Key differentiators

MAGNETOM Altea

↗ **siemens-healthineers.us/magnetom-altea**

Contents

SIEMENS
Healthineers

Magnet & BioMatrix Tuners

The all new design of MAGNETOM Altea incorporates both a short magnet with a 157 cm system length (cover to cover), plus a patient-friendly, 70 cm Open-bore. The magnet maintains excellent homogeneity over a large 50 x 50 x 50 cm3 field of view (FOV). The unique BioMatrix Tuners, CoilShim[1] and SliceAdjust, further enhance homogeneity by applying patient-specific and region-specific shim optimization in critical regions. This results in robust and reliable fat saturation throughout the entire imaging volume, especially important for: abdominal, off-center, large-FOV and long bone imaging. In addition, the system provides active shielding and zero helium boil-off technology.

**Features a large
50 x 50 x 50 cm³
field of view**

Gradients

The MAGNETOM Altea gradient amplifier comes in a modular and highly compact design with ultra-fast, solid-state technology and low switching losses. The following gradient strength is available and addresses the majority of clinical needs:

• XJ: 33mT/m max. amplitude with a maximum slew rate of 125T/m/s

The scanner utilizes both passive and active shimming.

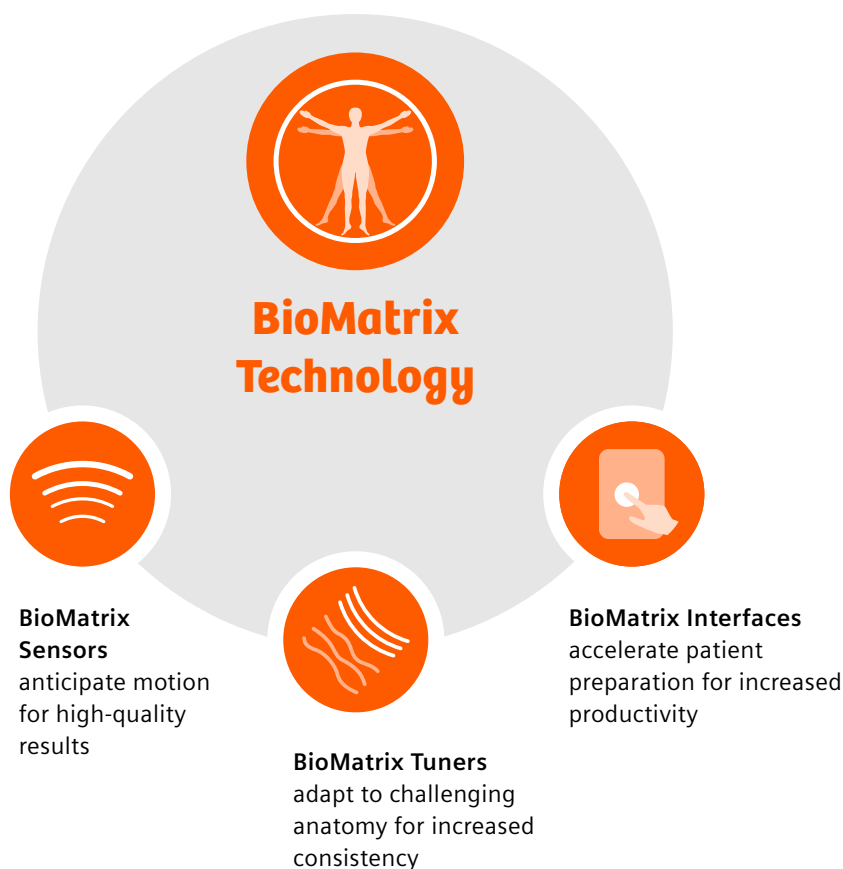**Powerful gradients
XJ: 33 mT/m @ 125 T/m/s**

[1]Optional

BioMatrix

Patients have unique, individual characteristics—biovariability. Different physiologies and anatomies—and how each patient interacts with the MRI technology—may cause variations in the imaging results. BioMatrix Technology helps to overcome these challenges by automatically adjusting to patient biovariability. By embracing human nature in this way, we can personalize the MRI examination and help expand precision medicine.

The three key pillars of the BioMatrix family that drive consistency and efficiency in the face of biovariability are BioMatrix Sensors, BioMatrix Tuners and BioMatrix Interfaces.


BioMatrix Technology

BioMatrix Sensors anticipate motion for high-quality results

BioMatrix Tuners adapt to challenging anatomy for increased consistency

BioMatrix Interfaces accelerate patient preparation for increased productivity

BioMatrix Sensors
Anticipate motion for high-quality results

The unique Respiratory Sensors[1] in the BioMatrix Spine coils automatically detect breathing patterns as soon as the patient lies on the table. This speeds up patient setup especially when respiratory triggering is needed for image acquisition. There is no need for an additional respiratory bellows or belt. The detected respiratory motion is immediately displayed on the BioMatrix Interface as a respiratory curve.
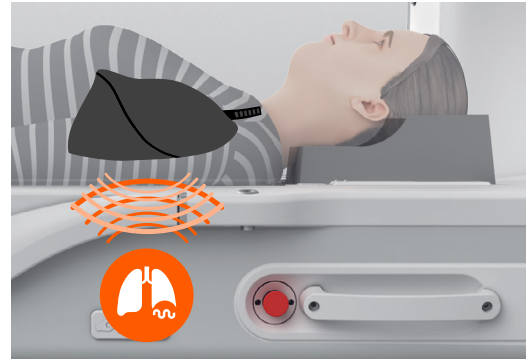
BioMatrix[1] Beat Sensor
Cardiac MRI exams without ECG

The BioMatrix Beat Sensor measures the motion of the heart and provides an alternative to ECG triggering. This improves the cardiac MR experience by: removing the need to expose the patient, saving time shaving the patient, and eliminating ECG learning time.
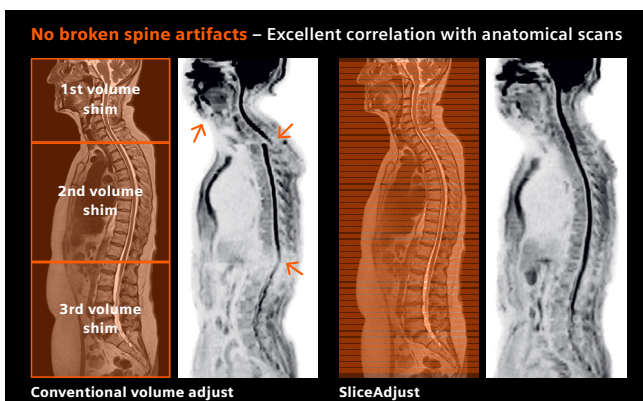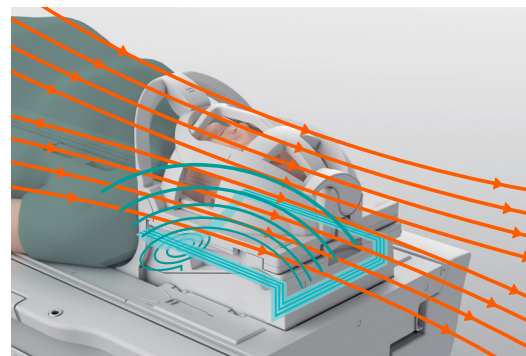
BioMatrix Tuners
Adapt to challenging anatomies for reliable exams

CoilShim[1]

Integrated into the new BioMatrix Head/Neck coils, CoilShim increases diagnostic quality and reduces the need for repeat scans by delivering improved fat saturation, better DWI and TSE quality in the neck region. Additional shim elements directly integrated into the BioMatrix Head/Neck coil perform region-specific shimming for a more homogeneous B0 field in the challenging head and neck region.

