







-  Conventional marking technology
-  Scribe, stylus and dot-peening marking technology
-  Type-wheel marking technology
-  Laser-marking technology
-  Traceability
-  Special-purpose machines

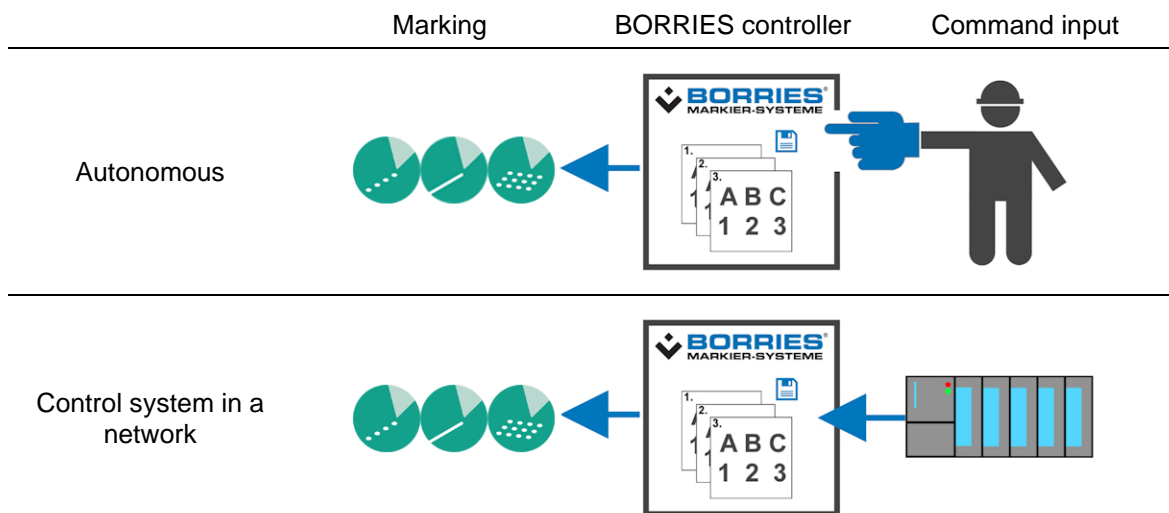
Marking-Software LDM-Makro

Technical data sheet

LDM Makro is a software for controlling the BORRIES marking controller. No additional computer is needed for operation. The BORRIES marking controller can be operated in the **Layout** or **Printer Mode** (LDM). A variety of configurable functions are stored in the BORRIES marking controller.

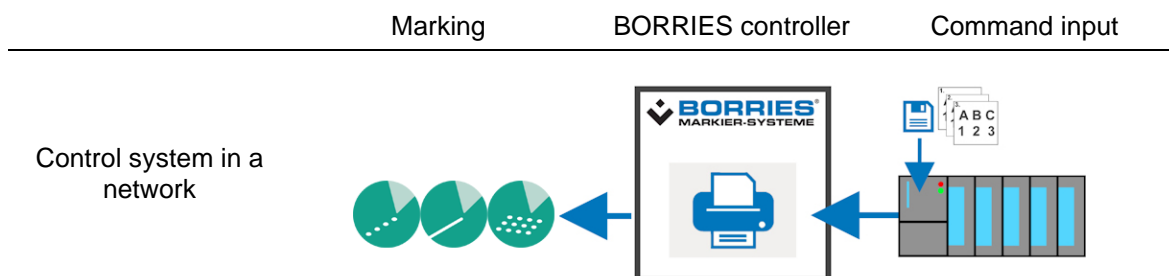
Layout mode







The marking data is managed within the marking controller. A layout (marking image) contains fields (rows) in which editable text, positions, font parameters and sequence instructions for the marking process are stored. Several layouts can be created and marked. The marking system can act independently or be operated by a higher level control system.



Printer mode

A higher level controller assumes control of the marking process here. All marking data (positions, texts, font parameters, handling commands) are managed in the higher level control system only and sent to the marking controller.



