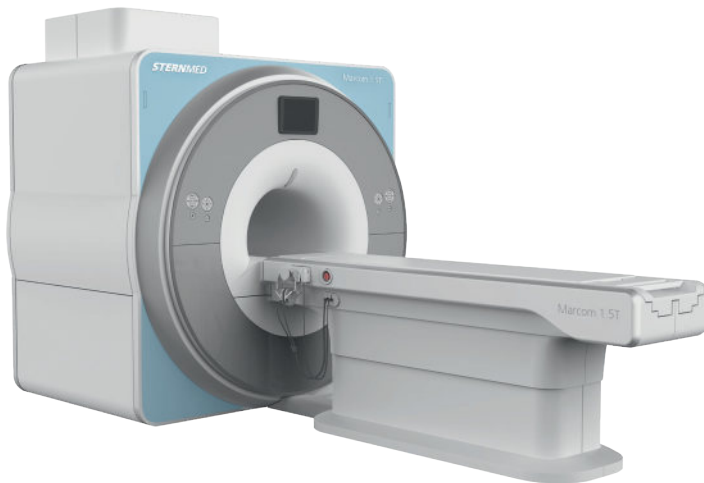


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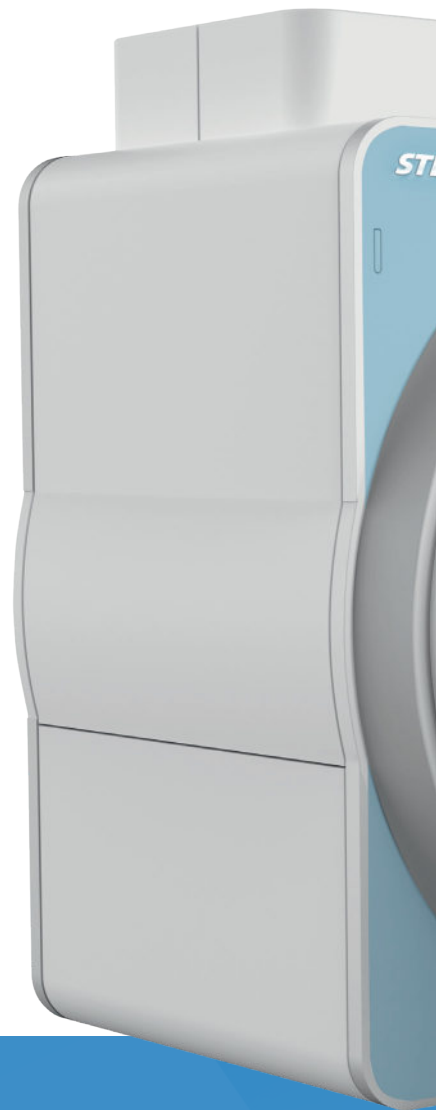
Marcom 1.5T

