

INTAMSYS

Industrial 3D Printers

High Performance Production Solutions

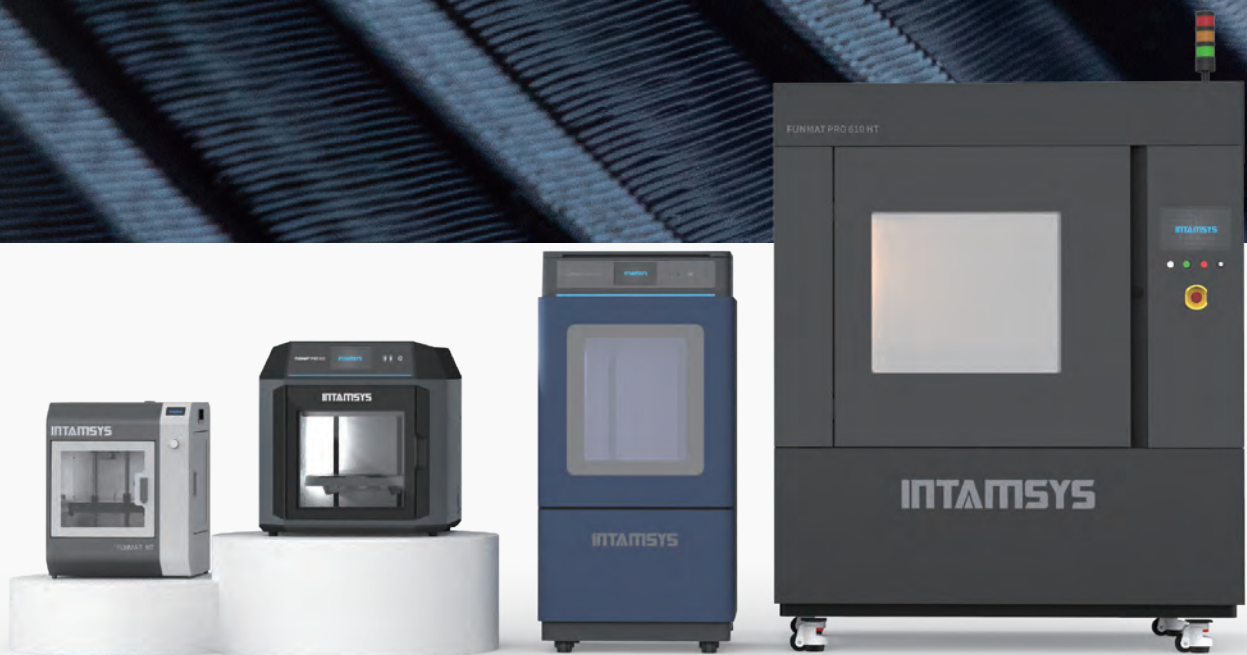




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About INTAMSYS

INTAMSYS is a world-leading additive manufacturing company, providing industrial 3D printers, software, high-performance materials and printing services. It was co-founded by a team of engineers from high-tech companies which were engaged in precision equipment development and high-performance materials research for many years.

INTAMSYS offers comprehensive additive manufacturing solutions including rapid prototyping, functional test prototyping, tooling, jigs and fixtures, end-use parts, and small batch production parts. These solutions are sought out on a widespread basis and provided to a variety of industries such as aerospace, automotive, electronics, manufacturing, consumer goods, healthcare, research and more.



COMPANY HISTORY

2016

INTAMSYS was founded and completed the angel round joint investment of Professor Li Zexiang, an early investor and chairman of DJI, and Professor Gao Bingqiang, an early investor of DJI and a well-known semiconductor scientist

Launched its first PEEK 3D Printer, the FUNMAT HT. Became one of the first manufacturers in the world to launch 3D printing solutions for PEEK materials, and continued to maintain its leading position in the industry

2018

Obtained the Pre A round of financing led by Clear Water Bay Capital, followed by Professor Gao Bingqiang and Brizan

Released the FUNMAT PRO 410 industrial 3D printer, providing complete 3D printing solutions for high-performance materials and composites, engineering materials, expand products to a wider range of industrial applications

2019

Established a subsidiary in Germany and opened a European Sales & Technical center to provide localized services

Launched the FUNMAT PRO 610HT large scale industrial 3D printer to enter the high-end manufacturing and production market

2021

Completed the A round of financing led by Sequoia Capital, and obtained the joint A+ round of financing from Porsche Ventures and Forebright Capital

Established a subsidiary in the United States and opened a Sales & Technical Center in the Americas to provide localized services

2022

Launched the FUNMAT PRO 310, providing real engineering material printing and bringing industrial performance to the desktop 3D printing

2023

Completed the B round of financing led by CMB International, followed by Forebright Capital and Porsche Ventures

Released a new generation of slicing software INTAMSUITE, providing an unparalleled industrial software experience

Released INTAMSYS HUB, a cloud printing platform management software

Self-Developed FFF (Fused Filament Fabrication) Core Technology

01

Advanced thermal design to support high performance, composite and engineering material printing

- Multi-point temperature gradient optimization in the chamber
- High temperature, high speed extrusion nozzle
- Liquid Cooling System on the printheads and motion motors

02

High-speed, high-precision drive and control technology, making large-size modeling more precise

- Closed-loop servo motor drive system
- High precision screw guide drive system
- Overall high stability with structure

03

Intelligent monitoring and closed-loop control technology to support continuous material process improvement

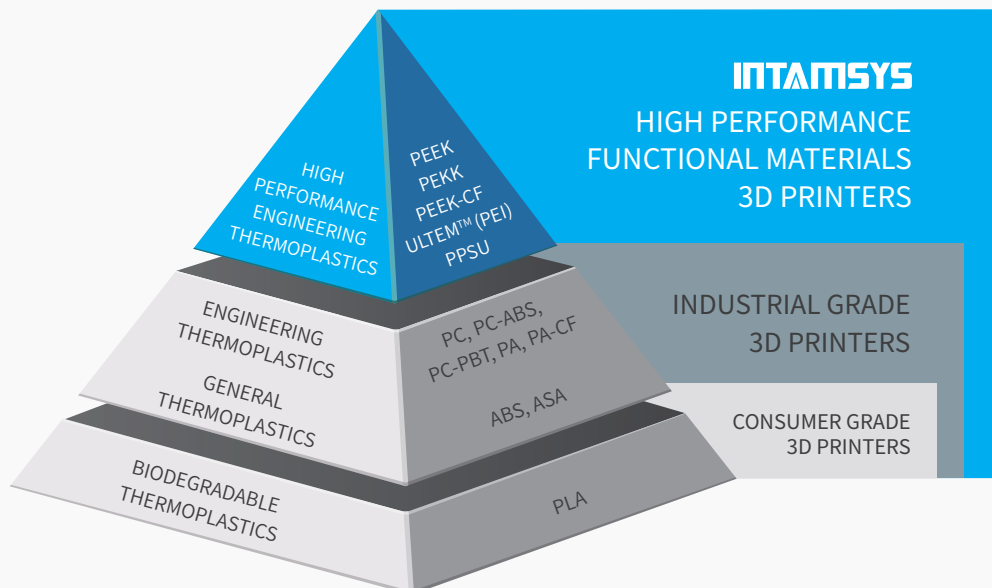
- High precision sensors
- In-line feed quality monitoring system
- Accurate control of print process rheology

