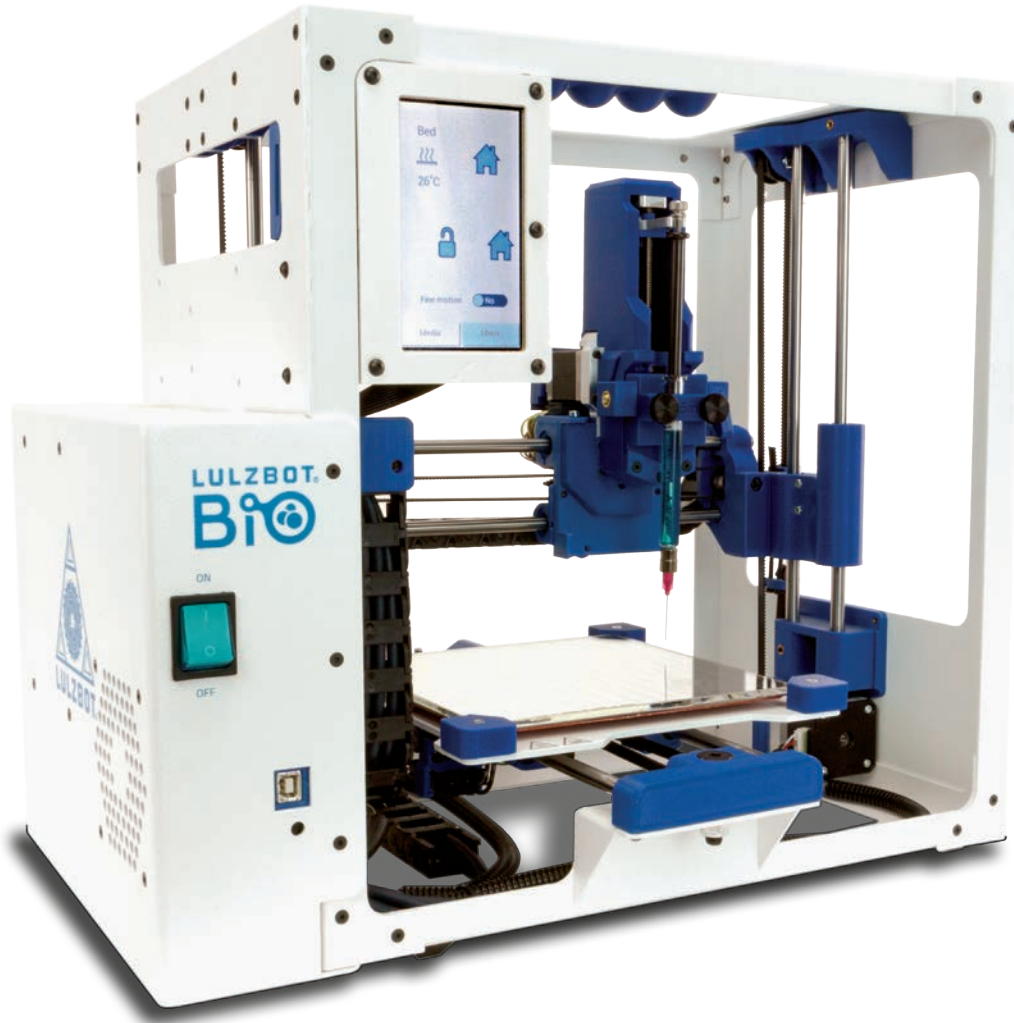


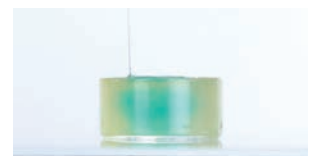
Designed for the Lab.  
Real Materials,  
Real Innovation.



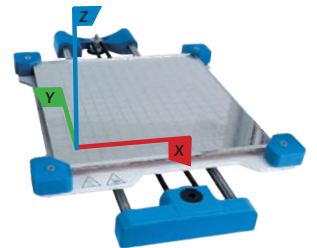
Syringe Pump Extruder



Material Options

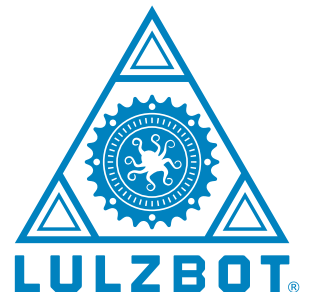


Heated Glass Print Bed



## FRESH™ Certified High-Detail Bioprinting

The LulzBot Bio is optimized for **FRESH™** (Freeform Reversible Embedding of Suspended Hydrogels) printing. Out of the box, users can print real, unmodified collagen, alginate, and other soft materials. With this tool, researchers are closer than ever to recreating human physiology for in vitro testing and regenerative medicine. An ultra-precise syringe pump extruder makes the Bio ideal for printing multi-scale vasculature, fully functional heart tissue, and more.



