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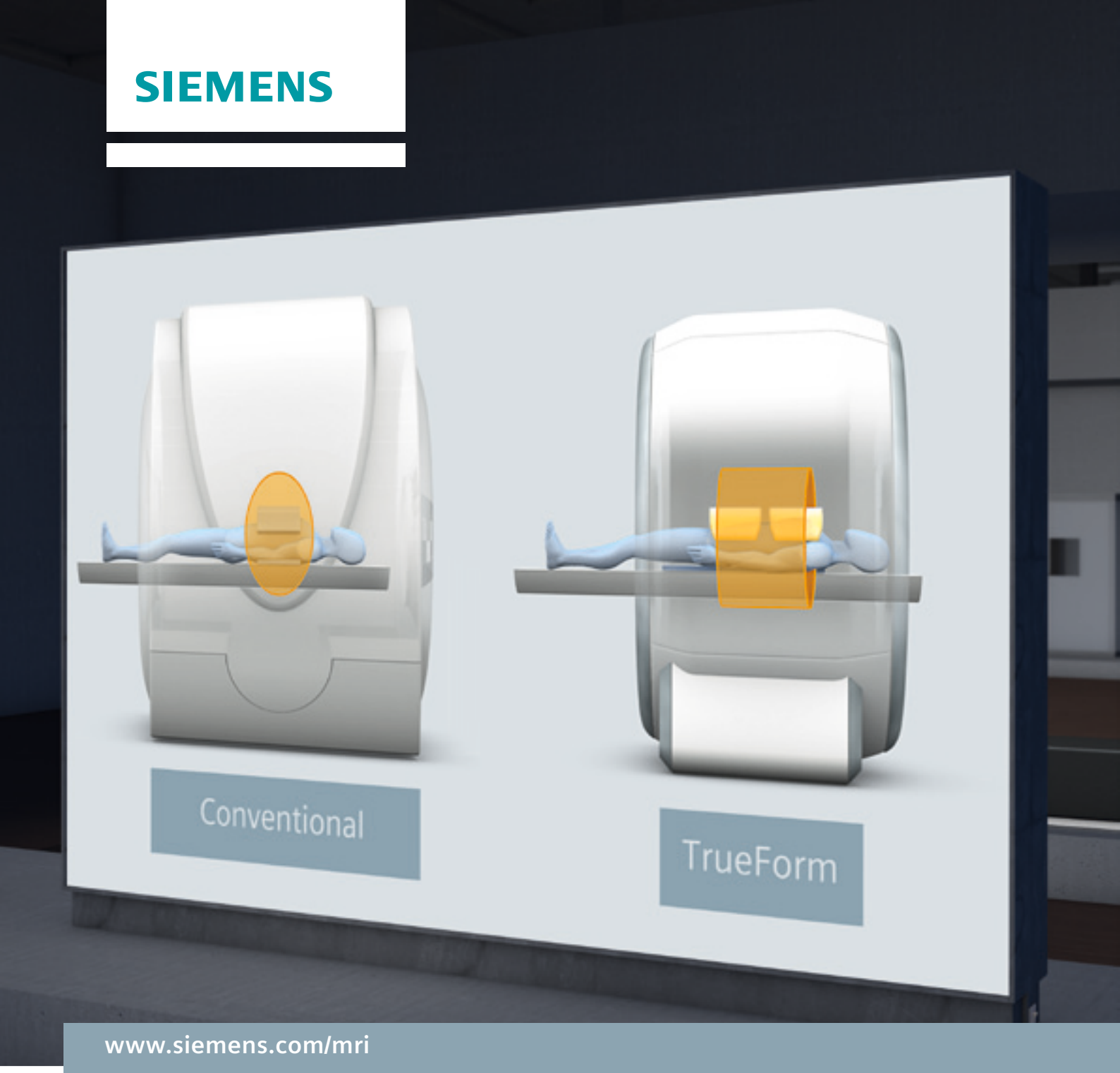


www.siemens.com/mri

TrueForm Magnet and Gradient Design

Imaging the true form of the anatomy.

Answers for life.

TrueForm Magnet and Gradient design

TrueForm® design, pioneered and introduced by Siemens in 2007, is the result of numerous technological innovations and addresses the need for field homogeneity. One important aspect of TrueForm design is TrueForm Magnet and Gradient design, which enables imaging of large volumes with Open Bore and short magnet design – without compromising spatial resolution or speed.