No broken spine artifacts – Excellent correlation with anatomical scans

1st volume shim

2nd volume shim

3rd volume shim

Conventional volume adjust

SliceAdjust

SliceAdjust

In a typical MR scanner, B0 field inhomogeneity resulting from a patient's anatomy is corrected by the standard volume shim. However, for multi-station exams, volume shimming has its limitations, for example, at station boundaries. This typically leads to "broken spine" artifacts in whole-body DWI or impaired fat saturation in multi-station TSE. With BioMatrix SliceAdjust, precise slice-by-slice shimming is performed to eliminate the inaccuracies of a conventional volume shim. SliceAdjust delivers excellent DWI quality, providing excellent correlation to anatomical scans and improving fat saturation in TSE scans.

[1]*Optional*

BioMatrix Interfaces
**Accelerate patient preparation for increased efficiency**

Select&GO

With one-touch positioning using the Select&GO display, based on the underlying BioMatrix Body Model, artificial intelligence is used to accelerate patient positioning by up to 30%.[1] The body region to be scanned is automatically displayed on the touch display depending on which set of coils is plugged into the table. As soon as the body region of interest is selected, the patient is moved to iso-center without activating the laser light. Delays due to incorrect positioning can now be avoided.

**BioMatrix Select&GO
accelerates patient
positioning—powered by AI**

Dockable Table[2]

The BioMatrix Dockable Table enables fast and easy patient setup. The multi-directional navigation wheel and 360-degree flexibility make patient handling easy. Also, the possibility to lower the table to 52 cm guarantees an easy patient transfer. The fast, automated push-button AutoDock functionality allows maneuvering without peddles. A receiving port guides the table for easy alignment into the scanner.
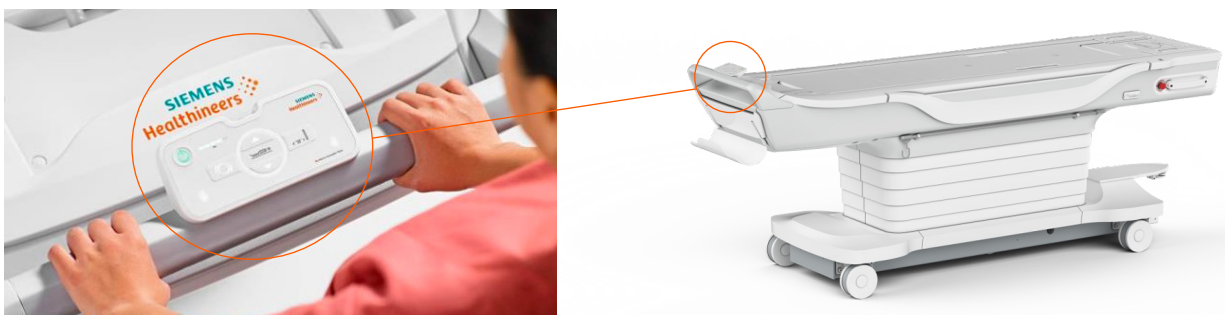
Easy and intuitive interface		Adapts to patients of all sizes		Easy docking with AutoDock
Sensitive to user touch	»	Up to 550 lbs	»	No pedals required

[1] *Data on file.*
[2] *Optional*

Tim 4G Technology
### Deliver exceptional image quality and speed with Tim 4G

Tim is the integrated coil technology that revolutionized MRI. Tim 4G is now in its 4th generation.

Tim 4G features DirectRF, a fully digital system of RF receive and RF transmit. This is unique in the market. Both the receivers and the transmitter are situated directly at the magnet. This ensures a very close relationship between all critical components (receiver, transmitter, body coil, gradient coil) with real-time feedback loops that result in tight control of all components simultaneously, for the highest accuracy.

On the receive side, care was taken to have the receivers as close to the receiving coils as possible—but not on the coils themselves, where they would only add weight and bulk and make the coils more expensive, without providing any clinical benefit. Additionally due to the integrated pre-amplifiers, the full SNR is preserved.

The most relevant differentiator of our RF systems is the number of independent RF channels working in combination with the high element density coils. Together they maximize use of the channels. For example, Tim 4G with the MAGNETOM Altea offers up to 32 independent RF channels (unique in the 1.5T arena). Altea also provides coils and coil combinations with the highest element density in the market to augment the 32 channels.

What is the benefit of high coil element density? High coil element density combined with a high number of RF channels allows for higher SNR and higher speed with higher PAT factors. The figure below demonstrates up to 205 cm of total scan range with Tim 4G's unique coils.

Highest channel count up to 180 channels connected simultaneously
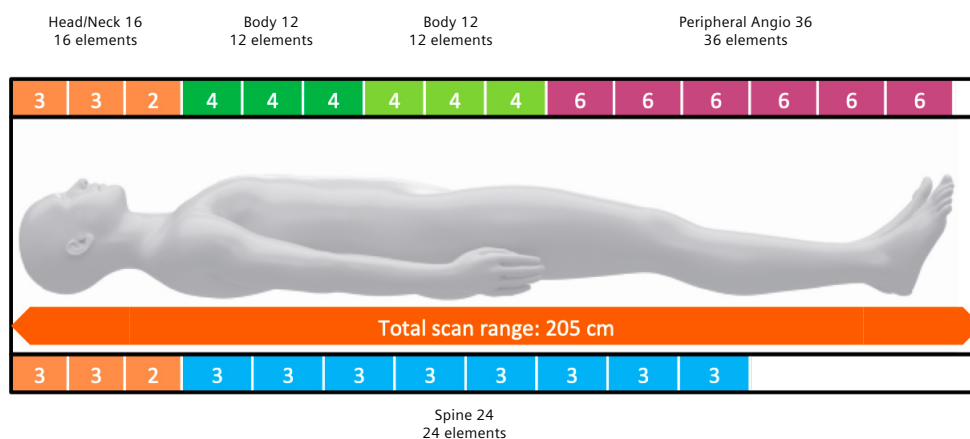
Example coil coverage from a MAGNETOM Altea [180 x 32]

