

1 NonProducts

1 Rigging of 1.5T MR into facility

1 Optima MR450w 1.5T GEM 25.0

1 Optima MR450w GEM XP 1.5T MR System EX Platform

Optima MR450w GEM XP 1.5T MR System EX Platform

The Optima MR450w GEM XP 1.5T MRI system from GE Healthcare is designed to deliver a comfortable patient-friendly environment while also delivering uncompromised clinical performance and streamlined workflow.

The EX configuration includes the system electronics, operating software, imaging software, post-processing software and RF coil suite:

- eXtreme XP Gradient Technology
- Acoustic Reduction Technology
- OpTix RF Receive Technology
- Volume Reconstruction Engine
- Computing Platform and DICOM
- GEM Express Patient Table with IntelliTouch
- GEM Suite - EX Coil Package
- Express 2.0 Workflow
- ScanTools and EX Tools
- Silent Suite

eXtreme Gradient Technology: The Optima MR450w delivers high temporal resolution through 3-axis gradient amplifier power and efficient gradient coil design as well as high spatial integrity through excellent magnet homogeneity and gradient linearity over a large FOV. In addition, the XRM gradients are non-resonant and actively shielded to minimize eddy currents and use an innovative digital control architecture design to deliver high fidelity, accuracy and reproducibility.

- Peak amplitude per axis: 44 mT/m
- Up to 200 T/m/s instantaneous peak slew rate per axis

- Peak current & voltage: 830 Amps, 1650 Volts
- Digital PI feedback loop control
- Maximum FOV: 50cm
- Duty Cycle: 100%

Acoustic Noise Reduction Technology: The Optima MR450w GEM XP system features five levels of acoustic reduction technology to deliver an enhanced patient environment.

- Gradient & RF coil isolation
- Acoustic dampening material
- Vibro-acoustic isolation
- Gradient waveform optimization

OpTix RF Receive Technology: The OpTix RF receive chain enables high bandwidth, high channel count reception with improved SNR over conventional MR receiver designs. The MR signal is digitized within the scan room and then optically transmitted to the reconstruction engine in the electronics room increasing SNR for all volume acquisitions

- Coil input ports: 138
- Simultaneous channel/receivers: 32
- Receiver sampling per channel: 80 MHz
- Receiver dynamic range at 1 Hz BW: >165 dB
- Receiver resolution: up to 32 bits
- Digital quadrature demodulation

Computing Platform: The Intel Xeon Nehalem Dual Core Processor computing platform utilizes a parallel, multi-processor design to enable simultaneous scanning, reconstruction, filming, and post-processing, archiving, and networking. The keyboard assembly integrates an intercom speaker, microphone, volume controls, and emergency stop switch. Start scan, pause scan, stop scan and table advanced to center hot keys are also included.

- 8GB DDR3 Memory
- 146GB SAS disk subsystem
- 24" flat panel LCD with 1920x1200 resolution

- Single tower configuration
- DVD interchange

DICOM: The Optima MR450w GEM XP system generates MR Image, Secondary Capture, Structured Report, and Gray Scale Softcopy Presentation State DICOM objects. The DICOM networking supports both send and query retrieve as well as send with storage commit to integrate with PACS archive. Please refer to the DICOM Compliance Statement for Optima MR450w GEM for further details.

GEM Express Patient Table with IntelliTouch: The GEM Express table is a mobile patient transport device with an embedded high-density, GEM Posterior RF Array and touch sensitive IntelliTouch land-marking. The fully detachable GEM Express table is easily docked and undocked by a single operator and simple to move in and out of the exam room for patient transport and preparation. These features can be vital in instances where multiple patient transfers can negatively impact patient care or when emergency extraction is required.

The GEM Express table and embedded GEM PA coil are designed to accommodate head-first or feet-first imaging for all supported exams. The table features three high-density coil connection ports: one at each end and one embedded for the GEM PA. Two additional coil connection ports are included in the docking mechanism.

- Maximum patient weight for scanning: 500 lbs
- Maximum patient weight mobile: 500 lbs
- Maximum patient weight for lift: 500 lbs
- 205 cm symmetrical scan range
- Automated vertical and longitudinal power drive
- Fast longitudinal speed: 30 cm/sec
- Slow longitudinal speed: 0.5 cm/sec
- Integrated arm boards & non-ferrous IV pole
- IntelliTouch & Laser land-marking

GEM Suite - Expert Coil Package: The Geometry Embracing

Method - GEM - Suite of coils for the Optima MR450w GEM XP system was designed to enhance patient comfort and image quality while simplifying workflow The EX Coil Package includes:

- T/R Body Coil & T/R Head Coil
- GEM PA, HNU & AA Arrays
- GEM Standard Flex Suite & Positioners
- 3-channel Shoulder Array

The GEM Posterior Array is designed to provide optimal element geometry for each targeted anatomy by using different element geometries for the cervical-to-thoracic spine transition, thoracic and lumbar spine, and the body.

- Elements: 40
- Length: 100 cm; Width: 40cm
- S/I coverage: 100cm head-first or feet-first
- Parallel imaging in all three scan planes
- Head-first or feet-first positioning

The GEM PA is designed to be used in conjunction with the GEM HNU, GEM AA or GEM Small AA (purchased separately), and the GEM PV Array (purchased separately). The GEM PA is invisible to additional surface coils when they are placed directly on top of the surface.

The GEM Head and Neck Unit includes the head base-plate and three anatomically optimized anterior arrays: the anterior Neuro-vascular array, the anterior cervical spine array, the anterior open-face array.

The GEM HNU may be positioned at either end of the GEM Express table to support head-first or feet-first imaging and may remain in place for all body, vascular, spine, and the majority of MSK exams. The GEM HNU base plate supports the patient's head, and the Comfort Tilt variable-degree ramp can be positioned under the HNU base plate to the coil to match the patient's head and neck position.

