FUJIFILM
Value from Innovation

AIRIS Vento

Advanced Open MRI

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Open Your Vision,
Make a Smart Choice.

AIRIS Vento has been created to offer a complete MRI solution around a flexible design concept for limited spaces, whilst also achieving excellent image quality, ease of operation and patient comfort. With AIRIS Vento's truly open design, we are leading the way in open MRI.

Operation

Efficient Operation

One of the important challenges in MRI is improving throughput. Ease of operation together with image sharing capabilities enhance workflow and support efficient and reliable diagnosis.

Technology

High-precision Imaging

One of the most significant factors required for high definition imaging relies on the performance of the magnetic circuitry. Our magnetic circuit technology and unique diagnostic function enables imaging of body regions that can frequently be challenging in conventional MRI systems.

Design

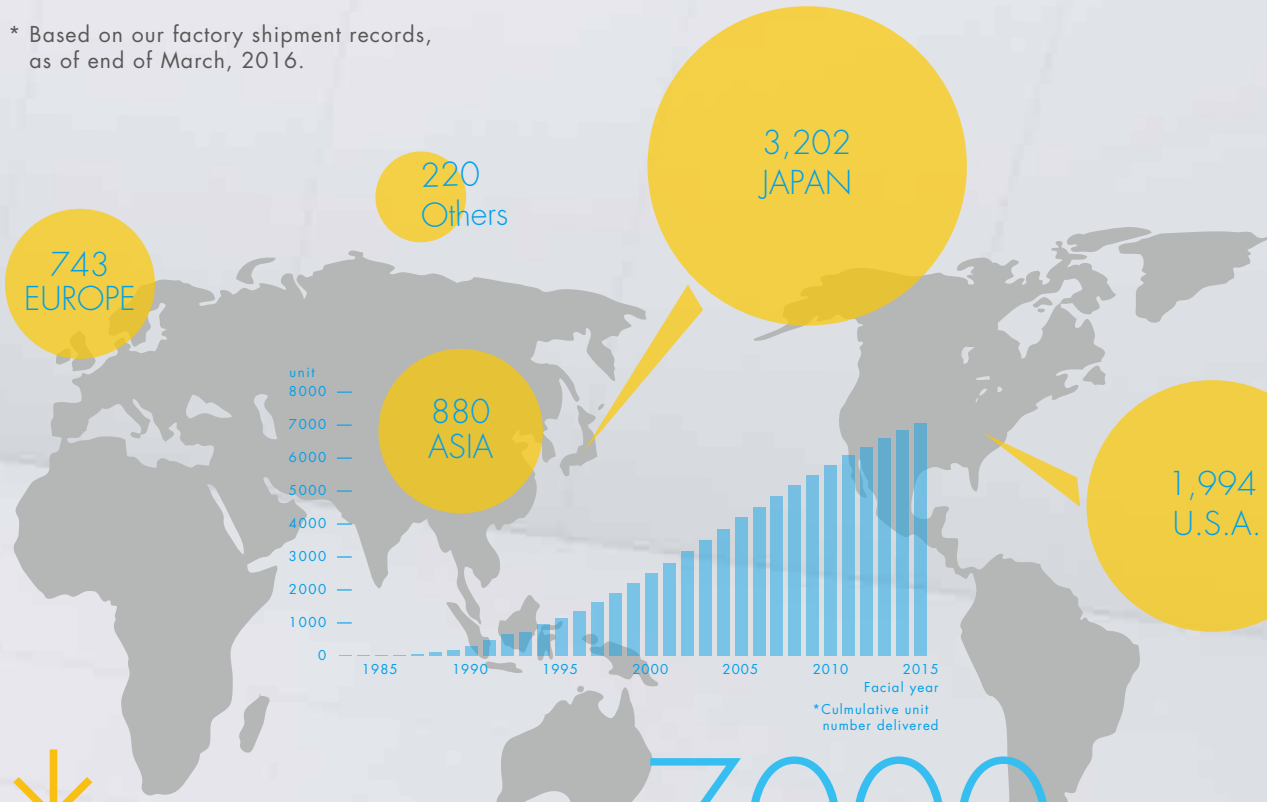
Designed for Comfort

MRI examinations are known to be time consuming and easily affected by motion artefacts. To acquire high-quality images, a comfortable and relaxed examination environment is essential. The wide open gantry and compact gantry design of AIRIS Vento reduces anxiety and provides patients with a high degree of comfort during MR exams.

WHY CHOOSE US?

