

TRADE IN

1 ** 30Fr/sec Extension 1

Frame Rate Extension increases the system acquisition speed for cardiac applications that require high speed imaging. The frame rate extension increases the acquisition speed to 15fps and 30fps with a 1024x1024 matrix.

2 ** AlluraClarity FD20 Ceiling 1

The AlluraClarity FD20 (Ceiling) single-plane cardiovascular system comprises a ceiling mounted C-arm stand and digital imaging X-ray system for cardiovascular diagnostic and interventional procedures.

ClarityIQ technology is the foundation of AlluraClarity systems touching every part of the imaging system.

ClarityIQ incorporates powerful state-of-the-art image processing technology, developed by Philips research, all working in real-time enabled by the latest computing technology:

- Noise and artifact reduction, also on moving structures and objects
- Image enhancement and edge sharpening;
Automatic real-time patient and accidental table motion correction on live images.
- Flexible digital imaging pipeline
- ClarityIQ systems have a flexible digital imaging pipeline from tube to display that is tailored for each and every application area such as Cardio or Neuro. This gives the flexibility to select virtually unlimited application-specific configurations.
- With ClarityIQ over 500 system parameters are fine-tuned for each application area; the result of years of Philips clinical leadership. It is now possible to filter out more X-ray radiation, use smaller focal spot sizes, shorter pulses, thereby fully utilizing the unique capabilities of the Philips MRC X-ray tube.

The AlluraClarity FD20 system uses an integrated single-host concept. The system is comprised of five functional building blocks: Geometry, X-ray Generation, Image Detection, Viewing, and User Interface. Each functional building block is explained in further detail including accessories.

GEOMETRY

The AlluraClarity FD20 Stand

The Allura stand consists of a ceiling-mounted C-arm. The stand has the following capability:

- The L-arm can be rotated and can be 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 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)
- The stand provides fully motorized fast movements with variable and configurable maximum speed.
 - Variable C-arm rotation speed, up to 25 degrees per second
 - Variable C-arm angulation speed, up to 18 degrees per second
- L-arm rotation and longitudinal movement: motorized and manual
- C-arm depth is 90 cm
- The FD20 Dynamic Flat Detector features Xper Access which allows the flat detector to be positioned in either portrait or landscape imaging modes in 3 seconds.
- The variable source image distance between focus and Dynamic Flat Detector input screen is motorized from 86.5 to 123 cm.
- The stand features BodyGuard a capacitive sensing collision avoidance system for patient protection.

Patient support

The Xper Table

- Patient support with flat carbon fiber tabletop
- Table top length of 319 cm, width 50 cm
- Metal-free overhang 125 cm
- Floating table-top movement of 120 cm longitudinal and 35 cm transversal range.
- Motorized height adjustment from 74.5 to 102.5 cm
- Maximum cantilever of 223 cm , for full patient coverage
- Maximum patient weight 250 kg plus 500 N for CPR (or 225 kg plus 1000 N) in any longitudinal position of the table top
- Xper Geometry and Imaging Modules for exam room controls.
 - The operating modules can be attached to either side of the table.

Patient Support Accessories set

- One cerebral filter
 - Three rail accessory clamps
 - One IV stand
 - One slow recovery foam mattress
 - One Set of Arm Supports (FCV0248)
 - One Set of Patient Straps (FCV0250)
 - One Head Support (FCV0251)
 - One Arm Support (FCV0258)
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- One Table-mounted Radiation Shield
- One anti-fatigue mat with Philips logo

X-ray Generation

The AlluraClarity FD20 comprises an integrated dedicated X-ray system, micro-processor controlled Certeray generator based on high frequency converter technique. The user interface control of this X-ray Generator is incorporated in the Xper module, Xper Desktop Viewing Console, and the Xper on-screen displays.

- The Certeray generator comprises:
 - X-ray generator: 100 kW
 - Voltage range: 40 - 125 kV
 - Program selection:
 - Pulsed X-ray up to 3.75 , 7.5 , 15 , 30, frames/s for digital dynamic exposures
 - Pulsed X-ray for pulsed fluoroscopy (3.75, 7.5, 15, 25, 30 frames/s).
 - Minimum exposure time of 1ms.
 - ECG triggered acquisition: allows acquiring one exposure for each QRS peak with selectable delay time
 - Automatic kV and mA control for optimal image quality prior to run to save dose
 - Optimal X-ray tube load incorporated in the Certeray generator
- An X-ray collimator with single semi-transparent wedged filter with manual and automatic positioning.
- SpectraBeam filtering of low energy radiation to optimize image quality and dose efficiency with the MRC-GS 0508 X-ray tube.
- Xper Beam Shaping, which means that, both shutters and wedges can be positioned on the Last Image Hold without the need for X-ray radiation.

Fluoroscopy

- Three programmable fluoroscopy modes
 - Each mode can be set to different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, and adaptive harmonization).
- Roadmap Pro
 - 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.
 - **Disclaimer:** AMC only corrects movement artifacts in two dimensions. Three dimensional movements such as swallowing or rotation of the head cannot be corrected.
 - 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 both a fluoro image and the last 20 seconds of Fluoroscopy, called Xper Fluoro Storage. These fluoro images or fluoro runs can be archived as a regular exposure run.

X-ray tube

The AlluraClarity 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.

Dynamic pulsed fluoroscopy 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.

IMAGE DETECTION

The AlluraClarity FD20 comprises the following image detection chain:

- A 30 cm by 40 cm FD20 Dynamic Flat Detector with eight imaging modes.
 - 30 x 38, 30 x 30, 26 x 26, 22 x 22, 19 x 19, 16 x 16, 13.5 x 13.5, and 11 x 11 cm
- The digital output of the FD20 flat detector is 2k*2.5k image matrix at 16 bits depth for the largest mode
- The flat detector subsystem features Xper Access, the detector can be rotated over 90 degrees, it moves from portrait to landscape back & forth
- DQE (Detective Quantum Efficiency) >77 %
- The pixel pitch: 154 x 154 microns

Viewing

The AlluraClarity FD20 comprises the following components in order to display the clinical images in the control and examination room:

Displays

Examination Room

Two 19-inch monochrome LCD monitors designed for medical applications. The first display is used for viewing live images. The second display is the reference monitor.

- 19-inch monochrome TFT-LCD display with a 160 degree viewing angle.
- Native format 1280x1024 SXGA
- 10-bit gray-scale resolution with gray-scale correction

These monitors are not delivered when FlexVision XL, EP Cockpit or EP Cockpit XL is selected.

The monitor ceiling suspension in the exam room can be configured to accommodate 3, 4, 6 or 8 LCD monitors and includes motorized height adjustment. The height-adjust feature is dependent

on the room ceiling height. When FlexVision XL, EP Cockpit or EP Cockpit XL is selected the monitor ceiling suspension is configured for one of those options.

- 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).

Control Room

One 19-inch color LCD monitor used as a data monitor.

- 19-inch color TFT-LCD display
- Native format 1280x1024 SXGA

One 19-inch monochrome LCD monitor (Xper review monitor) designed for medical applications.

- 19-inch monochrome TFT-LCD display
- Native format 1280x1024 SXGA
- 10-bit gray-scale resolution with gray-scale correction

These control room monitors are not delivered when EP Cockpit or EP Cockpit XL is selected.

The Graphical User Interface on the monochrome monitor has the following features and functions:

- 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 trace, stacking of images
- Landmarking

Acquisition

The acquisition segment coordinates the parameters for automatic exposure control. The program is selected via the Xper module or Xper Desktop Console.

Exposure techniques:

- Serial imaging for DA and DSA with automatic exposure setting
- Single shot mode
- Acquisition frame rates:
 - 0.5 to 6 fps at 2048 x 2048
 - 15 and 30 fps at 1024 x 1024

The AlluraClarity FD20 offers a storage capacity of:

- 50,000 images at matrix size of 1024 x 1024
- 12,500 images at matrix size of 2048 x 2048
- Maximum number of examinations is 999, with no limit to the maximum number of images per examination

USER INTERFACE

Xper is comprised of three elements: 1) Xper Settings, which customizes the system to each user preferred settings. 2) Xper User Interface 3) Xper Integration, which makes advanced integration functionality available such as DICOM Query / Retrieve, background archiving, and Xper Fluoro Storage.

The Xper User Interface uses User Interface modules in the Examination Room with On-Screen Display.

