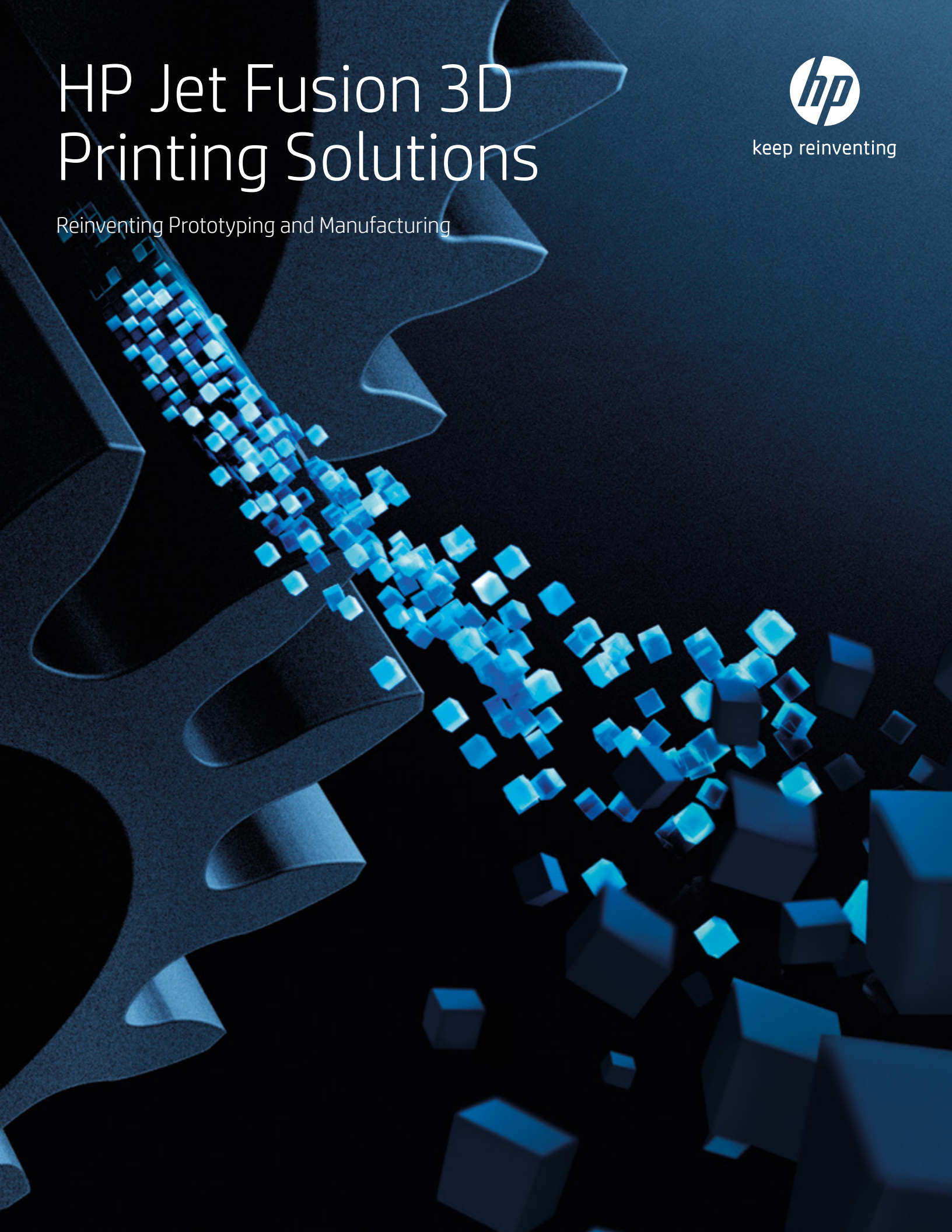
HP Jet Fusion 3D Printing Solutions

keep reinventing

Reinventing Prototyping and Manufacturing



1 Creating limitless potential

Welcome to a new era of 3D printing.

Leap beyond the limits of previous technologies and enter a world where 3D printing allows you to move rapidly from thoughts to things, from radical prototyping to final parts manufacturing.

A world where you can think and create without limits and propel your business forward by unlocking the full potential of 3D printing.

Because now, HP is bringing decades of expertise in printing and materials science—with more than 5,000 HP patents—to the unique performance of HP Multi Jet Fusion technology.

Fast form, fit, and function

HP Multi Jet Fusion technology enables production of functional parts, up to 10 times faster,[1] at the lowest cost,[2] and with no trade-offs in the process.

That's because HP's technology can transform part properties voxel by voxel—enabling a future of limitless applications, materials, and colors. Imagine a future where we can produce 'Smart Parts' with embedded electronics and integrated traceability and intelligence.

HP is here to help your business get ready for a future era of Digital Manufacturing.

Collaboration to advance the state of the art

HP's Multi Jet Fusion Open Platform will bring down the barriers to widespread 3D printing adoption across industries, in order to:

- Facilitate the development of never-before-seen 3D printing materials and new software to expand applications
- Enable new 3D printing materials that combine lower costs with enhanced properties
- Support the transformation from traditional manufacturing to a future of Digital Manufacturing
- Drive software innovation and standards such as 3MF, an improved 3D printing file format, through collaboration with partners

2 Reinventing prototyping and manufacturing: HP Jet Fusion 3D 4210/4200/3200 Printing Solutions

The HP Jet Fusion 3D printing solution reinvents how you prototype and produce functional parts, delivering quality output, up to 10 times faster[1] at half the cost[2]

Superior, consistent part quality[3,4]

- Get extreme dimensional accuracy and fine detail,[3] thanks to HP's unique Multi-Agent printing process
- Produce truly functional parts with optimal mechanical properties,[4] faster[1]
- Obtain predictable, reliable final printed parts that match your design[5]
- Access new future materials and uncover new applications thanks to the HP Multi Jet Fusion Open Platform

