

V.A. Medical Center  
BLDG 46  
1501 SAN PEDRO SE  
ALBUQUERQUE, NM 87108  
PO#: 501-B50023

Qty	Item Description
1	<b>Luminos Agile Max</b> Fully digital undertable system for fluoroscopy with integrated, tableside system control on the image receptor, with user interface for ambidextrous operation. High-resolution dynamic flat detector 43 cm x 43 cm for fully digital image chain with network connectivity in DICOM standard: Send, Print and Storage Commitment. DICOM DVD / CD burner. Height-adjustable patient table, tiltable from vertical to 20° Trendelenburg position. Undertable X-ray tube assembly OPTITOP 150/40/80HC-100 with undertable multileaf collimator and 65kW HF X-ray generator. CAREvision for pulsed fluoroscopy. One (1) b/w 19" high-contrast flatscreen display for live image. CAREmax measuring chamber for acquisition of the dose-area product.
1	<b>Upgrade to 80 kW PLF</b> Upgrade of POLYDOROS generator to 80 kW.
1	<b>Compression</b> Compression device integrated into the image receiver spotfilm device. Motorized movement in and out.
1	<b>DICOM WORKLIST &amp; MPPS</b> Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist) as well as feedback on the examination status with DICOM MPPS (Modality Performed Procedure Step).
1	<b>DICOM QUERY RETRIEVE - C</b> Retrieval of archived images (DICOM Query/Retrieve - Service as SCU) from a digital archive or a workstation. The images must have a DICOM XRF (X-Ray Radiofluoroscopy)/XA (X-Ray Angiography), CR (Computed Radiography), or SC (Secondary Capture) format, and must be generated by the FLUOROSPOT Compact.
1	<b>CAREPROFILE - C</b> Radiation free placement of collimator blades in the LIH.
1	<b>Careposition C</b> Radiation-free object positioning through graphic display of the X-ray center beam and the image edges in the LIH (Last Image Hold) for dose reduction.
1	<b>Fluoroloop - C</b> Storage and review of dynamic fluoroscopic sequences (FluoroLoop) with all available frame rates. The fluoroscopic sequence can be stored subsequently, after fluoroscopy has been performed. The maximum storable fluoroscopy time depends on the selected pulse rate.

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1	<b>STENOSIS QUANTIFICATION - C</b> Quantification program for determination of degree of stenosis.
1	<b>Security Package</b> The SW option for fluoroscopy systems with FLUOROSPOT Compact, providing enhanced security features including user management and audit trail functionality. In compliance with HIPAA law in the U.S.
1	<b>VA Kit</b> Second set of documentation for Veterans' Affairs Administration Hospitals in the U.S.
1	<b>Keyboard, US English</b> PS2 standard keyboard
1	<b>PAPER PRINTER INTERFACE</b> Printer connection for output of single images, study list, exam-protocols etc. on a network-capable printer, connected via Ethernet.
1	<b>External DVI interface</b> Standard video output (DVI-D format) at the FLUOROSPOT Compact, for connecting an external recorder to record image information on video recording media.
1	<b>DVD for Fluoro Recording</b> Direct output of fluoroscopy and image series on DVD recorder.
1	<b>Reference Image for FL-C</b>
1	<b>DCS 2FT with 2 Displays b/w</b> Ceiling-mounted, swiveling, rotating, height-adjustable display suspension system with longitudinal travel with two 19" displays for live and reference image display in the examination room. Radiation indicator on DCS.
1	<b>Ysio Max Ceiling Carriage 3 m</b> Ysio Max Ceiling Carriage 3 m Universal digital radiographic workplace for skeletal radiography of the recumbent, standing or seated patient. High-resolution, permanently installed or wireless detectors as a basis for a fully digital imaging chain with a digital imaging system, an image and control station with application and evaluation programs, and DICOM network connection. Tube assembly support fully motorized in all projection-relevant axes with up to 220 cm transverse travel. OPTITOP 150/40/80 X-ray tube assembly and multileaf collimator with full field and laser line light localizer.
1	<b>Ceiling rails 4.25m</b> 2 tracks for the ceiling-mounted support with a travel distance up to a maximum of 4.25 meters in longitudinal direction
1	<b>Laser light localizer</b> Additional laser light localizer shifted by 90° compared to the standard laser light localizer included in the delivery volume. For targeting setting of the acquisition projection and patient positioning without radiation, e.g., setting at a trauma patient table in longitudinal direction.
1	<b>Caremax plus HS Integrated</b> CAREMAX plus Dose Area Product (DAP) meter tracks and displays the Dose Area Product (DAP) and/or standardized patient entrance dose and is connected to the collimator via CAREMAX adapter cable. The Dose Area Product (DAP) is being displayed on the FLC image system and recorded in the exam protocol.
1	<b>Bucky Wall Unit for MAX wi-D Left</b> Bucky Wall Unit for MAX wi-D Left Floor-mounted Bucky wall stand with height-adjustable and tiltable detector tray for a MAX wi-D flat detector for digital acquisitions. With IONTOMAT three-field chamber and Bucky frame.

