

DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF HEALTH SERVICE REGULATION

ROY COOPER GOVERNOR MANDY COHEN, MD, MPH SECRETARY

> MARK PAYNE DIRECTOR

May 11, 2017

Jeffrey Shovelin PO Box 6028 Greenville, NC 27835-6028

Exempt from Review

Record #:

2234

Facility Name:

Vidant Medical Center

FID #:

933410

Business Name:

Pitt County Memorial Hospital, Inc.

Business #:

1443

Project Description:

Replace CT scanner

County:

Pitt

Dear Mr. Shovelin:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency), determined that based on your letter of May 5, 2017 and April 4, 2017, the above referenced proposal is exempt from certificate of need review in accordance with N.C. Gen. Stat. §131E-184(a)(f). Therefore, you may proceed to offer, develop or establish the above referenced project without a certificate of need.

However, you need to contact the Agency's Construction and Acute and Home Care Licensure and Certification Sections to determine if they have any requirements for development of the proposed project.

It should be noted that this determination is binding only for the facts represented by you. Consequently, if changes are made in the project or in the facts provided in your correspondence referenced above, a new determination as to whether a certificate of need is required would need to be made by the Agency. Changes in a project include, but are not limited to: (1) increases in the capital cost; (2) acquisition of medical equipment not included in the original cost estimate; (3) modifications in the design of the project; (4) change in location; and (5) any increase in the number of square feet to be constructed.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely.

Faturah Wilson for Jane Rhoe-Jones Project Analyst

Martha I Frisone

Assistant Chief Certificate of Need

cc: Construction Section, DHSR

Acute and Home Care Licensure and Certification Section, DHSR Paige Bennett, Assistant Chief, Healthcare Planning, DHSR

HEALTHCARE PLANNING AND CERTIFICATE OF NEED SECTION

WWW.NCDHHS.GOV TELEPHONE 919-855-3873

LOCATION: EDGERTON BUILDING • 809 RUGGLES DRIVE • RALEIGH, NC 27603 MAILING ADDRESS: 2704 MAIL SERVICE CENTER •RALEIGH, NC 27699-2704 AN EQUAL OPPORTUNITY/ AFFIRMATIVE ACTION EMPLOYER



May 5, 2017

Ms. Jane Rhoe-Jones Certificate of Need Section Division of Health Service Regulation NC Department of Health and Human Services 2704 Mail Service Center Raleigh, NC 27699-2704

RE: Vidant Medical Center's CT Replacement

Dear Ms. Rhoe-Jones:

Please accept this letter as documentation that I, Brain Floyd, President of Vidant Medical Center (VMC), do hereby certify, as it relates to the proposed project, that:

- 1. Financial control of the entire licensed health service facility is exercised at the site of the proposed renovations and/or construction, and
- 2. Administrative control of the entire licensed health service facility is exercised at the site of the proposed renovations and/or construction.

If you require additional information or clarification, please contact Jeff Shovelin, Director of Corporate Planning for Vidant Health at (252)-847-3631. Thank you for your time and attention to this important project.

Sincerely,

Brian Floyd, MBA, RN

President

Vidant Medical Center



April 4, 2017

Ms. Jane Rhoe-Jones Certificate of Need Section Division of Health Service Regulation NC Department of Health and Human Services 2704 Mail Service Center Raleigh, NC 27699-2704



RE: Request for "No Review" for a CT Scanner Replacement at Pitt County Memorial Hospital, Incorporated d/b/a Vidant Medical Center

Dear Ms. Rhoe-Jones:

Pitt County Memorial Hospital, Incorporated d/b/a Vidant Medical Center (VMC) plans to replace an existing GE Lightspeed CT scanner with a new GE Revolution CT scanner. The reason for the replacement is due to the age and subsequent performance and technology limitations of the existing equipment. The total capital costs for the proposed replacement is estimated to be \$2,344,611 (see Appendix D). These costs include all expenses associated with the equipment replacement. The project will be funded through accumulated reserves and is anticipated to be complete by November 2017.

Even though the project exceeds \$2,000,000, VMC believes that the proposed equipment replacement is not subject to review under North Carolina's Certificate of Need (CON) laws. VMC's proposed project meets the requirements found in G.S. 131E-184(f). This statute states:

- (f) The Department shall exempt from certificate of need review the purchase of any replacement equipment that exceeds the two million dollar (\$2,000,000) threshold set forth in G.S. 131E-176(22) [sic, should be (22a)] if all of the following conditions are met:
 - (1) The equipment being replaced is located on the main campus.
 - (2) The Department has previously issued a certificate of need for the equipment being replaced. This subdivision does not apply if a certificate of need was not required at the time the equipment being replaced was initially purchased by the licensed health service facility.
 - (3) The licensed health service facility proposing to purchase the replacement equipment shall provide prior written notice to the Department, along with supporting documentation to demonstrate that it meets the exemption criteria of this subsection.

Specifically:

a) The proposed project meets the definition of replacement equipment found in G.S. 131E-176(22a) in that the new equipment is being purchased for the sole purpose of replacing comparable medical equipment that is currently in use and otherwise disposed of when replaced. Reference Appendix F for the Responses to Replacement Equipment Key Questions and Appendix B for the equipment comparison table.

- b) The equipment is being replaced in the exact location where the existing equipment currently resides and is located on the main campus. Reference Appendix C for Site Plans and Floor Plans associated with the proposed project.
- c) VMC originally obtained ownership of the existing equipment through a certificate of need in November 1985 through approved project ID Q-2225-85 (see Appendix G). That original equipment was subsequently replaced in 2000 with the current equipment that is being proposed for replacement
- d) VMC is a licensed health service facility (see Appendix G for VMC's license) and by this letter, is providing prior written notice to the Department, along with supporting documentation to demonstrate that it meets the exemption criteria of this subsection.

VMC's proposal meets the requirements identified above and is therefore exempt from review. Therefore, VMC requests approval of a no review status for the proposed project.

If you require additional information or clarification, please contact me at (252)-847-3631.

Jeffrey Shovelin

Director of Corporate Planning

Vidant Health

PO Box 6028, Greenville, NC 27835-6028

(252) 847-3631

jshoveli@vidanthealth.com

Appendix A Vendor Quote



Date: Quote #: 01-27-2017 PR6-C81005

Version #:

Customer Number: 1-2311HJ

Quotation Expiration Date: 03-31-2017

Vidant Medical Center 2100 Stantonsburg Rd Greenville NC 27834-2818 Attn: Sandy Sackrason 2100 Stantonsburg Rd Greenville

NC 27834-2818

1) This Quotation that identifies the Product offerings purchased or licensed by Customer;

2) The following documents, as applicable, if attached to this Quotation: (i) GE Healthcare Warrantylies); (ii) GE Healthcare Additional Terms and Conditions; (iii) GE Healthcare Product Terms and Conditions; and (iv) GE Healthcare General Terms and Conditions.

This Agreement (as defined below) is by and between the Customer and the GE Healthcare business ("GE Healthcare"), each as identified herein. "Agreement" is defined as this Quotation and the terms and conditions set

In the event of conflict among the foregoing items, the order of precedence is as listed above.

This Quotation is subject to withdrawal by GE Healthcare at any time before acceptance. Customer accepts by signing and returning this Quotation or by otherwise providing evidence of acceptance satisfactory to GE Healthcare. Upon acceptance, this Quotation and the related terms and conditions listed above (or the Governing Agreement, if any) shall constitute the complete and final agreement of the parties relating to the Products identified in this Quotation.

No agreement or understanding, oral or written, in any way purporting to modify this Agreement, whether contained in Customer's purchase order or shipping release forms, or elsewhere, shall be binding unless hereafter agreed to in writing by authorized representatives of both parties.

Governing Agreement: Novation - Vizient Supply LLC Academic

Terms of Delivery: FOB Destination

forth in either (i) the Governing Agreement identified below or (ii) if no Governing Agreement is identified, the following documents:

Billing Terms: 80% delivery / 20% Installation

Payment Terms: Net Due in 30 Days
Total Quote Net Selling Price: \$1,894,610.85

By signing below, each party certifies that it (i) has received a complete copy of this Quotation, including the GE Healthcare terms, conditions and warranties, and (ii) has not made any handwritten or electronic modifications. Manual changes or mark-ups on this Agreement (except signatures in the signature blocks and an indication in the form of payment section below) will be void.

Each party has caused this agreement to be executed by its duty authorized representative as of the date set forth below.

CUSTOMER		GE HEALTHCARE Nicholas Bengel	01-27-2017
Authorized Customer Signatu	re Date	Signature	Date
Print Name	Print Title	Imaging Account Manager	
Purchase Order Number (if ap	plicable)	Email: nicholas.bengel@ge.com Office: +1 414 238 7008	



Date: Quote #: 01-27-2017 PR6-C81005

Version #:

Total Quote Selling Price Trade-In and Other Credits

Total Quote Net Selling Price

\$1,982,610.85 \$88,000.00

\$1,894,610.85

To Accept this Quotation

Please sign and return this Quotation together with your Purchase Order To:

Nicholas Bengel

Office: +1 414 238 7008 Email: nicholas.bengel@ge.com

Payment Instructions

Please Remit Payment for invoices associated with this quotation to:

GE Healthcare P.O. Box 96483 Chicago, IL 60693

To Accept This Quotation

- Please sign the quote and any included attachments (where requested).
- If requested, please indicate, your form of payment.
- If you include the purchase order, please make sure it references the following information
 - The correct Quote number and version number above
 - The correct Remit To information as indicated in "Payment Instructions" above
 - The correct SHIP TO site name and address
 - The correct BILL TO site name and address
 - The correct Total Quote Net Selling Price as indicated above

"Upon submission of a purchase order in response to this quotation, GE Healthcare requests the following to evidence agreement to contract to Signature page on quote filled out with signature and P.O. number.	erms.
Verbiage on the purchase order must state one of the following: (i) Per the terms of Quotation #; (ii) Per the terms of GPO#; (iii) Per #; or (iv) Per the terms of SAA # Include the applicable quote/agreement number with the reference on the purchase order. In addition, source of funds (choice of: Cash/Third Party Loan or GE HFS Lease or GE HFS Loan or Third Party Lease through), must be done on the quote signature page (for signed quotes), on the purchase order (where quotes are not signed) or via a separate written source of provided by GE Healthcare)."	indicated, which may be



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01-27-2017

GPO Agreement Reference Information

Customer:

Sandy Sackrason

Contract Number:

PLEASE SEE VIZIENT CONTRACT # BELOW

Start Date:

06/02/2011

End Date:

09/30/2019

Billing Terms:

80% delivery / 20% Installation

Payment Terms:

Net Due in 30 Days

Shipping Terms:

FOB Destination

NOTICE REGARDING COMPUTED TOMOGRAPHY ("CT") PRODUCTS. This notice applies only to the following GE Healthcare products: CT: Revolution CT and EVO, Optima 680 CT and Optima 520 CT. GE Healthcare has reclassified several advanced software tools and associated documentation to a GE Healthcare Technical Service Technology package that GE Healthcare feels will bring greater value and interest to our customers. GE Healthcare will continue to provide trained Customer employees with access to the GE Healthcare Technical Service Technology package under a separate agreement. GE Healthcare will continue to provide customers and their third party service providers with access to software tools and associated documentation in order to perform basic service on the CT, MR and NM products listed above upon a request for registration for such access. This will allow GE Healthcare to react faster to the future service needs of GE Healthcare customers. If you have any questions, you can contact your sales Service Specialist.

