

XR-CATH LAB, VAMC LOUISVILLE, KY

PO# 603-B40011

| Qty | Item Description |
|-----|---|
| 1 | Interventional Cardiology X-ray angiography system with primary clinical use in interventional cardiology, including application-specific accessories. |
| 1 | Artis zee floor Universal floor-mounted C-arm angiography system with a high-resolution flat detector. The motorized rotation of the floor stand into the lateral position enables complete patient access at the head end and generous patient coverage. The powerful 100 kW generator and MEGALIX Cat Plus X-ray tube with its new flat emitter technology are the prerequisites for excellent image quality. The CLEAR functionality to optimize the image impression, the CARE package to reduce radiation exposure, and DICOM standards are all included. The system has been prepared for Siemens Remote Service. |
| 1 | Sys SW incl cardiac acquisition Imaging system software including cardiac acquisition with frame rates of 7.5, 10, 15, and 30 f/s. Acquisition, display, and storage in 1k/12-bit matrix. |
| 1 | DSA / DR (1) Digital acquisition technology and digital subtraction angiography in matrix 1k. |
| 1 | Detector 20X20 incl.Compnts. (F)-EP High-resolution, dynamic flat detector for fully digital imaging chain, with integrated, removable grid. CAREwatch measuring chamber for detection of the dose-area product. MEGALIX 2-focus high-performance X-ray tube assembly, rotatable card collimator including CAREfilter, integrated collision protection and StraightView. |
| 1 | Table with Tilt Floor-mounted swivelling patient table with telescopic foot, floating and tiltable tabletop; motor-driven stepping for digital peripheral angiography. Table control module, power-assisted. |
| 1 | Tabletop & Mattress, Wide Carbon fiber tabletop including special foam mattress in wide, straight design. Mattress including cover. |

| Qty | Item Description |
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| 1 | Foot Switch Monopl. (Cable) For release of fluoroscopy, exposure and table brake as well as a configurable additional function. Cable connection. |
| 1 | Connection Kit - 2nd Foot Switch Connection kit for connecting a second tableside foot switch. |
| 1 | Foot Switch Monopl.(Wireless) For release of fluoroscopy, exposure and table brake as well as a configurable additional function. Wireless connection via radio communication. |
| 1 | Large Display with DCS 60" or 56" color flat screen display (including cables) for the examination room, installed on a ceiling-mounted, longitudinally mobile, swiveling, rotating, and height-adjustable display suspension system (DCS). A video controller (MDM) that can process up to 21 video input signals. Direct selection of display configurations (max. 12) via the tableside control module. |
| 1 | LD MDM-Controller Medium 18 Inputs The Large Display Multi Display Manager Controller Medium is one of three different video controller sizes and can be equipped with up to 18 video input channels. Up to 18 video input channels also can be shown simultaneously on the large display (LD). |
| 1 | LD Input external EP kit Contains all required connection kits for connecting the external analog and external digital video signals for the Large Display. |
| 1 | LD input VGA ext. (ultrasound) Analog input for an analog VGA video signal, e.g. from the ultrasound. |
| 1 | ACE Cable Set in Equipm.Room Image system interface to the displays in the control room if the image system is installed in the equipment room. |
| 1 | C-Room DVI 1xBWD-19 (Live) -36m One monochrome 19" flat-screen display with blue background color. |
| 1 | ECG Interface (1) Recording, storage and display of an ECG lead. Displayed together with the image information on a single monitor. |
| 1 | Sensis XP Interface f.Large Display Bi-directional communication interface between Artis zee with Large Display and the AXIOM Sensis XP hemodynamic and/or electrophysiology recording system. |
| 1 | LV analysis Analysis of the left ventricle with distance measurement and calibration. |
| 1 | Vessel analysis Vessel analysis with determination of degree of stenosis, distance measurement and calibration. |
| 1 | Fluoro Loop (1) Storage and review of dynamic fluoroscopic sequences (Fluoro Loop). The maximum storable fluoroscopic time depends on the selected pulse rate, e.g. 34 s at 30 p/s, 68 s at 15 p/s (VC21 software required). Note: With VC14 software, the values are 17 s at 30 p/s, 34 s at 15 p/s. |
| 1 | Automap Automatic stand positioning depending on the selected reference image and automatic reference image selection depending on the stand positioning. |
| 1 | MULTISPACE.F Manual stand rotation for additional work positions. |

| Qty | Item Description |
|------------|---|
| 1 | DICOM HIS / RIS Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist). |
| 1 | DICOM MPPS Feedback of examination status via DICOM MPPS (Modality Performed Procedure Step) to an external RIS/HIS patient management system. Data such as the dose-area product can be transferred to the RIS. |
| 1 | DICOM Print Provision of DICOM Print service for connection to a laser camera or a network printer (postscript). |
| 1 | LB rad. protection w/ pivot arm For shielding the lower body against scattered radiation within the examiner's moving range. Specially designed for avoiding collisions with the tube during oblique projections, therefore especially suited for cardiology. |
| 1 | Upper Body Rad. Prot. Artis-T To protect the upper body against scattered radiation within the operating range of the examiner, e.g. during interventional procedures. |
| 1 | Interface for C-Room Operation(MA) Interface for connecting the optional system control from the control room. |
| 1 | Control room emerg. stop module Safety button for switching off all system functions from the control room. |
| 1 | Hand switch manual Additional hand switch for radiation release and additional control functions. |
| 1 | Control Room Injector Interface Interface for controlling the contrast medium injector from the control room. |
| 1 | syngo Keyboard, English - US Keyboard with special syngo keys. |
| 1 | Intercom - Comfort Communication / intercom system for communication between examination room and control room. |
| 1 | Connector Panel Connector panel for installation in the Artis table base for plug connection of country-specific type (USA/Canada). |
| 1 | Armholder (pair) Two arm holders for comfortable lateral arm positioning along the patient's body. |
| 1 | VA kit Artis zee systems Second set of documentation for deliveries to the Veterans' Affairs Administration Hospitals in the U.S. |
| 1 | LB rad. prot. w/ left pivot arm For shielding the lower body against scattered radiation within the examiner's moving range. Specially designed for avoiding collisions with the tube during oblique projections, therefore especially suited for cardiology. |
| 1 | Upper Body Rad. Prot. Artis-T To protect the upper body against scattered radiation within the operating range of the examiner, e.g. during interventional procedures. |

| Qty | Item Description |
|-----|---|
| 1 | Examination lamp, 115 V Ceiling-mounted OR lamp (examination light class), flexibly adjustable towards the user, for diagnostics and minor surgery. Examination light Mach 130F with focusable dielectric light system. - Luminance: 35,000 Lux (3,255 fc) for 100 cm distance - Working distance: 70 to 140 cm - Color rendering index Ra (gen.): 96 - Color temperature: 4,300 Kelvin - Focusable spot size: 14 to 25 cm - Light body diameter: 22 cm - Halogen lamp: 22.8 V/50 W Examination light power connection 115 V Only in connection with upper body radiation protection 144 07 034 or 144 07 035. For direct connection with 115 V line voltage only. Max. arm length: 185 cm. Weight: 14 kg *2 May only be delivered in the USA with the local material no. or sales no. in the US price book |
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| 1 | Pre-install Artis-F (mono) |
| 1 | Pre-install Artis table, std |
| 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. |
| 1 | Follow-up training 32 hrs Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. 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. |
| 1 | Follow-up training 12 hrs Up to (12) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. 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. |
| 1 | Eaton Powerware 9390 160 kVA UPS Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware. Complete system backup without interruption. One UPS per lab. Not approved for sites requiring OSHPD certification. Please contact XPAS Inside Sales for configuration of an OSHPD certified configuration. |
| 1 | Blue anti-fatigue floor mat for hospital |
| 1 | Standard Rigging zee SP |
| 1 | Offset Initial Training 32 hrs |

