MAGNETOM Free.Max

Breaking barriers

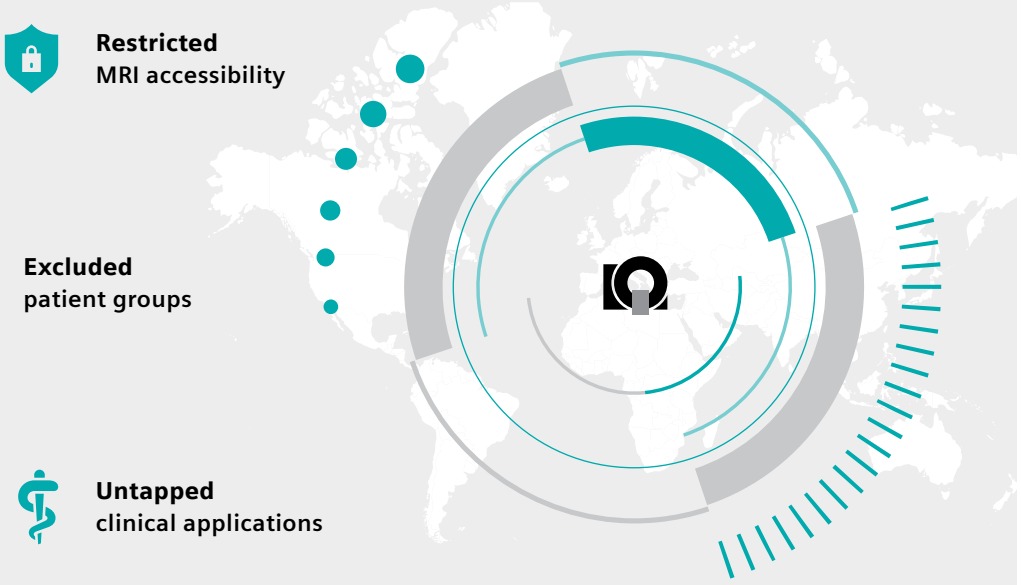
siemens-healthineers.com/free-max

SIEMENS Healthineers

Barriers limit the reach of MRI

Today more than ever, access to healthcare should be a matter of course. But barriers still exist that limit the reach and quality of care – patient groups that diverge from the norm, infrastructure constraints that limit accessibility, or clinical applications that cannot be offered. For MRI, those barriers may seem prohibitive, but often they are only imposed by conventions.

If we dare to question conventions and pursue new avenues, we can break down those barriers and expand the reach of MRI.



Breaking barriers in MRI

MAGNETOM Free.Max breaks barriers to expand the reach of MRI. Where patients have felt discomfort, the world's first 80 cm bore sets a new paradigm in patient comfort.

Where infrastructure was an obstacle to MRI, MAGNETOM Free.Max slots into an existing helium-free infrastructure. Where access to MRI was not viable, MAGNETOM Free.Max makes access affordable. And where conventions have limited our thinking, MAGNETOM Free.Max breaks out of conventions to explore new clinical opportunities in MRI.

Breaking barriers for patient comfort and accessibility

The world's first 80 cm patient bore

Offers claustrophobic, anxious, and larger patients access to MRI.

Lowers to a minimum table height of 48 cm

Up to 320 kg table load[1]

Contour Coils

Why choose if you can have both?

Put your patient at ease and benefit from workflow flexibility and efficiency with our new blanket-like coil portfolio.

Contour S Coil

- 45 cm x 27 cm
- Multi-purpose use, e.g., small joints

Contour M Coil[1]

