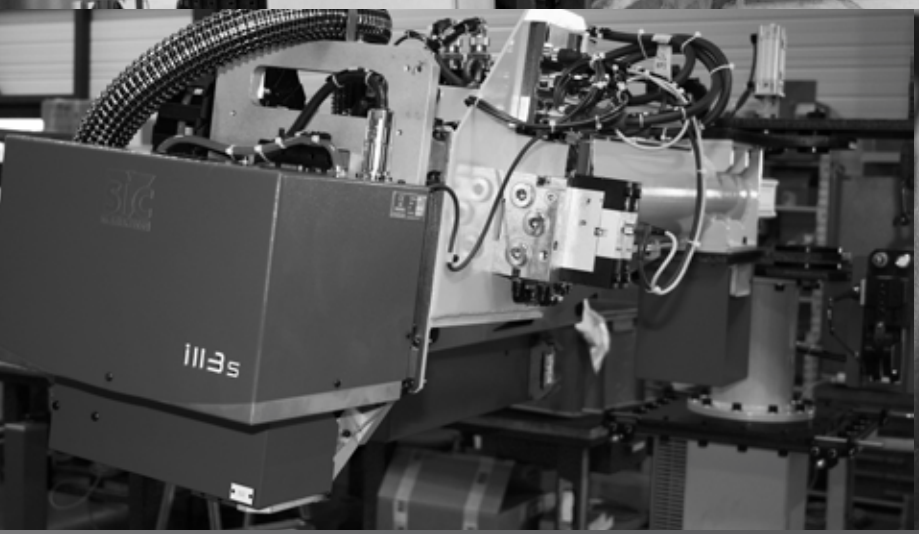
SIC MARKING

INTEGRATED MARKING & TRACEABILITY SOLUTIONS



sic-marking.com

A worldwide leader

SIC Marking is an international company developing innovative permanent marking solutions and automated identification for a complete traceability of industrial components.
For over 30 years, SIC Marking has engineered a full range of exclusive marking machines: dot peen, scribing, and laser marking systems.

SIC Marking offers the widest and the most up to date range of products on the market including portable, integrated and column-mounted marking machines.

300 Employees

10% Annual Growth

50 Million € Turnover

Installed Base of 40.000 Machines Worldwide

> OUR PRODUCT RANGE

• Portable

• Column-mounted

• Integrated

• Custom Marking Systems

We understand your challenges

Traceability through direct parts marking or DPM is a process used in many industries for product identification.

Direct part marking is much more reliable than other options, such as applying labels. Marking systems using dot peen, scribing or laser technologies allow to mark high quality codes in any production condition. Marking directly on the product offers better traceability and facilitates production automation, inventory management, batch control, quality control / failure in storage and also eliminates code reading errors.

> RELIABLE AND COMPACT SYSTEMS

- Adapted to industrial environments
- Hi-speed marking on most materials
- Effective and economical integration

Your requirements:

The integration of an automatic system on a production line should address different constraints:

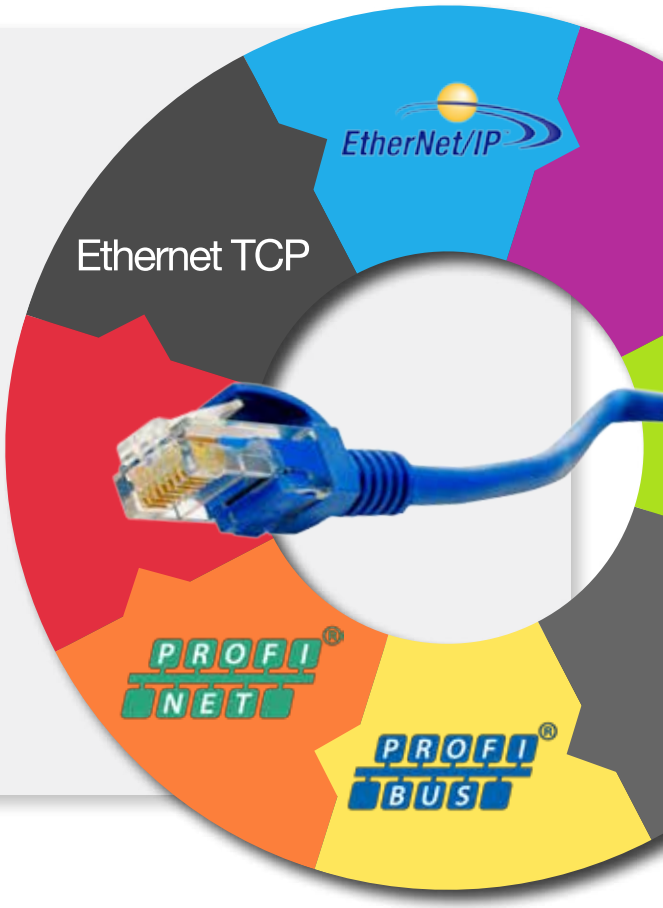
- Performance
- Quality
- Reliability
- Space requirements
- Costs (ROI)
- Communication between systems

