

Roboze

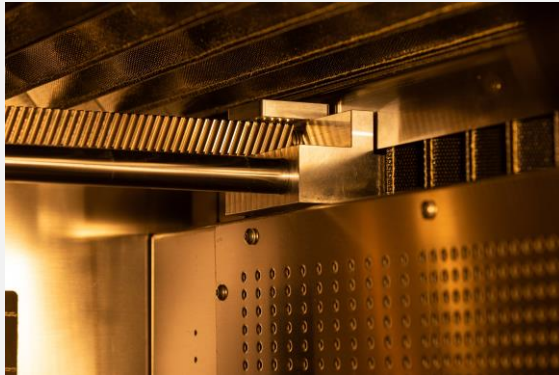
3D Printers and Materials

Three factors that make Roboze technology one-of-a-kind

Technology

Patented Beltless System

- Mechanical Repeatability;
- 10 μm positioning tolerance;
- Low Maintenance.



HVP Extruder (Patent pending)

- Optimize flow of high viscosity polymers;
- Reduce shrink rate;
- Avoid extruder clogging.



Insulated Heated Chamber

- Up to 180 $^{\circ}\text{C}$ (356 $^{\circ}\text{F}$);
- Uniform airflow and controlled temperature;
- Thermal post processing is not necessary.



Professional Series

Our Solutions



Roboze One+400 Xtreme

Produce prototypes in super polymers

Accelerate your product development by using advanced materials.



Roboze One Xtreme

Speed up the design and validation phase

Tolerances and repeatability guaranteed with a solid and industrial 3D printing system.

**DESIGN
FREEDOM**

**15 μ m POSITIONING
ACCURACY**

**HIGH-PERFORMANCE
MATERIALS**

**REPEATABLE
PROCESS OVER TIME**

Professional Series

Our Solutions



#PrintStrongLikeMetal

Professional Series

	Roboze One Xtreme	Roboze One+400 Xtreme
Build Volume	300 x 250 x 200 mm 11.8 x 9.8 x 7.9 in	300 x 250 x 220 mm 11.8 x 9.8 x 8.7 in
Extruder Temperature	300 °C / 572 °F	450 °C / 842 °F
Bed Temperature	100 °C / 212 °F	180 °C / 356 °F
Vacuum Plate	Yes	
Accuracy	XY: 15 µm / 590.55 µin Z: 25 µm / 984.25 µin	
Resolution	Quality Profile: 0.18 mm / 0.007 in Ultra Quality Profile: 0.12 mm / 0.005 in* Speed Profile 0.24 mm / 0.009 in Ultra Fast Profile: 0.36 mm / 0.014 in	

MATERIALS

	Roboze One Xtreme	Roboze One+400 Xtreme
ULTRA-PLA	X	X
STRONG-ABS	X	X
FUNCTIONAL-NYLON	X	X
ABS-ESD	X	X
CARBON PA	X	X
PP	X	X
FLEX-TPU	X	X
PEEK		X
CARBON PEEK		X

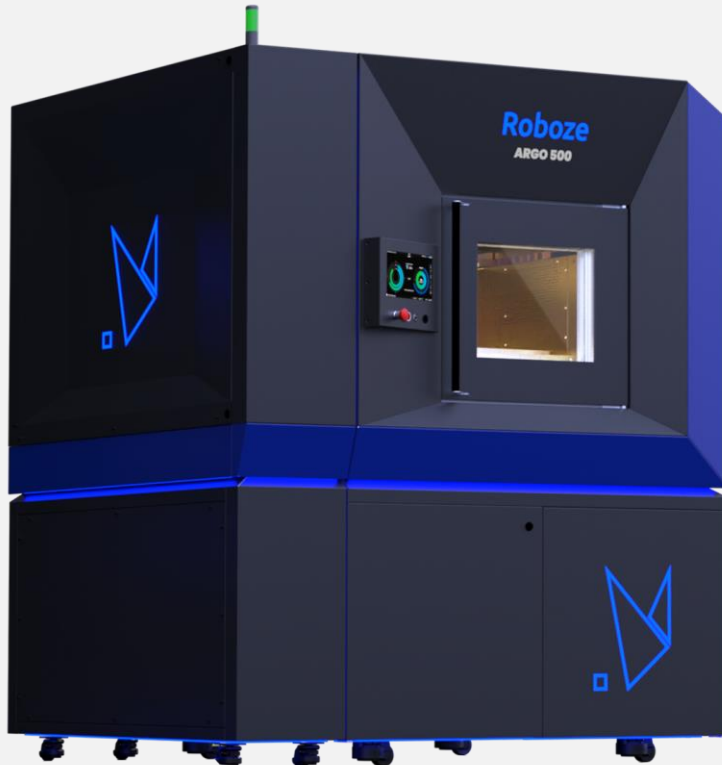
*Only for Roboze One+400 Xtreme



Roboze

Production Series

Our Solutions



Roboze ARGO 500

Produce large parts and custom batches

The first large-format super polymer 3D printer for industrial production



Roboze ARGO 350

Produce parts with super polymers and composites

Produce your parts in a few hours, with the Argo 350 on your shop floor.

