



CINCINNATI

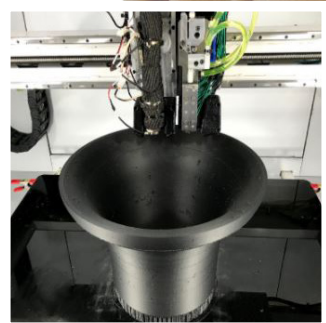
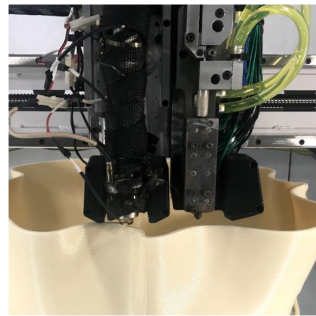
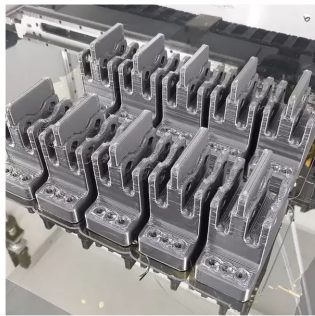
ADDITIVE SOLUTIONS

Print **Big**. Print **Fast**. Print **Strong**.



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	1050 mm x 1015 mm x 1000 mm (41.3" x 40.0" x 39.4")
Maximum Bed Temperature	150°C (302°F)
Maximum Chamber Temperature	90°C (194°F)
Maximum Travel Speed	500 mm/sec
Print Bed	Stationary Aluminum Print Bed with 4 Point Leveling. Vacuum Table Available
Printer Dimensions	98" x 66" x 78" (2.7 m x 1.7 m x 2.0 m)
Printer Weight	3500 lbs (1588 kg)
Power	208 - 240 Volts, Single Phase 60Hz, 100 Amp Circuit
Control	Yaskawa Sigma 7 CNC Motion Control with Custom HMI
Slicing	Integrated Industrial PC with Customized Simplify3D Installed

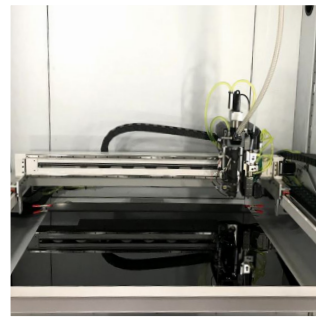
Configure your MAAM with single or dual extruders using filament or pellet extrusion technology, or a hybrid of both!

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	0.10 mm (0.004")	0.33 mm (0.013")
Maximum Nozzle Temperature	450°C (842°F)	500°C (932°F)
Nozzle Diameters	0.6 mm – 2.4 mm	1.0 mm – 5.0 mm
Nozzle Material	Copper or Hardened Steel	Tungsten Carbide



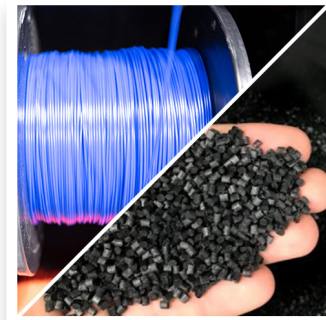
Control

- Windows 10 PC on 24" LCD Monitor with WiFi & Ethernet Connectivity
- Yaskawa Sigma 7 CNC Motion Control on a Cartesian System
- Comes with proven slicer settings for all materials and nozzles



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 for both filament and pellet feedstock
- Onboard environmentally controlled filament drying cabinet and active pellet drying included
- Dual material print capabilities allow for printing with soluble support material

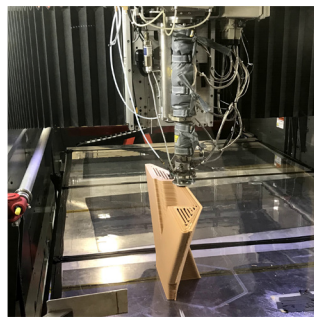
PRINT BIG | PRINT FAST

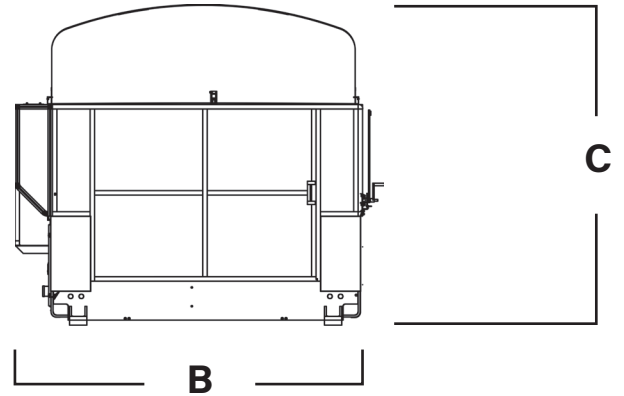
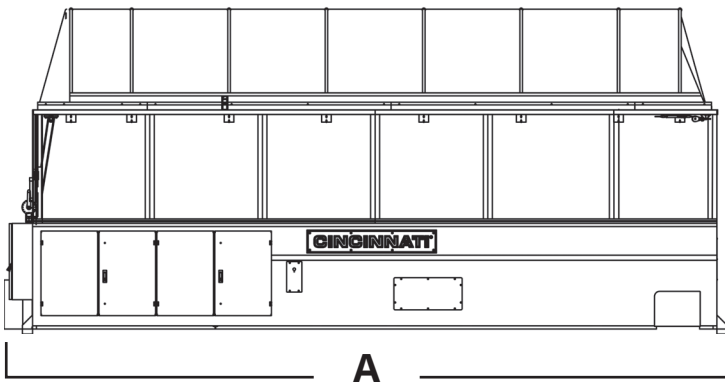
This technology allows you to create 3D large-scale tooling and products in a matter of hours.



BAAM

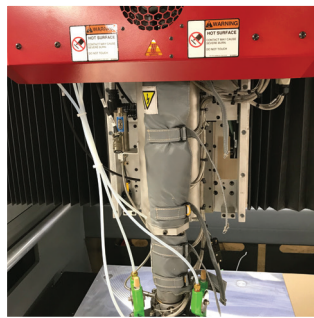
BAAM (Big Area Additive Manufacturing) is for manufacturing durable tooling, prototype or production parts from fiber-reinforced plastic. BAAM makes large objects out of readily available, commodity priced, extrusion grade thermoplastics. BAAM can print parts the size of a car at a rate of up to 80 pounds 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
- CI's 4th generation 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) and MAAM (Medium Area Additive Manufacturing).



LASERS



AUTOMATION



PRESS BRAKES



SHEARS



PM PRESSES



ADDITIVE

