HP Industrial Filament (IF) 3D Printer 600 High Temperature (HT) Solution

Experience high-temperature, industrial-grade 3D printing with the flexibility of an open materials platform—enabled by HP AM's trusted quality and expertise.

Introducing the HP Industrial Filament 3D Printer Solution[1]

HP AM Solutions is expanding its additive manufacturing portfolio with a new HP Industrial Filament 3D Printer Solution[1] designed to unlock high-performance, production-grade applications across different industries (such as aerospace, oil and gas, medical, automotive, railway, and education).

This modular solution combines HP AM's trusted quality and industrial expertise with the flexibility of an open materials platform—bringing together the new HP IF 3D Printer 600 HT, the HP IF 3D Materials Management System[2], and a suite of exchangeable modules[2] that enable high-temperature and engineered polymer printing.

Supported by HP AM's global service network, this new solution gives manufacturers the freedom to innovate with HP 3D Filament Materials and select third-party materials—empowering them to use a wide range of polymers and scale into new applications while maintaining industrial-grade performance.

Printer	Accessories[2]	
HP IF 3D Printer 600 HT	HP IF 3D Printer Modules[2]	HP IF 3D Materials Management System[2]
Open Materials Platform | HP 3D Filament Materials		

Designed for Your Success

High-temperature modular design for multiple filament material possibilities

HP IF 3D Printer 500 Module

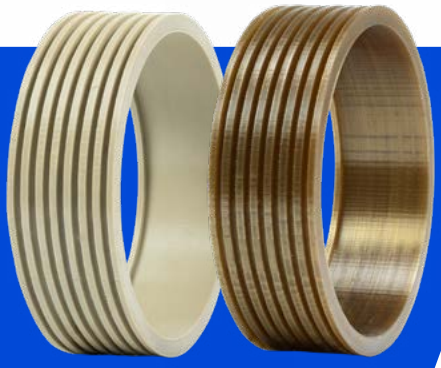
- Unlock consistent, high-quality results across a broad range of filament materials with an enclosed heated chamber (up to 195 °C) and intelligent thermal management that ensures optimal printing conditions throughout the process.
- Achieve up to 500 °C nozzle temperature[3] with the HP Industrial Filament (IF) 3D Printer 500 Module[2], designed for high-temperature printing of advanced polymers such as PEEK and PAEK, delivering exceptional mechanical strength and chemical and heat resistance for demanding industrial applications.
- Address multiple material needs with interchangeable 280 °C and 360 °C modules[2,3], designed for reliable printing of engineering-grade polymers—from ABS to PEI and PC—and compatible with carbon-filled materials across all modules.

HP IF 3D Printer 280 Module

HP IF 3D Printer 360 Module

- Achieve optimal quality and consistency with HP 3D Filament Materials[4]—cost-competitive and developed to ensure reliable performance when used with the HP Industrial Filament 3D Printer, the Material Management System[2], and the printer modules[2] as part of an integrated solution.
- Enhance flexibility with an open material platform[5] supporting third-party filament polymers. Access predefined generic profiles for common materials—or create and fine-tune your own—at no additional cost. The library of predefined material profiles is regularly updated so you can unlock new materials and explore new applications with ease.

