603-B93051

| Line # | Part # | Description | Qty |
|--------|--------|-------------|-----|
| **1** | | **Ambition Ingenia 1.5T X** | **1** |

**Ambition Ingenia 1.5T X Q3 2018**

Ingenia Ambition X is the new Philips 1.5T wide bore MRI. Based on its new, revolutionary fully sealed BlueSeal magnet, the solution lets you experience more productive and sustainable helium-free MR operations. Powered by the dStream architecture, the Ingenia Ambition X offers cutting-edge MR imaging techniques to help you excel clinically every day, provides flexible and intelligent tools for faster exams and more consistent scanning – all while increasing patient comfort.

Designed for today and tomorrow, the Ingenia Ambition X is the system that will serve your imaging needs well into the future.

The system software supports a generation of clinical options for head, neck, spine, MSK, body and cardiovascular imaging. In addition, it brings important improvements to the scanner GUI for better control and usability throughout the MR exam, including:

- Smart conflict management for improved workflow
- Selective archiving for better control of archiving & export
- Combined accession numbers for improved scan efficiency during procedure based billing
- Increased patient database image bulk storage capacity to 512GB
- Patient specific safety protocols with SAR/PNS management

**BlueSeal magnet system**

Built around the fully sealed BlueSeal magnet, the Ingenia Ambition X is designed to simplify your MR installation, reduce lengthy and costly disruptions in your MR operations and helps your department transition to more productive and sustainable helium-free operations. This revolutionary 70cm wide bore magnet operates with only 7 liters of liquid helium and is fully sealed, freeing up your mind and operations from helium potential complications. With BlueSeal, Philips aims to help MR facilities overcome some of the helium related issues of classic magnet design and virtually eliminate user dependency on scarce helium supply.

What's more, the ability to achieve hours of continuous high performance scanning. BlueSeal also delivers optimum quality and performance for imaging even the largest patients. Industry-leading magnet, gradient and system body coil designs provide a leading field-of-view of 55 cm.

- Ultra-efficient micro-cooling technology which require <7 liters of liquid helium
- Fully sealed design so no helium can escape, either suddenly during a quench or gradually.
- Digital control to enable EasySwitch services.
- Designed for no vent-pipe to facilitate easier siting, and further lower construction costs
- Actively shielded, lightweight design (<2,300 kg / 5,071 lbs)
- Ultra compact patient-friendly magnet design - only 1.62m in length
- Increased image accuracy for large FOV and multi-station exam

- Best-in-class magnet homogeneity (1.8 ppm / 50 x 50 x 45 cm V-RMS) for excellent image quality, off-center imaging and fat suppression.
- Image eyes-to-thighs in as few as 2 stations
- Ultra-large up to 55 cm field-of-view combined with a 70cm bore system, enabling uncompromised coverage and imaging of large patients.
- Superconducting screening coils to reduce magnetic field susceptibility caused by moving external ferrous objects.
- Side turret design for easy installations even with low ceiling and difficult access

**dStream architecture**

Unique digital broadband MR architecture capturing the purest MR signal combined with enhanced workflow and ease of use to provide increased SNR and greater efficiency in your daily operations. In addition, the number of channels is no longer determined by the MR system.

- Up to 40% greater signal-to-noise ratio (DirectDigital). DirectDigital RF receive technology samples the MR signal directly in the RF coil on the patient.
- As much as 30% improvement in throughput (FlexStream). FlexStream workflow increases system versatility and throughput.
- Easy expandability of clinical capabilities without the need for major system upgrades (EasyExpand)

Philips Ingenia Ambition X significantly improves MR image clarity, speed and expandability.

- Clarity: By digitizing the signal directly on the patient, dStream captures image data where the signal is at its purest.
- Speed: Patient and coil handling have never been easier: flexible exam setup to meet each patient's unique situation, simplified coil changeover and optimal quality for any exam.
- Expandability: The number of channels is determined by the coil, rather than limited by the system. This makes the MRI system forward-compatible to easily access emerging applications like body and cardiac and enhancements for established applications like neuro and musculoskeletal imaging.

**RF receive: DirectDigital and EasyExpand**

DirectDigital: Unique Philips technology that samples the MR signal directly in the RF coil on the patient. The fiber-optic transmission of digital broadband data from the coil to the image reconstructor removes potential noise influences typical with analog pathways.

- Capturing the purest MR signal with up to 40% greater signal-to-noise, enabling higher speed/resolution
- Increased dynamic range (max 187 dB)

DirectDigital technology additionally includes:

- Sub-millisecond TRs and ultra-short TEs
- Real-time imaging control for clinical motion correction:
  - navigator-corrections required for free-breathing cardiac techniques
  - high-resolution diffusion with profile updates within 1 ms.
- Real-time control of RF transmission, gradient switching, data acquisition and triggering.

EasyExpand: Inherent design of the dStream architecture, where channels are determined by the coils rather than the system. The MR system becomes channel independent, which means a removal of the number of channels as a system specification. This enables plug-and-play expansion of clinical capabilities.

**dS-SENSE**

Next generation parallel imaging for the dStream (dS) architecture, which simplifies and speeds up scan setup and enables higher parallel imaging factors for more speed or resolution.

- Includes quick, fully integrated reference scans which are planned automatically.

**RF transmit**

- 18 kW Solid-state RF power amplifier that provides ample energy to image large patients.
- RF-SMART technology enables SAR to be effectively managed through balanced system design, and maximizes scanner performance in combination with the application of Philips-unique imaging capabilities such as SENSE, SPAIR, Flip Angle Sweep and RF amplitude control.

Gradient system: Omega HP Gradients

High-performance gradients specifically designed for a wide bore magnet. Omega HP provides a high linearity and maximum peak and slew rate over the entire imaging field of view.

- Peak amplitude up to 45 mT/m (78 mT/m effective),peak slew rate up to 200 mT/m/ms (346 mT/m/ms effective). All specifications are on axis (x, y and z).
- Superb linearity (< 1.4% over 50 cm FOV) to improve geometric and diffusion accuracy, and to maximize resolution, even at the edges of the field-of-view.
- State-of-the-art water-cooled gradient coil and solid-state amplifier for high fidelity and 100% duty cycle.
- Non-resonant gradient design allows flexible generation of any type of gradient waveform.
- The integrated force-balanced design of the gradient coil and magnet reduces vibrations and ensures acoustic noise is minimized.
- Extremely low eddy currents for short echo times

AutoSofTone further reduces gradient acoustic noise by up to 30 dB (an 86 % reduction in patient-perceived acoustic noise).

**Standard RF receive coils**

**dS T/R System Body coil 1.5T**

The integrated dS T/R System Body coil is a transmit/receive system coil which is typically used for RF excitation, but can also be used for imaging various (large) body parts.

- Solid-state quadrature Transmit/Receive technology for improved SAR control and a high signal-to-noise ratio
- DirectDigital sampling in the coil where the MR signal is at its purest
- Excellent homogeneity
- 70 cm aperture

**dS coil solutions**

dStream (dS) coil solutions provide a full range of clinical solutions with two types of coils:

- Integrated coils combine to provide solutions for multiple applications
- Dedicated coils optimize imaging for a single application

dS coil solutions have been optimized for 3 important characteristics:

- Intrinsic signal-to-noise ratio (DirectDigital)
- Imaging coverage
- Parallel imaging performance

**dStream Interface**

Allows the connection and digitization of the signal from traditional RF coils* at the table. The digital signal from the interface is transferred via an optical connection to the reconstructor.

- Connector interface designed for easy connection and automatic release of coil
- Connects traditional coils up to 16 channels

*Note: Achieva coils are not compatible with dStream interface

**Workflow / throughput: FlexStream**

FlexStream is hinged upon the unique FlexCoverage Posterior coil that provides neck-to-toe coverage without the need for any manual coil removal or patient repositioning. The FlexCoverage Posterior coil simply combines with other unique dS coils to enable imaging with fewer coils and reduce concerns for coil positioning and patient setup. The optional FlexTrak patient transport system enables easy patient preparation and more efficient use of the MR scanner. FlexTrak solutions can instantly convert your MR system from general purpose use to dedicated advanced clinical use, such as breast imaging, intervention or therapy applications, while ensuring high throughput.

- As much as 30% improvement in throughput
- Easy coil handling through lightweight patient conforming coil design
- Large coverage coils for easier positioning
- Flexible combinations of coils
- Efficient coil usage – more applications with fewer coils
- Unique design allows up to 70% of routine applications without additional coil connections.
- FlexConnect easy to use, single-handed coil connections.

**FlexCoverage Posterior coil**

Posterior coil, used routinely in 60% of all applications, is an integrated coil below the thin table top providing neck–to- toe coverage. This coil does not need to be carried, positioned, connected nor exchanged, thereby enhancing workflow. It is always there when you need it.

