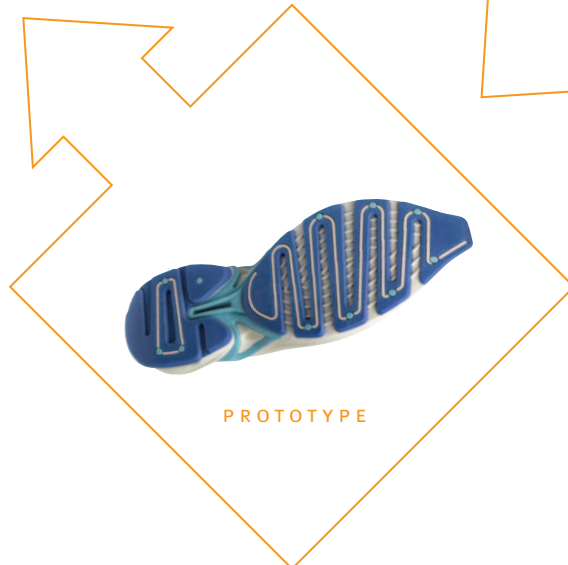




Z CORPORATION™

# Setting the standard for Fast, Affordable, Color 3D Printing



## Z CORPORATION™

- Founded 1994
- Located in Burlington, MA (USA) – Boston
- 3D Printing technology developed at MIT
- Launched 1st 3D Printer in 1998
- Launched 1st color 3D Printer in 2000
- Introduced High Definition 3D Printing (HD3DP) in 2005
- 2500+ customers worldwide
- 125+ authorized distributors worldwide

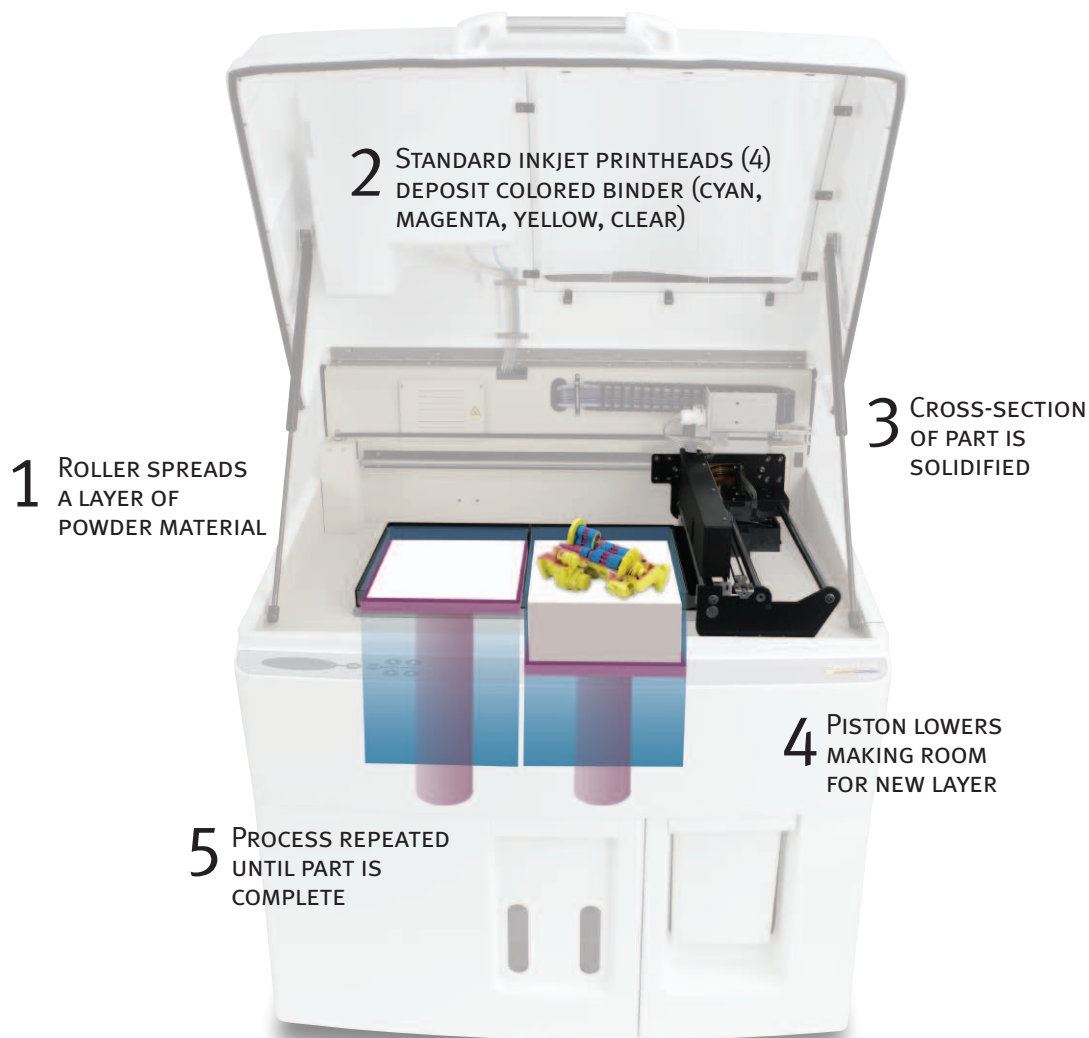


## Z Corporation Technology

The Z Corp. technology works by creating a 3D physical model directly from digital data, layer by layer. A 3D CAD file is imported into the proprietary system software. The

software slices the file into thin cross-sectional slices, which are fed to the 3D Printer. The 3D Printer creates the model one layer at a time by spreading a layer of

