

# MAGNETOM Free.Star MRI for all.

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



As an extremely powerful imaging tool, MRI has proven to play a pivotal role in the fight against many of our world's most prevalent diseases. Today more than ever, access to MRI should be a matter of course. But the cost and complexity of deploying conventional MR scanners limits its reach. The size and weight of conventional MRI scanners, the special infrastructure and servicing they require, plus the training needed to operate them are both technically and financially prohibitive for many healthcare providers. But these barriers are often 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.

**50%** of the world's population  
have no adequate access to MRI



**> We believe everyone deserves access to MRI**

# MRI for all.

MAGNETOM Free.Star introduces a disruptively simple approach to MRI that transforms global access to high-value care. Where conventional MR system architecture created an obstacle for installation and maintenance, MAGNETOM Free.Star seamlessly fits into an existing helium-free infrastructure. Where shortage of local expertise provided a constraint in operating such a complex imaging modality, MAGNETOM Free.Star empowers a seamless and automated workflow. Based on our revolutionary High-V MRI platform, MAGNETOM Free.Star creates a new breed of MRI that ensures greater healthcare for everyone.



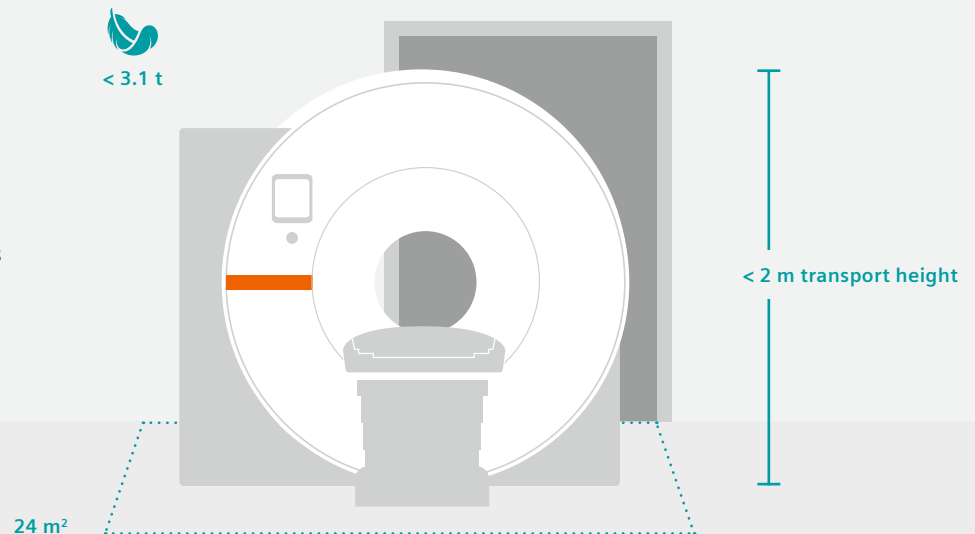
# Our most compact MRI

MAGNETOM Free.Star, disruptively simple to site.

With a small footprint, light weight and low height, MAGNETOM Free.Star opens up new siting possibilities, addressing infrastructure challenges that impede access to MRI.

## Minimum footprint for maximum siting flexibility.

Opening up new opportunities  
where MRI services can be  
offered.



# DryCool technology

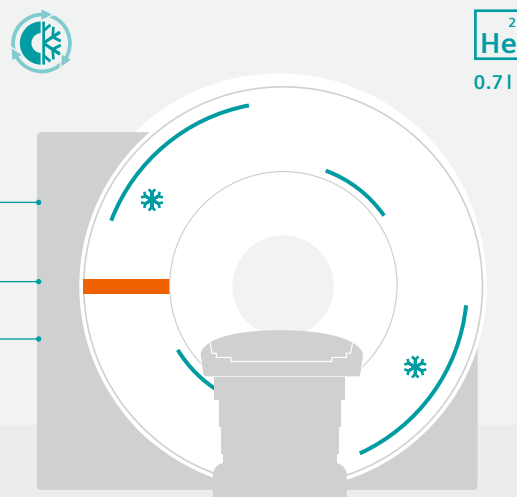
MAGNETOM Free.Star, freedom beyond helium.

