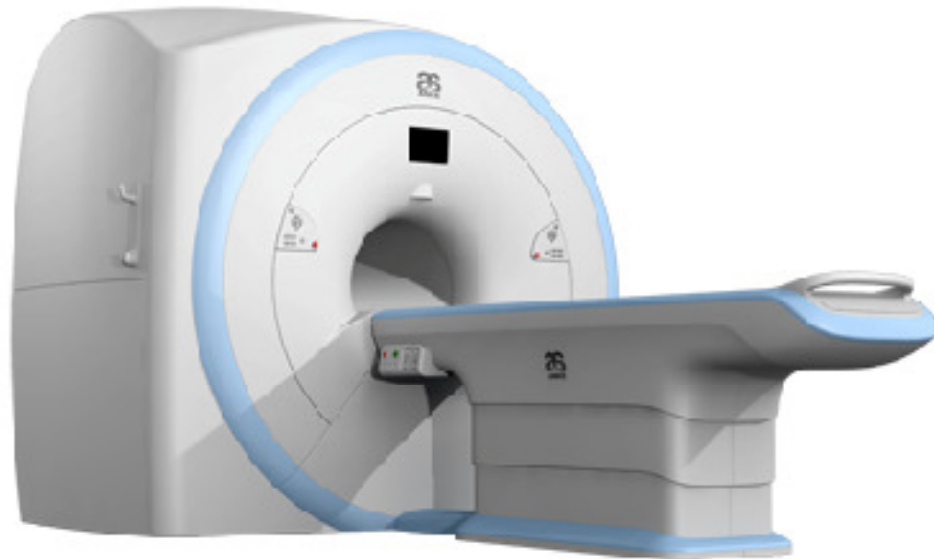




SHENZHEN ANKE HIGH-TECH CO., LTD
SUPERMARK 1.5T MRI SYSTEM



SuperMark 1.5T is a new generation superconducting MRI system based on years of experience in production and research. It's applicable to whole body scan, such as, nervous system, spine, joint soft tissue, pelvic and abdominal cavity, etc.

SuperMark 1.5T provides not only conventional pulse sequences and clinical diagnosis functions, but also provides advanced functional applications, for instance, 3D angiography and water imaging. It adopts brand new ANKE APEX operating system which ensures easy operation and fast diagnosis.

Technical Advantages

- ∅ Reliable short cavity superconducting magnet system with zero liquid helium consumption
- ∅ New generation fully digitalized and extensible multichannel spectrometer
- ∅ Powerful high efficiency and high fidelity gradient system; Multi-channel PA RF receiving coil with intelligent identification
- ∅ English operating system and high extensible computer system

Ø High resolution conventional clinical images; Practical advanced functional imaging

Superconducting MRI System

Ø Highly open and humanization design -> Streamlined design

Ø Rich sequences and technology satisfy clinical needs -> Efficient service

Low Investment

Ø High cost performance superconducting MRI system

Ø Zero liquid helium consumption, low running and maintenance cost

Ø Core technology by independent R & D supports full upgrade

Ø Low electric consumption

Ø Compact magnet design, minimum installation space: 35 square meters

High Return

Ø High resolution thin slice images improve diagnosis

Ø Short cavity magnet design makes patients comfortable

Ø Fast scan speed improves work efficiency

Technical Specification:

No.	Technique Description	Parameter	Remark
1	Magnet System		
1.1	Magnet Type	Permanent Magnet Automatic constant temperature system	
1.2	Field Strength	1.5T	
1.3	Magnet Shape	Dual-pillar shape	
1.4	Homogeneity (40cm, DSV, VRMS)	≤1.6ppm	
1.5	Shim Method	Active/Passive	
1.6	Magnet Vertical Gap (Cover)	40cm	
1.7	Magnetic Pole Dia. (Exclude Cover)	145cm	
1.8	Accessibility (Horizontal Opening Angle,	280°	

1.9	5 Gauss fringe field	X-axis: horizontal $\leq 2.5\text{m}$ Y-axis: Vertical $\leq 2.5\text{m}$ Z-axis: horizontal $\leq 2.5\text{m}$	
2	Patient Couch and Communication		
2.1	Patient Couch Driven mode	Motor-driven	
2.2	Max. Patient Weight	$\geq 200\text{kg}$ (440lbs)	
2.3	Patient Positioning Tools	Laser Light Localizer for positioning of center slice Motor-driven transfer to center of imaging volume	
2.4	Position accuracy	$\pm 1\text{mm}$	
2.5	Emergency Call Key	Yes	
2.6	Intercom System	Yes	
3	Gradient System		
3.1	Gradient Field Strength (Single Axis)	$\geq 30\text{mT/m}$	

