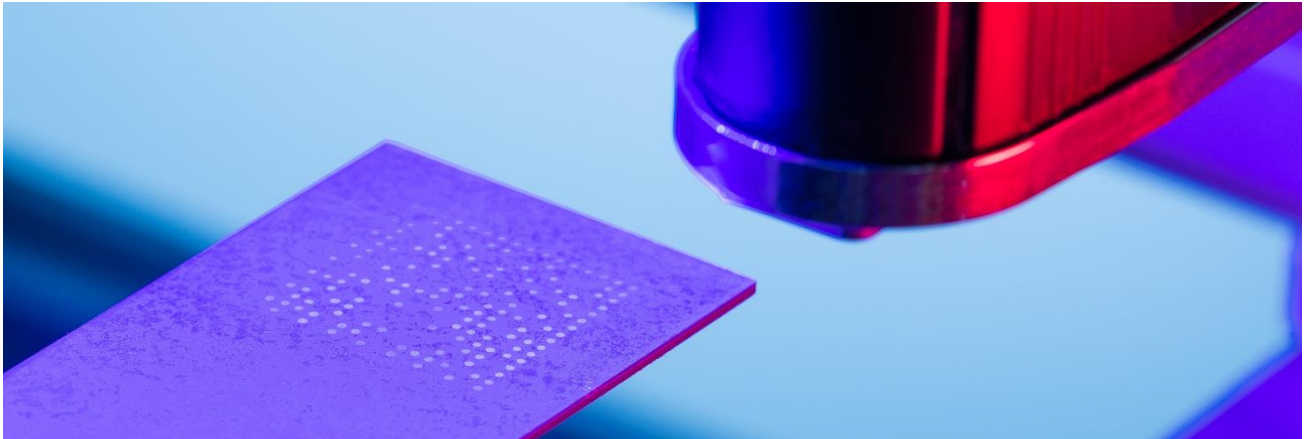


## Ceracode® Component Marking



### The digital fingerprint for metal parts

Ceracode® is a marking solution for hot forming metal parts for continuous identification and complete digital tracking and tracing for process temperatures up to 1200 °C.

Metal parts are marked with a temperature resistant ink. The encoded information can be reliably read even after high-temperature processes such as hot forming. Senodis provides the product as an overall solution including ink, printer, image recognition and IT-integration for their customers.

### Cost reduction and process optimization

- + Full traceability along the production line
- + Fast identification of individual parts and batches
- + Automation of handling and quality assurance
- + Reduction of production costs through process optimization



All in one system for an automated part marking

### Ceracode® overall solution

- + Marking machine-readable after process steps up to 1200 °C
- + Integrated solution with printer, scanner and control unit
- + Automated data recognition and transfer to ERP systems
- + Stationary and mobile identification
- + Integrated control unit and maintenance concept
- + Simple handling
- + Modular assembly for a simple integration into existing process lines
- + Optimized for long operating times with little maintenance procedures

## Ceracode® Component Marking

Code type	Data matrix code ECC200, micro QR
Printing method	Drop on demand – Ink based on ceramic pigments optimized for adhesion on metals
Temperature stability	Up to 1200 °C
Adhesion behavior	Abrasion-resistant after temperature steps No damage of surfaces and protective layers
Signs per data matrix code	10x10: 6 numeric, 3 alpha numeric 12x12: 10 numeric, 6 alpha numeric 16x16: 24 numeric, 16 alpha numeric 32x32: 124 numeric, 91 alpha numeric
Min. code height (width dependent on format)	10 jets: 17.5 mm 12 jets: 21 mm 16 jets: 28 mm 32 jets: 56 mm
Max. code height	16 x 16: 63.5 mm 32 x 32: 127 mm
Max. print velocity	2 m/s
Max. print distance	10 mm
Size (L x W x H)	400 x 400 x 520 mm <sup>3</sup> (with 150 mm travel)
System	Print head with positioning unit (linear axis), ink supply and container, rinsing-system, ID scanner including lighting, part recognition sensor, control unit, touchscreen interface
<b>Further features</b> <ul style="list-style-type: none"> <li>- Simple and robust user interface – less training effort</li> <li>- Automated, predictive rinsing and maintenance concept</li> <li>- Excellent code recognition – high contrast by luminescent particles</li> <li>- Communication through standard industrial interfaces (TCP/IP, RS485)</li> <li>- Flexible code positioning on the metal parts using linear axis</li> <li>- Part recognition through optical and inductive sensors</li> <li>- Standardized casing for a straightforward and fast installation and deinstallation</li> <li>- Minimal interference with existing production lines, self-sufficient design</li> </ul>	