

THE FASTEST,  
MOST AFFORDABLE  
COLOUR 3D PRINTING



Z CORPORATION®



#### DESIGN PROTOTYPES

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



#### EDUCATION

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



Created by Munson3D.com  
and Jard3D.com

#### ARCHITECTURE

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



#### METAL CASTINGS

Size: 20 x 33 x 13 cm  
(7.9 x 13 x 5.1 inches)  
Printing Time: 7 hours



#### GEOSPATIAL

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



#### ENTERTAINMENT AND THE ARTS

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



#### HEALTHCARE

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

From educational settings to the most demanding commercial environments, Z Corporation's family of 3D printers meets the needs of specialised 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 colour models that they can actually hold in their hands.
- **Architecture:**  
Create models of architectural designs and prototypes for the design of critical elements.
- **Metal Castings:**  
Directly print moulds, mould inserts and patterns for metal casting.
- **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

Z Corporation, producers of the world's fastest, easiest-to-use and most affordable colour 3D printers, makes 3D printing accessible to everyone. Z Corporation printers produce physical colour 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 Z CORPORATION TECHNOLOGY WORKS

Z Corporation 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, colour, 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 MULTICOLOUR

### Colour and high quality dramatically communicate design intent

- Produce realistic colour 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
- Full, 24-bit colour (just like a 2D printer) produces millions of distinct colours
- Multiple print heads provide the best range of accurate and consistent colours

## 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, odour 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

## MATERIAL OPTIONS

Z Corporation provides 3D printing materials to meet many business needs.

- **High performance composite material** can be used to make strong, high-definition parts and is the material of choice for printing colour 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 moulds for non-ferrous metals
- **Elastomeric material** has been optimised for infiltration with an elastomer to create parts with rubber-like properties
- Z Corporation parts can be sanded, drilled, tapped, painted and electroplated, further expanding the options available for finished part characteristics

## THE DIFFERENCE IS IN THE DETAILS

CREATE ULTRA-REALISTIC PARTS WITH EASE

DISPLAY THE MOST INTRICATE DETAIL

3D PRINT VIBRANT COLOUR—  
A Z CORPORATION EXCLUSIVE

APPLY HIGH-IMPACT GRAPHICS  
AND ANNOTATIONS



# ZPrinter® Product Line



**ZPrinter® 310 Plus**



**ZPrinter® 350**



**ZPrinter® 450**



**ZPrinter® 650**

OVERVIEW				
	Monochrome, most affordable, great parts	Monochrome, office friendly, affordable	Multicolour, easy to use, office friendly	Premium colour, highest resolution, largest build size
FEATURES				
Resolution	300 x 450 dpi	300 x 450 dpi	300 x 450 dpi	600 x 540 dpi
Colour			■	■
Automated Setup and Self Monitoring		■	■	■
Automated Powder Loading		■	■	■
Automated Powder Recycling and Removal			■	■
Snap-in Binder Cartridges		■	■	■
Intuitive Control Panel		■	■	■
Vertical Build Speed	25 mm/hour (1.0 inch/hour)	20 mm/hour (0.8 inch/hour)	23 mm/hour (0.9 inch/hour)	28 mm/hour (1.1 inch/hour)
Build Size	203 x 254 x 203 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 (8 x 10 x 8 inches)	254 x 381 x 203 mm (10 x 15 x 8 inches)
Material Options	High performance composite, direct casting, elastomeric, investment casting	High performance composite	High performance composite	High performance composite
Layer Thickness	0.089 – 0.203 mm (0.0035 – 0.008 inches)	0.089 – 0.102 mm (0.0035 – 0.004 inches)	0.089 – 0.102 mm (0.0035 – 0.004 inches)	0.089 – 0.102 mm (0.0035 – 0.004 inches)
Number of Jets	304	304	604	1520
SPECIFICATIONS				
Number of Print Heads	1	1	2	5
Equipment Dimensions	74 x 86 x 109 cm (29 x 34 x 43 inches)	122 x 79 x 140 cm (48 x 31 x 55 inches)	122 x 79 x 140 cm (48 x 31 x 55 inches)	188 x 74 x 145 cm (74 x 29 x 57 inches)
Equipment Weight	115 kg (255 lbs)	179 kg (395 lbs)	193 kg (425 lbs)	340 kg (750 lbs)
Power Requirements	90-110V, 5.3A 100-120V, 4.3A 200-240V, 2.4A	90-100V, 7.5A 110-120V, 5.5A 208-240V, 4.0A	100-240V, 15-7.5A	100-240V, 15-7.5A
File Formats for Printing	STL, VRML, PLY, 3DS, ZPR	STL, VRML, PLY, 3DS, ZPR	STL, VRML, PLY, 3DS, ZPR	STL, VRML, PLY, 3DS, ZPR
Workstation Compatibility	Windows® XP Professional and Windows Vista® Business/Ultimate	Windows® XP Professional and Windows Vista® Business/Ultimate	Windows® XP Professional and Windows Vista® Business/Ultimate	Windows® XP Professional and Windows Vista® Business/Ultimate
CE, CSA Regulatory Compliance	■	■	■	■
No Special Facility Requirements	■	■	■	■



**Z CORPORATION®**

**WORLDWIDE HEADQUARTERS**

Z Corporation  
32 Second Avenue  
Burlington, MA 01803 USA  
+1 781 852 5005

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