

Inspired by Nature,
Healthcare Innovation by

Dr. INVIVO 40

ORGAN REGENERATOR

Dr. INVIVO 4D

Organ Regenerator

In-situ 4D Fabricating

The World's First Z-Axis Curved Surface Fabricating

Bio-Hyperspace Creation

Sterilized Environment : H14 HEPA Filter, UV Lamp

Diverse Material Usage

All US FDA-Approved Materials : Bioinks, Biopolymers, Ceramics, etc.

High Accuracy

High-Precision Step-Motor & Temperature Control

User-Friendly Interface

LCD Touch Screen, Android OS, Wi-Fi, Remote Monitoring

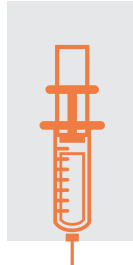
With Filament Extruder



Synthetic Polymers

PCL (Polycaprolactone)
PLGA (Poly Lactic-co-Glycolic Acid)
PLLA (Poly-L-lactic Acid)

With Syringe Dispenser



Bioinks

Hydrogel with Cell Mixtures

Powder Mixtures

Hydroxyapatite / Chitosan

Hydrogels

Collagen / Gelatin / Fibrin /
Hyaluronic Acid / Alginate

With Hot-Melting Pneumatic Dispenser



Pellet, Powder & Pastes

PCL, PLGA, PLA, Hydroxyapatite, etc.

Pneumatic Dispenser (Premium)

Nozzle Size : 100~400µm (optional)
High-Viscosity Material Fabricating
High Temperature : ~350°C
Pressure : Up to 900kPa

Extruder

Nozzle Size:200~400µm (optional)
Stainless Steel Nozzle

Bio Filament

Detachable Magnetic Slot
for Bio-filaments

Bioink Warmer

Upgrade & Premium

Temperature Control Bed

Upgrade & Premium : -4°C~60°C

LCD Touch Screen

Android OS

Clean Bench System

H14 HEPA Filter
Sterilizing UV Lamp

Thermometer

Upgrade & Premium

Syringe Dispenser

Nozzle Size : 100~400µm (optional)
Temperature Control System
Upgrade & Premium:-4°C~60°C

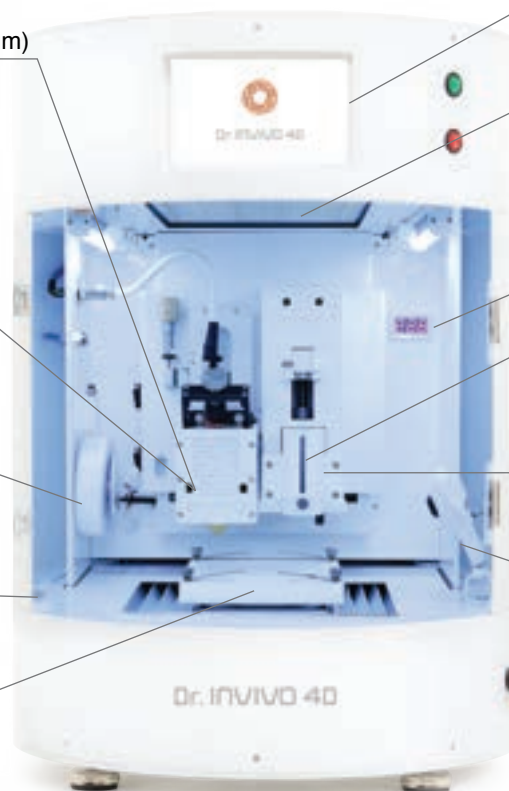
UV LED

Photo Curing
Wavelength : 365nm / 405nm (optional)
Upgrade & Premium

Wi-Fi Camera

Upgrade & Premium

Emergency Switch



REGENERATING METHODS / PATTERNS

	STANDARD	UPGRADE	PREMIUM
Thermoplastic Filament Extruder	✓	✓	✓
Chemical Cross-linking		✓	
Photo Polymerization			✓
Temperature Control of Dispenser and Bed			
Custom Blending Use EX) Hydrogel / Inorganic / Synthetic			



Scaffold Print with Cells



Various Pore Size and Porosity Control

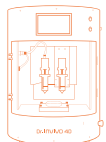


Extruder-Dispenser Dual Cross Print



Curved Fabricating (Optional)

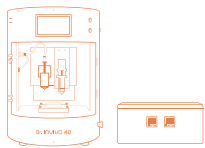
OPTION	A	B	C
STANDARD			
Dispenser	- Syringe Dispenser	- Syringe Dispenser - Syringe Dispenser	- Syringe Dispenser - Filament Extruder
Control	-	-	-
Bed	-	-	-



Dr. INVIVO 4D

UPGRADE

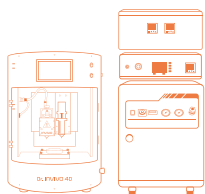
Dispenser	- Syringe Dispenser	- Syringe Dispenser - Syringe Dispenser	- Syringe Dispenser - Filament Extruder
Control	-Heating, Cooling, UV LED	-Heating, Cooling, UV LED -Heating, Cooling, UV LED	-Heating, Cooling, UV LED -Heating, Cooling
Bed	-Heating, Cooling	-Heating, Cooling	-Heating, Cooling



