i_Vision 1.5T

Helium Free Superconductive MRI

Precision & Vision

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FREE-cool

FREE-cool cryogenic conduction platform

The cryogenic conduction platform and powerful low temperature equalization processing technology make the magnet cooling below -269℃ without liquid helium, and allow the system to work stably.

Fast

High-efficiency cryogenic media

The temperature conduction difference is reduced to achieve rapid conduction between the cold head and the magnet. The low temperature environment required by the magnet can be realized quickly.

Stable

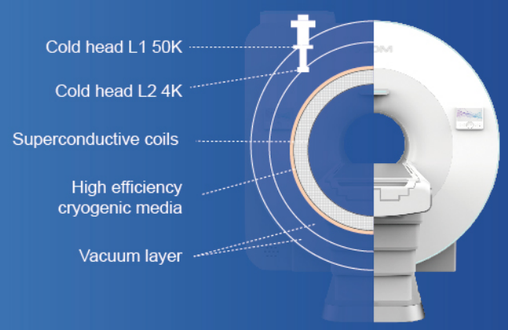
Vacuum insulation technology

Carbon fiber suspension technology is used to form a highly efficient shield to reduce heat exchange between inside and outside of magnet, and maintain a uniformed low temperature.

Uniform

Cryogenic conduction network design

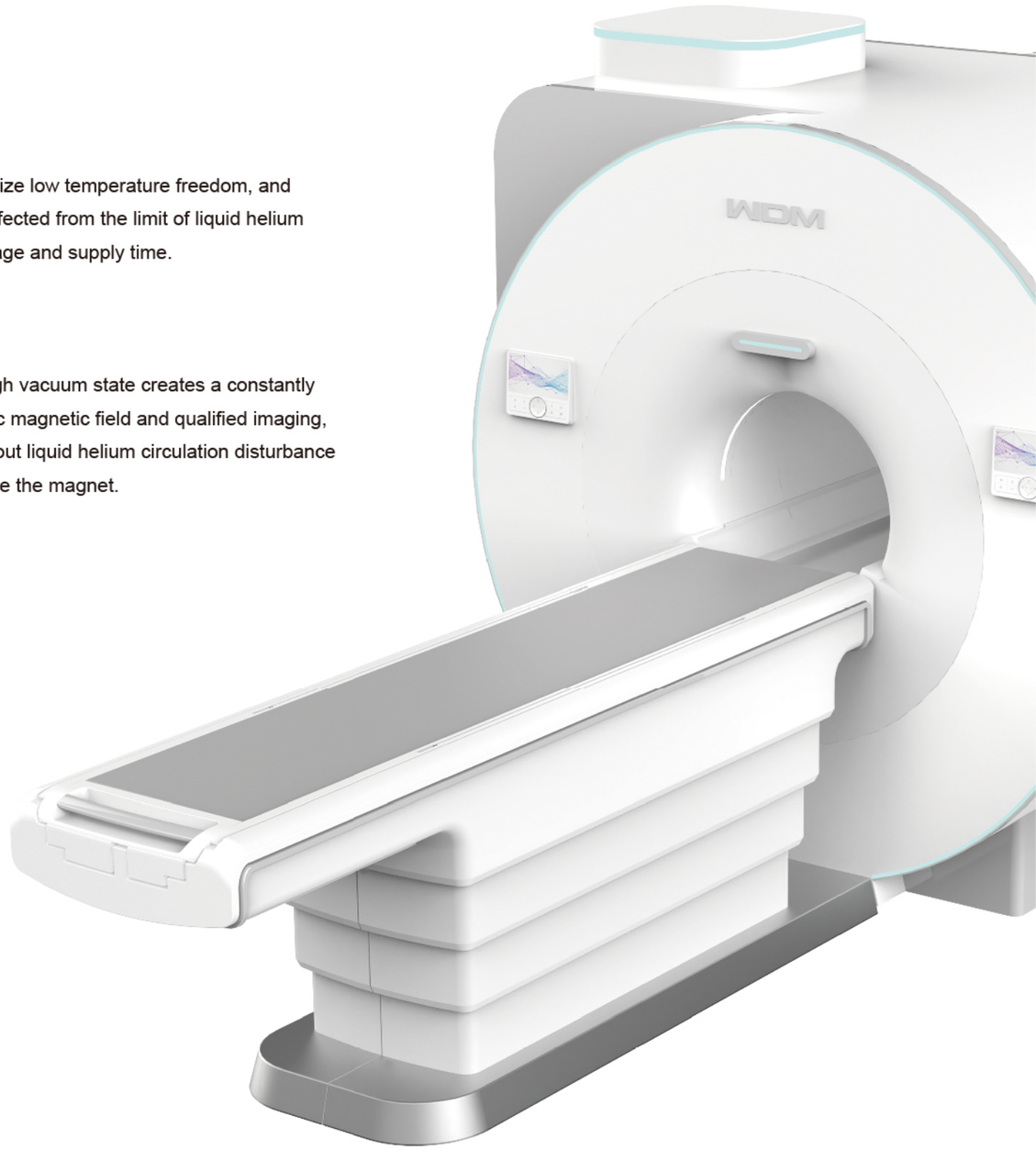
An efficient conduction path formed from the cold head to the magnet regardless of the conduction distance, provides a uniform, stable and consistent low temperature to different locations of the magnet.