Qty	Item Description
	Detector tray operated from the left / right side. Vertical height adjustment and detector tilt possible from both sides.
1	<p><b>Transparent grid 13/92, F180</b></p> <p>Highly selective anti-scatter grid for scattered radiation reduction:</p> <ul style="list-style-type: none"> <li>- Pb 13/92 (grid ratio 13:1, 92 lines/cm)</li> <li>- Grid focusing for SID 180 cm (71")</li> </ul> <p>Recommended for use in the Bucky wall stand when using the wi-D detector.</p>
1	<p><b>Transparent grid 13/92, Universal</b></p> <p>Highly selective anti-scatter grid for scattered radiation reduction:</p> <ul style="list-style-type: none"> <li>- Pb 13/92 (grid ratio 13:1, 92 lines/cm)</li> <li>- Grid focusing 140 cm (55")</li> <li>- Working range (SID) 115 cm to 180 cm (45" to 71")</li> </ul> <p>Recommended for use in the table and Bucky wall stand. Improved workflow due to fewer grid changes.</p>
1	<p><b>Transparent grid 13/92, F115</b></p> <p>Highly selective anti-scatter grid for scattered radiation reduction:</p> <ul style="list-style-type: none"> <li>- Pb 13/92 (grid ratio 13:1, 92 lines/cm)</li> <li>- Grid focusing for SID 115 cm (45")</li> </ul> <p>Recommended for use in the table and Bucky wall stand when using the wi-D detector.</p>
1	<p><b>Manual Control Bucky Wall Unit</b></p> <p>Wired hand-held remote to control system functions.</p>
1	<b>WLAN US</b>
1	<b>MAX wi-D</b>
1	<p><b>MAX wi-D Clip-on Grid 5/85 F115</b></p> <p>Grid (5/85), f 115 cm</p> <p>Highly selective anti-scatter grid for scattered radiation reduction:</p> <ul style="list-style-type: none"> <li>- Pb 5/85 (grid ratio 5:1, 85 lines/cm)</li> <li>- Grid focusing for SID 115 cm (45")</li> </ul>
1	<p><b>Transparent grid 13/92, F115</b></p> <p>Highly selective anti-scatter grid for scattered radiation reduction:</p> <ul style="list-style-type: none"> <li>- Pb 13/92 (grid ratio 13:1, 92 lines/cm)</li> <li>- Grid focusing for SID 115 cm (45")</li> </ul> <p>Recommended for use in the table and Bucky wall stand when using the wi-D detector.</p>
1	<p><b>Charger f. MAX wi-D and MAX mini</b></p> <p>This charger can be used to charge the replacement batteries for the MAX mini and MAX wi-D detectors.</p> <p>Note: The MAX mini battery can only be charged with this charger.</p> <p>Space for 3 batteries, with LED indicator for charge status. The charger connects to a wall socket using a power cord.</p> <p>This price book item includes the following components:</p> <ul style="list-style-type: none"> <li>- 1x battery charger</li> <li>- 1x power supply</li> <li>- 1x battery</li> </ul>

Qty	Item Description
1	<p><b>Foot holder</b></p> <p>Foot holders are necessary for examinations or interventional procedures involving Trendelenburg positions of 20° and more. They are attached to the slots of the footrest.</p> <ul style="list-style-type: none"> <li>- Maximum load capacity: 170 kg (374 lbs)</li> <li>- Weight: 0.6 kg (1.3 lbs)</li> </ul>
1	<p><b>Leg Support (left and right)</b></p> <p>Leg supports are required for gynecological and urological examinations. They can be adjusted in height and for leg positioning; the holders are shaped to conform to the anatomy of the knee joint. Attachment at the head end of the table in connection with the attachment frame for the footrest. The leg support is attached with a clamping device and clamping bolts.</p> <p>Weight: 4.4 kg (9.7 lbs)</p>
1	<p><b>Patient positioning mattress</b></p> <p>The radiolucent patient positioning mattress matches the size of the tabletop and has a heavy-duty soft plastic cover that is easy to clean. The soft pad allows comfortable patient positioning and repositioning.</p> <ul style="list-style-type: none"> <li>- Length: 198 cm (78")</li> <li>- Width: 66 cm/26" (53.5 cm/21" padded)</li> <li>- Thickness: 2.5 cm (1")</li> <li>- Weight: 2.7 kg (5.9 lbs)</li> </ul>
1	<p><b>Compression Belt</b></p> <p>Belt compression device with a radiolucent plastic belt.</p> <p>A clamping lever with a locking ratchet is used to tighten the easy-to-clean, radiolucent plastic belt.</p> <p>Advantages of compression:</p> <ul style="list-style-type: none"> <li>- Fast and efficient positioning of the patient on the tabletop</li> <li>- Reduction of patient thickness, i.e. improvement of image quality through scatter radiation reduction</li> </ul> <p>Weight: 3.6 kg (7.9 lbs)</p>
1	<p><b>Arm rest</b></p> <p>Padded support incl. fixing strap with eccentric clamping closure for comfortable and ergonomic positioning and immobilization of the extended patient's arm during intravenous contrast medium examinations or administration of intravenous medication. It attaches to the left or right accessory rail of the tabletop and can be positioned longitudinally and rotated on a swivel support.</p> <p>Weight: 5.0 kg (11 lbs)</p>
1	<b>Customer documentation, English</b>
3	<b>Initial onsite training 32 hrs</b>
1	<p>Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	<b>Initial onsite training 12 hrs</b>
1	<p>Up to (12) hours of on-site clinical education training, scheduled consecutively (Monday -</p>

