

Modix BIG-120Z

Product Brochure

Technical Specifications



BIG-120Z Highlights

- Print volume - 600 x 600 x 1,200 mm
- Price starts from only 8,000 USD
- Premium components
- Self assembly kit
- Multiple add-ons
- Heavy duty design
- Open architecture
- Future ready
- Premium support

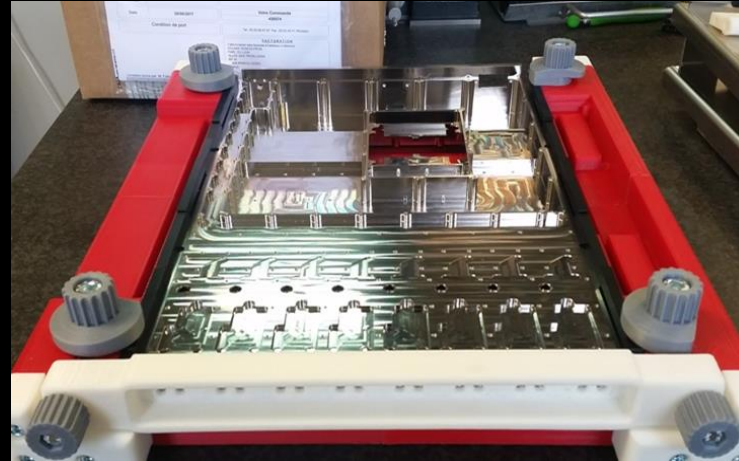
Your Best Next 3D Printer!



Why a Large 3D Printer?

Printing large models as one object makes them stronger and saves time on post processing. Use cases include:

- Customized large enclosures
- Manufacturing jigs
- Prototyping
- Cast molds
- Composite plugs
- Batch production - Modix 3D printers are capable of printing multiple small items in a single sequenced 3D print job.



What is IDEX?

IDEX stands for independent extruders. With IDEX, each print head can move independently in respect to each other and as a result, the idle print head can park outside the print bed.

IDEX is the best way to handle dual material printing as the idle print head doesn't drip or scratch the main model which happens when both heads are on the same carriage.

Save time on post processing – with IDEX, you can use an easy breakaway support material and remove support structures easier than when using the same filament for support. Bottom surfaces also come out smoother.

Print complex geometries – You can print parts with internal geometries and models using soluble support filament and parts with thinner features since support breaks out easily.



