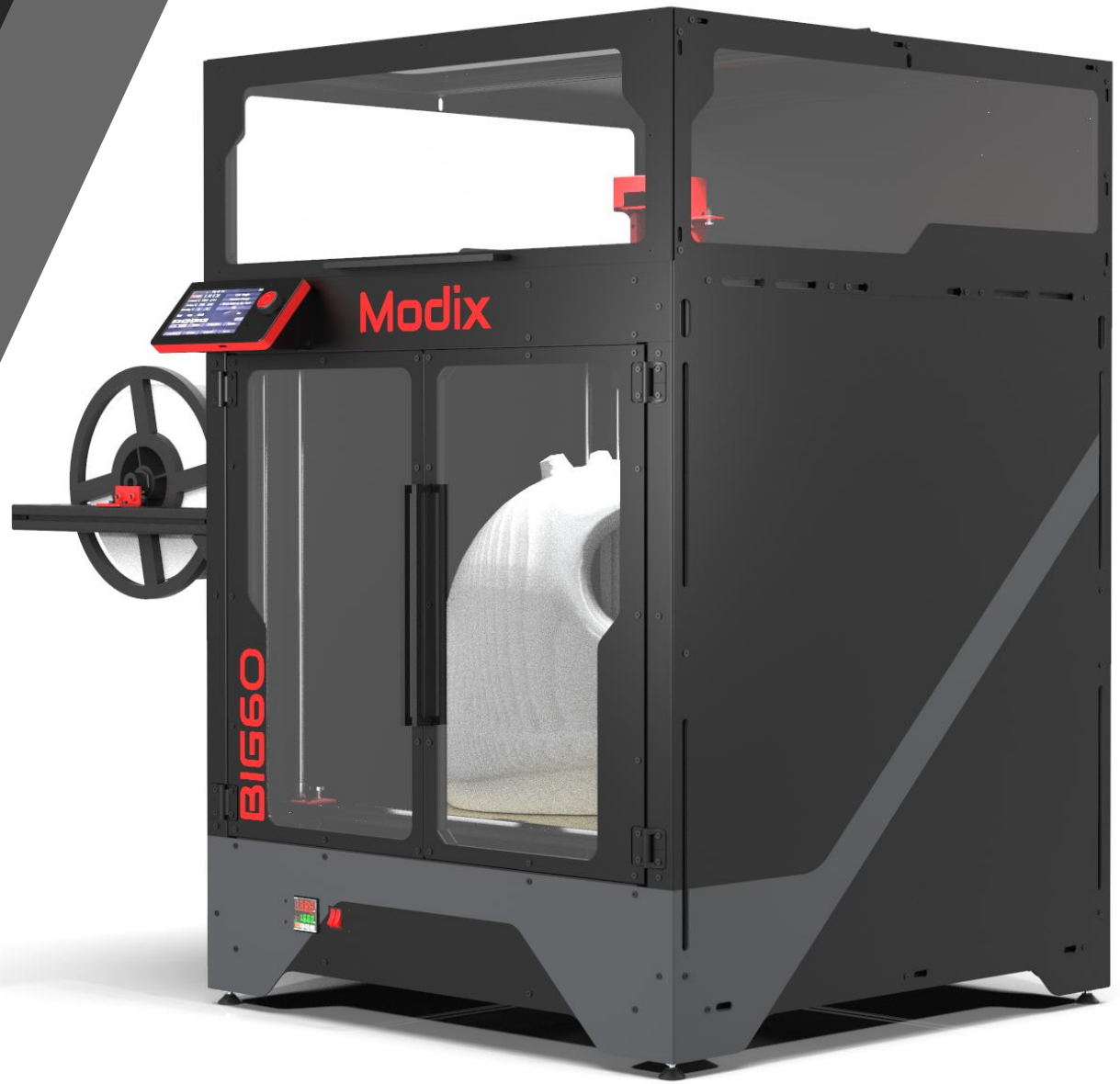
Modix
Large Scale 3D Printers

Modix BIG-60 V4

Product Brochure

Technical Specifications



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BIG-60 Highlights

- Large print volume - 600 x 600 x 660 mm
- IDEX dual print head technology
- Price starts from only 4,900 USD
- Premium components
- Self-assembly kit
- Multiple add-ons
- Heavy duty design
- Open architecture
- Future ready
- Premium support

Your Best Next 3D Printer!