- 57 cm x 29 cm
- Multi-purpose use, e.g., large joints

Contour L Coil

- 63 cm x 42 cm
- Multi-purpose use, e.g., abdominal imaging

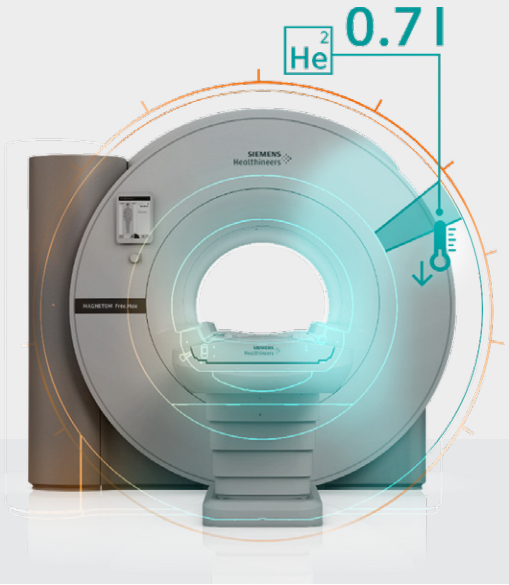
Available in three different sizes to always provide an ideal fit

Breaking barriers for a simplified infrastructure

Where MRI is needed should define where it is located. MAGNETOM Free.Max is our most compact MRI. With DryCool technology, it provides a virtually helium-free infrastructure. Opening up new opportunities for offering MRI services.

DryCool technology – Freedom beyond helium

- **Only 0.7 liter liquid helium**
- **Sealed-for-life magnet design**
- **No quench pipe**
- **Significantly reduced life cycle cost**



99.95%
reduction in liquid helium[3]

New benchmark in magnet ramp-up times

In case of a prolonged power outage, MAGNETOM Free.Max will automatically ramp down the magnet. Once the power has returned, the system will automatically ramp itself back up to field.

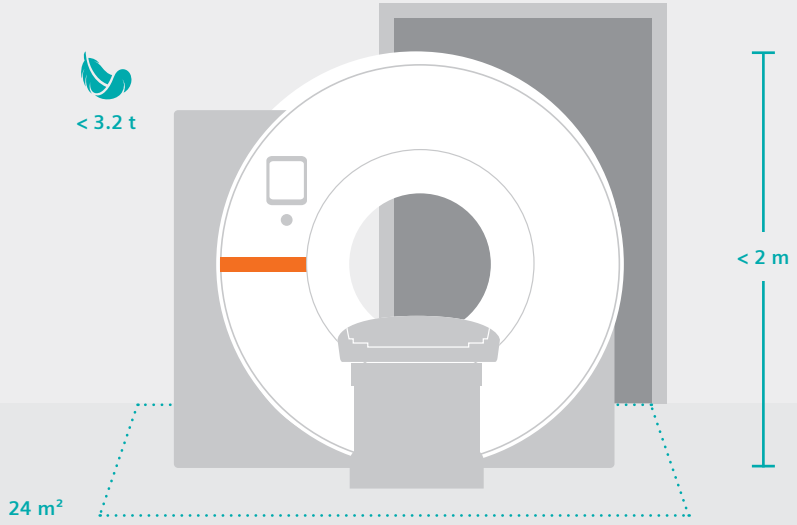
- Automatic and controlled ramp down time: < 0.5 hours
- Time to return to operation after controlled ramp down: < 4 hours[2]
- Time to return to operation after emergency shut off: < 24 hours[2]

Our most compact MRI

Minimum footprint for maximum siting flexibility.

Simplified MRI infrastructure

- Total scanner weight less than 3.2 tons
- Total footprint 24 m²
- Transportation height below 2 meters – fits through existing hallways and doors