Only with the HP Jet Fusion 3D 4210/4200 Printing Solutions

- Use advanced and custom print modes to control mechanical, functional, and aesthetic properties, accuracy, and speed
- Benefit from advanced part quality monitoring during the printing process

Breakthrough productivity[1]

- Produce more parts per day with continuous printing and fast cooling[6]
- Streamline your workflow with HP's automated materials preparation and post-processing station
- Cleaner experience with an enclosed Processing Station and materials not classified as hazardous[7]
- Rely on HP's Technical Services and Support—including Next Business Day Support & Parts[19]—to help maximize uptime and productivity
- Choose your ideal end-to-end solution from a range of printing and processing options

Only with the HP Jet Fusion 3D 4210/4200 Printing Solutions

- Add additional parts—while printing is already in progress—for urgent jobs
- Experience enhanced performance thanks to a higher disk capacity and additional memory

Lowest cost-per-part[2]

- Achieve lowest cost-per-part[2] and help reduce operational costs, opening your doors to short-run manufacturing
- Benefit from a competitively priced 3D printing solution[2]
- Optimize cost and part quality, with cost-efficient materials that offer industry-leading reusability[8]
- Plan production times more accurately and predictably to help increase your overall operational efficiency

The HP Jet Fusion 3D 4210 Printing Solution achieves

- up to 65% lower cost-per-part[2]
- double the breakeven point achieved by the HP Jet Fusion 3D 4200 Printing Solution, versus traditional manufacturing

HP Jet Fusion 3D 4210/4200/3200 Printers

HP Jet Fusion 4210/4200/3200 3D Processing Station with Fast Cooling[6]

For more information, please visit:
hp.com/go/JetFusion3Dsolutions

1 HP Jet Fusion 3D 4210 Printing Solution
Ideal for accelerating your business' transformation to industrial-scale 3D manufacturing with breakthrough economics for production runs—now at up to 65% lower cost per part[2]

2 HP Jet Fusion 3D 4200 Printing Solution
Ideal for your prototyping and short-run manufacturing needs, with high productivity[1] to meet same-business-day demands, at lowest cost per part[2]

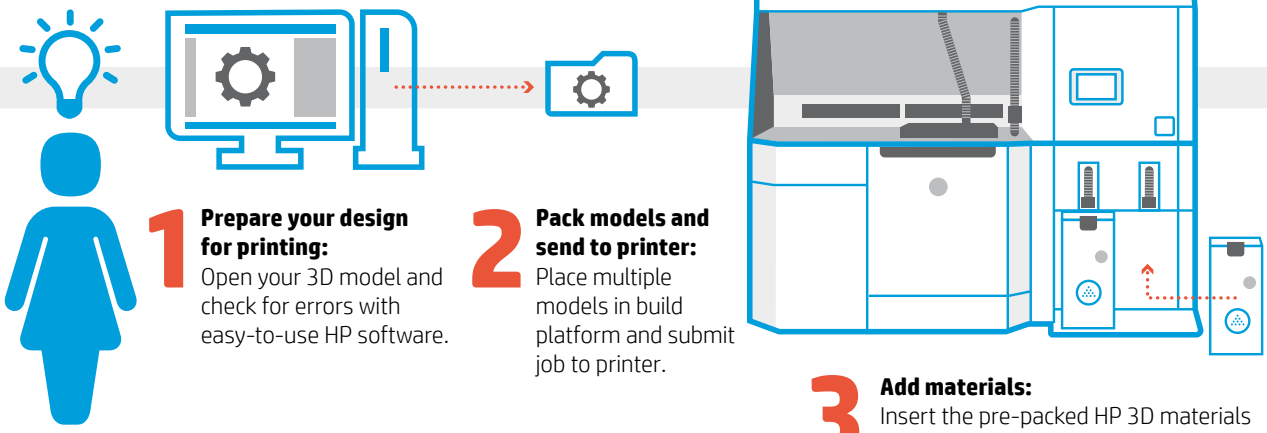
3 HP Jet Fusion 3D 3200 Printing Solution
Ideal for prototyping, giving you improved productivity[1] and the capacity to grow your usage at a low cost per part[2]

