

# MultiJet Plastic Printers

Fast and easy printing of functional precision plastic, elastomeric and composite parts with ProJet® MJP 3D printers



# **Benefits of MultiJet Printing**

MultiJet Printing (MJP) technology offers fast print times, easy operation and simple post-processing for high productivity and true simplicity, from file to finished part. Produce the highest fidelity, most true-to-CAD parts of any jetting 3D printing process.

# **GET MORE PARTS FASTER**

With fast print speeds, easy post-processing and advanced software for a streamlined workflow, getting accurate, high quality parts for your project or application is easier and faster than ever.

# TRUE-TO-CAD FIDELITY

Even tiny features come out right—and there's no risk of breaking small details during post-processing, allowing for greater geometric freedom. Compare corners and edges—MJP parts have the best defined geometry of any jetting 3D printer.

# INDUSTRIAL GRADE PRINT HEADS

Every MJP printer comes with an industrialgrade print head designed for long life and high reliability.

# SIMPLE FILE-TO-PART WORKFLOW

The Projet MJP Series is driven by 3D Sprint™. This exclusive additive manufacturing software for 3D Systems plastic printers streamlines your file-to-part workflow, from preparing and optimizing CAD data to managing the additive manufacturing process.

# **EASY POST-PROCESSING**

Finishing MJP parts is as easy as melting wax. No hand scraping, high-pressure water jets, caustic chemical baths, or special facilities requirements.

# ADVANCED MATERIALS DIVERSITY

The wide range of VisiJet® advanced plastic, elastomeric and composite materials for MJP printers produces high performance parts.

# More Materials, More Applications

The wide range of VisiJet plastic materials for the ProJet MJP Series enables a broad set of applications for rapid tooling, jigs and fixtures, concept models, form and fit testing, functional prototypes and medical applications requiring USP Class VI and ISO 10993 certification.

# **RIGID MATERIALS**

VisiJet Rigid materials print plastic parts with extreme durability and high rigidity that look and feel like injection molded parts with an exceptionally smooth finish. Rigid materials are available in a variety of colors from white, black and clear, to gray, natural and blue.

# **ENGINEERING GRADE MATERIALS**

VisiJet Armor and VisiJet ProFlex bring a new level of durability and strength to MJP printing. VisiJet Armor is a tough, ABS-like material with high impact resistance and a superior clear finish. VisiJet ProFlex is a strong polypropylene-like material with exceptional pliability.

# **ELASTOMERIC MATERIALS**

High performance elastomeric materials for MJP printers have an amazing elongation and Shore A hardness. Suitable for prototyping a wide range of mechanical applications requiring rubber-like functionality, these materials are ideal for gaskets, overmolds, and other applications requiring extreme flex properties.

# **CASTING MATERIALS**

VisiJet M3 Procast plastic material provides high direct micro-casting performance for a variety of applications, such as extremely small and delicate jewelry pieces, medical instruments, devices and other custom cast metal applications.

# ProJet® MJP 2500 Series

High quality, speed and ease-of-use made accessible

Accessing high fidelity, functional plastic or elastomeric prototypes has never been faster, up to 3x higher 3D printing speeds than similar class printers, and easier with finished parts up to 4x faster than other cleaning methods.



Combine pliability and strength to test elastomeric part designs in Visilet® M2 EBK (black) or ENT (natural).



Engineering-grade VisiJet Armor M2G-CL material makes it possible to create sturdy buckle closures.



Accurate plastic models let you check fit on complex shapes, including snap fit cases.

# PROFESSIONAL PRODUCTIVITY

Step up from desktop 3D printers to 24/7 usability and get more parts sooner, with same day design verification capability.

# AFFORDABLE PRICE

You no longer have to compromise on part fidelity to get an affordable 3D printer. The ProJet MJP 2500 and 2500 Plus are the most affordable MJP printers, yet still offer higher fidelity and more accurate prints than other printers costing up to ten times more.

