

Innovation Club 2025

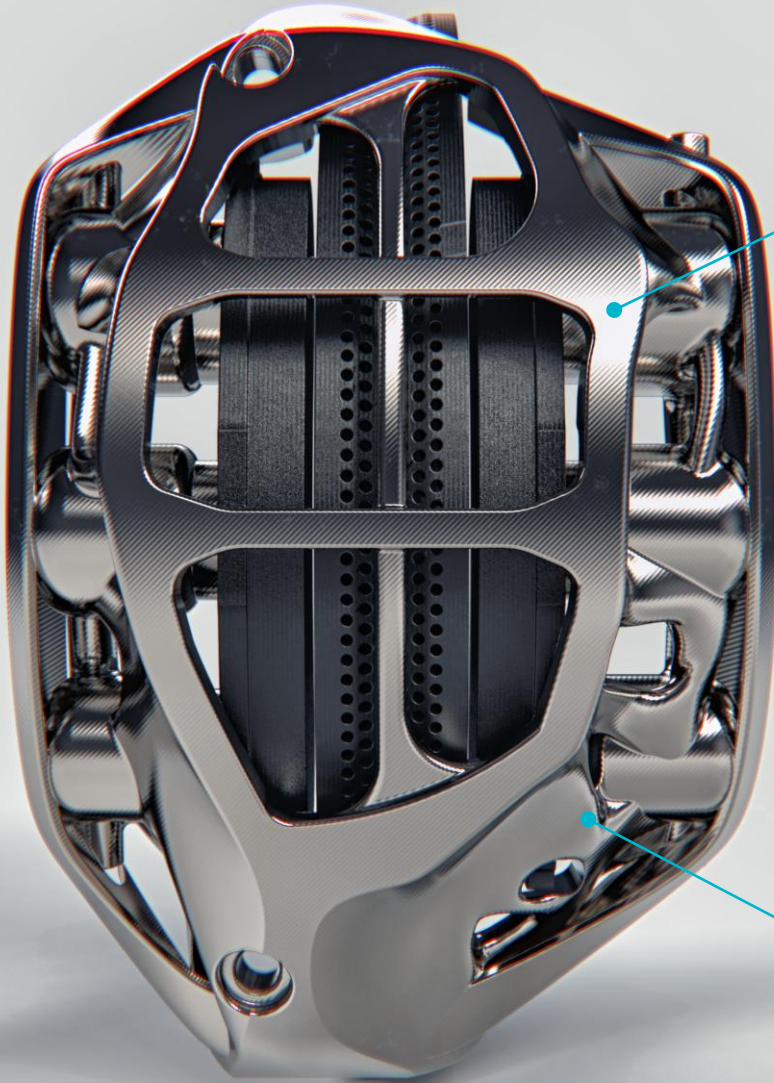
EBM - From Digital Design to Physical Part

