

**MAGNETOM Free.Max**

# Breaking barriers

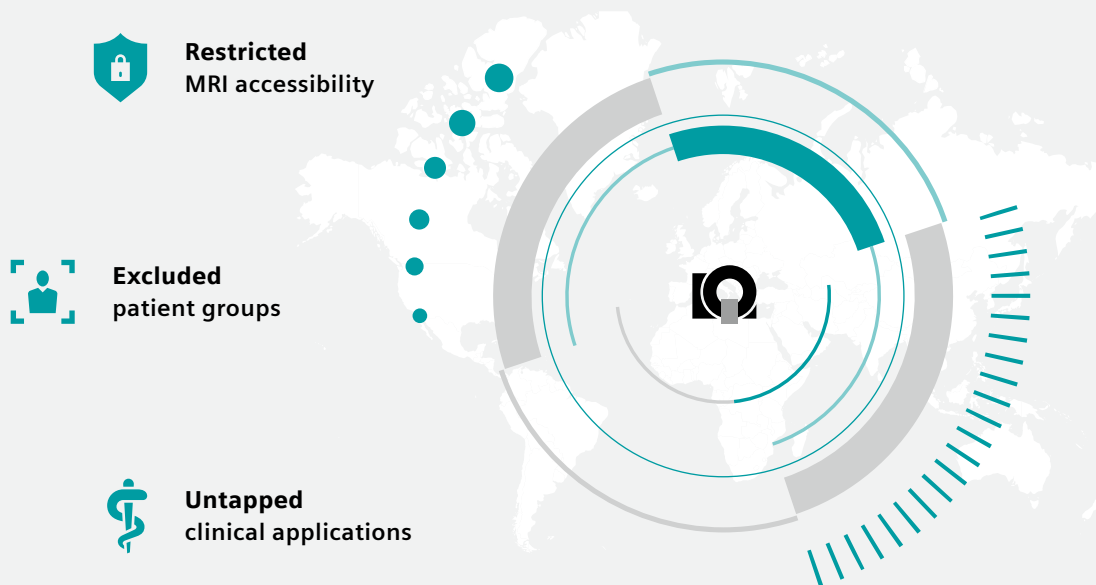
[siemens-healthineers.com/free-max](https://siemens-healthineers.com/free-max)



# 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.



# 80-cm Open MRI bore

A new paradigm in patient experience

## The world's first 80-cm patient bore

No more turning your patients away. With the world's first 80-cm bore, MAGNETOM Free.Max accommodates for patients with claustrophobia or anxiety, and enables you to include patients requiring more space!



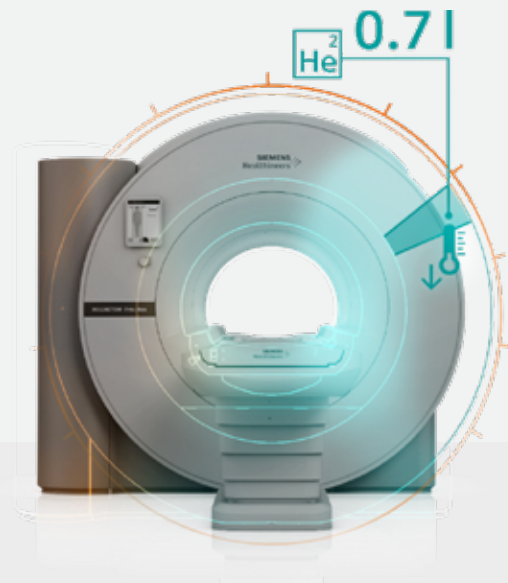
# Breaking barriers with simplified infrastructure

MAGNETOM Free.Max 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<sup>1</sup>



