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TRADE-IN  
MODEL: 100304.000 Achieva Quasar 3.0T Product:  
Serial Number: 32581  
Manufacturer: PHILIPS HEALTHCARE

Line #	Description	Qty
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1	<b>DS Achieva 3.0T QD X-Series R5</b>	1
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LIMITED AVAILABILITY BASED UPON RECEIPT OF CONTINGENT FREE ORDER AT THE FACTORY. CURRENT AVAILABILITY OF THIS OFFERING IS 150 DAYS ARO, SUBJECT TO AVAILABILITY AND PRIOR SALE.

NOTE: IF CUSTOMER IS UNABLE TO ACCEPT DELIVERY BY THE ABOVE STATED ARO DATE, THEN PHILIPS MAY DETERMINE A REVISED DELIVERY DATE.

### **Diamond Select Achieva 3.0T Quasar Dual X-Series System**

#### **D.S. Achieva 3.0T X-SRS R5**

The Achieva 3.0T X-series features a next-generation revolutionary, ultra-compact, actively shielded, super-conducting magnet with large 50 cm FOV capabilities. Through its use of new technology in all major subsystems (magnet, gradient, RF), the system provides everything you need to deliver cutting-edge whole-body 3.0T imaging.

#### **Patient Friendly Environment**

The Achieva 3.0T X-series is designed for enhanced patient comfort and throughput. The appealing new design provides a spacious system with unmatched patient access, virtually eliminating claustrophobic effects.

- Wide patient opening has a 110 cm (43 inch) flare
- Patient bore diameter is 60 cm (23.6 inch), length 60 cm
- Comfortable patient support - patients weighing up to 250 kg (550 lbs) to be comfortably positioned
- Patient table can be lowered to a height of 52 cm (20.4 inch)
- Horizontal travel of 215 cm (7.05 ft) with 1.0 mm (0.04 inch) accuracy
- Table speeds of 20 mm/s to 180 mm/s enable fast, easy patient positioning and easy multi-station examinations
- Adjustable fresh air supply and variable lighting
- In-bore microphone and ceiling-mounted loudspeakers support bi-directional patient-operator communication, as well as provision of music entertainment
- Hand-held nurse call button

Line #	Description	Qty
	<ul style="list-style-type: none"> <li>• Soft mattress with a headrest, knee support and positioning wedges</li> <li>• Patient headset with built-in two-way communication reduces acoustic noise by as much as 25 dB</li> <li>• Physiological synchronization for sequence triggering and gating is possible with the standard hardware:</li> <li>• Peripheral Pulse</li> <li>• Respiratory</li> <li>• VCG</li> <li>• Physiological signals can be observed on the operator's console monitor</li> <li>• Optional exam room displays include the Physiology Monitor (on the gantry) and the Interactive Exam Room Display.</li> </ul>	

#### **FreeWave digital RF system**

Achieva 3.0T X-series is powered by Philips' FreeWave, the first entirely direct digital broadband spectrometer. With a scaleable architecture, outstanding SNR performance and unique 3MHz bandwidth per RF channel, FreeWave is prepared to perform emerging clinical techniques that require higher data rates, bandwidth, and resolution.

#### **RF Receive:**

16 RF channels standard

Direct Digital Sampling at 80 MHz per channel with no analog demodulation.

3MHz Bandwidth per channel.

Modular expandable architecture

#### **RF Transmit:**

New Transmit/Receive system body coil with industry-leading SNR performance. The body coil is designed for dielectric-free imaging.

RF-SMART technology enables SAR to be effectively managed through balanced system design, maximizes scanner performance in combination with the application of Philips-unique imaging capabilities such as SENSE, SPAIR, Flip Angle Sweep and RF amplitude control.

High-performance RF power amplifier allows un-compromised access to the shortest, most complex RF pulses, even on large patients

#### **Real Time Control:**

Line #	Description	Qty
	Sub-millisecond TRs and ultra-short TEs provide improved image quality and reduced examination times.	
	Real-time imaging control for clinical motion correction, including SnapShot and optional navigator-corrections required for free-breathing cardiac techniques and high-resolution diffusion (i.e., PhaseTrak) with profile updates within 1 ms.	
	Real-time control of RF transmission, gradient switching, data acquisition and triggering.	
	<b>Standard RF coils:</b>	
	Quadrature Transmit/Receive integrated body coil	

### MR WorkSpace

The MR WorkSpace is a unique configurable solution for MR workflow targeted at resolving the management of the increasing volume of MR patient data. The MR WorkSpace includes the MR operator's console.

The MR WorkSpace can incorporate optional, advanced MR processing capabilities, directly sending the results to PACS. The result is a seamless working environment that can conform to the needs of any MR department - boosting its efficiency and productivity while avoiding the expense of dedicated workstations.

