REQUESTING SERVICE: RADIOLOGY SERVICE
SHIP TO: SUPPLY WAREHOUSE
     V.A. Medical Center
     BUILDING 36
     79 MIDDLEVILLE RD
     NORTHPORT, NY 11768

Qty	Item Description
1	**Symbia Evo** The Symbia Evo is a variable angle dual detector SPECT imaging system with an open gantry designed to maximize patient comfort and fast data acquisition. Equipped with Foresight Digital detectors, the Symbia Evo offers the industry's leading image quality for general purpose imaging as well as dedicated Cardiac SPECT applications. The Symbia Evo can be upgraded to Symbia Intevo Excel, Intevo 2, 6, or 16. The Symbia Evo comes equipped with a user-friendly software interface which is seamlessly integrated with the Windows 7 operating system.
2	**Low Profile 3/8"" Detectors** The low profile high resolution, digital detector assembly includes a .95 cm (3/8 in.) thick NaI (Tl) crystal.
1	**Caudal Tilt** Caudal tilt on Detector 2 allows for precise positioning of static and dynamic acquisitions.
2	**Low Energy High Res Collimator** Low energy (140 keV), high resolution, parallel hole collimator
2	**Medium Energy Collimator** Medium energy (300 keV), parallel hole collimator
2	**High Energy Collimator** High energy (364 keV) parallel hole collimator
1	**Pinhole Collimator** Pinhole collimator with a 4mm aperture
1	**6mm Aperture** The 6 mm aperture is a high sensitivity insert for the pinhole collimator.
1	**8 mm Aperture** The 8 mm aperture is a high sensitivity insert for the pinhole collimator.

Qty	Item Description
1	**Symbia Productivity Package**
	The productivity package automates collimator exchange and quality control, increasing the productivity of the Symbia Intevo and Evo camera systems.
1	**Collimator Cart**
	The collimator cart is designed to hold collimators and allows collimator exchange without pivoting the bed.
1	**Collimator Cart**
	The collimator cart is designed to hold collimators and allows collimator exchange without pivoting the bed.
1	**AQC Web Based Training**
	AutoQC web based training is available on the Siemens training website.
1	**AutoQC source kit**
	This source kit contains includes 1 - Gd-153 line and 1 - Co-57 point source required for the automatic quality control option.
	Note: The site Radioactive Material License may need to be updated to receive this source.
1	**Internal ECG for Symbia**
	The internal ECG gating system provides ECG triggering for the nuclear subsystem for nuclear cardiology examinations. In addition, for Symbia Intevo Excel, 2, 6 and 16, and T2, T6, and T16 cameras, the internal ECG gate provides ECG triggering to the CT subsystem for CT applications that require ECG gating.
	The ECG gate is built into the Symbia patient bed and is controlled by the Symbia acquisition workplace. The leads are AHA (American standard) color coded. They connect near the head of the patient bed and travel with patient, thus never interfering with scanning.
	The ECG waveform is displayed on the touch-screen Patient Positioning Monitor.
1	**Extra Hand Controller**
	Provides an extra hand controller for the scanner.
1	**UPS for Symbia Camera Systems**
	Uninterruptible power supply option that provides 10 minutes of back up power to the SPECT gantry enabling the proper shut down in the event of a power loss. Also provides noise filtering and transient suppression.
	Specifications:5.0 KVA Input configuration: 200-240 VAC, 50/60 Hz, L6-30P Output configuration: 208 VAC, L6-30R
1	**UPS for e.soft/c.cam (60 Hz)**
	Uninterruptable power supply option that provides 10 minutes of back up power enabling the proper shut down of the system in the event of a power loss.
1	**Monitor: 19 inch LCD**
	The 19" LCD Monitor is an economic monitor solution
1	**Additional System Manuals**
	Additional user manual for the above selected MI system.
1	**Organ Processing for Symbia**
	This upgrade will add organ processing capabilities to your acquisition workplace.

Qty	Item Description

1

Planar 1/2 Time Imaging

Planar 1/2 Time Imaging provides shortened Planar acquisition times.

1

Cardiology Engine 4DM

The Cardiology Engine Corridor4DM assists in the diagnosis and quantitative assessment of coronary artery disease by enabling the visualization of SPECT studies as well as quantified perfusion assessment.

1

DoD Level Security - SPECT

US Department of Defense Identifier

1

Syngo Security Package

The syngo Security Package provides enhanced security features including user management and audit trail functionality.

1

Remote Diagnostic Services

Siemens Remote Services. A broadband VPN connection is required for full remote service functionality and optimal system uptime.

