SIEMENS

Open 1 Tesla MR*

Great combinations go further

High-field performance
What's the big deal?

Everyone agrees 1 Tesla is where high-field MR begins – and they have good reason to. 1 Tesla image quality is a dramatic improvement on images scanned with 0.5 Tesla. You get double the signal to noise. Either double the resolution or half the exam time with the same image quality. And the full range of high-field applications. 1 Tesla is high-field: the beginning of sophisticated high-field MR.

So why should such high-field performance be limited to tunnel systems? Sure, the technical feasibility of an open high-field system is hard to imagine and by no means an easy feat. Yet where others have made noble attempts to reach for the stars, Siemens has succeeded: creating the first 1 Tesla high-field open MR system.

Discerning minds quickly spot solutions that promise more than they deliver. That's why we at Siemens made sure our new open system is indisputably 1 Tesla high-field. For performance-oriented radiologists, the idea of an open MR system has just become truly interesting.


MAGNETOM 1T

People-friendly
Who cares?

Extensive customer focus groups have confirmed: patients greatly prefer openness. Tunnels are constricting and intimidating. Open systems inviting and reassuring. And the more patients feel at ease, the more compliant they are during examinations. That, in turn, spells out quicker patient throughput – and a clearly noticeable increase in productivity. Patients, operators, radiologists alike: everyone profits from openness.

So why should openness be limited to only low-field or mid-field systems? As a pioneer in medical technology, Siemens has extended the limits to make the impossible possible: the combination of an open architecture with 1 Tesla field strength.

And thanks to a revolutionary positioning of the magnet support columns – asymmetrically "behind" the patient – the sense of openness is considerably expanded. While other manufacturers may crack open the door to new possibilities, Siemens liberates.


SIEMENS
MAGNETOM 1T

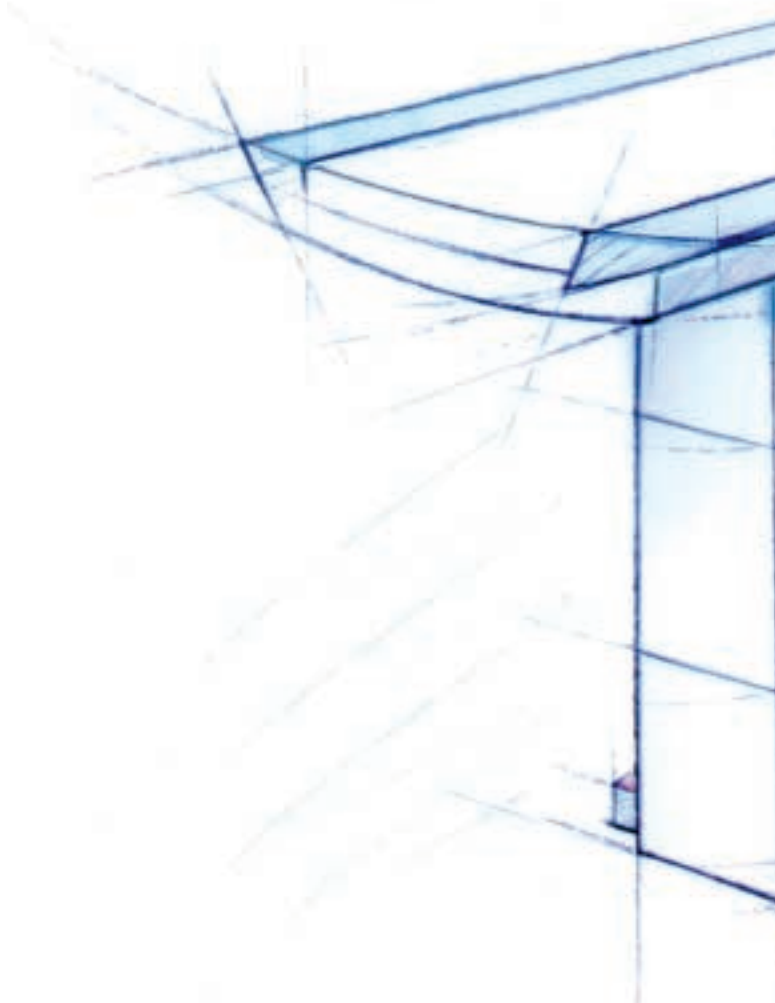
All in one
So where's the catch?