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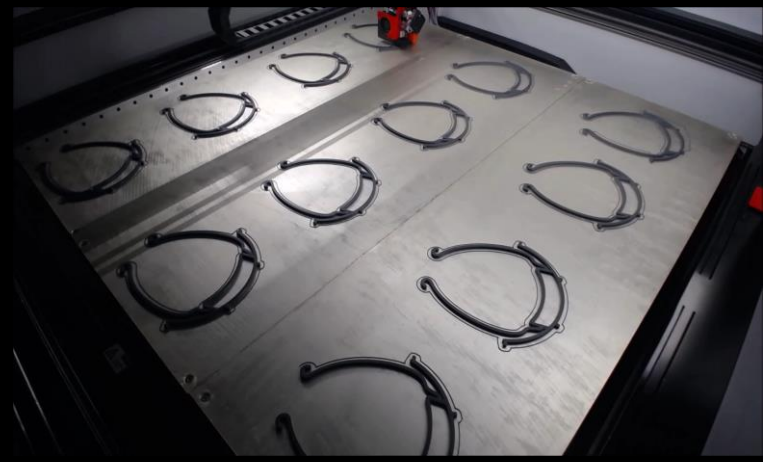
Why a Large 3D Printer?

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's 3D printers are capable of printing multiple small items in a single sequenced 3D print job.



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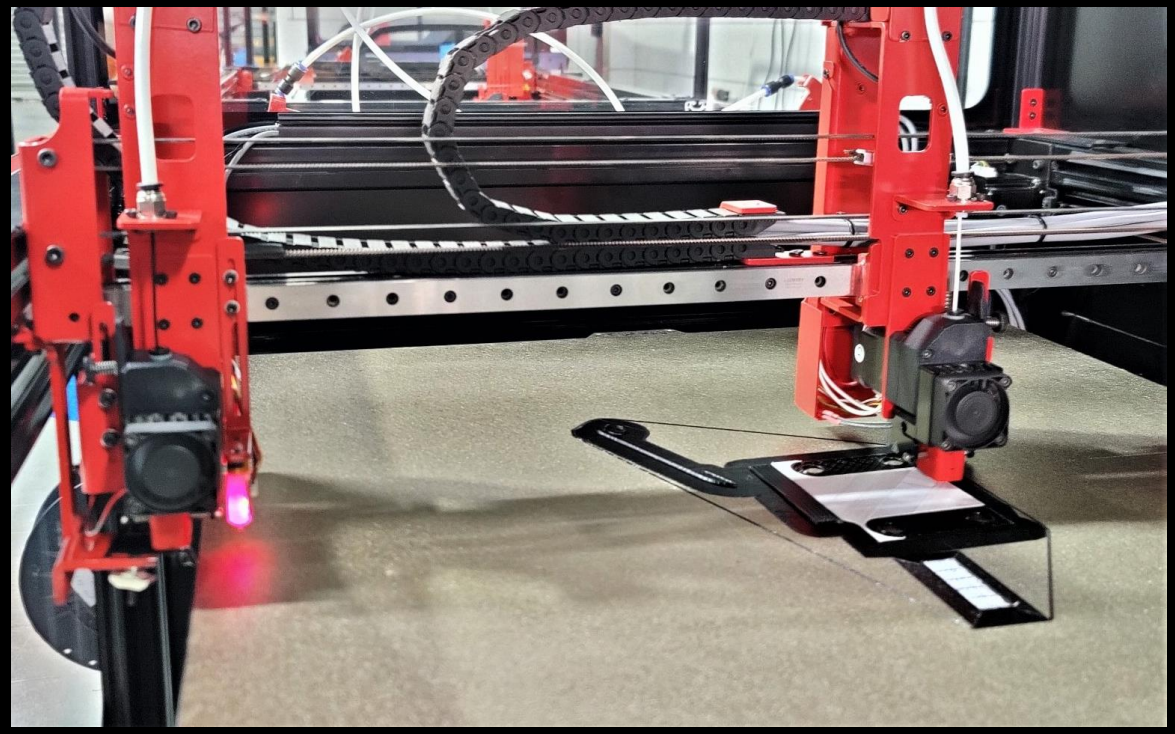
What is IDEX?

