



North Carolina Department of Health and Human Services
Division of Health Service Regulation

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Drexdal Pratt
Division Director

October 7, 2013

Catharine W. Cummer, Regulatory Counsel, Strategic Planning
Duke University Health System
3100 Tower Blvd, Suite 1300
Durham NC 27707

Exempt from Review - Replacement Equipment

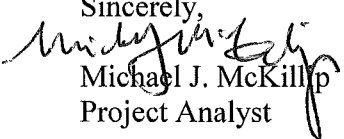
Facility: Duke University Health System d/b/a Duke Raleigh Hospital
Project Description: Replace cardiac catheterization equipment
County: Wake
FID #: 923421


Dear Ms. Cummer:

In response to your letter of September 30, 2013, the above referenced proposal is exempt from certificate of need review in accordance with N.C.G.S 131E-184(a)(7). Therefore, you may proceed to acquire, without a certificate of need, the Philips FD 20 cardiac catheterization equipment to replace the existing Philips Integriss Allura cardiac catheterization equipment system [Serial # S01H014720000001]. This determination is based on your representations that the existing unit will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need. Further please be advised that as soon as the replacement equipment is acquired, you must provide the CON Section and the Medical Facilities Planning Section with the serial number of the new equipment to update the inventory, if not already provided.

Moreover, you need to contact the Construction Section to determine if they have any requirements for development of the proposed project.

It should be noted that this Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this Agency and a separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Michael J. McKillip
Project Analyst


Craig R. Smith, Chief
Certificate of Need Section

cc: Construction Section, DHSR



Certificate of Need Section

www.ncdhhs.gov

Telephone: 919-855-3873 • Fax: 919-733-8139

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Mailing Address: 2704 Mail Service Center • Raleigh, NC 27699-2704

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Duke University Health System

Catharine W. Cummer
Regulatory Counsel, Strategic Planning

Duke

September 30, 2013

Via Electronic Mail

Michael J. McKillip, Project Analyst
Certificate of Need Section
Division of Health Service Regulation
2704 Mail Service Center
Raleigh, NC 27699-2704



Re: Equipment Replacement Project at Duke Raleigh Hospital

Dear Mr. McKillip:

I am writing to notify you of the proposed acquisition of replacement cardiac catheterization equipment at Duke Raleigh Hospital. Both the existing and replacement equipment are the C-arms capable of providing cardiac catheterization procedures. The original C-arm was purchased in 2002 and has reached the end of its useful life. A completed equipment comparison form and capital cost form is enclosed as Exhibit 1. A copy of the quote for the new equipment and accessories is enclosed as Exhibit 2. The total capital cost of the project is \$1,615,690.

The existing equipment is currently in use at Duke Raleigh Hospital, but will be removed from service in the state upon placement of the replacement equipment into service.

It is our understanding that this replacement is exempt from certificate of need review as the exempt acquisition of replacement equipment. We would appreciate your confirmation of this understanding. Thank you for your attention to this request. Should you have any questions, please let me know.

Very truly yours,

Catharine W. Cummer

Enclosures

EQUIPMENT COMPARISON

	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type of Equipment (List Each Component)	Cath Lab	Cath Lab
Manufacturer of Equipment	Philips	Philips
Tesla Rating for MRIs	NA	NA
Model Number	Integris Allura SP	FD 20
Serial Number	S01H014720000001	
Provider's Method of Identifying Equipment	Site ID 102944	
Specify if Mobile or Fixed	Fixed	Fixed
Mobile Trailer Serial Number/VIN #	NA	NA
Mobile Tractor Serial Number/VIN #	NA	NA
Date of Acquisition of Each Component	July 2002	
Does Provider Hold Title to Equipment or Have a Capital Lease?	Title	
Specify if Equipment Was/Is New or Used When Acquired	New	New
Total Capital Cost of Project (Including Construction, etc.) <Use Attached Form>		\$1,615,690
Total Cost of Equipment	\$1,086,143.20	\$1,322,694.80
Fair Market Value of Equipment		\$1,322,694.80
Net Purchase Price of Equipment		\$1,322,694.80
Locations Where Operated	Duke Raleigh	Duke Raleigh
Number Days In Use/To be Used in N.C. Per Year	365	365
Percent of Change in Patient Charges (by Procedure)	NA	0
Percent of Change in Per Procedure Operating Expenses (by Procedure)	NA	0
Type of Procedures Currently Performed on Existing Equipment	Cardiac catheterization	NA
Type of Procedures New Equipment is Capable of Performing	NA	Cardiac catheterization

PROPOSED TOTAL CAPITAL COST OF PROJECT

Project Name:
Provider/Company:

A. Site Costs

- (1) Full purchase price of land \$ _____
 Acres _____ Price per Acre \$ _____
- (2) Closing costs \$ _____
- (3) Site Inspection and Survey \$ _____
- (4) Legal fees and subsoil investigation \$ _____
- (5) Site Preparation Costs
 - Soil Borings..... \$ _____
 - Clearing-Earthwork... \$ _____
 - Fine Grade For Slab... \$ _____
 - Roads-Paving..... \$ _____
 - Concrete Sidewalks... \$ _____
 - Water and Sewer..... \$ _____
 - Footing Excavation... \$ _____
 - Footing Backfill..... \$ _____
 - Termite Treatment... \$ _____
 - Other (Specify)..... \$ _____
- Sub-Total Site Preparation Costs \$ _____
- (6) Other (Specify) \$ _____
- (7) **Sub-Total Site Costs** \$ _____

B. Construction Contract

- (8) Cost of Materials
 - General Requirements \$ 114,040
 - Concrete/Masonry \$ _____
 - Woods/Doors & Windows/Finishes \$ _____
 - Thermal & Moisture Protection \$ _____
 - Equipment/Specialty Items \$ _____
 - Mechanical/Electrical \$ _____
 - Other (Specify) \$ 13,808
- Sub-Total Cost of Materials..... \$ _____
- (9) Cost of Labor..... \$ _____
- (10) Other (Specify)..... \$ _____
- (11) **Sub-Total Construction Contract** \$ 127,848

C. Miscellaneous Project Costs

- (12) Building Purchase..... \$ _____
- (13) Fixed Equipment Purchase/Lease \$ 1,487,842
- (14) Movable Equipment Purchase/Lease \$ _____
- (15) Furniture \$ _____
- (16) Landscaping \$ _____
- (17) Consultant Fees
 - Architect and Engineering Fees \$ _____
 - Legal Fees..... \$ _____
 - Market Analysis..... \$ _____
 - Other (Specify)..... \$ _____
 - Other (Specify)..... \$ _____
- Sub-Total Consultant Fees..... \$ _____
- (18) Financing Costs (e.g. Bond, Loan, etc.). \$ _____
- (19) Interest During Construction. \$ _____
- (20) Other (Specify) \$ _____
- (21) **Sub-Total Miscellaneous..** \$ 1,487,842
- (22) **Total Capital Cost of Project (Sum A-C above)** \$ 1,615,690

I certify that, to the best of my knowledge, the costs of the proposed project named above are complete and correct.

 (Signature of Licensed Architect or Engineer) Date Certified: _____

I assure that, to the best of my knowledge, the above costs for the proposed project are complete and correct and that it is my intent to carry out the proposed project as described.

 (Signature and Title of Officer Authorized to Represent Provider/Company) Date Signed: 9/26/13

PHILIPS HEALTHCARE
A division of Philips Electronics North America Corporation
22100 Bothell Everett Highway
P.O. Box 3003
Bothell, Washington 98041-3003



Quotation #: 1-Q68EAU	Rev: 10	Effective From: 31-Jan-13	To: 17-Mar-13
Presented To: DUKE RALEIGH HOSPITAL 3400 WAKE FOREST RD RALEIGH, NC 27609 Tel: Alternate Address:	Presented By: Bethann Griffith-Subik <i>Account Manager</i> Steve Weiss <i>Regional Manager</i>	Tel: (919) 677-9046 Fax: (919) 677-9047	Tel: (678) 924-6087 Fax: (678) 924-6003
Date Printed: 31-Jan-13			
Submit Orders To: 22100 BOTHELL EVERETT HWY BOTHELL WA 98021 Tel: (888)-564-8643 Fax: (425) 458-0390			

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IMPORTANT NOTICE: Health care providers are reminded that if the transactions herein include or involve a loan or discount (including a rebate or other price reduction), they must fully and accurately report such loan or discount on cost reports or other applicable reports or claims for payment submitted under any federal or state health care program, including but not limited to Medicare and Medicaid, such as may be required by state or federal law, including but not limited to 42 CFR 1001.952(h).

Quote Solution Summary

<u>Line #</u>	<u>Product</u>	<u>Qty</u>	<u>Price</u>
	100215 Allura Xper FD20	1	\$1,322,694.80
Equipment Total:			\$1,322,694.80

Solution Summary Detail

<u>Product</u>	<u>Qty</u>	<u>Each</u>	<u>Monthly</u>	<u>Price</u>
100215 Allura Xper FD20	1	\$1,322,694.80		\$1,322,694.80

Buying Group: NO CONTRACT

Contract #: NONE

Add'l Terms:

Each Quotation solution will reference a specific Buying Group/Contract Number representing an agreement containing discounts, fees and any specific terms and conditions which will apply to that single quoted solution. If no Buying Group/Contract Number is shown, Philips' Terms and Conditions of Sale will apply to the quoted solution.

Each equipment system listed on purchase order/orders represents a separate and distinct financial transaction. We understand and agree that each transaction is to be individually billed and paid.

Payment Terms: 10% With Signed Acceptance of the Quotation, 70% Upon Delivery of Major Components, 20% Due When the Product is Available for First Patient Use, Net due 10 days from date of invoice

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System Type: New
Freight Terms: FOB Destination
Warranty Terms: Part numbers beginning with two (2) asterisks (**) are covered by a System 12 Months Warranty. All other part numbers are third (3rd) party items.
Special Notations: Contingencies must be removed 120 days before scheduled shipment to assure delivery on specified date. Any rigging costs are the responsibility of the Purchaser.
Additional Terms:

Line #	Part #	Description	Qty
1	**NNAE334	Conversion to FD20 C R8	1

The iXR Philips Catalyst Conversion Program is a practical and cost effective way to transform your current system into the Allura Xper FD20 monoplane.

Allura Xper FD20 monoplane is a state of art X-ray imaging system that can be customized to support a wide range of applications including peripheral, abdominal, cerebral, thoracic, cardiac and non-vascular interventional and diagnostic procedures.

The Allura Xper system comprises five functional building blocks:

1. Geometry,
2. X-ray Generation,
3. Image Detection,
4. Viewing.
5. User Interface.

1) Geometry:

a) The Allura Xper FD20 stand

The Allura Xper FD20 stand is a stable assembly of a C-arm and a ceiling suspended L-arm. The X-ray tube and the flat detector are integrated into the C-arm. This provides a compact assembly completely free from the floor, with maximal positioning flexibility and unrestricted access to the patient. The robust design ensures excellent reproducibility of projections, needed in for example subtracted imaging procedures and advanced 3D imaging. The L-arm can be rotated and moved in longitudinal direction allowing a three-sided patient approach and total body coverage.

- L-arm rotation around the patient table: +90, 0, -90 degrees.
- L-arm longitudinal movement: 300 cm

This movement features auto-stops at the parking position, cardio/neuro position and lower peripheral position. The Allura Xper FD20 stand allows a very wide range of projections, including PA and AP imaging.

In the head position (0 degrees position, L-arm parallel to patient table):

- C-arm rotation range (degrees): 120 LAO to 185 RAO
- C-arm angulation range (degrees): 90 CA to 90 CR (Full angulation capability determined by patient position)

In the side position (+90 / -90 degrees position, L-arm perpendicular to patient table):

- C-arm rotation range (degrees): 90 LAO to 90 RAO
- C-arm angulation range (degrees): 185 CA to 120 CR or 120 CA to 185 CR (Full angulation capability determined by patient position)

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Line #	Part #	Description	Qty
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The stand provides fully motorized movements with variable and configurable maximum speed. Coupled to the BodyGuard detection system, it allows high patient throughput, supporting the busiest schedules.

- Variable C-arm rotation speed, up to 25 degrees/s
- Variable C-arm angulation speed, up to 18 degrees/s

L-arm rotation and longitudinal movements are motorized and can also be performed manual. The BodyGuard is a unique detection system for automatic safeguarding of patient and equipment. This detection system senses objects close to the detector and subsequently limits system movements. Therefore the Allura Xper FD20 adapts to the actual size of the patient and allows to take full advantage of the high speed movements.

The Allura Xper FD20 features Xper Access to position the Flat Detector in portrait and landscape imaging modes. The motorized variable source image distance (SID) between focus and Dynamic Flat Detector input screen can be adjusted from 86.5 to 123 cm. This allows for optimum patient accessibility, imaging coverage and projection flexibility.

1b) Patient support

The Xper Table provides feather-light manual float movement, even for heavy patients, thanks to the unique mono-bearing technology. The long flat carbon fiber tabletop provides ample space to place e.g. catheters and endovascular tools. On customer request, the standard table top can be replaced by a table top for neuro procedures. This table top has a smaller width at the head end for better imaging results in neuro procedures.

- Table top length of 319 cm, width 50 cm (neuro table top is 45cm at head end)
- Metal-free overhang 125 cm
- Floating table-top movement of 120 cm longitudinal and 2 x 17.5 cm transversal
- Motorized height adjustment range is 74.5-102.5 cm for a table without swivel nor cradle/tilt.
- Maximum cantilever of 223 cm, for full patient coverage
- Table tilt +17 / -17 degree (optional)
- Table cradle +15 / -15 degree (optional)
- Pivot range -90 to +180 or +90 to -180 degree, table can be locked at any position and indents at 0, -13 and +13 degree (optional)
- Table swivel, 78.2 cm longitudinal motorized (optional).
- Maximum patient weight 250 kg with 25 kg of accessories plus 500 N for CPR in any longitudinal position of the table top

The exam room operating modules, the Xper Geometry and the Xper Imaging Modules, can be attached to one of the three sides of the table, right, left and foot end, while operation remains intuitively logical. The Xper Geometry Module includes controls for storage and recall of two freely selectable single plane projections.

The Allura Xper FD20 system can be fitted with a comprehensive set of accessories to help you perform your procedures as conveniently as possible. Included are:

- 1 cerebral filter
- 3 rail accessory clamps
- 1 drip stand
- 1 mattress

The mattress is a slow recovery foam mattress with a density of 58 kg/m³. The mattress has a thickness of 7 cm and adapts to the body shape of the patient. It makes the pressure being

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Line #	Part #	Description	Qty
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divided equally and it recovers when the patient is taken off the mattress. The light yellow cover is easy to clean. Patients are more relaxed due to the comfort of this mattress.

Set of Arm Supports (FCV0248)

Arm Support (FCV0258)

2) X-ray Generation

a) Generator

The Allura Xper FD20 comprises a dedicated high voltage generator system. This micro-processor controlled Velara CFD generator is based on high frequency converter technology. The user interface control of the Velara Generator is incorporated in the Xper module, the Xper Desktop Viewing Console, and the Xper on-screen displays.

