

VAMC MINNEAPOLIS, MN  
PO# 618-B39052

**TRADE IN:**

Manufacturer: GE Healthcare;  
Model: Innova 2000; SN:  
03400779; Installation Date:  
03/11/2004; EE# 58094.

**Artis zee ceiling - latest version**

**All items listed below are included for this system:** *(See Detailed Technical Specifications at end of Proposal.)*

<b>Qty</b>	<b>Item Description</b>
1	<b>Interventional Cardiology</b> X-ray angiography system with primary clinical use in interventional cardiology, including application-specific accessories.
1	<b>Artis zee ceiling</b> Universal ceiling-mounted C-arm angiography system with a high-resolution flat detector. 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	<b>Sys SW incl cardiac acquisition</b> 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	<b>DSA / DR (1)</b> Digital acquisition technology and digital subtraction angiography in matrix 1k.
1	<b>CLEARstent</b> CLEARstent enables an improved display of vascular supports (stents).
1	<b>Radiology</b> Radiographic system for medical applications with emphasis on interventional radiology.
1	<b>XWP w. InSpace 3D FlashRT zee/zeego</b> syngo X Workplace high-end post processing workstation, comprising Windows XP PC with syngo-based user software and network modules, equipped with the required HW and SW modules for real-time 3D reconstruction to virtually eliminate the time between the acquisition of a rotational angiographic examination and the display of the corresponding 3D reconstructed volume in the InSpace task card of the syngo Workplace: syngo X Workplace, syngo InSpace 3D Flash RT (incl. syngo iIdentify), InSpace 3D accessories as well as syngo iPilot to overlay calculated 3D reconstructions with live 2D fluoroscopy images.
1	<b>DynaCT Cardiac 30x40 FD</b> syngo DynaCT Cardiac for 30x40 FD provides 3D visualization of chambers and vessels of the heart using projection images from rotational angiography.

1

### **iPilot functionality for XWP**

syngo iPilot (enhanced functionality) allows the overlay of the colored 3D volume with regular fluoro as well as with subtracted fluoro (Roadmap) and acquisition series on the display of the syngo Workplace. Thus the iPilot information is available in parallel to the regular or subtracted fluoro or acquisition images on the live display of the acquisition system. syngo iPilot automatically updates all table, c-arm, zoom and SID changes. Even patient movement can be manually updated.

1

### **syngo InSpace 3D/3D Fusion**

syngo InSpace 3D/3D Fusion package for spatial alignment and visualization of image data of one patient where image data has been generated at different points in time or by different modalities. Support of optimal diagnosis (fusion of morphological and functional information) and therapy planning.

1

### **syngo iGuide Toolbox**

syngo iGuide Toolbox contains the functions 'Linked Marker', 'Linked Pointer' and 'Linked Contours' that provide tools that take graphics drawn on the 3D volume and simultaneously display it on the live monitor. These graphical markers allow pretreatment planning on the syngo 3D workstation by marking spots or areas on the 3D volume. The graphics are linked in real time for display on the live image monitor.

1

### **19in Color Flatscreen Display**

LCD color flatscreen display with high luminance and extended field of view.

1

### **Inroom Control SW-License**

Software extension for InSpace 3D and InSpace EP for remote control of the syngo Workplace from the examination room via touch panel and joystick.

1

### **syngo Angio Package**

Software package consisting of DSA Angio Viewer as well as High-Speed Review for real-time display of native and subtracted angiography images.

1

### **syngo keyboard, USA**

Keyboard with special syngo keys.

1

### **VA kit for syngo XWP VB21**

Second documentation set for deliveries to the Veterans' Affairs Administration Hospitals in the U.S.

1

### **Image Memory Extension R640 XWP**

Option to expand image memory by 300 GB.

1

### **3D / Dynavision**

Native or subtracted (with DSA option only) rotational angiography with angle and ECG triggering, generating the image data required for 3D reconstruction.

1

### **Detector 30x40 incl LaserCrossh.(T)**

High-resolution, dynamic flat detector for fully digital imaging chain, with integrated, removable grid and laser crosshairs as a positioning aid. CAREwatch measuring chamber for detection of the dose-area product. MEGALIX 3-focus high-performance X-ray tube assembly, rotatable angio collimator including CAREfilter, and integrated collision protection.

1

### **Table Standard**

Floor-mounted swiveling patient table with telescopic foot and floating tabletop.

1

### **Tabletop & Mattress, Wide**

Carbon fiber tabletop including special foam mattress in wide, straight design. Mattress including cover.

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 extended**

56" or 60" 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 extended) with extended working range. 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

### **Ceiling Rail Extension (1)**

Rails for extending the longitudinal travel range of the display suspensions system by 1.2 m.

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

### **XWP/MMWP video cabling**

This connection kit is needed to display the video signal from a unit, for example the syngo X-Workplace, on a single display or on a large display in the display suspension system (DCS) in the examination room. Note the following conditions if image content from third-party provider video signals are to be displayed on the Artis displays: - The display of external video signals depends on the operational state of the Artis system. If the Artis system has a malfunction or is shut down, the display of external video signals is not available. For this reason, do not feed the video signal into the Artis system if lacking the external video signal could result in a hazardous situation. - A third-party provider's unit may be connected only if it corresponds to the specifications of the video interface (e.g., at the MDM). - The connection may only be established by a Siemens service technician. Note: The connection must be made with fiber-optic cables to ensure that the unit's galvanic isolation is maintained. The fiber-optic cables must be ordered separately. - A third-party provider's unit must be connected by a technician from the third-party provider or by a hospital technician responsible for the equipment. - It is strongly recommended that image quality be tested by the third-party provider prior to start-up. This test ensures that the required image quality is achieved. - The system configurator is responsible for ensuring that applicable standards are maintained in the current version, e.g. 4 kV insulation Siemens will not be held liable for the inclusion of third-party provider units with respect to image quality and their suitability for clinical diagnosis.

2

### **Analog/digital video converter**

This connection kit is needed to convert the analog video signal of a unit, such as an ultrasound system, to a DVI-D video signal. Note the following conditions if image content from third-party provider video signals are to be displayed on the Artis displays: - The display of external video signals depends on the operational state of the Artis system. If the Artis system has a malfunction or is shut down, the display of external video signals is not available. For this reason, do not feed the video signal into the Artis system if lacking the external video signal could result in a hazardous situation. - A third-party provider's unit may be connected only if it corresponds to the specifications of the video interface (e.g., at the MDM). - The connection may only be established by a Siemens service technician. Note: The connection must be made with fiber-optic cables to ensure that the unit's galvanic isolation is maintained. The fiber-optic cables must be ordered separately. - A third-party provider's unit must be connected by a technician from the third-party provider or by a hospital technician responsible for the equipment. - It is strongly recommended that a test of image quality be performed by the third-party provider prior to start-up. This test ensures that the required image quality is achieved. - The person placing on the market is responsible for ensuring that applicable standards are maintained in the current version, e.g. 4 kV insulation Siemens will not be held liable for the inclusion of third-party provider units with respect to image quality and their suitability for clinical diagnosis.

