

- founded: October 2019 in St. Gallen (CH)
- spin-off from NTB Buchs by 4 co-founders
- patented technology owned by matriq
- initial capital of 200'000 CHF
- >1.2M CHF invested in r&d up to now
- 1.5M CHF financing round completed

*matriq AG has innovative marking and security solutions based on its DynamicMold technology. Every single plastic part is individually marked right in its forming process without delaying cycle time. A mold insert is creating a 2D-code watermark as unique device identity for product tracing and brand protection. And: we have re-invented the date stamp for plastics: welcome to digital.*

## the problem

Today, many products must be tracked during their entire life cycle, particularly in automotive and medtech. The latter has been set in force by EU regulations for MDR/IVDR 2017. For plastic products, this marking is often made by laser, ink jet, or adhesive labels. Laser marking is often no option, since it needs additives in the polymer that are not compatible for medical use. Marking always needs additional equipment, handling systems, marking machinery, consuming space in the fabrication site (often precious clean room space). This means more process / production time and higher costs. Part marking adds 7 to 10% to the total production costs of injection-molded goods. Moreover, quite a few products today face counterfeiting, and need therefore clear attributes to the original manufacturer for brand protection and trust. The common features such as holograms used therefore are themselves prone to counterfeiting.

## the solution and our usp

matriq's *DynamicMold* technology makes it possible to mark plastic components as well as plastic foils **directly with an individual code for each component** during primary forming or reshaping processes. The DM-mold insert is placed directly into the wall of the forming shape. The marking evolves **without any additional time and factory space**. Within milliseconds, a 2D-code (data matrix) is written onto the surface of a plastic part, in-mold and independent of the machine type.

We create a clear cost advantage and less hassle with peripheral equipment. The technology also makes it possible to directly combine the individual code with optical security structures. There is no other solution on the market that generates a pre-determined 2D-code directly during the manufacturing of a plastic part – which is, at the same time, counterfeit-proof and unique.

## market and competitors

The markets for tracking products and for brand protection are very large: The marking market has a volume of around EUR 7 billion (with 7% CAGR) without including the anti-counterfeit / security markets. The market of injection molding, a key method for producing plastic part, is worth around EUR 200 billion worldwide. The market for counterfeit medicines is developing particularly dramatically: 1-2% in the EU and 20-50% in Asia and Africa are already counterfeit.

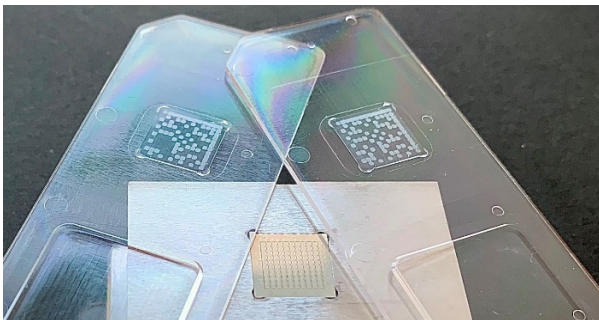
There is a multitude of different solutions that address the requirements of individual marking, and anti-counterfeit: from laser, adhesive labels, fingerprint analyses, to static optical security structures, or material additives called tagging such as DNA or nanoparticles. This means that a living market is established. However, all existing solutions have disadvantages compared to our *DynamicMold* technology.

## business model and products

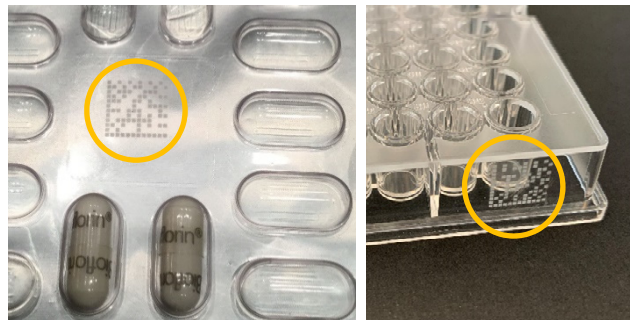
Our patented *DynamicMold* technology sells as mold insert for injection molding and other plastic forming machines in B2B. We apply a license fee per part marked by DM and have it included as a pre-paid model depending on the planned number of parts to be produced with. For custom design variants of our DM-insert, set-up costs and project fees incur.