- Head-to-toe coverage up to 200 cm* in combination with the base coil

 * *WholeBody Specialist required*

**FlexConnect coil connection / connectors:**

Single-handed coil connection for fast and easy plugging and unplugging of coils, and for auto-eject with FlexTrak undocking in emergency cases.

The small FlexConnect connectors use advanced fiber-optic connections for carrying digital broadband MR signals.

  • Enhanced reliability by eliminating delicate RF pin connections.

**FlexTrak table top**

Ultra-thin table top that maximizes bore space. Includes coil connections directly on the table top for fast and easy setup.
  • Ultra-thin design ensures minimal distance between patient and FlexCoverage Posterior coil for optimal SNR
  • Ultra-strong design supports patients up to 250 kg (550 lbs)
  • Wide table for enhanced patient space and comfort
  • Easily removed for patient transport using the optional FlexTrak patient transport system

**Workflow / throughput: SmartAssist**

Next generation, easy-to-use SmartExam and ExamCards software that helps the user reduce the number of manual tasks.
  • Simplifies workflow by making ExamCards more efficient
  • Can reduce repetitive tasks by half
  • Increases efficiency, reproducibility and consistency

**ExamCards**

A grouping of individual sequences and operations that define a clinical protocol. An ExamCard can include both the imaging sequences and any of the SmartAssist functionalities. ExamCards makes even the most complex exams simple.

  • A set of Philips defined ExamCards is standard
  • User-defined ExamCards can be created and stored
  • Can be exported to memory stick or portable device
  • Can be locked with a password to prevent unintended changes
  • Can be shared among any of your scanners
  • Philips Netforum provides an online community that allows ExamCards to be shared and downloaded
  • Supports user-editable tips and processing/viewing/networking steps
  • Supports single mouse-click scanner operation

SmartStart
One button action that automatically moves the table to isocenter and starts the ExamCard while the operator walks back to the console reducing the setup time.

SmartSelect coil and element selection

Automatically detects and selects the right coil and coil elements to maximize the SNR matching the area to be scanned.

  • Simplifies patient positioning and coil placement
  • No need for manual coil or element selection
  • Optimal SNR
  • Facilitates higher throughput

| Line # | Description | Qty |
|--------|-------------|-----|

**SmartExam planning (optional)**

Assists the operator in planning the MR exam. SmartExam uses sophisticated algorithms to recognize the anatomy. Then, using previously run exams as input, SmartExam automatically positions slices on the target anatomy, and uses ExamCards to conduct the study, reducing operator input to as little as a single mouse click.

- Targeted for 100% reproducibility and consistency in outcome

SmartExam optional packages include:

- SmartExam Brain
- SmartExam Spine
- SmartExam Shoulder
- SmartExam Knee
- SmartExam Breast

**SmartLink geometry linking**

SmartLink (geolink) is a tool for simplifying the planning, viewing and processing of multi-sequence multi-station exams, treating multi-station exams as one volume.
- Allows a single table sweep for multi-sequence (e.g. T1, T2, STIR) multi-station exams. All sequences are run at each station before the table is moved to the next station minimizing the number of table movements for increased patient comfort.
- Provides the flexibility to perform one sequence at all stations before starting the next sequence.
- Labels and sorts images regardless of the order in which they are acquired for subsequent viewing and processing as a single volume.
- BolusTrak (fluoroscopic scans) can be interleaved at any point during a multi-station exam.

**SmartLine processing**

Smart, automated and intelligent processing of image data. SmartLine processing steps can be run simultaneously and in parallel with image acquisition. Defined in the ExamCard, the same processing settings are used every time for consistent results.
- Progress of each processing step is clearly displayed to the user alongside the scanning progress.

The following packages are included:

- **SmartLine** VolumeView Real-time MIP, MPR and 3D surface rendering (standard or user defined volumes of interes t enable elimination of unwanted signals regions)
- **SmartLine** ImageAlgebra (including addition, subtraction, relative subtraction, cumulation, ratios, MTC, ASL calculation)
- **SmartLine** PicturePlus for user-defined image filtering (smoothing and/or edge enhancement)
- **SmartLine** T1 / T2 / rho map calculation
- **SmartLine** Delayed Reconstruction enables various retrospective image reconstructions from raw data (e.g. reconstruction of various flow directions from a 3D phase-contrast MRA dataset)

Scantools dependent options:

- **SmartLine** Diffusion registration
- **SmartLine** Diffusion (ADC, eADC, etc.)
- **SmartLine** IViewBold real-time fMRI analysis

**Viewing, filming and export**

The MR viewing environment supports fast and flexible viewing, processing and film generation

- Window width/level, zoom, pan, rotate, mirror
- Image annotation (text, arrows and lines)
- Simultaneous visualization of up to four independent series for comparison.
- Cine movie display in various formats
- Drag & drop functionality to enable the creation of films containing random image selections
- Single mouse click film generation of image series using a range of predefined formats
- Images and movies can be exported to Windows PC formats as visible on screen

**Patient environment and patient handling**

The Ingenia Ambition X was designed with the patient in mind, no matter the age, size or physical condition. The patient environment and patient handling features enhance patient comfort and facilitate exams.
Important features:
- Lightweight, patient-conforming coils
- 70 cm bore and extra large FOV imaging space
- Digital coil management workflow
- DirectDigital RF technology digitizes the signal in the RF coil on the patient
- SmartAssist efficiency enhancing software

Benefits include:

- More comfortable exams
- Decreased need for coil positioning
- Fewer retakes
- Faster exams

**Patient environment and patient handling**

The Ingenia Ambition X was designed with the patient in mind, no matter the age, size or physical condition. The Ingenia Ambition X's patient environment and patient handling features enhance patient comfort and facilitate exams.
Important features:
- Ultra-comfortable table mattresses
- Lightweight, patient-conforming coils
- 70 cm bore and extra large FOV imaging space
- Digital coil management workflow
- DirectDigital RF technology digitizes the signal in the RF coil on the patient
- SmartAssist efficiency enhancing software

Benefits include:

- More comfortable exams
- Decreased need for coil positioning
- Fewer retakes
- Faster exams

**Patient Comfort**

- A set of ultra-comfortable table mattresses designed to keep patients at ease and stable
- 70 cm aperture for enhanced patient comfort, patient fit and reduced anxiety
- Choice of feet-first or head-first imaging for most applications
- FlexCoverage Posterior coil: Never worry about the position of the patient to this coil. No cables, no connections. This invisible, patient-friendly coil is always there when you need it.
- Lightweight, conforming coils for enhanced patient comfort and operator handling
- Ambient Ring circular light to enhance the visual openness of the system.
- Adjustable fresh air supply in 6 increments
- In-bore microphone and ceiling-mounted loudspeakers support two-way patient-operator communication and music.
- Hand-held technologist call button.
- Patient headset with built-in two-way communication reduces acoustic noise by up to 25 dB.
- Look-out mirror with adjustable angulation

**Patient support**
- Patient support enables patients weighing up to 250 kg (550 lbs) to be comfortably positioned and lifted.
- Wide table top for improved patient comfort and accommodation of larger patients
- Patient table height can be quickly lowered, providing access for compromised or non-ambulatory patients.
- Detachable tabletop can be combined with one or more FlexTrak patient transport systems for efficient patient management and rapid egress. Supported by manual mode table release.
- Up to 200 cm* scan range
- Horizontal travel of 275 cm (9 ft 1 in.) with +/- 0.5 mm (0.02 inch) accuracy
- Horizontal table speeds of up to 325 mm/s to enable fast, easy patient positioning and rapid multi-station examinations
- Ergonomically designed control units on both sides of the bore to increase operating flexibility.

*\* WholeBody Specialist required*

**Physiology measurement and gating**
Wireless physiological hardware to provide synchronization for sequence triggering and gating. Wireless physiological signals can be observed on the operator's console monitor or on the optional Interventional Monitor.
- Wireless Physiology consisting of wireless Basic Triggering Unit (wBTU) and respiratory module hardware
- Physiological synchronization for sequence triggering and gating through
  - Wireless VCG

- Wireless Respiratory
- Wireless PPU (requires optional PPU Sensors)

**Patient accessories**
Comprehensive set of patient accessories, including

- Table mattress set
- Head/leg support
- Knee support
- Positioning wedges
- Small foam wedges
- Set of sandbags
- Set of patient fixation straps

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

**Host**
- Host memory 32 GByte
- System disk 120 GByte SSD, Solid State Disk technology
- Main image database disk 512 GByte SSD, Solid State Disk technology (approximately 600,000 images of 256 x 256 image resolution)
- Monitor 23-inch LCD wide-screen format monitor enabling large overview, and screen resolution: 1920 x 1200
- MicroSoft Windows ® OS 64 bits
- External image storage via USB port, DICOM STD-CTMR and E-MR format
- Network connection RJ45 10/100/1000 Mbps

**Recon**
Fast reconstruction of demanding imaging techniques (interactive real-time, dS-SENSE, high resolution and high coil receiver count).
- Processor 3.4 GHz Eight Core Processor
- Reconstruction speed 113.000 recons/sec (256 FFT, 100% FOV)
- Reconstruction memory 96 GByte

**Connectivity / interoperability**

The Philips MR system fits seamlessly into local TCP/IP based network environments. Communication is performed using DICOM protocols. The system can be configured for safe storage of MR and SC images and other patient data into departmental information systems and PACS. The Philips MR system supports the transfer of Standard MR Image, Enhanced MR Image, Enhanced MR Spectroscopy, RAW Data, SC Image and private objects. The system can be configured (per node) to support any of the above objects. If a receiving node does not support the Enhanced MR Image it will fall back to the Standard MR Image for the image transfer.

