AMCELL 1400®

Large volume industrial additive manufacturing cell to print metal and polymer parts.

AMCELL 1400® makes additive manufacturing a viable solution manufacturing large parts.
An Industrial 3D Printer for manufacturing functional parts.

Additive Manufacturing Solutions

Production in metal and polymers

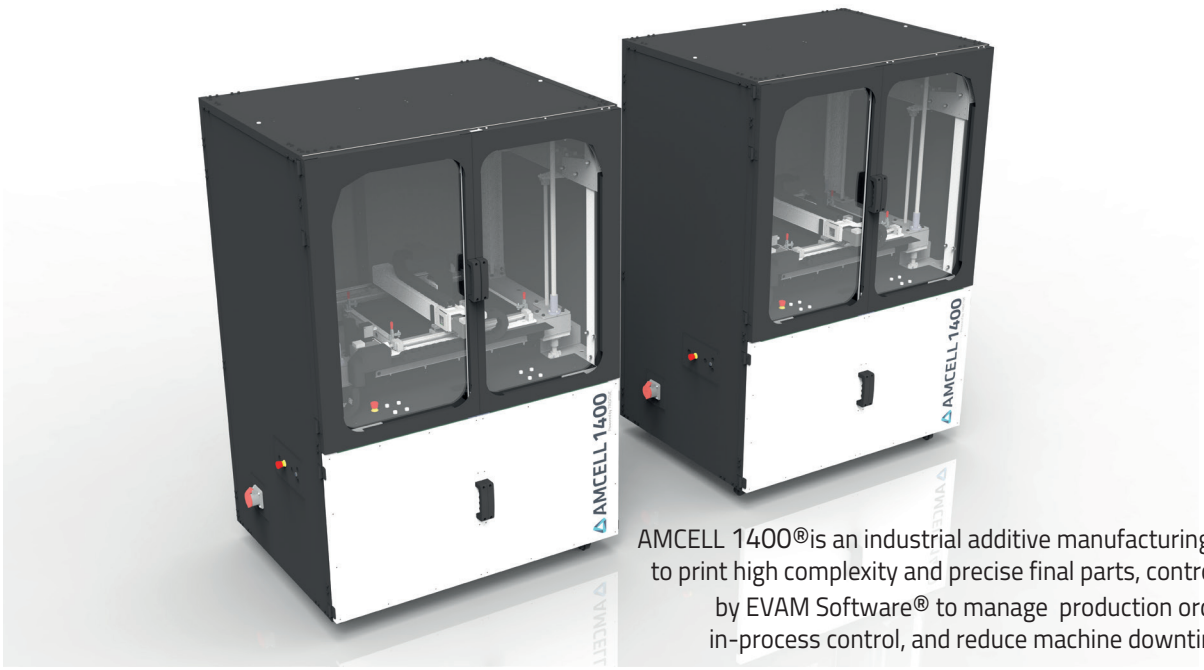
Accurate and functional parts

- Polymers
- Composites
- Metals
- High tolerance (ISO 2768)
- Large format

EVAM Software®

- Centralized control and monitoring
- Feedstock smart control
- Production optimization
- Printer integration
- Build simulation
- Scheduling
- Shopfloor connectivity
- Quality and process monitoring
- Traceability

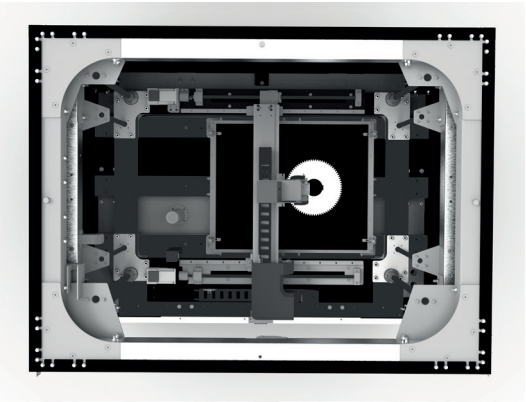
TRIDITIVE
ADDITIVE MANUFACTURING



AMCELL 1400®is an industrial additive manufacturing cell to print high complexity and precise final parts, controlled by EVAM Software® to manage production orders, in-process control, and reduce machine downtimes.