Our engagements:

- Ensure the full traceability of a part, an assembly or a process.
- Facilitate mechanical integration: we provide 3D drawings of our machines and can assist your engineering teams for design and modeling.
- Facilitate integration for the automation engineer: our machines are designed for use with the most recent industrial communication protocols, to easily adapt to production management and information systems.

> COMMUNICATION SOLUTIONS

SIC Marking systems can be connected to industrial networks without any additional equipment.
Already equipped with full connectivity (digital I/O, RS232, RS422...), our systems also offer many features to interact with all the elements that set up their environment.
Our machines can be easily integrated on all production lines using Profinet, Profibus, Ethernet TCP, and EtherNet IP (optional).
Direct connection to the industrial network without use of a gateway provides considerable time savings. It also reduces the cost of machinery installation, engineering and commissioning.



Dot peen Technology

Dot peen technology allows the marking of alphanumeric characters, logos, 2D codes, QR and datamatrix codes. This type of marking is made by a succession of impacts or dots. The force is transmitted by a controlled electric pulse through a solenoid, which powers the magnetic assembly and its stylus towards the surface.

Our integrated marking machines are designed to be placed at the heart of the production lines and used intensively. Their ease of integration and their high performance have built SIC Marking integrated systems a great reputation in all industries. These systems can also be adapted to specific needs and include identification systems with cameras.

Our dot peen technology is known and approved, it has allowed SIC Marking group to become a world leader in industrial marking.

> PERFORMANCE & REDUCED SIZE

- Fast marking on all types of surfaces
- Electrically powered - no air required
- Serial communication, EtherNet IP / Ethernet TCP Profibus / Profinet

> i53

Marking window	50 x 20 mm / 2 x 0.8 in
Weight	2.6 kg / 5.7 lbs
Dimensions	250 x 130 x 70 mm / 9.8 x 5.1 x 2.7 in

Integrated camera for i83 va

> i83 / i83 a / i83 va

Marking window	80 x 70 mm / 3.1 x 2.7 in
Weight	9,4 kg / 20.7 lbs
Dimensions	225 x 202 x 256 mm / 8.8 x 7.9 x 10 in

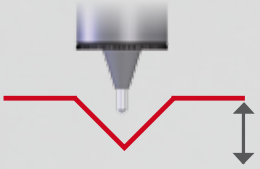
> i141 / i141 a

Marking window	150 x 100 mm / 5.9 x 3.9 in
Weight	12 kg / 26.4 lbs
Dimensions	346 x 288 x 247 mm / 13.6 x 11.3 x 9.7 in

> i113 D

Marking window	160 x 60 mm / 6.2 x 2.3 in
Weight	17.5 kg / 37.4 lbs
Dimensions	300 x 230 x 204 mm / 11.8 x 9 x 8 in

Deep marking : up to 1mm / 0.03 in.



1mm / 0.03 in

> CONTROLLERS

e10

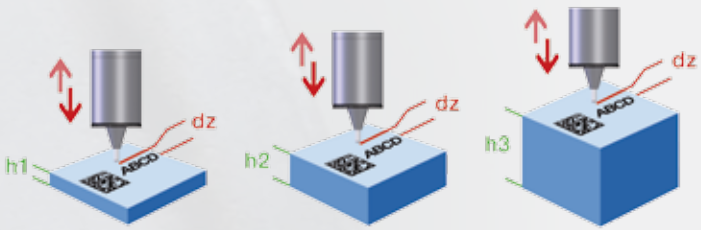
e10 R
with mounting kit for DIN rail

Dimensions	112 x 380 x 222 mm / 4.4 x 14.9 x 8.7 in or 140 x 380 x 222 mm / 5.5 x 14.9 x 8.7 in with DIN rail kit (option)
Weight	5 kg / 11 lbs
Ports	USB, RS232, EtherNet IP, Ethernet TCP, Profinet, Profibus, I/O
Programming	Integrated software and utilities on PC
Connecting cable length (controller / Machine)	5 to 15 m / 16.4 to 49.2 ft

> OPTIONS

AutoSensing option associated with a Z axis

Integrated sensor to ensure a constant stylus / part distance (dz) regardless of the height of the part (h1 / h2 / h3). Ideal for datamatrix marking.