- 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
  - Export / Import of Philips Private MR ExamCards Data
- DICOM SC:
  - Export / Import of SC (color) Image Data
- DICOM Grayscale Softcopy Presentation State:
- Export / Import of Grayscale Softcopy Presentation State
- 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
  - MR Studies on DVD
- IHE Integration Profiles
  - Scheduled Workflow
  - Patient Information Reconciliation
  - Consistent Presentation of Images
  - Basic Security
  - Consistent Time

Full information on compliance with DICOM standards and available functionality is contained in Philips' DICOM Conformance Statement.

**Installation: EasySite and PowerSave**
**EasySite**

System design for rapid installation times, compact siting footprint and low ceiling heights. Because no liquid helium can escape, there is no need for a vent pipe.

- Installation times as short as 7 days. Can vary based on the country of installation and prepared site conditions.
- Industry's lightest wide-bore magnet enables siting on upper floors.
- Siting (exam/technical/control room) as little as 31 m2
- Minimum siting limitation of 3,700 kg
- Low ceiling height
- No quench pipe
- Low transport height for easy facility access
- System / building vibration transfer is minimized by special vibration pads that require no facility adaptation.

**PowerSave**

- Unique, efficient design combined with smart power management of the high power sub-systems (gradient amplifiers, RF amplifiers, etc.) enable reduction in power consumption by up to 50% without affecting overall performance.

Scantools Pro provides the following generic workflow features for all clinical anatomies:

- ExamCards, for automated scanning and processing of patient studies. Examcards can be edited during scanning. The Split Exam option provides you the ability to separate imaging series acquired during a single scan session into multiple scan instances. This allows for correct association of imaging series to ordered/scheduled examinations to facilitate proper reporting, data handling and billing activities.
- SENSE parallel imaging methods for fast scan times, high resolution or to reduce susceptibility artifacts.
- CLEAR for signal uniformity correction based on coil-sensitivity and on patient loading.
- 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 Pro 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 Pro**

- 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.

| Line # | Description | Qty |
|---|---|---|

- 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.
- Venous BOLD provides T2\*-weighted 3D sequences compatible with SENSE. These sequences are useful for evaluating various brain anomalies associated with venous blood.
- Phase contrast (PC) sensitive imaging for the visualization of moving fluids.
- MobiFlex and MobiView, compatible with all sequences, for easy Total Spine imaging.
- T2\* perfusion analysis.
- Diffusion imaging processing with automatic generation of the ADC maps.
- Perfusion tools package, enabling:
  - Dynamic multi-slice T2\*-weighted sequences based on single- or multi-shot FFE or FFE EPI methods, including the PRESTO technique.
  - Processing and calculation of T1 and T2\* hemodynamic maps including Mean Transit Time (MTT), Time to Peak (TTP), Time of Arrival (T0), Negative Integral (NI), Index or upslope. All post-processing can be included as an in-line step within Examcard
  - 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 .
- 3D PRESTO
  - Whole brain coverage and high temporal-resolution T2\*-weighted imaging for perfusion-weighted and BOLD imaging studies.
  - Higher temporal resolution and coverage compared to traditional multi-slice techniques.
  - Reduce sensitivity to susceptibility and flow artifacts associated with EPI techniques, enabling imaging throughout the brain and into the skull base.

## MSK Pro

- 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, with improved susceptibility using SENSE, modifications of water-fat shift and user-specified bandwidth.
- Up to 1024 acquisition resolution and flexible reconstruction resolution via interpolation.

**Body Pro**

- TSE sequences with respiratory triggering (in combination with breath hold or free breathing).
- MultiVane motion correction for T2w TSE diagnostic images, even in case of severe patient motion.
- In and out of phase FFE/TFE sequences .
- SPAIR for high uniformity fat saturation.
- e-THRIVE volumetric imaging with fat suppression, in short breath-hold times Keyhole for high temporal dynamic imaging.
- Diffusion-weighted sequences with automated creation of Apparent Diffusion Coefficient (ADC) maps.
- MRCP sequences, (radial) single shot and 3D acquisitions.
- High-resolution pelvic imaging.
- VISTA: isotropic 3D TSE pelvic imaging allowing volumetric acquisitions to be reconstructed in any plane.
- MobiView and MobiFlex for automatic composition of data sets from multi-station acquisitions into full FOV images.
- Dynamic scan techniques for monitoring and evaluation of contrast uptake viewing.
- 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.
- MotionTrak Body includes a real-time respiratory navigator to synchronize data acquisition to the respiratory cycle of the patient. Options include: gating, tracking, gating & tracking, triggering, triggering & tracking. Tracking improves slice accuracy position over multiple breath hold sequences. Designed for all Body applications, including diffusion and DWIBS.

**Breast Pro**

- 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.

**Cardiac Pro**

- 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).
- ECG-triggered STIR (inversion recovery TSE) including black blood imaging (triple IR)
- ECG-triggered Inversion Recovery (including PSIR) for myocardial tissue characterization.
- Non-invasive quantitative flow measurements of blood, including overlaid color-encoded flow maps on the console.

**MRA Pro**

- 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 an increase in 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).

This suite is designed for fast workflow, robust scanning and an enhanced patient experience during MRI examinations. The dS PerformanceSuite Plus delivers fast, robust scanning methods based on dStream digital quality and speed.
- Autovoice
- ComforTone
- ScanWise Implant
- SmartExam Brain
- SmartExam Spine
- SmartExam Knee
- SmartExam Shoulder
- O-MAR specialist
- mDIXON FFE Specialist
- Wholebody Specialist

| Line # | Description | Qty |
|--------|-------------|-----|

**AutoVoice**

With AutoVoice the patient is coached through the MR examination with voice audio information to the patient on length of scan, breath hold and table movement. Multiple languages can be selected. Includes a recording option for specific commands or languages.

**ComforTone**

ComforTone is a scan technique that brings noise reduction. ComforTone ExamCards will be available for routine exams (Brain, Spine, MSK) including the reference scans.

**ScanWise Implant**

ScanWise Implant is a user interface with guidance that simplifies scanning patient with MR Conditional implants. It allows you to enter the implant's MR Conditional values only once and as specified by the implant manufacturer. It will automatically adjust all scan and pre-scan parameters to meet the implant conditional values entered by the operator. ScanWise implant makes your MR scanner adhere to the entered implant conditions throughout the whole examination.

**SmartExam Brain**

SmartExam Brain enables automatic planning of head examinations for consistent head studies with optimized scan quality, independent of patient, patient positioning or operator.

**SmartExam Spine**

SmartExam Spine, for spine examinations with automated numbering of the vertebrae. Includes a snapping mechanism, which allows easy definition of the levels for transverse stacks. Dragging a stack from one level to another makes the stack snap accurately to the next spinal disc level.

**SmartExam Knee**

SmartExam Knee enables automatic planning of knee examinations for consistent studies with optimized scan quality, independent of patient, patient positioning or operator.

**SmartExam Shoulder**

SmartExam Shoulder enables automatic planning of shoulder examinations for consistent shoulder studies with optimized scan quality, independent of patient, patient positioning or operator.

**O-MAR Specialist**

O-MAR improves soft tissue visualization in the vicinity of MR conditional orthopedic implants. Suitable for use on all patients cleared for MR exams, it uses the latest acquisition and reconstruction techniques to help reduce susceptibility artifacts caused by metal. It uses MARS (Metal Artefact Reduction Sequences) high bandwidth TSE methods in combination with VAT (View Angle Tilting) technology to further reduce in-plane distortion. For use with MR conditional orthopedic implants only. Contact the implant manufacturer in order to obtain the latest safety information to ensure patient safety relative to the use of an MR procedure.

**mDIXON XD FFE**

mDIXON XD FFE Specialist brings the next generation mDIXON algorithms for enhanced fat-free performance with a 2-point mDIXON method with flexible echo times and a 7-peak fat spectrum algorithm. mDIXON XD FFE Specialist provides fat-free FFE imaging with large FOV and sub-millimeter resolution, extending it use to challenging anatomies, including head, neck and spine, with access to new imaging methods such as subtractionless MRA.