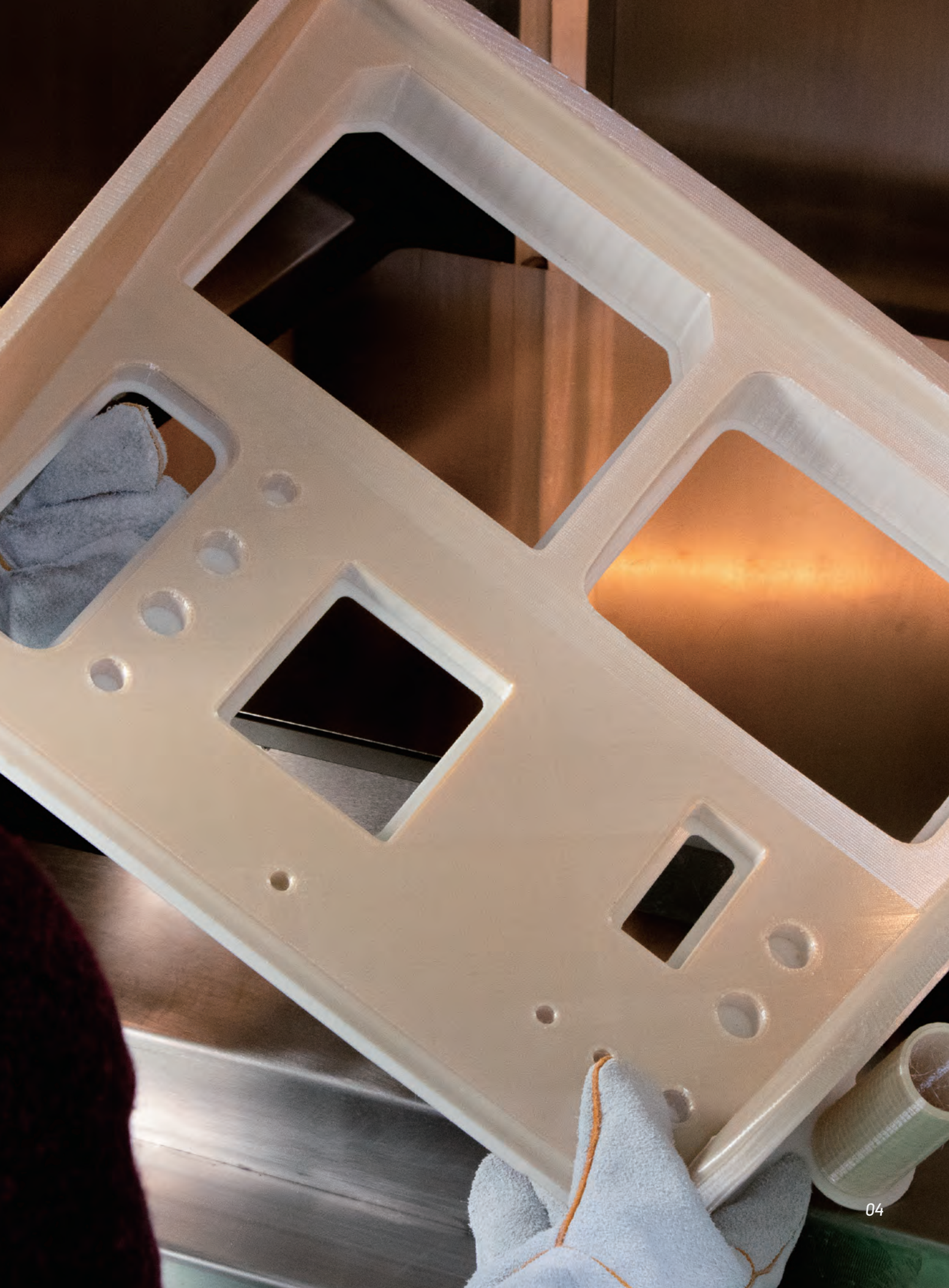
04

Full-process slicing software providing an integrated collaboration platform for additive manufacturing

- Intelligent path optimization technology that balances performance and structure
- Simulation technology based on big data analysis
- Geometric algorithms and finite element analysis techniques

High-performance 3D printing solutions





FUNMAT PRO 610HT

Large Scale · High Temperature · Industrial Production



Printing Capability

Ideal for printing High Performance Polymers like PEI, PEEK, PEEK-CF, PEEK-GF, PEKK, PPSU and many others.



Large Scale Production

Filament auto-reloading function and a build volume of 610 x 508 x 508 mm.



Advanced Thermal Design

Uniform 300 °C (572 °F) heated chamber, avoid warping and cracking.



High Precision & High Quality

Advanced servo control system with high precision screw guide.

INTAMSYS has paved the way with their breakthrough FUNMAT PRO 610HT. Equipped to effectively handle the tough requirements needed to print with high-performance thermoplastics, this machine unlocks industrial-grade, high-quality additive manufacturing capabilities. The FUNMAT PRO 610HT is capable of handling almost every high-performance thermoplastic material available on the market. It comes with a dual extruder that can reach 500 °C and a heated chamber of 300 °C for premium repeatability with your part designs. This is INTAMSYS' biggest printer yet, this is a larger solution, boasting a build volume of 610 x 508 x 508 mm. The FUNMAT PRO 610HT has found its home in many settings including automotive, aerospace, oil & gas, and more.