Qty

Item Description

1

Mark 7 Arterion, Pedestal System

The Arterion Mark 7 Pedestal contrast medium injector can be positioned anywhere at the patient positioning table on a mobile unit, for direct operation of all functions in the examination room. The injector system includes: A mobile pedestal stand with electronics unit, a contrast medium heater and a connection cable to the manual release. A support arm with injector head and a control lever for moving the injector head. A user control console with large touch screen and corresponding additional monitoring display on the injector head. Functions Pressure limitation: for 150 ml syringes 689 to 8273 kPa, corresponds to 100 to 1200 psi. . Flow rates for 150 ml syringes: 0.1 to 45 ml/s in increments of 0.1 ml/s 0.1 to 59.9 ml/min in increments of 0.1 ml/min rise/fall: 0 to 9.9 s in increments of 0.1 seconds Release delay for injection or radiation: 0 to 99.9 s in increments of 0.1 s. Adjustable volume for 150 ml syringes: 1 ml to the max. syringe capacity in increments of 1 ml. Fill rate: Variable syringe filling speed 1-20ml/s. Injection protocols: Up to 40 injection protocols possible. Parameters currently displayed on the touch screen display and on the head display: Injection speed Injection volume Remaining volume Injection duration Applied pressure Contrast medium heating: Nominal 35°C (95°F)+-5°C (9°F) Injection data memory Up to 50 injection data items stored Included in the scope of delivery Injector standard configuration 150 ml SIEMENS interface cable Operator Manual Service manual (English). Power supply 200 V to 250 V; 50/60 Hz.

One complimentary biomedical tuition is included with the purchase of this system. This training must be completed before the end of the warranty period.

Airfare for Complimentary Biomed Training for one engineer from SDF-RDU at roundtrip x 3 trips

Lodging for Complimentary Biomed Training for one engineer for 36 nights at /night

XP1XPESADV – Service Essentials for AX/XP Advanced Level – 10 days at /day - 10% = x 2 engineers

AX1ANGAPPL – Clinical Angio Applications 5 days at day - 10%

AX2ARTZEE – Artis Zee System – 20 days at day - 10% =

Airfare for Service Essentials for two engineers from SDF-RDU at roundtrip x 2 =

Lodging for Service Essentials for two engineers for 12 nights per engineer at night

Airfare for Additional Biomed Training for one engineer from SDF-RDU at /roundtrip x 2 trips

Lodging for Additional Biomed Training for one engineer for 31 nights at /night =

Additional Rigging/Out of Scope Inbound

| Qty | Item Description |
|-----|---|
| 1 | AXIOM Sensis Hemo Recording system for all types of hemodynamic heart catheterizations. |
| 1 | Sensis XP Starter Kit Vital Signs The starter kit includes necessary accessories for vital signs measurements. |
| 1 | Starterkit CO Thermo (N) The starter kit includes necessary accessories for Thermodilution Cardiac Output measurements. |
| 1 | Respiration option The respiration module measures and presents the respiratory frequency of adults and children in combination with Sensis. |
| 1 | Adult starter kit Respiration starterkit for adult. |
| 1 | Keyboard english English keyboard and mouse. |
| 1 | Artis IF Demogr. + X-ray data Interface license key for AXIOM Sensis XP for bi-directional communication with AXIOM Artis. |
| 1 | Cable set Artis zee Large Display Bidirectional communication interface between the Sensis XP recording system and the Artis zee with Large Display. |
| 1 | 2 x 19" Flat color display Two 19" color TFT flat screens for the control room with resolution of 1280 x 1024 (pixel) for Hemo application. The flat screen has a foot mount that can be tilted for best viewing angle. Including: Documentation. |
| 1 | 19in color display+switch-over (115V) One 19" TFT color display for HEMO applications in the examination room. Matching design with the AXIOM Artis displays. Includes: Documentation. |
| 1 | UPS 100-120V Uninterruptible power supply with battery backup for 100-120 V mains. The UPS ensures the supply of power to the Sensis System in the event of line voltage fluctuations and brief power failures. |

| Qty | Item Description |
|-----|--|
| 1 | Carto Interface Interface from an AXIOM Sensis XP recording system to a Biosense Webster CARTO XP or CARTO 3 system. |
| 1 | Vital Signs Alarm Configurable alarms for vital parameters HF, SPO2, NBP, respiratory rate/etCO2 and mean value of invasive arterial pressure during the examination. |
| 1 | FFR License Integrated measurement of FFR (Fractional Flow Reserve). |
| 1 | Sensis Client SW Package The AXIOM Sensis XP Information System SW client package assists the cardiologists, cardiac nurses, technicians and cath lab managers with comprehensive data access and workflow oriented tools in their daily reporting and administrative tasks. The package enables you to connect multiple AXIOM Sensis XP recording systems to a common AXIOM Sensis XP master server. |
| 4 | CTI License new The new coronary tree editor (Coronary Tree Illustrator) supplements the assessment possibilities and enables the graphic representation of the coronary blood vessels for the assessment of the coronary tree. |
| 1 | VA Kit Sensis XP Second documentation set for deliveries to the Veterans' Affairs Administration Hospitals in the U.S. |
| 2 | Statistics Manager Package Supplies necessary tools for e.g. the catheterization lab manager to investigate clinical outcomes and perform quality assurance by doing statistical searches. |
| 1 | Initial onsite training 32 hrs Sensis XP 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. |
| 1 | Follow-up training 32 hrs Sensis XP ECS_FOLLOWUP_32 Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. 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. |
| 1 | Standard Rigging Sensis |
| 1 | Offset Initial Training 32 hrs |
| 1 | X-ray transp. ECG Cableset IEC2 Complete ECG accessories X-ray translucent set for US Standard IEC 2. |

One complimentary biomedical tuition is included with the purchase of this system. This training must be completed before the end of the warranty period.

Airfare for Complimentary Biomed Training for one engineer from SDF-RDU at /roundtrip x 3 trips =

Lodging for Complimentary Biomed Training for one engineer at /night for 21 nights =

AX1ECSAPPL – Basics of Physiology & ECS Applications – 4 days at /day - 10% =

AX2SENSIS – AXIOM Sensis VC12 – 10 days at day - 10% =

Airfare for Additional Biomed Training for one engineer from SDF-RDU at roundtrip x 2 trips =

Lodging for Additional Biomed Training for one engineer at night for 16 nights =

Description

The accessories consist of:

- ECG cable clips

System Configuration

The monoplane C-arm system for digital acquisition techniques is designed to meet the requirements of state-of-the-art angiography and interventional procedures.