### 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.

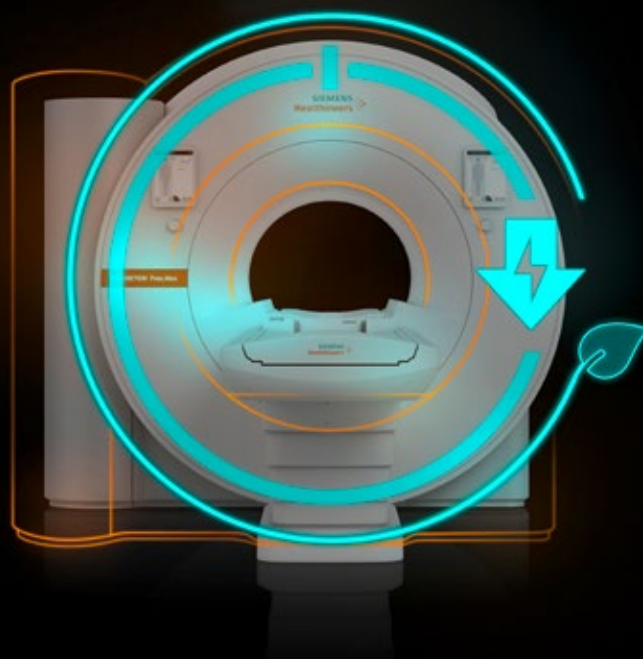
- Automatic and controlled ramp down time: < 0.5 hours
- Time to return to operation after controlled ramp down: < 4 hours<sup>2</sup>
- Time to return to operation after emergency shut off: < 24 hours<sup>2</sup>

# Maximizing energy efficiency with smart innovations

Save over up to

**20% energy**

with Eco Power Mode<sup>1</sup>



## Our most compact MRI

Minimum footprint for maximum siting flexibility

- Total scanner weight less than 3.2 tons
- Total footprint 24 m<sup>2</sup>
- Transportation height below 2 meters – fits through existing hallways and doors



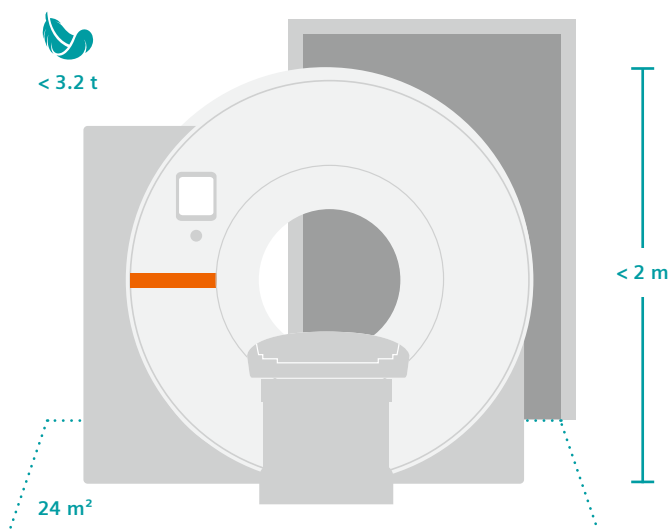
**Reduced installation cost**



**Increased siting flexibility**



**Helium-independent infrastructure**





# MAGNETOM Free. Platform turnkey<sup>3</sup> solution

Fully equipped MRI suite for a plug&play deployment

Agile siting is made easier with an out-of-the-box solution, ready to accommodate your clinical needs in the most challenging climate and geographical locations.



**> Spacious scanner room**

**> Separate control & patient changing room**



## Contour Coils

Light-weight and agile set of coils. Unmatched patient comfort with a simple and agile coil portfolio.