- Elements: up to 28 combined with PA and AA
- Length: 49.5 cm; Width: 38.8 cm

- Height with NV Array: 36.8 cm
- Height with Cervical Array: 33.6 cm
- Height with Open Array: 25.7 cm
- S/I coverage: up to 50 cm with PA and AA
- Parallel imaging in all three scan planes
- Head-first or feet-first positioning

The GEM Large Anterior Array facilitates chest, abdomen, pelvis, and cardiac imaging. The GEM AA is lightweight, thin and flexible, and pre-formed to conform to the patient's size and shape. The GEM AA permits upper abdomen and pelvis imaging without repositioning the coil.

- Elements: up to 36 combined with PA
- Length: 55.6 cm; Width: 67.3 cm
- S/I coverage: 54 cm
- R/L coverage: up to the full 50 cm FOV
- Parallel imaging in all three scan planes
- Head-first or feet-first positioning

The GEM Flex Suite is a versatile set of high-density 16CH receive arrays designed to provide high quality imaging in a wide range of clinical applications. The high degree of flexibility is particularly advantageous when imaging patients that do not fit the constraints of rigid coils. This standard set includes:

- Large Flex Array: 23 cm x 70 cm
- Medium Flex Array: 23 cm x 48 cm
- GEM Flex Interface Module P-Connector
- Positioning Devices

The 3-channel Shoulder Array offers the increased signal-to-noise characteristic of phased-array technology, along with a unique sleeve design that delivers exceptional joint-imaging capabilities.

Workflow: Express Workflow 2.0 incorporates features designed to streamline and automate exams.

- In-Room Operator Console and controls

- IntelliTouch land-marking
- Protocol Libraries & Management Tools
- Workflow Manager & Auto Functions
- Inline Processing, Networking & Viewing
- Start Scan, Stop Scan, Pause/Resume Scan

The In-Room Operator Console and dual-sided controls enable interaction with the host computer from the magnet room. The user has direct control or selection of:

- Display of patient name, ID, study description
- Display and entry of patient weight
- Display and entry of patient orientation and position
- Cardiac gating waveform display
- EKG lead confirmation with gating control:
- Respiratory waveform display
- IntelliTouch Landmarking
- AutoStart
- Display of coil connection and status
- Display of table location and scan time
- Screen saver

Express Exam enables complete control of protocols for prescription, archiving, searching, and sharing. Protocols are organized into two libraries – GE authored and Site authored – and Protocol Notes allow customized notes to be saved with each protocol. ProtoCopy enables a complete exam protocol, from either a library or previous exam, to be shared with a mouse click, and the Modality Worklist provides an automated method of linking exam and protocol information for a patient directly from a DICOM Worklist server.

The Workflow Manager controls the execution of scan prescription, acquisition, processing, viewing and networking and may automate these steps, when requested by the user. Auto Coil Prescription automatically selects the optimum subset of elements for scanning, and

AutoStart automatically starts the first acquisition as soon as the technologist exits the magnet room.

Processing steps are automatically completed with Inline Processing once the data have been reconstructed and the images saved into the database. For certain tasks, the user must accept the results or complete additional steps prior to saving the images. These automatic Inline Processing steps can be saved into the Protocol Library.

Inline Viewing allows the user to conveniently view, compare, and analyze images from the Scan Desktop by selecting the desired series from the Workflow Manager.

ScanTools: ScanTools 25.0 and the EX clinical package deliver an expansive portfolio of advanced applications, imaging options, and visualization tools packaged with the system operating software to provide extensive clinical capability and enhanced productivity.

Advanced Neuro Applications:

- Silent Suite with 3D Silenz
- eDWI diffusion with Multi-B and Smart-NEX
- Diffusion Tensor diffusion with FiberTrak
- SWAN 2.0 susceptibility imaging
- IDEAL FSE & GRE-based fat-water imaging
- PROPELLER 3.0 motion robust radial FSE
- PROPELLER 3.0 FSE-based diffusion imaging
- 3D Cube 2.0 FSE-based 3D imaging
- Dual Inversion 3D Cube imaging
- Spin Echo & Fast Spin Echo Suites
- T1-FLAIR & T2-FLAIR Suite
- Gradient Echo & Fast GRE Suites
- Spoiled Gradient Echo & Fast SPGR Suites
- Echo Planar, EPI FLAIR & fMRI EPI Suites
- EchoPlus with RTFA diffusion imaging
- 3D FIESTA & 3D FIESTA-C steady-state imaging

- 3D BRAVO IR-prepped fast SPGR imaging
- 3D COSMIC modified steady-state imaging
- 2D/3D MERGE multi-echo recombined GRE imaging
- PROBE PRESS & STEAM single voxel spectroscopy
- 2D & 3D CSI
- BrainSTAT GVF & AIF parametric maps
- Ready Brain automated brain exam prescription
- DWI Prep

Advanced Spine & MSK Applications:

- Silent Suite for Spine & MSK
- eDWI diffusion with Multi-B and Smart-NEX
- Diffusion Tensor diffusion with FiberTrak
- IDEAL FSE & GRE-based fat-water imaging
- PROPELLER 3.0 motion-robust radial FSE
- 3D Cube 2.0 FSE-based 3D imaging
- Spin Echo & Fast Spin Echo Suites
- Gradient Echo & Fast GRE Suites
- 3D COSMIC modified steady-state imaging
- 2D/3D MERGE multi-echo recombined GRE imaging
- High Bandwidth FSE artifact reduction
- Spectral Spatial Fat Suppression

Advanced Body Applications:

- eDWI diffusion with Multi-B and Smart-NEX
- 3D LAVA Flex fat-water T1 DCE with Turbo ARC
- IDEAL FSE & GRE-based fat-water imaging
- IDEAL IQ fat assessment
- StarMap T2* imaging
- Body Navigators pencil-beam diaphragm tracker
- PROPELLER 3.0 motion robust radial FSE
- Spin Echo & Fast Spin Echo Suites
- Gradient Echo & Fast GRE Suites
- 3D Cube 2.0 FSE-based 3D imaging

- 3D LAVA T1 DCE imaging with Turbo ARC
- 2D/3D Dual Echo Fat-Water Imaging
- 3D FR FSE MRCP & HYDRO imaging
- Enhanced SSFSE single-shot FSE imaging
- 2D FS FIESTA steady-state imaging
- Multi-phase DynaPlan
- SmartPrep automated bolus detection
- Fluoro Trigger real-time bolus monitoring
- Respiratory Compensation, Gating & Triggering
- iDrivePro & iDrivePro Plus real-time imaging
- SPECIAL IR Fat Saturation

Advanced Vascular Applications:

- Inhance 2.0 NCE-MRA suite
- TRICKS dynamic 3D CE-MRA
- SWAN 2.0 susceptibility imaging
- Flow Analysis post-processing
- Body Navigators pencil-beam diaphragm tracker
- 2D/3D Time-Of-Flight & 2D Gated Time-of-Flight
- 2D/3D Phase Contrast & Phase Contrast Cine
- SmartPrep automated bolus detection
- Fluoro Trigger real-time bolus monitoring
- 3D QuickStep automated multi-station imaging
- Magnetization Transfer
- Flow Compensation
- Peripheral & EKG Gating & Triggering
- Respiratory Compensation, Gating & Triggering

Advanced Cardiac Applications:

- 2D Phase Sensitive MDE myocardial imaging
- MDE Plus
- Cine IR gated GRE imaging with progressive T1
- FGRE TC myocardial time course timing
- Black Blood SSFSE multi-slice imaging

- Flow Analysis post-processing
- Double-Triple IR-FSE with spectral fat suppression
- FastCine FGRE-based, gated multi-phase imaging
- 2D FIESTA Cine steady-state, gated multi-phase imaging
- 3D FS FIESTA steady-state coronary imaging
- iDrivePro Plus real-time inter-active imaging
- Blood Suppression
- Cardiac Navigator diaphragm tracker
- Cardiac Compensation, Gating & Triggering
- Respiratory Compensation, Gating & Triggering
- Cine Paging (128 images/4 windows @ 30fps)
- Flow Analysis post-processing

Advanced Imaging Tools:

- ARC & Turbo ARC data-based parallel acceleration
- ASSET 3.0 image-based parallel acceleration
- Real Time Field Adjustment for DWI
- Chemical Shift Direction Selection
- 2D/3D GradWarp compensation
- Acoustic Reduction Technology
- IR Prep, DE Prep & T2 Prep
- Full Echo Train & Tailored RF
- Spectral Spatial Fat Suppression
- SPECIAL IR Fat Suppression
- ASPIR Fat Suppression
- Matrix ZIP 512 & ZIP 1024
- 3D Slice 2X ZIP & 4X ZIP
- Square Pixel & Rectangular FOV
- No Phase Wrap & No Frequency Wrap
- Extended Dynamic Range

Advanced Processing & Display:

- Inline Viewing & Inline Processing
- Image Fusion & Image Pasting

- SCIC & PURE surface coil intensity correction
- Multi-planar Volume Reformat
- Interactive Vascular Reformat
- ClariView Image Filtering
- Compare Mode & Reference Image
- Cine Paging (128 images/4 windows @ 30fps)
- Flow Analysis post-processing

Advanced FuncTool Analysis:

- ADC maps & eADC mapping
- Correlation Coefficient analysis
- NEI Negative Enhancement Integral analysis
- MTE Mean Time To Enhance analysis
- Positive Enhancement Integral analysis
- Signal Enhancement Ratio analysis
- Maximum Slope Increase analysis
- Maximum Difference Function analysis
- Difference Function analysis

Included in this Silent Suite product are any Silent software enhancements for those sequences previously purchased, as will be provided to all customers who purchase the Silent Suite and the underlying sequences, for a period of ten (10) years. This does not include any hardware or upgrades, which shall be available to you at an additional charge.

GE Healthcare will provide the above referenced enhancements for the system quoted herein during above term if and/or when such enhancements receives any applicable FDA clearance and are made available as a general commercial offering in the United States. This Silent Suite product is not refundable and not contingent upon GE Healthcare's delivery of any particular enhancements or Customer's acceptance of any enhancements made available. Customer may, at its option, decline to accept any enhancements made available by GE Healthcare herein, provided that Customer shall not be entitled to any price reduction or refund if Customer declines to accept any such enhancements. GE Healthcare makes no

representation or warranty as to the quantity or type of technology or functionality that may be included under any such enhancements. Customer is responsible for the proper accounting for all payments made in the manner required under any state or federal program which provides reimbursement to Customer for or related to any products or services provided under this Agreement.

1

Optima MR450w with GEM Magnet Design

Optima MR450w with GEM Magnet Design

To improve the patient experience and provide high image quality, no other component of an MRI system has greater impact than the magnet. The Optima MR450w system features a short, wide bore magnet that delivers a large field of view. The magnet geometry has been optimized to reduce patient anxiety by providing more space in the bore and more exams with the patient's head outside of the magnet. The 50cm field of view provides uniform image quality and can reduce exam times since fewer acquisitions may be necessary to cover large areas of anatomy. Complemented by GE's active shielding technology, the Optima MR450w has very flexible installation specifications to provide easy siting. And with zero-boil-off magnet technology, helium refills are effectively eliminated, thus reducing operating costs and maximizing uptime.