This product offering is made per the terms and conditions of Novation/GE Healthcare GPO Agreement # XR0321 (CT) and # XR11031 (PET-CT).

For access to the applicable Novation Agreement and Contract Summary, please login to the Novation Marketplace website. If you require assistance or are experiencing issues please contact one of the following for support:

Novation Customer Service (888) 7-NOVATE NOVCustomerService@novationco.com

Web Site Technical Support (800) 327-8116 NovationTechSupport@novationco.com



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1 S7919EX

Revolution CT system Revolution CT system

Revolution CT EX configuration is a breakthrough that delivers high-definition image quality and unique clinical capabilities through the convergence of coverage, spatial resolution, temporal resolution and dose performance – all in one. Until now, CT users have had to compromise between systems that could only provide a sub- set of these capabilities.

The Revolution CT delivers industry leading technical specifications for a premium CT system, including:

- VHD reconstruction, 3D Collimator, and focal aligned detectors provide high-definition image quality, while overcoming the challenges of typical wide detector systems such as cone beam artifacts, HU uniformity, scatter and beam hardening artifacts.
- ASiR-V provides integrated advanced iterative reconstruction technology that reduces noise and reduces low-signal streak artifact at very low signal levels. This technology is designed to deliver reduced noise levels, improved low contrast detectability and may enable a reduction in dose for all clinical applications. In clinical practice, the use of ASiR-V may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

Clinical Highlights

(To achieve the full benefits described below, an AW workstation or server with post processing tools may be required. Please consult with your GE sales representative)

Cardiovascular

- One-Beat, High definition, motion free coronary images at any heart
- Whole heart coverage at 160 mm allowing temporal and contrast uniformity across the whole volume.
- Smart Phase: Analyzes the motion of the coronaries throughout the volume to auto-select the best cardiac phase with the least motion.
- SnapShot(TM) Freeze temporal enhanced acquisition: A Intelligent motion correction acquisition technique that is designed to provide a 6x reduction of motion-blur while maintaining high spatial resolution and is demonstrated in cardiac phantom testing. The reduction in motion artifacts is comparable to a 0.058s equivalent gantry rotation speed with effective temporal resolution of 29 msec, as demonstrated in mathematical phantom testing.
- Arrhythmia management: The system can monitor and alert the user to these situations and also recommend turning on a challenging patient mode. This mode avoids scanning during an irregular beat and can further rescan during the next regular beat using the same contrast bolus.
- Best-in-class spatial resolution at 18.2lp/cm in z-direction and 14.8lp/cm in X-Y direction



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(measured at 2% MTF).

This spatial resolution provides clear images to help the physician with tasks such as accurately quantifying stenosis in coronary and other vascular structures.

- One-Beat, comprehensive cardiac assessment allows for acquiring motion free coronaries, rest or stress perfusion and functional data in a single beat, giving you a comprehensive assessment and potentially reducing the need for additional imaging tests. Integrated beam hardening reduction capabilities allows for accurate perfusion assessment. The ability to perform stress perfusion with motion free CCTA in a single exam can potentially reduce unnecessary dose by not requiring a rest perfusion exam in case no defects are found in the stress perfusion.
- Whole organ dynamic perfusion: This allows perfusion acquisition of the heart or other organs and tissues with uniform contrast along with integrated beam hardening reduction. The scanner also allows for a flexible aperture size and sampling rate during dynamic perfusion acquisitions. Revolution CT also allows for the ability to acquire a prospectively gated dynamic perfusion acquisition of the whole heart using up to 16 cm of coverage.
- The scanner is also capable of 4D imaging to acquire morphology and perfusion information from a single exam. This can help assess conditions such as congenital heart disease and visualize blood flow through vascular structures.
- TAVR planning: Dedicated TAVR/TAVI protocols allow for mixed acquisitions of the heart, aorta, and femoral arteries, with ECG-gated axial scans and non-ECG- gated axial or helical scans, using only one injection of contrast media, covering 700 mm of anatomy in less than 10 seconds.
- Calcium Scoring: The system also allows single beat acquisition for cardiac calcium scoring
- Triple RuleOut[™]: The system allows for robust Triple Rule Out studies with motion free coronaries, PE & aorta evaluation in a single exam. The system can cover the entire thorax anatomy in less than three seconds to provide contrast uniformity at low dose.

Neurology highlights

- Routine non-contrast whole brain scans can be performed in a single rotation without moving the table. VHD reconstruction technology ensures CT number uniformity across the whole brain coverage. Iterative MMAR can reduce the beam hardening artefacts at bone / brain interface and posterior fossa region. Enhanced Contrast can achieve excellent grey white matter differentiation.
- Smart Stroke, the stroke-dedicated hardware, software and post-processing solution on Revolution CT, can help physicians to reduce "CT scan-to-report" time and "door-to-treatment" time, thus to save more brain tissue of patient with stroke. (Post processing solutions are optional purchases)
- Whole brain CT perfusion with 70kVp, ASiR-V, smart collimation and variable sampling can acquire temporally uniform dynamic blood flow information to achieve accurate volumetric

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perfusion values at lower dose.

• Single phase or dynamic 4D whole brain CTA can be acquired within a single exam of whole brain CT perfusion to achieve comprehensive functional and anatomical assessment of the brain.

Body highlights

- Whole organ diagnosis and follow-up of organs such as the liver, kidneys, and pancreas is enabled by dynamic acquisition modes. The scanner can also acquire multiple images at the same location over time to provide a 4D view to assess vascular flow to these organs.
- Fast body scans enabled by multi-volume 16cm acquisition with excellent image quality allows for reduced breath hold times and shallow breathing. Dose is minimized through the ability to select collimations between 5 mm and 160 mm personalized to each patient.
- Low Dose Lung Cancer Screening protocols

Emergency & Trauma

- The system allows for robust Triple RuleOut™ acquisition for all patients providing One-Beat , high definition, motion free coronaries, PE and aortic dissection in a single exam covering the entire thorax in less than three seconds. ECG gating and mA modulation along with flexible collimations enable low dose acquisition personalized to the patient.
- Flexible scanning modes with 160 mm axial scan, 80 mm helical scan, table speeds as fast as 300 mm/s, and short inter-group scan delay allows for ultra-fast and versatile whole body and multi-group scanning, thus reducing the effect of breathing and other motion during the poly trauma scan.
- Smart Trauma with clinical ID can enable recon priority for trauma scans, prospective DMPR settings and faster reconstruction throughput.

Pediatrics

- Split second pediatric trauma acquisition of abdomen/pelvis is enabled by wide 160 mm z-coverage, thus reducing the need for sedation and eliminating unnecessary repetition of rescanning young children due to failed sedation, as is the case in 29% of conventional exams, shown in a large trial (British Journal of Anesthesia, 84 (6), 743-8 (2000))
- 70kV scan mode allows for minimizing dose to pediatric patients while preserving excellent contrast to noise ratio and image quality.

Musculoskeletal Imaging

- The Revolution CT can acquire high definition images of the bone with excellent details. Multi-Material Artifact Reduction (MMAR) technology can significantly reduce artifacts from metal objects such as screws and plates.
- 4D dynamic imaging mode can acquire kinetic studies to assess joint articulation up to 16cm coverage.

Dual Energy Capability



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Revolution CT features protocols which allow easy configuration of back to back Axial or helical scans of the same anatomy my at two different X-ray energies (kVp's). To further improve registration accuracy patient immobilization may be utilized. The additionally acquired dual energy data can be post-processed on AW Workstation using Add/Sub function to gain additional clinical information.

Key Hardware Components

Gemstone Clarity Detector

The Gemstone Clarity detector features a unique focally aligned layout of the detector sub-modules and a 3D collimator (post patient) to minimize scatter artifacts, ensure HU uniformity & reduce beam hardening artifacts associated with wide coverage systems. Combined with VHD reconstruction technology, the system delivers excellent image quality at full 160 mm coverage to enable whole organ imaging. The Gemstone Clarity detector also features a revolutionary ultra-low capacitance photo diode with new ASIC technology that redefines electronic noise at the quantum limit to less than 3 photons @ 120 keV (3100 electrons). The detector includes acquisition electronics which allow 4x faster bandwidth and 3x faster trigger rate than previous generations and reduces electronic noise by 25% which may improve image quality and reduce artifacts in low signal conditions as may be encountered in large patients. 3D Collimator Scatter Reduction Technology reduces scatter to primary ratio by more than 50% (R Melnyk, J Boudry, X Liu, and M Adamak, "Anti-scatter grid evaluation for widecone CT," Proc. of SPIE, Vol. 9033, 90332P1-7, 2014) and results in significant improvement in image quality and reduction in beam hardening and metal artifacts.

Gemstone Clarity detector specifications:

• Z-Coverage/360 degree rotation: 160 mm

• Number of slices: 512

• Number of detector rows: 256

• Number of detector elements: 212,992 cells with individual electronic/DAS channels

• Sampling rate: Up to 2,496 views per rotation (Up to 8914 Hz)

Electronic noise: less than 3 photons noise (3100 electrons)

Effective analog to digital conversion range >2,000,000:1

Scintillator speed: 0.03us (100 times faster than GOS)

• Afterglow: 0.001% (4 times lower than GOS)

Radiation damage: 0.03% (20 times less than GOS)

• Scatter to Primary Ratio: <10%

• Detection efficiency: 98% @ 120 kV

Performix HDw tube

The Performix HDw tube is a next generation anode-grounded, metal-ceramic x-ray tube. The

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tube enables improved spatial resolution via dynamic in-plane focal spot deflection and independent control of the focal spot size in both X and Z-axis which optimizes the focal spot to deliver consistent beam quality across the full 160 mm Z-axis coverage, making it one of the most innovative CT tubes offered today. The design is optimized for exams requiring a large number of scans without tube cooling. It is powered by an onboard high frequency generator capable of ultra-fast kVp switching. Due to the ultrashort exposure times associated with wide coverage scanning, traditional metrics related to tube cooling such as anode heat content & cooling rate lose their relevance. The GE Performix HDw tube includes a standard license that automatically enables the use of tube dependent advanced applications. The use of a third party X-ray tube will require an additional license for the activation of these features.

Ultra-fast kV Switching Generator

The new generator features 3x faster rise and fall times for kV switching compared to previous generator. This would allow for more time to be spent at the target energy levels and result in better energy separation between the datasets acquired at different kV levels using fast kV switching.

