

LIQUID ADDITIVE MANUFACTURING

 | LAM
3D PRINTER MADE IN GERMANY

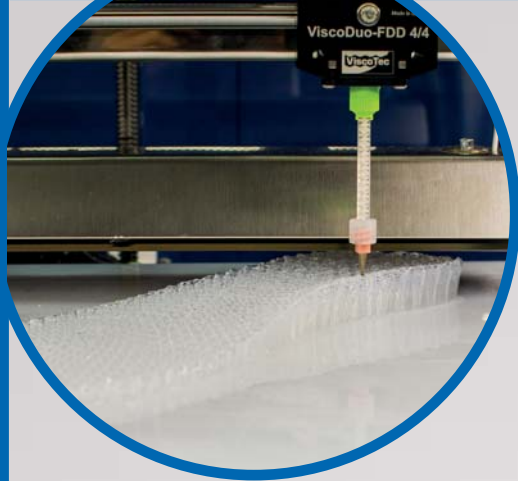
Great
mechanical
properties

3D printed
silicone
parts

no post-
processing



German
RepRap | 
Future in 3D Printing



SPECIFICATIONS

PRINT

Build platform (X/Y/Z)*	280 x 280 x 200 mm
Print speed	10 – 150 mm/s (depending on material)
Travel speed	10 – 300 mm/s
Nozzle diameter / Layer height	0.8 mm / 0.5 mm; 0.4 mm / 0.3 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, network-compatible
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

SILICONE PARTS WITH GREAT MECHANICAL PROPERTIES

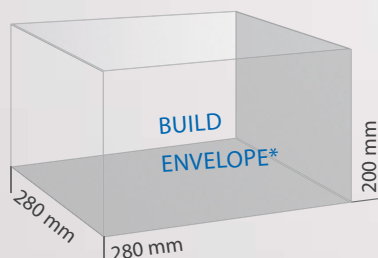
German RepRap designed its Liquid Additive Manufacturing (LAM) 3D Printer to print successive layers of 3D printable Liquid Silicone Rubber (LSR) in a method comparable to the FDM/FFF process. Each layer of the 3D printed LSR is fully crosslinked through thermal cure and therefore the material achieves almost the properties of injection molded LSR. Test parts printed with the LAM 3D Printer exhibited the same sharp cure profile of injection molded test samples, as well as 91 percent on average of the samples' mechanical properties. Specifically, 3D printed parts demonstrated 100 percent of the tear strength of injection molded samples, 90 percent of their tensile strength, 90 percent of their hardness and 85 percent of their elongation. Consequently, the LAM 3D Printer is capable of manufacturing functional parts or prototypes but also enables additive manufacturing of small series of high performance silicone elastomer parts. Further, the material's properties closely matching those of injection molded LSR, allowing an easy transfer into injection molding processes for high-volume manufacturing.

WORKFLOW OPTIMIZATION AND COST ADVANTAGES

The technology can significantly eliminate tooling and speed the time to market for new designs, reduce production waste or optimize the supply chain unachievable by conventional technologies. Another great advantage is that the parts of the LAM 3D Printer don't need to be post cured and can withstand UV rays.

ABOUT LC-3335 SILICONE RUBBER FROM DOW SILICONES

The material introduces the power and versatility of silicone technology into the realm of 3D printing. The LC-3335 silicone comes with a shore A50 hardness, 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-333x series are yet to come, focusing on different grades of shore A hardness, followed by self-lubricating LSR for Automotive applications, seals and connectors as well as LSR with oil content. Silicone rubber customers can now combine the uniquely beneficial properties of the already qualified silicones with faster prototype development and small series production of silicone parts.



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