THE FUTURE OF MEDICINE IS HERE

CELLINK+

What is Bioink?

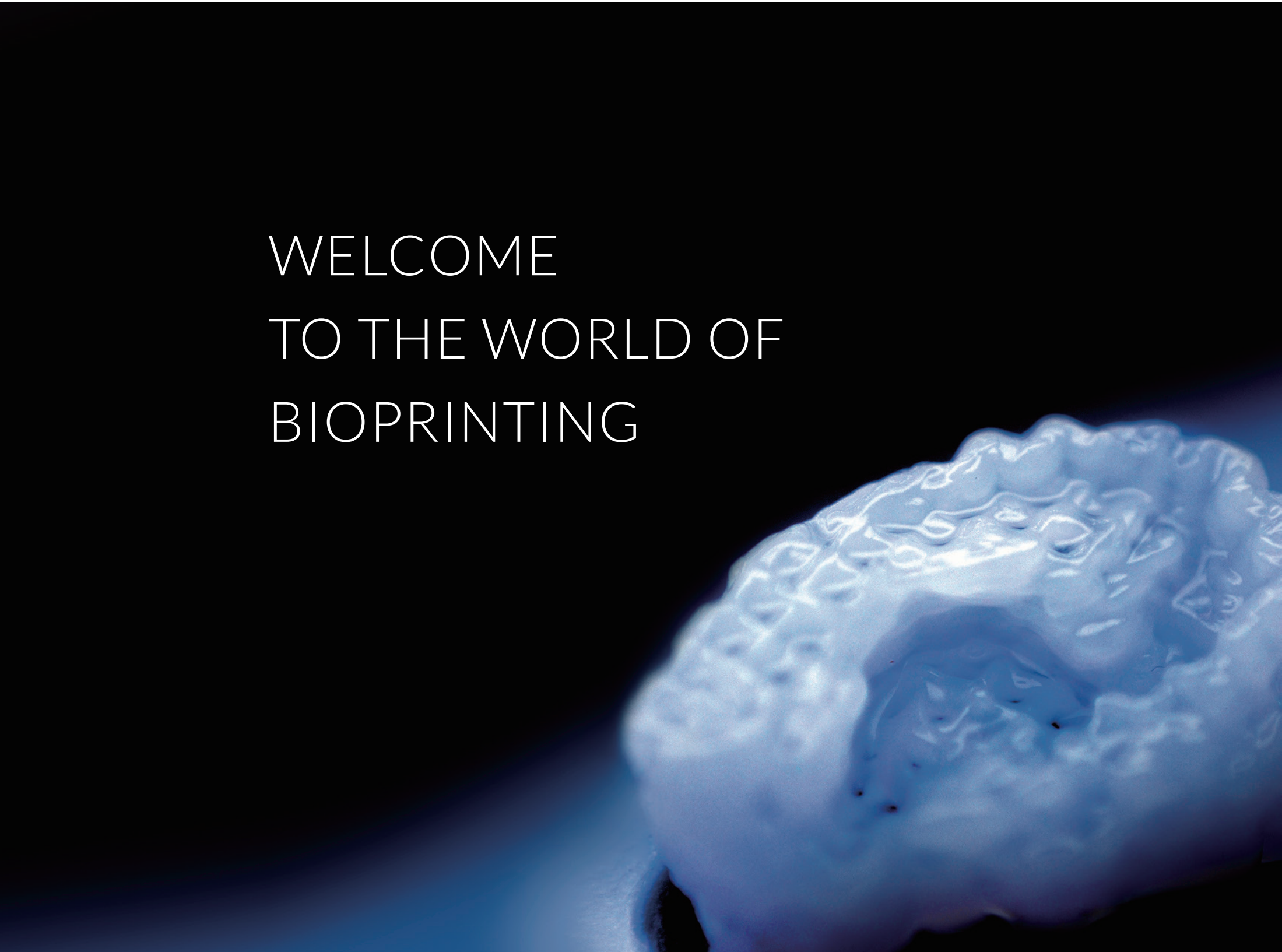
A bioink is a biomaterial that is suitable for bioprinting with cells and provides a temporary or permanent support to the cells while they produce their own extracellular matrix. Bioinks based on biopolymers, such as collagen, gelatin, hyaluronan, silk, alginate and nanocellulose, are known for their favorable biocompatible properties and are attractive biomaterials for cell encapsulation and 3D bioprinting. These bioinks provide an aqueous 3D environment with biologically relevant chemical and physical signals, mimicking the natural extracellular matrix environment. Significant advances in 3D bioprinting technology as well as the development of new bioinks have made it possible to bioprint complex 3D tissue structures.