- Generator maximum peak power: 103 kW
- Tube current range: 10-740 mA with 5 mA increments
- Tube voltage: 70, 80, 100, 120, 140 kV. Automatically selected through kV Assist based on patient body habitus and examination type
- Max x-ray tube assembly heat content: 5.0 MJ (6.8 MHU)
- Max continuous heat dissipation: 3.0 kW
- \bullet Focal spot size according to IEC 60336/2005: 1.0 x 0.7mm, 1.6 x 1.2mm, 2.0x1.2mm Gantry and Slipring

Revolution CT's gantry platform has been designed from the ground up to support the demands of today's scanning environment. Exclusive Whisper Drive system technology reduces audible noise during gantry rotation at 0.28s by more than 50% compared to a typical belt driven system thus improving patient comfort (audible gantry noise is measured at 69 dBA). The contactless slipring transfers power and data to and from the rotating side of the gantry (slip ring) to the stationary side through contactless RF technology. This eliminates carbon dust due to brush wear- out in typical CT systems thereby increasing the reliability of the system. In addition, the gantry frame features redundant fail-safe mounts for all major components that is designed and tested to stringent standards to ensure safe and reliable operation even at fast rotation speeds.

• Aperture: 80 cm

Focus-to- detector Distance: 109.7 cm
Focus-to- isocenter Distance: 62.6 cm

• Scan FOV: 50 cm



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- Rotation speeds: 0.28s, 0.35s, 0.5s, 0.6s, 0.7s, 0.8s, 0.9s, 1.0s per 360° acquisition
- Temporal resolution: 140ms cardiac temporal resolution without using SnapShot Freeze. 29ms effective temporal resolution using SnapShot Freeze. (As demonstrated in mathematical phantom testing)(AW workstation or server with CardIQ Xpress 2.0 required to process SnapShot Freeze data)
- Data chain bandwidth: 40 Gbps
- \bullet Table and gantry control panels: Define both internal and external scan planes to +/- 1 mm accuracy. Activated any time during exam (with tube stationary)
- Front and rear integrated gantry LCD Display: Display patient information, ECG data from the integrated ECG module, built-in patient breathing lights and countdown timer, cardiac gating indicator light and patient information videos
- Flexible cable manage system with coordinated straps attached to the gantry sides to keep cables connected to the gantry away from the floor and to reduce clutter

Operator Console

The Revolution CT scanner desktop allows simultaneous scanning, image reconstruction, display, processing and analysis, as well as networking and archival.

It features the new "Clarity Operator Environment" designed with your everyday needs in mind. The environment allows for more real time adaptive capabilities thus enabling dramatical- ly improved timing with Smart Prep including automatically transitioning to acquisition in as quickly as 1 second when the set HU threshold is reached. The benefits provided by the new interface include:

- Smart prescription workflow automates scan set up by recommending scan parameters specific to the patient based on scout attenuation and ECG information, in the case of cardiac, to enable consistent image quality & dose performance across scans, irrespective of the technologist expertise level
- Seamless multi-tasking through ability to have multiple patient sessions open with one active patient for acquisition and the rest for post-acquisition tasks
- "Plan ahead" task list as part of scan setup automates repetitive tasks such as reconstructions, image transfer, image processing, etc. without requiring technologist intervention
- Ability to prospectively prescribe multi planar reconstructions for anatomies such as spine as part of the protocol, thus automating the workflow seamlessly
- Clear status visibility across all automated patient tasks without any interaction enables you to focus on the primary task at hand
- Manage your patient flow better with the ability to pre- pare scan prescription for the next patient while the current patient is getting off the table
- Quickly select scan protocols through global search, anatomical selection or user specific

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favorites in the new-ly designed protocol management system

- Facilitates protocol consistency by controlling access to changes and simplifying inputs required
- Integration with AW allows prescribing automatic image processing steps to be performed on the AW / AW Server post acquisition
- Better dose awareness through clearly visible real time projected dose indicator for the selected protocol

Operator console specifications

- Intel Xeon performance processor: 2.60GHz/8-Core CPU (or equivalent)
- Nvidia high performance GPU (or equivalent)
- 64 GB DDR3 unbuffered ECC (or equivalent)
- 24 inch dual monitors with screen resolution of 1920x1200
- Image data storage up to 700,000 uncompressed DICOM images (512×512)
- Scan data storage of 1 TB (up to 1500 scan files are supported)
- DVD-ROM (supports DVD-R, DVD-RW, DVD+R, DVD+RW, DVD+R DL, CD-R, CD-RW)
- USB 3.0 Port for External Hard Disk Drive Connectivity (scan data storage and image data storage are supported)
- Recon Server Xtream enables recon task parallelism and achieves up to 1.8x faster reconstruction throughput than Recon Server Pro
- Image reconstruction speed up to 65 fps with FBP and up to 25 fps with ASiR-V.

Sustem Software

Smart Flow

Simplified, automated scan prescriptions, personalized to the patient and easy-to-use reference protocols make the Revolution CT fast and efficient in patient set-up, prescription & scanning. The following features further help you streamline your workflow.

Protocol Management System

Protocols can be copied, built and edited intuitively using the Protocol Management System.

- GE Reference Protocol: A set of predefined protocols for adult patients that cannot be modified but can be copied and used. These protocols are factory installed. They have been developed in collaboration with clinical partners to provide users with a convenient and clinical relevant starting point for tailoring your departmental protocols.
- Recently Scanned Protocols: A copy of the last 90 proto- cols reside exactly as they were used for review purposes only. These protocols can also be copied and used within into your departmental protocols.
- Anatomical Selector: Use the Anatomical Selector area to select a specific anatomical region to show only protocols related to that region.

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• Favorites: A user can add to a list of favorite protocols commonly used by your site. Clinical ID

Clinical ID is designed to streamline the clinical application specific workflow from protocol setup to reconstruction prioritization and automated reformatted views for timely diagnostic decisions. In 2016 summer release, Clinical ID is the integral part of Smart Stroke and Smart Trauma solutions.

AutoVoice™

Auto Voice provides recorded breathing instructions for the patient. Consistent breathing instructions assist with more precise timing during an exam. Auto Voice also provides a premessage in the SmartPrep feature. The system also comes equipped with microphones at the console and gantry for communicating with the patient. The system has three, pre-recorded messages in ten selectable languages that cannot be deleted. You can also record up to 17 additional messages for each language. Default language options include: Chinese, English (Female), English (Male), French, German, Italian, Korean, Japanese, Spanish (European), Spanish (Latin America).

Smart Patient Centering

The smart patient centering feature helps to detect suboptimal centering prior to the diagnostic scan. When scout is acquired, the system will assess patient centering. If the patient is off-centered greater than 2 cm, the system will display the table height location and an up or down arrow to indicate the elevation needed to reach that height.

SmartStart (TM)

- Gantry-mounted start scan button and countdown dis- play,
- Facilitates single-technologist operation by allowing start of scan at the gantry, with a visual reminder of time until X-ray initiation

SmartPrep ™ with Dynamic Transition

Enables real-time monitoring of IV contrast and a user-selectable mode to dynamically transition to the diagnostic scan phase when a user entered Enhancement Threshold is reached in the Transition ROI.

Trauma Patient entry

Allows patient scans and image display/analysis without entering patient data before scanning. Prospective Exam Split

Prospective Exam Split allows operator to specify how to split images from a scan into separate requested procedures/accession numbers in protocol management. This capability is especially useful in cases of full body trauma or for chest, abdomen and pelvis exams. Prospective Exam Split works with primary, secondary and reformatted images.

Smart DMPR

Smart DMPR can automatically generate reformatted views with prospectively set window



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width and window level and automatically transferring these image datasets to the designated PACS destination for fast review and diagnosis.

Digital Tilt

The system has preset protocols that can be selected prospectively, which allows images to be reconstructed at a specified tilt angle. This capability, combined with organ dose modulation and tilted head holder accessory for the patient allows for reducing the dose to sensitive organs such as the eyes while also reducing dental artifacts.

Enhanced Xtream Injector (Requires a compatible Bayer or Nemoto Injector system)

The Enhanced Xtream Injector provides synchronization of the start of the scan and the start of the contrast injector using the start scan button on the Scan Control Interface or the gantry controls. The Enhanced Xtream Injector also allows setting of the contrast injector parameters within the CT scan protocol and creation of an Injector Report at End Exam of what was delivered by the injector. The system and injector are operated independently after the start scan button is pressed on the system.

System Software

Volume High Definition Reconstruction

The system features state of the art image reconstruction technology designed to mitigate cone beam artifacts associated with wide coverage systems. In addition, the algorithm preserves temporal uniformity and provides excellent image quality at full 160 mm coverage. It further reduces variation in iodinated contrast HU uniformity across the full 160 mm Z coverage, typically caused due to heel effect. In addition, Multi-Material Artifact Reduction (MMAR) technology utilizes material physics learnings from GSI incorporated in single energy acquisition. In conjunction with the 3D Collimator, this reduces beam hardening artifacts due to iron, bone, metal & other dense objects.

Iterative Reconstruction: ASiR-V

Integrated advanced iterative reconstruction technology (ASiR-V) reduces noise, even at very low signal levels. The ASiR- V algorithm focuses primarily on the modeling of the system noise statistics, objects, and physics and de-emphasizes the modeling of the system optics. The most time-consuming portion of the IR process is the modeling of the system optics. By excluding the most time-consuming component, system optics, and focusing on the other terms during the IR process, significant image quality improvement can be achieved with- out paying a large penalty in reconstruction speed. The advanced system noise model includes the modeling of the data acquisition system (photon noise and electronic noise) as well as noise characteristics of the reconstructed images. The photon noise model includes characterization of the photon statistics as it propagates through the imaging chain. The modeling of the reconstructed image noise includes characterization of the scanned object, using information obtained from extensive phantom and clinical data. This technology is designed to deliver reduced noise levels, improved low contrast detectability and may enable up to 82% reduction in dose when



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Description

compared to FBP for all clinical applications.

Smart Dose technologies

Automatic Exposure Control (AEC)

AEC is a versatile and powerful tool designed to tailor the scanner's radiation output to each patient based on the patient's size, age, shape and attenuation and the user's re- quested level of image noise/quality criterion. AEC technology uses estimated patient attenuation values to adjust the mA dynamically in order to achieve the requested level of image noise/quality criterion.

3D Dose Modulation Utilizing SmartmA

Volumetric knowledge prior to scanning allows you to personalize protocols and optimize dose for every patient, large and small. During the scan, real-time, 3D dose modulation helps deliver consistent image quality because it automatically accounts for the changing dimensions of your patient's anatomy. In addition, the system provides guidance to assist in centering the patient to maximize the benefit of mA modulation.

Organ Dose Modulation

Organ Dose Modulation (ODM) builds on the SmartmA feature to enable even further patient dose reduction. By reducing the mA exposure profile as a function of the X-ray tube angle, radiosensitive organs towards the anterior surface of the patient, such as the eyes, breasts and thorax, can benefit from enhanced dose reduction while the overall image noise is still maintained.

kV Assist

kV Assist makes it easy to select optimal kV settings for the patient being scanned. It recommends tube voltage and current to achieve the lowest dose while meeting desired image quality goals.