The Velara CFD generator comprises:

- X-ray generator 100 kW
- Voltage range of 40 - 125 kV
- Maximum current 1250 mA at 80 kV
Program selection
- Pulsed X-ray for pulsed fluoroscopy; 3.75, 7.5, 15 and 30 frames/s
- Pulsed X-ray for (subtracted) acquisition up to 6 frames/s for vascular applications
- Pulsed X-ray for acquisition up to 60 frames/s for cardiac applications (optional)
- ECG-triggered acquisition: allows acquiring one exposure for each QRS peak with a selectable delay time
- Minimum exposure time of 1 ms
- Automatic kV and mA control for optimal image quality prior to run to save dose
- Optimal X-ray tube load incorporated in the Velara CFD generator
- A collimator with two semi-transparent wedged filters with manual and automatic positioning
- SpectraBeam filtering of low energy radiation to optimize image quality and dose efficiency with MRCGS 0407 X-ray tube
- Grid switching at dynamic pulsed fluoroscopy
- Xper Beam Shaping, positioning of both shutters and wedges on the Last Image Hold without the need for X-ray radiation Fluoroscopy
- Three programmable fluoroscopy modes can be selected from the Xper Imaging module. Each mode has a different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement and adaptive harmonization).

b) X-ray tube

The Allura Xper FD20 has the Maximus ROTALIX Ceramic grid switch tube assembly MRC 200 GS 0407 integrated in the C-arc. This MRC tube has an anode heat storage capacity of 2.4 MHU and 0.4/0.7 mm. nominal focal spot values. The tube has a maximal loading of 30 and 67 kW.

At dynamic pulsed fluoroscopy the tube uses grid switching technology to eliminate soft radiation and improve image quality. SpectraBeam allows for filtration of the x-ray beam with (a combination of) 0.2, 0.5 or 1 mm CU-equivalent filters.

Tube housing ROT-GS 1004 is for oil-cooling and has a build-in thermal safety switch. A rotor control unit is build-in for continuous rotation of the anode disk. The heat exchanger CU 3101 is for direct and continuous forced cooling with oil.

c) Parameter setting

The acquisition segment coordinates the parameters for automatic exposure control, ensuring

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Line #	Part #	Description	Qty
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optimal X-ray tube loading for top image quality. Different programs can be selected via the Xper module and/or via the Xper Desktop Viewing Console. Several exposure techniques are provided for different types of examination:

- Serial imaging for DA and DSA with automatic exposure setting
- Single shot mode, acquisition frame rates: 0.5 to 6 images/s at 2048 x 2048, 12 bit matrix

Roadmap Pro can be selected from the Xper imaging module and/or Xper module. A vessel map is created and superimposed with (un)subtracted live fluoroscopy. Acquisition runs can be done during Roadmap without losing the vessel map. Roadmap Pro features Smart Settings in special clinical modes that are optimized to visualize special materials such as coils and glue. Live processing of the vessel map, the device map and the landmark map can be done on the Xper Module. Xres for vascular procedures is standard part of Roadmap Pro.

In Roadmap Pro R2 "Automatic Motion Compensation" (AMC) is added to the roadmap functionality. During roadmap, small movements of the patient can lead to subtraction artifacts. These artifacts might conceal important clinical information. "Automatic Motion Compensation" compensates for rigid, uniform (skeletal/table) translations and is therefore very effective in interventional (neurology) applications where subtraction imaging is applied. Disclaimer: AMC only corrects movement artifacts in 2 dimensions. 3 dimensional movements like swallowing or rotation of the head cannot be corrected.

Xper Fluoro Storage, a grab function, allows storage and archiving of a fluoro image or the last 20 seconds of fluoroscopy. These fluoro images or fluoro runs can be archived as a regular exposure runs.

3) Image Detection

The dynamic flat detector subsystem for fluoroscopy and fluorography procedures is 30 cm by 40 cm.

8 different imaging modes are available; 30*38/30*30/26*26/22*22/19*19/16*16/13.5*13.5/11*11 cm.

The digital output of the FD20 flat detector is 2k*2.5k image matrix at 14 bits depth in the largest mode.

XperAccess allows the flat detector to be rotated over 90 degrees from portrait to landscape and vice versa.

The DQE (Detective Quantum Efficiency) is >73 % providing high conversion of X-ray into a digital image, while maintaining a high MTF. The pixel pitch is 154 x 154 microns

Radiation Dose Structured Report

Collection of dose relevant parameters and settings and export to a DICOM database (e.g. PACS, RIS), according IEC60601-2-43, 2nd Edition.

The reported data can be used for, for example:

Quality improvement: evaluating trends in X-ray dose performance per facility, system and operator. RDSR enables analysis of average dose levels & variance for routinely performed exams and procedures. Also, typical system usage can be extracted from the data, helping to identify root causes behind deviations and measures to improve.

Analysis of individual patient cases: using dose levels and system usage per procedure
Alerting for high dose cases, timely identifying patients at risk for deterministic effects, for proper follow-up.

Xres is a multi-resolution spatial temporal noise reduction and edge enhancement filter for interventional applications. Xres exploits the full benefits of dynamic digital flat detector imaging to enhance sharpness and contrast and has been designed to reduce noise in fluoroscopy and

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Line #	Part #	Description	Qty
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exposure runs. The settings for Xres Cardio can be customized to optimize image quality. Xres is Philips unique image processing algorithm developed at Philips Research for medical applications. Xres is used with Philips MR and US scanners next to Allura Xper systems.

4) Viewing

The Allura Xper FD20 comprises 3 TFT-LCD monochrome monitors to display the clinical images. 2 monitors are in the examination room and 1 monitor for viewing clinical images in the control room. These LCD monitors are designed for medical applications. The main LCD characteristics are:

- 19 inch monochrome TFT-LCD display
- Native format 1280x1024 SXGA
- 10 bit gray-scale resolution with gray-scale correction
- Wide viewing angle (approx. 160 degrees)
- High brightness (max 600 Cd/m², default 500 Cd/m²)
- Push buttons for control functions on front
- User programmable and standard reference setting
- On Screen Display
- Internal selectable lookup table for gray-scale transfer function
- Internal power supply (110-240 VAC)
- Including LCD protection screen

Unless otherwise stated, a Flat Monitor Ceiling Suspension (MCS) for 3 monitors is included for viewing in the examination room. It includes motorized height adjustment for most configurations and ceiling heights. The MCS offers flexible monitor positioning over a range of about 360 x 300 cm, allowing free monitor positioning around the table. At customer request, this 3 monitor MCS can be replaced by a 4, 6 or 8 fold MCS or an MCS integration kit for non-Philips MCS. The MCS integration kit contains vital parts for system operation.

Of the two medical monochrome LCD monitors included in the MCS, one is used for viewing of live images and the other serves as the first reference display. Reference images or runs are controlled by infra-red remote-control Xper Viewpad.

The On-Screen Display provides status information on stand rotation, angulation, display of system messages, X-ray tube load status, selected fluoroscopy mode, selected detector Field of View, and both the rate and accumulation of the dose area product and skin dose. For cardiac applications, the system also monitors and displays body zone specific Air Kerma data (10 zones).

The Allura Xper FD20 offers a storage capacity of (optionally extendable) of 50,000 images at matrix size of 1024 x 1024, in 8 or 10 bit depth. With a matrix size of 2048 x 2048 this is 12,500 images. Maximum number of examinations is 999, with no limit to the maximum number of images per examination.

5) User Interface

Xper stands for PERSONalized X-ray system. Xper comprises three features:

- Xper Settings, which customizes the system to each user preferred settings,
- Xper User Interface, which is based on Philips harmonization principles used through all clinical modalities.
- Xper Integration, which makes advanced integration functionality available. Functionality like DICOM Query /Retrieve, background archiving, and Xper Fluoro Storage.

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Line #	Part #	Description	Qty
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The Xper User Interface comprises a variety of User Interface modules in the Examination Room. There is the On-Screen Display, the Xper Module, and the Xper Imaging and Geometry Modules. The modules are described in further detail.

Continuous Autopush (NCVA090)

Continuous Autopush is an archive accelerator which ensures that background archiving continues with minimal disruptions

The On-Screen Display is positioned on the left side of the reference monitor. The following system information is displayed:

- X-ray indicator
- X-ray tube temperature condition
- Gantry position in rotation and angulations
- Source Image Distance
- Table height
- Table tilt angle (if option is installed)
- Table cradle angle (if option is installed)
- Detector field size display
- General System messages
- Selected Frame speed
- Fluoroscopy mode
- Integrated fluoroscopy time
- Skin Dose: dose rate at X-ray, cumulated dose at no X-ray
- Dose Area Product: dose rate at X-ray, cumulated dose at no X-ray
- Graphical bars for Body Zone specific dose-rate and accumulated skin dose levels, related to the 2 Gy level (cardiac applications only)
- Stopwatch

The Xper ViewPad contains the preprogrammed function settings. The system is provided with two Xper Viewpads. The following functions are provided:

- Run and image selection
- File and run cycle
- File overview
- Store to Reference image file
- Copy image to photo file
- Digital (fixed) zoom and panning
- Recall reference images, which means switching control of Xper
- ViewPad function from life to reference monitor
- Laser pointer, intended to point at regions of interest on the imaging monitors
- Led indication of laser pointer on/off and battery low
- Subtraction on/off
- Remasking
- Landmarking

The Xper Module can be connected at tableside or in the control room. Optionally, it is possible to connect in parallel up to three Xper Modules on the system. This module has a touch screen,

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Line #	Part #	Description	Qty
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which can be operated when covered with sterile covers. The Xper Module contains the following functionality:

- Acquisition settings
- Selection of Xper Setting, which incorporates a list of function
- Settings to set frame rates and x-ray generation settings applicable for the type of the preferred intervention.
- Automatic Position Control (optional) for stand positioning and the table positioning options
- Image Processing parameters can be adjusted on the Xper Module
- Quantitative Analysis (optional) like coronary analysis, left ventricular and vessel analysis can be performed on the Xper Module
- Interventional tools operation (optional) like Allura Xper FD20 3D-RA, 3D-Roadmap, StentBoost, Allura Xper FD20 3D-CA, XperCT and XperGuide can be operated from the Xper module
- Operation of Xcelera, XperIM and ViewForum viewing (optional)
- Operation of CX50 Ultrasound (optional)

NCVA778 The second Xper Module is equal to the standard Xper Module and provides touch screen control of displayed functionality.

The Xper Geometry module can be positioned at either three sides of the patient table; left, right or foot-end, while keeping the button operation intuitive. The Xper Geometry module provides the following functionality:

- Tabletop-float
- Table height position
- Source Image Distance selection
- Xper Access flat detector rotation
- Gantry positioning
- Longitudinal movement of the Gantry along the ceiling
- Gantry rotation in an axis perpendicular to the ceiling
- Store and recall of two scratch gantry positions including SID
- Emergency stop button
- Execute button of the Automatic Positioning Control (APC)
- Unlocking button for table pivot function
- Table tilt and cradle controls (if option is installed)

The Xper Imaging module can also be positioned at one of the three sides of the patient table, while keeping the button operation intuitive. The Xper Imaging module provides the following functionality:

- Fluoroscopy Flavor selection defined per Xper Setting
- Shutters and Wedge positioning on Last Image Hold
- Manual or automatic semitransparent wedge filter
- Xper Fluoro Storage and Grab
- Selection of the Detector field size
- Positioning of the shutters
- Reset of the fluoroscopy buzzer

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Line #	Part #	Description	Qty
		<ul style="list-style-type: none">• Selection of Roadmap Pro and SmartMask (optional)	

Both Xper Geometry and Imaging modules are provided with a protection bar. This removable bar protects the buttons from unintended control.

The control room comprises a Xper Review Module, two LCD monitors on special LCD monitor stands and a keyboard with mouse. The monitors are shared screens; the left monitor is the Xper data color monitor, and the right monitor is the Xper review B&W medical monitor.

An intercom system is connected independently from the system allowing placement at the preferred working position in the control room and examination room. The listen function can be selected separately on each intercom. Activating the talk function on one intercom automatically disables this function on the other intercom.

The Xper Review Module offers hardware with basic functions for fast and efficient review. The most prominent functions can be controlled by the push of a button. The Xper Review Module comprises the following functionality:

- Power on/off
- Tagarno wheel to control the review of a patient file
- File and run cycle
- Contrast, Brightness, and Edge enhancement settings
- File, Run, and Image stepping
- Run and file overview
- Image invert and digital zoom
- Go to original settings
- Reset fluoroscopy timer and enable/disable X-ray

The Xper data monitor is a 19" TFT-LCD color monitor. The Xper data monitor is part of a shared screen with the Xper review monitor controlled with a standard keyboard and mouse. The data monitor is intended as the patient data interface. The workflow is divided in scheduling, preparation, acquisition, review, report, and archive. System information is displayed on the bottom of the data monitor:

- Stopwatch and Time
- System guidance information
- Dose Area Product (DAP) and Skin Dose, as dose rate during
- X-ray, and accumulative dose at no X-ray
- Frame speed settings, fluoroscopy mode, and accumulated fluoroscopy time
- Exposure and fluoroscopy settings as Voltage (kV), Current
- (mA) and pulse Time (ms)
- Geometry information as rotation, angulation, and SID

Scheduling

In the scheduling page it is possible to add new patients. The patients can be listed and selected per date, physician, and intervention type. Previous DICOM patient studies can be uploaded with the DICOM Query Retrieve function in the Allura Xper FD20 system. Patient management protocols are flexible and allow for multiple studies to be selected under one patient identification number. This means that new studies can be appended to an earlier patient file. Furthermore, each study can contain multiple examinations to allow for split administrative purposes. Each examination contains multiple files, like acquisition file, reference file, and QA results file.

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Line #	Part #	Description	Qty
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Preparation

The preparation page provides the information of the room and patient preparation of each individual physician. The preparation page is customizable per Xper Setting and allows each physician to provide his own room protocols. This preparation page makes hard copies of the protocol instructions redundant.

Acquisition

The acquisition page contains information on the current selected patient.

Review

The review page allows for reviewing of patients:
Previous examination cases
Review of other DICOM XA or DICOM SC studies

Archive

Clinical studies can be archived to a CD or a PACS. The archive process can be completely automated and customized with Xper Settings. Parameters like multiple destinations, archive formats can be selected to the individual needs and wishes for programming under the Xper Settings. The Xper review monitor is a black and white monitor, which is shared with the color data monitor. The monitor is a 18" TFT-LCD B&W monitor. The Graphical User Interface on the Black and White monitor has the following features and possibilities:

- Step through file, run, or images
- File, and run overview
- Contrast, brightness, and edge enhancement settings
- Flagging of runs or images for transfer
- Applying text annotation in images
- Optional DICOM printing
- Executing Quantitative Analysis Packages if available
- Subtraction functionality
- Zoom/pan functionality
- Electronic shutters
- Video invert
- View Roadmap Pro, stacking of images
- Landmarking

The Xper DICOM Image Interface enables the export of clinical images to a destination like an Xcelera DICOM Recorder or a PACS server. The export formats are based on DICOM 3.0 protocols. The system exports clinical studies in DICOM XA or DICOM Secondary Capture formats.

- The Xper DICOM Image Interface transfers through its fast Ethernet link, making images available on-line within seconds. The archive process can be configured by Xper Settings. The images are sent out either in the background, or manually upon completion of the examination. The export format is configurable in 512x512, 1024x1024 or 2048x2048 (unprocessed) matrix, in 8 or 10 bit depth. The examination can be sent to multiple destinations for archiving and reviewing purposes. The Xper DICOM Image Interface provides DICOM Storage and DICOM Storage Commit Services.

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The DICOM Query/Retrieve function allows older DICOM XA MF and DICOM SC studies to be uploaded in the system. Furthermore, additional information can be appended to a study, while keeping the patient identification the same.

Access to the system from a Remote location is possible via network or modem connection. Remote access to a system can shorten the time needed for e.g. changing system settings or problem diagnosis.

EcoVision

At Philips Healthcare, we feel the responsibility towards society and the environment. The latest Allura Xper FD20 system is a perfect example of our EcoVision program. By examining every aspect of the Allura Xper FD20 design and development through a green eye, we drastically reduced the products environmental impact.