Ordering information

	HP Jet Fusion 3D 4210 Printing Solution		HP Jet Fusion 3D 4200 Printing Solution		HP Jet Fusion 3D 3200 Printing Solution	
Printer	2YG73A	HP Jet Fusion 3D 4210 Printer	M0P44B	HP Jet Fusion 3D 4200 Printer	M0P41A	HP Jet Fusion 3D 3200 Printer
Accessories	2YG74A	HP Jet Fusion 3D 4210 Processing Station with Fast Cooling[1]	M0P49C	HP Jet Fusion 3D 4200 Processing Station with Fast Cooling[1]	M0P50A	HP Jet Fusion 3D 3200 Processing Station with Fast Cooling[1]
	M0P45B	HP Jet Fusion 3D Build Unit	M0P45B	HP Jet Fusion 3D Build Unit	M0P45B	HP Jet Fusion 3D Build Unit
	M0P54B	HP Jet Fusion 3D External Tank 5 units Bundle	M0P54B	HP Jet Fusion 3D External Tank 5 units Bundle	M0P54B	HP Jet Fusion 3D External Tank 5 units Bundle
	M0P54C	HP Jet Fusion 3D External Tank Starter kit	M0P54C	HP Jet Fusion 3D External Tank Starter kit	M0P54C	HP Jet Fusion 3D External Tank Starter kit
Original HP Printheads	F9K08A	HP 3D600 Printhead	F9K08A	HP 3D600 Printhead	F9K08A	HP 3D600 Printhead
	V1Q77A	HP 3D710 Printhead				
Original HP Agents	V1Q60A	HP 3D600 3L Fusing Agent	V1Q60A	HP 3D600 3L Fusing Agent	V1Q60A	HP 3D600 3L Fusing Agent
	V1Q61A	HP 3D600 3L Detailing Agent	V1Q61A	HP 3D600 3L Detailing Agent	V1Q61A	HP 3D600 3L Detailing Agent
	V1Q63A	HP 3D700 5L Fusing Agent	V1Q63A	HP 3D700 5L Fusing Agent		
	V1Q64A	HP 3D700 5L Detailing Agent	V1Q64A	HP 3D700 5L Detailing Agent		
	V1Q78A	HP 3D710 5L Fusing Agent				
	V1Q79A	HP 3D710 5L Detailing Agent				
Other supplies	V1Q66A	HP 3D600 Cleaning Roll	V1Q66A	HP 3D600 Cleaning Roll	V1Q66A	HP 3D600 Cleaning Roll
Original HP 3D materials	V1R10A	HP 3D High Reusability PA 12 30L (13 kg)[9]	V1R10A	HP 3D High Reusability PA 12 30L (13 kg)[9]	V1R10A	HP 3D High Reusability PA 12 30L (13 kg)[9]
	V1R16A	HP 3D High Reusability PA 12 300L (130 kg)[9]	V1R16A	HP 3D High Reusability PA 12 300L (130 kg)[9]		
	V1R12A	HP 3D High Reusability PA 11 30L (14 kg)[9]	V1R12A	HP 3D High Reusability PA 11 30L (14 kg)[9]	V1R12A	HP 3D High Reusability PA 11 30L (14 kg)[9]
	V1R18A	HP 3D High Reusability PA 11 300L (140 kg)[9]	V1R18A	HP 3D High Reusability PA 11 300L (140 kg)[9]		
	V1R11A	HP 3D High Reusability PA 12 Glass Beads 30L (15 kg)[9]	V1R11A	HP 3D High Reusability PA 12 Glass Beads 30L (15 kg)[9]	V1R11A	HP 3D High Reusability PA 12 Glass Beads 30L (15 kg)[9]
	V1R22A	HP 3D High Reusability PA 12 Glass Beads 300L (150 kg)[9]	V1R22A	HP 3D High Reusability PA 12 Glass Beads 300L (150 kg)[9]		
Certified HP 3D materials	EVNV1R14A	VESTOSINT® 3D Z2773 PA 12 30L/14 kg Material	EVNV1R14A	VESTOSINT® 3D Z2773 PA 12 30L/14 kg Material	EVNV1R14A	VESTOSINT® 3D Z2773 PA 12 30L/14 kg Material
	EVNV1R17A	VESTOSINT® 3D Z2773 PA 12 300L/140 kg Material	EVNV1R17A	VESTOSINT® 3D Z2773 PA 12 300L/140 kg Material		
HP 3D Services	U9EJ8E	HP Installation w/Introduction to Basic Operation Service for HP Jet Fusion 3D Printer	U9EJ8E	HP Installation w/Introduction to Basic Operation Service for HP Jet Fusion 3D Printer	U9EJ8E	HP Installation w/Introduction to Basic Operation Service for HP Jet Fusion 3D Printer
	U9EL9E	HP Installation w/Introduction to Basic Operation SVC for HP Jet Fusion 3D Processing Station with FC	U9EL9E	HP Installation w/Introduction to Basic Operation SVC for HP Jet Fusion 3D Processing Station with FC	U9EL9E	HP Installation w/Introduction to Basic Operation SVC for HP Jet Fusion 3D Processing Station with FC
	U9HQ4E	Ramp up Care Pack for HP Jet Fusion 3D Solution	U9HQ4E	Ramp up Care Pack for HP Jet Fusion 3D Solution	U9HQ4E	Ramp up Care Pack for HP Jet Fusion 3D Solution
	1MZ23B	HP 3D Printer Initial Maintenance Kit	1MZ23B	HP 3D Printer Initial Maintenance Kit	1MZ23B	HP 3D Printer Initial Maintenance Kit
	1MZ24A	HP 3D Printer Yearly Maintenance Kit	1MZ24A	HP 3D Printer Yearly Maintenance Kit	1MZ24A	HP 3D Printer Yearly Maintenance Kit
	1MZ25B	HP 3D Post Processing Maintenance Kit	1MZ25B	HP 3D Post Processing Maintenance Kit	1MZ25B	HP 3D Post Processing Maintenance Kit
	U9EK7E	HP Advanced Operation Training Service for Jet Fusion 3D Printer (HP Training Center)	U9EK7E	HP Advanced Operation Training Service for Jet Fusion 3D Printer (HP Training Center)	U9EK7E	HP Advanced Operation Training Service for Jet Fusion 3D Printer (HP Training Center)
	U9VP8E	HP 3 year NBD* Onsite Hardware Support with DMR** HP 3 year NBD* Onsite Hardware Support with DMR**	U9EK4E	HP 3 year NBD* Onsite Hardware Support with DMR** HP 3 year NBD* Onsite Hardware Support with DMR**	U9QQ9E	HP 3 year NBD* Onsite Hardware Support with DMR** HP 3 year NBD* Onsite Hardware Support with DMR**
	U9EQ8E	HP 3 year NBD* Onsite Build Unit Support	U9EQ8E	HP 3 year NBD* Onsite Build Unit Support	U9EQ8E	HP 3 year NBD* Onsite Build Unit Support
	U9EM5E	HP 3 year NBD* Onsite Support for Processing Station with Fast Cooling	U9EM5E	HP 3 year NBD* Onsite Support for Processing Station with Fast Cooling	U9EM5E	HP 3 year NBD* Onsite Support for Processing Station with Fast Cooling
	U9VQ3E	HP 3 year Shared HW Support, Parts NBD* with DMR** and 2 onsite visits for Printer	U9TZ7E	HP 3 year Shared HW Support, Parts NBD* with DMR** and 2 onsite visits for Printer		
	U9UA2E	HP 3 year Shared Hardware Support, Parts NBD* and 2 onsite visits for Build Unit	U9UA2E	HP 3 year Shared Hardware Support, Parts NBD* and 2 onsite visits for Build Unit		
	U9UA7E	HP 3 year Shared Hardware Support, Parts NBD* and 2 onsite visits for Processing Station with FC	U9UA7E	HP 3 year Shared Hardware Support, Parts NBD* and 2 onsite visits for Processing Station with FC		
	U9UB1E	HP Train to Maintain Service for Jet Fusion 3D Printer	U9UB1E	HP Train to Maintain Service for Jet Fusion 3D Printer		
	2UL67A	HP Uptime Kit for Jet Fusion 3D Printer	2UL67A	HP Uptime Kit for Jet Fusion 3D Printer		
	2UL69A	HP Uptime Kit for Jet Fusion 3D Processing Station	2UL69A	HP Uptime Kit for Jet Fusion 3D Processing Station		
	2UL68A	HP Uptime Kit for Jet Fusion 3D Build Unit	2UL68A	HP Uptime Kit for Jet Fusion 3D Build Unit		