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

- X-ray indicator and X-ray tube temperature condition
- Gantry position in rotation, angulation, and Source Image Distance
- Detector field size display
- General System messages
- Selected Frame speed
- Fluoroscopy mode
- Integrated fluoroscopy time
- Skin Dose and Dose Area Product
- Stopwatch

The Xper ViewPad contains the preprogrammed function settings. The system is provides 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
 - 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
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Remote Intercom

The separate intercom which is connected independently from the system that allows separate placement of the intercom at the preferred working position in the control room and examination room.

Table Side Modules

Two Xper Modules are provided for use. The first Xper Module is mounted tableside. The Second Xper Module (NCVA778) is located in the control room. These modules use a touch screen, which can be operated when draped with sterile covers. The Xper Module contains the following functionality:

- Acquisition settings
- Selection of Xper Setting allows the user to set frame rates and X-ray generation settings applicable for the type of the preferred intervention
- Image Processing

The Xper Geometry module can be positioned on all sides of the patient table, while keeping the button operation intuitive. The Xper Geometry module provides the following functionality:

- Tabletop float and table height position
- Source Image Distance selection
- 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

The Xper Imaging module can also be positioned on 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
- Xper Fluoro Storage and Grab
- Selection of the Detector field size
- Shutter positioning
- Reset of the fluoroscopy buzzer

Pan Handle

- The Pan Handle is an extension of the control facility for floating movements of the tabletop.

Control Room

The control room comprises a Xper Review Module, Xper Desktop Module, a keyboard, and a mouse. The Xper Review Module offers the basic functions for review. The Xper Review Module contains the following functionality:

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

System information is displayed on the bottom of the data monitor:

- Stopwatch and Time
- System guidance information
- Dose Area Product (DAP) and Skin Dose, and accumulative dose
- 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

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 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.

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

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.
- Typical system usage can be extracted from the data.

Secondary Capture Dose Report

- The Secondary Capture Dose Report function allows the user to save & transfer, manually or automatically, a patient Dose Report to PACS in DICOM secondary capture format.
- The dose report will be stored in the related patient image folder.

Archive

Continuous Autopush (NCVA090)

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

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 DICOM Image Interface enables the export of clinical images to PACS. The export formats are based on DICOM 3.0 protocols. The system exports clinical studies in Cardiac DICOM XA Multi-Frame or DICOM Secondary Capture formats.

- The export format is configurable in 512x512, 1024x1024 2048 x 2048 (unprocessed) matrix.
- The examination can be sent to multiple destinations for archiving and reviewing purposes.
- The Xper DICOM Image Interface provides DICOM Storage and DICOM Storage Commitment Services.
- 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.

Remote Service

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.

Clinical Education Program for the Allura Xper System

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.

In the event that an EP Navigator workstation has also been ordered, the offsite training course will be tailored to focus on the electrophysiology functionality of the FD system and the EPN workstation.

In the event that your main FD system will be dedicated to Cardiac applications your offsite training course will be tailored to focus on the Cardiac functionality.

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).**

Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref #106107-110915

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FlexVision XL 7 Input Package

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The FlexVision XL 7 input package provides seven isolated wall connection boxes and seven legacy converters.

Isolated Wall Connection Box

This Isolated Wall connection Box facilitates connection of the video source via standard DVI cable/connector and lossless transfer of the video signal over the approximate 30 m cable distance. It can be mounted in the exam room or in the control room, depending on the location of the video source.

The quantity of the VWCB's has to be calculated as follows:

- For each video signal via MultiVision: 1 VWCB (max = 4)
- For each video signal to FlexVision XL on Cardio System: 1 VWCB (max = 9)
- For each video signal to FlexVision XL on Vascular System: 1 VWCB (max = 8)
- For each 3rd party video signal directly connected to an LCD in the MCS: 1x VWCB.
- Note:
 - No VWCB is required in case a video signal is connected directly to a dedicated LCD from the following sources:
 1. Xper Live/ref Slaving
 2. Interventional HW (XtraVision), ViewForum, Xcelera (only if workstations are powered by Allura Xper)
 3. Xper IM

Legacy Video Convertor

The Legacy Video Convertor enables conversion from VGA to 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
VGA	640 x480	4:3
SVGA	800 x600	4:3
XGA	1024 x768	4:3
SXGA	1280 x1024	5:4
SXGA+	1400 x1050	4:3
UXGA	1600 x1200	4:3
WXGA	1280 x800	16:10 (8:5)
WSXGA	1440 x900	16:10 (8:5)
WSXGA+	1680 x1050	16:10 (8:5)
WUXGA	1920 x1200	16:10 (8:5)
2K	2048 x1080	19:10
TV1080I/P	1920 x1080	16:9

- 4 ** DAP meter monoplane 1**
- This option provides a physical DAP meter device for the Allura systems to enable DAP (Dose Area Product) measurement instead of the standard used DAP calculation.
- The DAP meter consists of an Ionization chamber which measures the amount of radiation (Air Kerma rate) during all diagnostic X-ray examinations.
- 5 ** Addl sets of documentation 1**
- Set of black and white copies of all documents, comprising (if applicable):
- User manuals
 - Service manuals
 - System manuals
 - Test results
- 6 ** Prep table for Table Mount inj 1**
- This is only applicable when the Mark 7 Arterion Table Mount injector will be ordered locally. Prepared for Table Mount Injector prepares the XperTable with the cabling needed for a Table Mount install of the MEDRAD Mark 7 Arterion injector head. This preparation will facilitate the install of the Table Mount injector system. It will save an estimated 4 - 8 hours of installation time. The injector base unit can be placed in the technical room, and User Interface and display can be placed in the control room or on the wall of the exam room.
- 7 ** FlexVision 1**
XL,XperHD,Snapshot
- FlexVision XL is an integrated viewing solution designed to give you full control over your viewing environment.
- The FlexVision XL provides the ability to:
- Display information from up to 8 sources simultaneously (incl. third party systems) on the Philips 58-inch color LCD with LED backlight in the Exam Room.
 - Resize and/or enlarge information at any stage during the case.
 - Select and customize viewing lay-outs of the Philips 58-inch color LCD via the Xper table-side module
 - Overview connected equipment (incl. third party systems) from

a single location.

XperHD on FlexVision XL brings High Definition viewing for clinical images. Native resolution of FD20 can be displayed.

Excellent sharp and crisp clinical images can be displayed at full size without digital zoom.

Xper HD brings:

- High Definition imaging
 - Sharp images at full size without zoom
- High Definition display at native resolution
 - Up to 2k*2k image display fully integrated
- High Definition for the ultimate detail
 - Enhanced small vessel visualization

The FlexVision XL consists of:

- DVI video composition unit.
 - o The DVI video composition unit allows the user to direct and switch the video output of all connected medical equipment to specific sub windows of the Philips 58-inch color LCD with LED backlight in the Exam Room.
 - o The DVI video composition unit is operated from the Xper tableside module.
 - o The DVI video composition unit supports a wide variety of display formats (up to 1920x1200)
 - o Up to 9 external inputs are connected to the DVI video composition unit via Wall Connection Box(es).
 - Medical grade, high resolution color LCD in the Exam Room
 - o This display supports the image quality requirements for monochrome X-ray images as well as color images and replaces all displays normally delivered with an Allura Xper FD or AlluraClarity system for the Exam Room.
 - o Main characteristics are:
 - 58-inch, 8 Megapixel color LCD
 - Native resolution: 3840x2160
 - Brightness: Max: 700 Cd/m2 (typical) stabilized: 400 Cd/m2
 - Contrast ratio: 4000:1 (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
 - Large color LCD control (Xper Module)
 - o Resize and/or enlarge information at any stage during the case via the Xper tableside module in the Exam or Control Room
 - o Select viewing lay-outs via the Xper table-side module in the Exam Room
 - o Create new layouts by matching inputs to desired locations on preset templates.
 - Monitor Ceiling Suspension
 - o Monitor ceiling suspension for use in the Exam Room carries the 58-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 either side of the table.
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- Snapshot
 - o The snapshot function allows the user to store/save a screen-capture of any image on the 58-inch 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 .

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3D-RA Complete

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The combination of Allura 3D-RA with 3D dynamic roadmap offers a real time registration of 'live' 2D fluoro and a 3D-RA angiography volume (3D roadmap) or a previous acquired CT or MR data set (CT/MR roadmap). With the roadmap a better understanding of the anatomy can be obtained for procedure planning or risk assessment

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 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.

Philips' 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.

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 Reformatting): 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.

6 3D-RA on Xper Module

The 3D-RA on XPER MODULE integrates the off-line 3D-RA application in the Allura Xper system. It allows operation of 3D-RA with the Xper module in the examination room during an examination.