Technical Parameters

Printing

| | | | |
|--------------------------|---|----------------------------|--|
| Technology | FFF (Fused Filament Fabrication) | Materials* | PEI (ULTEM™) 9085, PEI (ULTEM™) 1010, PEEK, PEEK-CF, PEEK-GF, PEKK, PAEK, PPSU, PPS, PC, PC-ABS, PA6/66, PA6-CF, PA12, PA12-CF, ABS+, ABS, ASA, etc. |
| Build Volume | 610 x 508 x 508 mm (24 x 20 x 20 in) | Nozzle Temperature | Max. 500 °C (932 °F) |
| Layer Thickness | 0.1-0.5 mm | Chamber Temperature | Max. 300 °C (572 °F) |
| Number of Nozzles | 2 | Filament Chamber | Max. 50 °C (122 °F) |
| Number of Spools | 4 (Max 3 Kg/pc) | Functions | Auto-cleaning Nozzles, Filament Auto-reloading, Filament Jam Warning, Filament Absence Warning, Remote Control, Remote Printing |
| Filament Diameter | 1.75 mm | | |
| Print Speed | Max. 160 mm/s | | |
| Nozzle Diameter | Default: 0.4 mm (Optional: 0.6/0.8 mm) | | |
| Leveling | Auto Leveling | | |

Machine

| | | | |
|----------------------|--|-------------------------|---|
| Voltage | 3P 380 V 30 A/phase, 50 ~ 60Hz or 3P 200 V 50 A/phase, 50 ~ 60Hz | Filament Chamber | 4 Independent Sealed Chambers, With Active Heating And Dry Compressed Air (External Air Compressor Is Required), Keep Filament Dry During Printing, Auto Filament Feeding |
| Max. Power | 15 kW | Travel Speed | Max. XY 400 mm/s, Max. Z 50 mm/s |
| Connectivity | WiFi, Ethernet, USB | Resolution | XY : 12.5 μm; Z: 1.25 μm |
| Screen | 10" Touch Screen | Printer Size | With Warning Lights: 1710 x 1390 x 2250 mm (67.3 x 54.7 x 88.6 in) |
| Build Plate | Flexible Buildplates with Vacuum Adsorption System | Printer Weight | 1450 Kg (3086 lb) |
| Build Chamber | Fully Enclosed Printing Chamber | | |
| Motor System | Servo Control System With High Precision Ball Screw | | |
| Cooling | Liquid Cooling System & Fan | | |

Safety

| | |
|-------------------------|--|
| Safety Design | Independent Safety PLC, Electromagnetic Safety Door Lock, Over-temperature Protection, Overload Protection, Emergency Stop Button, Double-layer Thickened Heat-insulated Front Door, Heat-resistant Shield, Three-color Warning Light. |
| Safety Standards | EN60204 |
| Certification | CE, FCC, SGS |

Slicing

| | |
|-----------------------------|--------------------------------|
| Slicing Software | INTAMSUITE™ |
| Supported File Types | .stl/.obj/.x3d/.3mf/.stp/.iges |
| Operating System | Windows |

Operating Environment

| | |
|----------------------------|-----------------------------------|
| Working Temperature | 15 °C ~ 30 °C (59 °F ~ 86 °F) |
| Working Humidity | 30 ~ 70 % |
| Storage Temperature | -10 °C ~ 54 °C (14 °F ~ 129.2 °F) |
| Storage Humidity | 10 ~ 85 % |

*Printing materials are not limited to this table, recommended printing materials are fully validated on the printer.

FUNMAT PRO 410

High Performance and Fiber Composite 3D Printer



Smart Design

Dual nozzle, auto-leveling, auto-feeding, jam warning, remote monitoring.



Advanced Thermal Design

90 °C (194 °F) heated chamber and 500 °C (932 °F) nozzle, uniform chamber with liquid cooling system.



Multi-material Printing Capability

High Performance: PEEK, PEKK, PPS
Fiber Composite: PA-CF, PEEK-CF
Engineering: ABS, PC.



Dry Filament Chamber

Overall sealing design, built-in molecular sieve, can keep filament dry for over 30 days.

The FUNMAT PRO 410 is an industrial-grade FFF (Fused Filament Fabrication) 3D printer system characterized by its high-performance capabilities. Combining a respectable build volume with excellent print quality, the system is a great choice for professional and industrial users looking to 3D print high-performance parts with engineering-grade materials.



Technical Parameters

Printing

| | | | |
|--------------------------|--|--------------------------------|--|
| Technology | FFF (Fused Filament Fabrication) | Nozzle Temperature | Max. 500 °C (932 °F) |
| Build Volume | 305 x 305 x 406 mm (12 x 12 x 16 in) | Build Plate Temperature | Max. 160 °C (320 °F) |
| Layer Thickness | 0.1-0.5 mm | Chamber Temperature | Max. 90 °C (194 °F) |
| Number of Nozzles | 2 | Materials* | PEEK, PEEK-CF, PEEK-GF, PEKK, PPS, PC, PC-ABS, PA6/66, PA6-CF, PA12, PA12-CF, ABS, ASA, HIPS, PVA, Carbon Fiber-filled, Glass Fiber-filled, etc. |
| Number of Spools | 2 (Max 3 Kg/pc) | Functions | Auto-cleaning Nozzles, Filament Jam Warning, Filament Absence Warning, Remote Control, Remote Printing |
| Filament Diameter | 1.75 mm | | |
| Print Speed | Max. 120 mm/s | | |
| Nozzle Diameter | Default: 0.4 mm (Optional: 0.25/0.6 mm) | | |
| Leveling | Auto Leveling, Manual Leveling | | |

Machine

| | | | |
|----------------------|--|-------------------------|--|
| Voltage | 200-240 V, 15 A, 50/60Hz | Filament Chamber | Overall Sealed Design, Built-in Reusable Molecular Sieve To Keep Dry, Temp. And Humidity Real-time Monitoring, Auto Filament Feeding |
| Max. Power | 3 kW | Travel Speed | Max. XY 300 mm/s, Max. Z 50 mm/s |
| Connectivity | WiFi, Ethernet, USB | Resolution | XY: 15.6 µm; Z: 1.56 µm |
| Screen | 7" Touch Screen | Printer Size | 728 x 684 x 1480 mm (35.0 x 34.6 x 66.5 in) |
| Build Plate | Ceramics Glass Plate with Magnetic Fixations | Printer Weight | 230 Kg (507 lb) |
| Build Chamber | Fully Enclosed Printing Chamber | | |
| Motor System | High-precision Closed-loop Drive | | |
| Cooling | Liquid Cooling System & Fan | | |

Safety

| | |
|-------------------------|--|
| Safety Design | Electromagnetic Safety Door Lock, Over Temperature Protection, Overload Protection, Leakage Protection, Warning Labels |
| Safety Standards | EN60204 |
| Certification | CE, FCC, SGS |

Slicing

| | |
|-----------------------------|--------------------------------|
| Slicing Software | INTAMSUITE™ |
| Supported File Types | .stl/.obj/.x3d/.3mf/.stp/.iges |
| Operating System | Windows |

