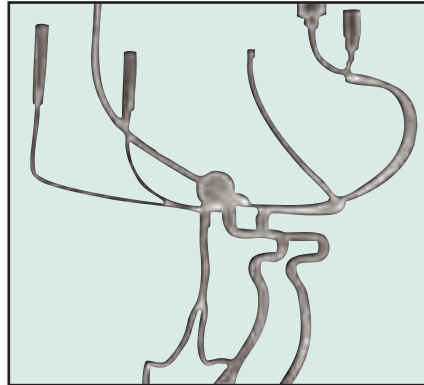




*Intracranial vascular phantom including circle of Willis and aneurysm.*

*The arteries represented in the phantom are: Left (L) and Right (R) internal carotid, L & R vertebral, the basilar, L & R posterior communicating, L & R middle cerebral, L & R anterior cerebral, L & R posterior cerebral and the anterior communicating arteries.*



## Product Description

Shelley's Intracranial Anthropomorphic Vascular Phantom is designed to realistically and accurately mimic the complex geometries of the vasculature in the human head. The 3-D vascular phantom, in which the true vessel diameters and lengths of the vascular tree are known, is an ideal model for testing geometric fidelity of imaging techniques.

The phantom is manufactured using the latest CAD/CAM and NC machining techniques. The intracranial vessels are embedded within rigid, transparent acrylic. The phantom can be manufactured without an aneurysm or with a variety of aneurysm sizes to meet the needs of individual applications.

## Applications

- Calibration of clinical angiographic imaging systems.
- Research & product development requiring complex vascular geometries (i.e. MRA, CTA and DSA).
- Comparisons between finite-element modeling and *in vitro* measurements.
- Custom applications where the aneurysm size can be varied in size or eliminated as per individual needs
- Ideal for blood flow experiments when used with the CompuFlow 1000 MR System

## Dimensions

Length: 180 mm Diameter: 150 mm

## Features

- Inflow to the phantom is provided through the internal carotid and the vertebral arteries.
- Outflow is provided through the anterior, middle, and posterior cerebral arteries.
- Each vessel in the phantom is represented by a single tube of constant radius, with circular cross section. Junctions between vessels are smoothed in order to ensure that flow characteristics mimic as closely as possible those found *in vivo*.
- Vascular diameters, lengths and vertex angles are based on values averaged from several sources in the literature.
- An aneurysm is located at the basilar bifurcation. This represents the location of the aneurysm most often treated using the endovascular approach.
- The aneurysm modeled is a classic berry aneurysm, represented by a 12.5 mm diameter (1/2") sphere.
- The aneurysm can be customized; it can vary in size (6 - 16 mm) or be eliminated, depending on individual needs.

*Phantom is fitted with quick-disconnect entrance and exit fluid connectors.*



SHELLEY MEDICAL IMAGING TECHNOLOGIES

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