For more than 30 years, we have been leading the way in open MRI.
With more than 7,000 MRI systems delivered worldwide*,
we are at the forefront of Open MRI technology

* Based on our factory shipment records,
as of end of March, 2016.



Reason 1

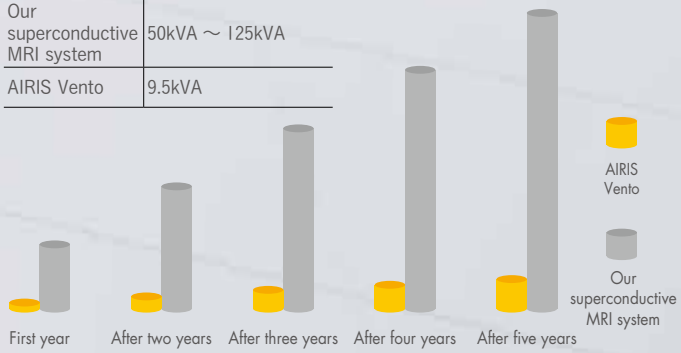
Over 7000 Units*

Making MRI affordable

Low running costs together with an attractive initial investment accelerate your MRI business and offer an excellent return on investment

In permanent magnet Open MRI technology, the magnetic field remains strong over the years with barely any change. Unlike superconductive MRI, there is no need for additional equipment and infrastructure in order to maintain the magnetic field, thereby keeping the costs low.
A low capacity power supply means the initial power system cost can be kept low, and lowering energy consumption reduces monthly running costs too.
The AIRIS Vento does not require a cooling system negating the need for a complex and costly infrastructure and the installation area can be minimized as a result.

System	Power supply capacity
Our superconductive MRI system	50kVA ~ 125kVA
AIRIS Vento	9.5kVA



[Cumulative cost over five years / refers to electricity cost for main unit only]

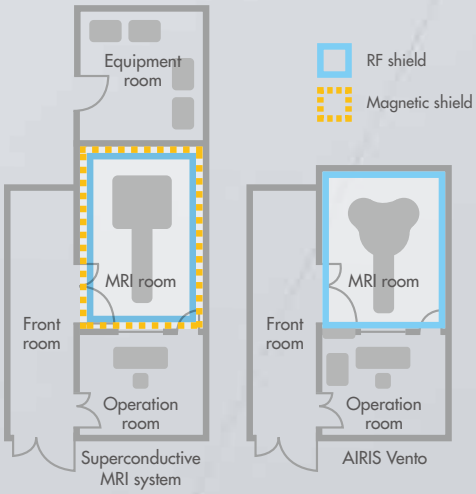
* The above graph is an example. The figures may vary according to system specifications and operating conditions.

Reason2

Ease of Installation

Reduced construction costs with easy siting

MRI installation usually includes two types of shielding: RF shielding to block any high frequency noise from the outside and magnetic shielding to suppress leakage of the magnetic field from the inside. However, a permanent magnet MRI system generally does not require any specific magnetic shielding, so the cost of construction is reduced.
Removing many of the construction processes usually associated with superconductive systems, results in faster and easier installation ensuring your Open MRI is up and running in a shorter timeframe.



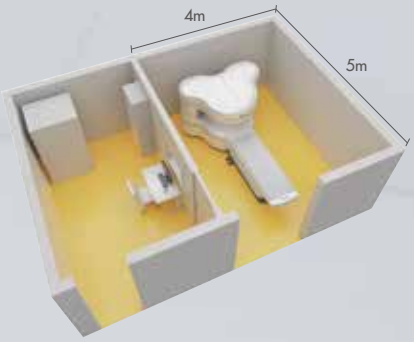
* Shielding is required for all planes, including ceiling and floor surface.

Reason3

Small Footprint

AIRIS Vento's compact design significantly reduces the space required for installation

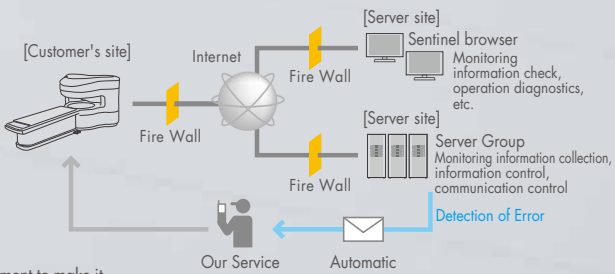
AIRIS Vento consists of three main units: the gantry, console and power supply system; fewer than its superconductive counterpart. The magnetic field leakage is also kept low, and in turn, the imaging room can be small. As an equipment room is unnecessary, the overall footprint is reduced and the space saved can be used for other purposes.