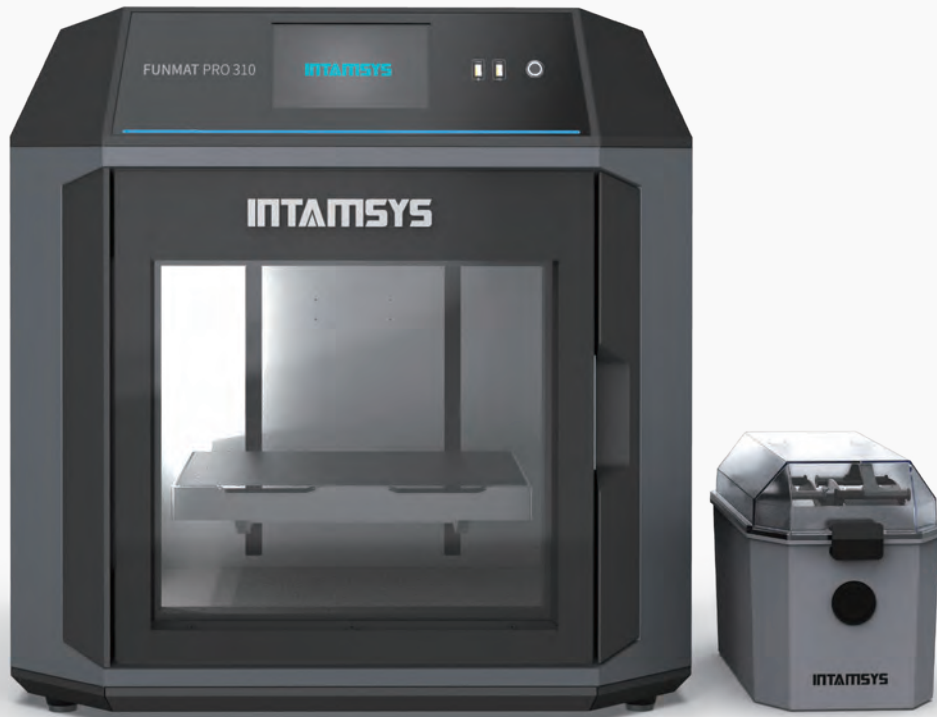
Operating Environment

| | |
|----------------------------|-------------------------------|
| Working Temperature | 15 °C ~ 30 °C (59 °F ~ 86 °F) |
| Working Humidity | 30 ~ 70 % |
| Storage Temperature | 0 °C ~ 35 °C (32 °F ~ 95 °F) |
| Storage Humidity | 20 ~ 90 % |

*Printing materials are not limited to this table, recommended printing materials are fully validated on the printer.

FUNMAT PRO 310

Bring Industrial Performance to your Desktop



Industrial Performance

Thermostatic chamber and full-size printing capability.



IDEX

More possibilities with multi material printing and twice as fast with synchronized and mirror modes.



Independent Filament Box

Keep material continuously dry for high-quality prints.



Unparalleled User Experience

Intelligent design and whole-process control.

The FUNMAT PRO 310 responds to the growing demands of professional engineers with a thermostatic chamber and full-size printing capability on a desktop machine. The thermostatic chamber can reach up to 100 °C (212 °F) to print engineering plastics with a build volume of 305 x 260 x 260 mm. Plug & play and easy-to-remove modular IDEX design provides multiple printing modes.

With whole-process control, the FUNMAT PRO 310 offers engineering material capabilities such as ASA, ABS, PC, PC-ABS, PA and PA-CF with INTAMSYS user-friendly 3D model-slicing software, INTAMSUITE™.



Technical Parameters

Printing

| | | | |
|--------------------------|--|--------------------------------|---|
| Technology | FFF (Fused Filament Fabrication) | Nozzle Diameter | Default: 0.4 mm (Optional: 0.25/0.6 mm) |
| Build Volume | Single Nozzle: 305 x 260 x 260 mm (12 x 10.2 x 10.2 in) ; Dual Nozzle: 260 x 260 x 260 mm (10.2 x 10.2 x 10.2 in) | Leveling | Mesh Leveling (Max. 100 Points) |
| Layer Thickness | 0.1-0.3 mm | Nozzle Temperature | Max. 300 °C (572 °F) |
| Number of Nozzles | 2 (IDEX) | Chamber Temperature | Max. 100 °C (212 °F) |
| Filament Diameter | 1.75 mm | Build Plate Temperature | Max. 160 °C (320 °F) |
| Print Speed | Max. 120 mm/s | Materials* | PC, PC-ABS, PA6/66, PA6-CF, PA12-CF, ABS, ABS+, SP3030, ASA, PLA, HIPS, PVA, ESD-safe, etc. |
| | | Functions | Filament Runout Warning, Remote Control, Remote Printing |

Machine

| | | | |
|-------------------------|--|---------------------------|--|
| Voltage | 100 – 132 V/15 A or 200 – 240 V/7 A. 50/60 Hz | Travel Speed | Max. XY 500 mm/s |
| Max. Power | 1500 W | Nozzle Maintenance | Quick Release Design, Easy Installation And Disassembly |
| Connectivity | WiFi, Ethernet, USB | Filament Box | Overall Sealed Box, Built-in Reusable Molecular Sieve To Keep Dry, Temp. And Humidity Real-time Monitoring, Standalone |
| Screen | 7" Touch Screen | Resolution | XY: 16 µm Z: 1.25 µm |
| Build Plate | Magnetic Flexible Buildplate | Filtering System | HEPA + Activated Carbon, replaceable |
| Build Chamber | Fully Enclosed Printing Chamber | Printer Size | 700 x 655 x 700 mm (27.6 x 25.8 x 27.6 in) |
| Cooling | Fan | | |
| Number of Spools | 2 (Max. 1 Kg/pc) | | |

Safety

| | |
|-------------------------|--|
| Safety Design | Safety Door Lock, Over Temperature Protection, Overload Protection, Warning Labels |
| Safety Standards | EN60204 |
| Certification | CE, FCC, SGS |

Slicing

| | |
|-----------------------------|--------------------------------|
| Slicing Software | INTAMSUITE™ |
| Supported File Types | .stl/.obj/.x3d/.3mf/.stp/.iges |
| Operating System | Windows |

Operating Environment

| | |
|----------------------------|----------------------------|
| Working Temperature | 15 °C ~ 30 °C (59 ~ 86 °F) |
| Working Humidity | 30 ~ 70 % |
| Storage Temperature | 0 °C ~ 35 °C (32 ~ 95 °F) |
| Storage Humidity | 20 ~ 90 % |

*Printing materials are not limited to this table, recommended printing materials are fully validated on the printer.