Magnet:

- Manufactured by GE Healthcare.
- Operating field strength 1.5T (63.86 MHz).
- Active magnet shielding.
- Zero boil-off Cryogens.
- Magnet length 145cm.
- Patient Aperture 76 cm.
- Patient Bore Diameter 70cm.
- Patient Bore Length 105cm.
- Maximum Field of View 50 cm x 50 cm x 50 cm.

Magnet Homogeneity: Typical ppm and Guaranteed ppm shown.

- 10cm DSV 0.007 and 0.02.

- 20cm DSV 0.035 and 0.06.
- 30cm DSV 0.11 and 0.18.
- 40cm DSV 0.5 and 0.7.
- 45cm DSV 1.2 and 1.6.
- 50x50x45cm 2.3 and 3.6.
- 50cm DSV 3.3.

DSV = Diameter Spherical Volume. Homogeneity for an elliptical volume of 50cm (x,y) by 45cm (z) dimension volume is shown for reference. Fringe field (axial x radial):

- 5 Gauss = 4.0 m x 2.5 m.
- 1 Gauss = 6.2 m x 3.7 m.

Quiet Technology: GE has implemented Quiet Technology on critical components of the Optima MR system to reduce acoustic noise and improve the patient environment. This technology enables full use of the eXtreme Gradient Platform for excellent image quality, while maintaining a safe environment for the patient. The technology encompasses the gradient coil, RF body coil, and magnet mounting.

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Optima MR450w 1.5T GEM 32ch System Electronics

Optima MR450w 1.5T GEM 32ch System Electronics

Patient expectations of MR have shifted in recent years, as patients have begun to demand a better, more comfortable scanning experience. Increasing the size of the bore is a good first step, but it's only the beginning. The right system should overcome traditional limitations of wide-bore MR, offering both excellent images and a user-friendly experience. Patients should be more comfortable during their scan, and clinicians more comfortable in making a diagnosis. All the while, organizations should expect their MR system to help them deliver solid financial returns, maintain a high standard of patient safety, and increase the quality of their care.

The Optima MR450w with GEM 1.5T MRI scanner from GE Healthcare offers a range of new functionality, provides a more patient-friendly environment, and is a clinical workhorse system for practices of all sizes and specialties.

Volume Reconstruction Engine Architecture:

The backbone of any high-channel count system is the reconstruction architecture. The MR450w utilizes the latest multi-core processing engine acquisition to disk technology, and bulk-access memory to deliver the necessary processing power to reconstruct data from high channel count coils. With 36,000 2D FFTs/sec an impressive volume to ensure you are not hampered in image reconstruction speed. The result is reliable and efficient processing MR data that enhances exam productivity.

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Preinstallation Collector and Cable Concealment Kit

Preinstallation Collector and Cable Concealment Kit

The Preinstallation Collector delivers to the site in advance of the magnet and main electronic components. This facilitates the later delivery and installation of supporting electronics. The following are the main components in the Preinstallation collector:

- Heat exchange cabinet for distribution of chilled water.
- Primary Penetration wall panel for support of the penetration cabinet.
- Secondary Penetration wall panel for support of gradient filters, helium cables, and chilled air and water.
- Helium cryocooler hose kit.

The Cable Concealment Kit accommodates a wide-range of scan room ceiling heights and is designed to provide a clean-look installation by concealing the overhead cabling from view.

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MR450w Dock and 32-Channel Switch Collector

MR450w Dock and 32-Channel Switch Collector

The MR450w Dock and 32-Channel Switch collector provides the interface between the magnet and GEM Express Patient Table with IntelliTouch. Also included is the RF signal switching hardware that routes the input signals to the respective OpTix receivers.

- 1 Optima MR450w Cable Configuration - A
Optima MR450w Cable Configuration - A
To accommodate various electronic and scan room configurations and sizes, the MR450w has preset lengths of cables and connector kits to speed system installation. This cable collection is compatible with fixed and relocatable building configurations.
- 1 Vibroacoustic Dampening Kit
Vibroacoustic Dampening Kit
Material in the Vibroacoustic Dampening Kit can significantly attenuate the transmission of gradient-generated acoustic noise through the building structure to nearby areas, including adjacent rooms and floors above or below the MR suite. If this kit is applied during the installation of a new magnet, no additional service charges are necessary. However, installation of the Vibroacoustic Dampening kit under an existing magnet requires special steps. The steps to prepare the site and steps to install, such as modifications to the RF screen room, and other magnet rigging, modifications to the RF screen room, and other finishing work, are not covered in the pricing.
- 1 Main Disconnect Panel
Main Disconnect Panel
The Main Disconnect Panel safeguards the MR system's critical electrical components, by providing complete power distribution and emergency-off control.
- 1 English Keyboard
English Keyboard
Required for our operator console. This keyboard is ergonomically designed to keep your staff comfortable even through the longest shifts. The scan control keyboard assembly has an intercom speaker, microphone, volume controls and emergency stop switch.
- 1 Operator's Console Table

Operator's Console Table

Wide table designed specifically for the color LCD monitor and keyboard.

