Viridis3D is an all-inclusive supplier of “additive manufacturing technology” for making sand molds and cores for foundry applications. We sell materials, 3D printing machines, software, scanners, and the training needed to successfully deploy 3D printed casting solutions.

Making Molds and Cores with Virids3D™

Three Dimensional Printing™ is a patented technology invented at Massachusetts Institute of Technology (MIT). 3D Printing allows you to make molds & cores directly from CAD and is the ideal method for making design stage prototypes, low volume production parts, and replacements for the legacy part market.

Our technology creates sand casting molds and cores which can be used with ferrous and non-ferrous metals. Metal pours are possible up to 2642F (1450° C) with no outgassing after oven drying. Our versatile inorganic binder system has been developed to work with a variety of foundry sands, to meet our customers’ needs.

Viridis3D Casting Services

Viridis3D operates a mold making and casting service branch to support customers who need a trial run, or who don’t have the demand to support an installed system. Viridis3D Casting Services works with you every step of the way, from casting design through printing the sand mold and core set, to shipping of your rough casting.

Markets

3D printed molds, cores, and patterns have been successfully used in the pump & fluid flow, transportation, architecture, restorations, fine arts, and consumer parts industries.

Viridis3D LLC
92 Bolt Street
Lowell, MA 01852
(978) 454-4466
sales@viridis3D.com
www.viridis3D.com

Viridis3D Metal Casting Solutions:
From CAD to casting in 24 hours!

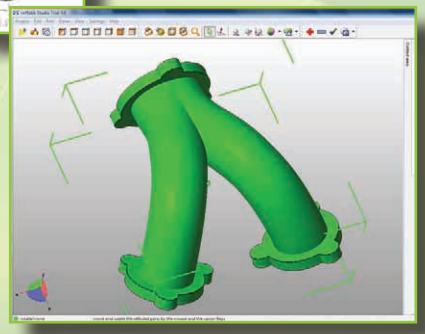
AMERICAN FOUNDRY SOCIETY

Made in USA

Design

1

2



Additive manufacturing provides options:
Additive manufacturing methods produce functional parts directly from computer designs, without the cost penalty from tooling. Advantages include:

- Expanded design possibilities
- Accelerate entry to market
- Prototypes or low volume production without costly tooling
- De-materialization - the number of components can be reduced both for assembly and end of life recycling
- Nimbleness - design and material changes can be incorporated quickly

Print

3

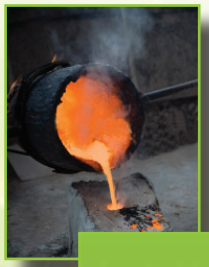
4

Flexible, on demand, manufacturing:
Viridis3D uses the fastest, most reliable 3D Printing platforms in the industry. Many molds or cores can be printed faster than a CNC machine can be programmed.

Viridis3D LLC

Pour

5



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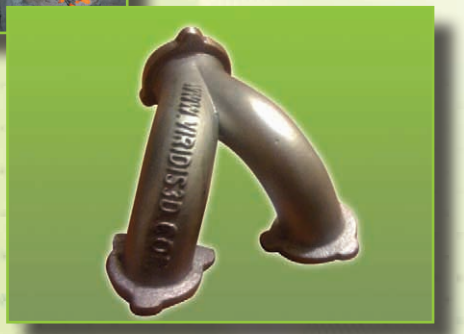
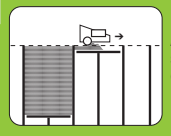


Materials:
Our proprietary ViriCast™ series sand casting materials are available with many common base sands, including Silica, Olivine and Zircon. Custom material formulation is also available. The systems work with many commercial mold washes as well.

Metals: aluminum, copper & bronze, iron and steel alloys

How 3D Printing Works

1

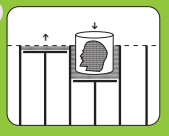


A thin powder layer is spread over the surface of a build bed.

2

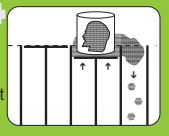
An inkjet printhead then jets a binder on to the powder bed and the binder selectively joins the grains together in the pattern for each layer of the part.

3



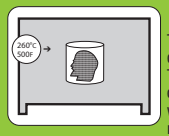
A piston that supports the powder bed and the partially completed part then lowers so that thenext powder layer can be spread and selectivelyjoined. This process is then repeated until the part is completed.

4



The completed mold piece is then removed from the powder bed and the loose unbound powder removed from the part.

5



The final mold set is dried in an oven. The molds can be optionally treated with a refractory mold wash, prior to the baking step.

6

Molten metal is poured directly into the mold cavity. From here, the process of demolding and finishing a casting is essentially the same as other casting processes.

www.viridis3D.com