

INDUSTRIAL 3D PRINTING FOR ALL

**Safe + Intelligent + Full Color**

THE NEXT GENERATION OF FFF



**rize**

# RIZE ONE

## WORLD'S FIRST INDUSTRIAL 3D PRINTER CERTIFIED WITH UL 2904 GREENGUARD

RIZE™ ONE is the first and only 3D printer in the world to be certified for health and environment safety under the stringent UL 2904 standards. While 3D printers are known to emit up to 200 VOCs and ultrafine particles, RIZE ONE does not. In fact, RIZE ONE's UL 2904 GREENGUARD certification covers both the print process and the post-processing.



RIZE ONE builds enhanced engineering thermoplastic and carbon composite parts with unmatched features, such as digital traceability and part identification, best-in-class Z-strength and simple post-processing.

Augmented Polymer Deposition (APD) - the next generation of FFF, our unique and patented hybrid of extrusion and jetting, makes this possible. Selective additives are jetted into the thermoplastic with voxel-level control to change the characteristics of the material. By jetting a specially formulated release agent between layers of extruded material, support structures are quickly, easily and cleanly removed, while maintaining a superior finish on supported surfaces. Jetting also provides for the indelible application of graphics, text and digital tracing information on any part surface.

RIZE ONE is robust and designed to work in any environment. Its UL 2904 GREENGUARD certification makes it the right choice for schools, offices, factory floors or in any environment.

A combination of strength, safety, security and speed make RIZE ONE the most affordable and sustainable additive manufacturing solution for the production of replacement and custom tooling, fixtures, jigs and end use parts.

### FEATURES

<b>Color</b>	Monochrome
<b>Build Material</b>	RIZIUM™ ONE, RIZIUM ST, RIZIUM BLACK, RIZIUM CARBON*
<b>Industrial + Office Safe</b>	UL 2904 GREENGUARD Certified, USP Class VI Certified Material
<b>Heated Build Chamber</b>	Yes, for industrial part strength and accuracy
<b>Security</b>	Secure Internet Connection
<b>Fastest Time to Part</b>	Minimal pre-processing and post-processing

### SPECIFICATIONS

<b>Device Dimensions</b>	21.4" H x 36" W x 25.4" D (535 x 915 x 647mm)
<b>Build Volume</b>	12" x 8" x 6" (310 x 200 x 152mm)
<b>Weight</b>	135 lbs (61kg)
<b>Layer Thickness</b>	.250mm or .125mm
<b>Resolution</b>	X/Y 300dpi; Z 200dpi at .125mm layer thickness
<b>Accuracy</b>	X/Y +/- .127mm, or +/- .003mm/mm, whichever is greater and Z +/- layer thickness (.250mm or .125mm)

\*Final specs subject to change

# VERSATILE, MULTI-MATERIAL INDUSTRIAL SOLUTIONS

RIZE 3D printers are purpose built for safety, strength, and accuracy required for producing functional prototyping parts. With the ability to print from plastic to carbon, version numbers on the part, minimal post-processing that takes seconds/minutes to remove the supports and industrial nature of the 3D printer, RIZE is a 'workhorse' for many customers. This allows RIZE customers faster iteration, compressed design cycle times and getting to pre-production parts and assemblies quickly before scaling manufacturing.

## FULL-COLOR, FUNCTIONAL PRINTING

Indelibly apply graphics and text to parts to include QR codes, part numbers, instructions, wear indicators or safety warnings.

## EASY TO USE, FASTEST TIME-TO-PART

Minimal, clean pre- and post-processing.

## SAFE MATERIALS AND PROCESS

People safe, environmentally friendly and recyclable. Suits school, office, production and field use.