R5 prepares your MR scanner to support a new generation of fast and consistent clinical diagnostic tools, based on personalized, patient-centered imaging. R5 provides a new software platform for consistency, quality, speed and new MR applications. R5 is a prerequisite for several optional clinical solutions for head, neck, spine, MSK and body imaging, including new coils. In addition, R5 brings important improvements to the scanner GUI for better control and usability throughout the MR exam. These include:

- A harmonized user interface with new planscan environment, simplified parameter editor, increased automation and smart conflict management
- Smart Select extended to analog coils
- Selective archiving for better control of archiving & export
- Combined accession numbers for improved scan efficiency for procedure based billing
- AutoSPAIR, software controlled SPAIR delay time for consistent fat suppression
- Increased patient DB image bulk storage capacity to >= 200GB
- Patient specific safety protocols with SAR/PNS management
- Recent Microsoft Windows® OS with IPv6 support.

**ExamCards** ExamCards, a cornerstone of the MR operator console, are complete, pre-set imaging protocols that can be automatically executed with push-button ease. ExamCards contain a structured multi-sequence examination, along with automated post-processing to automatically execute entire patient studies. ExamCards involve minimal user interaction, shorten overall exam time, reduce training requirements, and improve reproducibility of examinations. Users have full freedom to customize ExamCards. The NetForum Community allows Philips users to download best-practice ExamCards created by experts worldwide. NetForum unites Philips users with Philips and with one another via Internet access to a secure Philips website directly from the MR operator console or from any PC. Netforum also provides access to the latest training seminars, instructions for use and applications tips and guides.

- Single mouse-click scanner operation.

Line #	Description	Qty
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- Automated scanning.
- Automated post processing.
- Complete patient studies may be defined and stored, including comprehensive user tips.
- Geolinks enable scan geometries to be defined and automatically copied between sequences.
- Sequences and patient location (multi-station studies) may be arbitrarily ordered for optimum acquisition, and data is automatically sorted and viewed correctly.
- In addition to standard delivered ExamCards additional ExamCards are downloadable from NetForum or copied from system to system.
- ExamCards can be locked with a password to prevent unintended changes.

### **SmartExam**

SmartExam automates exam planning with a single mouse click. Its software automatically recognizes the anatomy, plans the MR exam, employs ExamCards to conduct the study for 100% reproducibility and consistency.

#### **SmartExam:**

- Provides consistent, reproducible images
- Delivers uniform image quality, regardless of operator expertise, patient age, patient position or pathology
- Makes better use of the technologists' time
- Assures consistency in follow-up exams, improving patient care
- Provides a faster scanning experience for patients

Optional SmartExam packages are available for Brain, Spine, Knee, Shoulder and Breast imaging.

### **Viewing, processing and filming**

MR Workspace supports fast and flexible viewing, processing and film generation at each workstation.

- Window width/level, zoom, pan, rotate, mirror.
- Image annotation (text, arrows and lines).
- Image arithmetic (including addition, subtraction, division and multiplication).
- Image measurement (including distance and angle, profile or histogram display and X-Y coordinate calculation).
- Regions of Interest (ROI) statistics (area, volume, mean and standard deviation) from user defined (square, rectangular, circular, elliptical or irregular) shapes.
- Time Intensity analysis of dynamics/phases.
- Volume calculation from contours drawn in adjacent slices.
- Simultaneous visualization of up to four independent series for comparison.
- Cine movie display of up to 24 slices or dynamics/phases
- PicturePlus for user-defined reduction of noise over images in combination with edge enhancement.
- Real-time MIP, MPR and 3D surface rendering (User defined volumes of interest enable elimination of unwanted signal regions).
- Rapid, single mouse click film generation of image series using a range of predefined formats.
- "Pick & place" functionality enables the creation of films containing random image selections.
- Images and movies can be exported to Windows PC formats.

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**Computer specifications (may be supplied on one or two computers)**

Host:

- >= 32 GB host memory
  - >= 100GB system disk
  - >= 250 GB main image database disk (Approx. >= 300,000 images - 256 x 256 image resolution)
  - >= 23-inch LCD wide-screen format monitor enabling large overview
  - LCD wide screen resolution: 1920 x 1200
  - MicroSoft Windows ® OS 64 bits
  - External storage via USB port
  - 10BaseT, 100BaseT or 1000BaseT connections.
- Recon Fast reconstruction of demanding imaging techniques.
- >= 6000 images per second (256 x 256 reconstructions)
  - >= 13000 recons/sec (256 FFT, 100% FOV)
  - >= 32 GB reconstruction memory (RAM)

**Connectivity / Interoperability**

The MR Workspace fits seamlessly into local network environments. Communication is via DICOM protocols. The system can be configured for safe storage of MR images and other patient data in departmental information systems and PACS. The MR WorkSpace conforms to the new Enhanced (multi-frame) MR DICOM standard, which improves the performance of data transfer of large data sets and fully supports information associated with Diffusion and Spectroscopy.

The system can be configured (per node) to support standard DICOM MR image transfer or DICOM Enhanced MR Image Transfer. If a receiving node does not support DICOM Enhanced MR, standard DICOM MR Images will be transferred.