Liquid - free helium conduction cooling technique

Realize low temperature freedom, and unaffected from the limit of liquid helium storage and supply time.

A high vacuum state creates a constantly static magnetic field and qualified imaging, without liquid helium circulation disturbance inside the magnet.



Low Cost

No loss of liquid helium, reducing the operating cost within the life cycle.
No worry about the loss of shutdown, can be quickly recovered from quench.
No need for a quench pipe, reducing site installation conditions.
Fast field ramp down in case of accident avoiding huge economic loss.
No loss of liquid helium from the magnets during transport.

Security

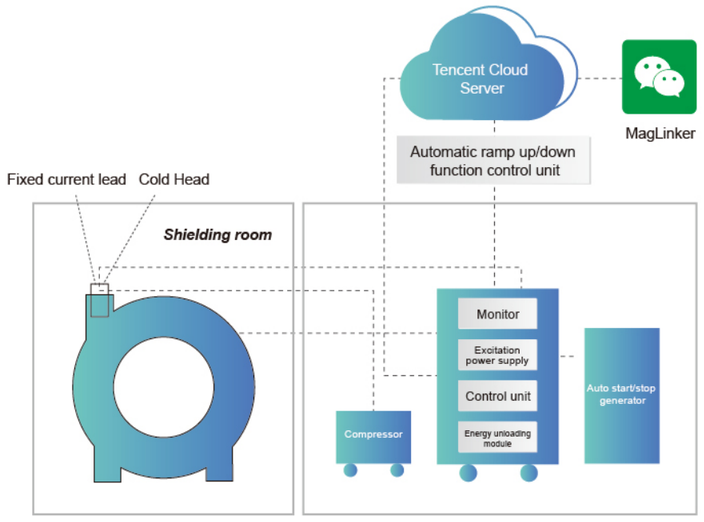
No risk of explosion since no longer a high-pressure vessel.
No risk of asphyxiation due to liquid helium leakage.
No serious consequences caused by power, refrigeration and water cooling malfunctions.

Intelligent

The COOL-mate intelligent control system integrates remote alarm, status query, automatic field ramp up/down function, and frees you from anxiety of quench.

MagLinker cloud-based interconnection technology

Automatically alarm for magnet abnormal conditions, user can inquire magnet status.



COOL-mate intelligent control system

Automatic ramp up/down function

When the power failure or refrigeration equipment failure exceeds 30 minutes, the magnetic field will be ramped down automatically and ramped up once the power restored.

Automatic recovery function

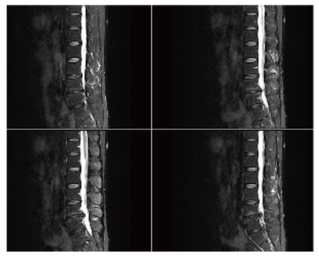
The magnet can recover automatically within 3 days after quench occurs.

Intelligent emergency generator

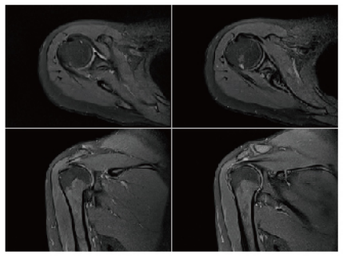
The intelligent power supply can be started immediately to ensure normal operation in case of accidental power failure.

