

CINCINNATI[®]

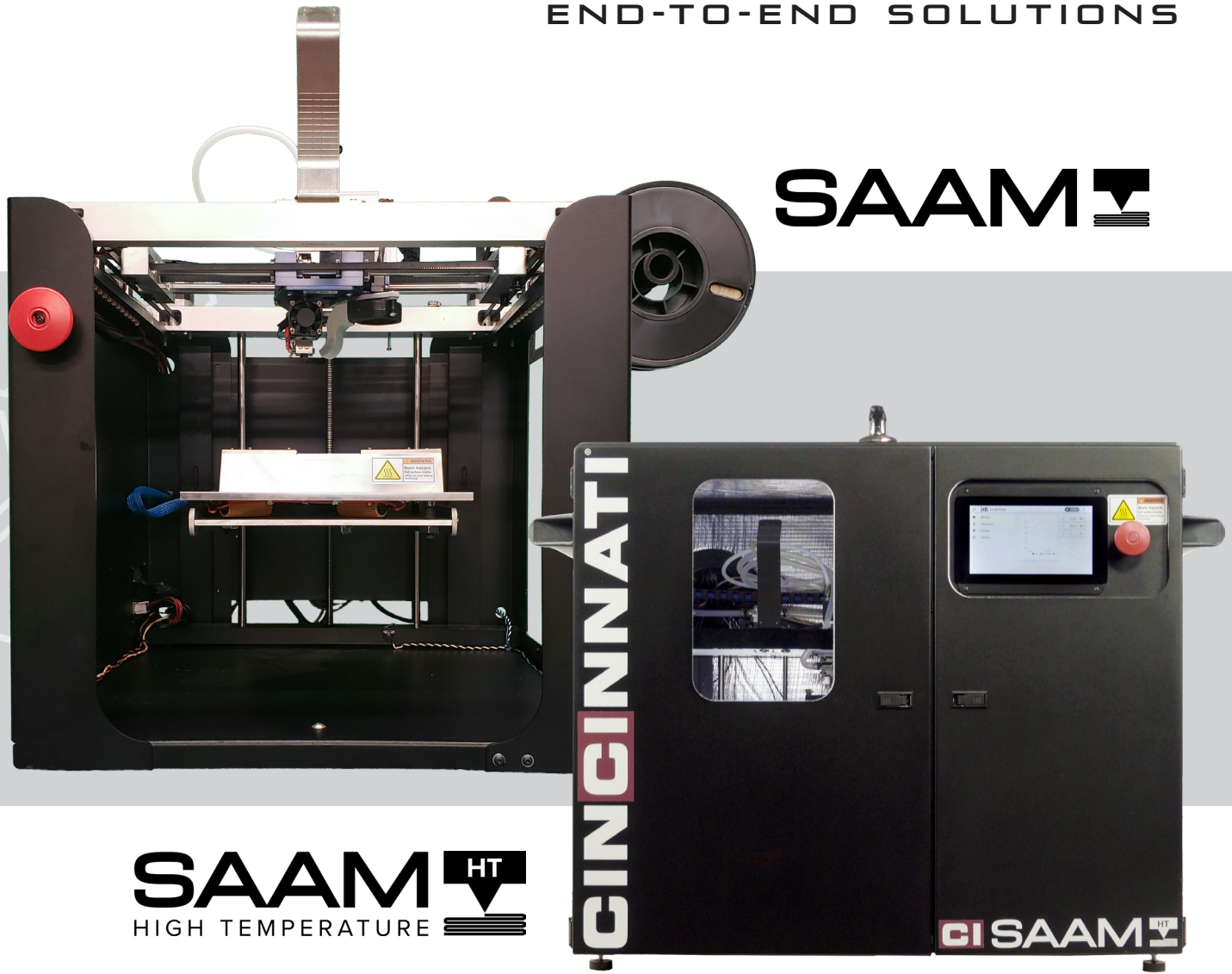


ADDITIVE SOLUTIONS

3D Print Your Way Everyday.

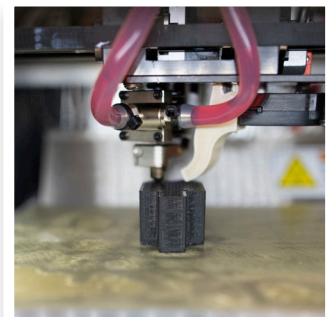
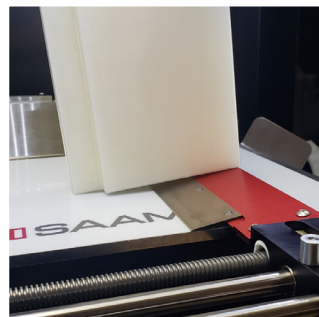


SAAM 



SAAM  HT
HIGH TEMPERATURE

SAAM (Small Area Additive Manufacturing) can be used with any compatible 3D printing filament. The patented CI Automate system enables automatic part ejection for maximum productivity. SAAM's all-metal construction ensures quality results years longer than the competition.



