# Equipment Specifications
## C-arm
## VISN 21/Northern California Healthcare System
## 612-B96006, 612-B96010, 612-B96011, 612-B96012

## A. REQUIREMENT OVERVIEW

Northern California Healthcare System, Sacramento and Martinez sites are requesting 4 c-arms to replace the existing outdated equipment. The c-arm should be able to be used interchangeably in the Gastrointestinal, Surgical Services, and Physical Medicine and Rehabilitation Departments.

| Facility | Quantity |
|---|---|
| Sacramento VA Medical Center | 3 |
| Martinez Out Patient Clinic | 1 |

## B. TECHNICAL REQUIREMENTS

1. Unit physical specifications

| | |
|---|---|
| a. Minimum detector size [cm] | 31 cm |
| b. Minimum central resolution [lp/mm] | 2.7 lp/mm |
| c. Minimum range of motion [deg] | 55 deg |
| d. Minimum c-arm depth [in] | 26.5 in |
| e. Minimum generator output power [kW] | 15 kW |
| f. Minimum monitor size (if dual) [in] | n/a |
| g. Minimum monitor size (if single) [in] | 32 in |
| h. Maximum system weight [kg] | 296 kg |

2. Additional specifications

| | |
|---|---|
| ☒ | a. Flat detector technology |
| ☒ | b. Flat surface beneath detector to allow for efficient table-top positioning |
| ☒ | c. Image magnification with a minimum of 3 settings |
| ☒ | d. Consistent field of view during rotation |
| ☒ | e. Low profile tube housing – Vendors are encouraged to propose the smallest housing available. |
| ☒ | f. Tube head controls for use by clinician |
| ☒ | g. Foot pedal |
| ☒ | h. Centering/alignment light for tube head |
| ☒ | i. Forward tube source |
| ☒ | j. Flat panel monitor(s) workstation on a cart with either dual or single high-resolution monitors |

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|---|---|
| ☒ | k. Reference monitor |
| ☒ | l. Integrated keyboard on workstation allowing back-up functionality to touch screen control system |
| ☒ | m. Motion and metal detection |
| ☒ | n. Measurement software |
| ☒ | o. Automatic video playback |
| ☒ | p. Integrated dose reporting, specifically RDSR |
| ☒ | q. User-configurable threshold dose warning |
| ☒ | r. Digital image rotation, reversal, and image invert |
| ☒ | s. Selectable mode settings for high-level pulse and low dose |
| ☒ | t. Easy positioning of the c-arm – ability to “rainbow” (over-scan) 180° without moving away from the patient |
| ☒ | u. DVD/CD or USB drive |
| ☒ | v. Audible/visual x-ray on warning |
| ☒ | w. CMOS flat detector technology |
| ☒ | x. Forward tube source |
| ☒ | y. Touchscreen monitor with 180° rotation, up/down and left/right tilt, and up/down motion |
| ☒ | z. Continuous fluoroscopy |
| ☒ | aa. Capability of powering up the c-arm and the workstation separately |
| ☒ | bb. UPS on board |
| ☒ | cc. Wireless capability |
| ☒ | dd. Wireless foot pedal |

3. Generator specifications

| | |
|---|---|
| ☒ | a. High-frequency |
| ☒ | b. Automatic dose rate control |
| ☒ | c. Ability to power from a standard wall outlet |
| ☒ | d. Pulse and continuous fluoroscopy modes |

4. Advanced applications

| | |
|---|---|
| ☒ | a. Digital Subtraction Angiography (DSA) |
| ☒ | b. Pulsed cine Bolus chase imaging with single contrast injection |
| ☒ | c. Roadmap technology for vascular imaging, to include<br>Increased frame rate from base model 30fps or greater<br>Real-time digital subtraction<br>Roadmapping<br>Increased image storage (1000 images or greater)<br>Bolus tracking<br>Vessel measurement tools and calculations<br>Catheter/guidewire visualization enhancement |

| | |
|---|---|
| | Preset vascular provfiles |
| ☒ | d. Orthopedic, to include<br>Metallic edge suppression<br>Bone visualization optimization (soft tissue suppression)<br>On-screen measurement tools (distance, angle, etc.)<br>Image comparison tools (side-by-side display, image overlay)<br>Preset orthopedic profiles |

5. Security/Connectivity requirements

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|---|---|
| ☒ | a. OEM-supported operating system |
| ☒ | b. Latest DICOM print, store, commit, radiation dose structured report (RDSR), and modality worklist |
| ☒ | c. Wireless connectivity to VA network – Compatible with 802.11b/g/n and FIPS 140-2 compliant |
| ☒ | d. Encrypted hard drive |
| ☒ | e. PACS compatibility – [Philips IntelliSpace] |

6. 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.

| | |
|---|---|
| ☒ | a. Additional year(s) of warranty |

## C. TRAINING REQUIREMENTS

1. Clinical Training

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|---|---|
| ☒ | a. On-site clinical applications training for [15] technologists during go-live (See summary table in section G) |
| ☒ | b. On-site follow-up clinical applications training for [6] technologists once technologists have hands-on experience with the system (See summary table in section G) |
| ☒ | c. Technologists who complete the clinical applications training shall receive continuing education credits (CMEs). |
| ☒ | d. 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. INFORMATION AND OTHER DOCUMENTATION REQUIRED

**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

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|---|---|
| ☒ | 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. |

The following equipment is available for trade-in. Please reflect any credits provided for trade-in equipment in the proposal.

| | |
|---|---|
| Station | 612 |
| Manufacturer | GE Healthcare |
| Model | OEC 9900 |
| EE/Asset Number | EE80044 |
| Serial Number | E23757 |

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|---|---|
| Station | 612 |
| Manufacturer | GE Healthcare |
| Model | OEC 9900 |
| EE/Asset Number | EE90316 |
| Serial Number | E27893 |

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| Station | 612 |
| Manufacturer | GE Healthcare |
| Model | OEC 9900 |
| EE/Asset Number | EE80047 |
| Serial Number | E92483 |

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|---|---|
| Station | 612 |
| Manufacturer | GE Healthcare |
| Model | OEC 9900 |
| EE/Asset Number | EE80045 |
| Serial Number | ES2965 |

# G. SUMMARY OF REQUIREMENTS

| Facility | PO Number | Training for Go- live | Follow-up training |
|---|---|---|---|
| Sacramento VA Medical Center | 612-B96006 | 4 | 3 |
| Sacramento VA Medical Center | 612-B96010 | 4 | 0 |
| Sacramento VA Medical Center | 612-B96012 | 3 | 0 |
| Martinez Out Patient Clinic | 612-B96011 | 4 | 3 |