

North Carolina Department of Health and Human Services
Division of Health Service Regulation
Certificate of Need Section

2704 Mail Service Center ■ Raleigh, North Carolina 27699-2704

Beverly Eaves Perdue, Governor
Lanier M. Cansler, Secretary

www.ncdhhs.gov/dhsr

Craig R. Smith, Section Chief
Phone: 919-855-3875
Fax: 919-733-8139

January 10, 2012

Dee Jay Zerman
Planning and Development
UNC Hospitals
101 Manning Drive, Suite 6021
Chapel Hill, NC 27514


RE: Exempt from Review / Replacement of One Vascular Interventional Radiology Unit /
UNC Hospitals / Orange County


Dear Ms. Zerman:

In response to your correspondence of January 4, 2012, the above referenced proposal is exempt from certificate of need review in accordance with N.C.G.S 131E-184 (a)(7). Therefore you may proceed to acquire, without a certificate of need, one (1) Siemens Artis ZEE Ceiling Angio Detector System to replace a Siemens Neurostar plus w/ 16" 1.1. Vascular Interventional Radiology Unit (Serial Number-4020060034). This determination is based on your representations that the existing unit will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need. However, you should contact the Construction Section to determine if they have any requirements for the development of this proposed project.

It should be noted that this Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this Agency and a separate determination. If you have any questions concerning this matter, feel free to contact this office.

Sincerely,


F. Gene DePorter, Project Analyst

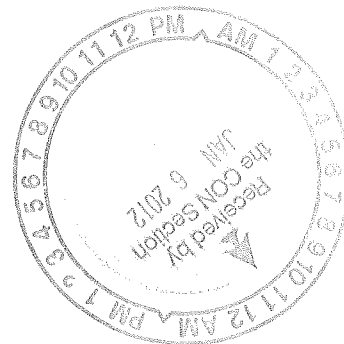

Craig Smith, Chief
Certificate of Need Section

Cc: Construction Section, DHSR
Medical Facilities Planning Section, DHSR





UNC
HOSPITALS



January 4, 2012

Mr. Gene DePorter
Certificate of Need Section
Division of Health Service Regulation
2704 Mail Service Center
Raleigh, NC 27699-2704

RE: Request for Exemption/Replacement of One Vascular Interventional Radiology unit/UNC Hospitals

Dear Mr. DePorter:

UNC Hospitals is planning to replace one of its Vascular Interventional Radiology units and is requesting a determination that the replacement of this equipment is exempt from review pursuant to 131E-184(7). We are supplying the following information that the CON Section has requested in the past as a part of its general information request for an equipment replacement.

1. A comparison of the existing and replacement equipment, using the format in the following table:

Equipment Comparisons

	<i>Existing Equipment</i>	<i>Replacement Equipment</i>
<i>Type of Equipment (List each component)</i>	Vascular Interventional Radiology unit	Vascular Interventional Radiology unit
<i>Manufacturer of Equipment</i>	Siemens Neurostar plus w/ 16" I.I.	Siemens Artis ZEE Ceiling Angio Detector System
<i>Tesla Rating for MRIs</i>	Not applicable	Not applicable
<i>Model Number</i>	375409	Not yet available
<i>Serial number</i>	4020060034	Not yet available
<i>Provider's Method of Identifying Equipment</i>	By model & serial #s	By model & serial #s
<i>Specify if Mobile or Fixed</i>	Fixed	Fixed
<i>Mobile Trailer Serial Number/VIN #</i>	Not applicable	Not applicable
<i>Mobile Tractor Serial Number/VIN #</i>	Not applicable	Not applicable
<i>Date of Acquisition of Each Component</i>	6/1999	Not yet available
<i>Does Provider Hold Title to Equipment or Have a Capital Lease?</i>	UNC Hospitals owns the equipment	UNC Hospitals will own the equipment

<i>Specify if Equipment Was/Is New or Used When Acquired</i>	New	Will be new
<i>Total Capital Cost of Project (Including Construction, etc.) <Use Attached Form></i>	Approx. \$1,775,000	\$1,922,812
<i>Total Cost of Equipment</i>	Approx. \$1,775,000	\$1,496,512
<i>Fair Market Value of Equipment</i>	NA (\$0-no trade in value)	\$1,496,512
<i>Net Purchase Price of Equipment</i>	NA	\$1,496,512
<i>Locations Where Operated</i>	UNC Hospitals	UNC Hospitals
<i>Number of Days In Use/To be Used in N.C. Per Year</i>	365 days	365 days
<i>Percent of Change in Patient Charges (by Procedure)</i>	NA	No change
<i>Percent of Change in Per Procedure Operating Expenses (by Procedure)</i>	NA	No change
<i>Type of Procedures Currently performed on Existing Equipment</i>	Vascular interventional radiology procedures	NA
<i>Type of Procedures New Equipment is Capable of Performing</i>	NA	Vascular interventional radiology procedures

2. A description of the basic technology and functions of the existing and replacement equipment, including the diagnostic and treatment purposes for which the equipment is used or capable of being used.

Response: The machine to be replaced is a Siemens Neurostar Plus w/ 16 I.I. purchased in June 1999 for \$1,775,000. UNC Hospitals plans to replace this unit with a Siemens ZEEGO Angio Detector System. The current equipment and the replacement equipment will perform the same basic functions including, minimally invasive diagnostic and therapeutic interventional techniques.

During procedures, small tubes, such as catheters and other very small instruments, are guided through the blood vessels or other pathways to a targeted site, to treat of a variety of medical disorders and diseases. This clinical subspecialty performs many types of percutaneous procedures, including biopsies, fluid draining, catheter insertions, embolizations, ablations, and dilating or stenting of narrowed vessels.

The studies most frequently performed in the Vascular Interventional Radiology Section at UNC Hospitals include: abdominal aortogram, aorto-femoral angiogram, arch aortogram, renal angiogram, pulmonary angiogram, visceral angiogram, neuro angiogram, venous catheter placement, drainage catheter placement, myelogram/lumbar puncture, thoracentesis, chest tube placement, stent placement, tumor ablation, vessel embolism, angioplasty, etc. The Vascular Interventional Radiology Section's Radiologists treat aneurysms, arteriovenous malformations, internal bleeding, blood clots (using clot dissolving thrombolytic therapy), vena cava filter insertions, chemoembolizations, renal hypertension,

infections and abscesses, urinary tract obstructions, and many other conditions without using surgery.

3. Brochures or letters from the vendors describing the capabilities of the existing equipment and the replacement equipment.

Response: The actual original brochure for the existing unit is not available. A copy of a brochure from the vendor describing the proposed replacement Artis ZEE ceiling mounted system is attached as Exhibit 3. A copy of the brochure for the unit similar to the existing Neurostar unit is not available.

4. A copy of the purchase order for the existing equipment, including all components and original purchase price.

Response: The original purchase order for the existing Siemens Neurostar is not available. Due to the large volume of purchasing by our facility, UNC Hospitals' fiscal services policy is to destroy purchase orders after five years. However, the biomedical engineer supporting the system states that the unit was purchased in 1999 for \$1,775,000.

5. A copy of the title, if any, for the existing equipment or the capital lease for the existing equipment.

Response: Not applicable. The equipment does not have a title and will not be leased.

6. If the replacement equipment is to be leased, a copy of the proposed lease that transfers substantially all the benefits and risks inherent in the ownership of the equipment to the lessee of the equipment, in accordance with criteria in Generally Accepted Accounting Principles (GAAP).

Response: Not applicable. The replacement equipment will not be leased.

7. If the replacement equipment is to be purchased, a copy of the proposed purchase order or quotation, including the amount of the purchase price before discounts and trade-in allowance.

Response: A copy of the quotation received from Siemens Medical Solutions regarding the replacement unit is attached as Exhibit 2. The existing unit has no trade-in value.

8. A letter from the person taking possession of the existing equipment that acknowledges the existing equipment will be permanently removed from North Carolina, will no longer be exempt from requirements of the North Carolina Certificate of Need law, and will not be used in North Carolina without first obtaining a new certificate of need.