With soluble support



With breakaway support

Premium Components



Extruder – Sweden



Controller -
UK



Aluminum Bed -
USA



Power Supply - Taiwan



Motion Rails - Taiwan



Signal Wires - Germany

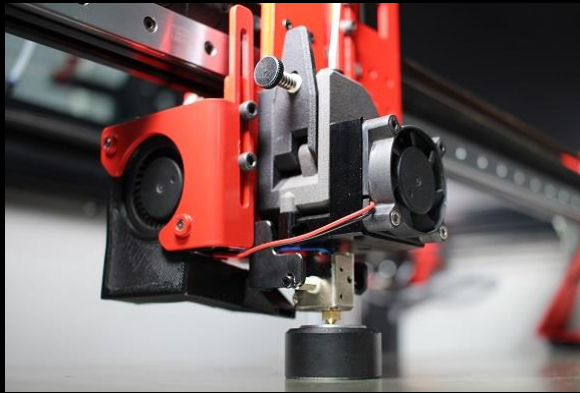


Timing Belts - USA

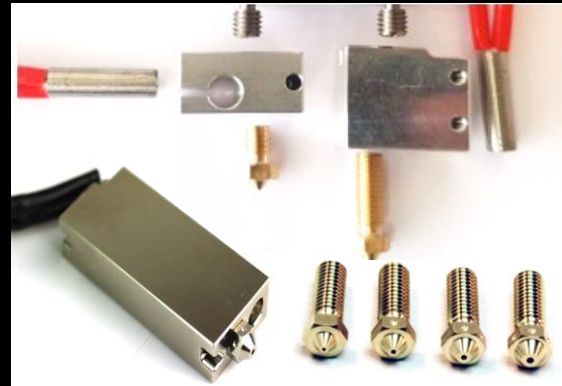


Motor Driver - Germany

Features & Highlights



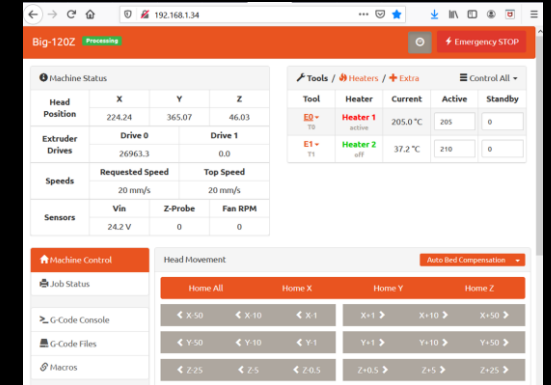
High flow & temp. extruder



Wide hotend selection



7-inch touchscreen



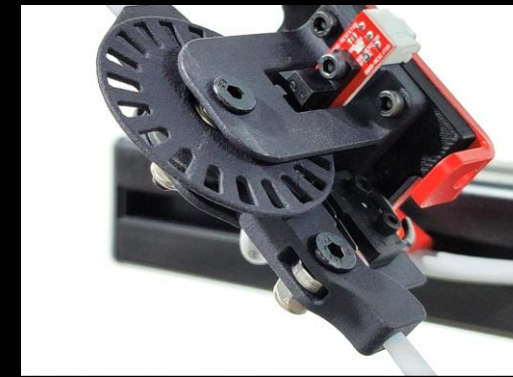
Remote web interface



Advanced DUET electronics



Magnetic bed



Clog Detector



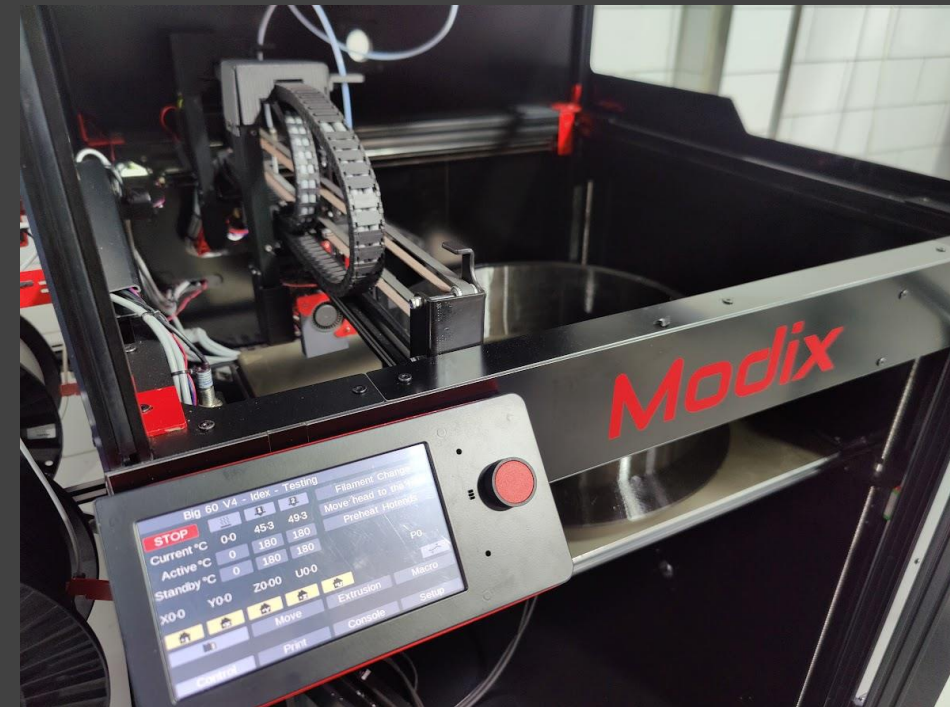
Power failure resume

Heavy Duty Design

Printing quality and reliability are determined not only by the quality of the machine's components, yet also by its design.

