MAGNETOM Free.Max

Breaking barriers

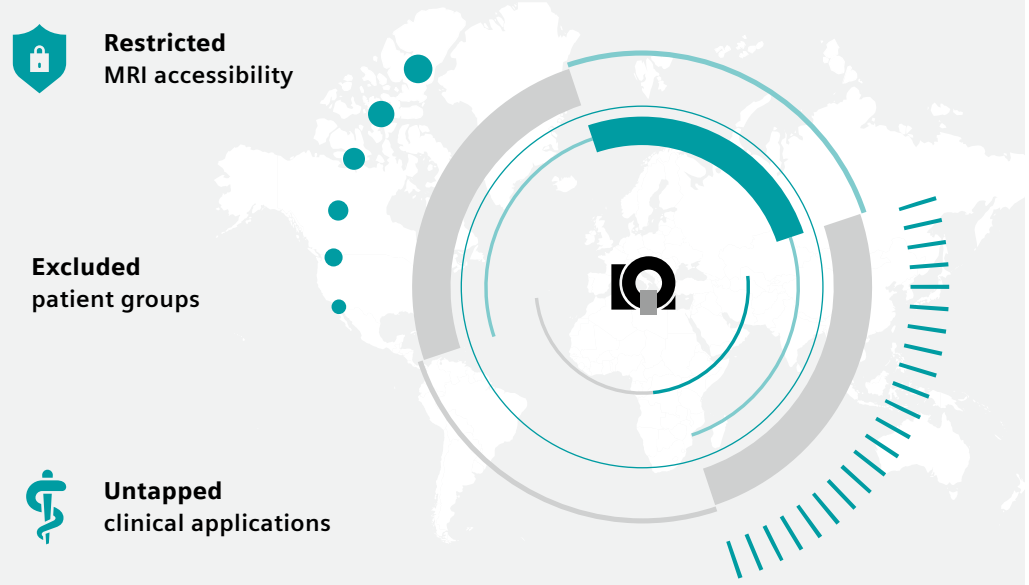
siemens-healthineers.us/free-max

SIEMENS Healthineers

Barriers limit the reach of MRI

Today more than ever, access to healthcare should be available to all, but barriers exist that limit the reach and quality of care - patient groups can diverge from the norm; infrastructure constraints can limit accessibility; and clinical applications cannot always be offered.

For MRI, these barriers may seem prohibitive, but if we dare to question the status quo and pursue new avenues, we can break down 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, MAGNETOM Free.Max is the world's first 80 cm bore offering an improved patient experience
- Where siting was an obstacle, MAGNETOM Free.Max offers a helium-free infrastructure
- Where access to MRI was not viable, MAGNETOM Free.Max makes access to MRI affordable
- Where conventions have limited our thinking, MAGNETOM Free.Max breaks barriers to explore new clinical opportunities

Breaking barriers for patient comfort and accessibility

The world's first 80 cm patient bore

With an 80 cm bore, MAGNETOM Free.Max can accommodate patients who may not have been able to tolerate an MRI scan before including obese patients, severely claustrophobic and anxious patients, and children.

Lowers to a minimum table height of 48 cm (18.9 in)

Accommodates patients up to 485 lb

Contour Coils

Put your patient at ease, and benefit from workflow flexibility and efficiency with our new portfolio of blanket-like contour coils.

Contour S Coil

- 45 cm x 27 cm (17.7 in x 10.6 in)
- 0.8 lbs
- Multi-purpose use,
  e.g., small joints

Contour L Coil

- 63 cm x 42 cm (24.8 in x 16.5 in)
- 1.54 lbs
- Multi-purpose use,
  e.g., abdominal imaging

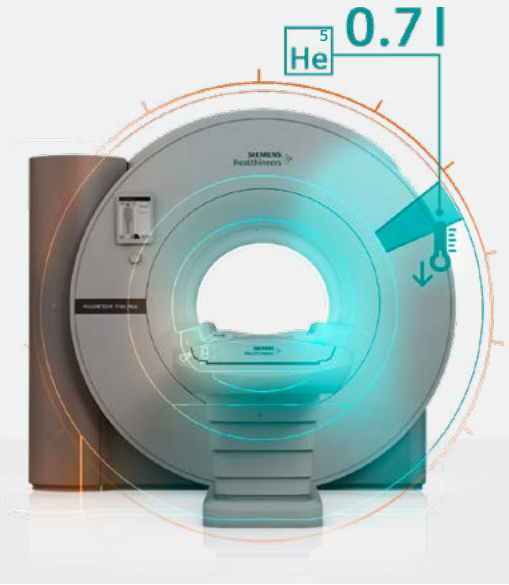
Available in two different sizes to provide an ideal fit

Breaking barriers for a simplified infrastructure

With DryCool technology, the MAGNETOM Free.Max provides a helium-free infrastructure, significantly reducing the lifecycle cost.