## BEST-IN-CLASS Z-AXIS STRENGTH

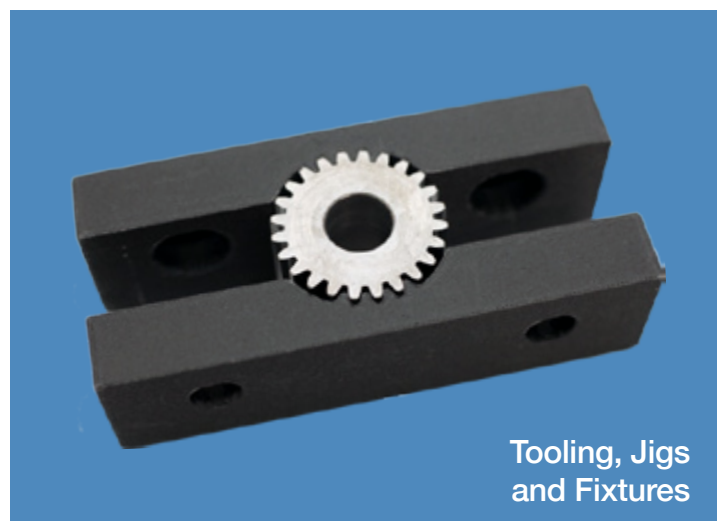
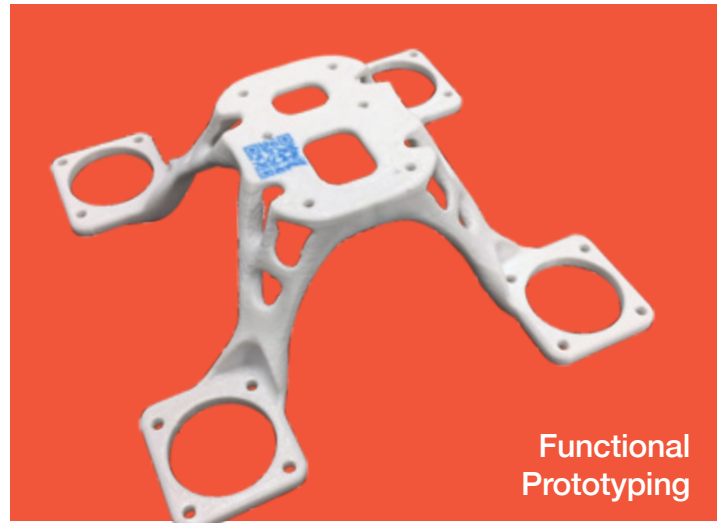
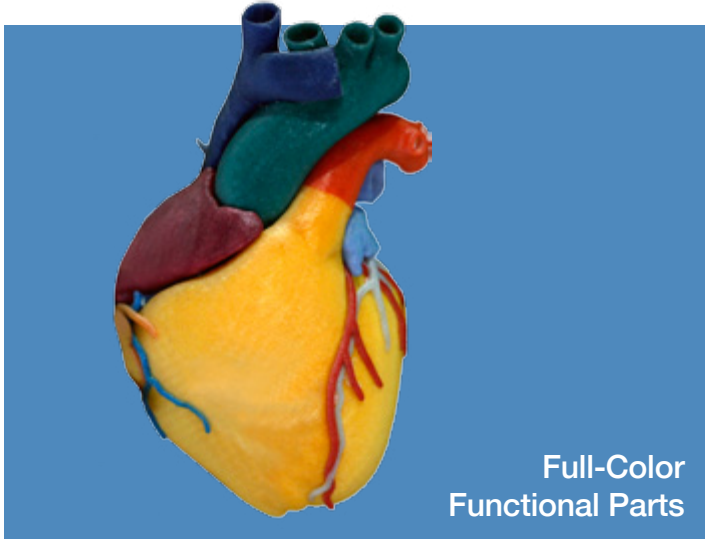
Ideal for functional prototypes, tooling and end-use/service parts.

## DIGITALLY AUGMENTED PARTS

Text, images and QR codes for traceability, built-in trust and IP controls.

## LOWEST COST OF OWNERSHIP

From initial investment to operational costs; a trained technician is not required.



# XRIZE

## FULL-COLOR & CARBON COMPOSITE INTELLIGENT PART PLATFORM

RIZE redefined additive manufacturing with XRIZE™, a versatile, multi-material industrial 3D printer that's purpose-built for safety, strength, accuracy and surface finish. XRIZE shares all the benefits of RIZE ONE, including safety, ease of use, minimal pre- and post-processing, minimal material management, and the ability to print parts using engineering-grade thermoplastic or carbon composite on a single platform.

XRIZE is the world's first true color industrial 3D printer that prints functional parts in vivid colors with safe operation, non-toxic and recyclable materials. With the ability to print color, users can embed graphics, logos, instructions and QR codes in the part creating digitally augmented parts for fully traceable and trusted parts.

XRIZE provides exceptional value for users across the enterprise by delivering vibrant, full-color durable parts in engineering-grade thermoplastic and carbon composite, offering unparalleled diversity of applications across prototyping, tooling and end-use/service applications in manufacturing, package design, AEC, consumer products and medicine.

