

Equipment Specifications

Magnetic Resonance Imaging

VISN 1/VA MAINE HEALTHCARE SYSTEM

402-B91003

A. REQUIREMENT OVERVIEW

This document highlights the requirements, technical specifications, and services being requested by VA Maine Healthcare System towards the purchase of a Magnetic Resonance Imaging (MRI) system that is used for diagnostic MRI examinations. Contractor shall provide all labor, equipment, materials, parts, tools, software, project management and disposal necessary to furnish and install a fully functional MRI system at 1 VA Center Drive, Augusta, ME 04330

Facility	Quantity
VA Maine Healthcare System- Togus	1

B. TECHNICAL REQUIREMENTS

1. Unit physical specifications

a. Magnetic field strength [T]	1.5T
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2. Additional specifications

<input checked="" type="checkbox"/>	a. Compressed sense	
<input checked="" type="checkbox"/>	b. Motion correction technology	
<input checked="" type="checkbox"/>	c. Helium save technology	
<input checked="" type="checkbox"/>	d. Noise reduction technology	
<input checked="" type="checkbox"/>	e. Power conditioning as recommended by vendor	
<input checked="" type="checkbox"/>	f. Uninterruptible power supply	
<input checked="" type="checkbox"/>	g. Vector ECG (VCG), Respiratory, and Peripheral Pulse grating/triggering	
<input checked="" type="checkbox"/>	h. Advanced exam planning technology	
<input checked="" type="checkbox"/>	i. Geometry linking (multi-station exams)	
<input checked="" type="checkbox"/>	j. Real-time MIP, MPR, and 3D surface rendering	
<input checked="" type="checkbox"/>	k. Advanced MR viewing environment for viewing, processing, and film generation	
<input checked="" type="checkbox"/>	l. Shielding	<input checked="" type="radio"/> Active <input type="radio"/> Passive
<input checked="" type="checkbox"/>	m. Patient-specific shimming	



<input checked="" type="checkbox"/>	n. Dixon-type technology for body, neuro, and musculoskeletal imaging
<input checked="" type="checkbox"/>	o. Advanced non-contrast MRA imaging technology
<input checked="" type="checkbox"/>	p. 3D FSE-based sequence for isotropic resolution in all contrasts
<input checked="" type="checkbox"/>	q. Bolus tracking system
<input checked="" type="checkbox"/>	r. Tabletop integrated coil design and ports
<input checked="" type="checkbox"/>	s. Patient positioning and support aids
<input checked="" type="checkbox"/>	t. Stepping capable table
<input checked="" type="checkbox"/>	u. Integrated music system, to include the following: Control room controls Speech communication for patient direction Speakers in both the exam room and control room Headphone jack on patient table MRI-safe headphones
<input checked="" type="checkbox"/>	v. Video camera system for monitoring inside the exam room from the control room
<input checked="" type="checkbox"/>	w. MRI-compatible injector (Please specify all available MRI-compatible injector options.)
<input checked="" type="checkbox"/>	x. Cryogenics (Vendors are expected to provide and install all cryogenics.)
<input checked="" type="checkbox"/>	y. Chiller meeting or exceeding MRI needs
<input checked="" type="checkbox"/>	z. All phantoms required for proper calibration and performance verification (Vendors are expected to provide phantoms for all system requirements and options identified in this document that require phantoms.)
<input checked="" type="checkbox"/>	aa. Power conditioning as recommended by vendor, to include the following: Protection from electrical failures, emergency power tests, power peaks and drops, electrical storms, etc. Prevention of image quality degradation
<input checked="" type="checkbox"/>	bb. Uninterruptible power supply
<input checked="" type="checkbox"/>	cc. MRI-compatible stretcher
<input checked="" type="checkbox"/>	dd. MRI-compatible wheelchair
<input checked="" type="checkbox"/>	ee. MRI-compatible infusion pump
<input checked="" type="checkbox"/>	ff. Fixed or mobile wand solution for metal detection

3. Workstation Requirements

<input checked="" type="checkbox"/>	a. Minimum acquisition workstation monitor size [in]	19in
<input checked="" type="checkbox"/>	b. Workstation UPS	
<input checked="" type="checkbox"/>	c. MRI-compatible patient monitor (including ECG)	

