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PO# 664-B30008

## Ysio - 2 detector system

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

Qty	Item Description
1	<b>Ysio 2 detectors fully auto 3m</b> Universal digital radiographic workplace for skeletal radiography of the recumbent, standing or seated patient. Two high-resolution flat 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 automated 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>Software Version VC10</b>
1	<b>wi-D (wireless detector 3543PR)</b> Mobile, wireless flat detector, with loading and receiving unit for the wireless detector.
1	<b>Snap-on grid for detector</b> Snap-on grid for wireless detector (wi-D) for free acquisitions. Highly selective anti-scatter grid for scattered radiation reduction: Pb 15/80 (grid ratio 15:1, 80 lines/cm). Grid focusing for SID 45"/115 cm. Weight: 2 kg
1	<b>Ysio table for wireless detector</b> Bucky table in compact design, for X-ray exposures of the entire body.
1	<b>Manual Control Ysio Table</b> Wired handheld remote to control system functions.
1	<b>Foot Kick Switch Front and Rear</b> For height adjustment of the patient positioning table and switching of the floating tabletop.
1	<b>Generator R80</b> High-frequency 80 kW X-ray generator for diagnostic procedures at workplaces with automatic exposure control.
1	<b>Caremax plus HS Integrated</b> Caremax plus dose-area product meter for recording the dose-area product and/or standardized patient entrance dose, connected to the collimator via Caremax adapter cable. For radiography and fluoroscopy systems with POLYDOROS L generator. The dose-area product (DAP) is displayed on the monitor of the FD imaging system
1	<b>19"Color Flatscreen Display</b> 19" LCD color flatscreen display with high luminance and extended field of view.

1

### **Bucky Wall Stand #RAD**

Floor-mounted Bucky wall stand with height-adjustable and tiltable detector Bucky with flat detector for digital acquisitions. With IONTOMAT three-field chamber and Bucky frame. Detector Bucky operated from the right side. Vertical height adjustment and detector tilt possible from both sides.

1

### **Pix/Pax FL-C Interface**

Interface to adapt the FLUOROSPOT Compact to a Ysio system with PIXIUM and PAXSCAN detectors.

1

### **Manual Control Bucky Wall Unit**

Wired handheld remote to control system functions.

1

### **VA Kit Ysio**

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

1

### **Transparent grid 15/80, F115**

Highly selective anti-scatter grid for scattered radiation reduction: Pb 15/80 (grid ratio 15:1, 80 lines/cm). Grid focusing for source-image distance (SID) of 115 cm. Note: Depending on the country, a grid with a 15:1 grid ratio or 80 lines/cm has to be used for pediatrics. In this case, use the wi-D detector in Portrait format.

1

### **Transparent grid 15/80, F180**

Highly selective anti-scatter grid for scattered radiation reduction: Pb 15/80 (grid ratio 15:1, 80 lines/cm). Grid focusing for source-image distance (SID) of 180 cm. Recommended for use in the Bucky wall stand if the fixed detector was configured.

1

### **DICOM WORKLIST & MPPS**

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

### **Security Package**

The SW option/extension for workplaces enables enhanced security features including user management and audit trail functionality.

1

### **UPS for image system (YSIO and dRF)**

Bridging of the imaging system power supply (50/60 Hz) until line voltage is back. The imaging system is automatically shut down during power failures.

1

### **Standard keyboard English, US**

Standard keyboard.

1

### **Compression Belt**

Belt compression device with a radiolucent plastic belt. A clamping lever with a locking ratchet is used to tighten the easy-to-clean, radiolucent plastic belt. Advantages of compression: - Fast and efficient positioning of the patient on the tabletop. - Reduction of patient thickness, i.e., improvement of image quality through scatter radiation reduction. Weight: 3.6 kg

1

### **Detector Holder, Mobile**

Trolley with detector holder for acquisitions with vertical, horizontal, and oblique beam projection. It can be positioned anywhere in the room, at the patient or patient table. - Clamping size of the holder for detectors 53.5 cm wide and up to 3.3 cm thick. - Height adjustment from the lower edge of the detector holder up to 2 cm to 120 cm above the floor. - Height adjustment counterbalanced

1

### **Customer documentation, English**

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

**Portable DR Panel Protector**

1

**Standard Rigging DigRad**

**Additional Rigging/Out of Scope for de-install and scrap of existing system**

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

**Airfare for Complimentary Biomedical Training for one tech from SAN to RDU**

1

**Lodging for Complimentary Biomedical Training**

1

**OPTIONS:**

**Qty**

**Item Description**

1

**Initial onsite training 12 hrs**

Up to (12) 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

**Offset Initial onsite training 12 hrs**

1

**Riverain SoftView Server + License**

SoftView Enhanced Chest Imaging from Riverain Medical automatically suppresses the display of bone in digital chest X-rays. This facilitates generation of an enhanced soft tissue diagnostic image for more detailed and accurate detection of pulmonary nodules. Since SoftView utilizes the original radiography for post processing, the patient is not subjected to additional radiation and motion artifacts do not arise.

