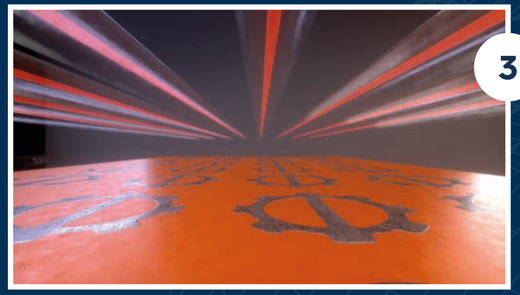
Tritone MoldJet® Technology

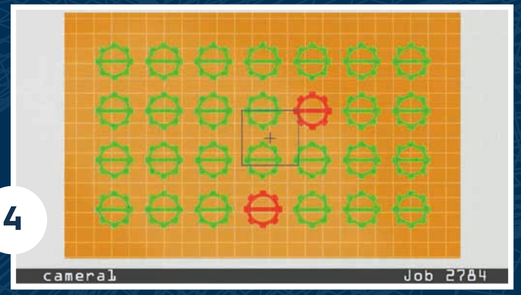
MoldJet Layer-by-Layer Build Process

1. Mold Forming:
Precise jetting of mold forms cavities of the inverse of the layer geometry.

2. Material Deposition:
High density paste is forced into all cavities of the build layer.

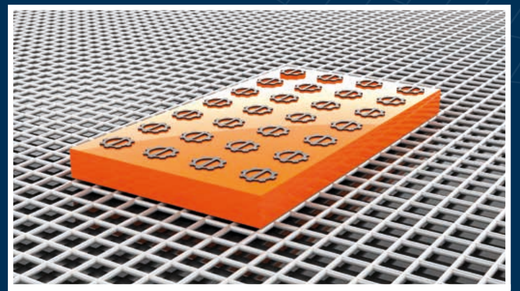


3. Drying & Hardening:
Layer is rapidly dried and hardened, by hot air and vacuum.

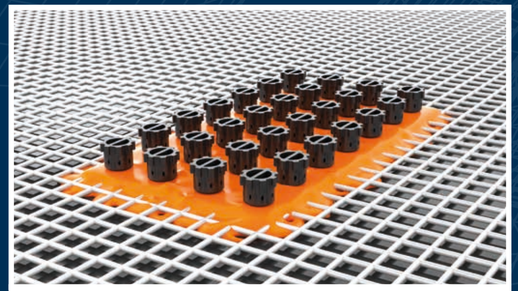


4. Optical Inspection:
Real time AI image analysis followed by auto-correction / layer removal if required.

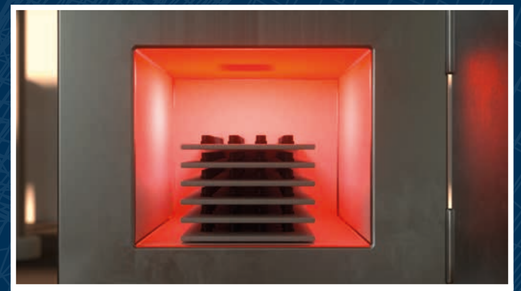
MoldJet Step-by-Step Post Processing



Finished Build Tray:
When removed from the system the tray contains robust green parts embedded in stable hard mold material.



Demolding:
A hands-free process, mold material is melted away to reveal green parts which are then rinsed in a solvent bath to prepare for sintering.



Thermal Debinding & Sintering:
Finally, debinding and sintering are done in a single stage. The green parts become functional end-use metal / ceramic parts.

The Technology

Tritone MoldJet is an innovative powder-free AM technology that enables production of metal and ceramic parts at an industrial scale and speed. It is designed for producing geometrically complex parts, with high density and great mechanical properties. MoldJet allows a quick and easy changeover between a wide variety of metals and ceramics. Parts of different geometries and applications can be manufactured in the same batch.

Advantages

- High part to part repeatability & accuracy
- Hands-free & powder-free post process
- Unlimited part geometric complexity (no support structures)
- A wide variety of materials (metal & ceramic)
- Materials changeover: quick, safe, and clean – no loose powder involved
- Highly robust green parts with low sintering shrinkage
- Automated AI powered in-process QC & layer correction tools
- Dynamic Layer Thickness mode, optimizing production speed and detail definition

Tritone
Industrial Additive Manufacturing