

e-MELT®-iM

 **Freemelt**

For optimized serial production



Setting the industry standard for serial production

Collaboration – Innovation – Transformation

- Industrial E-PBF machine for serial production with open architecture and seamless factory integration.
- Interchangeable, actively cooled build modules deliver high throughput and short cycle times, with an optimized machine footprint on the factory floor.
- Off-machine turnaround, for part recovery and powder handling at a dedicated station, boosts uptime, safety, and workflow efficiency.
- e-MELT®-iM is designed to maximize overall equipment effectiveness (OEE) and optimize total cost of ownership (TCO), delivering a competitive cost per part.



Technical data e-MELT®-iM

Per melt station and build module

| | |
|---------------------------|--|
| Beam power | Variable 0-6 kW |
| Beam acceleration voltage | 60 kV |
| Build envelope | Ø 100 x H 325 mm |
| Process vacuum level | 1x10 ⁻⁵ hPa (mbar) |
| Build sensorics | Backscattered electron detector, Pyrometer, NIR camera |

| | |
|---------------------------------|-----------------------|
| Build module docking to beam on | 20 minutes |
| Non gravity powder feed | Push piston |
| Spot size (min, FWHM) | 200 µm |
| Operating system | Linux |
| Build file format | Open Build File (OBF) |
| Process variables | Real time |

Features

Open source system

OEM agnostic interfaces for production process integration

Superior electron gun

High power with maintained beam quality
Improved productivity in high volume manufacturing

Outstanding heat management

ProHeat® Preheating
Pixelmelt® Spotmelting
Build tank cooling

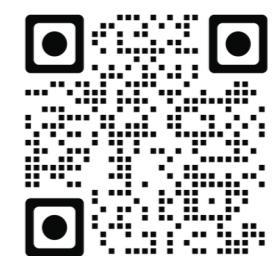
Fleet management

Realizing digital manufacturing

Maintenance

Asset condition monitoring
Asset maintenance

Read more about Freemelt's services





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:

