# HP Jet Fusion 4200 3D Printing Solution





## **Quality, functional parts**

- Ideal for industrial prototyping and final part production.
- Achieve predictable print time and parts with best-in-class isotropy.
- Choose between print modes tuned for mechanical/functional/aesthetic properties, accuracy, and speed.

## **Optimized productivity**

- Produce more parts per day with continuous printing.<sup>1</sup>
- Streamlined, cleaner experience with enclosed, automated mixing.<sup>2</sup>
- Rely on HP's world-class HP Jet Fusion 3D Solution Services to maximize uptime and productivity.

### **Optimized costs**

- Reduce operational costs, opening your doors to short-run production.
- Invest in a competitively priced 3D printing solution and produce at a low cost per part.
- Optimize cost and part quality, with cost-efficient materials that offer industry-leading reusability.<sup>3</sup>

# **HP Jet Fusion 4200 3D Printing Solution**

# Produce quality parts while optimizing productivity and cost

Ideal for industrial prototyping and final part production environments



## Automated materials mixing and loading systems

help streamline your workflow and reduce labor time



No additional room for parts removal needed with enclosed unpacking and material collection system, including a laminar hood



The **HP Jet Fusion 3D build unit**—included within the printer—is moved on for cooling right after job completion, allowing a continuous printing<sup>1</sup> process



The HP Jet Fusion 3D fast cooling **module** reduces cooling time resulting in fast time-to-part and more parts ready within the same day



### **HP Jet Fusion 3D Solution Services**

stand behind your business to maximize your uptime and productivity, with nextbusiness-day onsite support and spare parts availability⁵



### HP 3DaaS Base<sup>6</sup>

Convenient pay-per-use model with a low commitment



### HP SmartStream 3D Build Manager: guickly and easily prepare your jobs for

printing with all the elements you need



**HP 3D Center:** track, manage, and optimize your 3D operations with software that provides remote, real-time monitoring; preventive notifications; and historical data analysis







Integration with industry-leading software solutions



Autodesk® Netfabb® with Materialise Build Processor HP Workspace

for HP Multi Jet Fusion technology

Siemens NX AM for HP Multi Jet Fusion technology

# New materials and applications new growth opportunities

Expand into new applications and markets with a growing portfolio of HP 3D materials that enable you to produce a variety of low-cost, guality parts—and address sustainability objectives with industry-leading reusability.<sup>3</sup>

# HP 3D High Reusability PA 11 ductile,<sup>7</sup> quality parts

Produce functional parts with impact resistance and ductility.<sup>7</sup> This thermoplastic material, made from renewable sources,<sup>8</sup> provides optimal mechanical properties and consistent performance at industry-leading surplus powder reusability.<sup>3</sup>

Statements:<sup>9</sup> Biocompatibility, REACH, RoHS (for EU, Bosnia-Herzegovina, China, India, Japan, Jordan, Korea, Serbia, Singapore, Turkey, Ukraine, Vietnam), PAHs, Statement of Composition for Toy Applications





## HP 3D High Reusability PA 12 strong, low-cost,<sup>10</sup> quality parts

Reduce total cost of ownership<sup>11</sup> and produce strong, functional, detailed complex parts with HP 3D High Reusability PA 12, a robust thermoplastic that enables industry-leading surplus powder reusability.<sup>3</sup>

Statements:<sup>9</sup> Biocompatibility, REACH, RoHS (for EU, Bosnia-Herzegovina, China, India, Japan, Jordan, Korea, Serbia, Singapore, Turkey, Ukraine, Vietnam), PAHs, Statement of Composition for Toy Applications, UL 94 and UL 746A

# HP 3D High Reusability PA 12 Glass Beads stiff, dimensionally stable, quality parts

Produce stiff, functional parts—while achieving up to 70% surplus powder reusability<sup>12</sup>—with this glass bead filled thermoplastic material ideal for applications requiring high stiffness and dimensional stability like enclosures and housings, fixtures and tooling.

Statements:<sup>9</sup> REACH, RoHS (for EU, Bosnia-Herzegovina, China, India, Japan, Jordan, Korea, Serbia, Singapore, Turkey, Ukraine, Vietnam), PAHs, UL 94 and UL 746A

# **Materials Certified for HP Jet Fusion 3D Printing**



VESTOSINT® 3D Z2773 PA 12 is the first certified material for HP Jet Fusion 3D printers. This multi-purpose, affordable thermoplastic material is ideal for the production of strong parts, enabling design of lightweight structures with great color uniformity.<sup>13</sup>

ESTANE® 3D TPU M95A is an ideal fit for both prototyping and manufacturing scale-up applications, delivering high energy rebound, high-impact absorption, a low abrasion rate and high elasticity, combined with excellent unpacking/de-powdering properties.





# HP 3D Printing materials portfolio selection guide

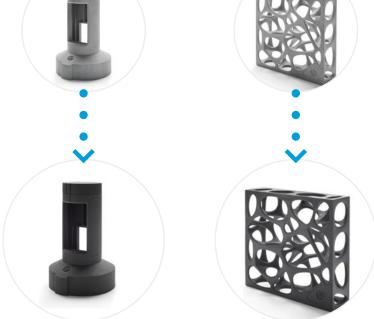
Usage and properties	HP 3D HR PA 11	HP 3D HR PA 12	HP 3D HR PA 12 GB	VESTOSINT <sup>®</sup> 3D Z2773 PA 12 <sup>13</sup>	ESTANE <sup>®</sup> 3D TPU M95A
Visual aids & presentation models	•	•	•	•	•
Functional prototyping	•	•	•	•	•
End-use parts	•	•	•	•	•
Dimensional stability	•	•	•	•	•
Functional rigid part (higher stiffness)	•	•	•	•	•
Ductile part (higher elongation at break)	•	•	•	•	•
Impact	•	•	•	•	•
HDT (heat deflection temperature)	•	•	•	•	•
Medical biocompatibility <sup>9</sup> (USP Class I-VI and US FDA guidance for Intact Skin Surface Devices)	•	•	•	•	٠
Look and feel	•	•	•	•	•
	Excellent	Good	e Fair	• Not recommended	In testing
or more information, visit: p.com/go/3Dmaterials					
HP recommend			F		

# post-processing solutions

## Girbau DY130 Dyeing Solution<sup>15</sup>

With 50 years of experience designing industrial equipment and in the dyeing equipment industry, Girbau offers a post-processing solution for dye finishing made for the HP Jet Fusion 4200 3D Printing Solution.<sup>15</sup>

For more information, visit: coloringsystem.girbau.com



# Maximize your equipment uptime with **HP Jet Fusion 3D Solution Services**

Drive business growth with high uptime and fast, efficient 3D printing. HP Jet Fusion 3D Solution Services can help your business in any capacity with productivity services, advanced training, lifecycle support, and essential care. We help you scale production and achieve your digital manufacturing objectives while increasing the return on your investment—from day one and as your needs evolve. Grow your business with true peace of mind.



# Accelerate your move to HP 3D Printing with **HP Integrated Financial Solutions**

Leverage the latest technology to help accelerate your growth, profitability, and competitiveness. Partner with HP Integrated Financial Solutions to help accelerate your time to value. Enjoy the flexibility to meet both your technology and financial plans while allocating your cash to other priorities.

Financing options include a low per-month payment for the HP Jet Fusion 4200 3D Printing Solution, enabling the flexibility to:

- Avoid a large up-front payment
- Align payments with revenue by using deferred or step payment options
- Simplify your administration: bundle hardware and services into a single agreement
- Change as your requirements evolve, refresh every 3–5 years

Financing and service offerings available through Hewlett-Packard Financial Services Company and its subsidiaries and affiliates (collectively HPFSC) in certain countries and is subject to credit approval and execution of standard HPFSC documentation. Rates and terms are based on customer's credit rating, offering types, services and/or equipment type and options. Not all customers may qualify. Not all services or offers are available in all countries. Other restrictions may apply. HPFSC reserves the right to change or cancel this program at any time without notice.

### Learn more at

hp.com/go/3DIntegratedFinancialSolutions

- Speed your transformation to full digital manufacturing with the hands-on experience and guidance you get with HP Digital Manufacturing Productivity Services.
- Empower your staff through HP 3D Printing Training Services, providing expert guidance on part design, print guality and yield, troubleshooting, and performance.
- Focus on your core business, while HP experts perform installations, upgrades, relocations, and more with HP 3D Printing Lifecycle Services.
- Leverage remote and on-site support options through **HP 3D** Printing Care Services. Return your equipment to full operating condition faster with optional four-hour response.

Learn more at hp.com/go/3DPrinter4200

# HP 3D as a Service (HP 3DaaS)<sup>6</sup>—Gain new levels of cost predictability with the flexibility to scale your business as you grow

In this business climate, there are many advantages to a "pay-asyou-go" business model when the focus is on outcomes. Capital expenses are transformed into operating expenses, spread over time. Paying on a usage basis puts the focus on your business results rather than equipment or transactions.

HP Jet Fusion 3D Printing Solutions are reinventing design and manufacturing. From accelerating design cycles, to printing fullcolor functional parts,<sup>16</sup> to running efficient volume production with repeatable part quality.

Speed up your digital manufacturing transformation with HP 3DaaS:

- **Predictable:** usage-based price per successful build<sup>17</sup> gives vou certainty around your variable costs
- **Convenient:** gain new operational efficiencies by simplifying supplies ordering and inventory management
- Affordable: avoid up-front investment—and help align your costs directly with your revenue by paying monthly<sup>18</sup>

HP 3DaaS Base includes:

- Automatic replenishment of HP 3D supplies
- HP 3D Printing Care Services, including remote and onsite support
- Online dashboard for easy, convenient tracking of billing and usage

Contact your HP sales representative for more information or learn more at hp.com/go/3DaaS

# **Technical specifications**

## HP Jet Fusion 4200 3D Printer

Printer	Technology	HP Multi Jet Fusion technology	
performance	Effective building volume	380 x 284 x 380 mm (15 x 11.2 x 15 in)	
	Building speed <sup>19</sup>	Up to 4115 cm <sup>3</sup> /hr (251 in <sup>3</sup> /hr)	
	Layer thickness	0.08 mm (0.003 in)	
	Job processing resolution (x, y)	600 dpi	
	Print resolution (x, y)	1200 dpi	
Dimensions (w x d x h)	Printer	2210 x 1200 x 1448 mm (87 x 47 x 57 in)	
	Shipping	2300 x 1325 x 2068 mm (91 x 52 x 81 in)	
	Operating area	3700 x 3700 x 2500 mm (146 x 146 x 99 in)	
Weight	Printer	750 kg (1653 lb)	
	Shipping	945 kg (2083 lb)	
Network <sup>20</sup>	Gigabit Ethernet (10/100/1000Base-T), supporting the following standards: TCP/IP, DHCP (IPv4 only), TLS/SSL		
Processor and memory	Processor	Intel® Core™ i7 4770TE (2.3 GHz, up to 3.3 GHz)	
	Memory	16 GB DDR3	
Hard disk	2TB (AES-256 encry	oted, FIPS 140, disk wipe DoD 5220M)	
Software	HP SmartStream 3D Build Manager, HP 3D Center, HP SmartStream 3D Command Center		
	Supported file formats	3MF, STL, OBJ, and VRML (v2.0)	
	Certified third-party software	Autodesk <sup>®</sup> Netfabb <sup>®</sup> with HP Work- space, Materialise Build Processor for HP Multi Jet Fusion technology, Siemens NX AM for HP Multi Jet Fusion technology	
Power	Consumption	9 to 11 kW (typical)	
	Requirements	Input voltage three phase 380-415 V (line-to-line), 30 A max, 50/60 Hz 200-240 V (line-to-line), 48 A max, 50/60 Hz	
Certification and Statement	Safety	IEC 60950-1+A1+A2 compliant; United States and Canada (UL listed); EU (LVD and MD compliant, EN 60950-1, EN 12100-1, EN 60204-1, and EN 1010)	
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia (ACMA), New Zealand (RSM)	
	Environmental statement	REACH	
Warranty & service coverage included	One-year limited har	dware warranty	

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future. More at: hp.com/go/learnaboutsupplies

## HP Jet Fusion 4200 3D Processing Station with Fast Cooling

Features	Automated mixing, sieving, and loading; semi-manual unpacking; fast cooling; external storage tank		
Dimensions (w x d x h)	Processing station with fast cooling	2990 x 934 x 2400 mm (117.7 x 36.8 x 94.5 in)	
	Shipping	3499 x 1176 x 2180 mm (137.8 x 46.3 x 85.8 in)	
	Operating area	3190 x 2434 x 2500 mm (125.6 x 95.8 x 99 in)	
Weight	Processing station with fast cooling	480 kg (1058 lb)	
	Loaded	810 kg (1786 lb)	
	Shipping	620 kg (1367 lb)	
Power	Consumption	2.6 kW (typical)	
	Requirements	Input voltage single phase 200-240 V (line-to-line), 19 A max, 50/60 Hz or 220-240 V (line-to-neutral), 14 A max, 50 Hz	
Certification and Statement	Safety	UL 2011, UL508A, NFPA, C22.2 NO. 13- 14 compliant; United States and Canada (UL listed); EU (MD compliant, EN 60204- 1, EN 12100-1 and EN 1010)	
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia (ACMA), New Zealand (RSM)	
	Environmental statement	REACH	
Warranty & service coverage included	One-year limited hardware wa	arranty	