DryCool technology – Freedom beyond helium

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



99.95%
reduction in liquid helium[1]

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.

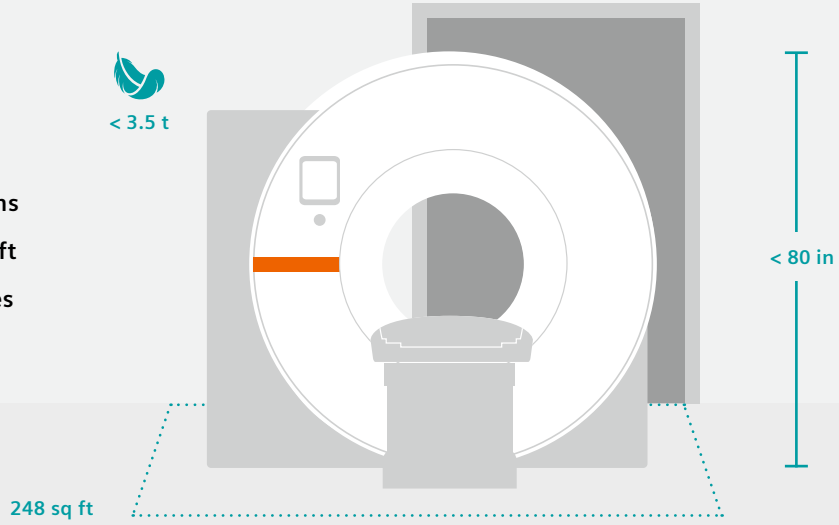
- Automatic and controlled ramp down time: < 0.5 hours
- Time to return to operation after controlled ramp down: < 4 hours[2]
- Time to return to operation after emergency shut off: < 24 hours[2]

Our most compact MRI

MAGNETOM Free.Max has a smaller footprint for maximum siting flexibility. It is also our lightest and easiest MRI scanner to site.

Simplified MRI infrastructure

- Total scanner weight less than 3.5 tons
- Minimum sitting requirement 248 sq ft
- Transportation height below 80 inches –fits through existing hallways and doors



Reduced installation cost

Increased siting flexibility

Helium-free infrastructure

High-V MRI: Value beyond barriers

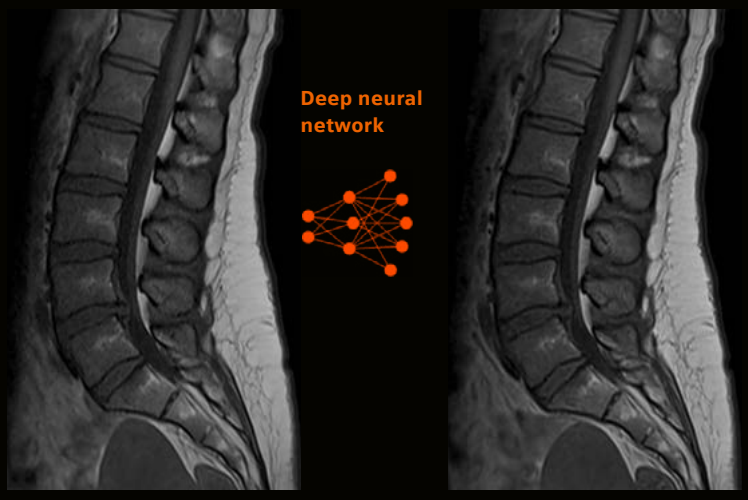
High-V MRI takes the power of digitalization and applies it to a new field strength of 0.55T to achieve inherent clinical benefits.

