Silicone Mock Vessels

Simple to complex – we can do them all

From straight mock vessels to bifurcations to aortic arches and complicated aneurysm models, our mock vessel division can fabricate a wide range of vascular mock vessel anatomies. Our standard compliance range is 5-7%, but we routinely make mock vessels to other compliances.

Certified Compliant

Dynatek measures the compliance and ID of mock vessels as part of our QA process on our proprietary Dynamic Compliance Tester (DCT) to ensure that they are consistent with the guidelines of ISO 7198. All mock vessels shipped to customers include a certification of vessel properties indicating the % radial compliance at a specific pressure, frequency and temperature.

Dynatek Labs: The Performance Leader for Mock Vessels

With 30 plus years of research and innovation behind us, Dynatek Labs produces the most precise mock silicone vessels in the world. Dynatek pioneered the fabrication of mock vessels for use in testing stents, stent grafts and some kinds of heart valves. Honed over decades, accuracy and precision are the hallmarks of our proprietary mock vessel fabrication process, and today we are the first choice for mock vessels by virtually every stent manufacturing company in the world.

No one has been making mock silicone vessels longer than Dynatek!
What's in a mandrel?

A mandrel is usually a stainless steel or aluminum rod accurately shaped to the customer’s vessel specifications and used as a mold for fabricating the mock vessel. A mock vessel can meet the required specifications only if the mandrel from which it is made captures the specifications accurately. Dynatek’s mandrels are machined and finished to extremely close tolerances so that mock vessels from every mandrel meet the requirements exactly.

Is it an art?

Yes, it is. Silicone is a tricky material to work with. Dynatek has over three decades of research experience working with silicone and we know, for example, exactly how much shrinkage to expect when the mock vessel is removed from its mandrel. It is this kind of knowledge that makes Dynatek’s mock vessels the most accurate and consistently precise in the world.

Or is it science?

Yes, it is. The photo above is a close-up of a T-bifurcated mandrel. In fact, it is a CNC-machined two-piece mandrel with the joint made to such close tolerances that the seam is invisible to the naked eye. Advantage? A bifurcated mock vessel with an ultra-smooth, bubble-free interior and naturally curved surfaces near the joint, just like a real vessel in vivo.

More about Dynatek’s Silicone Mock Vessels

Dynatek’s silicone mock vessels are clear for optical clarity, ideal for testing stents, demonstrations or training with complex interventional devices. We routinely fabricate mock vessels from 1.5 mm ID to 52 mm ID, up to 30 cm in length. Other custom lengths are available. Mock arteries can be specified by inner diameter (ID), wall thickness or compliance. While our standard compliance is 5-7%, other compliances are available upon request.

Custom Mock Vessels

Dynatek can fabricate mock vessels based upon your specifications:

- Shape
- Compliance
- Length
- Wall thickness
- Internal or external diameter

To receive a customized proposal, contact us today at:

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