Qty	Item Description
	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	<b>Offset onsite Training 12 hrs</b>
1	<b>Offset Initial Training 32 hrs</b>
1	<b>Portable DR Panel Protector(14x17)</b> The unique design of the DR Panel Protector provides an easy way to take weight-bearing x-rays of feet (AP view). The unit is simply placed over the DR panel which is first positioned on the floor. Patients step onto the DR Panel Protector with as much weight as needed to get the desired image. The face plate is made of polycarbonate designed to support patients weighing up to 500 pounds. The face plate is x-ray lucent, allowing the x-rays to pass through the DR Panel Protector with no significant absorption or scattering. The non-slip rubber floor grips keep the DR Panel Protector from slipping on a hard floor. The Panel Protector frame is notched to accommodate the cable connection from the digital DR panel to the host system. One year warranty through Clear Image Devices
1	<b>EZ PIC Universal Package</b> EZ PIC is a video acquisition workstation that enables digital recording to a hard drive on the workstation for review, editing and exporting to portable media and storage systems, including PACS. The EZ PIC provides audio recording capabilities and audio playback functionality. The EZ PIC is on a PC platform and includes a keyboard, mouse, and an LCD display with built in speakers. Perkins Electronics provides the EZ PIC Package system in a complete installation and product package that is designed to be integrated to the R/F system providing recording control to the R/F system footswitch providing a seamless integration to the R/F modality.  Package includes: EZ PIC System EZ PIC Processor LCD monitor Keyboard & Mouse EZ PIC Scan Converter Installation Kit Includes applicable video power cables Includes 1 year service agreement from Perkins Electronics.  Onsite Installation and Training provided by Perkins Includes 2 days onsite: 1 day installation and configuration of EZ PIC system 1 day of applications training
1	<b>Speech Audio Pack EZ PIC Kit</b>
1	<b>Standard Rigging Fluoro</b>

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

Lodging for Complimentary Biomed Training for one engineer for 17 nights

Airfare for Complimentary Biomed Training for one engineer from ABQ - RDU at

Project #2015-2473, Siemens Sireskop TF, Deinstall Date 8/2016, expires 1/23/2016

# Detailed Technical Specifications

## Luminos Agile Max

### Description

#### System configuration

Luminos Agile Max is a highly versatile undertable X-ray diagnostic system meeting all requirements with respect to ease of use, image quality, connectivity and low dose. The Luminos Agile Max features an ergonomic tableside user interface for ambidextrous use and is specially designed to accommodate the growing population of obese and bariatric patients.

#### Patient positioning

Patient positioning table easily accessible from all sides, tiltable from +90° to max. 20° Trendelenburg position.

- Table height adjustable from 65 cm to 112 cm (min. fluoro height 82 cm)
- Patient positioning tabletop 210 cm x 80 cm with examination range over the entire radiolucent part (193 cm x 53 cm). Motorized longitudinal travel  $\pm 80$  cm and transverse travel  $\pm 17.5$  cm.
- Foot rest attachable at head or foot end, up to a load of 230 kg.
- Comprehensive collision protection within the travel range of the image receptor.

Patient weight:

- Up to 150 kg - No restriction.
- 150 kg -182 kg (400 lbs) Patient longitudinal travel  $\pm 40$  cm with slow movement, table tilt unrestricted.
- Between 181 kg and 230 kg if tabletop is in center position. Table tilt from + 90° to - 15°.
- Between 231 kg and 275 kg if tabletop is in center position.

Interventions up to a patient weight of 250 kg (plus 50 kg still possible for CPR).