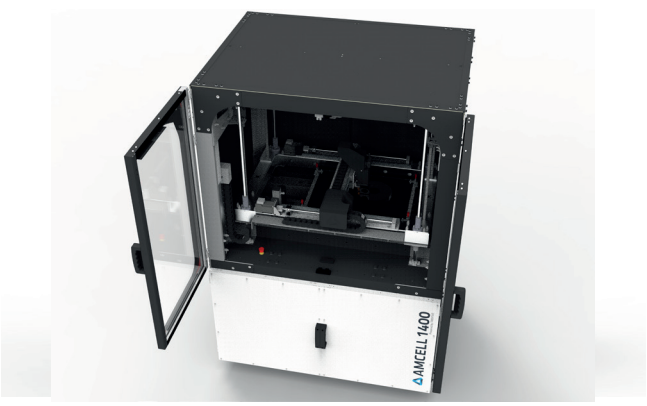
AMCELL 1400 ®

Manufacturing orders, process monitoring, feedstock control, smart environmental control, are just some of the features that makes AMCELL 1400® a robust platform for production of large parts.



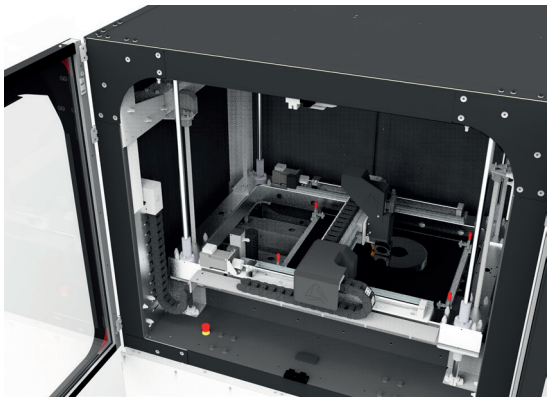
Robust and Reliable system

Built for continuous operation in tough applications.
Extremely robust components.



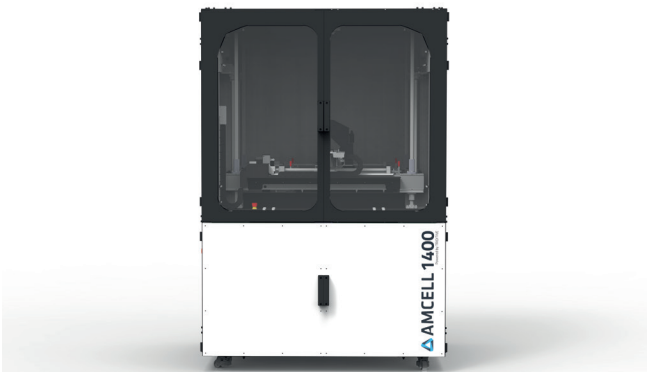
Large format

High-performance large volume industrial 3D Printer.
Printing volume: 450x400x500



Heated chamber

Unleash the potential of technical materials.



Software-controlled workflow and process monitoring

AMCELL 1400® includes EVAM Software®, the most advanced production control and remote monitoring solution.

TRIDITIVE
ADDITIVE MANUFACTURING

AMCELL 1400 ®

Technical information

AM technology	MEX; MMEX
Maximum printing height	500 mm
Maximum printing area	450x400 mm
Extruder system	Titanium printhead with magnetic suspension
Nozzle diameter	0.4 - 1.2 mm
Manufacturing materials	Polymers: ABS, ASA, CPE, HIPS, IGLIDUR I150, PA, PC, PETG, PLA, PP, TPU, VINYL. Composites: PA+ARAMIDE, PA+CF, PC+ABS, PC+PBT, CPE+CF Metals: SS 316, SS 17-4 PH, Inconel, Titanium.
Minimum layer height	50 µm
Build chamber	Heated with temperature control, Filter system
External and weight dimensions	1,059x 1,32 x 1,96 m. Weight: 350 kg

Manufacturing platforms

Platform change system	Manual
Build platform	Heated, up to 150°C
Build platform material	Tempered glass (customizable)
Build platform calibration	Automatic-contactless
Final parts storage	Manual

MEX (Material extrusion); MMEX (Metal Material Extrusion)

Mex is an additive manufacturing process in which material is selectively dispensed through a nozzle to manufacture parts in polymers, composites, and metals

How MMEX works for printing metal parts:

1. Green part

The green part is manufactured layer by layer extruding Metal Feedstock.