- DICOM Workflow Management:
- DICOM Modality Worklist
- DICOM Modality Performed Procedure Steps
- DICOM Storage Commitment
- DICOM Send/Receive:
- DICOM Enhanced MR:
- Export / Import of DICOM Enhanced MR Images
- Export / Import of DICOM MR Spectroscopy
- Export / Import of DICOM Raw
- DICOM MR:
- Export / Import of DICOM MR Images
- Export / Import of Philips Private MR Series Data
- Export / Import of Philips Private MR Spectrum Data
- DICOM Query / Retrieve of Philips MR data, all the exported image types
- DICOM Print
- Grayscale Softcopy Presentation State with preset window settings as on the console
- Basic Grayscale Print
- DICOM Media

Line #	Description	Qty
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- MR Studies on DVD (Read / Write) (optional)

- IHE Integration Profiles
- Scheduled Workflow
- Patient Information Reconciliation
- Consistent Presentation of Images
- Basic Security

### **X-series Quasar Dual gradient system**

The exclusive X-series Quasar Dual gradient system offers industry-leading performance with excellent linearity commensurate with a large 50cm FoV. The Quasar Dual gradient system enables users to choose between two amplitude/slew rate combinations to optimize critical applications. Quasar Dual allows selection of either 40 mT/m peak amplitude combined with a slew rate of 200 mT/m/ms or - in studies that profit from high gradient amplitude, such as diffusion-weighted imaging - a 80 mT/m peak amplitude. Both performance levels can be achieved over the entire FOV with best-in-class linearity. The gradient system design is force-balanced that minimizes vibration levels and acoustic noise. The Quasar Dual gradient system delivers the advanced performance levels required for new and demanding clinical applications, including high-resolution short TE/TR and EPI acquisitions.

- Dual mode gradient performance with peak amplitude selectable between 40 mT/m, slew rate 200 mT/m/ms or a 80 mT/m peak amplitude. All specifications are on axis (x, y and z).
- High linearity actively shielded gradient coil designed to minimize eddy currents and acoustic noise, and to provide accurate spatial encoding over a large 50cm whole body field of view.
- State-of-the-art water-cooled gradient amplifier technology combined with a non-resonant coil design, allows flexible generation of any type of gradient waveform with 100 % duty cycle.
- High Order shimming capabilities, first (x,y,z) and second order (x2-y2, z2, xy, xz, yz) for improved patient-specific shimming.
- SofTone reduces gradient acoustic noise by up to 30 dB (an 86 % reduction in patient-perceived acoustic noise).

### **DVD-PC**

Local media storage option intended for burning and reading DICOM data on medical grade DVD's. This option enables the operator to burn DVD's directly or prepare multiple DVD's for burning later.

- Includes DICOM viewer on every DVD created
- Create multiple DVD's for exchange with off-line stations
- Burn DVD's independently of other scanner functions.
- Dimensions (hwxwd): 10x34x38cm

### **Operator Console Table**

Standard office table for MR-operator

- Table surface 160x100 cm

Line #	#	Description	Qty
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- Adjustable Height

### **Vascular Accessory**

Comprehensive set of Vascular accessories, including:

- Arm Support to provide additional support for a patients arm when injections are required. The support easily slides under the patient and can be positioned on either side of table.
- Anterior coil frame to create a distance between the coil and the patient thereby avoiding direct contact (e.g. for peripheral vascular disease, pediatric patients).
- Feet Immobilizer to fixate the feet and lower legs in a comfortable and reproducible fashion. It is designed to reduce patient motion in peripheral vascular and whole body imaging.

### **Pre Installation Parts Achieva 3.0T**

Key siting preparation parts are provided in advanced to building contractors to minimize installation time.

### **Clinical Education Program for MR Achieva 3T Systems**

**Handover OnSite Education:** Philips Education Specialists will provide twenty-eight (28) hours of education for up to four (4) students, as selected by customer. Students should attend all 28 hours, and must include the two OffSite education attendees. This course does not cover Cardiac or Spectroscopy. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Site must be patient-ready, including all inspections approved, all accessory equipment installed and functioning (injectors, hard copy units, film processors and physiologic monitors), and all supplies stocked. Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.

**FollowUp OnSite Education:** Philips Education Specialists will provide twenty-eight (28) hours of Follow-Up Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Customer must have operated the system for at least 30 days. CEU credits may be available for each participant that meets the guidelines provided by Philips. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.

**PLEASE NOTE for all OnSite Education: It is recommended to purchase additional training, 16 or 24 hours, for customers purchasing specialist packages and requiring dedicated training for Breast Imaging, BOLD fMRI, or MultiNuclear Spectroscopy.**

**MR WebEd Live Remote:** Philips will provide one (1) **WebEd LIVE** broadcast for up to four attendees per site. WebEd Live is a web based course with formal instruction by a CTT certified trainer followed by interactive discussion with a Philips Clinical Instructor. All attendees must have access to high speed internet and a computer with speakers and keyboard. A microphone is highly recommended but not required. The WebEd LIVE topics and availability are posted on the

