

-Nuclear Medicine Capital Equipment Specifications

Dual Head Nuclear Imaging System

Diagnostic Whole Body, Planar Imaging & Cardiac and General SPECT Imaging

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G.V.(Sonny)Montgomery VAMC is requesting a Nuclear Imaging System integrated with an acquisition system, and a processing & review workstation. This equipment will be used to provide diagnostic quality imaging in a wide range of nuclear imaging procedures requiring planar and SPECT imaging involving processing and reconstruction of data to provide generated curves and values for added interpretation of procedures.

Modality: SPECT Dual Head Gamma Camera

Capital Equipment:

1. Dual Detectors –all purpose, free geometry imaging system, with variable angle, cephalic and caudal tilt
2. Large Field of View Detectors: Rectangular UFOV ,with a minimum of 21.0” x 15.50” (54x40cm)detection area
3. High Performance Dual Head Configuration
4. High Resolution Detector -3/8”(9.5mm)NaI crystal thickness
5. High quantum efficiency PMTs (photo multiplier tubes)
6. Energy range 40-620keV
7. Persistence Scope
8. Slim gantry with a wide bore (70cm); gantry design to enable a wide range of versatility and operational flexibility
9. Detectors to provide upright and horizontal orientations and positioning capabilities for patients that may be seated, upright or on a stretcher.
10. Automatic Body Contouring (ABC) for enhanced scanning efficiency and resolution in whole body scanning and with 90 & 180 degree SPECT imaging.
11. Ability for user-generated pre-programmed protocols for gantry positions and imaging table.
12. User friendly, fast, semi-automatic dual collimator exchange.
13. Real time gantry display.
14. Handset for gantry use.
15. Patient imaging table, cantilevered, multi angle pivot, with cleanable mattress pad and straps
16. Imaging table to support patient weight >350lbs, scan length range greater than 74 inches.
17. Table height minimum 59cm (23 inches) important for patient loading and unloading from wheelchairs or stretchers.
18. Table accessories such as table extenders, head holder, arm supports.

19. Additional accessories such as leg rest/ supports/cushions, table pads and straps.
20. Patient Bed Multi-angle Pivot.
21. EKG trigger.

Collimators:

1. Low Energy High Resolution (LEHR) Collimators (x2) to be used for General All Purpose Images With dedicated collimator cart for exchange and storage.
2. Medium Energy General Purpose (MEGP) Collimators (x2) to be used for studies involving medium energy isotopes. With dedicated collimator cart for exchange and storage.
3. High Energy General Purpose Collimators (x2) for studies involving higher energy isotopes such as 131-I imaging. With dedicated collimator cart for exchange and storage.

Workstations:

Acquisition & Processing Stations:

1. Integrated image processing workstation:
Acquisition/Console high performance computer with Quad Core processor, 4GB RAM, 500 GB hard drive, 100 GB database, diagnostic color dual monitor, 23" wide screen flat panel display, acquisition/console hardware, Supplemental In-room SPECT Acquisition Control, hardware memory upgradeable, professional interpretation workstation hardware
2. Simultaneous acquisition and energy spectrum histogram display.
3. Pre-defined or user generated protocols for rapid setup and recall.
4. Acquisition protocols for whole body, SPECT and gated SPECT with acquisition terminations with preset time/counts, capability for manual stop and resume acquisitions.
5. Motion detection and correction
6. Automated cardiac and general purpose SPECT motion correction integration.
7. Cardiac and general purpose SPECT reconstruction packages: Renal analysis and Renogram, whole body bone and spot reviews, gallbladder analysis & GB ejection fraction analysis, gastric emptying analysis with software support for up to 4 hour delay data, lung analysis for Vent/Perf, brain SPECT processing analysis, parathyroid analysis for planar and SPECT protocol, thyroid scan analysis, and other nuclear medicine imaging procedures.
8. HIS/RIS interface
9. Bilateral pinhole "motion enhancement" capability
10. CD-RW/DVD-RW multi drive
11. Keyboard and mouse
12. Cardiac analysis program-Emory Cardiac Toolbox
13. Cedars Sinai cardiac analysis program
14. Cedars Sinai Blood Pool Gated SPECT analysis program
15. Workstation UPS

16. Image quality recovery analysis with half dose or half time application

Software:

1. Acquisition Software
2. DICOM 3.0 Compatible Worklist
3. SPECT Processing
4. Nuclear Medicine Diagnostic Applications
5. Software Licenses
6. Thin Client (Optional)
7. Server Management (Optional)

Advanced Applications:

1. Whole Body SPECT Capability
2. Advanced Nuclear Cardiology SPECT
3. SPECT QC Package (Cedars QGS/QPS, Emory TB, 4DM)
4. Advanced Nuclear Oncology
5. Advanced Nuclear Neurology
6. Advanced Iterative Reconstruction//Processing for Nuclear Medicine/Nuclear Cardiology
7. Advanced Resolution Recovery
8. ½ time/dose Planar
9. ½ time/dose SPECT
10. Multi-frame Secondary Capture
11. Processing Placeholder
12. Remote Diagnostic Services
13. Applications Support
14. 3D/CTA Fusion Overlay (optional)

Accessories/Additional Items:

1. Internal ECG/Cardiac Gate
2. External ECG Connectivity/Input
3. ECG Monitor/Stand
4. Flood Source/Holder
5. Four Quadrant Bar Phantom
6. Point Source/COR Source/Holder
7. Scanner UPS
8. Under Floor/Above ground Cable (s)
9. Syringe wall holder for QA purposes
10. Main Disconnect Panel
11. Acquisition/Control Room console configuration and furniture
12. All applicable Operators Manuals x2
13. Install/Project Management

14. UPS to maintain total system functionality for 10 minutes without Facility power

Training:

1. Initial Onsite Applications Training (x1 week)
2. Follow-up Onsite Applications Training
3. Onsite Advanced Applications Training (x1 week)
4. Offsite Training for two technologists
5. Offsite Training Travel Package (Lodging/Meals/Transportation) for two technologist
6. Biomed Basic Training for two Biomedical Engineering staff
7. Biomed SPECT Training for two Biomedical Engineering staff
8. Biomed Console Training for two Biomedical Engineering staff
9. Biomed Workstation Training for two Biomedical Engineering staff
10. Web based Training for two Biomedical Engineering staff
11. Biomed Training Travel Package (lodging, meals, transportation) for two Biomedical Engineering staff

Options:

1. Auto QC
2. Advanced Nuclear Cardiology Configuration/Hardware/Processing

Turn in-removal for unit below:

EE# 38980

Equipment Manufacturer: Philips

Model: Forte

Serial #: FA06060287

Location: C32B-01

Acquisition Date: 7/19/2006