

Roboze

3D Printers and Materials



**GORDIUSZ
ALFA**

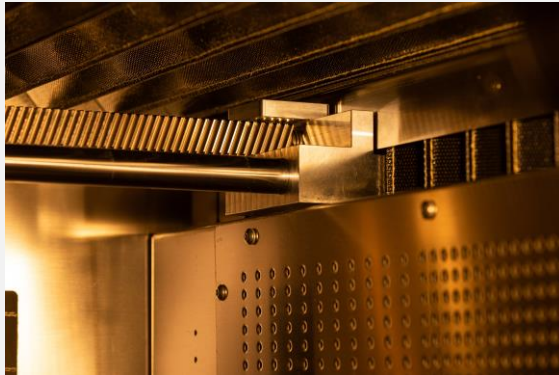
Célhoz az eszköz

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 °C (356 °F);
- Uniform airflow and controlled temperature;
- Thermal post processing is not necessary.



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



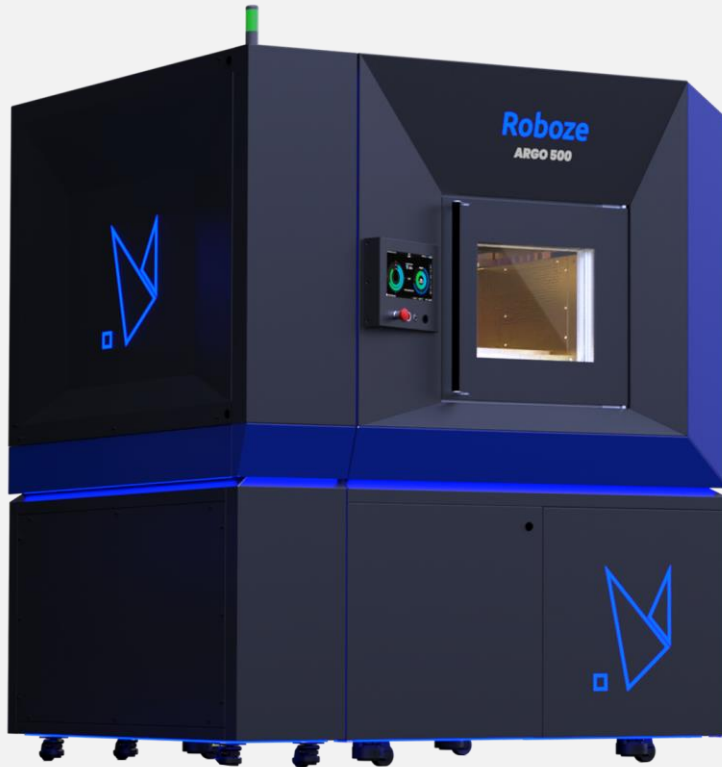
#PrintStrongLikeMetal

	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		
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



