

TECHNICAL SPECIFICATIONS FOR MRI SCANNER (Including delivery, installation and commissioning)

GENERAL APPLICATION

- Head, neck, spine, body and extremities imaging

STANDARD COMPOSITION

- Special Applications
- Gantry
- Patient Handling System
- Control Console
- Magnet System
- Gradient System
- Radiofrequency (RF) System
- RF Coils
- Image Collection and Processing
- Scan Parameters
- Computer System
- Data/Image Storage
- Accessories
- Safety Considerations
- Installation Requirements
- Other Requirements
- Other Terms and Conditions

SPECIFICATIONS

			Bidder's Offer (Please check if available)
<i>Special Applications</i>	Cardiac gating		
	Respiratory gating		
	Magnetic resonance angiography (MRA)		
	MR guided interventional studies		
	Single breath hold studies of the chest and the abdomen		
<i>Gantry</i>	Aperture	_____ cm	
	With lighting function inside dome		

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<i>Patient Handling System</i>	Movement	Motor driven	
	Controls	Remote from the console	
	Capacity	at least 300 to 400 lbs.	
Control Console	Keyboard	With integrated function keys and mouse control or trackball	
	TV monitor	High resolution 20" diameter or bigger	
	Function	Selection of scan parameters	
	Display image resolution	_____ x _____ or better	
<i>Magnet System</i>	Type	Superconductive	
	Field Strength	at least _____ T	
	Magnet cooling or Boil-off rate (consumption)	_____ l/hr	
	Homogeneity	+/- _____ to _____ ppm; diameter max. _____ cm	
	Magnetic fringe field	Pacemaker safe	
<i>Gradient System</i>	Shielding	_____	
	Maximum gradient strength	At least _____ mT/m	
<i>Radiofrequency System</i>	Phase control	Digital	
	Transmitter power	_____ to _____ kW	
	Receiver band width (maximum)	+/- _____ kHz or wider	
<i>Radiofrequency Coils</i>	With automatic tuning for coils		
	Head		
	Body		
	Phased array		
	Volume neck		
	T/L spine		
	Knee		
	Special purpose coils	Soft tissue Small parts Shoulder Extremities With dynamic motion studies capability	
<i>Image Collection and Processing</i>	Selection of successive image	Next/prior	
	Multiple image display	_____ to _____ images	
	Image rotate and flip		
	Image scroll		
	Image magnification (zooming)		
	Image reversal		
	Image annotation and labeling		

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<i>Image Collection and Processing</i>	2D images			
	3D images			
	MRA			
	Maximum intensity projection (MIP)	for 2D and 3D data sets		
	Multiplanar reformatting	Sagittal, axial, coronal, oblique, double oblique, curved, etc.		
	Save, restore and remove functions			
	Image networking			
	Pulse sequences	Spin echo		
		(Fast) inversion recovery		
		Echo planar imaging (EPI)		
		Fast spin echo		
		Combination echo		
		2D gradient echo		
	Imaging mode	3D gradient echo		
		Volume study		
		Single		
Image analysis	Multislice			
	Measures distance and angle			
<i>Scan Parameters</i>	ROI displays up to 3 measurements at one time on the screen			
	Reconstruction timer	_____ s or less		
	Slice thickness: 2D mode	___ to ___ mm in ___ mm inc		
	3D mode	___ to ___ mm in ___ mm inc		
<i>Computer System</i>	Field of view	___ to ___ cm		
	Scan time	___ to ___ sec or min		
	Memory size	_____ MB or higher		
	With CD-ROM drive			
<i>Image/Data Storage and Archiving</i>	Hard disk capacity	_____ GB or higher		
	With networking capability			
	Optical disk	- With read, write and erase - At least _____ GB		
<i>Accessories</i>	Digital film documentation			
	Cine (VCR interface)			
	QC phantoms	1 set		
	Laser imager			
	Automatic film processor	- heavy duty - compatible with the laser imager		

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<i>Accessories</i>	Sensitometer and densitometer	for monitoring of film processor and laser imager	
	1 unit automatic voltage stabilizer		
	Dehumidifier		
	Uninterrupted power supply		
	Patient positioning set		
	MRI wheelchair		
	Anti-magnetic IV stand		
	Non-magnetic water chiller		
	Non-magnetic stretcher		
Pipe-in music			
<i>Safety Considerations</i>	2-way audio communication (intercom system)	Between patient and operator	
	Patient monitoring device (i.e., MR pulse oximeter)	Should be MRI compatible	
	Emergency magnet shutdown unit		
	Non-magnetic fire extinguisher		
<i>Installation Requirements</i>	Space requirement	_____ sq m or less	
	Ceiling height	maximum of _____ m	
<i>Other Requirements</i>	Software/Hardware	- Upgradable, with certification - must be supported by active R&D co.	
	Air-condition unit		
	2 sets of	Operation and Instruction Manual	
		Service and Installation Manual	
		Wiring and Schematic Diagrams	
Parts Listing			

Other Terms and Conditions	To be checked by the bidder
Two (2) years warranty for parts and service after passing the acceptance testing of the Radiation Health Service (RHS), Department of Health (DOH)	
Must comply with the applicable requirements under DOH Administrative Order (AO) No. 35, s. 1994	
Bid offer is in Philippine peso to include taxes and duties; transportation to site, delivery, installation and testing expenses on site (hospital)	
Equipment must pass the conformance testing of the RHS, DOH as provided in the DOH AO No. 21, s. 1996 dated 04 June 1996	
Supplier must provide training on equipment operation, maintenance and quality control for users and maintenance personnel of the hospital	
Certification of manufacturer guaranteeing the availability of all spare parts for the next ten (10) years	
Inventory of spare parts for the unit/model offered duly signed by the principal	
Certification that the supplier has the capability for corrective and preventive maintenance of the unit	
Certificate/s of training for engineers/maintenance service personnel in model offered	
Certificate of sole distributorship from the unit manufacturer mentioning the name of the Philippine representative	
Certification of manufacturer guaranteeing delivery of equipment and all accessories	
The unit should conform to the International Electrotechnical Commission (IEC) standards or its equivalent	
Certificate of Philippine Securities and Exchange Commission (SEC) registration	
Certification of guaranteed uptime for the equipment offered	
The supplier must submit the original brochure.	
Supplier to submit cost of service contract for parts and labor after the warranty period	
Supplier to submit BIR clearance	
Supplier must be accredited as a supplier of x-ray equipment by the DOH Accreditation Committee for Medical Equipment	