### Contour S Coil



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

### Contour M Coil



- 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



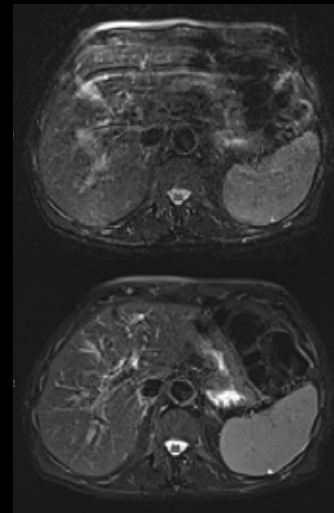
Available in three different sizes to always provide an ideal fit



## BioMatrix Contour L with Respiratory Sensor



- Fast patient setup
- Reproducible clinical results and image quality



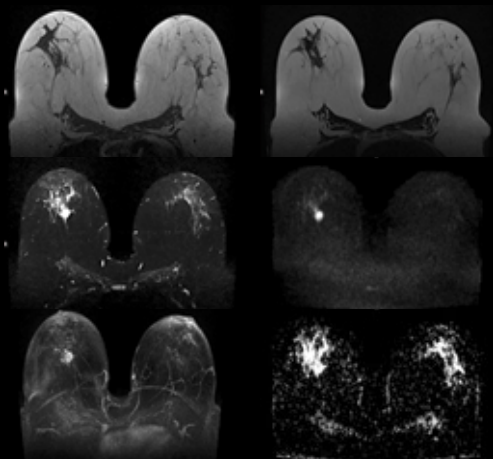
Without  
Respiratory  
Sensor

With  
Respiratory  
Sensor

# Dedicated coil portfolio

## Dedicated breast coil

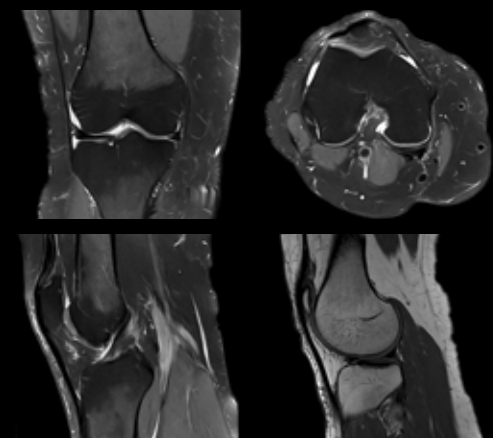
Leveraging world's first 80-cm bore for an improved patient experience