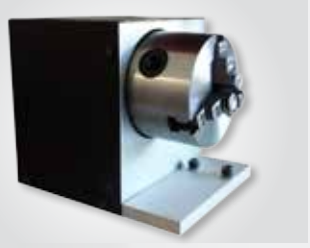


Part A *Part B* *Part C*

Approach > Detection > Stylus Positioning > Marking

Variable stylus length (60 - 150 mm / 2.3 - 5.9 in)

Motorized Z axis (50 to 200 mm stroke / 1.9 x 7.8 in stroke)



Rotating D axis

> e-smart

INTEGRATED NEW COMPACT

+ All cables supplied

ALL IN 1 : Autonomous stand-alone machine which integrates its controller.

Marking window	50 x 20 mm / 1.9 x 0.8 in
Weight	3,5 kg / 6.6 lbs
Dimensions	312 x 122 x 88 mm / 12.3 x 4.8 x 3.5 in

Scribing Technology

Scribing technology is an ideal choice for applications where noise level limitations are imposed. It ensures a silent high quality permanent mark, ideal for example for applications on resonant parts (tubes), sheet metal or VIN marking on chassis (Body In White / Assembly).

Our integrated marking machines are designed to be placed at the heart of production lines and can also be adapted to specific needs, such as VIN marking (Vehicle Identification Number).

SPEED AND DEPTH

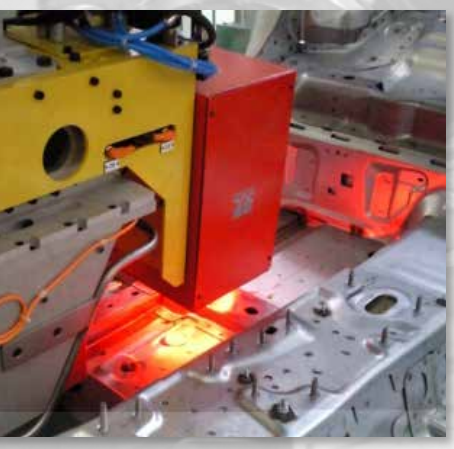
- Deep marking up to 0.5 mm depending on the material
- Fast and silent
- Good readability
- Requires compressed air

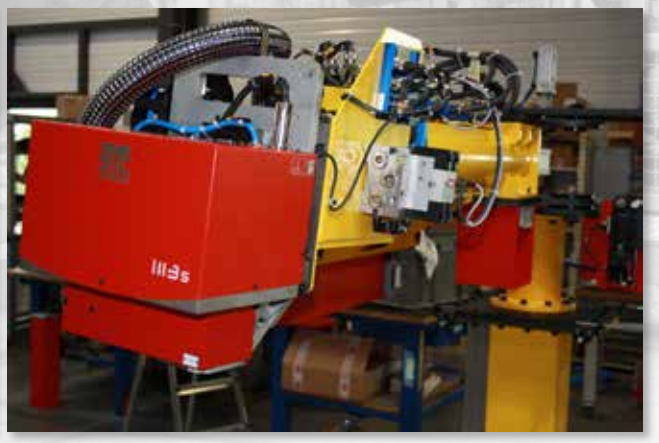
> i63 s

Marking window	60 x 30 mm / 2.4 x 1.2 in
Weight	7,8 kg / 17.1 lbs
Dimensions	160 x 170 x 340 mm / 6.2 x 6.6 x 13.3 in

> i113 s

Marking window	100 x 60 mm / 3.9 x 2.4 in
Weight	17,5 kg / 38.5 lbs
Dimensions	230 x 300 x 365 mm / 9 x 11.8 x 14.3 in





The e10 and e10 R controllers, detailed on page 5, are also used for all machines using scribing technology.

> VIN MARKING SOLUTIONS (Vehicule Identification Number)

OVER 150 VIN PROJECTS WORLDWIDE

Code validation through use of a vision box.

Machine mounted on a robot.

- A global presence among major automakers: Alfa Romeo, Aston Martin, Audi, Ferrari, Fiat, Maserati, Mitsubishi, Nissan, PSA, Renault, Volkswagen, Volvo…
- Manuals and/or robotic VIN systems with or without character recognition by camera.
- Custom system that adapts to all chassis. Designed, developed and installed by SIC Marking.

