3D SYSTEMS
Additive Manufacturing Solutions

Figure 4® Modular

Scalable, semi-automated 3D manufacturing solution designed to grow with your prototyping and production needs

Figure 4 Modular is a scalable, semi-automated 3D production solution that grows with your business, enabling capacity to meet your present and future needs, up to 10,000 parts per month, for unprecedented manufacturing agility.

Figure 4® Modular

Scalable solution for same-day prototyping and direct 3D production

With expandable capacity up to 24 print engines, automated job management and queuing, automated material delivery, and centralized post-processing, Figure 4 Modular's end-to-end digital manufacturing workflow is ideal for low to mid volume production and bridge manufacturing. In addition, each printer can run different materials and different jobs as part of a single high throughput line serving a multitude of parts being produced.

Base Unit (controller and single printer)

Add up to 23 auxiliary printers for a total of 24 printers per controller

Figure 4 UV Cure Unit 350*

MODULAR SCALABILITY

The base configuration of Figure 4 Modular is comprised of a single printer and a central controller. This can be easily scaled to up to 24 printer modules on a single controller, with layout configuration flexibility, empowering production to rapidly multiply without disruption to the shop floor.

END-TO-END PRODUCTIVITY

Fast and easy print jobs preparation with 3D Sprint advanced software, ultra-fast print speeds, post-curing in minutes instead of hours, and proactive and preventative support through 3D Connect Service, ensure high parts throughput with high accuracy and repeatability.

LOW TOTAL COST OF OPERATIONS

Figure 4 Modular enables companies to move directly into manufacturing from a digital CAD file, bypassing tooling costs and delays to start delivering final parts immediately.

This semi-automated solution reduces labor through automated job management and queuing, and an automated material feed system.

UNPARALLELED FLEXIBILITY

Figure 4 Modular's individual printers enable simultaneous production of a wide variety of part sizes and shapes, in multiple materials for a diverse range of parts for production and prototyping.

* UV curing is a required step for finishing parts, and 3D Systems has two light-based UV curing units available.

SPEED, ACCURACY AND REPEATABILITY THROUGH FIGURE 4 TECHNOLOGY

Our versatile Figure 4 solutions use projector-based imaging to quickly form each layer in a single image, combined with non-contact membrane Figure 4 technology for ultra-fast print speeds up to 100 mm/hour. Throughput and time-to-part is further enhanced with a light-based UV curing process that takes minutes versus hours with heat-based curing processes, enabling same day print and ship.

Your designs go from CAD to prototyping to manufacturing using a common technology to accelerate and simplify your manufacturing process and time-to-market. Digital molding reduces development costs, increases productivity and eliminates tooling requirements. These systems also deliver repeatable, true-to-CAD part accuracy with six sigma repeatability.

Wide Range of Materials for Application Diversity

3D Systems' Material Design Center has over 30 years of proven R&D experience and process development expertise. The broad and expanding range of materials available for Figure 4 Modular addresses a wide variety of applications needs, for functional prototyping, direct production of end-use parts, molding and casting.

RIGID MATERIALS

Figure 4 rigid materials produce durable plastic parts with the look and feel of cast or injection molded parts, with features that include fast print speeds, high elongation, exceptional impact strength, humidity/moisture resistance, long-term environmental stability and more.

ELASTOMERIC MATERIALS

Figure 4 elastomeric materials are ideal for the production of functional rubber-like parts with excellent shape recovery, high tear strength, great for compressive applications and material malleability.

HIGH TEMPERATURE MATERIAL

With heat deflection temperatures up to over 300° C with no additional thermal post-cure required, Figure 4 heat resistant material offers high rigidity and exceptional stability under extreme conditions.

SPECIALTY MATERIALS

Choose from Figure 4 specialty materials for sacrificial tooling, medical applications requiring biocompatibity and/or sterilization, and more.

Post-Processing Accessories

Centralized UV curing post-processing units are available as part of the overall solution. UV curing is a required step for finishing parts and obtaining the final material properties. Figure 4 materials use a light-based curing process which takes minutes versus hours for heat-based curing processes. 3D Systems has two optional light-based curing units available:

FIGURE 4 UV CURE UNIT 350

Equipped with 16 UV light bulbs placed inside of the four walls, the Figure 4 UV Cure Unit 350 achieves highly efficient and uniform curing of parts printed in Figure 4 materials. The interior allows you to place products on multiple layers to cure more parts at once, and is optimized for Figure 4 Modular parts at the maximum build height of 346 mm.

