

**WAREHOUSE/RECEIVING**

**V.A. Medical Center**

**1100 TUNNEL ROAD**

**ASHEVILLE, NC 28805-2043**

**637-B50013**

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**AQUILION ONE SERIES V DYNAMIC  
VOLUME CT SCANNER WITH AIDR 3D**

SYSTEM AND TABLE CONFIGURATION

CT SCANNER AQUILION ONE SERIES WITH HIGH  
CAPACITY EXTENDED COUCH

ACCESSORY KIT FOR HIGH CAPACITY COUCH

AQUILION ONE SERIES V VISION UPGRADE KIT

DYNAMIC VOLUME CT UPGRADE KIT AQUILION  
320 TO 640

AQUILION ONE - FAST SCAN AND X-RAY POWER  
UPGRADE KIT

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4-D NEURO PERFUSION PACKAGE WITH  
SURESUBTRACTION FOR CONSOLE

DICOM 3 MODALITY WORKLIST MANAGEMENT  
(MWM) SERVICE CLASS USER (SCU) SYSTEM

DICOM 3 QUERY/RETRIEVE SCP

DICOM 3 QUERY/RETRIEVE SCU AQ/MP

DICOM 3 STORAGE COMMITMENT SCU SOFTWARE

PRESENTATION OF GROUPED PROCEDURES (PGP)  
AND EXAM HARD SPLIT

CT PHANTOM

CHAIR WITH ADJUSTABLE ARMS AND BACK (Qty  
2)

CONSOLE DESK 65" X 36" X 30"

MEDIA FOR DVD-RAM DRIVE (9.4 GB) (Qty 5)

SERVICE MODEM CABLE (Qty 2)

NON-CORROSIVE FLOOR LEVELING EPOXY KIT

SURECARDIO WITH PHASEXACT FOR AQUILION  
ONE VISION

ECG GATING SCANNING SYSTEM

ROLLSTAND FOR MODEL-7800

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ECG MONITOR, R WAVE CARDIAC TRIGGER 3304-07-15

ADVANCED AQUILION ONE / PREMIUM CARDIAC CT COURSE FOR TECHNOLOGISTS

POWER CONDITIONER OPTIONS AQUILION ONE SERIES V

TOSHIBA POWER DISTRIBUTION UNIT

DISPLAY CONSOLE KIT AQUILION ONE (V7 OR LATER)

SURESUBTRACTION FOR AQUILION

CT CARDIAC FUNCTION ANALYSIS SOFTWARE (CFA)

VARIABLE HELICAL PITCH AQUILION PRIME AND AQ ONE TSX-301C (REQUIRES SURECARDIO ECG GATING)

DUAL ENERGY APPLICATION FOR AQUILION ONE AND ONE VISION - REQUIRES V6.0

TECH ASSIST LATERAL TABLE SLIDE FOR AQUILION

LATERAL COUCH MOVEMENT KIT

REAR FOOTSWITCHES (HIGH CAPACITY COUCH)

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TOSHIBAS INJECTOR SYNCHRONIZATION  
SOFTWARE FOR AQUILION ONE VISION  
(REQUIRES GEN 4 AND V7 SOFTWARE)

AQUILION ONE SERIES CAN PROTOCOL (V7 OR  
LATER)

SUREFLUORO: CT FLUORO KIT WITH FLAT-PANEL  
MONITOR

CT FLUOROSCOPY

LCD MONITOR FOR SUREFLUORO FOR AQUILION  
PRIME, RXL & VELOCT

NEEDLE HOLDER KIT FOR CT FLUOROSCOPY  
• *For SureFluoro*

FLUOROSCOPY STERILIZATION KIT FOR  
AQUILION-4 THROUGH AQUILION ONE

CEILING SUSPENSION MOUNT FOR LCD MONITOR

CEILING MOUNT PLATE FOR FIXED COLUMN

EXTENSION,SPRING ARM 75/90 CM

HOLDER FOR ONE FLAT SCREEN MONITOR WITH  
VESA-ADAPTER

MAVIG 360 COLUMN - FIXED (58 CM)

ARM HOLDER (ONE SIDE) (Qty 2)

MAT FOR HEADREST (Qty 2)

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HANDLE, TABLE, OVERHEAD

ARMREST, OVERHEAD

COLOR PRINTER INTERFACE FOR NETWORK  
PRINTERS

SURECARDIO SCORING ON CONSOLE

LUNG VOLUME ANALYSIS

4-D NEURO PERFUSION PACKAGE WITH  
SURESUBTRACTION FOR CONSOLE

VITREA FX WORKSTATION DESIGNED FOR  
AQUILION ONE WITH AQUILION ONE  
APPLICATIONS PACKAGE

VITREA WORKSTATION, CT TAVR ANALYSIS APP  
WITH EDUCATION

CT MYOCARDIAL ANALYSIS & EDUCATION PKG

BIOMED TRAINING - TUITION, TRAVEL AND  
LODGING - AQ VISION (10 CLASS DAYS)

TOSHIBAS INJECTOR SYNCHRONIZATION  
SOFTWARE FOR AQUILION ONE VISION  
(REQUIRES GEN 4 AND V7 SOFTWARE)

MEDRAD STELLANT D OCS DUAL FLOW INJECTOR  
WITH ISI 800 INTERFACE/SYNC KIT - CT

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- Includes 12 Month Service Warranty.

## **AQUILION ONE SERIES V DYNAMIC VOLUME CT SCANNER WITH AIDR 3D**

The Aquilion™ ONE Series V multi-detector CT is a multi-functional CT scanner with Adaptive Iterative Dose Reduction 3D Enhanced (AIDR 3D ENHANCED) and is a scalable 320 to 640\*<sup>1</sup> slice CT system, using Double Slice technology, that provides up to 0.275\*<sup>2</sup> rotation speeds. The system's advanced imaging capabilities allow you to perform a wider range of procedures with greater comfort, convenience and safety while increasing efficiency and productivity every step of the way. The speed and clinical accuracy of this technology offers significant benefits to patients – especially trauma, pediatric and critically ill patients. This technology supports fast data acquisition and transfer times to aide physicians to more clearly visualize internal injuries and disease in less time.

It includes Aquilion's best-in-class, 0.5 mm PUREViSION detector and 78 cm bore. It acquires up to 16 cm\*<sup>1</sup> volumes of the anatomy, such as the pancreas and temporal bones, in a single rotation without table movement. In addition, the Aquilion ONE Series V is the most flexible scanner offering true 320 and 640\*<sup>1</sup> slice conventional helical and step-and-shoot modes.

*\*1-The Dynamic Volume upgrade kit (320 to 640 slice) is required to obtain additional reconstructed slices in a single axial rotation.*

*\*2- The Fast Scan and X-ray Power upgrade kit is required to achieve 0.275 rotation speeds. Note: Power requirements for your site may change.*

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The Aquilion™ ONE Series V incorporates a host of ergonomic and automated features to streamline productivity, deliver the highest quality images and that make examinations faster, safer and more clinically relevant than ever. Aquilion™ ONE Series V also achieves consistently superior image quality with industry-leading, low-contrast resolution of 2 mm at 0.3% and high-contrast resolution of 0.35 mm (0.275°).

#### **Single-Energy Metal Artifact Reduction (SEMAR)**

SEMAR utilizes a sophisticated reconstruction algorithm to reduce artifacts caused by metal while improving visualization of the implant, supporting bone and adjacent soft tissues\* for an accurate diagnosis. SEMAR can be retrospectively applied to a routine low-dose scan, including volumetric and helical scans, combined with AIDR 3D ENHANCED to achieve the best possible image quality without the need for additional exposure dose or a dedicated scan procedure. Toshiba will include SEMAR with each system as a value add. SEMAR is normally valued at \$50,000.

