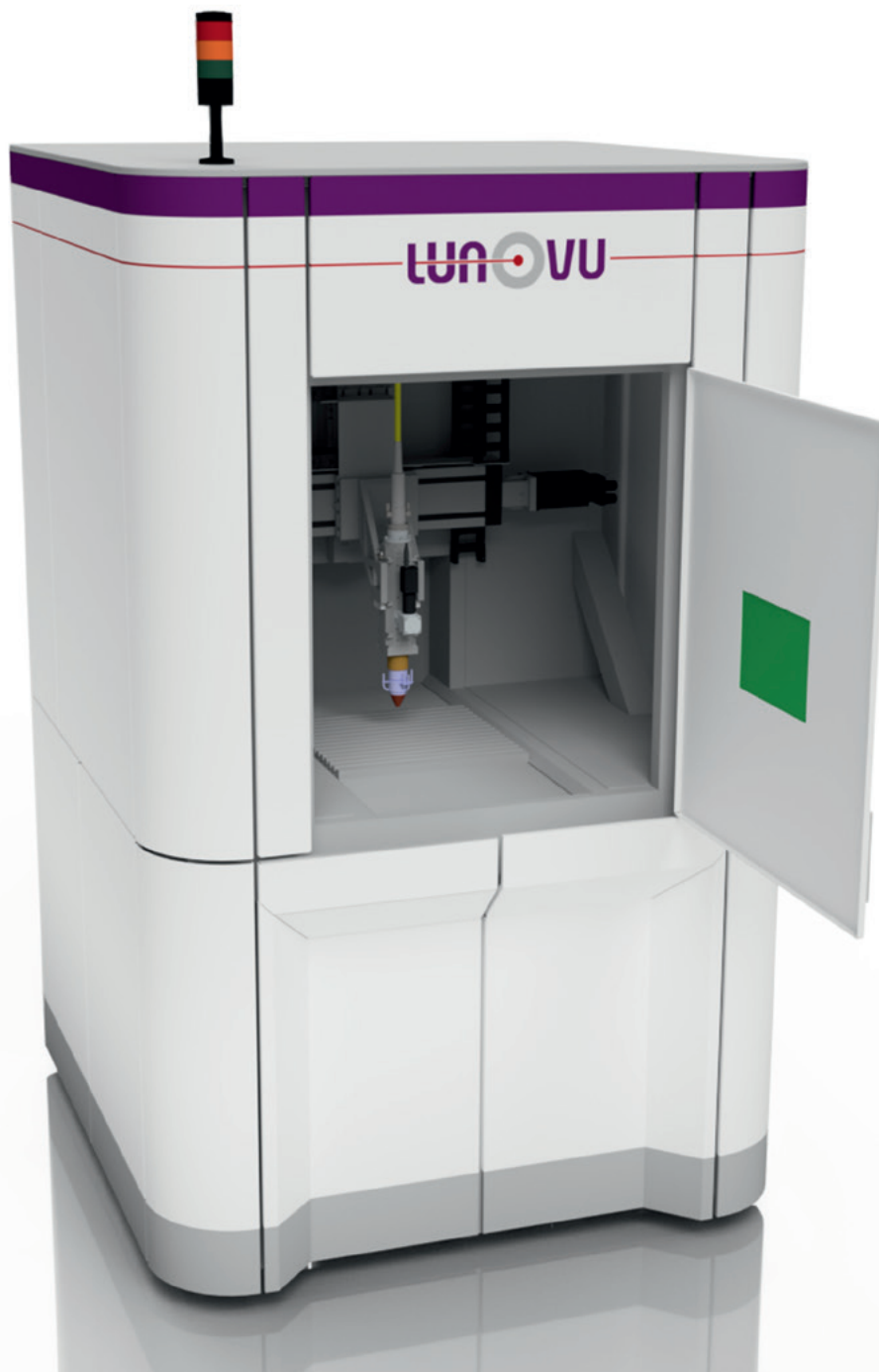


eLMD by LUNOVU

Entering the World of
Additive Manufacturing.