Laser Technology

Fiber laser is a high performance, robust and easy to implement technology.
Part traceability is essential to meet ISO quality requirements. This the reason why laser marking is used by manufacturers to automate marking operations and thus guarantee 100% control of their processes.

This technology is mainly used for permanent marking on all types of materials, from plastic to metal parts, whatever their hardness or surface finish. Fiber laser is recommended for high speed and high quality markings.

COMPACT, FAST AND ACCURATE

- Ease of integration
- Sources from 20W to 50W
- No maintenance

> i103 Easy 20W

+ VERSATILITY

- Excellent value for money
- Marking on all types of materials and difficult surface conditions
- Available in 30W

> i103 LG 50W

+ HIGH POWER & SPEED

- Deep and ultra fast marking
- Easy integration & reduced maintenance

> i103 HD 20W

+ STRONG CONTRAST MARKING

- Marking quality with strong contrast
- Multi applications (metals, plastics ...)

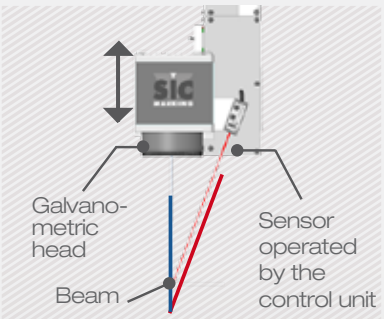
Marking windows for all our laser heads:	**60 x 60 mm / 100 x 100mm / 170 x 170mm (others contact us)**
Control	**PC Software**
Security	**Class 4 laser (EN60825-1 Standard) to secure- Integrated safety loop, for Class 1 integration (Emergency stop / laser safety fencing)**

Fiber Unit Production mode (without any PC):

> OPTIONS

2D CODE READING

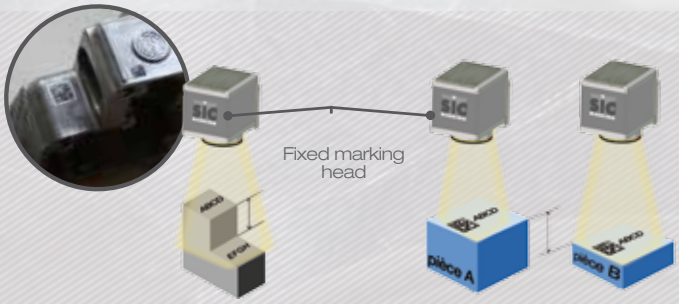
INTEGRATED 2D CODE READING SYSTEM

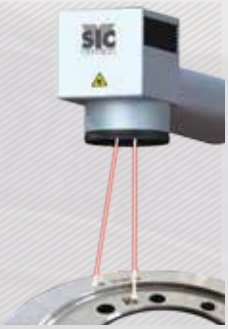


Automatic detection of parts

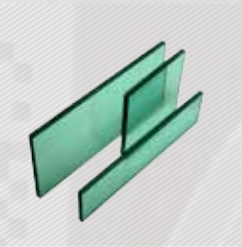
3D MARKING

MULTI LEVEL MARKING:
Automatic adjustment of the marking area



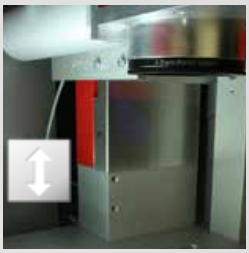


> ACCESSORIES



Protection glass windows

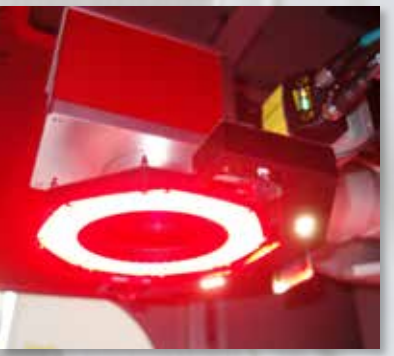
Protective glasses

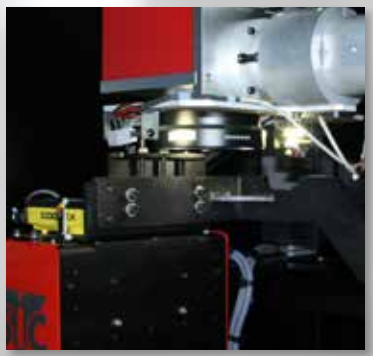


Motorized Z axis

Extraction and filtration systems

Communication cards





Vision Solutions

SIC Marking is a unique partner for marking and vision solutions. We can commit to a readability rate to ensure a high-performance traceability solution.