Modix machine design guidelines:

- Robustness of chassis and motion system
- Reduced electromagnetic noise
- Safe operation and safe assembly
- Easy assembly
- Easy maintenance
- Time between maintenance cycles
- Long-lasting calibration
- Ergonomics



Self Assembly

Modix 3D printers are delivered as self-assembly kits. The advantages for the customers are:

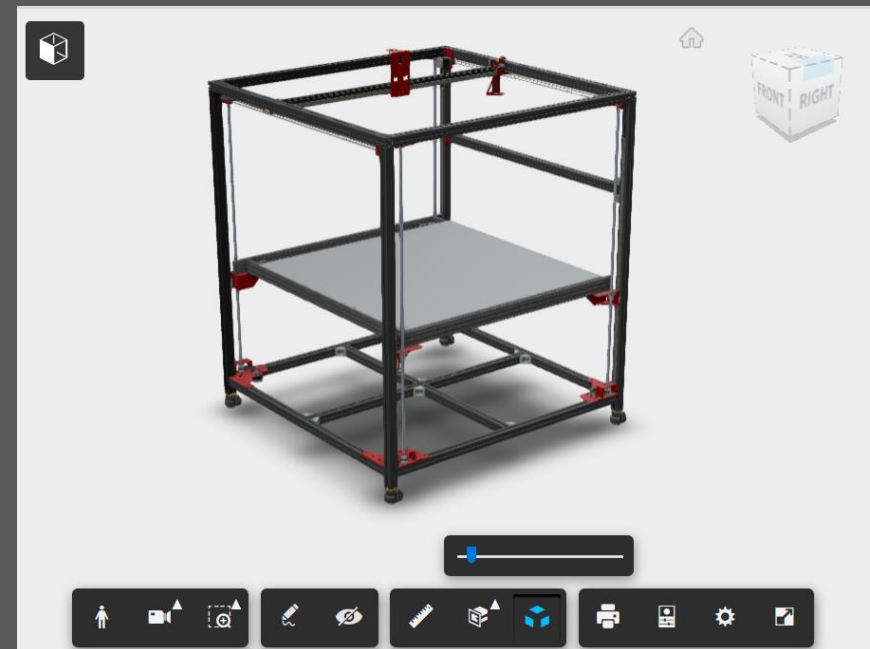
- In-depth knowledge of the machine
- Easier to customize, maintain and upgrade
- Independency
- Cost saving on assembly and shipment
- Compact packing allows flexibility in selecting assembly location
- Great learning experience

Online assembly guides contain:

- Detailed textual and visual step-by-step instructions
- Video demonstration for every step
- Rotatable online 3D models of sub-assemblies



Video for each assembly step

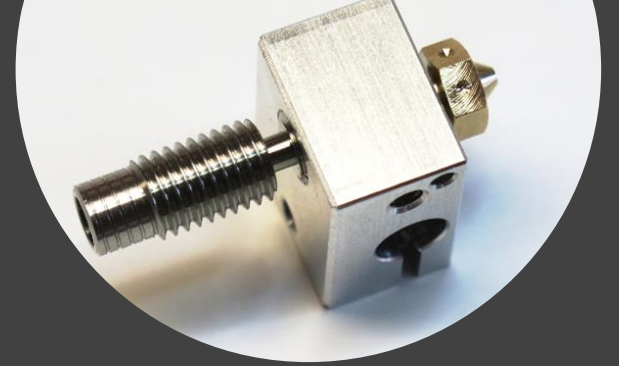
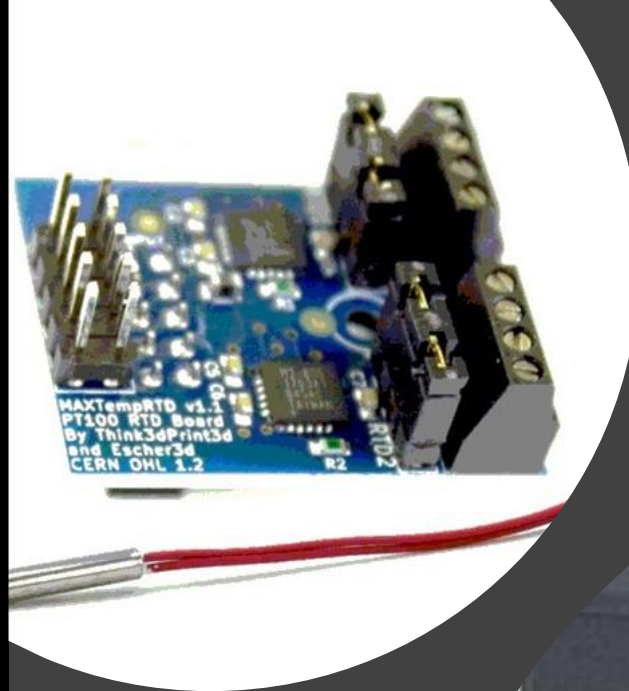


Online 3D models

Modularity

Modix 3D printers are modular by nature. Users can easily change the configuration of the printer based on a large selection of add-ons including:

- Three different hot-ends to select from including: E3D Volcano (default), E3D V6 for detailed printing and E3D Super-Volcano for high flow extrusion rates.
- Active air filter add-on that circulates the chamber air through a filtering system including a HEPA filter for small particles and active Carbon for removal of fumes.
- And more...