1	<p>1.5T Calibration Phantom Kit</p> <p>1.5T Calibration Phantom Kit</p> <p>This 1.5T calibration kit contains a large volume shim phantom, a daily quality assurance phantom, an echo-planar calibration phantom, and the associated loader shells.</p>
1	<p>Calibration Kit Phantom Holder Cart</p> <p>Calibration Kit Phantom Holder Cart</p>
1	<p>Standard Service Package for Warranty Period</p> <p>Standard service package delivered for the warranty period.</p>
1	<p>Neuro Elite Package</p> <p>Neuro Elite Package</p> <ul style="list-style-type: none">• 3D ASL• 3D PROMO• FOCUS <p>3D ASL utilizes water in arterial blood as an endogenous contrast media to help visualize tissue perfusion and provide quantitative assessment of cerebral blood flow (CBF) in ml/100 g/min. The quantitative CBF maps can be generated and stored in DICOM format.</p> <p>3D PROMO provides a real time 3D navigator based motion correction algorithm correcting for the six rigid body terms where re-acquisition of severely corrupted data provides robust, high quality, motion free, 3D outcomes. 3D PROMO is compatible with both T2 and T2 FLAIR Cube acquisitions.</p> <p>FOCUS delivers a highly efficient method for increasing the resolution in Single Shot DW EPI sequences. The outcome delivers robust high resolution results while removing artifacts typically induced from motion, image backfolding or unsuppressed tissue. In addition, with the higher efficiency of the application, the reduced field of view imaging leads to a</p>

reduction in blurring that translates into an overall improvement to the image quality result. The sequence utilizes 2D selective excitation pulses in DW-EPI acquisitions to limit the prescribed phase encoded field of view.

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MSK Elite Package

MSK Elite Package

- MAVRIC SL
- Cartigram

MAVRIC SL is a new advanced magnetic resonance imaging technique for imaging soft tissue and bone near MR conditional metallic devices. MAVRIC SL is designed to greatly reduce susceptibility artifacts, compared to conventional fast spin echo techniques, and is suitable for use on all patients cleared for MR exams.

Cartigram is a non-invasive imaging method for early detection of osteoarthritis. It quantifies the T2 relaxation of knee cartilage and can overlay the quantified parametric maps over high resolution images for clear visualization of the anatomy.

1

Cardiac Elite Package

Cardiac Elite Package

- 3D Heart
- MR Echo
- Tagging

3D Heart is a 3D Fat Sat FIESTA sequence (Optimized for 1.5T) or 3D IRPrep FGRE sequence (Optimized for 3T) that provides whole-heart coverage for coronary artery imaging or cardiac chamber imaging. It employs a T2 preparation pulse at 1.5T to provide myocardial suppression for better coronary visualization. A multi-slab localizer allows easy whole-heart prescription, and increase inflow effect for high vessel conspicuity. A navigator echo pulse that detects motion of the diaphragm is utilized to enable free breathing acquisition. The navigator has been optimized to improve robustness, and employs prospective real-time motion correction to improve motion suppression and increase scan efficiency.

As this sequence supports 3D IRPrep FGRE acquisition mode on both 1.5T and 3T, it can also be used for 3D MDE acquisition. With the purchase of 3D Heart, three additional options (3D MDE, Cine IR and Cardiac Navigator) are included.

MR Echo is a dedicated Cardiac MR interface that eases cardiac workflow and combines leading edge pulse sequences used specifically in cardiac imaging. It includes the following:

- 2D FIESTA imaging for cardiac wall motion visualization both in classic gated mode and with a real-time ability that needs no gating nor patient breath-holding. The real time imaging combines the resolution of MRI with the ease of use of Echocardiography and hence the product name MR Echo. FIESTA combined with parallel imaging permits acquisition times of approximately 50ms, which results in 20 frames/second in the real time mode.
- Time Course imaging includes two pulse sequences to visualize the myocardial tissue at a single phase over a period of time. The first of these is an FGRE pulse sequence which uses a notched saturation pulse to maximize contrast to noise ratio. The second is a FIESTA base time course technique, which permits time course imaging in multiple planes simultaneously.
- Myocardial Evaluation, within the MR Echo interface, allows scar tissue assessment of the heart.

With Cardiac Tagging, an even distribution of spatial saturation lines are applied across the myocardium in the FastCINE Gradient Echo pulse sequence to enable cardiac wall motion assessment. Tagging allows the application of 1D diagonal stripes or 2D grid saturation pulses once per R-R interval immediately following the R-wave trigger. Resulting images demonstrate motion (or lack of motion) effects.

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Breast Expert Package - GEM 1.5T

Breast Expert Package - GEM 1.5T

- VIBRANT
- 1.5T 8-channel GEM Breast Array

VIBRANT is a fast, high resolution T1-weighted imaging sequence and application optimized for evaluation of breast tissue. VIBRANT uses parallel imaging acceleration to quickly acquire multi-phase data without compromising spatial resolution. This 3D gradient echo technique, optimized for sagittal or axial acquisitions, uses an optimized inversion pulse and dual-shimming technology that yields enhanced image contrast and robust, uniform, bilateral fat suppression.

For improved tissue contrast, VIBRANT is compatible with Flex imaging (sold separately). VIBRANT Flex acquisition will provide a water-only, fat-only, in-phase and out of phase data sets in a single acquisition and produce images with significantly reduced chemical shift and susceptibility artifacts.

The GEM Breast Array generates high-definition breast images, designed for optimized use with ASSET and ARC parallel imaging techniques to accelerate image acquisition for both 2D and 3D data sets. The eight element phased-array coil helps ensure excellent temporal and spatial resolution, patient after patient. The array is compatible with VIBRANT, VIBRANT Flex, IDEAL, Fast Spin Echo, Fast Gradient Echo, spectroscopy and diffusion imaging sequences, and includes a set of MR compatible biopsy grids.

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MSK Elite Coil Package II - GEM 1.5T

MSK Elite Coil Package II - GEM 1.5T

- 1.5T 8-Channel Wrist Array - Invivo
- 1.5T 8-Channel Foot/Ankle Array - GE

The 8-Channel Wrist Array generates high definition images of the hand and wrist. The one-piece, ovoid, hinged design is optimal for small-FOV imaging and provides 12-cm S/I coverage. The coil can be positioned overhead or at the patient's side in either a vertical or horizontal orientation.