#### Flat detector image receptor

- Distance focus - tabletop 60 cm.
- SID from 89 cm to 125 cm.
- Primary collimator with rectangular format.
- Highly selective anti-scatter grid Pb 15/80, grid ratio 15:1, 80 lines/cm. Grid focusing for SID 100 cm.

Transparent grids improve the image quality by reducing scattered radiation on the film.

#### Flat detector:

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

- Semi-conductor material: Amorphous silicon (a-Si) with CsI-(scintillator)
- Size 43 cm x 43 cm
- Pixel size: 148  $\mu$ m (6.76 pixel per mm)
- Physical size of matrix: 2880 x 2880 (8.3 million pixels)
- Size of active matrix: 2840 x 2874 (8.2 million pixels)
- Detail resolution: 3.4 LP/mm
- Acquisition depth: 16 bits

148  $\mu$ m pixel arrays provide highest spatial resolution 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 8 f/s are possible.

Usable input formats:

- Overview: 43 cm x 43 cm; diagonal 60 cm.
- Zoom 1: 30 cm x 30 cm; diagonal 42 cm.

	<p><b>Description</b></p> <ul style="list-style-type: none"> <li>- Zoom 2: 22 cm x 22 cm; diagonal 32 cm.</li> <li>- Zoom 3: 15.5 cm x 15.5 cm; diagonal 21 cm.</li> </ul> <p><b>Operation</b> Ergonomic tableside user interface on the system, comfortable for both left- and right-handed users. Integrated system operation and total tableside examination control.</p> <ul style="list-style-type: none"> <li>- OPTI Grip for fast and easy movement of the flat detector image receptor and single-handed system operation.</li> <li>- Touch user interface for interactive control of all system functions.</li> </ul> <p>Footswitch FL/R: The footswitch combination with two separate switch pedals provides ergonomic work support. During fluoroscopy-guided patient examinations, the user's hands remain free for the examination. Fluoroscopy is switched on and off by foot. During fluoroscopy, targeted radiographic acquisitions can be released by foot, as well.</p> <p><b>Accessories included in basic version</b></p> <ul style="list-style-type: none"> <li>- Hand grip, front, axial adjustment.</li> <li>- Hand grip rail, back, axial adjustment.</li> <li>- Grip protection rail, head end, removable.</li> <li>- Shoulder supports (1 pair), three-dimensional adjustment.</li> <li>- Foot board, axial adjustment by 44 cm, can be used at head end or foot end.</li> <li>- Protective film for fluids</li> <li>- Radiation protection, complete</li> <li>- Counterweight for radiation protection</li> </ul> <p><b>OPTITOP 150/40/80HC-100 undertable X-ray tube assembly</b> Single track dual focus rotating anode tube with compound anode (rhenium-tungsten, molybdenum, graphite) with high heat storage capacity and high thermal load capacity for small focal spots.</p> <ul style="list-style-type: none"> <li>- Nominal voltage 150 kV max.</li> <li>- Nominal power (focal spot nominal values acc. to IEC 336): 40 kW: small focus 0.6 80 kW: large focus 1.0</li> <li>- Anode speed <math>\geq 8,500</math> r/min, anode angle <math>12^\circ</math>.</li> <li>- Heat storage capacity of the anode 580 kJ (783 kHU) acc. to IEC 613.</li> <li>- Total filtration (IEC 601-1-3) 2.5 mm Al equi.</li> </ul> <p><b>Multileaf collimator</b> Undertable multileaf collimator with rectangular collimation for automatic format collimation. Motor-driven Cu prefilters.</p> <p><b>CAREMAX</b> Electronic unit with KermaX-Plus, a measurement chamber integrated into the collimator housing for acquisition and fluoro systems to record the dose area product and/or standardized patient entry dose.</p> <p><b>19" Monochrome Flat display</b> High-contrast b/w TFT flat-screen display for live image display in the control room. With blue background color and black frame.</p> <ul style="list-style-type: none"> <li>- Flicker-free and distortion-free image display.</li> <li>- Screen size: 19"(48 cm).</li> <li>- Resolution: 1280 x 1024 (pixels).</li> <li>- Typical brightness: 400 cd/m<sup>2</sup>.</li> <li>- Maximum brightness: 1000 cd/m<sup>2</sup>.</li> <li>- Ambient light sensor for optimum adaptation of the image display to the room brightness.</li> </ul> <p><b>Imaging system</b></p>
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## Description

High-resolution digital imaging system with innovative image display, DICOM network connection and *syngo*-like user interface. It was optimized for general fluoro and multi-functional workplaces.

With the FLUOROSPOT Compact both single acquisitions and series from 0.5 to 8 images per second in 1440<sup>2</sup> matrix can be made and reviewed dynamically.