C-arm floor-mounted stand:

- Up to 5 programmed work positions and additional 50 user-defined work positions.
- One single joystick for patient angle oriented operation of C-arm and flat detector movements.
- Integrated, computer-aided collision monitoring ICP (Intelligent Collision Protection).
- C-arm positioning 0° to the head end and 35° to the left side of the patient longitudinal axis.
- Double oblique projections:
LAO/RAO: $\pm 130^\circ$
cranial max. 55°, 52° with isocenter 12 cm above patient tabletop
caudal 45°
- Variable C-arm speeds up to 25°/s.
- Variable source-to-detector distance between 90 cm and 120 cm.
- Isocenter-floor distance 106 cm.
- Focus-isocenter distance 75 cm.

Operation

An ideal workflow requires full user operation capabilities for the system including imaging system and generator under sterile conditions in the examination room. That way the user is able to operate the system by himself without the need to leave the examination room. The intuitive *syngo* operating elements allow for managing the whole process from preparation of the patient to image post processing in a safe, reliable, and time efficient way.

In the examination room:

Complete system operation through modular control elements directly at the patient table for controlling C-arm movements, patient table and multileaf collimator. Touchscreen with multi-functional joystick for operation of the imaging system, including post-processing and quantification as well as selection of the organ programs. It is based on *syngo* operation. The touchscreen is specifically configurable to individual clinical requirements. Data regarding system and table geometry, dose data with CAREwatch, as well as system messages, are shown in the live display

In the control room:

Standard Siemens *syngo* control via keyboard and mouse for all imaging system functions such as image post-processing, archiving and configuring of organ programs.

Display of system data

Data regarding system and table geometry, dose data with CAREwatch, as well as system messages, are shown integrated on the display in the examination room.

imaging system

High-resolution digital imaging system with CLEAR technology, DICOM network connection and *syngo* user interface.

In order to provide highest level system availability, the imaging system consists of two independent computer systems that manage central tasks such as real-time image processing during fluoroscopy or acquisition as well as post-processing and networking functionality separately from one another. This ensures the system performance will always meet the highest possible demands.

Description

Image storage capacity

25,000 images in 1k/12-bit image matrix (extendable).

Operating modes

- Digital pulsed fluoroscopy with pulse frequencies of 10 p/s, 15 p/s, and 30 p/s in 1k/12 bit matrix.
- Overlay fade: On-line overlay of active fluoroscopy and reference image.

CARE package

Siemens follows the ALARA principle: "As Low as Reasonably Achievable"; the CARE package (Combined Applications to Reduce Exposure) was developed based on this research and development principle to protect the examiner and the patient.

Dose saving

- CAREvision: Pulsed fluoroscopy with additional, reduced pulse rates of 7.5 p/s to 0.5 p/s. Adaptation of pulse rate to the current application requirements for significant reduction of radiation exposure, especially during interventional procedures.
- CAREprofile: Radiation-free positioning of the primary and semi-transparent diaphragms by means of graphic display in the LIH (Last Image Hold). Collimator shutters and semi-transparent filters can be adjusted as a graphical overlay on the last-image-hold without any need for fluoroscopy.
- CAREposition: Object repositioning without radiation through graphic display of the X-ray central beam and the image edges in the LIH (Last Image Hold). CAREposition enables the repositioning of an object under visual control without radiation. In case of table movements the current position of the central beam and the image edges are superimposed on the LIH image as orientation points.
- CAREfilter is intelligent control software that helps minimize X-ray dose without negative impact on image quality. During fluoroscopy and acquisition special copper prefilters are inserted into the X-ray beam depending on current X-ray transparency calculated by CAREmatic. The five-step adaptive Cu prefiltration is used to reduce the equivalent dose of the skin and improve radiation quality through dose saving of low-energy X-ray radiation: Filter steps: 0.1; 0.2; 0.3; 0.6; 0.9 mm Cu. Selection is automatic depending on absorption. This is necessary to ensure that the optimal prefilter value is always active. This automation makes work easier for the user because the given optimal filter setting need not be adjusted manually.
- CAREwatch: Display of the measured dose-area product and the calculated patient air kerma reference on the flat screen display.
Electronics unit with DIAMENTOR measurement chamber integrated in the collimator housing for dose acquisition. Configurable screens on the data display and imaging system monitor:
During fluoroscopy: Air kerma reference rate.
During fluoroscopy interval: Accumulated air kerma reference or dose-area product or percentage of dose limit value (sum of fluoroscopy and acquisition).
- Low dose acquisition: enables dose savings of up to 60 % during the examination. The low dose acquisition protocol can be released directly with the footswitch.

Dose monitoring

- CAREguard: enables three skin entry dose thresholds to be established. If the accumulated skin entry dose exceeds the configured threshold, a warning appears on the live display and tableside on the touchscreen control. This provides ideal skin entry dose monitoring during the examination.
- CAREmonitor supports the physician by enabling dose-efficient examinations, thereby significantly reducing the risk of skin burns. It includes special monitoring of the skin entry dose, taking into account the geometric conditions of the system (device angulation, table position). This ensures that the skin entry dose applied to a specific region of the patient's body will not exceed a specified threshold, thereby better protecting the patient from the harmful effects of X-radiation.
The critical equivalent skin dose to avoid X-ray-related skin injury is at about 2 Gy. CAREmonitor consistently calculates and displays the actual accumulated skin entry dose. This helps the user to detect a potential patient hazard quickly and with certainty.

Dose reporting

- CAREreport: part of the DICOM Structured Report; displays the dose information in DICOM format after every examination. This creates an integrated DICOM data set consisting of images and dose information, which can be sent together to a DICOM archive. The display of dose information in DICOM format permits the flexible analysis and further processing via a DICOM-capable analysis software/database.

CLEAR package

Description

The CLEAR package enables optimized image quality through real-time processing of the image data without increasing the radiation dose.

- CLEARcontrol: The new histogram analysis provides a more homogeneous image impression by harmonizing over- and underexposed areas of the image. This is done fully automatically, thus eliminating any further manual user corrections through windowing.
- CLEARview: Dose-dependent filtering of the image data efficiently suppresses image noise, enabling clear, sharp images, even for low-dose acquisitions.
- CLEARvessel: Every pixel is analyzed in real time, and vessel edges are shown in high contrast without adding noise to the image.
- CLEARmotion: Fine moving structures, such as small vessels and guidewires, are detected in the image and motion artifacts are suppressed efficiently. The visibility of small moving vessels and guidewires is improved significantly during fluoroscopy.

In addition there is Dynamic Density Optimization (DDO) for on-line harmonization of native series and single images.

Image processing

- Positive/negative image display, windowing, contrast/brightness, electronic display (shutter), image shift (roaming), vertical and horizontal image inversion, magnifying glass, and zoom functions.
- Automatic and manual pixel shift, remask, peak opacification for iodine contrast (MaxOpac) and CO₂ contrast (MinOpac), adding of the anatomical background (landmark) from 0 to 100% (only in connection with DSA option).
- Storing of single images as reference images also during fluoroscopy.
- Quantification: angle/length measurement, automatic and/or manual calibration.
- Text functions: user-definable image annotation, free annotation or by means of text components, comments line for the image, R/L display.
- Fast and direct access to all series, single images, and photo file via MULTIMAP both in the examination and in the control room.