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Basic functions

- 15 character sets for dot-peening, scribe marking and DataMatrix code (ECC200, GS1). Special characters, logos and customisable character sets.
- Square and rectangular DataMatrix codes with up to 52 x 52 dots and 16 x 48 dots.
- Functions for date, time, work shift, counter and serial numbers.
- Bypass and maintenance positions.
- Predictive maintenance: Independent maintenance message and calling up operating data.
- Different languages (mainly Latin fonts).
- Password functions.
- Control of up to three motor axes.
- Different interface protocols (STX/ETX, configurable start and end characters, 3964R).
- Data backup via SD card.
- Quick start guide for making getting started easier.
- Configurable font parameters:
 - Character height
 - Character width
 - Text width
 - Angle
 - Arc
 - Character spacing
 - Marking direction
 - Alignment of the text

And many other configuration options.

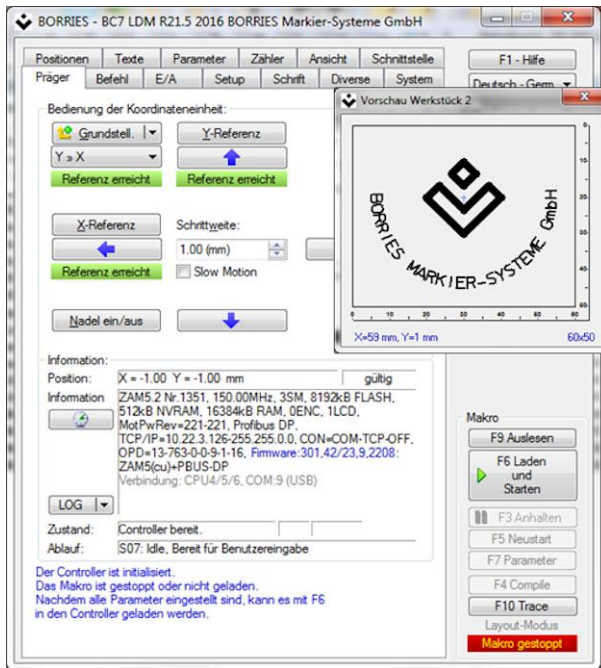
- Interfaces:
 - RS232, RS422
 - Ethernet TCP/IP
- Options (functions only in combination with additional hardware components)
 - Interfaces:
 - Digital I/O signals
 - Profibus DP
 - Profinet I/O
 - DeviceNet
 - Profinet IRT
 - Ethernet/IP
 - Touch-on functions
 - Tolerance compensation for a constant distance to the workpiece surface
 - Marking on an inclined plane by double touch-on (automatic angle calculation)
 - Tool checks (stylus break, piston movement)
 - Camera system
 - Workpiece clamping
 - Control panel
 - Stylus check
 - Start conditions
 - Workpiece queries

Other functions on request.

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Loading program and diagnostics tool

The LDM Makro software is configured using the supplied diagnostics and loading program. The required functions of the marking controller are selected and configured here. It can be used for logging the data, for backups or for updates.



- Configuring the layout or printer mode.
- Interactive input assistance for parametrising the individual functions.
- Interface simulation wizard.
- Marking preview.
- Basic tests of the marking system.
- Status display and control of the digital inputs and outputs.
- Available in multiple languages.
- Comprehensive and detailed software description.
- Runs on Windows® XP, 7 and 10.

Technical details

Layout mode

- 4 independent programmable counter algorithms: Start value, step width, reset value, counter limit, format check.
- Different controls of the data can be configured: Vehicle identification number (Modulo 11, Modulo 11 with extra test digit), Modulo 43, length and format.
- Protection against double marking with password protection (only one single number is ever stored).
- Set-up assistance ("Teach-In").
- Acceptance of external full or partial data.
- Automatic selection of the layout (10 to 128 layouts with 40 to 3 fields per layout) by external data, index bits or serial data (layout number or name).
- Use of a barcode reader. Up to 3 readings in succession for one marking cycle.
- Many other functions.

Printer mode

- More influence on the marking job at the higher level point.
- Up to 400 lines of 80 characters text each per marking operation.
- Many other functions.

Subject to technical changes.