Display of 3D-RA 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 3D-RA functions are available on the Xper module:

Image rotation

Image translation

Start mouse mode

Snapshot

Segmentation (window-width/window-level control)

3D zoom control

Store/recall views

Recall Anterior-Posterior view

Select 3D APC / Follow stand mode

7 3D and MR/CT Roadmap

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 fluoro images with the 3D-RA reconstruction or a previous acquired CT or MR data 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.

Image Acquisition

The 3D Roadmap is based on the visualization of the vessel tree out of 3D-RA. The MR/CT roadmap is based on visualization of the anatomy on previous acquired CT or MR data sets which are matched with the X-ray unit by registration of the CT or MR data sets with a low dose 3D-RA scan. The roadmap is activated with one button touch at tableside (Xper Module). Select the roadmap function on the touch screen module, activate fluoroscopy and the roadmap is activated. The "live" 2D fluoroscopy image is overlaid with the 3D volume of the vessel tree and is automatically displayed on the roadmap monitor in both the examination and control room.

Table side control

The bidirectional link between the X-ray system and the 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 roadmap monitor. 3D Follow C-arc allows the roadmap to remain in sync with the 2D projection, automatically adjusting viewpoint as the gantry is repositioned.

The roadmap is dynamic, providing the freedom to change:

- The angulation of the C-arc;
- The rotation of the C-arc;
- The Field of View;
- The Source to Image Distance.

i.e. if the geometry system is changed, the image angle changes accordingly, real-time.

Intuitive, fully controlled from tableside:

- 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

8 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.

CV 3DRA Handover OnSite Education:

Philips Education Specialists will provide sixteen (16) 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# 222-100615

9 ** Set of 2 additional 21in. LCDs 1

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.

10 ** Table mounted rad. Shield 1

A 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- and Xper- patient table.

It features:

- 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.

It includes:

- Lower shield measuring 70 cm high x 80 cm wide curved shape, 0.5 mm Pb equivalence
- Upper shield measuring 40 cm high x 50 cm wide 0.5 mm Pb equivalence
- Mounting clamp
- Docking device for wall mounting.

11	**	2ND REF for FlexVision XL	1
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2nd REF for FlexVision XL is optional on FlexVision XL. Second Ref images will be displayed on the large screen monitor.

12	**	StentBoost Complete	1
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The StentBoost package improves the visualization of devices in the coronary and non-coronary arteries during interventions. Before and after the deployment of the devices such balloons and stents the position can be checked and stent expansion can be confirmed in relation with the vessel wall. The StentBoost package enables physician to take any corrective action required immediately, while the catheter is still in place.

StentBoost automatically detects the stent delivery markers image after image. In each image StentBoost aligns the markers with the markers of the previous image.

StentBoost can be used with and without contrast. Without contrast the images are acquired with only a short cine run of 1 to 2 sec (recommended with 40 frames out) to show all radiopaque material in the close proximity of the markers will be enhanced resulting in enhanced stent visualization.

With contrast the images are acquired with a cine run of 5 to 6 sec. Contrast media is required only for the last 3 to 5 sec (typical recommendation of total 100 frames which of 100 frames cine run of which last 60 frames are with contrast) to show all radiopaque material in the close proximity of the markers will be enhanced resulting in enhanced stent visualization.

StentBoost automatically detects the stent delivery markers image after image. In each image StentBoost aligns the markers with the markers of the previous image. By doing this all radiopaque material in the close proximity of the markers will be enhanced resulting in enhanced stent visualization. A contrast enhanced image run results in a dynamic representation of the enhanced stent in relation with the vessel wall.

The Stentboost package functionality includes, but is not limited to:

- Pre-defined Region of Interest to indicate the location of the stent/balloon markers.
- Real time link for immediate data transfer.
- Automatic stent detection.
- Manual correction possibility for marker identification
- Review of StentBoost runs, before and after processing
- Measurements to supports decision-making in determining the percentage of remaining in the stent.
- Store image snapshot.
- Automatic pre-defined Region of Interest to indicate the location of the stent/balloon markers.
- Fading in/out of contrast vessel and StentBoost image.
- Viewing selection of StentBoost with and without contrast,
- Manual image contrast and brightness adjustment of the boost and contrast image
- Manual correction possibility for marker, boost and contrast identification.
- Create and store as movie.

With the Xper Module, StentBoost can be performed at table side with the Allura Xper Module. It provides full control in the examination room during a procedure at the table side.

Following StentBoost functions are available on the Xper module:

- ROI positioning and ROI resizing.
- Snapshot and Movie
- Run replay start and stop
- Contrast/Brightness control

StentBoost includes the following export functionality:

- Image transfer to any DICOM compatible device (e.g. PACS/Printer), supported are DICOM XA, DICOM SC.
- Support archive on one or multiple DVD's, CD-ROM(s)
- Image transfer to a standard PC compatible format (JPEG,AVI)
- Store a subset of exportable objects (snapshots and AVI Movies) to a USB removable memory device.
- Image transfer to any DICOM compatible device (e.g. PACS/Printer), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
- Image transfer to any PC in a standard PC compatible format (JPEG,AVI)
- Image transfer to any DICOM compatible device (e.g. PACS/Printer), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
- Image transfer to any PC in a standard PC compatible format (JPEG,AVI)

13

OncoSuite complete

1

OncoSuite provides a complete solution for Tumor Embolization and Percutaneous Ablation procedures in Interventional Oncology. Its 3D Live Image Guidance is based on the superior visualization with XperCT Dual, tumor embolization with EmboGuide and its percutaneous Ablation with XperGuide with the Ablation option.

OncoSuite consists of XperCT Dual, EmboGuide and XperGuide with Ablation option.

XperCT Dual extends the capabilities of the interventional suite offering CT like imaging to visualize bone, soft tissue and vessels in case of contrast enhanced acquisition. XperCT Dual protocols are available covering routine procedures such as biopsies and drainages but also advanced procedures such as abdominal oncological imaging up to neuro high resolution stenting. All protocols can be selected at the tableside via the XperModule.

The DualPhase dual view functionality allows the simultaneous visualization of two 3D datasets acquired at different times of the procedure such as the arterial and post-arterial contrast enhancement in oncologic liver imaging. In this DualView, XperCT Dual allows the segmentation of multiple lesions at the same time in the viewed datasets.

XperCT Dual acquires up to 60 frames/sec. (frame rate extension to 60frames/sec is included) and supports fast abdominal protocols with 5 to 10 second acquisition time for Allura release prior to 8.2 and even 5 to 8 second acquisition times for Allura release 8.2 or higher, thereby minimizing respiratory artifacts. The XperCT volume is displayed automatically within 8 to 15 seconds after acquisition. No user interaction is required.

XperCT Dual includes Metal Artifact Reduction to reduce the artifacts caused by metal presence in the region of interest. In case the original XperCT shows metal artifacts, the interventional radiologist can perform a second reconstruction and select for Metal Artifact Reduction, which will remove the artifacts caused by the metal present. The most typical examples of metal presence are: metal implants, coils or stents with stainless steel structures. Moreover, BMI Noise Reduction is included to reduce the noise caused by large size patients.

Note: BMI Noise Reduction is only available when Abdominal XperCT runs are selected

The XperCT volume can be viewed in the control room and in the examination room. The viewing package comprises:

- 3D volume viewing in any desired orientation
- Slice viewing in any desired orientation
- Slice viewing at any slice thickness with a minimum of 0.5 mm
- Five distance measurements calculated in the same volume, including "Quick measurement" feature
- Cut-plane functionality to provide precise insight into anatomical structure
- Unique high-resolution reconstructive zoom technique
- Graphical display of stand position including rotation and angulation parameters
- Contrast and brightness control
- Contrast resolution 5-10 Hu
- Spatial resolution of the initial reconstruction: 10 lp/mm

- Contrast range -1000 to 2000 Hu
- High resolution imaging mode produces
- 512x512x512 volume rendered reconstructions
- XperCT Dual can be controlled via the Xper module and the mouse at tableside.