INTAM™ Box

Keep Your Materials Dried Longer



Independent and sealed



Molecular sieve desiccant



Anti-tangle design



Temp. and humidity monitoring

Technical Parameters

| | |
|---------------------------|---|
| Number of filament spools | 2 x 1 Kg |
| Spool size | Diameter 200 ± 4 mm, width 40 - 70 mm |
| Drying time | $\leq 10\%$ RH for 20 days |
| Environment temperature | -10 °C ~ 60 °C (14 °F ~ 140 °F) |
| Desiccant | 4A molecular sieve, 900 g |
| Regeneration of desiccant | Dry at 200 °C (392 °F) for 2 hours |
| Product size | 315 x 205 x 257 mm (12.4 x 8.1 x 10.1 in) |
| Product weight | 2.45 Kg (5.4lb) |



Reusable Drying Unit

INTAM™ Cabinet

Meeting the Needs of Engineers for Convenient Work



Measurement

735 x 668 x 648 mm
28.9 x 26.3 x 25.5 in



Wheels for
easy movement



Folding
side table



Accessories
drawer



Filaments storage
drawer

Accessories Drawer Overview

- 1 High temperature resistance glove x 1
- 2 Copper brush x 1
- 3 Allen key with handle x 4
- 4 Allen key set x 1
- 5 Spatula x 1
- 6 Needle-nose plier x 1
- 7 Cutting plier x 1
- 8 PVP glue x 2 (additional purchase required)
- 9 Flash drive x 1
- 10 Leveling card x 1
- 11 Printhead x 1 (additional purchase required)
- 12 Nozzle x 6 (additional purchase required)
- 13 Tweezer x 1



The INTAM™ Cabinet is a customized accessory for the FUNMAT PRO 310

FUNMAT HT

Desktop High-performance 3D Printer



Multi-material printing capability

Can print high-performance materials such as PEEK, PEEK-CF, PEEK-GF, PEKK and other materials such as PA-CF, PA, PC, ABS.



Maximized build volume ratio

Build volume can be up to 260 x 260 x 260 mm.



Advanced Thermal Design

90 °C (194 °F) heated chamber, 160 °C (320 °F) build plate and 450 °C (842 °F) nozzle.



Intelligent Design

Auto-leveling, filament runout warning, remote video monitoring.

The advanced design of the FUNMAT HT makes it easy to adapt to lab and workshop environments. It offers a print size up to 260 x 260 x 260 mm with excellent part performance. With the FUNMAT HT you can print common engineering filaments as well as high-performance filaments such as PEEK, PEEK-CF, PEEK-GF, PEKK, and third-party materials.



Technical Parameters

Printing

| | | | |
|--------------------------|--|--------------------------------|--|
| Technology | FFF (Fused Filament Fabrication) | Leveling | Auto Leveling, Manual Leveling |
| Build Volume | 260 x 260 x 260 mm (10.2 x 10.2 x 10.2 in) | Materials* | PEEK, PEEK-CF, PEEK-GF, PEKK, PPS, PC, PC-ABS, PA6/66, PA6-CF, PA12, PA12-CF, ABS, ASA, HIPS, PVA, Carbon Fiber-Filled, Glass Fiber-Filled, ESD-safe, etc. |
| Layer Thickness | 0.1-0.5 mm | | |
| Number of Nozzles | 1 | | |
| Number of Spools | 1 (Max 1 Kg/pc) | | |
| Filament Diameter | 1.75 mm | Nozzle Temperature | Max. 450 °C (842 °F) |
| Print Speed | Max. 120 mm/s | Build Plate Temperature | Max. 160 °C (320 °F) |
| Nozzle Diameter | Default: 0.4 mm (Optional: 0.25/0.6/0.8 mm) | Chamber Temperature | Max. 90 °C (194 °F) |
| | | Functions | Filament Runout Warning, Remote Monitor |

Machine

| | | | |
|---------------------|--|-----------------------|--|
| Voltage | 100 ~ 132 V/15 A or 200 ~ 240 V/7 A. 50/60 Hz | Build Chamber | Fully Enclosed Printing Chamber |
| Max. Power | 1200 W | Motor System | High Performance Standalone Driver |
| Connectivity | SD Card | Cooling | Fan |
| Screen | 3.2" Touch Screen | Travel Speed | Max. XY 200 mm/s |
| Build Plate | Ceramic Glass Plate, with Magnetic Fixations | Resolution | XY: 15.6 µm; Z: 1.56 µm |
| | | Printer Size | 542 x 501 x 645 mm (21.3 x 19.7 x 25.4 in) |
| | | Printer Weight | 63 Kg (139 lb) |

Safety

| | |
|-------------------------|---|
| Safety Design | Overload Protection, Closed Chamber, Warning Labels |
| Safety Standards | EN60204 |
| Certification | CE, FCC, SGS |

Slicing

| | |
|-----------------------------|--------------------------------|
| Slicing Software | INTAMSUITE™ |
| Supported File Types | .stl/.obj/.x3d/.3mf/.stp/.iges |
| Operating System | Windows |

Operating Environment

| | |
|----------------------------|------------------------------|
| Working Temperature | 15 °C ~ 32 °C (59 ~ 89.6 °F) |
| Working Humidity | 30 ~ 70 % |
| Storage Temperature | 0 °C ~ 54 °C (32 ~ 129.2 °F) |
| Storage Humidity | 10 ~ 85 % |

*Printing materials are not limited to this table, recommended printing materials are fully validated on the printer.

3D Printing Material Solutions

Innovative | Professional | High Quality

INTAMSYS, a global leader in the additive manufacturing industry, is focused on customer applications by providing innovative additive manufacturing solutions. The INTAMSYS FUNMAT 3D printer series has been on the market for years, providing customers with the perfect combination of industrial 3D printers and high-performance materials.

Through years of active insight into customer demands, INTAMSYS has accumulated a wealth of knowledge in materials and in printing processes. By developing industrial filament solutions that closely resemble commonly used production materials, the INTAM™ series of high-quality filaments were launched. INTAM™ Filament and the FUNMAT 3D printer series, along with the optimized slicing software INTAMSUITE™ bring customers an unparalleled printing experience.

INTAMSYS is committed to providing continued custom material development and third-party material evaluation and certification.

| INTAM™ Performance | INTAM™ Engineering | INTAM™ Basic | INTAM™ Support | Customer Application Enabling Program |
|--------------------|--------------------|--------------|----------------|---------------------------------------|
| PEEK | PC | ABS | HIPS | BASF |
| PEEK-CF | PC-ABS | ABS+ | PVA | Ultrafuse® PPSU |
| PEEK-GF | PC-PBT | ASA | SP3030 | Ultrafuse® PC/ABS FR |
| PEKK | PC-FR | PLA | SP3050 | Victrex |
| PEI 9085 | PA6/66 | | SP5000 | VICTREX AM™ 200 FIL |
| PEI 1010 | PA6-CF | | SP5040 | VICTREX AM™ 450 FIL |
| PPSU | PA12-CF | | SP5080 | Wanhua |
| PPS | | | | PA12 |
| | | | | Kimya |
| | | | | ABS-ESD |

INTAMSYS Materials Mission

The INTAM™ Filament range is strictly tested and optimized for process parameters, resulting in a library of specialized materials and optimized printing settings. INTAMSYS philosophy is to incorporate "ready-to-print" settings to its additive manufacturing solutions.