Clinical Education Program for Allura Systems

Essentials OffSite Education: Philips will provide up to two (2) Cardiovascular Technologists, Registered Technologists Registered Nurses, or other system operator as selected by customer, with in-depth didactic, tutorial, and hands-on training covering basic functionality and work-flow of the cardiovascular imaging system. In order to provide trainees with the ability to apply all fundamental functioning on their system, and to achieve maximum effectiveness, this class should be attended no earlier than two weeks prior to system installation. This twenty-eight (28) hour class is located in Cleveland, Ohio, and is scheduled based on your equipment configuration and availability. Due to program updates, the number of class-hours is subject to change without notice. Customer will be notified of current, total class hours at the time of registration. This class is a prerequisite to your equipment handover OnSite Education. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. **Travel and lodging are not included, but may be purchased through Philips. It is highly recommended that 989801292102 (CV Full Travel Pkg OffSite) is purchased with all OffSite courses**

Handover OnSite Education: Philips Education Specialists will provide twenty-eight (28) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 28 hours, and must include the two OffSite education attendees. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Site must be patient-ready. Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. **It is highly recommended for systems that are fully loaded or for customers with a large number of staff members to also purchase 989801292099 (CV Add OnSite Clin Educ 24h).**

The above education entitlements expire one (1) year from equipment delivery date. Ref# 106107-071214

2 **NCVB171 3D-RA R.6 1

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Line #	Part #	Description	Qty
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Allura 3D-RA assists physicians in decision making for treatment strategy in endovascular procedures, neuro or vascular surgery or even radiotherapy.
Allura 3D-RA reduces the number of DSA acquisitions and fluoroscopy time needed to perform an examination. This means less X-Ray dose for the patient and the medical staff and a reduced quantity of dye, leading to reduced procedure costs.
Allura 3D-RA provides a unique assessment after treatment due to the use of non-subtracted images that allows to shows devices stents, coils, clips and provide the optimal stand projection for endovascular treatment.
Allura 3D-RA provides a wide range of communication facilities to export 3D Images.

1 Image Acquisition

Image acquisition is performed with the Rotational Angiography feature of the Allura Xper FD series with the flexibility to position the C-arm in either head or side position.
C-arm in Head position: the Rotational Angiography run is performed over a scan range of 240 degrees with a rotation speed up to 55 degrees/sec.
C-arm in Side position: the Rotational Angiography run is performed over a scan range of 180 degrees with a rotation speed up to 30 degrees/sec.

2 3D Vessel Reconstruction

The rotational run is automatically transferred and displayed as a 3D vessel model: with the Real-Time digital link (option) 120 images are reconstructed into a 3 dimensional model within seconds. Additional reconstructions, using the Reconstructive Zooming Technique, can be performed as well.

3 Workflow:

Allura 3D-RA in combination with the Allura Xper FD series will provide an optimal workflow via the following workflow enhancers:

Complete automated 3D-RA process from 3D acquisition to 3D Viewing: no user interaction needed.

3D at Xper Module (option); With the Xper module the physician has all required 3D functionality at tableside. At the touch screen module functionality like rotating, panning, zooming, AVA, virtual stenting, 3D-APC and 3D Follow C-arc can be performed. With the mouse tablet all other functions can be performed so that there is no need for the Physician to leave the examination room.

3D Automatic Position Control (3D-APC); When the optimal working position has been chosen via the Allura 3D-RA interventional tool, the C-arc will automatically steer to this position.

3D Follow C-arc; When the position of the C-arc (not using any X-ray) is changed, the 3D volume will automatically follow the position of the C-arc. This means the position of the C-arc (and therefore the 2D projection) and the 3D volume are always aligned. As last seen; when the user leaves the patient in the model and later selects that patient again, the Allura 3D-RA interventional tool will return to the image last used by the user.

Mouse over: When moving the mouse cursor over a button the mouse over text will show up to explain the function of that specific button.

4 Calibration

Allura 3D-RA calibrations are performed by Philips Healthcare Customer Support. Allura 3D-RA calibration data are stable over at least 6 months time.

5 Viewing

A Real Time user interface is available with 3D-RA, providing 3D object viewing in any space direction. A graphical display of (C-arm) stand position including angulation/rotation for any projection.

Phillips' CRM (Contrast Resolution Management) Technology for a considerable increase in contrast resolution in all volumes.

Various Image Rendering possibilities: Volume/Surface Rendering, MIP, Endoscopy, SUM (pseudo x-ray image) Gradient rendering; the possibility to display the vessel structure transparently.

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Line #	Part #	Description	Qty
		<p>Cut-plane function to get a precise insight of the shape of the pathology Orthoviewer providing a multi-planar visualization of objects using the different Image Rendering possibilities. MPR (Multi-Planar Reformating): enables visualization of the volume in all three standard projections (coronal, sagittal and axial) Especially useful for optimal viewing of spine procedures (e.g. Vertebroplasty) SpineView: special acquisition protocol for optimal viewing of the spine, especially osteoporotic vertebrae CalciView: allows visualization of Hyper dense plaque in 3D, separately or in relation to the lumen. 5 different distance measurements calculated in the same volume, including "Quick measurement" feature Volume calculation Automated Vessel Analysis (AVA), provides information on vessel segment diameter, area and length with only three mouse-clicks. Endoscopic and cross sectional views are available. Computer Assisted Aneurysm Analysis (CAAA), providing information on Aneurysms, like volume, neck size etc.. Catheter tip shape simulation, providing information on how to shape the catheter tip. Virtual stenting; Ability to simulate a stent placement in a selected vessel segment for proper stent sizing. All relevant data of the simulated stent are displayed Annotation: text can be added to a volume to capture comments. Interpolative Zoom Reconstructive Zooming Technique, 2 additional user defined reconstructions focused on the Volume Of Interest (VOI) using different cube size and voxel resolution. Subtraction of reconstructed volumes, allowing to visualize vessels without embolization devices (stents, coils, clips,..) to assess the outcomes of treatment Automatic Voxelshift: compensates for movement when rendering subtracted or superimposed volumes Set the grey values WW/WL Store/Recall of user defined projections.</p>	

6 Archiving

Transfer to:

Optional Hard Copy unit (DICOM Print)

Any optional DICOM compatible device (e.g. PACS/ViewForum/Xcelera), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D

Any PC in a standard PC compatible format (JPEG,AVI)

One or multiple DVD's, CD-ROM(s) for easy archiving

Store a subset of exportable objects (snapshots and AVI Movies) to a USB removable memory device.

Clinical Education Specialists will provide sixteen (16) hours of tailored CV 3DRA OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEUs are not available in all cases. Please read Guidelines for more information, which will be provided to you during the scheduling process. Education Hours: Mon - Fri 8:00am to 5:00pm, except Monday and Friday are half-days to allow for trainer's travel. 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 delivery date (or purchase date if not sold with equipment).

3	**NCVB294	Set of 2 additional 21in. LCDs	1
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Line #	Part #	Description	Qty
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Two 21inch additional displays are located on top of the monitor ceiling suspension frame which carry the 56 inch large screen color LCD display.

These 2 additional LCD's can be used to display additional video sources or used as display back up for Hemo and Xray Live images. These LCD's have a fixed content.

Main characteristics of back-up displays are:

- 21.3 inch, 2 Megapixel color LCD display
- Max. resolution: 1600x1200
- Brightness: 450 Cd/m2
- Contrast ratio : 550:1
- Wide viewing angle (approx. 170 degrees)
- Constant brightness stabilization control
- Independently selectable brightness settings for monochrome and color images
- Independently selectable lookup table for gray-scale, color and DICOM transfer function

FCV0587, "XPer Live/Ref Slaving" required when displaying X-Ray Live as back-up.

4	**NCVA014	Maximus Rotalix Ceramic Grid Switch T A MRC200-GS	1
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30kW small focus and 67 kW Large focus loading with anode heat storage capacity of 2.4 MHU.

Features:

- Maximus ROTALIX Ceramic tube with 0.4 / 0.7 mm nominal focal spot values.
- Tube housing ROT-GS 1004 for oil cooling with built-in thermal safety switch
- Grid switching with dynamic pulsed fluoroscopy
- Rotor control unit for continuous rotation of the anode disk.
- Cooling unit CU 3000 heat exchanger for direct and continuous forced cooling with oil.
- High Voltage cables

5	**FCV0587	Xper Live/Ref Slaving	2
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Xper Live/Ref Slaving
The Xper Live/Ref Slaving will enable the option to slave the Live or Ref video source from the Allura Xper. The total amount of Xper Live/Ref Slaving that can be selected is max 4.
Xper Live/Ref Slaving is possible:
- In Control Room icw FCV0011(B/W monitor in Control Room)
- In Philips MCS (additional monitor excluded from this option)
- icw FCV0519 1 or 2 MCS from Skytron/Steris

6	**FCV0589	Legacy Video Convertor	6
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Legacy Video Convertor
The Legacy Video Convertor enables conversion from VGA towards DVI.
The Legacy Video Convertor enables conversion from VGA towards DVI for supported input resolutions,
as listed in the table below.
Signal type Native resolution Image Aspect Ratio

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Line #	Part #	Description	Qty
		VGA 640x480 4:3	
		SVGA 800x600 4:3	
		XGA 1024x768 4:3	
		SXGA 1280x1024 5:4	
		SXGA+ 1400x1050 4:3	
		UXGA 1600x1200 4:3	
		WXGA 1280x800 16:10 (8:5)	
		WSXGA 1440x900 16:10 (8:5)	
		WSXGA+ 1680x1050 16:10 (8:5)	
		WUXGA 1920x1200 16:10 (8:5)	
		2K 2048x1080 19:10	
		TV1080I/P 1920x1080 16:9	
		TV 480I 720x480 4:3	
		TV 480P 704x480 4:3	
		TV 576I 720x576 4:3	
		TV 576P 704x576 4:3	
		TV 720P 1280x720 16:9	
7	**NCVA092	Lab Reporting	1
		Lab Reporting allows the user to generate and print simple reports in modality stand-alone situations. The user is able to incorporate free text and clinical images. The reporting functionality is suited for local printing and email. Part of the report is generated automatically from administrative data (e.g. patient/exam data hospital name) and required data (e.g. run-log dose information and event-log).	
8	**NCVB879	Aut Pos Contr Xper sys & table	1
		This Automatic Position Controller (APC) combines APC for Allura Xper FD10 and FD20 systems with table APC.	
		System APC provides two modes of operation:	
		Preset Position Sequence: the sequence of projections is determined through personalized Xper Settings. Each set contains a maximum of 10 positions. Positions can be recalled in sequence or directly. The projection sequence comprises rotation angulation and SID settings related to the selected reference image.	
		Reference driven positioning: The projections on the reference monitors can be recalled with the push of a button. The reference driven positioning recollects the C-arm rotation angulation Flat detector image format and SID.	
		Table APC	
		The Automatic Position Controller (APC) for the table provides two modes of operation:	
		Auto positioning. The tabletop position and table height will be adjusted automatically to the pre-defined default point of interest. This to save time and x-ray dose at the start of an exam or for setting up the system for rotation scans.	
		Store/recall of a position of the table top. This includes the height-, longitudinal- and lateral position of the table top.	
9	**NCVA695	FD Rotational Angio	1

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Line #	Part #	Description	Qty
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Rotational angiography provides real-time 3D impressions of complex vasculature and coronary artery tree. It acquires multiple projections with just one contrast injection via a fast rotational scan of the region of interest.

Rotational Angiography can be used during screening procedures to quickly determine the optimal projection for the study as the angle (rotation/angulation) of the projection is indicated on each image.

Compared with traditional angiography, Rotational Angiography can save considerable time, dose and contrast, while providing image detail required for diagnostic and therapeutic decisions.

A rotational scan is possible both with the Allura Xper systems in the side position (ceiling mounted systems) and in the head position, providing the flexibility to perform procedures virtually from head to toe.

C-arm in side position:

- Max. rotation Speed: 30 degrees/s
- Max. rotation Angle: 180 degrees

C-arm in head position:

- Max. rotation Speed: 55 degrees/s
- Max. rotation Angle: 305 degrees

Max. Frame speeds are given by the framespeed specifications of the system configuration.

The speed and range of rotation are the highest available (see table). The very high speed allows using less contrast, whereas the very wide rotation range provides a complete evaluation of the anatomy.

A contrast run can be followed up with a mask run, to allow image/run subtraction.

The stand is designed for a very high mechanical stability. It offers precise positioning and high reproducibility, assuring you of high quality images and excellent subtraction studies.

Operation of Rotational Angiography is extremely easy. The procedure is selected, set up and executed virtually in a matter of seconds, supporting the highest patient throughput.

A set of dedicated acquisition programs is available on the Xper Module and can be selected at the touch of a button. The rotation end- and start-positions are easily selected. The procedure is controlled from the exposure hand- or footswitch.

10	**NCVA864	Storage extension	1
		Storage extension	

Storage extension provides an increased storage capacity for

- Allura Xper FD20 systems the storage is increased from:
- 50.000 to 100.000 images at 1024x1024 matrix
 - 12.500 to 25.000 images at 2048x2048 matrix

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Line #	Part #	Description	Qty
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Allura Centron system the storage is increased from:
 - 50.000 to 100.000 images at 1024x1024 matrix

Power requirements:
 refer to system configuration

11	**NCVB868	CX50 Video and UI coupling	1
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The CX50 Integrated Ultrasound feature has been designed to easily and efficiently integrate ultrasound into the interventional suite.

Patient data:
 Allura Xper patient information automatically transfers to the CX50
 X-Ray and ultrasound patient studies may be configured with unique or identical study IDs to easily store and locate studies in DICOM
 Image display:
 The CX50 video output displays on the exam room LCD monitor
 Integrated controls:
 The Allura Xper Tableside Module remotely controls specific ultrasound modes and functions, including:
 Modes: 2D, Color Doppler, Color Power Angio (CPA), Clinical presets
 Functions: Zoom, Focus, Depth, Gain, ISCAN one-button optimization, Freeze, Acquire, Caliper, Replay, 2D Sector Width, Color Region of Interest, Biopsy Angles
 Mouse interaction: remotely control the CX50 at the tableside using a mouse and tablet

12	**NCVA097	Cath Arm Support	1
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For brachial catheterisation and digital imaging technique
 The support is made of X-ray transparent material with exception of the fixingclamp and pivots.

13	**NCVA098	Pulse Cath Arm Support	1
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Facilitates catheterization trough the pulse and provides room for placing catheterization instruments. It is a flat radio translucent board and is placed under the patient while a part projects at either the left or right side of the tabletop to support the arm.

Size: 100 x 85 cm
 Material: carbon-fibre reinforced material

14	**NCVA101	Peripheral X-ray Filter	1
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Set of flexible x-ray filters to provide an uniform density in angiographic examinations of the lower peripheral area.
 Comprising:

- one central filter, at the top edge provided with sizing markers at every 5 cm, length : 1 m
- two side filters, length: 1 m

15	**NCVA783	Pivot for table base.	1
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Line #	Part #	Description	Qty
		For angiographic- and interventional procedures of the upper peripherals. Provides improved table access for patient transfer. Allows pivoting of the table base around its vertical axes. Pivot range from -90 degrees to + 180 degrees (or -180 to +90 degrees) with locked positions on 0, -13/+13 (facilitating arm-angiography) and -90/+90 and 180 degrees.	

Comprising:

- pivot device with graduated scale to be mounted on the universal floor plate of the table.

Compatible with Xper Table

16	**NCVA791	Xper Table Tilt	1
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This innovating SyncraTilt enhances the accuracy and efficiency of gravity-oriented procedures. It is available as an option for the Xper table in Allura Xper series systems.

SyncraTilt is ideal for interventional, myelography, phlebography and head down procedures because it provides more precise imaging of contrast medium, blood, or objects in the body.

With SyncraTilt, the isocentre is automatically located at the isocentre of rotation and angulation of the stand. If the longitudinal position of the stand changes, the tilt isocentre is changed to match with the new stand position. As a result, the region of interest is always centred

As the table tilts, the X-ray beam automatically coordinates to the movement.

The table floats even when tilted, and the region of interest can be followed by panning the tabletop.

When combined with the Bolus Chase option, SyncraTilt enables phlebography to be performed with a head-up tilted patient.

