



### **J750**

## **Digital Anatomy Printer**

The J750 Digital Anatomy
Printer brings medical models
to life with incredible realism
that accurately represents
both the appearance and
response of human tissue.
Whether for surgeon training
or testing new medical
devices, these models provide
unmatched clinical versatility
and reduce the costs and
inconveniences of cadaver
and animal labs.



## **Medical Device Companies**

### **Move Your Innovation Forward**

With the J750™ Digital Anatomy™ solution, you can create lifelike in vivo environments in a range of pathologies for product testing and surgeon training. Test and train anywhere. Validate and verify new devices to achieve their intended objectives, faster and within budget, to accelerate time to market and adoption of your new technology.

## **Academic Medical Centers** and Hospitals

### **Train More Efficiently and Cost Effectively**

Integrate new technology into clinical practice sooner. J750 Digital Anatomy models give physicians the opportunity to develop skills prior to entering the operating room, in a risk-free surgical setting on a range of pathologies. This lets your hospital use operating room time more efficiently, reducing cost and improving patient outcomes.

# The New Standard in Medical Modeling

### **Bring Medical Models to Life**

The J750 Digital Anatomy Printer takes PolyJet™ technology to the next level. Use its capabilities to create models with an incredible array of fine details and minute structures that look, feel and function like actual human tissue, with true haptic feedback. And do all of this in a single print operation with minimal to no finishing steps like painting, sanding or assembly.

#### **Make Model Fabrication Easier**

Take the guesswork out of material selection. Choose the anatomy, and the materials are automatically selected for you. You can also adjust the degree of each tissue attribute desired. The gel-like support material can be removed with little or no effort from complex structures, like small blood vessels with internal diameters and wall thicknesses as low as 1.0 mm, making post-processing quick and easy.

### **Create Complex, Multi-Texture Structures**

Combine three new base materials exclusive to the J750 Digital Anatomy Printer to form over 100 unique digital materials. Use the proprietary validated applications offered to mimic human cardiac and vascular anatomy from actual patient scans. Select from a range of anatomical details and tissue properties to integrate into your model. Construct heart models with functional cords, annulus,



valves and calcifications. Vary compliance in vascular models to replicate both healthy and diseased vessels.

#### **Produce Anatomical Models As You Need Them**

The J750 Digital Anatomy printer lets you maintain a digital inventory and print models on demand when you need them.

### **Achieve Efficiency Gains**

Because the J750 Digital Anatomy printer allows you to produce anatomies that feel and behave like the real thing, it reduces the necessity for animal and cadaver labs allowing you to test and train anywhere. That means a reduction in training and procurement costs. It also means improved ethical practice, because it minimizes the use of animals for device testing and surgical training.



# Digital Anatomy Applications

The Digital Anatomy printer comes pre-programmed with a series of anatomical applications, developed in partnership with device manufacturers, world-class research institutions, hospitals and medical personnel.





### **Cardiac Applications**

Create heart models that maintain compliance as well as durability and replicate reality. Their anatomically accurate structures allow cutting, suturing and patching, as well as device insertion and deployment, making them invaluable learning and development tools.

### **Vascular Applications**

Vascular applications mimic reality and allow precision simulation of clinical procedures. You can insert guide wires and catheters into vascular models, deploy valves, grafts, and closure devices. Simulate actual blood flow with an active flow loop. Practice navigating tortuous anatomy with patient-specific models. Replicate calcifications and view them under fluoroscopy.

#### **Innovative Materials Make It Possible**

Accurate, realistic and functional, our materials make it possible to achieve the look, feel and behavior of the real thing.

- GelMatrix<sup>™</sup> A gel-like support material for easy removal from blood vessels with inner diameters and wall thicknesses as low as 1.0 mm.
- **TissueMatrix™** The softest translucent material commercially available. Ideal for replicating the look and feel of heart tissue.
- BoneMatrix<sup>™</sup> A strong, yet flexible material with memory to maintain its shape for representing bones and connective tissue.