*\* Bone structures near the metal-tissue interface may become distorted. Metal artifacts may not be completely removed in areas near the metal material. Comparison with the original images is suggested when performing diagnosis using SEMAR images.*

*Prerequisite: Requires Version 7.0 software. Not available on the Aquilion Large Bore or RXL.*

#### **COMPONENTS**

- eVolution 78 cm gantry bore with iStation
- eVolution 660 lb. couch with custom table pad and positioning accessories
- Single console with ergonomic operator controls\*<sup>3</sup>
- High speed reconstruction hardware
- MegaCool™ V X-ray tube
- PUREViSION detectors and DAS

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- Microsoft Windows 7 operating system
- Operator manuals and quality assurance phantoms

*\*3 - Optional Second Display Console available.*

#### **Ultra-Fast Workflow with Patient Comfort**

The Aquilion™ ONE Series V boosts productivity with fast scan and image reconstruction times while offering comfort features such as the wide bore (78 cm) and couch capacity (660 lbs.) for patients of all sizes pediatric to bariatric.

Aquilion™ ONE Series V makes exams easier for all patients. The routine fast scans made possible by the PUREVision detector also means short breath-holds for better patient compliance.

#### **Dose-Reduction Features**

Aquilion™ ONE Series V s reinforces Toshiba's guiding principle of ALARA for every patient. To achieve this, Aquilion™ ONE Series V has an array of adaptive and integrated dose-reduction strategies that are implemented at every stage, from patient registration to image reconstruction. In addition, patient dose reduction is integrated into the protocol software, so it activates prior to turning on the x-ray beam.

#### **Active Collimation**

Active collimation synchronizes the width of the x-ray beam at the ends of the scan range to the clinically useful area needed for image reconstruction. By eliminating exposure that is not used for diagnosis, patient dose is reduced.

#### **Adaptive Iterative Dose Reduction 3D (AIDR 3D ENHANCED)**

AIDR 3D ENHANCED is the fourth generation in the evolution of Toshiba's iterative reconstruction technology. AIDR 3D ENHANCED is an iterative algorithm intended to reduce pixel noise from the original data, the results analyzed, and the process repeated until the target level of noise-reduction is achieved. This iterative algorithm is excellent in reducing background noise



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while preserving diagnostic information compared to non-iterative approaches.

AIDR 3D ENHANCED can be integrated into all acquisition modes for routine clinical use and is able to reduce pixel noise magnitude in a way that may result in dose reduction.

#### **SUREkV**

Auto kV can be set for protocols using SUREExposure™, and the effective kV will be automatically selected based on patient size and SUREExposure settings.

#### **SUREExposure3D (x, y, z automated mA modulation software)**

Toshiba's SUREExposure3D software automatically adjusts the mAs rapidly during the scan to adapt to and compensate for changes in attenuation level produced by the non-uniformity of the anatomy being imaged. Therefore, as the scan moves from the shoulders to the lung, the mAs goes down, and as the tube rotates around the patient, less mAs is used anterior-posterior than laterally. For the same image quality level, compared to non-modulated scanning, SUREExposure3D can reduce the dose to patients.

#### **Auto Couch Height Positioning Compensation**

SUREExposure will compensate for incorrect patient positioning to ensure accurate body size calculation and exposure dose. This avoids incorrect positioning errors in patient size calculation.

#### **NEMA XR 25, XR 26 and XR 29**

Aquilion™ ONE Series V meets the National Electrical Manufacturers Association's (NEMA) Medical Imaging & Technology Alliance (MITA) standards XR 25, XR 26 and XR 29.

- MITA XR 25 Computed Tomography Dose Check
- Includes dose alerts and allows facilities to set dose notification values.
- MITA XR 26 Access Controls for Computed Tomography: Identification, Interlocks, and Logs

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- Provides access control ensuring only authorized operators can alter controls of the CT equipment.
- MITA XR 29 Standard Attributes on Computed Tomography (CT) Equipment Related to Dose Optimization and Management
- Smart Dose standard bundles four important features to ensure that equipment produces high-quality diagnostic images while supporting patient safety:
  - DICOM Structured Reporting
  - CT Dose Check
  - Automatic Exposure Controls,
  - Pediatric and adult reference protocols.

### **KEY FEATURES**

#### **Routine Fast Scanning**

The Aquilion™ ONE Series V is capable of reconstructing 320 and 640\*1 unique slices with every rotation of the gantry and incorporates a host of ergonomic and automated features to streamline productivity and deliver the highest quality images while lowering radiation dose. Aquilion™ ONE Series V also achieves consistently superior image quality with industry-leading, low-contrast resolution of 2 mm at 0.3% and high-contrast resolution of 0.35 mm (0.275\*2).

Patients benefit from the extremely short exam times. Fast scan acquisition can also be used to meet the demands of helical CTA examinations for vascular imaging.

#### **Double Slice Technology:**

With the new coneXact™ algorithm the Aquilion ONE Series V is able to generate 320 and 640\*1 unique slices per rotation with high-quality image reconstruction. No additional exposure is necessary as this advanced technology is entirely reconstruction based.

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*\*1-The Dynamic Volume upgrade kit (320 to 640 slice) is required to obtain additional reconstructed slices in a single axial rotation.*

*\*2- The Fast Scan and X-ray Power upgrade kit is required to achieve 0.275 rotation speeds. Note: Power requirements for your site may change.*

### **Optimal Space Utilization**

The Aquilion™ ONE Series V has four main components: gantry, couch, console and transformer. The recommended minimum CT room size is only 41 square meters with the compact couch.

### **SURETechnologies**

Improve workflow with real-time imaging, which provides the ability to view a scan at 12 frames per second (512x512) during the acquisition. This allows the operator to rapidly assess if additional images are needed.

The following are standard features on Aquilion™ ONE Series V:

- **SUREExposure** – Dose modulation based on scanogram
- **SUREkV** – Automatically sets the effective kV based on patient size.
- **SUREStart** – Real-time contrast detection at 12 fps. With **SUREStart** there is no need to perform a timing bolus, saving up to 30 cc's of contrast.

### **Easy Operation**

Aquilion™ ONE Series V is easy to operate using the 19-inch LCD monitor, mouse and ergonomic keyboard. Scan automatically by programming procedures with eXam Plan and vocal instructions through VoiceLink™.

### **EQUIPMENT COMPONENTS**

#### **eVolution Gantry with iStation**

Aquilion™ ONE Series V eVolution Gantry possess many work flow advantages, iStation and gantry controls are accessible from the gantry or the scan console.

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### **iStation**

The iStation is a 12-inch LCD screen that uses video and voice prompts to ensure patient compliance during scanning. This is especially useful during pediatric scanning as the iStation displays a video of a small child that tells the patient when to raise their arms, when to hold their breath, and so on. These child-friendly instructions, coming from a child figure helps assure compliance. iStation also allows the user to visualize the patient's ECG waveform when acquiring ECG-gated exams.

### **eVolution Gantry**

- Hybrid slip-ring technology conserves unused electricity
- Gantry tilts  $\pm 22$  degrees
- Large aperture: 78 cm
- Five scan fields of view
- Wide range of scan times provides greater flexibility for optimal image quality
- Gantry controls (eVolution touch panel) available on left/right and anterior /posterior sides to provide easy access, quick set up and improved workflow.

### **Console – Acquire and Display**

- Powerful, ergonomic console computer handles display, image feed, filming and transferring multi-planar reconstructions with the same interface used for axial images.
- InstaView - Full matrix real-time image review
- Capable of true simultaneous scanning, retrieving, archiving and filming without interruption using the optional second console. This is a genuine multi-tasking system for multi-slice and volume data sets.
- Powerful reconstruction tower with CPUs and hard drives with RAID 5 controllers.
- Includes user-friendly keyboard, mouse, monitor, CPU cabinet/reconstruction enclosure.