Superconductive MRI scanner



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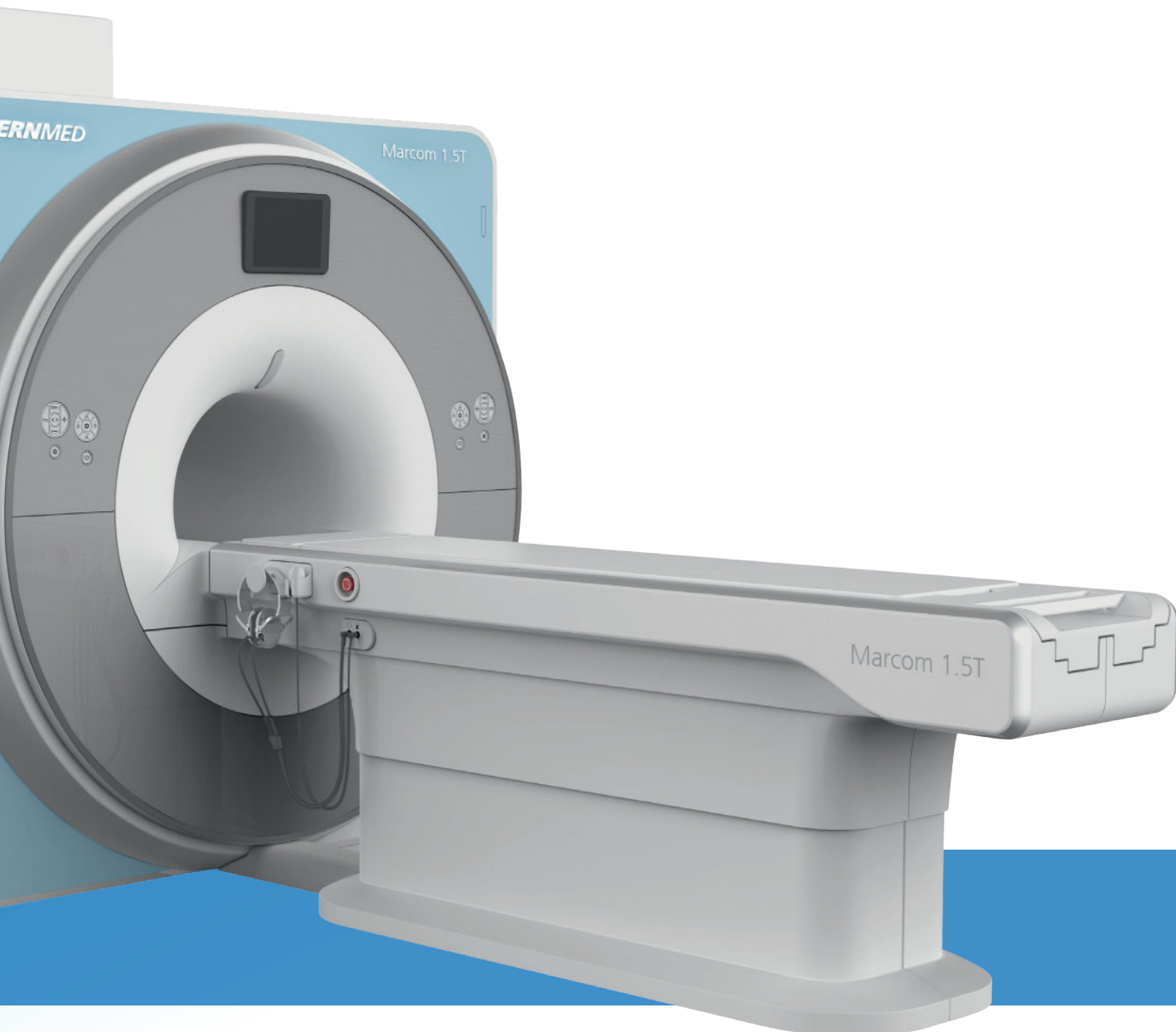


Marcom 1.5T

Superconductive MRI scanner

Marcom 1.5T is a new generation superconducting MRI scanner with 1.5 Tesla field strength applicable to whole body scan, such as, nervous system, spine, joint soft tissue, pelvic and abdominal cavity, etc.





Technical Advantages

Marcom 1.5T has a lot of technical advantages, short cavity magnet with zero helium consumption, fully digitalized multi-channel spectrometer, high efficiency gradient system; Multi-channel RF receiving coils with intelligent identification, High resolution conventional clinical images and practical advanced functional imaging are few of them.

Excellent outcome

The Short cavity magnet create the most comfortability for the patients, on the other hand the high resolution images with thin slices incredibly improved the diagnosis and created the most excellent outcome

Fast Scan Speed

Thanks to the super fast scan speed combined with user friendly operation with whole body phased array coil which improved the work flow efficiency of Marcom 1.5T.