2. Debinding

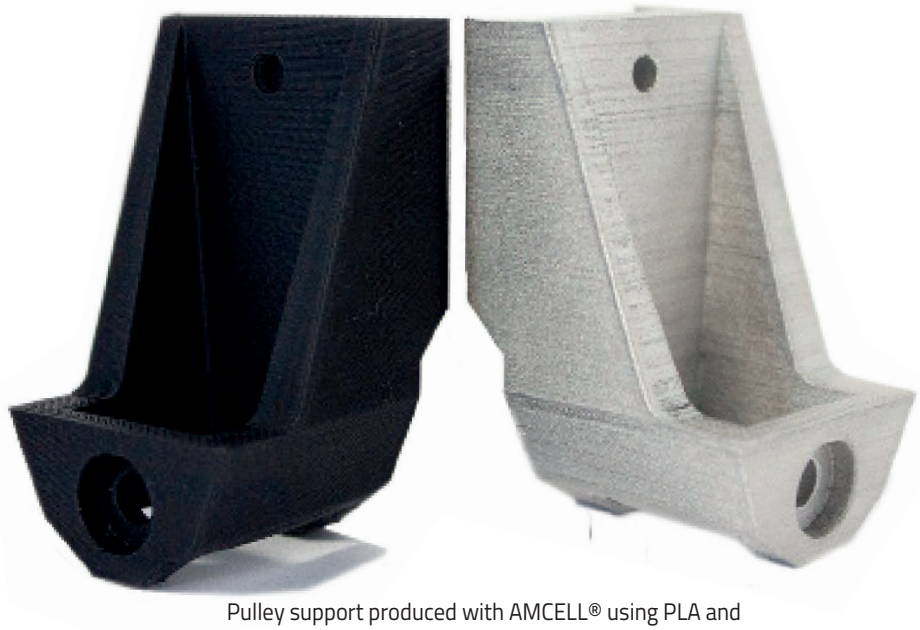
During the debinding process. The binder is removed through a debinding process.

3.Sintering

During the sintering process, the part is heated, the metal particles are redistributed and bonded.

4. Final part

Once the process is finished, a 100% metallic part is obtained with a density higher than 99%.



Pulley support produced with AMCELL® using PLA and Stainless Steel 316L without surface finish.

TRIDITIVE
ADDITIVE MANUFACTURING

Metals

STAINLESS STEEL 316L

Metal polymer composite filament to produce metal components in an austentic stainless steel type 316L.

Standards DIN 1.4404, X 2 CrNiMo 17 13 2, AISI 316L; UNS S31603

MECHANICAL PROPERTIES	Typical Value	Standard
Material density	7,83 g/cm^3	ISO 1183-1
Yield Strength, Rp 0.2	174 MPa	DIN EN ISO 6892-1
Tensile strength	561 MPa	DIN EN ISO 6892-1
Vickers Hardness	128 HV10	DIN EN ISO 6507-1

17-4 PH

MECHANICAL PROPERTIES	Typical Value	Standard
Material density	TBD	ISO 1183-1
Yield Strength, Rp 0.2	TBD	DIN EN ISO 6892-1
Tensile strength	TBD	DIN EN ISO 6892-1
Vickers Hardness	TBD	DIN EN ISO 6507-1

TITANIUM

Fused Filament Fabrication (FFF) of Titanium offers the possibility to produce complex shaped parts net shape or near net shape quality at low investment costs

MECHANICAL PROPERTIES	Typical Value
Material density	4,43 g/cm^3
Yield Strength, Rp 0.2	920 MPa
Tensile strength Rm	1005 MPa
Elongaton A	14%

COMING SOON: INCONEL AND M4

TRIDITIVE
ADDITIVE MANUFACTURING

Polymers

CPE
- Excellent mechanical & chemical properties
- Excellent surface finish
- High printability
- Food contact approved

PA
- Chemical & wear resistance
- Used in electrical and electronic components
- Good functionality under temperature
- Food contact approved

ASA
- Excellent outdoor resistance
- Excellent surface finish
- Good dimensional stability
- Production of functional parts

TPU
- Elastic material
- Good tear strength in all directions
- Chemical & abrasion resistance
- Used in electrical and electronic components

HIPS
- High impact resistance
- Excellent surface quality
- High printability
- Food contact approved

PP
- Electrical insulator & thermal resistance
- High dimensional stability
- Easily recycled
- Food contact approved

IGLDUR I150
- Excellent mechanical properties
- Used in parts subjected to wear
- Food contact approved

PVC
- Excellent surface finish
- Corrosion resistance
- High tensile strength and hardness
- Used in electrical and electronic components

PLA
- Excellent surface finish
- High printability
- Biodegradable by composting
- Food contact approved