SPECIFICATIONS	SAAM	SAAM HT
Build Size	7.9" x 7.4" x 9.4" (200mm x 190mm x 240mm)	
Printer Dimensions	21" x 17.5" x 23"	30" x 22" x 23"
Z-Resolution	0.0004" (11 microns)	
Part Accuracy ¹	0.005" (125 microns)	
Power Requirements	100-240V, 50-60Hz, 2.5-3.5A	120 VAC, 2kW, Single Phase
Nozzle Temperature	572°F (300°C)	932°F (500°C)
Bed Temperature	212°F (100°C)	482°F (250°C)
Chamber Controller Temperature	n/a	230°F (110°C)
Printer Management	Octoprint CI Edition	
Supported Slicers	Slic3r, Cura 4, Simplify3D	
Environmental Sensors	Ambient Conditions: Pressure, Humidity, Temperature	
Construction	6061 Aluminum and Steel Frame	All Metal Insulated Enclosure
Enclosed Chamber	Available	Included
CI Automate	Available	Available
Movement	Direct Drive, Motion System rated for 5-year lifetime	
Print Plate	Patented Kinematically coupled Aluminum print plate	
Manufactured Location	United States: Boston, MA and Harrison, OH	
MATERIALS²		
PLA	●	●
ABS	●	●
PETG	●	●
Nylon	●	●
Carbon-Fiber Nylon	●	●
Glass-Filled Nylon	●	●
Polycarbonate	⊗	●
ULTEM 9085	⊗	●
CF ULTEM 1010	⊗	●
Glass-Filled PEEK	⊗	●
Bound Metal Powder	⊗	●

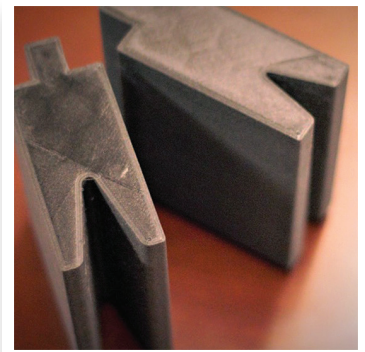
● It is recommend to use a brass nozzle but can use hardened steel nozzle

● Denotes the need for a hardened steel hot-end nozzle

⊗ Is not supported

¹ Part accuracy is within 95% confidence interval, and is geometry dependent

² Materials list represents materials successfully tested on SAAM. It does not guarantee assurance of the performance of third party materials.



Custom Tooling

Lean manufacturing requires flexible tools to enable improved efficiency, effectiveness, and profitability. Use SAAM to eliminate waste in your value stream today.

Rapid Fixtures

Drastically reduce cost and lead time on custom fixtures for any application. From inspection to machining to welding, SAAM can create the fixture that you need today.

Functional Parts

SAAM enables the fabrication of robust, end-use parts. Create complex geometries for custom manifolds, brackets, housings, frames, and more.

Rapid Prototyping

Skip the job shop for your next prototype. At the click of a button, use SAAM to create functional prototypes. Test your parts the same day you design them.



Continuous Operation

3D print unattended 24/7 with our patented Automated Ejection System



FFF 3D Printing

Build parts layer-by-layer to form virtually any shape imaginable



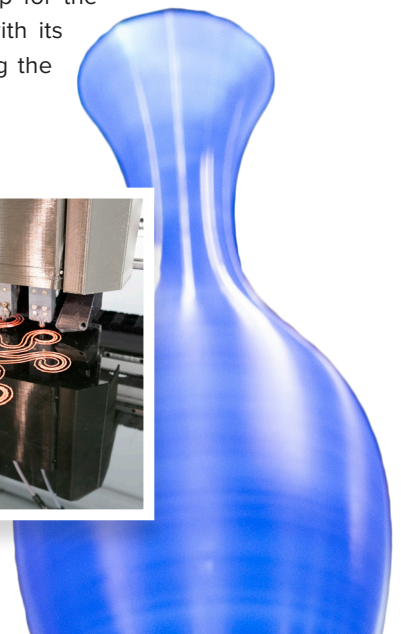
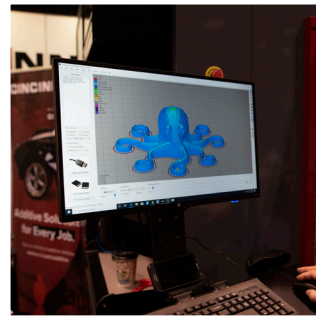
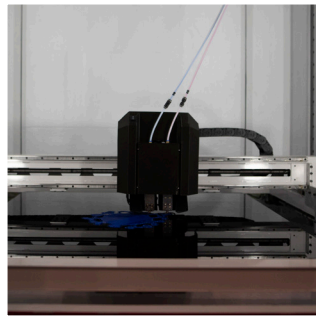
Performance Materials