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## Contour Knee Coil

Faster workflow, with the same image quality as Contour M

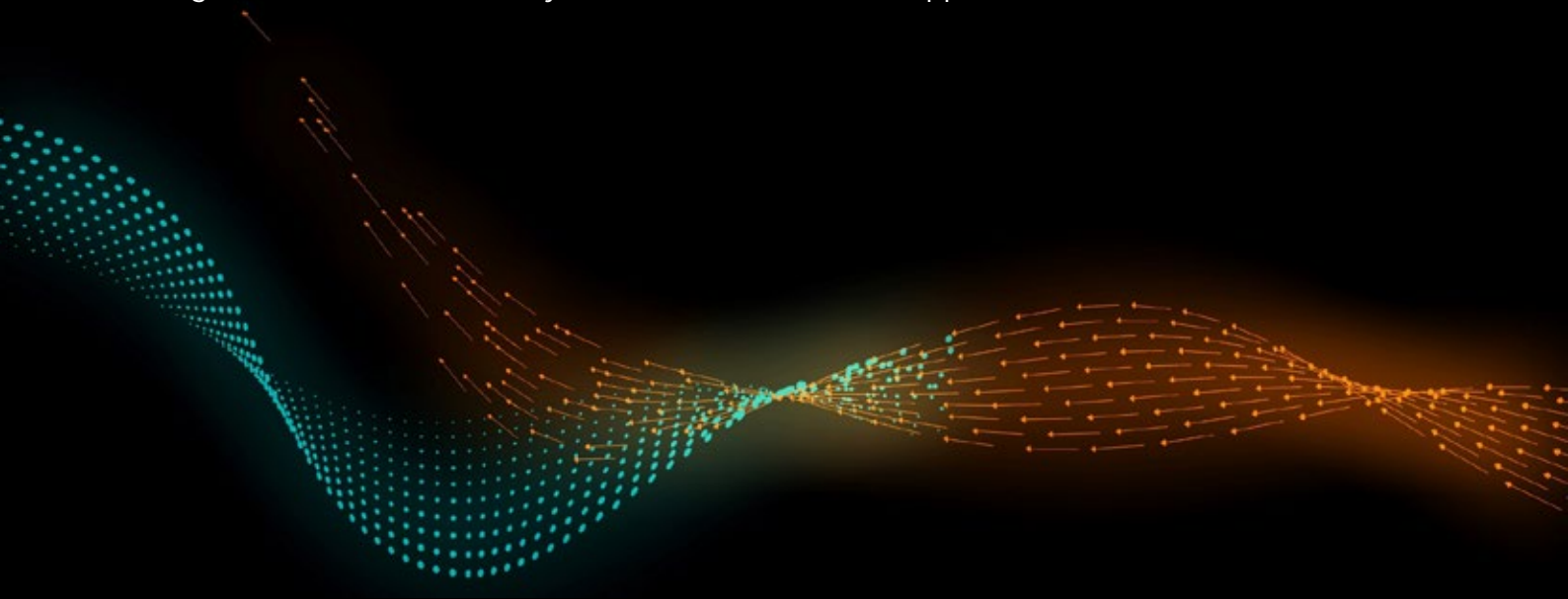


7aaaa0421

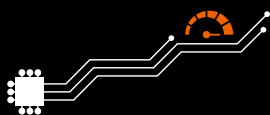
# High-V MRI

Clinical & business 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.



Rapidly increased  
computational power

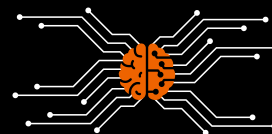


Increasingly efficient acquisition  
techniques



Simultaneous Multi-Slice,  
Compressed Sensing and more

AI-based image reconstruction



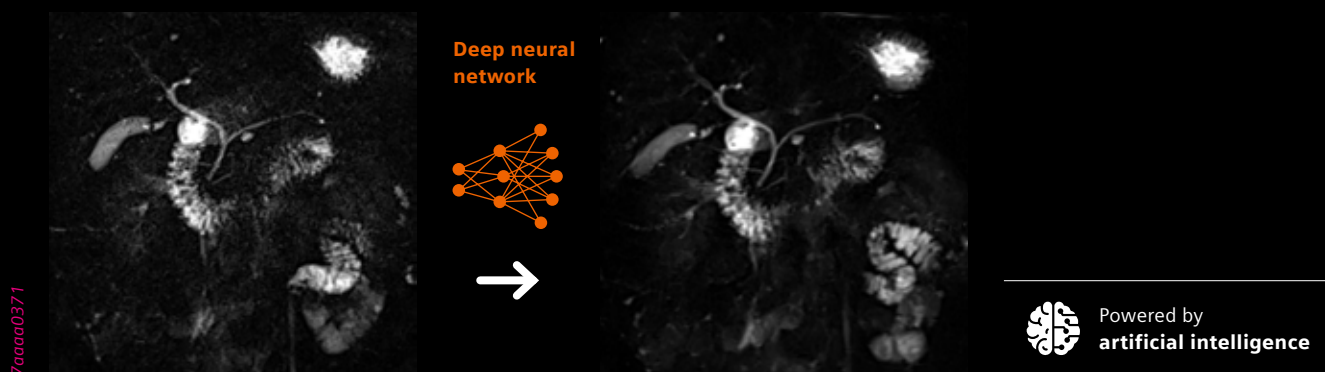
Deep Resolve – the new paradigm  
in clinical performance