3

### **Video splitter**

This connection kit is needed to display a DVI-D video signal from a unit, for example the syngo X-Workplace, on a single display or on a large display in the display suspension system (DCS) in the examination room, and all DVI-D connections on the unit are already assigned. Note the following conditions if image content from third-party provider video signals are to be displayed on the Artis displays: - The display of external video signals depends on the operational state of the Artis system. If the Artis system has a malfunction or is shut down, the display of external video signals is not available. For this reason, do not feed the video signal into the Artis system if lacking the external video signal could result in a hazardous situation. - A third-party provider's unit may be connected only if it corresponds to the specifications of the video interface (e.g., at the MDM). - The connection may only be established by a Siemens service technician. Note: The connection must be made with fiber-optic cables to ensure that the unit's galvanic isolation is maintained. The fiber-optic cables must be ordered separately. - A third-party provider's unit must be connected by a technician from the third-party provider or by a hospital technician responsible for the equipment. - It is strongly recommended that a test of image quality be performed by the third-party provider prior to start-up. This test ensures that the required image quality is achieved. - The system configurator is responsible for ensuring that applicable standards are maintained in the current version, e.g. 4 kV insulation Siemens will not be held liable for the inclusion of third-party provider units with respect to image quality and their suitability for clinical diagnosis.

5

### **Digital video cabling**

This connection kit is needed to display the video signal from a unit, for example a computer, on a single display or on a large display in the display suspension system (DCS) in the examination room. It connects a DVI-D video output of a unit to a DVI-D video input of the Siemens video signal distributor. Using fiber-optic cables ensures the galvanic isolation of the video source. Note the following conditions if image content from third-party provider video signals are to be displayed on the Artis displays: - The display of external video signals depends on the operational state of the Artis system. If the Artis system has a malfunction or is shut down, the display of external video signals is not available. For this reason, do not feed the video signal into the Artis system if lacking the external video signal could result in a hazardous situation. - A third-party provider's unit may be connected only if it corresponds to the specifications of the video interface (e.g., at the MDM). - The connection may only be established by a Siemens service technician. Note: The connection must be made with fiber-optic cables to ensure the galvanic isolation. - A third-party provider's unit must be connected by a technician from the third-party provider or by a hospital technician responsible for the equipment. - It is strongly recommended that a test of image quality be performed by the third-party provider prior to start-up. This test ensures that the required image quality is achieved. - The system configurator is responsible for ensuring that applicable standards are maintained in the current version, e.g. 4 kV insulation Siemens will not be held liable for the inclusion of third-party provider units with respect to image quality and their suitability for clinical diagnosis.

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

### **Live+Ref Video Interface to OEM (1)**

Video interface output for the video signals of Artis zee Live and Ref for connecting OEM products, with additional display of these signals in the control room or other rooms. Monoplane (1) design for 2 video signals. All signals are provided with video isolation.

1

### **ECG Interface (1)**

Recording, storage and display of an ECG lead. Displayed together with the image information on a single monitor.

1

### **patient recovery kit**

Manual C-arm release for easy patient recovery in case of a complete system failure.



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

**GOVT Training Class (T & L not included)**

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

1

**Training Class T&L not included**

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

1

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

1

**Offset Initial Training 32 hrs**

1

**Blue anti-fatigue floor mat for hospital**

1

**Standard Rigging zee SP**

1

**Project #2013-1630, GE Innova 2000 de-install date 12/2014 expires 1/11/2014 (**

Qty	Item Description
1	<p><b>Table with Tilt</b></p> <p>Floor-mounted swivelling patient table with telescopic foot, floating and tilttable tabletop; motor-driven stepping for digital peripheral angiography. Table control module, power-assisted.</p> <p><i>This item has been quoted as a substitute for Part No. 14427088 - "Table Standard" that has been included in the quotation.</i></p>

**OPTIONS:**

Qty	Item Description
1	<p><b>syngo InSpace EP XWP</b></p> <p>syngo InSpace EP is used for 3D visualization of the heart including automated segmentation of one or more ventricles/vessels of the heart (especially the left atrium with display of the pulmonary veins) and supports electrophysiologists in planning, performing, and follow-up of ablations, especially of atrial fibrillation ablations.</p>
1	<p><b>Eaton Powerware 9355 15 kVA UPS</b></p> <p>Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware. This UPS is recommended when protection and uninterruptible power is required for the Artis' C-arm and table. Emergency fluoroscopy is not available with this UPS. If emergency fluoroscopy is required, the 9390 - 160 kVA UPS is recommended for the full system. One UPS per lab. Additional seismic brackets are required to make this system OSHPD approved.</p>
1	<p><b>Eaton Powerware 9390 160 kVA UPS</b></p> <p>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.</p>
1	<p><b>DICOM MPPS</b></p> <p>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.</p>

# Detailed Technical Specifications

## Artis zee ceiling - latest version

/ Product	Description
<p style="text-align: center;"><b>7</b></p> <p><b>Interventional Cardiology</b></p>	<p>The accessories consist of:</p> <ul style="list-style-type: none"> <li>- ECG cable clips</li> </ul>
<p><b>Artis zee ceiling</b></p>	<p><b>System Configuration</b></p> <p>The monoplane C-arm system for digital acquisition techniques is designed to meet the requirements of state-of-the-art angiography and interventional procedures.</p> <p>C-arm ceiling-mounted stand: System cable outlet at the ceiling carriage, on the patient's left side.</p> <ul style="list-style-type: none"> <li>- Up to 5 programmed work positions and additional 50 user-defined work positions.</li> <li>- One single joystick for patient angle oriented operation of C-arm and flat detector movements.</li> <li>- Integrated, computer-aided collision monitoring ICP (Intelligent Collision Protection).</li> <li>- C-arm positioning 0° to the head end and variable up to 135° to the left and right side along the patient longitudinal axis.</li> <li>- Double oblique projections of ±100° in orbital movements and up to 330° (+180°/-150°) in rotational movements (depending on gantry positioning and patient size).</li> <li>- Variable C-arm speeds up to 25°/s.</li> <li>- Variable source-to-detector distance between 90 cm and 120 cm.</li> <li>- Isocenter-floor distance 108 cm.</li> </ul> <p>Integrated Multispace T: With motorized gantry rotation (± 135°) for free positioning of system and table, for optimum patient access.</p> <ul style="list-style-type: none"> <li>- Orthogonal system control, along patient longitudinal axis.</li> <li>- InFocus function to maintain projection during C-arm gantry rotation. InFocus saves time and dose because the ceiling-mounted support can be positioned in a flexible way without any impact on the image display.</li> <li>- Iso-tilt function to maintain projection during table tilt in the longitudinal direction (depending on table type).</li> </ul> <p><b>Operation</b></p> <p>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 <i>syngo</i> 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.</p> <p>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 <i>syngo</i> 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</p> <p>In the control room: Standard Siemens <i>syngo</i> control via keyboard and mouse for all imaging system functions such as image post-processing, archiving and configuring of organ programs.</p> <p><b>Display of system data</b></p> <p>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.</p> <p><b>imaging system</b></p> <p>High-resolution digital imaging system with CLEAR technology, DICOM network connection and <i>syngo</i> user</p>