1

Under Floor PHS Cable SPECT

This option includes a kit for installing the cable between patient bed and the Symbia gantry under the floor.

1

SPECT US Installation

This option includes the mechanical installation of the Symbia Evo series scanners.

1

Elevate S e.cam USA

Elevate is a Siemens Healthineers customer care program that helps you get the most from your investment. As a valued customer, MI Elevate offers customers a wide range of solutions and benefits for your existing installed Siemens Healthineers MI system.

As you consider the options for replacing your existing SPECT system, Siemens Healthineers is committed to helping you find the solution that best fits your needs and enable a smooth transition to your next-generation SPECT or SPECT/CT system. Allowing you to stay competitive with the latest technology in healthcare.

MI Elevate additionally serves as a GREEN initiative. When you Elevate your existing e.cam, this enables us to reuse and recycle your deinstalled system responsibly, utilizing the whole system or its parts, reducing our environmental impact.

1

teamplay Basic

Healthcare professionals, come together in teamplay's rich digital ecosystem to access both the metrics from their own imaging fleet and a vast shared pool of imaging data. As a community, you connect and collaborate in a secure environment with high data privacy and security standards. teamplay BASIC applications include Dose, Usage and Image data management functionalities free-of-charge.

Its easy onboarding allows you to register on teamplay´s digital platform and download the needed software to set it up in your institution: Click > Try for free at www.siemens.com/teamplay

1

Initial onsite training 32 hrs

Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

Qty	Item Description

1   **GOV'T ONLY - MI SPECT Training Class**

Tuition for (1) government attendee to attend a classroom course of choice at one of the Siemens training centers. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

1   **GOV'T ONLY - MI SPECT Training Class**

Tuition for (1) government attendee to attend a classroom course of choice at one of the Siemens training centers. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

1   **MI SPECT Project Management**

A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.

1   **SPECT Cardiac syngo Remote Trainer**

This offering is for one (1) Cardiac Remote Trainer(sRT) session of up to 60 minutes on either Cedars or Corridor 4DM and allows up to (4) imaging professionals to participate. This virtual training experience provides you with the knowledge required to unlock the potential of the cardiology packages from Cedars and Invia including quantification of cardiac examinations. Powered by a secure broadband Virtual Private Network (VPN) connection, syngo Remote Trainer connects to your Siemens imaging console and provides you with real-time support and training. An SRS connection must be activated to utilize syngo Remote Assist. This educational offering must be completed by the later of (12) months from purchase or install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

1   **SYMBIA S/Symbia Evo Excel Gantry Class**

This educational offering includes system training tuition for 1 clinical engineering professional on the Symbia S, EVO, or Excel system, and the syngo multimodality workstation as applicable. The training curriculum depends on and is limited to the system purchased and may include multiple courses including classroom training in USA or an international site, and/or virtual and web-based training. Additional modality basics training may be required as a prerequisite to these courses and must be purchased separately. This system training includes a 15% discount. Travel and lodging are not included. This educational offering must be completed by the later of (12) months from purchase or install end date; if training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund. This forfeiture does not apply to Federal government agencies.

:

Offset Part 14421656 Additional System Manuals

MISYS_ELV_ECAMHD   Elevate e.cam HD

Initial onsite training 32 hrs Gov Offset

Offset SYMBIA S/Symbia Evo Excel Gantry Class Complimentary Biomed Training

Detailed Technical Specifications

Description

The Symbia Evo has the following base features:

- Gantry
- Patient Bed
- Acquisition Workplace
- SPECT Acquisition Features

Gantry

The gantry has two Variable Angle SPECT detectors and an, open design with 102 x 78 cm (40.2 x 30.7 in) patient opening. The two Foresight Digital SPECT detectors can be configured for a myriad of applications including 76° or 90° for cardiac applications and at 180° or numerous other configurations for all other whole body and general protocols. The unobstructed gantry base permits planar imaging of seated and standing patients and patients on wheelchairs, or on standard imaging tables, gurneys and hospital beds. Optional caudal tilt of one detector allows for optimum detector positioning of static and dynamic acquisitions. The contemporary design of the gantry incorporates Siemens-typical design elements.

The gantry supports circular orbits and non-circular orbits using autocontour. Autocontour, with infrared real-time body contouring, is a standard component which minimizes patient to collimator distance to 1.2 cm (0.45 inches) in Whole Body and SPECT noncircular orbit acquisition modes.

All motorized motions of the patient bed, gantry and detectors are controlled from the hand controller which can be plugged into either side of the gantry.

