IEMAI®

High Temperature 3D Printer

MAGIC-HT-M

Applicable to PEEK, PEKK, PEI, PPSU & other High Performance Polymers

Equipped with High Temperature Single Nozzle Modular

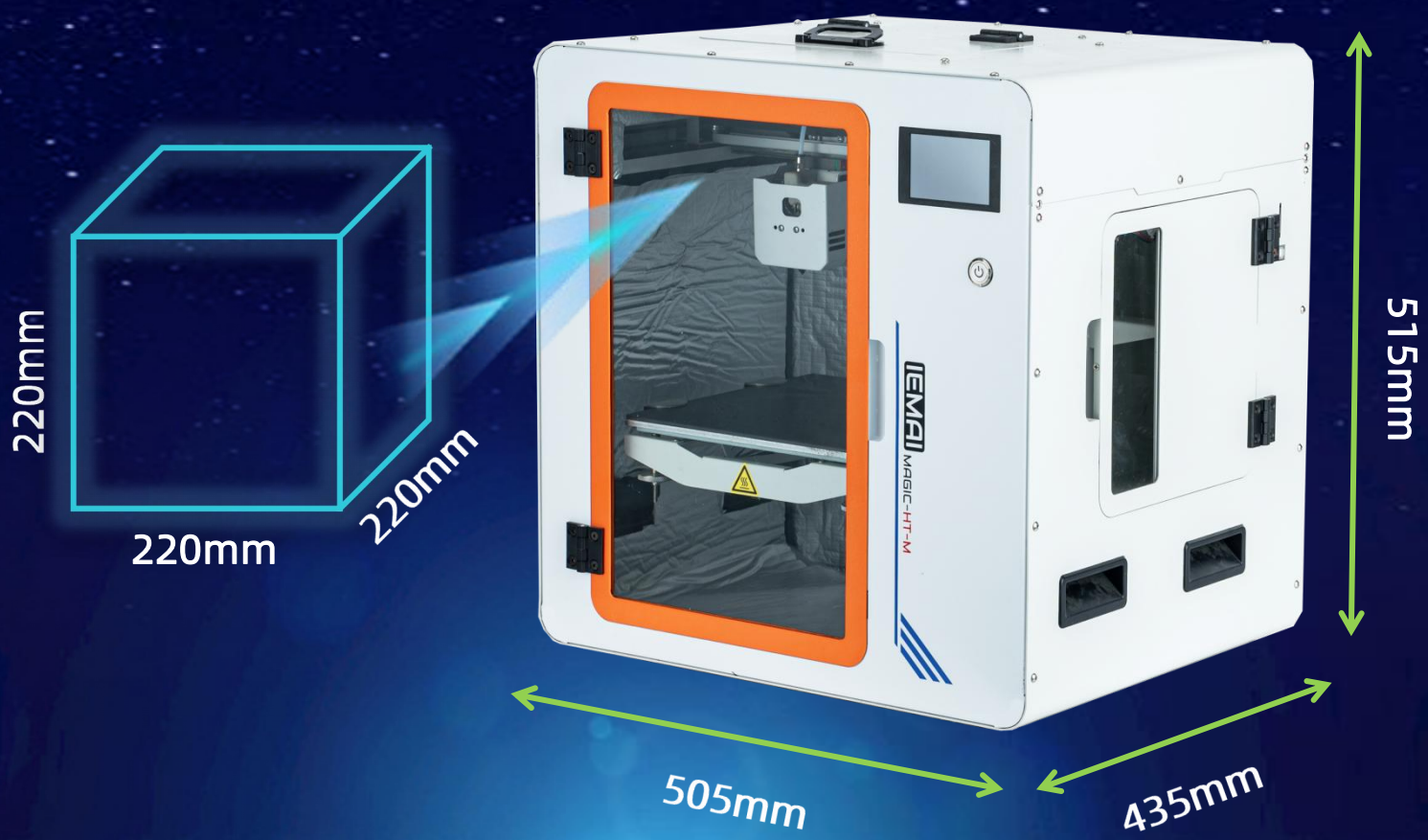
Excellent Temperature Conditions

Build Volume

220 x 220 x 220mm³ Build Volume

Best selection for aviation, automobile, medical, manufacturing, polymer, scientific research, etc. fields

Powerful Slicing Software with built-in parameter packages for various materials printing



Features

Printing Temperature : 450℃

Advanced extrusion designs which can be operate continuously in temperatures up to 450℃