* Next Business Day
** Defective Media Retention

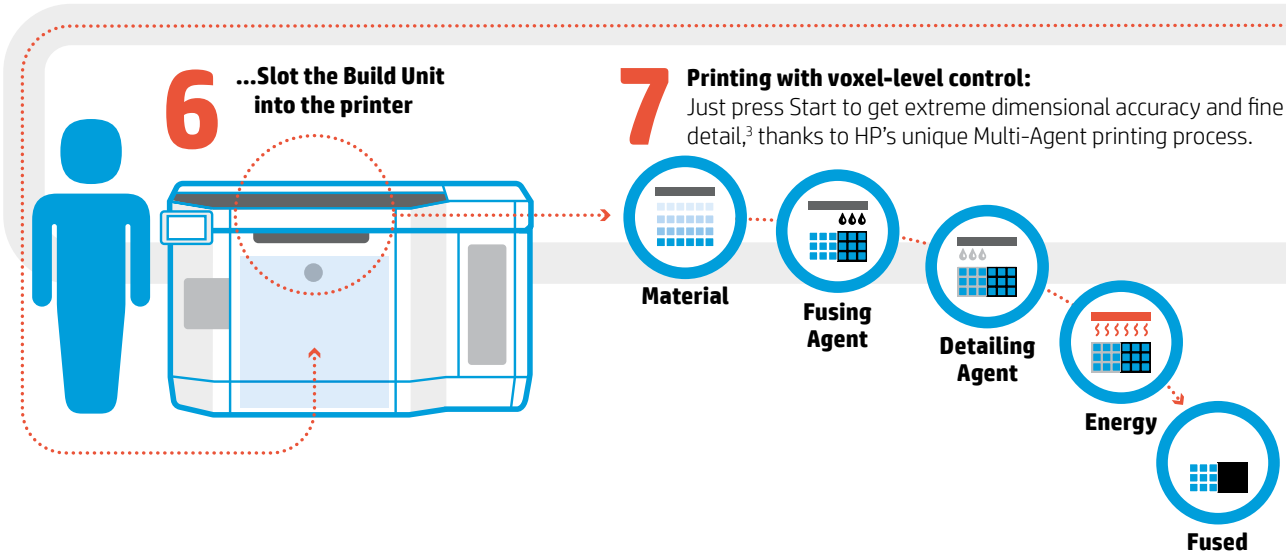
3 HP Jet Fusion 3D 4210/4200/3200 printing: an end-to-end solution

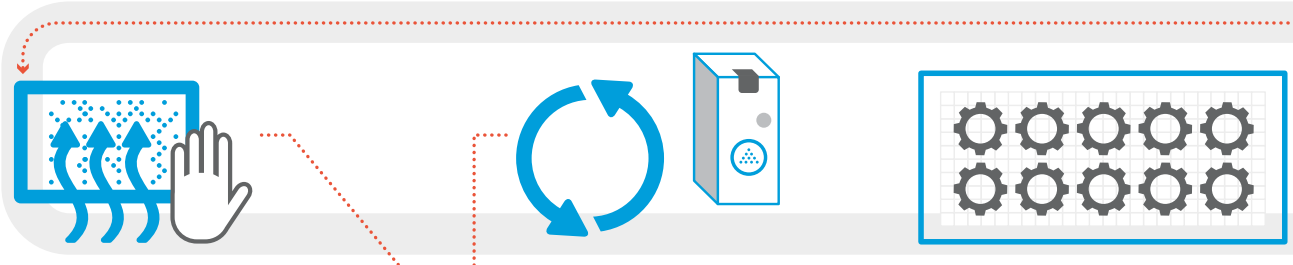


1 Prepare your design for printing:
Open your 3D model and check for errors with easy-to-use HP software.

2 Pack models and send to printer:
Place multiple models in build platform and submit job to printer.

3 Add materials:
Insert the pre-packed HP 3D materials cartridges into the HP Jet Fusion 3D Processing Station.



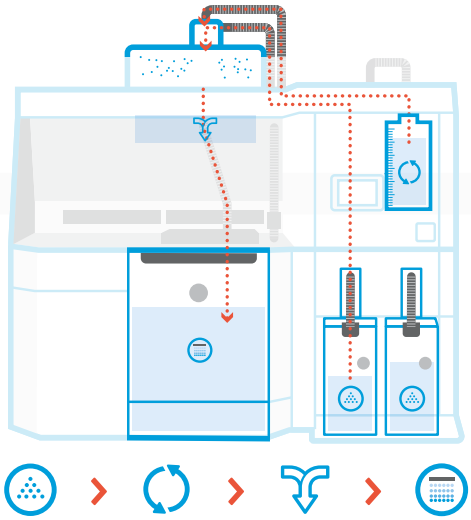


10 Cleaner extraction:[7]
Eliminate the need for an additional room for parts removal with enclosed unpacking and material collection system.