### **Eco Highlights**



- Cleaner, more comfortable experience—enclosed printing system, and automatic powder management<sup>2</sup>
- Minimizes waste due to industry-leading reusability of powder<sup>3</sup>
- Take-back program for eligible supplies available in select countries<sup>2</sup>

Please recycle printing hardware and eligible printing supplies. Find out how at our website: hp.com

### Learn more about HP Multi Jet Fusion technology at hp.com/go/3DPrint

Connect with an HP 3D Printing expert or sign up for the latest news about HP Jet Fusion 3D Printing: hp.com/go/3Dcontactus

> For more information, please visit hp.com/go/3DPrinter4200





Cofinanced Project by Minetur -SETS TSI-100802-2014-1

## **Ordering information**

Printer	M0P44B	HP Jet Fusion 4200 3D Printer
Accessories	MOP49C	HP Jet Fusion 4200 3D Processing Station with Fast Cooling
	M0P45B	HP Jet Fusion 4200 3D Build Unit
	MOP54B	HP Jet Fusion 5200/4200 Series 3D External Tank 5-units Bundle
	MOP54D	HP Jet Fusion 4200 Series 3D External Tank Starter Kit
Recommended accessories	Girbau DY130 Dyeing Solution <sup>16</sup>	Please consult with your local HP 3D Printing Specialist
Original HP printheads	F9K08A	HP 3D600 Printhead
Original HP agents	V1Q63A	HP 3D700 5L Fusing Agent
	V1Q64A	HP 3D700 5L Detailing Agent
Other supplies	V1Q66A	HP 3D600 Cleaning Roll
Original HP 3D high	V1R10A	HP 3D High Reusability PA 12 30L (13 kg)
reusability materials <sup>22</sup>	V1R16A	HP 3D High Reusability PA 12 300L (130 kg)
	V1R12A	HP 3D High Reusability PA 11 30L (14 kg)
	V1R18A	HP 3D High Reusability PA 11 300L (140 kg)
	V1R11A	HP 3D High Reusability PA 12 Glass Beads 30L (15 kg)
	V1R22A	HP 3D High Reusability PA 12 Glass Beads 300L (150 kg)
Materials Certified for HP Jet Fusion 3D Printing <sup>22</sup>	EVNV1R14A	VESTOSINT <sup>®</sup> 3D Z2773 PA 12 30L (14 kg) <sup>13</sup>
	EVNV1R17A	VESTOSINT <sup>®</sup> 3D Z2773 PA 12 300L (140 kg) <sup>13</sup>
	3DTW0030	ESTANE <sup>®</sup> 3D TPU M95A 30L (16 kg)
	3DTW0300	ESTANE <sup>®</sup> 3D TPU M95A 300L (160 kg)

HP Jet Fusion 3D Solution Services	UB4P2E	HP Digital Manufacturing Site Readiness Assessment Tier 1 Service for HP Jet Fusion 5200/4200 Series 3D Printing Solutions
	U9ZS7E	HP Ready-to-print Service for HP JF 4200 Series 3D Printing Solutions
	U9EK7E	HP Advanced Operation Training Service (HP Training Center) for HP Jet Fusion 4200 Series 3D Printing Solutions
	UCOE9E	HP Part Quality Proficiency Training Service for HP Jet Fusion 4200 Series 3D Printing Solutions
	UC1K8E	HP 3 Year Next Business Day Onsite HW Support with DMR* Production Care for HP Jet Fusion 4200 3D Printer
	UC1M6E	HP 3 Year Next Business Day Onsite HW Support Production Care for HP Jet Fusion 4200 3D Build Unit
	U9EM5E	HP 3 Year Next Business Day Onsite HW Support Foundation and Production Care for HP Jet Fusion 4200 3D Processing Station
*Defective Media Retention	UB4P5E	HP 1 Year Priority Care for HP Jet Fusion 5200/4200 Series 3D Printing Solutions

1. Continuous printing requires an additional HP Jet Fusion 3D build unit (standard printer configuration includes one HP Jet Fusion 3D build unit).