The first matriq product launching mid 2020 is a novel, digital replacement of the classic date stamp – we call it **DM-date**. The follow-up products are 12x12 and 16x16 data matrix code generators (**DM-trace**) for tracking / UDI of products and assemblies. When combining the 2D-code with optically active and brand-specific features, the product is named **DM-brand**. Here, our customers are manufacturers of products, who must protect themselves against falsifications effectively (e.g. pharma-packaging).

**illustrations**

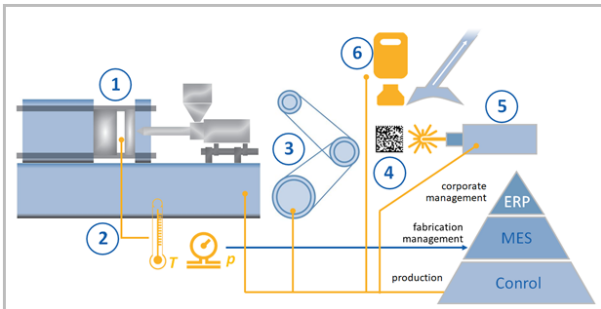


**DynamicMold mold insert prototype (coding chip 12x12 version, middle) and two injection-molded part from a series of over 100'000 manufactured and individually marked parts (data matrix code, ECC200/GS1 standard).**

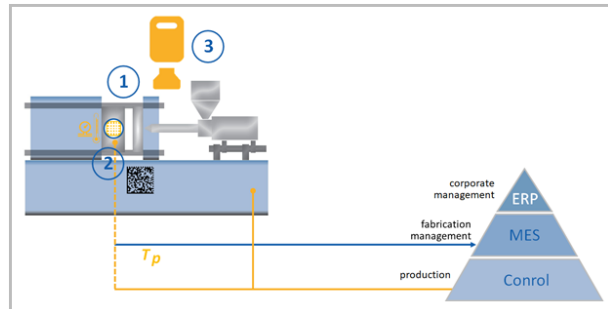


**Pharma blister and microtiter plate with a DataMatrix code in DynamicMold style. Such products can be marked without additional external marking process.**

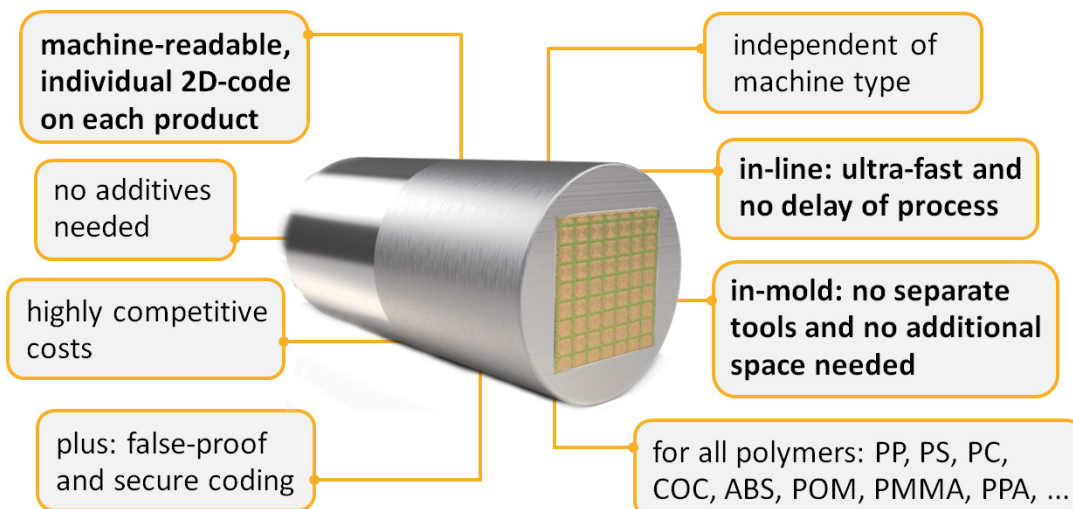
injection molding with laser marking and necessary periphery



injection molding with DM marking, no periphery needed



**Comparison of conventional marking-, verification-, monitoring- and data handling process combined in a standard setup with the same process using DynamicMold.**



**DynamicMold becomes the new standard particularly for the pharmaceutical and medical market because of its many advantages.**

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