



AVENCO 3D

Large-Scale Additive
Manufacturing Solutions



ROBOTIC PRINTERS

Mobility

Linear Robotic Printers offer a large print area on linear rails, allowing the print head to move freely along the x, y, and z axes. This enables larger and more complex production processes.

Print Area

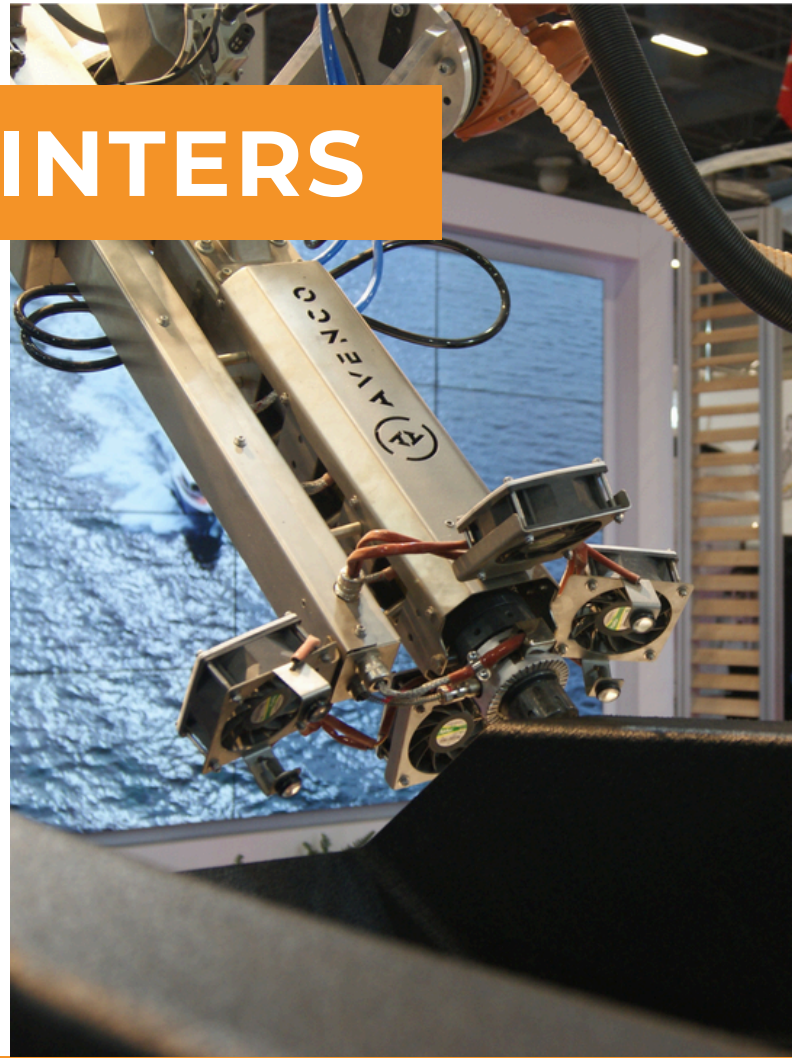
Linear Robotic Printers, with their large print volume, are ideal for the production of large parts. Their movable structures make it possible to print complex shapes with ease.

Flexibility

Linear Robotic Printers offer flexible production solutions by working with various materials and geometries, thanks to the free movement capability of the print head.

Precision and Repeatability

Linear Robotic Printers provide high precision and repeatability over large areas. This accuracy enables the reliable production of prints with fine details.



Linear Axis added Robotic Printer

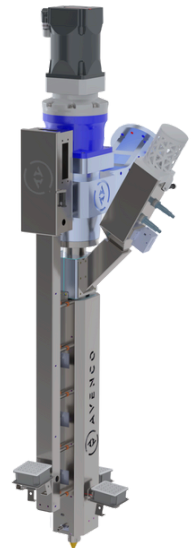
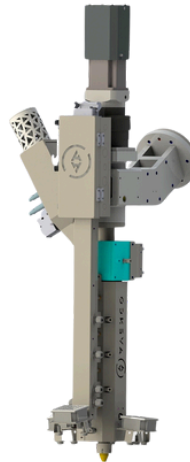
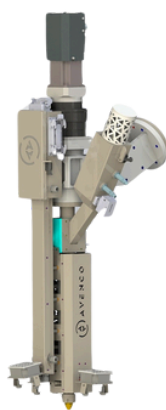
AVEX Series

Next Generation Thermoplastic 3D Printers

AVEX10

AVEX20

AVEX32



450°C Max
Temperature



High Productivity
With GF/CF
Reinforced Polymers



Long-Term
Operation



Multi Angular
Printing



Compatibility With
Complex Structures



TECHNICAL SPECS

	AVEX10	AVEX20	AVEX32
Screw Diameter	18 mm	25 mm	35 mm
Extrusion Output	12 kg/h	20 kg/h	32 kg/h
Heating Zones	4	4	4
Max Temperature	450 °C	450 °C	450 °C
Material Support	PP, ABS, PETG, PA, PC, GF/CF	Same as AVEX10	Same as AVEX10
Integration	Robot mountable	Robot or gantry mountable	Robot or gantry mountable
Use Case	Compact prototyping	Prototyping & Medium-scale	High-output & Tooling
Motor Type	2.9 kW air cooling	5.4 kW air cooling	11.8 kW liquid cooling
Weight	78 kg	84 kg	140 kg
Communication	Fully synchronized	Fully synchronized	Fully synchronized
Control	Dynamic PID Control	Dynamic PID Control	Dynamic PID Control