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.

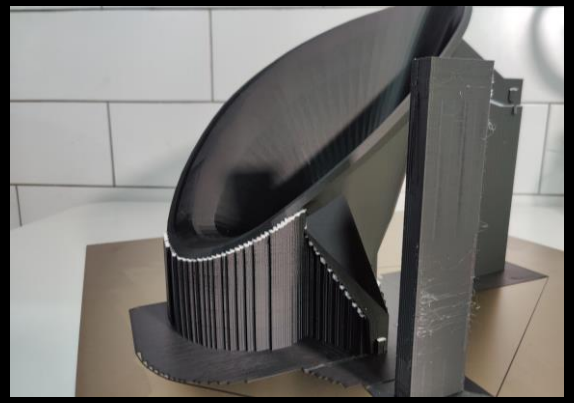
IDEX is the best way to handle dual material printing as the idle print head doesn't drip or scratch the main model which happens when both heads are on the same carriage.



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 our easily.

With soluble support



With breakaway support

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Premium Components

Extruder - Sweden

Controller - UK

Aluminum Bed - USA

Power Supply - Taiwan

Motion Rails - Taiwan

Signal Wires - Germany

Timing Belts - USA

Motor Driver - Germany

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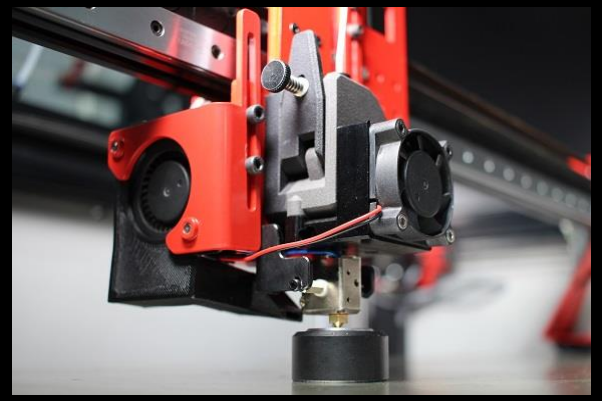
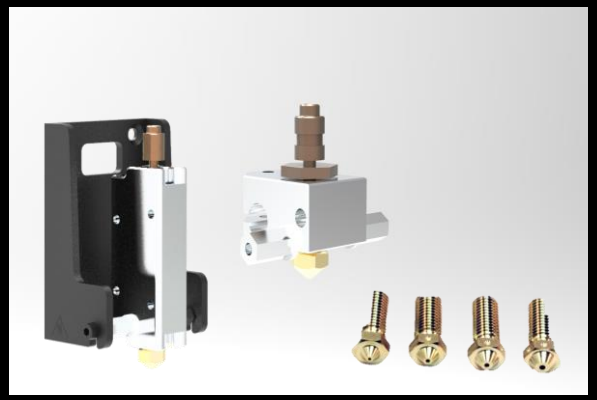
Features & Highlights

