

SIEMENS



Leading.
With
MAGNETOM.

www.siemens.com/prisma

MAGNETOM Prisma

The 3T PowerPack for exploration.

Answers for life.

80/200 simultaneous With



Leading in research.

In your quest for new insights, you need freedom to explore. No matter the research field you are leading in – powerful high-end MRI solutions support you. You have the opportunity to provide changes that can help answer fundamental questions of mankind. Answers that have the potential to further improve diagnostics capabilities and **help fight the most threatening diseases**. Brilliant imaging results, cutting-edge technology, strong collaboration, and open architecture help you drive innovation.

You are an MRI leader.

Whether you are just beginning to work with MRI or are at the forefront of research. With Siemens MAGNETOM MRI systems, you can be sure to lead. In your clinical field, your research, your business environment- to achieve our joint mission of advancing human health.

Leading. With MAGNETOM.



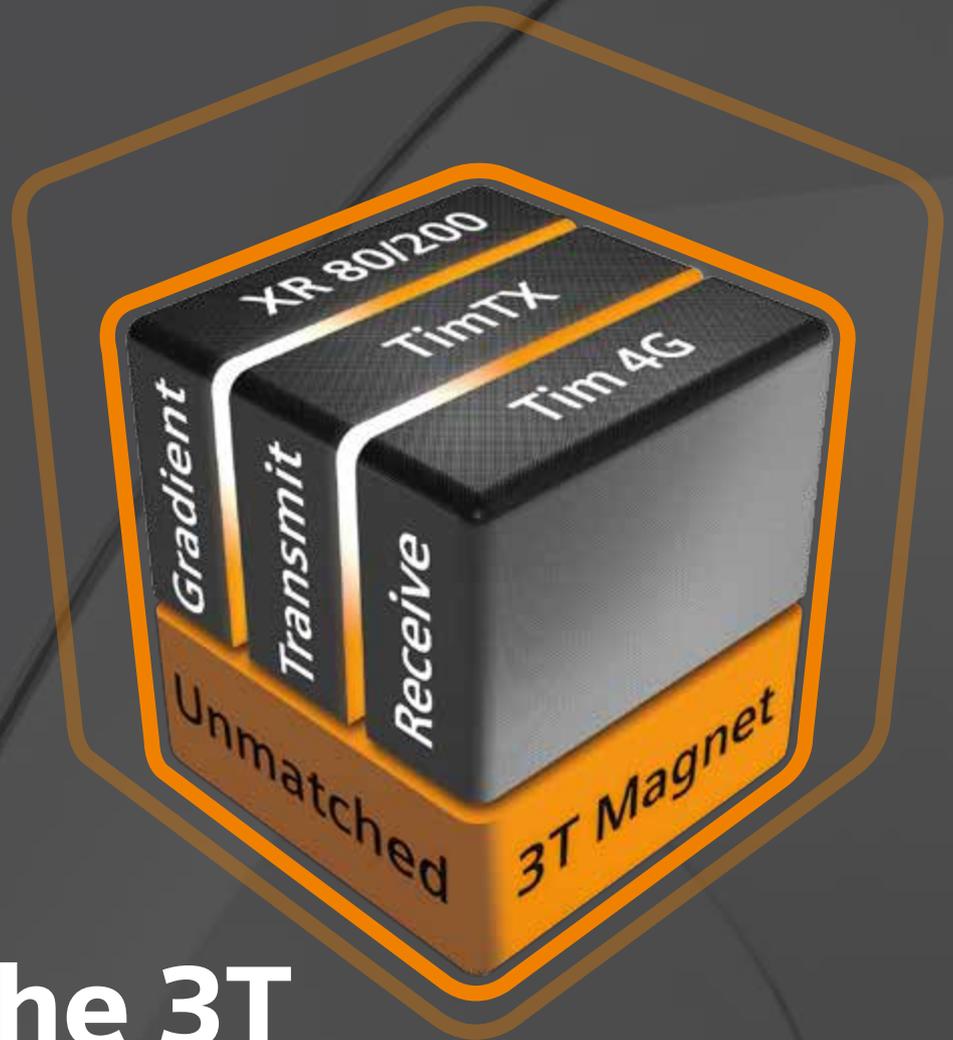
ously. MAGNETOM.

