



## Product Description

Shelley Medical Imaging Technologies' fillable vertebrae-spine column phantom simulates a human spinal column for magnetic resonance imaging and spectroscopy imaging applications.

This human scale spinal column phantom incorporates twelve independent fillable vertebrae disc chambers housed in a fillable spine column tube. The twelfth fillable vertebrae disc chamber is adjustable to tilt 30 degrees or at 45 degrees. Each fillable vertebrae disc in the spinal column is replaceable and can be filled with user-composed water-based contrast solutions. The vertebral column discs are supported by a pair of parallel rods within a fillable sealed spinal column tube. The phantom is constructed of an acrylic material to ensure minimal magnetic susceptibility artifacts.

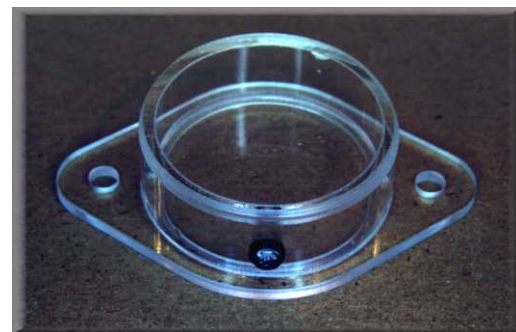
## Phantom Design

The fillable vertebrae-spine phantom consists of a cylindrical clear acrylic tube supported by leak free caps. One end cap is removable and supports the fillable vertebrae discs with a pair of acetal threaded rods. The last fillable disc chamber is tilted at 30 or 45 degrees by means of angled acrylic spacers inserted at time of assembly.

A stabilizing circular acrylic plate is positioned below the twelfth vertebrae to prevent the disc chambers from striking the tube wall. The leak proof removable end cap is secured with glass-filled nylon thumb-screws. The removable end cap also includes two holes for filling and draining. One fill hole incorporates a conical air bubble trap to ensure the phantom is free of cavitation.

Each fillable vertebrae disc is an independent chamber. Each disc is constructed of solvent-bonded clear acrylic, 1/8" thick, and is supported in the spine on parallel rods through a pair of holes. Each disc chamber is independently closed and sealed with a clear polycarbonate screw and an O-ring.

*Two sizes of this phantom are available*



Dimension	Large phantom, Model: PI-MRSSPL	Small phantom, Model: PI-MRSSPS
Overall length x diameter	13.5 x 6.0 inches or 342.9 x 152.4 mm	12.4 x 5.0 inches or 314.96 x 127.0 mm
Cylinder inside diameter	4.0 inches or 101.6 mm	3.25 inches or 82.55 mm
Disc chamber inside height x diameter	0.59 x 1.75 inches or 14.986 x 44.45 mm	0.50 x 1.25 inches or 12.7 x 31.75 mm
Disc volume	23 milliliters	10 milliliters
Net phantom volume	2.2 liters	1.1 liters

## SHELLEY MEDICAL IMAGING TECHNOLOGIES

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