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### **MegaCool™ X-ray Tube**

This compact, high-performance tube is designed to minimize tube-cooling delays with heavy patient loads at all scan times. It was built on the proven, anode-grounded, MegaCool tube technology used on every Aquilion multi-slice CT.

Other features include:

- Dual focal spots
- Anode capacity of 7.5 MHU
- Dissipation rate of 1,386 kHU per minute maximum

### **New PUREVision Detectors and DAS**

- Solid-state detector array with 0.5 mm detector elements.
- Unique Toshiba ceramic, solid-state detector array and DAS.
- Light output has been increased by 40%.
- Covers 8 cm to 16 cm\*<sup>1</sup> per rotation without any table motion.
- SUREConnect DAS – Ultra-fast DAS to acquire large volume data of detector.
- Low-contrast resolution of 2 mm at 0.3%

*\*1-The Dynamic Volume upgrade kit (320 to 640 slice) is required to obtain additional reconstructed slices in a single axial rotation.*

### **High-Power Generator**

Robust, high-voltage circuits that generate 72 kW at 600 mA, standard on all Aquilion™ ONE Series V systems (exception Aquilion™ ONE Series V ViSION, 100 kW at 900 mA\*<sup>2</sup>). This provides support for the 7.5 MHU x-ray tube and allows helical scans of up to 100 seconds.

Multiple kV Selections: 80, 100, 120 and 135 kV.

*\*2- The Fast Scan and X-ray Power upgrade kit is required to achieve 0.275 rotation speeds. Note: Power requirements for your site may change.*

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### **IMAGE MANAGEMENT**

Aquilion™ ONE Series V images can be stored on hard disk or DVD and transferred via high performance gigabit Ethernet connection using DICOM 3.0 standards.

### **NETWORKING**

#### **SUREConnect DICOM Connectivity Package**

Aquilion™ ONE Series V SUREConnect package supports DICOM 3.0 communications protocol with a set of tools that improve productivity and workflow. SUREConnect allows connectivity to DICOM 3.0 compliant scanners, workstations, printers with IHE profile support and auto-send to multiple DICOM destinations

- DICOM 3.0 Modality Worklist Management
- DICOM 3.0 Performed Procedure Step SCU
- DICOM 3.0 Enhanced CT Image Storage and Transfer
- DICOM 3.0 Query/Retrieve Service Class Provider (SCP)
- DICOM 3.0 Presentation of Grouped Procedures (PGP) and Study Split
- DICOM 3.0 (Storage SCU)

### **HELICAL SCAN & FUNCTIONALITY**

#### **MultiView**

Built into protocol for fast multi-planar reconstruction in batch mode specifically for multi-slice data sets. Coronal, sagittal and axial images are created and displayed for immediate viewing.

#### **3D Imaging on Console**

Provides excellent image quality with surface-shaded renderings and volume-rendered 3D images. Provides zooming and panning over the 3D surface and performs distance measurements.

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Other features include:

- Easy 3D
- Bone removal
- Maximum intensity projection (MIP)
- Minimum intensity projection
- Intensity volume rendering

Quantitative Analysis

- Profile display of CT numbers along a selected line in the axial plane
- Distance measurement and display
- CT number display
- Histogram display

eXam Plan Protocols

- 600+ eXam plan protocols that can be adjusted while scanning
  - Four preset reconstructions

Archiving

- Can be automated with each eXam plan
- Raw data and image data can be protected to prevent deletion

Filming

- Auto filming can be set as part of the eXam plan
- Images are displayed in 512x512 or 1024x1024

#### CUSTOMER CARE SERVICES

Developed with customer input, Toshiba's innovative support programs have resulted in increased customer satisfaction. These include the following:

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**InTouch Center®**

This centralized service facility provides applications and service support for customers 24 hours a day, seven days a week.

**InnerVision™ Plus**

Remote system diagnostics are available around-the-clock to help identify problems and provide potential solutions before care is interrupted or an engineer can arrive. InnerVision Plus is included at no charge and connected while any CT is under warranty, or any service agreement including Full Service, In-House Support, Partnership and/or VISN Master Service Agreement

**InTouch Agreements**

Based on customer needs, InTouch customer agreements can range from an a-la-carte approach to full-security agreements that provide complete system protection.

**Technical Assistance**

Customer support specialists are available 24/7 to help resolve technical issues in real time. Application support specialists are also available to assist staff with protocol and image-quality issues.

**Local Customer Teams**

A single call mobilizes a local team of Toshiba customer engineers. With an average of 10 years of Toshiba experience and 105 hours of specialized training, they can resolve almost any performance issue.

**Parts Support**

A complete inventory of product parts is ready for shipment when and where they are needed, any time of day or night.



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### **Image Maker Express**

Image Maker Express is an online marketing resource that helps Toshiba customers build demand for imaging service by growing their referring physician and patient relationships. Image Maker Express includes:

- Easy-to-use marketing resources and tools developed exclusively for Toshiba customers to bring together effective marketing strategies and tactics.
- A wealth of collaterals and content to create high-quality brochures, print ads and more to help market the Toshiba customer's new imaging capabilities.

Image Maker Express Materials available include:

- Product images and logos
- Clinical images and videos
- PowerPoint presentations and promotional videos
- Brochure samples
- Customizable press releases and media tips
- Marketing strategy tutorials

**\*Offerings may vary per product**

### **APPLICATION TRAINING**

Each system includes a custom developed three phase education program and the industry exclusive Performance Pro approach to learning.

Performance Pro is a unique approach to education utilizing blended learning with the promise of technical proficiency and optimal productivity for both physicians and technologists. If for any reason the customer is not satisfied with any portion of the training, Toshiba will conduct that portion of the training again, at no charge.

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**Pre-Installation:** Planning meeting at facility with Toshiba's CT Applications Manager to discuss objectives and timing of training, and to co-develop a custom program based on the facility's specific needs.

**Choice of two (2) Medical Imaging Consultants (MIC) self-study programs;** The CT Cross Trainer and/or The CT Registry Review Program.

The CT Cross Trainer is designed to acquaint the less-experienced technologist with important CT principles, technology and clinical exams. The program consists of 6 comprehensive Study Modules that have been accredited for 17 Category A CE credits; credits are earned by passing a post test for each Study Module.

The CT Registry Review Program is designed to help the experienced CT technologist prepare to pass the ARRT's post-primary exam in CT. The course consists of 8 comprehensive Study Modules that have been accredited for 19 Category A CE credits; credits are earned by passing a post-test for each Study Module.

**Installation:** A Clinical Evaluation will be conducted by an applications specialist, prior to turnover, to ensure the system is ready for the go-live date.

**Phase I:** Two (2) attendance vouchers for a four and a half (4.5) day technologist-focused course held at the Toshiba Institute of Advanced Imaging in Irvine, California. This course provides the fundamentals of operating Toshiba's Aquilion CT system, including a variety of CT scans performed with the latest dose reduction techniques. This course includes in-depth lectures and hands-on training. At the completion of the course, the attendee will be proficient in the following applications and operations: basic to advanced CT imaging console use, system menus, system default scan protocols, utilization of reconstruction parameters, post-processing image data, and troubleshooting image quality. This course is all inclusive of the following: tuition, airfare (booked by Toshiba), lodging, and meals. Accredited for CE credits by the ASRT Education Foundation.