The digital acquisition process produces continuously high-quality images for all fluoroscopy-guided contrast medium examinations, skeletal acquisitions and interventional procedures.

### Operating modes:

- Digital radiography (DR) with up to 2, 880<sup>2</sup>/12-bit matrix.
- CAREVISION: Pulsed fluoroscopy with selectable pulse frequencies 3 f/s, 7.5 f/s, 10 f/s, or 15 f/s in 1024<sup>2</sup>/12-bit matrix.
- High-speed fluoro at 30 f/s in Zoom 2 (22 cm x 22 cm) and Zoom 0 (43 cm x 43 cm)  
Pulsed fluoroscopy is especially suitable for time-intensive examinations to reduce the radiation dose for physician, staff, and patient.
- Display and storage of the last fluoroscopic image after switching off radiation (Last Image Hold).
- Single image and serial mode up to 1,440<sup>2</sup>/12-bit or 1,024<sup>2</sup>/12-bit matrix (depending on zoom).
- Serial mode (max. 8 f/s) with variable frame rate in three steps (max. 1,440<sup>2</sup>/12-bit matrix).
- DDO (Dynamic Density Optimization) for on-line harmonization of native series and single images.
- Live auto-windowing during fluoroscopy
- Live auto-shutter during fluoroscopy

### Image processing:

- Real-time edge enhancement, positive/negative image display, windowing, contrast/brightness, electronic display (shutter), image shift (roaming), vertical and horizontal image inversion, and magnifying glass and zoom functions.
- DiamondView Plus: multi-scaling procedure for image post-processing with high detail contrast and reduced noise. Filter size and strength are weighted differently and are used for adaptation to the overall image content. DiamondView Plus enhances the signal exploitation of the dynamic range and improves the organ-specific detail contrast (soft tissue and bone). Can be preset in the organ program, and can subsequently be selected or deselected.
- Storing of single images as reference images also during fluoroscopy.
- Quantification: angle/length measurement, automatic and/or manual calibration.
- Text functions: User-defined image annotation, free annotation or using text components, comment line for the image, R/L display, image report and image quality graphics.
- Image gallery for harmonization (visualization support for image post-processing)

### Image display:

Image review and display in 100 Hz progressive display (1,024<sup>2</sup> matrix) through high-resolution, flicker-free flat-screen displays.

- Screen layout with 4, 9, 16, 25, or 36 images of an examination.
- Display of R/L marks.

### Image storage capacity:

50,000 images for permanent storage in 1k/12-bit matrix and 2,000 images for permanent storage in 2840 x 2880 matrix.

### **DVD / CD burner (DICOM)**

DVD drive for automatic digital image storage on CD/DVD for offline data exchange in DICOM, TIFF, and AVI format.

### **Connectivity**

- DICOM Send: Digital, unidirectional image transfer of single images or complete folders to a network in DICOM format.
- DICOM Print: Provision of DICOM Print service for connection to a laser camera or a network printer (postscript-capable).
- DICOM Storage Commitment (StC): The network/archive sends a receipt acknowledgment for images/folders to the image system in DICOM format.

	<p><b>Description</b></p> <ul style="list-style-type: none"> <li>- DICOM Dose structured report: Enables transfer of dose report to archiving or viewing station.</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> <p><b>syngo Remote Assist</b> <i>syngo</i> Remote Assist is a standalone service option. With <i>syngo</i> Remote Assist, Siemens uses a secure broadband VPN connection (VPN = virtual private network) to establish a connection to your Siemens imaging console in order to offer you direct, real-time support and training. This seamless and simultaneous virtual interaction will contribute to improvements in image quality and optimization of system use.</p> <p><b>Siemens Remote Service</b> System Management software package to support Siemens Remote Service (SRS) with the following functions:</p> <ul style="list-style-type: none"> <li>- Basic package Siemens Remote Service for Diagnostics and Repair, Quality Assurance and Software Maintenance.</li> <li>- System remote configuration, e.g. adding of a DICOM node.</li> <li>- Early warning system to secure system operation.</li> <li>- The functions are made available in accordance with the maintenance contract package.</li> </ul> <p>Prerequisite for the early warning system is a permanent connection to the system via LAN and router. It is the project manager's task to make this available on-site.</p> <p><b>Power connection for the entire X-ray system</b> Basic version: 3/N/PE ~400 V (±10%) for 50/60 Hz line frequency. Option: 3/N/PE ~440/480 V (±10%) at 50/60 Hz via line adaptation transformer.</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* offers, 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>* Not all services of the Customer Care. Life offerings are necessarily available for all systems.</p> <p>Components for basic configuration are described in the following.</p>
	<p>Increased performance to extend the range of application:</p> <ul style="list-style-type: none"> <li>- 80 kW at 100 kV (IEC 60601-2-7), 1,000 mA at 79 kV.</li> <li>- Fluoroscopy, 450 W from 40 kV/0.2 mA to 110 kV/23 mA, pulsed fluoroscopy</li> </ul>

