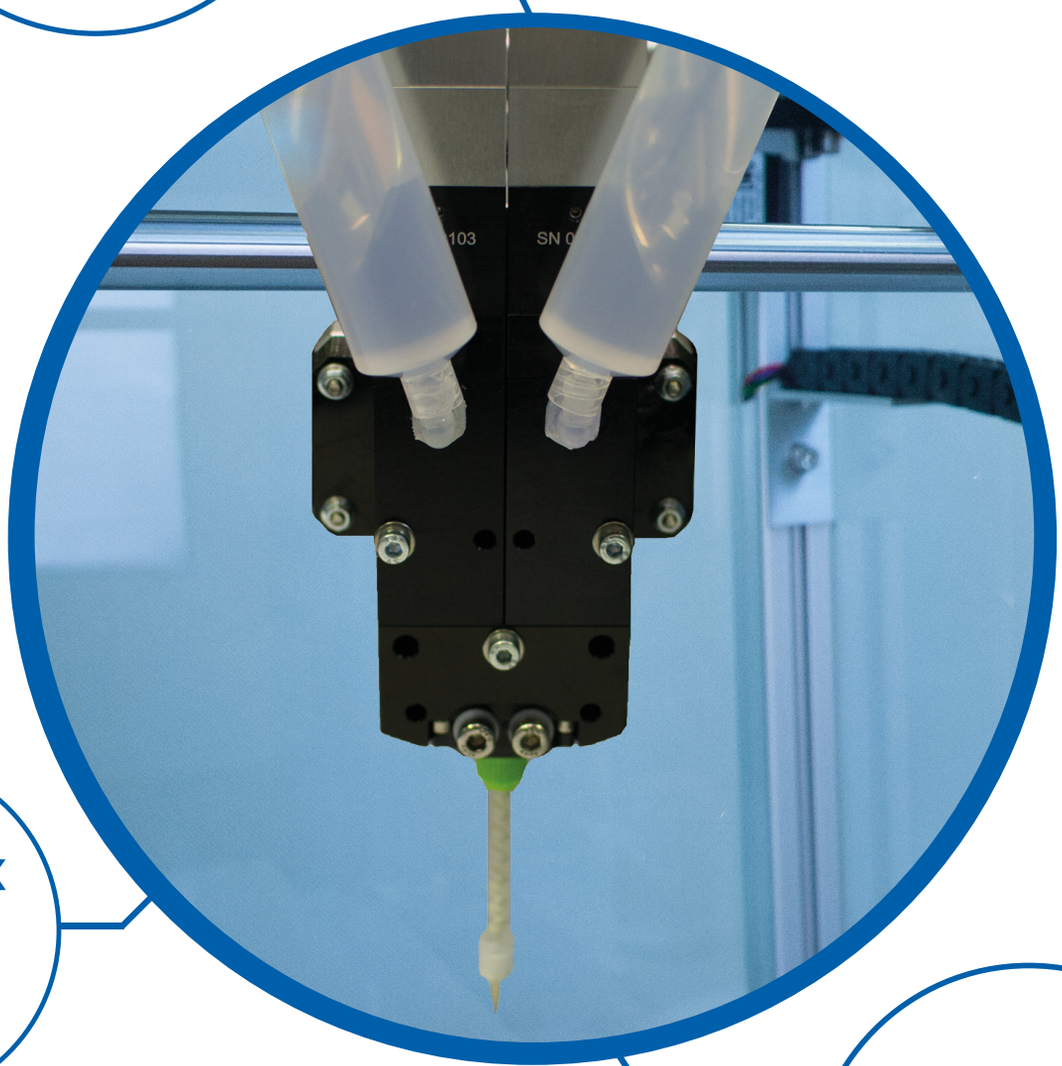
LAM

3D PRINTER MADE IN GERMANY

Liquid Additive Manufacturing

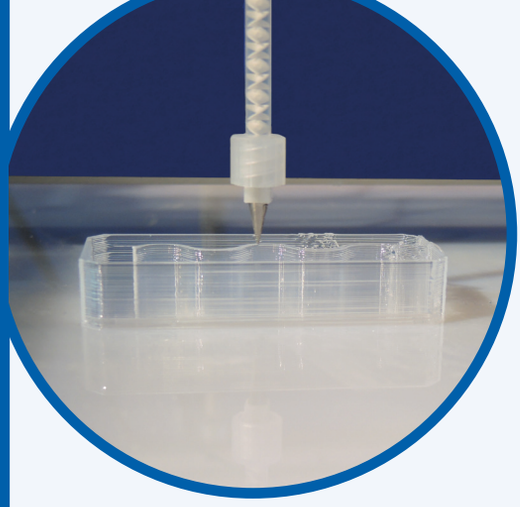


Complex Silicone Parts

Great Mechanical Properties

German RepRap

Future in 3D Printing



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SPECIFICATIONS

PRINT

Build platform (X/Y/Z)*
260 x 320 x 200 mm

Layer height min.
0.1 mm

Print speed
10 – 150 mm/s (depending on material)

Travel speed
10 – 300 mm/s

Nozzle diameter
0.8 mm

Material
LC-3335 3D Printable Silicone Rubber

Printing technology
LAM (Liquid Additive Manufacturing)

HANDLING

Filetransfer with SD card, Stand-alone printing with LC display, USB

Software
Simplify3D

DIMENSIONS AND WEIGHT

Dimensions (W/D/H)
700 x 700 x 1640 mm / 27.6 x 27.6 x 64.57 in

Weight
approx. 60 kg / 132.28 lbs

OPTIONS

Dualextruder for supportmaterial, base cabinet, nozzle diameter 0.6 and 0.4 mm
3D PrintBox network via Ethernet or Wifi

COMPLEX SILICONE PARTS AND GREAT MECHANICAL PROPERTIES

German RepRap designed its Liquid Additive Manufacturing (LAM) 3D Printer to print successive layers of 3D Printable Silicone Rubber in a method comparable to the FFF process. It is also possible to use support material. Thus, it can form complex silicone parts that would be difficult or impossible to achieve through conventional injection molding. Each layer of silicone is fully cross-linked through thermal cure to enable parts with mechanical properties that are comparable to molded components. Test parts printed with the LAM 3D Printer exhibited the same sharp cure profile of injection molded test samples, as well as 80 percent (on average) of the samples' mechanical properties. Specifically, 3D printed parts demonstrated 