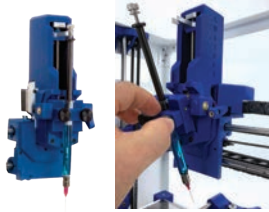
## FEATURES

### Designed for the Lab



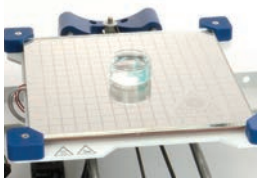
The small footprint and large build volume easily fits within laminar flow cabinets or on lab counter tops. The rugged design can easily be sterilized for printing cells using ethyl alcohol and UV lights.

### Syringe Pump Extruder



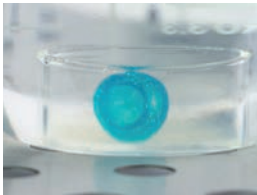
With the syringe pump extruder, you can precisely control material flow, which makes it possible to print high-detail objects in a wide range of viscosities and materials using the FRESH™ Certified process.

### Heated Bed



The LulzBot Bio's variable temperature heated bed allows full control of environmental conditions during printing, ensuring the integrity of the print from start to removal.

### Material Options



LulzBot Bio's open materials system offers ready-to-print profiles for alginate and unmodified collagen. With the Bio's configurable syringe pump and extrusion settings, you can quickly adapt to new materials and processes.

### Easy-To-Use Interface



The Bio features a 4.5" glove-friendly touch screen and SD card slot for easy operation without the need to be tethered to a computer.

## WHAT'S INCLUDED

- |   |                                  |                                   |                                       |
|---|----------------------------------|-----------------------------------|---------------------------------------|
| 1- Quick Start Guide                          | 1- Tool Kit Bag                  | 1- Plastic Petri Dish, 35mm       | 5- LifeSupport™ Support Material, 50g |
| 1- Power Cord                                 | 1- Gastight Glass Syringe, 2.5mL | 1- KIMAX crystallizing dish, 50mL | 1- Sodium Alginate, 50g               |
| 1- USB Cord                                   | 50- 25 gauge dispensing needles  | 1- Celltreat Petri Dish           | 1- CaCl <sub>2</sub> 5g               |
| 1- SD Card                                    | 50- 30 gauge dispensing needles  | 1- Spoon Scoopula                 | 1- Vacuum Grease, 1oz                 |
| 1 ea 2.5mL, 5mL, 10mL Syringe Base and Clamps | 2- Hypodermic Luer Lock          | 1- Specimen Cup w/ Lid            | 1- Metal 150mm Ruler                  |
| 2- Syringe Thumb Screws                       | 2- Cole-Palmer Female Luer       | 1- Transfer Pipette               |                                       |
|   | 2- Cole-Palmer Male Luer         | 1- Ball Hex Key Wrench Set        |                                       |

## TECHNICAL SPECIFICATIONS

<b>Print Area</b>	6.30" x 6.30" x 3.5"*** 160 x 160 x 89 mm
<b>Printer Dimensions</b>	18" x 13" x 15" 457 x 330 x 381 mm
<b>Operating Footprint Area</b>	30" x 25" x 21" 762 x 635 x 533 mm
<b>Net Weight</b>	18.92lb 8.58kg
<b>Print Head</b>	LulzBot Syringe Pump Extruder (Compatible with 2.5mL, 5mL, and 10mL syringes)
<b>Print Technology</b>	<b>FRESH™ Certified</b> (Freeform Reversible Embedding of Suspended Hydrogels) FRESH™ acronym is a Trademark of FluidForm™ 3D Bioprinting.
<b>XYZ Motion &amp; Resolution</b>	Motion: Belt Driven Resolution: 10, 10, <5μ
<b>Ambient Operating Temperature</b>	41° F to 104° F 5° C to 40° C 70° F (21° C) ideal for FRESH™ printing process
<b>Build Plate</b>	<b>Glass bed - Heated borosilicate glass</b> Maximum print surface temperature: Up to 110° C (230° F)
<b>Power</b>	Single Phase, 100VAC - 240VAC, 50/60Hz, Auto-switching MEAN WELL RSP-500-24, 24VDC, 500W, 21A
<b>Slicing Software</b>	Cura LulzBot Edition - Version 3.6.22 or newer
<b>Operating System</b>	Windows, Mac, GNU/Linux
<b>Firmware</b>	Marlin
<b>Supported File Types</b>	.stl, .obj, .g, .x3d, .3mf, .gcode
<b>Certification</b>	ETL/UL, CSA, FRESH™
<b>Country of Origin</b>	United States of America
<b>Warranty</b>	<b>Includes one-year factory warranty.</b> Optional one, two, and, three-year extended warranties available.

\*\*\* Z dimension variable based on needle length and dish size.  
Notice: This document is based on Beta hardware and is subject to change.  
The FRESH™ acronym is a Trademark of FluidForm™ 3D Bioprinting.  
LulzBot is a registered trademark of FAME 3D.