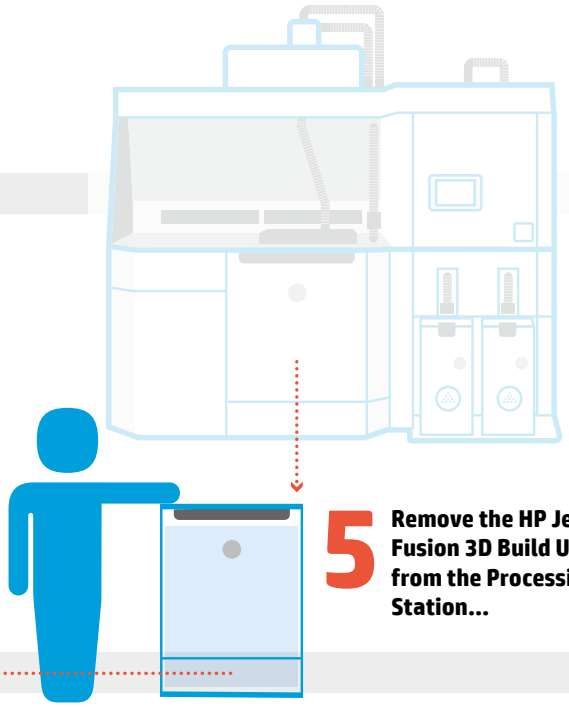
11 Industry-leading materials reusability:[8]
Get consistent performance while achieving 80% surplus powder reusability.[8]

12 Breakthrough productivity:
Produce parts up to 10 times faster[1] at half the cost.[2]

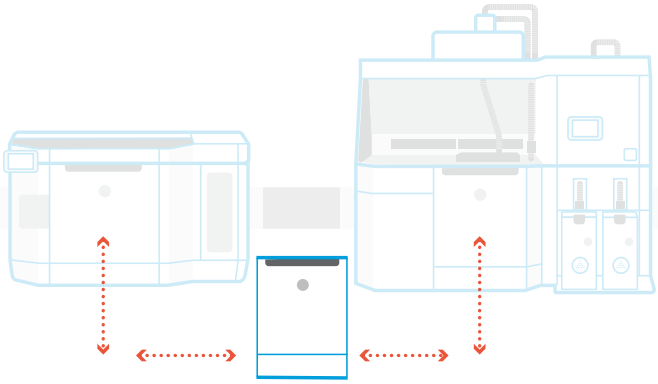
Enabled by HP Jet Fusion 3D Processing Station



4 **Automated mixing:**
A cleaner loading and mixing experience because the Processing Station is enclosed and automated. Materials are loaded into the HP Jet Fusion 3D Build Unit.

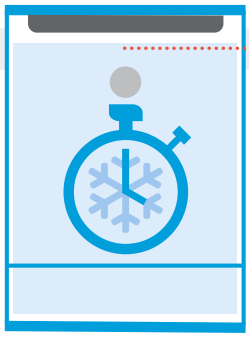


5 **Remove the HP Jet Fusion 3D Build Unit from the Processing Station...**



8 **Streamlined workflow:**
The Build Unit is removed from the printer—which is now ready for the next build—and slotted back into the Processing Station.

9 **Produce more parts per day with the HP Jet Fusion 3D Processing Station:**
With continuous printing and fast cooling.[6] Once cooled, parts are ready for post processing.



13 **Job done:**
As soon as the parts are ready, you receive an alert.

14 **HP Services:**
Rely on HP's Technical Services and Support—including Next Business Day Support & Parts[9]—to help maximize uptime and productivity.

keep reinventing

4 Engineering-grade thermoplastics...

HP 3D printing materials provide optimal output quality and high reusability at a low cost per part. Engineered for HP Multi Jet Fusion technology, these materials test the limits of functional part creation, optimizing cost and part quality, while also delivering high[10] and, in many cases, industry-leading reusability[8] at the lowest cost per part.[2]

HP 3D High Reusability PA 12
HP 3D High Reusability PA 12 produces strong, functional, detailed complex parts and helps reduce total cost of ownership.[11] This robust thermoplastic is ideally suited for complex assemblies, housings, enclosures, and watertight applications. It provides the best balance between mechanical properties and reusability,[12] and provides biocompatibility certifications.[13] It also delivers consistent performance—while achieving 80% surplus powder reusability[8]—at the lowest cost per part.[2]

HP 3D High Reusability PA 12 Glass Beads
Ideal for applications requiring high stiffness like enclosures and housings, fixtures and tooling, HP 3D High Reusability PA 12 Glass Beads is a 40% glass bead filled thermoplastic material with both optimal mechanical properties and high reusability.[10] It provides dimensional stability along with repeatability.[14] Customers experience quality results at a low cost per part and get consistent performance while achieving 70% surplus powder reusability.[15]

HP 3D High Reusability PA 11
HP 3D High Reusability PA 11 is designed for the production of strong, ductile,[16] functional parts including prostheses, insoles, sports goods, snap fits, living hinges, and more. Providing the lowest cost per part,[2]
HP 3D High Reusability PA 11 is a cost-efficient material offering industry-leading surplus powder reusability,[8] and is made from renewable sources.[17] It offers excellent chemical resistance[18] and enhanced elongation-at-break.[16]

New HP Open Platform Materials Partners:

dressler group

Lubrizol

ARKEMA

"By enabling us to directly develop 3D printing materials leveraging the HP Multi Jet Fusion Open Materials Platform, Arkema believes that we will be able to develop user-specific materials and uncover new applications for our customers and industry leaders. This great concept will accelerate the adoption of 3D printing and unlock its full potential. As a global designer of innovative, environmentally responsible Technical Polymer solutions for a wide variety of markets, Arkema is excited to collaborate with HP to change the way products are designed and produced and lead the way for the next industrial revolution."