Our business is based on permanent identification and full traceability of products and industrial components. That's why we created the M.V.R.T process (original SIC Marking Process):
Mark - Verify - Read - Trace.

With its unique expertise, SIC Marking offers complete marking and reading solutions, and also enable inter-system communications through custom software analysis, reporting and data archiving. Key parameters to high-performance part traceablity solutions are character or datamatrix mark quality, use of adequate marking and reading systems and real-time data communication.

SIC Marking respects IAQG 9132, ISO 15415, AIM/DPM standards.

M.V.R.T

Original SIC process

Marking + integrated reading

> Dot peen
> Laser

MARKING

Reading camera

Handheld reader

> Multiple readings on production lines (Machining, assembly ...)

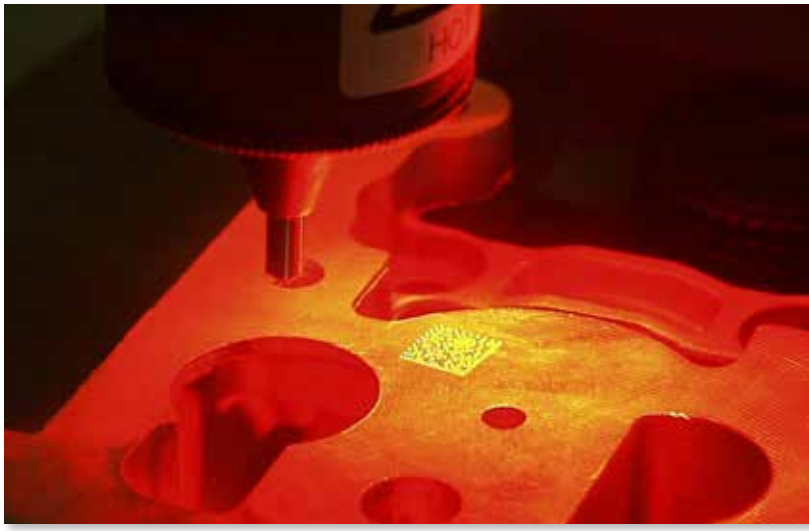
READING

VERIFICATION

> Using vision systems and high-performance lighting (analysis, measurement report editing, quality grade)

TRACEABILITY

> Information Management
> Data Saving



CUSTOM SOLUTIONS

> OUR EXPERTS WILL ADVISE YOU

TRAINING SESSIONS

We can also train your technicians on our vision systems.

EQUIPMENT CHOICE

Our experts will guide you in the choice of the most suitable equipment for your marking and traceability projects.

04

05

A GLOBAL SOLUTION

Total traceability in compliance with standards: DT05-89, ISO9132, ISO15415, ISO29158, JES131.

02

03

COMMISSIONING

Our technicians can perform on-site commissioning for all our machines.

01

TEST LABORATORIES

We provide your marking and reading lab results & studies to confirm the feasibility or your projects.

Success stories

OVER 150 VIN PROJECTS WORLDWIDE

VIN MARKING

SIC Marking develops, manufactures and installs VIN marking turnkey solutions for a large majority of automotive manufacturers worldwide. We have worked for fifteen years with Alfa Romeo, Aston Martin, Audi, Ferrari, Fiat, Maserati, Mitsubishi, Nissan, Peugeot, Renault, Volkswagen & Volvo plants...

The VIN (Vehicle Identification Number) is a 17 character number that is engraved on the chassis of each vehicle. This is a global standard that all car manufacturers must meet. Incorrectly marked VIN numbers will systematically generate costly production line stoppages. Furthermore, to have the right to sell vehicles, Vin numbers must always be readable and match the registration documentation.

Dedicated project teams offer solutions adapted to all requirements by carrying out mechanical, automation, industrial IT and vision feasibility studies. SIC Marking also provides personalized follow-ups on every VIN project with system installation & commissioning and production & maintenance employee trainings (in French, English, German and Spanish).

