

# 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Northern California Healthcare System, Sacramento and Martinez sites are requesting 4 c-arms to replace the existing outdated equipment.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

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



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

### 3. Generator specifications

<input checked="" type="checkbox"/>	a. High-frequency
<input checked="" type="checkbox"/>	b. Automatic dose rate control
<input checked="" type="checkbox"/>	c. Ability to power from a standard wall outlet
<input checked="" type="checkbox"/>	d. Pulse and continuous fluoroscopy modes

### 4. Advanced applications

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



	Preset vascular provfiles
<input checked="" type="checkbox"/>	d. Orthopedic, to include Metallic edge suppression Bone visualization optimization (soft tissue suppression) On-screen measurement tools (distance, angle, etc.) Image comparison tools (side-by-side display, image overlay) Preset orthopedic profiles

5. Security/Connectivity requirements

<input checked="" type="checkbox"/>	a. OEM-supported operating system
<input checked="" type="checkbox"/>	b. Latest DICOM print, store, commit, radiation dose structured report (RDSR), and modality worklist
<input checked="" type="checkbox"/>	c. Wireless connectivity to VA network – Compatible with 802.11b/g/n and FIPS 140-2 compliant
<input checked="" type="checkbox"/>	d. Encrypted hard drive
<input checked="" type="checkbox"/>	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.

<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 [15] technologists during go-live (See summary table in section G)
<input checked="" type="checkbox"/>	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)
<input checked="" type="checkbox"/>	c. Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).
<input checked="" type="checkbox"/>	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

<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	612
Manufacturer	GE Healthcare
Model	OEC 9900
EE/Asset Number	EE80044
Serial Number	E23757

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

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

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