	<p><b>Description</b></p> <p><b>DICOM MWL (Modality Worklist):</b> Import of patient/examination data from an external RIS/HIS patient management system.</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.</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 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> <p>With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.</p>
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	<p>Radiation-free positioning of primary collimators in the LIH on the monitor. Especially suitable for dose-saving examinations.</p>
	<p>With CAREposition it is possible to position an object without radiation under visual control. In case of table movement, the current radiation field position and the center beam position are superimposed on the LIH as orientation points.</p>
	<p>Calculation of the degree of vessel stenoses. Automatic vessel analysis and display of the minimum value in relation to a defined reference value. Geometrical and densitometrical determination of the value.</p>
	<p>SW license for systems with FLUOROSPOT Compact to support enhanced user management, including:</p> <ul style="list-style-type: none"> <li>- user authentication to prohibit unauthorized access.</li> <li>- privileges to define user/role based functionality.</li> <li>- permissions to control data access.</li> <li>- audit trails to log system and data access.</li> </ul>
	<p>TFT technology with high luminance and extended viewing angle.</p> <ul style="list-style-type: none"> <li>- Screen size 19" (48 cm).</li> <li>- Resolution: 1280 x 1024 (pixels).</li> <li>- Maximum brightness (typ.): <math>\leq 1000 \text{ cd/m}^2</math>.</li> <li>- Flicker-free and distortion-free image display.</li> <li>- Ambient light sensor for optimum adaptation of the image display to the room brightness.</li> </ul>
	<p><b>System Configuration</b> Ysio Max is a universal digital radiographic workplace with various flat detectors (MAX wi-D, MAX static) for image acquisition.</p>

## Description

The Ysio Max digital workplace is especially suited for a high patient throughput. As a universal workplace, the system is primarily used in X-ray departments of hospitals, in radiological and partly radiological offices with high patient throughput and standardized acquisition technology.

Basic system components:

- A ceiling-mounted tube assembly support with X-ray tube assembly and motorized multileaf collimator.
- An imaging and control station with application and evaluation programs, as well as DICOM system interfaces.
- CD/DVD drive for digital image storage on CD-R/DVD for offline data exchange in DICOM format.

### Tube assembly support

with X-ray tube assembly and motorized collimator.

All projection-relevant tube assembly positions can be manually adjusted with handles symmetrically mounted to the tube assembly collimator unit.

The ceiling-mounted tube assembly support can be adjusted in 3 axes for longitudinal, transverse, and height adjustment (x, y, and z-axes).

- Horizontal travel range in longitudinal direction 346 cm.
- Horizontal travel range in transverse direction 220 cm.
- Vertical lift 180 cm.

In 2 further axes ( $\alpha$ - and  $\beta$ -axes) the tube assembly collimator unit can be manually adjusted for oblique acquisitions of the recumbent patient, or for horizontal, oblique, or lateral acquisitions on the portable detector, or for free bedside acquisitions.

- Rotation around the vertical axis of the ceiling-mounted support from  $+154^\circ$  to  $-182^\circ$ . Lock-in positions every  $90^\circ$ .
- Rotation around the horizontal axis of the tube assembly support arm  $\pm 140^\circ$ . Lock-in positions at  $0^\circ$  and  $\pm 90^\circ$ .

X-ray tube assembly OPTITOP 150/40/80 HC-100:

Single-track dual-focus rotating anode tube with compound anode (rhenium-tungsten, molybdenum, graphite), with high heat storage capacity and high load capacity for small focal spots. Integrated overpressure safety device in the tube protective housing.

- 150 kV nominal voltage acc. to IEC 613.
- Nominal power (focal spot nominal values acc. to IEC 336):  
40 kW: small focus 0.6  
80 kW: large focus 1.0
- Anode speed  $\geq 8,500$  RPM, anode angle  $12^\circ$ .
- Heat storage capacity of the anode 580 kJ (783 kWh) acc. to IEC 613.
- Total filtration (IEC 601-1-3)  $\geq 2.5$  mm Al equiv.

Multileaf collimator:

With full field and laser line light localizer. Rectangular collimation, manual and motorized, via organ programs.

- Multileaf collimator rotatable by  $\pm 45^\circ$  around the center beam axis, e.g. for correct positioning of objects.
- A tape measure is integrated to check the focus-to-object distance.
- To improve radiation quality through dose reduction of the soft radiation parts, Cu filters (0.1 Cu; 0.2 Cu and 0.3 Cu) are inserted into the primary beam projection, depending on the organ program selected. They can also be selected manually.