INTAMSYS industrial 3D printing solutions also feature an Open Material System. The printers openness allow customers an infinite choice of materials available on the market (from basic-, engineering-, high-performance-grade materials and more).



Material Partners

CAEP (Customer Application Enabling Program) was launched to bring value to the filament portfolio in 2019. The CAEP focuses on the specialized customer's applications with the well-chosen filaments. All qualified filaments are validated into the INTAM™ Filament solution allowing compatible printing parameters with INTAMSYS printers.



INTAM™ Performance

High-performance materials suitable for various demanding environments

- PEEK** Semi-crystalline polymer, high strength, good chemical resistance, long-term use temperature of 260 °C (500 °F). It meets ISO10993-5,ISO10993-10 and has a UL94 V0 grade fire resistance. Widely used in aerospace, automotive, oil and gas, energy, medical, dental and scientific research industries.
- PEEK-CF** Carbon fiber reinforced PEEK, high dimensional stability and weight-to-strength ratio, HDT/A 315 °C (599 °F) allows short term usage at even higher temperatures. Commonly used for extreme environments such as aerospace & oil and gas industries.
- PEEK-GF** Glass fiber reinforced PEEK, high dimensional stability and electrical insulation. HDT/A 315 °C (599 °F) allows short term usage at even higher temperatures. Commonly used in extreme environments such as aerospace & oil and gas industries.
- PEKK** High strength, good wear and chemical resistance, high dimensional stability. Able to withstand hot and humid environments.
- PEI 9085** Made with ULTEM™ 9085 resin which complies with FAR 25.853 and OSU 65/65 standards with low flame, smoke and toxicity rating (FST). Ideal for aerospace and military applications, this includes aviation and railway as well.
- PEI 1010** High temperature resistance, high strength and rigidity, strong flame retardancy. Suitable for aerospace, automotive, medical and other industries.
- PPSU** Excellent heat resistance, corrosion resistance, electrical insulation and hydrolysis resistance. Widely used in electronic and electrical equipment manufacturing as well as tooling for the medical industry.
- PPS** Excellent heat resistance and corrosion resistance, good flame retardancy and mechanical properties. Used in electronics, automobiles, machinery and other fields.

INTAM™ Basic

Economical and easy-to-print basic materials

- ABS** Durable, high temperature resistance, good toughness. Suitable for automobiles, consumer goods, etc.
- ABS+** Featured ABS with access to water soluble support material.
- ASA** Excellent UV and weather resistance. Suitable for outdoor applications such as agriculture and construction.
- PLA** Bio-based polymer material, environmentally friendly and degradable, easy to print, economical and practical. Suitable for a variety of prototypes.

INTAM™ Engineering

Selective, economical and practical engineering materials

| | |
|----------------|--|
| PC | High strength, excellent durability, and printability. Used for product models, brackets, mechanical parts, etc. |
| PC-ABS | Good toughness, high temperature resistance and smooth surface finish. Suitable for automotive interiors, lighting equipment, high heat-resistant parts, etc. |
| PC-PBT | PC-PBT polymer blend, high corrosion resistance, maintains high toughness at low temperatures. Used in auto parts, electronic equipment, etc. |
| PC-FR | Highly flame-retardant PC material, achieves V0 performance in the UL94 flame-retardant test, high heat resistance and high mechanical strength. Used in industries with high flame retardant requirements. |
| PA6/66 | High mechanical strength and toughness, high temperature, ductility and fatigue resistance. Suitable for industrial parts used in harsh environments. |
| PA6-CF | Good strength, high rigidity, and matte surface finish. Used as electronic equipment, fixtures, auto parts, etc. |
| PA12-CF | High strength and rigidity, low water absorption, good interlayer adhesion and high dimensional stability. Used in automotive and aviation industries, as well as mechanical assemblies and other products. |