3.2	Gradient Slew Rate (Single Axis)	$\geq 100\text{mT/m/ms}$	
3.3	Rise Time	$\leq 0.3\text{ms}$	
3.4	Gradient Cooling System (Gradient coils and Power electronics)	Air Cooling	
4	RF System		
4.1	RF System Type	Digital Transmit and Receive signal	
4.2	Number of RF Channels	4	
4.3	Transmitter Amplifier Peak Power	6kW	
4.4	RF Bandwidth of Receiver	$\geq 1.25\text{MHz}$	
4.5	Head Coil	Yes	
4.6	Neck Coil	Yes	
4.7	Body/Spine Coil (17 inch)	Yes	

4.8	Body/Spine Coil (21 inch)	Yes	
4.9	Knee Coil	Yes	
4.10	Shoulder Coil	Yes	
4.11	Flexible Coil	Yes	
4.12	Breast Coil	Yes	
5	Computer System		
5.1	Host Computer	DELL Computer (for MR)	
5.2	System Software	Windows XP	
5.3	Operation Software	APEX	
5.4	CPU Clock rate	3.0GHz	
5.5	Main Memory	4GB	
5.6	Color LCD Monitor	19"	
5.7	Keyboard and Mouse	Standard	
5.8	Image Reconstruction Speed (256 x 256 Matrix)	200 frame/Sec.	
5.9	Hard Disk	500GB	

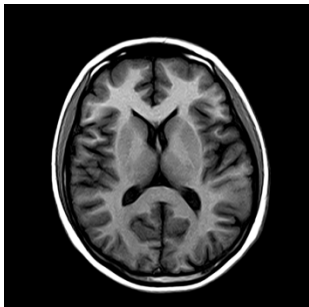
5.10	Image Storage Capacity (256 x 256 Matrix)	500,000	
5.11	Media Driver	DVD RW	
5.12	DICOM 3.0	Yes	
5.13	Ethernet	Yes	
5.14	Operation Console	Yes	
5.15	Operation Chair	Yes	
6	Scanning Parameter		
6.1	Max. FOV	410mm	
6.2	Min. FOV	5mm	
6.3	Min. TE (SE)	5ms	
6.4	Min. TR (SE)	11ms	

6.5	Min. TE (GR)	1ms	
6.6	Min. TR (GR)	3ms	
6.7	Min. 2D Thickness	1.0mm	
6.8	Min. 3D Thickness	0.1mm	
6.9	Max. Image Matrix	512x512	
7	Scanning Sequence & Imaging Technique		
7.1	Spin Echo 2D/3D (SE 2D/3D)	Yes	
7.2	DE/QE	Yes	
7.3	Fast Spin Echo 2D/3D (FSE 2D/3D)	Yes	
7.4	Single Shot FSE 2D/3D	Yes	
7.5	Inversion Recovery (IR)	Yes	
7.6	Fast Inversion Recovery (FIR)	Yes	
7.7	Gradient Echo 2D/3D (GR 2D/3D)	Yes	
7.8	Fast GR 2D/3D	Yes	
7.9	SPGR	Yes	
7.10	FLAIR	Yes	
7.11	Fat Imaging	Yes	

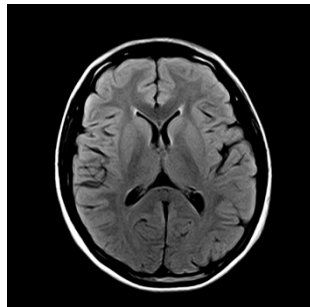
7.12	Fat Suppression imaging	Yes	
7.13	Water-Fat Separation imaging	Yes	
7.14	TOF MRA (2D/3D)	Yes	
7.15	MRCP (2D/3D)	Yes	
7.16	MRU (2D/3D)	Yes	
7.17	MRM	Yes	
7.18	Fast Hydrograph Imaging	Yes	
7.19	Diffusion Weighted Imaging (DWI)	Yes	
7.20	Max. b Value	1000s/mm ²	
7.21	Breath Hold Technology	Yes	