The Patient Positioning Monitor (PPM) is a touch screen flat panel display monitor which can be rotated for a wide range user access and visibility. It is used for the following functions:

- Patient Positioning with window and persistence adjustment
- Acquisition Parameter display (elapsed time, time remaining, view number, count rate, etc.)
- Detector and bed position information
- Gantry Control (reconfiguration, collimator change, offset zoom

Patient Bed

The patient-oriented design of the imaging bed consists of 40.0 cm (15.8 inch) wide and 2.6 mm (0.10 inch) aluminum pallet, supporting patient weights up to 227 kg (500 lbs). Minimum bed height is 53 cm (21 inches) for easy patient access. Programmable table positions for wheelchairs and gurneys minimize the transport efforts of patients and staff. Integrated rulers on each side of the patient bed, allow for quick whole body set up. The patient bed can easily be removed for rail-free access of sitting/standing patients, wheelchairs, imaging tables, gurneys and hospital beds.

A fully integrated source holder is provided for quick and convenient quality control.

Since patient comfort plays an important role in high quality medical imaging, the Symbia Evo comes equipped with the following comfort accessories:

- a head holder to support and stabilize the head during brain SPECT examinations
- a SPECT armrest to support upper arms and hands during SPECT examinations
- a whole body armrest to support the arms and keep them within the detector field of view during whole body examinations
- a set of patient support straps to help patient lie still on bed

Acquisition Workplace

The syngo-based high performance acquisition workstation provides a wide range of clinical acquisition protocols utilizing a graphical user interface, keyboard and mouse.

Description

SPECT Acquisition Features

SPECT Acquisition Modes:
- Planar static and dynamic
- Whole Body
- SPECT
- Gated SPECT
- Dynamic SPECT
- Whole Body SPECT

Workflow Features:
The system combines acquisition, post-processing (optional), and display into user customizable workflows that automate many clinical routines, remembering parameters for each clinical protocol, the workflow will automatically print, archive, and distribute your results to other devices on your network.

Quality Control:
Automatic and manual motion correction features aids in the improvement of the quality of the acquired images. Besides correcting for motion, gated studies can be beat normalized and quality control images such as sinograms and linograms created to document the results.

3D Orientation:
Reorient acquired SPECT volumes interactively to achieve the desired image orientation. Cardiac and general orientations are supported. If desired, the orientation applied to one volume can be automatically applied to up to 3 additional volumes.

Image Registration:
Multiple techniques provide accurate registration of acquired images including translation and rotation in three primary planes, optional automatic registration and landmark registration. The choice of output matrix size is a standard feature.

Reconstruction:
The reconstruction engine can resconstruct up to 5 volumes concurrently. Standard SPECT as well as wholebody, dynamic and gated cardiac volumes can be created. An advanced technique that provides high image quality comes standard with our system.

Flash 3D is a 3D iterative image reconstruction solution which offers the best reconstruction resolution in the market today following NEMA requirements. Flash 3D reconstruction uses a measured 3D collimator beam model in the iteration process. Correct modeling of the collimator distributes the activity over the slices for more accurate reconstruction. With Flash, the spatial resolution of the collimator is modeled to maintain the precise shape of the lesion. As a result, images are reconstructed with more counts in the correct volume, increasing image contrast.
The key components behind Flash 3D technology are:

- Ordered Subset Expectation Maximization (OSEM) reconstruction algorithm using 3D collimator modeling to increase resolution and decrease noise, while maintaining the exact shape of organs and lesions, when compared to filtered back projection reconstruction.

- Scatter Correction that uses patient specific scatter projection estimates to form a generalized dual-or triple energy window method to compensate for scatter during the iterative reconstruction process.

Symbia utilizes energy independent low profile digital Foresight detectors.

Detector assembly technical specifications:
- True rectangular FOV of 38.7 x 53.3 cm (15.25 x 21 in.)

Description

- 59 photomultiplier tubes – 53, 7.6 cm (3 in.) and 6, 5.1 cm (2 in.) diameter tubes
- .95 x 59.1 x 44.5 cm (3/8 x 23 x 17.4 in.) NaI (Tl) crystal material

The Low Profile Digital Foresight Detector features:

- Balanced performance between energy resolution and spatial resolution
- One, 10-bit high-speed flash ADC per PMT
- Variable PMT selection ensures high resolution for all multi-energy and multi-peak applications
- Optimized dynamic digital integration time to improve high count rate capability
- Individual PMT pile-up correction for improved performance at high count rates
- Energy independence maintains clinical performance at all energies including multi-peak and dual isotope studies
- Location independence maintains consistent spatial resolution across the field of view
- Crystal variation correction for optimal uniformity and linearity across all energies