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**Phase II:** Two consecutive, thirty-two (32) hour weeks, of initial on-site education will be provided at the customer facility following system go-live. Unique with Performance Pro, Toshiba will send two applications specialists for the first week of on-site education. One specialist will provide training for up to four (4) imaging professionals including the two (2) that attended the Phase I training, to focus on maximizing scanning techniques and protocols. The second specialist will work with the physicians to achieve desired image quality. Training is scheduled consecutively, Monday through Friday, with Monday mornings and Friday afternoons scheduled as travel time for the applications specialist. CE credits are earned by participants that attend the Phase II training events in their entirety.

**Phase III:** An additional twenty-four (24) hours of on-site education will be provided for the same four (4) imaging professionals, which participated in Phase II training, approximately 6-8 weeks following installation to optimize staff proficiency and system productivity.

Note: Toshiba personnel are not responsible for scanning patients, patient safety, any actual patient contact, or operation of equipment during education sessions. Toshiba will only demonstrate proper equipment operation.

The training is offered to the Customer at no charge, providing that it is completed no later than one (1) year after the warranty start date.

Additional classroom and onsite training is available for purchase.

Applications support is available by phone on the toll-free ASSIST line, 1-800-521-1968

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The training is offered to the Customer at no charge, providing that it is completed no later than one (1) year after the warranty start date.

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## **SYSTEM AND TABLE CONFIGURATION**

### **CT SCANNER AQUILION ONE SERIES WITH HIGH CAPACITY EXTENDED COUCH**

#### **ACCESSORY KIT FOR HIGH CAPACITY COUCH**

Includes each of the following items:

- Rolled Edge Foot Extension Pad
- Wide & Medium Security Straps
- Chin and Forehead Straps
- Adult Head Rest Pads (Medium and Large)
- Tilt Wedge
- Knee Support Wedge
- Coronal Head Support
- Table Pad
- Protective Table Covers (Box of Four)
- Detachable Rail 77"

#### **AQUILION ONE SERIES V VISION UPGRADE KIT**

This ONE 320 Series V ViSION upgrade kit, with Double Slice technology, elevates the Aquilion ONE 320 Series V scanner to an Aquilion ONE ViSION Series V Dynamic Volume CT Scanner and increases the rotation speed to 0.275 sec<sup>\*4</sup>. per rotation with higher power output capability (maximum 900 mA). Furthermore it transforms the Aquilion ONE 320 Series V platform from 8 cm up to 16 cm of coverage per rotation by upgrading the <sup>PURE</sup>ViSION detector to 320 x 0.5 mm and provides the ability to acquire whole organs in a single rotation.

*\*4 - ONLY available on Aquilion ONE Series (TSX-301C/5,8) and requires version 6 or greater.*

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*NOTE: Site power upgrade may be required.*

In addition to increased <sup>PURE</sup>ViSION detector coverage the One-Series-V ViSION upgrade kit include Toshiba's Aquilion 4D Neuroperfusion package.

Aquilion 4-D Neuroperfusion package includes:

- 4-D Brain Perfusion
- <sup>SURE</sup>Subtraction automatic bone removal
- <sup>SURE</sup>Perfusion automated perfusion maps
- 4-D DSA whole brain temporally uniform Digital Subtraction Angiography

#### **Dynamic 4-D Brain Perfusion**

CT perfusion is a fast brain imaging modality for use in the management of patients with various neurological disorders, ranging from acute stroke to subarachnoid hemorrhage. It provides excellent image quality with surface shaded-renderings and volume-rendered 4-D images. In addition, it provides zooming and panning over the 4-D surface and performs distance measurements.

Aquilion ONE Neuro includes <sup>SURE</sup>Perfusion and <sup>SURE</sup>Subtraction. Now acquire, reconstruct, and review whole brain volumes including the arteriogram, venogram, and whole brain perfusion using this totally flexible, comprehensive toolkit.

<sup>SURE</sup>Subtraction automatically removes bone and other highly attenuating objects from the image resulting in superb images, including even vessels adjacent to or surrounded by bone. <sup>SURE</sup>Perfusion adds the unique benefit of whole brain perfusion imaging, something no conventional multi-slice CT offers.

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All these examinations can be obtained with a single dynamic acquisition and a single injection of contrast material making Aquilion ONE fast, accurate, and simple to use. Beyond the enhanced clinical diagnosis that can be realized by a perfectly timed arteriogram and venogram, the data can also be displayed for the first time as a whole brain CT digital subtraction angiography data set and a temporally uniform whole-brain perfusion study.

<sup>SURE</sup>Subtraction - neurovascular CT digital subtraction angiography (CT DSA) software enhances diagnostic accuracy through greater image clarity and improves workflow. The software automates digital subtraction of the intra- and extra-cranial vessels from bone, providing superior clinical images in a fraction of the time of manual subtraction.

#### **Enhanced Diagnostics**

- Subtraction volume is completely free of bone, providing unsurpassed subtraction CTA studies of the brain
- Automatic detection of superior sagittal sinus
- More easily achieves arterial and venous segmentation
- In just seconds, creates 3DVR and MIP images with 360° left-to-right and head-over-heels tumble views

#### **Enhanced Workflow**

- Less than 5 minutes to load, process and display images
- Automated on-console imaging of cerebral blood flow, cerebral blood volume, and time-to-peak or mean transit time.
- Subtracted dataset is still in DICOM format
- Maximize productivity with programmable features
- Streamline patient throughput with a simple 3-step process

### **DYNAMIC VOLUME CT UPGRADE KIT AQUILION 320 TO 640**

This Toshiba CT system upgrade will upgrade the Aquilion 320 system to an Aquilion ONE 640 Dynamic Volume Scanner by upgrading the Quantum V detector to 320 x 0.5 mm rows.

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This upgrade allows a number of operational and clinical applications that enhance workflow and increase examination throughput. The installation of the upgrade kit by Toshiba's Service engineer and four consecutive days of on-site applications training are included.

***Program Conditions***

- All options on Aquilion 320 will be transferred to Aquilion ONE 640
- Any additional options may be purchased at standard prices

***Note - this option is only available for addition to systems that have not shipped or been installed***

**Benefits and Capabilities of the Aquilion**

Aquilion ONE 640 is a multi-functional Dynamic Volume CT scanner. It is the first CT to not only perform routine multi-slice imaging, but cover entire organs dynamically with lower radiation and less contrast dose. The 16 cm coverage of the Aquilion ONE's unique Quantum V detector can acquire whole volumes of the entire brain, heart, and other organs in a single rotation without table movement. In addition, the Aquilion ONE is the most flexible scanner offering conventional helical and step and shoot modes.

The whole organ coverage of Aquilion ONE offers a completely new way to image critical organs such as the head or heart without the need for over sampling or overlapping since the entire organ can be acquired in one rotation. This volume coverage gives outstanding image quality with significantly less contrast and lower radiation dose. Because of the lower dose, applications such as dynamic motion, vascular flow studies and perfusion imaging are possible with one scan and just a single contrast injection.

**Quantum Detectors and DAS**

- Unique Toshiba ceramic, solid-state detector array and DAS
- Covers 16 cm per rotation without any table motion



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<sup>SURE</sup>Connect DAS

Ultra-fast DAS to acquire large volume data of detector

### **AQUILION ONE - FAST SCAN AND X-RAY POWER UPGRADE KIT**

### **4-D NEURO PERFUSION PACKAGE WITH SURESUBTRACTION FOR CONSOLE**

Aquilion 4-D Neuroperfusion package includes:

- 4-D Brain Perfusion
- <sup>SURE</sup>Subtraction automatic bone removal
- <sup>SURE</sup>Perfusion automated perfusion maps
- 4-D DSA whole brain temporally uniform Digital Subtraction Angiography

### **Dynamic 4-D Brain Perfusion**

CT perfusion is a fast brain imaging modality for use in the management of patients with various neurological disorders, ranging from acute stroke to subarachnoid hemorrhage. It provides excellent image quality with surface shaded-renderings and volume-rendered 4-D images. In addition, it provides zooming and panning over the 4-D surface and performs distance measurements.