Printed using PEEK-CF



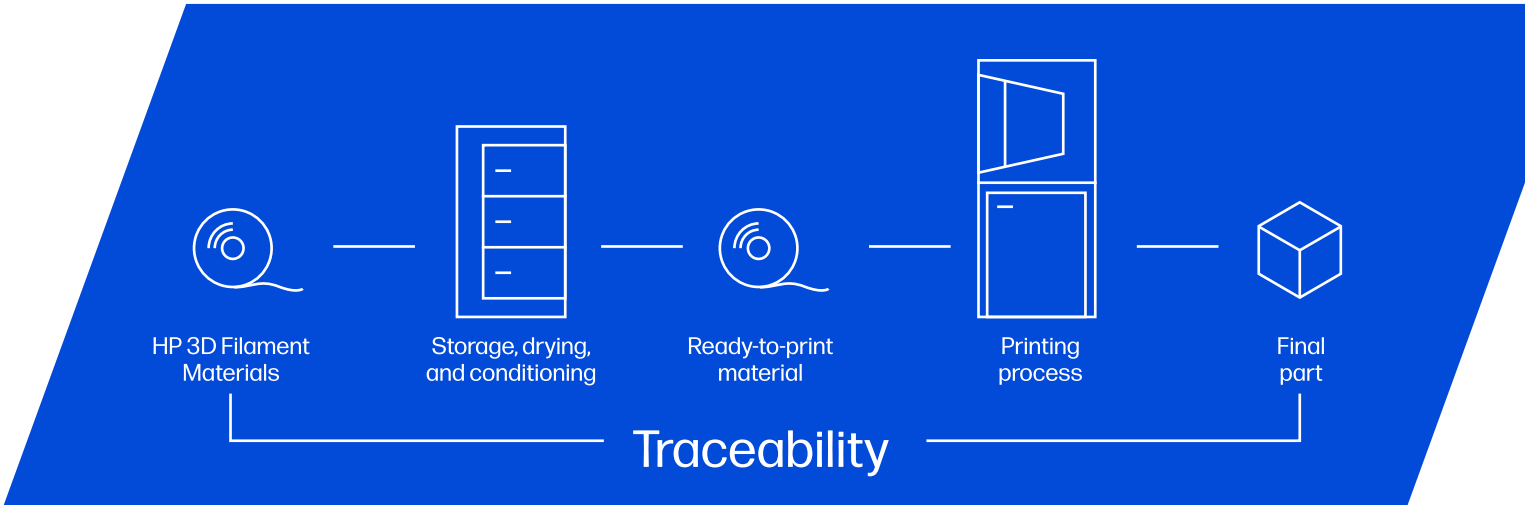
Printed using PEEK

Industrial-grade results with traceable and reliable production

- Designed for continuous, industrial-grade performance, the HP IF 3D Printer 600 HT delivers consistent quality and repeatability even under demanding, high-temperature operating conditions—ensuring reliable results print after print.[6]
- Maintain process stability and reliability with precise printer monitoring and automated diagnostics for predictable and repeatable outcomes.[7]

Printed using ULTEM®

- Ensure consistent quality and traceability with an enclosed, actively heated chamber that maintains stable thermal conditions for strong layer adhesion and dimensional accuracy (±0.125 mm or 0.0014 mm/mm—whichever is greater; Z axis additionally: +0/+1 layer height)[8]—even in long, multi-day prints. Each print is supported by a printing process report for traceability and validation.
- Achieve high-quality parts with accuracy and mechanical performance with the HP IF 3D Material Management System[2], which automates material drying and conditioning.
- Ensure material and process traceability with the HP IF 3D Material Management System[2]—featuring NFC-tagged spools, integrated registration, and automated logging for HP 3D Filament Materials providing process control from materials selection to final printed part.
- Enhance part strength, heat resistance, durability, and chemical resistance with the HP IF 3D Material Management System[2], which integrates post-annealing for high-performance PEEK and PAEK materials. Pre-programmed annealing cycles for HP 3D Filament Materials enable fast setup and consistent results in just a few steps.



Trusted HP AM's Quality and Industrial Expertise

- Gain a trusted partner for your 3D printing journey with HP IF 3D Expert Services—a dedicated team ready to support your specific material and application development, providing consistent part quality and guidance throughout your workflow.
- Provide safe, compliant, and connected operations with adherence to recognized international standards. The printer is UL 2011 (NRTL listed), while the Material Management System (MMS) complies with UL 61010-1 and UL 61010-2-010. The solution also meets CE marking requirements and incorporates cybersecurity measures for connected environments.
- Support a clean and controlled printing environment with an integrated triple-stage filtration system—pre-dust, HEPA H13,[9] and activated carbon—designed to manage particulate levels (PM10/PM2.5) and reduce VOC emissions.
- Maximize uptime and minimize disruptions through HP IF 3D Services, offering predictive and preventive maintenance, rapid response, and multi-level support.