Reduced installation cost

Increased siting flexibility

Helium-independent infrastructure

High-V MRI – Value beyond barriers

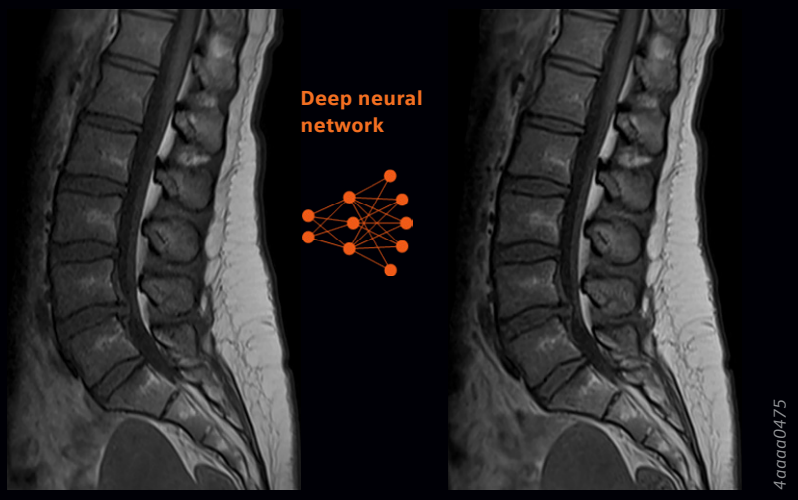
High-V MRI takes the power of digitalization and deliberately applies it to a new field strength of 0.55T with inherent clinical benefits. High-V MRI combines the best of both worlds to offer a new era in MRI that embraces diagnostic confidence in daily routine and new clinical opportunities.

Deep Resolve

Deep Resolve is our latest cutting-edge image processing technology that can increase image sharpness and reduce scan time due to reconstruction based on deep learning, and targeted denoising.

Acquiring sharper images, faster

Powered by **artificial intelligence**



Conventional
0.9 x 0.9 x 4.0 mm³
TA 5:16 min

Deep Resolve Gain & Sharp
0.5 x 0.5 x 4.0 mm³
TA 3:48 min

Image courtesy of University Hospital Erlangen, Germany

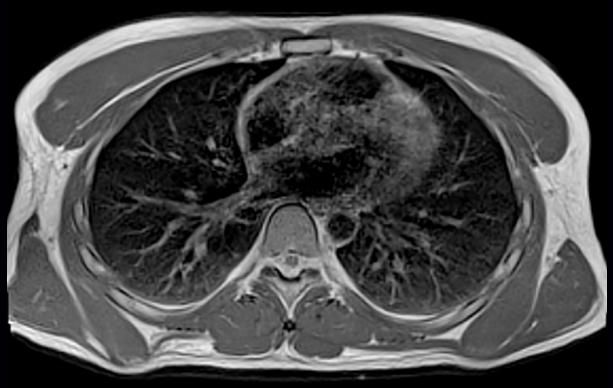
Breaking barriers to open up new clinical opportunities

When you dare to break conventions, new opportunities arise. The unique field strength of High-V MRI offers inherent physical benefits that overcome the limitations of today's MR imaging and opens up exciting new clinical applications.

Pulmonary imaging

Pulmonary imaging has been notoriously difficult with MRI as the magnetic signal gets destroyed at the interfaces between air and tissue due to large susceptibility differences.

MAGNETOM Free.Max enables new opportunities for improved pulmonary imaging due to fewer susceptibility artifacts compared with higher field strengths.



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Implant imaging

With changing patient demographics, metal implants are becoming more and more frequent in MR imaging. MAGNETOM Free.Max offers inherent benefits for implant imaging as the new field strength leads to reduced metal artifacts.

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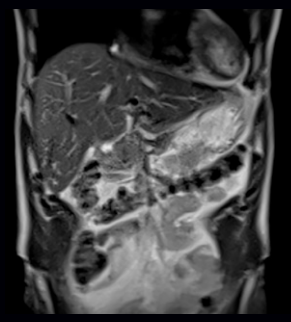
Diagnostic confidence for daily excellence

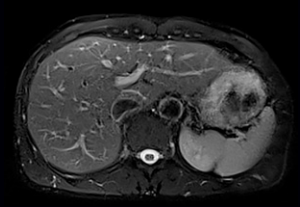
MAGNETOM Free.Max excels in image quality. For your daily routine, this translates into uncompromised diagnostic confidence. Rest assured that MAGNETOM Free.Max delivers excellent diagnostic quality for your standard clinical MRI applications.