7.22	Magnetization Transfer Contrast (MTC)	Yes	
7.23	Multi-slice and Angle-free Presaturation	Yes	
7.24	Saturation Tracking	Yes	
7.25	Maximum Intensity Projection (MIP)	Yes	
7.26	Multi-Angle Projection (MAP)	Yes	
7.27	3D Reconstruction	Yes	
7.28	Multi-planar Reconstruction (MPR)	Yes	
7.29	Multi-Artifacts Eliminating technology	Yes	
7.30	Checking with Part Metal Implant	Yes	
7.31	Online Image Filtration	Yes	
7.32	Online Post Proccession	Yes	
7.33	3D Scout	Yes	
7.34	Scanning Protocol Preset	Yes	
7.35	Scanning Protocol Queue Waiting	Yes	
7.36	Advanced Image Post Processing	Yes	
7.37	Image Fusion Technology of Vascular	Yes	
7.38	Image Fusion Technology of Spine	Yes	

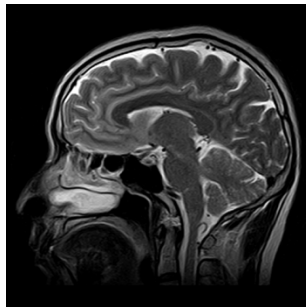
Clinical Images:



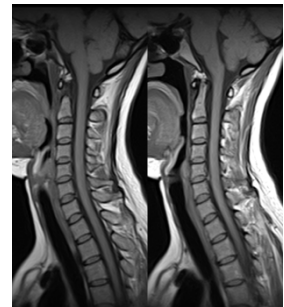
Brain 5mm T1WI



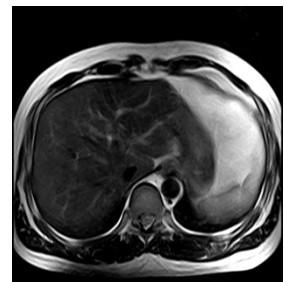
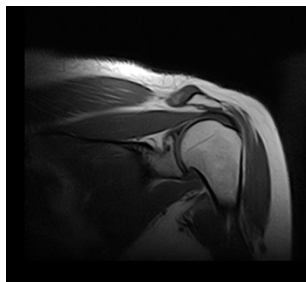
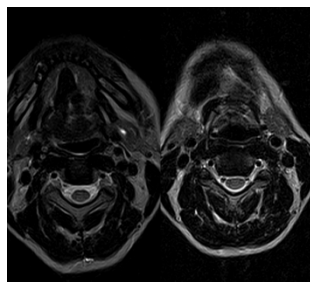
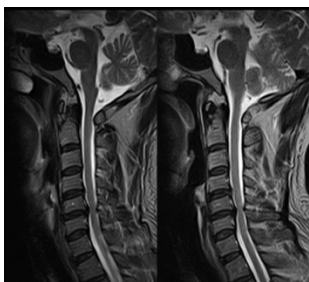
Brain 5mm Water Suppression