**Wholebody Specialist**

Whole Body Specialist enables automated multi-station head-to-toe coverage. Extended table stroke for dStream* systems and table-top extender for other systems to increase total table travel*, allowing whole-body multi-station feet-first imaging studies. Single table motion by combining all imaging sequences per station. Scan align guarantees user defined overlap between stations. Whole Body Specialist extends DWIBS to whole body coverage for multi-station body oncology exams.

| Line # | Description | Qty |
|--------|-------------|-----|

*Table stroke and imaging coverage varies depending on system type. Product Specifications of respective product specify the stroke and coverage.*

This suite is designed for fast workflow, robust scanning and an enhanced patient experience during MRI examinations. The dS PerformanceSuite Pro delivers fast, robust scanning methods based on dStream digital quality and speed. The dS PerformanceSuite Pro brings additional methods for motion fat reduction motion artifact reduction and free breathing imaging.

- MultiVane XD
- 3D Vane XD
- mDIXON XD TSE

**Multivane XD**

MultiVane XD is an enhanced Multivane technique for Multi-slice TSE and for Multi-slice FFE techniques, suitable for all anatomies. It provides an enhanced Multivane motion control algorithm especially suited for gross motion. Combinable with SENSE parallel imaging in any direction allowing for short scan times.

**mDIXON XD TSE**

mDIXON XD TSE Specialist brings the next generation mDIXON algorithms for enhanced fat-free performance, with a fast, 2-point mDIXON method, flexible echo times and a 7-peak fat spectrum algorithm. mDIXON XD TSE Specialist can be combined with Multivane XD in the head for simultaneous fat- and motion free imaging. mDIXON XD TSE can be used in various parts of the body, including MSK, head & neck, spine and pelvis.

**3D Vane XD**

3D Vane XD enables a 3D radial FFE acquisition which reduces motion artefacts compared to 3D Cartesian imaging during free breathing. The method applies a 3D radial acquisition with a golden angle radial stack of stars to remain insensitive with the (randomized acquisition of k-space) acquisition compared to the regular breathing pattern and is compatible with 3D mDIXON.

**VitalScreen**

VitalScreen contains two displays mounted on the MR front covers. VitalScreen provides the MR operator with patient identification details and guidance on exam set-up. Information is provided for patient orientation, VCG positioning, coil, examination name, number of scans, and total exam time. VitalScreen is multi-touch and allows the operator the change patient position or enter patient weight. It provides access to basic exam controls like ventilation, sound and light. The integrated workflow of VitalScreen means no exam adaptations are necessary on the MR console before starting the exam, allowing the MR exam to automatically start as soon as the scanner room door is closed.

**VitalEye**

VitalEye provides a patient's respiratory trace. Fully automatic without interaction or accessories. The technology is based on optic detection of submillimeter breathing motion of the patient in the bore. VitalEye is fully integrated into the MR system and workflow. The detected respiratory trace is displayed on VitalScreen and the MR console and can be used for respiratory triggered scans instead of a respiratory belt.

**dS PerformanceSuite Premium**

This suite is designed for fast workflow, robust scanning and an enhanced patient experience during MRI examinations. The dS PerformanceSuite Premium delivers fast, robust scanning methods based on dStream digital quality and speed.

- Compressed SENSE Essential

- Compressed SENSE MSK
- Compressed SENSE Body
- Compressed SENSE Cardiac

**Compressed SENSE Essential**
Compressed SENSE is a break-through acceleration technique speeding up not only sequences but your entire exam. This new paradigm in productivity requires a unique implementation, enabling 2D and 3D scans to be up to 50% faster with virtually equal image quality (compared to scans without Compressed SENSE). Compressed SENSE can be used in all anatomical contrasts and all neuro and spine anatomies.

**Compressed SENSE MSK**
Compressed SENSE is a break-through acceleration technique speeding up not only sequences but your entire exam. This new paradigm in productivity requires a unique implementation, enabling 2D and 3D scans to be up to 50% faster with virtually equal image quality (compared to scans without Compressed SENSE). Compressed SENSE can be used in all anatomical contrasts and all MSK anatomies.

**Compressed SENSE Body**
Compressed SENSE is a break-through acceleration technique speeding up not only sequences but your entire exam. This new paradigm in productivity requires a unique implementation, enabling 2D and 3D scans to be up to 50% faster with virtually equal image quality (compared to scans without Compressed SENSE). Compressed SENSE can be used in all anatomical contrasts and all body anatomies.

**Compressed SENSE Cardiac**
Compressed SENSE is a break-through acceleration technique speeding up not only sequences but your entire exam. This new paradigm in productivity requires a unique implementation, enabling 2D and 3D scans to be up to 50% faster with virtually equal image quality (compared to scans without Compressed SENSE). Compressed SENSE can be used in all anatomical contrasts and all cardiovascular anatomies.

**dS NeuroSuite Plus**

Advanced diagnostics are a crucial part of the treatment protocol for neurological disorders. With its superb 3D imaging of soft tissue, MRI can capture a wealth of structural and physiological information about the brain. Philips' neuro-diagnostic applications empower you to resolve complex questions with more certainty. Our dStream digital broadband architecture te chnology, which provides high-quality images at remarkable speed, helps you gain visibility into neurological anatomies and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- SWI Specialist
- Spectroscopy Specialist
- Black Blood imaging
- 3D SpineVIEW

**SWI Specialist**
The SWI Specialist package enables a SWIp sequence offering:

- 3D high resolution and high contrast susceptibility weighted imaging of the brain
- High SNR thanks to a multi-echo technology
- Enhanced contrast between tissues presenting susceptibility differences such as venous blood products or mineral deposits (e.g. iron or calcium) thanks to the utilization of MR phase information
- Visualization of phase maps to further help diagnosis.

**Spectroscopy Specialist**
The 1H Spectroscopy Specialist package includes a complete set of single voxel, multi-voxel and multi-slice proton spectroscopy acquisition methods executed by ExamCards. Key features are:

- 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 and with any coil

Includes the SpectroView Analysis package for visualization and processing of all spectroscopic data. Enables presentation of spectro data after processing in the form of:

- Graphs
- Tables
- 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.

**Black Blood imaging**
Black Blood imaging: features pre-pulses to achieve suppression of the blood signal for optimum myocardial and lumen visualization in cardiac and vascular imaging

**3D SpineVIEW**
3D SpineVIEW delivers high resolution isotropic 3D TSE acquisitions in short scan times by employing high 3D dS SENSE factors. Isotropic acquisition allows reformats in arbitrary planes.

**dS NeuroSuite Pro**

| Line # | Description | Qty |
| --- | --- | --- |

Advanced diagnostics are a crucial part of the treatment protocol for neurological disorders. With its superb 3D imaging of soft tissue, MRI can capture a wealth of structural and physiological information about the brain. Philips' neuro-diagnostic applications empower you to resolve complex questions with more certainty. Our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, helps you gain visibility into neurological anatomies and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- 3D NerveVIEW
- ZOOM Diffusion Imaging
- FiberTrak Specialist

**3D NerveVIEW**
3D NerveVIEW delivers high resolution isotropic 3D TSE acquisitions of the Brachial Plexus and Lumbar Plexus with short scan times by employing high 3D dS SENSE factors, and combining it with high bandwidth STIR fat suppression. Isotropic acquisition allows reformats in arbitrary planes.

**ZOOM Diffusion Imaging**
With ZOOM Diffusion imaging diffusion images with small FOV's will have reduced geometric distortion in anatomies like spine and prostate, compared to full FOV diffusion EPI scanning. The ZOOM Diffusion imaging applies non co-planar excitation and outer volume suppression to reduce fold over artifacts.

**FiberTrak Specialist**
The FiberTrak Specialist package provides advanced imaging and processing methods for assessment of white matter fiber tracts in the brain. Functionalities include:
- Diffusion Tensor Imaging (DTI) (up to 32 directions and 16 b-values).
- Automatic calculation of Fractional Anisotropy (FA) maps.
- Visualization of the white matter tracts using fiber tracking.

Fibertracking key features:
- Advanced 3D visualization of (multiple) white matter fiber tracts.
- 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.
- Multiple ROI fiber tracking.
- Statistics on voxels fibers and ROIs.

