Digital Anatomy Printer Software

The power to create the most realistic anatomical models.

The J750™ Digital Anatomy™ printer software gives you the power to create the most lifelike anatomical models available. Clinically validated preset anatomy options deposit 3D printing materials to behave with biomechanical accuracy that mimics human tissue and bone like never before.[1]

The power to create accurate biomechanical behavior.

Combinations of materials and more than 100 preset anatomical menu options allow you to mimic disease states and physiological factors with biomechanical accuracy. Anatomies are configured using unique material combinations that vary in softness, flexibility, and density to achieve native tissue behavior.

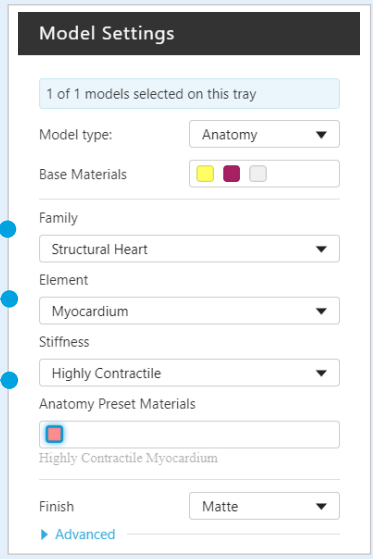
The power to create in a few simple clicks.

The preset anatomy menu offers more than 100 options that allow you to print accurate, lifelike models by simply choosing the desired anatomy.

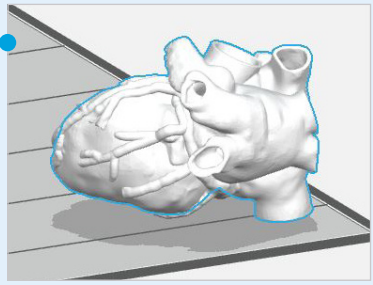
Choose Anatomy not Materials

Choose Anatomical Elements

Choose Properties for Each Anatomical Element Selected



Validated Clinical Solution



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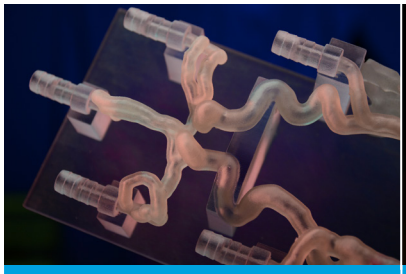
Sell Sheet

Advanced design tools take model creation to the next level.

No matter what anatomical model you create, our software provides you with the widest range of model properties to choose from.



Blood Vessels

Create large and very small complex blood vessels that behave like native vessels when pulsatile forces are applied and devices are inserted. Produces highly repeatable and consistant results.

Model properties include:

- Vessels with moderate to low compliance
- Semi rigid to rigid vessels
- Small to large blood pools
- Large to very fine vascular structures as small as 1.0 mm in diameter
- Create tumors, calcification, and leaflets with various properties

Structural Heart and Other Soft Organs

Create models that match tissue deformation characteristics and behave like native tissue when force is applied such as suturing and device insertion.

Model properties include:

- Soft healthy to stiffened diseased tissue
- Coatings and fiber structures from thin to thick
- Create solid or hollow internal organs
- Tumor creation from soft encapsulated or non-encapsulated to uniformly soft or uniformly stiff

Musculoskeletal

Create models that match bone density characteristics and behave like native bone when force is applied such as discectomy, drilling, reaming or sawing.

Model properties include:

- Dense to porous
- Normal to degenerated
- Flexible to stiff
- Medullary canal sizing – from miniature to normal

Screw Insertion Strain Relief

- Create a perimeter on an orthopedic model that allows for screw insertion without cracking the model
- Control the location, size and shape of the strain relief site

Long Bone Manipulation

- Autogenerate the distal and proximal regions of the bone and match intricate internal structures to the appropriate region– replicating cortical, cancellous and the medullary canal

The power to create with physician-tested, validated presets.

Digital Anatomy printer software was developed and refined over years of expert testing in partnership with top academic medical centers and hospitals across the globe. The anatomical presets have been validated to demonstrate similar feel and biomechanical performance as human anatomy.[2]

Digital Anatomy printer software unlocks the unique material combinations that create unparalleled realism

BoneMatrix™

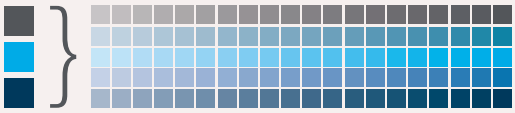
Complex material depositing patterns mimic porous bone structures, fibrotic tissues, and ligaments.

GelMatrix™

Unique GelMatrix material and GelSupport™ depositing patterns allow you to print small, complex vascular structures and easily remove internal support material.

TissueMatrix™

Sophisticated material configurations make models that feel and behave like native organ tissue when force is applied.



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

For more information, contact medical@stratasys.com.

1 Severseike, Leah et al., “Polyjet 3D Printing of Tissue-Mimicking Materials: How Well Can 3D Printed Synthetic Myocardium Replicate Mechanical Properties of Organic Myocardium?,” bioRxiv, 2019, doi.org/10.1101/825794.

2 Sparks, Adam et al., “Digital Anatomy Printing (DAP): A Direct Characterization of DAP Materials for Use as Compliant 3D-Printer Arteries using Intravascular Ultrasound (IVUS),” The Jacobs Institute, Submitted for publication, 2020.

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