4. Coil Requirements

<input checked="" type="checkbox"/>	a. Torso
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<input checked="" type="checkbox"/>	b. Knee
<input checked="" type="checkbox"/>	c. Shoulder
<input checked="" type="checkbox"/>	d. Head/neck/spine/array
<input checked="" type="checkbox"/>	e. Neuro vascular
<input checked="" type="checkbox"/>	f. Run-off
<input checked="" type="checkbox"/>	g. Foot/ankle
<input checked="" type="checkbox"/>	h. Wrist
<input checked="" type="checkbox"/>	i. Elbow
<input checked="" type="checkbox"/>	j. Cardiac
<input checked="" type="checkbox"/>	k. Prostate imaging
<input checked="" type="checkbox"/>	l. Functional MRI head
<input checked="" type="checkbox"/>	m. Carotid
<input checked="" type="checkbox"/>	n. Endorectal
<input checked="" type="checkbox"/>	o. Periphery vascular
<input checked="" type="checkbox"/>	p. Extremity, flexible
<input checked="" type="checkbox"/>	q. Transmit/receive
<input checked="" type="checkbox"/>	r. Adjustable neurovascular head
<input checked="" type="checkbox"/>	s. Whole body imaging

Each vendor is to respond with coils that meet the criteria listed above. Please include all other coils offered by your company in the optional section of the quotes.

5. Table Requirements

<input checked="" type="checkbox"/>	a. Detachable
<input checked="" type="checkbox"/>	b. Motorized
<input checked="" type="checkbox"/>	c. Adjustable height when table is attached and detached
<input checked="" type="checkbox"/>	d. Tabletop integrated coil design and ports

6. Safety Requirements

<input checked="" type="checkbox"/>	a. Safety system for magnet quenching and emergency shutdown, to include the following: Alarms for low cryogen levels, temperature limits, scans in progress Indicators for cryogen levels Heat sensor shut-offs for room temperature problems Oxygen monitor in gantry room
<input checked="" type="checkbox"/>	b. Fire suppression system meeting NFPA standards and all applicable codes (the system must connect to the facility fire alarm system)

7. Advanced Applications



<input checked="" type="checkbox"/>	a. 3D processing for all modality datasets
<input checked="" type="checkbox"/>	b. Neuro
<input checked="" type="checkbox"/>	c. Ortho
<input checked="" type="checkbox"/>	d. Body
<input checked="" type="checkbox"/>	e. Cardiovascular
<input checked="" type="checkbox"/>	f. Muscular
<input checked="" type="checkbox"/>	g. Vascular
<input checked="" type="checkbox"/>	h. MRA
<input checked="" type="checkbox"/>	i. Spectroscopy
<input checked="" type="checkbox"/>	j. Phase contrast MRI and flow analysis
<input checked="" type="checkbox"/>	k. Parametric prostate imaging
<input checked="" type="checkbox"/>	l. Fiber tracking software
<input checked="" type="checkbox"/>	m. Integration to third party Advanced Visualization System
<input checked="" type="checkbox"/>	n. Mobile trailer requirements

Each vendor is to respond with advanced applications that meet the criteria listed above. Please include all other advanced applications offered by your company in the optional section of the quotes.

8. Mobile Trailer Requirements

9. Security/Connectivity Requirements

<input checked="" type="checkbox"/>	a. OEM-supported operating system
<input checked="" type="checkbox"/>	b. Latest DICOM print, store, commit, and modality worklist
<input checked="" type="checkbox"/>	c. Encrypted hard drive
<input checked="" type="checkbox"/>	d. PACS compatibility – [Carestream]

10. Added Value

Specifications listed below are not required, but preferred. Vendors who do not include the below specifications in the submitted offer will not be docked or excluded from consideration. Specifications listed below will be evaluated based on added value.