- Compared to manual print retrieval process used by other powder-based technologies. The term "cleaner" does not refer to any indoor
- air quality requirements and/or consider related air quality regulations or testing that may be applicable. Industry-leading surplus powder reusability based on using HP 3D High Reusability PA 11 and PA 12 at recommended packing densities and compared to selective laser sintering (SLS) technology, offers excellent reusability without sacrificing mechanical performance. Tested according to ASTM D638, ASTM D256, ASTM D790, and ASTM D648 and using a 3D scanner. Testing monitored using statistical 3. process controls.
- process controls. For advanced data features charges may apply in the future. Available in most countries, subject to Terms & Conditions of HP Limited Warranty and/or Service Agreement. Please consult your local sales representative.
- 6. HP 3DaaS Base is currently available in the US, Canada, Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands,
- Portugal, Spain, Sweden, and UK. HP 3DaaS Base defined usage-based price applies for a one-year term. Testing according to ASTM D638, ASTM D256, and ASTM D648 using HDT at different loads with a 3D scanner for dimensional accuracy. Testing monitored using statistical process controls
- 8. HP 3D High Reusability PA 11 powder is made with 100% renewable carbon content derived from castor plants grown without GMOs in and areas that do not compete with food crops. IP 30 High Reusability PA 11 is made using renewable sources, and may be made together with certain non-renewable sources. A renewable resource is a natural organic resource that can be renewed at the same speed in which it is consumed. Renewable stands for the number of carbon atoms in the chain coming from renewable sources (in this case,
- For more information, see hp.com/go/statementsPA12, and hp.com/go/statementsPA12, and hp.com/go/statementsPA1268.
   Bor more information, see hp.com/go/statementsPA11, hp.com/go/statementsPA12, and hp.com/go/statementsPA1268.
   Based on internal testing and public data for solutions on market as of April, 2016. Cost analysis based on: standard solution configuration price, supplies price, and mainternance costs recommended by manufacturer. Cost criteria: printing 1.4 full build chambers of parts per day/S days per week over 1 year of 30 cm<sup>3</sup> parts at 10% packing density on Fast print mode using HP 30 High Reusability PA 12 material, and the powder reusability ratio recommended by manufacturer, and printing under certain build conditions and part geometries
- 11. Compared to selective laser sintering (SLS) and fused deposition modeling (FDM) technologies, HP Multi Jet Fusion technology can erduce the overall energy requirements needed to attain full fusing and reduce the system requirements for large, vacuum-sealed ovens. In addition, HP Multi Jet Fusion technology uses less heating power than SLS systems for better material properties and material reuse rates, minimizing waste.
- 12. HP Jet Fusion 3D Printing Solutions using HP 3D High Reusability PA 12 Glass Beads provide up to 70% powder reusability ratio, producing functional parts batch after batch. For testing, material is aged in real printing conditions and powder is tracked by generations (worst case for reusability). Parts are them made from each generation and tested for mechanical properties and accuracy.
  13. The only terms and conditions governing the sale of HP 3D printer solutions are those set forth in a written sales agreement. The only
- warranties for HP products and services are set for thin the express warranty statements for such products and services. Nothing herein should be construed as constituting an additional warranty or additional binding terms and conditions. HP shall not be liable for technical or editorial errors or omissions contained herein and the information herein is subject to change without notice. The Materials Certified

for HP Jet Fusion 3D Printing have not been designed, manufactured, or tested by HP for compliance with legal requirements and recipients are responsible for making their not been designed, manufactured, or tested of the for comparate wint regar requirements and recipients are responsible for making their own determination as to the suitability of VESTOSINT® 3D Z2773 for their purposes, including but not limited as regards direct or indirect food contact applications. 14. Nothing herein should be construed as constituting an additional HP warranty. The only warranties for HP products and services are set

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- 16. Full-color parts applicable only with HP Jet Fusion color 3D printers
- A successful build is a printed job that ends with the exit code "job\_completed\_successfully." HP 3DaaS Base defined usage-based price applies for a one-year term.
- 19. Based on 0.08-mm (0.003-in) laver thickness and 7.55 sec/laver.
- 20. The HP Jet Fusion 3D Printing Solution should be connected to the HP Cloud in order to enable the correct functioning of the printer And to offer better support. Printing supplies eligible for recycling vary by supply and by printer. Visit <u>hp.com/recycle</u> to see how to participate and for HP Planet 21
- Partners program availability; program may not be available in your area. Where this program is not available, and for other consumables not included in the program, consult your local waste authorities on appropriate disposal. 22. Liters refers to the materials container size and not the actual materials volume. Materials are measured in kilograms.

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