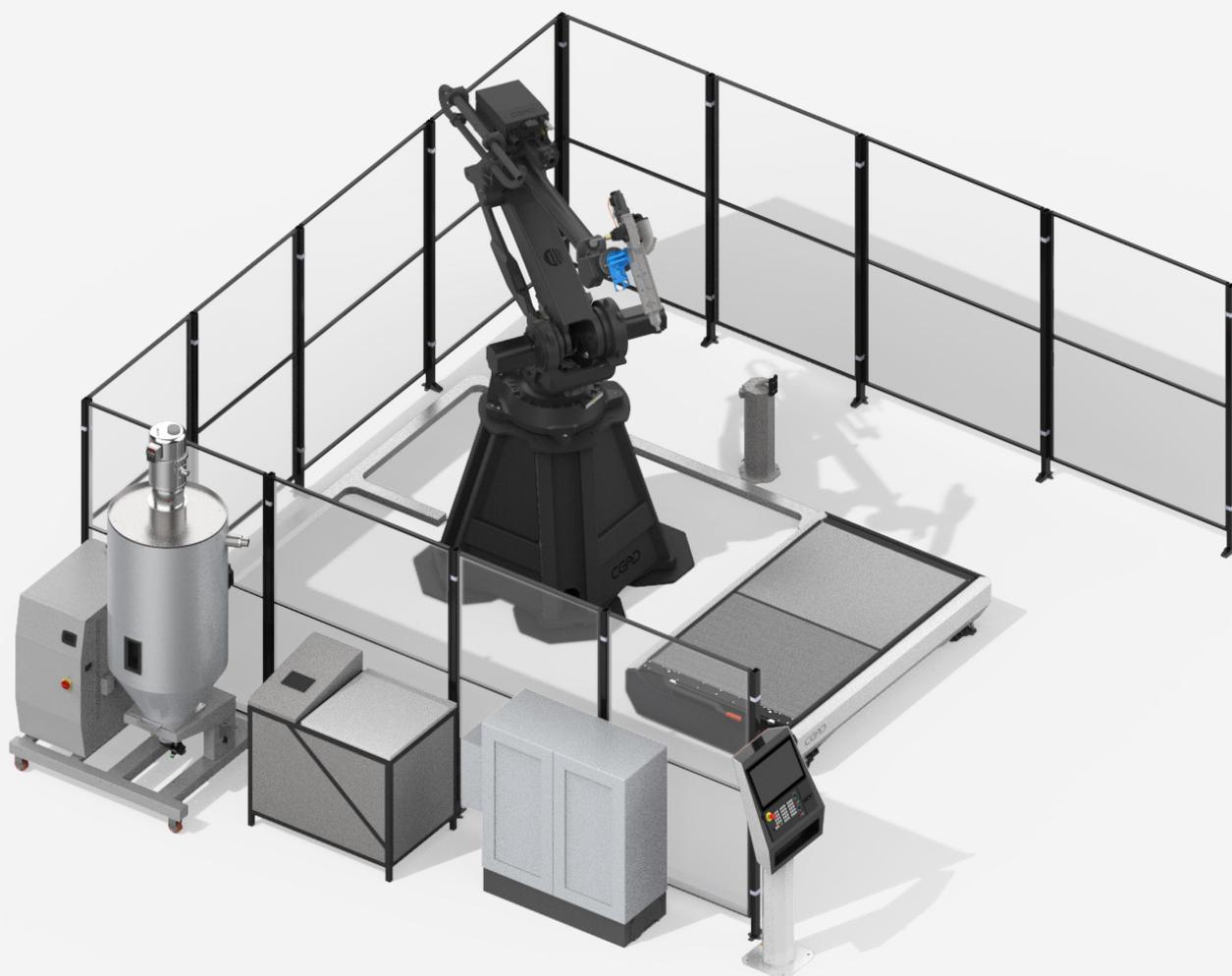


AUTOMATED LARGE SCALE ADDITIVE MANUFACTURING

Flexbot



CCAD



VERSATILE SYSTEM

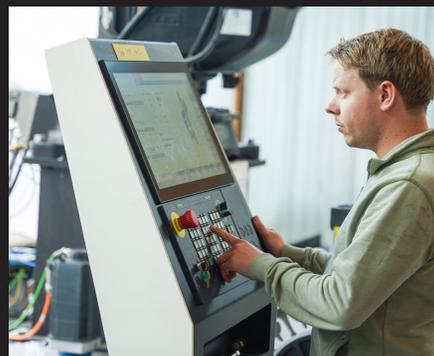
The Flexbot is a large scale additive manufacturing solution. Our advanced extruder's can print a wide variety of thermoplastic composites, suitable for many different applications. The system is upgradeable with features such as milling and dynamic flow control.

CNC CONTROL

With Siemens SINUMERIK control, the robot kinematics are fully integrated into a CNC system, allowing the required precision of complex movements along the toolpath. This enables the correct deposition of material and milling of the part to a final contour.

CUSTOM SYSTEM

The Flexbot can easily be configured for different size solutions due to the modular design. Our system can be upgraded with multiple robots, linear tracks and different types of extruder's. The 4 x 2m building platforms can connect into one big building platform.



TECHNICAL DETAILS



Standard systems

Type *	Flexbot Research	Flexbot Research XL	Flexbot Industry
Cell dimensions (mm) **	7750x6500 (WxD)	7750x6500 (WxD)	9750x7000 (WxD)
Printbed area (mm)	2000x1000 (WxD)	3000x1000 (WxD)	4000x2000 (WxD)
Kinematics	Industry Robot, 6-axis	Industry Robot, 6-axis	Industry Robot, 6-axis with linear track
Control system	CNC control, Siemens SINUMERIK	CNC control, Siemens SINUMERIK	CNC control, Siemens SINUMERIK
Material type	Pellet based	Pellet based	Pellet based
Build plate temp	100 C°	100 C°	100 C°
Extruder type	RE series	RE series	RE series

RE Series

Type ***	Weight (kg)	Max output (kg/h)	Nozzle size (mm)
E25	29	12	2-18
S25	40	20	2-18
E40	70	40	4-24
E50	165	84	5-25

* Next to standard solutions, CEAD offers full customized systems that match clients specific needs