/ Product	Description
<p data-bbox="131 331 269 359"><i>(Continued)</i></p> <p data-bbox="131 386 315 413"><b>Artis zee ceiling</b></p>	<p data-bbox="407 331 496 352">interface.</p> <p data-bbox="407 380 1487 478">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.</p> <p data-bbox="407 506 646 527"><b>Image storage capacity</b></p> <p data-bbox="407 527 922 548">25,000 images in 1k<sup>2</sup>/12-bit image matrix (extendable).</p> <p data-bbox="407 575 586 596"><b>Operating modes</b></p> <ul data-bbox="407 606 1360 663" style="list-style-type: none"> <li>- Digital pulsed fluoroscopy with pulse frequencies of 10 p/s, 15 p/s, and 30 p/s in 1k/12 bit matrix.</li> <li>- Overlay fade: On-line overlay of active fluoroscopy and reference image.</li> </ul> <p data-bbox="407 690 561 711"><b>CARE package</b></p> <p data-bbox="407 716 1479 785">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.</p> <p data-bbox="407 812 529 833">Dose saving</p> <ul data-bbox="407 844 1487 1539" style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> <li>- 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).</li> <li>- 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.</li> </ul> <p data-bbox="407 1566 565 1587">Dose monitoring</p> <ul data-bbox="407 1598 1487 1896" style="list-style-type: none"> <li>- CAREguard: offers the possibility of establishing three limit values for the air kerma reference. If the accumulated air kerma reference exceeds the configured limit value, a warning appears on the live display and tableside on the touchscreen control. This provides ideal air kerma reference monitoring during the examination.</li> <li>- 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.</li> </ul>

/ Product	Description
<p data-bbox="131 359 272 386"><b>(Continued)</b></p> <p data-bbox="131 411 318 438"><b>Artis zee ceiling</b></p>	<p data-bbox="407 359 553 386">Dose reporting</p> <ul data-bbox="407 390 1490 485" style="list-style-type: none"> <li>- 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.</li> </ul> <p data-bbox="407 510 574 537"><b>CLEAR package</b></p> <p data-bbox="407 537 1438 583">The CLEAR package enables optimized image quality through real-time processing of the image data without increasing the radiation dose.</p> <ul data-bbox="407 617 1490 884" style="list-style-type: none"> <li>- 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.</li> <li>- CLEARview: Dose-dependent filtering of the image data efficiently suppresses image noise, enabling clear, sharp images, even for low-dose acquisitions.</li> <li>- CLEARvessel: Every pixel is analyzed in real time, and vessel edges are shown in high contrast without adding noise to the image.</li> <li>- 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.</li> </ul> <p data-bbox="407 909 1433 955">In addition there is Dynamic Density Optimization (DDO) for on-line harmonization of native series and single images.</p> <p data-bbox="407 980 591 1008"><b>Image processing</b></p> <ul data-bbox="407 1012 1490 1293" style="list-style-type: none"> <li>- Positive/negative image display, windowing, contrast/brightness, electronic display (shutter), image shift (roaming), vertical and horizontal image inversion, magnifying glass, and zoom functions.</li> <li>- Storing of single images as reference images also during fluoroscopy.</li> <li>- ECG acquisition and storage: Recording, storage, and display of an ECG lead. Displayed together with the image information on a flat display.</li> <li>- Quantification: angle/length measurement, selection of automatic and/or manual calibration.</li> <li>- Text functions: user-definable image annotation, free annotation or by means of text components, comments line for the image, R/L display.</li> <li>- Fast and direct access to all series, single images, and photo file via MULTIMAP both in the examination and in the control room.</li> </ul> <p data-bbox="407 1318 667 1346"><b>DVD / CD burner (DICOM)</b></p> <p data-bbox="407 1346 1463 1392">DVD drive for automatic digital image storage in the background on DVD-/CD-ROM for off-line data exchange in DICOM format.</p> <p data-bbox="407 1417 526 1444"><b>Networking</b></p> <p data-bbox="407 1444 1146 1472">Network interface (1000 BaseT) with the following integrated DICOM services:</p> <ul data-bbox="407 1476 1490 1898" style="list-style-type: none"> <li>- DICOM Send: Sending of images into the DICOM network.</li> <li>- 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.</li> <li>- DICOM Storage Commitment (StC): Feedback from the image archive.</li> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> </ul>

/ Product	Description
<p><b>(Continued)</b></p> <p><b>Artis zee ceiling</b></p>	<p><b>Note concerning DICOM interface(s)</b> The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).</p> <p>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.</p> <p>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> <p><b>X-ray Generator</b> Microprocessor-controlled high-frequency X-ray generator with automatic dose rate control for angiography.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- SID tracking (automatic tube current adaptation to source-to-image receptor distance).</li> <li>- CAREMATIC automatic X-ray control system for fully automatic calculation and optimization of exposure data based on fluoroscopic data.</li> <li>- Patient transparency monitoring.</li> <li>- Tube load monitoring with indication in the data display.</li> </ul> <p>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 achieves high image quality and minimum radiation exposure for physician and patient with every exposure release.</p> <p><b>Accessories included in the scope of delivery.</b></p> <ul style="list-style-type: none"> <li>- Unilateral armrest</li> <li>- Infusion bottle holder</li> <li>- Additional hand switch for radiation release and additional control functions.</li> </ul> <p><b>Siemens Remote Service</b> Prepared for Siemens Remote Service SRS™ (during warranty, then with service contract):</p> <ul style="list-style-type: none"> <li>- Hardware and software remote diagnosis.</li> <li>- System remote configuration, e.g. adding of a DICOM node.</li> <li>- Early warning system ensuring system operation.</li> </ul> <p><b>syngo Evolve for Artis zee</b> <i>syngo Evolve</i> 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.</p> <p><b>Customer Care. Life - the customer care solution by Siemens Healthcare</b> From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care. Life", e.g.:</p> <ul style="list-style-type: none"> <li>- initial application training,</li> <li>- interactive e-learning for various applications,</li> <li>- free customer magazines,</li> <li>- arrangements for clinical training via a global network,</li> <li>- and free trial licenses</li> </ul> <p>You will find detailed information on our e-learning program and further details on general "Customer Care. Life" services on the internet.</p> <p>* "Customer Care. Life" offerings are not necessarily available to the full extent for all systems.</p>
<p><b>DSA / DR (1)</b></p>	<p>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.</p>

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<p><b>(Continued)</b></p> <p><b>DSA / DR (1)</b></p>	<p>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.</p> <p>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 CO<sub>2</sub> contrast (MinOpac); adding of the anatomical background (landmark) from 0 to 100%.</p> <p>With software version VC21 and higher, the following additional functions are available with Roadmap:</p> <ul style="list-style-type: none"> <li>- DSA image can be selected as a mask for Roadmap</li> <li>- Zoom can be changed during Roadmap</li> <li>- Catheter and vascular contrast can be changed separately</li> </ul> <p>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.</p>
<p><b>CLEARstent</b></p>	<p>CLEARstent enables an improved display of vascular supports (stents) that are growing increasingly difficult to detect in fluoro images due to the increasing number of obese patients and the ever finer structures.</p> <p>Regardless whether contrast agent is injected during the scene or not, CLEARstent either generates a magnified still image of the highlighted stent or displays the vessel filled with contrast agent alternating with the still image.</p> <p>The still image from fluoroscopy can then be overlaid.</p> <p>CLEARstent can be activated with a single operation, directly at the patient table.</p>
<p><b>XWP w. InSpace 3D FlashRT zee/zeego</b></p>	<p><b>syngo X Workplace</b> The functionality of the syngo X Workplace can be extended with additional software functions to suit specific user or clinical needs in angiography, surgery, and cardiology. The use of the licensed software is limited exclusively to the specific syngo X Workplace included with this configuration.</p> <p>The base viewing system can be extended by adding a wide range of application options.</p> <p><b>syngo X Workplace PC</b> High-performance workstation based on Windows XP Professional with upgraded 6/12 GB RAM and hard drive with 147 GB/300 GB for image data. The workstation is equipped with an Open GL accelerator board to support 3D applications. To exchange medical images on DICOM-compatible CD-Rs and DVDs, the system is equipped with a CD/DVD burner.</p> <p>syngo X Workplace can be connected to an existing network via Gigabit/100 Mbit Ethernet.</p> <p><b>syngo X Workplace Basic User Software</b> The syngo X Workplace software features an intuitive and thus easy to learn user interface developed from prototypes tested in close cooperation with users.</p> <p>Standard functions such as filming or image review, and optional clinical application software, are performed in individual processes on dedicated task cards. A number of functions and input parameters, as well as the language used, can be selected according to individual requirements.</p> <p><b>Package comprising the following software licenses</b> Basic software with CD and dongle for the following functions:</p> <ul style="list-style-type: none"> <li>- Patient Browser</li> <li>- Filming</li> <li>- Viewer</li> <li>- System services</li> </ul> <p>Patient Browser:</p>