MAGNETOM® Prisma is the 3T PowerPack for exploration that offers you a unique 3T platform to help you tackle the most demanding clinical and research challenges of today and the future. Its breakthrough design delivers maximum performance under prolonged high-strain conditions and gives you **the power to outperform** – in the most ambitious projects.

Exciting new applications deliver higher anatomical detail, and open new possibilities for imaging functional processes and understanding diseases. MAGNETOM Prisma offers **the power to explore** – to enter new areas of research.

MAGNETOM Prisma offers you the right tools to help translate your research into clinical routine. With the IDEA network – an open and active MRI collaboration and development network – you can exchange and share with other users. New reproducibility standards introduced by Dot (Day optimizing throughput engine) will help you boost your leadership position in MRI. MAGNETOM Prisma will give you **the power to succeed** – to set the future trends in imaging.

MAGNETOM Prisma
The 3T PowerPack for exploration.



The 3T PowerPack

MAGNETOM Prisma's core technologies

The PowerPack combines a new, unmatched 3T magnet with 80 mT/m @ 200 T/m/s gradients. The latest parallel transmit technology, TimTX TrueShape, enables zooming into specific body regions for enhanced image quality. Furthermore, the Tim 4G integrated coil technology offers remarkable imaging flexibility and supports complex examinations across the whole body.

ously.
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MAGNETOM Prisma.

The 3T PowerPack for exploration.

When it comes to tackling the most demanding clinical and research challenges MAGNETOM Prisma is the unique and powerful 3T platform at your side.



- Magnet homogeneity at 40 cm DSV – 0.25 ppm
- Imaging FoV – 50x50x50 cm
- Zero helium boil-off technology
- 80 mT/m @ 200 T/m/s, simultaneously
- High Power Shim – optional
- TimTX TrueShape – standard
- Tim 4G + Dot
- 64 or 128 receive channels
- High-power image reconstructor
- 60 cm bore diameter



The power to outperform

Excel with excellent MRI technology: unmatched 3T magnet, 80/200 gradient performance, latest parallel transmit technology, and highest coil element density.

[▶ p. 8/9](#)



The power to explore

Enter new areas of research with ground breaking applications such as *syngo* RESOLVE, *syngo* ZOOMit, and Diffusion Spectrum Imaging (DSI). MAGNETOM Prisma is the ultimate tool for the most demanding clinical and basic research.

[▶ p. 12/13](#)



The power to succeed

Drive the advancement of human health – all supported by the right tools, the right partner, and the right collaboration network.

[▶ p. 16/17](#)

The power to outperform

In the most demanding research projects with extensive long-term studies, you profit from a powerful, robust system. MAGNETOM Prisma is your 3T PowerPack for unlimited imaging and innovation capabilities.

When taking large steps in 3T research, MAGNETOM Prisma helps you keep the pace – boosting your performance in the most challenging research projects.

With the requirements of scientists in mind and based on the MAGNETOM Trio experience, the system has been designed for outstanding strength and robustness – embodied in an unmatched 3T magnet and unprecedented XR 80/200 gradients.

**Looking for the best in 3T research?
We have it.**

MAGNETOM Prisma incorporates excellent MRI technology, enabling faster examinations at higher spatial and temporal resolution. Shape the RF pulse from multiple sources independently to stay at the forefront of MRI application development.

Your benefit? Higher performance.