1

### **Ortho applications package**

The Ortho Application Package consists of a SW license for the Ortho function that enables the following 2 orthopedic acquisition methods: Ability to acquire up to 4 consecutive images of the legs or spine at the Bucky wall stand with Luminos Agile. This function requires a Bucky wall stand, a ceiling support, and a wi-D. An acquisition of up to 4 images with Luminos Agile at the patient table. Using the Spine Composing or Ortho Leg Composing software application at the imaging system, these are composed automatically into an overall image.

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### **Ortho accessory package**

Combine up to 4 consecutive leg or spine exposures in a composite image at the FLC Workplace. For lateral spine exposures we recommend using an 80 kW generator (SID of 300 cm recommended). Consists of: - Ortho support - Wall holder Technical data: Height: 202 cm; Depth: 75 cm; Width: 75 cm; Weight: 85 kg; Max. patient weight: 180 kg; Patient body length: up to 210 cm (standing).

# Detailed Technical Specifications

## Ysio - 2 detector system

Part No. / Product	Description
<p><b>14417195</b> <b>Ysio 2 detectors fully auto 3m</b></p>	<p><b>System configuration</b> Ysio is a universal digital radiographic workplace with two flat detectors for image acquisition. Thanks to the flat detectors, no cassettes with film transparency systems or storage phosphor screens are required.</p> <p>The Ysio digital workplace is especially suited for a high patient load. 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.</p> <p>Basic system components:</p> <ul style="list-style-type: none"> <li>- A ceiling-mounted, fully motorized, servo-supported tube assembly support with X-ray tube assembly and motorized multileaf collimator.</li> <li>- An imaging and control station with application and evaluation programs, as well as DICOM system interfaces.</li> <li>- CD/DVD drive for automatic, digital image storage on CD-R/DVD for offline data exchange in DICOM format.</li> <li>- A wireless flat detector, 3543PR (see text of the corresponding components).</li> <li>- A high-frequency X-ray generator with multipulse waveform (see text for the corresponding components).</li> <li>- A Bucky wall unit with integrated detector (see text for the corresponding components).</li> <li>- Optionally a height-adjustable patient positioning table with floating tabletop (if offered, see text of the corresponding components).</li> </ul> <p><b>Tube assembly support</b> with X-ray tube assembly and motorized collimator.</p> <p>All projection-relevant tube assembly positions can be adjusted both fully automated and manually (servo-supported) with handles symmetrically mounted to the tube assembly collimator unit.</p> <p>The ceiling-mounted tube assembly support with automatic positioning and servo tracking, or with servo-support if positioned manually, can be adjusted in 3 axes for longitudinal, transverse, and height adjustment (x, y, and z-axes).</p> <ul style="list-style-type: none"> <li>- Horizontal travel range in longitudinal direction 346 cm.</li> <li>- Horizontal travel range in transverse direction 220 cm.</li> <li>- Vertical lift 180 cm.</li> </ul> <p>In 2 further axes (<math>\alpha</math>- and <math>\beta</math>-axes) the tube assembly collimator unit can be set with motorized, automatic adjustment, or with servo-support for manual positioning, for oblique acquisitions of the recumbent patient, or for horizontal, oblique, or lateral acquisitions on the portable detector, or for free bedside acquisitions.</p> <ul style="list-style-type: none"> <li>- Rotation around the vertical axis of the ceiling-mounted support from +154° to -182° manually and from +150° to -180° motorized. Lock-in positions every 90°.</li> <li>- Rotation around the horizontal axis of the tube assembly support arm <math>\pm 140^\circ</math> manually and <math>\pm 135^\circ</math> motorized. Lock-in positions at 0° and <math>\pm 90^\circ</math>.</li> </ul> <p>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.</p> <ul style="list-style-type: none"> <li>- 150 kV nominal voltage acc. to IEC 613.</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 12°.</li> <li>- Heat storage capacity of the anode 580 kJ (783 kHU) acc. to IEC 613.</li> </ul>