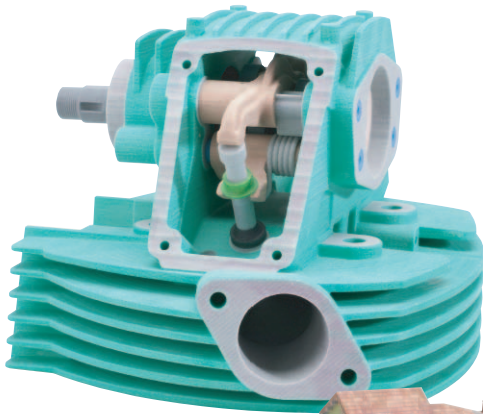
powder and inkjet printing a binder in the cross-section of the part. The process is repeated until every layer is printed and the part is complete and ready to be removed.



# Z Corporation 3D Printer Advantages

## Speed

Z Corporation 3D Printers are the fastest commercially available 3D printers, 5-10x faster than other RP technologies. A part can be printed at the rate of 25mm (1") vertical per hour. In addition, multiple parts can be printed simultaneously resulting in increased throughput. In today's highly competitive global market, speed in product development has become a critical factor for success, and a Z Corp. printer can make the difference between getting a part in an hour and having to wait until the next day.



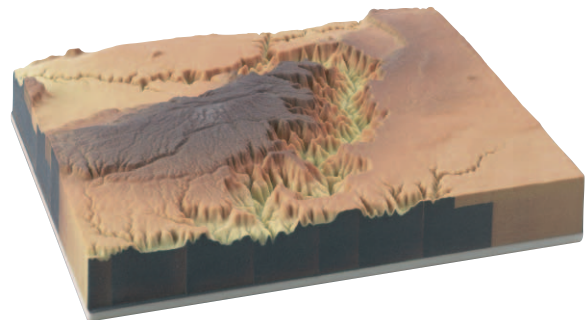
## High-Quality Color

Z Corporation 3D Printers operate like a 2D desktop inkjet printer, allowing for the use of multiple print-heads to support full-color printing with dramatic increases in speed. Full, 24-bit color capabilities use colored binder materials (cyan, magenta, and yellow, just like a 2D printer) to produce millions of distinct colors. Full-color printing allows the addition of annotations, engineering labels and texture maps. Z Corporation's introduction of HD3DP (High-Definition 3D Printing) capabilities also supports the production of models having complex geometries and small, detailed features.



## Affordability

Z Corporation® sets the standard for affordability in 3D printing. Because Z Corporation printers leverage standard inkjet printing technology, they are more reliable and affordable. The approach results in material usage costs that are a fraction of other rapid prototyping technologies; finished parts cost \$.10 USD per cubic centimeter in materials. A handheld part can be produced for about \$10 USD in material costs. Z Corporation 3D printers recycle all unused material, so you only pay for the actual materials used to produce a part.



## Ease-of-Use

Z Corporation 3D printers are easy to install and operate in any standard office environment. With just a few hours of training, you can singlehandedly operate a Z Corporation 3D Printer. There is no need for a dedicated operator. Each Z Corporation 3D printing system is designed for use by multiple operators with limited expertise, which enhances accessibility to the equipment within your organization.



# ZPrinter<sup>®</sup> 310 Plus

INDUSTRY STANDARD MONOCHROME  
3D PRINTING SYSTEM

#### Build Speed

2-4 layers per minute

#### Build Size

203 x 254 x 203 mm  
(8 x 10 x 8 inches)

#### Material Options

High performance composite,  
snap-fit, elastomeric, direct casting,  
investment casting

#### Layer Thickness

User selectable at time of printing;  
.089-.203 mm (.0035-.008 inches)

**Resolution:** 300 x 450 dpi

#### System Software

Z Corporation's proprietary software  
accepts solid models in STL, VRML  
and PLY file formats as input. ZPrint  
software features 3D viewing, text  
labeling, and scaling functionality.

