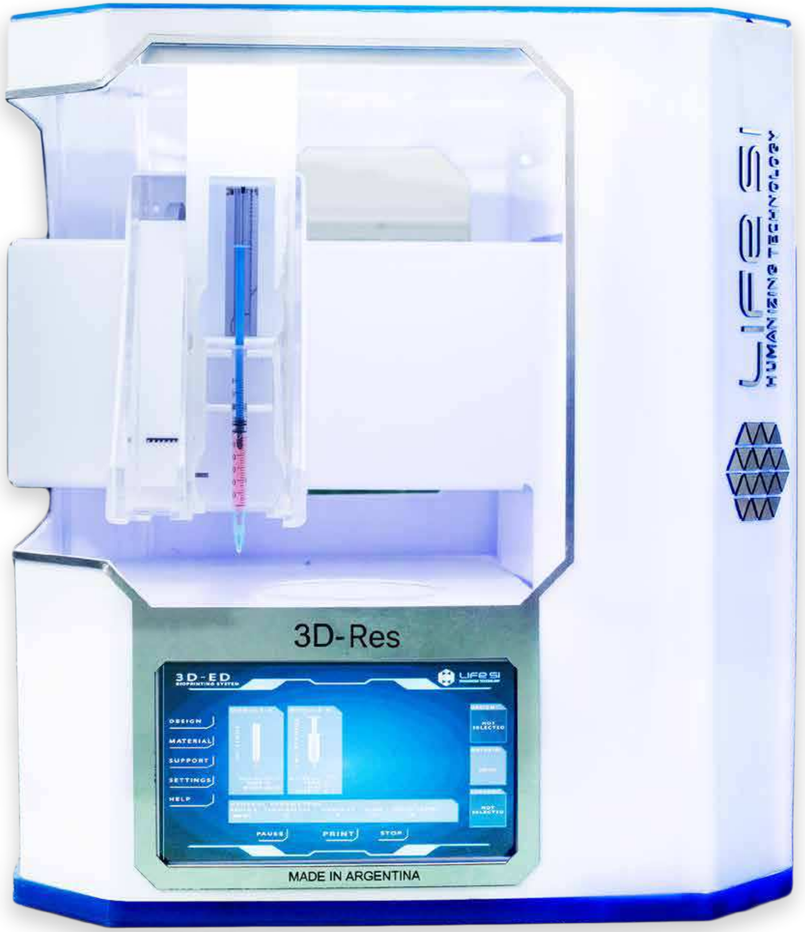
LIFE SI
HUMANIZING TECHNOLOGY

BROCHURE

3D Bioprinter

3D-Res

lifesi.technology



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¿What is bioprinting?

3D bioprinting is an additive manufacturing technology in which biological materials are used for creating and re-creating three-dimensional structures.

Using 3D printing techniques and a preiously designed geometry, cells and biomaterials are combined and deposit layer by layer in order to create structures that mimic biological live tissues´properties.

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Applications

- **Tissue engineering**
  - Scaffolds 3D printing for cell culturing.
- **Biomedical engineering**
  - 3D printing with biocompatible materials.
  - 3D printing with ceramic particles.
- **Pharmaceutical technology**
  - 3D printing of structures with pharmacological active ingredients.
  - Tablets 3D printing.
- **Electronics industry**
  - 3D printing with conductive inks.
- **Food industry**
  - Research in nutraceutics.