Future Ready

Modix 3D printers are designed for future upgrades and new technologies. When a new version is released, an upgrade is offered to our customers.

As creators, we believe that products should be designed to serve for long period of time, not to be replaced when a new model is coming out.



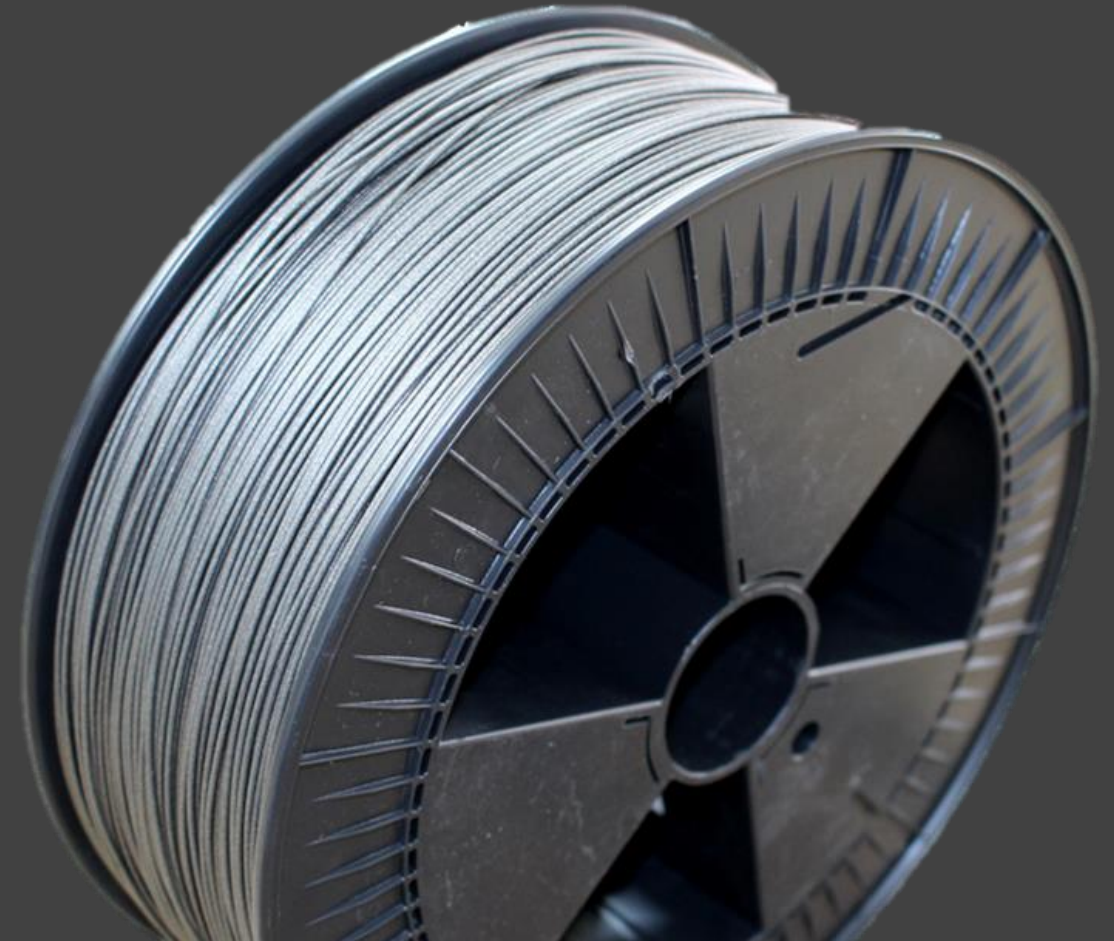
Filament

Modix default print head supports a wide line of filament including:

PLA, ABS, PET-G, PVA, ASA, HIPS, Nylon (PA), Polypropylene (PP), TPU/TPE (flexibles) and more.