Dominic Neumayer

pro-beam additive GmbH



September, 2025



Saving Weight

Compared to aluminium
40 % weight reduction

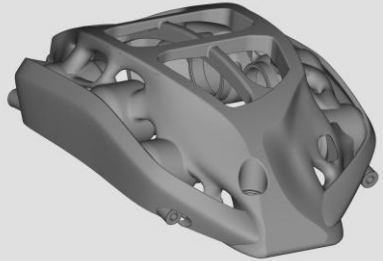
Tough Customer

Significant increase in
toughness and strength

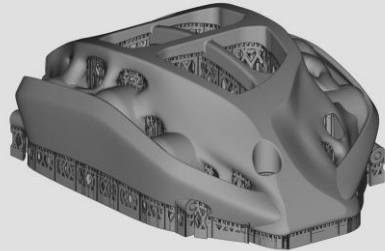




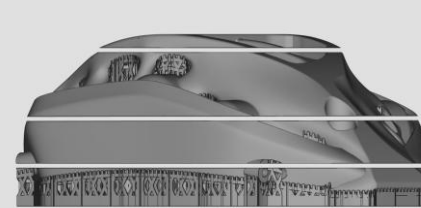
CAD-File



Support Structure



Slicing

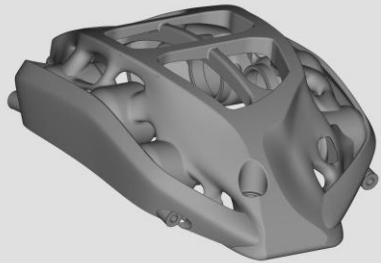


Send to Machine

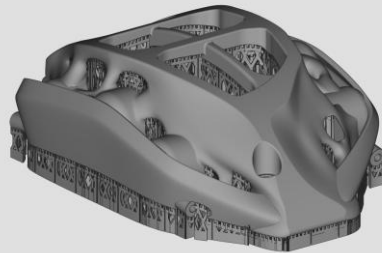


- **Design Freedom:** EBM allows for design freedom and traditionally hard to manufacture geometries

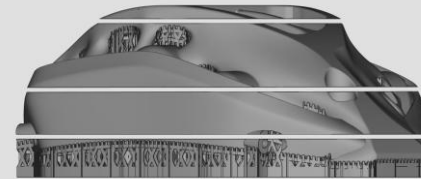
CAD-File



Support Structure



Slicing

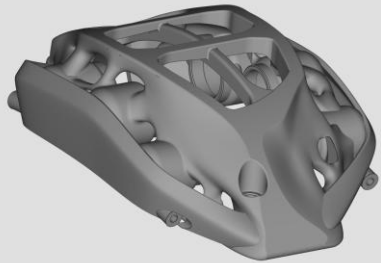


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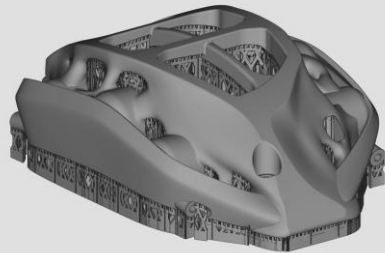


- **Design Freedom:** EBM allows for design freedom and traditionally hard to manufacture geometries
- **Support:** Unlike many other additive manufacturing processes, EBM requires fewer supports and enables parts to be built along the entire Z-height without anchoring to the build plate.

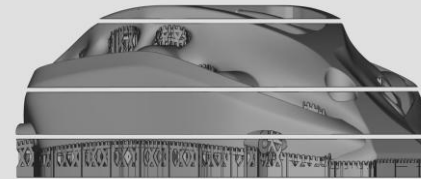
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Support Structure



Slicing

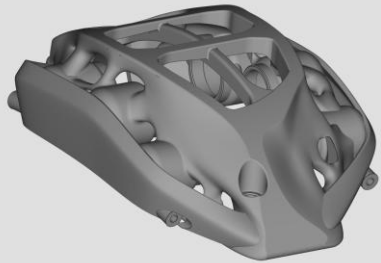


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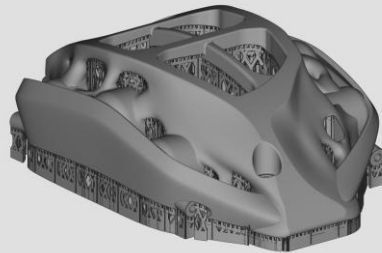


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- **Layer-by-Layer Process:** The 3D model is sliced into thin 2D layers, which are then sequentially melted by the electron beam to form the final part.