Part No. / Product	Description
<p><b>(Continued)</b>  <b>14417195</b>  <b>Ysio 2 detectors fully auto 3m</b></p>	<ul style="list-style-type: none"> <li>- Total filtration (IEC 601-1-3) <math>\geq 2.5</math> mm Al equiv.</li> </ul> <p>Multileaf collimator:  With full field and laser line light localizer. Rectangular collimation, manual and motorized, via organ programs.</p> <ul style="list-style-type: none"> <li>- Multileaf collimator rotatable by <math>\pm 45^\circ</math> around the center beam axis, e.g. for correct positioning of objects.</li> <li>- A tape measure is integrated to check the focus-to-object distance.</li> <li>- To improve radiation quality through dose reduction of the soft radiation parts, Cu filters (0.1Cu; 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.</li> </ul> <p>Option:  A measuring chamber for the dose area product can be integrated into the multileaf collimator.</p> <p><b>Controls and displays</b>  The control elements at the tube assembly and the multileaf collimator are ergonomically arranged for single-handed operation.</p> <p>Controls and displays at the tube assembly support (MaxTouch):  Multifunctional control display with color touchscreen for adaptation of acquisition parameters directly in the examination room.  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> </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>Mobile control units:</p> <ul style="list-style-type: none"> <li>- Wireless remote control for steering and positioning the ceiling-mounted support (x-, y-, and z-axes) and the tube assembly collimator unit (<math>\alpha</math>- and <math>\beta</math>-axes).</li> <li>- Foot kick bar to adapt the patient table height and operate the floating tabletop.</li> </ul> <p><b>Imaging and control station</b>  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 XP 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 or diagnostic display as control display.</li> <li>- Manual button for exposure release.</li> </ul> <p><b>Functions of the imaging and control station</b></p>

Part No. / Product	Description
<p><b>(Continued)</b>  <b>14417195</b>  <b>Ysio 2 detectors fully auto 3m</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.</li> </ul> <p>Parameterization of image preprocessing: enhancement, harmonization, edge enhancement and look-up tables (LUT).</p> <ul style="list-style-type: none"> <li>- Display of current acquisition in 5 s max. (preview); complete image 10 s maximum.</li> <li>- Display of image markings (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> <li>- DiamondView can be selected via the "Pre-processing card".</li> <li>- By entering "0", the image can be displayed without DiamondView.</li> </ul> <p>Image processing functions:</p> <ul style="list-style-type: none"> <li>- Image rotation.</li> <li>- Horizontal/vertical image mirroring.</li> <li>- Image zoom.</li> <li>- Pan.</li> <li>- Windowing.</li> <li>- Filters for edge enhancement and noise reduction.</li> </ul> <p>Image documentation and archiving:</p> <ul style="list-style-type: none"> <li>- Image transfer into the network.</li> <li>- Automatic, user-configurable data distribution (DICOM Send, see also system interfaces DICOM).</li> <li>- Automatic filming with virtual film sheet (DICOM Print, see also system interfaces DICOM).</li> <li>- Image data export (12 bit) on CD/DVD.</li> </ul> <p><b>Workflow</b></p> <p>The routine workflow is mostly automated, manual operations such as loading and transportation of cassettes are no longer necessary:</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Then the patient or the acquisition system is positioned and exposure is released.</li> <li>- 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.</li> <li>- Clinical Assurance Program (CAP): Collection of deleted images, studies and patient data, including evaluation capabilities.</li> </ul> <p>Password protection:  System access protected by password.</p> <p>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).</p>

Part No. / Product	Description
<p><b>(Continued)</b>  <b>14417195</b>  <b>Ysio 2 detectors fully auto 3m</b></p>	<p><b>DICOM system interfaces</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> </ul> <p>Options:</p> <ul style="list-style-type: none"> <li>- DICOM Modality Worklist/MPPS (if offered, see tender further down).</li> <li>- DICOM Query/Retrieve (if offered, see tender further down).</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>  Prepared for optional Siemens Remote Service SRS™ (during warranty period, subsequently 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 to secure system operation.</li> <li>- Functions according to the selected maintenance package.</li> </ul> <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>