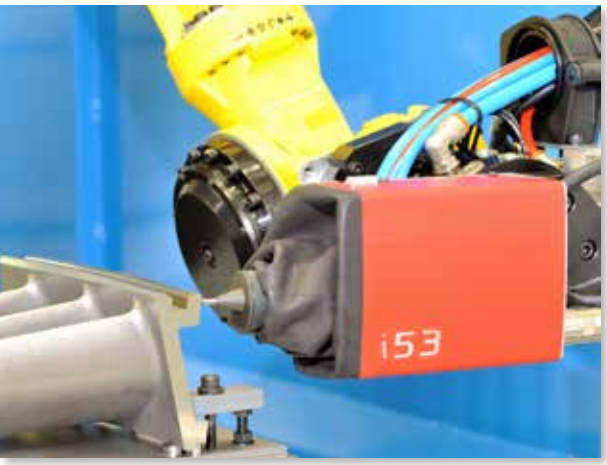
SIC Marking offers manufacturers and integrators two types of VIN systems: they can be entirely robotic and automated, or completely manual for 100% autonomous operation. We have over 100 VIN installations worldwide among major car manufacturers.
Our VIN marking systems consist of a standard i113s marking head and a pneumatic clamping system. As this equipment is reliable and robust it requires low maintenance costs. In addition, our VIN systems provide high marking speeds, from 16 to 21 seconds for 17 character / 2 logo marks.

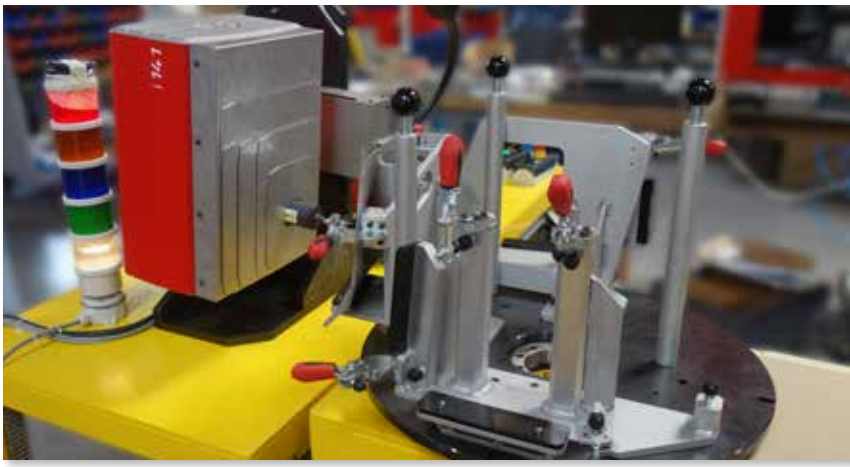
As for more than 30 000 SIC Marking systems operating worldwide, our VIN marking systems make use of our e10 controller, enabling standalone operation in 17 languages. These marking systems can readily be connected to industrial networks using the most communications protocols like RS232, RS432, Ethernet/IP, Profibus or Profinet.

SIC Marking also provides an optional character recognition system controlled by the SIC Vision software, and different depth monitoring systems. SIC Marking has strengthened its leadership position by providing its customers with marking and traceability solutions for the specific needs and requirements of automotive industry professionals.

VOLVO NISSAN RENAULT MITSUBISHI ALFA ROMEO AUDI PEUGEOT FIAT MASERATI LAMBORGHINI CITROËN

SIC Marking is Europe's first VIN system provider & leader worldwide.





MACHINING - ASSEMBLY

SAFRAN
AEROSPACE · DEFENCE · SECURITY

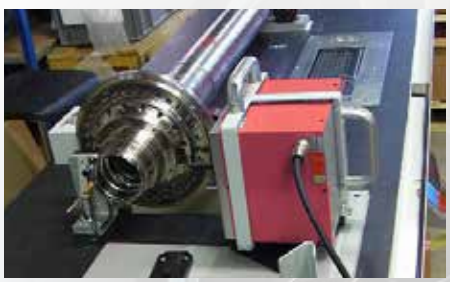
For over 20 years, Sic Marking is a partner of many divisions of the Safran group. Hispano-Suiza, Iabinal, Messier Bugatti-Dowty, Sagem, Snecma, Techspace Aero and Turbomeca are companies that we helped out with their traceability issues.

The accomplished projects and the trust of these companies in France, were then duplicated abroad. This enabled SIC Marking to develop this cooperation on a global scale, particularly in Mexico, China and Russia. For many years, SIC Marking has known how to adapt to the very strict standards that concern all companies of the Safran group. From simple marking on nameplates to more demanding N1 parts, SIC Marking has put all its expertise to offer optimal solutions for the traceability of each type of parts in compliance with required standards.

We have developed various custom machines to mark datamatrix codes and alphanumeric characters. Marking guns are used to mark dot peen characters on large parts such as reactors crowns. While our XL-Box laser systems, enable the company Sagem to mark and identify their production parts as well as their tools. Our column-mounted machines are at the heart of the identification of plane engine parts, such as blades or drum motors. They allows the company to mark alphanumeric characters and a datamatrix code for a complete traceability of parts.