The XperCT volume can be matched with (when additional options are available) Allura 3D-RA and pre acquired CT, PET/CT or MR volumes. This view allows combining multiple images from different modalities in order to provide additional anatomical insight. This multimodality volume can be viewed with the following functionalities:

- Registration of the two volumes from the same patient
- The resulting volume can be viewed with complete 3D-RA viewing functionality
- The XperCT slice can be overlaid onto the 3D vessel for better assessment of the region of interest
- Three different contrast rendering options to allow optimal viewing of the 3D vessel in the soft tissue structure
- (128x128x128, 256x256x256, 384x384x384 and 512x512x512 volumes)
- Movie clip recording functionality (AVI) to capture dynamic views
- 3D automatic position control at tableside: When an optimal working position is selected from the XperCT volume the C-arc steers itself to the selected position
- 3D Follow C-arc at tableside: When selected, the XperCT volume automatically follows the position of the C-arc.
- XperCT data and 3D-RA with XperCT Dual overlay is stored in the same patient file as all other patient related data. All this data can be reviewed at any time

XperCT data 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)

XperCT datasets can be stored/achieved 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

EmboGuide provides workflow-guided Embolization support in three steps. The first step comprises of the Identification and Segmentation of multiple lesions. Secondly, the feeders of the segmented lesions are identified. The Automatic feeder detection function supports the user with this. Finally, Live Image Guidance is used in order to reach each of the identified feeders for a selective or super-selective Embolization.

The essential components of EmboGuide are:

- 3D lesion segmentation tool for 3D target(s) identification and volume measurement.
-

- Workflow-driven planning tool with automated feeding vessel detection and marking.
- 3D roadmap navigation with lesion and feeding paths overlay.

Depending on Allura configurations, XperCT Dual allows obtaining two manual forward scans or two automatic rotational scans with a user-defined delay between them (automatic rotational scans only for Allura release 8.2 or higher). In case of two automatic rotational scans, the first scan is performed in a forward direction while the second one is performed in reverse direction (DualPhase wiper rotation). In both configurations, the first phase can be used to show early tumor contrast uptake and its feeding vessels, while the second scan can be used to depict the delayed contrast uptake in lesion, determining its vascularity and perfusion. Optimal automatic high volume reconstruction in this respect is essential to secure appropriate feeding vessel detection in the first phase and a good soft-tissue contrast in the second phase. The 3D lesion segmentation is an interactive user-guided tool that allows isolating regions of interest in a 3D volume using image-specific features. The tool can be used for user-guided segmentation of lesions from MR, CT or XperCT volumes. A workflow-driven planning tool, building on already available vessel detection and volume cut features, can then be used to highlight the feeding vessels to the lesion. Real-time overlay and registration of the 3D volume on live 2D X-ray images from the Allura X-ray system of the same anatomy can be used as additional 3D image guidance to support the navigation of the device/catheter. Planning data, like the earlier annotated feeding vessels and/or 3D landmarks can be displayed on 2D-3D fused images as supporting information.

EmboGuide provides the following functions:

- Automatic Feeder Detection; supports the user in analyzing the vasculature of lesions by giving the initial suggestions of the feeding vessels of the segmented lesions. The detected feeding vessels will be annotated and added to the planning.
- Manually add and/or remove feeding vessels; after running the automatic feeder detection function, the user can verify and refine the planning by manually adding and/or removing feeding vessels.
- Follow Feeder; for verification, the user may use the Follow Feeder function. This function allows the user to trace the path of a single annotated feeding vessel to verify whether it traces into a targeted lesion.
- 3D Landmarks; landmarks can be put on the 3D volume as additional information to support with the navigation of the catheter.
- Live 3D Image Guidance; real-time overlay and registration of the 3D volume on the live 2D X-ray images from the Allura X-ray system of the same anatomy, can provide additional 3D image guidance to help the user with navigating the device/catheter to the embolization target.
- Storage of the live 2D-3D overlay runs; the real-time overlay of the 3D volume with the live 2D X-ray images from the Allura X-ray system can be recorded and stored for reviewing at any time.
- Table-side control; to provide efficient work-flow during the interventional procedures, the most frequently used functions can be controlled from table-side.

Image data for EmboGuide is stored together with the EmboGuide movies and snapshots and can be sent to any optional DICOM compatible device (e.g. PACS/IntelliSpace Portal/Xcelera). Supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D and any PC in a standard PC compatible format (JPEG,AVI). All this data can be reviewed at any time.

EmboGuide movies and snapshots can be stored/achieved 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.

OncoSuite Ablation allows planning of the ablation zone with a high degree of accuracy using conventional methods. XperGuide ablation software helps to plan and guide the specific ablation zones and distance between the ablation needles in 3D based on the manufacturer's specifications of each needle. OncoSuite Ablation shows the isotherm of each needle on an XperCT overlay or on a pre-acquired MR, CT or PET/CT volume. OncoSuite Ablation assists clinicians in planning the optimal placement of the ablation needle to cover the targeted lesion. The needle path can be planned by drawing it or by defining entry and target locations on XperCT, MR, CT or PET/CT slices. By allowing the precise planning of multiple needles, XperGuide's ablation software assists clinicians in treating large tumors and thereby helping to prevent re-do.

OncoSuite Ablation consists of both XperGuide and the XperGuide Ablation option. XperGuide enables real-time needle guidance in the angio suite. Virtual needle paths are created by XperCT Dual data and on overlays of previous acquired MR, CT, or PET/CT datasets. In order to visualize the actual needle path versus the virtual path that is planned upfront, XperGuide offers the possibility to match real-time 2D fluoroscopy images with 3D volume of XperCT Dual, CT, PET/CT or MR datasets. A wide range of gantry projections can be used to define the needle path. This volumetric dataset can be viewed in any slice direction providing optimal sight.

Path planning in XperGuide can be done by:

- Drawing a virtual needle path on an XperCT, CT, PET/CT or MR slice
- Defining entry and target points on different XperCT Dual, MR, CT or PET/CT slices
- 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 Dual, MR, CT or PET/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 fluoroscopy pedal is pressed. The live 2D image is projected over the XperCT Dual, MR, CT or PET/CT volume. The gantry can be positioned in the calculated gantry positions or controlled manually. The XperGuide images (live 2D fluoroscopy projected over the XperCT Dual, MR, CT or PET/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 data, like XperGuide movies and snapshots, can be exported to any optional DICOM compatible device (e.g. PACS/ViewForum/Xcelera). Supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D and any PC in a standard PC compatible format (JPEG,AVI).

XperGuide movies and snapshots can be stored/achieved 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

XperGuide Ablation is an extension to the XperGuide software to facilitate the planning of tumor ablation procedures. It supports all percutaneous ablation techniques (RF, microwave and cryo-ablation) by displaying the isotherm of the chosen ablation needle. It allows the visualization of multiple needles by entering their thermal characteristics, and the assessment of their combined impact in the ablation zone. A virtual ablation needle with its thermal characteristics is displayed on a 3 dimensional XperCT volume or previously acquired CT, MR or PET/CT data to verify optimal positioning of the needle and obtain total tumor coverage. The thermal characteristics of each needle consist of the width, breadth and front of its ablation zones. Per needle up to three ablation zones of different isotherms can be defined. XperGuide Ablation allows to plan and store up to 60 different types of thermal needle characteristics simultaneously.

All thermal characteristics can be stored and transferred to other Allura systems. After the needle planning is performed, the 2D fluoroscopy overlay on the 3D volume allows real time needle guidance along the planned trajectory on XperCT, MR, CT and PET/CT datasets. During live needle guidance it is possible to adjust the ablation transparency and modify the previous plan. After the needle(s) are positioned, it's possible to control the effective ablation target with the previous plan.

Clinical Education Program for XperGuide Onco Ablation

CV XperGuide Onco Ablation OnSite Education: Philips Education Specialists will provide sixteen (16) 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#296044-20140116

14	**	Monoplane LCD support for control room	1
		Display support to increase display height and create storage volume to put away keyboard, mouse and cabling	
15	**	Xper Live/Ref Slaving	4
		This option contains a kit to split the Live or Ref video source from the Allura Xper. The total amount of Xper Live/Ref Slaving that can be selected is maximal. 4. Additional monitors are not included in this option and must be ordered separately.	
		This kit contains a video splitter, a wall connection box and cable set for one slave monitor. Connection box and slave monitor are not powered by Allura.	
16	**	RIS / CIS DICOM interface	1
		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 or to search for a 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 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.

17	**	Standard Line Rate Video Output	1
This interface provides image output to standard line rate video peripherals, such as VCRs or paper printers. This option also comprises automatic start and stop of a VCR, synchronous to the generation of X-ray (fluoroscopy and exposures).			
18	**	Dicom Print compose	1
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.			
19	**	Automatic Position Control (APC)	1
The Automatic Position Controller (APC) for Integris Allura Flat Detector systems provides two modes of operation:			
<ul style="list-style-type: none"> • Preset Position Sequence; the sequence of projections is determined per 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 rotation, angulation, and SID. 			
20	**	Table APC	1
The Automatic Position Controller (APC) for the table provides two modes of operation:			
<ul style="list-style-type: none"> • 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. 			
21	**	FD Rotational Angio	1
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:			
<ul style="list-style-type: none"> • 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.

