Qty	Item Description
1	**Artis Q ceiling BC Interv. Rad.** Artis Q ceiling radiology The Artis Q product line is setting new standards in interventional imaging. The GIGALIX X-ray tube, which has been completely redeveloped, is based on flat emitter technology which provides small focus sizes and strong, short X-ray pulses. CLEARpulse uses flat emitter technology to generate optimized short X-ray pulses, thereby providing an improved sharp display of moving vessels. Configuration: The ceiling-mounted C-arm offers highly flexible positioning of the C-arm around the patient table. The motorized movement of the C-arm from a head-end position to a lateral position provides free access to the patient's head and can reach from their head to their foot. The patient table with telescopic foot is fitted with a freely movable patient positioning tabletop, which can bear a maximum patient weight of 250 kg. The table can be rotated to ensure quick access to the patient even in emergency situations. The as4OHDR flat detector is optimized for the requirements of radiology and allows for steep angulations. The CLEAR package for optimizing image post-processing and the CARE package for dose reduction are included. This basic configuration includes digital acquisition technology and Digital Subtraction Angiography up to 7.5 f/s in 1k matrix. Images are displayed using a display suspension system with two 19" flat displays for live and reference image display in the examination room and a monitor in the control room. DICOM standards are supported and the system is prepared for remote maintenance. **PERISTEPPING / PERIVISION** Motorized stepping for real-time bolus chasing. C-arm stepping with ceiling mounted systems, table stepping with floor mounted and biplane systems. Peripheral digital angiography with stepping and online subtraction display. **2K acquisition** Acquisition and storage of single images and series with a resolution of up to 4.76 megapixels (2480 x 1920) at up to 7.5 f/s. The 2k acquisition is valid for DR, DSA, 3D acquisitions and PERIVISION, and affects full format, Zoom 1, and Zoom 2.
1	**wide TT thick mat. ins. of std. TT** Patient positioning tabletop made of carbon fiber in wide, straight design for interventional, radiological examinations. The tabletop is straight all the way to the head area. Matching the wide patient positioning tabletop, special-foam mattress, 7 cm, made of open-pore polyurethane material and a latex-free cover. Note: The wide patient positioning tabletop with the thick mattress replaces the narrow or wide tabletop with the thin mattress described in the basic configuration. The head-end holder, handles, and shoulder supports (if part of the basic configuration) are eliminated because they can only be used with the narrow tabletop.
1	**2nd 4 pedal wireless footswitch** Additional 4-pedal footswitch for release of fluoroscopy, exposure, and table brake, as well as a configurable additional function. Wireless connection via radio communication.

Qty	Item Description
1	**Vascular analysis** Vessel analysis with determination of degree of stenosis, distance measurement and calibration.
1	**Fluoro Loop** Storage and review of dynamic fluoroscopic sequences (Fluoro Loop). This saves an additional acquisition and reduces dose. 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.
1	**Automap** Automatic stand positioning depending on the selected reference image and automatic reference image selection depending on the stand positioning.
1	**DICOM RIS-Modality Worklist** 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-capable).
1	**Lower body radiation protection** For shielding the lower body against scattered radiation within the examiners moving range. Specially designed for avoiding collisions with the tube during oblique projections, therefore especially suited for cardiology.
1	**Moveable upper body rad. protection** To protect the upper body against scattered radiation within the operating range of the examiner, e.g. during interventional procedures.
1	**LED Surgical Light** Ceiling-mounted small LED OR light with variable focusing of the light field for optimum illumination especially in deep wound areas. Suitable for diagnostic and interventional applications as well as minor surgery
1	**Sec. operation in the control room** Interface for connecting the additional system control from the control room. Rail profile for hanging control modules (e.g. the table module) in the control room. Safety button for switching off all system functions from the control room.
1	**Injector conn. in the control room** Interface for controlling the contrast medium injector in the control room. Injectors can be offered by Siemens Healthcare Accessory Solutions
1	**VA kit Artis Q/Q.zen systems** Second set of system documentation (operator manual, etc.)
1	**Intercom - Comfort** Intercom system for communication between examination room and control room. It includes a microphone and a control box in the control room, and a microphone with an adaptive acoustic filter for background noise suppression and footswitch for conversation selection in the examination room. The microphone in the examination room is installed on the ceiling.
1	**Protective glass for Large Display** Non-reflecting protective glass that protects the LCD panel of the 60" Large Display from mechanical damage. The protective glass can be attached to and removed from the housing.