DVD / CD burner (DICOM)

DVD drive for automatic digital image storage in the background on DVD-/CD-ROM for off-line data exchange in DICOM format.

Networking

Network interface (1000 BaseT) with the following integrated DICOM services:

- DICOM Send: Sending of images into the DICOM network:
The DICOM Send function enables fully automatic transfer of generated image data to a DICOM archive or a DICOM workstation. The user can perform his examinations without interruption, while the system is fully automatically transferring the images to the archive scene by scene. This is a background process, and thus does not interfere with the ongoing fluoroscopy or acquisition.
- DICOM Storage Commitment (StC): Feedback from the image archive.
The DICOM StC function automatically gives feedback on whether the generated image data were successfully transferred. This provides the necessary certainty to the user before deleting the acquired images locally in the imaging system.
- DICOM-Query/Retrieve: Retrieval of archived images from a digital archive or from a workstation:
Already archived image data from a previous examination can be fully retrieved and is then available for review and processing. The user can request CT or MR system images from the archive and display the data as a reference image in the examination room. There is no need for a separate workstation.
- DICOM Structured Report: All the quantification results obtained on the system as well as all dose information on the individual radiation releases can be saved in DICOM SR (enhanced SR) format and transferred to a DICOM network.

Note concerning DICOM interface(s)

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across interfaces with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case that available

Description

configurations are not sufficient. With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

X-ray Generator

Microprocessor-controlled high-frequency X-ray generator with automatic dose rate control.

- 100 kW at 100 kV (DIN 6822), nominal power max. 80 kW (100 kV, 800 mA, 0.1 s) with Megalix tube and the newest flat emitter technology.
- SID tracking (automatic tube current adaptation to source-to-image receptor distance).
- CAREmatic automatic X-ray control system for fully automatic calculation and optimization of exposure data based on fluoroscopic data.
- Patient transparency monitoring.
- Tube load monitoring with indication in the data display.

The optimal X-ray parameters depend on the transparency of the patient at the current angulation, measured during fluoroscopy. These parameters are continuously calculated and updated. Test shots are no longer required. This ensures superior image quality and minimum radiation exposure for physician and patient with every exposure release.

Accessories included in the scope of delivery

- Unilateral armrest
- Infusion bottle holder
- Additional hand switch for radiation release and additional control functions.

Siemens Remote Service SRS™

Prepared for Siemens Remote Service SRS™ (during warranty, then with service contract):

- Hardware and software remote diagnosis.
- System remote configuration, e.g. adding of a DICOM node.
- Early warning system ensuring system operation.

syngo Evolve for Artis zee

syngo Evolve is a service feature that is offered as a separate sales option for all systems of the Artis zee family. It is a key component of our upgrade strategy and allows the customer to take advantage of technological advancements.

Customer Care. Life - the customer care solution by Siemens Healthcare

From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care. Life", e.g.:

- initial application training,
- interactive e-learning for various applications,
- free customer magazines,
- arrangements for clinical training via a global network,
- and free trial licenses

You will find detailed information on our e-learning program and further details on general "Customer Care. Life" services on the internet.

* "Customer Care. Life" offerings are not necessarily available to the full extent for all systems.

Digital acquisition technology with frame rates of 0.5 to 7.5 f/s in 1k/12 bit matrix and digital real-time filtration. Single image and serial acquisitions with time-controlled and manually variable frame rate.

The 1k image matrix with a bit depth of 12 bits allows an excellent image contrast by using 4,096 shades of grey. Thus, the image quality meets highest expectations in angiography and fulfills all prerequisites for precise diagnostics and safe interventions.

Digital subtraction angiography with frame rates of 0.5 to 7.5 f/s, including pixel shift, remask, roadmap, peak opacification for iodine contrast (MaxOpac) and CO₂ contrast (MinOpac); adding of the anatomical background (landmark) from 0 to 100%.

Description

With software version VC21 and higher, the following additional functions are available with Roadmap:

- DSA image can be selected as a mask for Roadmap
- Zoom can be changed during Roadmap
- Catheter and vascular contrast can be changed separately

Unexpected patient movements in DSA acquisitions will deteriorate image quality. Although this can be corrected via manual pixel shift, it is still inconvenient and time consuming for the user. Auto Pixelshift solves this challenge easily maintaining optimal image alignment.

Flat detector 20 x 20

The digital high-resolution dynamic flat detector with integrated removable grid is especially designed to fulfill the requirements of angiographic and interventional applications.

184 μm pixel arrays provide highest spatial resolution and excellent contrast. Fluoroscopy as well as image acquisition are always done in 1k matrix and 14 bit gray scale resolution with high detail visibility. Acquisition frame rates of up to 30 f/s are possible.

Usable input formats:

- Overview: 17.7 cm x 17.7 cm, diagonal 25 cm.
- Zoom 1: 14 cm x 14 cm; diagonal 20 cm.
- Zoom 2: 11 cm x 11 cm, diagonal 16 cm.
- Zoom 3: 7 cm x 7 cm; diagonal 10 cm.

The very compact design with integrated collision protection provides maximum C-arm angulation range for excellent patient access.

The flat detector is mounted on a motorized rotating turntable at the C-arm. This ensures upright presentation of the anatomy on the monitor screen independent of the relative position of the C-arm to the patient at all times. Motorized adjustment of the detector-patient distance.

Digital data transfer from the detector to the imaging system is via a high-speed Gigalink fiber-optic cable.

Removable grid:

The grid can easily be removed, saving the user time in examinations not requiring a grid. For example in pediatrics, where dose saving is especially important.

MediGuide Technology compatibility:

The flat detector is prepared for the upgrade with the Siemens MediGuide Technology Ready Kit.

Tube assembly MEGALIX Cat Plus 125/40/90-121GW

Dual-focus high-performance X-ray tube assembly with flat emitter technology for cardiac angiography, with metal center tube in lubricated spiral groove bearing technology for permanent, noise-free rotation.

- Maximum tube voltage 125 kV
- Focus: 0.4/0.8 (35/90 kW)
- Anode angle 8°
- Maximum anode heat storage capacity: 3,375,000 HU
- Maximum tube current for fluoroscopy: 250 mA

High tube power provides brilliant image quality even with heavier patients. In addition there is no need for X-ray pauses even during lengthy cases. The X-ray tube is completely silent, which is an additional benefit for patient and user.

Cardiac collimator

Compact multileaf collimator for cardiac angiography with rectangular collimator and wedge-shaped filter.

- Automatic synchronous rotation of detector and collimator unit to compensate image rotation in the different working positions of the gantry.
- Manual rotation of the detector and collimator unit using the control right on the detector housing.
- Five-step adaptive Cu pre-filtration (CAREfilter) to reduce the equivalent skin dose and improve radiation

Description

quality through dose saving for the soft radiation parts. Filter steps: 0.1; 0.2; 0.3; 0.6; 0.9 mm Cu.

- Electronics unit with DIAMENTOR measurement chamber integrated in the collimator housing, for acquisition of the dose-area product and the calculated patient entry dose (CAREwatch).

StraightView

The flat detector and the multileaf collimator are installed on a motorized rotating turntable on the C-arm. They automatically line up with the table swivel, thus ensuring upright images of objects which are in line with the table. The flat detector and multileaf collimator can also be rotated together at any angle relative to the table, enabling upright presentation and collimation of objects which are not in line with the table.