ABS
- Good surface finish
- Production of functional parts

	Density	Tensile Strength	Tensile Modulus	Elogation at break	Izod impact strength	Vicat softening temperature	Heat distortion temperature
CPE	1,25 g/cm ASTM D792	47 MPa ASTM D638	-	150% ASTM D638	No breaK ASTM D256	-	80°C ASTM D648
ASA	1,07 g/cm ASTM D792	40 MPa ASTM D638	1726 MPa ASTM D638	35% ASTM D638	441 J/m ASTM D256	94°C ASTM D1525	86/96°C ASTM D648
HIPS	1,05 g/cm ISO 1183	26 MPa ISO 527	-	40% ISO 527	No breaK ISO 179eU	88,5/38V°C ISO 306	85/89°C ISO 75
IGLIDUR 150	1,3 g/cm	-	-	-	-	-	-
PLA	1,4 g/cm ASTM D792	60/32 MPa ASTM D882	3600 MPa ASTM D882	6% ASTM D882	16 J/m ASTM D256	-	55°C ASTM E2092
PA	1,4 g/cm ISO 1183	200 MPa ISO 527	-	-	-	-	240°C ISO 75
TPU	1,20 g/cm ISO 1183-1	49 MPa DIN 53504	7,5/16 MPa DIN 53504	600% DIN 53504	-	-	-
PP	0,96 g/cm ISO 1183A	23 MPa ISO 527	1400 MPa ISO 527	20% ISO 527	-	-	-
PVC	1,35 g/cm 10-LA 022	49 MPa 10-LA 049	-	13,1% 10-LA 049	-	71 °C ISO 306	-
ABS	1,04 g/cm ISO 1183	39/32 MPa ISO 527	-	20% ISO 527	24/10 kJ/m ISO 180+1A	103/96°C ISO 306	81°C ISO 75-A

Composites

PA+CF

- High strength, hardness and rigidity.
- High-technical durable long-life material.
- Good properties also at low temperatures.
- Easy to print.

PA+Aramid

- The reinforcement with aramid fibers gives it tribological. properties and wear resistance.
- Smooth surface.
- Properties kept in a wide range of temperatures.

PC+PBT

- Chemical resistance.
- Easy to print, glossy finish.
- PC gives it good impact resistance and PBT good lubrication.

PC+ABS

- Great mechanical properties such as impact resistance, flexural strength.
- Excellent temperature resistance.
- Smooth finish.
- Resistant to chemicals wear and long-term loads.

	Density	Tensile Strength	Tensile Modulus	Elogation at break	Izod impact strength	Vicat softening temperature	Heat distortion temperature
PA+CF	1,25 g/cm ASTM D792	54,5 MPa ISO 527	103% ISO 527	103% ISO 527	-	-	-
PC+ABS	1,07 g/cm ASTM D792	42 MPa ISO 527-1,2	7% ISO 527-1,2	7% ISO 527-1,2	55/41 J/m ISO 180-1A	113/115 °C ISO 306	-
PC+PBT	1,05 g/cm ISO 1183	2050 MPa ISO 257	-	-	-	155°C ISO 306	105°C ISO 75
ARAMID	1,3 g/cm	42 MPa ISO 527-1,2	7% ISO 527-1,2	7% ISO 527-1,2	55/41 J/m ISO 180-1A	113/115 °C ISO 306	-

EVAM Software ®

Additive manufacturing Execution System (MES) to control and monitor all your AM factories.

EVAM® organizes and manages the workflow to ensure repeatability, traceability and productivity.

EVAM® empowers manufacturers to create and manage digital warehouses and scale production on-demand.

EVAM® is the fastest sourcing platform to produce parts on demand, centralize orders and optimize production.

EVAM® empowers manufacturers to remotely control machines and factory floor.

Digital Warehouse

100 GB of Digital Warehouse

Project management

Quotation engine

Version control of designs

Production Planning and Scheduling

100 GB of Digital Warehouse

Project management

Quotation engine

Version control of designs

Build simulation and scheduling

Stock control of materials

Custom deployment

Enterprise

All digital warehouse features

All production planning and scheduling features

Machine and shopfloor connectivity

Data analytics and reporting system

Traceability of printed parts

TRIDITIVE
ADDITIVE MANUFACTURING

TRIDITIVE

ADDITIVE MANUFACTURING

AMCELL® is an industrial 3D Printer for mass production of Metals and polymers.
Traditive leads the automation of Addictive Manufacturing.

TRIDITIVE SPAIN

Ctra. Oviedo-Santader km 8
Meres, Asturias, Spain, 33199
Phone: (+34) 984 200 010

TRIDITIVE USA

1 Constitucion Plaza, 2nd Floor.
Hartford, Connecticut. 06103
Phone: (+1) 860 502 2255

CONTACT

info@triditive.com
www.triditive.com