/ Product	Description
<p><b>(Continued)</b></p> <p><b>XWP w. InSpace 3D FlashRT zee/zeego</b></p>	<ul style="list-style-type: none"> <li>- Patient management.</li> <li>- DICOM communication with Send, Receive, Query/Retrieve, Print.</li> <li>- Reading of CDs/DVDs.</li> <li>- Module for writing DICOM CDs/DVDs for data exchange. Writing is in background mode.</li> </ul> <p>Filming: A virtual filmsheet shows a 1:1 display of the film sheets to be printed. This permits an effective preview of the filming job and the windowing of images, as well as providing a large number of evaluation functions.</p> <p>Image Review: Image Review supports interactive 2D review, evaluation and documentation functions. Multiple studies from the same patient can be displayed side-by-side for comparison.</p> <ul style="list-style-type: none"> <li>- Image display: 1.024<sup>2</sup> screen matrix, configurable with up to 64 image segments.</li> <li>- CINE display: Automatic or interactive dynamic presentation technique for the visualization of time and volume series.</li> <li>- Synchronized viewing of multiple series.</li> <li>- Measurement and annotation: Text annotation; distance, angle, circle, ROI and pixel lens, depending on information available from the acquisition system.</li> </ul> <p>System services: Microsoft Office 2003 Word, Excel, PowerPoint plus Outlook are supported (not provided!).</p> <ul style="list-style-type: none"> <li>- Any user-selectable file, such as cardiac, DSA or InSpace AVI video sequences, can be burned to CD to prepare quality presentations and demos of pathologies.</li> <li>- Network module: For connection to a local Ethernet (Gigabit or 100 Mbit) for communication with networked archives, printers, diagnostic and therapy workstations, and teleradiology routers.</li> </ul> <p>Scope of functions</p> <ul style="list-style-type: none"> <li>- Network stations can be configured.</li> <li>- Unlimited selection of stations.</li> </ul> <p><i>syngo</i> InSpace 3D Flash RT <i>syngo</i> InSpace 3D Flash RT facilitates the interactive 3D reconstruction and visualization in real time of a volume in volume rendering technique, MPR, and MIP. InSpace 3D is focused to support the interventional radiologist and neuroradiologist in the angio lab. Based on dedicated acceleration hardware the primary reconstruction results are available in full diagnostic quality in the examination room within 18 seconds for high contrast images and less than one minute for soft tissue DynaCT images. Subsequent secondary reconstructions are available even faster.</p> <p>The application facilitates interactive volume rendering, accelerated by a high-end 3D graphics card. It offers support for large data records of up to 1,600 images (512 x 512 matrix).</p> <p><b><i>syngo</i> iIdentify (Dual Volume Visualization)</b> Enables the differentiation between two high-contrast 3D objects that have virtually the same contrast density and allows the display of one low contrast and one high contrast volume in one view. <i>syngo</i> iIdentify enables clear differentiation between contrast-filled vessels, bones, stents and coils. Furthermore, visualization of the anatomical structure of tumors in combination with the feeding vessels becomes possible.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>- Reconstruction protocols, for visualization of vessels, bones, clips and coils.</li> <li>- The result of the reconstruction can be native or subtracted.</li> <li>- Modification of reconstruction area to allow zoom via reconstruction.</li> <li>- Visualization with shading and light source for an improved three-dimensional impression.</li> <li>- Interventional volume measurement.</li> </ul> <p>Image data:</p> <ul style="list-style-type: none"> <li>- Volume data from AX, CT, MR, and PET modalities.</li> <li>- Loading of two volume data sets simultaneously.</li> <li>- Layouts: single (1on1), double (2 on1) and quadruple (4on1) for MPR display.</li> <li>- Two displays are supported for simultaneous display of two volumes side-by-side.</li> </ul>

/ Product	Description
<p><b>(Continued)</b></p> <p><b>XWP w. InSpace 3D FlashRT zee/zeego</b></p>	<p>Image display modes:</p> <ul style="list-style-type: none"> <li>- VRT, Color VRT, MIP, MinIP, and MPR rendering.</li> <li>- Thin slice renderings for VRT, MIP, and MinIP.</li> <li>- Variable light source.</li> <li>- Shading effects.</li> </ul> <p>Volume editing:</p> <ul style="list-style-type: none"> <li>- Cut planes.</li> <li>- Editing of clip planes and control volumes.</li> <li>- ROI punching.</li> </ul> <p>Presets:</p> <ul style="list-style-type: none"> <li>- Series-specific bookmarks, to store and retrieve volume visualization parameters.</li> <li>- Global presets for series-unspecific application of volume visualization parameters.</li> </ul> <p>Output:</p> <ul style="list-style-type: none"> <li>- Radial ranges, including macro range definitions.</li> <li>- 2D and 3D measurements, measurement grid, distance measurement and annotations.</li> <li>- AVI format export with selectable compression format and compression ratio.</li> <li>- TIFF, PNG, BMP, JPEG image export.</li> <li>- Send to film sheet.</li> </ul> <p><b>Advantages and features of InSpace 3D Flash RT</b></p> <p>In angiography the three-dimensional information is used for diagnosis, planning of therapy and documentation in the field of endovascular and non-endovascular interventional procedures.</p> <p>Diagnosis and treatment can be performed in one session, thus providing a major advantage through the fully integrated workflow.</p> <ul style="list-style-type: none"> <li>- Transfer of the projection angle to the C-arm stand.</li> <li>- Indication whether the angulation can be achieved at the C-arm without collision with the patient or table.</li> <li>- Interventional volume measurement.</li> </ul> <p><b>InSpace 3D accessories</b></p> <p>Includes the accessories required for 3D reconstruction and visualization:</p> <ul style="list-style-type: none"> <li>- Plexiglas calibration phantoms</li> <li>- Line phantom for image quality control</li> <li>- Form filter</li> <li>- 3D data link</li> </ul> <p><b>syngo iPilot</b></p> <p>For any projection, zoom, SID and table position the physician can create an iPilot - view, which is superimposed on the live fluoro image. Via a fade with the joystick the degree of visibility can be determined. The physician can perform the procedure with more confidence. No extra contrast is needed to make the vessel tree visible.</p> <p>When the guidewire is visible on the live screen in the area the 3D reconstruction, the physician can press the "iPilot" button on the tableside control at any time.</p> <p>An image is automatically calculated and sent to the reference storage of the imaging system. Via the Overlay Fade functionality the physician can show the 3D and 2D live information in one image.</p> <p><b>DICOM</b></p> <p>Industrial standard for the transmission of information between DICOM-compatible equipment from different manufacturers. The scope of functions is described in detail in the DICOM Conformance Statement and in the standard version includes the Transmission/ Reception, Query/ Retrieve and Basic Print functions.</p> <p><b>Note concerning DICOM interface(s)</b></p> <p>For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.</p>