SIC Marking has also introduced in France and China, four dot peen systems dedicated to the marking of turbine shafts. These rotating parts on engines are sensitive and require a complex marking. Whether it is a marking gun or more complex custom solutions, SIC Marking is able to design a wide range of tailored systems adapted to the constraints of aerospace sectors.

We also work in collaboration with subcontractors and integrators of the Safran group. SIC Marking offers his expertise to assist integrators in the design of robotic cells that use marking stations and part identification.



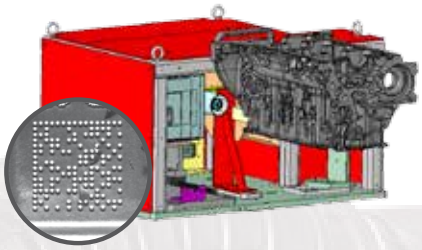
Success stories

PSA PEUGEOT CITROËN

SIC Marking is involved in the identification of PSA's engine components (EB 3-cylinder petrol engines, engines EB2DT 3-cylinder petrol turbo engines and DV5 / 6R (euro5 / euro6 standards) 4-cylinder turbo diesel).
Offering global expertise in traceability, SIC Marking has provided the following services to various PSA plants: supply, installation and calibration of marking and vision systems, on-site training of technicians, and all other required technical support.

FOUNDRY

> PSA Sites: Mulhouse & Charleville-Mézières (France)



Supplied and installed equipment at the Mulhouse site:
> 6 fully equiped boxes (marking heads, cameras & cooling systems)
> 12 cameras
> 3 portable marking guns with custom tooling

Supplied and installed equipment at the Charleville-Mézières site:
> 3 integrated lasers
> 3 cameras

Objectives: Ensure traceability of crankcases and cylinder heads at the molding stage. Guarantee the readability of the datamatrix codes for all parts coming out of the factory.
Constraints: parts are very hot at marking stage (300°C aluminum smelter). The unpolished crankcases treated in Mulhouse are blasted and have a granular surface.
Solution: SIC Marking developed a custom dot peen system. A sheet metal box integrates the marking machine, the camera to read the datamatrix codes and a cooling system to overcome temperature issues. The box was equipped with a forced air system to protect the mechanics that are exposed to heat radiations and dust. A Charleville-Mezieres, the absence of blasting allowed to use laser technology for a perfect traceability. The cylinder heads are marked after the molding process and the datamatrix code is read by cameras at each workstation, as well as at theTrémery factory.

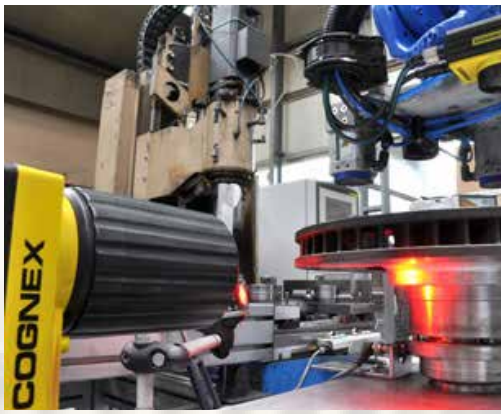
MACHINING

> PSA Sites: Trémery & Française de Mécanique (France)

Supplied and installed equipment at Trémery & Française de mécaniques sites:
> 25 integrated lasers
> 43 cameras

In these plants, SIC Marking ensures complete traceability of the main mechanical parts of PSA engines: crankcases, cylinder heads, crankshafts, connecting rods, camshafts, and bearing caps. Laser technology has been chosen for the traceability of these parts. Their identification is made by datamatrix readers.
Crankcases and cylinder heads: are marked at the end of the processing line with a datamatrix code.
Crankshafts: are marked by a laser system at the beginning of the line and identified by camera at each machining operation and marked again at the end of the line, at the control station.
Connecting rods: are marked on four sides with a datamatrix code.
These marking and identification operations can be performed on parts of raw foundry with a strong presence of oil which makes reading difficult. To overcome this difficult environment, SIC Marking has adapted its machines and developed custom systems for PSA's machining workshops.