Adrien Lapeyre
Global Market Manager – Technical Polymers Powders

Arkema

BASF
We create chemistry

"BASF has one of the broadest 3D Material portfolios in the chemical industry, and therefore, we are proud to join the HP Multi Jet Fusion Open Platform. BASF is a founding member of this Open Platform, and with our experience, knowledge of customer needs and applications, we are motivated to collaborate. The HP Open Platform is a great foundation to develop new materials and enable economies of scale, making materials more affordable and enabling not only prototyping but unlocking the potential of 3D printing for production."

Dietmar Geiser
Senior Manager 3D – Printing Strategy & Planning

BASF New Business GmbH

HP Open Platform Certified Materials

VESTOSINT® is a modified polyamide-based powder that is produced at Evonik's Marl site in Germany using the company's own special process. The powders are certified for HP Jet Fusion 3D printers.*

Certified for HP Jet Fusion 3D printers

EVONIK INDUSTRIES

*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 forth in 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 Certified for HP Jet Fusion 3D Materials have not been designed, manufactured, or tested by HP for compliance with legal 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.

"Evonik is developing new materials leveraging the HP Multi Jet Fusion Open Materials Platform. Evonik believes that HP's Open Materials program provides a unique opportunity to expand the adoption of 3D printing and creates a new platform to drive materials innovation through development of materials specifically suited for this process. HP's new MJF technology has the capabilities to create new applications for the 3D printing market by allowing us to develop new materials for the future."

Dr. Matthias Kottenhahn
Sr. VP & GM, High Performance Polymers

Evonik Resource Efficiency GmbH

...and beyond

HP plans to continue expanding our materials offering even further—delivering a wider family of thermoplastics, including those with flame-retardant properties. And we're exploring new materials, such as elastomers, polyamides, commodity plastics, and high-performance materials.

Thanks to the HP Multi Jet Fusion Open Platform and a network of materials innovation partners, we will continue expanding the palette of materials offerings even further. Accelerated materials innovation via the HP Multi Jet Fusion Open Platform is key so that even applications not yet imagined will become possible.

Accelerating materials innovation

HP is bringing down the barriers of 3D printing adoption across industries through materials innovation.

Materials cost, quality, performance, and diversity are real pain points for 3D printing customers today. So HP is addressing this with HP's unique Open Platform approach based on:

- Expanding 3D printing materials to address a broader set of applications
- Driving down materials costs—resulting in a consistently lower cost-per-part[2]— so that 3D printing becomes a viable alternative to traditional production methods
- Driving performance improvements and new possibilities for part properties that address specific industry needs—thanks to unique combinations of materials and agents

For more information, please visit:
hp.com/go/3Dmaterials

Henkel

"The partnership between HP and Henkel is backed by strong market leadership, a legacy of innovation and an aligned commitment to additive manufacturing. With our broad material portfolio and customer base across diverse industries, Henkel is able to champion custom 3D solutions across various functional applications. This, combined with HP's vision for open materials innovation, enables us to develop materials and applications once thought impossible."

Michael Todd
Corporate Senior Vice President and Global Head of Innovation and New Business Development

Henkel Adhesive Technologies

Lehmann&Voss&Co.

"Lehmann&Voss&Co. believes HP's Open Materials platform is a great concept and that with this approach HP can fulfill market needs that have so far limited the 3D printing market expansion. This platform will drive 3D adoption and will provide an on-ramp to companies to drive materials innovation using HP Multi Jet Fusion technology. Lehmann&Voss&Co. plans to collaborate with HP and looks forward to introducing a new material on this platform."

Dr. Marcus Rechberger
Market Development LUVOSINT©

Lehmann&Voss&Co.

5 HP 3D printing software: maximum efficiency end-to-end

Discover a complete and easy-to-use 3D printing software solution

Best-in-class algorithms help you achieve superior, consistent part quality with dimensional accuracy and fine detail.[3] Embedded quality checks help minimize errors, automated packing increases the number of parts per build, and accurate build time estimations let you plan production more efficiently.

Job preparation and monitoring

HP SmartStream 3D Build Manager
The intuitive and powerful HP SmartStream 3D Build Manager helps you prepare your jobs for printing and contains the essential features you need to prepare and send to print, including:

- Import 3MF and STL files
- 3D model error detection and correction
- 3D autopacking
- Send to print

HP SmartStream 3D Build Manager

Intuitive, powerful software to prepare and send your parts to print.

HP SmartStream 3D Command Center
The HP SmartStream 3D Command Center allows you to fully monitor your HP Jet Fusion 3D printers from your desktop. Keep track of build status, check consumables, and get real-time alerts.

HP SmartStream 3D Command Center

Keep track of build status, check consumables, and get real-time alerts.

Integration with industry-leading software solutions

Autodesk® Netfabb® Engine for HP provides advanced software for the additive manufacturing of production-quality parts. Quality control functions prevent machine errors and enhance your overall process reliability and efficiency.