#### Equipment Dimensions

74 x 86 x 109 cm (29 x 34 x 43 inches)

**Equipment Weight:** 115 kg (255 lbs.)

**Power Requirements:** 115V, 4.3A or 230V, 2.4A

**Network Connectivity:** TCP/IP 100/10 base T

#### Workstation Compatibility

Windows<sup>®</sup> 2000 Professional and  
Windows<sup>®</sup> XP Professional

**Regulatory Compliance:** CE, CSA

**Special Facility Requirements:** None

# Spectrum<sup>™</sup> Z510

NEXT-GENERATION HIGH-DEFINITION  
COLOR 3D PRINTING SYSTEM

#### Build Speed

2-4 layers per minute

#### Build Size

254 x 356 x 203 mm  
(10 x 14 x 8 inches)

#### Material Options

High performance composite,  
elastomeric, direct casting

#### Layer Thickness

User selectable at time of printing;  
.089-.203 mm (.0035-.008 inches)

**Resolution:** 600 x 540 dpi

#### Number of Printheads, Jets

4 printheads, 1216 jets total

#### System Software

Z Corporation's proprietary software  
accepts solid models in STL, VRML  
and PLY file formats as input. ZPrint  
software features 3D viewing, text  
labeling, and scaling functionality.

#### Equipment Dimensions

107 x 79 x 127 cm  
(42 x 31 x 50 inches)

#### Equipment Weight

204 kg (450 lbs)

#### Power Requirements

100V, 7.8A or 115V, 6.8A  
or 230V, 3.4A

#### Network Connectivity

TCP/IP 100/10 base T

#### Workstation Compatibility

Windows<sup>®</sup> 2000 Professional  
and Windows<sup>®</sup> XP Professional

#### Regulatory Compliance

CE, CSA

#### Special Facility Requirements

None



# Testimonials

**“We realized long ago that the most useful qualities of our 3D printers were speed, great part quality and color. That's why we recommend it to our network of NIKE companies and have more Z Corporation 3D printers than all other RP devices combined.”**

– DAN ARMSTRONG,  
TECHNOLOGY INITIATIVE MANAGER,  
NIKE

**“The model quality, color fidelity and resolution of prototypes printed on the Spectrum system exceeded our expectations”**

– BOB BORIS,  
TEAM CENTER MODEL SHOP MANAGER,  
FISHER PRICE

**“With the Z Corp. System,  
we can have a discussion in the morning,  
make a suggestion, break for lunch  
and see the results in early afternoon.  
No other tool can do this.”**

– MIKE JAHNKE,  
GLOBAL PROTOTYPING MANAGER,  
MOTOROLA

**“The Z Corporation 3D Printer  
offers students a wide range  
of design capabilities”**

– PROFESSOR DAVE WALLACE,  
MIT

**“The main advantage of the Z Corp. 3D Printer in our design process is that it is fast enough and cheap enough to produce a prototype of a part simply to clarify design or functionality issues. We now have the ability to make 3-5 iterations of one part, where in the past we could make only one.”**

– DAVE FISH,  
WESCAST INDUSTRIES



# Material Options

## High Performance Composite Material

can be used to make strong, high-definition parts and is the material of choice for printing color parts.

## Investment Casting Material

can be used to quickly fabricate parts that can be dipped in wax to produce investment casting patterns.

## Direct Casting Material

can be used to create sand casting molds for non-ferrous metals.

## Snap-Fit Material

has been optimized for infiltration with our Z-Snap epoxy to create parts with plastic-like flexural properties which are ideal for snap-fit applications.

## Elastomeric Material

has been optimized for infiltration with an elastomer to create parts with rubber-like properties.

In addition to the material options, Z Corp. parts can be sanded, drilled, tapped, painted and electroplated, further expanding the options available for finished part characteristics.

# Applications and Industries



## AUTOMOTIVE

Size: 25 x 28 x 11 cm  
Printing Time: 8 hours



## FOOTWEAR

Size: 10 x 30 x 5 cm  
Printing Time: 3 hours



## EDUCATION

Size: 13 x 25 x 13 cm  
Printing Time: 7 hours



## CONSUMER PRODUCTS

Size: 8 x 18 x 5 cm  
Printing Time: 2 hours



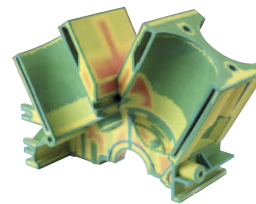
## CONCEPT MODELING

Size: 21 x 33 x 20 cm  
Printing Time: 12 hours



## METAL CASTING

Size: 20 x 23 x 13 cm  
Printing Time: 7 hours



## FINITE ELEMENT ANALYSIS

Size: 14 x 20 x 10 cm  
Printing Time: 4.5 hours



## FUNCTIONAL TESTING

Size: 20 x 20 x 4 cm  
Printing Time: 1.5 hours



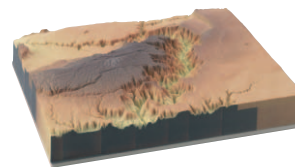
## PRESENTATION MODELS

Size: 25 x 29 x 7 cm  
Printing Time: 4.5 hours



## ARCHITECTURE

Size: 33 x 25 x 10 cm  
Printing Time: 8.5 hours



## GIS

Size: 25 x 31 x 6 cm  
Printing Time: 5.5 hours



## MEDICAL

Size: 25 x 20 x 10 cm  
Printing Time: 5.5 hours



Z CORPORATION™

## WORLDWIDE HEADQUARTERS

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