About Additive Manufacturing and LMD

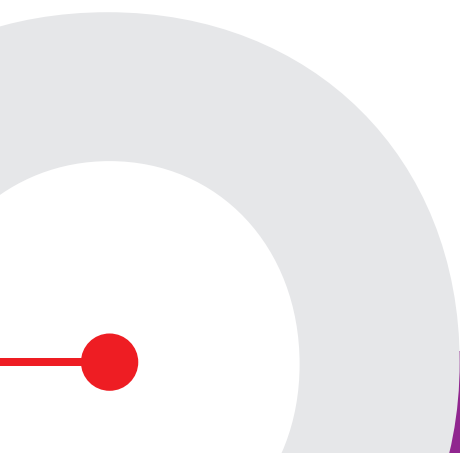
Additive Manufacturing (AM) is a technology that is about to revolutionize the manufacturing of prototypes, small batch series or customized parts.

Conventional machining, such as turning or milling, removes material from a work piece to achieve a defined 3-dimensional shape (subtractive manufacturing).

Additive Manufacturing generates material exactly at those places where it is needed. And nowhere else! Due to its inherent advantages, Additive Manufacturing has started to be a fast growing technology for the production of 3D parts made of plastics or metals.

When it comes to Additive Manufacturing of metals, a technology that is rapidly gaining relevance is LMD (Laser Metal Deposition). LMD can build 3D parts much faster than other AM technologies, generating larger parts in less time. Furthermore, LMD can use multiple materials in one production sequence. Even alloys with varying compositions can be produced easily.

LMD uses a laser that is focused onto a fine metal powder jet, creating a small pool of molten metal that rapidly solidifies. Moving this melt pool with multiple linear and rotary axes allows generating almost any three-dimensional object.



Additive Manufacturing with eLMD

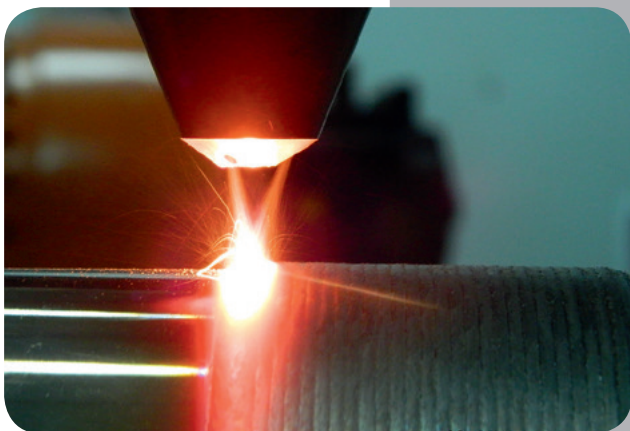
For a few applications, such as parts repair and modification, Laser Metal Deposition (LMD) has been an established production technology for many years. More recently, LMD has been recognized as a key technology for true Additive Manufacturing (AM).

eLMD by LUNOVU exactly meets the requirements of all those who consider starting with AM, or those who need a compact and robust LMD system for small scale production.

And most notable – it comes at an affordable price.

eLMD is a ready-to-use machine system, including:

- 2 kW diode laser with fiber and optics
- 300 mm x 300 mm x 300 mm process volume
- 3 linear axes (x-y-z)
- Powder supply unit and nozzle
- Safety housing
- Proprietary, NC based control system
- Pre-defined macros for standard processes and geometries



eLMD comes with a comprehensive support and training package. This includes operators' training at the LUNOVU R&D facilities, training at the customer's site as well as on-demand remote process and technology support.

Prepared for the future with eLMD

Additive Manufacturing is a young technology. Applications and requirements will change rapidly in the future. That is why the eLMD design is deliberately open and extendible. It is prepared for the seamless integration of upgrades and extensions at any time.

These include

- 5 axes control
- Different laser powers and beam qualities
- Various optics and nozzles
- Software modules, e.g. for process data management
- **Multi material capability**
- **Automated /semi-automated toolpath planning**
- **Optical scanning of parts surfaces plus toolpath definition**

Get in touch with us!

We are excited to learn about your ideas and visions, and to provide more details about eLMD.



Integrated Laser Solutions

LUNOVU GmbH
Kaiserstrasse 100
D-52134 Herzogenrath
Germany

T +49 (0)2407 55505-0
F +49 (0)2407 55505-55

info@lunovu.com
www.lunovu.com