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+ Temperature Controller

PREMIUM

Dispenser	- Syringe Dispenser - Syringe Dispenser	- Syringe Dispenser - Filament Extruder	- Syringe Dispenser - Hot-Melting Pneumatic Dispenser
Control	-Heating, Cooling, UV LED -Heating, Cooling, UV LED	-Heating, Cooling, UV LED -Heating, Cooling	-Heating, Cooling, UV LED -Heating, Pneumatic system
Bed	-Heating, Cooling	-Heating, Cooling	-Heating, Cooling



Dr. INVIVO 4D
+ Temperature Controller
+ Air Dispenser Controller
+ Air Compressor

Dr. INVIVO 4D COMPOSITION



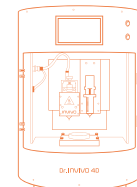
Syringe Dispenser



Filament Extruder



Hot-Melting Pneumatic Dispenser



Dr. INVIVO 4D
AC200-250V 4A



Temperature Controller
AC 200-250V 4A



Air Dispenser Controller
AC 200-250V 2A



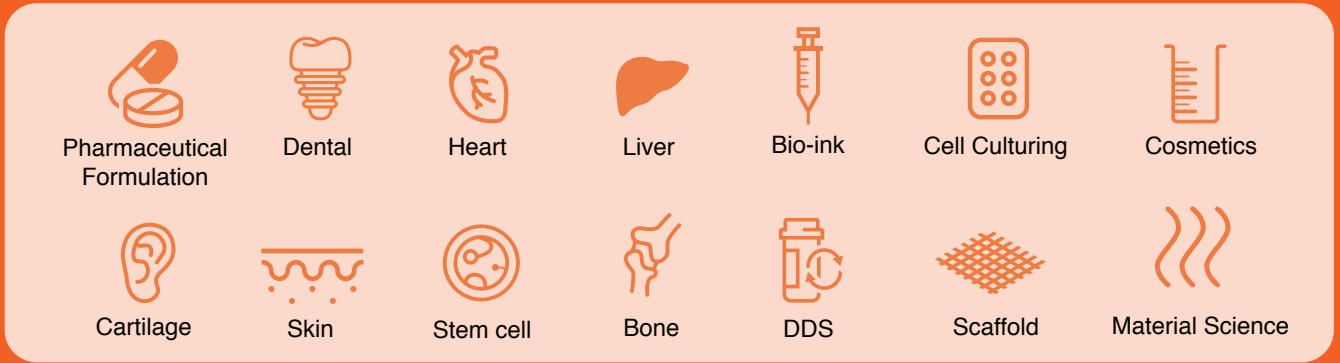
Air Compressor
AC 200-250V 4A

INVIVO REFERENCES

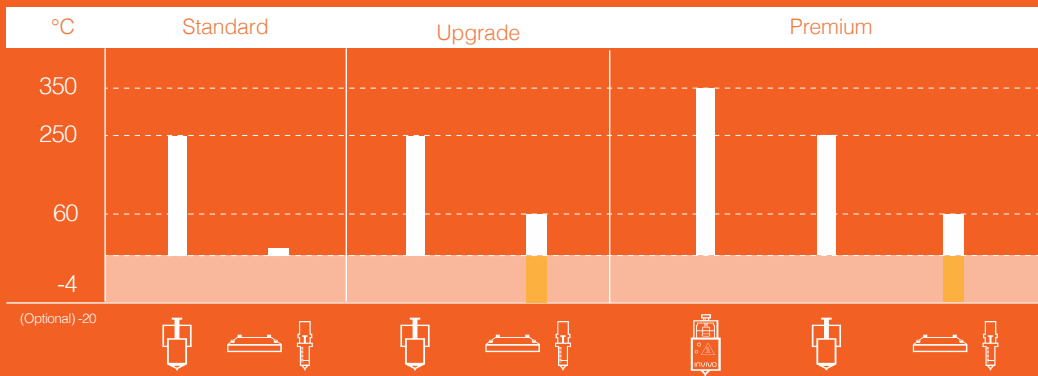


Organ Regenerator

Dr. INVIVO 4D



Temperature Control Range



- Syringe Dispenser : 100 ~ 400 μm (Optional)
- Regenrating Bed
- Filament Extruder : 100 ~ 400 μm (Optional)
- Hot-Melting Pneumatic Dispenser : 100 ~ 400 μm (Optional) : Up to 900 kPa

Things in Common

	Standard	Upgrade	Premium
Curing Methods		Chemical Cross-linking	
Sterilization		UV Lamp (12W/254nm) H14 HEPA Filter	
Technical Capabilities		LCD Touch Screen (Android OS) Wi-Fi Remote Monitoring	
Fabricating Speed (MAX)		20 mm/s	

Build Volume
(10 cm x 10 cm x 8 cm)

- * Avoid looking directly at the UV light.
- * Upgrade Model can be upgrade into Premium Model.
- * The above specifications are subject to change without notice to improve performance.

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