Why Bioprinting?

The innovative methods for engineering human tissues and organs can have a profound effect on the future of medicine. 3D bioprinting is considered a revolutionary technology for advancing and accelerating progress in the field of tissue engineering and regenerative medicine, and thus, the future of medicine. We believe that we can create this future through a collaborative spirit and by putting our combined expertise to the service of humanity.

The future is created in the present and it belongs to the doers, those who continue moving forward in order to see their vision come to realization. It's not that we see the future and then move towards it. We move in order to see it.

WELCOME
TO THE WORLD OF
BIOPRINTING



WE ARE CELLINK

We are a team of entrepreneurs, scientists, engineers and pioneers, pushing the limits for what's possible, paving the way for the future of regenerative medicine.

With our 3D bioprinters and bioinks, we will open the possibility for more extensive medical research. Together with our collaborators, in hundreds of labs in over 45 countries, we work side by side to ensure quality and support.

Our compassion for humans and drive to create an impact will pave the way for continued growth.

“There was a clear difference in CELLINK's customer approach, product robustness, and confidence in their products, all of which made CELLINK stand alone in the market of 3D bioprinting. We trusted the company and now looking back we think it was not a wrong decision to go with CELLINK.”
- Dr.Nath, Harvard Medical School

“Thanks CELLINK for engaging the students and holding this successful workshop on bioprinting”
- Ric Levato, UMC Utrecht

“CELLINK has taken our feedback and adapted their system while being actively engaged in the process”
- Dr. Grande, The Feinstein Institute for Medical Research

THE FUTURE OF 3D BIOPRINTING

Robust, reliable and small enough to fit on your benchtop, the powerful CELLINK+ 3D bioprinter is perfect for today's advanced research applications. Pair this with the benefit of unrivalled CELLINK customer support and you will see a dramatic increase in your research productivity in a wide range of applications.

The innovative CELLINK+ offers a pneumatic-based extrusion system with dual print heads and built-in UV LED curing that allows for quick and easy bioprinting of living tissues. Thanks to our patented Clean Chamber Technology, CELLINK+ offers a sterile internal environment right on your benchtop. The two heated print heads allow for the use of a wide range of materials and different cell types in the same construct. All of this can be found in a compact, precise and user-friendly system with the CELLINK+.

STERILITY ON YOUR BENCHTOP

CELLINK's Clean Chamber Technology provides a sterile printing environment without the need for a biological hood.

DIFFERENT CELL TYPES

Two printheads allows the user to print with different cell types in the same structure.

WIDE RANGE OF MATERIALS

Operating at temperatures up to 130 degrees Celsius, heated printheads allow you to print with a wide range of materials.

EASY CROSSLINKING

The built-in UV Crosslinking System with wavelengths of 365 nm and 405 nm provides a quick and convenient way to initiate photo crosslinking.

SPACE ECONOMY

Powerful and compact, the small footprint of the CELLINK+ fits easily on your benchtop.

PRECISE, ACCURATE AND REPRODUCIBLE

Pneumatic micro-extrusion printheads with high XYZ resolution.

STANDALONE UNIT

The LCD display and manual pressure regulators provide an easy-to-use standalone unit while retaining the option of monitoring the bioprinting process through a computer.