**dS MSKSuite**

Advanced diagnostics are a crucial part of the treatment protocol for MSK disorders. Philips' MSK-diagnostic applications empower you to resolve complex questions with more certainty, especially in cases where metal implants are present. Utilizing our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, you can deliver visibility into MSK anatomies, and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and

grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- Upgr to O-MAR XD Specialist
- 2K Imaging

**Upgr to O-MAR XD Specialist**

O-MAR XD improves soft tissue visualization in the vicinity of MR conditional orthopedic implants. Suitable for use on all patients cleared for MR exams, it uses the latest acquisition and reconstruction techniques to help reduce susceptibility artifacts caused by metal. It employs MARS (Metal Artefact Reduction Sequences) high bandwidth TSE methods and VAT (View Angle Tilting) technology. The upgrade to O-MAR XD Specialist adds SEMAC to reduce metal-induced distortions both in-plane and through-plane. For use with MR conditional orthopedic implants only. Contact the implant manufacturer in order to obtain the latest safety information to ensure patient safety relative to the use of an MR procedure.

**2K Imaging**

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.

**dS BodySuite**

Advanced diagnostics are a crucial part of the treatment protocol for diseases affecting the liver, pelvic area and breast. With its superb 3D imaging of soft tissue, MRI can capture a wealth of structural and physiological information on the body. Utilizing our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, you can deliver visibility into body anatomies, and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- 3D PelvisVIEW
- 4D Thrive/BLISS

**3D PelvisVIEW**

3D PelvisVIEW delivers high resolution isotropic 3D TSE acquisitions in short scan times by employing high 3D dS SENSE factors. Isotropic acquisition allows reformats in arbitrary planes.

**4D Thrive/BLISS**

With 4D imaging technique (4D-THRIVE, 4D-BLISS and 4D-TRAK) provides a 4D time-resolved technique that combines a keyhole method with CENTRA and SENSE techniques to drastically accelerate acquisition speeds, resulting in acceleration factors as much as 60 times faster than traditional scanning.

**dS VascularSuite**

Advanced diagnostics are a crucial part of the treatment protocol for vascular diseases. A comprehensive suite of MR angiography methods, including dynamic non-contrast acquisitions and non-subtraction peripheral MRA with mDIXON XD FFE can capture a wealth of structural and physiological information about the blood vessels. Philips' diagnostic applications for MRA empower you to resolve complex questions with more certainty. Utilizing our dStream digital broadband architecture technology which provides high-quality images at remarkable speed, you can deliver visibility into vascular anatomies, and view multi-dimensional data to enable diagnostic

decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- 4D-TRANCE
- 4D-TRAK XD
- Upgrade mDIXON XD FFE Multistation

**4D-TRANCE**
4D-TRANCE is a time-resolved technique for non-contrast angiography, promoting patient comfort and enabling you to evaluate the patency of the vascular anatomy in the brain using endogenous contrast with MIP visualization of multiple phases. 4D-TRANCE enables high temporal resolution down to 160 msec.

**4D-Trak XD**
4D-TRAK XD provides a fast, dynamic contrast-enhanced MR Angiography method with flexible sampling of both the arterial- and venous phase, enabling high spatial and temporal resolution simultaneously.

**Upgrade mDIXON XD FFE Multistation**
mDIXON XD MultiStation allows you to perform peripheral MR Angiography with improved vessel to-background contrast in only one single pass. You will be able to perform your peripheral MR Angiography acquisitions without the use of a subtraction mask, eliminating artifacts that could arise from misalignment, due to patient motion, between the pre and post contrast scan. Enjoy fast, robust peripheral MR Angiography.

**dS Base 1.5T**

An integrated coil solution for total spine related imaging. It includes the FlexCoverage Posterior and the Base coil with 90 cm coverage, using 44 channels maximum. Posterior coil, used routinely in 60% of all applications, is an integrated coil below the thin table top providing neck-to- toe coverage. This coil does not need to be carried, positioned, connected nor exchanged, thereby enhancing workflow. It is always there when you need it.

- Coverage: 90 cm
- Maximum nr. of channels: 44
- Main applications: Total spine, C-Spine, T-Spine, L-Spine
- Coil type: Integrated
- DirectDigital sampling in the coil where the MR signal is at its purest, without loss in the RF chain, enabling:
  - Enhanced SNR
  - dS-SENSE enhanced parallel imaging performance
  - Single FlexConnect coil connection and cable for fast and easy setup

The Base coil can stay on the table for most examinations without exchanging coils and additional dS Base is ideal to improve workflow by preparing the patient outside the magnet room.

**dS HeadNeck 1.5T**

An integrated coil solution for head, neck and total neuro related imaging. It includes the HeadNeck coil. Combined with the FlexCoverage Posterior coil and Base it enables:
- 45 cm coverage, using 20 channels maximum (Head-Neck)
- 90 cm coverage, using 52 channels maximum (Total Neuro)

- Coverage: 45 cm (HeadNeck) and 90 cm (Total Neuro)
- Maximum nr. of channels: 20 (HeadNeck) and 52 (Total Neuro)
- Main applications: NeuroVascular, Head, Brain, Pediatric,Total Neuro, Total spine, C-Spine, T-Spine, L-Spine
- Coil type: Integrated
- Lightweight coil(s)
- DirectDigital sampling in the coil for the purest MR signal without loss in the RF chain, enabling:
  - Enhanced SNR
  - dS-SENSE enhanced parallel imaging performance
  - dS-SENSE capable in AP, LR and FH directions
- Cable-less connection of top coil

When used with an Ingenia, the head section can be tilted to provide optimal positioning and comfort for challenging patients such as Kyphosis patients. Note: this feature is only available with an Ingenia 70cm bore system.

**dS Head 1.5T**

An integrated coil solution for head and total neuro related imaging. It includes the Head top coil, which combined with the FlexCoverage Posterior coil and Base enables:

- 30 cm coverage, using 15 channels maximum (Head)
- 90 cm coverage, using 51 channels maximum (Total Neuro)

When used with an Ingenia, the head section can be tilted to provide optimal positioning and comfort for challenging patients such as Kyphosis patients. Note: this feature is only available with an Ingenia Omega or Ingenia Omega HP.

- Coverage: 30 cm (Head) and 90 cm (Total Neuro)
- Maximum nr. of channels: 15 (Head) and 51 (Total Neuro)
- Main application: Head, Brain, Total Neuro, Total spine, C-Spine, T-Spine, L-Spine
- Coil type: Integrated
- Lightweight coil(s)
- DirectDigital sampling in the coil where the MR signal is at its purest, without loss in the RF chain, enabling:
  - Enhanced SNR
  - dS-SENSE enhanced parallel imaging performance
  - dS-SENSE capable in AP, LR and FH directions
- Cable-less connection of top coil

**dS Flex M 1.5T**

An integrated coil solution for general-purpose imaging. It includes two medium-sized flexible general-purpose coils. Combined with the FlexCoverage Posterior coil they enable 15 cm coverage, with a maximum of 6 channels.

The shape and size of the flexible coil elements enable a wide variety of applications, including imaging of medium sized anatomies. The coil can be used to locally enhance resolution of images acquired over a larger FOV, for example in pediatric applications.

- Coverage: 15 cm
- Maximum nr. of channels: 6
- Main applications: Shoulder, Foot, Ankle, Knee, Pediatric
- Coil type: Integrated
- dS-SENSE enhanced parallel imaging performance

**dS Torso 1.5T**

An integrated coil solution for body and peripheral vascular related imaging. It includes the FlexCoverage Anterior coil. Combined with the FlexCoverage Posterior coil it enables 60 cm coverage, with a maximum of 32 channels.

The flexible, lightweight easy-to-position FlexCoverage Anterior coil is designed to conform both in right-left and foot-head directions for almost any patient. This enables large coverage and comfortable strap-free operation.

- Coverage: 60 cm
- Maximum nr. of channels: 32
- Main applications: Tor so, Chest, Pelvis, Heart, Peripheral-vascular
- Coil type: Integrated
- Lightweight coil(s)
- DirectDigital sampling in the coil where the MR signal is at its purest, without loss in the RF chain, enabling:
  - Enhanced SNR
  - dS-SENSE enhanced parallel imaging performance
  - dS-SENSE capable in AP, LR and FH directions
- Single FlexConnect coil connection and cable for fast and easy setup

**NVC stability pad**

The NVC Stability pad is designed for the dS Base coil. It offers more stability and comfort for the head. It is compatible with the standard mattresses and the Comfort Plus mattresses.

**HA console table**

Standard office table for MR-operator

- Table surface 160x100 cm
- Adjustable Height

**PPU for wireless physiology**

The PPU for wireless physiology package contains a peripheral pulse sensor with the following 4 different sizes: neonate, infant, pediatric and adult. This option is required to use the periphal pulse as a means to do physiological synchronization for sequence triggering and gating . The sensor can be positioned on finger, toe or foot, and is compatible with the Ingenia, Multiva, HFO and Achieva platforms. This package is ONLY compatible with Ingenia, Achieva, Multiva, and/or Panorama systems with wireless physiology.

