3D SYSTEMS®

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	UV curable plastics: Figure 4™ TOUGH-GRY 10 – Rigid dark gray Figure 4 TOUGH-GRY 15 – Rigid gray Figure 4 FLEX-BLK 10 – Flexible black Figure 4 ELAST-BLK 10 – Elastomeric black Figure 4 TOUGH-BLK 20* – Rigid black Figure 4 MED-AMB 10* – Transparent biocompatible Figure 4 JCAST-GRN* – Jewelry casting
Material Packaging	2.5 kg cartridges for automated replenishment
Material Mixing (purchase separately)	Mixing Roller product recommendations are available upon request

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

* Expected availability in 2019
NOTE: Not all products and materials are available in all countries – please consult your local sales representative for availability

Figure 4™ Materials for Figure 4® Modular

A variety of robust, industrial-grade materials for fast prototyping, casting, elastomeric application and bridge manufacturing

Figure 4 TOUGH-GRY 10

Figure 4 TOUGH-GRY 15

Figure 4 FLEX-BLK 10

Figure 4 ELAST-BLK 10

Properties	Condition	Figure 4 TOUGH-GRY 10	Figure 4 TOUGH-GRY 15	Figure 4 FLEX-BLK 10	Figure 4 ELAST-BLK 10
Description		ABS-like, high-speed	ABS-like, economical	Polypropylene-like, flexible	Design elastomer
Applications		Rapid design iteration, functional testing, short-run manufacturing, RTV molding patterns	Rapid design iteration, functional testing, short-run manufacturing, RTV molding patterns	Rapid design iteration, functional testing, short-run manufacturing, RTV molding patterns	Design verification, validation and testing of rubber parts
Color		Dark Gray	Gray	Black	Black
Viscosity (cps)	at 25 °C	490	780	2108	1200
Solid Density (g/cm³)	at 25 °C	1.11	1.12	1.15	1.13
Liquid Density (g/cm³)	at 25 °C	1.04	1.04	1.06	1.06
Package Volume		2.5 kg cartridge	2.5 kg cartridge	2.5 kg cartridge	2.5 kg cartridge
Layer Thickness (mm) Standard Mode		0.05	0.05	0.10	0.10
Vertical Build Speed Standard Mode (mm/hr) Draft Mode (mm/hr)		78 104	41 68	33 55	47 NA
Tensile Strength, Ultimate (MPa)	ASTM D638	50	48	46	3.6
Tensile Strength, at Yield (MPa)	ASTM D638	50	48	37	NA
Tensile Modulus (MPa)	ASTM D638	2180	2120	1400	3.6
Elongation at Break	ASTM D638	25%	35%	104%	83%
Elongation at Yield	ASTM D638	4%	4%	6%	NA
Flexural Strength (MPa)	ASTM D790	75	73	37	NA
Flexural Modulus (MPa)	ASTM D790	2070	1960	990	NA
Notched Izod Impact Strength (J/m)	ASTM D256	29	32	55	NA
Unnotched Izod Impact Strength (J/m)	ASTM D4812	598	599	Did not break	NA
Heat Deflection Temperature at 0.45 MPa at 1.82 MPa	ASTM D648	59 °C 51 °C	59 °C 51 °C	52 °C 43 °C	NA NA
Coefficient of Thermal Expansion (ppm/°C) < T_g > T_g	ASTM E831	93 165	96 158	91 138	NA NA
Tear Strength (kN/m)	ASTM D624	NA	NA	NA	11
Compression Set	ASTM D395	NA	NA	NA	0.87%
Glass Transition (T_g)	DMA, E"	58 °C	55 °C	18 °C	-26 °C
Hardness, Shore	ASTM D2240	81D	82D	76D	65A
Water Absorption	ASTM D570	0.34%	0.37%	1.40%	1.40%

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