Equipment Specifications
Digital Portable Radiography
VISN 17/Central Texas Veterans Health Care System 674
[674-B90214]

Compliance spreadsheet is not needed for this requirement

A. REQUIREMENT OVERVIEW

Central Texas Veterans Health Care System (674) is requesting two Mobile Dart Portable X-ray systems replacements for two beyond economically repairable systems. These systems are used throughout the hospital supporting the ER, surgery, ICU, floors with portable x-rays. Requesting under emergency conditions due to the volume of work requested and service currently down by 50% capacity.

Facility	Quantity
674-Temple	2

B. TECHNICAL REQUIREMENTS

1.   Unit physical specifications

a.	High frequency generator power [kW]	32
b.	Generator kV range [kV]	40-133
c.	Tube maximum kVp [kVp]	133
d.	Generator mAs range [mAs]	.032-320
e.	Minimum exposure time [ms]	1msec
f.	Maximum exposure time [s]	3s
g.	Minimum tube rotation from axis in both directions [degrees]	360
h.	Minimum computer hard drive [GB]	500
i.	Maximum SID [cm]	200cm
j.	Minimum SID [cm]	10cm
k.	Maximum tube reach	47"
l.	Minimum tube reach	25"
m.	Number of wireless detectors	1
n.	Number of fixed detectors	N/A
o.	Minimum detector size [cm x cm]	35x43cm
p.	Minimum detector resolution [lp/mm]	3.2
q.	Maximum pixel size [μm]	125
r.	Maximum wireless detector weight with battery installed [lbs]	41
s.	Maximum fixed detector weight with battery installed [lbs]	N/A

t.	Detector distributed weight limit [lbs]	350
u.	Minimum detector field of view [cm x cm]	2 x 2 cm
v.	Minimum cord length for fixed detector [ft]	N/A
w.	Detector provision for shock/crush damage protection (cover, bumper, etc.)	yes
x.	X-ray tube minimum kUH [kUH]	300kHU
y.	X-ray tube focal spot range [mm]	0.7 x 1.3
z.	Drive battery type	Lead Acid
aa.	Minimum detector battery life without recharge [exposure/hour at kVp and mAs]	6 hours/120 exposures
bb.	Maximum charge time from no charge [hr]	3
cc.	Multi leaf tube collimation with light field accuracy [%]	2%
dd.	Minimum collimator rotation [deg]	90/90
ee.	Maximum image display time [s]	3 sec
ff.	Minimum display monitor size [in]	18inch
gg.	Minimum retractable cord length for unit [ft]	7 foot
hh.	Maximum system dimensions [cm]	56cmx129cm
ii.	Maximum system weight [kg]	1000 pounds
jj.	Other physical specifications	Safety bumper

2. Additional specifications

☒	a.	High frequency generator
☒	b.	Automatic dose control
☒	c.	On-board image touch screen display
☒	d.	Integrated dose reporting with RDSR reports
☒	e.	Ability to fully expose a 14x17 field at 40 inches (even when collimator is rotated)
☒	f.	Multiple IP destinations for images to be sent
☒	g.	kV range in increments of approximately 1kV
☐	h.	Collapsible column
☒	i.	Ability to release and move tube from arm (free release handles)
☐	j.	LED positioning light
☒	k.	Algorithms to reprocess for tubes and lines
☒	l.	Manual movement of portable when batteries are depleted
☒	m.	Ability to move portable from tube head
☒	n.	High efficiency detector
☒	o.	Ability to charge detector battery on unit
☒	p.	Trickle charge method for detector battery
☐	q.	Backup tether for DR Detector
☒	r.	Adjustable motor drive (low speed/high speed)

☒	s. Battery charge level indicator (estimated time/exposure remaining)
☒	t. Ability to make exposures on wall outlet connection
☒	u. Standard wall outlet connection with retractable cord
☒	v. On board computer (DR reconstruction and display)
☒	w. Pre-programmed exposure settings
☒	x. On-board user monitor with pop-up keyboard
☒	y. Repeat/Retake analysis
☐	z. Option for wireless and wired exposure control
☐	aa. Display monitor at tube head
☐	bb. Positioning handles on collimator, not on tube head
☒	cc. Grid and Gridless processing technology available
☐	dd. SID positioning aids (e.g. laser alignment)
☐	ee. Tube and detector angle alignment software
☐	ff. Wireless transmission of images to PACS
☐	ww. Other specifications multiple exposure hand switches

3. Software Solutions

☒	a. Rapid image display
☒	b. Image annotation
☒	c. Ability to apply multiple image processing algorithms both pre and post-acquisition to allow for soft tissue and/or bone enhancement.
☒	d. Ability to apply standard image editing functions, such as but not limited to; rotate, flip, zoom, window, level, etc.
☒	e. Monitoring of Dosage- The system must be able to supply a technology that allows for monitoring and tracking of radiation dose provided to a patient. DAP accuracy must be 99% reproducible with <2% deviation.
☒	f. Dose Reduction- The system must have systems in place to facilitate regular protocol optimization and reduced radiation dose to the patient.
☒	g. 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.
☐	h. Other software solutions – individual Tech log in

4. Security/Connectivity Requirements

☒	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 – Change Healthcare
☐	f.	Other security requirements

5.   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
☐	b.	Post-warranty remote diagnostic service program
☐	c.	Version/platform long-range plan
☐	d.	Other objectives

C. TRAINING REQUIREMENTS

1.   Clinical Training

☒	a.	On-site clinical applications training for [4] technologists during go-live
☒	b.	On-site follow-up clinical applications training for [4] technologists once technologists have hands-on experience with the system
☒	c.	On-site super user training during go-live for [2] personnel
☒	d.	Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).
☒	e.	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

☒	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.
☐	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.
☐	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	674
Manufacturer	Shimadzu
Model	Mobile Dart
EE/Asset Number	112499
Serial Number	410001B41010
Station	674
Manufacturer	Shimadzu
Model	Mobile Dart
EE/Asset Number	112500
Serial Number	410001B41017

G. SUMMARY OF REQUIREMENTS

This section outlines differences in requirements based on the unique needs of each facility. Vendors are encouraged to use the table below when developing proposals to best meet the requirements of each facility.

Facility	PO Number	Characteristic 1	Characteristic 2	Characteristic 3	Characteristic 4

Veterans Health Administration
Healthcare Technology Management