

ADMAFLEX 130

Experience 3D printing ceramics and metals in one exceptional way



Two materials, one machine; the Admaflex 130 is suited for 3D printing both ceramic as metal precision parts. Through an optional add-on, the ceramic 3D printer is suited to print metals too. This unique add-on supports high dense materials in staying homogeneous throughout the printing process, to optimize each layer. The advanced patented Admaflex Technology has an innovative material reconditioning system to minimize waste to none. The integrated DLP light engine allows for large surface printing, while maintaining precision and resolution, to produce even the smallest sized features in full detail. The Admaflex 130 is set up with an open architecture, providing layer-to-layer control to define printer settings, easily accessible through an adaptive touch screen. And, though AdmaPrint products achieve the best printing results, the open architecture also enables using in-house developed materials.

ADMAFLEX 130

Freedom of design, complex shaping & high functionality



Specifications

Printing technology	DLP
Net printing building volume before sintering¹ (by resolution)	90 x 56 x 110 ³ mm (35 µm) 160 x 100 x 110 ³ mm (62.5 µm)
Layer thickness	15 – 100 µm
Materials	- Aluminum oxide 316L - Zirconium oxide 17-4-PH - Silicon dioxide Inconel 625
Final product density equal to CIM/MIM	Ceramics ² >98.5% Metals >96 %
Machine dimensions	575 x 880 x 1760mm
Weight	Approx 300 kg
Required working temperature	22 +/- 2°C
Relative humidity	< 40%
Power requirements	110 / 230 V
File compatibility	SLC

¹ During the sintering products shrink 15 to 30% in X, Y and Z direction

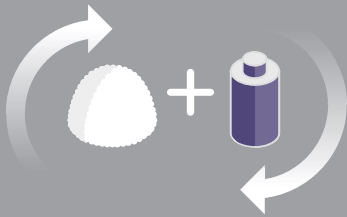
² For Aluminum oxide and Zirconium oxide

³ Longer Z stage is optional, up to 260 mm

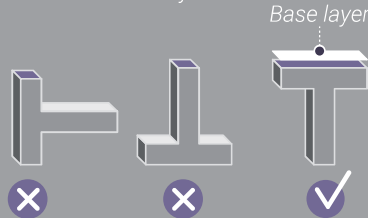
NB: net building volume is adaptable, contact us for more details.

ADMAFLEX process

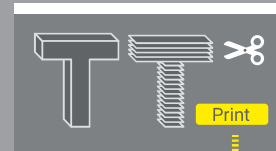
1 Powder is mixed with photosensitive resin.



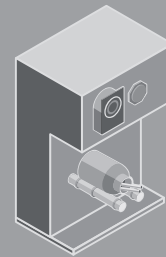
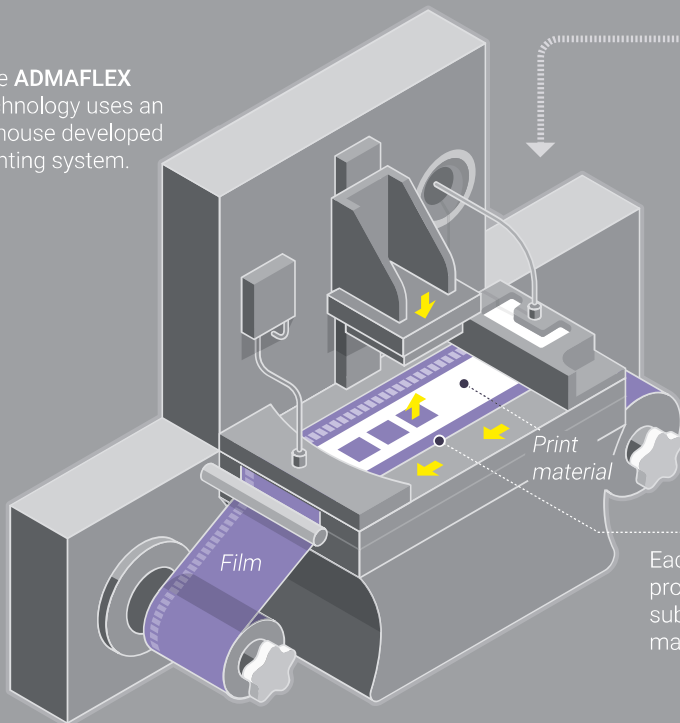
2 Determine printing direction and apply support structure if and where necessary.



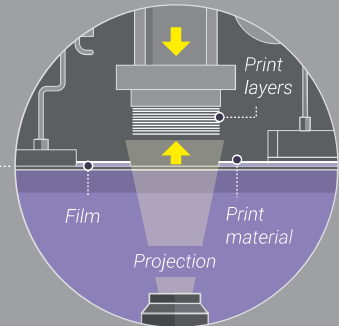
Product slicing and submission to the printer.



3 The ADMAFLEX technology uses an in-house developed printing system.

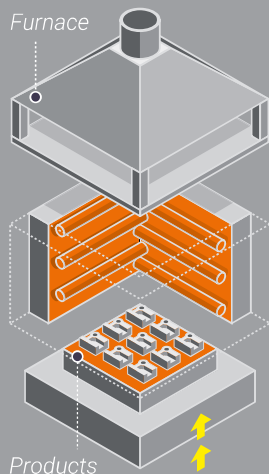


Optional add-on for 3D printing of metals.

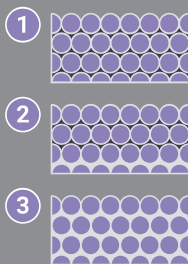


Each layer gets projected, with subsequent material curing.

4 During debinding all the polymers will be burned.

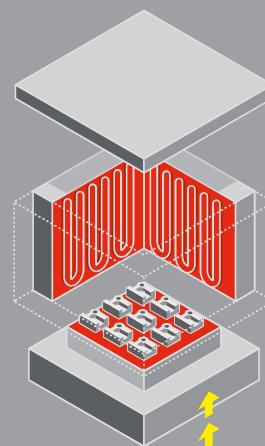


The debinding process

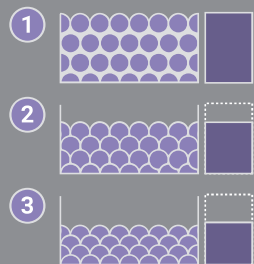


A powder structure remains.

5 During sintering product will reach its final density.



The sintering process



The atoms in the materials diffuse across the boundaries of the particles, fusing them together and creating one solid piece.