DUAL HEATED PRINTHEADS

The CELLINK+ comes equipped with dual heated printheads, allowing you to bioprint with different cell types and bioinks in the same structure without switching cartridges or pausing the process. As a result, complex, stable structures can be achieved precisely how you want them and in less time. The CELLINK+ comes with a built-in system to operate the printheads at temperatures up to 130 degrees Celsius. As a result, a wide range of biomaterials can be used, including those that may be too viscous at room temperature.

CLEAN CHAMBER TECHNOLOGY

The CELLINK+ features our patented Clean Chamber Technology, providing a sterile internal environment without the use of a biological hood. A powerful fan creates a positive air pressure inside the chamber of the CELLINK+. Unfiltered air is passed through a high-efficiency H13 HEPA filter with a retention rate greater than 99.95% that captures unwanted particles. The chamber is filled only with filtered air, providing a clean environment for 3D bioprinting and cell culturing right on your benchtop.

UV-CROSSLINKING SYSTEM

CELLINK+ comes equipped with a built-in UV Crosslinking System that hardens your structure and allows it to be moved without losing its integrity. A wide range of bioinks can be cross linked using the 365 nm LED or 405 nm option. These ideal crosslinking wavelengths are conveniently accessible within the sterile environment of the CELLINK+.

SPACE ECONOMY

We know how valuable lab space is, which is why we packed as much functionality as possible into the compact bioprinter of the CELLINK+. Dual heated printheads, Clean Chamber Technology, LCD display, built-in UV Crosslinking System, manual pressure regulators and more can all be found within the small footprint of CELLINK+.

PURPOSEFUL DESIGN

CELLINK+ was intentionally engineered to be user-friendly. The intuitive LCD controller allows you to set up and modify your bioprinting experiments. Manual pressure regulators provide precise regulation of the dispensing process. The built-in UV Crosslinking System offers a quick and easy way to strengthen your 3D-printed construct with the touch of a button.

Together, these features make the CELLINK+ a standalone unit while still retaining the ability to be monitored through a computer with accompanied software. As always, CELLINK's incredible customer support team is also here to help!

EASY PRINTING PROCESS

CELL MIXING

Before printing, the cells need to be mixed with the bioink. We have developed the easiest and most homogenous way of doing this using our innovative CELLMIXER. Put the bioink in a 3 mL syringe and add your cells to suspension media in a 1 mL syringe. Clip each syringe to the dispensing unit, connect the mixing unit to the tip of each syringe and then connect the filling cartridge. Screw all connections so there is no leakage. Fill the cartridge by gently injecting the ink and cells through the mixing unit. Your filling cartridge is now ready for bioprinting and can be disconnected from the mixing unit.

BIOPRINTING

When cell mixing is done and your cartridge is filled, you're ready to start printing. Screw a nozzle on to the cartridge and place it in the printhead after connecting it to the air system. Configure the desired print settings using the LCD display. Pressure can also be adjusted easily during the bioprinting process using the pressure regulator knobs. Follow the procedure to quickly home the XYZ axes, then choose the design file you would like to use and start printing.

CROSSLINKING

Depending on the material you are printing, you may need to crosslink the printed construct. For UV crosslinking, you can use the built-in LED with wavelengths of 365 or 405 nm. For other types of crosslinking, you can also add the crosslinking agent directly to your construct.

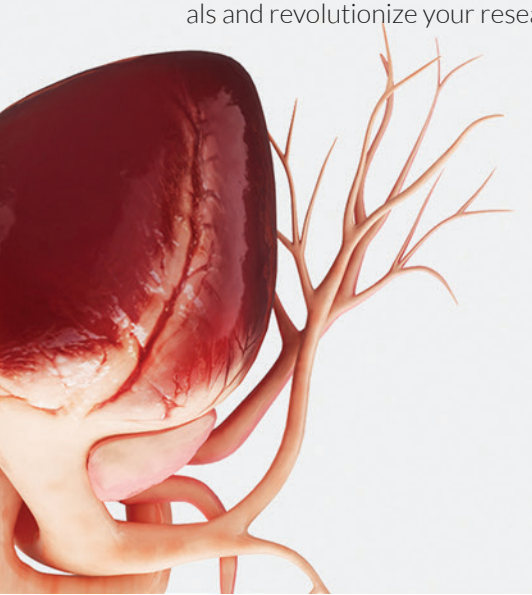
1 2 3

OUR BIOINKS

CELLINK is the first bioink company in the world and is also the creator of the world's first universal bioink. This opens the opportunity for scientists to bioprint using any type of cells.