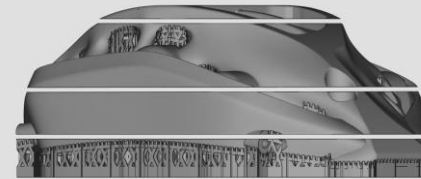
CAD-File



Support Structure



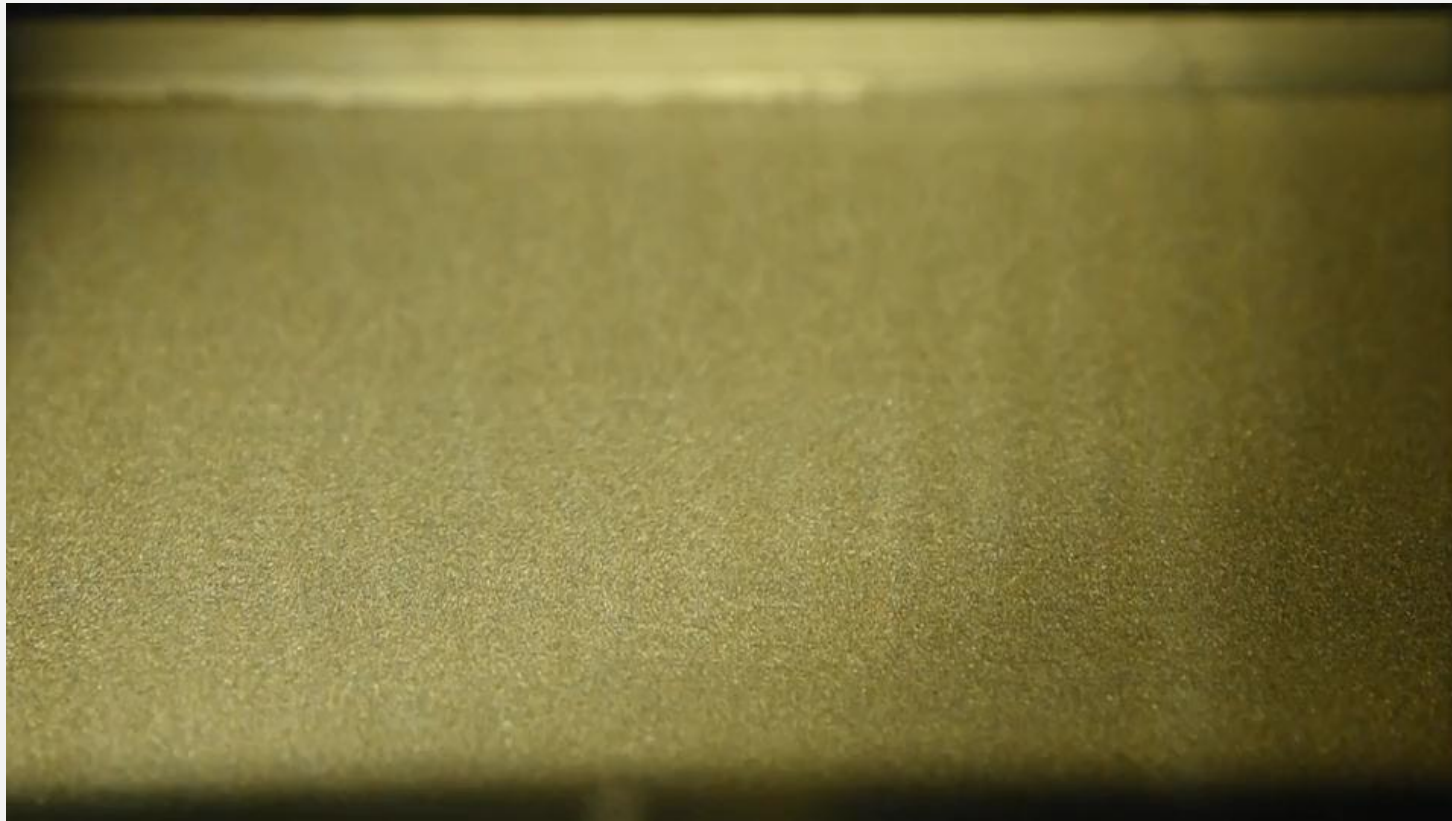
Slicing



Send to Machine



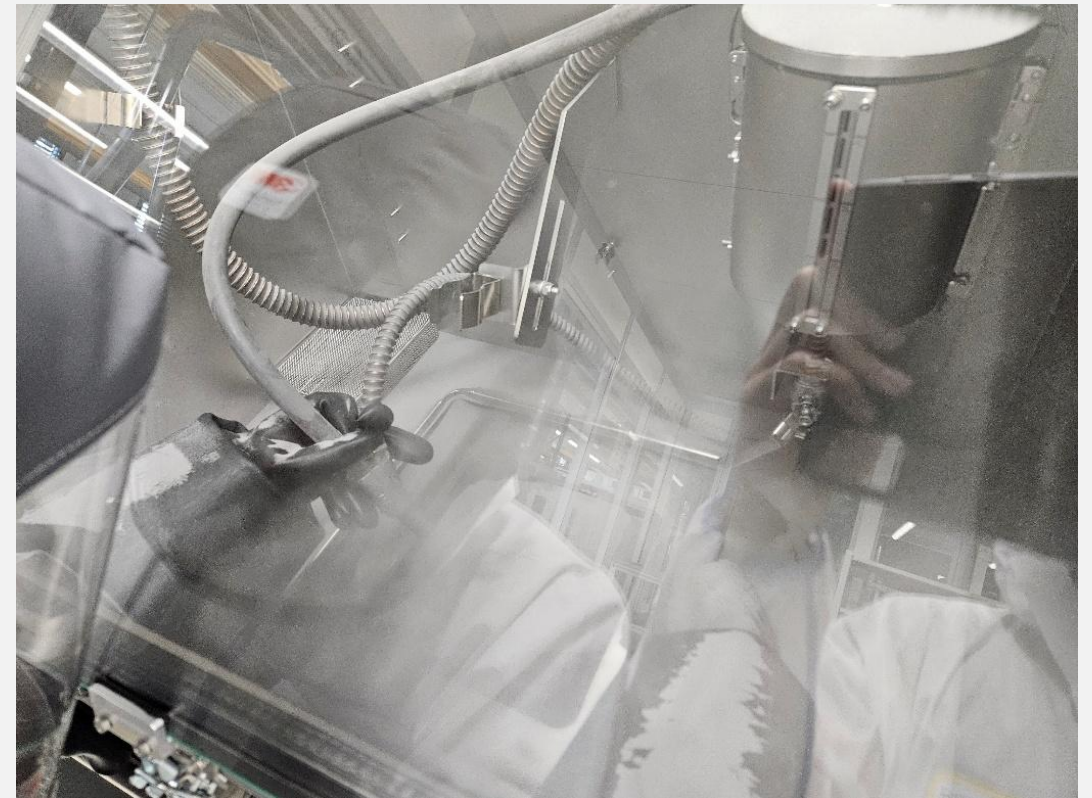
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- **Data Transfer:** Layer data is transmitted directly to the machine for build execution.



