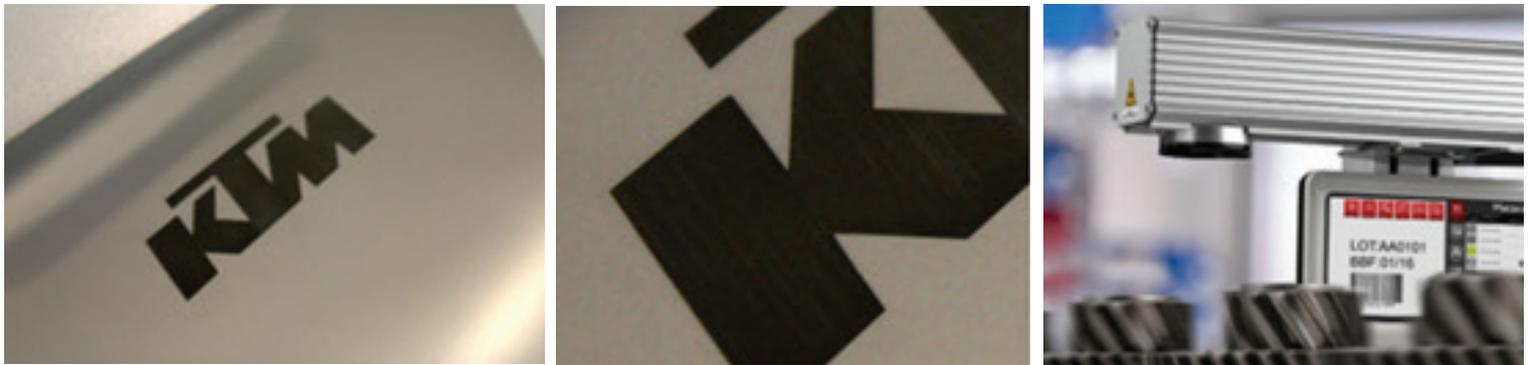


## MARKING ON ALUMINUM SHEET

Bradma laser equipment is used to encode and mark products of a wide variety of materials, including paper, cardboard, plastics (PET, PVC, HDPE), glass, metals and wood. The messages and graphics that are achieved are of high quality, at a minimum operating cost at high speeds.

Application News regularly provides a sample of products that are encoded and labelled with Bradma lasers, every day and worldwide.

Within the different possible reactions between some metals and laser radiation, the annealing effect is the most demanded because it provides a very high contrast marking without damaging the material. This reaction can also generate different colours depending on the material and process performed.



In this case, to personalise the protective aluminium sheet of a motorcycle part, a fiber laser with a 1064 nm wavelength is used, which allows for a high contrast mark and excellent finish. **The use of the laser at high pulsing frequencies helps to obtain the black colour and its correct uniformity**, while its infrared spectrum wavelength and the subsequent cooling of the piece ensure the correct annealing process.

For this marking to obtain such an intense colour, the logo has been carried out with a very high density spacing that ensures an optimal result.

LASER	Bradma SPA F-20
LENS	100 x 100
INDUSTRY	Pharma
APPLICATION TYPE	Automotive
PRODUCT	Protective plate
MATERIAL	Aluminium
MARKING TYPE	Static
MARKING TIME	27 sec.

## MARKING ON PARQUET

Bradma laser equipment is used to encode and mark products of a wide variety of materials, including paper, cardboard, plastics (PET, PVC, HDPE), glass, metals and wood. The messages and graphics that are achieved are of high quality, at a minimum operating cost at high speeds.

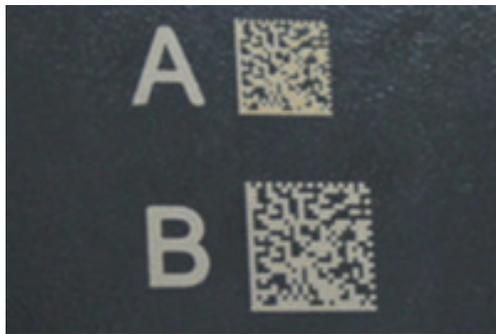
Application News regularly provides a sample of products that are encoded and labelled with Bradma lasers, every day and worldwide.

The innovation and development of new technologies mean that more and more industries increase their levels of control and traceability of their processes in order to optimize costs and ensure the best product. Parquet manufacturers are not being left behind.

In this case, traceability is ensured by printing on the vinyl of the internal side of the parquet of a Data matrix code with 62 alphanumeric characters.

**The objective of this application is quality control by detecting errors in production. Every time the inspection systems detect a fault, a code is printed on the inside of the parquet.** Depending on the speed of the manufacturing lines, between 15 and 50 meters per minute, the fiber laser is capable of marking different sized codes optimized at each line speed, thus improving visibility and readability of the codes.

In order to meet speed requirements, a 20W fiber laser with 1064nm wavelength is used. The reaction of the laser with the vinyl generates a high contrast and visible change of colour, which allows an immediate data matrix code reading ensuring total production control.



LASER	Bradma SPA F-20
LENS	100 x 100
INDUSTRY	Construction Materials
APPLICATION TYPE	Traceability
PRODUCT	Parquet
MATERIAL	Vinyl
MARKING TYPE	Dynamic
LINE SPEED	From 15 to 50 meters / minute