Qty	Item Description
1	**Arm holder (pair)** The patient's arms can be comfortably placed along the body using these two arm holders. They slide underneath the patient mattress and is held in position by the patient's weight. It includes two pairs of arm holders of different length (540/690 mm - 21.2"/27.2") and height (85/115 mm - 3.35"/4.53"), suitable both for thick and thin patient mattresses. Weight of small arm holder: each 0.65 kg/ 1.43Ib Weight of large arm holder: each 0.95 kg/ 2.09 lb Product may not be used in conjunction with a surgery table.
1	**Kyphoplasty arm rest "UNI"** armrest for patient positioning in prone position.
1	**Body strap set** The body belt protection set consists of two belts with Velcro strap. They are used for general fixation and compression and are laid around patient and tabletop.
1	**Lower body radiation protection** 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	**Moveable upper body rad. protection** To protect the upper body against scattered radiation within the operating range of the examiner, e.g. during interventional procedures.
1	**LED Surgical Light** Ceiling-mounted small LED OR light with variable focusing of the light field for optimum illumination especially in deep wound areas. Suitable for diagnostic and interventional applications as well as minor surgery
1	**AX ELEVATE #0 ANGIO/CARD** AX Elevate #0 program for angiography and card-angiography systems installed prior to 2003 or go end of support until 2014 and which will be replaced by a new Artis zee or Artis system or an Artis one system.
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.
	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	**Offset Initial Training 32 hrs**
1	**Standard Rigging zee SP**

Qty	Item Description
2	**Body strap set** The body belt protection set consists of two belts with Velcro strap. They are used for general fixation and compression and are laid around patient and tabletop.

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

Additional Rigging/Out of Scope
CS #8924 - Monitor cart with live display
Offset Part 14434137 VA Kit Artis Q/ Q.zen systems
XX2SYNGO - Syngo with Multimodality Workstation —

AX1ANGAPPL — Clinical Angio Applications — (5 days)
0
AX2ARTZEE — Artis Zee System — (20 days)

AX5ARTQZEN — Upgrade from Artis Zee (VC21) to Artis Q — (5 days) at

Detailed Technical Specifications

Description

System description:

The single plane X-ray angiography system for digital acquisitions was designed to meet the requirements of modern angiography and interventional procedures, with a focus on interventional radiology.

C-arm ceiling-mounted stand:
System cable outlet at the ceiling carriage, on the patient's left side.

- Up to 5 preprogrammed work positions and a further 50 user-defined work positions.
- One single joystick for patient angle oriented operation of C-arm and flat detector movements.
- Intelligent, computer-aided collision monitoring ICP (Intelligent Collision Protection).
- C-arm positioning 0° to the head end and variable up to 135° to the left and right side along the patient longitudinal axis.

  Double oblique projections of ±100° in orbital movements and up to 330° (+180 ^{0}/-150°) in rotational movements (depending on gantry positioning and patient size).

  Variable C-arm speeds up to 25°/s.
- Variable focus-to-detector distance between 90 cm and 120 cm.
- Isocenter-floor distance 108 cm.
- Focus-isocenter distance 75 cm.

MULTISPACE.T
The stand can be positioned on the left or right of the patient or at the head end, or at any angle in between. It can be moved longitudinally to any position along the length of the patient and also has a park position at a sufficient distance from the patient.

In Focus allows the projection angle to the patient to remain unchanged when rotating the C-arm around the table.

IsoTilt allows the projection angle to the patient to remain unchanged when tilting the patient table (if the tilting function is available).

Both In Focus and IsoTilt improve the efficiency of an examination because there is no need to spend time adjusting the projection angle.

Patient table for angiographic examinations

Patient table

- Direct patient access from all sides, both through the swiveling table and large tabletop cantilever.
- Electromechanical release of table swivel at the touch of a button at the table.
- Telescopic foot with motor-driven height adjustment.