/ Product	Description
<p><b>(Continued)</b></p> <p><b>XWP w. InSpace 3D FlashRT zee/zeego</b></p>	<p>The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).</p> <p>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.</p> <p>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>
<p><b>DynaCT Cardiac 30x40 FD</b></p>	<p><i>syngo</i> DynaCT Cardiac for 30x40 FD allows the use of proven <i>syngo</i> DynaCT 3D reconstruction for contrasted X-ray projection images of ventricles and vessels of the heart. <i>syngo</i> DynaCT Cardiac for 30x40 FD contains reconstruction algorithms for</p> <ul style="list-style-type: none"> <li>- ECG-triggered 3D acquisitions (multiple C-arm rotations, approx. 30 seconds exposure time) as well as for</li> <li>- untriggered 3D acquisitions (one C-arm rotation, approx. 5 seconds exposure time).</li> </ul> <p>In software version VC21 and higher, DynaCT also offers:</p> <ul style="list-style-type: none"> <li>- a new reconstruction algorithm optimized for fan beam geometry</li> <li>- 20sDR-H 109 kV for native DynaCT e.g., for detecting bleeding</li> <li>- faster 3D acquisition in 4x4 Binning mode</li> </ul> <p>ECG-triggered acquisitions provide greater temporal resolution, which is helpful for imaging cardiac morphology with a lot of motion.</p> <p>Clinical applications currently supported by DynaCT Cardiac:</p> <p>Electrophysiology:</p> <ul style="list-style-type: none"> <li>- 3D visualization of the left atrium to support ablation of atrial fibrillation (segmentation of the left atrium using InSpace EP, must be ordered separately)</li> <li>- 3D visualization of the coronary venous tree to support biventricular pacemaker implantation</li> </ul> <p>Interventional Cardiology/Surgery:</p> <ul style="list-style-type: none"> <li>- Planning, support and follow-up before, during and after heart valve replacement through 3D visualization of the aortic valve and coronary ostia</li> </ul> <p>Pediatrics:</p> <ul style="list-style-type: none"> <li>- 3D visualization of the congenital heart defects before and after surgical interventions: There are low-dose organ programs especially developed for pediatric acquisitions available.</li> </ul> <p><i>syngo</i> DynaCT Cardiac is especially suited for the planning, performance and follow-up of interventions through display of the cardiac 3D morphology directly in the cath lab.</p> <p>The overlay of live fluoro images with 3D image data can take place without the registration procedure. With <i>syngo</i> iPilot enhanced (option can be ordered separately) even color 3D image data can be overlaid.</p> <p>DynaCT Cardiac Volume can also serve as a basis for magnetic navigation systems (e.g., Niobe Navigant) or can be used by electroanatomical mapping systems (CARTO, Ensite NavX) for increased precision as well as time savings (optional <i>syngo</i> InSpace EP Segmentation required) .</p>
<p><b>iPilot functionality for XWP</b></p>	<p><b><i>syngo</i> iPilot Workflow</b></p> <p>In preparation for iPilot-guided intervention, the physician typically performs a 3D reconstruction to visualize the vessel tree or an anatomical structure as a volume. Upon selection of iPilot, this 3D reconstruction is overlaid with the live image. The degree of visibility of the 3D volume can be modified by the user. Patient movements can be compensated by adjusting the 3D volume accordingly.</p>
<p><b>syngo InSpace 3D/3D Fusion</b></p>	<p><i>syngo</i> DynaCT, CT or MR images are accepted as input for <i>syngo</i> InSpace 3D/3D fusion. Studies can be done with the same modality or with different modalities.</p>

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<p><b>(Continued)</b> <b>1</b> <b>syngo InSpace 3D/3D Fusion</b></p>	<p>Registration Algorithms:</p> <ul style="list-style-type: none"> <li>- automatic alignment of two datasets based on similar structures in the datasets</li> <li>- easy-to-use visual alignment with 6 degrees of freedom (3x translation, 3x rotation)</li> <li>- landmark based registration with convenient landmark editor for point-based registration using anatomical landmarks</li> <li>- storage of transformation matrix with datasets after registration for later retrieval</li> </ul> <p>Visualization Techniques:</p> <ul style="list-style-type: none"> <li>- side by side visualization of both datasets with correlated pointer and correlated scrolling with dog ears</li> <li>- 2D alpha-blending in monochrome or pseudo-color with adjustable balance between the two superimposed data sets.</li> </ul>
<p><b>syngo iGuide Toolbox</b></p>	<p><b>Linked Marker</b> 'Linked Marker' is used to display a graphical reference overlaid to the live image marking an anatomical structure that is visible in the 3D volume or marking the pathway for a puncture to guide the needle.</p> <p>The 'Linked Marker' tool places points or lines onto the 3D data set. Placement can be performed either in the MPR view or directly in the VRT view. Either all or selected graphics may be overlaid on the current live image – Fluoro, Roadmap or Acquisition – in order to support the user during an intervention. Modifications such as e.g. moving, resizing, deleting any selected graphics are possible.</p> <p>'Linked Marker' graphics may be saved with the 3D data set. That means these points and lines can be archived for later review with the 3D data.</p> <p><b>Linked Pointer</b> 'Linked Pointer' displays the current mouse cursor position on the 3D volume and matches the corresponding position on the live monitor.</p> <p>With 'Linked Pointer' function selected, all cursor movements in the InSpace MPR view are simultaneously shown at the corresponding position in the 2D image on the live monitor.</p> <p><b>Linked Contours</b> 'Linked Contours' displays a graphical outline on the live monitor to indicate the shape or contour of the 3D volume displayed on the <i>syngo</i> Workplace. It may be used to give the user a hint of the 3D volume on the live monitor, e.g. a stent or a coiling basket.</p> <p>Selecting the function 'Linked Contour' will generate a graphical display of the outlines in the 3D volume and overlay it on to the image – Fluoro, Roadmap or Acquisition – on the live monitor.</p> <p>The displayed contours are dependent on the current rendering settings (VOI, punching, windowing, transparency) of the displayed volume.</p> <p>Geometrical changes (stand angulation, zoom size, SID, table positions) will automatically result in an update of the displayed graphics on the live monitor.</p>
<p><b>19in Color Flatscreen Display</b></p>	<p>The Siemens 19" LCD flatscreen display features a very high contrast even under very bright ambient light conditions. The Gamma curve was precisely adapted to the CIE-/DICOM recommendation and is thus suited especially for gray scale display.</p> <p>LCD flatscreen display</p> <ul style="list-style-type: none"> <li>- 19" (48 cm) screen size</li> <li>- Resolution: 1,280 x 1,024 (pixel)</li> <li>- guaranteed brightness for the entire service life: 137 cd/m<sup>2</sup> at a contrast ratio of 300:1</li> <li>- Flicker-free and distortion-free image display</li> <li>- Anti-glare screen</li> </ul> <p>The controlled background lighting provides stable lighting throughout the entire product life cycle.</p>