Abdominal imaging

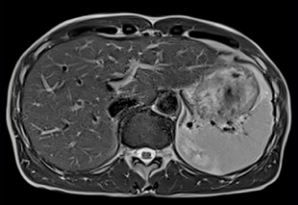
For routine body imaging consistent image quality is key. Additionally, body movement and contrast agent timing can impose challenges. With MAGNETOM Free.Max, we reliably achieve high image quality in all sequences used throughout the abdomen, including HASTE, BLADE & diffusion weighted imaging. And by applying our unique CAIPIRINHA technique, we can ensure single breath-hold T1 VIBE Dixon imaging – supporting a patient-friendly approach.



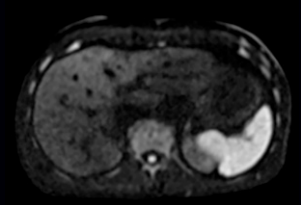
HASTE
PAT 3
1.5 x 1.5 x 6.0 mm³
TA 1:36 min



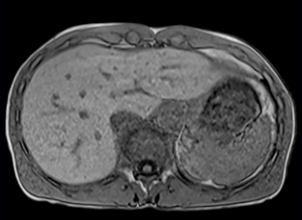
T2 BLADE Fat Sat
PAT 2
1.2 x 1.2 x 6.0 mm³
TA 5:48 min

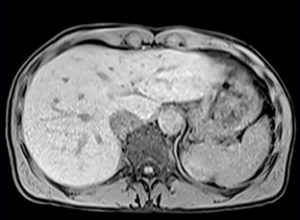


T2 BLADE
PAT 2
1.2 x 1.2 x 6.0 mm³
TA 3:57 min



DWI b800
Deep Resolve
1.5 x 1.5 x 6.0 mm³
TA 3:34 min





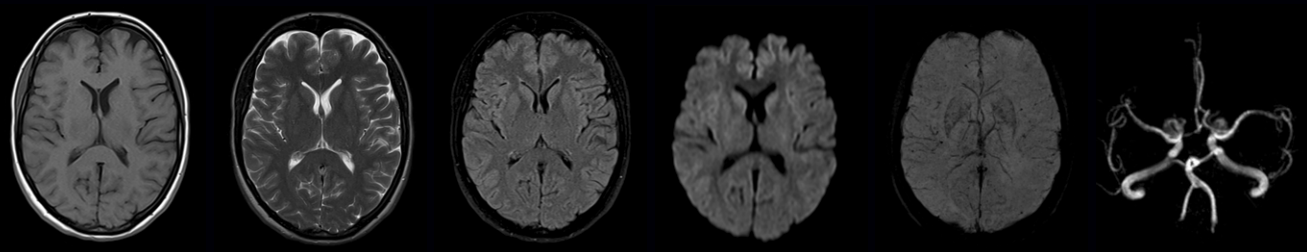
T1 VIBE Dixon (in-phase & water)
CAIPIRINHA
0.7 x 0.7 x 3.0 mm³
TA 4x 0:19 min

4aaaa0451

Total exam time: 16:11 min

Neuro imaging

For an MRI of the brain, high resolution and good image contrast is essential. MAGNETOM Free.Max is able to provide both. In addition to the morphological sequences, diffusion and susceptibility-weighted images can be acquired to assess hemorrhage or ischemia in the brain.



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T1 SE
0.4 x 0.4 x 5.0 mm³
TA 2:50 min