The option provides:

- maximum tilt range:
- 17 degrees (head down) to +17 degrees (head up).
- tilt speed: 2 degrees/sec
- automatic safeguarding system with manual override
- panning range in tilted plane: equal to the standard
- tabletop specifications (longitudinal 120cm, lateral 35cm)
- easy to use controls

Comprising:

- Tilt drive with user controls

Compatible with:

- Xper table in Allura Xper FD series Rel 3 onwards (monoplane versions) and Rel 2 onwards (biplane versions)
- Bolus Chase
- Pivot for table base
- swivel for table base

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Line #	Part #	Description	Qty
17	**NCVB199	Table top brake kit for the Xper Table	1
		The table top brake kit prevents the table top from floating in case of a power off situation. A friction brake is applied to stop the longitudinal and lateral movement of the table top.	
18	**FCV0510	Long mattress cardio	1
		Patient mattress, thickness 70 mm, length 3165 mm, width 500 mm	
19	**FCV0251	Head support	1
		Head support to optimize patient head position and/or for patient comfort.	
		Exists of two independent parts:	
		<ul style="list-style-type: none"> • head part • base part 	
		Two head straps are included.	
20	**FCV4894	Add.op-rail with cable ext.kit	1
		The content of the additional OP-Rail kit is:	
		<ul style="list-style-type: none"> • [A] One additional OP-Rail (mechanical) • [B] Cable Extension for OP-Rail <ul style="list-style-type: none"> • One Extension cable for Geo Module • One Extension cable for Imaging Module • One connection box (wherein the extension cables are coupled with the UI-Module cables. 	
		[A]	
		<ul style="list-style-type: none"> • An extension for the table op-rail (30cm). • The additional op-rail can be mounted at the both sides of the tabletop part where no op-rails are mounted. • The additional op-rail is compatible with AD5 and XperTable (cardio and neuro) patient-tabletops. • The op-rail has the same profile /dimensions as the current standard op-rail • The maximum load (downwards) on the additional op-Rail is 100 N (F=100N) <ul style="list-style-type: none"> • (this is limited by the tabletop of the Patient Table) • The maximum mechanical moment on the additional op-Rail is 40Nm downwards and 20Nm upwards <ul style="list-style-type: none"> • (this is limited by the tabletop of the Patient Table) 	
		[B]	
		<ul style="list-style-type: none"> • The cable extension consists out of two cables with a length of 1.3 m; one for the Geo and one for the Imaging module, and an interface box were the coupling to the • Geo and Imaging module cables can be made. 	
21	**FCV0017	CABLE CARRIER CS	2
		Additional carrier for suspension of cable hose from X-ray tube assembly or TV monitor.	

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Line #	Part #	Description	Qty
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22	**NCVA566	Interventional Hardw.(RT prep)	1
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The interventional hardware is a special platform designed for the Philips interventional software Integris 3D-RA, StentBoost and/or Allura 3D-CA

The Interventional Hardware comprises at least:

- Dell Workstation
- 2048 MB memory
- Primary hard disk for the Operating system
- Secondary 72 GB hard disk for application data
- Internal CD-ROM
- External DVD writer
- Operating Software
- Microsoft Windows XP Professional UK Operating System

Conditionally:

- Integris 3D-RA Calibration Tool Kit
- Grids for pincushion distortion and focus shift calibration
- Phantom for geometry calibration
- Phantom for user validation
- Allura 3D-CA
- Phantom for geometry calibration
- StentBoost
- Phantom for user validation

Compatible with:

- Integris series with connectivity release
- Allura Xper series

23	**NCVA590	Real time image link	1
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Real Time digital image link to an off-line Allura Interventional Hardware station. This applies on the applications 3D-RA, StentBoost and 3D-CA on the Interventional Hardware. This dedicated digital link sends raw or processed image data (depending on the application) real time during monoplane exposures to the connected Interventional Hardware station, to allow instant results of the applicable reconstruction after the exposure run.

In biplane systems, this digital link is available for the frontal channel only.

24	**NCVA116	3D RA Control for Xper Module	1
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Table Side Module functionality for Allura Xper FD20 used with Integris 3D-RA Release 4.2.

For further improvement of interventional procedures efficiency the following workflow enhancers are made available in the examination room: With the Xper touchscreen module the physician has all 3D functionality needed at tableside. Functionality like rotating panning zooming AVA Virtual stinting 3 and 3D Follow C-arc can be performed. No need for the Physician to leave the examination room. 3D Automatic Position Control (3D-APC); when the optimal working position has been chosen via the Integris 3D-RA interventional tool the C-arc will automatically steer to this position. 3D Follow C-arc: When the position of the C-arc (not using any X-ray) is changed the 3D volume will automatically follow the position of the C-arc. This means the position of the C-arc (and therefore the 2D projection) and the 3D volume are always aligned.

Line #	Part #	Description	Qty
25	**NCVB168	3D Roadmap	1

3D Roadmap extends the capabilities of the integrated 3D product by providing a sustainable 3D roadmap to support interventional procedures. The 3D Roadmap option matches the real-time 2D fluoroscopy images with the 3D-RA reconstruction of the vessel tree. It provides a 3D real time insight of the advancement of the guide wire, catheter and coils through complex vessel structures. 3D roadmap has automatic motion compensation for the neuro runs. When the automatic motion compensation function is active, this functionality will constantly correct the motion artifacts which can be present in the 3D Roadmap image.

Image Acquisition

The 3D Roadmap is based on the visualization of the vessel tree out of 3D-RA. The 3D Roadmap is activated with one button touch at tableside (Xper Module). Select the 3D Roadmap function on the touch screen module, activate fluoroscopy and the 3D Roadmap is activated. The "live" 2D fluoroscopy image is overlaid with the 3D volume of the vessel tree and is automatically displayed on the 3D roadmap monitor in both the examination and control room.

Intuitive, fully controlled from tableside:

The bidirectional link between the X-ray system and the 3D Roadmap allows the user to select the optimal stand position for the procedure in two ways. 3D Automatic Position Control allows the gantry to automatically move to the best interventional projection as shown on the 3D Roadmap monitor. 3D Follow C-arc allows the 3D Roadmap to remain in sync with the 2D projection, automatically adjusting viewpoint as the gantry is repositioned

- Landmarking to adjust the intensity of the anatomical reference surrounding the vessels;
- 3D blending to fade in/out the 3D view;
- WW/WL settings to control the contrast/brightness;
- Store and review runs for reporting and archive purposes;
- Store snapshots and movies.

3D Roadmaps can be sent to:

Any optional DICOM compatible device (e.g. PACS/ViewForum/Xcelera), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
Any PC in a standard PC compatible format (JPEG,AVI)

And stored/archieved on

A PACS systems as DICOM Secondary Capture images or movies

USB removable memory device

One or multiple DVD's, CD-ROM(s) for easy archiving

Hard copy via the (DICOM Print) protocol

26	**NCVB167	MR/CT Roadmap	1
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MR/CT Roadmap extends the capabilities of the integrated 3D product by providing a sustainable 3D roadmap based on previous acquired CT or MR scans to support interventional procedures. The MR/CT Roadmap option matches the real-time 2D fluoroscopy images with the 3D volume of CT or MR.

The CT or MR data can visualize in either 3D (e.g vascular structure) or with 2D slice in the same orientation as the 2D fluoro image. It provides a 3D real time insight of the advancement of the guide wire, catheter and coils through complex vessel and anatomical structures

Image Acquisition

A previously acquired CT or MR scan can be imported into the system and matched with a low dose 3D-RA or XperCT scan. The MR/CT Roadmap is activated with one button touch at tableside

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Line #	Part #	Description	Qty
		<p>(Xper Module). Select the MR/CT Roadmap function on the touch screen module, activate fluoroscopy and the MR/CT Roadmap is activated. The "live" 2D fluoroscopy image is overlaid with the MR/CT volume presented in 2D or 3D and is automatically displayed on the roadmap monitor in both the examination and control room.</p> <p>Intuitive, fully controlled from tableside:</p> <p>The bidirectional link between the X-ray system and the MR/CT Roadmap allows the user to select the optimal stand position for the procedure in two ways. 3D Automatic Position Control allows the gantry to automatically move to the best interventional projection as shown on the MR/CT Roadmap monitor. 3D Follow C-arc allows the MR/CT Roadmap to remain in sync with the 2D projection, automatically adjusting viewpoint as the gantry is repositioned.</p> <ul style="list-style-type: none"> • Easy 2 step registration of the MR/ CT volumes • Landmarking to adjust the intensity of the anatomical reference surrounding the vessels and tissue • 2D and 3D blending to fade in/out the 2D or 3D view; • WW/WL settings to control the contrast/brightness; • Store and review runs for reporting and archive purposes; • Store snapshots and movies. 	

MR/CT Roadmaps can be sent to:

- Any optional DICOM compatible device (e.g. PACS/ViewForum/Xcelera), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D.
- Any PC in a standard PC compatible format (JPEG,AVI).

And stored/archieved on

- A PACS systems as DICOM Secondary Capture images or movies.
- USB removable memory device.
- One or multiple DVD's, CD-ROM(s) for easy archiving.
- Hard copy via the (DICOM Print) protocol.

27	**NCVA879	Xper CT R2	1
<p>XperCT extends the capabilities of the angio system offering CT like imaging. The XperCT acquisition scan acquires up to 620 images. The 620 images ensure a high quality reconstruction of a CT-like volume to visualise soft tissue.</p> <p>XperCT includes frame rate extension to increase the system acquisition speed up to 60 frames per second. The high frame rates are beneficial for the dedicated abdomen protocols: fast acquisitions times in 5 or 10 seconds.</p> <p>The XperCT imaging process is fully automated in the Xper system. The XperCT 3D volume is displayed automatically within 1 minute (from acquisition to display): no user interaction required. Especially in critical cases it is important to obtain a fast overview.</p> <p>The 3D volume can be viewed in the control room and in the examination room. The slice view is performed by scrolling through the volume. Slice thickness and ww/wl can be varied upon user need. XperCT can be controlled via the Xper 3D module at tableside.</p> <p>In addition the XperCT volume can be matched with Allura 3D-RA. This view combines soft tissue information with high-resolution vessel information. The optimal view can be chosen with the orientation of the 3D volume: the C-arc follows automatically.</p> <p>Pre-requisite:</p> <ul style="list-style-type: none"> • Interventional HardWare • Real Time Link • FD Rotational Angio 			

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Line #	Part #	Description	Qty
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- Frame rate extension

Clinical Education Program for XperCT

CV XperCT Handover OnSite Education: Philips Education Specialists will provide eight (08) hours of 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: Site must be patient-ready. 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). Ref# 335-100615

28	**NCVB845	XperGuide Rel 2 SW	1
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XperGuide enables real-time needle guidance in the angio suite. Virtual needle paths are created on an XperCT dataset or on the previous acquired CT or MR dataset. XperGuide option matches the real-time 2D fluoroscopy images with the 3D volume of XperCT, CT or MR; to visualize the actual needle path versus the virtual path previously planned.

This volumetric dataset can be viewed in any slice direction. A wide range of gantry projections can be used to define the needle path.

Path planning can be done:

- By drawing a virtual needle path on an XperCT, MR or CT slice
- By defining entry and target points on different XperCT, MR or CT slices
- By defining a help line on a 3D volume XperGuide automatically calculates the optimal gantry projections for the path and transfers them to the planning to draw the needle path.

The calculated virtual needle paths can be viewed on the XperCT, MR or CT slices, to verify if this path is feasible. XperGuide supports planning of multiple needle trajectories. During the needle procedure, XperGuide is fully controlled at tableside. When XperGuide is active, guidance is automatically active when the fluoro pedal is pressed. The live 2D image is projected over the XperCT, MR or CT volume. The gantry can be positioned in the calculated gantry positions or controlled manually. The XperGuide images (live 2D fluoro projected over the XperCT, MR or CT volume) will follow the gantry projections.

At table side, XperGuide adapts in real-time to the following parameters:

- Changes in the angulation of the C-arm
- Changes in the rotation of the C-arm
- Changes in the field of view
- Changes in the source image distance

XperGuide run are in the same patient file as all other patient related data. All this data can be reviewed at any time.

XperGuide runs are stored together with the XperGuide movies and snapshots can be sent to:

- Any optional DICOM compatible device (e.g. PACS/ViewForum/Xcelera), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
- Any PC in a standard PC compatible format (JPEG, AVI)

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Line #	Part #	Description	Qty
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And stored/archieved on:

- A PACS systems as DICOM Secondary Capture images or movies
- USB removable memory device
- One or multiple DVD's, CD-ROM(s) for easy archiving
- Hard copy via the (DICOM Print) protocol

Clinical Education Program for XperGuide

CV XperGuide Handover OnSite Education: Philips Education Specialists will provide eight (08) hours of 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: Site must be patient-ready. 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). Ref # 336-100316

29	**NCVB875	EP Cockpit XL	1
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EP cockpit XL for Allura Xper mono-plane system with large 56-inch high resolution color LCD screen in the Exam Room
 EP cockpit XL is an integrated EP lab solution supporting an efficient working environment, integrated workflow and enabler for complex procedures.
 The EP cockpit XL provides the ability to:
 Reduce the amount of cables, keyboards and displays in the Exam Room and Control Room
 Display information from up to 8 sources simultaneously (incl. third party systems) on the Philips large 56-inch high resolution color LCD screen in the Exam Room.
 Resize & enlarge information at any stage during the case on the Philips large 56-inch high resolution color-LCD screen in the Exam Room.
 Select, customize & save viewing lay-outs of the Philips large 56-inch high resolution color LCD screen via the Allura Xper table-side module
 Display information (incl. third party systems) on any of the Philips ultra high-brightness 21-inch color LCD displays in the Control Room.
 Operate connected equipment (incl. third party systems) via the Allura Xper module in the Control Room.
 Select a predefined display setup and keyboard/mouse configuration, or save a custom configuration as a new preset configuration.
 Store any image on any screen and/or all images on all screens as a DICOM Secondary Capture image.
 The EP cockpit XL consists of:
 Omniswitch
 The Omniswitch is a 15 channel video-switch and 8 channel keyboard/mouse switch, operated from the Allura Xper Module in the Control Room and/or from the Allura Xper table-side module.
 The Omniswitch allows the user to direct the video output of all connected medical equipment to the Philips large 56-inch high

100215 Allura Xper FD20

Line #	Part #	Description	Qty
		<p>resolution color LCD screen in the Exam Room (up to 8 sources simultaneously) and to the Philips ultra high-brightness 21-inch color LCD displays in the Control Room (6 or 7 displays). The Omniswitch allows the user to switch keyboard/mouse control for the connected medical equipment. The Omniswitch can be connected to up to 8 medical equipment systems. These systems can be selected and controlled with 1 or 2 keyboard/mouse combinations in the Control Room. Medical grade, large screen high resolution color LCD display in the Exam Room This display support the image quality requirements for monochrome X-ray images, color EP signals as well as other images and replace all displays normally delivered with an Allura Xper system for the Exam Room. Main characteristics are:</p> <ul style="list-style-type: none"> • 56 inch, 8 Megapixel color LCD display • Native resolution: 3840x2160 • Brightness: max 450 Cd/m2 (typical) • Contrast ratio : 1200:1 (typical) • Wide viewing angle (approx. 176 degrees) • Constant brightness stabilization control • Lookup tables for gray-scale, color and DICOM transfer function • Full protective screen • Ingress Protection: IP-21 <p>Large 56-inch color LCD screen control</p> <ul style="list-style-type: none"> • Resize & enlarge information at any stage during the case via the Allura Xper table-side module in the Exam Room and/or the Allura Xper module in the Control Room. • Select, customize & save viewing lay-outs via the Allura Xper table-side module in the Exam Room • Select, customize & save viewing lay-outs via Allura Xper module in the Control Room <p>Ultra high-brightness, medical grade, color LCD displays A total of 6 x ultra high-brightness, medical grade, color LCD displays are provided with EP cockpit XL for use in the Control Room. These displays support the image quality requirements for monochrome X-ray images, color EP signals as well as other images and replace all displays normally delivered with an Allura Xper system. Main characteristics are:</p> <ul style="list-style-type: none"> • 21.3 inch, 2 Megapixel color LCD display • Display resolution (up to) : 1600x1200 • Input resolution (up to) : 1920x1200 • Brightness: 550 Cd/m2 • Contrast ratio : 800:1 • Wide viewing angle (approx. 170 degrees) • Constant brightness stabilization control • Independently selectable brightness settings for monochrome and color images • Independently selectable lookup table for gray-scale, color and DICOM transfer function <p>Monitor ceiling suspension A Monitor ceiling suspension for use in the Exam Room carry</p>	

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Line #	Part #	Description	Qty
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the large 56-inch color LCD screen, providing highly flexible viewing capabilities.
 The monitor ceiling suspension is height-adjustable and moveable along ceiling rails. It can be positioned on both sides of the table and replaces the Allura monitor ceiling suspension.
 Note: Two 21" additional displays (same as used in Control Room) are optional and located on top of the monitor ceiling suspension frame which carry the large 56-inch color LCD screen.