TIM 4G Coil Solutions

With one of the broadest coil portfolio's in the industry—the ultra-lightweight coils drive functionality and solve key clinical and workflow needs:
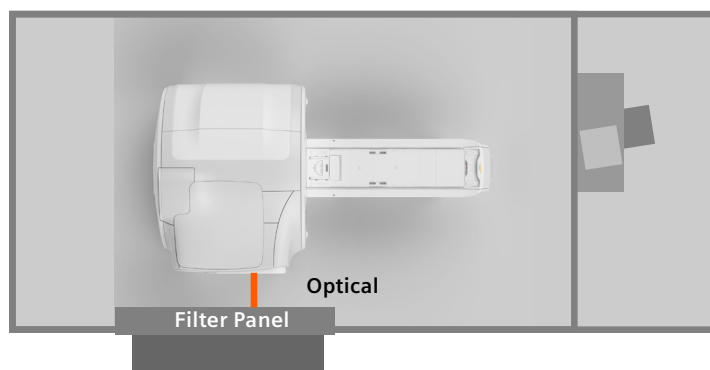
DirectRF

As discussed earlier. Direct RF provides integration of all transmit and receive components at the magnet, enabled by the unique digital-in and digital-out design with fiberoptic cables between the magnet and equipment room.

• Enabler for real-time feedback loops

• Higher signal purity and improved stability

• Enhanced image quality, less noise

• Easier siting

DirectRF
• **Better image quality, less noise**
• **Higher signal purity and improved stability**
• **Easier siting**



Optical

Filter Panel

DirectConnect and SlideConnect

DirectConnect and SlideConnect technology enable one-hand operation. This results in easy handling and helps to speed up the workflow even further.

Your advantages:

• Up to 40%[1] faster body imaging with Tim 4G due to its ultra-high coil element density, enabling more SNR and speed.

• Maximum 205 cm scan range without repositioning the patient when large coverage is required.

• Light-weight coil design for fast setup and increased patient comfort.

• Accelerated workflow with DirectConnect, cable-less coils for spine, head/neck and foot/ankle and SlideConnect technology on all other coils for easy one-handed operation.
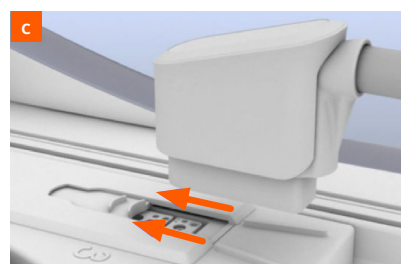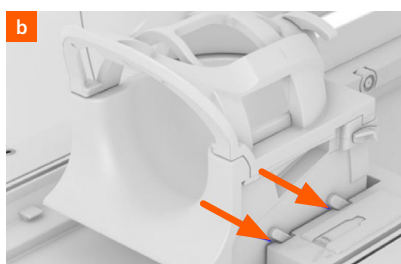
(a) Light-weight Body 18 coil on the integrated Spine 32 coil; easy-to-use and fast coil connection with (b) DirectConnect and (c) SlideConnect.
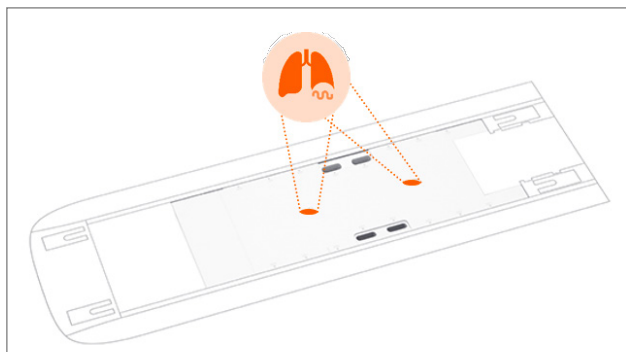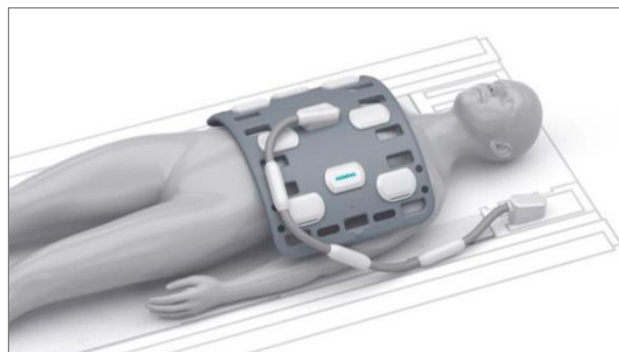
[1]Data on file.

Flexible and Patient Friendly Coils
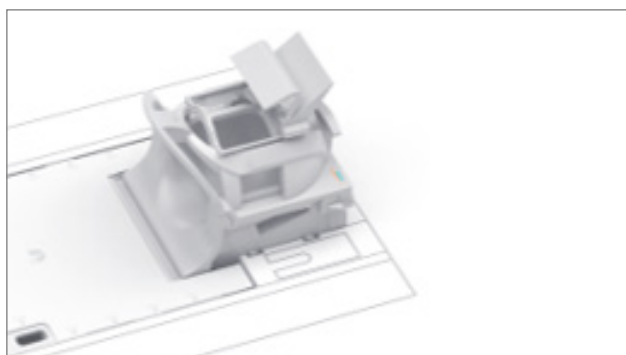
A comprehensive set of coils included
Designed to Support All Your Imaging Needs

BioMatrix Spine 24
with Respiratory Sensors[1]

BioMatrix Body 12

**BioMatrix Head/Neck 20** Tiltable and with Coilshim[1]

Flex 4 Large/Small

Wide Portfolio of Optional Coils

UltraFlex 18 Coils (Small & Large)[1]

The UltraFlex 18 coils provide a light-weight, blanket-like feel with the added benefit of breathability. The flexible coils adapt to the patient's anatomy (no fixation straps needed), easily contouring to their body, reducing anxiety.

- Dual-Density Signal Transfer enables the ultra-high density coil design by integrating key RF components into the UltraFlex 18
- Dedicated positioning Aids for shoulder, knee, elbow and foot/ankle for easy and comfortable patient positioning
- 18-channel design
- iPAT-compatible
- Stackable with the Body 12
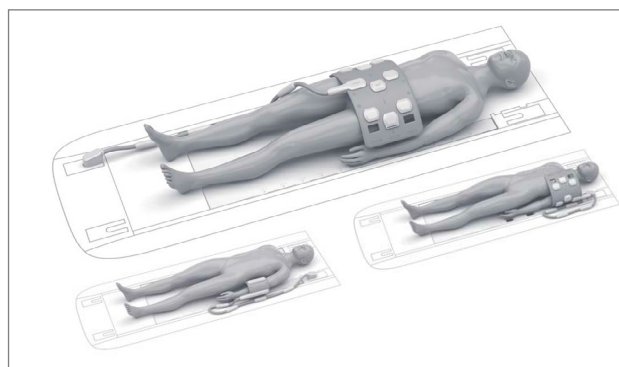
|	UltraFlex Large 18[1]	UltraFlex Small 18[1]
Weight	4 lb	3.1 lb
Dimensions (L x W x H)	11.4 in x 23.2 in x 0.55 in	7.5 in x 16.1 in x 0.55 in

[1]Optional

**BioMatrix Body 12 & BioMatrix Body 12 long[1]**

The BioMatrix Body 12 expands the coil portfolio as a patient-friendly, flexible, and high element density coil. With an integrated Beat Sensor, the breathable coil also incorporates the SlideConnect feature as well as exchangeable cable design for efficient positioning.