Use your own materials to get the results you need



MAAM

MAAM (Medium Area Additive Manufacturing) is an industrial sized additive machine built for production manufacturing with both filament and pellet fed extruders. A rigid welded frame, CNC controls, and the latest extruder technology are combined in this machine to print parts accurately and consistently at speeds that are unmatched in the 3D printer market. The optional dual filament extruders or filament and pellet hybrid extrusion makes the MAAM uniquely set up for the toughest and most complex print jobs. Its open source material solution, along with its temperature capabilities in the chamber, print bed and nozzles allow for 3D printing the industry's most highly engineered thermoplastics.



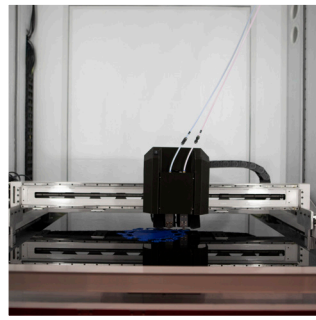
MAAM SPECIFICATIONS	
Build Envelope	1050mm x 1015mm x 1000mm (41.3"x40.0"x39.4")
Maximum Bed Temperature	150°C (302°F)
Maximum Chamber Temperature	90°C (194°F)
Maximum Travel Speed	500 mm/sec
Print Bed	Aluminum Fabricated Vacuum Table Print Bed with 4 Point Leveling
Printer Dimensions	2.7 m x 1.7 m x 2.2 m (106" x 66" x 85")
Printer Weight	3000 lbs (1361 kg)
Power	208 - 240 Volts, Single Phase 60Hz, 60 Amp Circuit
MODEL	DESCRIPTION
MAAM 120	Dual Filament Extruders
MAAM 101	Single Pellet Extruder
MAAM 111	Single Filament and Single Pellet Extruders

EXTRUDER SPECIFICATIONS		
	FILAMENT	PELLET
Material Feedstock	2.85 - 3.00 mm Filament	Standard Thermoplastic Pellets
Maximum Extrusion Rate	1.0 kg/hr (2.2 lb/hr)	2.5 kg/hr (5.5 lb/hr)
Maximum Resolution	0.20 mm (0.008")	0.33 mm (0.013")
Maximum Nozzle Temperature	450°C (842°F)	500°C (932°F)
Nozzle Diameters	0.6mm – 2.4mm	1.0mm – 5.0mm
Nozzle Material	Copper or Hardened Steel	Tungsten Carbide



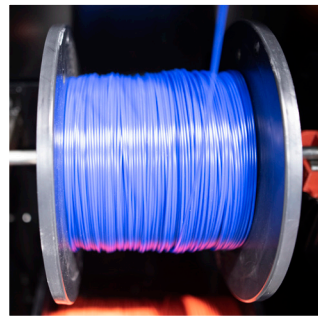
Control

- Windows 10 PC on 24" LCD Monitor with WiFi & Ethernet Connectivity
- Yaskawa Sigma 7 CNC Motion Control on a Cartesian System
- Compatible with any slicing software



Build Chamber

- Print parts up to 1 cubic meter with the accuracy and precision of a small scale printer
- Insulated and heated chamber allows for printing highly engineered, high temperature thermoplastics



Material

- Open source material solution
- Onboard environmentally controlled filament cabinet with space for multiple spools
- Dual material print capabilities allow for printing with soluble support material