**> Allowing us to do more with less**

# Deep Resolve

Unmatched image acquisition time  
with exquisite image quality

## Deep Resolve – the power of neural networks



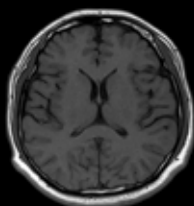
## Deep Resolve – Faster than ever before improved and detailed visibility



# Deep Resolve

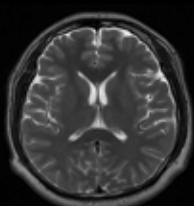
Unmatched image acquisition time with exquisite image quality

## T1 SE



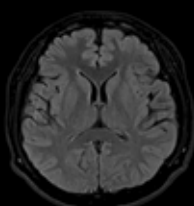
**Deep Resolve**  
0.6 x 0.5 x 5.0 mm<sup>3</sup>  
TA 2:46 min

## T2 TSE



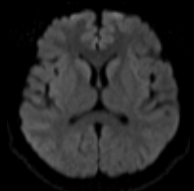
**Deep Resolve**  
0.4 x 0.3 x 5.0 mm<sup>3</sup>  
TA 1:03 min

## T2 TSE Dark-Fluid



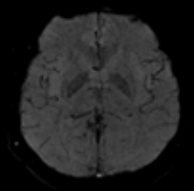
**Deep Resolve**  
0.5 x 0.5 x 5.0 mm<sup>3</sup>  
TA 3:12 min

## DWI b1000



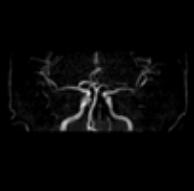
**PAT 2**  
0.7 x 0.7 x 5.0 mm<sup>3</sup>  
TA 2:26 min

## EPI SWI



0.8 x 0.7 x 2.0 mm<sup>3</sup>  
TA 4:04 min

## Time of flight



0.5 x 0.2 x 0.5 mm<sup>3</sup>  
TA 5:31 min

> **Total exam time: 19:02 min**

## T2 TSE



**PAT2 | Deep Resolve**  
0.5 x 0.5 x 4 mm<sup>3</sup>

> **Total exam time: 6:22 min**

## T1 TSE



**PAT 4 | Deep Resolve**  
0.2 x 0.2 x 3.0 mm<sup>3</sup>  
TA 2:08 min

## PD TSE Fat Sat



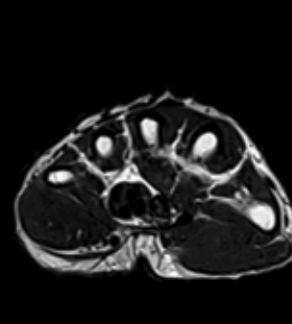
**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 2:05 min

## PD TSE



**PAT 4 | Deep Resolve**  
0.2 x 0.2 x 3.0 mm<sup>3</sup>  
TA 2:07 min

## T2 TSE

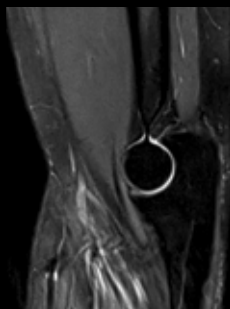


**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 1:44 min

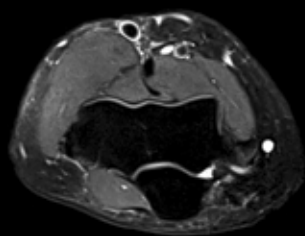
> **Total exam time: 8:04 min**

Images courtesy of Dr. Sampaio, Hospital Lusíadas

### PD TSE Fat Sat



**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 2:21 min



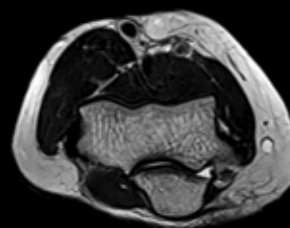
**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 2:21 min