Part No. / Product	Description
<p><i>(Continued)</i>  <b>14417195</b>  <b>Ysio 2 detectors fully auto 3m</b></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><b>14411083</b>  <b>wi-D (wireless detector 3543PR)</b></p>	<p>Mobile, wireless flat detector (wi-D) for image acquisition, 3543pR, CsI scintillator, amorphous silicon (a-Si).</p> <ul style="list-style-type: none"> <li>- Detector acquisition matrix approx. 3,000 x 2.364 (7 million pixels).</li> <li>- Pixel size 144 µm</li> <li>- Acquisition depth (gray scales) 16 bit.</li> <li>- Acquisition formats up to 34.0 cm x 43.2 cm (13.4" x 17").</li> <li>- Data transmission via W-LAN or backup cable.</li> <li>- Wireless use for approx. 2 hours.</li> <li>- Detector weight 4.8 kg</li> <li>- Max. load 135 kg (patient lying down) and 100 kg (patient standing).</li> </ul> <p>Loading and receiving unit for the wireless detector connected to PACS via the imaging system.</p>
<p><b>14409459</b>  <b>Ysio table for wireless detector</b></p>	<p>Height-adjustable patient positioning table with floating tabletop and detector Bucky for wireless detector 3543pR.</p> <ul style="list-style-type: none"> <li>- Free access to table and patient from all sides.</li> <li>- Patient positioning tabletop 80 cm x 240 cm</li> <li>- Longitudinal and transverse travel: ±48 cm and ±14 cm (±0.4 cm). (maximum longitudinal coverage without patient repositioning 190 cm)</li> <li>- Height adjustment of the tabletop 44 cm: from 51.5 to 95.5 cm (±0.5 cm).</li> <li>- Radiation absorption ≤ 0.65 mm Al</li> <li>- Max. patient weight 300 kg.</li> <li>- Longitudinal movement of detector tray (from edge to edge) ≥100 cm.</li> </ul> <p>Detector tray with highly selective transparent grid for scattered radiation reduction: Pb 13/92 (grid ratio 13:1, 92 lines/cm). Grid focusing for SID 115 cm.</p> <ul style="list-style-type: none"> <li>- For pediatric radiography the grid can be removed from the beam projection.</li> </ul> <p><b>Accessories</b>  Scope of delivery:</p> <ul style="list-style-type: none"> <li>- Lateral patient handles: The grips make patient positioning easier, and being able to hold on to the grips gives the patient a feeling of security.</li> <li>- An adapter for positioning film/screen cassettes and/or image plate systems also designed for use with a flat detector tray.</li> </ul>
<p><b>14411084</b>  <b>Manual Control Ysio Table</b></p>	<p>Wired control unit at the table with the following functions:</p> <ul style="list-style-type: none"> <li>- Autopositioning*</li> <li>- Raise/lower table</li> <li>- Release longitudinal/transverse travel of tabletop</li> <li>- Tube parking*</li> </ul> <p>Also a centering button on the detector tray for centering the tube on the detector.*</p> <p>* Full function only in combination with fully automatic ceiling support</p>
<p><b>14411086</b>  <b>Foot Kick Switch Front and Rear</b></p>	<p>Height adjustment, release, and locking of the floating tabletop is done through a foot kick switch. The foot kick rails are located in the foot area both at the front side and the rear side of the patient positioning table and can be programmed individually at the time of installation. This prevents accidental operation by patients or accompanying persons.</p>
<p><b>14409329</b>  <b>Generator R80</b></p>	<p>High-frequency X-ray generator with multipulse voltage waveform for diagnostic acquisition procedures at workplaces without FL function. The multi-pulse voltage waveform enables high data accuracy, precise</p>

Part No. / Product	Description
<p><i>(Continued)</i>  <b>14409329</b>  <b>Generator R80</b></p>	<p>reproducibility and short exposure times.</p> <ul style="list-style-type: none"> <li>- Multi-processor system for organ programs.</li> <li>- Free selection of radiographic parameters.</li> <li>- Electronic generator monitoring during exposure.</li> <li>- Tube load computer with acoustic alarm and interval display.</li> <li>- Integrated automatic exposure control.</li> </ul> <p>Generator control fully integrated in the system console.</p> <p>Rating:</p> <ul style="list-style-type: none"> <li>- 80 kW at 100 kV acc. to IEC 601. max. 800 mA at 100 kV</li> <li>- Tube voltage: between 40 kV and 150 kV</li> </ul> <p>Workplaces:</p> <ul style="list-style-type: none"> <li>- max. 3 selectable workplaces (Bucky table, Bucky wall stand, and free acquisition).</li> <li>- One (1) dual focus X-ray tube assembly can be connected.</li> </ul> <p>Power connection:  3 phase current: 380 V, 400 V (<math>\pm 10\%</math>); 50/60 Hz.</p>
<p><b>14409330</b>  <b>19"Color Flatscreen Display</b></p>	<p>The Siemens 19" LCD color 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>- Maximum brightness (typ.): 280 cd/m<sup>2</sup></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>
<p><b>14418471</b>  <b>Bucky Wall Stand #RAD</b></p>	<p><b>System configuration</b>  The Bucky wall unit is a floor-mounted, stand-alone or wall-mountable grid acquisition system with a height-adjustable and tiltable detector Bucky with Bucky support and an integrated detector as the digital image acquisition system.</p> <p>It is especially suited for acquisitions of skeletal radiography of the standing and seated patient:</p> <ul style="list-style-type: none"> <li>- Orthopedic diagnostics.</li> <li>- Thorax and general diagnostics.</li> <li>- Trauma and ER diagnostics.</li> </ul> <p>With this Bucky wall stand, more profound diagnostic requirements for acquisitions of thorax (lungs), abdomen, pelvis, spine, skull and extremities are met.</p> <p>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.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> </ul> <p><b>Detector Bucky</b>  The detector Bucky with single-handed operation includes a IONTOMAT three-field chamber for automatic exposure control (incl. three-field templates) and a device for symmetric positioning of the flat detector.</p>