Today we provide more than 40 different sterile and ready-to-use bioinks for various applications, from printing cancer models to skin models. Moreover, it is compatible with any 3D bioprinting system.

You can also check out our different kits for special applications and needs. The Support kit will enable the fabrication of your 3D constructs from otherwise unprintable materials and revolutionize your research!



APPLICATIONS

Bioink	Cartilage	Skin	Bone	Muscle	MSCs	Other Cell Types	Sacrificial Material	Thermoplastic Scaffolds
CELLINK A	√		√		√			
CELLINK A - RGD		√		√	√	√		
CELLINK	√	√	√		√	√		
CELLINK BONE			√		√			
CELLINK FIBRINOGEN		√	√	√	√			
CELLINK FIBRIN		√	√	√	√			
CELLINK RGD		√	√	√	√			
CELLINK SKIN		√						
CELLINK SKIN+		√						
CELLINK LAMININK 111						√		
CELLINK LAMININK 121				√		√		
CELLINK LAMININK 411						√		
CELLINK LAMININK 521						√		
CELLINK LAMININK+						√		
Coll1		√	√	√	√	√		
CollMA		√	√	√	√	√		
GelMA		√	√	√	√	√		
GelMA A		√	√	√	√	√		
GelMA C		√	√	√	√	√		
GelMA HA	√	√	√			√		
GelMA high C		√	√	√	√	√		
GelXA		√	√	√	√	√		
GelXA-Bone			√		√			
GelXA-Fibrin		√	√	√	√			
GelXA-Skin		√						
GelXA-LN111						√		
GelXA-LN121				√		√		
GelXA-LN411						√		
GelXA-LN521						√		
GelXA-LN+						√		
GelXG		√	√	√	√	√		
CELLINK PCL								√
PLA								√
PLGA								√
CELLINK Pluronics							√	
CELLINK START							√	
CELLINK START X							√	
CELLINK Support							√	
CELLINK Xplore							√	
HAMA Kit	√	√						

BIOVERSE.CO

EXTENDING DEVELOPMENT BEYOND YOUR LAB

The future in development lies in the power of sharing and improving together. Bioverse is a global online 3D-bioprinting community with CAD-models of human organs and tissue models. The platform is open-source and gives you a place to share, develop and download blueprints and protocols of all types of tissues, organs and tissue analogs. Bioverse is developed and maintained by Cellink AB.