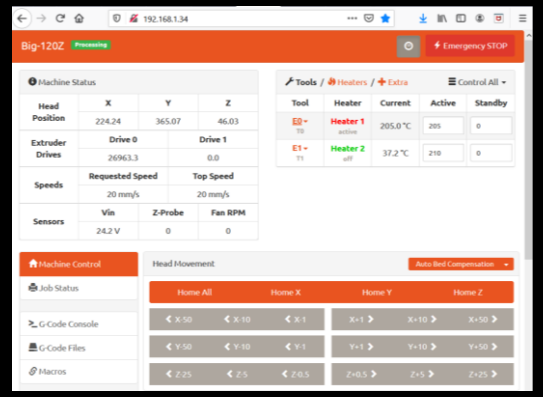


Griffin Print-Head



Wide hot-ends selection

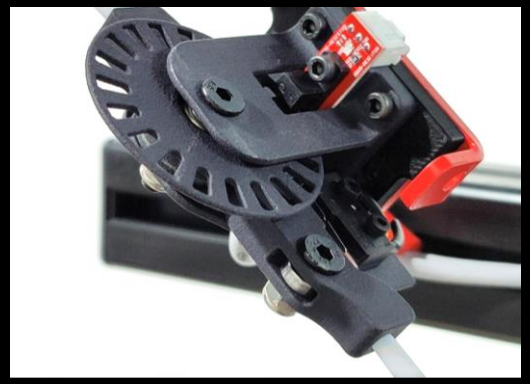
7-inch touchscreen



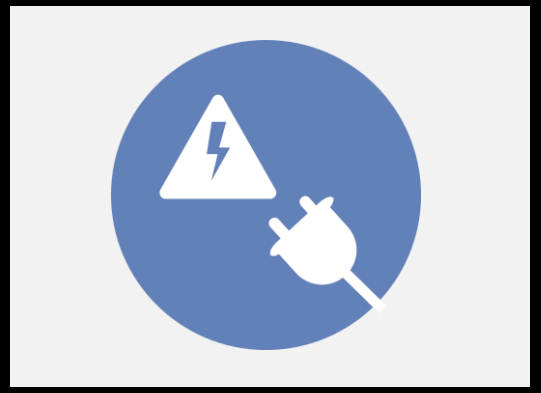
Remote web interface

Advanced DUET electronics

Magnetic bed



Clog Detector



Power failure resume

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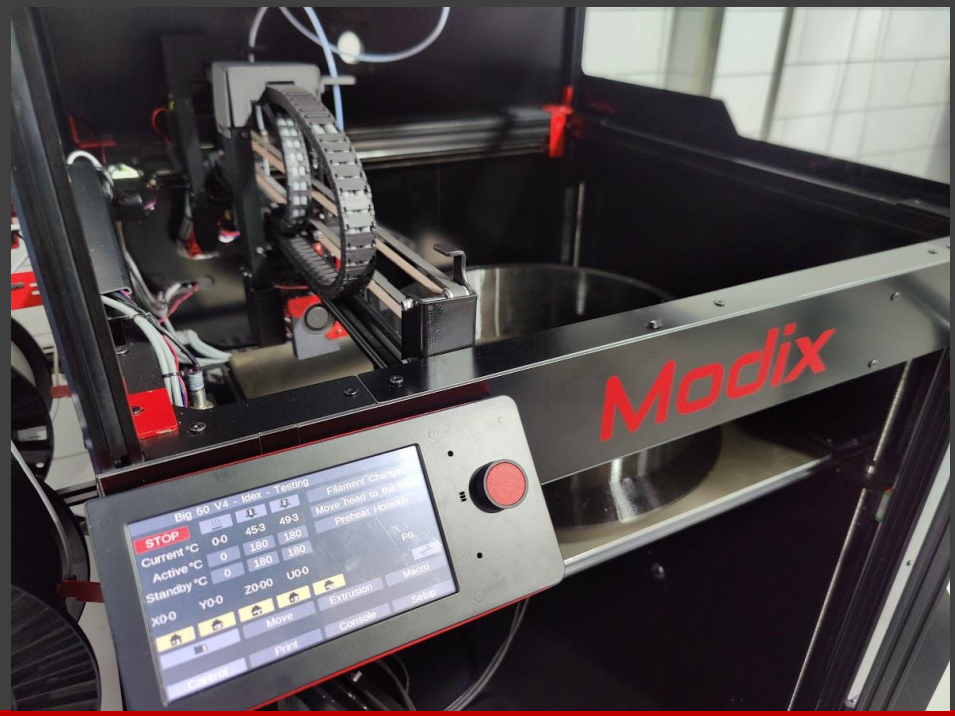
Heavy Duty Design

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

Modix engineering design guidelines:

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



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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 a long period of time, not to be replaced when a new model is coming out.