The 8-Channel Foot/Ankle Array produces high-resolution images of the foot and ankle by incorporating an 8-channel phased array design in a unique "ski" boot design. The unique coil design has excellent distal coverage and supports multiple

foot positions for optimizing studies. Parallel imaging is supported to reduce acquisition times.

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| 1 | <p>1.5T 3-Channel Shoulder Array - GE Coils</p> <p>1.5T 3-Channel Shoulder Array - GE Coils</p> <p>The 1.5T 3-channel Shoulder Array offers the increased signal-to-noise characteristic of phased-array technology, along with a unique sleeve design that delivers exceptional joint-imaging capabilities. The coil provides clear definition of the shoulder joint, specifically the head of the humerus, clavicle, acromion, supraspinatus muscle and ligaments. Patient comfort pads and restraining straps are included.</p> |
| 1 | <p>1.5T Small Flex Coil with Interface - P Connector</p> <p>1.5T Small Flex Coil with Interface - P Connector</p> <p>The Small Flex Coil is the smallest of a versatile set of high density 16-channel receive coils designed to give high quality images in a wide range of applications. The smallest of these three coils is optimized for the reduced field of view and improved image quality needed in hand, wrist, and elbow imaging applications. Together with an extra interface assembly, this coil is ideal for MR sites doing a higher volume of musculoskeletal scans.</p> <p>The high degree of flexibility is particularly advantageous when imaging patients that do not fit the constraints of rigid coils, improving the patient and technologist experience, and enabling most exams to be completed with the same level of image quality expected from dedicated coils.</p> <p>The Small Flex Coil is compatible with the Discovery MR450 and Optima MR450w systems with the standard Express Patient Table and also with the MR450w systems with the GEM Express Patient Table.</p> <p>Includes:</p> <ul style="list-style-type: none">• 1.5T Small Flex Coil.• Flex Interface Module 16-channel Fixed, P-Connector.• Flex Interface Module Cover. |
| 1 | <p>Manual Cryogen Compressor Water Bypass</p> |

GE MR Heat Exchanger Manual Cryogen Compressor Water Bypass Option

Add a level of magnet protection with a Manual Cryogen Compressor Bypass. In case of a power failure, you can cycle municipal or facility water through the cryogen compressor and reduce cryogen loss and reduce the likelihood of quenching.

FEATURES AND BENEFITS

- Easy to install and simple to use
- Helps switch over water supply to your cryogen compressor in the event of loss of power to reduce cryogen loss
- Includes fluid supply pressure gauge, temperature gauge and flow rate meter for easy verification of operation
- Manual operation reduces unintentional switch-overs and coolant dumping during brown-outs and supply power glitches

COMPATIBILITY

Must be used with a GE MR Heat Exchanger:

- E8911CA
- E8911CB
- E8911CC
- E8911CD
- E8912CA
- E8912CB
- E8912CC
- E8912CD

NOTES:

- Item is NON-RETURNABLE and NON-REFUNDABLE

MR Heat Exchanger for MR450w - Standard Ambient Temp

GE Optima MR450w Heat Exchangers - 49kW (20 Tons)

Cooling for your GE Healthcare MR system has never been so easy. GE Healthcare has partnered with the Glen Dimplex Group, a world leader in cooling systems, to offer heat exchangers designed to meet the needs of your Discovery MR

System. Now you can look to GE Healthcare for your entire MR purchase and support.

This heat exchanger is highly reliable and the only unit verified to perform with the new platform of GE Healthcare MR systems. As part of your integrated GE Healthcare solution, you'll work with a single contact throughout the whole installation. A Project Manager of Installation will help with building layout, room designs, delivery and installation - every step until your system is ready to scan. Our team will work seamlessly with architects, contractors and your internal team to help ensure timely, cost-effective completion.

Once your cooling system is running, you'll get fast, highly-skilled service support managed through GE Healthcare - with the same quality and response time you expect from your MR system.

FEATURES AND BENEFITS

- Designed to provide stable fully dedicated cooling for your MR system's needs
- Water/glycol outdoor-air-cooled heat exchangers to support your highest exam volumes and your full range of diagnostic procedures
- Redundant fluid pumps with automatic switchover let you keep operating with no loss of cooling even if one pump goes down
- Quad compressor, dual tandem refrigeration circuit design saves on energy while your system smoothly transitions through the 10% to 100% heat load capacity cycles of patient scanning and idling
- Quiet operation between patient exams and overnight - ideal for facilities in residential areas
- Comes with installation support, installation visits, preventative maintenance visit and 1 full year of parts and labor warranty
- Installation support includes: support through GE's Project Manager of Install, GE's Design Center, technical support from the Glen Dimplex company, two (2) installation visits
- Comprehensive and quality service rapidly delivered

through our CARES service solution

- 65 gallons of 100% glycol concentrate for complete system filling and diluting
- Wall mounted remote display panel provides the ability to monitor the system's operation and indicates possible system errors
- Filter kit with flow meter helps to ensure purity of water prior to entry to the MR system
- Highly recommended that Vibration Isolation Spring Kit (E8911CJ) be added for systems that will be roof top mounted

SPECIFICATIONS

- Net Cooling Capacity: 49 kW / 20 Ton
- Maximum Coolant Flow: 35 gpm (132 l/m)
- Coolant Outlet Temperature: 48 F (8.9 C)
- Coolant Temp Stability: E 1.8 F (E1.0 C)
- Max Coolant Pressure : 70 Psi (4.8 Bar)
- Refrigerant: R407C
- Ambient Temp Range: -20 to 120 F (-30 to 50 C)
- Condenser Air Flow (Approx): 18,000 Cfm
- Tank Capacity: 100 gal (378 l)
- Flow Meter Range: 4-40 gpm
- Filters: 50 micron cartridge filters
- Supply Voltage: 460v / 3 phase / 60 Hz
- Coolant Connections: 2" NPTF
- Overall Size (L x W x H) 44" x 136" x 84.5"

COMPATIBILITY:

- GE Optima MR450w 1.5T MR System

NOTES:

- Item is NON-RETURNABLE and NON-REFUNDABLE

set of positioning pads, and a set of Velcro security straps.

