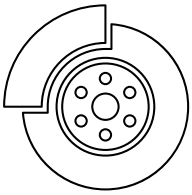
ALTFORM

RAPID COATING

BRAKE DISC LASER CLADDING
MODULAR SOLUTIONS

Laser-based coating for a cleaner future

The new Euro 7 regulation marks a turning point in automotive manufacturing: brake discs are now in the spotlight as a key element for reducing PM10 emissions. Thanks to our deep expertise in laser technology and more than a decade of innovation in additive manufacturing and powder handling, we've developed an advanced, fully automated range of solutions for the high-speed coating of brake discs using laser cladding.



The RC Family
3 modular solutions for every need

Our **Rapid Coating robotic cell** is now available in three configurations:

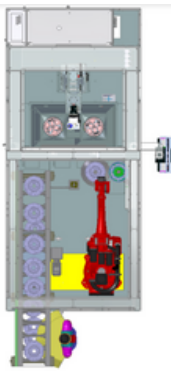
- **RC-proto** – Designed for prototyping and low-volume validation
- **RC-flex** – A highly flexible and scalable cell for mixed production
- **RC-fast** – A high-throughput cell with double laser heads for maximum productivity

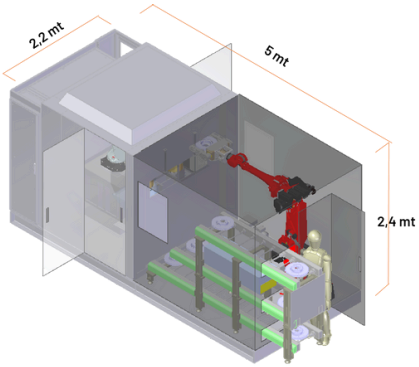
Configuration	Load / Unload	n. Laser heads	Coated discs / year
RC-proto	Manual	1	~ 10.000 *
RC-flex	Automatic	1	~ 150.000 **
RC-fast	Automatic	2	~ 250.000 **

* average ∅ 304 mm disc, one shift per day
** average ∅ 304 mm disc, three shifts per day

All systems are based on robotic automation and can handle discs of different sizes, from passenger cars to commercial vehicles, with fast changeovers and minimal operator intervention.

Our solutions are already installed at leading European carmakers, helping them meet Euro 7 targets with precision, speed, and reliability.





RC-proto

RC-flex

RC-fast

Features

Laser power **up to 22 kW** (16 kW standard)

Disc dimensions **Ø 250-500 mm**

Productivity **1500 cm²/min** (11-12 kg/h)

Typical layer thickness **100-350 µm**

- > Proprietary laser head and nozzle solution
- > Reduced deformation during the process
- > Optimized energy consumption
- > Less maintenance required

Full automation

Scalable complete and automated system

From raw to coated brake disc with a fully automated solution, tailored to your needs in terms of volume and production mix, customized to your specifications

Monitoring

All process and line data constantly under control

Sensors and tools for monitoring the process (e.g., layer thickness and meltpool), with full traceability and data integration with the factory ecosystem

Powder management

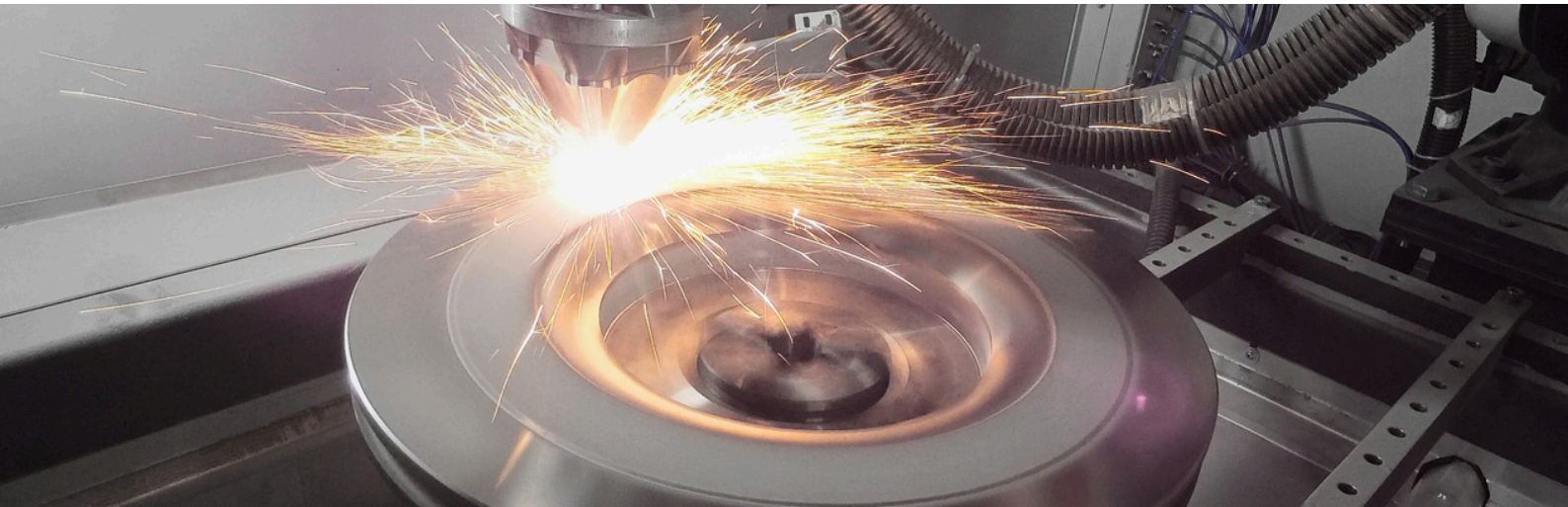
A centralized system for your plant

Centralized powder management in a single system for all the machines in your plant. Recovery and reuse of steel powder from the bond layer

Proprietary technology

For maximum coating quality

We entirely develop the process, the nozzles, and the laser head: this is why we can best adapt the technology to the results you expect



Not just coatings

AltForm can supply the **entire line** from the raw disc to the coated and ground disc. We do this by acting as the **main contractor** for the whole line, coordinating a group of **top-level suppliers**, and integrating their solutions to create a state-of-the-art, **fully automated production line**.

Modular solution

We build our offer on a full range of **modular solutions**, using our distinctive customer-centered approach and **long-standing knowledge of engineering systems** and machinery for sustainable, efficient manufacturing - all based on a unique history of technological integration.

Joint development

The production line will be **tailor-made** to your specifications. In this sense, you will be directly involved in defining the specifications, developments, and tests to make your **custom line** as efficient as possible.

Continuous improvement

Our goal is a long-term partnership. Collaboration on research projects focused on: process monitoring, new materials, and optimization of production lines. All results obtained from the research project will be **integrated into new and existing production lines**.

Ask us how we can design your next-generation brake disc coating line!

ALTFORM

Connect with us
www.altform.com