* The area for standard layout of scan room is 5 m x 4 m.
* Actual layout will vary according to installed environment.

Sentinel Customer Support

This ensures that your system is kept running smoothly and efficiently through round the clock monitoring. It provides proactive first class reliability for stability and maintenance.



System status screen

* Users are required to set up their network environment to make it compatible with Sentinel.
The level of service may vary depending on the contractual coverage.

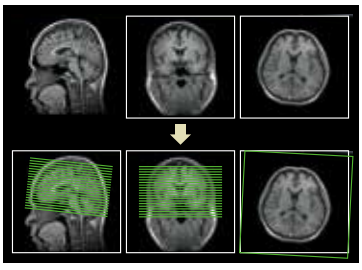
Enhanced operability to support efficient and reliable diagnosis, including ease of operation and image sharing.

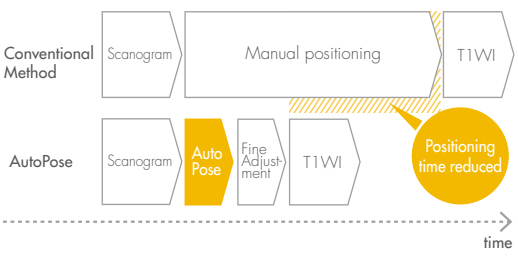
Operation made more efficient

AutoPose*[1]

Supports correct image cross-section settings and reduces strain on the operator

AutoPose is a function that supports slice line parameters. This function allows faster set-up of the OM or AC-PC lines used in head examinations and reduces strain on the operator. Prior settings such as teach/register and 3D data acquisition are not required.





Unified, eye-friendly colour to minimize eye strain

A user interface that is easy to understand and operate

A soft celadon-based colour set, has been adopted for the GUI (Graphical User Interface). MRI imaging parameters that can be complex are more easily displayed on the Windows-based wide screen.

Customization of protocols

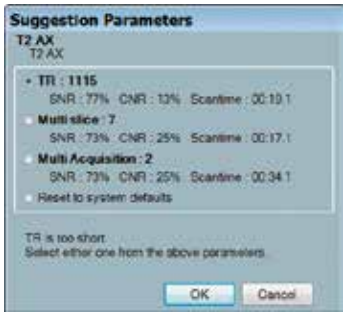
Supports efficient registration and alteration of protocols

Routine protocols can be easily registered and changed by the operator, even during the examination to optimize the settings according to the patient and clinical requirements.

User Interface (UI) suggestions

Supports alteration of imaging parameters

This function provides guidance for parameter settings. During protocol change, several options are displayed to allow the operator to select the parameter most appropriate for that particular scenario.



Curved MPR

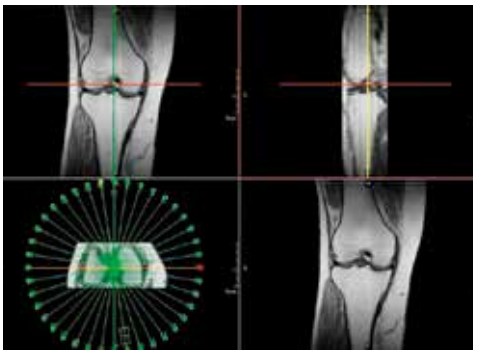
Reconstruction capability of various cross-sectional images from the 3D images

Arbitrary curved cross-sections can be reconstructed using data acquired through imaging. In addition, multiple curved-sections can be reconstructed simultaneously.

Radial MPR

Offers simultaneous image reconstruction of multiple cross-sections

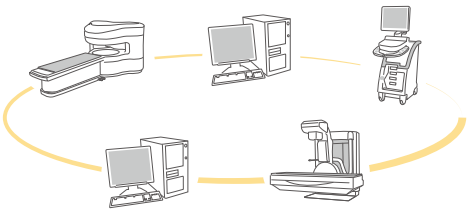
Radial MPR images are created which can be useful when diagnosing complex structural tissue such as within the knee joint.



DICOM Function

Offers various interfaces

The DICOM interface is included as standard in the AIRIS Vento which adapts to the hospital's current networks and which will continue to evolve and upgrade over time. DICOM MWM*1, SWF*1, and PIR*1 functions are also supported.



IHE PDI Function*1

Extensive coordination for compatibility with the hospital's in-house and external network systems

Support for the IHE PDI*1 standard is provided to enable various data exchanges, such as image zoom and rotation display, with other systems supporting the PDI standard. Ability to write DICOM data and simple browser software*2 to a CD-R are also included.