Aquilion ONE Neuro includes <sup>SURE</sup>Perfusion and <sup>SURE</sup>Subtraction. Now acquire, reconstruct, and review whole brain volumes including the arteriogram, venogram, and whole brain perfusion using this totally flexible, comprehensive toolkit.

<sup>SURE</sup>Subtraction automatically removes bone and other highly attenuating objects from the image resulting in superb images, including even vessels adjacent to or surrounded by bone. <sup>SURE</sup>Perfusion adds the unique benefit of whole brain perfusion imaging, something no conventional multi-slice CT offers.

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All these examinations can be obtained with a single dynamic acquisition and a single injection of contrast material making Aquilion ONE fast, accurate, and simple to use. Beyond the enhanced clinical diagnosis that can be realized by a perfectly timed arteriogram and venogram, the data can also be displayed for the first time as a whole brain CT digital subtraction angiography data set and a temporally uniform whole-brain perfusion study.

<sup>SURE</sup>Subtraction - neurovascular CT digital subtraction angiography (CT DSA) software enhances diagnostic accuracy through greater image clarity and improves workflow. The software automates digital subtraction of the intra- and extra-cranial vessels from bone, providing superior clinical images in a fraction of the time of manual subtraction.

#### **Enhanced Diagnostics**

- Subtraction volume is completely free of bone, providing unsurpassed subtraction CTA studies of the brain
- Automatic detection of superior sagittal sinus
- More easily achieves arterial and venous segmentation
- In just seconds, creates 3DVR and MIP images with 360° left-to-right and head-over-heels tumble views

#### **Enhanced Workflow**

- Less than 5 minutes to load, process and display images
- Automated on-console imaging of cerebral blood flow, cerebral blood volume, and time-to-peak or mean transit time.
- Subtracted dataset is still in DICOM format
- Maximize productivity with programmable features  
Streamline patient throughput with a simple 3-step process

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### **DICOM 3 MODALITY WORKLIST MANAGEMENT (MWM) SERVICE CLASS USER (SCU) SYSTEM**

Allows the CT system to obtain details of patients and scheduled examinations electronically from the HIS/RIS system, avoiding the potential mistakes of manual entry.

*Note: This option does not include a DICOM gateway for the HIS/RIS system.*

### **DICOM 3 QUERY/RETRIEVE SCP**

- Allows a Storage Class User (SCU) to query the SCP device
- Enables user devices to retrieve patient, study, series and/or image information in conformance with the DICOM 3.0 standard

### **DICOM 3 QUERY/RETRIEVE SCU AQ/MP**

Allows a device to initiate a request for patient, study, series and/or image information from the provider device in accordance with the DICOM 3.0 standard.

### **DICOM 3 STORAGE COMMITMENT SCU SOFTWARE**

Verifies image transfer and storage.

- Allows operator to determine if data is stored correctly at the PACS server, avoiding unintentional image deletion.
- Improves efficiency of image management operations.
- Provides fail-safe method to prevent image data from being deleted unintentionally even in the event of a communication failure (during image transfer or during a storage verification response).

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### **PRESENTATION OF GROUPED PROCEDURES (PGP) AND EXAM HARD SPLIT**

PGP is an Integrated Health Enterprise (IHE) standard designed specifically with multiple examination orders (Requested Procedures) that can be performed in a single CT examination.

- Provides preset and automatic transfer solutions for multiple exams from a single CT exam.
- Facilitates clinical viewing of images and reporting of individual requested procedures.
- Use with PACS systems that are IHE PGP compliant.
- Use the study split option for PACS systems that are not yet IHE PGP compliant to physically split images into multiple examinations.

### **CT PHANTOM**

Measures image quality to ensure compliance to Toshiba standards for:

- High-contrast resolution
- Low-contrast resolution
- Slice thickness
- Noise
- Contrast scale

### **CHAIR WITH ADJUSTABLE ARMS AND BACK (Qty 2)**

#### **CONSOLE DESK 65" X 36" X 30"**

Measures 65" x 36" x 30"

### **MEDIA FOR DVD-RAM DRIVE (9.4 GB) (Qty 5)**

- 9.4 GB
- Two-sided

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**SERVICE MODEM CABLE (Qty 2)**

**NON-CORROSIVE FLOOR LEVELING EPOXY KIT**

**SURECARDIO WITH PHASEXACT FOR AQUILION ONE VISION**

SURECardio for Aquilion ONE provides the basic foundation package of hardware and software for advanced cardiac imaging. It includes a compact ECG monitor with a color screen for easy set up and monitoring.

Aquilion ONE SURECardio volumetric CT with arrhythmia detection provides real time beat monitoring and the ability to acquire volumetric cardiac CTA within one heartbeat. No table movement is required. If an arrhythmia or abnormal heartbeat is detected Aquilion ONE can automatically adjust the scan and acquire the next normal heartbeat.

The axial gated acquisition provides low dose to the patient for evaluation of calcified plaque. The system acquires data utilizing an ECG gated software that provides a fast gated output for R-wave synchronization

SURECardio phaseXact eliminates the need for unnecessary multiple reconstructions by automatically selecting and reconstructing the cardiac phase with the least motion.

SURECardio Prospective™ is a unique application that dramatically lowers patient dose during coronary CTA exams. This advanced software provides enhanced workflow with automatic pitch selection and exposure window setting based on patient's heart rate and employs the use of the helical acquisition and an x-ray on/off modulation technique.

This unique application allows for rapid data collection during every heartbeat, producing short scan times with a dramatic reduction of x-ray exposure and contrast dose to the patient.

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**CARDIAC APPLICATION TRAINING**

Includes a two phase education program.

**Phase I:** Prerequisite to on-site education: Attendance in the Advanced Cardiac Course held at the Institute for Advanced Imaging, Irvine, CA.

**Phase II:** Twenty-four (24) hours of on-site education will be provided at the customer facility for up to four (4) imaging professionals including the one (1) that attended Phase I training. Training is focused on maximizing cardiac scan techniques and protocols and to optimize staff proficiency and system productivity in cardiac imaging. Training is scheduled for three (3) consecutive days during standard business hours. CE credits are earned by participants that attend the Phase II training event in its entirety.

Note: Toshiba personnel are not responsible for scanning patients, patient safety, any actual patient contact, or operation of equipment during education sessions. Toshiba will only demonstrate proper equipment operation.

Education expires two (2) years from the later of purchase date or warranty start date.

Additional classroom and onsite training is available for purchase.

Applications support is available by phone on the toll-free ASSIST line, 1-800-521-1968.

**ECG GATING SCANNING SYSTEM**

**ROLLSTAND FOR MODEL-7800**

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### **ECG MONITOR, R WAVE CARDIAC TRIGGER 3304-07-15**

Cardiac ECG Trigger Monitor Model 7800 for use with CT hardware and software to measure skin impedance to help ensure reliable scanning.

- Compact ECG monitor with fast gated trigger output for R-wave synchronization applications
- High & Low Heart Rate Limits
- 6.5" Color LCD Display (TFT Active Matrix)
- Integrated ECG simulator to test the integrity of the patient cables, lead wires, and electronic circuitry.