Part No. / Product	Description
<p><i>(Continued)</i>  <b>14418471</b>  <b>Bucky Wall Stand</b>  <b>#RAD</b></p>	<ul style="list-style-type: none"> <li>- Front plate - detector distance <math>\leq 45</math> mm.</li> <li>- Radiation absorption of the front plate <math>\leq 0.5</math> mm Al.</li> <li>- A stationary, exchangeable transparent grid for scattered radiation reduction; Pb 15/80. Optionally for SID 115 cm and/or 150 cm and/or 180 cm (see tender further down).</li> </ul> <p><b>Integrated flat detector 43x43</b>  Integrated, fixed flat detector for digital image acquisition, CsI-scintillator, amorphous silicon (a-Si).</p> <ul style="list-style-type: none"> <li>- Detector acquisition matrix 3040 x 3040</li> <li>- Pixel size 139 <math>\mu</math>m</li> <li>- Acquisition depth (gray scales) 14 bit with 8x oversampling.</li> <li>- Acquisition formats up to 42.2 cm x 42.2 cm.</li> </ul> <p><b>Accessories</b>  Scope of delivery:</p> <ul style="list-style-type: none"> <li>- Lateral patient handles for optimum patient positioning, e.g. during PA thorax exposures.</li> <li>- Patient overhead handle, swiveling around the horizontal axis, for optimal patient positioning for lateral acquisitions.</li> </ul>
<p><b>14411087</b>  <b>Manual Control</b>  <b>Bucky Wall Unit</b></p>	<p>Wired control unit at Bucky wall unit with the following functions:</p> <ul style="list-style-type: none"> <li>- On/off tube tracking</li> <li>- On/off light localizer</li> <li>- Tube parking*</li> <li>- Tuber centering*</li> <li>- Autopositioning of tube*</li> </ul> <p>* Full function only in combination with fully automatic ceiling support</p>
<p><b>04434028</b>  <b>DICOM WORKLIST &amp;</b>  <b>MPPS</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.  With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.</p>
<p><b>14409342</b>  <b>Security Package</b></p>	<p>This SW license enables the Workplace System to support enhanced user and system 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><b>CID4948</b>  <b>Portable DR Panel</b>  <b>Protector</b></p>	<p>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 <b>500 pounds</b>. 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</p>

Part No. / Product	Description
<p><b>(Continued)</b>  <b>CID4948</b>  <b>Portable DR Panel Protector</b></p>	<p>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.</p>
<p><b>14428649</b>  <b>Ortho applications package (Optional)</b></p>	<p><b>SW license for Ortho function</b>  Ability to acquire up to 4 consecutive images of the legs or spine at the Bucky wall stand, and the ability to acquire up to 3 images at the Ysio and up to 4 with Luminos Agile at the patient table. The Spine Composing or Ortho Leg Composing software applications on the imaging system assemble these automatically into a single image.</p> <p>Acquisitions made at the Bucky wall stand should use a source-image distance (SID) of 300 cm. If 300 cm is not possible, the source-image distance (SID) can be reduced, to as little as 180 cm.</p> <p>Acquisitions at the patient table should use a source-image distance (SID) of 150 cm. If 150 cm is not possible, reduce the source-image distance (SID) to 115 cm.</p> <p>The Ortho package (ortho support and grid Pb 15/80, 300 cm grid focusing) has to be ordered separately.</p> <p>The use of an 80kW generator is recommended for acquisitions of the lateral spine.</p> <p><b>Spine Composing</b>  Spine Composing takes individually acquired digital radiographic images of the spine and composes them into an overall image.</p> <p>The main functions are:</p> <ul style="list-style-type: none"> <li>- automatic composing of digital radiographies into an overall image.</li> <li>- standard image post-processing functions are available.</li> </ul> <p><b>Ortho-Leg Composing</b>  Ortho-Leg Composing takes individually acquired digital radiographic images of the legs and composes them into an overall image.</p> <p>The main functions are:</p> <ul style="list-style-type: none"> <li>- automatic composing of digital radiographies into an overall image.</li> <li>- standard image post-processing functions are available.</li> </ul>