70 kV Scanning

70 kVp scan mode enables low dose pediatric and small patient scans

ECG Modulated mA

For cardiac applications, prospective ECG dose modulation automatically adjusts the mA to minimize the patient's exposure to X-rays – reducing mA, and thus dose, near the beginning and end of each prescribed phase range. Up to 3 phase ranges are selected within a heart cycle with different mA levels. The peak mA for the first phase range is automatically determined based on noise index set by the user. The user can also select the relative mA level for an optional second or third phase range, set as a percent of the mA level of the first phase range. This provides clear images and allows you to reduce dose yet provides motion free, high quality images for functional and anatomical analysis within a heart cycle

Color Coding for Kids

Based on the Broselow-Luten Pediatric System, the Color Coding for Kids was developed to help

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operator to select the correct pediatric CT protocol. The system divides the protocols into nine color zones based on height and weight, and incrementally increases scan technique as the patient's size in- creases. This arrangement of protocols assists you in reducing the variations in pediatric protocol selection. If the patient weight is unavailable, a Broselow-Luten Tape can also be used to obtain the weight based on the length.

Smart Dose technologies

- Smart Track: Advanced hardware and software for X-ray beam tracking minimizes patient dose
- Smart Beam: Optimizes X-ray beam filtration independently for body, head, and cardiac applications.
- Soft Shutter: This capability reduces the over-beaming dose in helical scans by using an advanced reconstruction algorithm for helical scans that makes better use of acquired data through intelligent view weighting and back projection.
- Dose Check: Provides the user with tools to help them manage CT dose in clinical practice and is based on the standard XR-25-2010 published by The Association of Electrical and Medical Imag- ing Equipment Manufacturers Association (NEMA). Dose Check provides the following:
- o Checking against a Notification Value if the estimated dose for the scan is above your site established value
- o Checking against an Alert Value where the user needs spe- cific authority to continue the scan at the current estimated dose without changing the scan parameters if the estimated dose exceeds the alert value
- o The ability to define Alert Values for Adult and Pediatric with age threshold
- o Audit Logging and Review capabilities
- o Protocol Change Control capabilities provided by robust protocol management interface
- DoseWatch Explore is an introductory dose management software application that provides you secure access, via any PC with internet access, to dose and protocol data from this system. An InSite connection to the system and completion of the registration process is required to use the DoseWatch Explore application. For US and Canadian Customers, this quotation includes access to the DoseWatch Explore application for a period of time concurrent with the system warrantu.
- Dose Computation, Display & Reporting: CTDIvol (CTDI volume), DLP (Dose Length Product), and Dose Efficiency computation and display during scan prescription provide dose information to the operator. Dose Reporting saves the CTDIvol, DLP, and phantom type in a DICOM Structured Dose Report and a secondary screen cap- ture. Series and cumulative exam values are saved. Saved values can be networked or archived.

DICOM Interchange

DICOM Interchange allows the saving of any image from the database, along with a PC viewer using Internet Explorer, to a CD-R or DVD-R with- out marking the exam/series or image as



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archived for exam transfer between stations that are not networked or pass along to referring physicians or patients. For detailed information, please reference DICOM conformance statement.

- DICOM Storage Service Class
- Service Class User (SCU) for image send
- Service Class Provider (SCP) for image receive
- Service Class User (SCU) for storage commitment
- DICOM Query/Retrieve Service Class
- DICOM Modality Worklist
- DICOM Modality Performed Procedure Step

Image Networking

Exams can be selected and moved between the Revolution CT and any imaging system supporting the DICOM protocol for network send, receive and pull/query. Image transfer time using DICOM protocols is > 16fps on a 1000baseT network.

Warranty: The published Company warranty in effect on the date of shipment shall apply. The Company reserves the right to make changes. All specifications are subject to change. Regulatory Compliance: This product is designed to comply with applicable standards under the Radiation Control for Health and Safety Act of 1968. Laser alignment devices contained within this product are appropriately labeled according to the requirements of the Center for Devices and Radiological Health.

This product complies with the performance standards of 21 CFR, sub-chapter J, and the applicable IEC 60601-1 series.

This product complies with NEMA Standard XR29-2013 / MITA Smart Dose Standard.

See the Pre-Installation manual for details of the siting requirements for GE Revolution CT.

1 B7918EN E

English keyboard

1 B7919AE

Standard cable set for Revolution CT system

1 B7919BM

Revolution CT high capacity table features a next generation table capable of 300mm/s travel speed. This enables faster scanning for longer range anatomies. The table has also been designed with 10x more stiffness to reduce deflection under heavy load and provide the best possible images even under heavy load conditions. The table features include:



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- Controls on gantry for elevation and cradle movement. Foot pedals on both sides of table for fast elevation. Cradle position controlled from OC for prescribed scans.
- Integrated ECG module with waveform and configuration through the gantry display.
- Workflow hub area with a see through tray to give you the most flexibility in placing scanning related supplies, etc.
- IV Pole integrated at the foot-end of the table helps to prevent IV lines from becoming crossed and tangled, and helps keep lines in place during patient travel.
- o Vertical Range: 56cm to 103cm (675 lbs)
- o Vertical Scannable Range: 73.1cm to 103cm
- o Elevation Speeds: 15(+/-3)mm/s and

48(+/-3)mm/s

- o Horizontal Range: 200 cm
- o Horizontal Scannable Range (metal free)
- 200cm in Axial
- 185cm in helical
- 5-200cm in scout
- o Horizontal speed Up to 300mm/s
- o Load capacity 306 kg/ 675 lbs maximum allowed with +/-0.06% positional precision

over the entire scannable range.

1 B7900LC

This option provides lung screening reference protocols that are tailored to the CT system, patient size (small, average large), and the most current recommendations from a wide range of professional medical and governmental organizations. Now, qualifiedi GE Healthcare CT scanners with this option are formally indicated for, and can be confidently used by physicians for low dose CT lung cancer screening of identified high-risk patient populations. These protocols deliver low dose, short scan times, and clear and sharp images for the detection of small lung nodules. Early detection from an annual lung screening with low dose CT in high-risk individuals can prevent a substantial number of lung cancer-related deaths.ii

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All new GE 64-slice and greater CT scanners, and virtually all of the 16-slice CT scanners that GE Healthcare sells are qualified for this screening option. This solution is also available to thousands of qualified GE CT scanners currently in use, increasing access to the quality scanners that satisfy both patient and physician needs. The new protocols, do include the choice for the user to be able to utilize GE Healthcare's industry-leading technologies such as ASIRTM, ASIR-VTM and VeoTM that are designed to reduce image noise, which is undesirable for physicians looking for small nodules.

This option contains two documents. Lung Cancer Screening Option Reference Protocol Guide, and the Lung Cancer Screening Option User Manual / Technical Reference Manual i The following GE Healthcare CT scanners are qualified to receive the new low dose CT Lung Cancer Screening Option: LightSpeed 16, BrightSpeed Elite, LightSpeed Pro16, Optima CT540, Discovery CT590 RT, Optima CT580, Optima CT580 W, Optima CT590 RT, LightSpeed Xtra, LightSpeed RT16, LightSpeed VCT, LightSpeed VCT XT, LightSpeed VCT XTe, LightSpeed VCT Select, Optima CT660, Revolution EVO, Discovery CT750 HD, Revolution HD, Revolution CT. ii Moyer V. Screening for Lung Cancer: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med. 2014;160:330-338.

http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lung-cance

1 B7660B Chair for CT scanner

1 B7919AY Revolution Desk - Adjustable

1 B75342CA Coronal Head Holder.

The 14KVA Partial UPS has been specifically designed to coordinate with GE Healthcare CT & PET/CT scanners. In the event of a power outage a partial system UPS provides continuous backup power to the scanner host and control computers, thus assuring no loss of usable scan data.

o Critical circuits in the gantry and table remain powered which facilitate the safe removal of the patient from the scanner. o If power is restored within the battery hold-up time, the operator can continue scanner operations without the need to reboot the system.

o When longer power outages are anticipated,



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the UPS provides time for the operator to safely remove the patient and complete an orderly shutdown of the system software o Maintains system electronics and allows critical scanner operations to continue for 10 minutes (typical) after loss of power o Protects electronics from under voltage, brownouts, line sags, over voltage and transients

SPECIFICATIONS

o Dimensions (H x W x D): 49" x 12" x 32"

o Weight: 620 lbs.

o Output Frequency: 50 or 60 Hz, auto-sensing

NOTE: ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

NOTE: REMOVAL/DISPOSAL OF OLD UPS IS THE CUSTOMER'S RESPONSIBILITY

NOTE: INSTALLATION AND RIGGING IS NOT INCLUDED

NOTE: CONTACT GE SERVICE OR EATON FOR START-UP ASSISTANCE

1 E4502AE

The 125 Amp CT System Main Disconnect Panel (MDP) serves as the main facility power disconnect source installed ahead of the system PDU. The MDP will disconnect system power on first loss of incoming power, helping to prevent damage to system components. It also includes an automatic restart control circuit which restores power to the CT System PDU after a power outage.

- Can reduce installation time and cost by eliminating delays in obtaining individually
 enclosed components and on site assembly (ex: main circuit breaker, feeder overcurrent
 devices, magnetic contactors and UPS emergency power off are combined into a single
 panel
- Configuration flexibility can be used as a stand-alone main disconnect or with the
 optional partial system UPS. (On systems where the optional partial system UPS is used
 the main disconnect panel also provides NEC mandated emergency power off control to
 both the PDU and UPS
- Designed and tested for GEHC CT products

SPECIFICATIONS

 Automatic restart incorporates an adjustable time delay to delay main power until the power has stabilized for 5 seconds

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Description Qty Catalog No. One flush wall mounted remote emergency off pushbutton furnished with each system UL, cUL and CE labeled The GEHC Revolution CT table slicker is specifically designed to maximize contaminant E8016DA 1 protection. Manufactured to be used in conjunction with the table restraining belts, this slicker adds versatility to your CT procedures. Latex free, it is strongly suggested that the slicker is cleaned with a water/bleach solutioj prior to every procedure. Features: Table gray cushion sealed in vinyl slicker Dimension 2403 x 788 Table extender gray cushion sealed in vinul slicker Dimension 406 x 788 Cover for catheter bag hanger Increase system uptime by protecting table from spills and particulate contaminants Easy to install and comfortable for patients Will not interfere with normal operation of CT table Clear PVC plastic facilitates faster cleanup of blood and fluids Prevents contaminant build up in hard to clean areas Thermosealed seams and flaps Recommended for trauma centers and sites concerned about exposure to blood and fluid-borne disease 1 E8016DC The GEHC Revolution CT Foot Switch slicker is specifically designed to maximize contaminant protection. Latex free, it is strongly suggested that the slicker is cleaned with a water/bleach solutioj prior to every procedure. W0126CT 1 Revolution CT Customer Excellence Training The Revolution Experience: Clinical Education Program 22 Days Onsite and 16 Hours of TiP Virtual Assist (TVA) and 2 HQ Classes This training will begin with a Revolution Partnership Meeting, approximately 4-6 weeks prior to the first onsite training week. The purpose of this meeting is to identify the core group of technologists and radiologists who will participate in onsite training, understand the site's level of prior GE experience, discuss key factors necessary to ensure successful training, identify critical needs and clinical areas of focus, and discuss the preferred timeline and content for the first year of onsite training. Initial training will include 8 days during a 2 week turnover. The Clinical Applications Specialist will work with staff to introduce them to the Revolution Clarity user interface, review the system

components and how they impact clinical scanning, discuss the Revolution protocols and begin patient scanning. Protocol and image quality review will be completed with the radiologist(s).