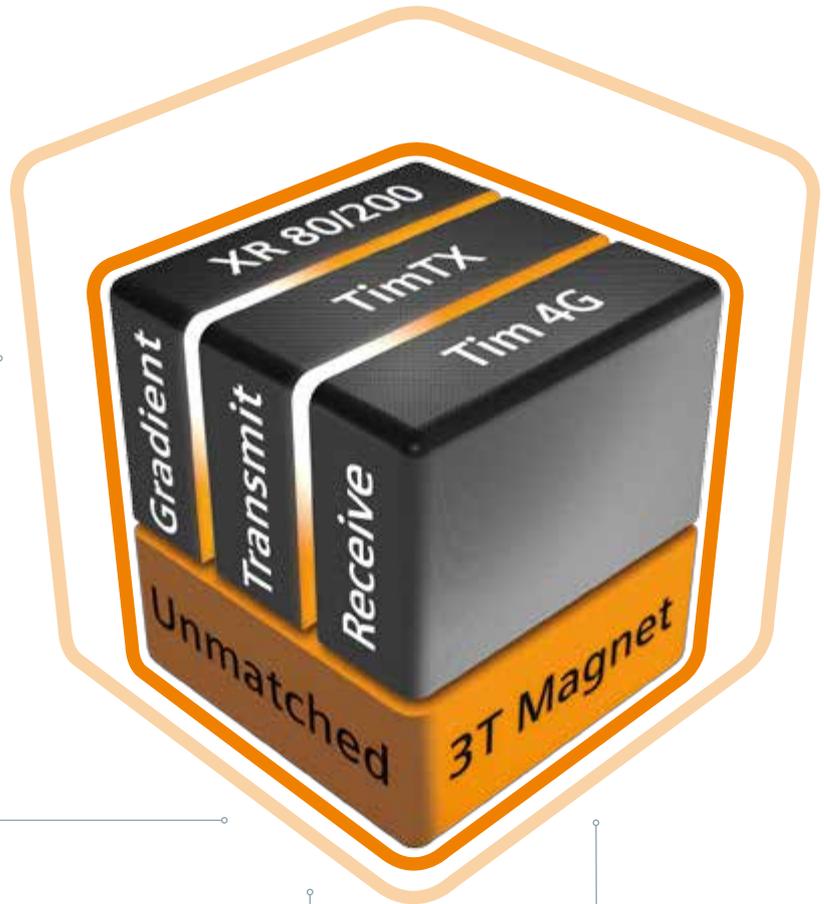
With the unique 3T PowerPack at its core, MAGNETOM Prisma offers unlimited imaging capabilities and long-lasting stability, even for long examinations. Empowering your most innovative research – no matter the field you are in.



“*TimTX TrueShape allows you to excite the volume of interest in two separate RF channels – which translates into a very robust image quality.*”

*Henrik Michaely, MD
Associate Professor of Radiology
Section Chief Vascular and Abdominal Imaging
Institute of Clinical Radiology and Nuclear Medicine
Mannheim, Germany*

The 3T PowerPack



Outstanding gradient performance

- 80 mT/m @ 200 T/m/s simultaneously, on all axes
- Ultra high-performance cooling for each individual gradient axis
- Force-compensated design for reduced vibrations
- Unprecedented long-term stability and minimized acoustic noise
- 60 cm bore

Parallel transmit technology

- Selective excitation with TimTX TrueShape
- Zoomed imaging with syngo ZOOMit standard
- Open platform to develop new applications

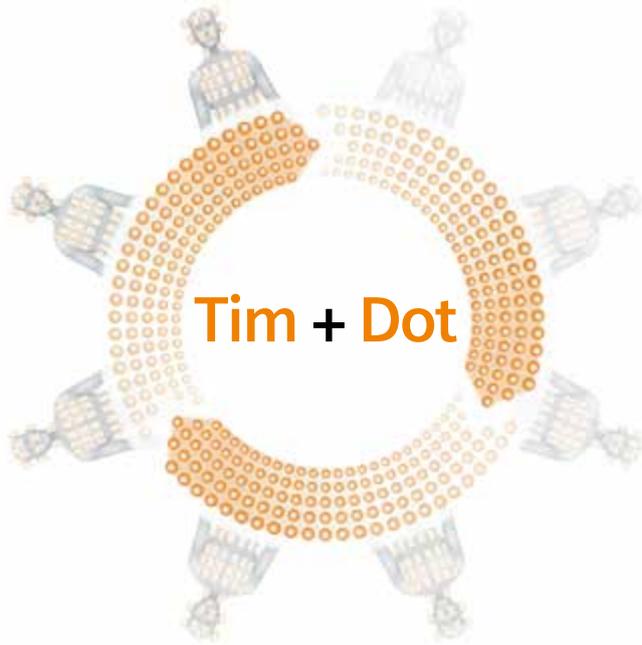
New high-performance 3T magnet

- 3T benchmark homogeneity
- FoV 50x50x50 cm
- New high-order shim
- Zero helium boil-off

