



SLM additive manufacturing system

Realizer SLM 125

Additive manufacturing equipment that constructs a component by sequentially fusing layers of powder based on a three-dimensional CAD model

Technical specification

- Layer height: 20–50µm
- Build volume: 125 x 125 x 180(z)mm
- Power: 200W IPG Ytterbium fibre laser

Some applications

- Customised components – eg patient-specific medical implants created directly from CT scans with minimal lead time
- Complex components – eg hydraulic manifolds with complex internal passages that are otherwise labour-intensive or impossible to manufacture using conventional methods
- Integration of many components into a single assembly – eg heat exchangers featuring integral fine and complex features
- Components with conformal cooling – creating tools with a reduced cycle time, longer operational life and a reduction in moulding scrap rates
- Lightweight components – eg lightweight aircraft components with designs unachievable using conventional manufacturing
- Internal lattice structures – minimises mass without compromising structural support, rigidity or heat transfer capabilities, eg helicopter exhaust gas nozzles with integral cooling

Features and benefits

- Build chamber purged with argon gas – process takes place in an inert (argon) environment with an oxygen level below 0.1%
 - Integrated powder recycling system
 - Preheat capability
 - Able to process:
 - Titanium – Ti6Al4V Grade 5, 23
 - Nickel – IN718, IN625, IN713C
 - Aluminium – AlSi10Mg
 - Stainless steel – SS316L, SS304
 - Cobalt chrome
 - Other special materials such as tantalum, MP35N and Nimonic 90