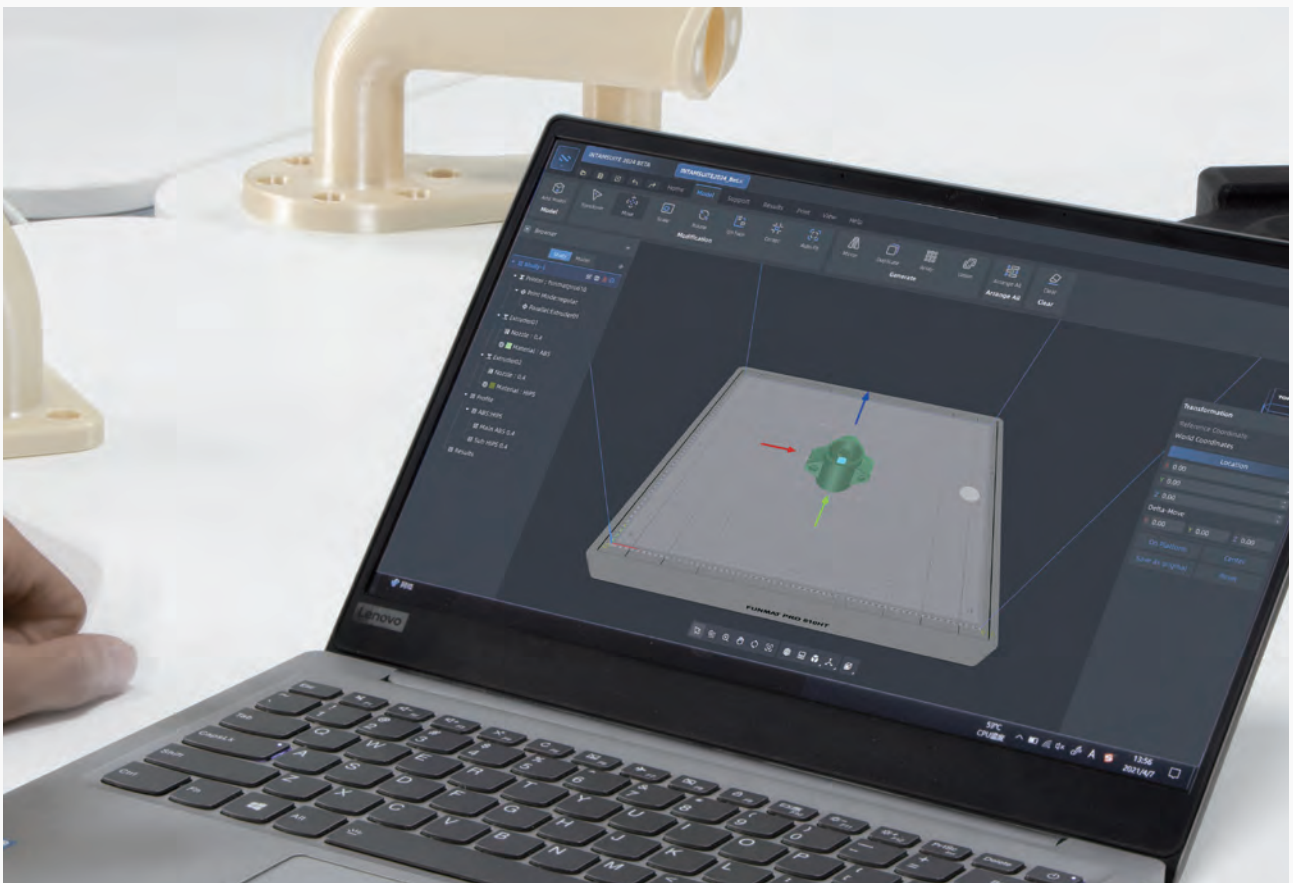
INTAM™ Support

Support materials to help complex structure printing

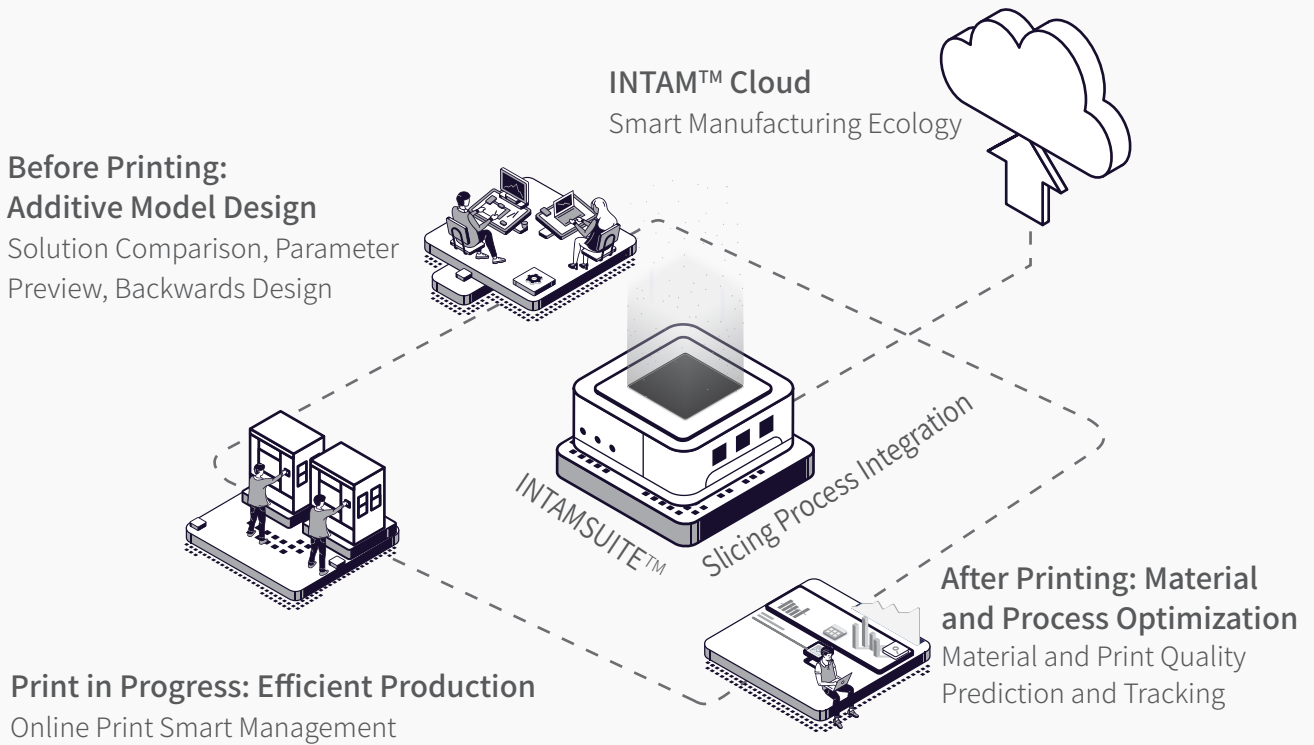
| | |
|---------------|--|
| HIPS | Breakaway support material, suitable for ABS, PC, PC-ABS, PC-PBT, PC-FR, ASA and other materials. |
| PVA | Water-soluble support material, suitable for PLA and other materials. |
| SP3030 | Water-soluble support material for PA6/66, PA6-CF, ABS+. |
| SP3050 | Breakaway support material. Suitable for PA12 and PA12-CF. |
| SP5000 | The preferred breakaway support material for PEEK, PEEK-CF, PEEK-GF, PEKK, and PAEK. Easily removed with the aid of solvents. |
| SP5040 | Breakaway support material, easy to remove. Suitable for PEI 9085. |
| SP5080 | Breakaway support material. Suitable for PEI 1010. |

Slicing Software

INTAMSUITE™ is an all-in-one collaboration platform that combines model design and repair, automated model slicing, online monitoring and print process optimization. It provides the best slicing experience for users of FUNMAT™ series printers. Preparing the print file before printing is a critical step in ensuring quality. INTAMSUITE™ provides a friendly user interface, ensuring that what you see is what you get. Compared to conventional slicing software for 3D printing, INTAMSUITE™ is heavily optimized for material processes, slicing procedures, and system integration. INTAMSUITE™ provides the necessary support for design and manufacturing at all stages, while comprehensively laying out the future intelligent manufacturing ecosystem.



Core Functions



Data compatibility and processing capabilities



Adaptive line width function



Customized support structure



Set printing parameters by model



Extensive library of material processes



Open slicing parameter settings



Preview slice paths in more details



Printing process data reading



Model checking, mesh repair

Industry and Application Solutions



Aerospace

3D printing technology enables metal substitution of some aerospace products for shape verification of prototype, direct product manufacturing and mold making to meet "lighter, faster, lower cost, higher performance" design and manufacturing needs.

Sample name: Cubesat

Solution: Choosing PEEK and PEEK-CF dual-material printing, the satellite case are required to cope with the complex space environment, and has the advantages of high strength, temperature resistance, and radiation resistance. The cost advantage of small batch production of 3D printing is obvious.



Defense Industry

Based on the characteristics of the military industry which are research and development, single prototypes, small and medium batch, multi-variety and defense production. 3D printing solves the painful problems of high price and low efficiency of traditional processing and rapid production of spare parts during regular maintenance, bringing high added value to on-demand manufacturing.