Connect with Materialise Magics with Materialise Build Processor for HP Multi Jet Fusion technology, the industry-standard software for professional 3D printing, to unlock the full potential of your HP 3D printer and manage every step in your production process.

The new Siemens NX AM for HP Multi Jet Fusion module will enable NX customers to combine design, optimization, simulation, preparation of print jobs, and inspection processes for HP Multi Jet Fusion 3D printed parts, all in a single managed environment and with a minimum of steps.

Founding member of 3MF Consortium

HP is a founding member of the 3MF Consortium—an industry consortium working to define a new 3D printing format that will allow design applications to send full-fidelity 3D models to a mix of other applications, platforms, services, and printers.

For more information, please visit:
hp.com/go/3Dsoftware

6 Boost your competitive advantage with HP Technical Services and Support

Rely on HP Technical Services and Support to stand behind your business, maximizing your uptime and productivity, and driving your business growth.

With exclusive HP installation, training, support services and market-leading applications expertise, you can optimize your 3D printer performance, throughput, part quality, and yield.

- Next-business-day onsite support[19]
- Next-business-day spare parts availability,[19] thanks to HP's global reach
- 3D printing productivity and professional services to accelerate your business growth

We help you do more as well as get more return on your investment. Not just from day one, but every day as your needs evolve. So you can grow your business with real peace of mind.

For more information, please visit:
hp.com/go/3Dsupport

7 Accelerate your move to HP 3D printing with HP Financial Services

HP can help make it easier for you to acquire an HP Jet Fusion 3D printing solution. Whether you are looking to ease into your transition, or prefer to have more flexibility to refresh to the latest technology, we can help you design the right financial solution that meets your business objectives best.

Choose an investment solution that helps you avoid making a large, up-front cash outlay and provides a monthly payment plan that aligns with both your technology and financial requirements.

- Make monthly payments on your new hardware over the chosen term, typically 3 to 5 years, with the flexibility to ease into your deployment through a payment deferral or step structure
- Bundle hardware and services into a simple and straightforward agreement that gives you more flexibility to refresh sooner
- Accelerate your migration by converting your existing owned technology to a monthly payment so you can free up cash to fund your investment in new HP 3D printing
- We can even design an asset recovery solution to help you securely navigate through the removal and recycling of your HP 3D printing equipment when you are done with it

You have the flexibility to add-on or expand as your business grows, and at the end of your chosen term, we make it simple for you to refresh and renew to the latest generation. You can cost effectively keep your business in a position to grow and improve with the most advanced HP technology.

For more information, please visit the Programs and Promotions section on
hp.com/go/hpfinancialservices

Financing and service offerings available through HP 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.

8 Technical specifications[20]

HP Jet Fusion 3D 4210/4200/3200 Printer

Printer performance	Technology	HP Multi Jet Fusion technology
	Effective building volume	380 x 284 x 380 mm (15 x 11.2 x 15 in)
	Building speed	**3200 Printer:** 2800 cm³/hr (170 in³/hr)[21] **4210/4200:** 4500 cm³/hr (274 in³/hr)[22]
	Layer thickness	**3200 Printer:** 0.08 mm (0.003 in) **4210/4200:** 0.07 to 0.08 mm (0.0027 to 0.0031 in)
	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[23]	Gigabit Ethernet (10/100/1000Base-T), supporting the following standards: TCP/IP, DHCP (IPv4 only), TLS/SSL	
Hard disk	2 TB (AES-128 encrypted, FIPS 140, disk wipe DoD 5220M)	
Software	Included software	HP SmartStream 3D Build Manager, HP SmartStream 3D Command Center
	Supported file formats	3mf, stl
	Certified third-party software	Autodesk® Netfabb® Engine for HP, Materialise Magics with Materialise Build Processor for HP Multi Jet Fusion, Siemens NX AM for HP Multi Jet Fusion
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, 50/60Hz
Certification	Safety	IEC 60950-1+A1+A2 compliant; United States and Canada (UL listed); EU (LVD and MD compliant, EN60950-1, EN12100-1, EN60204-1, and EN1010)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia (ACMA), New Zealand (RSM)
	Environmental	REACH
Warranty & Service coverage included	One-year limited hardware warranty	

HP Jet Fusion 4210/4200/3200 Processing Station with Fast Cooling[6]

Features	Automated mixing, sieving, and loading; semi-manual unpacking; fast cooling; external storage tank; compatible with high-capacity material cartridges	
Dimensions (w x d x h)	Processing Station with Fast Cooling[6]	3121 x 1571 x 2400 mm (122.9 x 61.9 x 94.5 in)
	Shipping	3499 x 1176 x 2180 mm (137.8 x 46.3 x 85.8 in)
	Operating area	3321 x 3071 x 2500 mm (130.7 x 120.9 x 99 in)
Weight	Processing Station with Fast Cooling[6]	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, 50/60Hz or 220 -240 V (line-to-neutral), 14 A max, 50Hz
Certification	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	REACH
Warranty & Service coverage included	One-year limited hardware warranty	

Eco Highlights

- Powders or agents are not classified as hazardous[7]
- Cleaner, more comfortable workplace—enclosed printing system, and automatic powder management[7]
- Minimizes waste due to industry-leading reusability of powder[8]
- Take-back program for printheads[24]