TrueForm Key Benefits

Increased homogeneity

- Large volume coverage
- Cylindrically optimized homogeneity volume corresponding better to the true form of the human body

Higher image quality

- Reduction of the unusable edges on images
- Better fat saturation coverage

Optimized Field of View

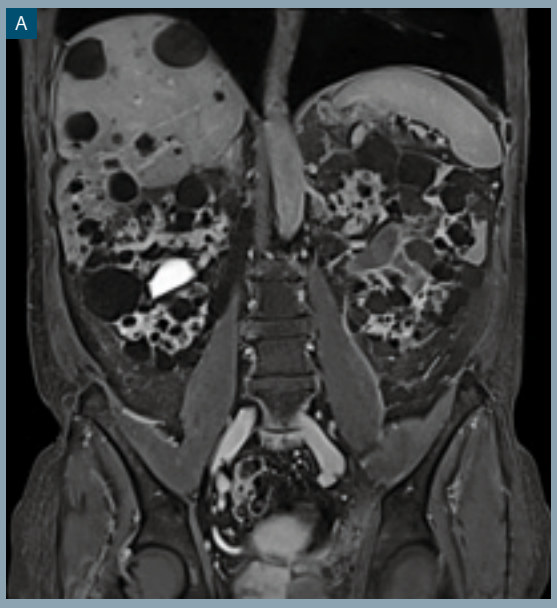
- Ability to use a FoV of up to 50 cm x 50 cm x 45 cm
- Supporting a full range of applications

Image without distortions along the edges due to TrueForm Magnet and Gradient design (MAGNETOM Aera, T2 TSE, 45 cm x 45 cm FoV).

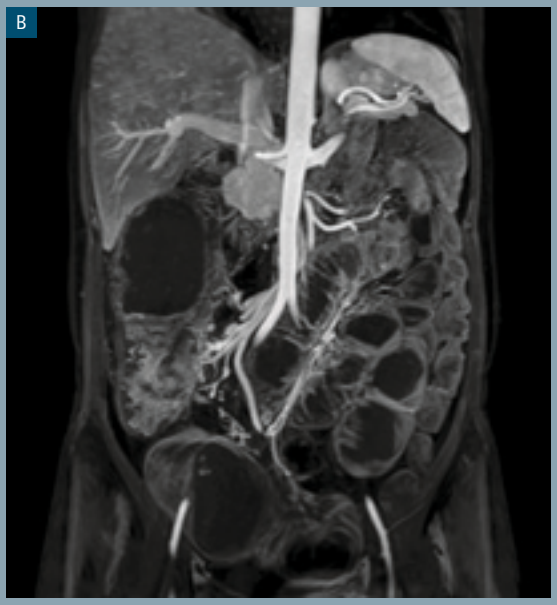
Excellent clinical performance

TrueForm Magnet and Gradient design has established itself in the clinical routine with over 1,000 installations worldwide as of September 2011. The images below show the elimination of commonly known distortions along the edges.

A



B



Images showing the effect of TrueForm Magnet and Gradient design without conventional distortions along the edges even in more challenging measurements using fat saturation techniques.

A: MAGNETOM Skyra,
T1 3D VIBE FatSat,
40 cm x 40 cm FoV
University Medical Center Mannheim, Germany

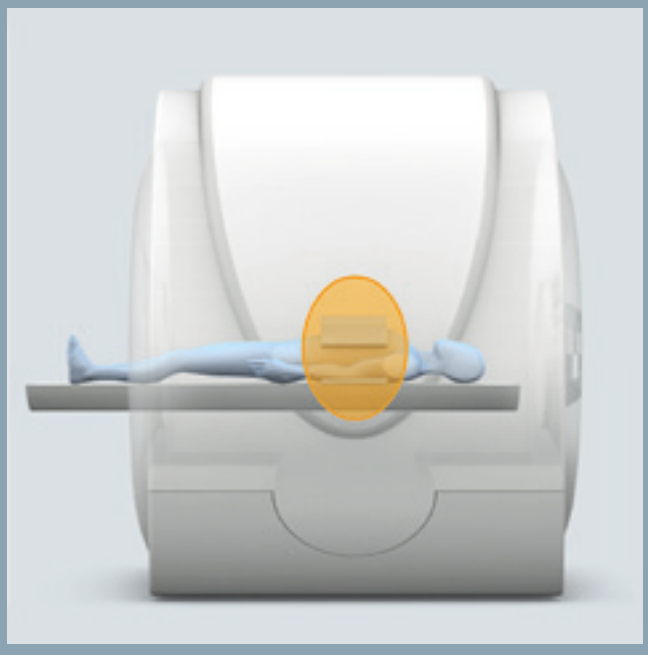
B: MAGNETOM Skyra,
T1 3D VIBE FatSat MIP,
30 cm x 38 cm FoV
University Medical Center Mannheim, Germany