Tim 4G integrated coil technology

- Highest coil element density
- Designed for maximum SNR and extreme iPAT performance
- Up to 128 independent channels
- Fully digital MRI with Direct RF
- Real-time feedback loop for enhanced performance monitoring during scanning

Boost your clinical productivity



Tim 4G+Dot are the direct response to today's demanding world of healthcare economics.

Tim 4G is Siemens' innovative coil architecture and receive technology that unlocks imaging power like never before.

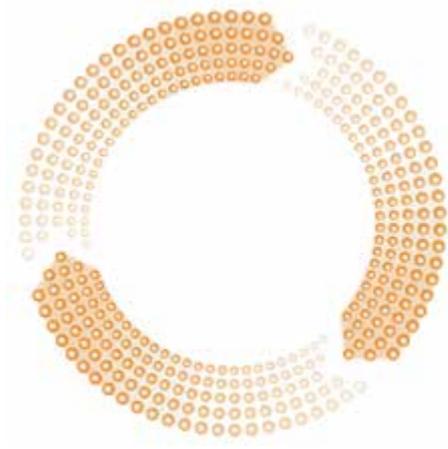
Dot engines help take the complexity out of MRI, at the same time enable consistency and reproducibility.

Together, they redefine productivity – with an increase of up to 50%.



“With Dot, we can now ensure our examinations are far more reproducible and of excellent quality.”

Arnaud Lambert
Technologist
Imagerie Médicale Saint Marie,
Osny, France



Tim sets the standard in MRI.

Tim is Siemens proven integrated coil technology with over 8,000 installations worldwide. Now, in its 4th generation, Tim 4G brings ultra high-density coils combined with the highest channel configurations. Tim 4G – with its all new RF architecture – locates all transmit and receive components at the magnet resulting in an all digital-in/all digital-out architecture.

Your benefits:

- Exceptional image quality
- Faster acquisition and exam time
- Higher SNR

Flexibility

- Up to 204 coil elements with up to 128 independent RF channels for higher SNR and speed
- Ultra high-density coil array for an imaging distance up to 205 cm with no coil repositioning
- Light-weight, patient friendly coils allow more flexibility in patient set-up

Accuracy

- High resolution imaging from head-to-toe with high channel coils
- All digital-in/digital-out DirectRF architecture with transmit and receive components at magnet for true signal purity and stability
- TimTX TrueForm, providing excellent B1 homogeneity at 3T

Speed

- Easier and quicker set-up with improved Tim 4G DirectConnect and SlideConnect coils
- Tim Dockable Table is mobility done right
- iPAT2 allowing parallel imaging in two directions for fast data acquisition

Dot. The next movement in MRI.

Dot is a new way of scanning in MRI. We think it's a better way. Dot scanning uses a suite of customizable engines – allowing the user to personalize exams according to patient needs, build in step-by-step user guidance, and automate MRI exams – either “out of the box” or based on the institution’s standards.

Your benefits:

- Increased consistency and reproducibility
- Greater ease of use
- Higher productivity

Personalized

- Uniquely tailored, optimized exam strategies
- Adapt scanning to the patient condition or clinical question
- Customize Dot strategies to your standards of care

Guided

- Real-time on-board guidance with images and text through even the most complicated exams
- Adapt scanning to your protocols for increased standardization with integrated decision points
- Add your own instructions including image examples for consistent positioning and scanning

Automated

- Consistent and reproducible scanning with features like AutoAlign, AutoBolus Detection
- Intelligent workflows customizable to your standards enable effortless set-up
- Optimized timing of scanning and breathing