Floor-mounted patient positioning table designed for angiographic examinations and interventions.

- Direct patient access from all sides, both through the swiveling table and large tabletop cantilever.
- $\pm 15^\circ$ head up/head down positioning.
- Iso-tilt functionality for maintaining the projection during table tilt along the patient axis.
- Motorized, power-dependent table movement in longitudinal direction when the table is tilted (power-assisted control).
- Electromechanical release of table swivel at the touch of a button at the table.
- Telescopic foot with motor-driven height adjustment.
- Max. patient weight 200 kg. Accessories weighing up to 40 kg can also be installed.

Carbon fiber tabletop in wide, straight design with matching special foam mattress for universal applications. Tabletop has a straight design up to the head area, for maximum positioning convenience also for obese patients.

As a result, two foot switches can be connected directly to the table.
One foot switch is connected via cable, the other is wireless.

Color flat display

The 60" or 56" display area represents a new dimension in medical image display. Using a fully integrated tableside control panel with 12 layout variants, all examination-relevant data are displayed on the same large area screen. The result is high levels of flexibility in displaying individual screen layouts.

Data such as live, assist and reference images, *syngo* X Workplace, Sensis/recording systems, PACS, HIS/RIS, ultrasound, ECG, external video, endoscope, mapping systems, system and table geometry, system messages and dose information can be individually positioned and displayed on the Large Display, if connected.

The extended Roadmap function is included, if DSA is available:

- During fluoroscopy (FL), the native live FL image is displayed, otherwise the LIH image (Last Image Hold).
- During Roadmap/subtracted fluoroscopy, the native live FL image is displayed, otherwise the LIH image (Last Image Hold).
- During DSA acquisition, the native live image is displayed, otherwise the native max fill image.

Contains the dual reference function:

- An additional, static reference image for parallel display of two reference images on the Large Display.

Important images for diagnostic purposes can be displayed to scale in their original size, less important non-diagnostic information can be displayed at a reduced size.

The enlarged display can be selected individually via the display configurations.

For the diagnostic color display in TFT technology, with high luminance and extended viewing angle, the gamma curve has been adapted particularly for gray scale display according to the CIE / DICOM recommendation.

Technical specification for the display:

- Display size (W x H) 124.4 x 70 cm. or 60 " 133 cm x 74,8 cm
- Screen size 56" (142.2 cm). or 60 " 153 cm
- Resolution: 3840 x 2160 (pixels); 8 megapixels at 4 x HD.
- Color depth $16.7 \cdot 10^6$ colors.

Description

- Guaranteed brightness for the entire service life: 300 cd/m² at a contrast ratio of 800:1.
- Flicker-free and distortion-free image display.

Multi Display Manager

The Multi Display Manager (MDM) receives the different video signals and processes this information for visualization on the Large Display.

Up to 21 external video sources can be connected (max. 21 DVI-D or 15 DVI-R plus max. 6 analog). Other digital/analog combinations are possible, but the sum must not exceed 21 channels.

Display ceiling-mounted stand

The longitudinally mobile, swiveling, rotating, and height adjustable display ceiling suspension (DCS) with normal working range contains a large 56" color flat display. All cables are integrated into the universal mounted DCS.

Technical specification for the display ceiling support:

- Longitudinal travel range 217.5 cm with 300 cm rails.
- Longitudinal travel range 337.5 cm with 425 cm rails.
- Height adjustment range 85 cm.
- Swivel range (max. system rotation) 300 degrees.
- Display swivel range 330 degrees.

Bypass concept

In case of error, such as controller failure, the Large Display switches automatically to bypass mode and emergency fluoroscopy is displayed on the Large Display.

Backup concept

The Large Display has a backup concept to ensure against power supply failure (2 separate power supplies for the left and right sides of the Large Display).

The Multi Display Manager (MDM) Medium receives various internal and external video signals and processes this information for presentation to scale on the Large Display (LD).

Up to 18 external and internal video sources can be connected (max. 14 DVI-D and 4 analog (VGA) channels).

Important images for diagnostic purposes can be displayed to scale in their original size on the LD. Less important, non-diagnostic information can be displayed at a reduced size in the interpolation algorithm for image information integrated in the MDM.

An enlarged or reduced display can be selected individually via the display configurations at the touch screen (ECC). The MDM controller then takes over interpolation and adaptation of image size.

In waveform images with high resolution, such as for electrophysiological recording systems, the curves are displayed free of artifacts because of a special interpolation algorithm.

Including:

- 5 x LD Input External Digital Kit 14417161:
A digital kit 14417161 includes:
1 x digital input and connection kit for an external digital DVI-D video signal including cable and DVI-D video splitter.
For digital video signals, DVI-D, HDMI, comprising a DVI-D video splitter for the external monitor and the external video signal. The video splitter is needed if there is no second analog video output on the external device.
All required DVI-D cables, fiber-optic cables, power supplies, adapter and power plugs, and labels are also included.
- 3 x LD Input External Analog Kit 14417131:
An analog kit 14417131 includes:
Analog input and connection kit for external analog video signals including cable and video splitter.
For analog video signals, VGA, BNC VGA, DVI-I, BAS, PAL, NTSC, comprising an analog VGA video splitter for the external monitor and the external video signal. The video splitter is needed if there is no second analog video output on the external device.
All required VGA cables, fiber-optic cables, a converter, power supplies, adapter and power plugs, and labels are also included.

Description

* To display images from third-party video sources on the Large Display interfaces for external video signals, note the following requirements:

- The connection of third-party devices is only permissible if they meet the specifications of the LD interface.
- The connection of the LD interface to the LD controller must be performed by a Siemens service technician.
- The connection to the third-party device must always be performed by the technician of the third-party company or by the responsible on-site hospital technician.
- Siemens cannot assume any warranty for the connection of the third-party device with respect to the image quality and its suitability for diagnosis.
- For this reason, it is strongly recommended that the image quality tests prescribed by the third-party manufacturer are performed again prior to use. These tests can ensure that the required image quality is achieved.
- The system configurator is responsible for ensuring that the valid versions of the relevant standards are met.

For analog video signals with SXGA 1280 x 1024 or VGA 640 x 480 output (e.g. ultrasound), directly connectable at the examination table.

Consisting of:

- a video separator and OTV-VGA splitter for the external analog video monitor signal
- two HD 15 VGA cables, one 40 m and one 5 m in length
- a VGA adapter cable for 5 x BNC, 0.6 m and 1 m in length
- an adapter
- an MDM container slide-in tray for attaching the components in the container

* To display images from third-party video sources on the Large Display interfaces for external video signals, note the following requirements:

- The connection of third-party devices is only permissible if they meet the specifications of the LD interface.
- The connection of the LD interface to the LD controller must be performed by a Siemens service technician.
- The connection to the third-party device must always be performed by the technician of the third-party company or by the responsible on-site hospital technician.
- Siemens cannot assume any warranty for the connection of the third-party device with respect to the image quality and its suitability for diagnosis.
- For this reason, it is strongly recommended that the image quality tests prescribed by the third-party manufacturer are performed again prior to use. These tests can ensure that the required image quality is achieved.
- The system configurator is responsible for ensuring that the valid versions of the relevant standards are met.