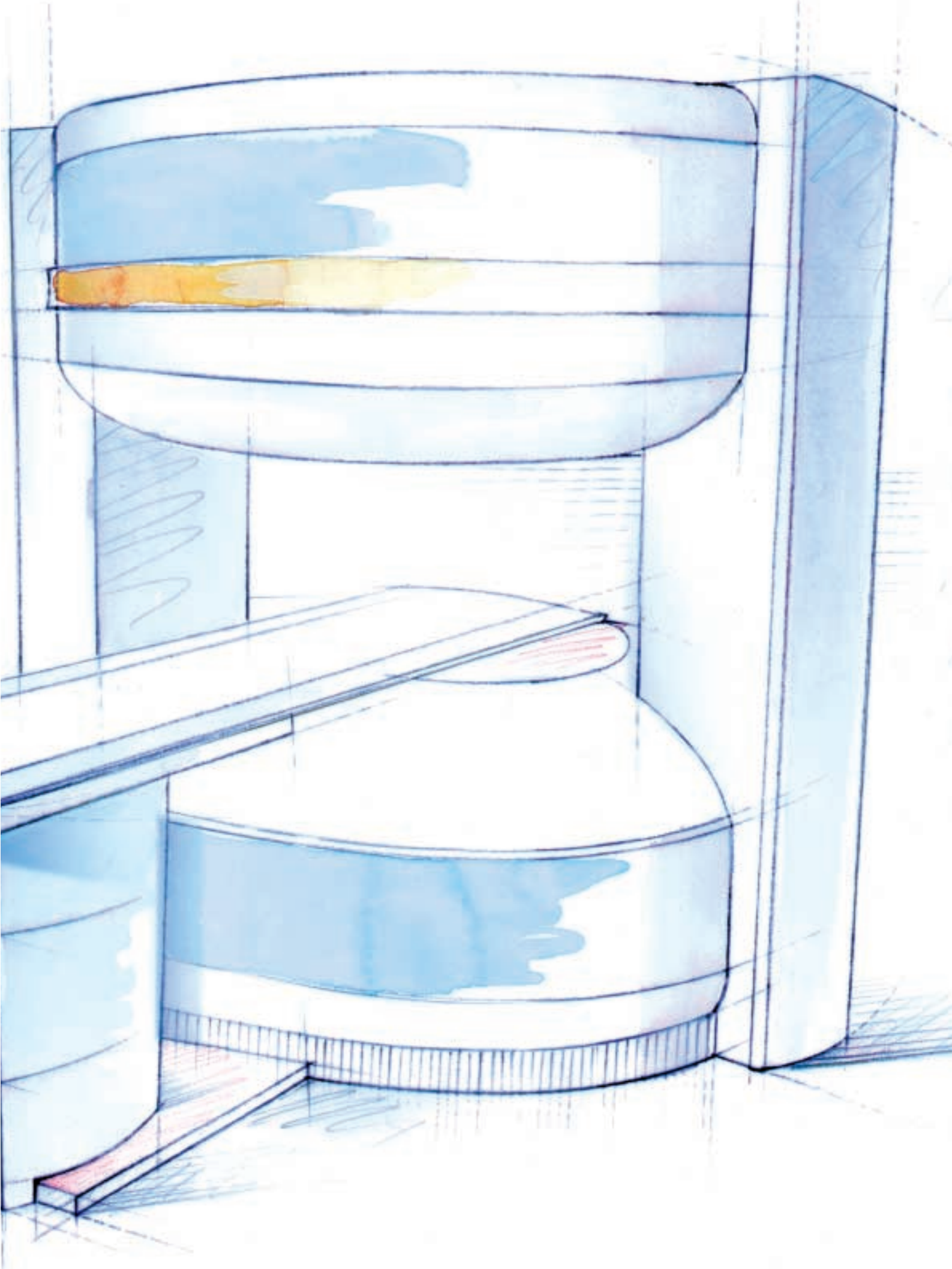
The most amazing thing about Siemens' new open high-field MR system is not that it is technically possible – but that it is economically feasible. Thanks to many years of research, a powerful magnet system has been developed which cleverly bridges the wider magnet gap necessary for an open system, while also providing sufficient active shielding and innovative field forming plates to maximize performance. Most of all, now the technology has been optimized to the point where it can be integrated in a system which is affordable to purchase – and profitable to operate.