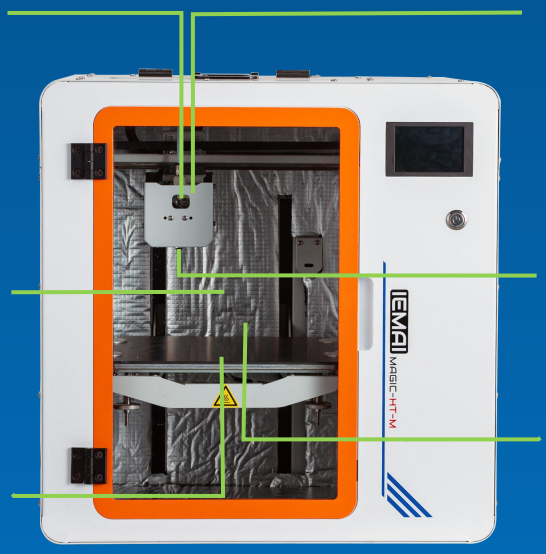
Support for high performance polymers printing

Chamber Temperature : 90℃

Maintain temperature gradient to achieve good degree of crystallization and control internal stress of the print model

Hot Bed Temperature : 150℃

Bed temperature can up to 150℃ for ensure the adhesion of the print model



Single Nozzle Modular

Easy to disassemble and assemble when maintenance and repair.

User can use different nozzles according to high temperature/ general temperature/ fiber reinforced polymers.

Automatic Leveling

Automatic leveling makes operation easier and higher printing success rate.

Filament Detection

Pause printing/ release beep warning when filament is absent.

Resume print after filament feed.

Printer Parameters

Single Nozzle Modular

Carbon Fiber Plate

Personalize Design

Size and Weight

Build Volume	220*220*220mm
Machine Size	505*435*515mm
Package Size	535*465*675mm
Net Weight	35KG
Cross Weight	51KG

Temperature and Accuracy

Printing Temperature	Maximum 450C°
Hot Bed Temperature	Maximum 150C°
Chamber Temperature	Maximum 90C°
Printing Speed	0-150mm/s
Material Storage	Desiccant moisture-proof
Material Storage	Minimum 10% RH
Positioning Accuracy	X/Y: 12.5μm; Z: 1.25μm

Extrusion System

Nozzle Quantity	1 module
Cooling Method	Air cooling (heat dissipation zone cold zone / model cooling)
Nozzle Size	0.4mm (standard) / 0.6mm (optional)
Nozzle Material	Copper alloy (pure) / hardened steel (fiber reinforced)
Recommended Layer Thickness	0.05-0.3mm