What our customers say:

"TrueForm Design leads to increased homogeneity and image quality for all organs."

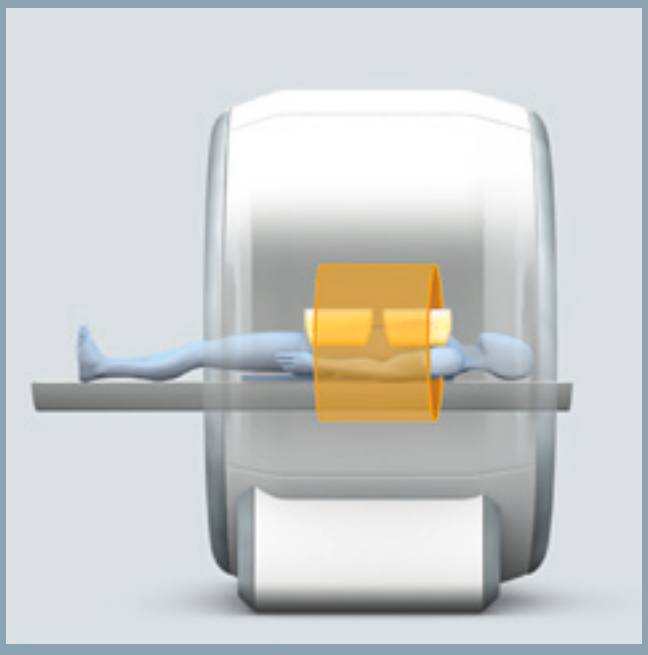
Markus Lentschig,
MR and PET/CT Imaging Center
Bremen Mitte, Germany

Imaging the true form of the anatomy



Conventional

Comparison of conventional (left) and TrueForm (right) Magnet design showing the increased possible imaging volume due to the optimized homogeneity.



TrueForm

TrueForm Magnet and Gradient design is optimized for a cylindrically shaped volume rather than a spherical one, as shown above.

TrueForm Magnet design is an innovation that produces a cylindrically optimized homogeneity volume instead of the conventional spherical or elliptical volume. A cylinder corresponds better to the true form of the human body. TrueForm Gradient design also creates a cylindrical shape for the gradient linearity volume.

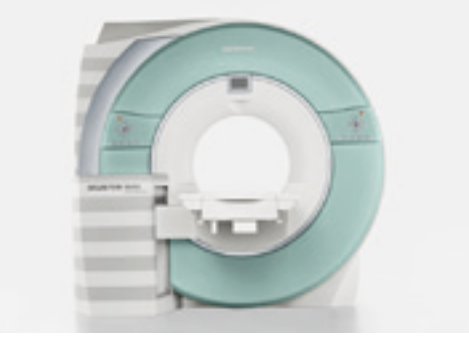
The two combined result in better image quality by reducing the unusable edges in the images as well as better fat saturation covered in a scan. TrueForm design reduces the overlap needed between steps for extended Field of View (FoV) exams, reducing the number of steps needed for a given scanning range.

TrueForm Magnet and Gradient design is optimized for a cylindrically shaped volume rather than a spherical one. An ideal cylinder has 1.5 times more volume than a sphere with the same axis lengths, which means a greater homogeneity volume compared to conventional magnets with identical "nominal" specifications.

For MAGNETOM Aera, MAGNETOM Skyra and MAGNETOM Verio, TrueForm Magnet and Gradient design is standard providing the ability to use a FoV up to 50 cm x 50 cm x 45 cm depending on the application.

TrueForm Magnet and Gradient design is standard on MAGNETOM Skyra 3T ...

... MAGNETOM Verio 3T ...



... and MAGNETOM Aera 1.5T systems.

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