Upgrade packages

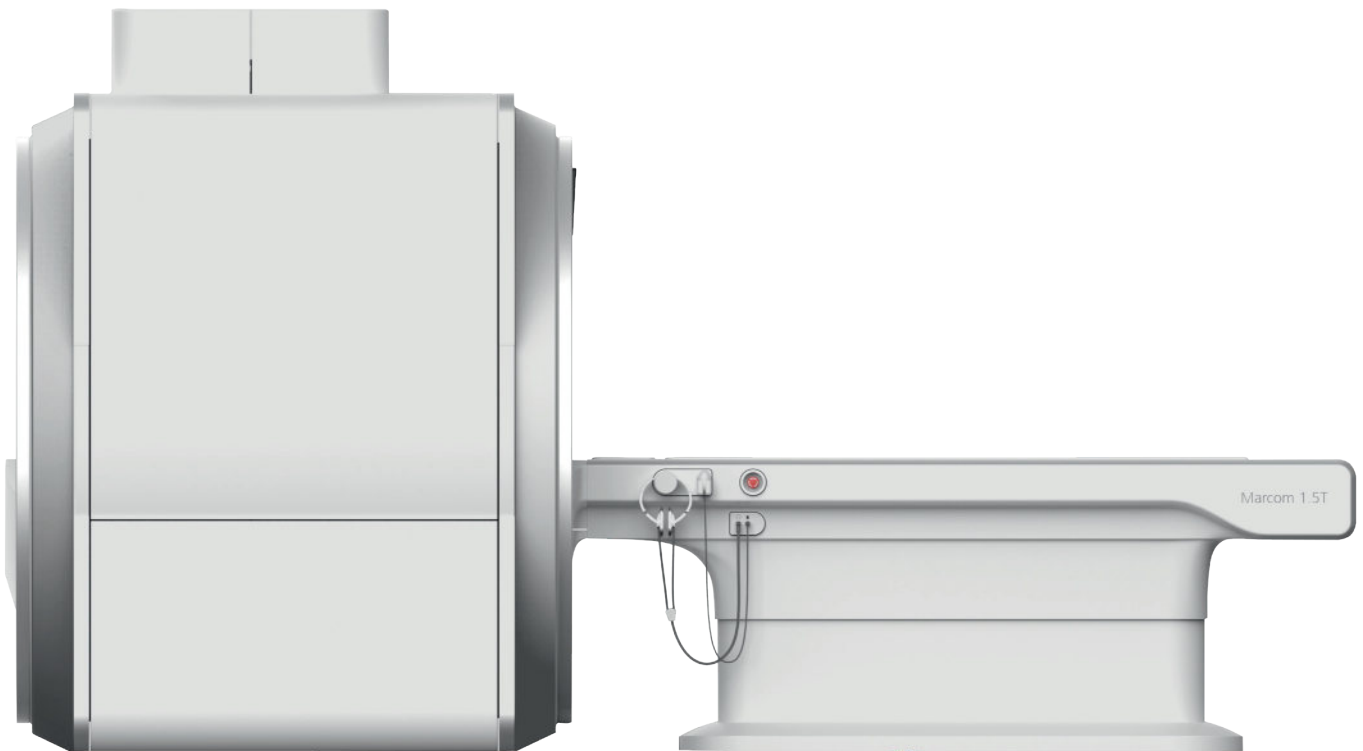
Marcom 1.5T Upgrade packages ensure your system update to the latest MR technologies, this is not limited only to software also the hardware will be included in these upgrades packs.

Minimum Space Requirement

The brilliant magnet design creates a compact system to minimize the space requirement to 35 square meters.

Economic Investment

The upgrade packs, zero helium consumption, low electric consumption; low maintenance cost, smaller space requirement made Marcom 1.5T the most economic investment plan for hospitals and diagnostic centers.



POWERFUL FEATURES

- Fully digital RF system
- Receiving Channel: 16
- 4K cold head technology
- Receiving Coil: Phase Array Coils
- Image reconstruction speed 1500 fps
- Parallel acquisition technology platform
- Technology of liquid helium „zero“ consumption
- Advanced imaging techniques and clinical application
- 8" TFT- LCD display on Magnet, real-time display system status
- Maximum gradient field and slew rate reached at the same time
- Fully digital real-time transmit and receiving gradient control system
- Patient table can be controlled by machine cover in case of emergency

