

# eMELT<sup>®</sup>-iM



For optimized serial production



# Setting the industry standard for serial production

Collaboration – Innovation – Transformation

e-MELT®-iM is a game changer for industrial serial production, reaching higher productivity combined with open source accessibility in an industrial package.

Innovative design featuring interchangeable, and actively cooled build modules to enable outstanding productivity for a streamlined workflow with low manning. Part recovery and powder handling are relocated to a separate, designated turnaround station for improved efficiency and safety.

With a focus on automation and ergonomics, e-MELT®-iM delivers superior productivity at the lowest TCO (Total Cost of Ownership), and an efficient factory footprint while improving the work environment and enabling a green transition in the manufacturing industry.



## 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  
Asset management

## 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	10 <sup>-6</sup> 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, FWHP)	200 µm
Operating system	Linux
Build file format	Open Build File (OBF)
Process variables	Real time



# Freemelt is your dedicated partner, taking full ownership through the product lifecycle!

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## 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. In addition, Freemelt offers a partnership with a focus on productivity improvements for the customer. Freemelt's industrial 3D printers offer increased productivity with optimized TCO (Total Cost of Ownership).

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