The Physician's Chair has padded arms for comfort and comes in a charcoal gray color that blends with any environment.

The MR Accessories Kit contains a complete set of coated positioning pads in a lightweight tote case that can be a permanent fixture in an MR suite or can be easily carried from room to room. The following pads are included: 1 knee rest, 1 knee coil insert, 1 extremity rest, segment table pads, 4 body wedges, 4 rectangle stack pads, and 2 rectangle elbow pads.

The Velcro Security Straps include one 14 inch wide set and one 6 inch wide set.

1 Medrad Spectris Solaris EP Injector w/ICBC - NOT FOR MOBILES

Medrad Spectris Solaris EP MR Injection System

Medrad Spectris Solaris EP MR injector for use use in all MR scanner field strengths up to and including 3.0T. Optimized touch-screen for fewer keystrokes, KVO (keep vein open) allows patient to be prepared before beginning the scan. Larger 115 ml saline syringe for longer KVO or multiple flushes. Includes cables and starter kit...E

NOTE: GE is responsible for unpacking, assembly, and installation of equipment. Medrad will be available for technical assistance by phone at (412)767-2400. An additional charge will apply for on-site installation assistance. Medrad will be responsible for operational checkout, final calibration, in-service of the equipment, and initial applications training. Please contact the local Medrad office two weeks in advance of installation.

1 700 VA Partial System UPS - MR

700 VA Partial System UPS - MR

Tested with all MR system computers, the 700VA Partial System UPS provides reliable, clean, consistent power for the data processing portion of the MR imaging system. The use of the double conversion UPS enables the MR system data processing portion electronics to operate when there is a power anomaly or total power loss. Valuable data and the system operating

software are protected, if there is an extended outage the UPS allows for an orderly shutdown of the system.

FEATURES/BENEFITS

- True double-conversion, online technology provides reliable operation and uninterrupted glitch free power
- Automatic frequency selection eases startup, i.e., 50 or 60 Hz compatible
- Integral Electronic Static Bypass switch means zero transfer time
- Improves user productivity, system reliability, reduces service costs and increases system uptime
- Advanced Battery Management (ABM) software monitors / indicates battery health and improves battery service life

SPECIFICATIONS

- Dimensions (H x W x D): 9.09" x 6.3" x 13.9"
- Weight: 26 lbs.
- Input Voltage Range: Single Phase 80-138 V
- Input Frequency Range: 47-70 Hz
- Rating: 700 VA / 630 W

COMPATIBILITY

- MR Systems

NOTES

- This is a partial system UPS - it covers only the computer, not the entire MR imaging system. After a power event portions of the system will have to be reset before operation can resume
- Customer is responsible for rigging and arranging for installation with a certified electrician
- ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

Expression Standard Roll Cart (Adult)

Expression is specifically designed to withstand demanding environments with strong magnetic fields, Expression delivers the highest quality results, increased patient comfort and safety, and improved productivity with a lifetime of reliability.

- Six-color waveform capability - two ECG, SpO2, EtCO2 and two IBP - provides an easy to see overview of patient status
- The cleanest and safest ECG information available, thanks to proprietary Advanced Gradient software, for any clinical magnet up to and including 3.0 Tesla
- Wireless SpO2 monitoring uses a digital signal to ensure precise values for saturation and fast acquisition, even on pediatrics.
- Precise EtCO2 measurement with waveform fill helps you make more informed decisions when monitoring respiratory gas.
- Patient body temperature monitoring allows you to provide the same standard of care in the MRI suite that you offer in the OR by allowing rectal, esophageal or surface temperature measurements.
- The smart battery management system provides a full eight hours of life on a single charge for each wireless module. The monitor displays the remaining battery life for the base unit, display and each module. A remote battery charger charges up to four depleted batteries at one time.
- Large, tilting 12-inch color screen makes patient monitoring as effortless as possible with a complete picture of patient status including ECG, SpO2, EtCO2, invasive pressures and Active Trend Arrows - that can easily be viewed from a distance
- Expression's 360 alarm light is positioned on top of the monitor, so you can be alerted to check the patient's condition even when you can't hear the alarm or when you aren't in front of the screen. Numbers and graphs are color-coded and easy to read, enabling fast decision making. Open menus don't block all vitals so you can continuously monitor the patient.
- Using the innovative, quick-set mount, you can easily remove the display and place it in a more convenient location in seconds.
- Navigation is "dial-and-select" simple. Just turn the large

control knob and click on the vital sign for more targeted menu options.

- 1 Adult Bellows for MRI Respiratory/Cardiac Gating
Adult Bellows for MRI Respiratory/Cardiac Gating
This non-magnetic, adult size bellows assembly is for use with MRI respiratory gating and respiratory compensation packages. Pediatric size also available separately (E8811EJ)...H
- 1 Small Person Bellows for MRI Respiratory/Cardiac Gating
Pediatric Bellows for MRI Respiratory/Cardiac Gating
This non-magnetic, pediatric size bellows assembly is for use with MRI respiratory gating and respiratory compensation packages. Adult size also available separately (E8811ED)...H
- 1 TiP Discovery and Optima Family Training 10 Days Onsite Plus 10 Hrs TVA
TiP Discovery and Optima Family Training 10 Days Onsite Plus 10 Hrs TVA
The TiP Training Choices program is designed for CURRENT GE customers WITHOUT HDx experience who purchase a Discovery or Optima system. Training is delivered onsite at the customer's facility and instructs students in start-up operation of the system and introduces participants to the system design, workflow, new options and clinical applications included. Extended TVA support ensures learners maintain performance over the long term.
This training program must be scheduled and completed within 36 months after the date of product delivery.

