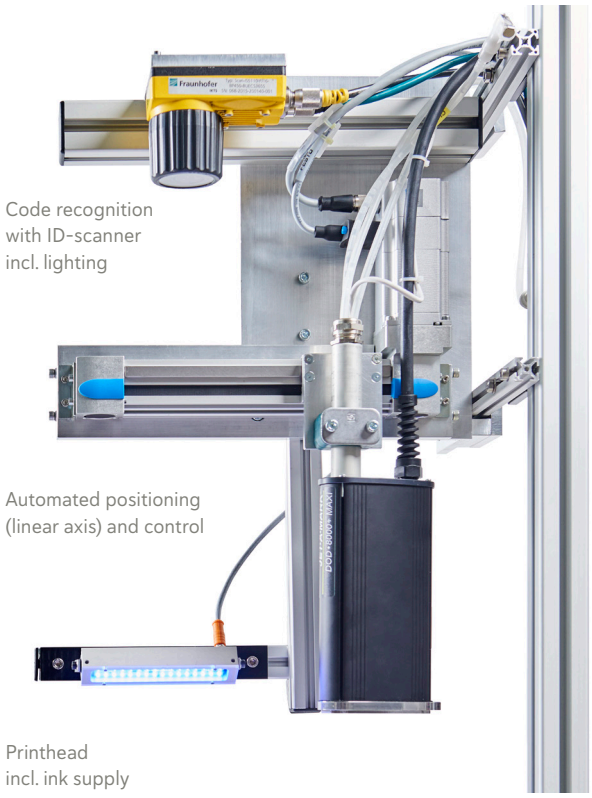
SENODIS

CeraCode®
Part Marking

The digital fingerprint for metal components

Ceracode® is a marking solution for hot-formed metal components providing a continuous identification and a complete digital "tracking & tracing" at process temperatures of up to 1200 °C.

The components are marked with a temperature-resistant ink and the encoded information is machine-readable even after high-temperature processes such as hot forming. The customer is provided with a complete solution including printer, image acquisition and IT integration by Senodis.



The CeraCode® all-in-one solution

- Marking machine readable after process steps up to **1200 °C**
- Provided as an **integrated solution** including printer, scanner and controller
- **Automated data acquisition** and data transfer to ERP systems
- Stationary and mobile identification
- Integrated controller and maintenance concept
- Simple handling
- **Modular structure** for an easy process integration
- Optimized for **long operating times** with low maintenance

Cost reduction and process optimization

Continuous **traceability** along the process chain

Fast **identification** of parts and batches

Automation of handling and quality control

Reduction of process costs through process optimization

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CeraCode® Part Marking – Technical data

Code type	Data Matrix ECC200, Micro QR
Printing method	Drop-on-Demand - ink based on ceramic pigments optimized for adhesion to metal
Temperature resistance	Up to 1200 °C
Adhesive behaviour	Abrasion-resistant after heating procedure No damage of material and protective layers
Encoded characters per Data Matrix	10 × 10: 6 numerical, 3 alpha-numerical 12 × 12: 10 numerical, 6 alpha-numerical 16 × 16: 24 numerical, 16 alpha-numerical 32 × 32: 124 numerical, 91 alpha-numerical
Min. code height (width is dependent on the format)	8 jets: 14 mm 12 jets: 21 mm 16 jets: 28 mm 32 jets: 56 mm
Max. code height	16 × 16: 63,5 mm 32 × 32: 127 mm
Max. printing speed	2 m/s
Max. print distance	10 mm
Size (L x B x H)	400 × 400 × 520 mm³ (with 150 mm stroke)
System features	Printhead with positioning unit (linear axis), ink supply and tank, rinsing/cleaning system, ID-scanner incl. lighting, part sensor, controller, touchscreen interface
Further details	· Simple and robust handling - only little training efforts · Automated predictive maintenance system · Excellent code readability - high contrast with luminescent particles · Communication with standard interfaces (TCP/IP, RS485 and more) · Simple positioning of the code on the part with a linear axis · Part recognition during printing with optical or inductive sensors · Standardized housing for a simple and fast integration · Optimized for a quick and easy integration with minimal interference for the existing operations

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