

REG4Life TECHNICAL SPECIFICATIONS

- ✓ **Printing technology:** Mechanical extrusion
- ✓ **Weight:** < 30 kg
- ✓ **Dimensions:** 630x489x536 mm
- ✓ **Dimensions with Desktop Cabin:** 850x714x1078 mm
- ✓ **Easily Exchange of Print Heads:** Plug&Play system
- ✓ **Print Head Positions:** 3
- ✓ **Print Head components:**



Syringe Modules	Temperature control	Volume
Heated syringe	RT – 50°C	3cc/5cc/10cc/custom
High temperature syringe	RT – 250°C	3cc
Refrigerated syringe	-20°C – 100°C	5cc
Bi-component syringe	No	2cc + 2cc (1:1 ratio)
Coaxial syringe	No	10cc + 3cc

Thermoplastic Extrusion Modules	Temperature control	Diameter
Filament Extruder	RT – 250°C	1.75 mm
Pellet Extruder	RT – 250°C	1.5 – 4 mm

Photocuring Modules	Wavelength
UV-light curing system	365/385/custom
Visible light curing system	405/custom

- ✓ **Print Bed components:**

Print Bed Module	Temperature control	Construction Volume
Heating Print Bed	RT – 120°C	120x120x90 mm
Refrigerated Print Bed	-20°C – 100°C	120x120x90 mm



✓ Other components:

Print Bed Adapter	
Petri Dish Adapter	≤ 100 mm diameter
Multiwell Plate Adapter	6, 12, 24, 48, 96 well plates

✓ Resolution:

Minimum Positioning Precision XY	150 µm
Minimum Positioning Precision Z	400 nm
Minimum Layer Resolution	400 nm
Theoretical Resolution	1.87 µm

- ✓ Sensitivity: 1.8 nL (3cc syringe)
- ✓ Maximum Extrusion Force: 1.4 MPa (1cc syringe)/ 346 kPa (3cc syringe)
- ✓ Working range of viscosities: 1 to 300000 mPa
- ✓ Minimum Print Head Response Time: < 1 ms
- ✓ Maximum Printing Speed: 80 mm/s
- ✓ Nozzle Diameter: from 150 to 1500 µm
- ✓ Calibration: Automatic (laser calibration)
- ✓ Frame: chemically resistant, powder-coated, high grade steel
- ✓ Sterilization systems: Desktop Laminar Flow Cabin adapted to the bioprinter's dimensions (UV-C germicidal lamps 275 nm, 2W, HEPA filter H14)(optional)
- ✓ Software Bundle Modelling: FDM (Fused Deposition Modelling), IPF (Injection Pore Filling), IVF (Injection Volume Filling), Object Pre-Visualization
- ✓ Support file types: STL, G-codes, OBJ
- ✓ Support operating systems: Windows
- ✓ Connectivity: USB, Ethernet (No WiFi)
- ✓ Computer included (with incorporated software)
- ✓ Capacity to develop custom-made tools and features on demand