### **ADVANCED AQUILION ONE / PREMIUM CARDIAC CT COURSE FOR TECHNOLOGISTS**

One (1) attendance voucher for a three day technologist-focused course held at the Toshiba Institute of Advanced Imaging in Irvine, California. This course provides a foundation of cardiac anatomy and physiology with ECG and cardiac gating, including CT scans performed with the latest dose reduction techniques. This course includes in-depth lectures and hands-on training on the CT scanner and Vitrea post-processing systems. At the completion of this course, you will be proficient in the following operations: cardiac anatomy and physiology, CTA scanning, ECG monitoring, image quality assessment and image processing. Vitrea post-processing training includes coronary artery calcium scoring and cardiac functional analysis. This course is all inclusive of the following: tuition, airfare (booked by Toshiba), lodging and meals. Accredited for CE credits by the ASRT Education Foundation.

***Prerequisite: Currently operating an Aquilion ONE system***

Education expires two (2) years from the later of purchase date or warranty start date.

Additional classroom and onsite training is available for purchase.

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Applications support is available by phone on the toll-free ASSIST line, 1-800-521-1968.

## **POWER CONDITIONER OPTIONS AQUILION ONE SERIES V**

### **TOSHIBA POWER DISTRIBUTION UNIT**

The PDU is engineered to address common power problems found in the hospital environment and to isolate the CT system components to meet IEC 60601-1 Third Edition requirements. This is important to assure optimal reliability and performance of CT systems. Customer is responsible for complying with Toshiba's site specifications for electrical power.

This device provides most of the electrical site preparation requirements of Toshiba CT systems. The PDU contains a low impedance isolation step-down transformer with a shielding plate between primary and secondary.

#### **Voltage Conversion**

Wiring costs are significantly reduced since the PDU accepts a single, 480V delta input, supplying 200V to the generator and the various other parts of the system.

#### **Distribution**

The PDU comes prepackaged with the distribution breakers needed for each system feed. Having all system breakers in one location also makes it easier for service personnel to remove power.

#### **Installation**

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



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### **DISPLAY CONSOLE KIT AQUILION ONE (V7 OR LATER)**

This ergonomic, second scanning console upgrades the Aquilion ONE system to a dual-console system. The scan console (scan system monitor) and the display console (image processing monitor) can be operated independently or in parallel in order to improve workflow and efficiency.

This is a genuine multi-tasking system for multi-slice and volume data sets.

- Includes user-friendly keyboards, mouse, monitors and CPU cabinet
- High line-rate, 19-inch, color monitor displays images in a 512x512 or 1024x1024 matrix using mouse and ergonomic keyboard

*NOTE: Requires version 7 software or greater.*

### **SURESUBTRACTION FOR AQUILION**

This neurovascular CT digital subtraction angiography (CT DSA) software, with <sup>SURE</sup>Subtraction Carotid, improves workflow and enhances diagnostic accuracy through greater image clarity. This fully automated non-rigid registration algorithm digitally subtracts bone from the intra- and extra-cranial vessels including carotid vessels providing superior clinical images in a fraction of the time required for manual subtraction.

#### **Enhanced Diagnostics**

- Subtraction volume is completely free of bone, providing unsurpassed subtraction CTA studies of the brain and neck
- <sup>SURE</sup>Subtraction Carotid- provides superior visualization of the vertebral arteries internal and external carotids
- Easily achieves arterial and venous segmentation
- In just seconds, creates 3DVR and MIP images with 360° left-to-right and head-over-heels tumble views

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#### Enhanced Workflow

- Less than 5 minutes to load, process and display images
- Subtracted dataset is still in DICOM format
- Maximize productivity with programmable features
- Streamline patient throughput with a simple 3-step process
- No special head immobilization required

*Note: <sup>SURE</sup>Subtraction Carotid requires V4.74 or later*

#### **CT CARDIAC FUNCTION ANALYSIS SOFTWARE (CFA)**

CT cardiac function analysis software is used to analyze cardiac function using data obtained by performing cardiac MPR processing for ECG-gated scan data according to the cardiac axis.

#### Features:

- MPR (cross-sectional) images horizontal and vertical to the cardiac axis can be generated.
- Cross-sectional images can be switched in real time.
- MPR images, cardiac volume curves, and cardiac function parameters are simultaneously displayed in a single window.

The following parameters are calculated and displayed for the entire left ventricle:

- Cardiac output (CO)
- Cardiac ejection fraction (EF)
- End-diastolic volume (EDV)
- End-systolic volume (ESV)
- Stroke volume (SV)
- Cardiac index ( $CI = CO/BSA$ )
- Stroke index ( $SI = SV/BSA$ )
- Left-ventricular volume curve

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### **VARIABLE HELICAL PITCH AQUILION PRIME AND AQ ONE TSX-301C (REQUIRES SURECARDIO ECG GATING)**

vHP (Variable Helical Pitch) improves workflow by enabling a change of pitch during the acquisition with two different scan parameters, while completing the scan in a single examination.

- Cardiovascular applications: vHP combines a CTA (ECG-gated using a cardiac CTA pitch) and a CTA of the aorta (non-gated use of a standard CTA pitch) into a single scan.
- Trauma applications: vHP combines a brain scan (detailed pitch) and body scan (standard pitch) into one continuous scan.

#### **Key Features**

- Enhances automated workflow
- Excellent management of contrast media
- Dramatically reduces x-ray dose
- Provides seamless reconstruction of images
- Reproducible results every time

#### **Package Includes**

- vHP software disk
- ROM's for gantry/couch control
- Manuals

*Prerequisite: #SURECARD-PRIME, <sup>SURE</sup>Cardio with phaseXact and <sup>SURE</sup>Cardio Prospective for Aquilion.*

### **DUAL ENERGY APPLICATION FOR AQUILION ONE AND ONE VISION - REQUIRES V6.0**

Dual Energy Package available on Aquilion ONE VISION, ONE 640 and ONE 320 includes the following:

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### **Dual Energy System**

- The tube voltage can be rapidly switched during scanning, and images acquired at different tube voltages can be obtained.
- Segmentation can be performed for the region to be analyzed.
- The CT value ratios of the region to be analyzed can be measured, providing information that is useful for identifying the materials.
- Blending images that are close to the images acquired with the specified kV value can be generated by blending images acquired with a high kV value and images acquired with a low kV value.
- Iodine map images, that indicate whether or not the contrast-enhanced regions are present, can be generated.

### **Dual Energy Raw Data Analysis**

- Dual Energy Volume scanning can generate analysis volume data (basis material images) that can be used only in the Dual Energy Raw Data Analysis.
- Two volume data sets acquired with different tube voltages and basis material images are loaded and the analysis results are displayed.
- Monochromatic images can be virtually generated based on the loaded images.
- Images with the best contrast-to-noise ratio (referred to as "Best CNR images") can be generated from the obtained monochromatic images.
- Map images indicating whether or not the contrast enhanced regions are present (referred to as "iodine map images") can be generated.

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### **Dual Energy Composition Analysis**

- Two volume datasets acquired by performing scanning with different tube voltages are loaded and displayed.
- The two loaded volume datasets are analyzed to extract and display suspected uric acids.

*Requires Version 6.0 software or later*

### **TECH ASSIST LATERAL TABLE SLIDE FOR AQUILION**

Toshiba's exclusive Tech Assist Lateral Table Slide, improves technologist safety by automating the adjustment of patients on the table. In addition, it improves access for interventional procedures and accommodates precise off-center imaging. It provides the ability to move the table an infinitely variable 8.4 cm (4.2 cm on each side). This exclusive lateral movement of 8.4 cm improves image quality, minimizes patient dose and provides better access for interventions and emergency patients.

With the Aquilion CT Systems, ergonomics and patient access have evolved to an unprecedented degree with the eVolution couch and gantry. Offering greater comfort and convenience, they increase operator efficiency for faster throughput while improving patient compliance to ensure higher quality exams.

