







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







# DotPeening marking unit 350

## Technical data sheet

- Highly accurate dot-peening marking system
- Complies with the requirements of the **EN 9132 specification** and the **ATA SPEC2000** "direct part marking guideline"
- DataMatrix coding directly on workpieces
- Plain-text marking with dot matrix lettering (5x7) or Vibropeening
- 3-axis NC **real-time process control** for the entire marking process
- **Electrical dot-peening precision marking head**
- Automatic height positioning with **built-in distance sensor** compensates for workpiece tolerances
- Specific working height programmed for different workpieces
- The special parameter control for the force, acceleration and duration of the stylus stroke for the optimal setting of the marking strength and the corresponding working times allows an optimal adaptation, even with demanding materials
- **Proven, well-engineered coordinate unit** with high-precision linear axes and ballscrews. The accuracy of the NC drives is higher than 3 µm. Long-term accuracy and stability with minimal maintenance
- **Intuitively operable WINDOWS® program** as a common operating level for the entire system with a focus on process-reliable series production and the simultaneous possibility of an analysis according to the "first-article-inspection". Marking data via Ethernet, barcode scanner or keyboard. The Layout Editor can show an actual workpiece image as a bitmap.



- Compact integrated **image processing system for a precise geometry verification of the coding**. Integrates LED lighting with electronically-controlled intensity. Lighting in the same optical axis as the camera sensor.

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## Marking head versions



Fig. Marking head with cooling/touch-on



Fig. Marking head with camera/touch-on







## Technical data

Properties	Dimensions, unit, explanation
Text field	100 x 50 mm
Z-axis	160 mm, other sizes on request
Typical marking time	10x10 dot DataMatrix: 10 sec. MFR 12345/SER ABC123 as 18x18 dots and as plain text: 30 sec.
Typical verification time	18x18 dot DataMatrix: 3 sec.
DataMatrix formats	10x10 to 52x52 [dots], 1.9x1.9 to 9.0x9.0 [mm] (EN 9132) 8x18; 8x32; 12x26; 12x36; 16x36; 16x48 [dots], 1.5x3.4 to 5.8x12.7 [mm] (EN 9132)
Power connection	120 V/230 V AC, 300 W

### Minimum requirements for PC and operating system

PC with Windows® XP, Windows® 7/8.1/10*, 32 or 64-bit, processor with min. 1500 MHz, min. 1024 MB RAM*), Approx. 100 MB free hard disk space, CD drive, Ethernet or USB ≥2.0 connection (optional**), Screen resolution ≥1024x786 pixels resolution or higher	Supplied by customer
Data interface for PC connection	Ethernet (TCP/IP) or USB ≥2.0 (optional)
*) For Windows® 7/8.1/10, a faster PC with more RAM should be available.	
**) The USB port should only be used if the marking system is operated in an interference-free environment.	

Subject to technical changes.

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## Windows® software

**VisuWin PRO** (professional) is the fully-developed BORRIES software for marking tasks. The operating language can be changed by the user at any time (menus and all messages). The online integration into any production controls and IT structures is possible. Marking jobs can be prepared and saved for later recall. The data is input by barcode, command number or other data. It provides an alternative data interface to host computer systems. Marking jobs are prepared elsewhere (in the network). Eight authorisation levels for secure operation are available.

**WisuWin SE** (standard edition) can be used when no complex data management is required and the marking data is entered or read in directly. This version has a simpler structure and is suitable for "stand-alone" applications. A verification system cannot be integrated.

## Vision system for calibrated verification

- Verification camera **specially developed for dot-peening codes** on metal
- Meets the requirements of the **EN 9132** specification
- **Integrated lighting** reproducible by electronic control
- Height control via NC axis for **tolerance-free test distance**
- **No distortions** due to vertical imaging
- **Quality assessment** can be configured for each individual criterion and in total **from A to F** and can be called up directly in the trend overview
- Output of the overall quality status "OK" – "Warning" – "Not OK" weighted from individual features for **simple and reliable production monitoring** when coding
- **Individual measured values** of all criteria can be saved in the database, e.g. for trend analysis
- Trend overview in **quality classes (A to F)** can be called up directly
- **Statistical evaluations** and graphic trend displays possible
- WINDOWS® software for **detailed analysis**
- Each point can be examined individually (**zoom inspection**)
- **Calibrateable test system** according to **ISO quality standards**
- Suitable for "**first article inspection**" of a production lot

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## General information

### Stylus marking technology

- Process that can be used flexibly (marking depth, font heights and font widths individually selectable)
- Can also be used on sloping, slightly curved and round surfaces
- Low force load for the component
- Captive and permanent marking
- Chip-free, material-displacing process
- No thermal influence on the material
- Low running costs
- Marking of plain texts (7x5, 9x7, Vibropeening) and DataMatrix/dot-peening possible

### DataMatrix – dot-peening

- DataMatrix: A code for large amounts of data in the smallest space and maximum reading safety
- Codes and plain text marked with a stylus are clear and permanent
- Can be used on different materials and surfaces
- It can be read with hand-held or stationary code reading systems, which can also be integrated into marking systems
- No functional restrictions compared to conventional barcodes
- Maximum error correction (reliability and robustness) – verification systems (calibrated verification) for the analysis according to the "first-article-inspection"
- Suitable for direct product marking
- Readable in any orientation
- Marking size scalable according to the surface finish
- **Dot peening:** Identical marking process in which the DataMatrix code is applied according to ATA SPEC2000/ EN 9132 "direct part marking guideline".