Option:

A measuring chamber for the dose area product can be integrated into the multileaf collimator.

### Controls and displays

The control elements at the tube assembly and the multileaf collimator are ergonomically arranged for single-handed operation.

Controls and displays at the tube assembly support (MAXTouch):

Multifunctional control display with color touchscreen for adaptation of acquisition parameters directly in the

	Description
	<p>examination room.</p> <p>Displays include:</p> <ul style="list-style-type: none"> <li>- The collimation size of the acquisition field (in cm x cm).</li> <li>- The selected SID.</li> <li>- The selected Cu additional filters.</li> <li>- Rotation from the 0-position.</li> <li>- Tube assembly and detector centering.</li> <li>- Operating states such as "ACSS/Manual", "Ready", "Selected", etc.</li> <li>- Current detector angle (MaxAlign feature) – to eliminate the need to guess the tube angle and to protect the patient by reducing repeat exposures. Available with MAX wi-D and MAX mini.</li> </ul> <p>The display follows the tube assembly orientation.</p> <p>The following functions can be set manually at the multileaf collimator:</p> <ul style="list-style-type: none"> <li>- Full field light localizer with timer for optical display of the collimated acquisition format and an optionally coverable laser line light localizer.</li> <li>- The collimation of the acquisition format set last can be retrieved via a memory button.</li> <li>- The rectangular collimation of the radiation field is pre-defined through the organ program and can be set manually by means of two dials.</li> <li>- The motorized insertion of the Cu additional filters is controlled via the organ program, but can also be selected freely.</li> </ul> <p><b>Imaging and control station (syngo FLC)</b></p> <p>The entire control and communication of the radiography system incl. digital image processing takes place from a central operating site - the imaging and control station.</p> <p>It includes:</p> <ul style="list-style-type: none"> <li>- A high-end PC imaging system, based on Windows 7 with <i>syngo</i> user interface. Storage of original data 14 bit. Storage of image data 12 bit. Storage capacity approx. 10,000 images.</li> <li>- Keyboard and mouse.</li> <li>- One 19" color flat-screen as control display or diagnostic display.</li> <li>- Manual button for exposure release.</li> </ul> <p><b>Functions of the imaging and control station</b></p> <p>Patient and study administration:</p> <ul style="list-style-type: none"> <li>- Importing of patient lists and examinations from the HIS/RIS</li> <li>- Manual patient registration</li> <li>- Patient, study, and image data management</li> <li>- Configuration functions</li> </ul> <p>Acquisition and postprocessing:</p> <ul style="list-style-type: none"> <li>- Organ program selection and configuration</li> <li>- Selection of generator and diaphragm parameters. Parameterization of image preprocessing: enhancement, harmonization, edge enhancement, and look-up tables (LUT)</li> <li>- Display of current acquisition between 1.5 and 3.5 seconds (preview); complete image in 3.5 to 6 seconds max. depending on detector type</li> <li>- Display of image markers (L/R, a.p./p.a.)</li> <li>- DiamondView Plus: multi-scaling procedure for image post-processing with high detail contrast and reduced noise</li> </ul> <p>DiamondView is a multi-scale procedure, i.e. filter size and strength are weighted differently and are used for adaptation to the overall image content.</p> <ul style="list-style-type: none"> <li>- DiamondView enhances the signal exploitation of the dynamic range and improves the organ-specific detail contrast (soft tissue and bone).</li> </ul>

## Description

- DiamondView can be selected via the "Pre-processing card".
- By entering "0", the image can be displayed without DiamondView.

Image processing functions:

- Image rotation
- Horizontal/vertical image mirroring
- Image zoom
- Pan
- Windowing
- Filters for edge enhancement and noise reduction

Image documentation and archiving:

- Image transfer to the network
- Automatic, user-configurable data distribution (DICOM Send, see also system interfaces DICOM)
- Automatic filming with virtual film sheet (DICOM Print, see also system interfaces DICOM)
- Image data export (12 bit) on CD/DVD

### Workflow

Routine workflows are largely automated.

- Prior to exposure the patient data is transferred via the patient management system (HIS/RIS: option) or entered through the control console. The exposure parameters are selected through the organ programs.
- Then the patient or the acquisition system is positioned and exposure is released.
- The exposure released at the central system control is read out within a few seconds by the detector. It is displayed at the control display for orientation and made available in DICOM format at the imaging system output for sending e.g. to reporting workstations, image networks, laser cameras, etc.
- Clinical Assurance Program (CAP): Collection of deleted images, studies and patient data, including evaluation capabilities.

Password protection:

System access protected by password.

Option:

Security Package: SW option with enhanced security features such as User Management and Audit Trail function (if offered, see text of the corresponding components).