- **Integrated Cardiac Beat Sensor**
- **Can be combined with additional BioMatrix Body 12 coils for larger coverage**
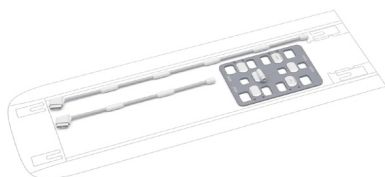
16 Ch Ortho Coils[1]
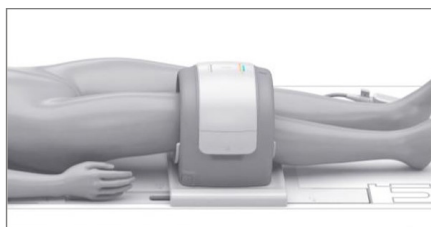
Accommodate more patients with a flared opening

Tx/Rx Knee 18

Full hand and wrist coverage
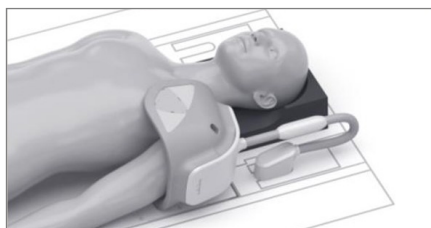
Hand/Wrist 16

Optimal fit to patient anatomy with flexible coil elements

Shoulder Shape 16

Secures the anatomy for motion free imaging

Foot/Ankle 16

[1]Optional

myExam Companion

10 myExam assists deliver consistent, reproducible results from head to toe

myExam assist with MAGNETOM Altea

Standardized results every time

Acquisition

myExam Abdomen Assist   myExam LiverLab Assist

myExam Cardiac Assist   myExam Large Joint Assist*

myExam Angio Assist

myExam Brain Assist*

myExam Breast Assist   myExam Prostate Assist

myExam Spine Assist*   myExam Whole-Body Assist

Over 90%[1] of MRI exam requests covered by myExam assists

myExam Companion breaks down the barriers of complex MRI operations using a new philosophy on how to operate MRI. It leverages the new possibilities of digitalization and AI, to turn data into integrated expertise and tailored assistance.

The myExam Autopilot, Assist and Cockpit helps users efficiently achieve high-quality results – regardless of their experience level, the patient, or throughput.

Which mode should you work with?

Different modes. Different use cases. Consistent IQ: Powered by AI myExam Companion provides tailored user assistance enabling consistent and reproducible results.

myExam Autopilot

myExam Autopilot offers users the most advanced and intelligent automation. It enables users to scan at high quality with just a simple click and has the potential to remove burdensome routine tasks.

Automate intelligently

- MRI operation drastically simplified
- Automated protocol without the need for any manual adjustments
- Clear design with a focus on what users need – and without any distractions
- Novel usability with touch or click interaction

*Standard
[1]Evaluation of 9 million Siemens MR exams, 2014.

myExam Assist

myExam Assist provides guided workflows. Users can select exam strategies or flexibly adapt them based on the patient's condition. It allows for high quality, efficient exams even when conditions change.

Flexible and guided

- Standardized exam strategies for all supported body regions
- Decision logic for consistent adaptations
- Useful automation with automated slice/volume positioning

myExam Cockpit

myExam Cockpit allows users to customize intuitively. It provides a central workspace for protocol management. Users can set up and maintain protocols, build knowledge into standardized exams and make those continuously available for every user in the MRI department.

Customize intuitively

- Configure all your protocols to your individual needs
- Configure and set-up myExam Autopilot or Assist programs
- Efficient protocol management with explorer and editor in one
- Instantly edit, save, and run your protocols – for maximum flexibility even during an examination
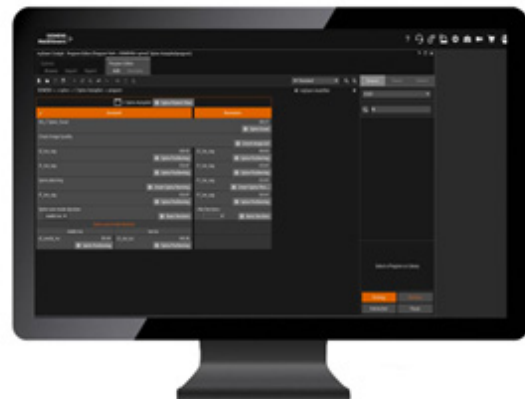

Autosuite

Integrated Autosuite – powered by AI

Providing ease-of-use, consistency, and reproducibiltiy in myExam Autopilot or Assist while remaining customizable to your standards in myExam Cockpit.
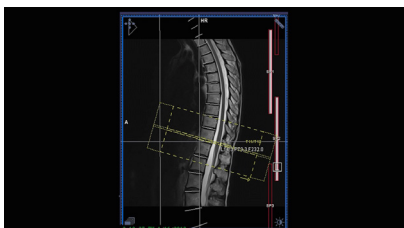
AutoAlign, AutoCoverage, and AutoFoV
For consistent slice or volume coverage and orientation
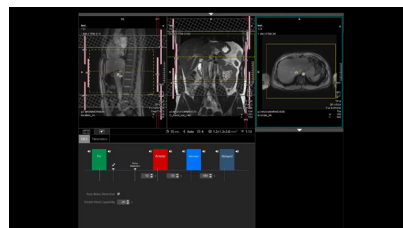
AutoBolus Detection and AutoVoice Commands
For consistent timing of breathing or contrast in dynamic imaging
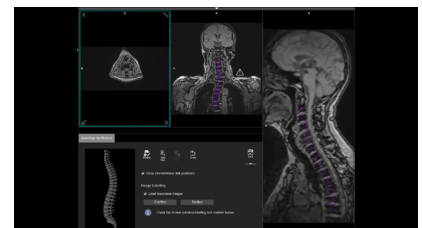
AutoLabeling and AutoCoil Select
Eliminate the need for manual coil selection or labeling tasks

Speed

Deep Resolve

Deep Resolve is an AI-powered image reconstruction technology that takes advantage of convolutional neural networks to accelerate MRI scans faster than ever before while simultaneously increasing resolution.
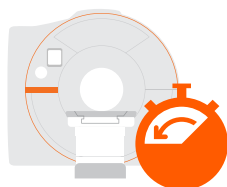
Increase department throughput
Drive improved efficiency

Increase in image resolution
Improve diagnostic confidence

Patient comfort in the MR
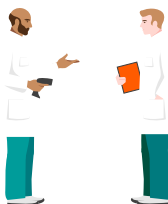Faster exams = less table time

Radiologist

CEO

Technologist

Schedule flexibility
Administrative support

Increase clinical referrals
Expand services

Deep Resolve Gain

What is it?
Deep Resolve Gain is a targeted denoising method to increase the MRI signal of images. With this, either shorter scan times or higher resolution can be achieved.