With no need for a quench pipe, MRI installation planning and siting is made easier than ever before.

## A new benchmark in cooling performance:

- Ramp down time: <0.5 hours
- Time to be back in operation after controlled ramp down: <4 hours<sup>1</sup>
- Time to be back in operation after emergency shut off: <24 hours<sup>1</sup>

Sealed-for-life magnet design  
No quench pipe  
New benchmark in ramp-up times



**Reduced installation cost**



**Increased siting flexibility**



**Helium-independent infrastructure**

# MAGNETOM Free. Platform Reach Edition<sup>2</sup>

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

## 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



- 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**

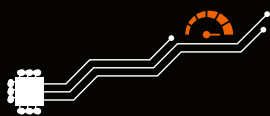


# Making MRI more accessible by leveraging digital solutions

## MAGNETOM Free.Star with High-V MRI

Digitalization is rapidly transforming MR imaging by applying highly efficient acquisition techniques and deep learning-based reconstruction. 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

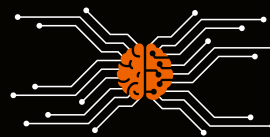


Increasingly efficient acquisition techniques



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 – the power of neural networks




**Conventional**  
Matrix: 192 x 256  
TA 2:12 min


Deep neural network



→

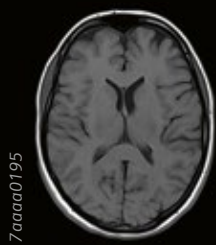


**Deep Resolve**  
Matrix: 384 x 512  
TA 2:12 min

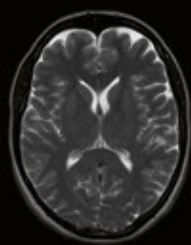


Powered by  
**artificial intelligence**

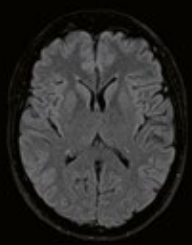
## Neuro imaging



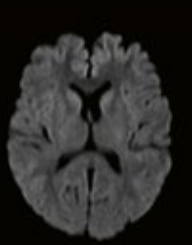
**T1 SE**  
0.4 x 0.4 x 5.0 mm<sup>3</sup>  
TA 2:50 min



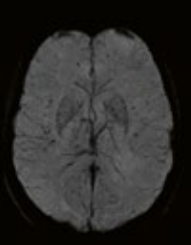
**T2 TSE**  
**Deep Resolve**  
0.4 x 0.4 x 5.0 mm<sup>3</sup>  
TA 2:50 min




**T2 TSE Dark-Fluid**  
**Deep Resolve**  
0.5 x 0.5 x 5.0 mm<sup>3</sup>  
TA 4:00 min



**DWI b1000**  
**PAT 2**  
0.7 x 0.7 x 5.0 mm<sup>3</sup>  
TA 2:54 min



**EPI SWI**  
**Deep Resolve**  
0.8 x 0.8 x 1.8 mm<sup>3</sup>  
TA 4:23 min



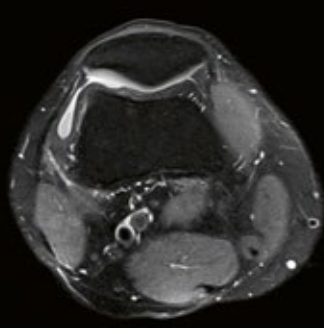
**Time of flight**  
0.5 x 0.5 x 0.5 mm<sup>3</sup>  
TA 4:05 min