19" high-contrast b/w display for live image display, as well as syngo operation in the control room. Table design with black frame.

Display in monochrome TFT technology with high luminance and extended viewing angle.

- 19" (48 cm) monitor.
- Resolution: 1,280 x 1,024 (pixel).
- Guaranteed brightness for the entire service life: 400 cd/m² at a contrast ratio of 500:1.
- Flicker-free and distortion-free image display.
- Ambient light sensor for optimum adaptation to the room brightness.

The bidirectional communication between Sensis XP recording system and the Artis cath lab allows automatic patient registration at the Artis via transfer of patient demographics from Sensis XP. Thus, there is no longer any need for manual registration on Artis. This saves time and increases data security because wrong data entries (e.g. typos) are no longer possible. In addition, Artis will send its exam data (see below list) back to the Sensis XP so they can get included in Sensis XP exam report.

Transfer of patient demographics, study results and measurements like:

Description

- Acquisition time
- Plane
- RAO/LAO angle
- Cran./Caud. Angle
- SID
- Magnification
- Mode
- Frame frequency
- Pulse width
- Time of scene
- Focus
- Total area dose
- Fluoroscope time
- Average Fluoro voltage
- Average fluoro current

This kit contains a cable set suitable for Artis zee with Large Display.

Scientific measuring program integrated in the imaging system for evaluation of the functionality of the left ventricle.

- Automated and manual contour detection.
- Automatic end-diastole/end-systole detection.
- Calculation of ejection fraction, volumes and indices (area, length and Simpson methods).
- Centerline, radial and regional wall movement analyses
- Automatic and manual calibration methods.
- Distance and angle measurement.

Measuring program integrated in the imaging system for objective, precise and reproducible evaluation of vessels.

- Automated contour detection.
- Determination of degree of stenosis.
- Automatic and manual reference diameter determination.
- Automatic and manual calibration methods.
- Distance and angle measurement.

The vascular analysis allows precise quantification under sterile conditions, direct at table side with the touchscreen control. This speeds up the intervention and makes the procedure safer for the patient. The reports can be easily stored in the patient folder for documentation and to show the correct analysis of dilatations etc. Especially to be used for vessel sizes between 0.5 mm and 50 mm.

Optimized procedure workflow, especially during interventions is the result of the automap-function. A selected reference image displaying the needed medical information (e.g. before dilatation) is used as the basis for moving the system to the correlated position automatically. The intervention can be continued immediately without manually repositioning the patient. Vice versa, an already stored reference image for a dedicated system position is automatically displayed when automap is selected, making it easy to switch from one angulation to another with instantly available image information.

Manual stand rotation for free positioning of system and table relative to each other, for example for the following additional work positions:

- Left-side patient access.
- OR work, standby and park position.

Orthogonal system control, along patient longitudinal axis.

Description

DICOM MWL (Modality Worklist):

Import of patient/examination data from an external RIS/HIS patient management system.

Note concerning DICOM interface(s)

For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.

With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

DICOM MPPS (Modality Performed Procedure Step)

Sending of dose data, patient data, and examination data to an external RIS/HIS patient management system.

Sent in MPPS:

- **Total dose-area product**
- **Number of exposures**
- **kV** per image (DICOM Exposure Dose Sequence)
- **ms** per image
- **mA** per image

Note concerning DICOM interface(s)

For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

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With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

DICOM Print: printing of images by means of a virtual filmsheet on a DICOM laser camera.

Selecting "Auto-Print" automatically forwards the images stored in the virtual filmsheet to the laser camera. This optimizes the workflow, eliminating the need for user interaction. In addition, a specific layout can be configured on the virtual filmsheet, which the user can review and edit on the monitor at any time. As a result, printing is only required after the layout has been optimized on the monitor, saving time and costs.

Note concerning DICOM interface(s)

For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.

With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

| |
|--|
| <p>Description</p> <p>The lower body radiation protection can be attached to the accessory rails either on the right or on the left side of the patient positioning table. It consists of the following independent shielding units:</p> <ul style="list-style-type: none"> - A basic unit shielding the area between accessory rails and the floor. It is flexible and can be adapted to the examiner's preferences. - One LB radiation protection pivot swivel element that can move out of the way during collisions with the tube and still retain its protective function. - Two clip-on units pointing upwards from the upper edge of the basic unit with a length of 57 cm and 27 cm. <p>The scattered radiation shielding units can be attached to the basic unit in an overlapping and fan-shaped way to allow closed, adapted scattered radiation protection even in the lower thorax area. The maximum load of the accessory rails is 40 kg, the weight of the attached scattered radiation protection is 8 kg.</p> |
| <p>Radiation protection attached via a ceiling-mounted, mobile stand for protection against scattered radiation; inc. 4 m ceiling rail.</p> <ul style="list-style-type: none"> - Swivable and rotatable around the fixed point, range of rotation 360°. - Counter-balanced, height-adjustable support arm. - Acrylic glass with Pb equivalent of 0.5 eq (w x h: 61 cm x 76 cm), with recess for interventional examinations. |
| <p>Keyboard for easy operation of <i>syngo</i> (browser, viewer, filming). There are special keys for windowing, scrolling, printing, marking and network communication.</p> |
| <p>For Artis tabletops, the two arm holders help to laterally position the arms comfortably along the patient's body. They are slid laterally underneath the mattress, level with arms, and fixed by the patient's body weight. The patient's arms can be immobilized with commercially available fixing straps. Two pairs of arm holders of different length and height (matching the mattress height) are supplied, that are suitable both for thick and thin mattresses.</p> |
| <p>The lower body radiation protection can be attached to the accessory rails either on the right or on the left side of the patient positioning table. It consists of the following independent shielding units:</p> <ul style="list-style-type: none"> - A basic unit shielding the area between accessory rails and the floor. It is flexible and can be adapted to the examiner's preferences. - One LB radiation protection pivot swivel element that can move out of the way during collisions with the tube and still retain its protective function. - Two clip-on units pointing upwards from the upper edge of the basic unit with a length of 57 cm and 27 cm. <p>The scattered radiation shielding units can be attached to the basic unit in an overlapping and fan-shaped way to allow closed, adapted scattered radiation protection even in the lower thorax area. The maximum load of the accessory rails is 40 kg, the weight of the attached scattered radiation protection is 8 kg.</p> |
| <p>Radiation protection attached via a ceiling-mounted, mobile stand for protection against scattered radiation; inc. 4 m ceiling rail.</p> <ul style="list-style-type: none"> - Swivable and rotatable around the fixed point, range of rotation 360°. - Counter-balanced, height-adjustable support arm. - Acrylic glass with Pb equivalent of 0.5 eq (w x h: 61 cm x 76 cm), with recess for interventional examinations. |
| <p>Complete system backup without interruption. One UPS per lab.</p> <p>The Artis system will be supplied by the UPS with full power to all functions in case of power failure. The operation is not restricted to emergency fluoroscopy.</p> <p>Operation:</p> <ul style="list-style-type: none"> - In case of power failure, the complete Artis system is backed up without interruption to the system or any imaging functionality. |

Description

- Full system operation including fluoroscopy and acquisition are possible without interruption. There will be no interruption even in the case of a power failure in the middle of an acquisition.
- No interruption to workflow
- No re-boots required.
- Additional advantage of an on-line power conditioner for complete system.
- Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware.