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The timing and content of the follow up visits will be customized to the clinical priorities of the site. Follow up visits will include advanced features and imaging for specific clinical applications such as cardiac and perfusion. Results of technologists assessments at the end of each of the initial training sessions will also be used as a guide for the content and focus of the follow up training. TiP Virtual Assist training will also be used to provide access to GE Clinical Applications Specialists who can answer questions as well as perform virtual troubleshooting, remote observation, image quality checks and to provide additional training.

Two full service CT Headquarter customer classes are included. Each 4.5 Day course is designed to introduce the technologist to the Revolution CT system. It is recommended that this course be attended prior to the system turnover. The full service courses include travel and modest living expenses.

This training program must be scheduled and completed within 12 months after the date of product delivery. Onsite training and TVA are delivered Monday through Friday between 8AM and 5PM.

1 R21013AC

GE Healthcare has reclassified its service tools, diagnostics and documentation into various classes (please refer to the Service Licensing Notification statement at the beginning of this Quotation). The Standard License provides access to service tools used to perform basic level service on the Equipment and is included at no charge for the warranty period.

Quote Summary:

Trade in of LS 16
Total Quote Net Selling Price

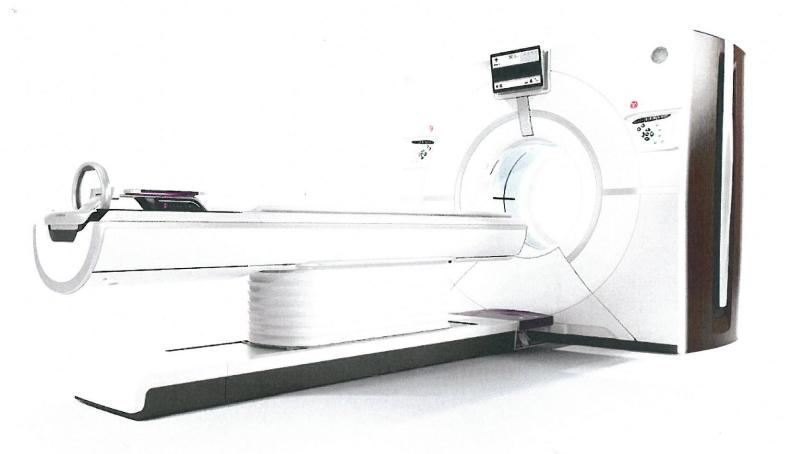
\$1,894,610.85

(Quoted prices do not reflect state and local taxes if applicable. Total Net Selling Price Includes Trade In allowance, if applicable.)

Appendix B Equipment Comparison Table and Brochures

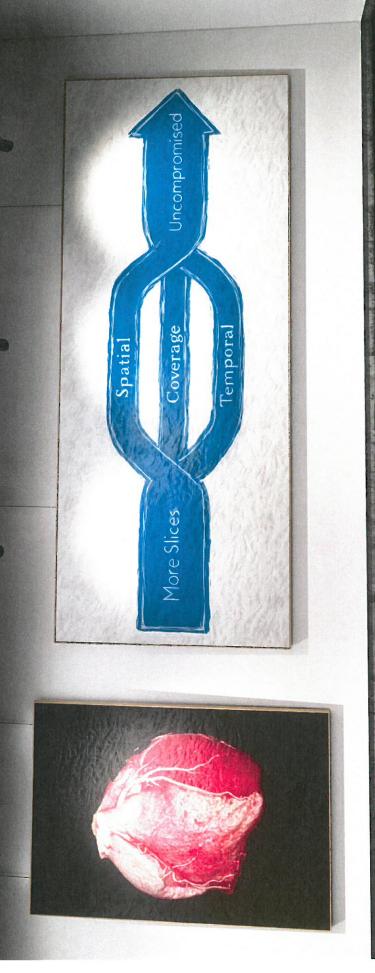
Equipment Comparison

	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type of Equipment (List Each Component)	CT Scanner	CT Scanner
Manufacturer of Equipment	GE	GE
Tesla Rating for MRIs	N/A	N/A
Model Number	Lightspeed CT Scanner	Revolution CT Scanner
Serial Number	00000314491CN2	
Provider's Method of Identifying Equipment	CT#3	CT#3
Specify if Mobile or Fixed	Fixed	Fixed
Mobile Trailer Serial Number/VIN #	N/A	N/A
Mobile Tractor Serial Number/VIN #	N/A	N/A
Date of Acquisition of Each Component	2000	2017 (Proposed)
Does Provider Hold Title to Equipment or have a Capital Lease?	Hold title	Will Hold Title
Specify if Equipment Was/Is New or Used When Acquired	New	New (Proposed)
Total Capital Cost of Project (including construction, etc.)	\$775,000	\$2,344,611
Total Cost of Equipment	\$775,000	\$1,982,611
Fair Market Value of Equipment	\$88,000 (current FMV)	\$1,982,611
Net Purchase Price of Equipment	\$775,000	\$1,894,611 (cost minus trade-in)
Locations Where Operated	CT Scanning #3	CT Scanning #3
Number Days in Use to be Used in N.C. Per Year	365	365
Percent of Change in Patient Charges (by Procedure)	%0	%0
Percent of Change in Per Procedure Operation Expenses(by Procedure)	%0	%0
Type of Procedures Currently Performed on Existing Equipment	CT procedures	
Type of Procedures New Equipment's Capable of Performing		CT procedures



REVOLUTION CT Uncompromised.



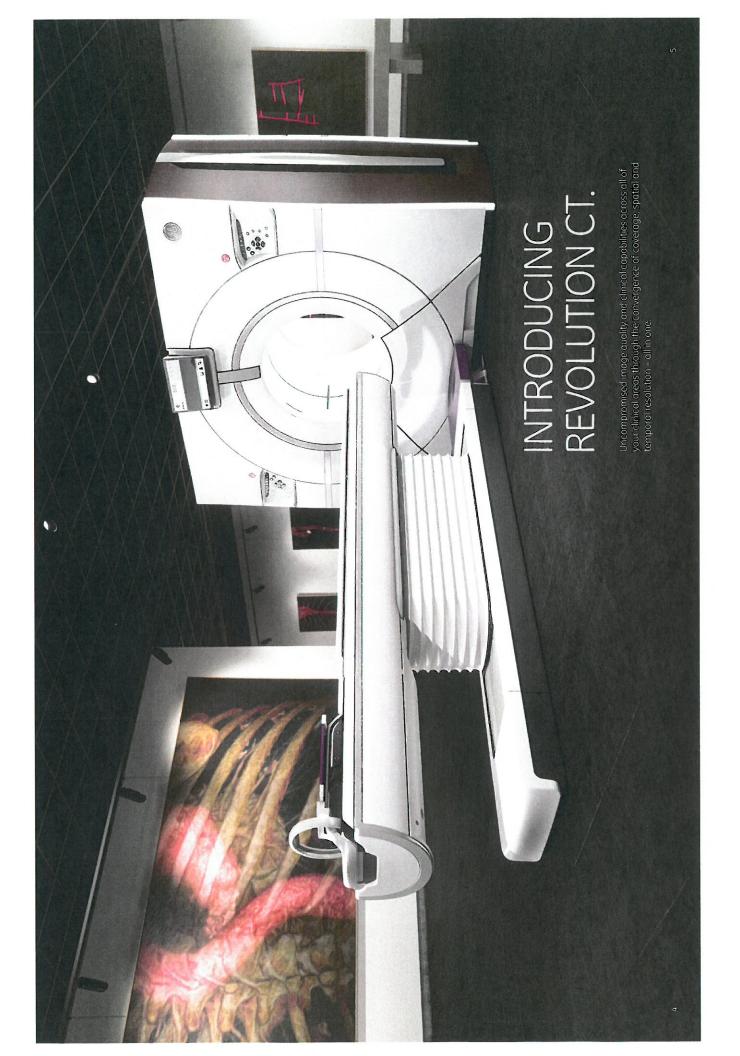


IT'S TIME FOR A REVOLUTION.

The ability to explore inside the human body non-invasively is a modern day miracle. A miracle made possible for millions of people through work.

As with any technology that advances over time, sometimes what's

needs of all your patients, even the challenging ones? What if your CT could help you deliver clinical excellence across all of your departments?





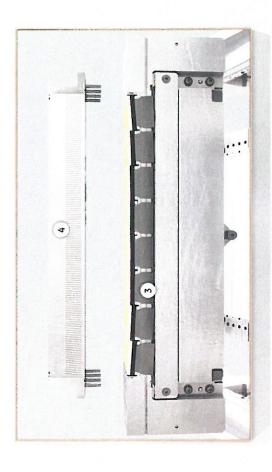


NEXT GENERATION DETECTOR.

The groundbreaking Gemstone Clarity Detector enables 160 mm detector coverage with best-in-class spatial resolution.



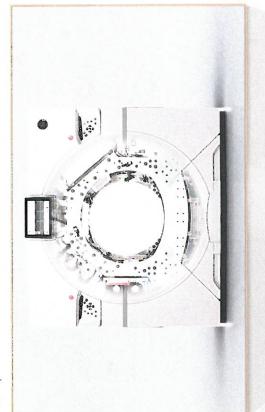
- 1 With the industry's fastest scintillator, the Gernstone Clarity Detector enables high definition imaging and ultra-fast kV switching.
- 2 Minioturized detector modules are designed to reduce electronic noise by 25% which may improve image quality and reduce artifacts in low signal conditions, as may be encountered in large patients.



- Revolution CT utilizes a unique, focally aligned detector design to overcome limitations such as cone beam artifacts associated with wide coverage.
- A proprietary 3D Collimator ensures IV contrast uniformity and minimizes scatter and bean hardening artifacts associated with wide coverage systems it reduces scatter to primary ratio by more than 50% compared to a 160 mm system with a 1D post patient collimator.

NEXT GENERATION PLATFORM.

The Revolution CT gantry platform has been designed from the ground up to enable routine performance at the fastest rotation speeds.



Whisper Drive system to reduce audible noise during gantry rotations by more than 50%. Future proof platform tested to support 0.2 sec/rotation, 70 g of force, and ultra-fast KV switching



Contactless slip ring to transfer data to and from the rotating side of the gantry to the stationary side through RF technology at 40 Gbps. Induction based, brushless slip ring to reliably transfer high voltage power.

MAKING ADVANCED EXAMS ROUTINE AND ROUTINE EXAMS ADVANCED.

Thanks to its innovative design, Revolution CT will improve routine exams and enable you to deliver breakthrough clinical applications for all your physicians and your most challenging patients.

Make your routine exams advanced with best-in-class 0,23 mm spatial resolution and built-in artifact reduction.