Find out more about HP sustainable solutions at hp.com/ecosolutions

For more information, please visit
hp.com/go/JetFusion3Dsolutions

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

1. Based on internal testing and simulation, HP Jet Fusion 3D average printing time is up to 10 times faster than average printing time of comparable fused deposition modeling (FDM) and selective laser sintering (SLS) printer solutions from $100,000 USD to $300,000 USD on market as of April, 2016. Testing variables for the HP Jet Fusion 4210/4200/3200 Printing Solutions: Part quantity: 1 full build chamber of parts from HP Jet Fusion 3D at 20% of packing density versus same number of parts on above-mentioned competitive devices; Part size: 30 grams; Layer thickness: 0.08 mm/0.003 inches.
2. Based on internal testing and public data, HP Jet Fusion 3D average printing cost per part is half the average cost of comparable FDM & SLS printer solutions from $100,000 USD to $300,000 USD on market as of April, 2016. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1 build chamber per day/5 days per week over 1 year of 30-gram parts at 10% packing density using HP 3D High Reusability PA 12 material, and the powder reusability ratio recommended by manufacturer. Based on internal testing and public data, HP Jet Fusion 3D 4210 Printing Solution average printing cost-per-part is 65% lower versus the average cost of comparable FDM and SLS printer solutions from $100,000 USD to $300,000 USD on market as of April, 2016 and is 50% lower versus the average cost of comparable SLS printer solutions for $300,000 USD to $450,000 USD. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1.4 full build chambers of parts per day/5 days per week over 1 year of 30-gram parts at 10% packing density on fast print mode using HP 3D High Reusability PA 12 material, and the powder reusability ratio recommended by manufacturer.
3. Based on dimensional accuracy of ±0.2 mm/0.008 inches, using HP 3D High Reusability PA 12 material, measured after sandblasting. See hp.com/go/3Dmaterials for more information on materials specifications.
4. Based on the following mechanical properties: Tensile strength at 48 MPa (XYZ), Modulus at 1700-1800 MPa (XYZ). ASTM standard tests with HP 3D High Reusability PA 12 material. See hp.com/go/3Dmaterials for more information on materials specifications.
5. Within allowable margin of error. Based on dimensional accuracy of ±0.2 mm/0.008 inches, using HP 3D High Reusability PA 12 material, measured after sandblasting. See hp.com/go/3Dmaterials for more information on materials specifications.
6. Fast Cooling enabled by HP Jet Fusion 3D Processing Station with Fast Cooling. HP Jet Fusion 3D Processing Station accelerates parts cooling time vs recommended manufacturer time of SLS printer solutions from $100,000 USD to $450,000 USD, as tested in April, 2016. FDM not applicable. Continuous printing requires an additional HP Jet Fusion 3D Build Unit (standard printer configuration includes one HP Jet Fusion 3D Build Unit).
7. 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. The HP powder and agents do not meet the criteria for classification as hazardous according to Regulation (EC) 1272/2008 as amended.
8. HP Jet Fusion 3D printing solutions using HP 3D High Reusability PA 12 and HP 3D High Reusability PA 11 provide 80% post-production surplus powder reusability, producing functional parts batch after batch. For testing, material is aged in real printing conditions and powder is tracked by generations (worst case for recyclability). Parts are then made from each generation and tested for mechanical properties and accuracy.
9. Liters refers to the materials container size and not the actual materials volume. Materials are measured in kilograms.
10. Based on using recommended packing densities, offers high reusability of surplus powder. Liters refers to the materials container size and not the actual materials volume. Materials are measured in kilograms.
11. Compared to SLS and FDM technologies, HP Multi Jet Fusion technology can reduce 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. Compared to SLS technology. Tested according to ASTM D638 and MFI test.
13. Based on HP internal testing, June 2017, HP 3D600 Fusing and Detailing Agents and HP 3D High Reusability PA 12 powder meet USP Class I-VI and US FDA's guidance for Intact Skin Surface Devices. Tested according to USP Class I-VI including irritation, acute systemic toxicity, and implantation; cytotoxicity per ISO 10993-5, Biological evaluation of medical devices–part 5: Tests for in vitro cytotoxicity; and sensitization per ISO 10993-10, Biological evaluation of medical devices–Part 10: Tests for irritation and skin sensitization. It is the responsibility of the customer to determine that its use of the fusing and detailing agents and powder is safe and technically suitable to the intended applications and consistent with the relevant regulatory requirements (including FDA requirements) applicable to the customer's final product. For more information, see hp.com/go/biocompatibilitycertificate/PA12.
14. Testing according to ASTM D638, ASTM D256, and ASTM D648 using HDT at different loads with a 3D scanner for dimensional stability. Testing monitored using statistical process controls.
15. HP Jet Fusion 3D printing solutions using HP 3D High Reusability PA 12 Glass Beads provide 70% post-production surplus powder reusability, producing functional parts batch after batch. For testing, material is aged in real printing conditions and powder is tracked by generations (worst case for recyclability). Parts are then made from each generation and tested for mechanical properties and accuracy.
16. Testing according to ASTM D638, ASTM D256, and ASTM D648 using HDT at different loads with a 3D scanner for dimensional stability. Testing monitored using statistical process controls.
17. HP 3D High Reusability PA 11 powder is made with 100% renewable carbon content derived from castor plants grown without GMOs in arid areas that do not compete with food crops. HP 3D 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, castor seeds) according to ASTM D6866.
18. Tested with diluted alkalies, concentrated alkalies, chlorine salts, alcohol, ester, ethers, ketones, aliphatic hydrocarbons, unleaded petrol, motor oil, aromatic hydrocarbons, toluene, and DOT 3 brake fluid.
19. Available in most countries, subject to Terms & Conditions of HP Limited Warranty and/or Service Agreement. Please consult your local sales representatives for further details.
20. For latest technical specifications, please visit hp.com/go/3Dprint.
21. Based on 0.08-mm (0.003-in) layer thickness and 10.9 sec/layer.
22. Based on 0.08-mm (0.003-in) layer thickness and 7.9 sec/layer.
23. 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.
24. Printing supplies eligible for recycling vary by printer. Visit hp.com/recycle to see how to participate and for HP Planet 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.

4AA6-4894EEP, November 2017

This is an HP Indigo digital print.