Deep Resolve

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

Acquire sharper images, faster

Powered by **artificial intelligence**



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

Deep Resolve
0.5 x 0.5 x 4.0 mm³
TA 3:48 min

Image courtesy of University Hospital Erlangen, Germany

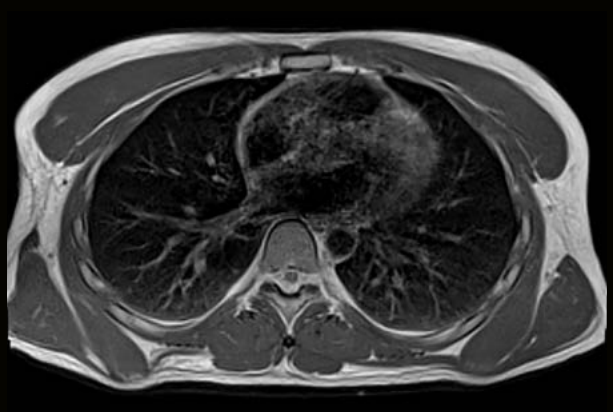
Breaking barriers to open up new clinical opportunities

With the new and unique field strength of High-V MRI, MAGNETOM Free.Max benefits from the inherent change in MR physics that opens up the possibility of new and improved clinical applications.

Pulmonary imaging

The challenges of pulmonary imaging in MRI is well known since the magnetic signal gets destroyed at the interfaces between air and tissue.

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 improvements in modern day medicine and an aging population, metal implants are becoming more common.

MAGNETOM Free.Max offers inherent benefits for implant imaging since its new field strength leads to reduced metal artifacts.

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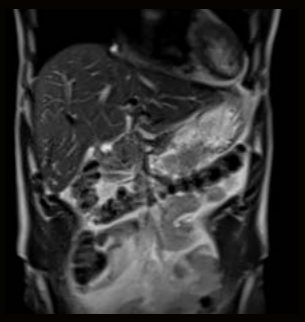
Diagnostic confidence for daily excellence

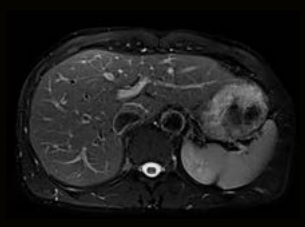
MAGNETOM Free.Max delivers excellent diagnostic quality for your standard clinical MRI applications.

Abdominal imaging

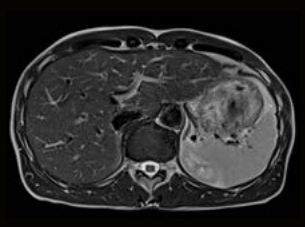
For routine body imaging, consistent image quality is key. Body movement and contrast agent timing can impose challenges, but with MAGNETOM Free.Max, you can reliably achieve high image quality in all sequences used throughout the abdomen.



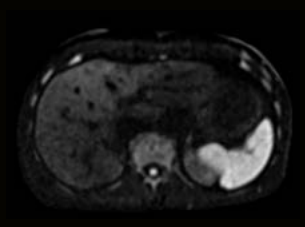
HASTE
PAT 3
1.5 x 1.5 x 6.0 mm³
TA 1:36 min



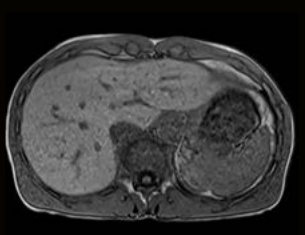
T2 BLADE Fat Sat
PAT 2
1.2 x 1.2 x 6.0 mm³
TA 5:48 min