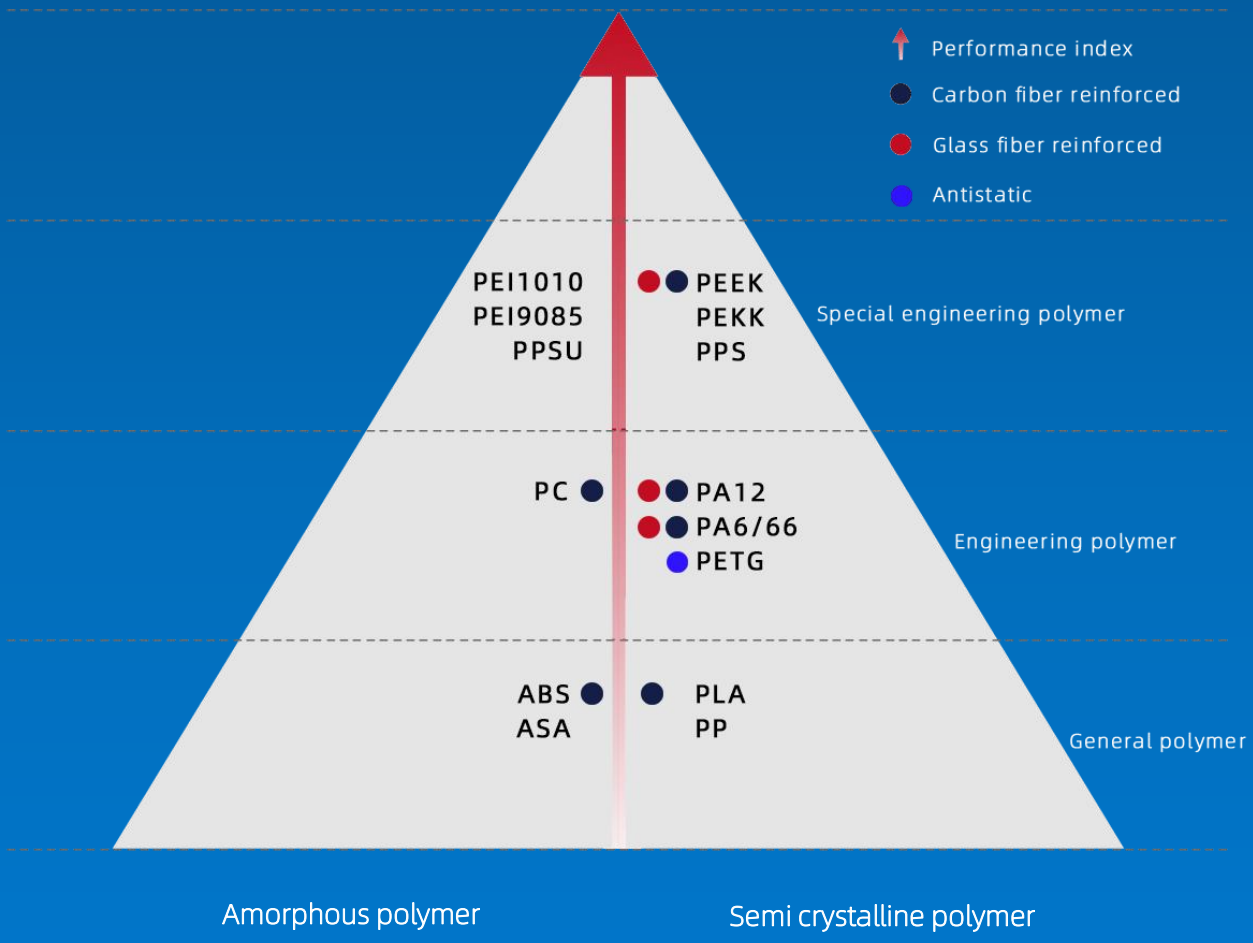
Software and Functionality

Slicing Software	IEMAI 3D EXPERT, CURA, S3D
Functionality	Power failure recovery, filament detection, automatic leveling, automatic shutdown, LAN control
Power	100V±10% 50-60Hz miximum power 950W
Data Transmission	SD Card, WIFI
File Type	STL, OBJ, 3MF, etc.
Operating System	Windows 64 Bits

Material System

Enrich user printing experience with the most selective printing materials and excellent temperature conditions of MAGIC-HT-M

(Not limit to thermoplastic polymers, but also enhanced & modified polymers)



Polymer Performance Comparison Table

IEMAI®

Material	Tensile Strength (Mpa) ISO 527	Elongation (%) ISO 527	Flexural Sterngth (Mpa) ISO 178	Flexural Modulus (Mpa) ISO 178	Notched Impact Strength (KJ/m2) ISO 179	HDT (C°) ISO 75 1.8Mpa	Tg (C°)	Support Material
PEEK	100	40	170	4200	6	152	143	HT-SP
PEKK	90	5	150	3000	5.2	139	160	HT-SP
PEI 9085	54	3	90	2050	12.7	158	186	HT-SP
PEI 1010	85	6	160	3300	5	190	215	HT-SP
PPSU	65	6.5	92	2152	13.8	212	220	HT-SP
PPS	50	5	83	2300	30	182	86	HT-SP
CF-PEEK	112	10	170	6338	92	300	147	HT-SP
GF-PEEK	105	2.5	130	7625	73	300	143	HT-SP
GF-PA	51	9	72	2720	43	157	70	PVA E-REMOVE
CF-PA	30	1.5	50	1904	16	140	74	PVA E-REMOVE
CF-ABS	48	3	78	5280	16	78	105	PVA E-REMOVE
CF-PC	72	2.5	92	5880	18	135	143	PVA E-REMOVE
ESD-PETG	30	5	55.8	1890	8.5	68	78	PVA E-REMOVE
PA	52	150	67	1600	0.5	155	67	PVA E-REMOVE
PC	60	12	94	2044	25	99	113	PVA E-REMOVE
ABS	46	2.5	69	2350	19	97	—	PVA E-REMOVE
ASA	43.8	6.7	73.4	3206	10.5	100	98	PVA E-REMOVE
PETG	53	4	171	2040	4.5	68	80	PVA E-REMOVE
PP	14	10	7.8	244	0.35	105	—	PVA E-REMOVE
TPU	—	330	—	—	—	—	—	PVA E-REMOVE
PLA	46.6	1.9	85	3283	2.68	58	61	PVA E-REMOVE