# YSIO SYSTEM

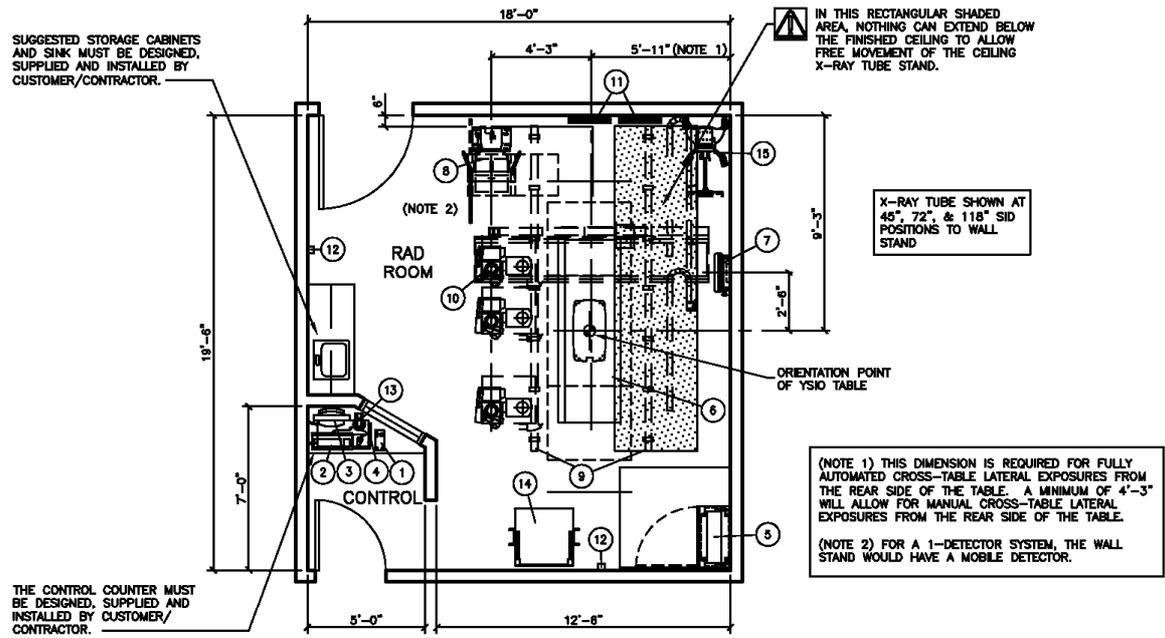
## TYPICAL ROOM PLAN

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The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and therefore does not contain any site specific detailed requirements. This information is subject to change without notice. Federal, state and/or local requirements may impact the final placement of the components. It is the customer's responsibility to ensure that the final layout and placement of the equipment complies with all applicable requirements.

# YSIO SYSTEM TYPICAL ROOM PLAN



**TYPICAL PLAN**

SCALE: 1/8" = 1'-0"

EQUIPMENT LEGEND								
NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES)			REMARKS
					W	D	H	
①	CONTROL ROOM MODULE	Ⓜ	2	-	4 3/4	10 1/16	3 3/16	ON CUSTOMER'S COUNTER
②	IMAGING SYSTEM - KEYBOARD AND MOUSE	Ⓜ	-	-	-	-	-	ON CUSTOMER'S COUNTER
③	FLAT SCREEN CONTROL ROOM DISPLAY	Ⓜ	-	-	-	-	-	ON CUSTOMER'S COUNTER
④	IMAGING SYSTEM CONTAINER (UNDER COUNTER)	Ⓜ	110	1,468	17 3/8*	32 1/2*	27*	*INCLUDES REQUIRED CLEARANCES.
⑤	POLYDOROS R80 (80 KW) GENERATOR CABINET	Ⓜ	944	2,048**	31 1/2	17 1/8	86 3/4	** 1,195 IN STANDBY MODE
⑥	YSIO TABLE WITH MOBILE DETECTOR	Ⓜ	970	2,560	94 13/16	31 1/2	***	***20 1/4" TO 37 9/16"
⑦	DOCKING STATION (WALL MOUNTED)	Ⓜ	40	256	20 3/8	7 13/16	16 1/4	WITHIN 13 FT. OF TABLE INSERT
⑧	YSIO WALL STAND WITH FIXED DETECTOR (RIGHT LOADING GRID)	Ⓜ	551	751	30	36*A	83	*A - MAX. IN HORIZONTAL POSITION
⑨	YSIO CEILING RAILS FOR X-RAY TUBE SUSPENSION	Ⓜ	59	-	167 3/8	3	3 1/2	SIZE AND WEIGHT PER RAIL
⑩	3M FULLY AUTOMATED BRIDGE & X-RAY TUBE STAND	Ⓜ	803	3,072*B	119 1/4	39	4	*B 171 IN STANDBY MODE
⑪	GRID HOLDER (WALL MOUNTED)	Ⓜ	22	-	21 11/16	4	16 9/16	SUGGESTED LOCATION
⑫	EMERGENCY MECHANICAL STOP SWITCH (TWO PROVIDED)	Ⓜ	-	-	3 3/8	3 3/8	4 1/4	ONLY WITH FULLY AUTOMATED SYSTEM
⑬	REMOTE CONTROL CHARGING STATION	Ⓜ	-	-	4 1/8	7 1/4	4	ONLY WITH FULLY AUTOMATED SYSTEM
⑭	ORTHO SUPPORT (FOR ORTHO OPTION)	Ⓜ	177	-	34 13/16	29 1/2	79 1/4	FOR ORTHO OPTION
⑮	MOBILE DETECTOR HOLDER ON WHEELS (OPTION)	Ⓜ	121	-	24 1/2	40 3/16	70 1/2	ROLL AROUND LATERAL HOLDER