Line #	Part #	Description	Qty
		Clinical Education portal. Following a WebEd LIVE broadcast, an assessment will be assigned to all attendees and CEUs may be awarded upon successful completion.	
		<b>MR Registry Review:</b> This self study program consists of twelve (12) comprehensive study modules that are delivered in a reference binder. Each module contains thirty to eighty pages of easy-to-follow text, with an abundance of illustrations, images and summaries, written in the language of the clinical technologist. This course is designed to help the technologist prepare to pass the ARRT's post-primary exam in MR, and has been accredited for twenty-six (26) Category A CE credits. Credits are earned by passing a post-test for each study module.	
		<b>MR Cross Trainer:</b> This self study program consists of six (6) comprehensive study modules that are delivered in a convenient reference binder. Each study module contains thirty to sixty pages. The program is designed to acquaint the technologist with important principles, equipment and exams of MR. This course has been accredited for eighteen (18) Category A CE credits, that are earned by passing a post-test for each study module.	
		<b>MR Sectional Anatomy &amp; Imaging Strategies:</b> This self study program consists of six (6) comprehensive study modules that are delivered in an easy to follow book format. Each study module contains thirty-five to seventy pages. The first study module introduces the technologist to the concepts and terms used when working with sectional anatomy imaging modalities. Study modules 2-6 focus on specific regions of the body by identifying key anatomical structures and their physiological significance as well as practical sectional imaging strategies. This course has been accredited for eighteen (18) Category A CE credits, that are earned by passing a post-test for each study module.	
		<b>Education expires one (1) year from equipment installation date (or purchase date if sold separately).</b> Ref# 3703710891271286191-140615	
2		<b>other means of transport</b>	1
3		<b>ASL Neuro Specialist</b> ASL Neuro Specialist enables non-contrast brain perfusion imaging. It relies on the highly sensitive pseudo-continuous labeling technique (pCASL) providing high SNR and contrast, and allowing whole brain coverage with isotropic resolution. It also includes multi-phase ASL for dynamic perfusion assessment and selection of optimal labeling delays. ASL post-processing is performed on the MR console through Image Algebra and may be integrated in Examcard. Color coded ASL maps with quantification bar can be visualized in the MR console viewing environment or on Intellispace Portal.	1
4		<b>ScanTools Premium</b> Scantools Premium provides the following generic workflow features for all clinical anatomies: <ul style="list-style-type: none"> <li>• ExamCards for automated scanning and processing of patient studies.</li> <li>• SENSE parallel imaging methods for fast scan times, high resolution or to reduce susceptibility artifacts.</li> <li>• CLEAR for signal uniformity correction based on coil-sensitivity and on patient loading.</li> </ul>	1



Line #	Part #	Description	Qty	Each	Price
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- PicturePlus to improve appearance of images through edge enhancement and smoothing. Provides full control over all enhancement parameters, which can be applied automatically post-acquisition or as a post-processing option.
- High-resolution acquisitions and reconstruction (1024 matrix)

In addition, ScanTools Premium contains fast, high resolution imaging methods for the assessment of morphology of all anatomical areas including brain and spine, MSK, body and breast, cardiac, and various blood vessels with or without contrast agents. Specific features per clinical area are listed below.

#### Neuro Premium

- Sequences include SE, FFE and EPI based methods, with fat suppression methods including STIR, SPIR, ProSet and SPAIR.
- FLAIR for CSF suppression.
- Snapshot imaging, intended for uncooperative patients, eliminates the effects of patient and physiological motion through the combination of rapid TSE sequences and SENSE. Individual Snapshot images can be acquired in any orientation in approximately 250ms to 300ms. Asymmetric TSE makes Snapshot compatible with T1-, T2- and diffusion-weighted imaging.
- Single, Dual and Triple IR sequences for evaluation of gray and white matter differentiation.
- 2D TSE with Flip Angle Sweep technology for SAR and Magnetization Transfer reduction, improving gray/white matter contrast in both T2 and FLAIR acquisitions.
- 3D based anatomical sequences including:
  - VISTA, isotropic 3D TSE for volumetric acquisitions with reconstruction in any plane.
  - 3D T1-TFE sequences for volumetric acquisition and reconstruction of the original dataset in any orientation.
  - 3D TFE for isotropic coverage of the entire head in short scantimes using SENSE. A single data set can be reformatted into alternate planes both pre- and post-contrast, eliminating the need for additional scans.
- DRIVE for T2-weighted 2D and 3D TSE acquisitions enabling short TRs while maintaining contrast-to-noise and SNR. Used to improve fluid visualization (IAC), for short scan times and to increase resolution.
- Balanced FFE/TFE for high-resolution high contrast (IAC and Spine applications).
- ProSet water and fat excitation for spinal nerve root imaging. Combines the characteristics of the high-resolution volume acquisitions with ProSet water or fat only selection.
- Multiple radial projection myelography both with 2D and 3D sequences.
- MultiVane to correct motion for multi-shot TSE examinations with radial encoding. MultiVane delivers high resolution diagnostic images even in case of patient motion for T2, IR-real & FLAIR TSE imaging as well as gradient-echo examinations.
- Dynamic multi-slice T2\*-weighted sequences based on single- or multi-shot FFE-EPI methods for perfusion and fMRI sequences.
- Single-shot EPI diffusion-weighted imaging (DWI) with three diffusion directions and up to 16 b-values, robust against motion and generating isotropic DWI images.
- BolusTrak enables accurate synchronization of high-resolution CE-MRA acquisitions. BolusTrak uses a real-time fluoroscopic display of bolus arrival in the area of interest and manual start of the target acquisition. BolusTrak in combination with CENTRA minimizes venous contamination and produces optimal arterial vessel contrast and resolution.
- TRACS enables accelerated time-resolved contrast-enhanced vascular imaging. TRACS uses SENSE for image acceleration and CENTRA phase-encode ordering for optimized contrast.
- m-FFE provides unique image contrast - ranging from 2D or 3D gradient-echo sequences to the combination of echoes.

