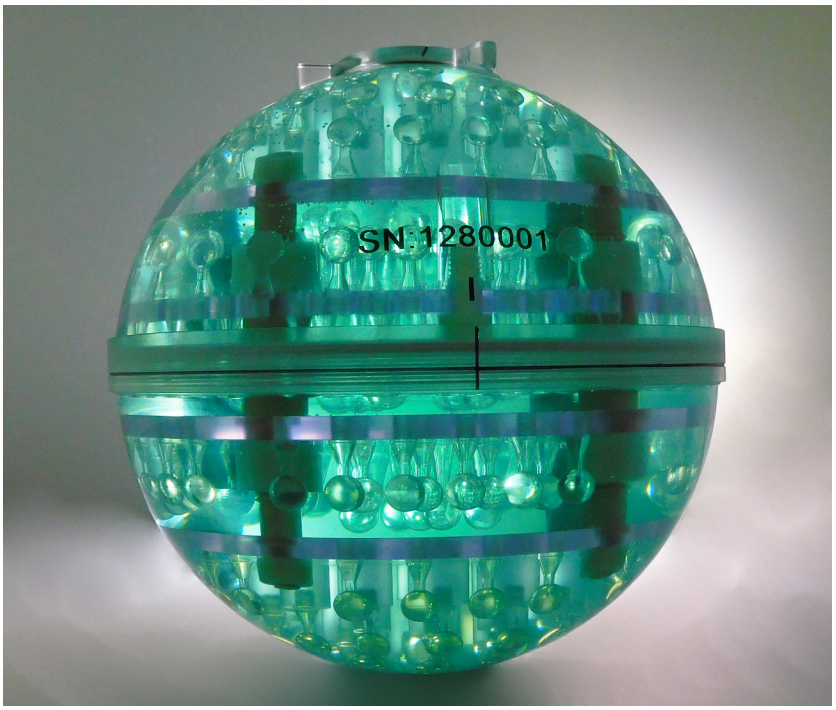
PART NUMBER
EMR128



Magphan® 128 Distortion Phantom

The EMR128 is from the family of Magphan® Quantitative Imaging Phantoms developed with physicist Richard Mallozzi, Ph.D. The Magphan® 128 is designed to provide detailed distortion mapping of MR head coil sized fields.

For comprehensive MR image quality measurements, we recommend the Magphan® S162, our most advanced MR systems phantom designed for head coils, and the TMR body phantoms.

The Magphan® 128 is an updated replacement for the EMR051, the phantom selected to monitor the MR distortion for the Alzheimer's Disease Neuroimaging Initiative (ADNI), involving precision volume measurements over long periods of time. The Magphan® Quantitative Imaging Phantoms continue to be widely used in neuroimaging studies where distortion monitoring is critical in fields such as autism and Alzheimer's research.

With increased use of MR for quantitative applications, such as radiation oncology planning and volumetric MRI, distortion has become important to measure and track.

Several white papers by Richard Mallozzi, Ph.D. outline the sources of MR distortion and residual distortion after MR distortion corrections. The Magphan® Quantitative Imaging Phantom provides the ability to quantify the effects of distortion on these critical processes.

The Magphan® 128 housing fits in modern head coils and the solid sphere technology supports a wide range of pulse sequences.

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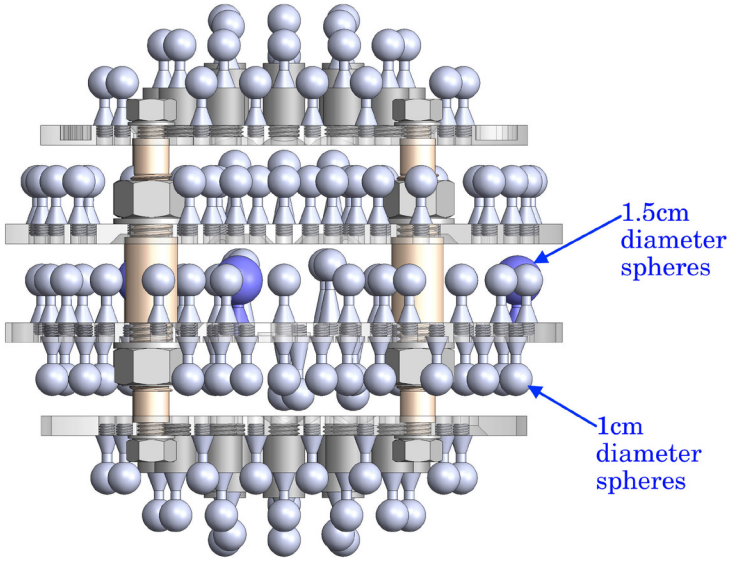

Magphan® distortion measurements are made from an array of precisely-positioned fiducial spheres located inside the phantom. Comparing known and scanned sphere positions allows for a highly accurate distortion map to be created.

The EMR128 model includes, three 1.5-cm diameter spheres, and 218 1-cm spheres.

The phantom housings are cast from a clear urethane material. The two halves of the sphere have a threaded connection allowing for internal access to the phantom if required.

Smári Image Analysis Service
The cloud-based Smári image analysis service provided by Phantom Laboratory measures geometric distortion. Two years of service is included.

The service is conveniently cloud-based and totally automated. Uploading a DICOM image series of the phantom generates an informative report. Trending and comparative analysis of data between machines is included.