# YSIO SYSTEM SPECIFICATIONS

POLYDOROS R80	
X-RAY GENERATOR POWER REQUIREMENTS	
INCOMING POWER:	480 VOLTS, 3 PHASE, 60Hz
CIRCUIT BREAKER:	80 AMPS.
GENERATOR OUTPUT:	80 KW
ALLOWABLE IMPEDANCE:	0.16 OHMS.
MAXIMUM MOMENTARY LOAD:	135 KVA
LINE VOLTAGE VARIATION:	± 10% MAX.
PHASE BALANCE:	2% MAX BETWEEN ANY 2 PHASES
FREQUENCY VARIATION:	± 1 Hz
VOLTAGE SURGES:	10% MAX. ABOVE LINE VOLTAGE
INSTANTANEOUS VARIATION:	20 msec. MAX. DURATION
VOLTAGE SAGS:	10% MAX. BELOW LINE VOLTAGE 20 msec. MAX. DURATION
LINE TRANSIENTS (SPIKES):	50% MAX. ABOVE LINE VOLTAGE 5 msec. MAX. DURATION
GROUND IMPEDANCE:	0.25 OHMS MAX.
NOTE:	
ALL INCOMING POWER SUPPLIES, FOR THE SIEMENS EQUIPMENT, ARE TO BE DEDICATED (BACK TO SOURCE) ISOLATED AND INSULATED FROM ANY OTHER EQUIPMENT, SUCH AS, ELEVATORS, GENERATORS, HVAC SYSTEMS, ETC.	
A NEUTRAL CONDUCTOR, IF PRESENT, IS NOT USED FOR THE LINE VOLTAGE CONNECTION TO THE SIEMENS EQUIPMENT. IF THE NEUTRAL CONDUCTOR IS PROVIDED, IT SHOULD NOT BE ELECTRICALLY CONNECTED AT ANY POINT IN THE POWER DISTRIBUTION TO THE SIEMENS EQUIPMENT UNLESS SPECIFICALLY REQUIRED. UNINTENTIONAL NEUTRAL TO GROUND BONDS MAY VIOLATE LOCAL AND NATIONAL ELECTRICAL CODES, AS WELL AS CREATE GROUNDING PROBLEMS.	
ATTENTION:	
SIEMENS MEDICAL SYSTEMS, INC. RECOMMENDS THAT THE INCOMING POWER LINES BE ANALYZED WITH RESPECT TO TRANSIENT SURGES AND IMPULSES, SAGS, AND OVERVOLTAGES.	

ROOM HEIGHT REQUIREMENTS		
		USABLE TABLE HEIGHT AT 45° SID
MINIMUM ROOM HEIGHT	8'-9 1/8"	2'-5 1/2" (3)
MINIMUM ROOM HEIGHT FOR 60° SID TO TABLE	9'-3"	2'-11 1/8"
MAXIMUM ROOM HEIGHT WITHOUT THE TUBE STAND TELESCOPE EXTENSION	9'-5 5/8" (1)	3'-1 1/2" (4)
	9'-10 7/8" (2)	
MAXIMUM ROOM HEIGHT WITH THE TUBE STAND TELESCOPE EXTENSION	10'-1 1/2" (1)	3'-1 1/2" (4)
	10'-7" (2)	
1) UPRIGHT (0°) EXPOSURES ARE POSSIBLE AT LOWEST POSITION OF WALL STAND.		
2) UPRIGHT (0°) EXPOSURES ARE NOT POSSIBLE AT LOWEST POSITION OF WALL STAND.		
3) RESTRICTED TABLE HEIGHT AT 45° SID.		
4) USABLE TABLE HEIGHT UNRESTRICTED.		