**LARGE-SCALE
FINISHED PARTS**

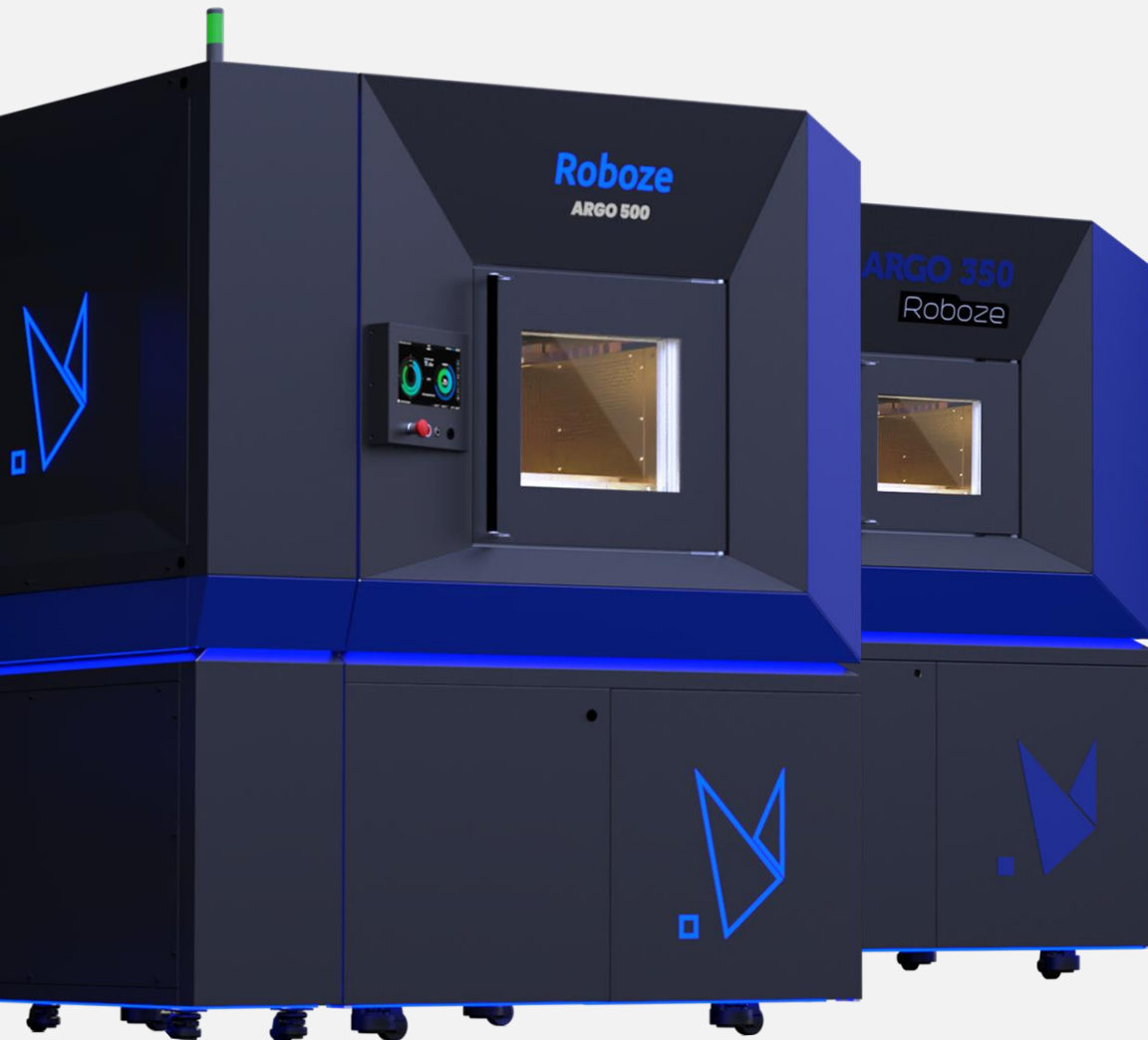
**10 μ m POSITIONING
ACCURACY**

**HIGH-PERFORMANCE
MATERIALS**

**REPEATABILITY
PROCESS OVER TIME**

Production Series

Our Solutions



#PrintStrongLikeMetal



Roboze

	Production Series	
	Roboze ARGO 350	Roboze ARGO 500
Build Volume	350 x 300 x 300 mm 13.8 x 11.8 x 11.8 in	500 x 500 x 500 mm 19.7 x 19.7 x 19.7 in
Extruder Temperature	450 °C / 842 °F	
Heated Chamber	180 °C / 356 °F	
Vacuum Plate	Yes	
Accuracy	XY: 10 µm / 393.70 µin Z: 25 µm / 984.25 µin	
Resolution	Quality Profile: 0.225 mm / 0.009 in Speed Profile 0.300 mm / 0.012 in	
MATERIALS		
ULTRA-PLA	X	X
STRONG-ABS	X	X
FUNCTIONAL-NYLON	X	X
ABS-ESD	X	X
CARBON PA	X	X
PP	X	X
PC-LEXAN™AMHI240F	X	X
FLEX-TPU	X	X
ULTEM™AM9085F	X	X
PEEK	X	X
CARBON PEEK	X	X
Helios™ PEEK 2005	X	X

Roboze Materials



PC-LEXAN™
Polycarbonate + Siloxane

High impact resistance and ductility at low temperature (up to -30°C)
Flame and UV rays resistance



FUNCTIONAL-NYLON
Polyamide 6

Low wear and low friction coefficient
Good chemical and mechanical resistance



ABS-ESD
ABS + Carbon Nanotubes

Electrostatic discharge protection with a surface resistivity of $10^7 \Omega$ (the typical range is 10^6 - $10^9 \Omega$)



PP
Polypropylene

High chemical resistance, bump and abrasion.
electric insulation properties.



FLEX-TPU
Thermoplastic polyurethane

Abrasion and fatigue resistance
High elasticity and good hardness
Atmospheric agents and ozone resistance



STRONG-ABS
Acrylonitrile-butadiene-styrene

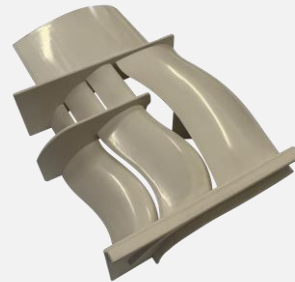
Good processability
Impact resistance
Low water absorption



ULTRA-PLA
Polylactic Acid

High surface quality
Easy to print
Sustainable and hypoallergenic

Roboze Materials



PEEK Polyether ether ketone

- Extreme chemical resistance
- High thermal resistance
- Self lubricating

Continuous Use Temperature

Test Method: ASTM D3045
Value: **250°C**

