



## Laser marking on coloured polymers in the medical sector

# Röchling



### CLIENT

Röchling Medical Brensbach GmbH

### COUNTRY

Germany

### INDUSTRY

Medical Devices

### APPLICATION

Scale and measurement markings

### SUBSTRATE

Plastic

### LASER SOLUTION

1 x D-5005 Green with iLaserBox 450

### Company intro and history

The Röchling Group has been shaping the industry worldwide for nearly 200 years. Röchling's expertise with customised plastics make a difference by reducing the weight of cars, ensuring safe and secure medication packaging and improving industrial applications.

Their medical division develops solutions in the fields of diagnostics, fluid management and pharma as well as surgery and interventional. Röchling's medical division partners with leading global companies when it comes to components, services and smart plastic products that are needed in the healthcare industry.

### Challenge

A long-term search was conducted for the perfect laser system that could code on both the syringe and containers, which consisted of three different plastics. The newly developed and patented syringe is composed of three different components. These are made of various polymers and colour pigments (white, blue and transparent). These parts required a durable and resistant marking.

The intricate marking of the scale had to be reliable and easy to read, as well as being consistent.

Marking also had to be performed as quickly as possible, at a maximum time of 5 seconds per component.



*D-5005 Green with rack*

## Macsa Solution

The pigment supplier instigated contact between Röchling Medical and Koenig & Bauer Coding, Macsa ID's exclusive distributor in Germany. In order to complete the project within the initially established timings, all participants collaborated to find the ideal combination of pigmentation, basic material and laser system. The pigment supplier found the D-5005 Green gave the most optimal results with high-contrast marking on both transparent and opaque plastic components. Leading competitors who were also offered the opportunity to present solutions offered UV lasers, but would require the installation of two systems. Macsa's Green lasers, part of the most extensive range of lasers on the market, produced the desired results with the installation on just one system, representing a significant saving. The iLaserBox 450 marks the components in an ISO-certified clean room. The adjustable workpiece holder made the solution adaptable according to the shape and size of the components and the client's needs. Thanks to the large working area that this solution offers, and the sophisticated workpiece holder, the marking time was reduced to as low as 2 seconds per component.

The all in one solution made up of Class 1 certified laser protection, D-5005 Green laser, fume extraction and adjustable workpiece holder achieved optimal results and Röchling's requirements were perfectly met to satisfaction.



*iLaserBox 450 and workpiece holder*

## Quotes

**"Both the sampling for identifying the perfect combination of plastic polymers and the future-orientated and excellent realisation of our marking requirements convinced us."**

*Ralf Suffel – Project Manager, Röchling Medical*