*1 Optional. *2 Cannot be used for diagnostic purposes.

RADAR*

Motion reduction capability

RADAR uses radial scan technology to mitigate motion artefact caused by a patient's body movement due to voluntary or involuntary motion. Available with T2WI but also T1WI and FLAIR imaging in any plane and any body region including the head and shoulder joint, which are susceptible to respiration movements and the cervical spine that can be affected by swallowing movements. RADAR can help reduce repeat scans and improve image quality.

VASC-ASL*

Offers non-contrast MR angiography technique

VASC-ASL is a non-contrast MRA imaging function that uses 3D BASG (Balanced SARGE) to visualize the blood flow labelled with IR pulses. This function is used to produce images of portal veins, renal arteries, and upper and lower extremity arteries.

3D-GEIR*

Acquire high contrast, 3D, high spatial resolution images

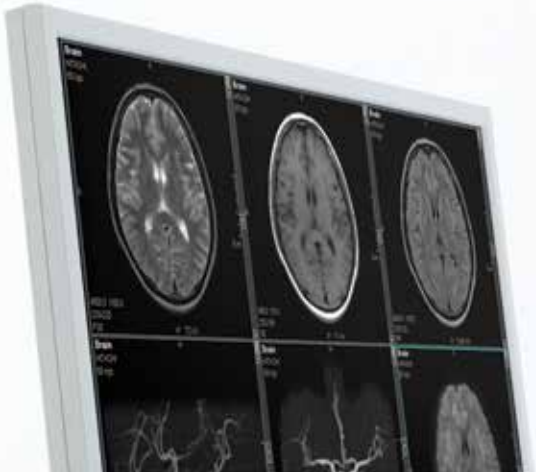
This function offers high-speed T1WI imaging through Gradient Echo with IR pulse. This allows high contrast, 3D, high spatial resolution images to be acquired. This function can be used for measurement of volume data when imaging the head.

VR (Volume Rendering) Function*

Supports diagnosis of complex vascular structures

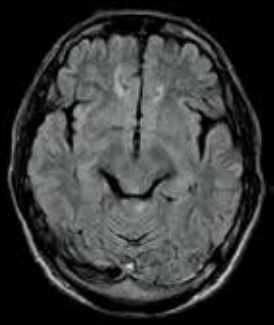
Volume rendering, a reconstruction method, can be created on the console. The blood flow movement can be determined stereoscopically compared to MIP, providing support to diagnosis of regions with complex vascular structures such as the head.

Our technology group know-how improving image quality

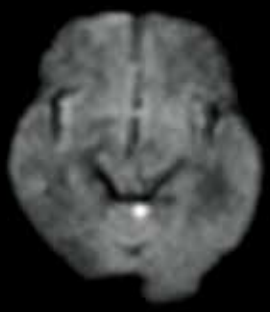


*Option

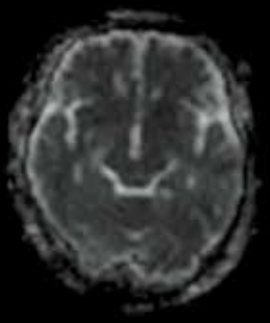
[Acute Cerebral Infarction]



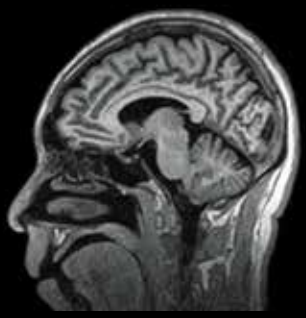
FLAIR



DWI



ADC map

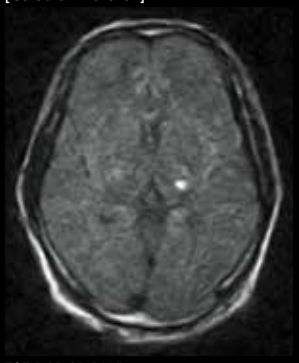


3D-GEIR

[Left Middle Cerebral Aneurysm]

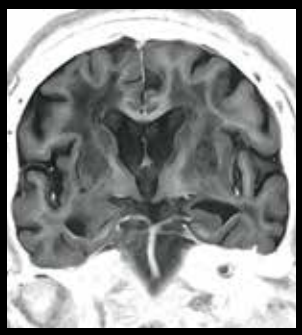
3D-TOF VR image

[Cerebral Infarction]