Different Multi-channel phased array receiver coil

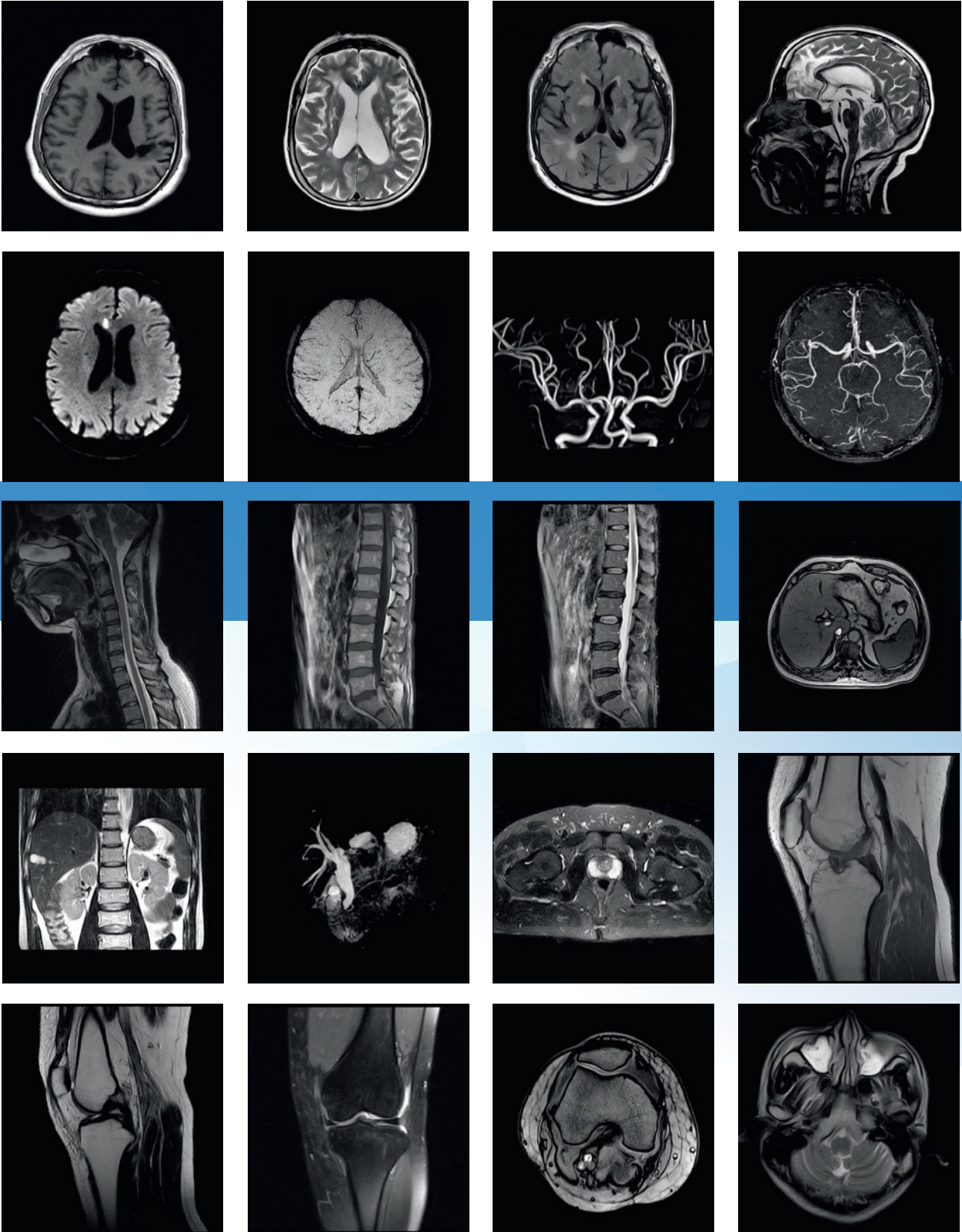
Standard package

- Head coil, 8 channels
- Neck coil, 8 channels
- Body coil, 16 channels
- Knee coil, 8 channels
- Shoulder coil, 4 channels

Optional

- Ankle coil, 8 channels
- Wrist coil, 8 channels
- Breast coil, 4 channels
- CTL coil
- Finger coil, 8 channels

EXCELLENT CLINICAL IMAGES



TECHNICAL SPECIFICATIONS

Marcom 1.5T | SternMed superconductive MRI scanner

SUPERCONDUCTIVE MAGNET

Superconductive Magnet	1.5T active shield superconducting magnet
Magnet net weight	4t (include 100% liquid helium)
Homogeneity	≤ 0.45 ppm @ DSV 45cm ≤ 0.20 ppm @ DSV 40cm ≤ 0.08 ppm @ DSV 30cm ≤ 0.02 ppm @ DSV 20cm
Stability	≤ 0.1 ppm/h
Helium boil-off rate	Zero boil off
Helium refill period	≥ 3 years
5 Gauss Fringe Field (X,Y,Z)	≤ 2.6 m, 2.6m, 4m
Patient aperture	605mm \pm 5mm
Length of magnet(with cover)	170cm
Bed lowest height	63cm

GRADIENT

Gradient System	Full digital real-time transmit and receiving gradient control system
Cooling System Type	Water-cooled
Gradient strength	40mT/m
Slew rate	150mT/m/ms

RF SYSTEM

Spectrometer	16 channels
Power of transmitter amplifier	20KW
Receiving coil type	Standard: Head & Neck: 16ch, Body: 16ch, Knee: 8ch, Shoulder: 4ch Optional: Ankle 8ch, Wrist 8ch, Breast 4ch

WORKSTATION

Operating system	Windows 7
CPU	≥ 3.6 GHz
RAM	8 GB
Hard disk	1 TB
The main screen displays	24" Color LCD (
Network components	DICOM 3.0 standard interface, through the local Ethernet network easily to link camera, diagnosis and treatment workstations, medical information systems, remote diagnostics system.