T2 TSE
Deep Resolve
0.4 x 0.4 x 5.0 mm³
TA 2:50 min

T2 TSE Dark-Fluid
Deep Resolve
0.5 x 0.5 x 5.0 mm³
TA 4:00 min

DWI b1000
PAT 2
0.7 x 0.7 x 5.0 mm³
TA 2:54 min

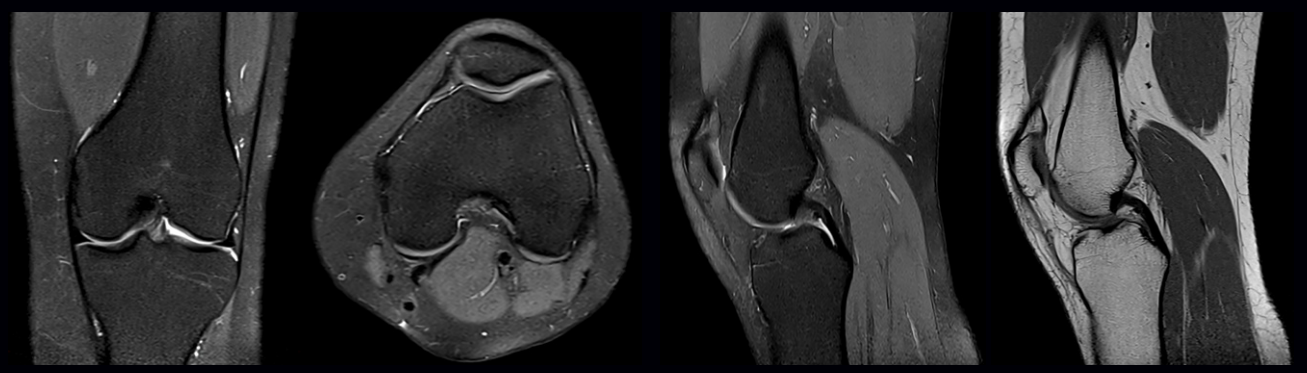
EPI SWI
Deep Resolve
0.8 x 0.8 x 1.8 mm³
TA 4:23 min

Time of flight
0.5 x 0.5 x 0.5 mm³
TA 4:05 min

Total exam time: 21:02 min

MSK imaging

MAGNETOM Free.Max offers great image quality for MSK examinations. Additionally, acquisitions are performed efficiently with our latest imaging techniques such as Deep Resolve and Simultaneous Multi-Slice.



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PD TSE Fat Sat
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm³
TA 2:58 min

PD TSE Fat Sat
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm³
TA 2:47 min

PD TSE Fat Sat
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm³
TA 3:13 min

PD TSE
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm³
TA 1:51 min

Total exam time: 10:49 min

Breaking the barrier of complex operation

MAGNETOM Free.Max simplifies complex MRI operations and allows users to achieve consistent high-quality results – regardless of their experience level, the patient, or throughput.

myExam Companion

Using the new possibilities of digitalization and AI, data is turned into integrated expertise and tailored assistance.
myExam Companion comes in three different modes to provide tailored user assistance enabling consistent results.

myExam Autopilot
Automate intelligently

myExam Assist
Flexible and guided

myExam Cockpit
Customize intuitively

myExam Autopilot

The innovative myExam Autopilot enables healthcare professionals of any skill level to perform routine MRI for brain, spine, and knee examinations.

- Scan with virtually a simple click of a button
- For consistent results – no matter the user, patient, or workload

Highly automated, easy to use workflow

Operate with touch or click

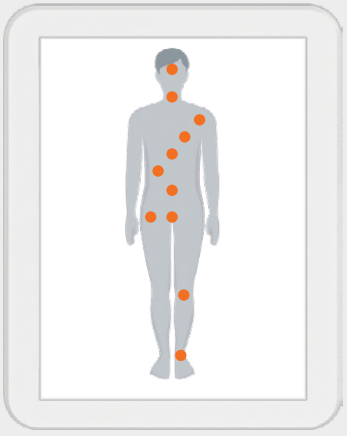
Ergonomic workplace

Powered by
artificial intelligence

BioMatrix Select&GO

BioMatrix Select&GO, powered by AI, enables fully automated patient positioning with one touch.

- **Automatic isocenter positioning from head to toe**
- **30% faster patient positioning[3]**



Automated positioning for eleven body regions with BioMatrix Select&GO

syngo Virtual Cockpit

MAGNETOM Free.Max intregrates *syngo* Virtual Cockpit remote assistance directly into your workplace. Benefit from an expert at your side when you need it.

Connected scanner

While you focus on caring for your patients, we stay connected to care for your MRI. Through innovative service[4] from Siemens Healthineers, such as the preventive intelligence of our Guardian Program, we solve technical issues before downtimes occur.