Control Room set-up

The 6 x ultra high-brightness color LCD displays, the 2x keyboard/mouse combination and Allura Xper module are designed to support an efficient workflow within the Control Room.

Equipment connected to EP cockpit XL can be operated via the Allura Xper module.

Note: The Allura Xper module is delivered with EP cockpit XL (EP cockpit)

Display information (incl. third party systems) on any of the Philips ultra high-brightness 21-inch color LCD displays in the Control Room.

Snapshot functionality

The snapshot function allows the user to store/save a screen-capture of any image on any EP cockpit display as a DICOM Secondary Capture image to a connected PACS.

The snapshot function allows the user to store/save a screen-capture of any image on any EP cockpit display as a DICOM Secondary Capture image to a connected PACS.

The snapshot-all function allows the user to store/save a screen-capture for each displayed image in the Exam Room / Control Room as separate DICOM Secondary Capture images

Wall Connection Boxes

A total of 9 x Wall Connection Boxes are provided with EP cockpit XL.

Through Wall Connection Boxes a wide range of 3rd party equipment can be connected to the EP cockpit XL Omniswitch.

The Wall Connection Boxes provides galvanically isolated connections: Video (DVI), Network (RJ45) and Keyboard/mouse (USB) .

The Wall Connection Boxes can be located in the Technical Room, Control Room and/or Exam Room.

In case of an Equipment Rack: 1 x Wall Connection Box is permanently placed on the Equipment Rack

Notes:

Life-supporting equipment can not be connected to the Wall Connection Boxes

EP cockpit XL displays are not powered by an Uninterruptible Power Supply. Equipment that requires a (fail-safe) power connection (UPS) for the video output need an additional display connected to that equipment's UPS.

Medical equipment with dedicated keyboards or displays should not be connected without consent of the manufacturer. Please contact your 3rd party equipment vendor for information and

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Line #	Part #	Description	Qty
		clearance. Compatibility EP cockpit XL is compatible with: Allura Xper FD10 series from Release 7.6 onwards Allura Xper FD20 series from Release 7.6 onwards	
		Allura Xper FD20 series from Release 7.6 onwards	
30	**980306640009	Blue Anti-Fatigue Floor Mat w/ Logo Blue Anti-Fatigue Floor Mat w/ Logo	1
31	**980406171109	40x50CM Rad Shield w/ Ext Arm-Ceiling Mnt	1
32	**980406190009	PIVOTING TABLE-MOUNTED RADIATION SHIELD Table-mounted radiation shield for additional protection of physician and staff against scatter radiation. The shield consists of two protective parts: a lower shield and an upper shield. The shield is specially designed for use with the AD5 patient table.	1
		The table mounted radiation shield provides the following features:	
		<ul style="list-style-type: none"> • Mounting to either the right or left table accessory rails; • Pivoting into the required working position; • Pivoting into the parking underneath the tabletop facilitating patient preparation; • The upper shield can be positioned upright providing optimal protection or can be folded down for free access to the patient. 	
		The table mounted radiation shield includes:	
		<ul style="list-style-type: none"> • Lower shield measuring 70 cm high 80 cm wide 0.5 mm Pbequivalence; • Upper shield measuring 40 cm high 50 cm wide 0.5 mm Pbequivalence; • Mounting clamp; Docking device for wall mounting.	
33	**989801220012	Cable Spooler	1
34	**989801220037	M LED 3MC Light MAViG M3 MC LED - Multi Color / power Supply Included Includes Portegra2 Ext Spring Arm 75/90cm	1
35	**989801220064	Medrad Xper Cable Rack Mnt	1
36	**989801220078	Medrad Provis Rack Mount	1

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Line #	Part #	Description	Qty
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The MARK V ProVis rack mount version is a contrast medium power injector which is dedicated for system integration.

The injector is accomplished with microprocessor control of the flow rate the volume and the pressure. A dual turret syringe system is applied suitable for 2x150 ml disposable syringes.

- flow rate can be set in ml/sec. ml/min. and ml/hour.
- display of achieved rate volume pressure and time.
- constant update and display of total injected contrast per patient
- injection programs can be stored and retrieved.

Comprising:

- electronic unit for rack mounting with power cable (3 m)
- injector head with controls heater system and cable (4.6 m)
- two disposable 150 ml syringes with pressure jackets and dual turret.
- control panel with cable (15 m)
- hand switch with coiled cable
- system interface cable 24 m with D connector
- rack mount installation kit
- table mount for injector power head of the injector MARK V ProVis
- Connector kit for injector head which is a kit for mounting the connector of the injector head extension cable at the connection box of the Angio DIAGNOST 5 table withcover for connection box of the AD5 for insulated mounting of the injector head connector
- mounting material
- injector head extension cable 18 m with mounting instructions for connector assembly

37	**989801220080	Portegra 2 360 Ceiling Column	2
		Portegra 2 360 Column w/ trolley and ceiling track	

38	**989801220502	Rotational IVUS Upgrade Kit	1
		Rotational Option: Adds rotational IVUS functionality to the IVUS system. System is compatible with Volcano's Revolution™ catheters.	

39	**NNAE305	Interventional Rad Package..	1
		CO2 View Trace	

Software package which enables tracing (stacking) of images acquired with CO2 injections. This function can be used during postprocessing next to view trace of images acquired with iodine injection.

Subtracted Bolus Chase

For visualization of vessel structures when the blood flow is difficult to estimate, in particular in the lower peripherals.

Bolus Chase solves the problem of cumbersome step movements, the mismatch between blood flow and selected program, and lack of real-time image information.

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Line #	Part #	Description	Qty
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During digital acquisition in non-subtracted mode with uninterrupted real-time image display, the contrast bolus is followed (chased) interactively by a motorized table scan movement using a hand-held speedcontroller to adapt the speed of the table scan to the contrast flow. The framespeed can be adapted as well.

The bolus run is followed with a mask run while using the same speedcurve and framespeed as generated during the bolus run. Viewing is possible in the subtracted and non-subtracted mode. If subtracted viewing is not required, the mask run can be skipped.

Subtracted Bolus Chase gives fast, accurate results for increased patient throughput and improved patient management. Automated exposure control and precise speed control assure a high quality images and excellent subtraction studies.

Comprising:

- automatic exposure control
- tabletop motordrive and hand-held speed controller (tableside)
- technique selection using Xper module, available both tableside and in control room (Xper FD20, FD20/10)

RIS/CIS Dicom Interface

This package allows communication of the Allura Xper system with a local information system (CIS or RIS). The interface uses the DICOM Worklist Management (DICOM WLM) and Modality Performed Procedure Step (DICOM MPPS) standards.

If a hospital has an Allura Xper system and an information system it can receive patient and examination request information from the information system and report examination results in order to:

- Eliminate the need for retyping patient information on the Allura Xper
- Prevent errors in typing patient names and registration numbers (ensuring consistency with IS information to prevent problems in archive clusters ortosearch fora name in case of later retrieval)
- Inform the IS about the acquired images and radiation dose

Upon request from the Allura Xper system the complete worklist with all relevant patient and examination data is returned from the IS to the Allura Xper system. For each patient the following information will be shown on the Allura Xper after it has been retrieved from the IS:

Patient Identification:

- Patient name
- Patient ID
- Birth date
- Sex

Examination/Request Information:

- Accession number
- Scheduled procedure step start time
- Scheduled performing physician's name

It is possible at all times to enter patient demographics information manually within the

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Line #	Part #	Description	Qty
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Allura Xper system in case of an emergency or in case the local Information System connection is down.

On request of the clinical user the Allura Xper will report the following information about the selected patient to the IS:

Patient Identification:

- Patient name
- Patient ID
- Birth date
- Sex

Examination/Request Information:

- Accession number
- Performed procedure step status start/end date and time
- Performing physician's name
- Referenced image sequence

Radiation dose:

- Total time of fluoroscopy
- Accumulated fluoroscopy dose
- Accumulated exposure dose
- Total dose
- Total number of exposures
- Total number of frames

Further detailed information can be found in the Allura Xper DICOM Conformance Statement.

The interface requires an EasyLink (hardware and software) if the IS is not compliant with DICOM Work List Management and Modality Performed Procedure Step.

Full autocall (Xper)

The AutoCal option is a software package to be used in conjunction with quantitative analysis software packages. It provides an auto calibration procedure for an object to be analyzed that is placed in the iso-center. When the object to be analyzed (e.g. Left Ventricle Vessel Segment) is placed in the iso-center AutoCal avoids the need to:

- acquire an additional image series containing a sphere or grid for calibration purposes
- calibrate manually on a calibration object (e.g. catheter) displayed in the image or image series to be analyzed

The AutoCal option is a software package to be used in conjunction with quantitative analysis software packages. It provides an auto calibration procedure for an object to be analyzed that is placed in the iso-center. When the object to be analyzed (e.g. Left Ventricle Vessel Segment) is placed in the iso-center AutoCal avoids the need to:

- acquire an additional image series containing a sphere or grid for calibration purposes
- calibrate manually on a calibration object (e.g. catheter) displayed in the image or image series to be analyzed

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Line #	Part #	Description	Qty
		Vascular Quant.Sw pkg(Xper)	

Functions:

- vessel diameter / stenotic index
- automated vessel analysis
- calibration routines

In addition the package allows manual measurements of line lengths (absolute and ratio's) and angulations. Multiple measurements in one image are possible.

Compatible with:

- Allura Xper FD10 Rel 3 and FD10/10 Rel 2 onwards
- Allura Xper FD20 Rel 2 and FD20/10 Rel 2 onwards
- Allura CV20 R1 onwards

FD SmartMask

SmartMask simplifies roadmapping procedures by overlaying a selected reference image with fluoroscopy on the live monitor in the exam room.

The reference image can be faded in/out with variable intensity, controlled from tableside.

SmartMask uses the reference image displayed on the reference monitor.

Any previously acquired image can be used as reference.

SmartMask facilitates pre- and post- intervention comparisons to assess treatment results

40	**989600213942	AD5 TO XPER TABLE ADAPT. PLATE	1
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*****PROMOTIONS*****

Promotion Name	Description
Allura 3D-RA Promotion Q1, 2013	This special promotion provides the Allura 3D-RA application at a reduced price. All orders for this promotion must be received on or before April 5, 2013.
XperCT Promotion Q1, 2012	This special promotion provides the Philips XperCT application at a reduced price. All orders for this promotion must be received on or before April 5, 2013.

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NET PRICE

\$1,322,694.80

Buying Group: NO CONTRACT

Contract #: NONE

Add'l Terms:

Each Quotation solution will reference a specific Buying Group/Contract Number representing an agreement containing discounts, fees and any specific terms and conditions which will apply to that single quoted solution. If no Buying Group/Contract Number is shown, Phillips' Terms and Conditions of Sale will apply to the quoted solution.

Each equipment system listed on purchase order/orders represents a separate and distinct financial transaction. We understand and agree that each transaction is to be individually billed and paid.

Price above does not include any applicable sales taxes.

The preliminary delivery request date for this equipment is: _____.

If you do not issue formal purchase orders indicate by initialing here _____.

Tax Status:

Taxable _____ Tax Exempt _____

If Exempt, please indicate the Exemption Certification Number: _____, and attach a copy of the certificate.

Delivery/Installation Address:

Invoice Address:

Contact Phone #:

Contact Phone #:

Purchaser approval as quoted:

Date:

Title:

This quotation is signed and accepted by an authorized representative in acknowledgement of the system configuration, terms and conditions stated herein.

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OPTIONS

SELECTION OF ANY OPTION WILL INCREASE THE CONTRACT PRICE BY THE AMOUNT SHOWN IN THE PRICE COLUMN. OPTIONAL EQUIPMENT PRICING VALID ONLY IF PURCHASED IN CONJUNCTION WITH EQUIPMENT QUOTED.

Line #	Part #	Description	Qty	Each	Price	Initial
1	**NCVA781	Dicom Print compose	1	\$2,244.40	\$2,244.40	_____
		Dicom Print provides the possibility to interface to any DICOM Printer. This is an automated printing protocol. The option provides Print Manual Overrides, Print Job submission, and Print Job management.				
2	**NCVA693	FD Dual Fluoro	1	\$25,816.80	\$25,816.80	_____
		Dual Fluoro for Flat detector systems				
		The Dual Fluoroscopy mode allows digitally processed fluoroscopy in parallel with trace subtract fluoroscopy, providing a non subtracted reference fluoro image for complex interventions.				
		This option provides an additional fluoro channel in parallel to the default fluoro channel. The Dual fluoroscopy mode is selected via the Xper module.				
		The trace subtracted fluoro image will be displayed on the exam monitor, the non-subtracted fluoro image is displayed on the reference monitor.				
		In Dual Fluoro mode, The fluoroscopy image on the exam monitor can be zoomed digitally with a factor 2, providing a larger view of the region of interest for complex interventions. The fluoro zoom function is controlled via the Xper module.				
3	**NCVA697	ViewForum for CV	1	\$40,039.60	\$40,039.60	_____

ViewForum in combination with the Allura Xper System provides a parallel working environment, allowing parallel viewing and processing of previously acquired images of the current or previous patient in order to increase patient throughput and procedure efficiency. At the same time the ViewForum enables a multi-modality work environment for radiographers and radiologists in their preparation and review of CT, MR, US and X-Ray studies.

The ViewForum includes the X-ray vascular package. The X-ray Vascular Analysis software enables advanced, off-line vascular processing. All processing settings of the acquisition system remain available and can be further manipulated to obtain optimal results for reporting or further detailed analysis.

The package includes:

- Remasking
 - Subtraction (incl. run subtraction)
 - Manual Pixel Shift
 - Split Screen (horizontal or vertical split)
 - AutoWarp Pixel Shift("rubber band" transformations)
- Landmarking or Viewtrace (for CO2 and Iodine)
- Automated Vascular Analysis (AVA) for stenosis measurements

The ViewForum standard functionality includes:

- visual shutters,
- stack and tile viewing,
- cine, movie-export,
- sequence generation of volumes and projections,
- linking annotations and measurements

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OPTIONS

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Line #	Part #	Description	Qty	Each	Price	Initial
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- Print Protocols and Editor
- Full DICOM communications (Incl. Query and Retrieve, import and export)
- CD and DVD Writing (DVD+RW) A DICOM viewer will be burnt with all CD's and DVD's
- Support for DICOM Standard Grey-scale to for best image quality

ViewForum operates on Microsoft Windows XP.