How does it work?
The acquired MRI system generates a patient specific, targeted noise map which reflects spatial noise variations. The MR image and the corresponding targeted noise map are subtracted in an iterative process to remove excess noise which does not add value to the final MRI image.

What problem does it solve?
MRI coil geometry and patient variability can create unnecessary noise in MR images. The noise impairs the signal of the MRI image and can decrease image quality. Deep Resolve Gain directly addresses the removal of the signal not contributing to the image.

What is the key differentiator?
Deep Resolve Gain targets the local noise variation introduced by each MRI patient and the corresponding RF coil via the iterative principle, similar to compressed sensing, but focused on noise removal.

The benefits:

⏱ & 🖼

Speed up scan time   Get higher image quality

Deep Resolve Sharp

What is it?
Trained on over 10,000 pairs of low-res and high-res MR data, Deep Resolve Sharp reconstructs a higher resolution image from low resolution data via the AI network.
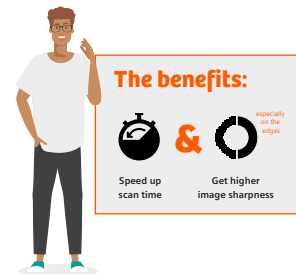
How does it work?
A low-res image is reconstructed from the low-res data into a sharper, higher resolution image. Data consistency with the acquired raw data is ensured as part of the final image reconstruction. The result is an image with sharper edges and up to a 2x improvement of in-plane resolution.

What problem does it solve?
Typically, in MRI, you can either have a longer scan that acquires a lot of data and provides high resolution or a quicker scan, less data – but lower resolution. Why not have the best of both scenarios with Deep Resolve Sharp.

What is the key differentiator?
The AI network can generate high-res output from low-res input because it has been trained on many pairs of high and low-res images, enabling the software to anticipate where to expect a sharp edge in an image.

The benefits:
Speed up scan time & Get higher image sharpness especially on the edges

Deep Resolve Boost

What is it?
Deep Resolve Boost enables super resolution at imaging speeds never before possible.
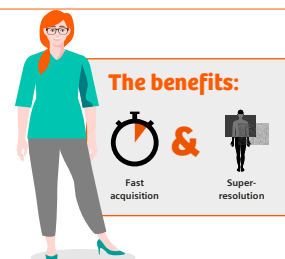
How does it work?
Leveraging raw data from a reduced, and thus faster scan as input, a deep neural network is applied multiple times in an iterative process to generate the final output with significantly reduced noise. The integration of the raw data along the entire reconstruction process leads to unmatched performance and ensures data integrity.
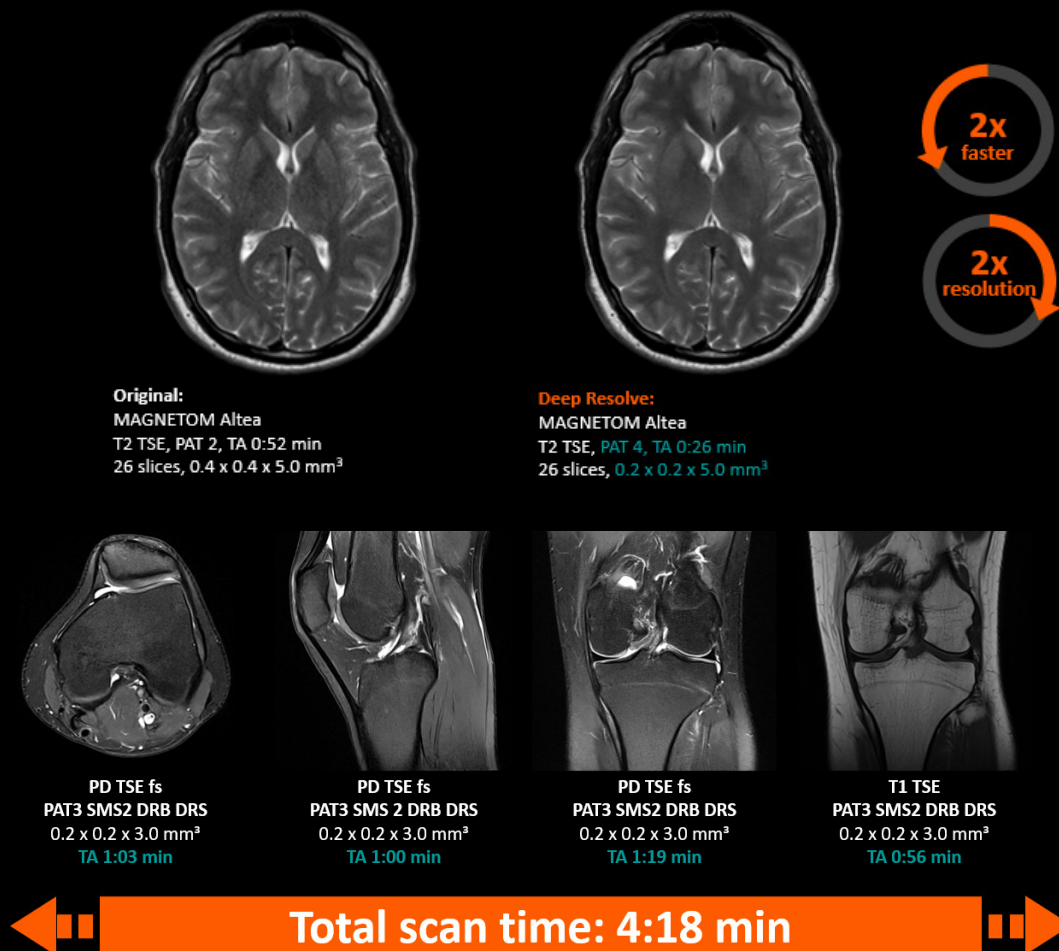
What problem does it solve?
With conventional reconstruction methods, a highly accelerated image acquisition will lead to strong noise contamination and/or artifacts. The reconstruction with Deep Resolve Boost enables the generation of images with extremely high MRI signal and a superfast image acquisition simultaneously.

What is the key differentiator?
Deep Resolve Boost can be combined with Deep Resolve Sharp as well as Simultaneous Multi-Slice (SMS) for amazingly fast accelerations and super-resolution across all anatomies.