FSE-RADAR DWI

[Hippocampus/Vertebral Basilar Artery]

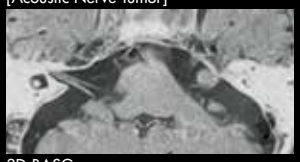


STIR

[Orbital Tumour]

FatSep-T1WI

[Acoustic Nerve Tumor]

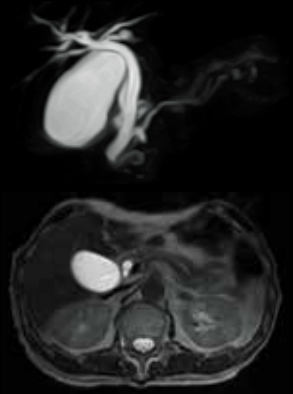


3D-BASG

[Subclavian/Carotid/Common Iliac/Popliteal/Pulse-gated MRA MIP image]

3D-VASC-ASL (Non-Subtraction technique)

[Main Pancreatic Duct IPMN]

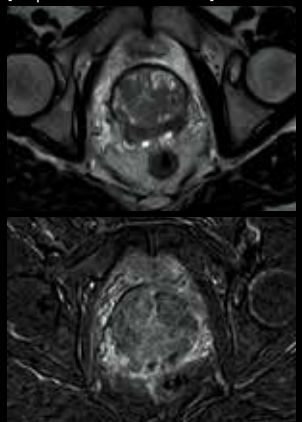


(Above) MRCP Respiratory-gated MIP image
(Below) Respiratory-gated T2WI

[Ureteral Calculus]

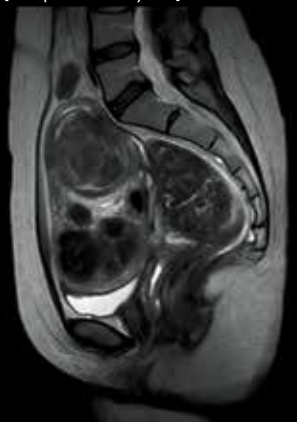
3D-Urography Respiratory-gated MIP image

[Suspicion of Prostate Cancer]



(Above) T2WI (Below) Subtraction image

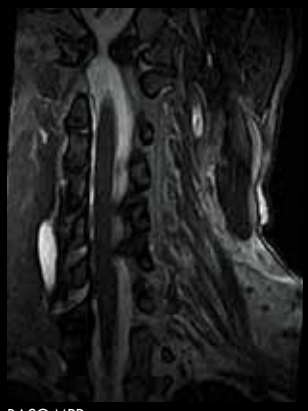
[Multiple Uterine Myoma]



T2WI

[Disc Herniation]

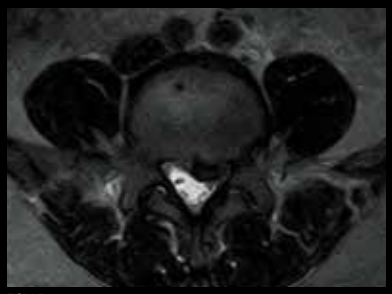
T2WI



BASG MPR

[Disc Herniation]

T2WI

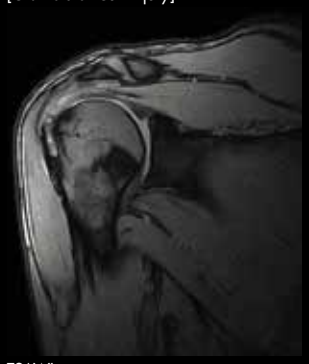


T2WI

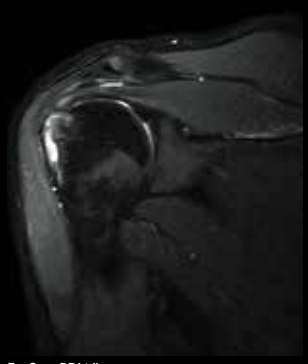
[Left Incides Soft Tissue Tumor]

(Above) T1WI (Below) T2*WI

[Old Rotator Cuff Injury]