22	**	Subtracted Bolus Chase	1
		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.	
		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)

23	**	CO2 View Trace Software	1
		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.	
24	**	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	
		Allura Centron system the storage is increased from:	
		- 50.000 to 100.000 images at 1024x1024 matrix	
		Power requirements:	
		refer to system configuration	
25	**	FD Dual Fluoro	1
		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 Floro mode, The fluoroscopy image on the exam montitor 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.	
26	**	FD SmartMask	1
		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	
27	**	FULL AUTOCAL	1

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

28 ** Vascular Quant.Sw pkg(Xper) 1

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

29 ** ViewForum for CV with LCD 1

ViewForum combined with the Allura Xper System provides a parallel working environment to increase patient throughput and procedure efficiency. It allows for parallel viewing and processing of previously acquired images. These images can be from the current or previous patient. The ViewForum enables a multi-modality work environment for physicians and staff in preparation and review of CT, MR, US and X-Ray studies. The viewforum includes a 19" LCD color monitor for the control room.

The ViewForum standard functionality includes:

- visual shutters, stack and tile viewing, cine, movie-export, sequence generation of volumes and projections, linking annotations and measurements
- 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 for best image quality.

The ViewForum includes the X-ray vascular package. The X-ray Vascular Analysis package enables advanced, off-line vascular processing. All processing settings of the acquisition system remain available and can be 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
-

ViewForum operates on Microsoft Windows XP.

Compatible with: Allura Xper FD20 series

Comprising:

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

Clinical Education Program for View Forum

CV View Forum Handover OnSite Education: Philips Education Specialists will provide sixteen (16) 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# 224-100615

30

BCR package on ViewForum

1

Bolus Chase Reconstruction (BCR)

The BCR package reconstructs an overview image of peripheral vasculature. The reconstruction is made using a series of images from a single contrast injection. In the acquisition protocol the automatic Bolus Chase protocol (BC) is highly advised. The resulting survey can be used as a roadmap next to the original diagnostic images.

In combination with the X-Ray Vascular package it is possible to view subtracted original images next to the reconstructed survey image.

A calibration ruler is included in this package.

Compatible with:

- Allura Xper FD20 systems.

31

Volume Vision

1

With the optional Volume Vision application, 3D (volumetric) reconstructions of prior CT and/or MR examinations are made easy, in order to allow for better procedure planning. Volumetric reference images generated from prior exams can be displayed in the exam room and manipulated for maximum guidance. Finding and retrieving prior exams on a PACS is facilitated by the PACS work list feature. There is also the possibility to export XperCT and Allura 3D-RA datasets from ViewForum to a PACS.

Volume Vision features:

- Multi Planar Reconstruction (MPR):
 - Rendering of arbitrary slices through the data volume lets you optimally visualize anatomy in any cut plane direction and also in curved planes.
- Maximum and minimum Intensity Projection (MIP):

- Visualization of the highest intensity along the line of sight, typically used for vascular visualizations.
- 3D Volume Rendering (VR) with:
 - State of the art shaded volume rendering technique for CT and MR datasets
 - This feature also re-renders 3D RA and Xper CT image sets
 - Linked to MPR/MIP and original images for enhanced diagnostic confidence (reference views with triangulation)
- Task guided advanced segmentation toolset. The tools also include a tissue management function allowing the user to compose visualizations with different segmentations to clearly emphasize anatomical structures.
- Task guided movie generation and capture tools, one Protocollized and one freestyle version.
 - The Protocollized tool lets you define spin, bounce, roll and set the range of movie as well as the number of images. This is a tool of choice for strait forward movies for MPR, MIP or 3D renders. Save the results as original or secondary capture (protocol movie) or as AVI (for PowerPoint).
 - The freestyle movie tool has another purpose; it facilitates the specific visualization of pathology. It allows the user to set a number of key images in any position, render type and zoom modus. From these key images it automatically generates an “interpolating” movie allowing the viewer to follow pathology. Store your results in a PowerPoint compatible AVI.

Content:

- Extended graphical card with 768 MB memory.
- ViewForum Volume Vision software

32	**	Xper Pedestal	1
<p>The Xper pedestal creates an additional flexible work spot for operating the system in the examination room. The pedestal is provided with additional Xper Geometry and imaging modules and has the possibility to hold the X-ray footswitch. Optionally an additional Xper module can be mounted on the pedestal creating a work spot with full system control. The Xper pedestal is connected to the system by means of a wall connection box and can be positioned freely around the patient table with a cable length of 5 meters. The pedestal has been designed with stability and ease of use in mind and can be stowed away near the wall connection box when not in use.</p>			
33	**	ViewForum on Xper Module	1
<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> • 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 			
34	**	3rd Xper Module pr	1

Third Xper Module

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

The following functions can be made available providing the relevant commercial options have been selected:

- Acquisition settings
- Image processing controls
- Automatic position control (optional)
- Channel selection for MultiVision
- Quantitative Analysis controls (optional)
- Xcelera and ViewForum viewing (optional)
- Interventional tool controls (optional)
- Allura 3D-RA, Dynamic 3D Roadmap
- StentBoost, Allura 3D-CA
- XperCT, XperGuide
- XIM physiomonitoring controls (optional)

Connectivity:

A maximum of 3 Xper modules can be connected to the Allura Xper system:

- one Xper module on the XperTable
- one Xper module in the control room
- one Xper module on the Xper Pedestal

35

**

Wireless footswitch: mono-plane version

1

The wireless footswitch is an option for our Allura systems. It provides the possibility to have one wireless footswitch in the exam room.

A wireless footswitch provides workflow optimization, flexibility at table-side, removes cable clutter on the floor and provides easier cleaning of the footswitch.

The mono-plane wireless footswitch is a 3 pedal version; one pedal for fluoroscopy, one for exposure and one to control the roomlight/single shot. The pedals can be configured according customers preferred lay-out.

The wireless footswitch is working via RF technology and is fully tested and released for medical use. It has an active range up to 10 meters, depending on structures within this range.

The wireless footswitch has a lithium battery which only needs to be recharged once per week. During recharging the footswitch still can be used and is fully functional. In parallel, a wired footswitch can also be used.

The status of the battery is indicated by an LED-indication on the footswitch itself, so that the user can decide when the footswitch needs to be recharged.

The wireless footswitch can easily be cleaned in water. It has the highest water ingress protection standard (IPX8).

The wireless footswitch has an on/off switch. It can be switched off when not in use. When the footswitch is active, but not in use, it will go into a sleep-mode. It will be re-activated when touched or when one of the pedals is pressed.

36

**

CX50 Video and UI coupling

1

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

37	**	Cath Arm Support	1
		For brachial catheterisation and digital imaging technique The support is made of X-ray transparent material with exception of the fixingclamp and pivots.	
38	**	Pulse Cath Arm Support	1
		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	
39	**	Ratchet compressor	1
		Accessory with quick-set lever stop. Includes: <ul style="list-style-type: none">• 3 Cotton compression belts 23 cm wide• Ratchet-winding mechanism on one side for symmetrical compression	
40	**	Peripheral X-ray Filter	1
		Set of flexible x-ray filters to provide an uniform density in angiographic examinations of the lower peripheral area. Comprising: <ul style="list-style-type: none">• one central filter, at the top edge provided with sizing markers at every 5 cm, length : 1 m• two side filters, length: 1 m	
41	**	Pivot for table base.	1
		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: <ul style="list-style-type: none">• pivot device with graduated scale to be mounted on the universal floor plate of the table. Compatible with Xper Table	

42	**	Xper Table Tilt	1
<p>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.</p> <p>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.</p> <p>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</p> <p>As the table tilts, the X-ray beam automatically coordinates to the movement.</p> <p>The table floats even when tilted, and the region of interest can be followed by panning the tabletop.</p> <p>When combined with the Bolus Chase option, SyncraTilt enables phlebography to be performed with a head-up tilted patient.</p> <p>The option provides:</p> <ul style="list-style-type: none"> • 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 <p>Comprising:</p> <ul style="list-style-type: none"> • Tilt drive with user controls <p>Compatible with:</p> <ul style="list-style-type: none"> . 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 			
43	**	Cradle extension	1
<p>This extension provides the possibility to cradle the table top.</p> <p>This allows optimal positioning of the patient for f.i. more invasive (surgical) or guided puncture procedures.</p> <p>Functionality:</p> <ul style="list-style-type: none"> . 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 			
44	**	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.