High uniformity magnet

With high-performance superconducting magnet and sub second intelligent shimming technology, it can quickly complete high-precision shimming in any area and any part, which ensures that the magnetic field homogeneity within the range of 45cm sphere is less than 1ppm, which brings large FOV and excellent fat saturation effect in the off-center imaging.



Lumbar spine fat-suppression image

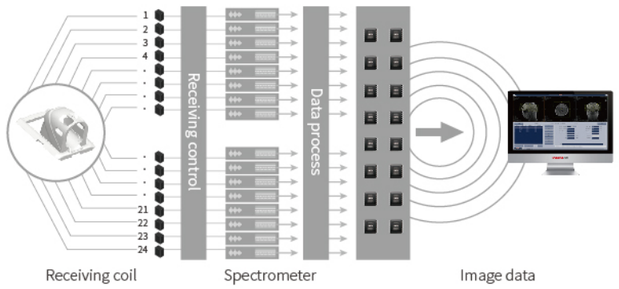


Shoulder fat-suppression image

16/24/32 channel RF platform

The i_Vision 1.5T series adopts spectrometer of 16/24/32 channel with independently corresponding coils to achieve 1:1 channel transmission from system to coil, and to achieve fast scanning of all parts of the body combining with Power sense fast imaging technology.

Through reasonable coil design, more channels are used for each part examination.

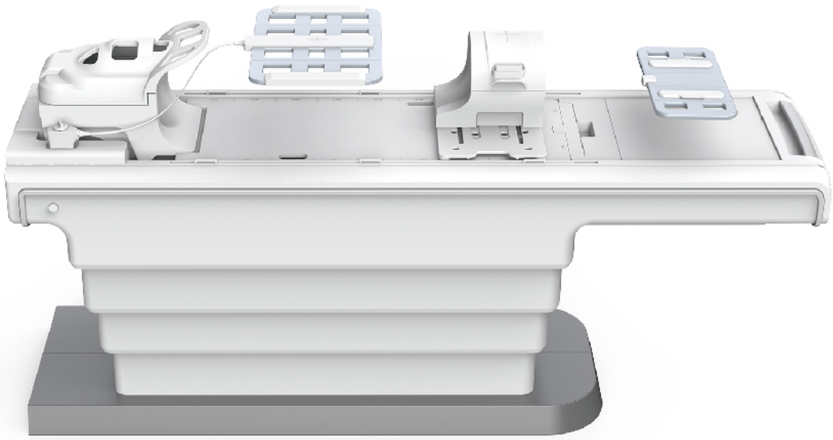


Receiving coil　　Spectrometer　　Image data

Integrated coils

Highly integrated with the MRI system, the integrated coils can perform high-quality and wide range combined imaging. When performing multi-parts examination, there is no need to replace the coil one by one and move the patient repeatedly, which shortens scanning time and improves the efficiency.

Wide range combined imaging　　Free coil combination　　No patient re-positioning　　Reduced examination time



Integrated coils

Head neck combined coil

Flexible abdomen coil

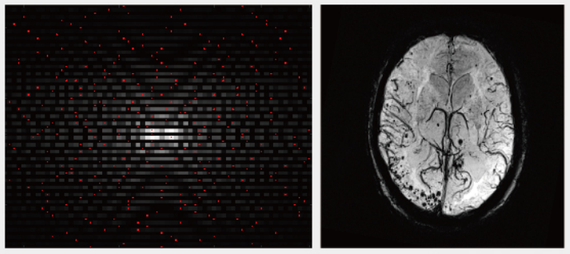
Knee coil

Flexible multi-function coil

Embedded flat coil

Power sense fast imaging system

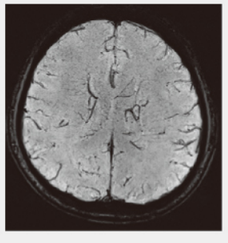
Integrating traditional “Sense” and AI-based compressed Sense, the “Power Sense” fast imaging technology, optimizes the acquisition mode, and improves the scanning speed almost without sacrificing image quality.



The left picture is K-space data, the red dots represent the collected points

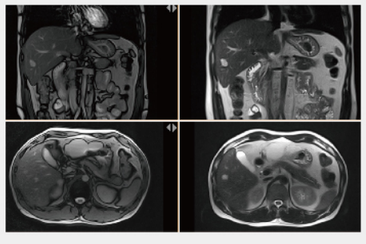
Power sense acceleration technology is used to collect only a few points in a short time, and complete a high resolution image.