MAGNETOM Prisma – boosting your power in research

Brain connectivity

Body physiology

Organ morphometry

Tissue metabolism

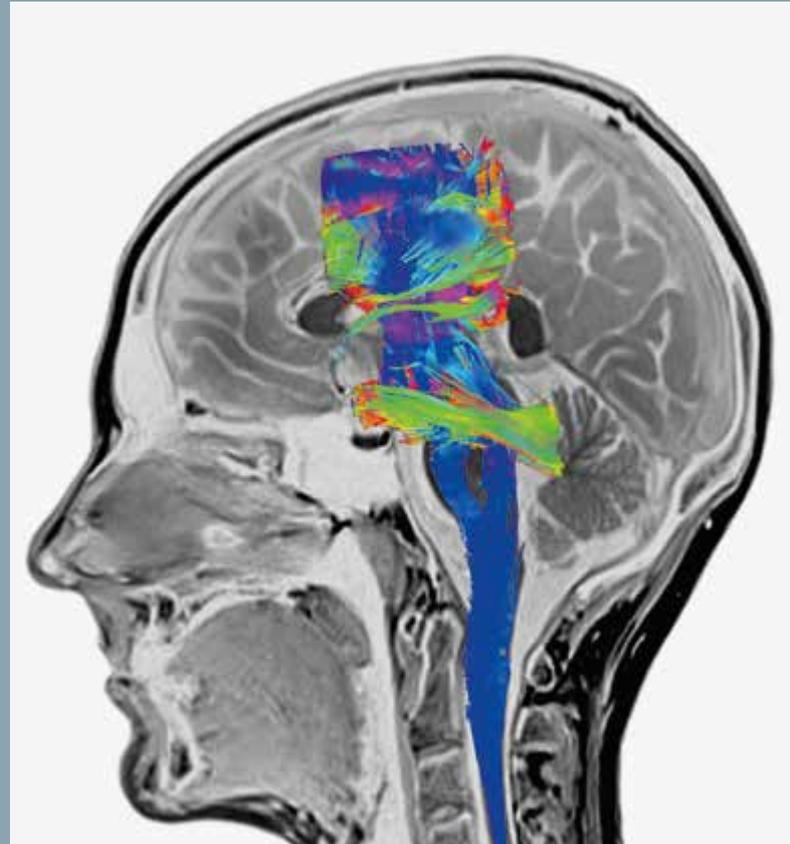
Quantitative MRI

MAGNETOM Prisma
A Tim+Dot System



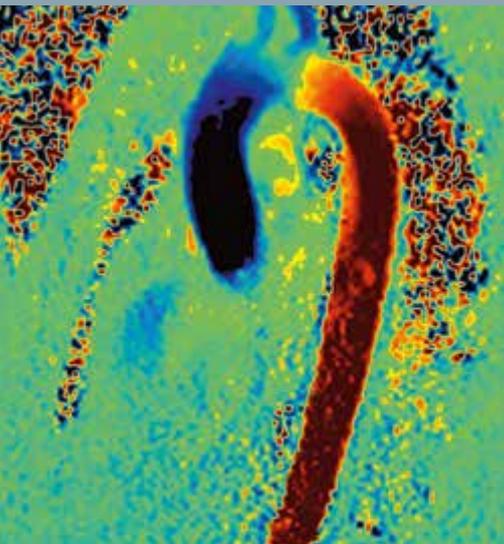