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Self Assembly

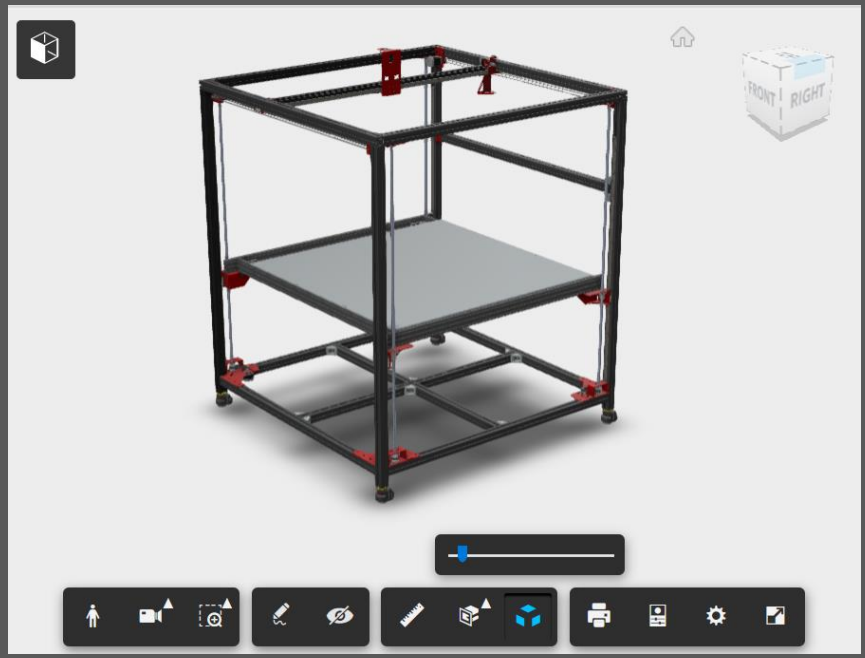
Modix 3D printers are delivered as self-assembly kits.
The advantages for the customers are:

- 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

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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, for example: Griffin standard (default), Griffin High-Resolution for detailed printing and Griffin High-Flow for XL high flow extrusion rates (up to 300gr per hour).
- 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…

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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.

Our standard PT-1000 thermistor and Griffin heat-block made of nickel-coated copper allows high temperature printing of up to 500°c (tested up to 340°c).

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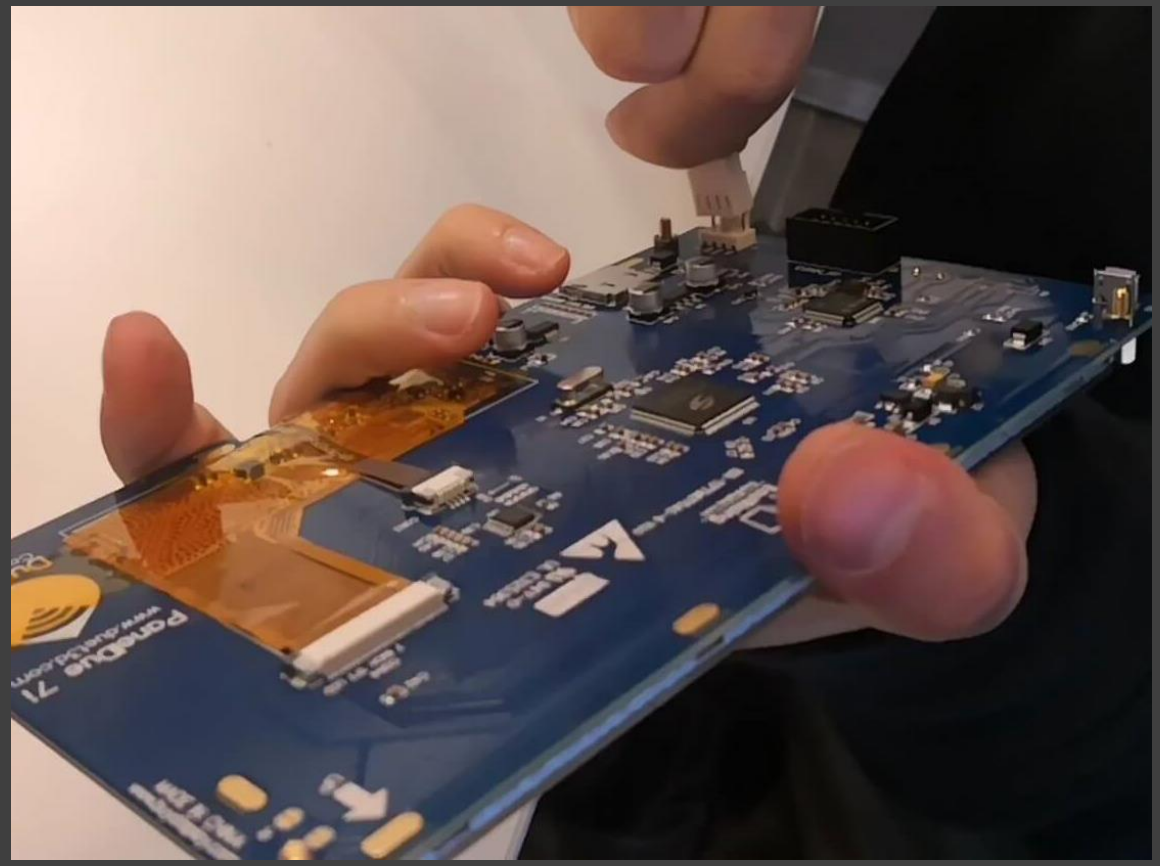
Open Architecture