Build Job

Depowdering

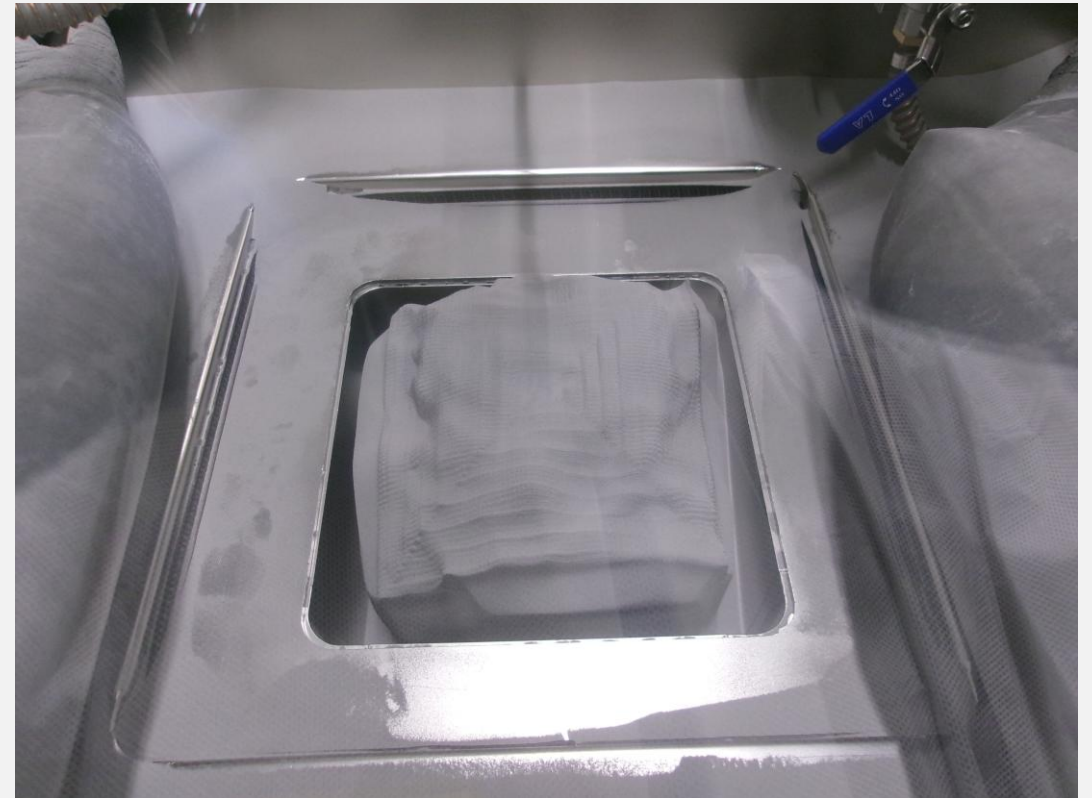
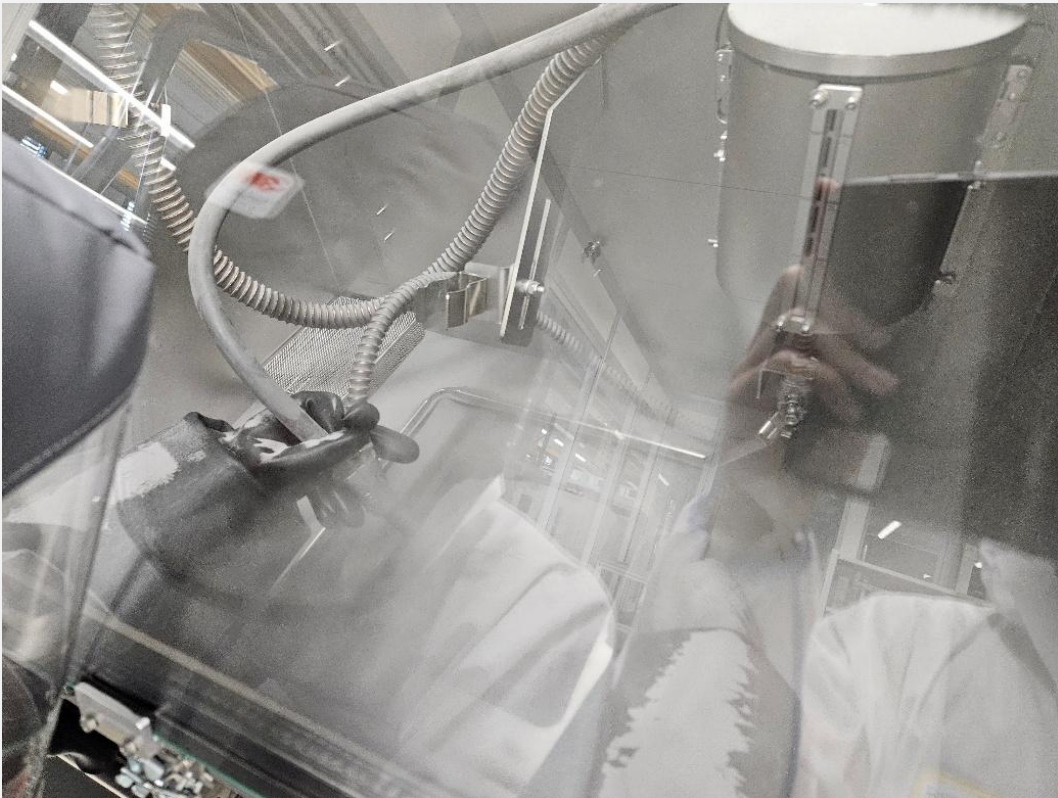
Support Removal