**DVD-PC**

| Line # | Description | Qty |
|--------|-------------|-----|

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 (hxwxd): 10x34x38cm

**Arm support**

The arm support is designed to work in conjunction with the existing MR tabletop to provide additional support for a patients arm when injections are required. The support easily slides under the patient.

Features:

- Transparent arm support contoured to match the MR table-top
- Positioning on either side of table

**Comfort Plus Pack**

The Comfort Plus Pack delivers a set of ultra-comfortable table mattresses designed to keep patients at ease and stable. The pack contains:

- 2 Comfort Plus Mattresses large;
- 2 Comfort Plus Mattresses small;
- 1 Comfort Plus End piece;
- 1 Comfort Plus NVC pad.

**Vascular positioning pack**

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.
- A Knee Support that allows for comfortable positioning of the patient to reduce patient motion

**Clinical Education Package for Ambition Ingenia 1.5T X** :

Project and Workflow Evaluation Onsite: Philips Education representative(s) conduct an assessment to evaluate site demographics, workflow, and identify the key contact personnel and decision makers. During this process, Philips requests direct observation of the customer's MR workflow while scanning patients. Additionally, a copy of the Customer's MR protocol list is requested to be made available to Philips Education representative. Customer information

provided during this process is the first building block for planning educational support and Clinical Exam Card configuration.

The site assessment should occur at the customer's convenience 10-12 weeks prior to the initial handover date. The typical site assessment lasts between 3-8 hours.

MR Intro to Philips e-learning: This course provides an Introduction to the Philips systems. Course topics include: examination room, User Interface Module (UIM), the two environments for planning and reviewing examinations, the double database browser, registering a new patient, starting and planning an ExampleCard, and customizing image display settings.

It is recommended this online self-paced learning be completed prior to the offsite Essentials course and initial handover.

Essentials OffSite Education: The MR Essentials course is a prerequisite to Initial OnSite Education. Philips will provide up to two (2) technologists, as selected by customer.  This course is designed for new to Philips users. This course focuses on the daily workflow including patient registration, planning, scanning, post-processing, and archiving. Various tools are used to provide an effective and comfortable learning environment, using interactive workstations, workbook modules, and presentations. The participants will scan live scan models. It is recommended that the participant have prior knowledge of MR physics and basic MR applications. If the customer has already been working with Philips equipment or attended Essentials, another offsite course may be substituted. This course is held at the Cleveland Training Center in Cleveland, Ohio. This course has been approved for ASRT Category A credits. Continuing Education Credits will only be awarded to students who attend the entire course. No partial credits are available.

Travel and lodging are not included with offsite education, but may be purchased through Philips. Add part 989801292093 (MR Full Travel Pkg OffSite) for each Offsite course.

Clinical Assessment: A Philips Clinical Specialist conducts an assessment to evaluate system readiness and functionality. During this assessment, Philips requests access to the MR system and the protocol database. Information from this assessment is used to tailor education that is delivered during the initial handover.  The Clinical assessment should occur the week prior to the initial handover date.

Handover OnSite Education: Philips Clinical Services Specialists (CSS) will provide two (2) twenty-eight (28) hour education sessions onsite over two (2) consecutive weeks for up to four (4) technologists, as selected by customer. Learners should attend both sessions, and should include the  Off-site education attendees. These sessions do not cover Cardiac or Spectroscopy.   A radiologist should also be available for image review. Please refer to training guidelines for detailed information.

FollowUp OnSite Education: Philips Clinical Services Specialist (CSS) will provide twenty-four (24) hours of Follow-Up Education for up to four (4) techologists, as selected by customer, including technologists from night/weekend shifts if necessary. For this training, the site should prepare a light caseload of volunteers and cooperative patients to evaluate ExamCards, image quality, and parameter modification.

 ACR Assistance OnSite: Philips Clinical Services Specialist (CSS) will provide sixteen (16) hours of MR ACR Assist for up to (4) MR technologists and providers with a comprehensive overview of the ACR Accreditation submission process.  The MR ACR Assist training will assist customers in the creation of protocols that meet or exceed ACR guidelines, review image quality requirements of the ACR, and review proper parameter manipulation to maintain image quality.  The customer will have an understanding of weekly QA requirements of the ACR and ACR submission requirements.

Note:  The customer is responsible for patient contact or operation of equipment during training sessions. Due to legal responsivity of Philips and the customer site, Philips personnel may not

| Line # | Description | Qty |
|--------|-------------|-----|

provide direct patient contact or handle operation of the equipment during scanning. Philips Clinical Education does not provide training on 3 party equipment.

For education listed above: CEU credits may be available for each participant that meets the guidelines provided by Philips unless otherwise indicated.

For customers purchasing specialist packages, additonal education is required.  This includes Breast, Cardiac,  and Advanced Neuro such as BOLD fMRI or MultiNuclear Spectroscopy.  It is suggested the customer purchase no less than 24 hours of Onsite education and Offsite (where applicable) for each package.

MIC Module: Medical Imaging Consultants (MIC) provides self study programs to be delivered to the customer.  There are three (3) MR programs to choose from.  These programs are:

MR Registry Review: This 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.

MR Cross Trainer: This 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.

MR Sectional Anatomy & Imaging Strategies: This 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.

Education expires one (1) year from equipment installation date (or purchase date if sold separately).  Ref#63706227602626146383638463852089-20180315

| 2 | **Enhanced Warranty Terms** | 1 |
|---|------------------------------|---|

As an Ingenia MR customer, Philips will provide additional customer service and support benefits during the twelve (12) months warranty period, including:

- Extended service coverage hours, Monday – Friday, 8 am to 9 pm
- Flexible Planned Maintenance scheduling, Monday – Friday, 7 am to midnight and Saturday 8 am to 5 pm
- Expedited onsite labor response*
- Expedited parts delivery*

*dependent upon local factors and conditions

| Line # | Description | Qty |
|---|---|---|
| 3 | 1.5T 16 ch MSK coil Pkg | 1 |

**dS FootAnkle 16ch 1.5T**

Ski-boot shaped coil for optimum coverage of the ankle and entire foot up to the toes also in large foot sizes. The coil design and element layout allow for either large FOV imaging of the whole foot or small FOV high resolution imaging for ankle joints. The coil is easy to set up and can be used with the patient's foot vertical or up to 20 degrees plantar flexed. In Vertical position the coil can be tilted using a tilting device for maximum patient comfort.

- Coverage: 32 cm in A/P direction and 24 cm in H/F direction
- Maximum nr. of channels: 16
- Main applications: Foot, Ankle, Toes
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance

**dS SmallExtr 16ch 1.5T**

Semi-flexible coil designed for imaging of elbows, hands, small knees and shoulders. The coil has an inner diameter of 20 cm to match the size of the small extremities. It has a flexible wrap-around design for easy positioning and good fit. A mattress that supports both patient and coil is provided to increase patient comfort and avoid motion.

- Coverage: 24 cm in H/F direction
- Maximum nr. of channels: 16
- Main applications: Extremities, Elbow, Arm, Shoulder
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance

**dS Shoulder 16ch 1.5T**

Coil designed for high image quality throughout the shoulder joint, with excellent penetration into the
labrum. The coil consists of a base anterior part and an adjustable anterior part which can be raised and tilted for comfortable positioning. The coil can be positioned on the left or the right side of the table to scan the right or the left shoulder.
- Coverage: 18 cm LR
- Maximum nr. of channels: 16
- Main application: Shoulder
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance

| | | |
|---|---|---|
| 4 | MR Chiller | 1 |

Chiller and associated hardware designed in accordance with cooling requirements necessary for selected MR scanner with appropriate ambient and seismic options. Bundle includes chiller, remote display, interface panel and start-up kit.  Installation cost is not included.

| | | |
|---|---|---|
| 5 | T/R Interface 1.5T | 1 |

T/R Interface with connector on gantry to enable connection of Transmit/Receive coils.

| Line # | Description | Qty |
|---|---|---|
| 6 | **Expansion to dS WholeBody 1.5T** | 1 |

In combination with the dS Torso 1.5T coil solution this expansion provides an integrated coil solution for whole body and peripheral vascular related imaging. It includes an additional FlexCoverage Anterior coil. Combined with the FlexCoverage Posterior, HeadNeck and Base it enables 200 cm coverage, with a maximum of 108 channels.

The flexible, lightweight easy-to-position FlexCoverage Anterior coil is designed to conform both in right-left and foot-head directions for almost any patient. This enables large coverage and comfortable strap-free operation.