HP IF 3D Printer 600 HT specifications

PRINTING	Print technology:	Fused Filament Fabrication (FFF)
	Build volume:[10]	380 × 380 × 420 mm (60,480 cm^3) 15 x 15 x 16,5 in
	Min. layer height:	50 µm
	Number of printheads:	2; purging system
	Nozzle diameter:	0.5/0.5 mm or 0.4/0.4 mm
	Filament diameter:	1.75 mm
	Printhead temperature (max.):	500°C
	Buildplate temperature (max.):	190°C
	Chamber temperature (max.):	195°C (active heating)
	Filament chamber temperature (max.):	50°C
	Achievable part accuracy:	Parts are printed with an accuracy of 0.125 mm or 0.0014 mm/mm whichever is greater. Accuracy in Z-axis includes an additional tolerance of 0.000/+ layer height
SPEED	Travel move:	1 m/s
	Printing speed:	0.4 m/s
DIMENSIONS AND MASS	External dimensions (WxDxH):	915 x 980 x 2020 mm
	Mass:	365 kg
CONSTRUCTION	Chassis:	Steel
	External:	Steel and vacuformed ABS, chamber lined with satin stainless steel
	Build surface:	Borosilicate glass and vacuum sealed PEI sheet
ENVIRONMENT	Operating temperature:	18 to 30 °C
	Operating humidity:	30 to 60% without condensation
	Storage temperature:	–25 to +55°C
POWER	Electrical ratings:	230–240 V~ (±10%), 50/60 Hz, 20 A (max), 4.6 kW (max), 1.5 kW (average), SCCR 5 kA
	Mains connection:	EC 60309 power inlet, 32 A, 2P+PE. Matching IEC 60309 plug included. Detachable power supply cord not provided.
	Communication:	Ethernet
COMPRESSED AIR	Pressure:	Maximum 6 bar
	Line diameter:	8 mm
	Airflow:	Minimum 50 l/min
SOFTWARE	Slicing software:	3DGence SLICER 4.0
	Cloud based services:	3DGence CONNECT
HP 3D FILAMENT MATERIALS	ULTEM™ 9085 (by SABIC), PEEK, Victrex AM200, PEEK-CF, ABS, PC, PA-CF	
OPEN MATERIALS (EXAMPLES)*	PEI, PEEK, PEEK-CF, PEAK, ABS, PC, PA-CF, and others	
SUPPORTING MATERIALS	HIPS, HPSM-10, HPSM-30	
SAFETY	Advanced Filtration Unit:	High-efficiency three-stage filtration: Pre-filter (G4), HEPA H13 particle filter, and activated carbon
PRODUCT CERTIFICATIONS	CE and NRTL (UL2011) listed	
WHAT IS INCLUDED?	HP Industrial Filament 3D Printer 600 High Temperature (HT)	
	One HP IF 3D Printing Module (M280, M360, or M500), selected based on application requirements.	
	Set of accessories	
	Signal tower	
	Emergency stop circuit	
	Air Treatment Unit (ATU)	
	Advanced filtration unit	
PRINTER MODULES	HP Industrial Filament 3D Printer 280 Module with dual-extruder	
	HP Industrial Filament 3D Printer 360 Module with dual-extruder	
	HP Industrial Filament 3D Printer 500 Module with dual-extruder	

HP IF 3D Material Management System[1] specifications

DIMENSIONS	Dryer dimensions (WxDxH):	3 chambers: 850 × 630 × 1740 mm
	Max. dimensions with open door [WxDxH]:	3 chambers: 850 × 1090 × 1740 mm
ENVIRONMENT	Operating temperature:	+10 to +30°C relative humidity from 30% to 60% w/o condensation
	Operating humidity:	30%–60% RH (non-condensing)
	Storage temperature:	–25 to +55°C relative humidity 10% to 85% w/o condensation
POWER	Electrical ratings:	230–240 V~ (±10%), 50/60 Hz, 16 A (max), 3.6 kW (max)
	Mains connection:	IEC 60309 power inlet, 32 A, 2P+PE. Matching IEC 60309 plug included. Detachable power supply cord not provided.
TEMPERATURES	Operating temperature range:	50°C - 200°C
CONNECTION	Communication:	Ethernet
DRYING	Operating technology:	Dry air [actively dried]
	Drying chamber space [WxDxH]:	470 × 260 × 320 mm
	Drying chamber volume:	39,1 l
	Number of material slots in one chamber:	4
	Number of chambers in the dryer:	3
	Maximum filament spool diameter:	220 mm
	Maximum thickness of the spool:	90 mm
	Material tracking system:	Smart Material Manager
	Third-party materials:	Yes, in the CUSTOM option
	Drying process settings:	Predefined / Edition in the CUSTOM option
	Recrystallization process settings:	Predefined
SOFTWARE	Device monitoring and archiving:	Locally and 3DGence CONNECT
	Software updates:	Automatic, via USB and Internet
CONSTRUCTION	Electronics:	3DGence
	NFC TAG Reader:	Yes, on the front of the device
	Display:	10" TFT capacitive display with 1280 x 768 px resolution
PRODUCT CERTIFICATIONS	CE and NRTL listed	
ACCESSORIES	Print recrystalization kit	
	Drying agent cartridges (one for each drying chamber)	
	Drawers for storing materials in the drying chamber (one for each drying chamber)	