Battery power is supplied for a 10 minute backup at continuous full power. This should allow the lab to continue operation for at least 45 to 90 minutes in normal operation.

Not approved for sites requiring OSHPD certification. Please contact XPAS Inside Sales for configuration of an OSHPD certified configuration.

NT60010835 Interstate Mat Corporation Anti-fatigue Mat

Industrial-grade anti-fatigue floor mat that provides comfort and durability. As a high-quality product designed to fight fatigue, it provides support for tired, aching feet, legs and back. Beveled edges for safety. Size 3'x5'.

The Arterion Mark 7 Pedestal contrast medium injector can be positioned anywhere at the patient positioning table on a mobile unit, for direct operation of all functions in the examination room.

The injector system includes:

- A mobile pedestal stand with electronics unit, a contrast medium heater and a connection cable to the manual release.
- A support arm with injector head and a control lever for moving the injector head.
- A user control console with large touch screen and corresponding additional monitoring display on the injector head.

Functions

Pressure limitation:

- for 150 ml syringes 689 to 8273 kPa, corresponds to 100 to 1200 psi. .

Flow rates for 150 ml syringes:

- 0.1 to 45 ml/s in increments of 0.1 ml/s
- 0.1 to 59.9 ml/min in increments of 0.1 ml/min
- rise/fall: 0 to 9.9 s in increments of 0.1 seconds

Release delay for injection or radiation:

- 0 to 99.9 s in increments of 0.1 s.

Adjustable volume for 150 ml syringes:

- 1 ml to the max. syringe capacity in increments of 1 ml.

Fill rate:

- Variable syringe filling speed 1-20ml/s.

Injection protocols:

- Up to 40 injection protocols possible.

Parameters currently displayed on the touch screen display and on the head display:

- Injection speed
- Injection volume
- Remaining volume
- Injection duration

| | |
|--|---|
| | Description |
| | <ul style="list-style-type: none">- Applied pressure <p>Contrast medium heating:</p> <ul style="list-style-type: none">- Nominal 35°C (95°F)+-5°C (9°F) <p>Injection data memory</p> <ul style="list-style-type: none">- Up to 50 injection data items stored <p>Included in the scope of delivery</p> <ul style="list-style-type: none">- Injector standard configuration 150 ml- SIEMENS interface cable- Operator Manual- Service manual (English). <p>Power supply 200 V to 250 V; 50/60 Hz.</p> |

- Applied pressure

Contrast medium heating:

- Nominal 35°C (95°F)+-5°C (9°F)

Injection data memory

- Up to 50 injection data items stored

Included in the scope of delivery

- Injector standard configuration 150 ml
- SIEMENS interface cable
- Operator Manual
- Service manual (English).

Power supply

200 V to 250 V; 50/60 Hz.

Sensis - latest version

Description

Recording system for all types of dynamic (hemodynamic) studies with a built-in *syngo*® database for storage of patient examinations including measurements, waveforms, event log, and flow sheet.

Basic configuration including

- Dialog computer with 3.0 GHz dual-core processor or faster, 2 GB RAM or more, 1 TB Hard disk or more, DVD-R/CD R-Writer.
- Windows XP Professional multitasking operating system, including software license.
- *syngo*® multitasking operating system, including software license.
- *syngo*® database system, including software license.

Complete HEMO software

for all pediatric/adult, right/left heart, angio/valvular hemodynamic examinations including functionality for hemodynamic calculations such as gradients, valve areas, shunts. Including: annotations, event log, split-screen, 12 channel ECG.

- Configurable programs that allow user to create/define system settings.
- Special "hot keys" for ease-of-use and flexibility.
- 12-channel ECG, 4 IBP, 4 IBP dP/dt, QRS
- Color waveforms with programmable layout and digital monitoring readout can be displayed on 5 pages.
- Sensis networking software for linking Sensis systems together in a multi-lab environment based on an Ethernet network.

New in Hemo Software with Sensis

- Workflow Support programs – fast setting of pressure parameters, support for more standardized procedures (adaptable by user) for e.g. left heart, right-left heart, or pediatric procedures.
- Pullback sequence: Support for multiple pullbacks in a row.
- Virtual pullback: Calculate gradients from 2 separate pressure measurements.
- Extended catheter site list (including peripheral sites), support for user configurable catheter sites.

Hardware configuration

- DVD-R/CD-R burner for archiving of study data
- Signal input electronic box (SIB) for mounting under the examination table or on the rail including:
 - 12 channel surface ECG amplifier (10 electrodes)
 - Module for thermo dilution cardiac output measurement
 - 4 invasive blood pressure channels
 - Module for SpO₂ measurement
 - Module for measurement of Non-Invasive blood pressure
 - 2 analog outputs
 - Holder for mounting
 - Prepared for inserting additional modules.
 - All modules are integrated in the SIB
- Hemodynamic pressure organizer (HemoMed pod) that provides a single cable connection to the SIB for cardiac output and 4 invasive pressures. Including:
 - HemoMed connection cable, 3 m.
- Adapter for mounting the HemoMed pod on the Artis table rail.

Siemens Remote Service

The system is prepared for SRS (Siemens Remote Service) including: hardware and software remote diagnosis.

System remote configuration:

The customer must provide remote access (for router, LAN, etc.) for installation and operation of the system.

Note concerning DICOM interface(s)

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Description

Functionalities which act across interfaces with/between partner systems require the presence of corresponding interfaces as well as explicit validation, since the interpretation of the interface by the partner/target system lies outside of this product's area of responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case that available configurations are not sufficient.

With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

Customer Care. Life - the customer care solution by Siemens Healthcare

From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care. Life", e.g.:

- initial application training,
- interactive e-learning for various applications,
- free customer magazines,
- arrangements for clinical training via a global network,
- and free trial licenses

You will find detailed information on our e-learning program and further details on general "Customer Care. Life" services on the internet.

* "Customer Care. Life" offerings are not necessarily available to the full extent for all systems.

The starter kit includes:

2 HemoMed pod adapters, 10-pin;
adapter block to connect pressure transducer cables with 10-pin orange connectors to the HemoMed pod.

1 SpO₂ extension cable 3 m,
for connecting SpO₂ sensors to the SpO₂ module of the signal input box.

1 Reusable SpO₂ clamping sensor for adults.

1 NBP connection hose 3 m,
for connecting adult and child cuffs to the NBP module of the signal input box.

1 NBP Cuff, adults: arm circumference 23-33 cm.

1 NBP extension hose 1 m.
For connecting adult and child cuffs to the NBP connection hose 3m

1 adapter package for the Sensis NBP hose (10 units / package) for connecting the new Dräger NBP cuffs to the Sensis NBP hose.

The starter kit includes

1x 33 68 458
CO intermediate cable, 1 m, connects the CO accessories with the HemoMed pod.

1x 84 19 160
CO catheter cable for connecting the catheter to the intermediate cable.

1x 84 20 077
CO Thermistor cable, Ohmeda for connecting with Thermistor T-piece (57 41 975 EH413).

1x 85 39 983
C.O. Thermistor cable, Edwards.