Single source (Co-57 or Tc-99m) tunes the detector for all energies

The low energy high resolution collimator has the following technical specifications:
- 148,000 hexagonal holes
- Sensitivity: 202 cpm/microCurie
- Resolution: 7.5mm at 10 cm
- Weight: 22 kg (49 lbs)

The medium energy collimator has the following technical specifications:
- 14,000 hexagonal holes
- Sensitivity: 275 cpm/microCurie
- Resolution: 12.5 mm at 10 cm
- Weight: 64 kg (140 lbs)

The high energy collimator has the following technical specifications:
- 8,000 hexagonal holes
- Sensitivity: 135 cpm/microCurie
- Resolution: 13.4 mm at 10 cm
- Weight: 125 kg (275 lbs)

Due to the weight of these collimators, it is recommended that an individual collimator cart containing only the 2 high energy collimators be utilized.

The pinhole collimator with 4 mm aperture has the following technical specifications:
- 1 round hole
- Sensitivity: 123 cpm/microCurie for 99m Tc
- Resolution: 6.6 mm at 10 cm
- Weight: 80 kg (177 lbs)

SPECT imaging with a pinhole collimator is not allowed.

The pinhole collimator occupies the upper 2 locations on a collimator cart; Therefore, only an additional 2 collimators (1 pair) can be stored on the same cart.

The 6 mm aperture has the following technical specifications:
- Sensitivity: 271 cpm/microCurie for 99m Tc
- Resolution 9.5 mm at 10 cm

Description

The 8 mm aperture has the following technical specifications:
- Sensitivity: 478 cpm/microCurie for 99m Tc
- Resolution: 12.5 mm at 10 cm

The productivity package includes the following features:
- Integrated Collimator Changer
- Automatic Collimator Exchange
- Automatic Quality Control

Integrated Collimator Changer

Innovative collimator exchange system that is mounted beneath the patient bed. Saves time and effort when changing collimators. Holds two sets of low or medium energy collimators including SMARTZOOM collimators.

Automatic Collimator Changer

Fully automated changing of collimators within the integrated collimator changer. Collimator removal or exchange is initiated from the patient positioning monitor.

Automatic Quality Control

Automatic quality control is performed via self-shielding Gd-153 line and Co-57 point sources. The sources are housed in the patient bed and are extended automatically as part of the camera's quality control procedures. The daily, weekly, and monthly procedures are customer scheduled and performed automatically without manual intervention.

The collimator cart is automatically clamped to the patient bed once positioned by the user. The clamping mechanism allows precise collimator exchange to occur.

The collimator cart is designed to hold 2 sets of collimators, or 1 set in combination with a pinhole collimator.

Due to the weight of the high energy collimators, it is recommended that an individual collimator cart contains only 1 set of high energy collimators.

The collimator cart is automatically clamped to the patient bed once positioned by the user. The clamping mechanism allows precise collimator exchange to occur.

The collimator cart is designed to hold 2 sets of collimators, or 1 set in combination with a pinhole collimator.

Due to the weight of the high energy collimators, it is recommended that an individual collimator cart contains only 1 set of high energy collimators.

The useful life of the 370 MBq (10 mCi) Gd-153 line, used for daily extrinsic floods and monthly multi-head registration procedures, is 2 years. The useful life of the 1.85 MBq (50 µCi) Co-57 point, used for intrinsic floods, is 1 year.

Sources that have been replaced are returned to the source vendor for disposal. Return shipment costs are not included in the purchase price.

The Symbia scanner comes standard with a single hand controller that can be plugged into either side of the gantry. This option adds an additional hand controller for added efficiency in accessing the motorized motions for the patient bed, gantry, and detectors.

Specifications:

Description

1.4 KVA

Input configuration: 120 VAC, 5-15P
Output configuration: 120 VAC, (6) 5-15R

The Monitor: 19 in. LCD technical features are:
  - 19" active display
  - Optimal picture resolution of 1280 x 1024
  - Anti-glare panel surface
  - Up to 170 degree viewing angle

Organ processing provides generic tools for the manipulation of NM images. In addition, it provides dedicated processing protocols for the many different types of exams performed in nuclear medicine departments. Features provided are:

- Cardiac: Planar Gated Blood Pool, First Pass, Shunt
- Lung: Perfusion, Ventilation, V/Q
- Thyroid
- Renal: GFR, ERPF, MAG3, Transplant, TER, Ace Inhibitor
- Gastric
- Hepatobiliary
- Brain: Patlok, Lassen, IMP, IMP-ARG, NIMS
- GSA Liver
- Parathyroid: Scaled subtraction
- Image manipulation tools: Series Filter, Series Arithmetic,
- Series Reformat, and Series ROI and Curve
- Manual Fusion