Capture the whole heart in a single beat, in high definition, with motion-free coronary images at any heart rate. One-beat acquisition for calcium scoring, coronary imaging or comprehensive cardiac assessment can be achieved with or without beta blockers.

Flexible scan modes to enable precise TAVR planning, delivering low radiation and contrast dose?

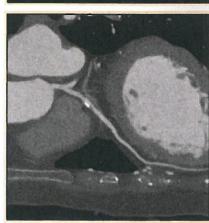
Perform whole-organ dynamic perfusion studies of the heart, brain, liver, kidneys and other organs and tissues with up to 16 cm coverage with uniform IV contrast. The flexible collimation and sampling rate minimzes dose and is particularly beneficial in localizing anatomy of interest.

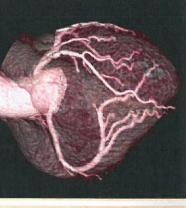
Whole organ coverage enables 4D imaging for all anatomies to visualize vascular flow, organ motion or kinetic properties.

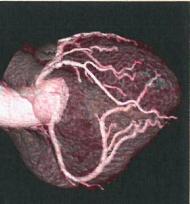


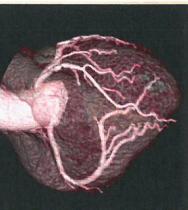
CARDIAC IMAGING.

One-beat, low dose, high definition, motion-free, at any heart rate.





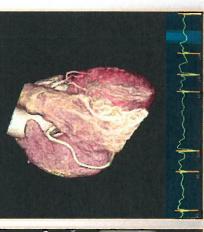




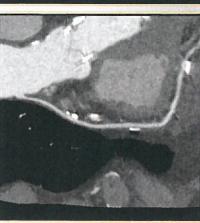


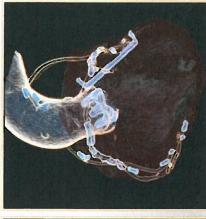
80 kV, 350 mA, 69 bpm, BMI 21, 0.6 mSv





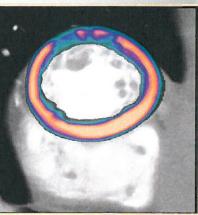
One-beat, low dose, high definition, motion-free - even with challenging patients.

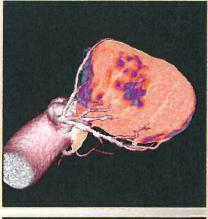




100 kV, 400 mA, 79 BPM, 24 BMI, 3.2 mSv

Comprehensive cardiac assessment: coronaries, myocardial perfusion and function in a single exam.





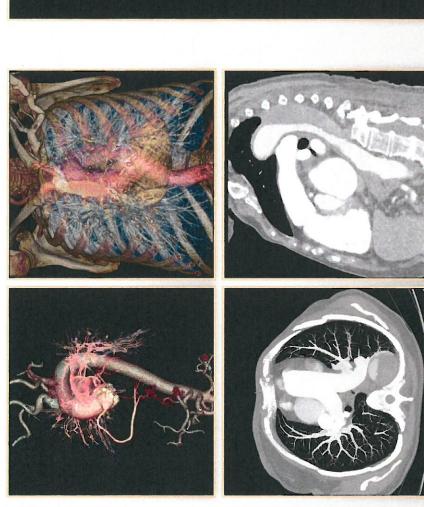
100 kV, 450 mA 54 BPM, 28 BMI, 1.6 mSv

100 kV, 325 mA, 42-145 BPM, 29 BMI, 1.2 mSv patient with irregular heart rate

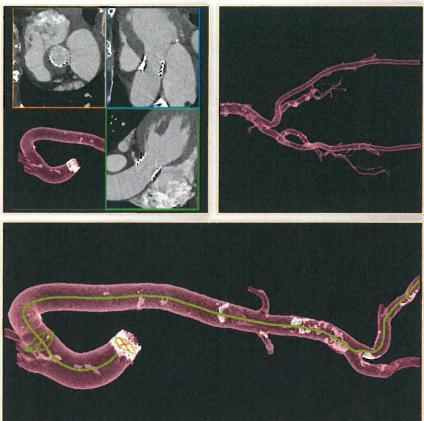
Images reconstructed using SnapShat' Freeze

CARDIOVASCULAR IMAGING.

Robust, high definition triple rule out study for every patient with motion-free coronaries at low dose and a minimal breath-hold.



Flexible scan modes to enable rapid and precise TAVR planning, delivering low radiation and contrast dose $^{\!\circ}$.

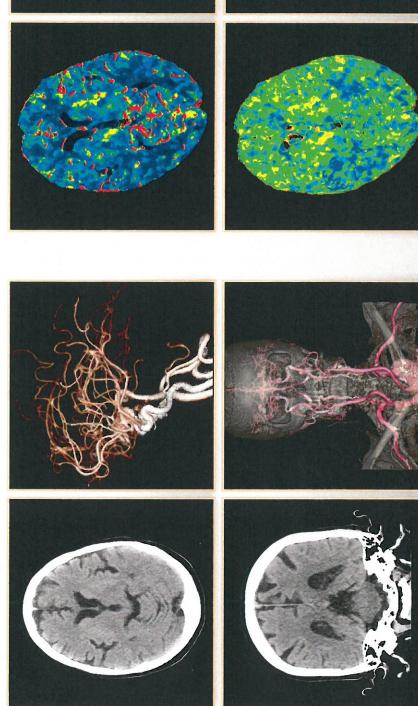


* When used in conjunction with fast table speed and kV Assist technolo

NEURO IMAGING.

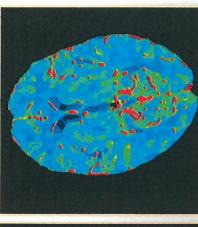
Routine low dose head imaging in less than a second with significantly reduced artifacts.

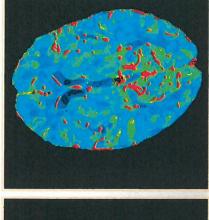
High definition CT angiography.

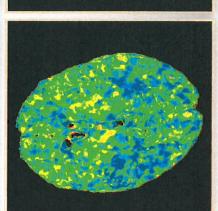


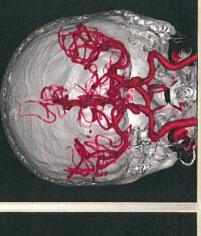
Rapid, comprehensive stroke assessment:

Personalized wide coverage without table motion and flexible sampling for low dose perfusion. One exam for whole brain perfusion and dynamic CTA at a very low dose.







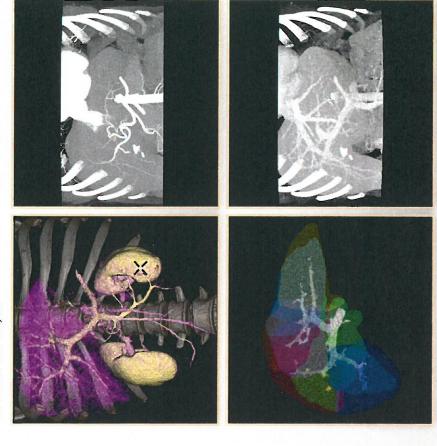


BODY IMAGING.

Fast body scans with excellent image quality using multi-volume axial scanning with flexible collimation.



Dynamic imaging of the whole liver, kidneys and pancreas with variable sampling for perfusion and vascular flow analysis.

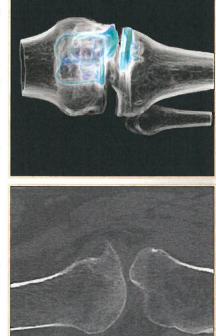


MUSCULOSKELETAL IMAGING.

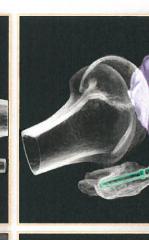
High definition bone imaging.

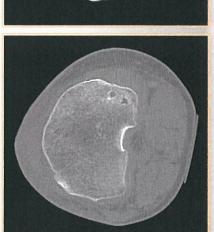
4D kinetic study to assess joint articulation through wide coverage dynamic imaging.

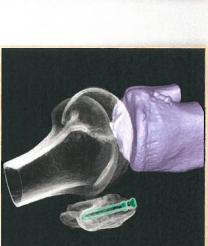
High definition bone imaging with significantly reduced artifacts from screws and metal.





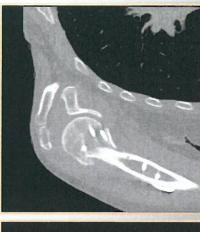














DESIGNED FOR RAPID TRAUMA ASSESSMENT.

Revolution CT helps you be prepared for the unpredictable with a comprehensive suite of dedicated trauma tools for patient setup, scanning and image review.

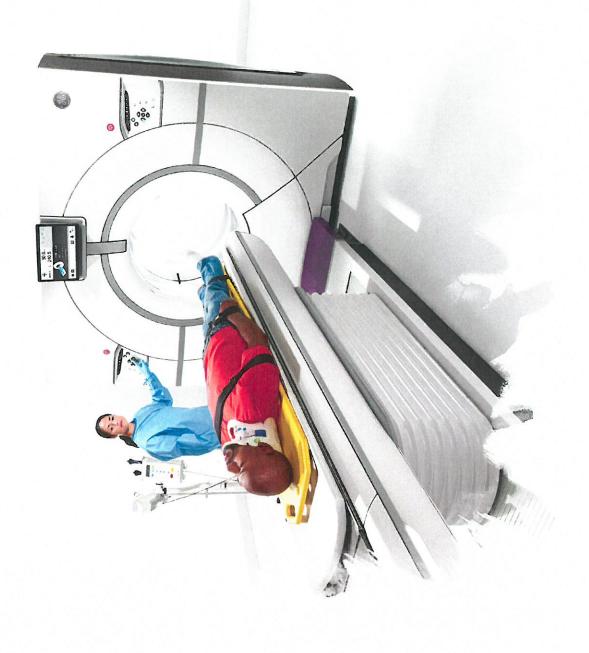
Better access to patients with a wide 80 cm bore.

Rapid setup with emergency department presets and scan modes

Rapid scanning with automatic patient positioning and in-room scan start.

Ultra-fast speed enabled by wide coverage acquisitions, combined with fast table speed, reduces the effect of breathing and other motion.

Instant access to images with real-time reconstruction.





DELIVER BETTER CARE AT A LOWER DOSE.

Revolution CT features the latest Smart Dose Technologies designed to help you acquire high quality images using lower doses of radiation. Smart Dose Technologies contribute to a more accurate diagnosis and lower exposure for patients across routine and advanced exams, including dynamic acquisitions for perfusion and 4D studies.

Integrated ASIR-V

ASIR-V reconstruction technology reduces noise even at very low signal levels. This technology is designed to deliver reduced noise levels, improve low-contrast detectability and routinely reduce dose up to 82% for patients of all loges.

Organ Dose Modulation

The system can also automatically modulate X-rays to reduce dose to radiation-sensitive argans and anatomical areas such as the eyes and the breasts without compromising image quality.

Pediatric imaging

Sedation free and minimal breath hold at a very low dose for pediatric patients. Whole abdomen and pelvis scanning in less than one second.