*Note: Available only on High-Capacity Couch for Aquilion ONE, Aquilion ONE ViSION Edition, Premium, PRIME 80 and PRIME 160.*

### **LATERAL COUCH MOVEMENT KIT**

Exclusive lateral couch movement option. Lateral movement of 8.4 cm (4.2 cm on each side) minimizes patient dose and provides better access for interventions.

### **REAR FOOTSWITCHES (HIGH CAPACITY COUCH)**

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## **TOSHIBA INJECTOR SYNCHRONIZATION SOFTWARE FOR AQUILION ONE VISION (REQUIRES GEN 4 AND V7 SOFTWARE)**

### **AQUILION ONE SERIES CAN PROTOCOL (V7 OR LATER)**

Provides synchronization of the Aquilion CT with a contrast injector that supports CAN Protocol Level 1. This enables the CT scan to be started remotely using the injector during contrast-enhanced CT exams.

#### **Key Features**

- Improves contrast timing and optimizes workflow
- Synchronized start improves control of contrast enhancement
- Simplified operation enables single operator workflow

#### **Enhance Safety**

- One-button on either the scanner or injector starts and stops the sync protocol (provides stop message at console when stopped at injector)
- Technologist can remain at the patient's side

#### ***Prerequisites:***

- *TSX-301C/6,7,8*
- *Version 7 software or greater.*

***Acist or MEDRAD Injector with Injector Synchronization. For injectors with other options, such as MEDRAD's Certegra platform, additional DICOM options, such as Performed Procedure Step, will be required as well.***

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## **SUREFLUORO: CT FLUORO KIT WITH FLAT-PANEL MONITOR**

SUREFluoro CT fluoroscopy with Single-Energy Metal Artifact Reduction (SEMAR) and AIDR 3D

AIDR 3D applies to continuous real-time CT Fluoroscopy coupled with SUREStart to allow real-time imaging at a reduced dose. 3D Needle Positioning includes an easy to understand Angle Guide display for needle navigation during CT Fluoroscopy procedures.

SEMAR utilizes a sophisticated reconstruction algorithm to reduce artifacts caused by metal while improving visualization of the implant, supporting bone and adjacent soft tissues\* for an accurate diagnosis. SEMAR can be applied to a routine low-dose scan, combined with AIDR 3D to achieve the best possible image quality without the need for additional exposure dose or a dedicated scan procedure.

*Prerequisite: Requires Version 6.0 software or newer for Aquilion ONE ViSION, ONE and Premium*

*\* Bone structures near the metal-tissue interface may become distorted. Metal artifacts may not be completely removed in areas near the metal material. Comparison with the original images is suggested when performing diagnosis using SEMAR images.*

## **CT FLUOROSCOPY**

### **LCD MONITOR FOR SUREFLUORO FOR AQUILION PRIME, RXL & VELOCT**

Simultaneously displays the same images as those on the main console to assist in needle placement.

Includes:

- Flat-panel, image-display unit
- Video cables (30 m)
- Manuals

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- Resolution controller
- Multiplexer

*Prerequisite: CT Fluoroscopy*

#### **NEEDLE HOLDER KIT FOR CT FLUOROSCOPY**

- For SureFluoro

Allows users to keep their hands outside the primary X-ray beam while inserting a biopsy needle under CT fluoroscopic guidance.

#### **FLUOROSCOPY STERILIZATION KIT FOR AQUILION-4 THROUGH AQUILION ONE**

Fluoroscopy Sterilization Kit for Aquilion 4 -ONE

Includes ten (10) sterile CT hyper handle drapes and ten (10) non-sterile gantry aperture drapes.

#### **CEILING SUSPENSION MOUNT FOR LCD MONITOR**

Ceiling mounted suspension system comprised of:

- Mounting plate
- Articulating arm, 165 cm long
- Holder for one flat screen monitor

#### **CEILING MOUNT PLATE FOR FIXED COLUMN**

**EXTENSION, SPRING ARM 75/90 CM**

**HOLDER FOR ONE FLAT SCREEN MONITOR WITH VESA-ADAPTER**

**MAVIG 360 COLUMN - FIXED (58 CM)**



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**ARM HOLDER (ONE SIDE) (Qty 2)**

CT Armrest – One Side  
Arm support for IV injection  
For tabletop width of 47 cm

**MAT FOR HEADREST (Qty 2)**

- For headrest CAHR024A
- Made of polyethylene
- Size: 426 mm long x 400 mm wide

**HANDLE, TABLE, OVERHEAD**

- Handle for abdomen scanning
- Positioned at the headrest bracket

**ARMREST, OVERHEAD**

- Arm support for abdomen scanning
- Positioned at headrest position

**COLOR PRINTER INTERFACE FOR NETWORK PRINTERS**

Transfers windows in the image display area to a Post Script color printer (sold separately) via a network. Compatible with Aquilion ONE, 64, 64, 16, 8, Super4, and Asteion Super 4 PC-Based systems.

**Features**

- Supports 24-bit, full-color Postscript printing
- Specify next print job before current job is complete
- Able to print while checking contents

***Note: Postscript Printer sold separately***

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### **SURECARDIO SCORING ON CONSOLE**

<sup>SURE</sup>Cardio Scoring on-console software is designed to calculate calcium scores from non-contrast-enhanced CT data acquired during an ECG-gated cardiac exam.

#### **Key Features**

- Calculates Ca scores using the Agatston method and the Volume Mass method.
- Calculates and displays the score and number of Ca lesions for each of the following coronary artery branches:
  - Right coronary artery (RCA)
  - Left main trunk (LM)
  - Left anterior descending branch (LAD)
  - Left circumflex branch (LCX)
- Calculates and displays the total score and number of Ca lesions.
- Displays a report containing:
  - The calculated scores
  - The corresponding guidelines indicated by the studies accepted as the standards in the field
  - The axial images for the highest 12 scores
- Outputs the report to a general-purpose printer or a DICOM network printer.
- Registers the report in a DICOM SC file as a new series added to the corresponding data.

***Prerequisite:*** <sup>SURE</sup>Cardio ECG gating (option, must be purchased separately).

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## **LUNG VOLUME ANALYSIS**

The Lung Volume Analysis can be used to support the physician in the diagnosis and documentation of chest diseases, *e.g.*, when examining the pulmonary tissue (*i.e.*, lung parenchyma) in CT thoracic datasets. Evaluation tools (3-D segmentation and isolation of subcompartments, volumetric analysis) and reporting tools are combined with a dedicated workflow. This software application can be used with standard non-contrast-enhanced chest volume acquisitions.

## **4-D NEURO PERFUSION PACKAGE WITH SURESUBTRACTION FOR CONSOLE**

Aquilion 4-D Neuroperfusion package includes:

- 4-D Brain Perfusion
- SURESubtraction automatic bone removal
- SUREPerfusion automated perfusion maps
- 4-D DSA whole brain temporally uniform Digital Subtraction Angiography

### **Dynamic 4-D Brain Perfusion**

CT perfusion is a fast brain imaging modality for use in the management of patients with various neurological disorders, ranging from acute stroke to subarachnoid hemorrhage. It provides excellent image quality with surface shaded-renderings and volume-rendered 4-D images. In addition, it provides zooming and panning over the 4-D surface and performs distance measurements.

Aquilion ONE Neuro includes SUREPerfusion and SURESubtraction. Now acquire, reconstruct, and review whole brain volumes including the arteriogram, venogram, and whole brain perfusion using this totally flexible, comprehensive toolkit.

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<sup>SURE</sup>Subtraction automatically removes bone and other highly attenuating objects from the image resulting in superb images, including even vessels adjacent to or surrounded by bone. <sup>SURE</sup>Perfusion adds the unique benefit of whole brain perfusion imaging, something no conventional multi-slice CT offers.