More than 10 000 customers trust us in many industries

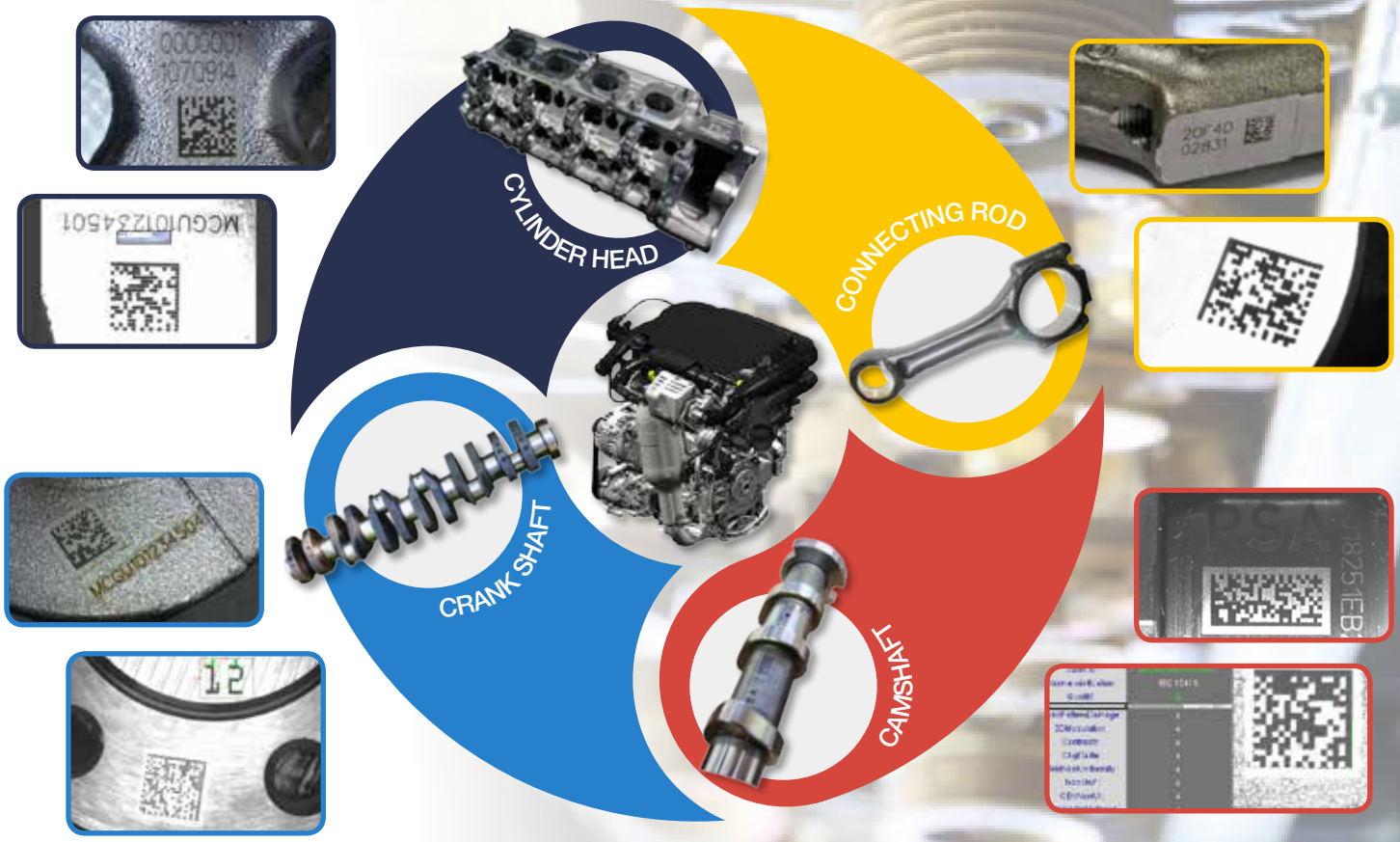


ASSEMBLY

Supplied and installed equipment at Trémery & Française de mécanique sites:
> 5 scribing marking systems
> 52 cameras

> PSA Sites: Trémery & Française de Mécanique (France)

Objectives: identify parts by reading datamatrix on the main operations of the assembly line.
Constraints: SIC Marking has had to consider the mechanical constraints of the equipment's installation. Moreover, sometimes the parts must be read in groups. For example, the rods should be read three by three.
Solution: SIC Marking developed custom marking machines based on scribing technology and use of more than fifty cameras with lighting solutions.



SUPPORTING YOU ALL OVER THE WORLD

Subsidiaries in Italy, the UK, Germany, Canada, the USA, Mexico, China, South Korea and a network of over 40 distributors...

SIC MARKING, a global specialist in marking and traceability solutions.

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Our integrated marking machines are designed to be placed at the heart of production lines and used intensively. Their ease of use and their high performance have given SIC Marking's integrated systems a great reputation in all industries.

SIC Marking is certified ISO 9001: 2008.






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SIC MARKING

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