### T1 SE



**PAT 4 | Deep Resolve**  
0.2 x 0.2 x 3.0 mm<sup>3</sup>  
TA 2:42 min

### T2 TSE



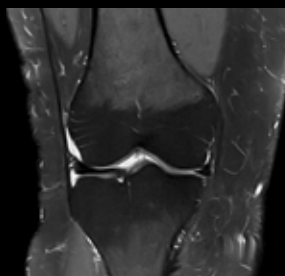
**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 1:44 min

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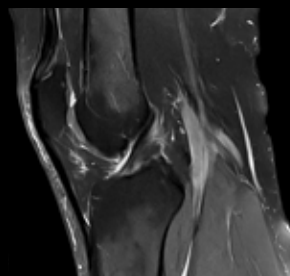
➤ **Total exam time: 9:08 min**

Images courtesy of Dr. Sampaio, Hospital Lusíadas

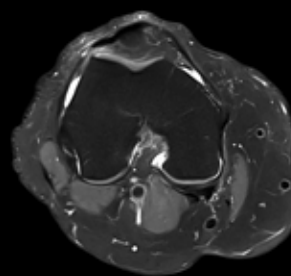
### PD TSE Fat Sat



**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 1:55 min

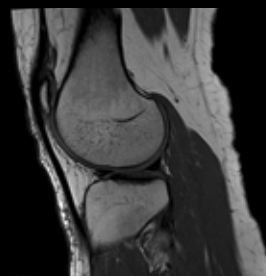


**PAT 4 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 1:55 min



**PAT 4 | Deep Resolve**  
0.2 x 0.2 x 3.0 mm<sup>3</sup>  
TA 1:55 min

### T1 TSE

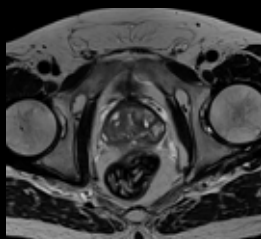


**PAT 2 | SMS 2 | Deep Resolve**  
0.3 x 0.3 x 3.0 mm<sup>3</sup>  
TA 1:44 min

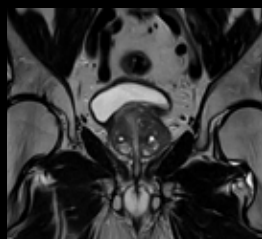
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➤ **Total exam time: 7:29 min**

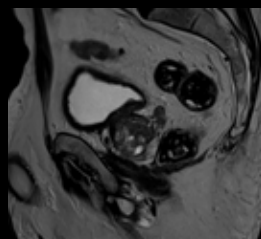
### T2 TSE



**PAT 4 | Deep Resolve**  
0.4 x 0.4 x 3.0 mm<sup>3</sup>  
TA 3:54 min

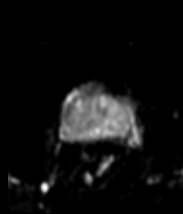


**PAT 4 | Deep Resolve**  
0.4 x 0.4 x 3.0 mm<sup>3</sup>  
TA 3:54 min

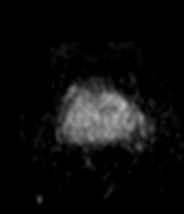


**PAT 4 | Deep Resolve**  
0.4 x 0.4 x 3.0 mm<sup>3</sup>  
TA 1:44 min

### DWI (b50/b800)



**PAT 4 | Deep Resolve**  
1.2 x 1.2 x 3.0 mm<sup>3</sup>  
TA 3:43 min



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➤ **Total exam time: 13:15 min**

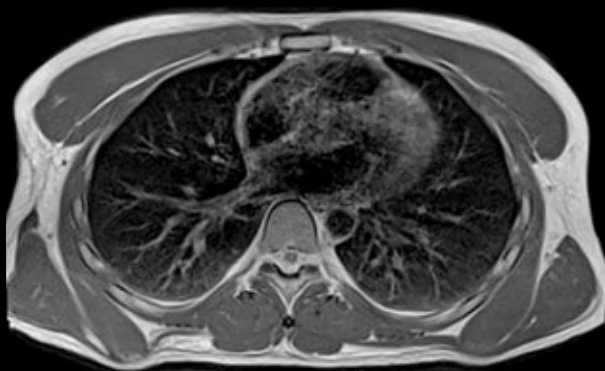
# Breaking barriers to open up new clinical opportunities

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.