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, after market modifications and several enthusiastic Modix related user's communities.



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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!

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Technical Specifications

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General

Technology	FFF: Fused Filament Fabrication
Print volume (metric, XYZ)	600 x 600 x 660 mm / ~23 x 23 x 25 inch
Machine size (WxDxH) with enclosure	906 x 1060 x 1,356 mm / 35.6 x 41.7 x 53.4 inch
Shipping weight	120kg
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

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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. Optional add-ons: Griffin High-Resolution and Griffin 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

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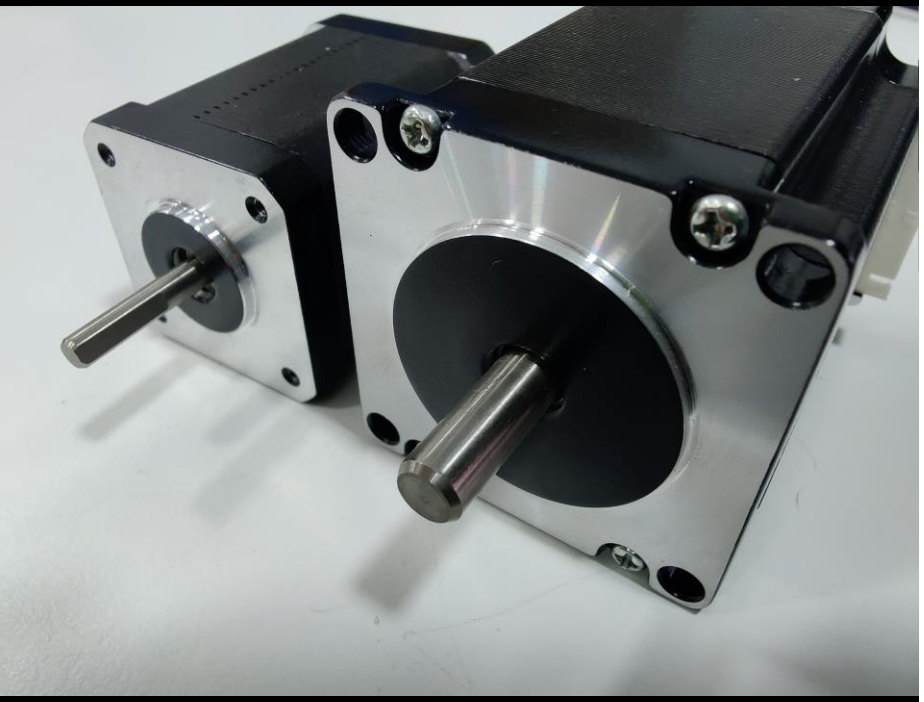