The benefits:
Fast acquisition & Super-resolution

Original:
MAGNETOM Altea
T2 TSE, PAT 2, TA 0:52 min
26 slices, 0.4 x 0.4 x 5.0 mm³

Deep Resolve:
MAGNETOM Altea
T2 TSE, PAT 4, TA 0:26 min
26 slices, 0.2 x 0.2 x 5.0 mm³

2x faster

2x resolution

PD TSE fs PAT3 SMS2 DRB DRS 0.2 x 0.2 x 3.0 mm³ TA 1:03 min	**PD TSE fs** PAT3 SMS 2 DRB DRS 0.2 x 0.2 x 3.0 mm³ TA 1:00 min	**PD TSE fs** PAT3 SMS2 DRB DRS 0.2 x 0.2 x 3.0 mm³ TA 1:19 min	**T1 TSE** PAT3 SMS2 DRB DRS 0.2 x 0.2 x 3.0 mm³ TA 0:56 min

◀ **Total scan time: 4:18 min** ▶

Simultaneous Multi-Slice[1]

SMS is a revolutionary method to significantly reduce imaging times for TSE, diffusion, and BOLD imaging through simultaneous excitation and readout of multiple slices. It is the only acceleration technique that does not result in SNR-related losses due to subsampling as opposed to iPAT. Implementation includes a multiband pulse coupled with the blipped CAIPIRINHA technique to minimize g-factor-related SNR penalties.

SMS for the TSE sequence reduces scan times, and/or increases slice coverage/resolution at similar scan times. SMS TSE is unique and is particularly beneficial in MSK imaging, which accounts for a major proportion of daily routine exams.

SMS RESOLVE (REadout Segmentation Of Long Variable Echo trains) delivers high-resolution, low-distortion, diffusion-weighted imaging (DWI) for accurate depiction of lesions. Additionally, this technique is largely insensitive to susceptibility effects, providing detailed anatomy-true diffusion imaging of the brain, spine, breast and prostate.

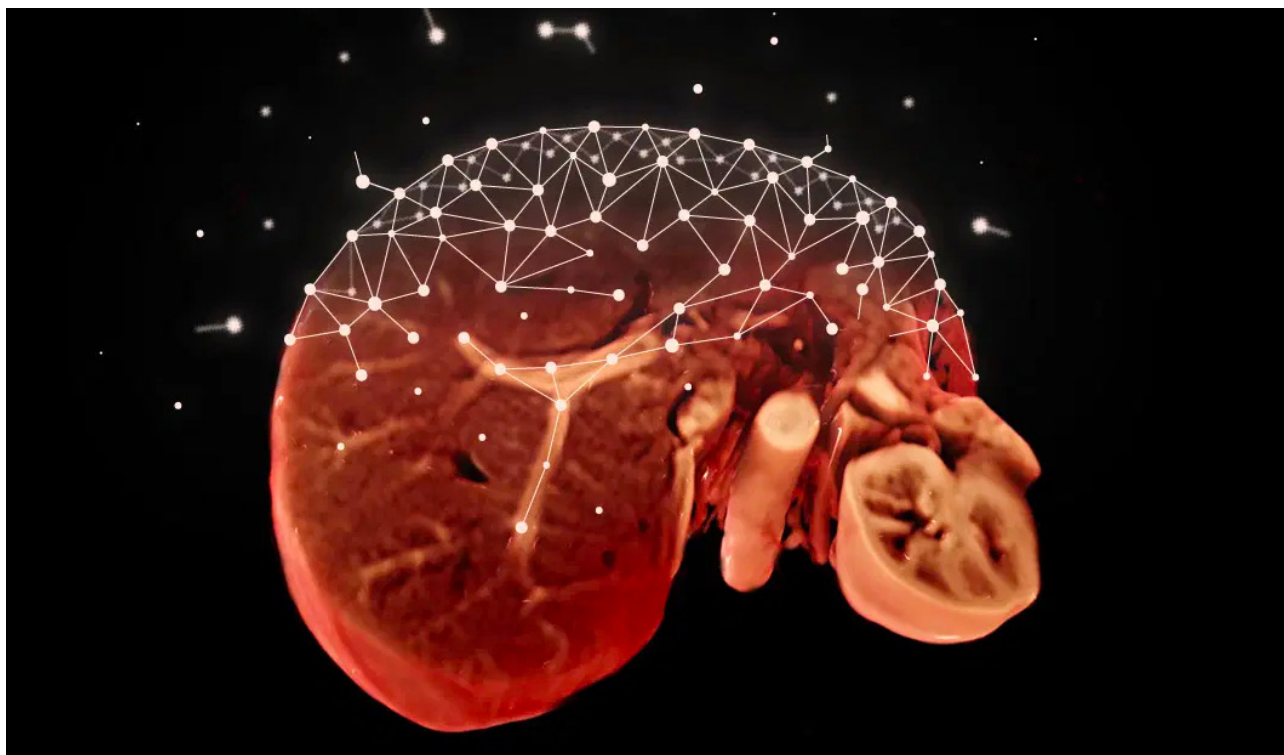[1]*Optional*

Compressed Sensing[1]

Compressed Sensing is an acceleration technique that incorporates sparse, incoherent subsampling followed by iterative reconstruction. Compressed Sensing in static imaging includes Compressed Sensing SPACE, Compressed Sensing Time-of-Flight (ToF), and Compressed Sensing SEMAC for metal artifact reduction[2]. Compared with other static exams, these Compressed Sensing applications benefit from intrinsic sparsity, which allows higher acceleration factors.

Compressed Sensing GRASP-VIBE[1]

With Compressed Sensing GRASP-VIBE, you can expand the patient population eligible for abdominal MRI. Patients who cannot hold their breath or follow breathing commands, including those with dementia and hearing impairments, children, or multi-morbid patients, can now undergo high-resolution dynamic abdominal imaging. With the push of a button, Compressed Sensing GRASP-VIBE's intelligent reconstruction and processing framework instantly recognizes different phases of liver dynamics, automatically labels them, and outputs only the clinically relevant information.

Highlights and benefits:

• Perform push-button, free-breathing liver dynamics in clinical routine

• Overcome timing challenges in dynamic imaging and respiratory artifacts

• Expand the patient population eligible for abdominal MRI

• Auto Bolus Detection

• AutoLabeling of relevant phases (pre-contrast, arterial, portal-venous and delayed)

• Self-gating for further reduction of residual motion blur

• Optimized clinical protocols for the abdomen

[1]Optional

[2]The MRI restrictions (if any) of the metal implant must be considered prior to patient undergoing MRI exam. MR imaging of patients with metallic implants brings specific risks. However, certain implants are approved by the governing regulatory bodies to be MR conditionally safe. For such implants, the previously mentioned warning may not be applicable. Please contact the implant manufacturer for the specific conditional information. The conditions for MR safety are the responsibility of the implant manufacturer, not of Siemens Healthineers.

Turbo Suite Packages

To maximize value for our customers, we created three Turbo Suite packages consisting of a combination of various acceleration techniques. Each package is optimized and suitable for different sequences and body regions.