Brain connectivity
Whole-brain DTI Tractography

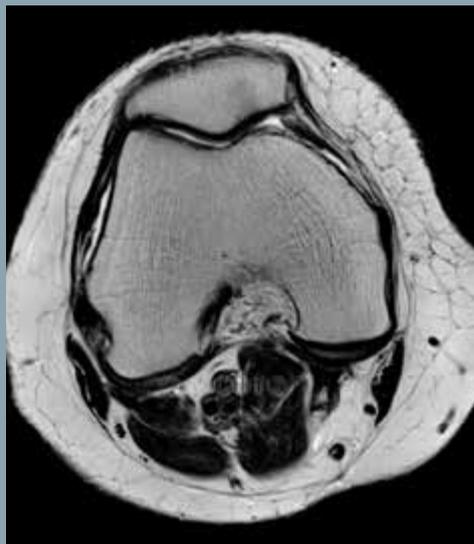


C-spine DTI Tractography

Body physiology
Cardiac Flow Imaging

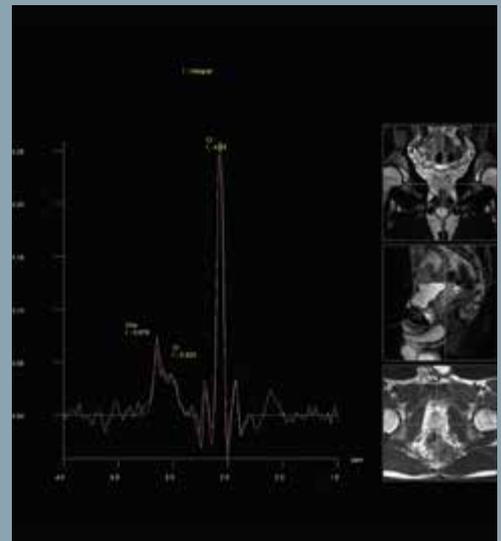
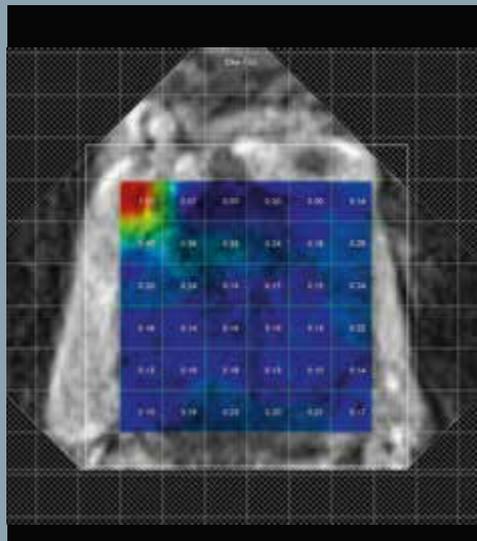
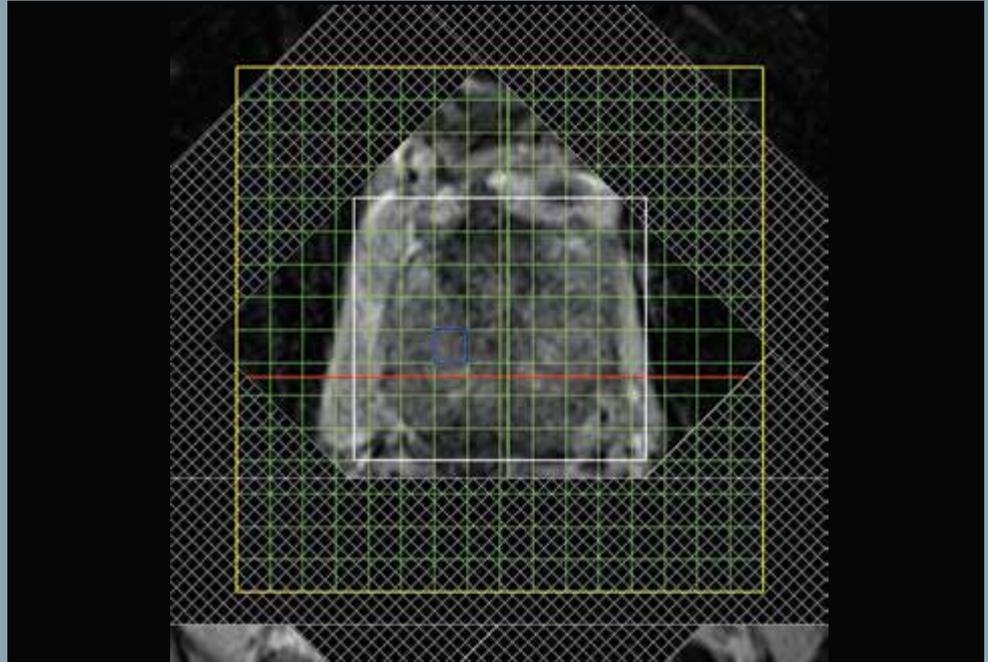