LC-3DPRINT BOX UV POST-CURING UNIT

The LC-3DPrint Box is available for UV-curing parts and is the recommended UV-curing unit for Figure 4 Modular print materials for parts under 195 mm. The LC-3DPrint Box is a revolutionary UV light box equipped with 12 UV light bulbs strategically placed inside to ensure a product is illuminated from all sides, which results in a quick and uniform curing cycle.

Figure 4 UV Cure Unit 350

LC-3DPrint Box UV Post-Curing Unit

Figure 4® Modular

A scalable 3D manufacturing solution for prototyping and production

PRINTER HARDWARE

Build Volume (xyz)	124.8 x 70.2 x 346 mm (4.9 x 2.8 x 13.6 in)
Minimum Layer Thickness	0.01 mm (0.0004 in)
Resolution	1920 x 1080 pixel
Pixel Pitch	65 microns (0.0025 in) (390.8 effective PPI)
Wavelength	405 nm
Operating Environment Temperature Humidity (RH)	24/7 operation 5-30 °C (41-86 °F) 30-70%
Electrical	100-240 VAC, 50/60 Hz, Single Phase, 15A/7.5A
Compressed Air	Minimum pressure of 4.83 bar (70 psig) of dry air. 9.5 mm or 6.4 mm (0.38 or 0.25 in) OD tubing. Connections external to machine not supplied by 3D Systems
Configurations	Base unit (controller and a printer), scalable to 24 auxiliary printers
Dimensions (WxDxH)	Base unit (uncrated): 122.6 x 72.9 x 209.1 cm (48.2 x 28.7 x 82.3 in) Auxiliary printer (uncrated): 66.1 x 72.9 x 209.1 cm (26 x 28.7 x 82.3 in)
Weight	Controller (uncrated): 98.5kg (217.2 lbs) Printer (uncrated): 190.5kg (420 lbs)
Certifications	FCC, CE, EMC, UL

POST-PROCESSING ACCESSORIES

Post-Processing	Cleaning, drying and curing
Cleaning Solvents	IPA, Easy Rinse C, TPM
Curing Accessories (purchase separately)	
Figure 4 UV Cure Unit 350	Load capacity (WxDxH): 124.8 x 70.2 x 346 mm Dimensions (WxDxH): 50 x 57 x 100 cm Full light spectrum: 300-550 nm Controlled temperature for optimal curing Weight (uncrated): 77.1 kg
LC-3DPrint Box (for curing printed parts with a Z height up to 195 mm)	Load capacity (WxDxH): 260 x 260 x 195 mm Dimensions (WxDxH): 41 x 44 x 38 cm Full light spectrum: 300-550 nm Controlled temperature for optimal curing Weight (uncrated): 22 kg Electrical: 110V/230V, 50/60 Hz, 2.6A/1.3A

MATERIALS

Build Materials	See material selector guide and individual material datasheets for specifications on available materials.
Material Packaging	2.5 kg cartridges for automated replenishment

SOFTWARE AND NETWORK

3D Sprint® Software	Easy build job set-up, submission and job queue management; Automatic part placement and build optimization tools; Part nesting capability; Part editing tools; Automatic support generation; Job statistics
3D Connect™ Software Capable	3D Connect Service provides a secure cloud-based connection to 3D Systems service teams for proactive and preventative support.
Connectivity	RJ45 Ethernet interface. Network hub and cabling not provided
Client Hardware Recommendation	• 3 GHz multiple core processor (2 GHz Intel® or AMD® processor minimum) with 8 GB RAM or more (4 GB minimum) • OpenGL 3.2 and GLSL 1.50 support (OpenGL 2.1 and GLSL 1.20 minimum), 1 GB video RAM or more, 1280 x 1024 (1280 x 960 minimum) screen resolution or higher • SSD or 10,000 RPM hard disk drive (minimum requirement of 7 GB of available hard-disk space, additional 3 GB free disk space for cache) • Google Chrome or Internet Explorer 11 (Internet Explorer 9 minimum) • Other: 3 button mouse with scroll, keyboard, Microsoft .NET Framework 4.6.1 installed with application
Client Operating System	Windows® 7 and newer (64-bit OS)
Input File Formats Supported	STL, CTL, OBJ, PLY, ZPR, ZBD, AMF, WRL, 3DS, FBX, IGES, IGS, STEP, STP and X_T

NOTE: Not all products and materials are available in all countries – please consult your local sales representative for availability

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