Add to the high quality technology and profitability an irresistible aesthetic appeal – clever design which smoothly coordinates functionality with elegance of tone and form – and the equation is complete: the open high-field MR system from Siemens.

Who else but a world leader in MR technology has the competence and know-how to successfully unite such diverse and inter-disciplinary factors?

Great combinations go further.





Data
Preliminary specifications

Magnet	
• Manufacturer	Oxford Magnet Technology
• Field strength	1 Tesla
• Type	Superconducting, Actively-Shielded
• Homogeneity	2 ppm Vrms @ 40 cm
	1 ppm Vrms @ 30 cm
• Weight	13.7 tons
• Fringe field (without shielding)	5 m x 6 m (16' x 19') (vertical x horizontal)
• Patient gap	44 cm
• Max FOV	40 cm
Gradients	
• Strength	>= 20 mT/m
• Slew rate	>= 25 T/m/s
• Rise times	<= 800µ sec
Table	
• Width	80 cm wide
• Motor driven?	Yes, from console
• Horizontal movement?	Yes, floating, 2D
• Height adjustable?	Yes
Applications	
• MRA Package	Comprehensive
• Multi-slab MRA	Yes
• Peripheral MRA	Yes, + moving table
• Bold Imaging	Yes
• Perfusion	Yes
• Breath-hold abdominal sequences	Yes
• Diffusion	Yes
• Single-shot EPI	Yes
• Spectral Fat Sat	Yes
RF Coils	
• CP Phased Array Package	Yes, Integrated IPA
• CP Head/Neck Array	Yes, Integrated IPA
• CP Body/Spine Array	Yes, Integrated IPA
• CP Peripheral Array	Yes
• CP Extremity	Yes
• CP Shoulder	Yes
• Multipurpose coils	Yes
Software	
	syngo + MRease
	NT-based, high-performance PC
Siting	
Min. room height clearance	2,85 m (9' 4")
Min. installation space	35 m^2 (377 sq. ft.)

* The information about this product is being provided for planning purposes. The product requires 510 (k) review and is not commercially available in the U.S.

Please contact in the USA:
Siemens Medical Systems, Inc.
186 Wood Avenue South
Iselin, NJ 08830-2770
(+1) 732 321-4500
or your local Siemens Representative

Please contact in Japan:
Siemens-Asahi Medical Technologies Ltd.
Takanawa Park Tower 14 F
20–14, Higashi-Gotanda 3-chome
Shinagawa-ku
Tokyo 141-8641
(+81) 354 238 489

Please contact in Asia:
Siemens Advanced
Engineering Pte. Ltd.
Medical Division
Asian Business Centre
2, Kallang Sector
Singapore, 349277
(+65) 841 35 28

Siemens **medical**
Solutions that help

Siemens Aktiengesellschaft
Medical Engineering Group
Henkestrasse 127, D-91052 Erlangen
Telephone (+49) 913184-0
http://www.med.siemens.com
http://www.openhighfield.com

Order No. A91100-M2220-F316-1-7600
Printed in Germany
BKW 62316 WS 070010.