

# Equipment Specifications

## Digital Radiography and Fluoroscopy

VISN 15, Harry S Truman Memorial Veterans Hospital

589-B83004

### A. REQUIREMENT OVERVIEW

Harry S Truman Memorial Veterans Hospital has a requirement for one (1) radiographic/fluoroscopic imaging unit. This unit is required for imaging of Veterans for fluoroscopy exams of the esophagus, modified barium swallow studies, barium enemas, upper gastro-intestinal imaging, small bowel studies and general-purpose radiographic imaging.

### B. TECHNICAL REQUIREMENTS

#### 1. Unit physical specifications

a. Minimum wall detector size [in x in]	14 x 17
b. Minimum table detector size [in x in]	17 x 17
c. Minimum detector resolution [lp/mm]	4.0
d. Maximum detector weight (with battery) [lbs]	7
e. Height range for wall bucky [in]	60
f. Maximum patient weight [lbs]	600 (400 dynamic)
g. Minimum table width [cm]	73
h. Minimum table tilt [deg]	90
i. Minimum generator power [kW]	80
j. Minimum generator phases	3
k. Radiographic kVp range [kVp]	40-125
l. Radiographic mA range [mA @ kVp]	800 mA @ 100 kVp
m. Fluoroscopy kVp range [kVp]	75-125
n. Minimum pulse rate [frames/sec]	30
o. Minimum acquisition matrix size	512 x 512
p. Minimum acquisition bit depth	8
q. Minimum spatial resolution [lp/mm]	4.0
r. Minimum SID range [in]	21
s. Heat unit x-ray tubes [kHU]	300
t. Minimum control room monitor size [in]	19
u. Minimum in-room monitor size [in]	19
v. Minimum control room computer hard drive memory [GB]	250
w. Minimum patient opening [in]	21
x. Maximum system dimensions [cm]	177 x 152



y. Maximum system weight [kg]	1600
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2. Additional specifications

<b>Generator</b>	
<input checked="" type="checkbox"/>	a. High-frequency generator with automatic dose rate control
<input checked="" type="checkbox"/>	b. Continuous and pulsed fluoroscopy ma modes
<b>Fluoroscopic Tube</b>	
<input checked="" type="checkbox"/>	c. Configuration <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"><input checked="" type="radio"/></div> <div>Overhead tube</div> </div> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"><input type="radio"/></div> <div>Floor-mounted</div> </div>
<input checked="" type="checkbox"/>	d. Pulsed/grid fluoroscopic tube
<input checked="" type="checkbox"/>	e. Selectable filtration
<b>Fluoroscopic spot device/Imaging tower</b>	
<input checked="" type="checkbox"/>	f. Flat panel detector technology
<input checked="" type="checkbox"/>	g. Automated image capture and save, to include last image hold
<input checked="" type="checkbox"/>	h. Variable speed power assist controlled in all directions
<input checked="" type="checkbox"/>	i. Footswitch and tower controls, to provide the following: Control of both fluoroscopy and spot shots Automatic shut-off when footswitch or tower control is released
<input checked="" type="checkbox"/>	j. Removable lead curtains with counter weights for when curtains are not in use
<b>Radiographic/overhead tube crane system</b>	
<input checked="" type="checkbox"/>	k. Patient alignment system (laser alignment/positioning lights)
<input checked="" type="checkbox"/>	l. Table and upright auto tracking package
<input checked="" type="checkbox"/>	m. Pre-programmed exposure settings located on tube or in control room
<input checked="" type="checkbox"/>	n. Ability to change between table top, upright bucky, and table bucky from tube head
<b>Control room fluoroscopic/radiographic control panel</b>	
<input checked="" type="checkbox"/>	o. Auto HIS/RIS refresh package
<input checked="" type="checkbox"/>	p. Quality control tracking package
<input checked="" type="checkbox"/>	q. Bar code reader
<input checked="" type="checkbox"/>	r. UPS for x-ray control/image memory
<input checked="" type="checkbox"/>	s. Ability to send images directly from the control panel (no separate workstation required)
<input checked="" type="checkbox"/>	t. Ability to capture live video
<input checked="" type="checkbox"/>	u. DVD recorder
<b>Wall stand/fixed wall detector</b>	
<input checked="" type="checkbox"/>	v. Ability to position detector in portrait or landscape mode
<input checked="" type="checkbox"/>	w. Auto tracking
<input checked="" type="checkbox"/>	x. Tilting bucky
<b>In-room monitor</b>	
<input checked="" type="checkbox"/>	y. LCD control room monitor