Line #	Part #	Description	Qty
		<ul style="list-style-type: none"> <li>• Venous BOLD provides T2*-weighted 3D sequences compatible with SENSE. These sequences are useful for evaluating various brain anomalies associated with venous blood.</li> <li>• Phase contrast (PC) sensitive imaging for the visualization of moving fluids.</li> <li>• MobiFlex and MobiView, compatible with all sequences, for easy Total Spine imaging.</li> <li>• T2* perfusion analysis.</li> <li>• Diffusion imaging processing with automatic generation of the ADC maps.</li> <li>• Perfusion tools package, enabling: <ul style="list-style-type: none"> <li>• Dynamic multi-slice T2*-weighted sequences based on single- or multi-shot FFE or FFE EPI methods, including the PRESTO technique.</li> <li>• Processing and calculation of T1 and T2* hemodynamic maps including Mean Transit Time (MTT), Time to Peak (TTP), Time of Arrival (TO), Negative Integral (NI), Index or upslope. All post-processing can be included as an in-line step within Examcard</li> <li>• Prospective Motion Correction: accounts for subject motion by real time monitoring of motion during acquisition and adjustment of acquisition parameters accordingly. PMC enables overall improvements in image registration.</li> </ul> </li> <li>• 3D PRESTO <ul style="list-style-type: none"> <li>• Whole brain coverage and high temporal-resolution T2*-weighted imaging for perfusion-weighted and BOLD imaging studies.</li> <li>• Higher temporal resolution and coverage compared to traditional multi-slice techniques.</li> <li>• Reduce sensitivity to susceptibility and flow artifacts associated with EPI techniques, enabling imaging throughout the brain and into the skull base.</li> </ul> </li> </ul>	

#### MSK Premium

- SE, TSE, and FFE sequences, with fat suppression provided by STIR, ProSet, SPIR and adjustable fat suppression with the SPAIR method.
- Balanced acquisitions (bFFE) for high-resolution morphology scans.
- DRIVE combined with TSE to increase sensitivity to fluids (with good T2 weighting), even with short TRs.
- Turbo-STIR for fat-suppressed evaluation of bone bruises.
- TSE with asymmetric profile ordering for proton density weighted imaging of joints with higher spatial resolution or faster scan times.
- Mixed Mode (interleaved IR/SE for combined T1 & T2 map calculation).
- Multi-Echo T2 measurements (up to 32 echoes) for T2 mapping.
- 3D FFE with ProSet for water-only (selective excitation) sequences. Optimizes cartilage and/or fluid imaging with high-resolution in all directions.
- e-THRIVE for 3D high-resolution fat-suppressed imaging for MR arthrograms and evaluation of soft tissue lesions as well as rheumatoid arthritis.
- MobiFlex for simple visualization of total spine imaging and multiple-station long bone studies.
- Dynamic imaging sequences for TMJ or other joint studies.
- Includes protocols for imaging in the presence of prostheses, to improve susceptibility using SENSE, modifications of water-fat shift and user-specified bandwidth.
- 2K imaging offers a scan matrix of 2048 x 2048, providing high resolution even with large FOVs, or lower resolution scans with a 2048 matrix reconstruction. Compatible with all imaging methods.

#### Body Premium

Line #	Part #	Description	Qty
		<ul style="list-style-type: none"> <li>TSE sequences with respiratory triggering (in combination with breath hold or free breathing).</li> <li>MultiVane motion correction for T2w TSE diagnostic images, even in case of severe patient motion.</li> <li>In and out of phase FFE/TFE sequences .</li> <li>SPAIR for high uniformity fat saturation.</li> <li>e-THRIVE volumetric imaging with fat suppression, in short breath-hold times Keyhole for high temporal dynamic imaging.</li> <li>Diffusion-weighted sequences with automated creation of Apparent Diffusion Coefficient (ADC) maps.</li> <li>MRCP sequences, (radial) single shot and 3D acquisitions.</li> <li>High-resolution pelvic imaging.</li> <li>VISTA: isotropic 3D TSE pelvic imaging allowing volumetric acquisitions to be reconstructed in any plane.</li> <li>MobiView and MobiFlex for automatic composition of data sets from multi-station acquisitions into full FOV images.</li> <li>Dynamic scan techniques for monitoring and evaluation of contrast uptake viewing.</li> <li>High Resolution Diffusion / DWIBS package enables single or multi-station high resolution diffusion weighted imaging with background suppression. Patient and physiological motion is controlled by navigator-based motion correction.</li> <li>MotionTrak Body includes a real-time respiratory navigator to synchronize data acquisition to the respiratory cycle of the patient. Options include: gating, tracking, gating &amp; tracking, triggering, triggering &amp; tracking. Tracking improves slice accuracy position over multiple breath hold sequences. Designed for all Body applications, including diffusion and DWIBS.</li> <li>4D-THRIVE / BLISS is a time-resolved 3D technique to drastically accelerate dynamic body and breast imaging through the combination of a keyhole method with CENTRA and SENSE. Combines high spatial resolution with high temporal resolution to facilitate acquisition of multiple dynamic volumetric data sets per breath-hold.</li> </ul>	