# Powered by GrabCAD Print Digital Anatomy Software

The J750 Digital Anatomy Printer uses GrabCAD Print™ Digital Anatomy software specifically designed for medical applications. Its preset anatomical settings and unique ability to accommodate these digital materials make producing lifelike anatomical models easy.

The unique voxel-based engine automatically generates your model's minute structures, enhancing both visual and tactile realism.





## Functional Model For Surgeon Training and Device Testing

This heart model features functioning cords, annulus, and valves with leaflets, created with the J750 Digital Anatomy Printer's cardiac application. It combines the ultra-soft TissueMatrix<sup>™</sup> material with Agilus30<sup>™</sup> to mimic the feel and response of myocardium, giving realistic haptic feedback during device insertion and deployment.





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### **Versatility**

Take advantage of the versatility offered by the J750 Digital Anatomy Printer. Use the 100+ anatomical presets or when full color capabilities are desired over biomechanical properties, select from over 500,000 colors. Define transparencies. Determine textures and finishes. Create an end product that's as close to the real thing as possible. With PolyJet technology and multi-material capabilities built-in, you can 3D print prototypes or anatomical models in the most intricate detail.



### **Innovation at its Best**

Stay on top of the latest innovations by securing an annual J750 Digital Anatomy Printer software license. You will receive new anatomical applications as they are introduced along with periodic updates to your existing applications.



Achieve up to 70% cost reduction\*



3 unique base materials provide **100+ anatomical presets** 

Product Specifications	
Model Materials	Vero™ family of opaque materials including neutral shades and vibrant VeroVivid™ colors
	Agilus30™, TangoPlus™ and TangoBlackPlus™ flexible materials
	VeroClear™, VeroUltraClear™ transparent materials
	TissueMatrix, BoneMatrix
	Biocompatible Clear
Digital Materials	Unlimited number of composite materials including:
	Over 500,000 colors
	Digital ABS Plus and Digital ABS2 Plus™ in ivory and green
	Rubber-like materials in a variety of Shore A values
	Ultra-soft rubber-like material with a Shore 00 value
	Translucent color tints
	User-developed digital materials with GrabCAD Voxel Print™
Support Materials	SUP705™ (waterjet removable)
	SUP706B™ (soluble)
	GelMatrix (waterjet removable)
Build size	490 x 390 x 200 mm (19.3 x 15.35 x 7.9 in.)
Layer Thickness	Horizontal build layers down to 14 microns (0.00055 in.)
Workstation Compatibility	Windows 7 and 8.1
Network Connectivity	LAN - TCP/IP
System Size and Weight	1400 x 1260 x 1100 mm (55.1 x 49.6 x 43.4 in.); 430 kg (948 lbs)
Material Cabinet	670 x 1,170 x 640 mm (26.4 x 46.1 x 25.2 in.); 152 kg (335 lbs)
Operating Conditions	Temperature 18 – 25 °C (64 – 77 °F); relative humidity 30-70% (non-condensing)
Power Requirements	100-120 VAC, 50-60 Hz, 13.5 A, 1 phase
	220-240 VAC, 50-60 Hz, 7 A, 1 phase
Regulatory Compliance	CE, FCC, EAC
Software	GrabCAD Print Digital Anatomy, including the optional add-on GrabCAD Voxel Print
Build Modes	High Speed: up to 3 base resins, 27-micron (0.001 in.) resolution
	High Quality: up to 6 base resins, 14-micron (0.00055 in.) resolution
	High Mix: up to 6 base resins, 27-micron (0.001 in.) resolution
Accuracy	Typical deviation from STL dimensions, for models printed with rigid materials, based on size:
	under 100 mm: $\pm 100 \mu$ ; above 100 mm: $\pm 200 \mu$ or $\pm 0.06\%$ of part length, whichever is greater.
	Please refer to material-specific spec sheets for accuracy estimates.

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