<input checked="" type="checkbox"/>	a. Additional year(s) of warranty
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C. TRAINING REQUIREMENTS

1. Clinical Training

<input checked="" type="checkbox"/>	a. On-site clinical applications training for [5] technologists during go-live
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<input checked="" type="checkbox"/>	b. On-site follow-up clinical applications training for [5] technologists once technologists have hands-on experience with the system
<input checked="" type="checkbox"/>	c. Off-site clinical applications training for [2] technologists (to include tuition)
<input checked="" type="checkbox"/>	d. Off-site clinical applications training for [2] physicians (to include tuition)
<input checked="" type="checkbox"/>	e. Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).
<input checked="" type="checkbox"/>	f. Vendors shall be responsible for accommodating different personnel shifts for clinical applications training during go-live.

2. Biomedical Technician Training

Please reference the “Instructions to Offers” section 2.8.g for further information about the type of information to provide by equipment type not by specific request. Please also reference the “Instructions to Offers” section 7.3.3. for response format.

Technical training information to include detailed information about the curriculum and length of the biomedical technical training required for each equipment type.

Although the NAC will not award this training along with the equipment, it is imperative that the customer is informed that this training is available. Vendors must demonstrate that they can provide any required off-site training, therefore off-site training should be quoted as an optional item. Off-site training will be purchased at the time of need via a modification (if the original order remains open) or via a separate order. No travel expenses for any VA employees will be included in any HTME equipment or training order.

D. SERVICE REQUIREMENTS

1. VPN/Remote Access – The vendor shall provide any and all equipment service programs, such as remote diagnostics, during the warranty period. The vendor shall provide post-warranty remote diagnostic service program as an “Add Option” with the offer. The system shall provide vendor remote diagnostics via VPN. The vendor shall either utilize the VA national site-to-site VPN or work with the Office of Cyber and Information Security and the VAMC Information Systems Security Officer to establish a client-based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed systems:
 - a. Two (2) copies of operator instruction manuals (one (1) electronic and one (1) physical copy)
 - b. Two (2) copies of a service manuals (one (1) electronic and one (1) physical copy)

*Vendors can include the physical copy as a priced line item in their quote as applicable.
3. Minimum Warranty – The system and accessories shall be covered under the manufacturer’s warranty and shall include all parts and labor for one year following acceptance by the VAMC. This warranty must include PMs as required by the manufacturer. The manufacturer’s factory-trained field service representatives shall perform installation and maintenance during the warranty period.

Vendors are encouraged to include any offerings for service, warranty, and training that may exceed the minimum requirements, to include information on their service support structure during and after the warranty



period. Vendors who do not include any added value offerings for service, warranty, and training will not be docked or excluded from consideration. However, any such offerings will be evaluated based on added value.

E. OTHER INFORMATION/DOCUMENTATION REQUESTED

Please reference the “Instructions to Offers” section 2.8a-h for further information about the type of information to provide by equipment type not by specific request. Please also reference the “Instructions to Offers” section 7.3.3. for response format.

1. Completed pre-procurement assessment form (6550 Appendix A)
2. Completed Manufacture Disclosure Statement for Medical Device Security (MDS2) form
3. Federal Information Processing Standard (FIPS) 140-2 certification
4. Product brochures
5. Technical specification sheets, to include dimensions and weight of the system
6. Typical drawings (pdf version of the CAD drawings)
7. Technical training- Biomedical: information to include detailed information about the curriculum and length of the biomedical technical training required for each equipment type.
 - Although the NAC will not award this training along with the equipment, it is imperative that the customer is informed that this training is available. Vendors must demonstrate that they can provide any required off-site training, therefore off-site training should be quoted as an optional item. Off-site training will be purchased at the time of need via a modification (if the original order remains open) or via a separate order. No travel expenses for any VA employees will be included in any HTME equipment or training order.
8. Support information to include your company’s support structure during and after the warranty period
 - On-line or telephonic applications support and availability (include third party coverage)
 - A listing of field service engineer locations and availability
 - A listing of part depots

F. TRADE-IN

<input checked="" type="checkbox"/>	a. In instances where sanitization of ePHI compromises the OS and/or application software, or requires the removal of internal storage media, the vendor accepts the equipment “as is” and can elect at their own discretion to contract with the original equipment manufacturer (OEM) to restore the system.
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The following equipment is available for trade-in. Please reflect any credits provided for trade-in equipment in the proposal.

Station	402
Manufacturer	Siemens
Model	Magnetom Espree
EE/Asset Number	34413
Serial Number	30990