**> Total exam time: 21:02 min**

## Orthopedic imaging



**PD TSE Fat Sat**  
**SMS 2 | Deep Resolve**  
 $0.3 \times 0.3 \times 3.0 \text{ mm}^3$   
 TA 2:46 min



**PD TSE Fat Sat**  
**SMS 2 | Deep Resolve**  
 $0.3 \times 0.3 \times 3.0 \text{ mm}^3$   
 TA 2:16 min



**PD TSE Fat Sat**  
**SMS 2 | Deep Resolve**  
 $0.4 \times 0.4 \times 3.0 \text{ mm}^3$   
 TA 2:56 min

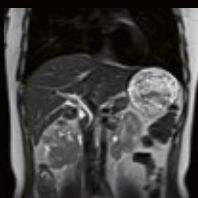


**T1 SE**  
 $0.3 \times 0.3 \times 3.0 \text{ mm}^3$   
 TA 1:51 min

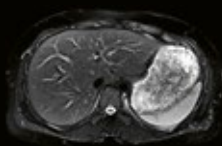
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> **Total exam time: 9:49 min**

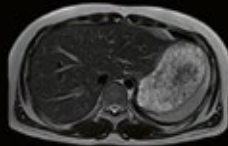
## Abdominal imaging



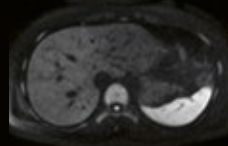
**HASTE**  
**PAT 2 | Deep Resolve**  
 $1.5 \times 1.5 \times 6.0 \text{ mm}^3$   
 TA 1:23 min



**T2 BLADE Fat Sat**  
**PAT 2**  
 $1.2 \times 1.2 \times 6.0 \text{ mm}^3$   
 TA 4:36 min



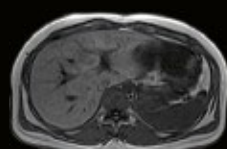
**T2 BLADE**  
**PAT 2**  
 $1.2 \times 1.2 \times 6.0 \text{ mm}^3$   
 TA 3:27 min



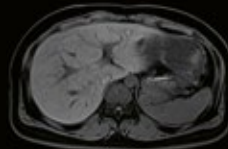
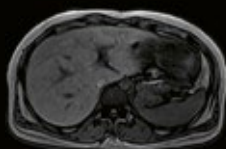
**DWI b800**  
**PAT 2 | Deep Resolve**  
 $1.5 \times 1.5 \times 6.0 \text{ mm}^3$   
 TA 3:38 min



**MRCP**  
**PAT 3 | Deep Resolve**  
 $0.6 \times 0.6 \times 1.0 \text{ mm}^3$   
 TA 2:43 min



**T1 VIBE Dixon**  
**(in-phase, opposite-phase & water)**  
**CAIPIRINHA 2 | Deep Resolve**  
 $0.8 \times 0.8 \times 3.0 \text{ mm}^3$   
 TA 4x 0:16 min



**T1 VIBE Dixon**  
**(in-phase, opposite-phase & water)**  
**CAIPIRINHA 2 | Deep Resolve**  
 $0.9 \times 0.9 \times 3.0 \text{ mm}^3$   
 TA 4x 0:17 min

7aaaa0165

> **Total exam time: 17:59 min**

# Leveraging High-V MRI to reach higher clinical value

When you dare to break conventions, new opportunities arise. The unique field strength of 0.55T with High-V MRI offers inherent physical benefits that overcome the limitations of today's MR imaging. MAGNETOM Free.Star offers new clinical applications that expand the reach of MRI.



**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.

With MAGNETOM Free.Star new opportunities arise as fewer susceptibility artifacts compared to higher field strength allow improved pulmonary imaging.



As patient demographics are changing, metal implants become more and more frequent in MR imaging. MAGNETOM Free.Star offers inherent benefits for **implant imaging** as the new field strength also leads to reduced metal artefacts.

# Effortless and intuitive operation

## myExam Companion

MAGNETOM Free.Star, 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**  
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 examinations<sup>3</sup>

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



## myExam 3D Camera

The world's first 3D camera fully integrated with your MRI scanner offers two unique benefits: AutoPositioning allows for automatic patient positioning for all available local coils. And AutoRegistration<sup>5</sup> is designed to streamline and help safeguard accurate patient registration.



## BioMatrix Technology

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

### Select&GO

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

➤ Up to 48% faster<sup>4</sup> patient positioning in combination with myExam 3D Camera.