Get connected to stay one step ahead

Smart education

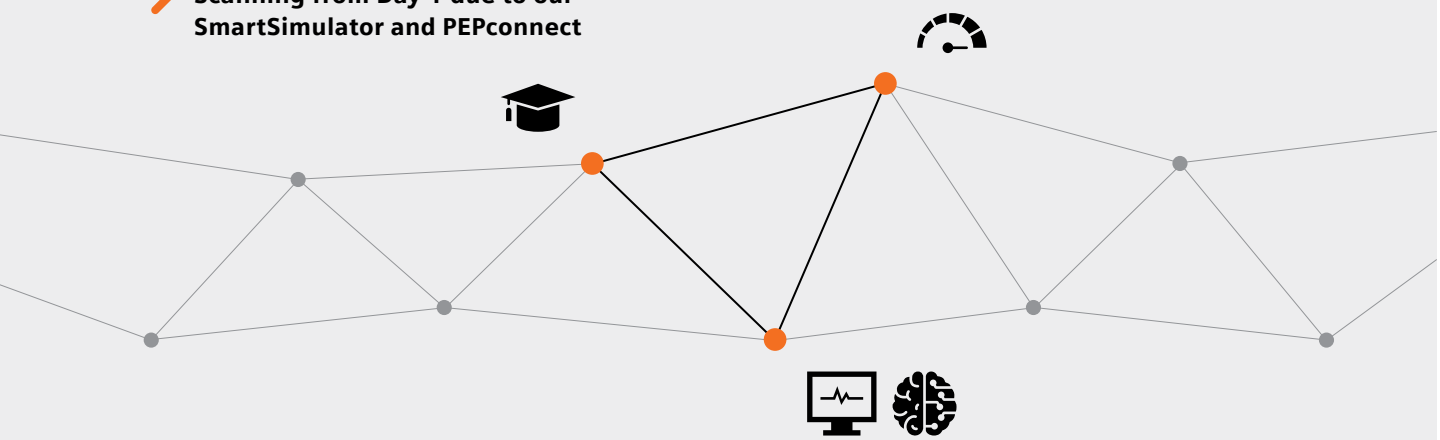
- Optimal mix of online and onsite trainings within tailored application support based on your needs
- With **SmartSimulator** – the virtual connection to a hands-on scanner experience even before the system is installed
- With **PEPconnect** – the industry's first personalized online education and performance experience

Scanning from Day 1 due to our SmartSimulator and PEPconnect

Automatic updates

- Our **Advance Plans** keep systems cybersecure and highly efficient through automatic updates and upgrades – the service plans for medical equipment in the digital era

24/7 service supporting you to maximize efficiency



Proactive monitoring

- Real-time system monitoring of all critical components with **Guardian Program and CoilCare**
- Detects and corrects errors before they even occur

Applying artificial intelligence to ensure maximum system uptime

Redefining affordability

Healthcare economics are changing worldwide. As a result, radiology providers around the world need to rethink how they deliver services to drive a successful and profitable business, while maintaining high-quality care for the patient. MAGNETOM Free.Max breaks new ground by improving the overall economics of MR imaging and therefore offers great opportunities within the changing healthcare environment.

Life cycle cost

MAGNETOM Free.Max introduces comprehensive innovations that significantly reduce the life cycle costs of MRI.

Service	**Connected scanner**
Operations	**myExam Companion**
Product	**High-V MRI**
Installation	**Most compact MRI & DryCool technology**

"It's more convenient, it's less expensive, and it's faster. So from a siting perspective there are only benefits, not a single disadvantage. This is great."[5]

Prof. Elmar M. Merkle, M.D.
Chief Physician in Radiology and Nuclear Medicine
University Hospital Basel, Switzerland

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For accessories, please visit: siemens.com/medical-accessories

[1] *The feature is still under development and not yet commercially available. Its future availability cannot be guaranteed.*

[2] *Time will extend if magnet refrigerator remains off for a longer period of time.*

[3] *Data on file.*

[4] *The products/features and/or service offerings (mentioned on page 14) are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details. Prerequisites: stable SRS connection with adequate bandwidth.*

[5] *The statements by customers of Siemens Healthineers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results. This statement is from a person, who or whose institution is engaged in a collaboration with Siemens Healthineers.*

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