Build Job

Depowdering

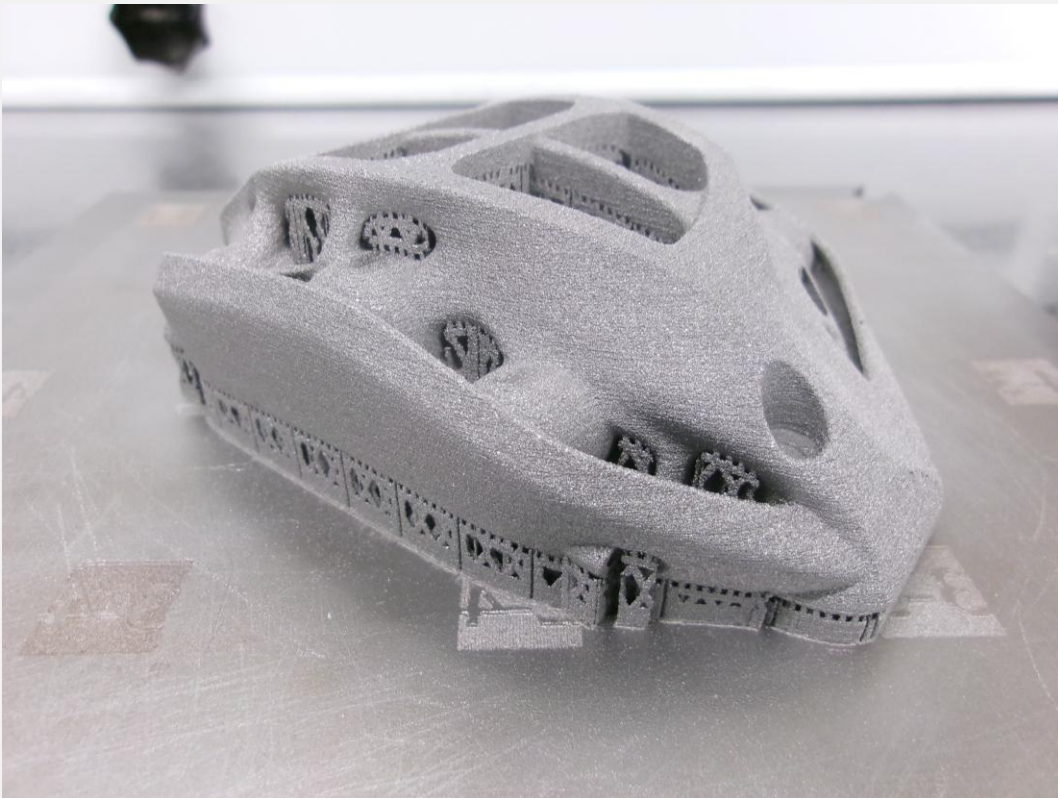
Support Removal



Build Job

Depowdering

Support Removal



Thank you very much
for your attention.

Dominic Neumayer
pro-beam additive GmbH



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