## A paradigm shift in 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.

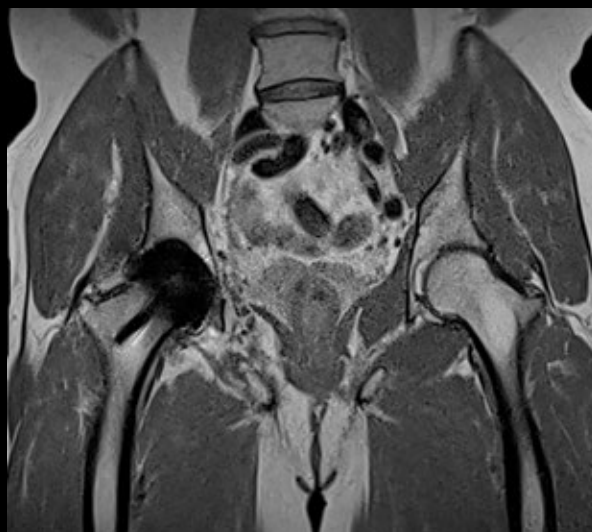
MAGNETOM Free.Max enables new opportunities for improved pulmonary imaging due to fewer susceptibility artifacts compared with higher field strengths.



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## More confident visualization in 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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# Effortless and intuitive operation

## myExam Companion

MAGNETOM Free.Max, with myExam Companion, breaks down the barriers of complex MRI operations. Using the new possibilities of digitalization and AI, data is turned into integrated expertise and tailored assistance to benefit the user and address the clinical question.



### myExam Autopilot

Intelligently automated



### myExam Assist

Flexibly guided



### myExam Cockpit

Intuitively customized

## myExam Autopilot

The innovative myExam Autopilot enables healthcare professionals of any skill level to perform routine MRI examinations<sup>5</sup>

myExam Autopilot provides a highly automated workflow and strongly simplified interface that enables brain, spine, knee, hip and shoulder exams with a simple click of button.





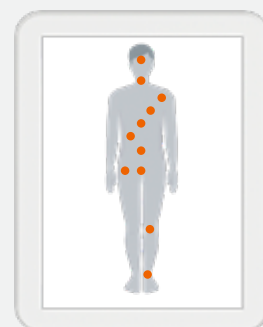
## BioMatrix Technology

MAGNETOM Free.Max streamlines your tasks beyond scanning. You gain efficiency and reproducibility in your patient setup with BioMatrix workflow automation.

### 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<sup>1</sup>



**> Automated positioning for eleven body regions with BioMatrix Select&GO**

### myExam 3D Camera

The world's first 3D camera fully integrated with your MRI scanner offers two unique features:

- AutoPositioning can make patient positioning up to 48% faster<sup>1</sup>
- AutoRegistration is designed to streamline and help safeguard accurate patient registration



# Remote Imaging

## Remote Scanning

With *syngo* virtual Cockpit, you can benefit from an in-house expert at your side through our remote scanning service WeScan<sup>6</sup>, directly integrated into your MAGNETOM Free.Max.



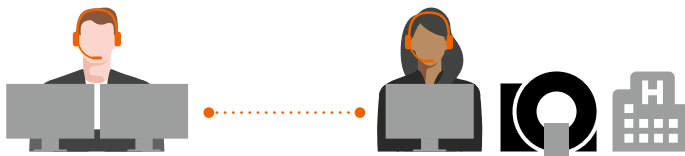
## Remote Reading

WeRead<sup>7</sup> offers access to a network of renowned specialists providing teleradiology services, accommodating high case load and the need for a 2<sup>nd</sup> opinion.