### DICOM system interfaces

- DICOM Send: Sending of images into the DICOM network.  
The DICOM Send function enables fully automatic transfer of generated image data to a DICOM archive or a DICOM workstation. The user can perform his examinations without interruption while the system fully automatically transfers the images to the archive. This image data transfer takes place entirely in the background and thus does not affect acquisitions performed at the same time.
- 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 way the user can be sure that the acquisitions stored locally in the imaging system can be deleted.
- DICOM Print: Printing of images by means of a virtual filmsheet on a DICOM laser camera.  
Selecting "Auto-Print" automatically forwards the images stored in the virtual filmsheet to the laser camera. This optimizes the workflow, eliminating the need for user interaction. In addition, a specific layout can be configured on the virtual filmsheet, which the user can review and edit on the monitor at any time. As a result, printing is only required after the layout has been optimized on the monitor, saving time and costs.

Options:

- DICOM Modality Worklist/MPPS (if offered, see tender further down).
- DICOM Query/Retrieve (if offered, see tender further down).

### Note concerning DICOM interface(s)

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

## Description

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.

### **syngo Remote Assist**

*syngo* Remote Assist is a standalone service option.

With *syngo* Remote Assist, Siemens uses a secure broadband VPN connection (VPN = virtual private network) to establish a connection to your Siemens imaging console in order to offer you direct, real-time support and training. This seamless and simultaneous virtual interaction will contribute to improvements in image quality and optimization of system use.

### **Siemens Remote Service**

Prepared for optional Siemens Remote Service SRS (during warranty period, subsequently with service contract):

- Hardware and software remote diagnosis.
- System remote configuration, e.g. adding of a DICOM node.
- Early warning system to secure system operation.
- Functions according to the selected maintenance package.

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

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

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

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

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

## System Configuration

The Bucky wall stand is a floor-mounted, stand-alone or wall-mountable grid acquisition system with a height-adjustable and tiltable detector tray with tray support and the ability to insert a MAX wi-D flat detector as the digital image acquisition system. The pullout for the opening is left/right.

It is especially suited for acquisitions of skeletal radiography of the standing and seated patient:

- Orthopedic diagnostics.
- Thorax and general diagnostics.
- Trauma and ER diagnostics.

With this Bucky wall stand, more profound diagnostic requirements for acquisitions of thorax (lungs), abdomen, pelvis, spine, skull and extremities are met.

The basic configuration consists of a radiography system with a vertically positioned and tiltable detector Bucky for horizontal, oblique or lateral patient acquisitions.

The additional tilting range of the detector Bucky extends the diagnostically relevant acquisition projections.

- Vertical height adjustment of the counter-balanced, easily movable detector Bucky from detector center approx. 27 cm to 172 cm above floor: Operation possible from both sides.
- Tilting range between 0° and +90°, and up to -20° continuously around the horizontal axis; lock-in position at 0°. Operation possible from both sides.

**Accessories**

Scope of delivery:

- Lateral patient handles for optimum patient positioning, e.g. during PA thorax exposures.
- Patient overhead handle, swiveling around the horizontal axis, for optimal patient positioning acquisitions.

**Wired control unit at Bucky wall unit with the following functions:**

- On/off tube tracking
- On/off light localizer
- Tube parking\*
- Tube centering\*
- Autopositioning of tube\*

\* Full function only in combination with the option Aim/ Aim FAST

Mobile, wireless flat detector (MAX wi-D) for image acquisition, CsI scintillator, amorphous silicon

- Detector acquisition matrix approx. 2872 x 2354
- Pixel size 148 µm
- Acquisition depth (gray scales) 16 bit
- Acquisition formats up to 34,9 cm x 42,5 cm (13,7" x 17")
- Thickness 19mm
- Data transfer via W-LAN
- Operation time:
  - min. 3.5 hours during regular utilization
  - min. 6 hours in standby mode
- Detector weight 3 kg
- Max. load 150 kg (patient lying down) and 100 kg (patient standing)

In order to secure the patient in Trendelenburg positions of 20 degrees or more, foot restraints examinations or interventional procedures such as myelography.

The foot restraints can be used for any foot size. They are latched into the footboard sockets.

Max. load: 170 kg

The radiolucent table pad matches the size of the tabletop and has a heavy-duty soft plastic cover clean. The soft cushion allows comfortable patient positioning and repositioning.

To prevent the pad from sliding during head-up positions, the straps of patient table pad can be handrail at the head end.



<b>Description</b>
<p>The armrest enables ergonomic positioning of the stretched-out arm for intravenous contrast medium examinations or intravenous medication.</p> <p>It is pivoted at a swivable support arm and can be adjusted longitudinally; it can be attached to the accessory rails of the patient positioning table on the left or the right side.</p>