  Maximum patient weight: 250 kg. It is possible to install up to 40 kg of additional accessories, plus a further 100 kg for patient resuscitation.

Patient positioning tabletop

Patient positioning tabletop made of carbon fiber in wide, straight design for universal use. The tabletop is straight all the way to the head area.

Patient mattress

Matching, special-foam mattress, 4 cm, incl. a latex-free cover.
This visco-elastic comfort mattress reacts to temperature and has the special property of adapting to the individual

Description

body shape under the influence of body weight and heat.

Application-specific accessories

Unilateral armrest: Carbon fiber armrest for cardiology and arm angiography to slide underneath the positioning mattress.

Infusion bottle holder

Instrument tray: Plastic instrument tray to be positioned at the patient table above the patient. It is swivable and height-adjustable, so that it can be positioned directly or sideways above the patient.

Arm holder (1 pair): Two arm holders for comfortable lateral arm positioning along the patient's body.

Additional hand switch for radiation release and additional control functions.

Operating modes

Fluoroscopy

- Digital pulsed fluoroscopy with pulse frequencies of 10 p/s, 15 p/s, and 30 p/s in 1k/12 bit matrix. Pulse rates of 0.5 - 7.5 p/s are also possible with CAREvision.

  Overlay fade: On-line overlay of the reference image onto the active fluoroscopy. This improves efficiency and safety during interventional procedures because additional information which is clinically necessary can be displayed directly in the live fluoroscopy image.

Digital acquisition technology
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:
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%.
Includes the "Advanced Roadmap" additional function which offers the following clinical benefits:

- 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.

CARE package

ALARA principle
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

- CAREfilter: Intelligent control software that minimizes X-ray dose. Not only does this not have a negative impact on image quality, it can in fact improve it. During fluoroscopy and acquisition, special copper prefilters are automatically inserted into the X-ray beam depending on current X-ray transparency, which is calculated continuously. This is necessary to ensure that the optimal prefilter value is always active. This automation makes work easier for the user because the optimal filter setting need not be adjusted manually for each case.
  The adaptive Cu prefiltration has five steps (0.1, 0.2, 0.3, 0.6, 0.9 mm) and is used to lower the reference air kerma and improve radiation quality by reducing the low-energy X-ray radiation.
- 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

Description

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 or radiation.

CAREposition: Radiation-free object repositioning by means of graphic display of the X-ray center beam and image edges in the LIH image. With CAREposition it is possible to reposition the 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.

Low dose acquisition: enables dose savings of up to 60 % during the examination. The Low Dose Acquisition protocol can be released with a separate pedal on the foot switch.

Dose monitoring

- CAREwatch: Display of the measured dose-area product and the calculated patient reference air kerma 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: Reference air kerma rate.
  During fluoroscopy interval: Accumulated reference air kerma or dose-area product, or percentage of the reference air kerma limit (total from fluoroscopy and acquisition).
  CAREguard: Monitoring the reference air kerma. If the accumulated reference air kerma exceeds one of the three configurable limits, a warning appears on the live display and tableside on the touchscreen control. This allows ideal monitoring of the accumulated reference air kerma during the examination.
- CAREmonitor: Special model-based monitoring of the measured skin entry dose, taking into account the geometric conditions of the system (actual device angulation, table position, patient weight, patient size). It then continually displays whether the skin entry dose applied to a specific region of the patient's body exceeds a specific configurable upper limit. CAREmonitor continually calculates and displays the actual accumulated skin entry dose as a portion of this upper limit. This helps the user to detect a potential patient hazard at an early stage. The patient is therefore better protected against the damaging effects of radiation.

Dose documentation

- CAREreport: Dose information as part of the DICOM Structured Report. After each examination, the information is available in DICOM format and can be sent to a DICOM archive together with the image data, for example. Saving dose information in DICOM format also enables flexible analysis and further processing via a DICOM-capable analysis software/database.

  CARE Analytics: Standalone PC program for analyzing doses in angiography, CT, and radiological examinations. The data can be exported to statistics programs such as Microsoft Office Excel and SPSS for further analysis. CARE Analytics is available for download from the Siemens Intranet.