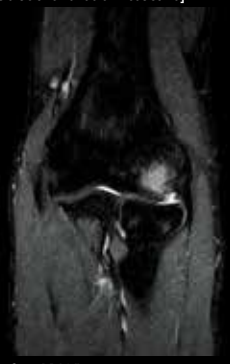


T2*WI



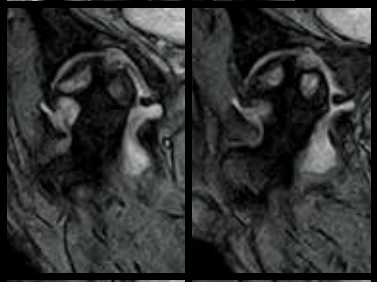
FatSep-PDWI

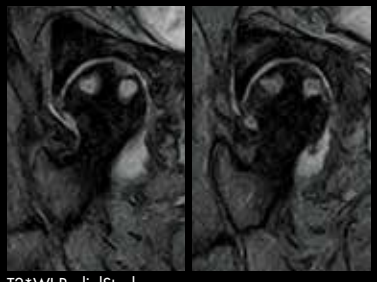
[Osteochondrosis Dissecans]



FatSep-PDWI

[Alcoholic Osteonecrosis]





T2*WI RadialStack

[3D Neurography]

FatSep-T2*WI MIP image

[ACL Tear/Meniscus Injury]

T2*WI

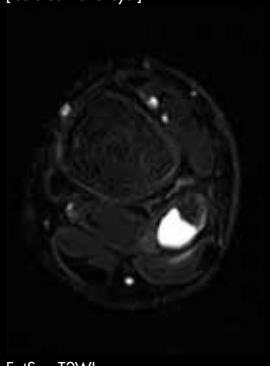
[High Resolution image]

T2WI

[Calcaneal Fracture]

T2*WI

[Isolated Bone Cyst]



FatSep-T2WI

[Metatarsal Stress Fracture]

T2*WI

Strengthening Technological Capabilities

Our unique magnetic circuit technology with diagnostic function which enables sharper, higher definition imaging of challenging body regions and applications.

SuperShim

Reduces magnetic field non-uniformity which cannot be corrected with primary shimming

SuperShim is a technology that increases the uniformity of the static field, which is of paramount importance in MRI. Non-uniformity in the magnetic field cannot be fully corrected with first order shimming which performs linear correction. SuperShim is provided to reduce non-uniformity in the magnetic field by enabling high order shimming.

FatSep Function

Provides fat suppression imaging with high SNR

The FatSep (fat water separation) function enables imaging of different TE to acquire in-phase and out-of-phase images simultaneously. The two types of images are added to form fat suppressed images. Through this additional process, FatSep provides fat suppressed images with a good SN ratio and clarity. It can also provide a Fat image through a subtraction process.

High Reconstruction Imaging

Supports high-definition imaging

This function enables high spatial resolution imaging which result in higher definition images of joint regions required for orthopedic areas. An image reconstruction matrix of 2048 x 2048 is achieved through the high-speed imaging processor.

High Sensitivity Receiver Coils

Especially effective for images with a small FOV and high spatial resolution

Regions that require a small FOV and high spatial resolution as in orthopedics need higher sensitivity receiver coils. The solenoid coil adopted in the AIRIS Vento delivers this high sensitivity. The small diameter coil is tailored to fit the body and the target region easily positioned to the centre of the coil where sensitivity is at the highest. This is optimal for acquiring images of regions that require a small FOV together with high spatial resolution, as in orthopedics.

Open design–
Patient Comfort

AIRIS Vento offers an expansive, panoramic open aspect designed to reduce patient anxiety and provide a comfortable examination environment.

Floating Table

Designed for comfort, accessibility and isocentric imaging

The lateral slide function allows the floating table to move right and left inside the gantry and the target region can be positioned easily in the centre of the magnetic field. The table can be lowered to a minimum height of 490 mm, allowing easier accessibility for children and elderly patients. The 700 mm wide table top offers patients both comfort and a 'feel-good' factor, helping to reduce claustrophobia.

Lateral Slide

Enables high-definition imaging even in off-centered regions

In MRI, traditionally the highest definition in imaging can be obtained at the centre of the gantry. This is due to the high uniformity of the static field and RF radiation strength, along with the high linearity of the gradient magnetic field. AIRIS Vento's table can be moved laterally (right and left) inside the gantry. Therefore, any region that is out of the midline (shoulder, knee, etc.) can be centralized to the magnetic field.

AIRIS Vento's wide open design offers extraordinary comfort within calm, scanning atmosphere for a patient friendly experience, relieving anxiety and reducing feelings of claustrophobia. Friends or relatives can accompany the patient offering reassurance throughout the scan.

Footswitch

Allowing the operator to focus on the patient

The adopted footswitch enables hands-free control of the table in the vertical and horizontal direction, allowing the operator to focus on patient care.

AIRIS Vento

Advanced Open MRI

FUJIFILM

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