Compatible with:

- Allura Xper FD20 series

Content:

- High end workstation hardware (min. configuration: 4x 1GB memory, 146 GB HDD, 256 MB graphical card)
- ViewForum Rel. 6.3 software or higher
- X-Ray vascular package
- Instruction For Use

Clinical Education Specialists will provide sixteen (16) hours of tailored CV View Forum OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEUs are not available in all cases. Please read Guidelines for more information, which will be provided to you during the scheduling process. Education Hours: Mon – Fri 8:00am to 5:00pm, except Monday and Friday are half-days to allow for trainer's travel. 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 delivery date (or purchase date if not sold with equipment).

4	**NCVA706	ViewForum on Xper Module	1	\$11,916.40	\$11,916.40	
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This option integrates the ViewForum application in the Allura Xper system. It allows operation of ViewForum with the Xper module in the examination room during an examination. Display of ViewForum imaging in the examination room has to be arranged for the monitor ceiling suspension with an additional monitor or with MultiVision (sharing an existing monitor). Following ViewForum viewing functions are available on the Xper module:

- study selection
- replay control (start/stop/autocycle, run step, image step)
- Report selection (with page step, close report)
- image settings (adjust Contrast, Brightness, Edge enhancement) and reset to original settings

5	**NCVB882	Cradle extension	1	\$20,639.80	\$20,639.80	
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OPTIONS

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Line #	Part #	Description	Qty	Each	Price	Initial
		<p>This extension provides the possibility to cradle the table top. This allows optimal positioning of the patient for f.i. more invasive (surgical) or guided puncture procedures. Functionality: . isocentric cradle with maximum cradle range: -15 degrees to +15 degrees for the full tilt range . cradle speed: 3 degrees/sec . automatic safeguarding system with manual override . easy to use controls</p>				
6	**989801220084	Volcano Joystick Option Kit	1	\$1,401.20	\$1,401.20	_____
		A compact joystick that comes with a clamp to be mounted on the patient bedrails. Some physicians prefer to control the IVUS system via a joystick, and this option provides this functionality. Can be operated under the sterile drape.				
7	**989801220085	Volcano Print Kit	1	\$1,599.60	\$1,599.60	_____
		A compact color thermal printer that is used to print IVUS images for physician reference, the patient file, or to provide to the patient. Connects directly to the CPU in the control room via USB.				
8	**989801220086	Volcano Video Switch Opt kit	1	\$1,190.40	\$1,190.40	_____
		In cases of established labs that have limited monitors on the boom, an optional 4-port video switch permits for toggling of multiple video inputs to one monitor. If the lab already has a video switch with an open port, this option would not be required.				
9	**989801220089	Volcano Witt ECG Cable Kit	1	\$601.40	\$601.40	_____
		The VH IVUS functionality from Volcano requires an input signal from the labs ECG signal. This custom connector ensures connectivity for the ECG signal from a specific ECG system. NOTE: Every s5i installation will require an ECG connection. Note the labs ECG system when ordering.				
10	**989801220093	Volcano IVUS s5i	1	\$77,078.40	\$77,078.40	_____
		The base components required to operate a Volcano IVUS s5i system, including: the system CPU; a control console for the control room; a bedside touchpad controller; a patient interface module (PIM); an isolation transformer through which power is supplied to the CPU; a USB extension kit which transmits data and power between the CPU and patient bedside-mounted peripherals; a 19" LCD monitor for the control room. The core bundle also includes installation of components, excluding pulling cables, which will be done by Philips.				
		Cables required to operate the Volcano IVUS s5i system. The kit includes a patient interface module (PIM) cable, a shielded CAT5 Ethernet cable, an ECG cable, and a grounding cable. These cables need to be laid in the dedicated pipe connecting the patient table area to the control room. All cables in this kit are 30 meters in length.				
		Patient interface module (Pimmnett) for FFR wires and all hardware required for the Fractional Flow Reserve				
11	SP059B	Universal Power Supply	1	\$55,000.00	\$55,000.00	_____
		Philips Power Solutions 25 kVA UPS for FD20 system.				

Philips Standard Terms and Conditions of Sale

The products and services listed in the quotation are offered by Philips Healthcare, a division of Philips Electronics North America Corporation ("Philips") only under the terms and conditions described below.

1. **Price; Taxes.** The purchase price stated in the quotation does not include applicable sales, excise, use, or other taxes in effect or later levied. Customer shall provide Philips with an appropriate exemption certificate reasonably in advance of the date the product is available for delivery otherwise, Philips shall invoice Customer for those taxes, and Customer shall pay those taxes in accordance with the terms of the invoice.

2. **Cancellation.** Philips' cancellation policies are set forth in the applicable schedule attached to these Terms and Conditions of Sale.

3. **Payment Terms.**

3.1 Unless otherwise specified in the quotation, Philips will invoice Customer, and Customer will immediately pay such invoice on receipt for each product in accordance with the payment terms set forth in the applicable schedule attached to these Terms and Conditions of Sale:

3.2 Orders are subject to Philips' on-going credit review and approval.

3.3 Customer shall pay interest on any amount not paid when due at the maximum rate permitted by applicable law. If Customer fails to pay any amount when due, in addition to any other rights or remedies available to Philips at law or in equity, Philips may discontinue the performance of services, discontinue the delivery of the product, or deduct the unpaid amount from any amounts otherwise owed to Customer by Philips under any agreement with Customer. In any action initiated to enforce the terms of the quotation following a Customer default or product cancellation under an order arising from the quotation, Philips shall be entitled to recover as part of its damages all costs and expenses, including reasonable attorneys' fees, in connection with such action.

3.4 Credit Card. Philips, at its discretion, will accept a credit card for payment on orders with a net value of \$50,000 or less.

4. **Trade - In.** If Customer will be trading-in any equipment ("Trade-In"), then:

4.1 Customer represents and warrants that Customer has good and marketable title to such Trade-In;

4.2 Title to the Trade-In shall pass from Customer to Philips upon Philips making the new equipment available for first patient use. Removal of the Trade-In from Customer's site shall occur no later than the date Philips makes the new product available for first patient use, unless otherwise agreed in writing between Philips and the Customer; and

4.3 Notwithstanding anything to the contrary in any Business Associate Addendum ("BAA"), Customer represents and warrants that Customer has removed or de-identified all Protected Health Information ("PHI") from the Trade-In equipment as of the date the equipment is removed. To the extent Customer has not done so, Customer agrees to reimburse Philips for any out-of-pocket costs Philips incurs to remove or de-identify PHI from the Trade-In.

4.4 If (a) the condition of the Trade-In is not substantially the same when Philips removes the Trade-In (ordinary wear and tear excepted) as it was when Philips quoted the Trade-In value; or (b) Customer delays the removal of the Trade-In, then Philips may reduce the price quoted for such Trade-In or cancel the Trade-In and Customer will pay the adjustment amount within thirty (30) days of receipt of invoice.

4.5 If Philips does not receive possession of the Trade-In, Philips will charge Customer, and Customer will pay within thirty (30) days of receipt of invoice, the amount of the Trade-In allowance.

4.6 Evidence that Customer intends to trade in an asset as part of the purchase or lease of any product(s) shall be in the form of, but not limited to: (a) receiving a trade in quote and/or authorization from Philips on the value of the asset to be traded in; (b) providing Philips with serial numbers of assets to be traded in; and/or, (c) providing Philips with a de-installation date to remove an existing asset in order to install Philips quoted equipment.

5. **Leases.** If Customer desires to convert the purchase of any product to a lease, Customer will arrange for the lease agreement and all other related documentation to be reviewed and approved by Philips not later than ninety (90) days prior to the date of the availability for delivery of major components of the product. The Customer is responsible for converting the transaction to a lease, and is required to secure the leasing company's approval of all of these Terms and Conditions of Sale. No product will be delivered to the Customer until Philips has received copies of the fully executed lease documents and has approved the same.

6. **Security Interest.** Customer hereby grants to Philips a purchase money security interest in the products until all payments have been made. Customer shall sign any financing statements or other documents necessary to perfect Philips' security interests in the products. Where permitted by applicable law, Customer's signature on the quotation or on a purchase order issued as a result of the quotation gives Philips the right to sign on Customer's behalf and file any financing statement or other documents to perfect Philips' security interest in the product.

7. **Shipment and Risk of Loss.**

7.1 The applicable schedule attached to these Terms and Conditions of Sale shall apply for delivery.

7.2 Title to any product (excluding software), and the risk of loss or damage to any product shall pass to the Customer F.O.B. destination. Customer shall obtain and pay for insurance covering such risks at destination.

8. **Installation, Site Preparation, Remote Services.**

8.1 **Installation.** Customer shall provide Philips full and free access to the installation site and suitable and safe space for the storage of the products before installation. Customer shall advise Philips of conditions at or near the site, including any hazardous materials, that could adversely affect the installation or pose a health or safety risk to Philips' personnel, and shall ensure that those conditions are corrected and hazardous materials removed, and that the site is fully prepared and available to Philips before installation work begins. Customer shall ensure, at no charge to Philips, that there are no obstacles preventing Philips from moving the product from the entrance of the Customer's premises to the installation site. Customer shall be responsible, at its expense, for rigging, the removal of partitions or other obstacles, and restoration work. The products will be installed during normal working hours. Philips will unpack the product, construct applicable pads (if required for certain products), connect the product to a safety switch or breaker to be installed by the Customer, and calibrate and test the product. If local labor conditions, including but not limited to a requirement to utilize union labor, require the use of non-Philips employees to participate in the installation of the product, then such participation of non-Philips employees shall be at Customer's expense. In such case, Philips will provide engineering supervision during the installation.

8.2 Site Preparation. Except where Philips has agreed in writing to provide construction services for a fee pursuant to a construction agreement and scope of work signed by Customer, Customer shall be responsible, at its expense, for the preparation of the installation site where the product will be installed including any required structural alterations. Customer shall provide any and all plumbing, carpentry work, conduit, wiring including communications and/or computer wiring, network equipment, power supply, surge suppression and power conditioning (except to the extent they are expressly included in the quotation), fire protection and environmental controls, ground fault and isolation system, and other fixtures and utilities required to properly attach, install, and use the product. Site preparation shall be in compliance with all safety, electrical, RF or magnetic shielding and acoustical suppression and building codes relevant to the product and its installation and use. The sufficiency of any installation site plans shall be the responsibility of Customer. Customer, at its expense, shall obtain all permits and licenses required by federal, state, or local authorities in connection with the installation and operation of the product, including any certificate of need and zoning variances. PHILIPS MAKES NO WARRANTY AND ASSUMES NO LIABILITY FOR THE FITNESS OR ADEQUACY OF THE SITE IN WHICH THE PRODUCT IS TO BE INSTALLED OR USED. CUSTOMER INDEMNIFIES PHILIPS AGAINST ANY CLAIMS, INCLUDING SUBROGATION CLAIMS, ARISING FROM CUSTOMER'S SITE PREPARATION RESPONSIBILITIES.

8.3 Remote Services Network ("RSN"). Customer will (a) provide Philips with a secure location at Customer's premises to store one Philips RSN router (or a Customer-owned router acceptable to Philips at Customer's option) for connection to the equipment and to Customer's network; and (b) at all times during the warranty period provide Philips with full and free access to the router and a dedicated broadband Internet access node, including but not limited to public and private interface access, suitable to establish a successful connection to the products through the Philips RSN and Customer's network for Philips' use in remote servicing of the product, remote assistance to personnel that operate the products, updating the products software, transmitting automated status notifications from the product and regular uploading of products data files (such as but not limited to error logs and utilization data for improvement of Philips products and services and aggregation into services). Customer's failure to provide such access at the scheduled time will constitute Customer's waiver of the scheduled planned maintenance service and will void support or warranty coverage of product malfunctions until such time as planned maintenance service is completed or RSN access is provided. Customer agrees to pay Philips at the prevailing demand service rates for all time spent by Philips service personnel waiting for access to the products.

9. Product Warranty.

9.1 If a separate product warranty page prints as part of this quotation, that product warranty applies to your purchase and is incorporated herein; otherwise Section 9.2-9.7 shall apply.

9.2 **Hardware/Systems.** Philips warrants to Customer that the Philips equipment (including its operating software) will perform in substantial compliance with its performance specifications in the documentation accompanying the products, for a period of 12 months beginning upon availability for first patient use.

9.3 **Stand-alone Licensed Software.** For a period of ninety (90) days from the date Philips makes Stand-alone Licensed Software available for first patient use, such Stand-alone Licensed Software shall substantially conform to the technical user manual that ships with the Stand-alone Licensed Software. "Stand-alone Licensed Software" means sales of Licensed Software without a contemporaneous purchase of a server for the Licensed Software. If Philips is not the installer of the Stand-alone Licensed Software, the foregoing warranty period shall commence upon shipment.

9.4 If the start of the installation is delayed for any reason beyond the control of Philips for more than thirty (30) days following the date that Philips notifies Customer that the major components of the product are available for delivery, the warranty period begins on the thirty-first (31st) day following that date.

9.5 Philips' sole obligations and Customer's exclusive remedy under any product warranty are limited, at Philips' option, to the repair or the replacement of the product or a portion thereof within thirty (30) days after receipt of written notice of such material breach from Customer ("Product Warranty Cure Period") or, upon expiration of the Product Warranty Cure Period, to a refund of a portion of the purchase price paid by the Customer, upon Customer's request. Any refund will be paid to the Customer when the product is returned to Philips. Warranty service outside of normal working hours (i.e. 8:00 A.M. to 5:00 P.M., Monday through Friday, excluding Philips' observed holidays), will be subject to payment by Customer at Philips' standard service rates.

9.6 This warranty is subject to the following conditions: the product (a) is to be installed by authorized Philips representatives (or is to be installed in accordance with all Philips installation instructions by personnel trained by Philips); (b) is to be operated exclusively by duly qualified personnel in a safe and reasonable manner in accordance with Philips' written instructions and for the purpose for which the products were intended; and (c) is to be maintained and in strict compliance with all recommended and scheduled maintenance instructions provided with the product; and Customer is to notify Philips immediately if the product at any time fails to meet its printed performance specifications. Philips' obligations under any product warranty do not apply to any product defects resulting from improper or inadequate maintenance or calibration by the Customer or its agents; Customer or third party supplied interfaces, supplies, or software including without limitation loading of operating system patches to the Licensed Software and/or upgrades to anti-virus software (except DAT file changes) running in connection with the Licensed Software without prior validation approval by Philips; use or operation of the product other than in accordance with Philips' applicable product specifications and written instructions; abuse, negligence, accident, loss, or damage in transit; improper site preparation; unauthorized maintenance or modifications to the product; or viruses or similar software interference resulting from connection of the product to a network. Philips does not provide a warranty for any third party products furnished to Customer by Philips under the quotation; however, Philips shall use reasonable efforts to extend to Customer the third party warranty for the product. The obligations of Philips described herein and in the applicable product-specific warranty document are Philips' only obligations and Customer's sole and exclusive remedy for a breach of a product warranty.

9.7 THE WARRANTIES SET FORTH HEREIN AND IN PHILIPS' WARRANTY DOCUMENT WITH RESPECT TO A PRODUCT (INCLUDING THE SOFTWARE PROVIDED WITH THE PRODUCT) ARE THE ONLY WARRANTIES MADE BY PHILIPS IN CONNECTION WITH THE PRODUCT, THE SOFTWARE, AND THE TRANSACTIONS CONTEMPLATED BY THE QUOTATION, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, WHETHER WRITTEN, ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Philips may use refurbished parts in the manufacture of the products, which are subject to the same quality control procedures and warranties as for new products.

10. Philips Proprietary Service Materials. Any Philips maintenance or service software and documentation provided with the product and/or located at Customer's premises is intended solely to assist Philips and its authorized agents to install and to test the products or to assist Philips and its authorized agents to maintain and to service the products under warranty or a separate support agreement with Customer. Customer agrees to restrict access to such software and documentation to Philips' employees and those of Philips' authorized agents only and to permit Philips to remove its Proprietary Service Materials upon request.