Turbo Suite Essential
Turbo Suite Essential comprises established acceleration techniques such as iPAT, iPAT[2], T-PAT, and the unique CAIPIRINHA to maximize productivity for all contrasts and orientations in routine imaging from head to toe. CAIPIRINHA can be applied to volumetric 3D imaging that supports iPAT[2] for body, neuro, or MSK imaging.

Turbo Suite Essential provides unique parallel imaging techniques for routine examinations in 10 – 15 minutes[2] scan time

Turbo Suite Excelerate[1]
Turbo Suite Excelerate comprises cutting-edge acceleration techniques such as Simultaneous Multi-Slice (SMS) and Compressed Sensing for static 2D and static 3D imaging applications in Neuro, MSK, and Body MRI.

Turbo Suite Excelerate enables time savings, for all contrasts, orientations, and body regions by up to 50%[2]

Turbo Suite **Essential**

Routine exams in 10–15 minutes

Turbo Suite **Excelerate**

Up to 50% time savings

iPAT
CAIPIRINHA
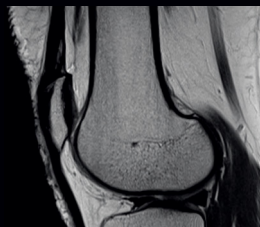VIBE
CAIPIRINHA
SPACE

SMS DWI
SMS TSE
SMS RESOLVE
CS ToF
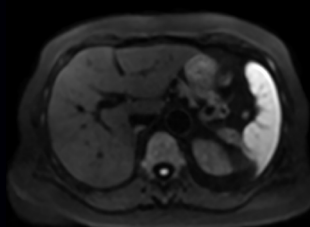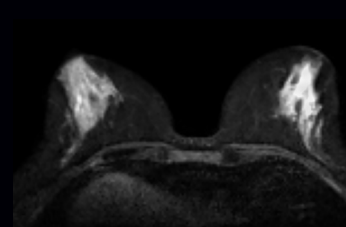CS SPACE
CS SEMAC

[1]Optional
[2]Data on file.

Conventional

PD TSE, PAT 2
0.4 x 0.4 x 3 mm[1]
TA 2:14 min
1aaaa1659

DWI, PAT 3, b800
1.6 x 1.6 x 6.0 mm[1]
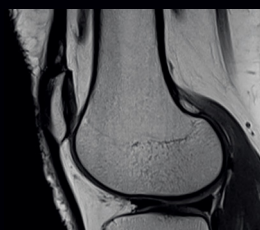TA 3:09 min
1aaaa1528

RESOLVE, b800
1.6 x 1.6 x 6.0 mm[1]
TA 5:22 min
1aaaa3233
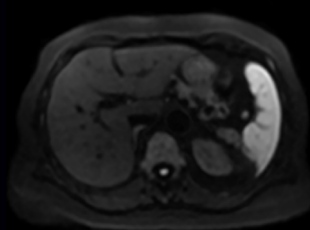
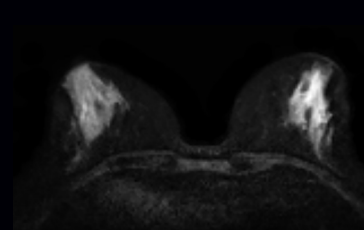**53% reduction**   **50% reduction**   **45% reduction**

**Turbo Suite
Excelerate with
Simultaneous
Multi-Slice and
Compressed
Sensing**

PD TSE SMS, PAT 2, SMS 2
0.4 x 0.4 x 3 mm[1]
TA 1:03 min
1aaaa1659
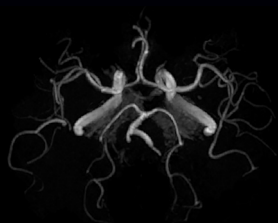
SMS DWI, PAT 2, SMS 2, b800
1.6 x 1.6 x 6.0 mm[1]
TA 1:35 min
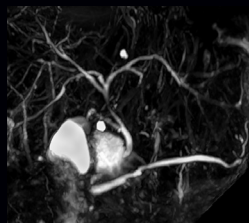*1aaaa1528*

SMS RESOLVE, SMS 2, b800
1.6 x 1.6 x 6.0 mm[1]
TA 2:58 min
1aaaa3233
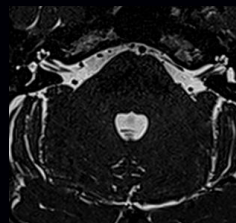
[1]*Subject to variability based on region specific requirements.*

3D TOF MIP
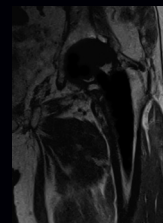**0.5 mm iso**
TA 6:40 min
1aaaa2930

T2 SPACE MIP, MRCP, PAT 3
0.5 x 0.5 x 1.0 mm[1]
TA 5:51 min
respiratory triggered
1aaaa2793

T2 SPACE, PAT 2
0.3 x 0.3 x 0.6 mm[1]
TA 5:13 min
1aaaa3016

SEMAC[2], PAT 3
0.9 x 0.9 x 3.0 mm[1]
TA 6:54 min
1aaaa2956

70% reduction   **96% reduction**   **55% reduction**   **56% reduction**

3D CS TOF Angio MIP
0.5 mm iso
TA 2:00 min
1aaaa2930

T2 SPACE MIP, MRCP, CS 23
0.5 x 0.5 x 1.7 mm[1]
TA 0:15 min
breath-hold
1aaaa2793
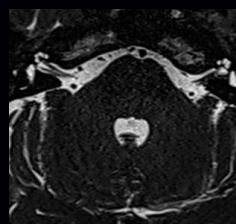
CS T2 SPACE, CS 6
0.3 x 0.3 x 0.6 mm[1]
TA 2:20 min
1aaaa3016
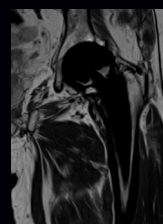
CS SEMAC[2], CS 8
0.9 x 0.9 x 3.0 mm[1]
TA 3:03 min
1aaaa2956

[1]*Subject to variability based on region specific requirements.*

[2]*The MRI restrictions (if any) of the metal implant must be considered prior to patient undergoing MRI exam. MR imaging of patients with metallic implants brings specific risks. However, certain implants are approved by the governing regulatory bodies to be MR conditionally safe. For such implants, the previously mentioned warning may not be applicable. Please contact the implant manufacturer for the specific conditional information. The conditions for MR safety are the responsibility of the implant manufacturer, not of Siemens Healthineers.*

Open Recon

Open Recon is a developer-friendly interface that facilitates the creation and deployment of innovative MR reconstruction algorithms. Open Recon unlocks the MR system for algorithms to be deployed by scientists, third party companies, and Siemens Healthineers. Different reconstruction algorithms can be executed in a container on the reconstruction system, exchanging data via a dedicated interface. With Open Recon, custom reconstruction algorithms can easily be run and adjusted, enabling seamless workflow. Open Recon also facilitates the sharing of algorithms across institutions relying on the ISMRM raw data format.