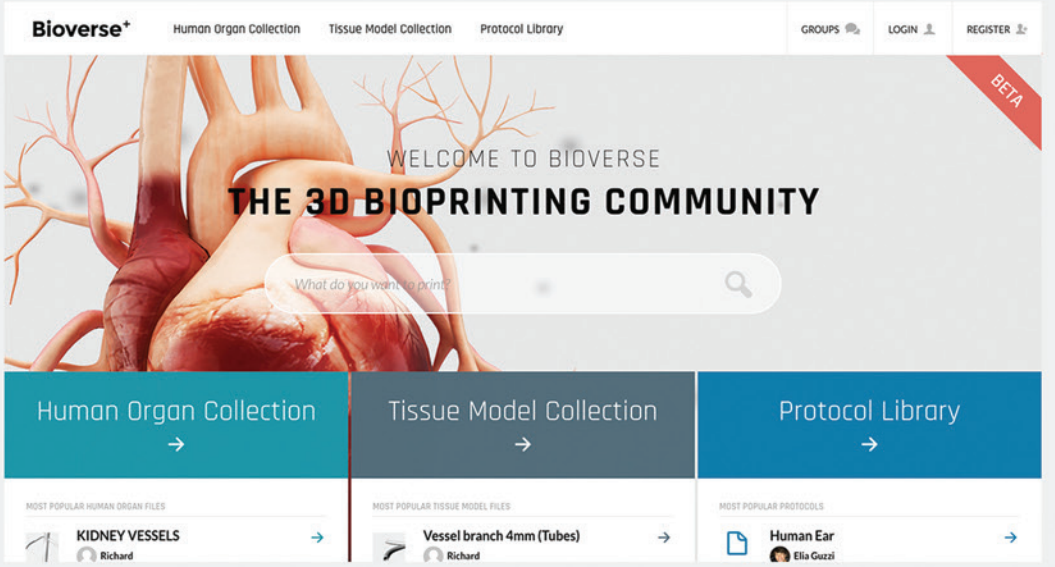
COLLABORATE TO ACCELERATE PROGRESS

Search through this online database for human organ models, tissue models or protocols to improve your work. Extend your expertise beyond your lab by collaborating with other great minds around the world.

OWNERSHIP HAS NEVER BEEN MORE CONVENIENT

Bioverse.co is not only a forum for sharing, but also for caring. Use your products' serial numbers and register them under your account at Bioverse. You'll get notifications when your warranties are about to expire, if maintenance should be done and when there are new software updates for your CELLINK+.

Quickly download 3D models, project files and printing protocols to easily set up your next bioprinting project with the CELLINK+.



FEATURES

BIOPRINTING

Bioprinting Technology: Pneumatic-based microextrusion system

Printheads: 2 heated, pneumatic-based extrusion printheads

UV Crosslinking System: 1 UV LED curing system 365 nm (405 nm optional)

Printhead Temperature Max: 130° Celsius

Build Volume: 130 x 80 x 100 mm. Printbed has insets for P100 petri dish and multi-well plates.

Positioning Precision: XY: 10 µm [0.0004 in]; Z: 2.5 µm [0.0001 in]

Layer Resolution: 100 µm [0.0039 in]

Hydrogel's viscosity range: 0.001 to 250 Pa.S [1 to 250,000 cP]

Max. Operating Pressure: 700 kPa

Set Pressure Range: 5 to 400 kPa

Sensitivity: Within 0.2% F.S. (0.8 kPa)

Repeatability: Within ±1% F.S. (4 kPa)

Minimum Unit Setting: 1 kPa

Pressure Display Units: kPa, MPa, kgf/cm2, bar, psi, inHg and mmHg

Printhead's Response Time: 5 ms or less (ON), 4 ms or less (OFF)

Nozzle Length: Auto-calibration, 6.35 mm [0.25 in] to 38.1 mm [1.5 in]

Nozzle Diameter: User dependent, 50 to 1540 µm

SOFTWARE

Software Bundle: Slic3r, Repetier-Host
File Types: STL/OBJ/AMF
Supports: Windows (XP 32 bit/7+), Mac OS X (10.6 64 bit/10.7+) and Ubuntu Linux (12.04+)
Connectivity: USB, SD-card

PHYSICAL SPECIFICATIONS

Frame: Chemically resistant, powder-coated high-grade steel
D x W x H: 330 x 370 x 430 mm (19.1 x 16.5 x 14.7 in)
Shipping Box: 59 x 55 x 43 cm (23 x 21.5 x 17 in)
Shipping Weight: 20 kg (44.5 lbs)

ELECTRICAL

Power Supply Adapter:
Input: 100-240VAC, 50/60Hz, 2.0A
Output: 24VDC, 6.67A, 160W Max
Portable, Oil-free Air Compressor:
EU/UK/AU/CH: 230VAC, 50Hz
US/MEX/CA/JAP/Taiwan: 110VAC, 60Hz
INKREDIBLE+ 3D Bioprinter:
Input: 24 VDC, 6 A
IP-classification: IP10

ADDITIONAL FEATURES

Clean Chamber Technology
Manual pressure regulators

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