11. Patent Infringement Claims.

11.1 Philips shall indemnify, defend, and hold harmless Customer against any new claim that a Philips Product provided in the quotation infringes, misappropriates, or violates any third party intellectual property right, whether patent, copyright, trademark, or trade secret, provided that Customer: (a) provides Philips prompt written notice of the claim; (b) grants Philips full and complete information and assistance necessary for Philips to defend, settle, or avoid the claim; and (c) gives Philips sole control of the defense or settlement of the claim.

11.2 The provisions of this section shall not apply if the product is sold or transferred.

11.3 If (a) a Philips' Product is found or believed by Philips to infringe such a claim; or, (b) Customer has been enjoined from using the Philips Product pursuant to an injunction issued by a court of competent jurisdiction, Philips may, at its option, (i) procure the right for Customer to use the product, (ii) replace or modify the product to avoid infringement, or (iii) refund to Customer a portion of the product purchase price upon the return of the original product. Philips shall have no obligation for any claim of infringement arising from: Philips' compliance with Customer's designs, specifications, or instructions; Philips' use of technical information or technology supplied by Customer; modifications to the product by Customer or its agents; use of the product other than in accordance with the product specifications or applicable written product instructions; use of the product with any other product; if infringement would have been avoided by the use of a current unaltered release of the products; or use of the Philips Product after Philips has advised Customer, in writing, to stop use of the Philips Product in view of the claimed infringement. Philips will not be liable for any claim where the damages sought are based directly or indirectly upon the quantity or value of products manufactured by means of the products purchased under this quotation, or based upon the amount of use of the product regardless of whether such claim alleges the product or its use infringes or contributes to the infringement of such claim. The terms in this section state Philips' entire obligation and liability for claims of infringement, and Customer's sole remedy in the event of a claim of infringement.

12. Limitation of Liability. THE TOTAL LIABILITY, IF ANY, OF PHILIPS AND ITS AFFILIATES FOR ALL DAMAGES AND BASED ON ALL CLAIMS, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE, ARISING FROM A PRODUCT, LICENSED SOFTWARE, AND/OR SERVICE IS LIMITED TO THE PRICE PAID HEREUNDER FOR THE PRODUCT, LICENSED SOFTWARE, OR SERVICE.

THIS LIMITATION SHALL NOT APPLY TO:

- (a) THIRD PARTY CLAIMS FOR BODILY INJURY OR DEATH CAUSED BY PHILIPS' NEGLIGENCE OR PROVEN PRODUCT DEFECT;
- (b) CLAIMS OF TANGIBLE PROPERTY DAMAGE REPRESENTING THE ACTUAL COST TO REPAIR OR REPLACE PHYSICAL PROPERTY DAMAGE;
- (c) OUT-OF-POCKET COSTS INCURRED BY CUSTOMER TO PROVIDE PATIENT NOTIFICATIONS, REQUIRED BY LAW, TO THE EXTENT SUCH NOTICES ARE CAUSED BY PHILIPS' UNAUTHORIZED DISCLOSURE OF PHI; and,
- (d) FINES/PENALTIES LEVIED AGAINST CUSTOMER BY GOVERNMENT AGENCIES CITING PHILIPS' UNAUTHORIZED DISCLOSURE OF PHI AS THE BASIS OF THE FINE/PENALTY, ANY SUCH FINES OR PENALTIES SHALL CONSTITUTE DIRECT DAMAGES.

13. DISCLAIMER. IN NO EVENT SHALL PHILIPS OR ITS AFFILIATES BE LIABLE FOR ANY INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA, OR THE COST OF SUBSTITUTE PRODUCTS OR SERVICES WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT.

14. Confidentiality. Each party shall maintain as confidential any information furnished or disclosed to one party by the other party, whether disclosed in writing or disclosed orally, relating to the business of the disclosing party, its customers and/or its patients, and the quotation and its terms, including the pricing terms under which Customer has agreed to purchase the products. Each party shall use the same degree of care to protect the confidentiality of the disclosed information as that party uses to protect the confidentiality of its own information, but in no event less than a reasonable amount of care. Each party shall disclose such confidential information only to its employees having a need to know such information to perform the transactions contemplated by the quotation. The obligation to maintain the confidentiality of such information shall not extend that (a) is or becomes generally available to the public without violation of this Agreement or any other obligation of confidentiality or (b) is lawfully obtained by the receiving Party from a third party without any breach of confidentiality or violation of law.

15. Compliance with Laws & Privacy.

15.1 Each party shall comply with all laws, rules, and regulations applicable to the party in connection with the performance of its obligations in connection with the transactions contemplated by the quotation, including, but not limited to, those relating to affirmative action, fair employment practices, FDA, Medicare fraud and abuse, and the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"). Health care providers are reminded that if the purchase includes a discount or loan, they must fully and accurately report such discount or loan on cost reports or other applicable claims for payment submitted under any federal or state health care program, including but not limited to Medicare and Medicaid, as required by federal law (see 42 CFR 1001.952[h]).

15.2 In the course of providing project implementation related services and/or warranty services to Customer, hereunder, it may be necessary for Philips to have access to, view and/or download computer files from the products that might contain Personal Data. "Personal Data" means information relating to an individual, from which that individual can be directly or indirectly identified. Personal Data can include both personal health information (i.e. images, heart monitor data, and medical record number) and non-health information (i.e. date of birth, gender). Philips will process Personal Data only to the extent necessary to perform and/or fulfill its project implementation related service, warranty service and/or warranty obligations hereunder.

15.3 It is Customer's responsibility to notify Philips if any portion of the order is funded under the American Reinvestment and Recovery Act ("ARRA"). To ensure compliance with the ARRA regulation, Customer shall include a clause stating that the order is funded under ARRA on its purchase order or other document issued by Customer.

16. Excluded Provider. Philips represents and warrants that Philips, its employees and subcontractors, are not debarred, excluded, suspended or otherwise ineligible to participate in a federal health care program, nor have they been convicted of any health care related crime for the products and services provided under this Agreement (an "Excluded Provider"). Philips shall promptly notify Customer when it becomes aware that Philips or any of its employees or subcontractors, providing services hereunder, have become an Excluded Provider whereupon Customer may terminate this order by express written notice for product and services not yet shipped or rendered.

17. **General Terms.** The following additional terms shall be applicable to the purchase of a product:

17.1 **Force Majeure.** Each party shall be excused from performing its obligations (except for payment obligations) arising from any delay or default caused by events beyond its reasonable control including, but not limited to, acts of God, acts of third parties, acts of any civil or military authority, fire, floods, war, embargoes, labor disputes, acts of sabotage, riots, accidents, delays of carriers, subcontractors or suppliers, voluntary or mandatory compliance with any government act, regulation or request, shortage of labor, materials or manufacturing facilities.

17.2 **Bankruptcy.** If Customer becomes insolvent, is unable to pay its debts when due, files for bankruptcy, is the subject of involuntary bankruptcy, has a receiver appointed, or has its assets assigned, Philips may cancel any unfulfilled obligations, or suspend performance; however, Customer's financial obligations to Philips shall remain in effect.

17.3 **Assignment.** Customer may not assign any rights or obligations in connection with the transactions contemplated by the quotation without the prior written consent of Philips, which consent shall not be unreasonably withheld, and any attempted assignment without such consent shall be of no force or effect.

17.4 **Export.** Customer shall assume sole responsibility for obtaining any required export authorizations in connection with Customer's export of the products from the country of delivery.

17.5 **Governing Law.** All transactions contemplated by the quotation shall be governed by the laws of the state where the equipment will be installed, without regard to that state's choice of law principles, and expressly excluding application of the Uniform Computer Information Transactions Act ("UCITA"), in any form. EACH PARTY, KNOWINGLY AND AFTER CONSULTATION WITH COUNSEL, FOR ITSELF, ITS SUCCESSORS' AND ASSIGNS, WAIVES ALL RIGHT TO TRIAL BY JURY OF ANY CLAIM ARISING WITH RESPECT TO THIS AGREEMENT OR ANY MATTER RELATED IN ANY WAY THERETO.

17.6 **Entire Agreement.** These Terms and Conditions of Sale, the terms and conditions set forth in the quotation and the applicable Philips' product-specific warranty document constitute the entire understanding and agreement by and between the parties with respect to the transactions contemplated by the quotation, and supersede any previous understandings or agreements between the parties, whether written or oral, regarding the transactions contemplated by the quotation. The pricing in the quotation is based upon the terms and conditions in the quotation. No additional terms, conditions, consents, waivers, alterations, or modifications shall be binding unless in writing and signed by the parties. Customer's additional or different terms and conditions, whether stated in a purchase order or other document issued by Customer, are specifically rejected and shall not apply to the transactions contemplated by the quotation.

17.7 **Headings.** The headings in the quotation are intended for convenience only and shall not be used to interpret the quotation.

17.8 **Severability.** If any provision of the quotation is deemed to be illegal, unenforceable, or invalid, in whole or in part, the validity and enforceability of the remaining provisions shall not be affected or impaired, and shall continue in full force and effect.

17.9 **Notices.** Notices or other communications shall be in writing, and shall be deemed served if delivered personally, or if sent by facsimile transmission, by overnight mail or courier, or by certified mail, return receipt requested and addressed to the party at the address set forth in the quotation.

17.10 **Performance.** The failure of Customer or of Philips at any time to require the performance of any obligation will not affect the right to require such performance at any time thereafter. Course of dealing, course of performance, course of conduct, prior dealings, usage of trade, community standards, industry standards, and customary standards and customary practice or interpretation in matters involving the sale, delivery, installation, use, or service of similar or dissimilar products or services shall not serve as references in interpreting the terms and conditions of the quotation.

17.11 **Obligations.** Customer's obligations are independent of any other obligations the Customer may have under any other agreement, contract, or account with Philips. Customer will not exercise any right of offset in connection with the terms and conditions in the quotation or in connection with any other agreement, contract, or account with Philips.

17.12 **Additional Terms.** The Product specific schedules listed below are incorporated herein as they apply to the equipment listed on the quotation and their additional terms shall apply solely to Customer's purchase of the products specified therein.

If any terms set forth in a schedule conflict with terms set forth in these Terms and Conditions of Sale, the terms set forth in the schedule shall govern:

(a) Schedule 1: Xcelera, Xper IM, Cardiovascular Information System (CVIS) and TraceMasterVue EKG Storage System (TMV) Products.

LICENSED SOFTWARE

1. License Grant.

1.1 Subject to any usage limitations for the Licensed Software set forth on the product description of the quotation, Philips grants to Customer a nonexclusive and non-transferable right and license to use the computer software package ("Licensed Software") in accordance with the terms of the quotation. The License shall continue for as long as Customer continues to own the product, except that Philips may terminate the License if Customer is in breach or default. Customer shall return the Licensed Software and any authorized copies thereof to Philips immediately upon expiration or termination of this License.

1.2 The License does not include any right to use the Licensed Software for purposes other than the operation of the product. Customer may make one copy of the Licensed Software in machine-readable form solely for backup purposes. Philips reserves the right to charge for backup copies created by Philips. Except as otherwise provided under section 1.6, Customer may not copy, reproduce, sell, assign, transfer, or sublicense the Licensed Software for any purpose without the prior written consent of Philips. Customer shall reproduce Philips' copyright notice or other identifying legends on such copies or reproductions. Customer will not (and will not allow any third party to) decompile, disassemble, or otherwise reverse engineer or attempt to reconstruct or discover the product or Licensed Software by any means whatsoever.

1.3 The License shall not affect the exclusive ownership by Philips of the Licensed Software or of any trademarks, copyrights, patents, trade secrets, or other intellectual property rights of Philips (or any of Philips' suppliers) relating to the Licensed Software.

1.4 Customer agrees that only authorized officers, employees, and agents of Customer will use the Licensed Software or have access to the Licensed Software (or to any part thereof), and that none of Customer's officers, employees, or agents will disclose the Licensed Software, or any portion thereof, or permit the Licensed Software, or any portion thereof, to be used by any person or entity other than those entities identified on the quotation. Customer acknowledges that certain of Philips' rights may be derived from license agreements with third parties, and Customer agrees to preserve the confidentiality of information provided by Philips under such third party license agreements.

1.5 The Licensed Software shall be used only on the product(s) referenced in the quotation.

1.6 Customer may transfer the Licensed Software in connection with sale of the product to a healthcare provider who accepts all of the terms and conditions of this License; provided that Customer is not in breach or default of this License, the Terms and Conditions of Sale, or any payment obligation to Philips.

2. Modifications.

2.1 If Customer modifies the Licensed Software in any manner, all warranties associated with the Licensed Software and the products shall become null and void. If Customer or any of its officers, employees, or agents should devise any revisions, enhancements, additions, modifications, or improvements in the Licensed Software, Customer shall disclose them to Philips, and Philips shall have a non-exclusive royalty-free license to use and to sub-license them.

2.2 The Licensed Software is licensed to Customer on the basis that (i) Customer shall maintain the configuration of the products as they were originally designed and manufactured and (ii) the product includes only those subsystems and components certified by Philips. The Licensed Software may not perform as intended on systems modified by other than Philips or its authorized agents, or on systems which include subsystems or components not certified by Philips. Philips does not assume any responsibility or liability with respect to unauthorized modification or substitution of subsystems or components.

071612 (Rev I)

Schedule 1
Interventional X-Ray (iXR), Diagnostic X-Ray (DXR), Computed Tomography (CT), Magnetic Resonance (MR),
Positron Emission Tomography (PET), Nuclear Medicine (NM), Radiation Oncology (PROS), Women's Healthcare (WHC), and
Ultrasound (US) products (including Image Guided Intervention and Therapy (IGIT) Products)

1. Payment Terms.

Unless otherwise specified in the quotation, Philips will invoice Customer, and Customer will pay such invoice on receipt, as follows:

- 1.1 For Interventional X-Ray (iXR), Diagnostic X-Ray (DXR), Computed Tomography (CT), Magnetic Resonance (MR), Positron Emission Tomography (PET), Nuclear Medicine (NM), Radiation Oncology (PROS), and Women's Healthcare (WHC):
- (a) 10% of the purchase price shall be due with Customer's acceptance of the quotation.
 - (b) 70% of the purchase price shall be due on delivery of the major components of the product. Product installation will not begin until Customer has paid this portion of the purchase price.
 - (c) 20% of the purchase price shall be due when the product is available for first patient use. Available for first patient use means the product has been installed and substantially meets Philips' published specifications.
- 1.2 For Ultrasound(US) products (including IGIT Products):
- (a) 100% of the purchase price shall be due thirty (30) days from Philips' invoice date.
- 1.3 If the start of the installation is delayed for any reason beyond the control of Philips for more than thirty (30) days following the date that Philips notifies customer that the major components of the product are available for delivery, the unpaid portion of the purchase price shall be due on the thirty-first (31st) day following such date.

2. Cancellation. The quotation is subject to change or withdrawal prior to written acceptance by Customer. All purchase orders issued by Customer are subject to acceptance by Philips. If Customer cancels an order prior to product shipment, Customer shall pay a cancellation charge of fifteen percent (15%) of the net order price. Orders are non-cancellable for products shipped.

3. Delivery.

- 3.1 Philips will use reasonable efforts to ship the product to the Customer by: (a) by the mutually agreed upon shipment date; or (b) by the date stated in the quotation; or (c) as otherwise agreed in writing. Philips will ship the product according to Philips' standard commercial practices. Philips will deliver the equipment during normal working hours, 8:00 - 5:00 PM, in the time zone where the Customer is located. Philips may make partial shipments. Philips will pay shipping costs associated with product shipment.
- 3.2 Prior to the shipment of any product, Philips may change the construction or the design of the product without notice to the Customer so long as the function, footprint, and performance of the product are not substantially altered.
- 3.3 If Customer requests a delay in the date major components of the product are available for delivery, then Philips will place the product in storage and the unpaid portion of the purchase price shall be due. Customer will reimburse Philips for all storage fees incurred upon receipt of invoice.