CLEAR package

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

- CLEARpulse generates images with a higher contrast while also allowing doses to be lower. This is because it uses an anode with a larger area, operated with a higher anode rotation speed. This achieves a higher pulse power, which also reduces the tube voltage when coupled with 0.1 mm Cu prefiltration. This in turn makes it easier to eliminate the parts of the radiation spectrum which are not suitable for imaging.
- 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.

Description

Image generation

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

- Power output: 100 kW at 100 kV.
- SID tracking: Automatic tube current adaptation to focus-to-detector distance.
  CAREmatic: Automatic X-ray control system for fully automatic calculation and optimization of exposure data based on fluoroscopic data.
- CLEARpulse: Provides higher image contrast using a reduced dose.
  Patient transparency monitoring.
- Tube load monitoring with indication in the live 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 user and patient with every exposure release.

GIGALIX 125/30/40/90 - G X-ray tube assembly
Triple-focus high-performance X-ray tube assembly with unique flat emitter technology for generating extremely high tube currents of max. 250 mA in fluoroscopy and 1000 mA in acquisition. This provides very good image quality even with heavier patients or steep angulations. The focus is always quadratic and permits outstanding perceptibility of small structures with a nominal quadratic focus of 0.3/0.4/0.7. The anode has a high heat storage capacity of 5.2 MHU and the metal center tube with liquid bearing technology allows a maximum cooling power of 1520 kHU/min. This means that pauses are not required during radiation, even for lengthy procedures. The X-ray tube is almost silent, which is an additional benefit for patient and user.

as4OHDR flat detector
The digital high-resolution dynamic flat detector with integrated removable grid is especially designed to fulfill the requirements of interventional imaging.
The detector features 16-bit analog-to-digital conversion, resulting in a gray scale resolution of 65,536 gray scales. This in turn improves contrast resolution in 3D imaging with syngo DynaCT.

The increased scintillator layer thickness of 750 pm results in a high DQE (Detective Quantum Efficiency) of 77%, thereby improving image quality at low radiation doses.

154 pm pixel arrays provide highest spatial resolution (3.25 LP/mm) and excellent contrast. Acquisition frame rates of up to 60 f/s are possible.

Usable input formats:

- Overview mode 30 cm x 38 cm.
- Zoom 1: 30 cm x 30 cm; diagonal 42 cm.
- Zoom 2: 22 cm x 22 cm; diagonal 32 cm.
  Zoom 3: 16 cm x 16 cm; diagonal 22 cm.
- Zoom 4: 11 cm x 11 cm; diagonal 16 cm.
  Zoom 5: 8 cm x 8 cm; diagonal 11 cm.

The flat detector is mounted on a motorized rotating turntable at the C-arm. It can be rotated by 90°, so that it can be adjusted to landscape format or portrait format. Any angle in between can be adjusted.
Motorized adjustment of the detector-patient distance.

The as4OHDR flat detector offers additional operating functions directly on the detector housing, such as angulation, FD rotation (cranial/caudal, RAO/LAO), and change of the focus-detector distance.

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

Description

Tube collimator
Compact multileaf collimator for DSA and cardiac applications with rectangular collimator and wedge-shaped filters. Includes the adaptive Cu prefiltration (CAREfilter) as well as the measurement chamber for recording the dose-area product and reference air kerma (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.

Image processing

Positive/negative image display, windowing, contrast/brightness control, electronic display (shutter), image shift (roaming), vertical and horizontal image inversion, magnifying glass, and zoom functions.

- 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 images via MULTIMAP both in the examination room and in the control room for displaying or post-processing images.

Imaging system

Dual architecture
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 best possible system performance and availability.

Image storage capacity
25,000 images in 1k/12 bit image matrix. This can be optionally extended to up to 100,000 images.

Image storage

DVD/CD burner
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 and/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

Description

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

Displays and display suspension system

Display suspension system
Ceiling-mounted, swiveling, rotating, height-adjustable display suspension system with longitudinal travel. It is fitted with two 19" high-contrast b/w displays for live and reference image display in the examination room as standard.

Displays
Live and reference display

Flat-screen displays in monochrome TFT technology with high luminance and extended viewing angle.

- Screen size: 19" (48 cm).
- Resolution: 1,280 x 1,024 (pixels).
- Guaranteed brightness for the entire service life: 400 cd/m ^{2} at a contrast ratio of 500:1.
- Flicker-free and distortion-free image display.
- Ambient light sensor for optimum adaptation of the image display to the room brightness.