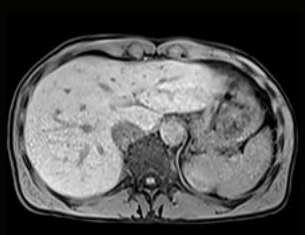


T2 BLADE
PAT 2
1.2 x 1.2 x 6.0 mm³
TA 3:57 min



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





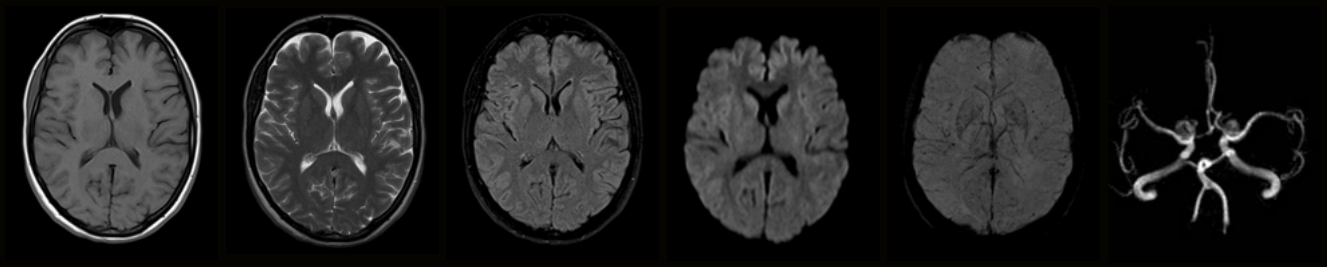
T1 VIBE Dixon (in-phase & water)
CAIPIRINHA
0.7 x 0.7 x 3.0 mm³
TA 4x 0:19 min

4aaaa0451

Total exam time: 16:11 min

Neuro imaging

MAGNETOM Free.Max provides high resolution and contrast images essential for brain MRI. In addition to standard sequences used to image the brain, diffusion and susceptibility-weighted imaging and time of flight angiography images can all be performed on MAGNETOM Free.Max.



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T1 SE
0.4 x 0.4 x 5.0 mm⁴
TA 2:50 min

T2 TSE
Deep Resolve
0.4 x 0.4 x 5.0 mm⁴
TA 2:50 min

T2 TSE Dark-Fluid
Deep Resolve
0.5 x 0.5 x 5.0 mm⁴
TA 4:00 min

DWI b1000
PAT 2
0.7 x 0.7 x 5.0 mm⁴
TA 2:54 min

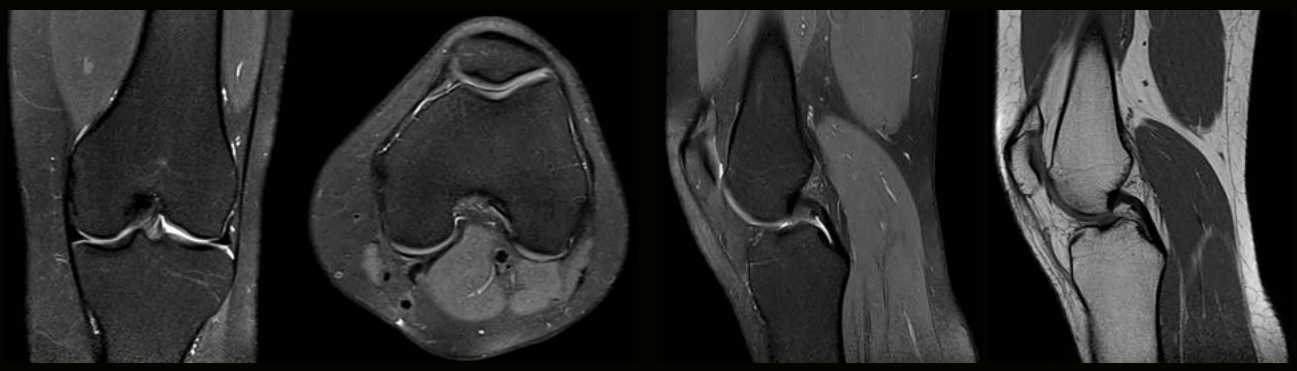
EPI SWI
Deep Resolve
0.8 x 0.8 x 1.8 mm⁴
TA 4:23 min

Time of flight
0.5 x 0.5 x 0.5 mm⁴
TA 4:05 min

Total exam time: 21:02 min

MSK imaging

MAGNETOM Free.Max offers excellent 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 mm⁴
TA 2:58 min

PD TSE Fat Sat
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm⁴
TA 2:47 min

PD TSE Fat Sat
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm⁴
TA 3:13 min

PD TSE
Deep Resolve & SMS
0.3 x 0.3 x 3.0 mm⁴
TA 1:51 min

Total exam time: 10:49 min

Breaking barriers to simplify MRI operations

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

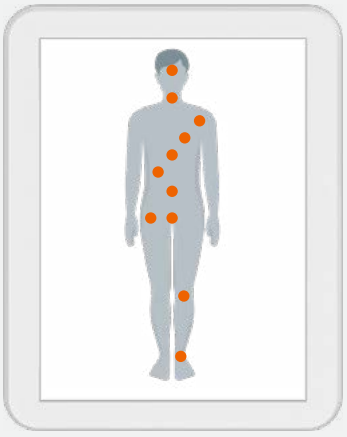
Operate with touch or click

Ergonomic workplace

BioMatrix Select&GO

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

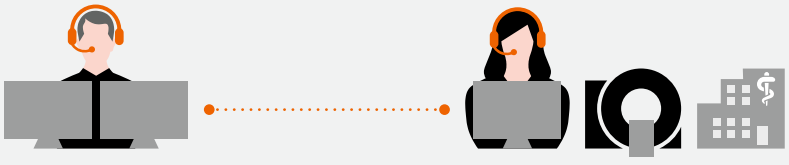
- **Automatic isocenter positioning from head to toe**
- **30% faster patient positioning[3]**