XRIZE leverages RIZE's APD process, the next-generation of FFF, by extruding an engineering-grade thermoplastic and simultaneously jetting CMYK (cyan, magenta, yellow and black) inks through industrial printheads, voxel by voxel, to achieve the full-color part. RELEASE INK is jetted between the part and the automatically-generated supports to enable peel-away support removal, leaving a smooth surface finish on all supported surfaces.



### FEATURES

<b>Color</b>	Full, CMYK Color
<b>Build Material</b>	RIZIUM™ ONE, RIZIUM™ ST, RIZIUM™ BLACK, RIZIUM™ CARBON
<b>Industrial + Office Safe</b>	Yes, process and USP Class VI Certified materials
<b>Heated Build Chamber</b>	Yes, for industrial part strength and accuracy
<b>Security</b>	Secure Internet Connection, Optional Cloud connectivity
<b>Fastest Time to Part</b>	Minimal pre-processing and post-processing

### SPECIFICATIONS

<b>Device Dimensions</b>	21.4" H x 36" W x 25.4" D (535 x 915 x 647mm)
<b>Build Volume</b>	12" x 8" x 8" (310 x 200 x 200mm)
<b>Weight</b>	137 lbs (62kg)
<b>Layer Thickness</b>	.250mm or .125mm
<b>Resolution</b>	X/Y 300dpi; Z 200dpi at .125mm layer thickness
<b>Accuracy</b>	X/Y +/- .127mm, or +/- .003mm/mm, whichever is greater and Z +/- layer thickness (.250mm or .125mm)

## MATERIALS

The RIZIUM™ family of filaments and inks are designed for high strength, superior layer adhesion, long term stability and clean operation. All RIZIUM filaments are VOC-free for safe operation in enclosed environments, and require no special venting, disposal equipment or protective gear.

### RIZIUM CARBON

RIZIUM™ CARBON is based on an engineering-grade thermoplastic, reinforced with carbon fiber for a higher modulus and incredible visual finish. RIZIUM CARBON is ideal for applications requiring high stiffness such as functional prototyping for manufacturing.



### RIZIUM ONE AND RIZIUM BLACK

Our own compound of engineering-grade thermoplastic, parts made with RIZIUM™ ONE and RIZIUM™ BLACK have an interlayer bond superior to 3D printed polycarbonate, carbon-fiber reinforced nylon, and ABSPlus. Moisture absorption less than .01% enhances stability and simplifies storage and handling. Parts 3D printed with RIZIUM ONE filament and inks conform to USP Class VI specifications - ideal for manufacturing medical devices and life sciences applications.

### CMYK AND MARKING INKS

Indelible CMYK inks in vivid color enhance communication of branding, imagery and data on physical models. Text and graphics can be applied to any surface for adding part numbers, operating instructions and safety warnings. A part digitally augmented with data, such as a QR code, builds trust and traceability into the additive manufacturing process.



### RELEASE ONE

Jettisoned between the part and its support structure, RELEASE ONE is a zero-toxicity repelling agent that safely weakens the bond between the part and the supports, making removal faster and safer than other 3D printing processes. Most parts require less than 2 minutes of post-processing, revealing a smooth finish.

# SOFTWARE AND CLOUD PLATFORM

## RIZE ONETOUCH

The RIZE slicer has been custom designed from the ground up to generate tool paths for building parts fast without compromising on strength. Users can import files in multiple formats, including stl, obj, 3mf, ply, vrml, and fbx or use the SOLIDWORKS plug-in to directly import a model from CAD. Intelligent slicing automatically identifies and handles problems in the imported file, such as incomplete surfaces or mismatching surface boundaries. A simple and intuitive interface lets users rotate, move and scale one or multiple parts on the build bed for printing with automatic support-structure generation. Use the default settings for reliable results or the advanced options to specialize output for unique situations. And, only RIZE OneTouch software includes markup features to apply text, graphics and 2D barcodes directly onto parts.

## RIZE CONNECT

RIZE CONNECT enables users to remotely manage and monitor their RIZE ONE and XRIZE 3D printers from any location to improve production efficiency. Users can receive notifications, queue jobs and manage an enterprise print farm with an intuitive graphical user interface. Using RIZE CONNECT, users can also build greater security into their parts with digital part identification and other forms of part augmentation, such as QR codes and version control for part traceability, compliance and authenticity.