RAW MATERIALS



PLA

Polylactic Acid

PC

Polycarbonate

ABS

**Acrylonitrile
Butadiene Styrene**

PA

Polyamide

TPU

**Thermoplastic
Polyurethane**

PESU

Polyethersulfone

PP

Polipropilen

PETG

**Polyethylene
Terephthalate Glycol**

MATERIALS SPECS

PLA

- ParagBiodegradable and easy to print with low warping
- **T:** 190–220 °C
- **E:** 3.5 GPa
- **S:** 50–70 MPa
- **p:** 1.24 g/cm³

PC

- High impact and temperature resistance, transparent
- **T:** 260–310 °C
- **E:** 2.4 GPa
- **S:** 60–70 MPa
- **p:** 1.20 g/cm³

ABS

- Durable, suitable for post-processing, large prints
- **T:** 230–260 °C
- **E:** 2.1 GPa
- **S:** 40–50 MPa
- **p:** 1.04 g/cm³

PA

- Flexible and strong, with high abrasion resistance
- **T:** 240–270 °C
- **E:** 2.5 GPa
- **S:** 75–85 MPa
- **p:** 1.14 g/cm³

TPU

- Elastic, highly impact resistant, suitable for flexible parts
- **T:** 220–250 °C
- **E:** 0.02 GPa
- **S:** 30–50 MPa
- **p:** 1.21 g/cm³

PESU

- Excellent chemical and heat resistance for high-end uses
- **T:** 370–430 °C
- **E:** 2.7 GPa
- **S:** 85–95 MPa
- **p:** 1.37 g/cm³

PP

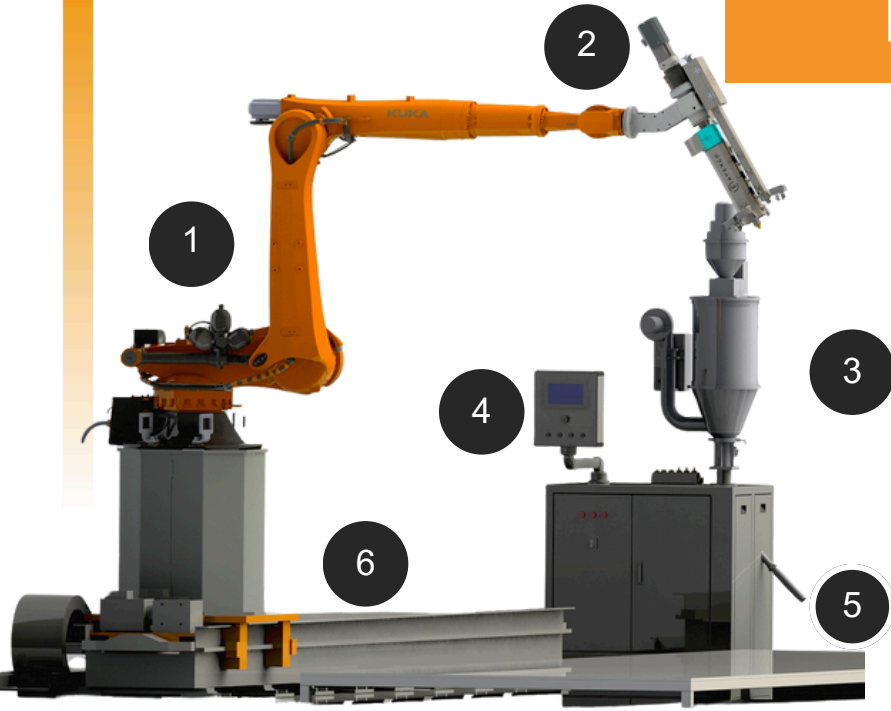
- Lightweight and chemical resistant with good toughness
- **T:** 220–250 °C
- **E:** 1.6 GPa
- **S:** 25–35 MPa
- **p:** 0.90 g/cm³

PETG

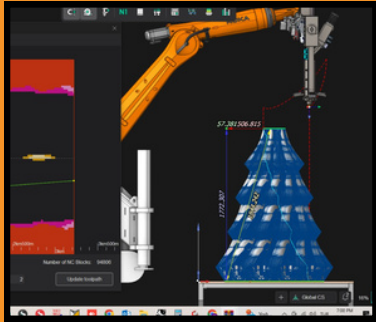
- Tough, semi-transparent, and low shrinkage material
- **T:** 230–250 °C
- **E:** 2.1 GPa
- **S:** 45–55 MPa
- **p:** 1.27 g/cm³

- **T:** Nozzle temperature range required for extrusion
- **E:** Stiffness of the material (resistance to elastic deformation)
- **S:** Maximum tensile stress the material can withstand
- **p:** Material density, indicating weight per unit volume

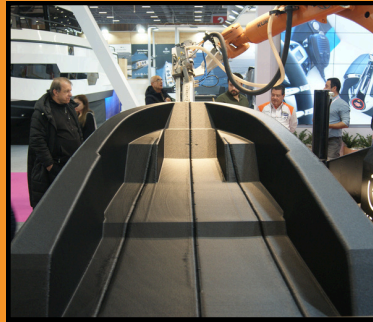
DESIGN



1. KUKA ROBOT
2. AVEX SERIES
3. DRYER
4. CONTROL PANEL
5. PRINTING TABLE
6. SLIDER (3-30 m)



CAM



Operation



Support

ency
Go Beyond CAD/CAM

KUKA

Official System
Partner

BECKHOFF
New Automation Technology

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