#### Breast Premium

- SPAIR for high uniformity fat saturation.
- e-THRIVE for volumetric coverage with uniform fat suppression.
- BLISS, two bilateral sagittal volumes within a single acquisition.
- Diffusion-weighted sequences with automated creation of Apparent Diffusion Coefficient (ADC) maps.
- Silicone-Only sequences optimized for breast implants.
- 4D-THRIVE / BLISS is a time-resolved 3D technique to drastically accelerate dynamic body and breast imaging through the combination of a keyhole method with CENTRA and SENSE. Combines high spatial resolution with high temporal resolution to facilitate acquisition of multiple dynamic volumetric data sets per breath-hold.

#### Cardiac Premium

- Black blood prepulses to suppress blood signal for optimized myocardial and lumen visualization.
- Multi Slice / Multi Phase for function studies.
- Retrospective triggering with real-time prospective updating for full R-to-R coverage of function studies.
- Temporal profile sharing for playback frame rates higher than acquisition frame rates.
- VCG gating for robust ECG gating and triggering (includes a four-lead cable set).

Line #	Part #	Description	Qty
		<ul style="list-style-type: none"> <li>• ECG-triggered STIR (inversion recovery TSE) including black blood imaging (triple IR)</li> <li>• ECG-triggered Inversion Recovery (including PSIR) for myocardial tissue characterization.</li> <li>• Non-invasive quantitative flow measurements of blood, including overlaid color-encoded flow maps on the console.</li> <li>• k-t BLAST provides up to five fold acceleration using an alternative parallel imaging technique employing undersampling in time and space. Suited for dynamic and real-time cardiac studies as well as single breath hold, multi-slice cine studies. Can be combined with most other imaging methods.</li> </ul>	

#### **MRA Premium**

- 3D FFE sequences for contrast-enhanced MRA, including assessment of carotids, peripherals and renal arteries.
- Quantitative flow with variable VENC values for non-invasive measurements of blood flow in three directions.
- 2D/3D Balanced TFE/FFE for fast, high-resolution non-contrast enhanced vascular imaging.
- Phase-Contrast Angio for imaging of brain vasculature.
- TRANCE for 3D high contrast TSE acquisitions without vascular contrast agents.
- Time-of-flight (inflow) sequences with TONE to improve contrast and MTC to reduce peri-orbital fat signal.
- CENTRA for 3D high-resolution contrast enhanced imaging to allow increased spatial resolution without venous contamination.
- Keyhole imaging to improve temporal resolution in dynamic studies.
- BolusTrak for synchronization of high-resolution CE-MRA acquisitions with a real-time fluoroscopic display of bolus arrival in the area of interest.
- MobiView for automated composition of multi-station acquisitions (e.g. MRA runoffs) into single images.
- MobiFlex for setup and acquisition of complex multi-station exams, combining different FOVs, resolution, geometries and SENSE acceleration factors.
- VCG gating for robust ECG gating and triggering (includes a four-lead cable set).
- 4D-TRAK is a scan method for fast, dynamic CE-MRA combining CENTRA, Keyhole and SENSE. Provides high spatial and temporal resolution simultaneously for a variety of CE-MRA applications, including evaluation of brain AVM, Subclavian Steal Syndrome, congenital heart disease or hemodialysis shunts. Can be combined with MobiFlex for direct visualization of dynamic peripheral vascular studies.

<b>5</b>	<b>Bold Specialist</b>	<b>1</b>
<p>The BOLD Specialist package provides specialized acquisition sequences for performing BOLD (Blood Oxygen Level Dependent) studies to localize T2* task-related signal changes in the brain. All acquisition techniques are automatically executed by ExamCards.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• High temporal resolution dynamic single slice, multi-slice FFE or FFE-EPI sequences. (Also included in ScanTools PRO)</li> <li>• Protocol-controlled trigger interface for integrated BOLD analysis environment.</li> <li>• Allows acquisition of up to 16,000 images.</li> </ul>		

#### **View BOLD**

Line #	Part #	Description	Qty
		<p>The IView BOLD Analysis package for the MR console provides real-time processing of functional BOLD MR data sets into functional activation maps, enabling clear visualization of task-related areas of activation.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Flexible and intuitive paradigm creation interface, allowing retention of paradigm lists for evaluation. Paradigm definitions can include filtering, clustering, default threshold settings and interleaved tasks.</li> <li>• Time Intensity Diagrams (TID) in real-time.</li> <li>• Real-time computation of statistical parameter maps to visualize and quantify areas of neural activity</li> <li>• Real-time image registration during the study, including saving of original and registered data.</li> <li>• Color-coded image maps including T-Test statistics</li> <li>• DICOM-compatible color-overlaid or numerical results of functional MR experiment.</li> </ul>	

All data created can be transferred via DICOM to PACS or other workstations and all results can be converted to Windows-compatible formats.