Carbon filled filaments and other particle filled filaments such as wood or metal filled filaments require a special nozzle that can handle the abrasive nature of these filaments. Please refer to “E3D Nozzle X” or “The Olsson Ruby” third party alternatives.

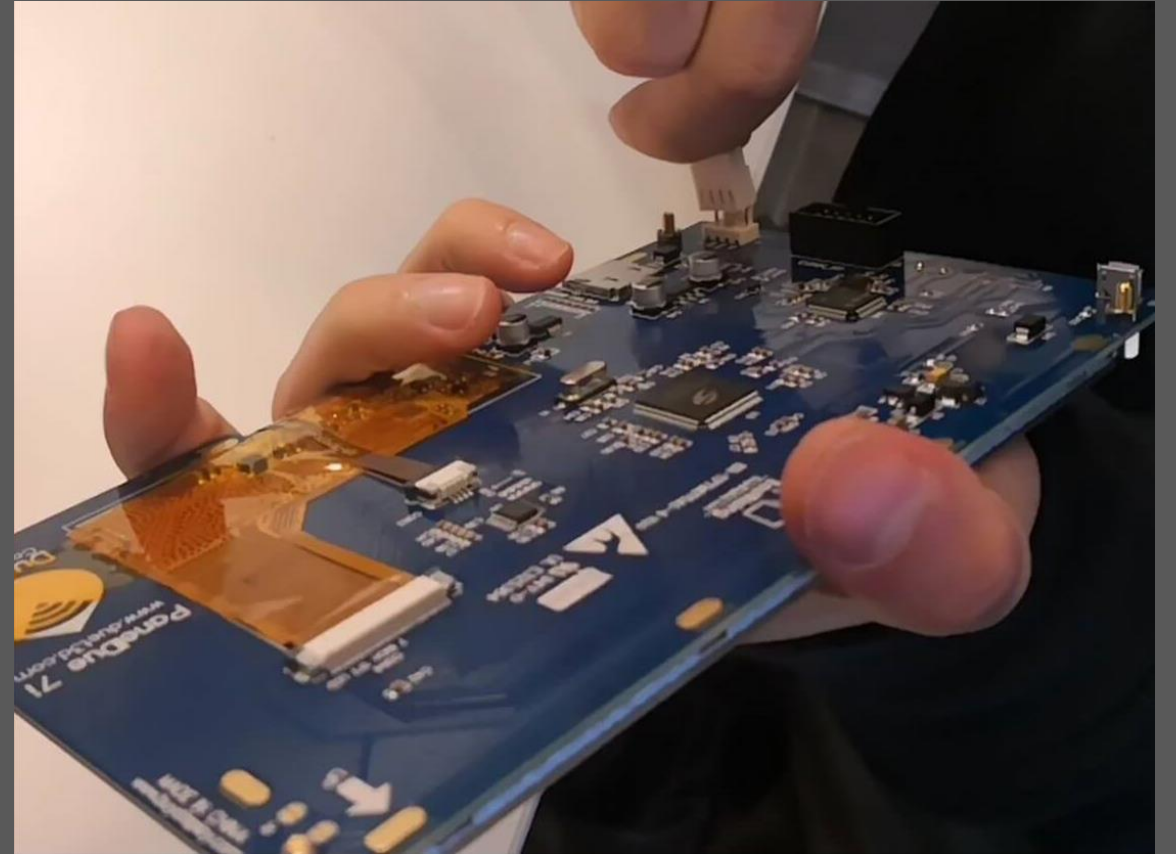
By using the “PT-1000 thermistor” add-on available in our online shop, customers may increase the print head maximum temperature to 500°C.



Open Architecture

Our customers are not locked-in! Users can select filament from any source and make a use of various modeling and slicing software solutions, to their own preferences.

As our components are sourced from leading vendors, owners of Modix printers enjoy a wide line of add-ons, aftermarket modifications and several enthusiastic Modix related user's communities.



Outstanding support

We at Modix believe that hardware is just another form of service. Therefore, we spare no efforts to walk the extra mile towards our customers.

We provide:

- 1-year warranty to all our products
- Lifetime free support
- Email support requests, cleared daily
- Video support sessions upon request

Modix is proud of its prompt and professional support services!



