

Binder Jetting sand printer

A liquid bonding agent is selectively deposited to join the pre activated sand particles. Layers of material are then bonded to form a part. The printhead strategically drops binder into the powder. The job box lowers and another layer of powder is then spread and binder is added.



Build volume (X, Y, Z) mm: 1800×1000×700

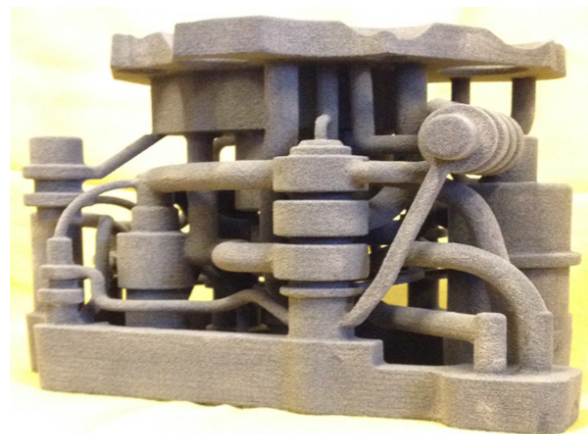
Build speed, dm³/h: 60-85

Layer thickness, μm: 280-500

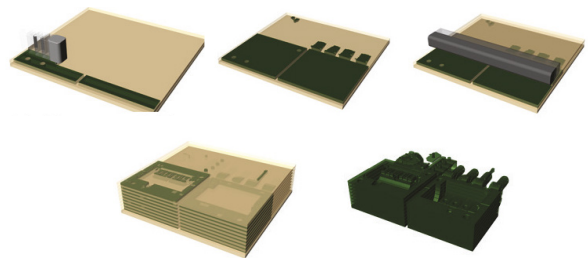
Build height, cm/h: 4-5

Print resolution, μm: 100

Materials: Silica sand but also zircon sand (ZrSiO₄), chromite sand (FeO · Cr₂O), ceramic beads and black iron ore can be used.



Sand core, 3D printed.



Advantages

- Flexible batch production; creates complex and accurate sand cores and molds, individual parts, small production lots, no molds and storage necessary
- High productivity; large job box, high-speed printing, easy unloading, cores ready for immediate casting
- Suited for light metals, non-ferrous metals, cast iron and steel

Challenges

Difficult to evacuate loose sand from deep narrow pockets.

Developing multiple material powder bed.

Contact

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