Brain 3mm T2WI



C-spine 3mm T1WI

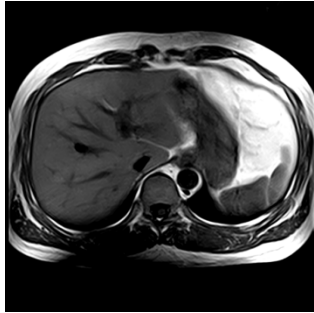


C-spine 3mm T2WI

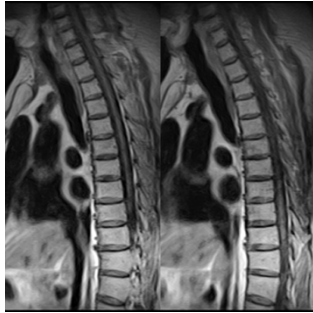
C-spine 3mm Tra or Axi

shoulder 3mm T1WI

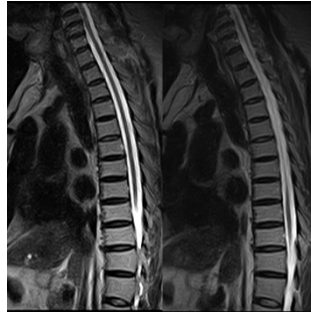
Abdomen 6mmT1WI



Abdomen 6mm T2WI



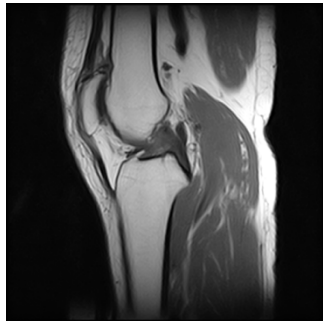
T-spine 3mm T1WI



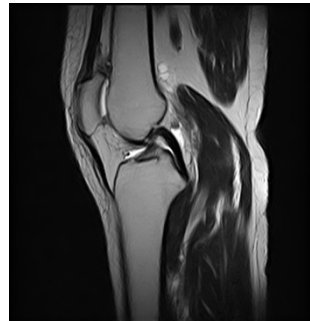
T-spine 3mm T2WI



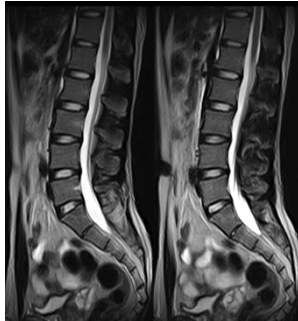
L-spine 3mm



Knee 3mm T1WI



Knee 3mm T2WI



L-spine 3mm T2WI



Knee 3mm fat



Large Body Coil



Small Body Coil



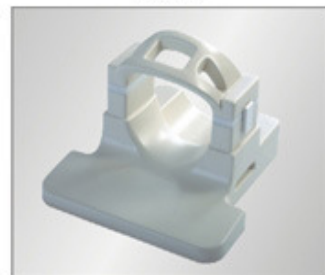
Head Coil



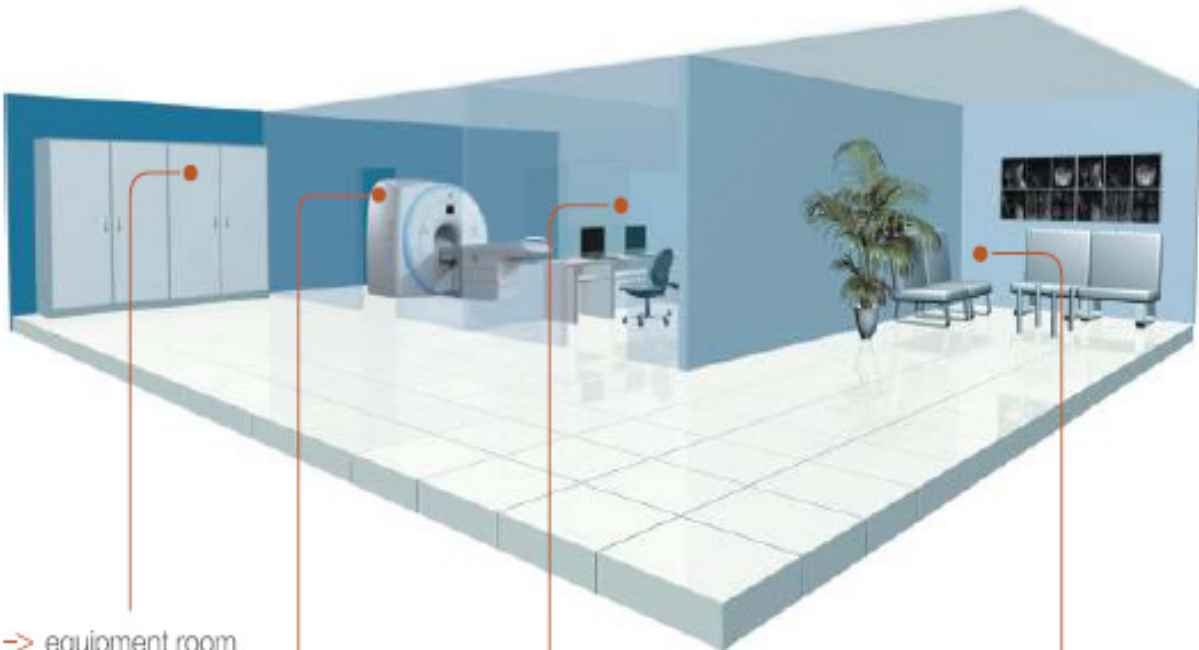
Shoulder Coil



Knee Coil



Neck Coil



-> equipment room

-> scanning room

-> operation room

-> waiting room