Technical Specifications



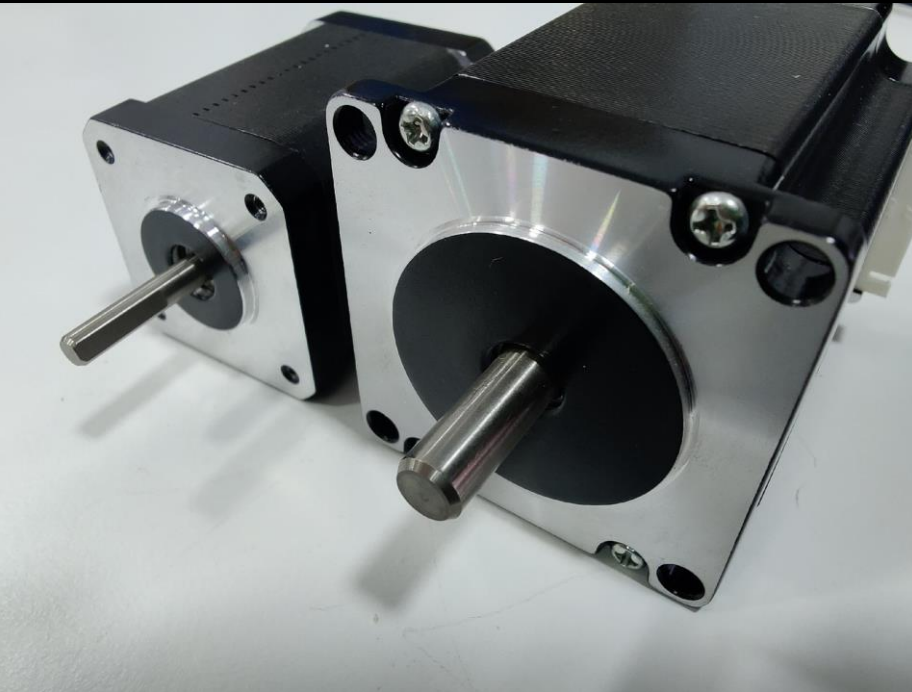
General

Technology	FFF: Fused Filament Fabrication
Print volume (metric, XYZ)	600 x 600 x 1,200 mm / ~47 x 23.6 x 25 inch
Machine size (WxDxH) * with enclosure	906 x 1,060 x 2,066 mm / 35.6 x 41.7 X 75.4 inch
Shipping weight	140kg
Assembly	Self-Assembly
Closed print chamber	Optional
Enclosure type	Aluminum composite panels (ACP), 3mm thick. Polycarbonate doors and top lid
Feet	Articulated leveling feet included Casters - optional



Print Head

Number of print heads	One print head included, secondary (IDEX) - optional
Default filament diameter	1.75mm
Extruder brand & model	Bondtech BMG Extruder (direct drive)
Hotend brand & model	Modix Griffin High Flow. Optional add-ons: V6 (detailed) and Super-Volcano (high flow)
Included nozzles (mm)	0.4, 0.6, 0.8 Primary hotend 0.4 for Secondary IDEX hotend
Hotend max. temperature	500°C (tested up to 340°C)
Extruder motors	Motech MT-1703HS168A Direct drive extruders gear reduction of 3:1
Filament sensor	Clog, filament runout and under extrusion detection