WE MAKE BIOPRINTING SIMPLE

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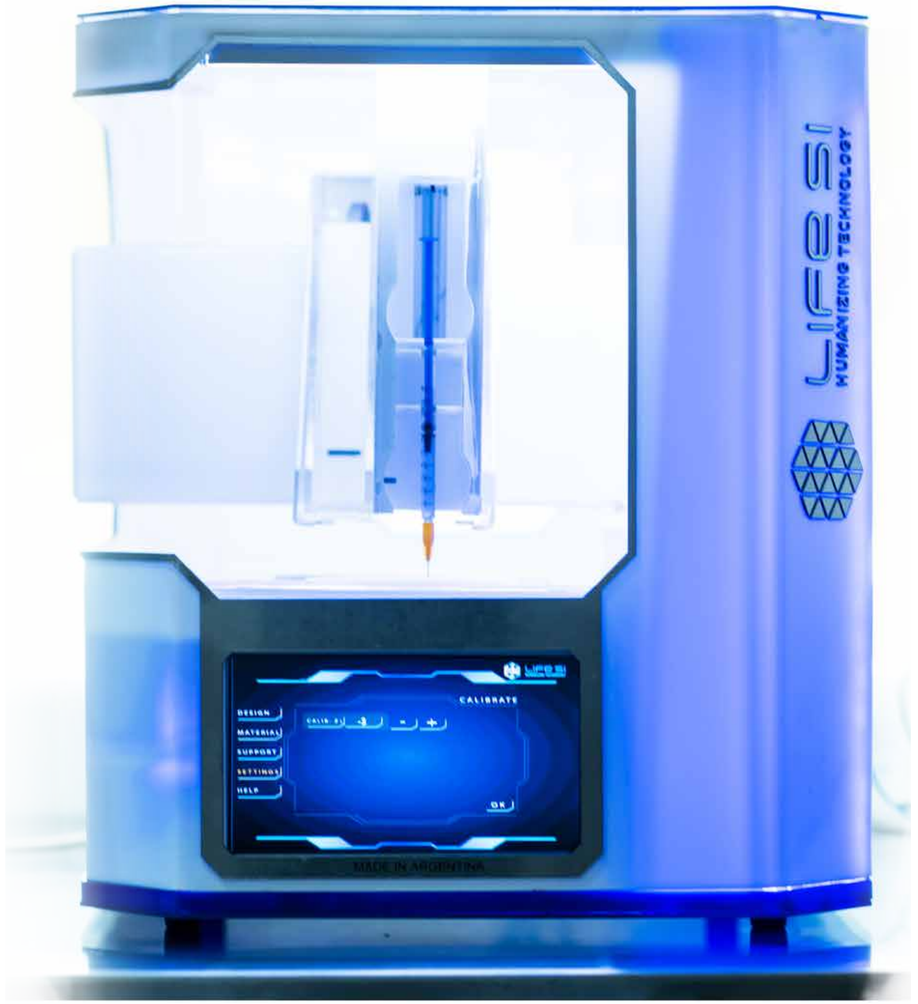
Shifting Paradigms

We present our 3D-Res bioprinter. A system designed to be **versatil** in its applications, **intuitive** in its use **affordable** for emerging countries.

Our goal in Life SI is to **synthesize in one system** multiple 3D printing technologies, **make the work easier** for the developers and researchers and to **bring the technology closer** to the communities in order to foster our countries scientific developments.

That is why for the last six years we have been bringing **integral solutions** for our clients.