All these examinations can be obtained with a single dynamic acquisition and a single injection of contrast material making Aquilion ONE fast, accurate, and simple to use. Beyond the enhanced clinical diagnosis that can be realized by a perfectly timed arteriogram and venogram, the data can also be displayed for the first time as a whole brain CT digital subtraction angiography data set and a temporally uniform whole-brain perfusion study.

<sup>SURE</sup>Subtraction - neurovascular CT digital subtraction angiography (CT DSA) software enhances diagnostic accuracy through greater image clarity and improves workflow. The software automates digital subtraction of the intra- and extra-cranial vessels from bone, providing superior clinical images in a fraction of the time of manual subtraction.

#### **Enhanced Diagnostics**

- Subtraction volume is completely free of bone, providing unsurpassed subtraction CTA studies of the brain
- Automatic detection of superior sagittal sinus
- More easily achieves arterial and venous segmentation
- In just seconds, creates 3DVR and MIP images with 360° left-to-right and head-over-heels tumble views

#### **Enhanced Workflow**

- Less than 5 minutes to load, process and display images
- Automated on-console imaging of cerebral blood flow, cerebral blood volume, and time-to-peak or mean transit time.
- Subtracted dataset is still in DICOM format
- Maximize productivity with programmable features  
Streamline patient throughput with a simple 3-step process

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## **VITREA FX WORKSTATION DESIGNED FOR AQUILION ONE WITH AQUILION ONE APPLICATIONS PACKAGE**

Vitreia fX is a high-performance 2-D, 3-D and 4-D workstation designed specifically for Aquilion ONE. Vitrea fX provides extreme performance with real-time navigation, required for Aquilion ONE datasets. The Vitrea fX workstation with 30 inch display includes:

### **Cardiac & CFA Software**

CT Cardiac Analysis enables physicians to determine the presence and extent of coronary obstructive disease by displaying the extracted anatomy in a variety of views. The interface and automated tools help to efficiently analyze the coronary arteries.

CT Cardiac Functional Analysis (CFA) utilizes CT images of the heart to assist cardiologists and radiologists in assessing cardiac function for the left ventricle. Clinicians are able to view the cardiac phases dynamically and review the calculated results.

### **Endovascular Stent Planning**

CT Endovascular Stent Planning (EVSP) enables visualization and measurements of aortic vessels for evaluation, treatment and follow-up for aortic vascular disorders. It automates 3D segmentation of the aorta and initializes stent measurements, based on a template provided by stent manufacturers for a highly efficient workflow.

### **Vitreia General Vessel Probe**

The Vitrea Vessel Probe tool is a single-click curved planar reformatting tool used for vascular analysis. Vessel Probe supports multi-modalities, including CT, MR and XA-3D Angio datasets.

### **Vitreia VScore Software**

For coronary artery calcium scoring

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**Vitreia SUREPlaque™**

CT SUREPlaque provides the visualization and measurement of vessel walls and plaque characteristics in arterial vessels using color defined Hounsfield Unit (HU) ranges through a streamlined workflow. It can assist in the stratification of patients identified to have atherosclerosis.

**Vitreia CT Colon Analysis**

CT Colon Analysis provides clinicians with the ability to perform CT colonography. It provides optimized layouts for 2D and 3D examination of the lumen, including tools for quantitative analysis of suspected polyps.

**Aquilion ONE 4D Neuro Comprehensive Neurology Software**

CT Brain Analysis 4D for fX aids with assessing the whole brain and evaluating perfusion deficits by displaying 4D-DSA (digital subtraction angiography) views of blood flow in the vessels and 3D perfusion maps. It supports the physician in visualizing the apparent blood perfusion in brain tissue affected by acute stroke. Automated tools help to efficiently visualize anatomy and pathology.

PRESENTED TO:

VA ASHEVILLE  
1100 TUNNEL RD  
ASHEVILLE, NC. 28805

**Vital U Education**

Twelve Vital U education units are included with each Vitrea workstation. Vital U education units included with Vitrea workstation packages can be applied in any combination toward the cost of courses offered below.

Course Title	Setting	Days	Units
Advanced Visualization Fundamentals	Classroom	3	2
Advanced Visualization Fundamentals - Core (Prerequisite: Advanced Visualization Fundamentals)	Classroom	1	1
Specialty Instruction for Colonography, Cardiovascular, Neurology or Oncology (Advanced)	Classroom	2	2
Advanced Enterprise Administrator	Classroom	2	3
Advanced Visualization Course	Client Facility	2	6
Enterprise Advanced Visualization	Client Facility	3	9
Four Hour Webinar Tailored to Client Site	Online	.35	1
On-Site, Five Classroom, Add-on	Client Facility	N/A	3
Include travel to classroom	N/A	N/A	2
eLearning Videos	Online	N/A	Unlimited
Vital U Webinars	Online	N/A	Unlimited
A Vital Images representative will contact the customer to set up training. Rights to education offered with the software license will expire 12 months from the delivery date of the software to the customer.			

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### **VITREA WORKSTATION, CT TAVR ANALYSIS APP WITH EDUCATION**

CT Transcatheter Aortic Valve Replacement (TAVR) Planning assists with the assessment of the aortic valve and in pre-operational planning and post-operative evaluation of transcatheter aortic valve replacement procedures.

### **CT MYOCARDIAL ANALYSIS & EDUCATION PKG**

CT Myocardial Analysis enables the visualization and analysis of the myocardium with segmentation, color coding and polar maps. Analysis tools include measurements and comparison ratios. CT Myocardial Analysis also includes reporting tools for formatting findings and user selected areas of interest. Package includes 6 Vital U Education Units.

### **BIOMED TRAINING - TUITION, TRAVEL AND LODGING - AQ VISION (10 CLASS DAYS)**

Aquilion VISION Service & Repair (CT291C)

The Aquilion VISION Service & Repair course is for biomed engineers with experience in CT or diagnostics imaging. This Aquilion VISION Service & Repair training course is for those who will have the responsibility to provide support for the Aquilion VISION CT scanners. The training course will focus on the theory of operation and repair of the Aquilion scanners. The topics in this course will focus on CT dynamic volume concepts, theory of operation, planned maintenance, diagnostics, repair, and troubleshooting.

This course will be conducted with a blend of instructor-led classroom discussions and laboratory hands-on practice.



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**Objectives:**

- Follow safe procedures while servicing a CT scanner.
- Operate the Aquilion VISION scanner to run test programs, setup scans and to verify basic functionality.
- Verify the Aquilion VISION scanner's performance and operational status.
- Perform planned routine preventive maintenance.
- Retrieve error logs and messages.
- Backup software and site specifics.
- Perform system calibration and alignment after replacement of the key scanner sub-assemblies such as the X-ray tube.

As part of the requirements to pass this course, all biomedics will be required to pass a practical demonstration of comprehension with a score of 80% or better. There will also be various lab exercises during the class that will be used to check comprehension of various course modules.

***Prerequisites:***

- Introduction to CT (CT122)
- Aquilion Large Current Slip Ring Cleaning Video & Quiz (SUPR-CT0094)
- DAS Theory of Operation Aquilion 64 (CT105)

Students must bring notebook computers equipped with Pentium-class CPUs, 1GB of available hard disk space, Windows XP, Office XP or later, CD-ROM drive, serial port RS232, serial cable, and network connectivity. Laptops are not available to borrow or rent during class.

***This course is all inclusive: tuition, airfare (booked by Toshiba) and lodging.***

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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.

**TOSHIBAS INJECTOR SYNCHRONIZATION SOFTWARE FOR  
AQUILION ONE VISION (REQUIRES GEN 4 AND V7 SOFTWARE)**

**MEDRAD STELLANT D OCS DUAL FLOW INJECTOR WITH ISI 800  
INTERFACE/SYNC KIT - CT**