PULSE SEQUENCES

Spin-Echo sequence	SE 2D/3D -- FSE 2D/3D -- FSE sharing -- Single shot FSE Spin echo fat-suppression imaging Spin echo frequency fat suppression imaging Spin echo water suppression imaging FSE Min.TE \square 256 x 256 matrix \square ≤ 4 ms FSE Min.TR \square 256 x 256 matrix \square ≤ 8 ms FSE Min.TE \square 128 x 128 matrix \square ≤ 3 ms FSE Min.TR \square 128 x 128 matrix \square ≤ 6 ms
GRE sequence	GRE 2D/3D 3D GRE Min.TE \square 128 x 128 matrix \square ≤ 0.4 ms 3D GRE Min.TR \square 128 x 128 matrix \square ≤ 1 ms 3D GRE Min.TE \square 256 x 256 matrix \square ≤ 0.8 ms 3D GRE Min.TR \square 256 x 256 matrix \square ≤ 1.5 ms
EPI sequence	Single shot EPI -- Multi shot EPI -- Spin echo EPI -- Gradient echo EPI EPI Min.TR \square 256 x 256 matrix \square ≤ 8 ms EPI Min.TE \square 256 x 256 matrix \square ≤ 3 ms EPI shortest echo spacing time \square 128 x 128 matrix \square ≤ 0.4 ms EPI maximum scan layers ≥ 128 EPI maximum echo chain length ≥ 512 Max. b value = 10000
IR sequence	IR -- FIR (water / fat suppression) -- FLAIR -- Single Shot FIR -- STIR Chemical Saturation Water-fat Separation

TECHNICAL SPECIFICATIONS

Marcom 1.5T | SternMed superconductive MRI scanner

PULSE SEQUENCES

Special K space filling and data processing method	Anti-movement propeller scanning technology Propeller scanning T2 FSE image Propeller scanning T2 FLAIR image Propeller scanning DWI image	
Advanced imaging technology	Body Imaging	Liver dynamic enhancement technology Phase / de-phase imaging technology MR cholangiopancreatography (MRCP) MR urography (MRU) -- MR myelography (MRM)
	Neuro imaging	High resolution cervical spine marrow imaging High resolution inner ear 3D imaging Whole spine imaging
	Diffusion weighted imaging (DWI)	Isotropic acquisition ADC measurement -- ADC-map color mapping
	MR angiography (MRA)	2D/3D TOF technology Continuous multi-layer 3D TOF technology Contrast enhanced MRA Magnetization transfer (MTC) Maximum intensity projection Multi planar reconstruction
	Susceptibility Weighted Imaging (SWI)	Compatible with parallel acquisition Magnetic sensitive intensity mapping imaging technology Magnetic sensitive phase mapping imaging technology
	Parallel acquisition technology	Algorithm based on image -- Algorithm based on K-space Parallel acquisition acceleration factor = 4 Compatible RF coil -- Compatible sequence Automatic Calibration Technology Applied Direction of Parallel Acquisition Factor X,Y,Z
Gate Trigger	Artifact correction technology	Fluid compensation Respiratory compensation Head motion artifact correction Elimination of magnetic sensitive artifact Eddy current adaptive correction Gradient linearity correction Multi-echo phase correction
	ECG -- Respiratory -- Peripheral	

SCANNING PARAMETER

FOV	10~500 mm
Scan orientations	Any angle (axial, sagittal, coronal, any slope, multi-layer multi-angle)
Image type	T1 weighted imaging, T2 weighted imaging, T2*weighted imaging, proton density imaging, Water suppressed imaging, Fat Suppressed image, MRM, MRU, MRCP, Magnetic Resonance angiography (MRA), Diffusion weighted imaging (DWI)

PATIENT TABLE

Patient Table	Drop out of the open two-dimensional movement, motor drives, cross laser positioning, Emergency braking situation or power outage, you can manually take the bed.
Max. Patient Load	200Kg
Positioning accuracy	≤1mm

POWER SUPPLY

Voltage and frequency	3N~ 380 V / 50Hz
Input Power	Max. 100 kVA



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