Motion

X & Y axes linear guides	HIWIN MGW9
Z axis guides	Smooth Rods included. HIWIN MGW9 optional add-on
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 250 mm/s (depends on nozzle & layer height)
Printing acceleration	Up to 3000 mm/s^2

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Print Bed

Bed plate	Alcoa Mic-6, 6.35mm milled cast aluminum plate
Number of heaters	AC heater, 1,370 Watt, dual zone
Temperature controller	Autonics TCN4 PID controller
Maximum bed temperature	120^{o}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
Z offset calibration	With a digital probe for high precision

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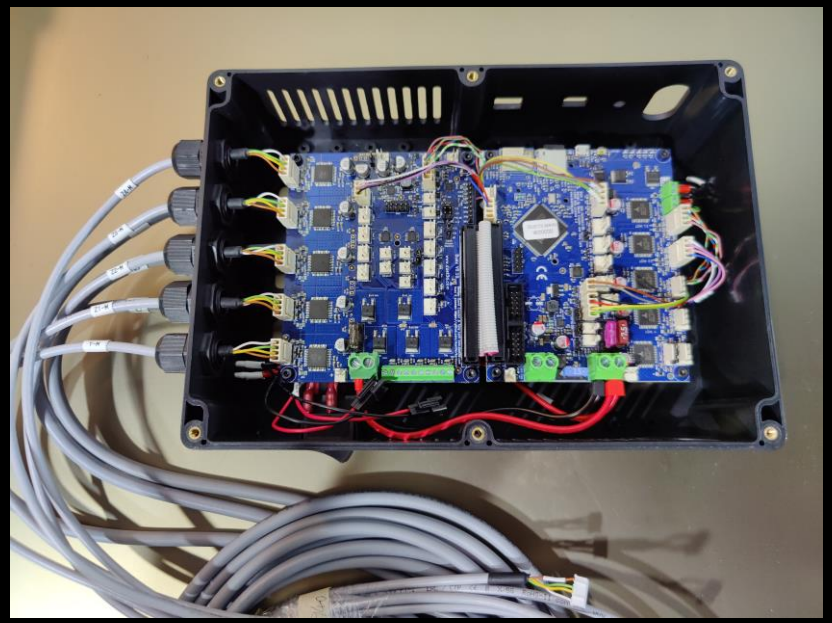

Electronics

Electronic controller	Duet2 & Duex expansion board
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 with Duet3D Ethernet board. Should be purchased and replaced by customer
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 Silicone pad heater. Two versions are available: 110V & 230V. 220V - 1370W 110V – 1200W We supply according to shipping destination. Power requirement for bed heater in North America is a dedicated 15A outlet.
AC power cords	We supply the required AC cords for each country

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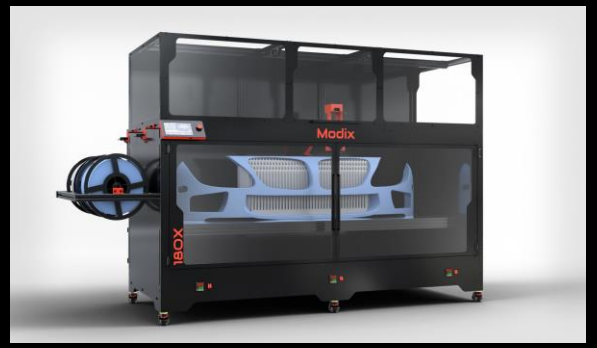
Modix's Line of Products

BIG-60
600 x 600 x 660 mm
From 4,900 USD

BIG-120X
1,200 x 600 x 640 mm
From 7,500 USD



BIG-180X
1,800 x 600 x 600 mm
From 15,500 USD

BIG-Meter
1,010 x 1,010 x 1,010 mm
From 13,500 USD

BIG-120Z
600 x 600 x 1,200 mm
From 7,500 USD

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