<b>6</b>	<b>FiberTrak Specialist</b>	<b>1</b>
	<p>The FiberTrak Specialist package provides advanced imaging and processing methods for assessment of white matter fiber tracts, which conduct information impulses throughout the brain. All acquisition techniques are automatically executed by ExamCards.</p>	

This package features:

Diffusion Tensor Imaging (DTI) extends the functionality of Diffusion Weighted Imaging (DWI) to measure the directional dependence of the diffusion coefficient in tissues. DTI data enable the creation of Fractional Anisotropy (FA) maps and visualization of the white matter tracts using fiber tracking.

Features:

- Multi-directional DTI imaging sequences using the full range of available diffusion acquisition methods, and including multiple b-value sequences.
- Selectable number of diffusion directions (up to 32)
- Automatic calculation of Fractional Anisotropy (FA) maps available in ExamCards.

With fiber tracking, the DTI sequence can be processed to visualize white matter fiber tracts.

Key features:

- Advanced 3D visualization of (multiple) white matter fiber tracts in the brain with minimal mouse interactions including:
  - Overlays of anatomical and Bold Analysis datasets
  - 3D display movies of the entire white matter fiber structures
  - 2D cross sections of anatomical and Bold Analysis datasets
  - 2D color cross sections with fiber tracts

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- Easy navigation and viewing
- Single-click fiber tracking, ROI fiber tracking, and multiple ROI fiber tracking
- Statistics on voxels fibers and ROIs

All data created can be transferred via DICOM to PACS or other workstations and all results can be converted to Windows-compatible formats.

7	<b>SWI Specialist</b>	1
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The SWI specialist package enables state-of-the-art 3D high resolution and high contrast susceptibility weighted imaging of the brain. These images are delivered by the SWIp sequence utilizing phase information to enhance contrast between tissues presenting susceptibility differences such as venous blood products or mineral deposits (e.g. iron or calcium). SWIp may help in brain diagnosis by providing high resolution display of venous cerebral vessels and facilitating visualization of lesions such as (micro)-hemorrhages or venous malformations. Additionally, SWIp provides phase maps to further help diagnosis.

8	<b>Spectroscopy Specialist</b>	1
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The 1H Spectroscopy Specialist package includes a complete range of single voxel, multi-voxel and multi-slice proton spectroscopy acquisition methods. All acquisition techniques are automatically executed by ExamCards.

Key features:

- ExamCard-based spectroscopy acquisition:
  - Fully integrated into the acquisition user interface
  - Planning on survey images including free angulations of spectroscopic volumes
  - Easy scanning, planning and reconstruction
- Short TE spectroscopy with STEAM volume selection (minimum TE < 10 ms)
- PRESS volume selection
- 2D, Multiple 2D and 3D spectroscopic imaging
- SENSE 2D and SENSE 3D Spectroscopic imaging
- 2D and 3D Turbo Spectroscopic Imaging
- Combination of Turbo Spectroscopic Imaging and SENSE to even further reduce acquisition time
- Anisotropic matrix to reduce scan time
- Automated water suppression and MOIST, a unique (adiabatic) water suppression technique which is insensitive to B1 and T1.
- Dynamic single voxel spectroscopy
- Multiple REST slabs suppression, including circular REST
- Can be used for any anatomy
- Can be used with any coil

**SpectroView:**

The SpectroView Analysis package enables visualization and processing of all spectroscopic data in just a few mouse-clicks.

Key features:

- SpectroView data processing and viewing environment enabling presentation of spectro data after processing in the form of:
  - Graphs
  - Tables

Line #	Part #	Description	Qty	Each	Price
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- Ratio and metabolite images in color overlay
- Grids on reference images including corresponding spectra
- Processed and fitted spectra
- Metabolic peak levels

All data created can be transferred via DICOM to PACS or other workstations and all results can be converted to Windows-compatible formats.

9		<b>NeuroScience Specialist</b>	1		
		NeuroScience Specialist provides functionalities to support neuroscience research such as: export functions (NIFTI, XML, SPAR/SDAT), extended data size (64k), B0 mapping, extended DTI acquisition capabilities with up to 128 b-directions, up to 32 b-values, multi-shell and user defined schemes for research neurofunctional imaging to help explore structural brain connectivity.			

10		<b>MultiVaneXD</b>	1		
		MultiVaneXD is an enhanced Multivane motion control technique, including correction for gross motion, and combinable with SENSE parallel imaging for reduced scantime in any direction. Available for 2D TSE or FFE techniques.			