19" high-contrast b/w display for live image display in the control room is included as a desktop version with a black frame.

Display of system data
Data for device and table position, dose data, and system messages are displayed in the examination and control room on both the live display and the reference display.

Operation

syngo
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.

Footswitch
A 4-button wired foot switch to release fluoroscopy, exposure, and table brake as well as a configurable additional function is included as standard.

In the examination room
For an ideal workflow, full operation capabilities for the system can be accessed directly at the patient table. These include complete system operation through modular control elements for controlling C-arm movements, the patient table, and the multileaf collimator.

syngo-based touchscreen with multi-functional joystick for operation of the imaging system, including post-processing and quantification as well as selection of the organ programs. The touchscreen is specifically configurable to individual clinical requirements.

This means that the user can operate the system on their own without having to leave the examination room if this is deemed necessary by the situation.

Description

In the control room

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

Siemens Remote Service SRS?
Prepared for Siemens Remote Service SRSTM (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 Q
syngo Evolve is a service feature that is offered as a separate sales option for all systems of the Artis Q family. It is a key component of our upgrade strategy and allows you to take advantage of technological advancements.

Customer Care - the customer care solution from Siemens Healthcare
From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care¯. These include:

- Initial application training
- Interactive e-learning for various applications
- Free customer magazines

  Arrangements for clinical training via a global network
- Free trial licenses

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

* The availability of "Customer Care" services may be restricted for some systems.

User Training
Siemens recognises the significant investment you are making in purchasing a new imaging system and are determined that you are able to realise the full capability of this new system. Siemens clinical applications training ensures you have every opportunity to fully utilize your new system.

Content of user training: Handover Training and Follow-up Training

- Introduction to the functions, options, and handling of the angiography system
- Instruction on the use of the angiography system together with modern, highly-developed applications

Delivery & duration of the user training varies and may be country specific so for additional information please contact your local Siemens representative.

Excellent image quality from the abdomen to the feet is due to the fact that adjustable parameters such as acquisition frame rate, measuring fields, position of collimator blades and semitransparent filters are stored specifically for each table position. That way the different X-ray transparencies for abdomen, legs and feet can be compensated and a consistent, contrasty image quality offered.
Just one single injection of contrast media protects the health of the patient and gives the physician an instant, subtracted image display of the peripheral blood vessels.

PERISTEPPING:
Peripheral digital stepping angiography with only a single contrast medium injection under visual control of the bolus flow.
C-arm stepping with ceiling mounted systems, table stepping with floor mounted and biplane systems.

- Position-dependent variable frame rates.

Description

- Fully automatic exposure control.
- Automatic storage of the collimator setting for each step.

PERIVISION:
Peripheral digital stepping angiography with online subtraction display in an examination procedure with only one single contrast medium injection under visual control of the bolus flow.

- Only one single automatically acquired mask image for each individual position.
- Position-dependent variable frame rates.
- Fully automatic exposure control.

Automatic storage of the collimator setting for each step

The visco-elastic comfort mattress for narrow tabletop reacts to temperature and has the special property of adapting to the individual body shape under the influence of body weight and heat.

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.

Automap optimizes the procedure workflow, especially during interventions. 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. On the other hand, the system is able to select a reference image for the current device position. In case of changes in device position, this enables the user to see the corresponding reference images quickly and safely.

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

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.

Description

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

Printing Acquisitions using a Virtual Filmsheet
Selecting "Auto-Print" automatically forwards the images stored in the virtual filmsheet to the printer. 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:
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 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 configurations are not sufficient.
With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

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 shielding units:

- 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.

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.

Radiation protection attached via a ceiling-mounted, mobile stand for protection against scattered radiation; incl. 4 m ceiling rail.

- 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.

Mach LED 2SC OR light with focusable light system, can be positioned flexibly. Can also be installed on the Portegra2 ceiling support of the portable radiation protection panel. It is therefore fully integrated into the ceiling-installed radiation protection system of the Artis Zee VC21/Q/Zen family.

