XR RF, VAMC SEATTLE, WA
PO# 663-B60042

OBLIGATION# 663-B60042
Shimadzu SonialVision™ G4 Universal System
Sonial G4 17"x17" Flat Panel Detector, UD150BC-40S 80kW Generator
ZS-200 Universal Elevating Radiographic/Fluoroscopic table, 500 lbs limit, 700 lbs static,
Knee Crutch (1 pair), Drip Stand/IV Holder,
Storage Rack for table accessories, Compact Local Console
SMART Display 58" 8MP Multi-modality Color LCD, EIZO Smart Display Monitor Support,
and Overhead Type Radiation Shield
Kenex Height Adjustable Over-Table X-ray Shield
DICOM Radiation Dose Structure Report (RDSR)
Applications Included

Qty	Item #	Description
1		**Sonialvision G4 Package with Hygienic smart column** SHIMADZU SONIALVISION™ G4 UNIVERSAL SYSTEM A new premium R/F system that offers completely superior ergonomic design and highest user confidence. 17x17 inch Large FOV and 139 micron pixel size FPD mean leading-edge digital imaging and fine image quality. Various features of dose reduction and dose management provide an important aspect of radiology imaging. The SONIALVISION G4 will make your x-ray room the most productive and efficient by covering a wide range of x-ray examinations both R/F as well as, digital radiography. Features include: Ultra high image quality and large field FPD • 17x17 inch 139 micron pixel pitch FPD. Large Patient Coverage • 79.7 inch (202.5 cm) of longitudinal movement. This is accomplished by imaging chain, not table movement at any table angle • Completely flat Tabletop with no side frames adds to comfort and imaging Multi-functionality to perform many procedures • This system has been thoughtfully designed to be ideal for a wide range and variety of examinations, such as orthopedics, general radiography. Barium studies, endoscopy, urology, angiography, pediatrics, and bariatrics. • Urology mode realizes the unique table tilting with fixing the height of ROI and asymmetric collimation feature to keep the imaging field at the very end of tabletop. Comprehensive Dose Care • Grid controlled Pulsed fluoroscopy reduces doses. • Three beam hardening filters are provided as standard to efficiently remove unnecessary soft X-rays that do not contribute to image quality. The optimal BHF is selected to suit the examination automatically to ensure the lowest dose • A new auto filtering collimator R-300 has three kinds of beam hardening filters which cut unnecessary soft x-ray.

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		• G4 has “Dose Eye” collimation which allows the user to collimate even further to the minimum field by Iris collimation and asymmetric collimation. • On the LIH (Last Image Hold) you can set the collimation for the next fluoroscopy “virtual collimation”. • Grid can be removed to lessen dose in pediatrics or exposure to thin body parts. Totally Redesigned Digital Imaging Console • New DR-300 has state-of-the-art digital image processing technology and acquires radiography images while keeping original high resolution matrix. • The digital unit has integrated system for examination and image processing • Touch panel console offers essential information which is clearly visible to users making exam execution and completion easier. SURE Engine Advance • SONIALVISION G4 has an advanced digital imaging filter which contributes to noise reduction by using recursive filters and software driven image outputs to minimize halation and optimize imaging parameters. Universal Tilting/Elevating Radiographic / Fluoroscopic table ZS-200 with the following features: • 90 Degree Vertical to 90 Degree Trendelenburg with continuously variable speed tilt • Soft start and stop inverter drive motors • Maximum tilt speed 90 degrees in 17 seconds • Flat 235 X 76.5 table top • Carbon fiber reinforced plastic (CFRP) table top for low attenuation o 0.8 mm of AL eq. • Longitudinal Imaging chain movement: o Longitudinal range of imaging chain: 63.2 inches (160.5 cm) o Tube Arm speed: 5.9inches/sec (15 cm/sec) continuously variable • Lateral Table to movement: o 9.8 inches (25 cm) for peripheral studies o Variable speed,; 2.0 inches/sec (5.0 cm/sec) (max) • Table top elevation range: o 18.5 to 43.3 inches (47 to 110 cm) from floor o Allows maximum flexibility to load patients on and off of table o With 18.5inches (47cm) of table height being the lowest position patients can easily reach the floor for stability and safety • All Digital Carriage, without SPOTFILMER. Enables the following: o Improved image quality o X-Ray dose reduction o Enhanced field of view (closer to patient) • Table Weight: 3,440 lbs. (1,560 kg) • Compact and ergonomic design allows mounting only 4 inches from back wall Imaging Unit • Imaging coverage max 79.7 inches (202.5 cm) • Oblique angle of X-ray tube rotation +40/-40 degrees cranial-caudal and caudal-cranial to table FPD • X-ray tube rotation angle Vertical: Counter clockwise 90 degrees to Off table Gurney, or Trendelenburg: Clockwise 90 degrees • Dedicated inch mover for minor adjustments of imaging unit • The edge of the imaging range can be positioned as close as 3.7 inches (9.5 cm) from the head end of the table. Collimation • Virtual Collimation; Enables to collimation of irradiation field by displaying the collimator position onto fluoroscopic LIH (Last Image Hold) image. • Left and right asymmetrical collimator • Octagonal (Iris) collimator Additional Beam Hardening • 0.1mm Cu • 0.2mm Cu • 0.3mm Cu Dose Area Product (DAP) • DAP Mounting Kit • VacuDAP Dose Area Meter Grid • Ratio 10:1, Density: N 50 line/cm • Focusing Distance 47.2 inches(120 cm)		

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		• Interspace material: AL • Removable Grid Standard Accessories • Footrest • Shoulder rest • Side hand grip, 1 pair • Overhead hand grip • Table Mattress • Footswitch for fluoroscopy and radiography • Intercom • Grid Storage Rack • SMILE Mat with Shimadzu “Global Strings” Design • 9BCu Phantom Swallowing Examinations • Wheelchair or swallow patients can be examined by extending the imaging chain up to 150cm of SID Stretcher Applications The tube head can rotate 90 degrees at vertical position to image patients on the stretcher 500 lbs weight feature • Table Fully Functional with Patient Load up to 500 pounds and 700 pounds in case that the patient is lying horizontally and stationary Hygienic Smart Column Integrated Tube Arm Features: • Design allows for installation in a 107 square foot room with a 9 foot 6 inch recommended ceiling o 8 ft 6 in Minimum Height (Some movement restrictions) • With Table Vertical; X-ray tube Focus is 59.4 to 220 cm from floor. • Tube Rotates +90 degree – 90 degree (motorized for stretcher work) • Easy patient access from either side of the table • Linear Tomography capability o Exposure range FFD: 110cm, Horizontal, Vertical or at any table tilt angle from +90 to -90 degree o Exposure angle 8, 20 30, 40 degree o Speed maximum 2.5 second for 40 degree o Layer height: 0 to 250 mm from the tabletop • X-Ray Tube • Fluoroscopic X-Ray Tube: 750kHU, 0.7 X 1.2 Focal, Grid Controlled Pulse Fluoroscopy 17x17” Flat Panel Imaging Detector Shimadzu Flat Panel Detector Technology System • Dynamic Flat Panel Detector • Cesium Iodide (CsI) Scintillator • 139 micrometer pixel technology for sharp diagnostic visualization • DQE 70% +/- 5% • Spatial resolution: 3.6 line/mm (Nyquist) • 17 x 17 inch Full imaging field of view • Acquisition frame rate: Max. 30 fps • High resolution image acquisition with dose reduction • Max 3032x3032 (17”x17”) Spot Image Acquisition • Max 3032x3032 (17”x17”) Serial image Acquisition at 15 fps • Images obtained as 16 bit data 65,530 graduations • Stored with a digital processing device as 16 bit data without losing any image information • FOV: 17x17” FPD provides the largest imaging area, and 5 selectable FOV (17x17,15x15,12x12, 9x9, and 6x6 inch) best in the market UD150BC-40S Radiographic/Fluoroscopic High Frequency Inverter X-Ray Generator with the following features: • High Frequency, 50 kHz inverter • 80kW Radiographic Rating • LCD Touch Panel • Advanced Anatomical Programming with 800 programs • Two-Point (kV / mAs) and three point (kV / mA / t) manual techniques and AEC / APR override capabilities • Radiographic tube voltage 40-150 kV Continuous • Radiographic Tube Current 10-1000 mA • Time selection 0.001-10 seconds • Radiographic; 0.5 to 800 mAs		

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		• Fluoroscopic tube voltage 50 – 125 kV continuous • Fluoroscopic Tube Current mA 0.3 – 20 mA • Automatic Brightness Stabilizer • Fluoroscopic Timer • Exposure counter • Anode heat calculator • Two X-Ray tube compatibility • Requires 480 VAC, Three Phase power or others available • Automatic Exposure Control (AEC) • High Speed Starter DR-300 Shimadzu Digital System Includes: • Anti-Virus Software • Fluoroscopy 1024 x 1024 matrix • Auto-Calibration, and image quality analysis/measurement software • High speed CPU • Disk drive stores 10,000 images at 1024x1024 • Windows 7 operating system with intuitive graphic user interface • PC keyboard and Mouse • DVD-R drive; upto 2,000 images in DICOM Media Strage 1024 x 1024 matrix Radiography • SPOT Acquisition • Serial Acquisition • Milti-frame imaging: 2 or 4 split horizontally/vertically • SUREengine Advance for Radiography o The digital filters suppress the halation and loss of shadow details for SPOT Acquisition images Fluoroscopy • Pulsed Fluoroscopy at 30/15/7.5/3.75 fps • Fluoroscopy Image Storage: Direct store/LIH (Last Image Hold) store/Loop Store, Up to 1,000 frames per run. • Virtual Collimation • SUREengine Advance for Fluoroscopy o Real-time multi frequency processing o Real-time flexible noise reduction Processing • Customizable fields allow exam settings to be pre-programmed to Individual doctor’s specifications making for one-click exam setup • Auto-image optimization • Extensive group of post-processing features for optimal image quality o Gamma Selection from 10 kinds of nonlinear contrast curve o Recursive Filter Noise Reduction o 13 x 13 Template filter processing Edge Enhancement • Horizontal / Vertical Inversion • Zoom up to x 4 • Multiple Image Display (2x2, 4x4) • Annotation for overlay display text and figure • Distance & Angle Measurement on the image DICOM Communication • DICOM 3.0 network includes o DICOM storage class o DICOM MWM (Modality Worklist class.) o DICOM media DVD-R in DICOM format o DICOM print class Monitors • Two 19 inch LCD Monitor for Procedure Room • Two 19 inch LCD Monitor for Control Room Standard Remote Control Console, Desktop Type: ZS-200 RC-U, Built-in Kit • All controls necessary for a given examination are gathered at the central touchscreen. • Controls are customizable for each examination type and facility. • Equipped with a 10.4 inch LCD touch panel • Operator can view patient information or change fluoroscopic and radiographic conditions • Mounts in customer’s provided counter Standard Remote Control Console, Desktop Type:		