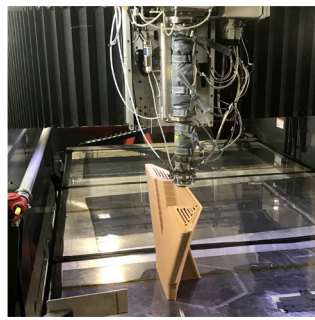
PRINT LARGE | PRINT FAST

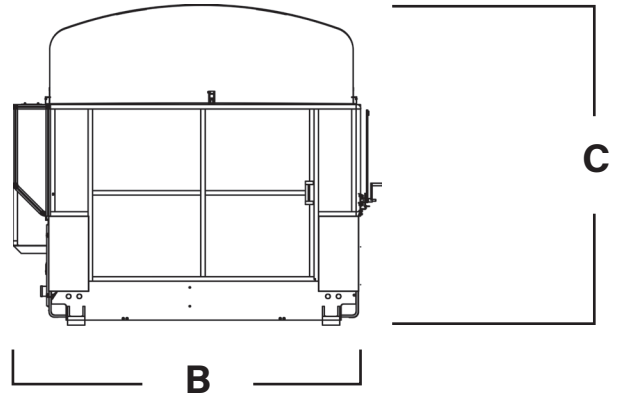
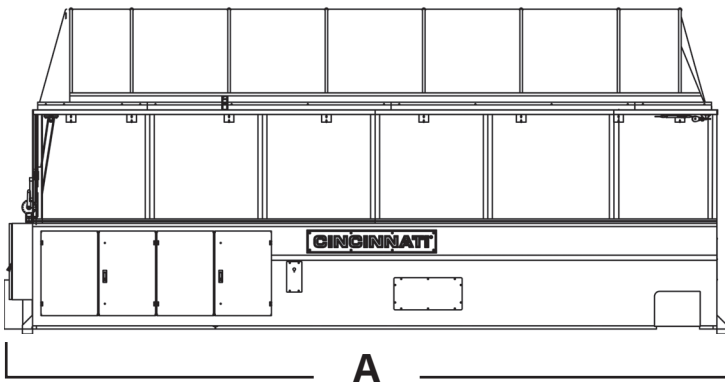
This technology allows you to create 3D large-scale tooling and products in a matter of hours.



BAAM

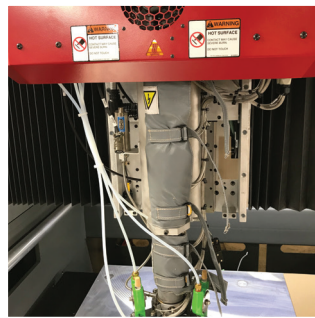
BAAM (Big Area Additive Manufacturing) is for manufacturing durable tooling, prototype or production parts from fiber-reinforced plastic. BAAM makes large objects out of readily available, commodity priced, extrusion grade thermoplastics. BAAM can print parts the size of a car at a rate of up to 80 pounds per hour. CI is transforming the way the world thinks about additive manufacturing.





SPECIFICATIONS	603	606	608	806
MACHINE DIMENSIONS				
Length (A)	308"	308"	308"	427"
Width (B)	144"	144"	144"	153"
Height (C)	128"	171"	198"	172"
Weight	32,000 lbs	32,000 lbs	32,000 lbs	40,000 lbs
Power	460V/ 3 Phase/ 60 Hz			
WORKPIECE DIMENSIONS				
X-Axis	140"	140"	140"	240"
Y-Axis	65"	65"	65"	90"
Z+W Axis	36"	72"	98"	72"

All Dimensions are preliminary and are subject to change.



Construction

- Stress relieved Steel plate fabricated frame
- Aluminum honeycomb gantry
- Linear motor drive system
- Absolute positioning accuracy: +/- 0.005"

Extruder

- Feedrate: 80 lbs/hour
- Dynamic Flow Control
- Unique Automatic Tamping
- Proprietary Extruder for 3D Printing
- Extrusion Die (Nozzle)
Diameters: 0.200", 0.300" and 0.400"

Materials

CINCINNATI and our partners have used dozens of materials including: ABS, PPS, PC, PLA, TPU, and PEI. By adding carbon fiber, glass fiber, or organic fiber strength and thermal stability is improved.

Users are welcome to develop their own proprietary materials and parameters.

Control

- Microsoft Windows® Embedded OS
- 22" LCD color touch screen
- Network interface/USB Outlet



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CINCINNATI®

CI is a U.S. based, build-to-order machine tool manufacturer and has shipped more than 50,000 machines in 120 years of operation. The campus has a 500,000-square-foot plant and technical center on an 200+ acre site near Cincinnati, Ohio. Current products include: Laser Cutting Systems, Automation, Plasma Tables, Press Brakes, Shears, Powdered Metal Compacting Presses, Software, BAAM (Big Area Additive Manufacturing), MAAM (Medium Area Additive Manufacturing) and SAAM (Small Area Additive Manufacturing).



LASERS



AUTOMATION



PLASMA



PRESS BRAKES



SHEARS



PM PRESSES



ADDITIVE