70 kV scanning

This enables the capability for low dose protocols, which are especially suitable for pediatric imaging.

* In clinical practice, the use of ASR-V may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

PRIORITZE THE PATIENT EXPERIENCE.

Your patients expect more. They want quick, high quality results in a low stress environment. By giving more thought to the aesthetics that the patient sees, hears, and feels, Revolution CT can help your scan room feel less clinical and more inviting. And the technology inside helps you deliver a confident diagnosis with patient sofety in mind.

Deliver personalized patient information and videos via gantry displays.

Provide access and comfort to more patients with a wide 80 cm bore.

Minimize patient anxiety with powerfully quiet, split-second scanning enabled by the Whisper Drive gantry.

Lower radiation and contrast dose without compromising your image $\text{quality}^{\delta}.$

Create a better patient environment with design features such as soft ambient lighting and a patient-centric bore pattern.





A BETTER USER EXPERIENCE.

Welcome to the new Clarity Operator Environment. We took cues from the consumer devices you enjoy using every day and integrated them into a totally new, yet familiar user interface experience. With the latest in Smart Technologies, the new Clarity Operator Environment will provide you with more intuitive, guided acquisition workflow to simplify scan setup and enable more consistency across scans.

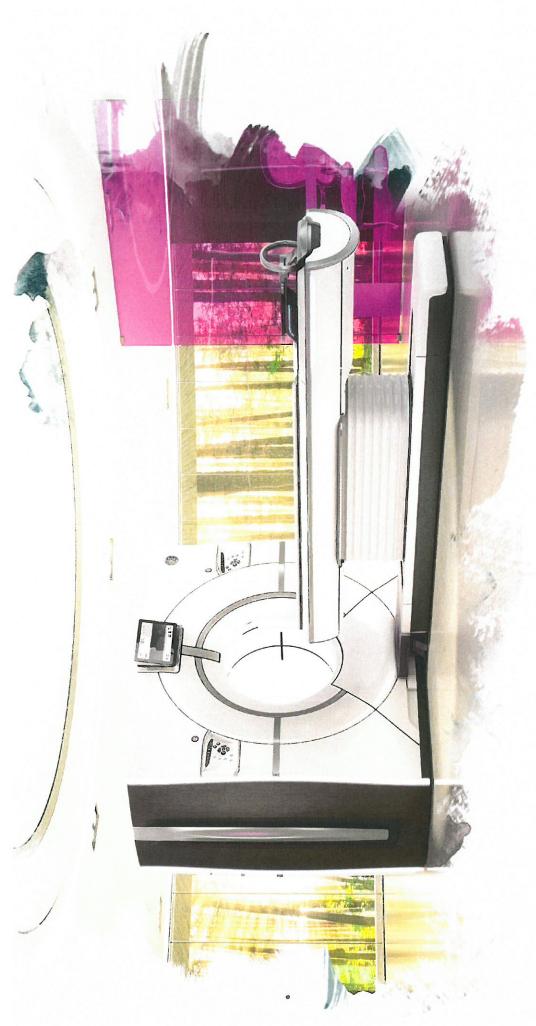
Find relevant protocols quickly with simple keyword search.

Adapt to the needs of your patient by odding or deleting an exam series with protocol cart.

Tabbed workflow allows quick access to exams from multiple patients and alerts the user when all tasks are complete.

Personalizes scan parameters based off patient scout.

Plan-ahead task lists streamlines tasks such as reconstructions, image transfers and post-processing.



REVOLUTION CT Uncompromised.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

GE Healthcare 3000 N. Grandview Blvd. Waukesha, WI 53188 **USA** gehealthcare.com



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CT-0533-02.14-EN-US JB20344XX

* Trademark of General Electric Company

GF Healthcare

GoldSeal LightSpeed¹⁶ Featuring Freedom workspace desktop

Catalog - S7868HP (ASiR* compatible by adding catalog B70752RT)

The GoldSeal* refurbished LightSpeed16* CT scanner with

Xtream* technology routinely acquires 16 sub-millimeter slices in one rotation, at a scan speed of 0.5 seconds. The system's benefits include:

- Routine use of sub-millimeter slices without image noise or coverage compromise
- Small lesion and small vessels assessments pancreas, liver or circle of willis, renal arteries, coronary arteries and peripheral vascular arteries
- HiLight* Matrix II detector is designed to deliver consistent image quality with its 21,888 individual elements: 16 rows of 0.625mm thickness and 8 rows of 1.25mm thickness
- Productivity features designed for the CT technologist include in-room start, remote gantry tilt, breathing lights with countdown timer, gantry controls mounted on all four corners of the gantry and an integrated IV Pole at the foot of the table
- Option to add innovative radiation-dose reducing ASiR technology.[†]

Power/Generator

- Performix* 6.3MHu X-ray tube
- 53kw generator
- 10mA to 440mA at 10mA increments
- 80, 100, 120, 140kVp

Table/Gantry

- Breathing lights with timer
- 70 cm aperture
- 400 lb table weight limit
- 170 cm table travel
- Remote Tilt +/-30 degrees

Image Analysis

- Helical Tilt
- Smart Prep
- 440 mA
- DMPR* 3D prospective
- Large Image Series
- Helios 2 SmartSpeed
- Direct 3D
- 90 kvA
- Volume Viewer
- Data Export
- Vari Viewer
- · Color Coding for Kids

Image Chain

- 16 fps reconstruction
- · HiLight* Matrix II detector
- HyperPlane* reconstruction algorithm
- SmartmA* automatic modulation technique
- CrossBeam* reconstruction algorithm
- · microVoxel* imaging



NEMA XR 29-2013 standard.



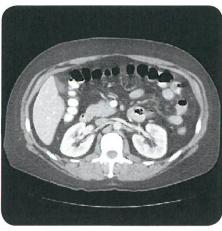


Workflow Enhancements

- Bar code reader
- Media tower with 2 bays, dvd, cd rw drives
- 2 19 inch color LCD monitors

- ConnectPro* HIS RIS interface
- Accessories Axial head holder, metalless supine coronal head holder, metalless cradle & cradle extender, QA phantom, long interconnect cables, IV pole & tray, operators stool, and CT service cabinet







The LightSpeed¹⁶ maintains the optimal speed, power and resolution needed for all kinds of CT applications. Yet it fits in the same space as a single slice for an easier installation.

Available Training

- Onsite clinical applications
- TIP Virtual Assist remote training

Warranty

Includes full 1 year warranty for system and tube.

Contact Us

GoldSeal systems are quoted subject to availability. To confirm current availability of systems or additional options in your region, contact your GE Healthcare representative.

Your access to quality medical imaging is our priority. Get the most for your budget by choosing GoldSeal today. If it meets our standards, we know it will meet yours.

Learn more at www.gehealthcare.com/goldseal

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† In clinical practice, the use of ASiR may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

Good Refurbishment Practice

The GoldSeal program is consistent with Good Refurbishment Practice (GRP) established by leading industry trade associations such as MITA (Medical Imaging & Technology Alliance) a division of NEMA (National Electrical Manufacturers Association), COCIR (European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry) and JIRA (Japan Industries Association of Radiological Systems).

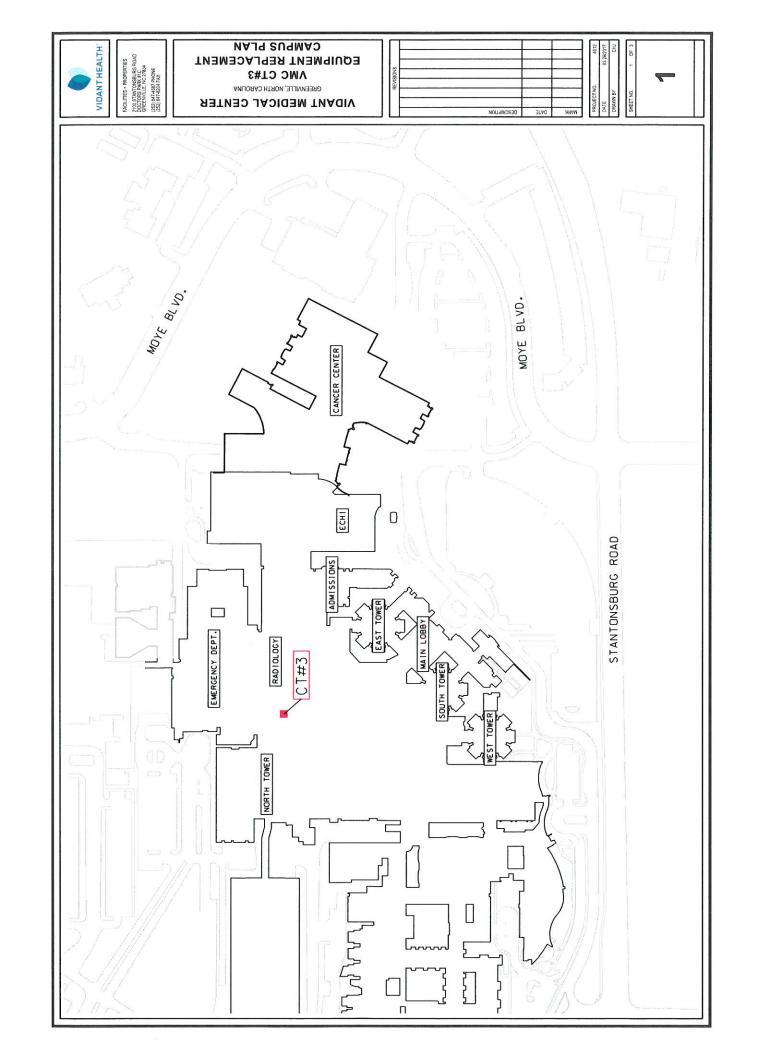
GE Healthcare 3114 N. Grandview Blvd. Waukesha, WI 53188 USA