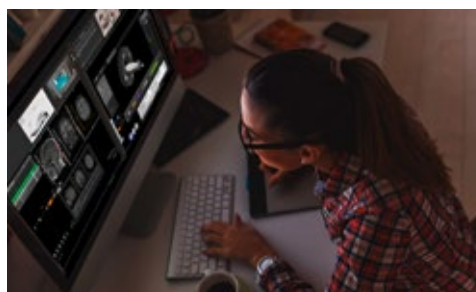


➤ **Automated positioning for eleven body regions with BioMatrix Select&GO**

## Remote Imaging

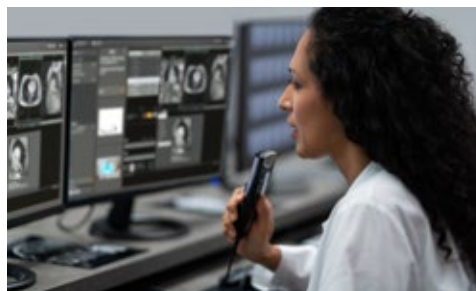
### Remote Scanning

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.Star.



### 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.



# Connected scanner

While you focus on caring for your patients, we stay connected to care for your MRI. Through innovative service 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

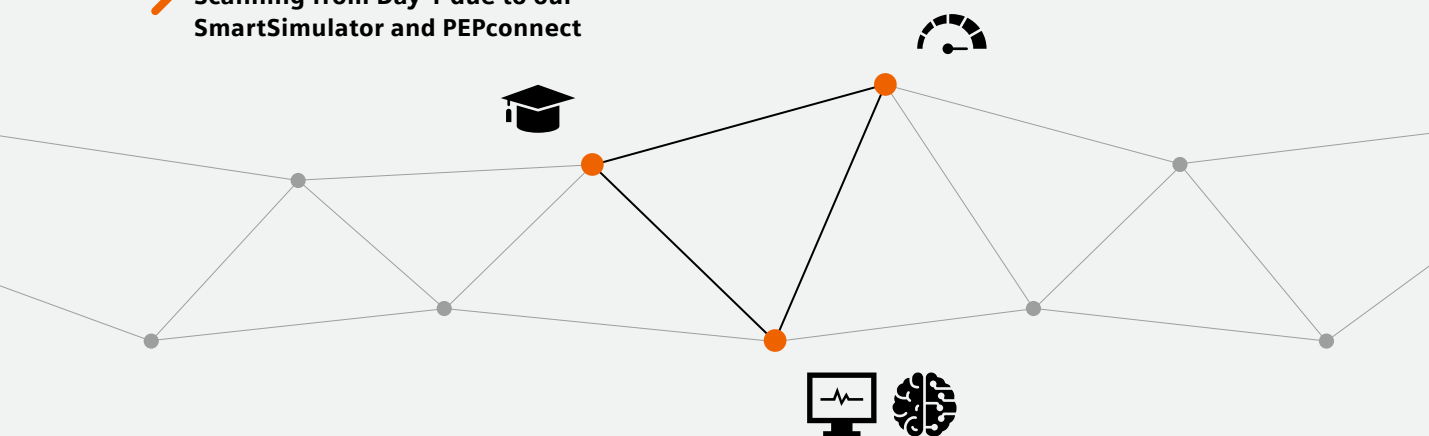
- Optimal mix of online and onsite trainings within tailored application support based on your needs
- With **SmartSimulator** – the virtual connection to a hands-on scanner experience even before the system is installed
- With **PEPconnect** – the industry's first personalized online education and performance 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.Star breaks new ground by improving the overall economics of MR imaging and thereby offers great opportunities within the changing healthcare environment.

## Life cycle cost

MAGNETOM Free.Star 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>8</sup>*

**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](https://www.siemens.com/medical-accessories)

<sup>1</sup> Time will extend if magnet refrigerator remains off for a longer period of time.

<sup>2</sup> This solution is still under development and not commercially available yet. It is not for sale in the U.S. Its future availability cannot be guaranteed. 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>3</sup> For head, spine, knee and shoulder examinations

<sup>4</sup> Data on file

<sup>5</sup> This product is under development and available in select countries.

<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 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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