

THE FASTEST,
MOST AFFORDABLE
COLOR 3D PRINTING



3DSYSTEMS™



DESIGN PROTOTYPES

Size: 3.5 x 2 x 0.7 inches
(9 x 5 x 2 cm)
Printing Time: 0.5 hours



EDUCATION

Size: 8 x 5 x 2.5 inches
(20 x 13 x 6 cm)
Printing Time: 3 hours



Created by Munson3D.com
and Jard3D.com

ARCHITECTURE

Size: 7 x 5.5 x 8 inches
(18 x 14 x 20 cm)
Printing Time: 9 hours



INDUSTRIAL

Size: 3.7 x 6.3 x 1.1 inches
(9 x 16 x 3 cm)
Printing Time: 1 hour



GEOSPATIAL

Size: 8 x 8 x 2 inches
(20 x 20 x 5 cm)
Printing Time: 3 hours



ENTERTAINMENT AND THE ARTS

Size: 3 x 3 x 5 inches
(8 x 8 x 13 cm)
Printing Time: 3 hours



HEALTHCARE

Size: 9.8 x 7.9 x 3.9 inches
(25 x 20 x 10 cm)
Printing Time: 5.5 hours

From educational settings to the most demanding commercial environments, ZPrinters meet the needs of specialized applications, including:

- **Design Prototypes:**
3D print concept models, functional prototypes and presentation models for evaluating and refining designs, including finite element analysis (FEA) results and packaging.
- **Education:**
Engage students by bringing digital concepts into the real world, turning their ideas into real-life 3D color models that they can actually hold in their hands.
- **Architecture:**
Create models of architectural designs and prototypes for the design of critical elements.
- **Industrial:**
Make patterns and molds for metal casting, RTV molding and urethane casting applications.
- **Entertainment and the Arts:**
Produce custom avatars and figurines from 3D data generated by electronic games — and other creations — with ease.
- **Geospatial:**
Easily convert GIS data into 3D landscape and cityscape models.
- **Healthcare:**
Rapidly produce 3D models to reduce operating time, enhance patient and physician communications, and improve patient outcomes.

A WORLD OF POSSIBILITIES

3D Systems, producers of the world's fastest, easiest-to-use and most affordable color 3D printers, makes 3D printing accessible to everyone. ZPrinters produce physical color models quickly, easily and inexpensively from computer-aided design (CAD) and other digital data. The most successful companies have adopted 3D printing as a critical part of the iterative design process to:

INCREASE INNOVATION

- Print prototypes in hours, obtain feedback, refine designs and repeat the cycle until designs are perfect
- Create affordable prototypes early in the ideation stage of product development

IMPROVE COMMUNICATION

- Hold realistic 3D models in your hands to impart infinitely more information than a computer image
- Communicate with various audiences using fast, affordable and easy 3D printing

SPEED TIME TO MARKET

- Compress design cycles by 3D printing multiple prototypes on demand, right in your office

REDUCE DEVELOPMENT COSTS

- Cut traditional prototyping and tooling costs
- Identify design errors earlier
- Reduce travel to production facilities

WIN BUSINESS

- Bring realistic 3D models to prospective accounts, sponsors and focus groups

HOW ZPRINTER TECHNOLOGY WORKS

ZPrinter technology works by creating a 3D physical model directly from digital data, layer by layer, turning concepts and ideas into real, physical 3D models that you can hold, examine and evaluate.



1
A 3D CAD file is imported into ZPrint™ software. The software slices the file into thin cross-sectional slices, which are fed to the 3D printer.



2
The 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.



3
The process is repeated until every layer is printed and the part is ready to be removed.

ZPRINTER ADVANTAGES

ZPrinters set the standard for speed, color, affordability and ease of use.

FASTEST PRINT SPEED

High speed and throughput for a range of applications

- 5x-10x faster than all other technologies
- Output models in hours, not days
- Build multiple models at the same time
- Support an entire engineering department or classroom with ease

UNIQUELY MULTICOLOR

Color and high quality dramatically communicate design intent

- Produce realistic color models without paint
- Better evaluate the look, feel, and style of product designs
- 3D print text labels, logos, design comments, or images directly onto models
- A range of options, from 64 basic colors to unlimited color combinations
- Multiple print heads provide the best range of accurate and consistent colors

HIGH RESOLUTION

Realistic models and precise details

- High-definition 3D printing produces models with complex geometries and small, detailed features
- 3D print the most intricate detail, such as a thin wall on a mechanical prototype or a railing on an architectural model

LOWEST OPERATING COST

Affordable for all environments

- One-fifth the cost of other technologies
- Unused materials are recycled for the next build, eliminating waste
- Based on reliable, affordable inkjet technology

EASY TO USE

Spend time generating ideas, not operating a 3D printer

- Requires minimal training and expertise
- Only ZPrinters perform most operations automatically
- Automated setup and self monitoring
- Automated powder loading and recycling
- Snap-in binder cartridges
- Intuitive control panel for easy operation

SAFE AND OFFICE FRIENDLY

Ideal for everyday use in any standard office or school environment

- Quiet, safe, odor free
- Closed-loop powder loading, removal, and recycling
- Continuous negative pressure for containing airborne particles within the machine
- Eco-friendly, non-hazardous build material
- Zero liquid waste
- No physical support structures to remove with dangerous cutting tools or toxic chemicals
- Noise-suppression technologies for quiet, intrusion-free operation

“We get prototypes quickly, we refine them quickly, we create new ones, and we derive our elite designs....”

Eskild Hansen
Head of European Design Centre
Cisco Consumer Business Group

THE DIFFERENCE IS IN THE DETAILS

MATERIAL OPTIONS

3D Systems provides 3D printing materials to meet many business needs.