Response: Siemens will deinstall the existing equipment and remove the equipment from use at no cost to UNC Hospitals. The equipment will permanently removed and no longer exempt from CON law and review.

9. Documentation that the existing equipment is currently in use and has not been taken out of service.

Response: UNC Hospitals currently has seven vascular interventional radiology units in use as identified on our Licensure Renewal Application form.

Also, enclosed as Exhibit 1 is a completed 'Proposed Total Capital Cost of Project' form which projects the total capital cost of this replacement project to be \$1,922,812. Should you require any additional information regarding the replacement of this equipment, please do not hesitate to contact me at 919-966-1129.

Sincerely,



Dee Jay Zerman, Associate Director
Planning & Program Development

PROPOSED TOTAL CAPITAL COST OF PROJECT

Exhibit 1

A. Site Costs

(1) Full purchase price of land	\$	0	
Acres _____ Price per Acre \$ _____			
(2) Closing costs	\$	0	
(3) Site Inspection and Survey	\$	0	
(4) Legal fees and subsoil investigation	\$	0	
(5) Site Preparation Costs			
Soil Borings	\$	0	
Clearing - Earthwork	\$	0	
Fine Grade for Slab	\$	0	
Roads - Paving	\$	0	
Concrete Sidewalks	\$	0	
Water and Sewer	\$	0	
Footing Excavation	\$	0	
Footing Backfill	\$	0	
Termite Treatment	\$	0	
Other (Specify)	\$	0	
Sub-Total Site Preparation Costs	\$	0	
(6) Other (Specify)	\$	0	
(7) Sub-Total Site Costs			\$ 0

B. Construction Contract

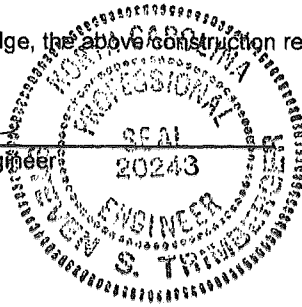
(8) Cost of Materials			
General Requirements	\$	11,297	
Concrete/Masonry	\$	2,259	
Woods/Doors & Windows/Finishes	\$	31,631	
Thermal & Moisture Protection	\$	3,389	
Equipment/Specialty Items	\$	9,037	
Mechanical/Electrical	\$	51,965	
Other ()	\$	3,389	
Sub-Total Cost of Materials	\$	112,968	
(9) Cost of Labor	\$	169,452	
(10) Other: Construction Contingency	\$	31,380	
(11) Sub-Total Construction Contract			\$ 313,800

C. Miscellaneous Project Costs

(12) Building Purchase	\$	0	
(13) Fixed Equipment Purchase	\$	1,496,512	
(14) Movable Equipment Purchase	\$	0	
(15) Furniture	\$	0	
(16) Landscaping	\$	0	
(17) Consultant Fees			
Architect and Engineering Fees	\$	62,800	
Legal Fees	\$	0	
Market Analysis	\$	0	
Sub-Total Consultant Fees	\$	62,800	
(18) Financing Costs (e.g. Bond, Loan, etc.)	\$	0	
(19) Interest During Construction	\$	0	
(20) Other: Project Contingency	\$	49,700	
IT Costs	\$	0	
(21) Sub-Total Miscellaneous			\$ 1,609,012
(22) Total Capital Cost of Project (Sum A-C above)			\$ 1,922,812

I certify that, to the best of my knowledge, the above construction related costs of the proposed project named above are complete and correct.

Stu S. T...
 Signature of Licensed Architect or Engineer



PRELIMINARY PROPOSAL

Customer Number: 0000010805

Date: 12/15/2011

UNIVERSITY OF NORTH CAROLINA HOSPITALS
101 MANNING DRIVE
CHAPEL HILL, NC 27517

Quote Nr: 1-20TQQG Rev. 0

Siemens Artis Zeego Solution for VIR-4 Includes Trade of existing Siemens Neurostar

All items listed below are included for this system:

Qty	Part No.	Item Description
1	14417062	Universal interventional radiology X-ray angiography system with primary clinical use in interventional radiology, including application-specific accessories.
1	14417024	Artis zeego (A) Floor-mounted, multi-axis C-arm angiography system with very flexible positioning, variable isocenter height, and 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	14417019	Sys SW incl DSA/DR (1) Imaging system software including digital subtraction angiography and digital acquisition technology in 1k/12-bit matrix.
1	14409307	3D Acqu. incl. DYNAVISION DSA/DR Native or subtracted (with DSA option only) rotational angiography with angle triggering, generating the image data required for 3D reconstruction.
1	14407236	Detector 30X40 incl. Component(MA) High-resolution, dynamic flat detector for fully digital imaging chain, with integrated, removable grid. CAREwatch measuring chamber for detection of the dose-area product. MEGALIX 3-focus high-performance X-ray tube assembly, rotatable angio collimator including CAREfilter, and integrated collision protection.
1	14407234	Control Cabinet Artis Multi Axis
1	14407238	Table with Stepping Floor-mounted swiveling patient table with telescopic foot and floating tabletop; motorized longitudinal movement.
1	14404984	PERISTEPPING / PERIVISION Peripheral digital angiography with stepping and online subtraction display.
1	04435215	Tabletop & Mattress, Wide Carbon fiber tabletop including special foam mattress in wide, straight design. Mattress including cover.
1	14402010	Foot Switch Monopl.(Wireless) For release of fluoroscopy, exposure and table brake as well as a configurable additional function. Wireless connection via radio communication.

SIEMENS

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE
Edwin Winicki - (336) 688-0978

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14417185	DCS 4m extDVI 2xBWD-19D(L+R+2xFrt.) Display suspension system for four flat displays in a row, with two 19" monochrome flat displays with blue background color. Prepared for two additional displays.
1	14407157	Roadmap Plus DCS DVI (Monoplane) One additional 19" monochrome flat display for enhanced Roadmap functionality and dual reference function.
1	14417060	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	14407166	C-Room DVI 1xBWD-19 (Live) -36m One monochrome 19" flat-screen display with blue background color.
1	14407248	MultiModality-Viewing DCS System Consisting of a basic kit with video switch, optical video isolation and isolation transformer, as well as a color flatscreen display with black frame and cable for installation in a DCS.
1	14400268	MMV interface for switching at ECC At the ECC touchscreen console, switching between different video sources, e.g. syngo Workplace, integrated workstation, ultrasound system and patient monitoring, for display on an in-room monitor.
1	04490673	Multi Modality Viewing LEO kit For connection of a color flatpanel display to a syngo Workplace in the examination room, incl. optical isolation transformer and VGA cable.
1	14417105	MultiMod.-View. LEO joystick/mouse Additional, dedicated joystick in the examination room for precise and fast control of a syngo Workplace parallel to mouse operation in the control room.
1	04490707	Multi Modality Viewing Univers.kit The kit includes an optical buffer amplifier with VGA cable and enables the image signal of any VGA-based source (SXGA 1280 x 1024 or VGA 640 x 480) to be displayed (switchable) at a display in the DCS in the examination room.
1	14417085	MultiModality Viewing Uni-Kit (CR) The kit includes an optical buffer amplifier with VGA cable and enables the image signal of any VGA-based source (SXGA 1280 x 1024 or VGA 640 x 480, e.g. Ultrasound) to be displayed (switchable) at a display in the DCS or Large Display in the examination room. The source can be easily connected and disconnected directly at the examination table.
1	04435850	Vessel analysis Vessel analysis with determination of degree of stenosis, distance measurement and calibration.
1	14411163	Fluoro Loop (1) Storage and review of dynamic fluoroscopic sequences (Fluoro Loop). The maximum storable fluoroscopy time depends on the selected pulse rate, e.g. 17 s at 30 p/s, 34 s at 15 p/s.
1	04435801	Automap Automatic stand positioning depending on the selected reference image and automatic reference image selection depending on the stand positioning.
1	04435926	DICOM HIS / RIS Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist).
1	04435892	DICOM Print Provision of DICOM Print service for connection to a laser camera or a network printer (postscript).
1	14417134	LB rad. protection w/ pivot arm For shielding the lower body against scattered radiation within the examiner's moving range. Specially designed for avoiding collisions with the tube during oblique projections, therefore especially suited for cardiology.

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Fax: (336) 856-9995

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Edwin Winicki - (336) 688-0978

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14401912	Upper Body Rad. Protection Artis-F To protect the upper body against scattered radiation within the operating range of the examiner, e.g. during interventional procedures.
1	04443383	Examination lamp, 115 V Ceiling-mounted examination lamp, flexibly adjustable towards the user, for diagnostics and minor surgery.
1	14407252	Interface for C-Room Operation(MA) Interface for connecting the optional system control from the control room.
1	14409254	C-Room Table Support Short Rail profile for hanging control modules (e.g. the table module) in the control room.
1	14409444	Control room emerg. stop module Safety button for switching off all system functions from the control room.
1	04443433	Handswitch Additional hand switch for radiation release and additional control functions.
1	04443615	Control Room Injector Interface Interface for controlling the contrast medium injector from the control room.
1	14407176	syngo Keyboard, English - US Keyboard with special syngo keys.
1	14411218	Radiology Radiographic system for medical applications with emphasis on interventional radiology.
1	14417055	XWP w. InSpace 3D FlashRT zee/zeego 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 the syngo iPilot option to overlay calculated 3D reconstructions with live 2D fluoroscopy images.
1	14402025	DynaCT Package syngo DynaCT offers cross-sectional imaging in the interventional suite from projection images of rotational angiography by an Artis FD system. syngo DynaCT provides excellent soft tissue image quality (512 matrix) for neuro and body imaging. Abdominal soft-tissue images are reconstructed within 30 seconds, and neuro soft-tissue images in less than one minute.
1	14402033	19in Color Flatscreen Display LCD color flatscreen display with high luminance and extended field of view.
1	14401876	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	14401878	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	14401888	syngo Angio-Leg Composing SW-Lic. Module for creating native full-format images of the peripheral vascular tree.
1	04472853	syngo keyboard, USA Keyboard with special syngo keys.
1	04451022	Customer documentation, English

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51 Valley Stream Parkway, Malvern, PA 19355
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE
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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	04451022	Customer documentation, English
1	14417048	VoMo Artis zeego on concrete
1	AXA_INITIAL_3 2	Initial onsite training 32 hrs
1	AXA_FOLLOW UP_32	Follow-up training 32 hrs
1	AXA_INT_BAS _CLS	Artis Class
1	AXA_WP_ADV CLS	Advanced syngo X-Workplace Class
2	NT60010635	Blue anti-fatigue floor mat for hospital
1	O4RIDGESPLU S	PERI BOLUS KIT
1	AXA_RIG_ZEE GO_STD	Standard Rigging zeego
1	AXA_BUDG_A DDL_RIG	Budgetary Add'l/Out of Scope Rigging \$ 5,000
1	AXA_BUDG_A DDL_RIG	Budgetary Add'l/Ground Leakage Test @ \$3,000
1	AXA_BUDG_A DDL_RIG	De-installation of current equipment @ \$10,000

System Total: \$1,496,512

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. To place an order for the above listed items, please notify your Siemens Healthcare Sales Representative who will submit to you a formal Siemens Healthcare Proposal, inclusive of Terms, Conditions, and Warranty coverage. Only a formal Siemens Healthcare Proposal may be used to create a binding order for this equipment.

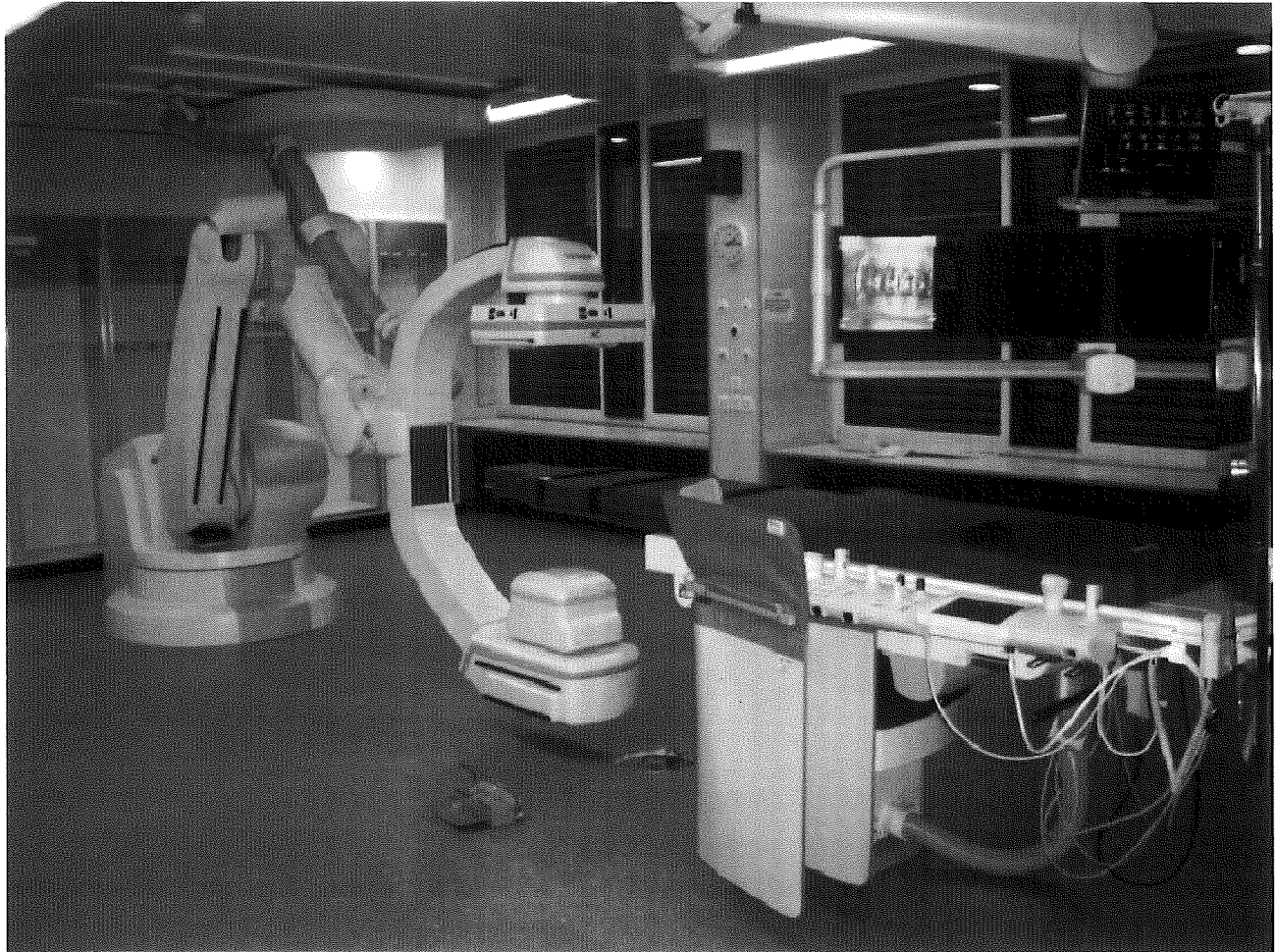
Siemens Healthcare

Edwin Winicki
(336) 688-0978
edwin.winicki@siemens.com

SIEMENS

ARTIS ZEEGO TYPICAL ROOM PLAN

AX-A



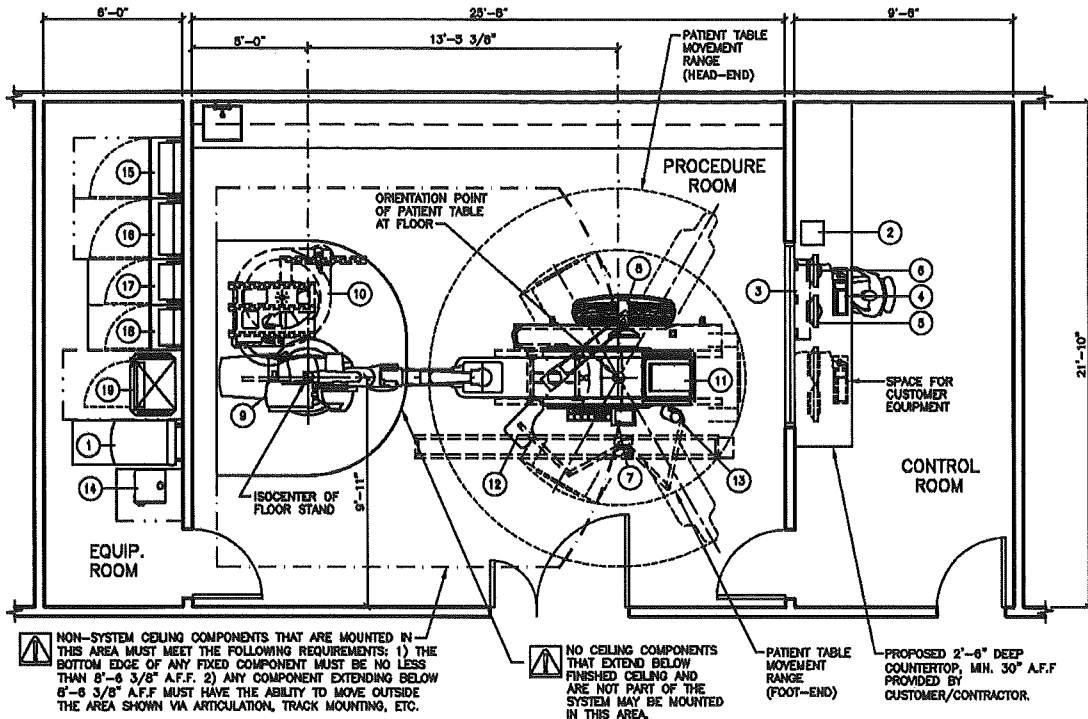
The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and 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.

SIEMENS

FOR REFERENCE ONLY,
NOT FOR CONSTRUCTION.

ARTIS ZEEGO TYPICAL ROOM PLAN

AX-A



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	AXIS IMAGE SYSTEM	IS	331	4347	23	37 1/2	28 3/8	MTD. ON CASTERS
②	ACE (ARCHIVE CONTROL EXTENSION)	AC	13	N/A	12 1/4	11 3/4	4	MTD. ON CONTROL COUNTER
③	CONTROL ROOM DISTRIBUTOR	CR	64	342	41 1/2	8 1/4	16 1/8	MTD. ON WALL
④	KEYBOARD	KB	2.2	342	17 1/2	6 1/8	2 1/8	MTD. UNDER COUNTER OR ON CONSOLE
⑤	19" MONOCHROME LIVE DISPLAY	LD	15	256	16 1/4	4	13 1/4	ON COUNTER OR CONSOLE
⑥	19" MONOCHROME REFERENCE DISPLAY	RD	15	256	16 1/4	4	13 1/4	ON COUNTER OR CONSOLE
⑦	TABLE CONTROL MODULES	TC	20.2	---	35 3/8	8 3/4	3 1/2	ON TABLE OR TROLLEY
⑧	DCS 6 DISPLAY CEILING SUSPENSION	DS	680	1536	167	27 7/8	63 1/2	CEILING SUSPENDED
⑨	ARTIS ZEEGO FLOOR STAND W/ MOUNTING PLATE	RS	3531	---	---	---	---	ROBOT FLOOR MOUNTED
⑩	FLOOR STAND CABLE REEL	FR	268	---	89	53 1/8	10 1/8	CEILING SUSPENDED
⑪	PATIENT TABLE (OR)	PT	1169	683	---	---	---	TABLE FLOOR MOUNTED
⑫	UPPER BODY RADIATION SHIELD 4 M TRACK (OPTION)	UR	196	---	---	---	---	TRACK MOUNTED
⑬	MAVIG R96 O.R. LAMP (OPTION)	ML	48	---	---	---	---	
⑭	KLUVER COOLING UNIT	KL	93	8192	18 3/4	15 1/2	18 3/4	FLOOR OR SHELF MOUNTED
⑮	POLYDOROS A100 (POWER UNIT 1)	PL	662	3413	31 1/2	17 1/8	87	FLOOR MOUNTED
⑯	CABLE CABINET	CC	285	---	31 1/2	17 1/8	87	FLOOR MOUNTED
⑰	SYSTEM CONTROL CABINET	SC	518	5460	23 1/2	17 1/8	87	FLOOR MOUNTED
⑱	SYSTEM CONTROL CABINET (OR TABLE ONLY)	SC	275	682	23 1/2	17 1/8	87	FLOOR MOUNTED
⑲	ARTIS ZEEGO FLOOR STAND CONTROL CABINET	FC	368	5118	31 3/4	20 1/2	53 1/4	FLOOR MOUNTED

ARTIS ZEEGO SPECIFICATIONS

AX-A

TRANSPORTING REQUIREMENTS

TRANSPORT FRAMES WITH WHEELS

FLOOR STAND: 71"W X 60"D X 67"H, WEIGHT: 3520 LBS.
C-ARM: 77"W X 52"D X 71"H, WEIGHT: 1,034 LBS.

TRANSPORT/STORAGE FLAT PANEL DETECTOR

IN SYSTEMS WITH FLAT PANEL DETECTORS, THE DETECTOR IS REMOVED FROM THE STAND FOR TRANSPORT TO THE CUSTOMER. THE LIMITED TRANSPORT AND STORAGE CONDITIONS APPLY FOR THE DETECTOR.

FLAT PANEL DETECTOR:

TEMPERATURE RANGE: 14° F TO 131° F
RELATIVE HUMIDITY: 20% TO 95% NON CONDENSING
AIR PRESSURE: 700 hPa TO 1060 hPa

MAGNETIC FIELD PRECAUTIONS

THE PRESENCE OF MAGNETIC FIELDS IN THE VICINITY OF EQUIPMENT MAY HAVE AN ADVERSE EFFECT. IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY THAT THE FOLLOWING VALUES ARE NOT EXCEEDED.

MAXIMUM ALLOWABLE MAGNETIC FIELD	DEVICES
1.0mT (10 GAUSS)	COMPUTERS, MAGNETIC DISK DRIVES, OSCILLOSCOPES, PROCESSORS
0.5mT (5 GAUSS)	X-RAY TUBES, B/W MONITORS, MAGNETIC DATA CARRIERS, DATA STORAGE DRIVES
0.2mT (2 GAUSS)	SIEMENS CT SCANNERS
0.15mT(1.5 GAUSS)	COLOR MONITORS, SIEMENS LINEAR ACCELERATORS
0.05mT(0.5 GAUSS)	X-RAY IMAGE INTENSIFIERS, GAMMA CAMERAS, PET/CYCLOTRON, OTHER LINEAR ACCELERATORS

MAGNETIC FIELDS SHOULD BE MEASURED PRIOR TO DELIVERY

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*

POLYDOROS A100

X-RAY GENERATOR POWER SUPPLY REQUIREMENTS

WIRING SYSTEM:	480Y/277V-3 PHASE-4-W, 60 HZ.
MINIMUM POWER SUPPLY:	225 KVA DISTRIBUTION XFMR
X-RAY GENERATOR NAMEPLATE MOMENTARY RATING: (RADIOGRAPHIC EXPOSURE)	160 KVA, 194 AMPS, MAXIMUM RMS (IN-RUSH) CURRENT
X-RAY GENERATOR NAMEPLATE LONG-TIME RATING: (FLUOROSCOPY)	8 KVA, 25 AMPS, FULL LOAD CURRENT
INCOMING LINE IMPEDANCE (mΩ)	≤ 160
MINIMUM CIRCUIT BREAKER SIZE: (BASED ON N.E.C. 517-73)	100 AMPS

POWER QUALITY PARAMETERS

MAXIMUM LINE VOLTAGE VARIATION	±10% OF SYSTEM VOLTAGE
MAXIMUM ALLOWABLE MOMENTARY LINE VOLTAGE VARIATION AT GENERATOR PEAK OUTPUT OF 160 KVA:	2% OF CONNECTED LINE VOLTAGE
PHASE BALANCE:	2% MAX. BETWEEN ANY 2 PHASES
FREQUENCY VARIATION:	± 1 HZ. OF 60 HZ
VOLTAGE SURGES:	10% MAX. ABOVE CONNECTED LINE VOLTAGE *AT 20 MILLISECONDS MAXIMUM DURATION.
VOLTAGE SAGS:	10% MAX. BELOW CONNECTED LINE VOLTAGE *AT 20 MILLISECONDS MAXIMUM DURATION.
LINE TRANSIENTS (SPIKES):	50% ABOVE CONNECTED LINE VOLTAGE *AT 5 MILLISECONDS MAXIMUM DURATION.
NEUTRAL TO GROUND:	±0.5 VOLTS MAX. POTENTIAL
NEUTRAL TO GROUND SURGES:	±10 VOLTS MAX. POTENTIAL
SYSTEM GROUNDING IMPEDANCE:	0.25 OHMS MAX.

POWER SUPPLY NOTES:

1. INCOMING POWER SUPPLIES FOR SIEMENS EQUIPMENT SHOULD BE DEDICATED (BACK TO SOURCE), ISOLATED AND INSULATED FROM ANY OTHER EQUIPMENT SUCH AS ELEVATORS, GENERATORS, HVAC SYSTEMS, ETC.

2. SIEMENS MEDICAL SYSTEMS, INC. RECOMMENDS THAT THE INCOMING POWER LINES BE ANALYZED WITH RESPECT TO TRANSIENT SURGES AND IMPULSES, SAGS AND OVERVOLTAGES.

* CONNECTED LINE VOLTAGE IS THE ACTUAL VOLTAGE MEASURED IN THE FIELD AFTER THE POWER TRANSFORMER IS CONNECTED TO ITS LIVE LOAD AND IS THE VOLTAGE USED BY SIEMENS TO CALIBRATE THE X-RAY EQUIPMENT.

POWER REQUIREMENTS

POLYDOROS-M / POLYDOROS A100 GENERATOR (PU1):
480 VOLTS, 3-PHASE, 160 KVA, 100 AMPS, 60 Hz
SYSTEM CONTROL CABINET (SC):
480 VOLTS, 3-PHASE, 8 KVA, 50 AMPS, 60 Hz.

FOR MORE INFORMATION

FOR MORE DETAILED PLANNING REQUIREMENTS FOR THIS SYSTEM, SEE THE TYPICAL FINAL DRAWING SET NUMBER: TYPICAL # 08008

ARTIS ZEEGO SPECIFICATIONS

AX-A

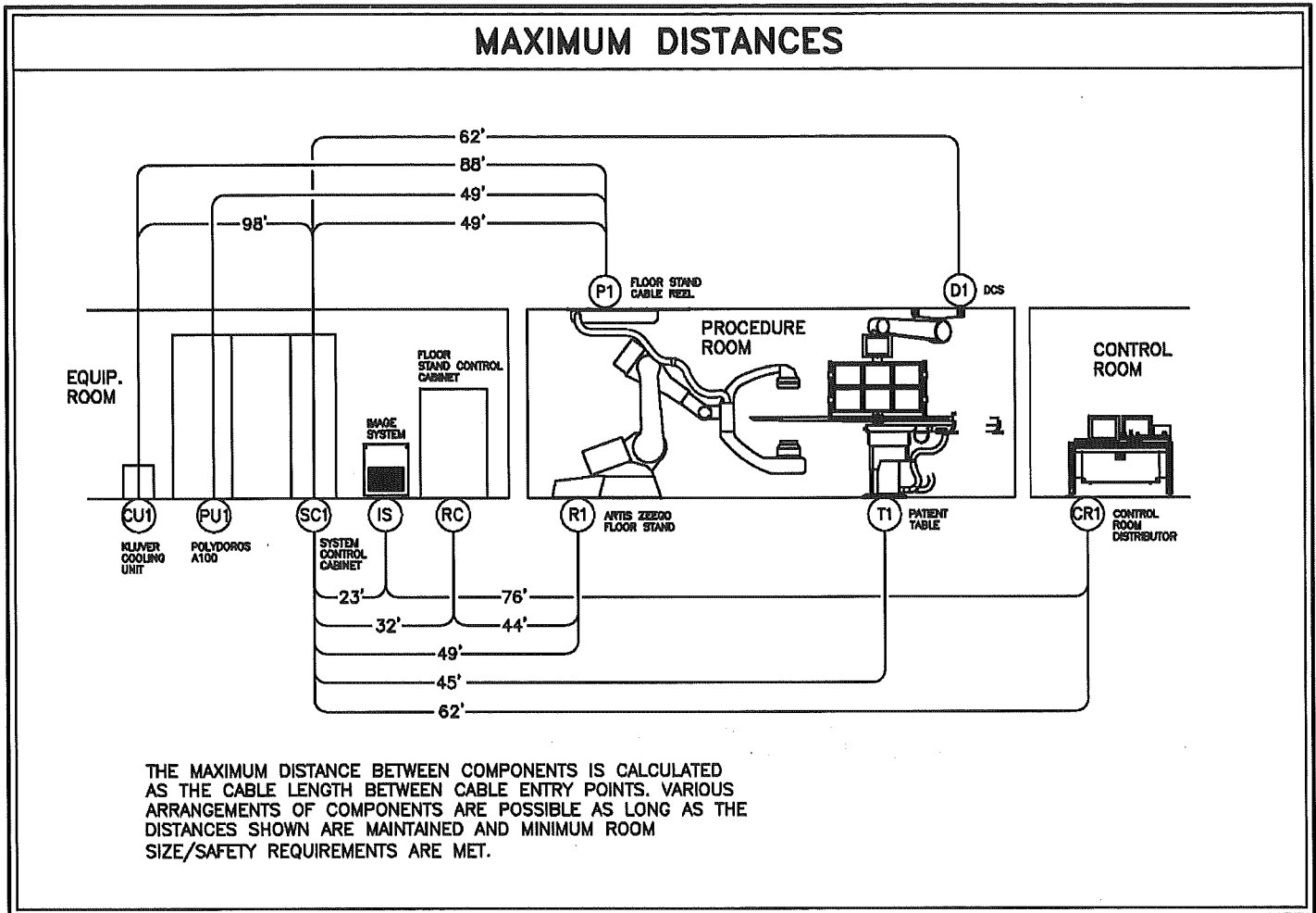
ENVIRONMENTAL CONDITIONS		
EXAMINATION AND CONTROL ROOM	TEMPERATURE RANGE: RELATIVE HUMIDITY:	50°F–86°F (RECOMMENDED TEMPERATURE 70°F) 20% – 75% NON-CONDENSING
AXIS IMAGE SYSTEM	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE GENERATION:	50°F–95°F (RECOMMENDED TEMPERATURE 70°F) 20%–75% NON CONDENSING 50° F/HR 370 CFM 53 dB(A)
POLYDOROS GENERATOR	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE GENERATION:	50°F–95°F (RECOMMENDED TEMPERATURE 70°F) 20%–75% NON CONDENSING 41° F/HR 470 CFM 55 dB(A)
SYSTEM CONTROL CABINET	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE GENERATION:	50°F–86°F (RECOMMENDED TEMPERATURE 70°F) 20%–75% NON-CONDENSING 41° F/HR 294 CFM 48 dB(A)
SYSTEM CONTROL CABINET 2 (ONLY FOR OR TABLE)	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT:	50°F–86°F (RECOMMENDED TEMPERATURE 70°F) 20%–75% NON-CONDENSING 41° F/HR
KLUVER COOLING UNIT	TEMPERATURE RANGE: RELATIVE HUMIDITY: AIR FLOW VOLUME: MAX. NOISE GENERATION:	41°F–86°F (RECOMMENDED TEMPERATURE 70°F) FROST FREE 647 CFM 55 dB(A) AT 50 HZ, 59 dB(A) AT 60 HZ
FLOOR STAND ROBOTIC CABINET	TEMPERATURE RANGE: MAX. NOISE GENERATION:	50°F–95°F (RECOMMENDED TEMPERATURE 70°F) 67 dB(A)
FLOOR STAND WITH FLAT DETECTOR	MAXIMUM TEMPERATURE GRADIENT: ATMOSPHERIC PRESSURE: SHOCKS: VIBRATIONS: MAX. NOISE GENERATION:	41° F/HR 700hPa – 1040hPa MAXIMUM 10G/16MS MAXIMUM 0.1 G/10–200HZ <55 dB(A)

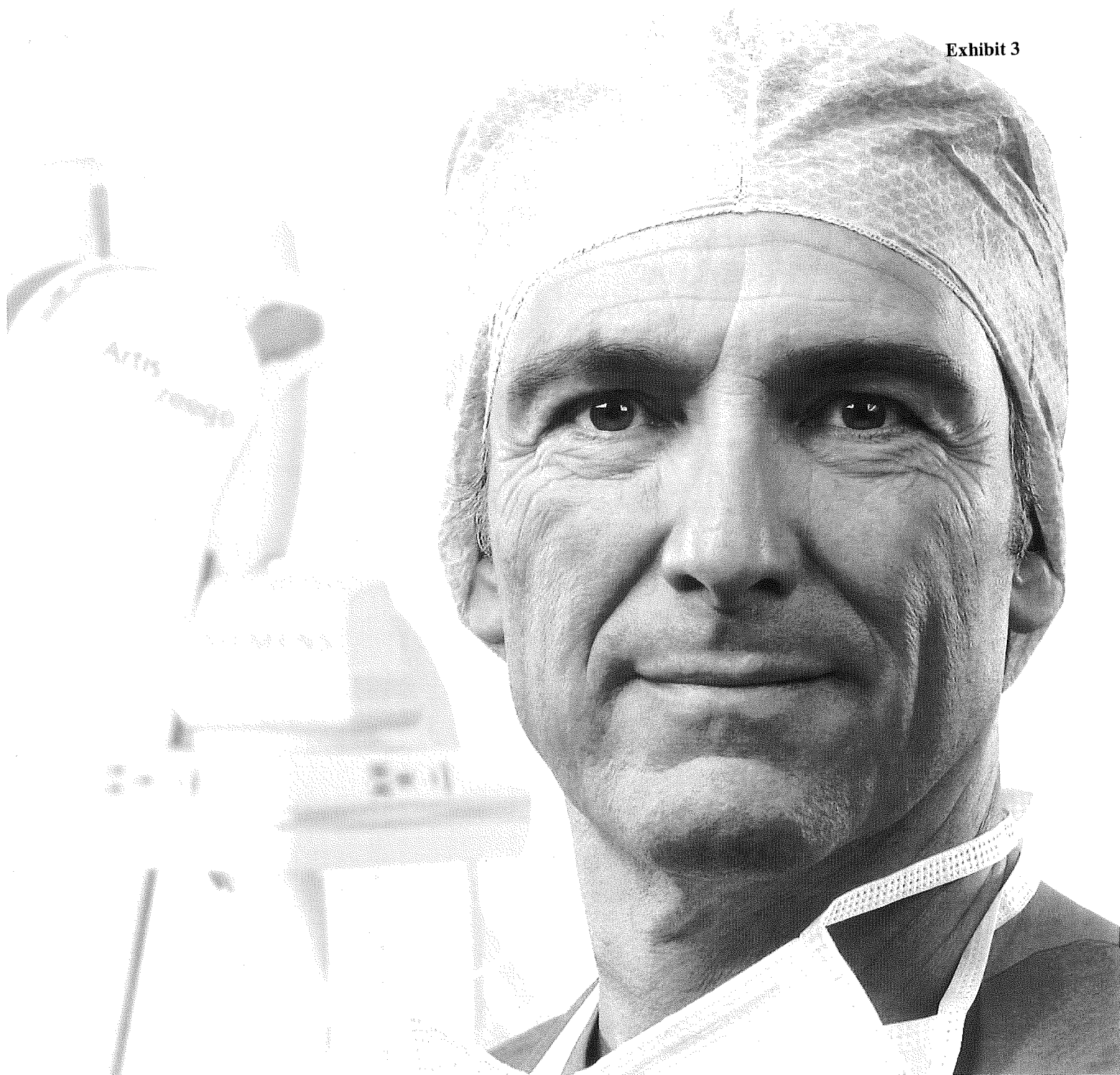
CEILING HEIGHT REQUIREMENT
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> 9 FT. – 6 IN. </div>

RESOURCE LIST (SMS USE ONLY)		
DESIGNATION	PG NUMBER	DATE
ARTIS ZEEGO MULTI-AXIS	AXA4-040.891.03.01.02	07.09
		11.08

ARTIS ZEEGO SPECIFICATIONS

AX-A





Artis zeego

The multi-axis system for Interventional Radiology
Are you ready to **zee** the future?

www.siemens.com/healthcare

SIEMENS

zeego looks better from every angle.

There's never been anything quite like Artis zeego®. As part of the new Artis zee® family of interventional imaging systems, Artis zeego is the first multi-axis system that can be positioned the way you want. And it can be controlled with far greater ease and precision than a traditional floor- or ceiling-mounted system.

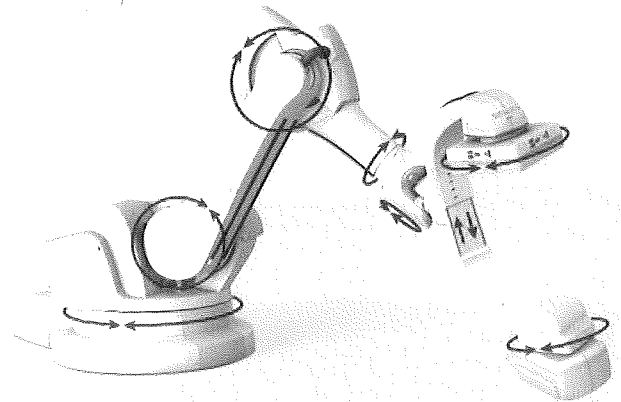
Artis zeego gives you greater positional flexibility and broader coverage — including Large Volume cross-sectional images up to 47 cm (18.5 in) in diameter. Its isocenter height can be adjusted to the operator, reducing the fatigue associated with long procedures. And Artis zeego can be parked compactly to give your clinical team easier access to the patient, making it an ideal solution for hybrid rooms.

Artis zeego is here. And it's designed to make your job a lot easier.





With its multiple axes, Artis zeego offers unmatched flexibility. It enables complete head-to-toe coverage, and features a variable working height to help reduce fatigue.



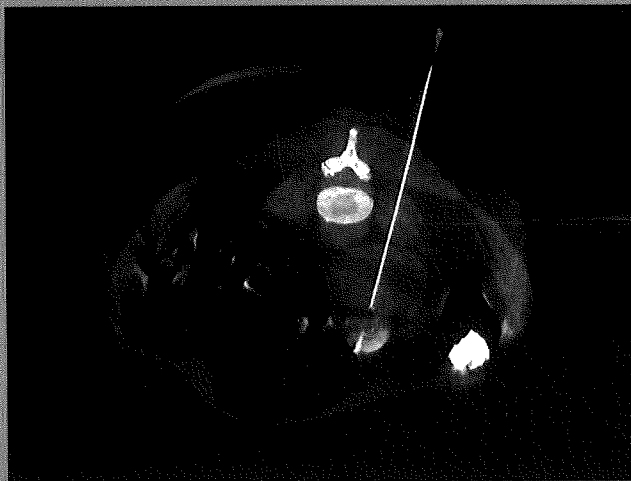
zeeego opens your eyes.

The whole picture. Large Volume *syngo* DynaCT imaging with Artis *zeeego* provides better coverage of the entire abdomen, a clear advantage when treating obese patients or patients with liver cancer. It provides images of the whole liver for chemoembolization and other oncology procedures. And it enables enhanced imaging when performing needle guidance for biopsies and radiofrequency ablations.

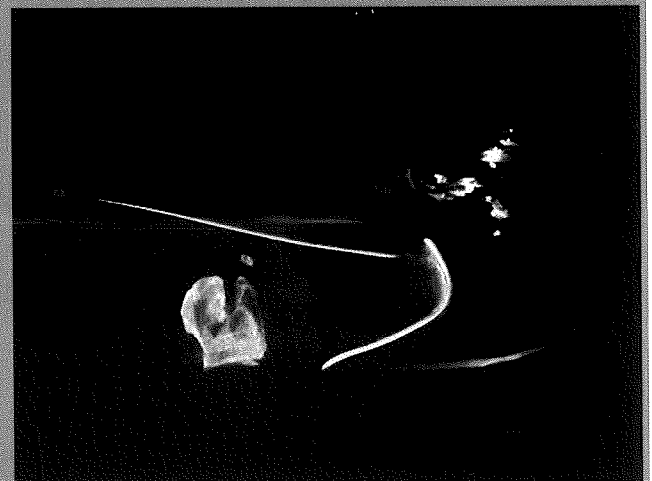


Image the whole abdomen with Large Volume *syngo* DynaCT.

Needlework in the angio suite. Artis *zeeego* with *syngo* iGuide allows you to perform needle procedures in the angio suite more easily and with greater access than with a conventional CT, especially in cases of obese patients and complex needle positioning.



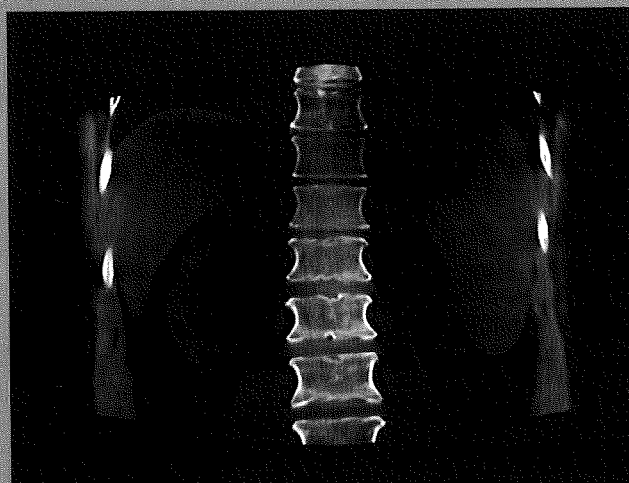
Large Volume *syngo* DynaCT allows excellent visualization of both the skin entry and needle target point in one volume, even when treating obese patients.



One of Artis zeego's most valuable features is its ability to provide Large Volume, cross-sectional *syngo*® DynaCT imaging. With Artis zeego, you get coverage that rivals a traditional CT scanner.

The power of portraits.

Artis zeego enables portrait views with *syngo* DynaCT with a height of 25 cm (9.8 in). This is particularly valuable for spinal procedures, e.g., vertebroplasties, kyphoplasties, lumbar punctures, and CT myelographies.



Excellent spinal coverage with Portrait *syngo* DynaCT.

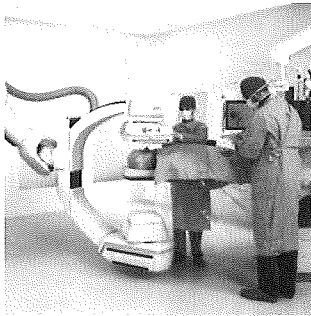
Dual-volume visualization with *syngo* iDentify. *syngo* iDentify provides simultaneous visualization of dual-volume high-contrast imaging or one high- and one low-contrast data set. It saves time, simplifies procedures, and is an ideal tool for providing a baseline for surgery.



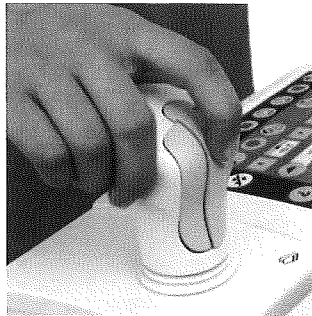
Dual-volume visualization of a cerebral coil package with *syngo* iDentify.

zeego lightens your load.

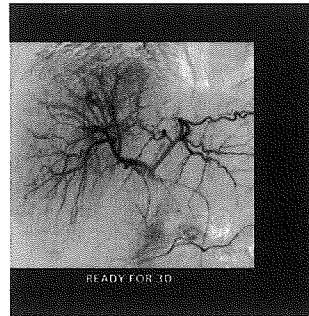
As demand for interventional procedures increases, so does the need for more efficient performance. Artis zeego meets the challenge by enabling your clinical team to work with greater ease and comfort.



Better for your back. Artis zeego features a variable isocenter, which allows you to adjust the working height of the system. This helps reduce the fatigue associated with performing long procedures with a fixed isocenter system. In short, Artis zeego allows clinicians to work with greater comfort and precision.



At your fingertips. The new mouse-like control is easier to operate, and with its modular design, can be flexibly positioned to maximize operator comfort.



3D menu workflow. The new system-driven workflow enables faster acquisition of 3D images. To improve efficiency, the start position for 3D data collection is moved to automatically, eliminating the time-consuming need for the operator to select the position manually.



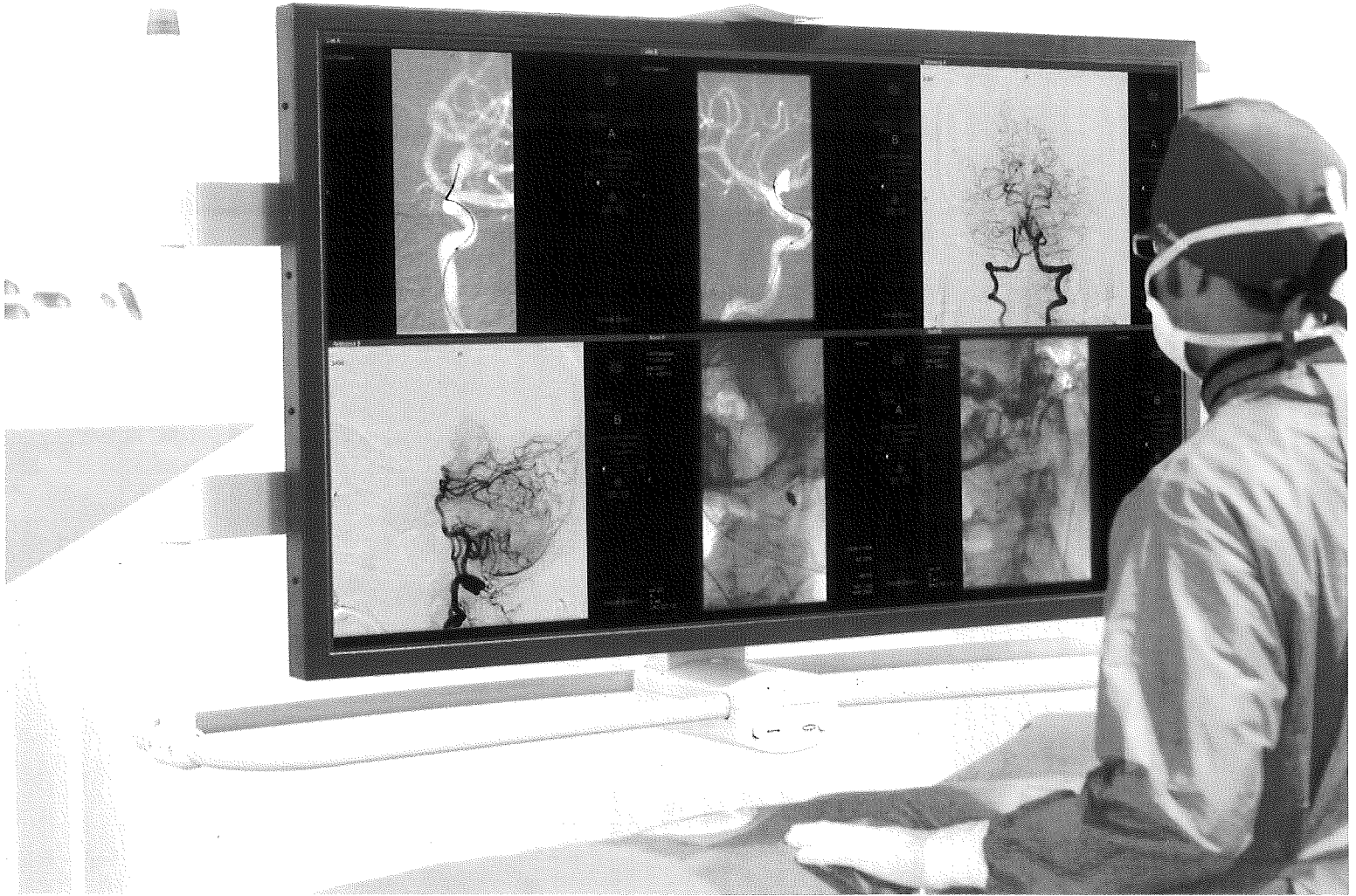
Positioning flexibility. Artis zeego's multiple axes provide exceptional floor-mounted positioning flexibility, enabling more angulations, complete head-to-toe coverage, and multiple work positions. And zeego's enhanced ergonomics allows you to work more comfortably and efficiently.