45 ** Long mattress cardio 1
 Patient mattress, thickness 70 mm, length 3165 mm, width 500 mm

46 ** Neuro Head Holder 1
 The Neuro Head Holder is designed to position and immobilize the head, improving patient comfort and Image Quality. The Neuro Head Holder features adjustment of rotation, height and angulation. It has a unique clamp assembly enabling the patients head to be turned left/right without changing the height enabling easier patient transfer. The aluminum equivalence of the Neuro Head Holder is between 1.0 and 0.5 mm enabling optimal x-ray translucency.

The Neuro Head Holder consists of;

- Head support
- Inlay
- 2 head straps

The Neuro Head Holder is compatible with all Allura tables & table tops (excluding the MAQUET tables).

47 ** Add.op-rail with cable ext.kit 1
 The content of the additional OP-Rail kit is:

- [A] One additional OP-Rail (mechanical)
- [B] Cable Extension for OP-Rail
 - 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]

- 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)
 - (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
 - (this is limited by the tabletop of the Patient Table)

[B]

- 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.

48	**	Add. OP rail (US version)	2
<p>An extension for the table op-rail (30cm).</p> <p>The additional op-rail can be mounted at the both sides of the tabletop part where no op-rails are mounted.</p> <p>The additional op-rail is compatible with AD5 and XperTable (cardio and neuro) patient-tabletops.</p> <p>The OP-rail has the standard US dimensions for operating room accessories.</p> <p>The maximum load (downwards) on the additional op-Rail is 100 N (F=100N) (this is limited by the tabletop of the Patient Table)</p> <p>The maximum mechanical moment on the additional op-Rail is 40Nm downwards and 20Nm upwards (this is limited by the tabletop of the Patient Table)</p>			
49	**	CABLE CARRIER CS	2
<p>Additional carrier for suspension of cable hose from X-ray tube assembly or TV monitor.</p>			
50	**	Interventional Tools Hardware	1
<p>The Interventional hardware is the hardware for the 3D interventional tools and enables import and viewing of DICOM compatible data from other imaging modalities.</p> <p>The Interventional Hardware comprises at least:</p> <ul style="list-style-type: none"> • Computer Workstation • CR 19" display • 16 GB memory • 2 TB disk for the operating system, application software and application data • Internal CD-Rom / DVD writer • Mouse tablet to interact with all the interventional tools at the table side. <p>Conditionally: FD Calibration Tool Kit for 3D-RA</p>			
51	**	Laser Option	1
<p>Xperguide Laser tool</p> <p>The XperGuide laser tool is a positioning aid. It is attached to the patienttable for use during percutaneous interventional procedures. The laser tool marks the needle entry point on the skin, and assists with holding the needle in the correct position and orientation. Using the laser tool with XperGuide allows you to concentrate on the Progress View without needing to switch back to the Entry View. The laser tool has an LED to indicate its status: when the LED is lit, the laser is active.</p> <p>Laser tool components</p> <ul style="list-style-type: none"> • Laser tool • Laser tool holder and table clamp for fixation to the patient table • Laser tool charger 			

2D Perfusion brings functional imaging in the interventional suite and therefore allows assessing tissues perfusion during the intervention. It is based on a digital subtraction angiography (DSA) and it calculates the transit time of the contrast through the vessels, displaying it as a full color image.

2D Perfusion can be used for the identification of perfusion alterations in tissue in case of vascular pathologies or to verify perfusion behavior in case of tumors and AVM. It helps identifying the areas

which are at risk of being hypo-perfused (or hyper perfused) and it allows to compare side by side pre, peri, and post-procedural perfusion images to identify treatment end point and to verify procedure outcome.

2D perfusion allows to draw a region of interest (ROI) and to study the perfusion within the ROI thanks to the time density curve.

Once the ROI is selected, the time density curve is generated real time and the average value of the selected parameter is calculated and displayed.

When comparing pre and post intervention images, it's possible to draw a region of interest and it will be automatically drawn in the comparative image. It will also calculate the time density curve of both images, to easily evaluate pre and post intervention differences.

The functional parameters available are:

1. Mean Transit Time
2. Arrival Time
3. Time to Peak
4. Wash-in Rate
5. Width
6. Area Under Curve

The color legend indicates for which functional parameter each color represents in the displayed image.

- 2D Perfusion runs are acquired on a compatible with Allura Xper FD system release 7.2.3.3/ 7.2.5/ 7.6.3/ 7.8.1/ 7.7.1/ 8
- 2D Perfusion can run on Interventional Tools Hardware: Radisys 8 and DELL T5500. In field extensions, replacement hardware can be ordered.
- 2D Perfusion supports subtracted X-ray exposure runs acquired with a 2D Perfusion protocol. (While acquiring a run with the 2D Perfusion protocol, the subtracted run is shown on the X-ray modality screen.)
- 2D Perfusion supports runs acquired on the frontal channel or on the lateral channel.
- The 2D Perfusion protocol acquires up to 173 images at 3 frames per second.
- 2D Perfusion supports runs of 5 images or more
- Runs can be transferred to 2D Perfusion over the DICOM network or over the Real Time Image Link (option).
- 2D Perfusion provides different options for exploring the time-to-density curve, which describes the presence of contrast at a certain point in time.
- It allows to draw 2 different types of ROI: an elliptical ROI or to draw a freeform ROI. If you make changes to the ROI (elliptical ROI only), the curve in the analysis graph is updated automatically.

- In procedures where it's required to compare left and right hemispheres, you can draw a mirror line, and analyze the perfusion behaviors in the ROI between the hemisphere suspected to have a perfusion alteration, with the normo-perfused hemisphere.
- 2D Perfusion includes 3 new EPX's for Neuro, Abdominal and Peripheral examinations. 2D perfusion allows to select the frames where the presence of contrast is detected, in order to reduce the motion artifacts.

Clinical Education Program for 2D Perfusion

IXR 2D Perfusion OnSite Education: Philips Education Specialists will provide sixteen (16) 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 # 6034-20131218

53

VasoCT

1

VasoCT provides high resolution 3D imaging that reveals key information about cerebral vascular structures and devices to support the highest possible spatial assessment. The devices can be visualized in parent vessel context.

Key Benefits:

- Enhances visualization of endovascular devices (stents, flow diverters etc.) and vessel morphology down to perforator level
- Allows visualization beyond the clot with peri-procedural imaging of the distal vessel aspects in ischemic stroke
- Allows rapid non-traumatic follow up of interventional patients, as a consequence reducing procedural and hospital stay costs

VasoCT requires:

- Allura R7.2 or higher
- XperCT R2 or higher;
- Interventional Workstation;
- Real Time Digital Link

VasoCT is available for Allura Xper and AlluraClarity with an FD20 detector on the frontal Arc.

The VasoCT package contains everything that is needed for to perform VasoCT imaging such as:

- VasoCT software package
- Instruction video
- Instructions for Use

Personal Dose Meter.

The Personal Dose Meter (PDM) is a small and easy to wear active Xray dose meter intended to measure

and store received Xray dose of staff, present in an Xray room during radiation. The PDM has build-in

wireless communication to connect to the DoseAware Base Station for real time dose-rate indication and

has a long battery life for maintenance-free usage. In addition it can be personalized to increase interest

and awareness. The PDM not only records warning level profiles every second for a total of 3600 sec

(cyclic overwritten), but also stores accumulated dose data every hour for maximum 5 years.

A clip and a lanyard holder are included to facilitate easy wearing.