<input checked="" type="checkbox"/>	z. LCD in-room monitor	<input checked="" type="radio"/> Ceiling-mounted <input type="radio"/> Pedestal-mounted
<input checked="" type="checkbox"/>	aa. In-room remote control to orientate and manipulate images	
<input checked="" type="checkbox"/>	bb. High contrast black and white	
<b>Removable table detector requirements</b>		
<input checked="" type="checkbox"/>	cc. Wireless detector (not tethered to the system/table)	
<input checked="" type="checkbox"/>	dd. Detector charger in bucky/holder	
<input checked="" type="checkbox"/>	ee. Additional battery	
<b>Table requirements</b>		
<input checked="" type="checkbox"/>	ff. Full articulation	
<input checked="" type="checkbox"/>	gg. Auto-centering option to exact middle while the table is in horizontal or vertical position	
<input checked="" type="checkbox"/>	hh. Table movement controls	<input checked="" type="radio"/> Tableside <input type="radio"/> Trolley
<input checked="" type="checkbox"/>	ii. Head-holder device for prone position	
<input checked="" type="checkbox"/>	jj. Removable/adjustable patient handgrips	
<input checked="" type="checkbox"/>	kk. Removable/adjustable footrest	
<input checked="" type="checkbox"/>	ll. Removable/adjustable shoulder rests	
<input checked="" type="checkbox"/>	mm. Removable/adjustable stirrups	

### 3. Software Requirements

<input checked="" type="checkbox"/>	a. Repeat rate – ability to track repeat/retake data to include such items as technologist (required unique identifier), reason for repeat, patient dose, exam type, etc. The data should be exportable to Excel or other databases for tracking, trending, and combining with data from other imaging sources within the facility.
<input checked="" type="checkbox"/>	b. Dose monitoring, must interface with NexoDose dose tracking software
<input checked="" type="checkbox"/>	c. Structured dose reporting

### 4. Security/Connectivity Requirements

<input checked="" type="checkbox"/>	a. OEM-supported operating system
<input checked="" type="checkbox"/>	b. DICOM 3.0 print, store, commit, and modality workload
<input checked="" type="checkbox"/>	c. HL7 integration (HIS/RIS)
<input checked="" type="checkbox"/>	d. Wireless connectivity to VA Network – Compatible with 802.11b/g/n and FIPS 140-2 compliant
<input checked="" type="checkbox"/>	e. Encrypted hard drive
<input checked="" type="checkbox"/>	f. PACS compatibility – Philips iSite/Intellispace

## C. TRAINING REQUIREMENTS



Description	No. of Personnel
1. On-site clinical applications training for technologists during go-live	11
2. On-site follow-up clinical applications training after technologists have hands-on experience with the system	11
3. Biomedical technician training package (to include tuition)	1

Biomedical technician training shall include any prerequisites required prior to the training and shall be equivalent to the training received by OEM field service representatives. Technicians shall be given all service manuals, schematics, diagrams, diagnostic software, other special tools, and keys equivalent to what OEM field service representatives have available to diagnose, troubleshoot, repair, and maintain the equipment.

Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).

Off-site training will not be purchased at the time of award. Vendors must demonstrate that they can provide any required off-site training listed above, therefore off-site training should be quoted as an optional item. Travel for VA employees is not authorized under the HTME contracts. In no case should any training include expenses for travel or travel for VA personnel at no cost.

## D. SERVICE REQUIREMENTS

1. VPN/Remote Access – The vendor shall provide, at no additional cost, 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 system manager (super user) manual outlining back-up procedures, managing privilege group limits, routine tasks, etc.
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 requirements with their proposals. 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

1. Product brochures
2. Technical specification sheets, to include dimensions and weight of the system



3. DICOM Conformance Statement
4. IHE integration statement
5. FIPS 140-2 certification
6. Completed pre-procurement assessment form (6550)
7. Completed MDS2 form
8. Detailed information about the curriculum and length of the biomedical technical training
9. Details on any off-site training offered for technologists
10. Information about your company's support structure during the warranty period
  - a. Describe on-line or telephonic applications support and availability (include third party coverage)
  - b. Provide a listing of field service engineer locations and availability
  - c. Provide a listing of part depots
11. Information about your company's support options following the warranty period, including a description of on-line or telephonic applications support and availability
12. Version/platform long-term plan
13. Two (2) copies of the product service manual (1 hard copy and 1 digital copy)

## 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.
<input type="checkbox"/>	b. In instances where sanitization of ePHI compromises the OS and/or application software, the operating system and application software will be reloaded by VA or a vendor contracted by VA on the native system post drive sanitization. Verification of system operation is the responsibility of the vendor.
<input type="checkbox"/>	c. VA has no trade-in units to offer.

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

Station	589-A4, Columbia, MO, 65201
Manufacturer	General Electric
Model	Precision 500D
EE/Asset Number	108949
Serial Number	91186247