Future of 3D Bioprinting

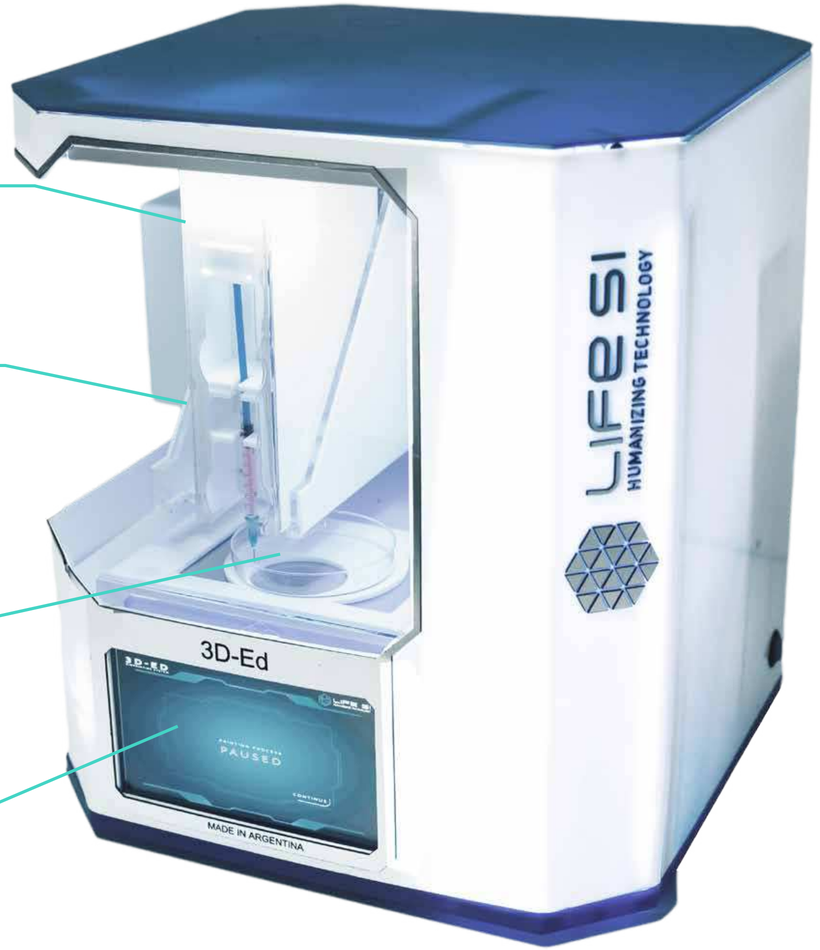
3D-Res Bioprinter

Syringe automated calibration

Dynamic modules
Different 3D printing technologies

Bed temperature control
Heat/cold

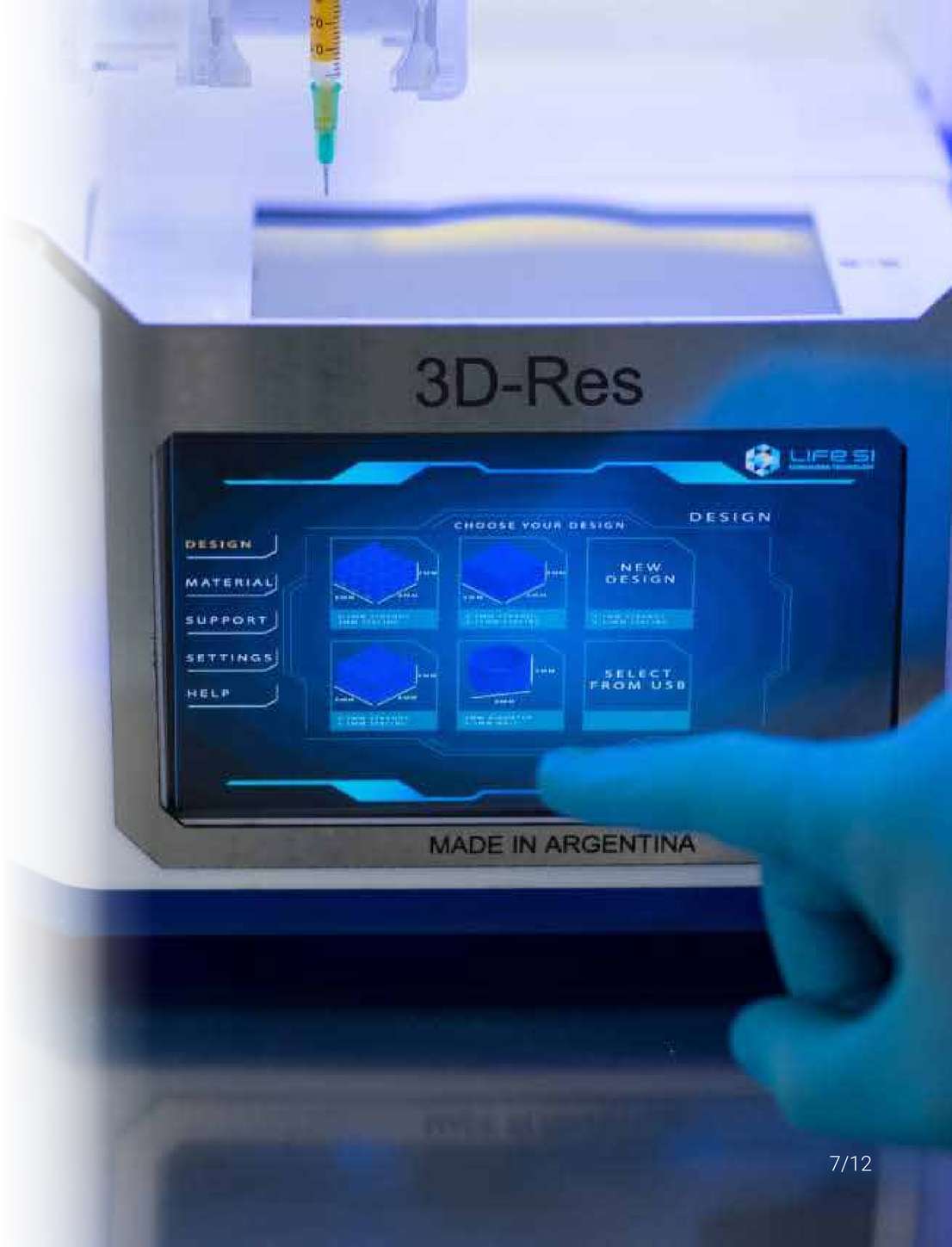
Touchscreen interface for real-time setting



Features

INTUITIVE

- Starting point autocalibration (autocalibration preset for different supports: Petri dish, slide, call-culture plate, among others).
- Pre-loaded geometries ready to print.
- Touchscreen interface (computer no needed).
- Interchangeable 3D printingmodules (different modules for different 3D printing technologies, such as FDM, syringe, SLA).
- Designed to be used in sterile areas (sanitizable surfaces, air flow oriented to be used inside a laminar flow cabinet).