The PDM can be configured via the cradle and DoseView (and the optional Dose Manager) software for

the following attributes:

- Full name (max 40 bytes)
- Display user name (max 16 bytes)
- User group from list
- PDM ID (max 16 characters)
- Position on body
- Date & time = Real Time Clock, synchronized with local time, and being the clock master for the DoseAware system. With each
- connection PDM => Base Station => Dose Manager the timing is synchronized automatically.
- Date of PDM assignment to a person
- Dose history reset
- Sleep mode On/Off
- Annual dose limit

The PDM has following specifications:

- Operational unit: HP10
- Dose range: 1 μ Sv – 10 Sv
- Dose resolution: 1 μ Sv
- Dose uncertainty: 5% or 1 μ Sv
- Dose rate range: 10 μ Sv/hr - 50 mSv/hr
- (3 nSv/s - 15 μ Sv/s)
- Response time: < 4 s, 40 μ Sv/hr – 100 μ Sv/hr; < 1 s above 100 μ Sv/hr
- Energy dependency X-, Gamma-rays: N40-N160 (33keV – 118 keV)
- Average battery life: 3 – 5 years, depending on daily use
- Weight: 30 gr
- Dimensions: 45 x 45 x 10 mm (w x h x d)
- Personalization: 8 inlays with colour
- Communication radio: Center frequency 868.3 Mhz for Europe version
915 Mhz for USA version

55	**	Personal Dose Meter rack	1
<p>This stainless steel rack facilitates storage of up to 5 ea Personal Dose Meters. Intended to be mounted on a wall. Dimensions: 40 x 19 x 6 cm (W x H x D) Weight: 0,4 kg</p>			
56	**	Dose Manager Package	1
<p>The Dose Manager is a software program that serves as archive and reporting facility for all dose data of the DoseAware system. It allows tracking of multiple PDM's at a location.</p> <p>Core functionality is:</p> <ul style="list-style-type: none"> • Store and manage dose history for multiple PDM's • Collect all dose history from connected Base Stations via the network • Browse dose history of PDM's as graph or table • Export dose data for personal analysis with other software tools, like Windows Excel • Create and print reports of dose history <p>In the DoseAware system, the Dose Manager automatically retrieves all dose data from all connected Base Stations and thus archives normally the full dose-rate history of all PDM's in use. Similar to the Base Station and DoseView it can show overviews of accumulated dose per day, per week, per month, and per year, but then for multiple PDM's in one view. With various PDM-grouping choices. It offers default reports for printing of overviews but also possibilities to create reports with personal selection criteria of PDM grouping or time periods.</p> <p>In combination with the cradle it offers, equal to DoseView, PDM-user setting management (password protected administrative function) and data read out/analysis of a PDM that is put in the cradle.</p> <p>The Dose Manager package includes the software program and a cradle for installation on a PC (not included), with following PC requirements:</p> <ul style="list-style-type: none"> • Windows XP or Vista operating system • .NET 3.5 onwards • At least 2 GB system memory • At least one free USB port • Minimum 40 GB hard disk with at least 15 GB available space. Total required disk space for data storage over time obviously depends on numbers of PDM's in use and storage period. 			
57	**	DoseAware Xtend package	1

DoseAware Xtend is a unique solution providing staff working in an X-Ray environment with direct, real time dose feedback, enabling them to pro-actively optimize their behavior and reduce exposure to scattered dose. The DoseAware Xtend is a complete package and comprises of:

- 1 DoseAware Xtend package (including a reference PDM holder, a radio hub, cables and other items to connect with the Allura FlexVision, ...)
- 3 PDMs (one of these to be used as reference PDM)
- 1 PDM rack.

DoseAware Xtend

The DoseAware Xtend system contributes to long-term dose reduction of people who work with or are in the presence of x-ray imaging equipment. This is done by measuring and presenting individual dose exposure in real time for any Personal Dose Meter (PDM) in range when x-ray is used. Based on this information the individual can understand and act and change behavior to reduce the received dose.

The DoseAware Xtend combines individual dose information from the PDM with modality procedure data from the Allura and integrates this into real time feedback.

DoseAware Xtend product benefits:

- The DoseAware Xtend screen will be displayed on the FlexVision monitor, which allows for flexible real-time display close to live view or any other preferred position
- Smarter read out with dose aware data per procedure by sharing information from the Allura:
 - o An advisory when user is advised to take more radiation protection measures, like using lead curtain or lead shielding between themselves and the X-ray Tube
 - o Accumulative dose data per procedure
 - o A relative value as behavior indicator (Relative dose in %) per procedure (normalized data by reference PDM on C-Arm)
- Automatic operator dose reporting by email (per lab or per PDM) and
The PDM dose information is stored within the Hub. Dose data on procedure level will be sent automatically by email. Dose data by second can be retrieved by the Dose Manager software (optional) via a standard network interface.

The DoseAware Xtend package includes also:

- A cradle and the DoseView software package that can be installed on a local PC (not included), which has Windows XP, Vista or Windows 7 as operating system.
 - A radio hub for the radio communication with the PDM's
 - All items (including wall connection box) to integrate the DoseAware Xtend with your Allura FlexVision.
-

3 Personal Dose Meters

The Personal Dose Meter (PDM) is a small and easy to wear active X-ray dose meter intended to measure and store received X-ray dose of staff, present in an X-ray room during radiation. The PDM has built-in radio-frequency wireless communication (915 Mhz for USA version, 952,4 MHz for Japan version, 868.3 Mhz for ROW version,) to connect to the DoseAware hub for real time dose-rate indication and has a long battery life for maintenance-free usage. In addition it can be personalized to increase interest and awareness. The PDM not only records warning level profiles every second for a total of 3600 sec (cyclic overwritten), but also stores accumulated dose data every hour for maximum 5 years.

The PDM can be configured via the cradle and DoseView or Dose Manager Software.

The DoseAware Xtend package includes 3 PDM's. One of these PDM's will be used as reference PDM placed in the holder on the C-arc.

58	**	Black Anti-Fatigue Floor Mat w/ Blue Logo	3
		Blue Anti-Fatigue Floor Mat w/ Logo	

59	**	Rad Shield w/ Arm (Contoured) 61X76	1
		Contoured Rad Shield with Arm rest. 61X76	

60	**	PIVOTING TABLE-MOUNTED RADIATION SHIELD	1
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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.

The table mounted radiation shield provides the following features:

- 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:

- 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.

61	**	Cable Spooler	1
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62	**	M LED 3MC Light	1
		MAVIG M3 MC LED - Multi Color / power Supply Included Includes Portegra2 Ext Spring Arm 75/90cm	

63	**	Carrot C-Com Intercom	1
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C-Com is a state-of-the-art digital wireless communication system specifically suited for medical environments. Compared to conventional systems that include central microphones and overhead speakers, C-Com dramatically reduces noise and distraction, enhances patient comfort and synchronizes clinical activities.

- The C-Com System includes (5) wireless headsets.
- The C-Com System is part of the Carrot Advanced Tool Set and not intended for diagnostic use.
- Whisper-sensitive military spec directional microphones
- Extremely comfortable headsets ensure flawless audio fidelity and precise communication.
- Physician instructions and collaborative communication are distributed to all team members

1 year warranty

64

**

Mark 7 Arterion, Table Mount

1

The Mark 7 Arterion Injection System is the latest in MEDRAD's "Mark" series of angiographic injectors. Compared to earlier systems, the Mark 7 Arterion injector head is lighter and easier to use so you can focus more on the patient.

The clear and intuitive user interface guides you through proper set-up, and highlights the information you need to perform safe procedures.

Unique to the market, the front load system simplifies set-up and makes for a cleaner tear down. The clear syringe provides a higher level of confidence that you are ready to inject.

Made from a clear material, the Mark 7 Arterion syringe (Catalog ART 700 SYR) allows you to easily view the inside of the syringe for smoother purging of air. And MEDRAD's famous fluid dots are still there to help-round for fluid, oval for air.

The table mount injector solution ensures the contrast injector is conveniently placed and always available when it is needed. It provides a clean workspace without occupying valuable floor space. System includes:

- Table Mount
- display control panel
- 6 ft. coiled hand switch
- operation manual (CD)
- 10 ft. head cable
- syringe heat maintainer
- imaging system interface cable for the Allura / Allura Xper
- consumables starters kit

For the MEDRAD Mark7 Injector system Philips is only the distributor. MEDRAD provides the service as well as the application support of both versions unless stated differently in the Philips Service Agreement

System Specifications:

- Flow Rate 0.1-45.0 ml/s in 0.1 ml increments
- 0.1-59.9 ml/m in 0.1 ml increments
- Volume 1-150 ml in 1 ml increments
- Pressure Limit 100-1200 psi in 1 psi increments
- (150ml syringe) 689-8273 kPa in 1 kPa increments

- Rise Time 0.0-9.9 seconds in 0.1 increments
- Delay Time 0.0-99.9 seconds in 0.1 increments
- Fill Speed 1-20 ml/s
- Fill Volume 1-150 ml
- Syringe Size 150 ml
- Syringe Heat Maintainer 35 °C (95 °F) ± 5 °C (9 °F)
- Protocol Memory 40 Protocols
- Injection Memory History

65 ** CORE Precision Guided Therapy System 1
CORE Precision Guided Therapy System

CORE CPU, Operator's Manual, Power Transformer, Cable Pre-Install Kit, Connection Box, two (2) Standard Controller and one (1) bedrail mount, 19" NEC Monitor Kit, Phased Array PIM Body, FFR functionality, DICOM Network Connection, ChromaFlo Functionality.