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**

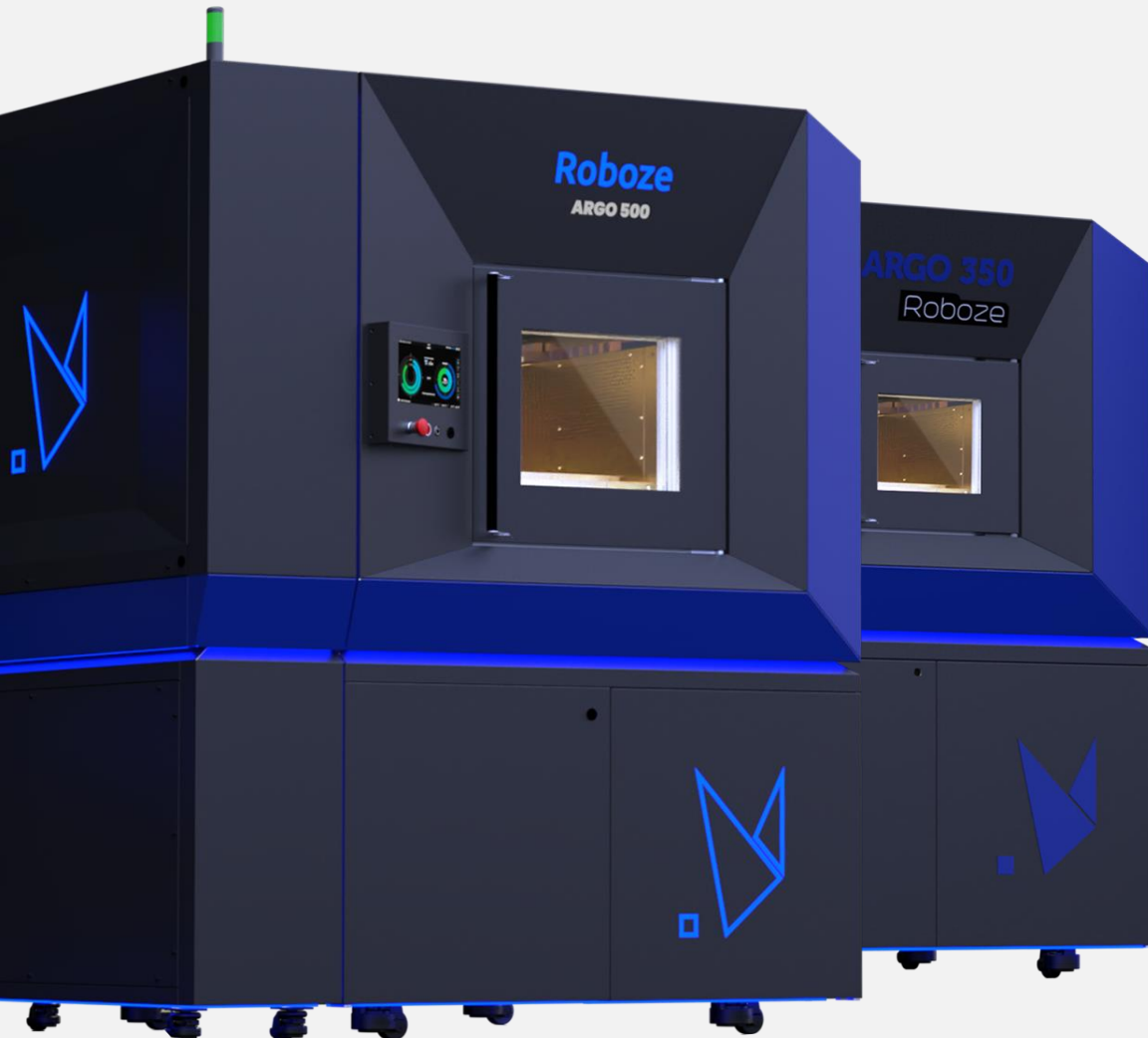
**10 μ m POSITIONING
ACCURACY**

**HIGH-PERFORMANCE
MATERIALS**

**REPEATABILITY
PROCESS OVER TIME**

Production Series

Our Solutions



#PrintStrongLikeMetal



	Production Series	
	Roboze ARGO 350	Roboze ARGO 500
Build Volume	350 x 300 x 300 mm	500 x 500 x 500 mm
	13.8 x 11.8 x 11.8 in	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



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

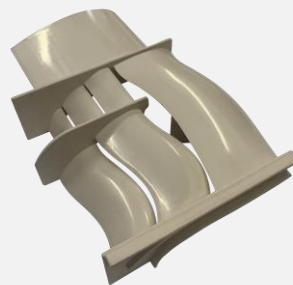
High compression strength

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

Roboze 3D Printing to be competitive and generate profits

Industrial Production Challenges

AUTOMOTIVE



Traditional technology



Roboze technology



Centering device

Reduction of parts in the warehouse: 92%

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

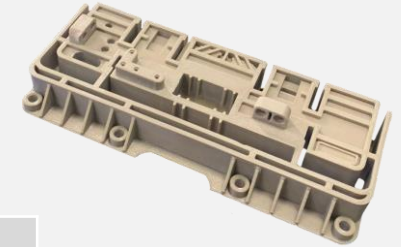
ELECTRICAL MOBILITY



Traditional technology



Roboze technology



Busbar Support

Cost saving: 39%

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%

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

AEROSPACE



Traditional technology



Roboze technology



Cup Holders in
ULTEM™ AM9085F

Cost saving: 71%

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

BARI, IT

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