memory:
Display of permanent error memory information with environmental data on the service life of the system
- Event log:
Detailed information on the time of occurrence and duration of error reactions
- Statistical data:
Display and export of load spectrum meters and statistical data

Fields of application

LiDIA was designed for daily use in maintenance and system troubleshooting. In the extended version, it enables access to a multitude of specific diagnostic functions for combustion engines. The focus here was on producing an intuitive user concept.

The Snapshot function makes it easy to forward diagnostics data to colleagues in customer services, or to save data for subsequent processing. A central component of LiDIA is the production database, which permanently makes the available datasets available for all applications.

System requirements

LiDIA runs on all computers with Windows 7 SP1 or Windows 10 operating systems. Two USB ports are required for connecting the communication cable and the USB token for user identification.

LiDIA Software Licences

Available software licences

	Technician Light (read and restricted write access)	Technician Service (read and write access)
Authorisations		
Information screen	•	•
Overview	•	•
Measurement data	• (restricted access)	• (extended access)
Oscilloscope	•	•
Snapshot	•	•
Dynamic error memory	• (read access)	• (read access and reset)
Long-term error memory		• (read access)
Error reactions log		• (read access)
Common Rail System visualisation	• (read access)	• (read access and test routines)
SCR System visualisation	• (read access and basic test routines)	• (read access and extended test)
SCR Filter System visualisation	• (read access and basic test routines)	• (read access and extended test)
Actuator control	• (restricted access)	• (extended access)
Components exchange		• (supported)
Data Recorder (Crash Recorder)		• (read access)
Upload		• (supported)
Software provision		• (SW download from production server)

Basic functions



Control device diagnostic

Establishment of communication with control devices and display of respective supported diagnostic functions. Access to control device data, error memory, adjustment parameters, visualisation of systems and production of an ECU protocol.



Long-term error memory

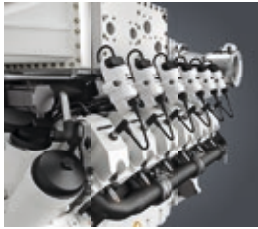
Access to the control device's long-term error memory and display of the frequency of error occurrence, environmental conditions upon first and last error occurrence, min. and max. values of essential physical input variables



Statistical data

Retrieval and representation of control device data, event meters, 1D and 2D spectra, load spectra and component monitoring

Liebherr Components



Gas engines



Diesel engines



Fuel injection systems



Axial piston hydraulics



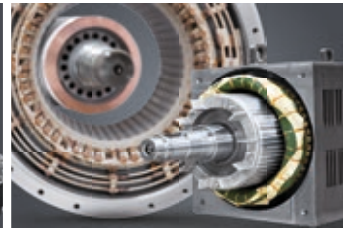
Hydraulic cylinders



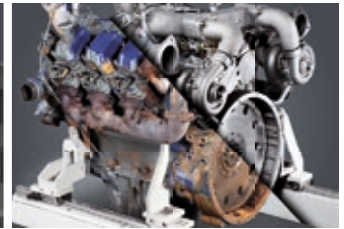
Large diameter bearings



Gearboxes and winches



Electric machines



Remanufacturing



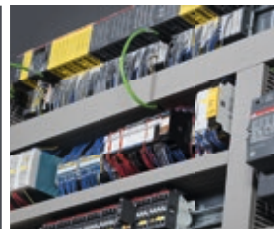
Human machine interfaces and gateways



Control electronics and sensor technology



Power electronics



Switchgear



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.

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