The Planar ½ Time Imaging package is based upon a statistical, adaptive de-noising and de-blurring process for planar imaging. It can be used to:

— Shorten the acqujsition time of planar imaging, and/or
— Reduce the dose administered to the patient, and/or
— Enhance the image quality of statistically poor imaging results

---

The Cardiology Engine provides the Corridor4DM Cardiac Suite, a comprehensive set of quantitation programs for the evaluation of SPECT Myocardial Perfusion Imaging

The Corridor4DM application includes comprehensive interactive processing and display, generation of 2D, 3D, and polar maps images, calculation of ventricular volumes, myocardial mass and ejection fraction for gated SPECT studies and utilizes gated bloodpool data to calculate left ventricular Ejection Fraction. Compare perfusion and functional polar maps to gender matched normal files, which includes additional support for attenuation correction. Also included are a normal database generator and the ability to create reports within the Corridor4DM application. The Corridor4DM application is an OEM product developed and supported by INVIA.

Outputs include DICOM secondary capture files, result files, reports as well as the ability to generate an AVI or TIFF file.

Supported software for Profile Reconstruction cardiac data

Applications include: Corridor4DM Cardiac Suite

The DoD Level Security option ensures that the system conforms to the Defense Information Systems Agency's Standard Technical Implementation Guides (DISA STIGs). This level of security provides for the following:

Description

- Secure configuration and hardening
- Whitelisting anti-malware protection
- Quarterly security updates

Enhanced user management, including:

- User authentication to prohibit unauthorized access
- Privileges to define user/role based functionality
- Permissions to control data access
- Audit trails to log system and data access.

A broadband connection is required for full remote service functionality and optimal system uptime. The Siemens Remote Service option allows for remote access to your networked workstations. Hardware may need to be purchased.

Features include:
- Image Transfer
- Remote updates including Virus Protection
- Error log retrieval
- Remote Workflow revisions
- Remote configuration
- License management
- Remote workstation control via netmeeting

This option does not include the cost of any room modifications for sub-floor installation of the cable.

Installation includes:

- Complete system assembly
- Alignment
- System startup
- Calibrations
- Performance verification to factory specifications

teamplay BASIC applications provide a locally installed teamplay receiver software with web-based data analytics capabilities in the area of Dose, Usage and Image data management.

teamplay Dose BASIC application and teamplay Usage BASIC application are restricted to datasets produced by Siemens modalities.

Its easy onboarding allows you to register on teamplay´s digital platform and download the needed software to set it up in your institution: Click > Try for free at www.siemens.com/teamplay

teamplay Receiver software
teamplay Receiver software is a DICOM gateway that is installed on the local institution network to manage communication of data between hospital systems and teamplay servers and manage conformity with local data privacy regulations.

Functionalities of the teamplay Receiver software:

- DICOM fetch and receive (Query/Retrieve and C-STORE)
- Choice of three data privacy levels
- Automatic software updates

The teamplay Receiver software can be installed on hardware or virtual machines provided by the customer meeting the minimum requirements listed below.

Description

- Windows 64-bit server or client operating system
  (at least Windows Server 2012 R2 or Windows Server 2016 is recommended for a production environment although Windows 10 may be used):
  min. dual core CPU system
  min. 4 GB memory
  at least 200 GB free dirk space (< 500 GB recommended)
- Recommendation for small sites (up to 50.000 procedures per year):
  at least 4 core system
  at least 8 GB memory
- Recommendation for medium sites (between 50.000 and 250.000 procedures per year):
  at least 6 core system
  at least 8 GB memory
- Recommendation for large sites (more than 250.000 procedures per year):
  at least 8 core system
  at least 16 GB memory
- At least 6 Mbit/s upload bandwidth to the Internet

The minimum hardware requirements are applicable when fetching data for teamplay Dose and Usage using DICOM Q/R. For scenarios where data will be actively sent to teamplay using DICOM C-Store the hardware requirements depend on the actual load and needs to be adjusted accordingly. Please contact the Siemens teamplay support for help

teamplay Dose:
teamplay Dose provides easy access to dose data to support the quality assurance process for monitoring imaging radiation doses across the fleet of scanners in the institution.

teamplay Usage:
teamplay Usage provides an intuitive way to display an overview of the fleet utiliziation of all institutional diagnostic imaging scanners.

teamplay Images Research:
teamplay Images Research provides the functionality to receive imaging data from other teamplay members for research and education.
Caution: teamplay Images Research is not intended for clinical use.

teamplay Images:
teamplay Images provides the functionality to receive imaging data from other teamplay members.