# CAPABLE PLASTIC AND ELASTOMERIC MATERIALS

Engineered for performance, VisiJet Rigid materials deliver durable white, black, gray or clear plastic parts, VisiJet Armor offer ABS-like tough properties, VisiJet ProFlex brings Polyproylene-like properties and VisiJet M2 elastomeric materials deliver parts with outstanding elongation and full elastic recovery.

# **PROFESSIONAL QUALITY**

Make sure your prototypes look, feel and perform as designed. Get professional quality, true-to-CAD fidelity and precision with 3D Systems' easy MJP workflow.

# **MJP EasyClean System**

There's no manual support removal needed with MultiJet Printers. The MJP EasyClean System is a new, incredibly simple way to remove supports from MJP parts in under 30 minutes.

Two warmer units use steam and soy-based oil to melt wax supports away, without manual labor and without damaging your printed parts.



# ProJet® MJP 3600 Series

High throughput, resolution and performance

The ProJet MJP 3600 and 3600 Max provide a larger build volume and exceptionally fast print speeds, so you can get more parts printed faster. Its automated batch post-processing removes support up to 4x faster than other processes and provides more productivity to design evaluation and prototyping needs.

# HIGH PERFORMANCE PLASTICS, VERSATILE APPLICATIONS

VisiJet M3 materials deliver toughness, durability, stability, high temperature resistance, water-tightness, biocompatibility and castability.

# **HIGH THROUGHPUT**

With up to twice the print speed of similar class printers, you can print more parts and get them in your hands faster.

# **HIGH DEFINITION PARTS**

When getting the finest details right matters, no other jetting printer beats the MJP 3600 Series. High fidelity, smooth surface finish, sharp edges and finest details are preserved by hands-free and safe post-processing.



Functional filter prototype printed in clear, white and black rigid plastics

# MJP parts simulate the look and feel of many injection molded plastics so you can approximate visually and test functionally Part accuracy and material performances perfectly suit rapid tooling applications

# PHASE CHANGE PROCESS

3D Systems MJP employs proprietary thermally-controlled materials for superior print definition. As each heated droplet of material is jetted, it immediately cools and holds its shape as it lands on the part or support surface.

- Printed material does not "ooze" over edges or pool in corners
- Edges are sharp, holes are round, corners are clean
- Ensures excellent sidewall quality



MJP Phase Change Process

Without Phase Change

# ProJet® MJP 5600

Large format, multi-material composite parts in a single build

Your products are made of multiple materials—now your prototypes can be printed with varying degrees of flexibility, transparency and differentiated shades in one part, giving your 3D prints more realistic mechanical properties for large and small parts.



New rigid black plastic VisiJet® CR-BK enables even more composite mechanical performances

Print realistic medical models in rigid and elastomeric materials





Multi-material prototypes car blend clear, black or white to communicate ideas and simulate finished products

# **EXCEPTIONALLY HIGH THROUGHPUT**

Combine an over 50% larger build volume with up to 2x faster print speeds and up to 4x faster post-processing than similar class solutions for high-throughput printing. The ProJet MJP 5600 is fast when printing composite materials, and even faster when printing single materials.

# **SUPERIOR PART QUALITY**

Get greater geometric freedom and part functionality with multi-material composite printing that delivers accurate, true-to-CAD parts with superior surface finish, sharp edges and fine details.

# **DOZENS OF MATERIAL CHOICES**

This printer and material system simultaneously prints and blends flexible and rigid photopolymers, layer-by-layer at the voxel level, to achieve superior mechanical properties for a variety of applications, including over-molded parts, multi-material assemblies, rubber-like components, jigs and fixtures, dies and more.

# MECHANICAL FUNCTIONAL TESTING

Validate that designs perform correctly in the real world. Find and fix problems early, before committing to tooling.

# **CONCEPT COMMUNICATION**

Bring your ideas to life with realistic models for colleagues, customers and others.

# **RAPID TOOLING**

Print injection molds, hydroforming dies, patterns and other short-run tooling for concept and bridge production.

# FORM AND FIT ASSEMBLY TESTING

Check interactions and clearances between components to ensure proper assembly.

# **ERGONOMIC STUDIES**

There's no substitute for holding a part and exploring it from all angles. MJP parts are smooth, beautiful and accurate for ergonomic testing.