4. Additional Customer Installation Obligations for Magnetic Resonance.

- 4.1 Customer shall provide any and all Site preparation and shall be in compliance with all RF or magnetic shielding and acoustical suppression and building codes relevant to the product and its installation and use.
- 4.2 Customer's contractor or Customer's architect is required to provide detailed information on the proposed Helium Exhaust Pipe for their MRI system prior to installation to ensure safety specifications are being met.
Required Details include:
- (a) Architectural drawing or sketch with complete dimensions including lengths, bending radii, bending angles, and pipe diameters for entire Helium Exhaust Pipe run from RF enclosure to discharge location.
 - (b) Completed Helium Exhaust Pipe Verification Checklist (Provided by Local Philips Project Manager)
 - (c) Picture showing the area where the Helium Exhaust Pipe will discharge.
- 4.3 Magnets will not be released for delivery unless and until Helium Exhaust Pipe details are provided for verification and have been confirmed to meet all life safety specifications.

5. Additional Terms Related to Sales of IGIT Products.

- 5.1 As part of installation, Philips will connect the IGIT product to such DICOM compatible scanners as Customer may designate (in writing), including CT and MR scanners and, if ultrasound navigation is included in the product, an iU22 ultrasound system.
- 5.2 If Customer requires that Philips connect the IGIT product to more than two (2) scanners or other devices, then Philips shall invoice Customer and Customer shall pay for installation services at Philips' then-current daily service rate. Additionally, Customer shall (a) make the scanner(s) the Customer has designated available to Philips' installation representative, (b) create and provide a data set of the installation phantom on or before the installation date, and (c) have its IT representative available to assist in connecting the IGIT product to Customer's DICOM devices during the agreed installation time. If such installation and connection is delayed due to Customer failing in its obligations described in this section, then Philips may invoice Customer and Customer shall pay either for (a) any time that Philips spends waiting at the site for such obligation to be fulfilled, at Philips' then-current service rate, or (b) reasonable travel expenses if Philips has to reschedule such installation.
- 5.3 Training on the IGIT Product is not included with the purchase of the IGIT product unless it is separately identified on the quotation.

6. Additional Terms Related to Sales of the IntelliSpace Breast Solution, including the MammoDiagnost VU.

- 6.1 **Installation.** Philips will install the IntelliSpace Breast Solution and perform installation tests on the application running with the hardware provided as part of the solution, including the MammoDiagnost VU. Philips also configures and provides interfaces to the equipment and information systems set forth in a statement of work signed by Philips and the Customer. Interfaces set forth in Subsection 6.2 below are Customer's responsibility and are not part of Parts installation deliverables.
- 6.2 **Customer's Interface Obligations for Third Party RIS and MIS Applications.** Customer is responsible to develop and implement interfaces from the Licensed Software running on the client workstation to any third party Radiology Information System ("RIS") or Mammography Information System ("MIS") or to contract with the RIS and/or MIS vendor to have them perform these interface obligations on Customer's behalf. Interfacing the solution from the solutions server is not permitted. Philips shall provide Customer an API toolkit for the Licensed Software to aide Customer to perform such interface tasks. The successful and reasonably timely completion of these projects takes good faith efforts on the part of both Philips and Customer, especially when Customer has third party interfaces to develop and implement. A project implementation plan is based on completion dates mutually agreed by the parties that should be

reflective of the obligations of both parties. These dates are entered into the project implementation plan for this solution (the "Project Implementation Plan"). In the event Customer has not fulfilled its interface obligations by the dates set forth in the Project Implementation Plan, Customer will sign Philips' acceptance (MDIR) document for the Philips deliverables sold and pay the final payment described in Subsection 1.1(c), provided that Philips has installed the Philips deliverables and provided the interfaces Philips is responsible for pursuant to Subsection 6.1, and that the Philips deliverables substantially meet Philips' published specifications.

6.3 Prior Validation of Operating System Updates and/or Upgrades. Patches introduced by operating system oem's or upgrades to anti-virus software can impact the performance and functionality of the applications that run on them and affect patient safety. Philips shall perform validation testing of certain Microsoft operating systems and MacAfee anti-virus software during the warranty period. Philips shall have no obligation to validate any other third party operating system or anti-virus software. Customer shall not install or use (a) operating system patches, updates or upgrades; (b) anti-virus updates (except to the DAT files, i.e., virus definitions); or, (c) upgrades to anti-virus search engines, collectively (a)-(b) prior to validation testing and approval by Philips ("Unauthorized Updates"). Philips shall have no liability, including, without limitation, for warranty claims, arising from use of the Licensed Software with Unauthorized Updates. In the event Philips discovers that Customer is using an Unauthorized Update with the Licensed Software, Philips shall have the right to require Customer to roll back to the most recently validated versions of operating systems and anti-virus, prior to performing any support.

6.4 Customer's Network Connectivity Obligations. Customer must have network connectivity between the IntelliSpace Breast solution server, the client workstation, and the optional DynaCAD server of not less than 1GB/s, and all three systems must be on the same subnet. A connection of no less than 100 MB/s is required between the IntelliSpace Breast solution and the hospital network. However for optimal performance a 1GB/s network between the IntelliSpace Breast and the hospital network is recommended.

6.5 RSN Warranty Condition Requirement. As a condition to receiving warranty service on this solution, Customer agrees it shall use Philips Remote Service Network ("RSN") service to enable Philips to access the system to perform its support obligations.

PHILIPS PRODUCT WARRANTY

CARDIOVASCULAR (CV) SYSTEMS

This product warranty document is an addition to the terms and conditions set forth in the quotation to which this warranty document is attached. The terms and conditions of the quotation are incorporated into this warranty document. The capitalized terms herein have the same meaning as set forth in the quotation.

TWELVE-MONTH SYSTEM WARRANTY

Philips warrants to Customer that the Philips Vascular and Cardiac Systems (the "System") as delivered to Customer will perform in substantial compliance with its performance specifications for a period of twelve (12) months upon first patient use. Any glassware or flat detectors provided with the System is subject to special warranty terms set forth below.

PLANNED MAINTENANCE

During the warranty period, Philips personnel will schedule planned maintenance visits, in advance, at a mutually agreeable time on weekdays, between 8:00 A.M. and 5:00 P.M. local time, excluding Philips observed holidays.

SYSTEM UPGRADES

Any commercially available upgrade to the System which is hereafter installed by Philips during the original term of the System warranty shall be subject to the warranty terms contained in the first paragraph of this warranty, except that such warranty shall expire on the later of: a) upon termination of the initial twelve (12) month warranty period for the System on which the upgrade is installed or b) after ninety (90) days for parts only from the date of installation.

MRC X-RAY TUBES

Philips warrants to Customer, for the warranty periods further specified in this section, that the Philips X-Ray tube will be substantially free from defects in material and manufacturing workmanship, which impair performance under normal use as specified in Philips product descriptions and specifications.

The warranty period for MRC tubes provided with Customer's purchase of a new or refurbished X-ray system shall be the shorter of thirty-six (36) months after installation or thirty-eight (38) months after date of shipment from Philips. The warranty period for purchases of replacement tubes shall be the shorter of twelve (12) months after installation or fourteen (14) months after date of shipment from Philips.

MRC TUBE WARRANTY EXCLUSION

The above warranty shall not apply to X-ray tubes outside the United States and Canada. Philips' obligations under the product warranty do not apply to any product defects resulting from: improper or inadequate maintenance or calibration by Customer or its agents; Customer or third party supplied software, interfaces, or supplies; use or operation of the product other than in accordance with loss, or damage in transit; improper site preparation; unauthorized maintenance or Philips' applicable product specifications and written instructions; abuse, negligence, accident, modifications to the product; or, to viruses or similar software interference resulting from the connection of the product to a network.

MRC TUBE WARRANTY REMEDIES

If a tube is found to fail during the warranty period, and if, in the best judgment of Philips, the failure is not due to neglect, accident, improper installation, use contrary to instructions, or the exclusions stated above, Philips' tube warranty liability hereunder is limited to, at Philips option, the repair or replacement of the tube. Any replacement tube would have a warranty period equal to the balance of the warranty period left on the tube replaced.

IMAGE INTENSIFIER TUBES

Philips warrants the image intensifier tubes provided with the System, if any, will be free from defects in material and manufacturing workmanship for twenty-four (24) months. Claims must be made within twenty-four (24) months after installation or twenty-seven (27) months after date of shipment from Philips, whichever occurs first. If an image intensifier tube fails to meet this warranty, as Customer's sole and exclusive remedy, upon return of the tube, Philips will provide a prorated credit towards the purchase of a replacement tube from Philips as follows:

USAGE	CREDIT
0 to within 12 months	100%
12 to within 13 months	50%
13 to within 14 months	46%
14 to within 15 months	42%
15 to within 16 months	37%
16 to within 17 months	33%
17 to within 18 months	29%
18 to within 19 months	25%
19 to within 20 months	21%
20 to within 21 months	17%
21 to within 22 months	12%
22 to within 23 months	8%
23 to within 24 months	4%

Tubes received by Philips under this warranty that are found to meet all test specifications will be returned to the Customer and the warranty will continue as of the original date of installation. Examination of the returned tube may necessitate its destruction, but Philips' liability shall, in any case be limited to repair or replacement as aforesaid, only if in its sole opinion the tube has been properly used, installed and applied and has not been subjected to neglect, accident, or improper installation, or use. Transportation charges and risk of loss, both ways, of returned or replaced tubes shall be at the expense of the Customer.

DYNAMIC FLAT DETECTORS

Philips warrants the flat detectors provided with the System, if any, will be free from defects in material and manufacturing workmanship for twelve (12) months. Claims must be made within twelve (12) months after installation or fifteen (15) months after date of shipment from Philips, whichever occurs first. If a detector fails to meet this warranty, as Customer's sole and exclusive remedy, upon return of the detector, Philips will provide Customer a replacement detector at no additional charge.

SYSTEM SOFTWARE AND SOFTWARE UPDATES

The software provided with the System will be the latest version of the standard software available for that System as of the 90th day prior to the date the System is delivered to Customer. Updates to standard software for the System that do not require additional hardware or equipment modifications will be performed as a part of normal warranty service during the term of the warranty.

All software is and shall remain the sole property of Philips or its software suppliers. Use of the software is subject to the terms of a separate software license agreement. Customer must sign all such license agreements prior to or upon the delivery of the product. No license or other right is granted to Customer or to any other party to use the software except as set forth in the license agreements.

Any Philips maintenance or service software and documentation provided with the product and/or located at Customer's premises is intended solely to assist Philips and its authorized agents to install and to test the System, to assist Philips and its authorized agents to maintain and to service the System under a separate support agreement with Customer, or to permit Customer to maintain and service the System. Customer agrees to restrict the access to such software and documentation to Philips' employees and those of its authorized agents, and to authorized employees of Customer only.

WARRANTY LIMITATIONS

Philips' obligations under the System warranty are limited, at Philips' option, to the repair or the replacement of the System or a portion thereof, or to a credit or refund of a portion of the purchase price paid by Customer. Any refund or credit will be paid to Customer when the System is returned to Philips. Certain of the parts used in the manufacture or installation of, or in the replacement parts for, this System may contain refurbished components. If such components are used, they will be subject to the same quality control and inspection procedures as all other components in the System. Any System warranty is made on condition that Philips receives written notice of a System defect during the warranty period, and within thirty (30) days following the discovery of the defect by Customer. Philips' obligations under the System warranty do not apply to any System defects resulting from: improper or inadequate maintenance or calibration by Customer or its agents; Customer or third party supplied software, interfaces, or supplies; use or operation of the product other than in accordance with loss, or damage in transit; improper site preparation; unauthorized maintenance or Philips' applicable product specifications and written instructions; abuse, negligence, accident, modifications to the System; or to viruses or similar software interference resulting from the connection of the product to a network. Philips does not provide a warranty for any such third party products furnished to Customer by Philips; however, Philips shall use reasonable efforts to extend to Customer the third party warranty for the product. The obligations of Philips described above are Philips' only obligations and Customer's sole and exclusive remedy for a breach of a System warranty. Repairs or replacement parts do not extend the term of this warranty.

THE WARRANTIES SET FORTH IN THIS WARRANTY DOCUMENT WITH RESPECT TO THE SYSTEM (INCLUDING THE SOFTWARE PROVIDED WITH THE SYSTEM), GLASSWARE, AND DETECTORS ARE THE ONLY WARRANTIES MADE BY PHILIPS IN CONNECTION WITH THE SYSTEM, SOFTWARE, GLASSWARE, DETECTORS, AND THE TRANSACTIONS CONTEMPLATED BY THE QUOTATION, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

ACCESS TO SYSTEM

Philips shall have full, free and safe access to the System and Customer's operation, performance and maintenance records for the System, on each scheduled or requested warranty service visit. Philips shall also have access to and use of any machine, service, attachment, features or other equipment required to perform the necessary service contemplated herein at no charge to Philips. Customer waives warranty service if it does not provide such access to the System and Customer's records. Should Philips be denied access to the System and Customer's records at the agreed upon time, a charge equal to the appropriate hourly rate will be accepted by Customer for "waiting time."

WARRANTY SERVICE

In the event it is not possible to accomplish warranty service within normal working hours (8:00 A.M. to 5:00 P.M., Monday through Friday, excluding Philips observed holidays), or in the event Customer specifically requests that warranty service be performed outside of Philips normal working hours, Customer agrees to pay for such services at Philips standard service rates in effect. Maintenance Agreements are available for extended coverage.

TRANSFER OF SYSTEM

In the event Customer transfers or relocates the System, all obligations under this warranty will terminate unless Customer receives the prior written consent of Philips for the transfer or relocation. Upon any transfer or relocation, the System must be inspected and certified by Philips as being free from all defects in material, software and workmanship and as being in compliance with all technical and performance specifications. Customer will compensate Philips for these services at the prevailing service rates in effect as of the date the inspection is performed. Any System which is transported intact to pre-approved locations and is maintained as originally installed in mobile configurations will remain covered by this warranty.

CONDITIONS

This warranty is subject to the following conditions: the System (a) is to be installed by authorized Philips representatives (or is to be installed in accordance with all Philips installation instructions by personnel trained by Philips), (b) is to be operated exclusively by duly qualified personnel in a safe and reasonable manner in accordance with Philips written instructions and for the purpose for which the products were intended, (c) is to be maintained and in strict compliance with all recommended and scheduled maintenance instructions provided with the System, and (d) Customer is to notify Philips immediately in the event the System at any time fails to meet its printed performance specifications.

LIMITATIONS OF LIABILITY AND DISCLAIMERS

The liability, if any, of Philips AND ITS AFFILIATES for damages whether arising from breach of the terms in the quotation, breach of warranty, negligence, indemnity, strict liability or other tort, or otherwise with respect to the products and services is limited to an amount not to exceed the price of the product or service giving rise to the liability.

IN NO EVENT SHALL PHILIPS OR ITS AFFILIATES BE LIABLE FOR ANY INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, OR THE COST OF SUBSTITUTE PRODUCTS OR SERVICES WHETHER ARISING FROM BREACH OF THE TERMS IN THIS QUOTATION, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT. PHILIPS SHALL HAVE NO LIABILITY FOR ANY GRATUITOUS ADVICE PROVIDED TO THE CUSTOMER.

FORCE MAJEURE

Philips and Customer shall each be excused from performing its obligations arising from any delay or default caused by events beyond its reasonable control including, but not limited to: acts of God, acts of third parties, acts of the other party, acts of any civil or military authority, fire, floods, war, embargoes, labor disputes, acts of sabotage, riots, accidents, delays of carriers, subcontractors or suppliers, voluntary or mandatory compliance with any government act, regulation or request, shortage of labor, materials or manufacturing facilities.

Philips system specifications are subject to change without notice Document Number 4535 983 03234 999