70 percent of the tensile strength elongation of injection molded samples, and 90 percent of their tear strength. Consequently, the LAM 3D Printer is potentially capable of printing functional prototypes and enabling small manufacturing trials of complex parts. Further, the material's properties closely match those of liquid silicone rubber (LSR), allowing an easy transfer into injection molding processes for high-volume manufacturing.

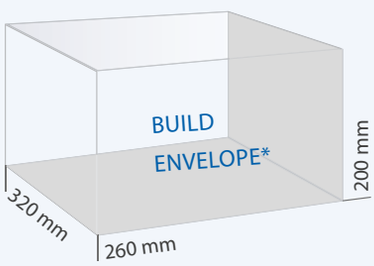
WORKFLOW OPTIMIZATION AND COST ADVANTAGES

The technology can significantly reduce production waste, optimize the supply chain, eliminate tooling and speed the time to market for new designs unachievable through conventional technology. Another great advantage is that the finished parts of the LAM 3D Printer can withstand UV rays.

ABOUT LC-3335 SILICONE RUBBER FROM DOW CORNING

The material introduces the power and versatility of silicone technology into the realm of 3D printing. The LC-3335 silicone comes with a shore hardness of A50, which allows multiple variations of different densities and flexibilities of the later 3D printed object by using all the potential of the geometry and grade of the volume-infill. More variations of the LC -3335 are yet to come, focusing on a wider range of shore hardness, followed by LSR materials with appropriate certification in the medical or food sector.

Silicone rubber customers can now combine the uniquely beneficial properties of the already qualified silicones with faster prototype development and small series production of highly complex parts.



presented by

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Future in 3D Printing

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