- Luminance: 100,000 Lux for 100 cm distance
- Field: 60 to 150cm
- Color rendering index Ra: 95
- Color temperature: 4,500 Kelvin, single color

Description

- Focusable spot size: 14 to 28cm
- Diameter of light head: 49cm
- Number of LED lights: 21
- Total input power: 30 VA
- Max. reach of the spring arm combination: 185 cm
- Weight without grip sleeve: 12,5kg

OR lamp power connection 230V or 115V possible

Rail profile (short table attachment) for table operation

- Weight: 1.4 kg
- Rail length: 12 cm
- Width: 20 cm
- Height: 14.5 cm

Rail profile (long table attachment) for device operation (with or without table operation)

- Weight: 2.8 kg
- Rail length: 25 cm
- Width: 20 cm
- Height: 14.5 cm

Communication / Intercom system for communication between examination room and control room, with additional footswitch for conversation selection in the examination room.
Microphone and control box on the console in the control room.
With adaptive acoustic filter for background noise suppression in the examination room.
Microphone in the examination room installed on the ceiling.

Ordering information that can be deleted from the final version of the offer follows:
Intercom - Comfort replaces the old intercom system (without adaptive acoustic filter for background noise suppression).
Delivered as an option only, not included in the basic configuration

Depending on the view angle toward the panel, there is a reduction in contrast as well as image blurring. We therefore recommend removing the glass (which is easy to do) when evaluating diagnostic images.

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 securing straps (not included). 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.

An arm holder weighs 8 kg.

Ordering information that can be deleted from the final version of the offer follows:
Not in conjunction with the Surgery table and multi-section metal / carbon tabletop or the multi-section Surgery metal / carbon tabletop RoW.
Already included in the following basic configurations:
- *Combination Interventional cardiology/radiology*
- *Interventional radiology*
- *Neuroradiology*
- *Combination Interventional radiology / cardiology*
- *Vascular surgery*
- *Neurosurgery*

Can also be ordered as an option.

Description

This support makes it possible to position the patient's arm comfortably in various positions underneath the tabletop, e.g. in the elbow position at an angle of 90° parallel or transversally to the wide tabletop.
The positioning of the arms can be adjusted according to the arm length and thickness with an additional included pad for the armrest.

The armrest is attached to the tabletop under the mattress without the need for an additional attachment.

Ordering information that can be deleted from the final version of the offer follows:
The armrest for vertebroplasty and kyphoplasty can be used with the wide Artis tabletop.
Delivered as an option only, not included in the basic configuration.
Not in conjunction with the Surgery table.

Ordering information that can be deleted from the final version of the offer follows:
Not in conjunction with the multi-section Surgery metal / carbon tabletop or the multi-section Surgery metal / carbon tabletop RoVV.

Delivered as an option only, not included in the basic configuration.

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 shielding units:

- 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.

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.

Radiation protection attached via a ceiling-mounted, mobile stand for protection against scattered radiation; incl. 4 m ceiling rail.

- 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.

Mach LED 2SC OR light with focusable light system, can be positioned flexibly. Can also be installed on the Portegra2 ceiling support of the portable radiation protection panel. It is therefore fully integrated into the ceiling-installed radiation protection system of the Artis Zee VC21/Q/Zen family.

- Luminance: 100,000 Lux for 100 cm distance
- Field: 60 to 150cm
- Color rendering index Ra: 95
- Color temperature: 4,500 Kelvin, single color
- Focusable spot size: 14 to 28cm
- Diameter of light head: 49cm
- Number of LED lights: 21
- Total input power: 30 VA
- Max. reach of the spring arm combination: 185 cm
- Weight without grip sleeve: 12,5kg

OR lamp power connection 230V or 115V possible

AX Elevate is the "managed system upgrade program" of Siemens, which supports you replacing your existing system to a new system and which therefore enables you to benefit of modern technologies and functionalities. Your existing Siemens system must be returned to Siemens to take advantage of this offer.

Description
AX Elevate is part of our comprehensive customer care program, Life.
Ordering information that can be deleted from the final version of the offer follows: *Not in conjunction with the multi-section Surgery metal / carbon tabletop or the multi-section Surgery metal / carbon tabletop RoVV.* *Delivered as an option only, not included in the basic configuration.*