11		<b>SmartExam Pack Neuro</b>	1		
		SmartExam uses Philips-exclusive technology to enable completely automatic planning of examinations. With SmartExam, studies can be consistently reproduced with optimized scan quality independent of patient, positioning and operator. This package includes:			

- SmartExam Brain
- SmartExam Spine

#### **SmartExam Brain**

SmartExam Brain enables automatic planning of head examinations.  
With SmartExam Brain, all head studies can be consistently reproduced with optimized scan quality independent of patient, positioning and operator.

#### **SmartExam Spine**

SmartExam Spine provides automated numbering of the vertebrae.  
A unique snapping mechanism allows easy definition of the precise levels for transverse stacks. Dragging a stack from one level to another results in stack snapping precisely to the new disc level. These SmartExam Spine features make it easy to use while providing consistent and reproducible MR exams.

SmartExam seamlessly integrates with ExamCards, enabling automatic planning, scanning and processing of complete patient studies with a single mouse-click.  
SmartExam ensures:

- The patient will spend less time in the system.
- The physician gets reproducible, consistent clinical results independent of operator.
- The operator can focus on managing patient throughput.
- The administrator gets increased efficiency and throughput and the practice becomes easier to staff and train.

12		<b>SENSE Head Coil 3.0T 8ch</b>	1		
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Line #	Part #	Description	Qty	Each	Price
		<p>The <b>SENSE Head coil</b> has 8 elements that are ideally suited for complete high-resolution, full coverage brain imaging, including MR angiography, spectroscopy and functional neuro examinations. The crown-shaped design enables clear visualization of the lateral and cortex areas while its open design focuses on patient-friendliness.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Maximum SENSE factor of 8</li> <li>• Coil is delivered with mirror</li> <li>• Outside coil dimensions in 320 x 540 x 630 mm</li> <li>• Compatible with all RF platforms with 8 or more channels on 3.0T</li> </ul>			
13		<b>Earthquake brackets</b>	1		
14		<b>seismic anchoring required</b>	1		
15		<b>Chiller for 1.0 or 1.5 or 3.0T Systems</b>	1		
		Chiller hardware with specification in accordance with cooling requirements necessary for selected MR scanner. Installation cost is not included.			
16		<b>Chiller Interface Panel</b>	1		
		Chiller interface panel, specification in accordance with requirements necessary for selected chiller.			
17		<b>MR Stereo - HiFi system</b>	1		
		Premium Audio Technology Meets Compact Design			
		Stream tracks from online music services, relax to an internet radio program or air your digital music collection with the clarity and assurance of a high-end audio component. With wireless-capable ethernet and optional Blue tooth USB adapter you can source music from a preloaded selection of online channels- including Pandora and Last.fm. Front loading CD player, FM/AM tuner with 40 station preset memory. USB port for iPod/iPhone. Solid 2 way bookshelf speakers.			
		Plays Audio CD, CD-R, and CD-RW Model # CS-N755			
18		<b>Rigging Charges</b>	1		
		Rigging			
19		<b>Trade in Allowance</b>	1		
		Customer represents and warrants that (i) Customer has, and shall have when title passes, good and marketable title to the equipment being traded in and (ii) has the authority to effect such trade in.			
		Product: 100304.000 Achieva Quasar 3.0T			
		Serial Number: 32581			
		Manufacturer: PHILIPS HEALTHCARE			



Line #	Part #	Description	Qty	Each	Price
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Trade-In authorization number: 39165

De-install Date: Not later than 180 days after receipt of Order

Customer will be trading-in equipment that is described on the attached System Disclosure Form (the "Trade-In"), which Trade-In the parties agree (i) will be removed on the De-install Date and (ii) is currently in the condition as represented on the System Disclosure Form. In addition, the parties agree as follows:

1. Customer represents and warrants that Customer has good and marketable title to the Trade-In as of the date of this Quotation and will have good and marketable title when Philips removes the Trade-In from Customer's site (the "Removal Date");
2. Title to the Trade-In shall pass from Customer to Philips on the Removal Date, unless otherwise agreed by Philips and the Customer;
3. Notwithstanding anything to the contrary in any Business Associate Addendum, Customer represents and warrants that as of the Removal Date all Protected Health Information will have been de-identified or removed from the Trade-In;
4. Philips may test and inspect the Trade-In prior to de-installation. If the condition of the Trade-In is not substantially the same on the Removal Date (ordinary wear and tear excepted) as it is identified on the System Disclosure Form, then Philips may reduce the price quoted for the Trade-In;
5. If the removal date is delayed until after the De-Install Date, unless Philips causes the delay, then Philips may reduce the price quoted for the Trade-In by six percent (6%) per month.
6. Philips is responsible for normal de-installation costs of the Trade-In.
7. The trade-in value will not include costs associated for any facility modifications and/or rigging required for de-installation and must be accounted for separately.
8. Customer is responsible for all plumbing necessary to properly drain coolant from chiller system and cap the lines.
9. Prior to the Removal Date, Customer shall remove from the room all equipment that is not being de-installed.

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#### Customer Note

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Replacement unit. Service will be covered under existing Service contract.