/ Product	Description
<b>Inroom Control SW-License</b>	<p>The InRoom Control software extension allows for remote control of the syngo Workplace from the examination room via touchscreen and joystick.</p> <p>For this, another set of functions is offered on the Artis touchscreen. These are implemented for 3D navigation and allow the user to manipulate the 3D image displayed on the optional display.</p>
<b>syngo Angio Package</b>	<p>The <i>syngo</i> Angio package enables dynamic review of DSA scenes (in subtracted or native display) and their postprocessing at the <i>syngo</i> Workplace, with functions such as:</p> <ul style="list-style-type: none"> <li>- Remasking.</li> <li>- Pixelshift.</li> <li>- Anatomic background.</li> <li>- Opacification etc.</li> <li>- Review of DYNAVISON and PERIVISION scenes</li> </ul> <p>The high-speed functionality increases the image review frequency, especially of biplane and single-plane cardiac scenes, depending on the frame rate and the <i>syngo</i> Workplace hardware used.</p> <p>With the current <i>syngo</i> Workplace hardware the following maximum image review frequencies of the scenes can be achieved:</p> <p>Biplane (native):</p> <ul style="list-style-type: none"> <li>- 6 f/s with a 1024<sup>2</sup> matrix</li> <li>- 15 f/s with a 512<sup>2</sup> matrix</li> </ul> <p>Monoplane (native):</p> <ul style="list-style-type: none"> <li>- 15 f/s with a 1024<sup>2</sup> matrix</li> <li>- 30 f/s with a 512<sup>2</sup> matrix</li> </ul>
<b>syngo keyboard, USA</b>	<p>Keyboard for easy operation of syngo (browser, viewer, filming). There are special keys for windowing, scrolling, printing, marking and network communication.</p>
<b>3D / Dynavision</b>	<p>Angle and ECG-triggered digital rotation angiography with corresponding image data transfer to a <i>syngo</i> X Workplace for 3D image data reconstruction.</p> <ul style="list-style-type: none"> <li>- Rotation speed is up to 60°/s (Artis zee ceiling, Artis zeego) and 45°/s (Artis zee floor, Artis zee biplane).</li> <li>- Angle triggering allows a reduction in dose through a reduced acquisition frame rate while at the same time achieving better image quality.</li> <li>- All parameters required for the 3D reconstruction are included in the organ program. This enables optimized image quality and easy handling.</li> <li>- Acquisitions with frame rates in 1k matrix from 0.5 to 7.5, 10, 15, 30 f/s (standard) and 60 f/s with reduced spatial resolution can be selected,</li> </ul> <p>Includes DYNAVISON DR for native and DYNAVISON DSA for subtracted (with DSA option only) rotational angiography. Reconstruction at the <i>syngo</i> X Workplace is not possible with these operating modes.</p>
<b>Detector 30x40 incl LaserCrossh.(T)</b>	<p><b>Flat detector 30 x 40</b></p> <p>The digital high-resolution dynamic flat detector with integrated removable grid is especially designed to fulfill the requirements of angiographic and interventional applications.</p> <p>154 µm pixel arrays provide highest spatial resolution (3.25 LP/mm) and excellent contrast. Fluoroscopy as well as image acquisition are always done in 14-bit gray scale resolution, allowing excellent detail visibility. Acquisition frame rates of up to 30 f/s are possible.</p> <p>Usable input formats:</p> <ul style="list-style-type: none"> <li>- Overview mode 30 cm x 38 cm.</li> <li>- Zoom 1: 30 cm x 30 cm; diagonal 42 cm.</li> <li>- Zoom 2: 22 cm x 22 cm; diagonal 32 cm.</li> <li>- Zoom 3: 16 cm x 16 cm; diagonal 22 cm.</li> </ul>

/ Product	Description
<p><i>(Continued)</i></p> <p><b>Detector 30x40 incl LaserCrossh.(T)</b></p>	<ul style="list-style-type: none"> <li>- Zoom 4: 11 cm x 11 cm; diagonal 16 cm.</li> <li>- Zoom 5: 8 cm x 8 cm; diagonal 11 cm.</li> </ul> <p>The very compact design with integrated collision protection provides maximum C-arm angulation range for excellent patient access.</p> <p>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.</p> <p>Digital data transfer from the detector to the imaging system is via a high-speed Gigalink fiber-optic cable.</p> <p>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.</p> <p>Laser crosshairs: Laser crosshairs integrated in the cover of the flat detector and tableside operation for easier, quicker and dose-saving positioning of the patient.</p> <p>The 30 x 40 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.</p> <p><b>Tube assembly MEGALIX Cat Plus 125/20/40/80-122GW</b> 3-focus high-performance X-ray tube with flat emitter technology, metal center tube in lubricated spiral groove bearing technology for permanent, noise-free rotation.</p> <ul style="list-style-type: none"> <li>- Maximum tube voltage 125 kV</li> <li>- Focus: 0.3/0.6 x 0.6*/1.0 (17/38/80 kW)</li> <li>- Anode angle 12°</li> <li>- Maximum anode heat storage capacity: 3,375,000 HU</li> <li>- Maximum tube current for fluoroscopy: 250 mA</li> </ul> <p>* Image quality improved</p> <p>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.</p> <p><b>Angio collimator</b> Compact multileaf collimator for DSA and cardiological applications with rectangular diaphragm, wedge-shaped filter diaphragms and finger-shaped graduated filter.</p> <ul style="list-style-type: none"> <li>- Automatic synchronous rotation of detector and collimator unit to compensate image rotation in the different working positions of the gantry.</li> <li>- Manual rotation of the detector and collimator unit using the control right on the detector housing.</li> <li>- Five-step adaptive Cu pre-filtration (CAREfilter) to reduce the equivalent skin dose and improve radiation quality through dose saving for the soft radiation parts. Filter steps: 0.1; 0.2; 0.3; 0.6; 0.9 mm Cu.</li> <li>- Independent rotation and shifting of filter diaphragms.</li> <li>- 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).</li> </ul>
<p><b>Table Standard</b></p>	<p>Patient table for angiographic examinations and interventions.</p> <ul style="list-style-type: none"> <li>- Direct patient access from all sides, both through the swiveling table and large tabletop cantilever.</li> <li>- Electromechanical release of table swivel at the touch of a button at the table.</li> <li>- Telescopic foot with motor-driven height adjustment.</li> <li>- Max. patient weight 250 kg. Accessories weighing up to 40 kg can also be installed.</li> </ul>
<p><b>Tabletop &amp; Mattress, Wide</b></p>	<p>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.</p>