# **JIGS AND FIXTURES**

3D print jigs and fixtures quickly and free up CNC equipment for production.

	ProJet MJP 2500	Projet MJP 2500 Plus	ProJet MJP 3600	ProJet MJP 3600 Max	ProJet MJP 5600
Max Build Envelope Capacity (W x D x H)	11.6 x 8.3 x 5.6 in (294 x 211 x 144 mm)		<u>UHD &amp; XHD Modes</u> : 8 x 7.3 x 8 in	HD Mode: 11.75 x 7.3 x 8 in (298 x 185 x 203 mm UHD & XHD Modes: 11.2 x 7.3 x 8 in (284 x 185 x 203 mm	All Modes: 20.4 x 15 x 11.8 in ) (518 x 381 x 299 mm)
Resolution (xyz)	800 x 900 x 790 DPI, 32 μ layers		<u>HD Mode</u> : 375 x 450 x 790 DPI; 32 μ layers <u>UHD Mode</u> : 750 x 750 x 890 DPI; 29 μ layers <u>XHD Mode</u> : 750 x 750 x 1600 DPI; 16 μ layers		UHD & UHDS Modes: 600 x 600 x 1600 DPI; 16 μ layers XHD & XHDS Modes: 750 x 750 x 2000 DPI; 13 μ layers
Typical Accuracy	±0.001-0.002 inch per inch (0.025-0.05 mm per 25.4 mm) of part dimension (on platform)  Accuracy may vary depending on build parameters, part geometry and size, part orientation and post processing				
Build Materials NEW	Rigid White VisiJet M2R-BK² – Rigid Black	Rigid Gray VisiJet M2 EBK – Elastomeric Black VisiJet M2 ENT – Elastomeric Natural VisiJet Armor M2G-CL – Clear, ABS-like	VisiJet M3-X – Rigid White VisiJet M3 Crystal – Rigid Clear VisiJet M3 Black – Rigid Black VisiJet M3 Proplast – Rigid Natural VisiJet M3 Navy – Rigid Blue VisiJet M3 Techplast – Rigid Gray VisiJet M3 Procast – Castable	VisiJet M3-X – Rigid White VisiJet M3 Crystal – Rigid Clear VisiJet M3 Black – Rigid Black VisiJet M3 Proplast – Rigid Natural VisiJet M3 Navy – Rigid Blue VisiJet M3 Techplast Rigid Gray VisiJet M3 Procast – Castable	Base materials: Visijet CR-WT 200 <sup>1,3</sup> – Rigid White Visijet CR-CL 200 <sup>1,3</sup> – Rigid Clear Visijet CR-BK - Rigid Black Visijet CE-BK – Elastomeric Black Visijet CE-NT – Elastomeric Natural
Support Material	Eco-friendly, easily removable wax				
Post- processing	———— MJP EasyClean System ————		- ProJet Finisher ————		ProJet Finisher XL
Included Software	3D Sprint	3D Sprint	3D Sprint	3D Sprint	3D Sprint
Standard	1 year parts & labor	1 year parts	1 year parts & labor	1 year parts & labor	1 year parts & labor

<sup>&</sup>lt;sup>1</sup> USP Class VI and ISO 10993

Warranty

& labor

<sup>2</sup> Respectively replaces former VisiJet M2 RWT, RBK and RCL materials

& labor

Accuracy may vary depending on build parameters, part geometry and size, part orientation, and post-processing. The performance characteristics of these products may vary according to product application, operating conditions, material combined with, or with end use. 3D Systems makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use.

5 year printhead



**3D Systems Corporation** 333 Three D Systems Circle Rock Hill, SC 29730 www.3dsystems.com ©2017 by 3D Systems, Inc. All rights reserved. Specifications subject to change without notice. 3D Systems, Projet and VisiJet are registered trademarks and the 3D Systems logo and 3D Sprint are trademarks of 3D Systems, Inc.

5 year printhead

5 year printhead

<sup>&</sup>lt;sup>3</sup> New formulation as VisiJet CR-WT 200 and CR-CL 200 replaces VisiJet CR-CL and CR-CL