Carbon PEEK PEEK + Carbon Fibers

- High compression strength
- High mechanical properties
- Ideal for metal replacement in the most extreme environments.

HDT (load 1.82MPa)

Test Method: ASTM D648
Value: **250°C**

Helios™ PEEK 2005 PEEK + Ceramic Fibers

- Stiff and strong at high temperatures
- Thermal and electrical insulation
- Easy to print and post-process

Tensile Strength

Test Method: ASTM D638
Value: **125 MPa**

Carbon PA PA + Carbon Fibers

- High tensile strength
- High tensile modulus
- Good thermal resistance

Tensile Strength

Test Method: ASTM D638
Value: **93 MPa**

ULTEM™AM9085F Polyether imide

- Thermal resistance
- Flame retardant
- Good surface quality

EN 45545

Certification

Industrial Production Challenges

AUTOMOTIVE



Traditional technology



Roboze technology



Centering device

Reduction of parts in the warehouse: 92%

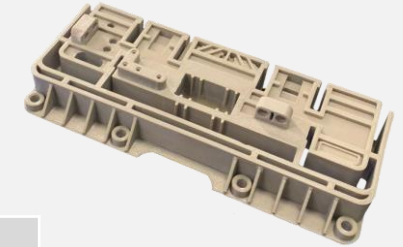
ELECTRICAL MOBILITY



Traditional technology



Roboze technology



Busbar Support

Cost saving: 39%

Material	Metal	Carbon PA
Production costs	€ 195 / \$ 235	€ 134 / \$ 161
Production time	3 weeks	6 hours
Stock in warehouse	200	16

Material	PEEK	PEEK
Production costs	€ 1.502 / \$ 1.807	€ 922 / \$ 1109
Production time	3 weeks	24 hours
Material waste	79%	0,5% Supports & raft

DEFENCE



Traditional technology



Roboze technology



Gear in Carbon PEEK

Weight reduction: 84%

AEROSPACE



Traditional technology



Roboze technology



Cup Holders in ULTEM™ AM9085F

Cost saving: 71%

Material	Leaded brass	Carbon PEEK
Production costs	€ 329 / \$ 396	€ 97 / \$ 117
Production time	6 months	5 hours
Weight	419 g	67 g

Material	ULTEM™ AM9085F	ULTEM™ AM9085F
Production costs	€ 15.000 / \$ 18.047 + variable costs	€ 661 / \$ 795
Production time	3 weeks	6 hours
Occupied space in Warehouse	Yes (Mould)	None

Our official reseller:



**GORDIUSZ
ALFA**

www.gordiuszalfa.hu

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