/ Product	Description
<b>Connection Kit - 2nd Foot Switch</b>	<p>As a result, two foot switches can be connected directly to the table. One foot switch is connected via cable, the other is wireless.</p>
<b>Large Display with DCS extended</b>	<p><b>Color flat display</b> The 56" or 60" display area represents a new dimension in medical image display. Using a fully integrated table-side 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.</p> <p>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.</p> <p>The extended Roadmap function is included, if DSA is available:</p> <ul style="list-style-type: none"> <li>- During fluoroscopy (FL), the native live FL image is displayed, otherwise the LIH image (Last Image Hold).</li> <li>- During Roadmap/subtracted fluoroscopy, the native live FL image is displayed, otherwise the LIH image (Last Image Hold).</li> <li>- During DSA acquisition, the native live image is displayed, otherwise the native max fill image.</li> </ul> <p>Contains the dual reference function:</p> <ul style="list-style-type: none"> <li>- An additional, static reference image for parallel display of two reference images on the Large Display.</li> </ul> <p>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.</p> <p>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.</p> <p>Technical specification for the display:</p> <ul style="list-style-type: none"> <li>- Display size (W x H) 56 " 124,4 cm x 70 cm or 60 " 133 cm x 74.8 cm</li> <li>- Screen size 56" (142.2 cm). or 60 " 153 cm</li> <li>- Resolution: 3840 x 2160 (pixels); 8 megapixels at 4 x HD.</li> <li>- Color depth 16.7 10<sup>6</sup> colors.</li> <li>- Guaranteed brightness for the entire service life: 300 cd/m<sup>2</sup> at a contrast ratio of 800:1.</li> <li>- Flicker-free and distortion-free image display.</li> </ul> <p><b>Multi Display Manager</b> 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.</p> <p><b>Display ceiling-mounted stand</b> The longitudinally mobile, swiveling, rotating, and height adjustable display suspension system (DCS extended) with extended working range contains a large 56" color flat display. All cables are integrated into the universal mounted DCS with double-articulated arm. The double-articulated arm of the "extended" display suspension system provides greater flexibility and a greater positioning range for the Large Display.</p> <p>Technical specification for the display ceiling support:</p> <ul style="list-style-type: none"> <li>- Longitudinal travel range 315 cm.</li> <li>- Height adjustment range 75 cm.</li> <li>- Swivel range between the articulated joint and the suspension at the ceiling-mounted carriage ± 150 degrees.</li> <li>- Swivel range between the freely-suspended cantilever arm and the articulated joint ± 120 degrees.</li> <li>- Display swivel range 330°.</li> </ul> <p><b>Bypass concept</b> In case of error, such as controller failure, the Large Display switches automatically to bypass mode and</p>

/ Product	Description
<p><i>(Continued)</i></p> <p><b>Large Display with DCS extended</b></p>	<p>emergency fluoroscopy is displayed on the Large Display.</p> <p><b>Backup concept</b> 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).</p>
<p><b>LD MDM-Controller Medium 18 Inputs</b></p>	<p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p>
<p><b>XWP/MMWP video cabling</b></p>	<p>Using the connection kit, one DVI-D video signal of a unit is duplicated. One of these is connected to one of the DVI-D video inputs of the Siemens video signal distributor. The second video signal is available for use by a display, for example in the control room. Using fiber-optic cables ensures the galvanic isolation of the video source.</p> <p>The inputs support a maximum resolution of 1920x1200.</p> <p>It includes the following components:</p> <ul style="list-style-type: none"> <li>- a video splitter</li> <li>- A DVI to fiber-optic cable adapter</li> <li>- A fiber-optic cable (36 meters)</li> <li>- A fiber-optic cable to DVI adapter</li> <li>- Two 5 volt power supplies for the adapters</li> </ul>
<p><b>Analog/digital video converter</b></p>	<p>Using a connection kit, a VGA, DVI (up to a resolution of 1600 x 1200), SVideo, or BAS video signal is converted into a DVI-D video signal.</p> <p>Note: This kit can be used only if at least one VGA or DVI connection is available on the unit.</p> <p>It includes the following components:</p> <ul style="list-style-type: none"> <li>- An analog - digital video converter</li> </ul>
<p><b>Video splitter</b></p>	<p>Using the connection kit, one DVI-D video signal of a unit is quadrupled. One of these remains available for the original use, for example by a display in the control room. The other can be connected to DVI-D video inputs of the Siemens video signal distributor using video cables that can be ordered separately.</p> <p>The inputs support a maximum resolution of 1920x1200.</p> <p>It includes the following components:</p> <ul style="list-style-type: none"> <li>- a video splitter</li> </ul>
<p><b>Digital video cabling</b></p>	<p>The inputs support a maximum resolution of 1920x1200.</p> <p>It includes the following components:</p> <ul style="list-style-type: none"> <li>- A DVI to fiber-optic cable adapter</li> <li>- A fiber-optic cable (36 meters)</li> <li>- A fiber-optic cable to DVI adapter</li> <li>- Two 5 volt power supplies for the adapters</li> <li>- Two DVI to HDMI adapters</li> </ul>

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<b>LD input VGA ext. (ultrasound)</b>	<p>For analog video signals with SXGA 1280 x 1024 or VGA 640 x 480 output (e.g. ultrasound), directly connectible at the examination table.</p> <p>Consisting of:</p> <ul style="list-style-type: none"> <li>- a video separator and OTV-VGA splitter for the external analog video monitor signal</li> <li>- two HD 15 VGA cables, one 40 m and one 5 m in length</li> <li>- a VGA adapter cable for 5 x BNC, 0.6 m and 1 m in length</li> <li>- an adapter</li> <li>- an MDM container slide-in tray for attaching the components in the container</li> </ul> <p>* To display images from third-party video sources on the Large Display interfaces for external video signals, note the following requirements:</p> <ul style="list-style-type: none"> <li>- The connection of third-party devices is only permissible if they meet the specifications of the LD interface.</li> <li>- The connection of the LD interface to the LD controller must be performed by a Siemens service technician.</li> <li>- 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.</li> <li>- Siemens cannot assume any warranty for the connection of the third-party device with respect to the image quality and its suitability for diagnosis.</li> <li>- 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.</li> <li>- The system configurator is responsible for ensuring that the valid versions of the relevant standards are met.</li> </ul> <p>Should you have any questions, please call the LD hotline: +49 (9191) 18-8099. In the USA, please call the local LD hotline.</p>
<b>C-Room DVI 1xBWD-19 (Live) -36m</b>	<p>19" high-contrast b/w display for live image display, as well as syngo operation in the control room. Table design with black frame.</p> <p>Display in monochrome TFT technology with high luminance and extended viewing angle.</p> <ul style="list-style-type: none"> <li>- 19" (48 cm) monitor.</li> <li>- Resolution: 1,280 x 1,024 (pixel).</li> <li>- Guaranteed brightness for the entire service life: 400 cd/m<sup>2</sup> at a contrast ratio of 500:1.</li> <li>- Flicker-free and distortion-free image display.</li> <li>- Ambient light sensor for optimum adaptation to the room brightness.</li> </ul>
<b>Automap</b>	<p>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.</p>
<b>DICOM HIS / RIS</b>	<p><b>DICOM MWL (Modality Worklist):</b> Import of patient/examination data from an external RIS/HIS patient management system.</p> <p><b>Note concerning DICOM interface(s)</b> For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.</p> <p>The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).</p> <p>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.</p> <p>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.</p>