YSIO SYSTEM TECHNICAL DATA		
TRANSPORTING INFORMATION		
CEILING TRANSVERSE BRIDGE (3M)	SIZE: 126"L x 32"W x 10"H	WEIGHT: 419 LBS.
CEILING TRANSVERSE BRIDGE (4M)	SIZE: 174"L x 32"W x 10"H	WEIGHT: 512 LBS.
X-RAY TUBE SUPPORT FULLY AUTOMATED (WITHOUT CARRIAGE)	SIZE: 67"L x 41"W x 52"H	WEIGHT: 847 LBS.
X-RAY TUBE SUPPORT FULLY SYNCHRONIZED (WITHOUT CARRIAGE)	SIZE: 67"L x 41"W x 52"H	WEIGHT: 827 LBS.
TABLE	SIZE: 63"L x 35"W x 33"H	WEIGHT: 1,039 LBS.
FIXED DETECTOR WALL STAND (WITH PACKING AND CRATE TOP)	SIZE: 92"L x 35"W x 42"H	WEIGHT: 865 LBS.
MOBILE DETECTOR WALL STAND (WITH PACKING AND CRATE TOP)	SIZE: 92"L x 35"W x 42"H	WEIGHT: 898 LBS.
MINIMUM DOOR OPENING:	37"	
MINIMUM CORRIDOR WIDTH:	6'-11"	
ENVIRONMENTAL CONDITIONS		
	IN OPERATION	TRANSPORT
PERMISSIBLE AMBIENT TEMPERATURE	65°F TO 82°F	-4°F TO 131°F
PERMISSIBLE RELATIVE HUMIDITY	20 TO 75%	10 TO 95%

WIRELESS DETECTOR CONNECTION
OPERATION OF THE WIRELESS DETECTOR CAN BE AFFECTED BY OTHER WLAN DEVICES IN THE VICINITY OF THIS INSTALLATION. TO AVOID ANY CONFLICTS, THE CUSTOMER MUST PROVIDE A LIST OF EXISTING WLAN CHANNELS (FREQUENCIES) OR THE SPECIFIC CHANNEL (FREQUENCY) THEY DESIRE TO BE USED FOR THE WIRELESS DETECTOR.
THE WIRELESS CONNECTION IS ENCRYPTED (WPA2) AND IS BASED ON TWO WLAN STANDARDS, WITHIN WHICH SEVERAL CHANNELS (FREQUENCIES) ARE AVAILABLE:
1) 11G STANDARD - OPERATES AT 2.5 GHZ
2) 11A STANDARD - OPERATES AT 5 AND 6 GHZ
THE STANDARD (11G OR 11A) CAN BE SET BY SIEMENS SERVICE VIA THE SERVICE SOFTWARE INSTALLED ON THE IMAGING SYSTEM.
THE WIRELESS CONNECTION IS ONLY USED TO TRANSFER DATA BETWEEN SIEMENS EQUIPMENT AND IS NOT USED TO SEND DATA TO THE CUSTOMER'S NETWORK.

# YSIO SYSTEM SPECIFICATIONS

MAXIMUM CABLE DISTANCES BETWEEN COMPONENTS								
	CONTROL ROOM MODULE	IMAGING SYSTEM	GENERATOR	TABLE	DOCKING STATION	WALL STAND	CEILING TUBE STAND	MECHANICAL STOP SWITCHES
GENERATOR	59'-0"	59'-0"	-	36'-0"	36'-0"	36'-0"	32'-0"	60'-0"

THE DISTANCES LISTED ABOVE ARE CALCULATED AS THE MAXIMUM CABLE LENGTH BETWEEN CABLE ENTRY POINTS. DEPENDING ON THE COMPONENT, THE CABLE ENTRY POINT MAY BE IN FLOOR, WALL OR CEILING. VARIOUS ARRANGEMENTS OF COMPONENTS ARE POSSIBLE AS LONG AS THE DISTANCES SHOWN ARE MAINTAINED AND THE SYSTEM FUNCTIONALITY IS NOT ADVERSELY AFFECTED.

### REMOTE SYSTEM DIAGNOSTICS

SIEMENS REMOTE SERVICES (SRS) REQUIRES A CONNECTION BETWEEN THE SRS REMOTE SERVER AND SIEMENS SYSTEMS VIA REMOTE LOCAL AREA NETWORK ACCESS, TO ENSURE THE UPTIME OF YOUR SYSTEM.

THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:

- (PREFERRED) VPN - WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE.
- (OPTIONAL) \*SRS ROUTER\* - CONNECTED TO ANALOG PHONE LINE VIA \*ANALOG MODEM\*, ETHERNET CONNECTION TO CUSTOMER'S LAN, AND A POWER OUTLET.

NOTE: = \*SUPPLIED BY SIEMENS\*

### RESOURCE LIST (SMS USE ONLY)

DESIGNATION	PG NUMBER	DATE
YSIO SYSTEM	AXB7-020.891.01.10.02	07.11

### FOR MORE INFORMATION

FOR MORE DETAILED PLANNING REQUIREMENTS FOR THIS SYSTEM, SEE THE TYPICAL FINAL DRAWING SET NUMBER: 08010