Highlights and benefits:

• Simplified reconstruction environment for scientists

• Convenient access to reconstruction parameters via dedicated "inline" card

• Facilitated scientific collaboration via the ISMRM raw-data format

• Possibility of MR reconstruction algorithms deployment for third parties and Siemens Healthineers
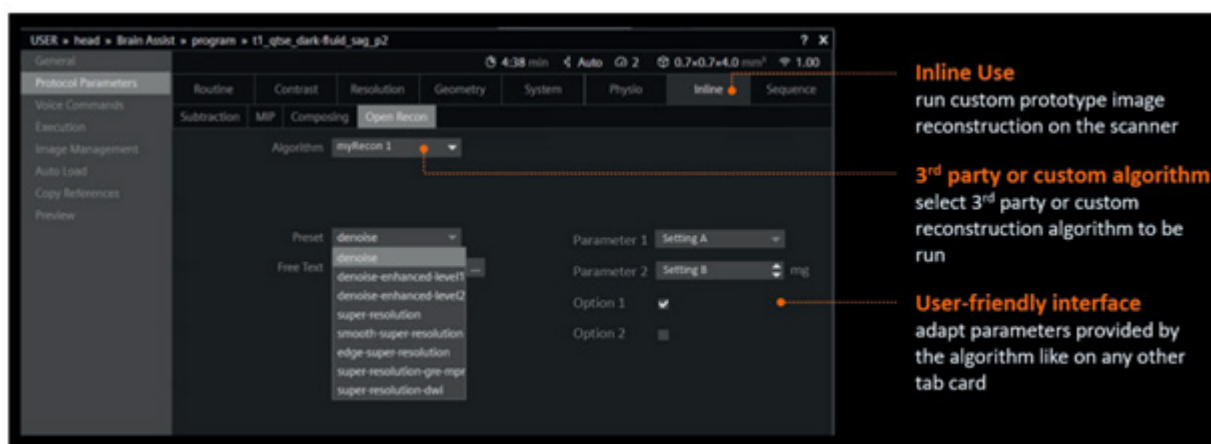
Improving the MRI patient experience – with comfort, speed, and entertainment

Most patients who undergo an MRI scan experience some level of anxiety. Help patients overcome anxiety by turning MRI into a comfortable, fast, and entertaining experience.

- **Calm patients with a relaxing atmosphere**
- **Create a patient comfort zone**
- **Ease patients' anxiety**

Bring patient experience solutions to life with augmented reality
Explore how our solutions improve the MRI patient experience with augmented reality (AR). Configure the solutions in your environment and display them in life size directly on your smart mobile device.

Calm patients with a relaxing atmosphere[1]
Patients arriving for an MRI examination are often anxious and stressed. Help them relax the minute they enter the room with our scanner MoodLight. You can also design a calming theme for your scan room using scanner skins, projections, or wall coverings.

Quiet Suite – Imaging is to be seen, not heard
Offer patients quiet examinations of the brain, spine, and large joints —without compromising image quality or scan time. Quiet Suite benefits your patients by providing a 99%[2] reduction in sound pressure for neurological and orthopedic MRI exams.

MAGNETOM Mini Scanner Mock-up[1]
Let patients see, hear, and feel an MRI scan with our MAGNETOM Mini Scanner Mock-up. The MAGNETOM Mini Scanner Mock-up comes with a sliding table top that can be manually moved in and out of the bore. The MAGNETOM Mini Scanner Mock-up also features two buttons that, when pressed, will play pre-recorded sounds of three different MRI sequences.

[1]Optional
[2]Data on file.

MRI Life Design

Short installation time
Thanks to its compact system design, MAGNETOM Altea has a typical installation time of less than 10 working days, helping reduce costs from the very start.

Small footprint
Minimum total space requirement: ~300 ft^2 for magnet, electronics, and console room. The system complies with the standard ceiling height of 94.5 in. An integrated water cooling cabinet eliminates the need for dedicated cooling of the entire equipment room.

Zero Helium boil-off magnet technology
During operation, the magnet windings must be cooled below their critical temperature using liquid helium. Equipped with Zero Helium boil-off technology, MAGNETOM Altea requires no helium refill in normal use. Depending on the frequency and type of applications used, overall savings of up to 1,300 liters of liquid helium are possible[1].

Product take back
Most of the materials used to produce MAGNETOM Altea are recyclable. 92% (by weight) can be recycled for material content and 8% for energy. We refurbish systems and reuse components and replacement parts whenever possible through our Refurbished Systems business.

Power-saving technology
Intelligent technology for higher energy efficiency: optimized sequences for less gradient switching, and self-adapting components, that switch off automatically when not needed.

System start timer
Timer clock that can be installed together with the MAGNETOM Altea to start the system automatically at user-definable times, eliminating waiting times during system boot up. It allows the definition of three different startup times for different days.[3]

Advance. Now Evolve
The Advance.Now Evolve when included in a service agreement, elevates your imaging solutions to the head of the pack. Get the latest versions of your equipment's software as it becomes available—as well as systematic hardware upgrades—so your imaging systems remain state-of-the-art for years to come.

[1]*Data on file.*
[2]*Source: https://www.bloomberg.com/news/articles/2013-01-31/helium-rises-to-highest-since-1995-in-fallout-from-shale-boom.*
[3]*University Hospital Freiburg, Germany. The statements by Siemens Healthineers customers 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 was provided by a person who or whose institution is engaged in a collaboration with Siemens Healthineers.*

Siemens Healthineers pioneers breakthroughs in healthcare. For everyone. Everywhere. Sustainably. The company is a global provider of healthcare equipment, solutions and services, with activities in more than 180 countries and direct representation in more than 70. The group comprises Siemens Healthineers AG, listed as SHL in Frankfurt, Germany, and its subsidiaries. As a leading medical technology company, Siemens Healthineers is committed to improving access to healthcare for underserved communities worldwide and is striving to overcome the most threatening diseases. The company is principally active in the areas of imaging, diagnostics, cancer care and minimally invasive therapies, augmented by digital technology and artificial intelligence. In fiscal 2024, which ended on September 30, 2024, Siemens Healthineers had approximately 73,000 employees worldwide and generated revenue of around €22.4 billion.

Further information is available at www.siemens-healthineers.com.

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.

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 Healthineers sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

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.

Siemens Healthineers reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. For the most current information, please contact your local sales representative from Siemens Healthineers.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

Siemens Healthineers Headquarters
Siemens Healthineers AG
Siemensstr. 3
91301 Forchheim, Germany
siemens-healthineers.com

USA
Siemens Medical Solutions USA, Inc.
Healthcare
40 Liberty Boulevard
Malvern, PA 19355-9998, USA
siemens-healthineers.us