Automated positioning for eleven body regions with BioMatrix Select&GO

syngo Virtual Cockpit

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



Connected scanner

While you focus on caring for your patients, Siemens Healthineers will care for your MRI. Through our remote service solution[4] we are able to solve technical issues before downtime occurs.

Get connected to stay one step ahead

Smart education

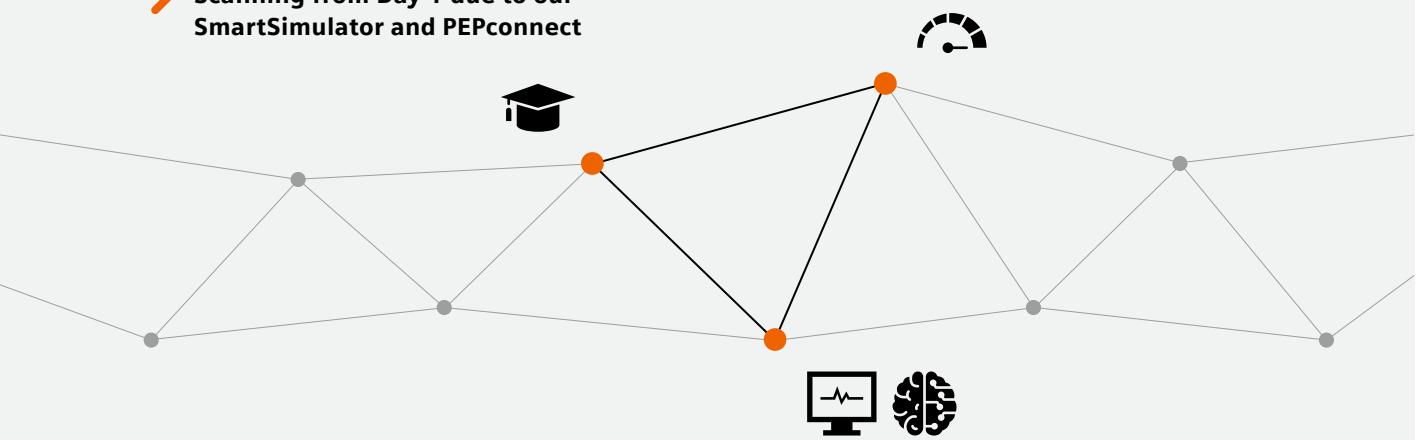
- Optimal mix of online and onsite trainings with tailored application support based on your needs
- Virtual connection to a hands-on scanner experience before the system is installed with **SmartSimulator**
- Personalized online education and performance experience with **PEPconnect**

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

24/7 service supports you to maximize efficiency



Proactive monitoring

Scan from Day 1 with SmartSimulator and PEPconnect

Detect and correct errors before they occur through real-time system monitoring with **Guardian Program** and **CoilCare**

Maximizing system uptime with artificial intelligence

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 to improve the overall economics of MRI services and offers great opportunities in a changing healthcare environment.

Lifecycle cost

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

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

"MAGNETOM Free.Max is more convenient, less expensive, and faster. So from a siting perspective, there are only benefits and not a single disadvantage. It is great"[5]

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

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey toward expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare.

An estimated 5 million patients globally benefit every day from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics, and molecular medicine, as well as digital health and enterprise services.

We're a leading medical technology company with over 120 years of experience and 18,500 patents globally. With about 50,000 dedicated colleagues in over 70 countries, we'll continue to innovate and shape the future of healthcare.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer's setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

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The information in this document contains general technical descriptions of specifications and options as well as standard and optional features, which do not always have to be present in individual cases.

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Disclaimers

1. *Compared to the maximum amount of helium possible in a conventional MRI scanner.*
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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