- Coverage: 200 cm*
- Maximum nr. of channels: 108
- Main applications: Whole body, Peripheral-vascular, Torso, Chest, Pelvis, Heart
- Coil type: Integrated
- Lightweight coil(s)
- DirectDigital sampling in the coil where the MR signal is at its purest, without loss in the RF chain, enabling:
  - Enhanced SNR
  - dS-SENSE enhanced parallel imaging performance
  - dS-SENSE capable in AP, LR and FH directions
- Only 3 FlexConnect coil connections and cables for fast and easy setup

*\* WholeBody Specialist required*

| | | |
|---|---|---|
| 7 | **dS Flex L 1.5T** | 1 |

An integrated coil solution for general-purpose imaging. It includes two large flexible general-purpose coils. Combined with the FlexCoverage Posterior coil they enable 20 cm coverage, with a maximum of 8 channels.

The shape and size of the flexible coil elements enable a wide variety of applications, including imaging of large anatomies. The coil can be used to locally enhance resolution of images acquired over a larger FOV, for example in pediatric applications.

- Coverage: 20 cm
- Maximum nr. of channels: 8
- Main application: Shoulder, Hip, Head, Brachial plexus, Pelvis, Cardiac, Pediatric
- Coil type: Integrated
- dS-SENSE enhanced parallel imaging performance

| | | |
|---|---|---|
| 8 | **dS Flex S 1.5T** | 1 |

An integrated coil solution for general-purpose imaging. It includes two small flexible general-purpose coils. Combined with the FlexCoverage Posterior coil they enable 10 cm coverage, with a maximum of 4 channels.

The shape and size of the flexible coil elements enable a wide variety of applications, including imaging of small anatomies. The coil can be used to locally enhance resolution of images acquired over a larger FOV, for example in pediatric applications.

- Coverage: 10 cm
- Maximum nr. of channels: 4
- Main applications: Elbows, Wrist, Ankle, Inner ear, Pediatric
- Coil type: Integrated
- dS-SENSE enhanced parallel imaging performance

| | | |
|---|---|---|
| 9 | **dS Knee 16ch 1.5T** | 1 |

| Line # | Description | Qty |
|---|---|---|

Coil designed for ultra-high SNR imaging over an extended field of view of the knee and other extremities. Two overlapping rings of eight elements extend the coverage area and minimize the need for precise positioning. dS-SENSE enhanced parallel imaging can be selected in all directions. The dS Knee 16 ch has a split design for easy patient setup and an ergonomically ramped insert for patient comfort.

- Coverage: 20 cm
- Maximum nr. of channels: 16
- Main applications: Knee,  extremities
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance

**10**            **dS Breast 16ch 1.5T**            **1**

A dedicated breast coil that can be used alone or in combination with FlexTrak Mammo. The coil is designed to deliver highest performance in coverage, image resolution and imaging speed. An adjustable head rest and soft patient ramp are included for patient comfort.

- Coverage: Bilateral
- Maximum nr. of channels: 16
- Main application: Breast
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance. SENSE can be applied in LR and FH direction for enhanced resolution or speed
- Very comfortable coil with optimized patient comfort ramp

**11**            **dS HandWrist 16ch 1.5T**            **1**

Coil that closely fits the left or right hand and wrist for high SNR. This design provides the high SNR needed to acquire images with a small and larger FOV. The coil can be used at the patient's side. The coil attaches to a rigid base plate for fixation to reduce patient motion artifacts.

- Coverage: 10 cm for wrist and 28 cm for Hand and wrist
- Maximum nr. of channels: 16
- Main application: Hand and/or Wrist
- Coil type: Dedicated
- dS-SENSE enhanced parallel imaging performance

**12**            **dS T/R Head 1.5T**            **1**

Transmit/receive coil, consisting of a base, sliding coil and head support, that provides excellent spectroscopy results due to its higher B1 field. In addition, it enables imaging of patients with stereotactic frames. The open design reduces claustrophobia, while ensuring good homogeneity.
- Single channel transmit
- Single channel receive
- Main applications: Head, Brain, Spectroscopy, Extremities, Patients with stereotactic frames.

**13**            **dS NeuroSuite Premium**            **1**

| Line # | Description | Qty |
|---|---|---|

Advanced diagnostics are a crucial part of the treatment protocol for neurological disorders. With its superb 3D imaging of soft tissue, MRI can capture a wealth of structural and physiological information about the brain. Philips' neuro-diagnostic applications empower you to resolve complex questions with more certainty. Our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, helps you gain visibility into neurological anatomies and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- 3D ASL Neuro Specialist
- Bold Specialist

**3D ASL Neuro Specialist**
The 3D ASL option brings a 3D pseudo-continuous labeling technique providing high SNR quantitative perfusion measurements, using water in arterial blood as an endogenous tracer. The method will bring whole multi-slice, or 3D brain coverage with isotropic resolution. Multi-phase ASL for dynamic perfusion assessment and selection of optimal labeling delays. Color coded ASL maps with relative quantification bar.

**Bold Specialist**
The BOLD Specialist package provides:
- High temporal resolution dynamic single slice, multi-slice FFE or FFE-EPI sequences
- Protocol-controlled trigger interface for integrated BOLD analysis environment
- Acquisition of up to 16,000 images
- iView BOLD analysis package providing real-time processing of functional BOLD MR data sets into functional activation maps.

| 14 | dS CardiacSuite Pro | 1 |
|---|---|---|

Advanced diagnostics are a crucial part of the treatment protocol for heart disease. A comprehensive suite of cardiac MR tools for ischemic and non-ischemic diseases, including quantitative tissue characterization, can capture a wealth of functional and pathological information about the heart. Philips' cardiac diagnostic applications empower you to resolve complex questions with more certainty. Utilizing our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, will help you deliver visibility into cardiac anatomies, and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- Cardiac Expert Specialist
- Cardiac Quant

**Cardiac Expert Specialist**
Cardiac Expert supports the acquisition of multi-slice, dynamic tissue studies with T1 weighting and uniform tissue suppression* by including Look Locker methods for determining an optimal inversion delay time. Cardiac Expert also provides myocardial tagging** to allow assessment of regional wall motion and allows for real-time interactive planning of challenging cardiac views.

| Line # | Description | Qty |
|--------|-------------|-----|

**Cardiac Quant**
Cardiac Quant performs a pixel-wise analysis of myocardial tissue based on T1, T2/R2 and T2*/R2* maps. T1 mapping uses an optimized MOdified Look-Locker Inversion recovery (MOLLI) acquisition. On-the-fly parametric maps are overlaid for assessment of myocardial condition with confidence maps for diagnostic quality. Two robust MOLLI schemes (5s(3s)3s and 4s(1s)3s(1s)2s) are provided. T2* mapping is based on single breathhold, multi-echo, ECG-triggered acquisitions to provide T2* and R2* relaxation maps in addition to T2 and R2 maps for assessment of myocardial tissue characteristics.

**15**       **dS CardiacSuite Premium**       **1**

Advanced diagnostics are a crucial part of the treatment protocol for heart disease. A comprehensive suite of cardiac MR tools for ischemic and non-ischemic diseases, including quantitative tissue characterization, can capture a wealth of functional and pathological information about the heart. Philips' cardiac diagnostic applications empower you to resolve complex questions with more certainty. Utilizing our dStream digital broadband architecture technology, which provides high-quality images at remarkable speed, will help you deliver visibility into cardiac anatomies, and view multi-dimensional data to enable diagnostic decision support. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- Coronary Acquisition
- K-t BLAST

**Coronary Acquisition**
Enables non-invasive imaging of coronary arteries. Deploys 3D sequences combined with MotionTrak respiratory navigators for real-time motion correction and T2-preparation for good contrast between myocardium and vessels.

**K-t BLAST**
K-t BLAST provides up to five fold acceleration using an alternative parallel imaging technique employing undersampling in time and space.

**16**       **dS BreastSuite**       **1**

Advanced diagnostics are a crucial part of the treatment protocol for breast diseases. SmartExam Breast enables consistent fat suppression and reproducible image quality of breast examinations, independent of patient or operator. 3D Breast VIEW delivers high resolution isotropic 3D TSE breast acquisitions with short scan times by employing high 3D dS SENSE factors. Isotropic acquisition allows reformats in arbitrary planes.

- 3D BreastVIEW
- SmartExam Breast

**3D BreastVIEW**
3D BreastVIEW delivers high resolution isotropic 3D TSE acquisitions in short scan times by employing high 3D dS SENSE factors. Isotropic acquisition allows reformats in arbitrary planes.

**SmartExam Breast**
SmartExam Breast: enables consistent fat suppression and reproducible mage quality of breast examinations, independent of patient or operator.

| Line # | Description | Qty |
|--------|-------------|-----|

**17**                **dS LiverSuite**                **1**

Advanced diagnostics are a crucial part of the treatment protocol for diseases affecting the liver and requiring assessment of liver stiffness. MR Elastography empowers you to resolve complex questions with more certainty. This supports non-invasive assessment of differences in tissue stiffness of the liver in a fast breathhold scan, providing you with additional input to help make informed treatment decisions. Image processing is fully integrated at the scanner and offers automatic calculation of elastograms with statistical confidence maps. Philips mDIXON Body Fat Quant empowers you to resolve complex questions with more certainty. At Philips, we understand your challenging business environment and your need to increase profitability and grow revenue. This set of advanced diagnostic applications can help you differentiate yourself from competitors and increase your referral services.