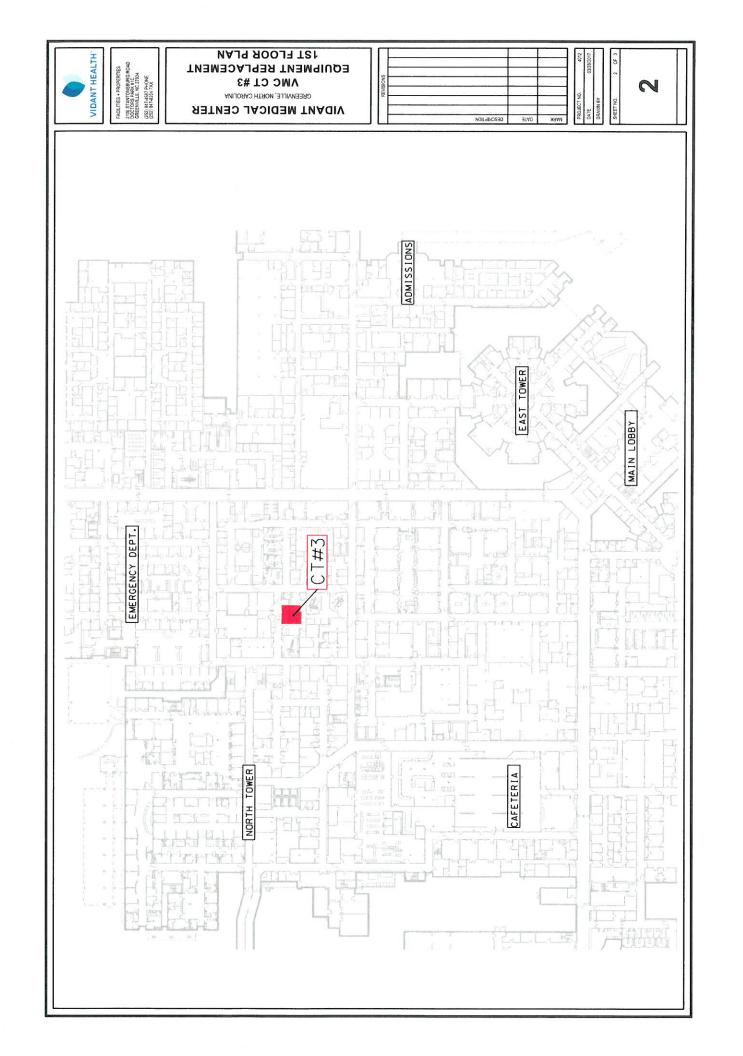
www.gehealthcare.com



GOLD-0183-05.15-EN-US JB31148US

Appendix C Current and Proposed Drawings





VIDANT HEALTH VIDANT HEALTH FACURES - PROPERTES AND STANDARD ROAD GREEN AND PROPE GREEN AND PROP GREEN AND PROP GREEN AND PROP GREEN AND PROP GREEN AN	VIDANT MEDICAL CENTER CREEVILLE, NORTH CAROLINA VMC CT #3 EQUIPMENT REPLACEMENT ENLARGED FLOOR PLAN	NOTTE DESCRIPTION	PROJECT NO. 0078 2017 OATE 0078 2017 ORGANN BY C. C. J. SHEET NO. 3 OF 3
N. S.	CT#3	CLAZ	
	SCISS THE HEAD OF THE PROPERTY		

Appendix D Capital Cost Sheet

CAPITAL COST SUMMARY

Site Costs			
(1) Full purchase price of land	\$ 0		
Acres 0 Price per Acre \$			
(2) Closing costs	\$ 0		
(3) Site Inspection and Survey	\$ 0	_	
(4) Legal fees and subsoil investigation	\$ 0	<u> </u>	
(5) Site Preparation Costs [Include]			1
Soil Borings			
Clearing and Grading			
Roads and Parking			
Sidewalks			
Water and Sewer			1
Excavation and Backfill			
Termite Treatment			
Sub-Total Site Preparation Costs	\$ 0		
(6) Other (Specify)	\$ 0	-	
(7) Sub-Total Site Costs	- Maria	\$	0
Construction Contract			
(8) Cost of Materials [Include]			
General Requirements	1		
Concrete/Masonry			I
Woods/Doors & Windows/Finishes			
Thermal & Moisture Protection			
Equipment/Specialty Items			
Mechanical/Electrical			
Sub-Total Cost of Materials	\$ 167,850		1
(9) Cost of Labor	\$ 205,150	•	- 1
(10) Other	200,100	•	
(11) Sub-Total Construction Contract		\$	373,000
Miscellaneous Project Costs		<u> </u>	57.5,555
(12) Building Purchase	\$ 0		
(13) Fixed Equipment Purchase/Lease	\$ 1,894,611	•	1
(14) Movable Equipment Purchase/Lease	\$ 0	•	- 1
(15) Furniture (lighting & waste mgmt)	\$ 0	•	- 1
(16) Landscaping	\$ 0	•	1
(17) Consultant Fees	<u> </u>		1
Architect and Engineering Fees	\$ 55,000		1
Legal Fees	Ψ 00,000	•	- 1
Market Analysis		•	- 1
CON Preparation	-	•	- 1
Sub-Total Consultant Fees	\$ 55,000	-	1
(18) Financing Costs (e.g. Bond, Loan, etc.)	\$ 55,000 \$ 0	-	I
(19) Interest During Construction	\$ 0	•	I
(20) Other (DHSR Review Fee; IS Cost)	\$ 22,000	•	1
(20) Other (DHSR Review Fee, 15 Cost) (21) Sub-Total Miscellaneous	φ 22,000	. œ	1,971,611
(21) Sub-10tal Miscella lieuus		\$	1,971,011
(22) Total Project Capital Cost (Sum A-C above)		\$	2,344,611
(22) Total Froject Sapital Gost (Sulli A-G above)		<u> </u>	4,0 11 ,011

Appendix E Existing Equipment Removal Letter

GE Healthcare PO Box 414 Milwaukee, WI 53187

March 9, 2017

Sandra Sackrison Radiology Service Line Administrator Vidant Medical Center 2100 Stantonsburg Road Greenville, NC 27834-2818

RE: GE Lightspeed 16

Dear Sandy,

Thank you for allowing General Electric Healthcare (GEHC) the opportunity to earn your business. Vidant Health is a valued customer and we truly appreciate the partnership we share.

The purpose of this letter is to inform you that General Electric Healthcare will be responsible for removing your existing GE Lightspeed 16 CT scanner as part of your upcoming GE Revolution CT purchase and estimate the de-installation and removal will be completed at no additional charge to Vidant Health. Vidant Health will be responsible for the cost of any scan room construction/renovation, clearing the rig path, rigging costs, and opening the scan room access panel. We will work closely with your facilities planning department to insure proper timing of the de-installation. The system will be de-installed, removed, and shipped by our GE team to our Goldseal business in Waukesha, WI. We understand and confirm that this unit may not be returned to the State of North Carolina without proper authorization from the North Carolina Certificate of Need (CON) section of DHSR.

Thank you again for the opportunity to earn your business. If you have any additional questions, feel free to call me at any time.

Sincerely,

Nick Bengel Imaging Account Manager, NC General Electric Healthcare 414-238-7008 Nicholas.bengel@ge.com

Appendix F Response to Required Questions

Responses to the Required Questions

1. A comparison of the existing and replacement equipment, using the format in the attached table. <u>Note</u>: If the manufacturer's model and serial numbers for the <u>existing equipment</u> are not provided, the exemption request will not be processed until the numbers are provided.

See equipment comparison table in Appendix B

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

A computerized tomography (CT) scan combines a series of X-ray images taken from different angles and uses computer processing to create cross-sectional images, or slices, of the bones, blood vessels and soft tissues inside your body. CT scan images provide more detailed information than plain X-rays do.

A CT scan has many uses, but is particularly well-suited to quickly examine people who may have internal injuries from car accidents or other types of trauma. A CT scan can be used to visualize nearly all parts of the body and is used to diagnose disease or injury as well as to plan medical, surgical or radiation treatment.

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

See the vendor quote in Appendix A for the specifications and Appendix B for the brochure of the new replacement unit. Brochures for the existing equipment are also in Appendix B.

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

The original purchase order for the existing equipment no longer exist. The original unit was purchased on 2000 for \$775,000.

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

The existing equipment was purchased new. A title for the equipment does not exist.

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

Not Applicable. The replacement equipment will be purchased new, not leased.

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

See Appendix A for the complete quote for the replacement equipment from the vendor.

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

See Appendix E for documentation from the vendor that shows the existing equipment will be permanently removed from North Carolina, will no longer be exempt from requirements of the North Carolina Certificate of Need law, and will not be used in North Carolina without first obtaining a new certificate of need.

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

The existing equipment is currently in service and is being used to perform CT scans on patients that need them. In fact, VMC performed over 44,000 CT scans in FY16 on its existing three units combined.

Appendix G Original Certificate of Need

atate

Uarn/ina Department Of Human Resources Division Of Facility Services

Certificate Of Need

Project Ide	entification Number Q-2225-85	. Effective Date .	November	22, 1985
Issued to:	Pitt County Memorial Hospital		is.	
	200 Stantonsburg Road Greenvill	e, North Car	olina 27	834

The North Carolina Department of Human Resources, pursuant to the North Carolina Health Planning and Resource Development Act of 1978, G.S. § 131-175, et seq., as amended and recodified, G.S. §131E-175, et seq., hereby finds and certifies that the new institutional health service proposed by the person listed above is consistent with, or as conditioned is consistent with the plans, standards, and criteria prescribed by the Act and the rules and regulations promulgated thereunder. The findings of the Department are attached hereto and incorporated by reference.

This Certificate affords the person listed above the opportunity to proceed with development of the proposed new institutional health service in a manner consistent with the plans, standards, and criteria prescribed by the Act and the rules and regulations promulgated thereunder. This Certificate includes and is limited to:

SCOPE: Acquisition of a Second Whole Body Computed Tomography Scanner

CONDITIONS: See Reverse Side

PHYSICAL LOCATION: Pitt County Memorial Hospital , Radiology Department

MAXIMUM CAPITAL EXPENDITURE: \$1,303,000

TIMETABLE: Ordering of Equipment: September 8, 1985

Arrival of Equipment: December 30, 1985 Operation of Equipment: March 6, 1986

FIRST PROGRESS REPORT DUE: January 30, 1986

This Certificate is limited to the person listed above and is not transferable or assignable. This Certificate may be withdrawn as provided in G.S. §131E-189, and the rules and regulations promulgated thereunder.

Issuance of this Certificate does not supplant provisions or requirements embodied in codes, ordinances, statutes other than G.S. §131E-175, et seq., rules regulations or guidelines administered or enforced by municipal, state or federal agencies or the agent thereof.

> Chief, Certificate of Need Section Division of Facility Services

DES-8001 / Pay 3/851

CONDITIONS

- 1. That Pitt County Memorial Hospital within 30 days of the date of this decision and prior to the issuance of a Certificate of Need provide to the Certificate of Need Section, DFS information for that Section's review and approval concerning the choice of a vendor and terms of the agreement to purchase a second computed tomography scanner. This condition was acceptably met by information received by this Agency October 30, 1985.
- 2. That Pitt County Memorial Hospital within 30 days of the date of this decision and prior to the issuance of a Certificate of Need provide to the Certificate of Need Section, DFS a statement from the vendor that the cost set forth in the application for this project have been agreed upon by the vendor. This condition was acceptably met by information received by this Agency October 30, 1985.

State of Aurth Caroling Department of Health and Human Services Division of Health Service Regulation

Effective January 01, 2017, this license is issued to Pitt County Memorial Hospital, Inc.

to operate a hospital known as

Vidant Medical Center

located in Greenville, North Carolina, Pitt County.

This license is issued subject to the statutes of the State of North Carolina, is not transferable and shall remain in effect until amended by the issuing agency.

Facility ID: 933410
License Number: H0104

Bed Capacity: 909

General Acute 782, Rehabilitation 75, Psych 52,

Dedicated Inpatient Surgical Operating Rooms: 7

Dedicated Ambulatory Surgical Operating Rooms: 0

Shared Surgical Operating Rooms: 26

Dedicated Endoscopy Rooms: 4

Authorized, by:

Secretary, N.C. Department of Health and Human Services



Director, Division of Health Service Regulation