HP IF 3D Printer Modules[1] specifications

	HP IF 3D Printer 280 Module	HP IF 3D Printer 360 Module	HP IF 3D Printer 500 Module
Temperature	Up to 280°C	Up to 360°C	Up to 500°C
Nozzle diameter	0,5 mm/0,5mm	0,4 mm/0,4mm	0,4 mm/0,4mm
HP 3D Filament Materials	ABS, PA-CF	ULTEM™ 9085 (by SABIC), PC	PEEK, PEEK-CF, Victrex AM200
Open Materials (Examples)*	ABS, PA-CF, ASA, PET	PEI, PC	PAEK, PEEK, PEEK-CF, PEKK-A
Support material	HPSM-10, HIPS	HPSM-10, HPSM-30	HPSM-10, HPSM-30

*These are examples; not limited to this list.

Ordering information

Product number	Product
D09MVA	HP Industrial Filament 3D Printer 600 High Temperature
D09MWA	HP Industrial Filament 3D Material Management System[1]
D09MXA	HP Industrial Filament 3D Printer 280 Module[1]
D09MYA	HP Industrial Filament 3D Printer 360 Module[1]
D09MZA	HP Industrial Filament 3D Printer 500 Module[1]

1. Selected availability in the EMEA region starting in early 2026. EU countries (27) : Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden. EFTA countries (4): Iceland, Liechtenstein, Norway, and Switzerland. Also UK and Turkey. Selected Availability in the AMS region in the first half of 2026: United States and Canada.
2. HP IF 3D Printer Modules and the HP Industrial Filament 3D Material Management System are optional accessories sold separately.
3. The stated nozzle temperature capability (280 °C / 360 °C / 500 °C) is based on the maximum operating temperature specifications of each respective interchangeable print module (M280, M360, and M500). Actual printing temperatures are selected by the user based on material requirements.
4. HP Certified materials are engineered and tested in combination with the HP Industrial Filament 3D Printer, the Material Management System, and printer modules to ensure consistent, high-quality results. This integrated approach enables optimized process parameters, stable material behavior, and predictable part performance across applications.
   While HP cannot guarantee the same level of reliability or print quality with non-HP 3D Filament Materials, the open platform supports third-party polymers through predefined generic profiles that are compatible with the system and available at no additional cost—providing users with flexibility without the need to create profiles from scratch.
5. Open material: The use of non-HP materials that do not incorporate an SMM NFC tag, or the use of incorrect or non-recommended process parameters, may result in degraded performance, system malfunction, and potential damage to the equipment. HP does not guarantee compatibility with non-HP materials and assumes no responsibility or liability for any issues, damages, or losses arising from the use of non-HP materials or from operation outside the recommended material profiles and process conditions.
6. The HP Industrial Filament 3D Printer's repeatable performance is achieved through its rigid mechanical architecture, precise motion system, and intelligent thermal control, which maintain stable printing conditions and dimensional accuracy over successive production cycles.
7. Based on built-in printer capabilities, including real-time system monitoring, sensor-based feedback loops, and automated diagnostics designed to maintain controlled process conditions and identify potential errors before or during printing. These features support reliable operation and help enable predictable, repeatable outcomes when using recommended settings and materials. Actual results may vary based on material selection, part geometry, and print parameter configuration.
8. This specification reflects the maximum part accuracy under nominal conditions. The figure of '±0.125 mm or 0.0014 mm/mm, whichever is greater' applies to the X/Y dimensions and includes an additional tolerance ('+0/+layer height') in the Z-axis. Actual part tolerances may vary based on the chosen material, part geometry, ambient conditions, print settings and calibration procedures.
9. Filtration components selected based on HEPA H13 standards and activated carbon adsorption properties. Performance varies by material type, maintenance, ventilation, and operational conditions. The customer takes full responsibility for assessing the relevant product Safety Data Sheets, evaluating the potential for operator exposure, and implementing appropriate ventilation, or other industrial hygiene measures, to meet local environmental, health and safety requirements.
10. Maximum printable volume may vary depending on the material used and other parameters applied to optimize final print quality.

If you would like to learn more about the HP IF 3D Printer Solution 600 HT Solution or to connect with us, please visit:
https://www.hp.com/filament3dprinter600HT

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