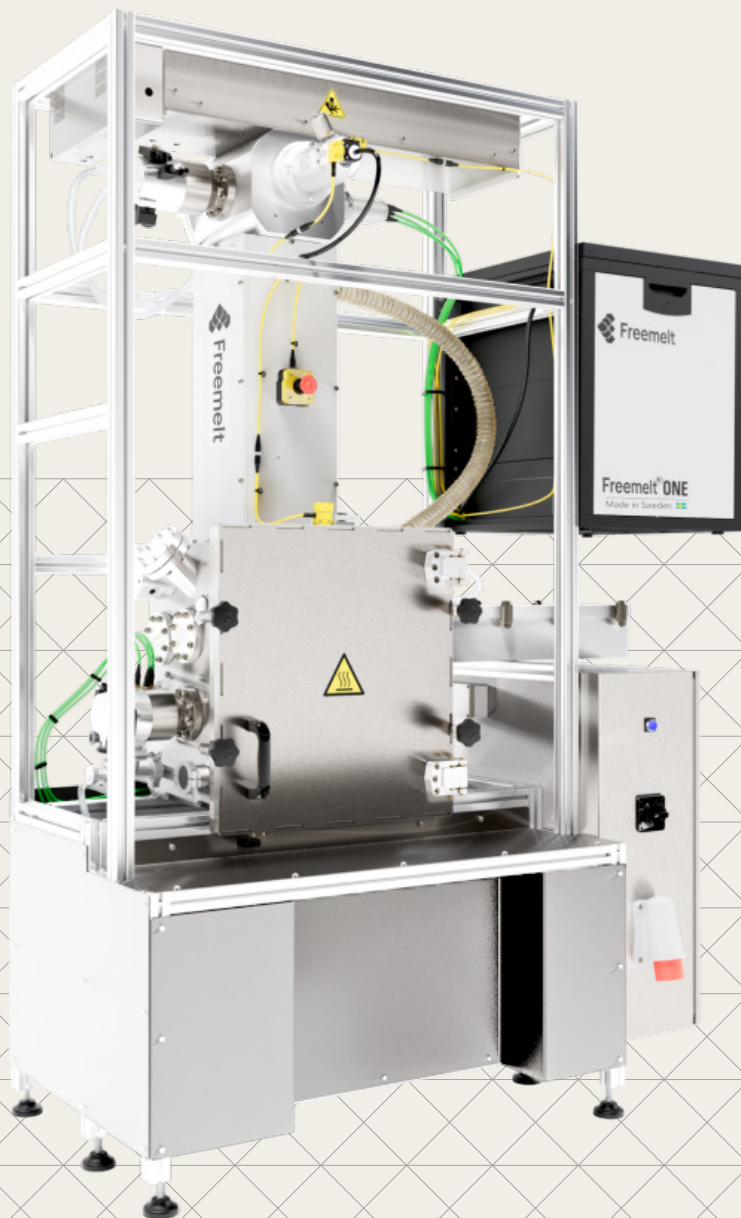


Freemelt® ONE



For open materials research



Open research

Collaboration – Innovation – Transformation

- ❖ High beam power and fully open beam path sequencing.
- ❖ Create your own IP with total control in the open architecture.
- ❖ Develop new materials optimized for your application.
- ❖ Develop processes faster and use a broader range of metal powders.
- ❖ Take advantage of knowledge and data shared in an open community.
- ❖ A wide range of ports for instrumentation with the open system architecture.



Technical data Freemelt® ONE

Beam power	Variable 0–6 kW
Beam acceleration voltage	60 kV
Build envelope	Ø100 x H 100 mm
Base pressure in vacuum chamber	1x10 ⁻⁵ hPa (mbar)

Pumpdown time of vacuum chamber	<30 minutes
Cathode heater	CO ₂ Laser
Operating system	Linux
Build file format	Open Build File (OBF)

Additional features

Backscattered electron detector (BSE)

Enables detection of irregularities, such as porosity or swelling in each melted powder layer.

Periscope

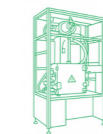
With the periscope feature, the process is viewed via a mirror and no shutter is needed to protect against "metalization".

ProHeat®

ProHeat® opens up a wider range of processable materials thanks to unique heating plate, minimizing the risk for powder charging and smoke events.

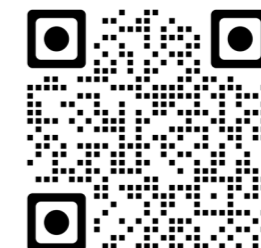
Pixelmelt®

Unlock the full potential of spotmelting with Pixelmelt® Software, a catalyst for innovation that will redefine the way you approach spotmelting in metal 3D printing.



> 30 materials mastered

Read more in published open-access papers





Freemelt is your partner through the full AM journey!

About Freemelt

A Swedish company founded 2017 with extensive knowledge, experience, and patents within Electron Beam Powder Bed Fusion (E-PBF).

Freemelt offers a complete product and service offering, supporting customers from early material process development through application and product development followed by a seamless transition to industrial serial production. We serve customers in the defense, energy, and MedTech sectors across Europe, U.S., and Asia, helping them drive innovation and enhance production efficiency.

Book a demo or request more information:

