

V.A. MEDICAL CENTER
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EQUIPMENT SUMMARY:
RR/CM80DR/RS.000

**RADREX-I CEILING-SUSPENDED
DIGITAL RADIOGRAPHY SYSTEM 80
KW WITH ONE STATIONARY 17X17"
DR PANEL AND ONE REMOVABLE
14X17" DR PANEL**

RADREX-I CEILING-SUSPENDED 80 KW
MIXED DETECTOR DIGITAL
RADIOGRAPHY SYSTEM -- WITH
STANDARD OTC RAILS

REJECT ANALYSIS SOFTWARE

19" LCD MONITOR WITH TOUCH PANEL

VBS HAND GRIP FOR LATERAL
RADIOGRAPHY, LONG

UPS KIT FOR RADREX-I CONSOLE

UPS FOR RADREX-I CONSOLE

CABLE,UPS

EQUIPMENT SUMMARY: (continued)

RADREX INSTALLATION KIT

POWER DISTRIBUTION UNIT FOR RADREX-I

AUTO-STITCHING AND PATIENT SUPPORT
STAND

PATIENT SUPPORT STAND

AUTO-STITCHING

TABLE TOP LATERAL CASSETTE HOLDER

RADREX-I DOSE METER KIT (DIAMENTOR K1S)

DOSE METER CONTROLLER

DIAMENTOR CHAMBER

CABLE FOR DIAMENTOR CHAMBER

POWER SUPPLY, 110-240 VAC/24 VDC, 1.5 A

CABLE, RS232

LONG AXIS 8:1 FOCUS 40" GRID CAP FOR
PORTABLE DETECTOR

PAXSCAN 4336R PROTECT-A-GRID DR PANEL
GRID ENCASEMENT

14" X 17" 8:1/215/34-44 GRID

PROTECTOR FOR CANON REMOTE DR PANEL

BIOMED TRAINING - TUITION, TRAVEL AND
LODGING - RADREX (5 CLASS DAYS)

Special Information & Terms

- This quotation/order will be subjected to the Agreement for X-Ray equipment products between Government and Toshiba America Medical Systems, Inc., Reference contract no. SPM2D1-09-D-8322/V797P-6033(b).
- Includes 12 month Service Warranty.

RR/CM80DR/RS.000

RADREX-I CEILING-SUSPENDED DIGITAL RADIOGRAPHY SYSTEM 80 KW WITH ONE STATIONARY 17X17" DR PANEL AND ONE REMOVABLE 14X17" DR PANEL

RADREX-i mixed-detector radiographic system is configured with a fixed 17x17" detector in the wall stand and a portable 14x17" detector in the table. This system is engineered to improve productivity and workflow, and provide value beyond any other system in its class.

The integrated components make program set-up and patient positioning easier with features that automate patient data entry, detector tracking and image processing. In addition, the superior processing power for optimized images eliminates post processing after an exposure and saves time during an examination.

High-productivity features are standard in the system. Patient care is improved with the tube-side access to examination controls and the in-room image display allows point-of-care decision making. And bariatric exams are made easy with a 600 lb. table weight limit, 600 kHU X-ray tube and 80kW generator all standard.

In short, RADREX-i does everything more economically with an unprecedented ease-of-use for both patients and technologists.

COMPONENTS

- Integrated control console
- 80 kW/150 kVp radiographic generator
- 600,000 HU X-ray tube
- Motor-driven elevating table
- Automatic exposure control
- Automatic/manual collimator
- 14"x17" removable digital image receptor for table
- 17"x17" digital image receptor for wall stand
- Ionization chambers for wall stand and radiographic table
- Ceiling-suspended tube support
- Tilting vertical bucky wall stand, -20 to 90 degree range
- High voltage cables
- PDU (Power Distribution Unit)

KEY FEATURES

Productivity Features

Automation comes standard with RADREX-i including the following features:

- Auto-tracking – eliminates the need to manually position the X-ray tube and detector by providing synchronization for table and wall stand tracking.
- Auto-collimation – automatically selects the correct collimation size for the patient's body part, saving crucial time for the patient and technologist.
- Auto-program – selects the correct program for each specific X-ray procedure, instead of the technologist manually selecting the program on the generator.
- Auto-park – raises the X-ray tube after the exam with a single touch, giving the patient room to safely sit or stand following the procedure.
- REXVIEW – Color LCD Panel that provides point of care access to generator programs and image preview

- In-room image preview – increases productivity and promotes improved patient care
- Auto-Center Stop -- provides a visual guidance for quick and easy detector centering

Control Console

Integrated workstation provides patient entry, generator controls, post-processing and documentation into a single point-of-contact. The easy-to-use intuitive user interface helps streamline workflow and accelerate throughput.

Overhead Tube Crane

Highly flexible OTC is capable of almost any angle, pivot and swivel combination for positioning freedom. The OTC provides tube-side access to examination controls, allowing point-of-care decision making to improve patient care.

- All free grip for maximum maneuverability
- Increased range of travel
- REXVIEW - Color LCD touch panel
 - Patient information display
 - Access to generator programs
 - Image Preview
 - Rotating display mechanism

Digital Acquisition

RADREX-i provides filmless radiography with state-of-the art, flat-panel, digital detectors that provide excellent detailed radiographic images for optimized patient care. Combined with various image-processing functions and an expansive dynamic range, RADREX-i delivers high-image resolution for greater diagnostic confidence.

Image Enhancement

- RADREX-i Digital Radiographic System nearly eliminates retakes due to a host of image-quality enhancements that can be programmed into individual APC programs to help increase productivity and ensure superior image quality.
- Display enhancement processing adjusts contrast density areas of an image
- Digital compensation filter provides enhanced contrast in under-penetrated or over-penetrated areas
- f-Processing provides soft tissue and bone visualization
- Auto field detection locates collimated edges of image for automatic electronic shutter placement
- Image sharpening brings out more visible detail
- Grayscale transformation ensures high-quality data
- Automatic adjustment of image size to the collimated area
- Manual stitching software allows selection of 2-3 single images to be stitched together to create a single long image

SPECIFICATIONS

Integrated Control Console

- Windows XP Professional with single Pentium IV 3.2 GHz
- 160 GB x 2 SATA HDD
- Storage capacity of 5,000 images
- 19" LCD color touch screen monitor
- Image preview available in less than 3 seconds
- DICOM 3.0 compatible (send, print, storage class)
- DICOM MWM and MPPS
- DICOM RDSR
- Manual Stitching software
- 2 Ethernet interfaces (10/100 Base-T, 1000 Base-T)

80 kW / 150 kVp Radiographic Generator

- High-frequency power (Inverter)
- 80 kW output
- mA range: 10 to 1000
- kVp range: 40 to 150 kVp, 1 kVp steps
- mAs range: 0.5 - 600
- Timer range: 1 msec – 9 seconds
- Anatomical Programmed Radiography (APR), 10,000 views
- Automatic APR selection with RIS information
- Integrated control console used for APR and technique information; includes date/time feature
- Integrated diagnostic functions to improve system up-time
- High-speed starter

X-Ray tube

- Focal spot: 0.6/1.2mm
- Anode angle: 12 degrees
- Anode heat capacity: 420 kJ (600,000 HU)
- Heat dissipation: 1750 W (2465 HU/sec)
- Anode speed: 9700 RPM
- Anode diameter: 100mm

Elevator Bucky Table

- Designed to accommodate the 14"x17" removable DR panel in the portrait or landscape mode
- Patient weight limit 600 lbs.
- 4-way floating table top
- Integrated foot switch
- Motorized elevating range: 20" – 37.4"
- Tabletop dimensions: 32.2"x93.7"
- Table longitudinal movement: 31.4"
- Table transverse movement: 9.4"
- Detector travel: 21"

- 100 cm focusing distance
- 40 lines/cm grid density with 8:1 grid ratio
- Tabletop filtration: <0.6 mm AL
- Table mount Lateral Cassette Holder

14"x17" Digital Image Receptor for Table

- 14"x17" imaging sensor panel
- Amorphous silicon (a-Si) sensor technology
- Cesium Iodide (CsI) scintillator
- 35x42 cm active area
- High-precision, 7.75 million-pixel resolution
- Pixel pitch: 139 μ m
- Grayscale: 4096 grayscale (12 bits)
- Weighs 4.9 kg (10.78 lbs)
- 8 meter tethered cable

Ceiling-Suspended Tube Support

- Vertical tracking to maintain SID when table is raised or lowered
- Vertical tracking to maintain horizontal alignment when wallstand is raised or lowered
- Autopark key drives the overhead tube into its highest vertical positioning to facilitate easy patient transfer on/off the table
- Vertical movement: 150 cm (59")
- Minimum focal spot-to-floor distance: 42 cm (16.5")
- Tube rotation
- Vertical axis: ± 180 degrees; detents 0, ± 90 degrees
- Horizontal axis: ± 180 degrees; detents 0, ± 90 degrees

Automatic Collimator

- Collimator with light
- Automatic shutter control with manual override
- Rectangular blades
- Additional independent collimator blade for offset collimation
- Beam-hardening filter to help reduce soft radiation
- Pre-formatted sizing

- Field-of-view is automatically set from APR selection
- Detector centering indicated by shadow crosshair
- Bucky tray centering indicated by laser light
- Swivel mount enabling ± 45 degrees

Vertical Tilting Wallstand

- Center column mount
- Motorized vertical detector tracking
- Dual rectangular ion chambers
- Tilting range from -20 to 90 degrees
- Vertical travel: 50"
- 150 cm focusing distance
- 78 lines/cm grid density with 10:1 grid ratio

17"x17" Digital Image Receptor for Wall Stand

- 17"x17" imaging sensor panel
- Amorphous silicon (a-Si) sensor technology
- Cesium Iodide (CsI) Scintillator
- 43x43 cm active area
- High-precision, 9-million-pixel resolution
- Pixel pitch: 143 μm
- Grayscale: 4096 grayscale (12 bits)
- No active cooling required
- Includes mounting hardware

X-ray Tube Warranty

- All X-ray tubes carry a 12-month, non-prorated warranty.
- Initial 12 months – free replacement
- If a tube fails within the first 12 months, it will be replaced at no cost to the customer
- The replacement tube will carry the free replacement warranty for the remainder of the 12 months from the time of the first installation.

Image Maker Express

The Image Maker Express is a marketing support online resource designed exclusively for Toshiba customers that helps you create outreach programs to generate awareness about your imaging services.

- Includes positioning and messaging guides to help you strategize your communications efforts and tactics
- Contains product information, ready-to-use collaterals, and ideas for creating custom materials to promote your new imaging capabilities

Image Maker Express gives you access to:

- Product images
- Clinical images
- PowerPoint presentations
- Sample brochures
- Sample press releases
- Marketing strategy tutorials

Updates at www.imagemaker.toshiba.com/express

**Offerings may vary per product*

Build demand by:

- Sending a press release
- Developing a strategic plan
- Creating brochures
- Finding tips on effective presentations

APPLICATIONS SUPPORT

Two-phase, on-site training session is included with purchase of the system:

Pre-requisite: Toshiba eLearning

- Digital Imaging Principles CBT located on the Toshiba Learning Center Website.

Phase One: Initial On-Site Training

- 32 hours of training for up to four technologists following installation.
- Includes generator setup, complete overview of system operation and technique review.
- Imaging of patients to evaluate image quality.
- This training is scheduled in advance.

Phase Two: Second On-Site Training

- 16 hours of follow-up training for up to four technologists.
- This training is scheduled in advance, four-to-eight weeks after the initial training.
- Follow-up visit must take place within 6 months of the initial turnover.

Additional On-Site Training:

Additional On-site training available for purchase.

Applications support is available by phone on the toll-free ASSIST line.

COMPONENT SUMMARY:

RADREX-I CEILING-SUSPENDED 80 KW MIXED DETECTOR DIGITAL RADIOGRAPHY SYSTEM -- WITH STANDARD OTC RAILS

This RADREX-i system features a Ceiling-Suspended Tube Support with standard length rails.

Standard Length Rail Specifications

- Longitudinal movement: 445 cm (175")
- Lateral movement: 230 cm (90.5")
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REJECT ANALYSIS SOFTWARE

A quality assurance tool that allows images to be captured and categorized by technologist for follow-up quality review. The reject report can be exported to the network shared folder of this device as a MHT file.

- Captures reasons for rejection
- Reports percentage of accepted and rejected images
- Fields and date ranges are set by administrator
- Rejected image is associated with reject list
-

19" LCD MONITOR WITH TOUCH PANEL

VBS HAND GRIP FOR LATERAL RADIOGRAPHY, LONG

Hand grip bar mounted on the vertical bucky stand, used for stabilizing patients for lateral chest radiography.

UPS KIT FOR RADREX-I CONSOLE

UPS FOR RADREX-I CONSOLE

CABLE,UPS

RADREX INSTALLATION KIT

Provides nuts, bolts, drill bits and other miscellaneous materials to help ensure a smooth installation.

PDU-RADREX

POWER DISTRIBUTION UNIT FOR RADREX-I

This PDU-RADREX provides most of the electrical site preparation requirements of Toshiba RADREX-i system, including:

Voltage Conversion

Facility wiring costs are significantly reduced since the PDU-RADREX accepts a single, 480V DELTA or WYE 3 phase input 3 and distributes both the required 208V single phase for the Digital Image Processor and 480V 3 phase required for the RADREX-i generator and the remainder of the RADREX-i components.

Distribution

The PDU-RADREX comes prepackaged with input and output distribution breakers needed for each system feed. Having all system breakers in one location also makes it easier for service personnel or the customer to remove appropriate AC power when needed.

Planning

Planning is simplified by having all these components and functions delivered in a single box.

Installation

Installation is much faster, more predictable, and less expensive with a factory-assembled and tested system.

Approvals

UL listing will reduce time and uncertainties obtaining local electrical inspection approvals.

Reduced Site Preparation Costs

The PDU-RADREX comes equipped with an input shunt-trip circuit breaker, eliminating, in most cases, the need for a room breaker.

AST-PSS.100

AUTO-STITCHING AND PATIENT SUPPORT STAND

Stitching package includes auto-acquisition and software that allows stitching of 2 to 3 images for long leg and spine imaging. The patient stand that keeps patient isolated from moving detector is included with this package.

The stitching software provides two methods of stitching:

- Fixed Tube – utilizes offset collimation with 2-step moving detector
- Stepping Tube – synchronized movements of tube and detector

PATIENT SUPPORT STAND

AUTO-STITCHING

QT-TCH

TABLE TOP LATERAL CASSETTE HOLDER

- Quick and easy positioning on the X-ray table
- Accommodates portable DR panel up to 14x17"
- Accommodates CR/film cassettes up to 14x17"
- Assists in accommodating cross-table lateral examinations

RR-DOSEKIT.100

RADREX-I DOSE METER KIT (DIAMENTOR K1S)

- Displays exposure dose (mGy) for each radiographic exposure
- Displays the total exposure dose for the examination

DOSE METER CONTROLLER

- Displays exposure dose (mGy) for each radiographic exposure
- Displays the total exposure dose for the examination

DIAMENTOR CHAMBER

CABLE FOR DIAMENTOR CHAMBER

POWER SUPPLY, 110-240 VAC/24 VDC, 1.5 A

CABLE,RS232

RR-GRID8LONG40.100 LONG AXIS 8:1 FOCUS 40" GRID CAP FOR PORTABLE DETECTOR

- Protect-a-Grid encasement
- 14X17 8:1/215/34-44 grid

PAXSCAN 4336R PROTECT-A-GRID DR PANEL GRID ENCASEMENT

14" X 17" 8:1/215/34-44 GRID

4948

PROTECTOR FOR CANON REMOTE DR PANEL

The DR panel protector provides additional protection for weight bearing X-rays of feet.

- Supports patients up to 500 lbs
- Faceplate is radiolucent for excellent image contrast
- For use with Canon and Varian portable detectors
- Easy to clean non-porous polyethylene, polycarbonate and stainless steel construction

RF266C-TTL

**BIOMED TRAINING - TUITION, TRAVEL AND LODGING - RADREX
(5 CLASS DAYS)**

The Bio Med training course must be completed twelve (12) months from equipment installation date (or purchase date if sold separately). If training is not completed within the applicable time period then the obligation to provide this course will expire without refund unless funds are used for additional operator training within this time frame.