Brain SWI Power sense



Acceleration factor：6
Scan time：3mins

Abdominal imaging Power sense



One time breath hold

i-Smooth
Mute acquisition technology

The i_Smooth technology is integrated to reduce the system noise in all directions and sequences, taking into account of both high-quality imaging and better experience.

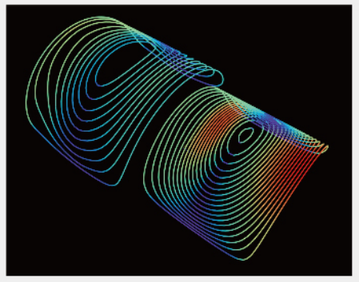
All-round silence

Noise reduction

Noise reduction with high quality imaging

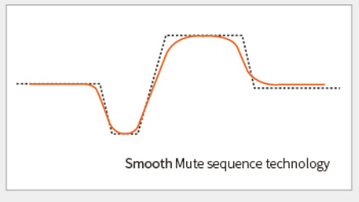
Mute gradient technology

The gradient coil is designed with thrust balance optimization technology to reduce the Lorentz force between the gradient field and the main magnetic field, and effectively minimize the vibration caused by gradient switching.



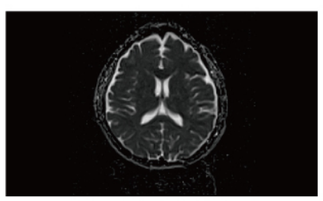
Mute sequence technology

i_Smooth technology will intelligently superimpose the gradient field, reduce the slew rate and smooth the gradient waveform to further improve denoising, almost without influence to the image quality and scanning time.

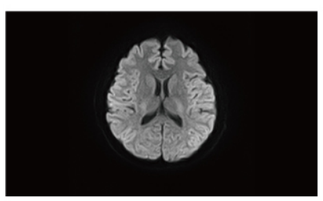


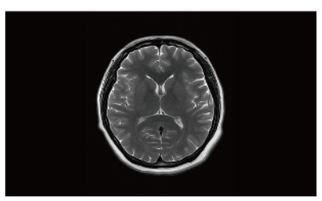
Gradient waveform smoothing, reduced sound sharpness

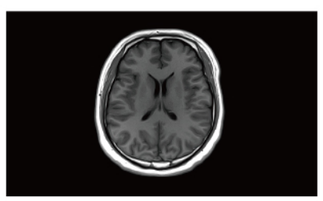
Clinical Images

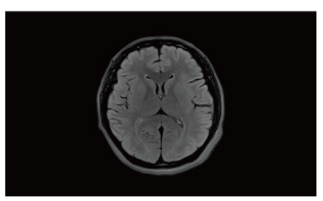

Brain ADC

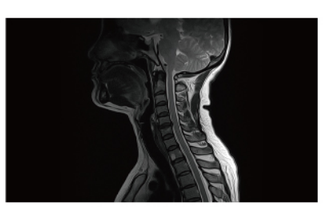

Brain MRA

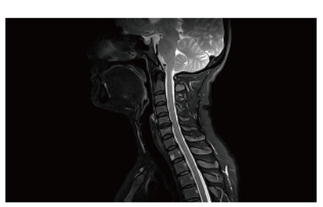

Brain DWI (B=1000)

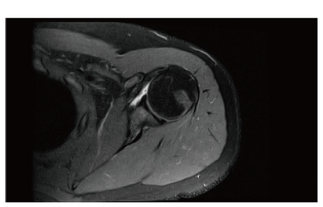

Brain T2

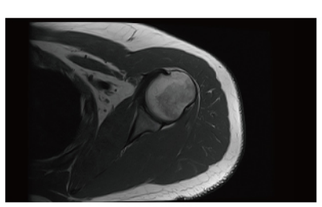

Brain TI FLAIR

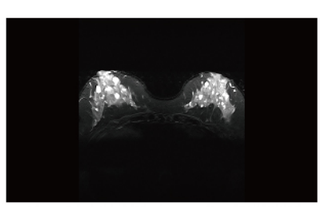

Brain T2 FLAIR

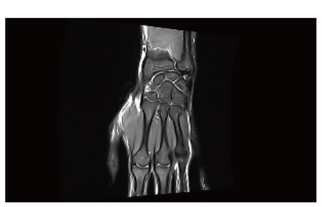

Cervical Spine T2

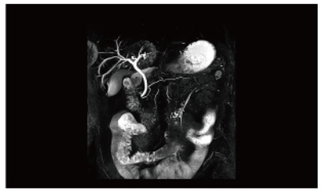

Cervical Spine T2 Fat Suppression (DIXON)