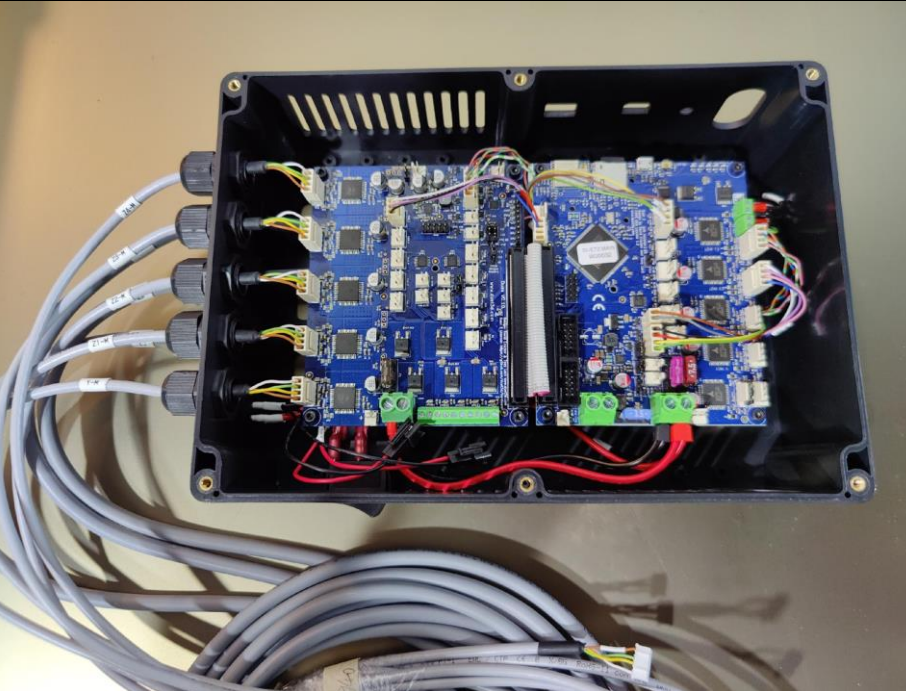
Motion

X & Y axes linear guides	HIWIN MGW9
Z axis guides	HIWIN MGW9
X & Y axes drive system	Gates GT2 width: 9mm, fiberglass reinforced
Z axis drive system	SFU1204 Ball screw 2:5 belt gear reduction
X axis motors	2 x NEMA-23 motors
Y axis motor	1 or 2 (IDEX) NEMA-17 motors
Z axis motors	4 x NEMA-23 motors
Resolution (XYZ)	4 x 4 X 0.5 micron
Printing speed	Up to 150mm/s (depends on nozzle & layer height)
Printing acceleration	Up to 1000mm/s ²

Print Bed



Bed plate	Alcoa Mic-6, 6.35mm milled cast aluminum plate
Number of heaters	AC heater, 1,370 Watt each
Temperature controller	Dual Autonics TCN4 PID controller
Maximum bed temperature	120°C
Bed leveling probe	BL touch probe.
Bed leveling	Automatic. Bed shape is measured by probing 100 different points.
Bed tilt leveling	Automatic
Bed motion system	4 x ball-nut screws. Each screw is mounted to a dedicated stepper motor with a belt gear system



Electronics

Electronic controller	Duet3D: Duet2 Wifi
User interface	7 inch Touch screen – PanelDue from Duet3D
Remote control (WiFi)	Upload Gcode files right from your desktop
Direct connectivity	SD Card, USB cable
Ethernet	Optional to replace with Duet3D Ethernet board (to be purchased directly from Duet3D)
Electronics (DC) power	Meanwell 24V/280Watt power supply powering the electronic and motion system. Universal AC input: 110-230V, 50/60 Hz
Bed heaters (AC) power	Direct AC feed, 1370W Silicone pad heater. Two versions are available: 110V and 230V. We supply according to shipping destination. Power requirement for bed heater in North America is a dedicated 15A outlet.
AC power cords	AC cords supplied according to country/destination

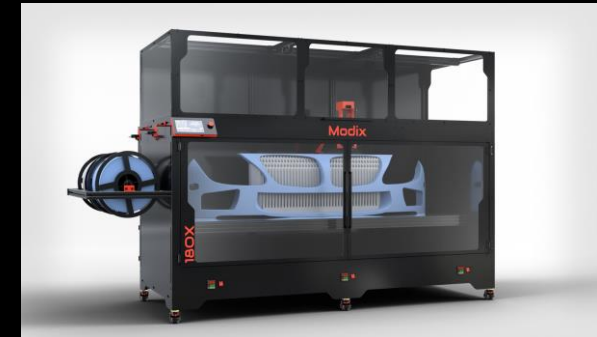
Modix's Line of Products



BIG-60
600 x 600 x 660 mm
From 5,400 USD



BIG-120X
1,200 x 600 x 640 mm
From 8,000 USD



BIG-180X
1,800 x 600 x 600 mm
From 17,000 USD



BIG-Meter
980 x 1,000 x 1,000 mm
From 15,000 USD



BIG-120Z
600 x 600 x 1,200 mm
From 8,000 USD



Everest
970x1,030x2,000 mm
From 27,000 USD

Modix Modular Technologies LTD.

Contact us!

<https://modix3d.com>

Sales@modix3d.com

Support@modix3d.com

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