1.5T GE HDxt Sustem ID 202745MR Trade-In

- 1 MR Full Service
- MR Full Service
- The MR Full Service will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the Signa LX and EXCITE product families.
- 1 Discovery MR750/MR450 and Optima MR450w Full Service Class and Lab
- Discovery MR750/MR450 and Optima MR450w Full Service Class and Lab
- This 9-day training program will be available to all MR Service Engineers with sites upgrading to Discovery MR750, Discovery MR450 and Optima MR450w, as well as those receiving Discovery MR750, Discovery MR450 and Optima MR450w as part of forward production. The Discovery MR750, Discovery MR450 and Optima MR450w System class/lab provides the instructional and hands-on opportunities for the student to acquire the fundamental competencies to effectively and safely service the Discovery MR750, Discovery MR450 and Optima MR450w Systems.
- 1 MR Basic Service Readiness Class and Lab
- MR BASIC SERVICE READINESS (CLASS/LAB)
- The MR Basic Service Readiness in-resident course will equip the Engineer with the theory

and physics of MR and the ability to identify, operate and PM systems at a basic service level. This one-week in-residence course will provide classroom instruction as well as practical application of Basic Service skills on a variety of GE MR systems. This course is prerequisite to all of the other MR training courses. This course must be taken within 2 years from the purchase date.

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Meals And Lodging Expense

Meals and Lodging Expense has been developed to allow the customer the convenience of prepaying for their meals and lodging expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI.

The price of this convenience is based on a per day basis. Thus a quantity of 1 is equal to 1 day's meals and lodging expense. When purchasing the meals and lodging expense please be mindful of weekend days during the training stay and include 2 days to cover a weekend in the purchase quantity.

Examples: A 5-day course needs a quantity of 5. Any course longer than 5 days should include 2 days to account for the weekend stay. Any course longer than 10 days will require an additional 4 days of the meals and lodging expense to cover the 2 weekends of the stay. Thus a 15-day course would have a quantity of 19 days to cover the 2 weekends of the stay. This expense must be used within 2 years from the purchase date.

Three meals a day Monday thru Thursday, 2 meals on Friday, plus breaks are provided in the onsite cafeteria. The GE Healthcare Institute cafeteria closes Friday after lunch and reopens Monday morning for breakfast. Weekend meals are the responsibility of the customer.

Only for In-resident courses to be taken at the GE Healthcare Institute.

3

Airfare Expense

The AIRFARE EXPENSE has been developed to allow the customer the convenience to prepay their roundtrip Airfare expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI. To be used for engineers attending In-Resident Class/Lab courses for Diagnostic Imaging.

Customer will make their Airfare arrangements thru the GE Travel Center. Specific directions will be provided to the customer upon confirmation of class. Please note that this expense must be used within 2 years of the purchase date

3

Lodging Weekend Expense

Lodging Weekend Expense

Weekend Lodging Expense is to cover Saturday and Sunday lodging expenses for those engineers who are staying at the Rivers Edge Condos while attending Diagnostic Imaging Biomed training at the Healthcare Institute. Please note that there are no meals included on the weekend. Must be used within 2 years from the purchase date.

1

Spectro Elite Package - 1.5T

Spectro Elite Package - 1.5T

- BREASE
- PROSE

BREASE is a single-voxel TE-averaged PRESS sequence that is optimized for mapping the bio-chemical information of breast tissue. The TE averaging eliminates unwanted information from

side-bands to ensure clean and simple spectra and streamline interpretation. Optimized prescan and reconstruction algorithms are employed to accurately characterize tissue, especially in areas normally dominated by lipid signal.

PROSE (PROstate Spectroscopy and Imaging Exam) is an image-guided clinical imaging and spectroscopy package that allows users to acquire high-resolution prostate-gland images using optional Surface Coil Intensity Correction (SCIC) - as well as volume localized water/lipid-suppressed hydrogen spectra and multi-voxel spectroscopic images via endorectal and phased-array coils.

1

Magnacoustics Genesis Ultra Music System for MR

Magnacoustics Genesis ULTRA Communication & Music System

The Magnacoustics Genesis ULTRA is the only MRI Communication & Music System to interface directly with GE's MRI hardware and software. This allows software driven Auto Voice Commands from GE's computer to be delivered directly into the patient's ears for breath-hold sequences. This same interface allows the Technologist to talk directly to the patient through the console Mic even while the scan is in progress. The Genesis ULTRA also features an exclusive Patient Ready Signal. By simply depressing a small button on the handheld control an audible and visual signal is transmitted to the Technologist indicating the patient's readiness for the scan to begin. This simple step streamlines the breath-hold exam which amounts to approximately 30% of all exams. Patient Handheld Volume and Media Selection Controls with Voice Feedback interface with an FM/AM stereo, CD player, and iPod

interface. This distracts even the most apprehensive of your patients by allowing them to be in control of their own environment. Additionally, the Auto Gain feature automatically raises and lowers the volume level for the patient based on the Sound Pressure Level of the MRI. Magnacoustics also provides the only patented 8-driver transducer that provides the highest sound directly to the patients ears with the MagnaLink Headset System. This patented system includes a stethoscope-style headset with the MagnaPlug (replaceable earplug) that provides 29dB of attenuation and complies with GE Healthcare MR Safety Guide Operator Manual.

The Genesis ULTRA's See-In-the-Dark GUI Electroluminescent Backlit Technologist Control Unit enhances operation in the normally low-lit MRI environment allowing the Technologist to operate the entire system with the touch of a button.

The Genesis ULTRA includes an integral interface for fMRI with built-in input for audio stimulation and output for responses...E