Description

The respiration module measures the respiration frequency of patients (adult/pediatric) by analyzing the CO₂ concentration of the expiratory air. The respiratory frequency will be transmitted to the Sensis. The digital value is presented on the real time display and stored as vital sign value in the Sensis database. Additionally the end-expiratory CO₂ concentration is measured and transferred to Sensis as the etCO₂ value. The digital value is presented on the real time display and stored as vital sign value in the Sensis database. The module can be mounted with the HemoMed Pod holder on the Modura rail of the table.

Including:

- Oridion Microcap Module.
- Hemomed Pod holder and clamp.
- Respiration SW license.

The respiration kit for adult includes the accessories for the first examinations:

- 3 pack adult, >55 kg (25 pcs. each)
- 1 pack intermediate, 20-55 kg (25 pcs. each)

Interface license key for AXIOM Sensis XP to transfer patient data and receive X-ray protocols, study results, and measurements from AXIOM Artis, such as:

- Acquisition time
- Plane
- RAO/LAO angle
- Cran./Caud. Angle
- SID
- Magnification
- Mode
- Frame frequency
- Pulse width
- Time of scene
- Focus
- Total area dose
- Fluoroscope time
- Average fluoro voltage
- Average fluoro current

The bidirectional communication interface between the Sensis XP recording system and the Artis zee with Large Display contains the cabling from the AXIOM Sensis XP cabinet to the Artis zee.

Including:

- Sensis interface license for the Artis zee
- Undertable installation kit for the Sensis SIB at the Artis zee table
- Sensis cable set to the Artis zee with Large Display

The display can be switched over between real-time and dialog monitor through a SW-controlled switch and can be switched off through a switch in the cabinet.

- 19" (48 cm) screen size
- Resolution: 1.280 x 1,024 (pixel)
- guaranteed brightness for the entire service life: 137 cd/m² at a contrast ratio of 300:1
- Flicker-free and distortion-free image display
- Anti-glare screen

The interface to a Biosense Webster CARTO XP/CARTO 3 mapping system contains:

- Interface cable.
- Interface license for the AXIOM Sensis XP recording system.

Bidirectional data transfer:

| Description |
|--|
| <ul style="list-style-type: none"> - Patient demographic data are sent from AXIOM Sensis XP to the CARTO XP/CARTO 3 system. - 2D-Image transfer from the CARTO XP/CARTO 3 system into the AXIOM Sensis XP report. - Automatic event creation in AXIOM Sensis XP whenever a marker on CARTO XP/CARTO 3 system is set. |
| <p>Visual and audible alarms during ongoing examinations, with configurable alarm threshold defaults for adults, children and neonates. Alarms can be enabled/disabled or temporarily muted during the ongoing examination.</p> |
| <p>The FFR application enables</p> <ul style="list-style-type: none"> - FFR data to be measured directly during the examination - FFR results and the FFR waveform image to be stored in the Sensis system. These are available for reporting or export to the information systems. - the FFR measurement to be postprocessed <p>Compatible with the FFR pressure wires of St. Jude Medical (Radi) and Volcano. Can be connected to a channel of the Sensis HemoMed-Pod.</p> <p>Including: an FFR license for a Sensis / Sensis Lite Hemo measuring station with SW version VC11 or higher</p> |
| <p>It supports the cardiologists in creating Windows WORD-based reports for examinations performed in the catheterization lab in a structured way that efficiently supports the workflow. The AXIOM Sensis XP SW Client package provides additional clients. The package enables you to connect multiple AXIOM Sensis XP recording systems to a common AXIOM Sensis XP Master server.</p> <p>Included software packages:</p> <p>The AXIOM Sensis XP Patient Explorer The "entry point" of the AXIOM Sensis XP information system that supports cardiology personnel in searching for patient studies and reports for further workflow-oriented processing.</p> <p>AXIOM Sensis XP Documentation Tool It supports the cardiology personnel in entering and handling administrative and procedural data e.g. catheters, drugs in a customized and structured way.</p> <p>The AXIOM Sensis XP Report Generator It supports the cardiologists in creating various Windows WORD based reports for examinations performed in the catheterization lab in a way that efficiently supports the workflow.</p> <p>The AXIOM Sensis XP Report Composer It supports the cardiologists in creating Windows WORD-based templates. Events, clusters, tables and fields are used to create your custom configured reports for examinations performed in the catheterization lab.</p> <p>Microsoft SQL 2008 database access license Allows connecting to the Master database of the AXIOM Sensis XP Information System SW Master package.</p> <p>Microsoft WORD 2007 license</p> <p>NOTE: It is a pre-requisite that one installed AXIOM Sensis XP SIS Master database already exists. The AXIOM Sensis XP Information System SW Client package is required on every additional AXIOM Sensis XP recording system.</p> |
| <p>The package allows you to illustrate the coronary dominance, collaterals, grafts, stenoses and interventions with corresponding characteristics.</p> <p>Operation is easy and flexible using menus and graphical functions, which enables flexible specification of the precise anomaly. Grafts are easily drawn into the template. Existing coronary tree images can be compared with the current one and entries such as stenoses can be copied into the current image. Collateral vessels can also be drawn onto the heart to complete the picture.</p> |

| Description |
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| <p>The coronary tree can be recorded in an AXIOM Sensis XP report and is also available to <i>syngo</i> Dynamics for assessment.</p> <p>The CTI option can be installed on:</p> <ul style="list-style-type: none"> - Sensis XP recording system with SIS Master SW package or - Sensis XP recording system with SIS Client SW package or - Report Workstation or - Sensis XP postprocessing workstation with SIS Client SW package <p>NOTE: In VC11 the CTI user interface is only available in English. This also applies to the assessment texts generated by the CTI application.</p> |
| <p>The AXIOM Sensis XP Statistics Manager Package supplies necessary tools for e.g. the catheterization lab manager to investigate clinical outcomes and perform quality assurance by doing statistical searches in the AXIOM Sensis XP Master database.</p> <p>The Statistics Manager Package option can be installed on a customer provided PC connected via network to the AXIOM Sensis XP Master software package.</p> <p>Minimum Requirements for the PC:</p> <ul style="list-style-type: none"> - Pentium III 700 MHz or higher - 512 MB RAM or higher - 30 GB disk/DVD/CD-ROM - Optional: Parallel Interface for dongle - Network connection (Ethernet or WLAN) - Windows 2000 Professional SP4 or Windows XP Professional <p>NOTE: It is a prerequisite that at least one AXIOM Sensis XP SW Master package exists. For each installation of Statistics Manager a separate license is necessary.</p> |
| <p>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.</p> |
| <p>ECS_FOLLOWUP_32 Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. 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.</p> |
| <p>Including:</p> <p>1x 6644541 ECG trunk cable 3.8m (US Standard).</p> <p>3x 6627520 Radio translucent Limb lead electrode cable kit with grabbers</p> <p>3x 6627538 Radio translucent Chest lead electrode cable kit with grabbers</p> <p>1x 6644608</p> |

| Description |
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| Standard Limb lead electrode cable kit 1.0 m with grabbers |
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| 1x 6644566 |
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| Standard Chest lead electrode cable kit 0.7 m with grabbers |
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| 2x 5144378 |
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| Radio translucent ECG electrodes, 30 pcs |
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