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<b>(Continued)</b> <b>DICOM HIS / RIS</b>	With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.
<b>LB rad. protection w/ pivot arm</b>	<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"> <li>- A basic unit shielding the area between accessory rails and the floor. It is flexible and can be adapted to the examiner's preferences.</li> <li>- 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.</li> <li>- Two clip-on units pointing upwards from the upper edge of the basic unit with a length of 57 cm and 27 cm.</li> </ul> <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>
<b>Upper Body Rad. Prot. Artis-T</b>	<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"> <li>- Swivable and rotatable around the fixed point, range of rotation 360°.</li> <li>- Counter-balanced, height-adjustable support arm.</li> <li>- Acrylic glass with Pb equivalent of 0.5 eq (w x h: 61 cm x 76 cm), with recess for interventional examinations.</li> </ul>
<b>syngo Keyboard, English - US</b>	Keyboard for easy operation of <i>syngo</i> (browser, viewer, filming). There are special keys for windowing, scrolling, printing, marking and network communication.
<b>Intercom - Comfort</b>	<p>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.</p>
<b>LB rad. prot. w/ left pivot arm</b>	<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"> <li>- A basic unit shielding the area between accessory rails and the floor. It is flexible and can be adapted to the examiner's preferences.</li> <li>- 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.</li> <li>- Two clip-on units pointing upwards from the upper edge of the basic unit with a length of 57 cm and 27 cm.</li> </ul> <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>
<b>Body module</b>	<p>The insert with accessory rails attached to the right and left slides over the outer edges of the patient positioning tabletop. It is locked in place through two screws on either side. The part to be inserted underneath the tabletop consists of radiolucent carbon fiber material, which avoids disturbing edges in the image.</p> <ul style="list-style-type: none"> <li>- Load capacity of the accessory rails: max. 40 kg.</li> <li>- Length of the accessory rails: 45 cm.</li> </ul>
<b>5 Blue anti-fatigue floor mat for hospital</b>	<p><b>NT60010835 Interstate Mat Corporation Anti-fatigue Mat</b></p> <p>Industrial-grade anti-fatigue floor mat that provides comfort and durability. As a high-quality product designed to</p>

/ Product	Description
<p><i>(Continued)</i></p> <p><b>Blue anti-fatigue floor mat for hospital</b></p>	<p>fight fatigue, it provides support for tired, aching feet, legs and back. Beveled edges for safety. Size 3'x5'.</p>
<p><b>Table with Tilt (Alternate)</b></p>	<p>Floor-mounted patient positioning table designed for angiographic examinations and interventions.</p> <ul style="list-style-type: none"> <li>- Direct patient access from all sides, both through the swiveling table and large tabletop cantilever.</li> <li>- ±15° head up/head down positioning.</li> <li>- Iso-tilt functionality for maintaining the projection during table tilt along the patient axis.</li> <li>- Motorized, power-dependent table movement in longitudinal direction when the table is tilted (power-assisted control).</li> <li>- Electromechanical release of table swivel at the touch of a button at the table.</li> <li>- Telescopic foot with motor-driven height adjustment.</li> <li>- Max. patient weight 200 kg. Accessories weighing up to 40 kg can also be installed.</li> </ul>
<p><b>syngo InSpace EP XWP (Optional)</b></p>	<p>Automated segmentation works on preoperative 3D CT or MR data sets or on intraoperative 3D rotational angiography data sets (<i>syngo</i> DynaCT Cardiac), the latter being acquired in the cath lab.</p> <p>Using three-dimensional visualization of ventricle and vessel morphology (especially of the complex and individual anatomy of the left atrium), InSpace EP reduces the examination time of ablations as a therapy for atrial fibrillation and simultaneously increases the chances of the ablation's success.</p> <p>InSpace EP functions:</p> <ul style="list-style-type: none"> <li>- InSpace EP processes both CT and MR data sets from Siemens modalities and external suppliers.</li> <li>- InSpace EP processes image data acquired intraprocedurally through C-arm rotational angiography immediately before, during or after the procedure in the examination room (<i>syngo</i> DynaCT Cardiac).</li> <li>- Autosegmentation of ventricles/vessels of the heart (especially the left atrium with visualization of the pulmonary veins) is automatically performed in one step.</li> <li>- Different interactive postprocessing methods of segmentation results.</li> <li>- Endoscopic view and Fly functionality (including automatic generation of movies).</li> <li>- Clipping functionality can also be applied to segmentation results, enabling visualization of the interior surface of a segmented ventricle.</li> <li>- EP Notebook: Lesions can be planned before the procedure and saved during the procedure for subsequent documentation as ablation points.</li> <li>- Interface connectivity to AXIOM Artis/Artis zee/zeego systems.</li> <li>- Interface connectivity to AXIOM Sensis XP (integration of visualizations into Sensis Report).</li> <li>- Interface connectivity to common electroanatomical mapping systems (exporting of extracted surfaces to CARTO, Ensite NavX).</li> <li>- DICOM Networking.</li> <li>- "Adjust C-arm"/"Adjust 3D" functionality: Automatic adaptation of Artis C-arm angulation to current <i>syngo</i> Workplace 3D views (including segmentation results) of the heart and vice versa.</li> </ul> <p>Direct overlay of multiple (multicolored) segmentation results onto a live fluoroscopy image is possible. The overlay functionality is activated/deactivated directly from the InSpace EP user interface.</p>
<p><b>Eaton Powerware 9355 15 kVA UPS (Optional)</b></p>	<p>This UPS is recommended when protection and uninterruptible power is required for the C-arm and table. Emergency fluoroscopy is not available with this UPS. If emergency fluoroscopy is required, the 9390 - 160 kVA UPS is recommended for the full system. One UPS per lab.</p> <p><b>Operation:</b></p> <ul style="list-style-type: none"> <li>- Since this UPS is working completely uninterrupted, a power failure is observed when no radiation is available and the display shows "No X-ray please wait".</li> <li>- The Emergency power lamp (red) will light on the power display during a power failure. All stand movements are possible and the image system functions are protected against data loss. Guaranteed back up time: 10 min.</li> </ul>

/ Product	Description
<p><i>(Continued)</i></p> <p><b>Eaton Powerware 9355 15 kVA UPS (Optional)</b></p>	<ul style="list-style-type: none"> <li>- Restoring of hospital's main power supply is indicated when the generator boots again (also green Hospital power lamp lights). Full exposures are available after apx. 75 seconds.</li> </ul> <p>Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware.</p> <p>Additional seismic brackets are required to make this system OSHPD approved.</p>
<p><b>Eaton Powerware 9390 160 kVA UPS (Optional)</b></p>	<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><b>Operation:</b></p> <ul style="list-style-type: none"> <li>- In case of power failure, the complete Artis system is backed up without interruption to the system or any imaging functionality.</li> <li>- 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.</li> <li>- No interruption to workflow</li> <li>- No re-boots required.</li> <li>- Additional advantage of an on-line power conditioner for complete system.</li> <li>- Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware.</li> </ul> <p>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.</p> <p>Not approved for sites requiring OSHPD certification. Please contact XPAS Inside Sales for configuration of an OSHPD certified configuration.</p>
<p><b>DICOM MPPS (Optional)</b></p>	<p><b>DICOM MPPS (Modality Performed Procedure Step)</b> Sending of dose data, patient data, and examination data to an external RIS/HIS patient management system. Sent in MPPS:</p> <ul style="list-style-type: none"> <li>- <b>Total dose-area product</b></li> <li>- <b>Number of exposures</b></li> <li>- <b>kV</b> per image (DICOM Exposure Dose Sequence)</li> <li>- <b>ms</b> per image</li> <li>- <b>mA</b> per image</li> </ul> <p><b>Note concerning DICOM interface(s)</b> For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.</p> <p>The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).</p> <p>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.</p> <p>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>