

Functional Requirements for **Portable Digital X-Ray System**  
For **Minneapolis (618) VA Medical Center 618-B69070**

**Technical Requirements**

**Portable System Requirements:**

1. 30kW generator or similar with High Frequency
2. On-board image touch screen display
3. Integrated Dose reporting with RDSR reports
4. Ability to fully expose a 14x17 field at 40 inches (even when collimator is rotated)
5. Minimum 270 degree tube rotation from axis in both directions
6. Multiple IP destinations for images to be sent
7. kV range: 35-125kV in steps of 1kV or similar
8. mAs range: 0.1 - 400 mAs or similar
9. Tube max: 125kVp or higher
10. If running a Windows Operating System, the OS will be Windows 7 or higher
11. Computer hard disk 300GB or greater
12. Collapsible column
13. Wireless worklist from RIS with ePHI available at point of care
14. Wireless: compatible with 802.11g and FIPS 140-2 compliant
15. Provide DICOM Conformance Statement
16. Provide completed Pre-Procurement Assessment Form (6550)
17. LAN connections (as backup)
18. Full warranty - minimum one (1) year
19. Ability to release and move tube from arm (free release handles)
20. Provide length, width, and weight of portable unit
21. Provide maximum SID
22. Provide minimum SID
23. Provide Maximum Tube reach
24. Provide minimum tube reach
25. LED Positioning light
26. Algorithms to reprocess for tubes and lines
27. Provide options/solutions for manual movement of portable when batteries are depleted
28. Provide drive battery type
29. Ability to move portable from tube head

**Desired Options:**

1. Pre-programmed exposure settings
2. On-board user monitor with pop-up keyboard
3. Repeat/Retake analysis
4. Option for wireless and wired exposure control
5. Display monitor at tube head
6. Positioning handles on collimator, not on tube head
7. Grid and Gridless processing technology available
8. SID positioning aids (e.g. laser alignment)
9. Tube and detector angle alignment software

**Detector Requirements:**

1. Size - No smaller than 35x43cm
2. Resolution - minimum 3.2lp/mm
3. Weight limit (w/battery installed) - less than 7.0lbs
4. Wireless (not tethered to the system)
5. Provide maximum direct weight limit of detector
6. Provide distributed weight limit of detector
7. Detector battery charged on portable, in detector
8. Trickle charge method for detector battery
9. Backup tether for DR Detector
10. Provide detector battery life without recharge (exposure/hour at kVp and mAs)
11. Full one (1) year warranty including drop protection
12. Provide maintenance requirements and drop policy (post warrant)

**Documentation to Provide:**

1. DICOM Conformance Statement
2. Pre-procurement Assessment Form (6550)
3. FIPS 140-2 Compliance Certificate

**Support**

1. Provide information about your company's support structure during the warranty period (i.e. a listing of Field Service Engineer locations and availability, support 800 phone number(s), remote support, etc.). Upon service being requested, call back time of 1 hour and on-site support within 4 hours is required.

**Training**

1. On-site applications during GO-LIVE – Minimum 24 hour
2. Super User training during Go-LIVE
3. Follow Up on-site training – minimum 24 hour