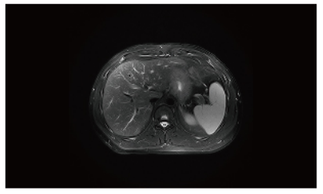

Shoulder PD Fat Saturation

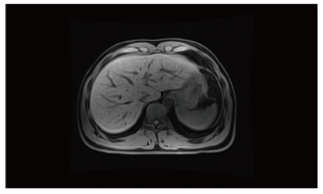

Shoulder T1

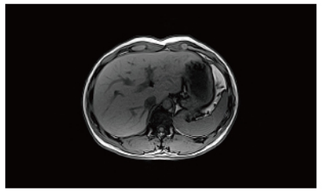

Breast T2 Fat Suppression (DIXON)

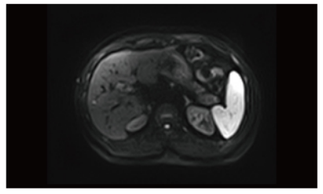

Wrist Fat Saturation

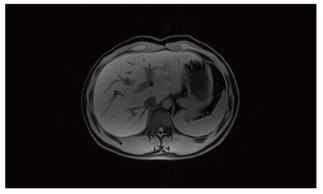

Abdominal MRCP

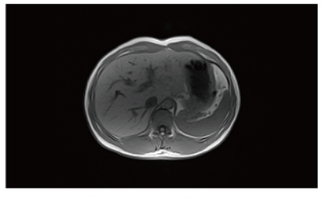

Abdominal T2 Fat Saturation

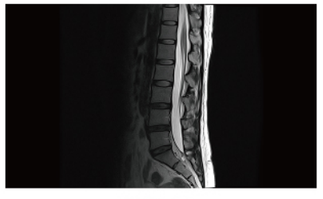

Abdominal Dynamic Enhancement (Masking)


Abdominal Out-phase

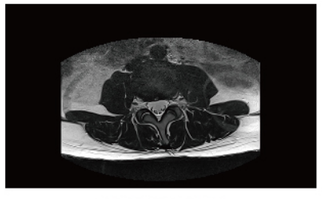

Abdominal DWI (B=800)

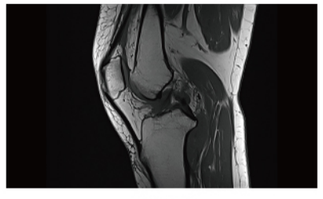

Abdominal Dixon (Water image)

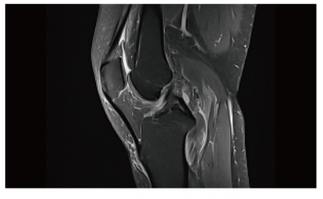

Abdominal In-phase


Lumbar T2

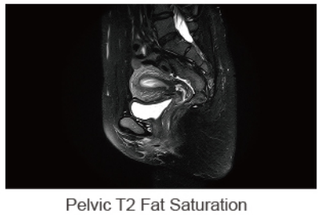

Lumbar T2 Fat Suppression (DIXON)

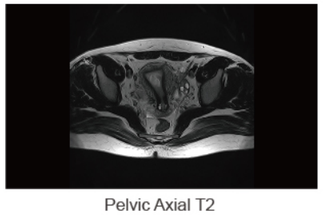

Lumbar Axial T2

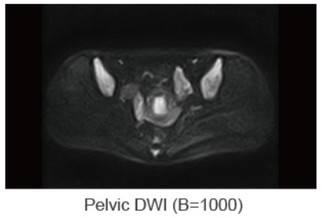

Knee T1


Knee PD Fat Saturation

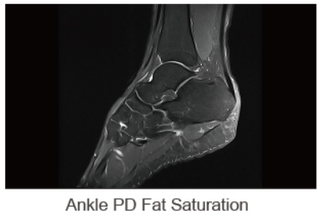

Pelvic Sagittal T2


Pelvic T2 Fat Saturation


Pelvic Axial T2


Pelvic DWI (B=1000)


Ankle T1


Ankle PD Fat Saturation