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		ZS-200 RC-S, outer frame for mounting • All controls necessary for a given examination are gathered at the central touchscreen. • Controls are customizable for each examination type and facility. • Equipped with a 10.4 inch LCD touch panel • Operator can view patient information or change fluoroscopic and radiographic conditions • It sets on top of counter Standard Remote Control console, cart type ZS-200 RC-C, cart for console: • All controls necessary for a given examination are gathered at the central touchscreen. • Controls are customizable for each examination type and facility. • Equipped with a 10.4 inch LCD touch panel • Operator can view patient information or change fluoroscopic and radiographic conditions • It built into a roll around cart Transformer, ZS-200 CAB (step down from 480V to 200V) Transformer, D150BVC-40S (step up from 200V to 400V)		
1		**Compact Local Console**		
		SMART Display 58" 8MP Multi-modality Color LCD, EIZO Smart Display Monitor Support, and Overhead Type Radiation Shield		
1		**SMART Display with 8 channel** EIZO Radiforce LS580W Large Monitor Solution - 58" viewing area enables a new dimension in medical imaging allowing high flexibility in arranging different screen layouts. - Fully Automated Stability through the Integrated Stability System (ISS). - DICOM/CIE compliant grayscale response built into the monitor. - Integrated uniformity correction for homogenous luminance. - Multi-modality imaging display capability Eizo large Monitor Manager - SMART Display 8 - Collects up to 8 different video input signals, - Combines these information and transmits the combined window to the monitor. - Source window can be arranged at any position on the monitor. - High reliable design by redundant power supply and cyclic life check. - WEB based configuration tool.		
1		**Column Assy for Shimadzu MTA Solution**		
1		**MTA-40C-56 for SMART Display Moving rail 4.0m.**		
1		**Fixed Rail C ASSY**		
1		**PC Transformer Set**		
1		**Portegra2 extension/spring arm 95/91 cm with acrylic shield 600 x 760 mm**		
1		**Portegra2, Twin Column Stationary**		
		Cart Type Radiation Shield		
1		**Kenex Height Adjustable Over Table X-Ray Shield**		

Qty	Item #	Description	List Price	Disc. Price
1		**DICOM Radiation Dose Structure Report (RDSR)**		
1		**Drip Stand (IV Holder)**		
1		**Lateral cassette holder used with Grid Cap (NEW ITEM)**		
1		**Knee Crutch (1 pair) SV-G4 Style**		
1		**Storage Rack for table accessories**		
1		**PurePower - Power Control and Distribution Unit**		
1		**Inside Delivery (2 men - 6 hours Each) with crate removal and disposal**		
1		**Installation Dollies Rental**		
		SUBTOTAL VA CONTRACT PRICE (47% Base & 50% Options off list)		
1		**Applications - 7 Days (4 days at initial, 3 days follow-up to include Advanced after 6 weeks) - INCLUDED**		
1				
1				
		including AutoCad and Isometric		
1		**Service Training - Sonialvision G4 Service Training Class**		
		- Tuition for one (1) biomedical engineer for 4-5 days service training class at Shimadzu Medical Systems - Does not include Travel and Living expenses.		

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1		**The following items are not included in the total price listed above. If you wish to purchase these items, indicate "Accept" next to the item, followed by your initials. The amount for each option below will be added to the total above if accepted. These items may replace other items in the quotation above, and will be indicated per item.**		
1		**Tomosynthesis Option (Optional)** Tomosynthesis is an automated acquisition process that acquires several images while the tube is moving in an arc, from 8-40 degrees, across a region of interest. The series of images are then processed in a "Cone Beam" or CT-type back projector resulting in a volume of data. The volume of data is then available for investigation by scrolling through the volume in a series of slices. Slice thickness can be post processed in a similar manor to that used in CT imaging. Slices of interest can be extracted as required for further investigation, printing and DICOM storage. Tomosynthesis provides numerous key advantages including: - Low dose - Weight bearing - Low metal artifacts - High spatial resolution - High quality imaging in plaster fixation - Easy positioning - Fast acquisition - Large FOV - Erect and Supine AP/PA and Lateral Projections		