Organ morphometry
High resolution knee with excellent FatSat



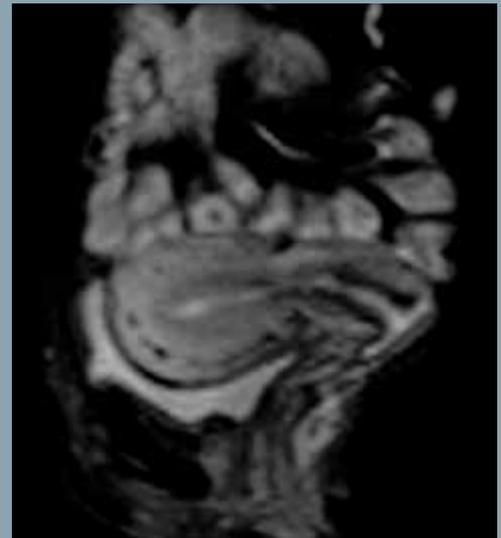
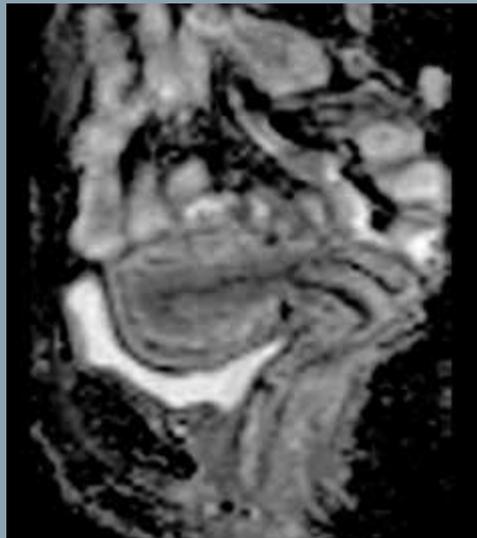
Tissue metabolism

Spectroscopy
Imaging



Quantitative MRI

Zoomed High Resolution
Imaging of the pelvis



The power to explore

Enter new areas of research and set the future trends in healthcare. Exciting applications will be your vehicle to open up new possibilities to elucidate a mechanistic understanding of disease.

Advanced applications such as DWI, SWI, resting state fMRI, dynamic angiography, perfusion, and Diffusion Spectrum Imaging (DSI) – or your own research applications. MAGNETOM Prisma is your companion – no matter the path you're taking or the route you are choosing. It will support you with unmatched 3T power and hand you virtually unprecedented imaging possibilities.

Explore new territories

MAGNETOM Prisma allows you to visualize detail in the finest anatomical structures and reveals valuable functional information. Develop your own applications and sequences – adapted to your research needs. Profit from consistent and

reproducible results that will boost your research.

Your benefit? Finding answers.

A prism in its raw form breaks light into a wide spectrum of colors. MAGNETOM Prisma does the same, only in MR research. MAGNETOM Prisma is the tool that, when enabled by your scientific knowledge and expertise, will open up a wide breadth of applications looking to answer the numerous questions that MR research poses. From brain functionality, to body physiology, organ morphometry, tissue metabolism or quantitative MRI, MAGNETOM Prisma delivers the answers that you are looking for.



“MAGNETOM Prisma has the power to lead to better expertise and innovative research in the future. Beside the improved gradient system, the 64-ch Head/Neck coil allows us to get better signals from the cortex and also cover the cerebellum and the neck very well. That allows exploring new research fields which are difficult to do on other 3T scanners.”¹

Rainer Goebel
Professor, Maastricht University &
Scientific Director, Scannexus,
Maastricht, The Netherlands

The power to succeed

There is one elementary goal that unites everybody active in the research field: You want to make a difference in the lives of others. A spirit of innovation fuels your desire to understand disorders and disease. In short: You strive to advance human health.