The slimline control module (right) allows the operator to get closer to the table and allows easier patient access.



zee enhanced workflow

zee more, do more with the Artis zee Large Display



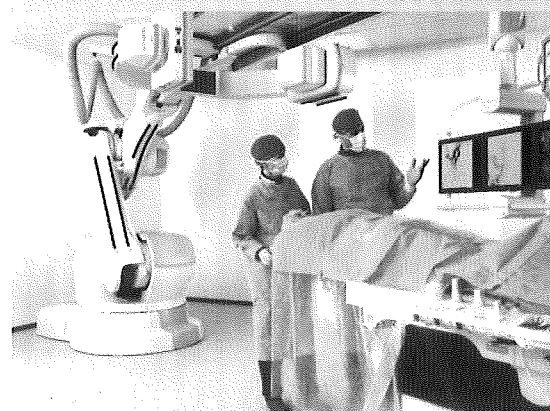
With the Artis zee Large Display, Siemens features a full color 56-inch medical-grade screen that lets you view multiple inputs simultaneously and provides over 200 layout configurations. Up to 12 different screen combinations can be directly selected at tableside and the image of clinical focus can be zoomed up to twice the size of a standard display. The Artis zee Large Display gives you the whole picture.

It's all about access.

Artis **zeego** helps make the most of the limited space available in the interventional suite. It can be stowed in a variety of compact positions so interventionalists have more work space and better access to the patient. Its smaller C-arm enables access to both the patient's left and right sides, and it affords better access to the head during neuro procedures than conventional ceiling-mounted systems. And since Artis **zeego** is floor-mounted, it easily meets laminar flow and other sterility requirements.

Safety first.

Artis **zeego** is equipped with the SafeMove system so you can operate it confidently. SafeMove features an integrated intelligent collision protection function that allows the operator to maneuver it with confidence around the patient.



Artis **zeego** can be parked in a variety of compact positions to make the most of the limited space available in the interventional suite.

zee a confident investment

zeego gives you the edge.

Investing in new technologies represents a substantial financial commitment for any healthcare enterprise. Artis zeego's unique capabilities are designed to provide value for your investment today and in the years ahead.

More flexibility, greater efficiency.

By freeing up space in the angio lab and OR, Artis zeego enables your clinical teams to work faster and more efficiently. Thanks to its multiple park positions, Artis zeego allows cleaning to be performed quickly and effectively after each procedure, so your room can be made available to the next patient faster.

In hybrid rooms, Artis zeego saves time and expense by eliminating the need to transfer patients to the OR in emergency situations. Pre- and post-operative imaging can be performed directly in the hybrid room, keeping the angio and CT suites free for diagnostic use.

Time is money.

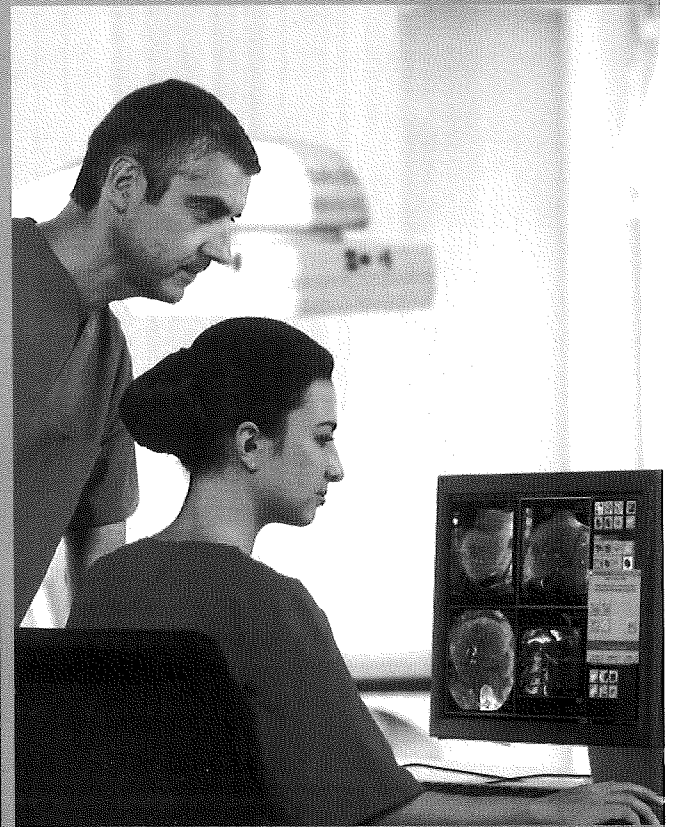
Another key economic advantage of Artis zeego is its ability to support needle procedures in the angio suite and free up your CT for other diagnostic uses. In fact, in the time it takes to complete one needle procedure, your CT could be used for many diagnostic scans.

A confident investment.

Siemens helps you to get the most from your investment. From on-site applications training to optional clinical education courses, we help you to optimize workflow to get the most from your Artis zeego. We offer proactive Uptime Services such as the Guardian Program, which significantly reduces unplanned downtime, so the only thing you have to think about is your patients. And with syngo Evolve for Artis zeego, we offer you the opportunity to participate in future innovations – keeping your system at the cutting edge.

zee the possibilities.

Siemens has been broadening the boundaries of radiology for over a century. Artis zeego, a product of advanced industrial engineering, boldly reflects that tradition of innovation. It has the power to revolutionize interventional imaging, making it faster, easier, and more economical. It can transform healthcare organizations, marking those who use it as true medical innovators. And as the frontiers of interventional imaging continue to expand, Artis zeego will help clinicians translate that progress into higher levels of care.



Not all features mentioned are necessarily standard

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Global Business Unit

Siemens AG
Medical Solutions
Angiography, Fluoroscopic and
Radiographic Systems
Siemensstr. 1
DE-91301 Forchheim
Germany
Phone: +49 9191 18-0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters

Siemens AG
Healthcare Sector
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
www.siemens.com/healthcare

Legal Manufacturer

Siemens AG
Wittelsbacherplatz 2
DE-80333 Muenchen
Germany

www.siemens.com/healthcare