Modules

Dynamic

MODULES

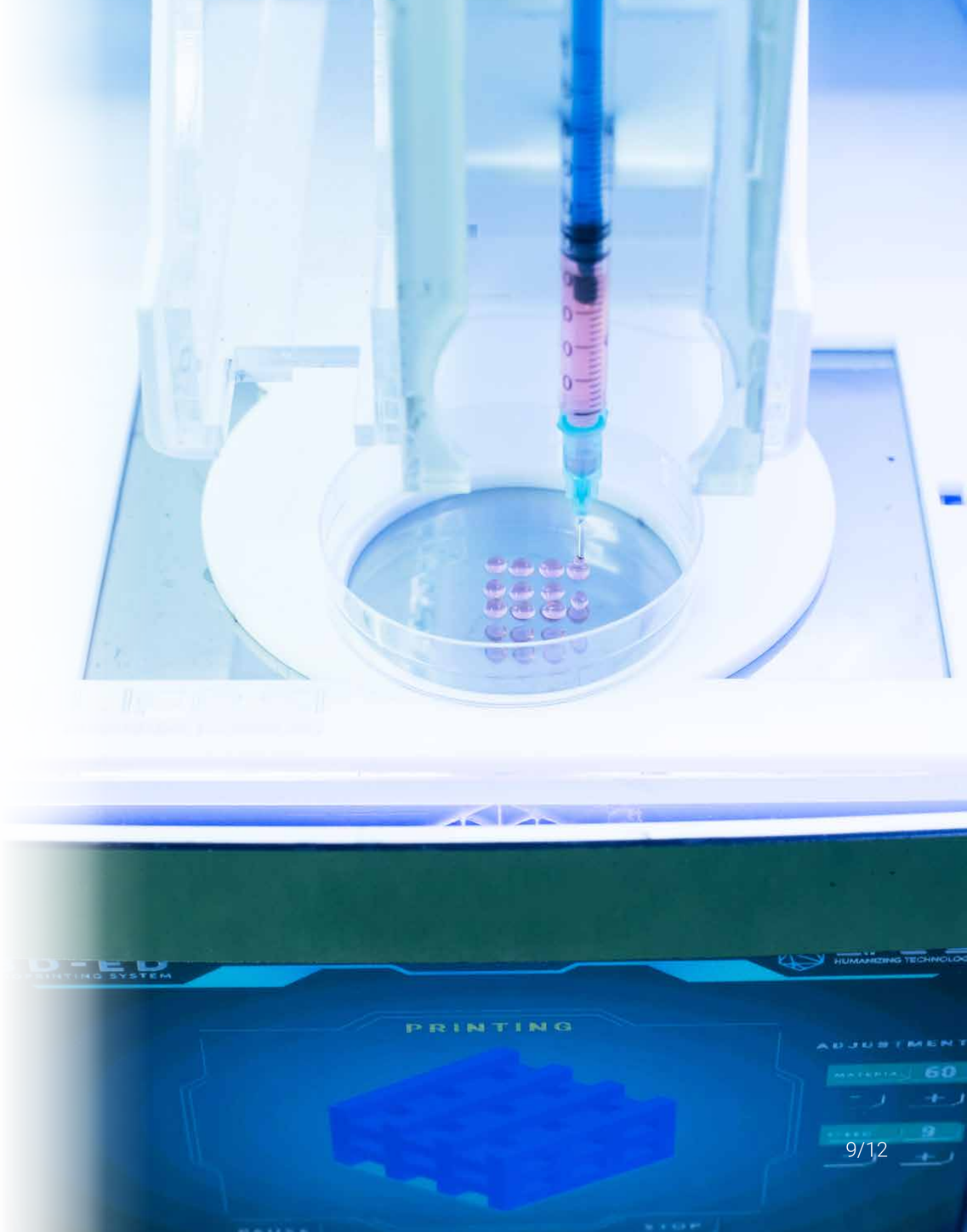
Independent and interchangeable modules.

- Syringe module: 1, 3, 5 y 10mL without temperature control.
- Syringe module: 1, 3, 5 y 10mL with temperature control.
- Twin syringe module (2 x 1 mL) without temperature control.
- Twin syringe module (2 x 1 mL) with temperature control.
- FDM module (1,75 mm filament).
- SLA module (405 nm laser).

Technical features

VERSATIL

- **Max printing volume: 127 x 100 x 30 mm**. Axis resolution: **20 um.**
- **Supports**: Petri dish, microscope slide, cell-culture plate, multi-well plate, microfluidic chip.
- **Bluetooth** communication.
- 7 inches **touchscreen.**
- Bed **temperature control.**
- Temperature control for the **interchangeable 3D printing modules.**



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¿What is a bioink?

Bioinks are **hydrogels seeded with cells** used as the material for 3D printing biological structures (bioprinting).

In Life SI we offer bioinks developed to achieve high printing quality and biocompatibility.

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Bioinks

Two different inks designed for cell culturing in training research and development. Presenteation: 1mL syringes or sterile reagents for preparation. Printability of 0.96.

Life INK 1

Sterile base ink made of gelatin and alginate for soft tissue research.

Life Bone

Sterile ink loaded with hydroxiapatite fot bone tissue regeneration research.

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