In MRI research, there are two forces driving the future of healthcare: You aspire to transfer ideas from the lab into the clinical routine. We, as Siemens, aspire to translate research results into products. This shared impulse is basis for a solid partnership that relies on collaboration, support, and trust.

With MAGNETOM Prisma we offer Dot, our workflow solution for more consistent and reliable results. The extremely high degree of reproducibility across repeated scans is not just offered for exams of the same volunteer, but for group studies, or even multisite clinical research projects. By creating project-specific programs you are able to hold on to needed

examination steps and ensure the same parameters for future scans.

This smart technology is another feature that makes MAGNETOM Prisma the unique tool, placing you at the forefront of collaborative basic and high-clinical research.

Collaborate & succeed

As part of the largest and most active research community, you are able to get in touch with like-minded people, discuss ideas, and easily profit from this intensive exchange.



“*Research is driven by people. The more people you know, the better you are linked, the better research will be after all.*”

*Henrik Michaely, MD
Associate Professor of Radiology
Section Chief Vascular and Abdominal
Imaging Institute of Clinical Radiology
and Nuclear Medicine
Mannheim, Germany*



Siemens SCR,
Princeton

Siemens' collaboration presence spans the globe

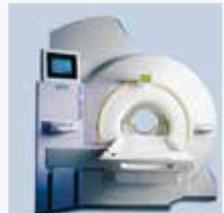
Our history of 3T success

2000



Usability
syngo®

2001



Dedicated 3T head scanner
MAGNETOM Allegra

2003



3T goes Whole body
MAGNETOM Trio

2004



Unique applications
e.g. 3D Inline fMRI

2005



3T + Tim
MAGNETOM Trio + Tim

2007



70cm + TrueForm
MAGNETOM Verio



2009



Tim 4G + Dot
MAGNETOM Skyra

2010



3T + PET
Biograph mMR

2011



TimTX TrueShape and syngo ZOOMit
Introduced with
MAGNETOM Skyra

2012



The key to 3T
MAGNETOM Spectra

2013



The 3T PowerPack for exploration
MAGNETOM Prisma



Customer Care

Customer Services

Siemens' solutions help you maintain uptime, improve performance, and optimize workflow for sustainable healthcare, while ensuring that your staff is trained to deliver the highest quality results possible. You can depend on us as a trusted partner.

MORE Clinical Expertise

Enhanced expertise, greater efficiency, and high productivity thanks to education, consulting services, and personalized training. Our dedicated application specialists will help you to effectively use your systems to ensure a high level of satisfaction for your business and your patients.

www.siemens.com/uptime-services

syngo Evolve MR

Up-to-date, powerful hardware and software are key factors for enhancing the performance and diagnostic quality of your systems. *syngo* Evolve helps you to keep pace with rapidly developing technological advances throughout the complete life cycle of your system.

www.siemens.com/syngo-evolve

Customized Service Agreements

Different needs call for individual service agreements. That is why we have structured our technical services in modules and additional options. By selecting the best combination of modules and options, we develop an individualized Performance Plan that ensures an optimal service solution for your situation.

www.siemens.com/performance-plans

Redefine your MRI system

Redefine your MRI system with options and upgrades. Keep pace with innovations and keep your system state of the art during its entire product lifecycle. Get your personalized recommendation and discover new coils and clinical software applications. Try them out with a software trial license and experience how you can redefine your system to meet your needs.

www.siemens.com/redefine



MAGNETOM World

Our online platform with clinical information, case reports, protocols, application tips, and talks by international experts is growing every day. Stay informed at:

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MAGNETOM_World

MAGNETOM Prisma.

The 3T PowerPack for exploration.

○ Unmatched 3T magnet

○ Outstanding gradient performance:
80/200 simultaneously

○ Unlimited imaging and
innovation capabilities

○ Exciting new applications

Leading.
With MAGNETOM.

¹The statements by Siemens' customers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" setting and many variables exist there can be no guarantee that other customers will achieve the same results.

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