- MR Elastography
- mDIXON Body Fat Quant

**MR Elastography**
MR Elastography provides a non-invasive assessment of differences in tissue stiffness (Elastogram kPa) using the most recent evolution of the MRE algorithm produced by the Mayo Clinic. Fully integrated transducer control and stiffness map processing at the scanner. Confidence maps accompany the stiffness maps to provide quality assurance. Patient experience scan included in the MRE workflow to enhance patient comfort. Indication: non-invasive assessment of liver fibrosis.

**mDIXON Body Fat Quant**
mDIXON Body Fat Quant produces quantitative fat fraction maps in a single breath-hold, covering the whole liver. It is based on a 3D mDIXON sequence with multiple echoes , correcting for T2* decay and employing a multi-peak fat model. Next to the fat fraction maps, water, fat, In-phase, out-phase and T2*/R2* relaxation maps can be produced. Fat fraction maps and T2* relaxation maps can be visualized in color with quantification bar, in the MR console viewing environment or on Intellispace Portal.
Note: *requires mDIXON Body Specialist/mDIXON XD FFE Specialist as a pre-requisite.*

**18**                **NeuroScience Specialist**        **1**

Neuroscience Specialist provides functionalities for neuroscience research and neurofunctional imaging, to help e.g. explore structural brain connectivity. Functionality includes:

- Export functions (NIFTI, .XML, SPAR/SDAT are part of basic software)
- 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

**19**                **Cardiac Quant Extension**        **1**

CardiacQuant Extension is an optional plugin for Cardiac Quant, which adds flexibility for the creation of T1 maps. It allows the option of user defined T1 mapping schemes as alternatives for the predefined "native" or "enhanced" schemes as provided by CardiacQuant.

**20**                **FlexCaddy**                **1**

| Line # | Description | Qty |
|---|---|---|

Coil storage cart which stores dStream coils and accessories to enhance workflow for a large range of clinical applications. Includes:

- IV pole
- Storage for
  - 2x Anterior coils
  - 1x Head Top / other coil
  - 1x HeadNeck Top / other coil
  - 1x Base coil
  - Accessories

**21**          **Head and Arm Support**          **1**

Dedicated Head and Arms support enabling enhanced image quality with improved patient comfort through high dS-SENSE acceleration in Body imaging. This device provides comfortable patient positioning and can be used with Head first or Feet First patient positioning. The use of high dS-SENSE acceleration in Body imaging is enabled by the design of the dS Torso coil, allowing dS SENSE factors up to 6 in RL direction.
Benefits of this approach are:

- Improved image sharpness
- Reduced image distortion
- Less # Breath Holds
- Shorter Breath Hold times

**22**          **Patient observation monitor**          **1**

Images from the Patient Observation Cameras can be displayed on a Patient Observation Monitor positioned at a convenient location in the scanner control area. The monitor provides full visibility of the patient in all situations that require continuous visual monitoring, e.g. pediatric examinations and cardiac stress tests, as well as monitoring of patient setup and waiting areas.
Features:

- High brightness color LCD monitor
- Tilt, swivel and height-adjust for an ideal viewing position

**23**          **Multi Camera Color**          **1**

The Multi Camera Color solution provides two color cameras and a Camera interface box which allows for up to 4 cameras to be connected: 3 MR compatible cameras and 1 outside exam room camera. The patient observation cameras are color cameras including a varifocal zoom lens that can be mounted at any convenient position within the examination room to visually monitor the patient, or outside the examination room, e.g. as a surveillance camera for the prep room or the waiting area. The images are displayed on the Patient Observation Monitor (ordered separately) in the scanner control area.

Features:

- 2 MR compatible cameras
- Camera interface box
- Easy mounting to walls

**24**          **FlexTilt**          **1**

| Line # | Description | Qty |
|---|---|---|

The FlexTilt is an easy to use device which allows the dS Base in combination with the dS Head and dS HeadNeck coils to be tilted. The coils can be tilted up to 18 degrees in incremental steps of 2 degrees.

**25**      **MR Additional Training 28 Hrs OnSite**      **4**

Clinical Education Specialist will provide twenty-eight (28) hours of MR OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information.

Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.

Education expires one (1) year from equipment installation date (or purchase date if sold separately).

**26**      **MR Stereo.**      **1**

The Yamaha R-S202 stereo comes with **Speakers**:
• 2 channels of 100 Watt high -power output
• Advanced circuitry design
• Bluetooth to your favorite streaming music services
• 40 station FM/AM preset tuning
• Brushed aluminum finish and simplistic design
• Speaker selector for two systems
• Simple remote control layout

**27**      **MEDRAD MRXperion MR Injection System**      **1**

The MEDRAD MRXperion Injection System is a syringe-based fluid delivery system indicated for delivery of contrast media and saline during MR procedures. It is intended to be used for the specific purpose of injecting intravenous MR contrast media and saline into the human vascular system for diagnostic studies in magnetic resonance imaging (MRI) applications with MRI scanners that have a magnetic field strength between 0.7 Tesla and 3.0 Tesla. Only trained healthcare professionals are intended to operate this device.
The system consists of basic components that communicate by a direct fiber optic connection. The Control Room Unit (CRU) contains the user interfaces (computer touch screen display with Pod) that contain controls used to program and control the injection system. Both also have individual power supplies that require AC power. These components are MR unsafe and should not be taken into the scanner room.
The Scan Room Unit (SRU), is positioned near the magnet bore. The Scan Room Unit is MR Conditional device and should be located, installed, and operated per the specifications. It contains the integrated injector pedestal base, IV pole and head with display and controls.
The SRU Power Supply is provided to power the Scan Room Unit. The SRU Power supply is MR Conditional device and should be located, installed, and operated per the specifications. The power supply can be mounted outside the scan room with the optional penetration panel filter kit or installed in the scan room at the maximum distance away from the bore or exterior scanner surface. It must be installed no closer than a minimal distance from the scanner as called out in the room layout diagram. It requires AC power and should be positioned to allow AC connection without using any AC power strips.

**28**      **X47 Basic + AA,O2,IBP(x2),Temp**      **1**

| Line # | Description | Qty |
|---|---|---|

Expression Patient Monitor (MR400): 15 inch Widescreen Touchscreen interface, MRI Rating 5,000 gauss 4W/kg SAR 3.0T, 8-Hour Smart Battery Technology, 3rd-Gen Wireless ECG with Advanced Filters, 3rd-Gen Wireless Pulse Oximetry (SpO2) with Perfusion Index, Single-Lumen Non-Invasive Blood Pressure (NIBP), CO2 monitoring with Respiration Rate, Wired and wireless gating with MRI systems, and Multi-priority alarm system with CDS. All parameters support Adult, Pediatric, Infant and Neonatal applications. One (1) day on-site Expression system training, One (1) year limited warranty and factory service for hardware.

For OEM ordering only - Feature set includes non-invassive blood pressure, wireless ECG, wireless SpO2, low-flow CO2, respiration monitoring, dual anesthetic agent detection, O2 monitoring, invassive blood pressure (2 channel), and body/surface temperature. Includes all standard accessories.

**29**              **X57 MR400 X47 Accessories**              **1**

Bundled accessories to be used with the Expression MR400 MRI Patient Monitor.

For OEM ordering only - Includes all hardware accessories, and reusable and disposable accessories for 20 Adult and Pediatric patients.

**30**              **Rigging Charges**              **1**

Rigging charges

| Line # | Part # | Description | Qty |
|--------|--------|-------------|-----|
| **1** | **\*\*NAEA155** | **Ambient Lighting MR system** | **1** |

Ambient Lighting for MR combines Ambient Experience design strategies and dynamic, LED colored lighting to enhance the clinical space. The solution begins with site-specific recommendations to optimize the clinical area in terms of workflow and storage, including opportunities to minimize clutter for a more soothing environment. These recommendations are incorporated into the equipment Site Plans. Dynamic colored Lighting can work to wash the walls in selectable colors, providing both positive distraction for the patient and an opportunity to personalize an otherwise intimidating environment. The lighting solution is controlled by an easy-to-operate wall-mounted dial which selects the color of the light and can also set a speed for colors to change.
The Ambient Lighting for MR solution includes:
Design recommendations to minimize clutter and improve workflow incorporated in Site Plans
Oversight by Philips Project Manager
Dynamic colored LED lighting
Lighting controller
Power supply unit, cabling
Instructions for Use
Note: this lighting component provides decorative lighting only.
It is not intended as, nor replaces' functional lighting.