Sample Name: Turbine

Solution: This underwater turbine structure is complex, requiring high and low temperature resistance, anti-corrosion, and low water absorption. Still, traditional processing is more difficult. PEEK material can meet the demanding situation, while by 3D printing, users can significantly reduce costs and cycle time.



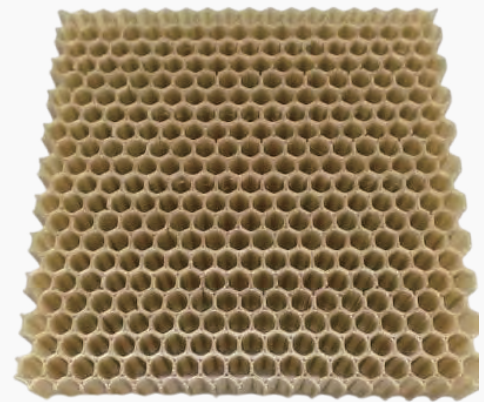


Education and Research

Additive manufacturing processes, new material researches, cross-disciplinary researches, and cutting-edge application-related disciplines have contributed to the maturing of additive manufacturing. It has also contributed to the training of high-end talents in the manufacturing industry.

Sample Name: Research on wave-absorbing materials and structures

Solution: Prototype testing of different materials (PEEK, PA, etc.) and structures combined with rapid validation and iteration to find materials and structures that meet the needs of the application.



Medical

PEEK material itself has excellent biocompatibility, and mechanical properties very close to bone. It has been widely used in human implantation. The use of 3D printing technology can perfectly match the individual needs of patients and has huge market potential.

Sample name: Sternal bone repair implant

Solution: PEEK is biocompatible for medical implantation. It has a density similar to bone, and can be clearly imaged under X-ray for post-operative observation. 3D printing can be customized and processed on an individual patient basis.





Automotive

3D printing technology is used throughout the entire automotive production cycle. It covers rapid prototyping, functional prototype verification, tooling and other auxiliary tools such as customized modifications and production of spare parts for small batch models.

Sample name: Steering wheel prototype

Solution: Large scale/batch printing shortens the iteration cycle. Rapid prototyping at a time, Only 2-3 days for monolithic manufacturing. PC-ABS material was chosen to bring out the best benefits of the combination of PC and of ABS. PC brought temperature resistance and strength to the part while ABS gave to the part its smooth surface quality.

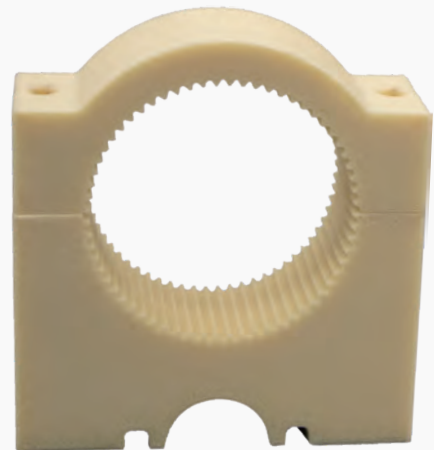


General Manufacturing

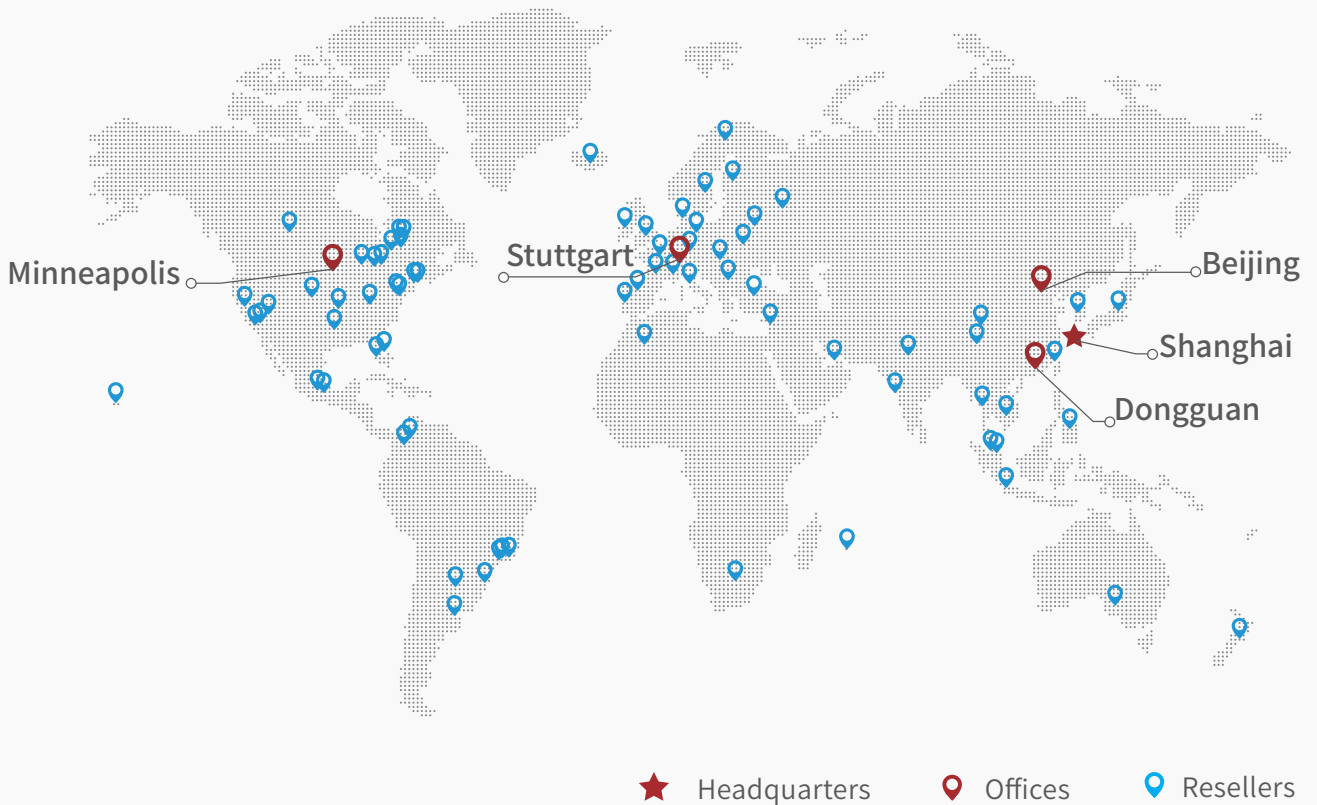
Unlimited design freedom, customization, lightness, intuitiveness, precision, and efficiency help companies achieve flexible production of complex structures and rapid iterations.

Sample name: Pipe joint bracket

Solution: This pipe joint bracket printed of nylon material embodies high wear-resistance and toughness. Fixing methods can be designed according to the pipe size and site conditions.



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