

eMELT[®]-iD



For efficient product development



For your development needs

Collaboration – Innovation – Transformation

Freemelt's cutting-edge 3D printer e-MELT®-iD is based on Freemelt's proven innovative core technology built on open source principles. e-MELT®-iD is tailored for efficient application development and initial production.

What sets e-MELT®-iD apart is true transferability of products and processes to e-MELT®-iM. This allows users to certify and qualify parts before scaling up production volumes.

Freemelt is your dedicated partner offering a comprehensive product and service portfolio supporting industrial customers from the inception of a product idea to serial production.



Features

Open source system

Full control of electron beam parameters
Empowering creation of intellectual property

Superior electron gun

Maintained beam quality across full power range

Outstanding heat management

ProHeat® Preheating
Pixelmelt® Spotmelting
Build tank cooling

Product development and initial production

Unmatched process design freedom
On-line layer-wise build process monitoring
Seamless transfer to e-MELT®-iM
Fleet management

Maintenance

Asset condition monitoring
Asset maintenance

Technical data e-MELT® -iD

Beam power	Variable 0-6 kW
Beam acceleration voltage	60 kV
Build envelope	Ø100 x H 325 mm
Process vacuum level	10 ⁻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, 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!

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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