## *syngo* Virtual Cockpit

MAGNETOM Free.Max integrates *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<sup>8</sup> 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

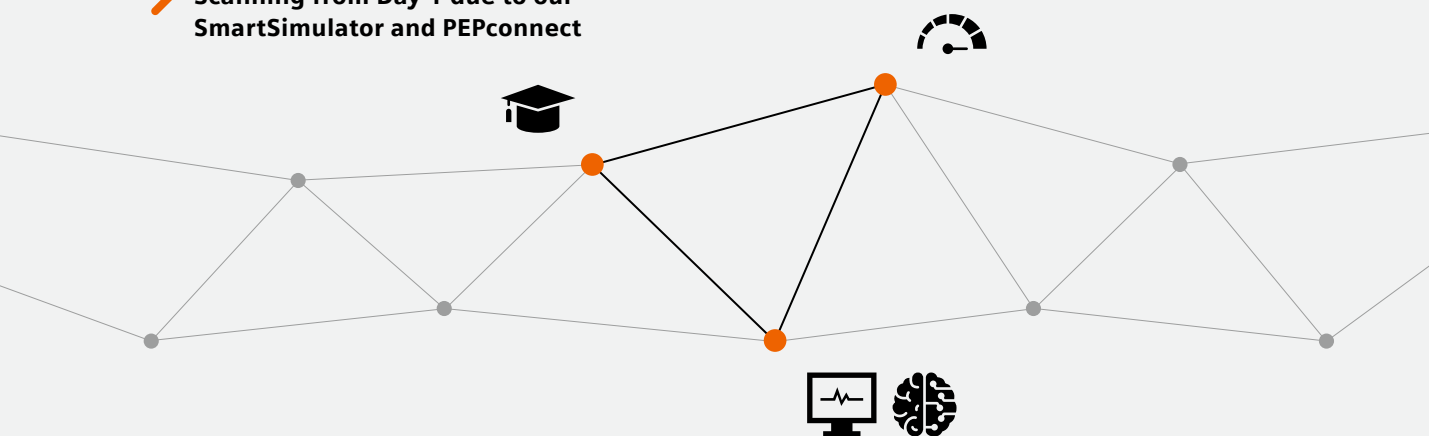
- Optimal mix of online and onsite trainings within tailored application support based on your needs
- With **SmartSimulator** – the virtual connection to a hands-on scanner experience even before the system is installed
- With **PEPconnect** – the industry's first personalized online education and performance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





### > Digitalization and data 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."*<sup>9</sup>

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

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens sales organization worldwide. Availability and packaging may vary by country and are subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States. Some products are still under development and not commercially available yet. Their future availability cannot be ensured.

The information in this document contains general technical descriptions of specifications and optional features which do not always have to be present in individual cases. Siemens reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information.

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For accessories, please visit: [siemens.com/medical-accessories](https://www.siemens.com/medical-accessories)

<sup>1</sup> Data on file.

<sup>2</sup> Time will extend if magnet refrigerator remains off for a longer period of time.

<sup>3</sup> The information shown herein refers to products of 3<sup>rd</sup> party manufacturer's and thus are in their regulatory responsibility. Please contact the 3<sup>rd</sup> party manufacturer for further information.

<sup>4</sup> The feature is still under development and not yet commercially available. Its future availability cannot be guaranteed.

<sup>5</sup> For head, spine, knee, shoulder, and hip examinations

<sup>6</sup> The products/features and/or service offerings (here mentioned) 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.

<sup>7</sup> The products/features and/or service offerings are not commercially available in all countries. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. WeRead is currently under development and commercially only available in Germany as BEFUND24. Please contact your local Siemens Healthineers organization for further details.

<sup>8</sup> 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.

<sup>9</sup> 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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