** We recommend to keep 1000 mm clearance in depth and width for accessibility of the system

*** All extruder's can heat up to max. 400 C°.

Safety Caging

The safety cage surrounding the robot is included for safe operations. The cage includes a sliding door with opening of 3.5 m and locking mechanism.

Drying system with automatic material transport

Pellet dryer with automatic hopper loader and automatic material transport is included for processing thermoplastics pellets and 24hr operation.

MATERIALS

Flexbot prints a wide variety of pellet based fiber reinforced plastic materials for different kind of applications. Find our latest material brochure for the latest available materials.

Biobased materials

Materials such as PLA / PP combined with cellulose fibers.

Commodity materials

The usual suspects PP / ABS / ASA / PET / PC combined with glass fibers.

High-end materials

For ultra strong parts PEEK / PESU / PPS combined with carbon fiber.

UPGRADES

Each application requires different set-ups, therefore we offer multiple upgrades for specific client tailored needs.

Milling

Combines 3D printing and milling into one automated process. Important feature for smooth surface finishing.

Dynamic flow control printing

Creates accurate control of the material flow. Important feature for retractions and travel moves.

Calibration

Increase the accuracy of the robot. Important upgrade for robots on linear tracks and with milling upgrade.



CEAD is a technology supplier of 3D printing equipment and pioneer on the frontier of large scale composite additive manufacturing. We supply a total package when it comes to 3D printing solutions and offer the latest innovative technology, assistance with installation, training, maintenance and support. We will help you build your production process from start to finish.

CEAD

Schieweg 25
2627 AN Delft
The Netherlands
+31 (0) 15 737 01 83
info@CEADgroup.com