- High-performance composite material makes strong, high-definition parts
- Choose from a range of finishing options to meet your needs, from resin for ultra-strong functional prototypes to water for creating concept models quickly, safely, and very affordably
- ZPrinter parts can be sanded, drilled, tapped, painted and electroplated, further expanding the options available for finished part characteristics

CREATE ULTRA-REALISTIC PARTS WITH EASE

DISPLAY THE MOST INTRICATE DETAIL

3D PRINT VIBRANT COLOR—A 3D SYSTEMS EXCLUSIVE

APPLY HIGH-IMPACT GRAPHICS AND ANNOTATIONS



ZPrinter® Product Line



ZPrinter® 150



ZPrinter® 250



ZPrinter® 350



ZPrinter® 450



ZPrinter® 650



ZPrinter® 850

| FEATURES | | | | | | |
|--|---|---|---|--|--|--|
| Resolution | 300 x 450 dpi | 300 x 450 dpi | 300 x 450 dpi | 300 x 450 dpi | 600 x 540 dpi | 600 x 540 dpi |
| Minimum Feature Size | 0.016 inches (0.4 mm) | 0.016 inches (0.4 mm) | 0.006 inches (0.15 mm) | 0.006 inches (0.15 mm) | 0.004 inches (0.1 mm) | 0.004 inches (0.1 mm) |
| Color (number of unique colors per part) | White | 64 colors (basic spot color) | White | 180,000 colors (advanced color) | 390,000 colors (top-of-the-line color) | 390,000 colors (top-of-the-line color) |
| Automated Setup and Self Monitoring | ■ | ■ | ■ | ■ | ■ | ■ |
| Automated Powder Loading | ■ | ■ | ■ | ■ | ■ | ■ |
| Powder Recycling | ■ | ■ | ■ | ■ | ■ | ■ |
| Automatic Build Bed Clearing | | | | ■ | ■ | ■ |
| Fine Powder Removal | Accessory | Accessory | Integrated | Integrated | Integrated | Accessory |
| Snap-in Binder Cartridges | ■ | ■ | ■ | ■ | ■ | ■ |
| Intuitive Control Panel | ■ | ■ | ■ | ■ | ■ | ■ |
| Vertical Build Speed | 0.8 inch/hour (20 mm/hour) | 0.8 inch/hour (20 mm/hour) | 0.8 inch/hour (20 mm/hour) | 0.9 inch/hour (23 mm/hour) | 1.1 inch/hour (28 mm/hour) | .2 – .6 inch/hour (5 – 15 mm/hour); speed increases with volume of prototypes |
| Prototypes per day* | 19 | 19 | 25 | 25 | 33 | 42 |
| Build Size | 9.3 x 7.3 x 5 inches (236 x 185 x 127 mm) | 9.3 x 7.3 x 5 inches (236 x 185 x 127 mm) | 8 x 10 x 8 inches (203 x 254 x 203 mm) | 8 x 10 x 8 inches (203 x 254 x 203 mm) | 10 x 15 x 8 inches (254 x 381 x 203 mm) | 20 x 15 x 9 inches (508 x 381 x 229 mm) |
| Material | High performance composite | High performance composite | High performance composite | High performance composite | High performance composite | High performance composite |
| Layer Thickness | 0.004 inches (0.1 mm) | 0.004 inches (0.1 mm) | 0.0035 – 0.004 inches (0.09 – 0.1 mm) | 0.0035 – 0.004 inches (0.09 – 0.1 mm) | 0.0035 – 0.004 inches (0.09 – 0.1 mm) | 0.0035 – 0.004 inches (0.09 – 0.1 mm) |
| Number of Jets | 304 | 604 | 304 | 604 | 1520 | 1520 |
| SPECIFICATIONS | | | | | | |
| Number of Print Heads | 1 | 2 | 1 | 2 | 5 | 5 |
| Equipment Dimensions | 29 x 31 x 55 inches (74 x 79 x 140 cm) | 29 x 31 x 55 inches (74 x 79 x 140 cm) | 48 x 31 x 55 inches (122 x 79 x 140 cm) | 48 x 31 x 55 inches (122 x 79 x 140 cm) | 74 x 29 x 57 inches (188 x 74 x 145 cm) | 47 x 46 x 68 inches (119 x 116 x 162 cm) |
| Equipment Weight | 365 lbs (165 kg) | 365 lbs (165 kg) | 395 lbs (179 kg) | 425 lbs (193 kg) | 750 lbs (340 kg) | 800 lbs (363 kg) |
| Power Requirements | 90-100V, 7.5A 110-120V, 5.5A 208-240V, 4.0A | 90-100V, 7.5A 110-120V, 5.5A 208-240V, 4.0A | 90-100V, 7.5A 110-120V, 5.5A 208-240V, 4.0A | 100-240V, 15-7.5A | 100-240V, 15-7.5A | 100-240V, 15-7.5A |
| File Formats for Printing | STL, VRML, PLY, 3DS, FBX, ZPR | STL, VRML, PLY, 3DS, FBX, ZPR | STL, VRML, PLY, 3DS, FBX, ZPR | STL, VRML, PLY, 3DS, FBX, ZPR | STL, VRML, PLY, 3DS, FBX, ZPR | STL, VRML, PLY, 3DS, FBX, ZPR |
| Workstation Compatibility | Windows® 7, Windows Vista® | Windows® 7, Windows Vista® | Windows® 7, Windows Vista® | Windows® 7, Windows Vista® | Windows® 7, Windows Vista® | Windows® 7, Windows Vista® |
| CE, CSA Regulatory Compliance | ■ | ■ | ■ | ■ | ■ | ■ |
| Special Facility Requirements | | | | | | Shop Air |
| Office Compatibility | ■ | ■ | ■ | ■ | ■ | |

*Based on baseball-size geometry.

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