-Includes VH IVUS End User License Agreement

The customer agrees that use of the VH IVUS Software is subject to the terms of the End User License Agreement. A copy of the End User License Agreement is also available from your VOLCANO representative or online at www.volcanocorp.com/products/pdf-files/software-support-vh-ivus.pdf

-Includes Three (3) Year IVUS Software Support Agreement

This signed Agreement provides for the purchase of the IVUS Software Support Agreement (SSA), which provides for unspecified IVUS software revisions released during for a three (3) year term (should any be commercially released) at no additional cost. In the absence of an SSA, future software revision releases will be made available at additional cost to be determined upon commercial availability.

66 ** CORE Revolution Option 1
CORE Revolution Option
Includes SpinVision PIMr and PIM Cable

67 ** CORE™ Printer Option 1
CORE Printer Option

68 ** CORE™ Control Pad Option 1
CORE Control Pad Option
Bedside touchscreen controller offering system control from the sterile field

69 ** Ceiling Track w/Column & Handle Ext 1
Mavig 2.5m Ceiling Track with Ceiling trolley, 360 degree column, and brake handle extension.

70	**	Physician Taught XperGuide Workshop	2
<p>This physician taught and hands-on workshop provides instruction and practice using XperCT and XperGuide. It also covers the technical aspects and benefits of using CT/MR matching along with fluoroscopy for live guidance purposes.</p> <p>You will get hours of hands-on practice, working with your own workstation, as well as live case participation in a small group setting and you discuss best practices with other participants to gain new insights and avoid common pitfalls.</p> <p>The 12 hour/1.5 day workshop is located at Cincinnati Children's Hospital in Cincinnati, OH. This package includes tuition for one clinician and one X-ray tech to attend this workshop. Travel packages and additional attendee packages can be purchased separately.</p>			
71	**	IXR Additional Training 16 Hours OnSite	2
<p>Clinical Education Specialists will provide sixteen (16) hours of CV OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. 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 the earlier of equipment delivery date or purchase date.</p>			
72	**	IXR Additional Training 24 Hours OnSite	2
<p>Clinical Education Specialists will provide twenty-four (24) hours of CV OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. 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 the earlier of equipment delivery date or purchase date.</p>			
73	**	CV Full Travel Pkg OffSite	2
<p>Includes one (1) participant's airfare from North American customer location to Cleveland, Ohio, with lodging, ground transportation, and meal expenses. Breakfast/dinner provided by the hotel, and lunch/breaks are catered by Philips. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced.</p> <p>Education expires one (1) year from equipment installation date (or purchase date if sold separately).</p>			
74	**	CV 16h to 20h Travel Pkg OffSite	2
<p>Includes one (1) participant's airfare from North American customer location to Cleveland, Ohio, with lodging, ground transportation, and meal expenses. Breakfast/dinner provided by the hotel, and lunch/breaks are catered by Philips. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced.</p> <p>Education expires one (1) year from equipment installation date (or purchase date if sold separately).</p>			
75	**	Airfare to Cleveland for Biomed Training	4

Includes one (1) participant's airfare from North American customer location to the Cleveland Training Center (CTC) in Cleveland, Ohio. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced. Expires one (1) year from the earlier of equipment delivery date or purchase date.

76 ** Food Transpt Lodging for 27
Cleveland Biomed Training
Includes one (1) day of modest lodging, ground transportation, and meal expenses in Cleveland, Ohio for one (1) attendee. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced. Although this part is only for one day, it is sold in multiple quantities to account for entire length of course. Expires one (1) year from the earlier of equipment delivery date or purchase date.

77 ** XD3908EPCOCKPITNAVFLEX4 1
D

Course Number: XD3908

System Codes: 722010, 722011, 722012 and 722013

Course Title: EP Cockpit, EP Navigator & FlexVision

Course Length: 4 days (excludes Saturdays, Sundays, and Philips holidays)

Delivery Method(s): ILT

Modality: iXR

Location: PHC, CTC

Target Audience: Service Engineers.

DESCRIPTION:

The EP Cockpit part trains the engineer to a technical and application level which will enable the engineer to do room preparation, mechanical and electrical installation, configuration and connectivity on the EP Cockpit parts of an Allura Xper FD system, following the System Manual Installation and Setting To Work.

The EP Navigator part trains the engineer to a technical and application level which will enable the engineer to do the Installation and the Setting To Work activities between the Allura Xper FD Cathlab, EP Navigator workstation and an Xcelera, following the Setting To Work.

The engineer will be able to connect an Allura Xper FD modality to the EP navigator who can retrieve the CT images of the patient from the Xcelera or 3D-ATG images from the Allura. The EP Navigator will match these reconstructed 3D images with the fluoroscopy images coming from the Cathlab.

The FlexVision part will train the engineer to a technical level which will enable the engineer to do the Installation, Setting To Work and Corrective Maintenance of the FlexVision option on an Allura Xper FD system according the Service Manuals.

All knowledge and skills for the configuration, connectivity and interoperability functions are practiced during the lab sessions.

PREREQUISITES:

XD3971 or XD9065

COURSE OBJECTIVES:

During this course the field service engineer will be provided with the needed competencies to install an Allura Xper EP Cockpit lab with an EP Navigator workstation & FlexVision 56" monitor.

The engineer will learn the following knowledge and skills:

- Hardware Installation of the EP Navigator components
- Installation of the EP Navigator Operating Software and Application Software
- Configuration of an EP Navigator towards an Xcelera for query and import
- Configuration of an Xcelera towards an EP Navigator for query and send
- Configuration of a Real Time Output (RTO) link of a Cathlab towards the EP Navigator
- Configuration of the Control network of a Cathlab towards the EP Navigator
- Execution of the DICOM verification tests for Query and Import
- Configuration of the Xper settings of the Cathlab for a correct automatic EP workflow with the Cathlab in application mode
- Testing of the total workflow with all systems in Application mode
- Mechanical /Electrical Installation Monitor Ceiling Suspension with FlexVision 56" monitor
- Mechanical /Electrical Installation B-Cabinet
- Configuration of the FlexVision 56" monitor
- Adjustments of the FlexVision 56" monitor
- Corrective Maintenance issues of the FlexVision 56" monitor

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XD3970ALLURAFD7.6PART1C TC9

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Course Number: XD3970

System Codes: 722010, 722011, 722012, 722013

Course Title: Allura Xper Rel 7.6 Part 1

Course Length: 9 days (exclude Saturday, Sunday, and Philips holiday)

Delivery Method(s): Instructor-Led

Modality: iXR

Location: PHC, SLC, CTC

Target Audience: Service Engineers.

DESCRIPTION:

Part 1 trains the Customer Support engineer to a technical level which will enable him/her to perform Planned Maintenance (PM) and basic Corrective Maintenance (CM) on Allura Xper systems, according to the Customer Support philosophy. He / She will also be able to assist during a system installation.

Part 1 can be followed up by part 2, intended for dedicated Cardio Vascular modality Engineers.

Part 2 focuses on setting to work (configuration) and extended Corrective Maintenance.

The following Allura Xper systems are covered:

FD10 release 7.6

FD10/10 release 7.6

FD20 release 7.6

FD20/10 release 7.6

FD20/20 release 7.6

PREREQUISITES:

CS9020 BASIC NETWORKING

XC3002 X-RAY SYSTEMS BASIC PART 2

COURSE OBJECTIVES:

The engineer will learn how to:

- Operate the system, as far as required to perform service tasks.
- Make use of the service documentation.
- Make use of basic functionality of the service tools.
- Perform Planned Maintenance:
 - Safety checks
 - Performance checks
 - Adjustments(Not included: Mechanical checks)
- Create a backup of the system.
- Perform a restore of the system.
- Perform basic CM with help of the service documentation and service tools.
 - Faultfinding using the System Manual Corrective Maintenance.
 - Focus on replacement of parts with a high exchange rate.
 - Retrieve the log file from the system to escalate a problem.
- Customize positions for Automatic Position Control in the EPX-database.

MAJOR TOPICS:

Introduction Allura Xper systems

Operating

Service documentation

Service tools

Planned Maintenance

Corrective Maintenance

System Architecture

X-ray generation

Geometry

Operator controls

Power supply

Imaging

System control

Radiation safety

Image quality

Customization

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**XD3974ALLURAXPERREL7.6P
ART2CTC9**

1

Course Number: XD3974
System Codes: 722010, 722011, 722012, 722013
Course Title: Allura Xper Rel 7.6 Part 2
Course Length: 9 days
Delivery Method(s): Instructor-Led
Modality: iXR
Location: PHC, SLC
Target Audience: Service Engineers.

DESCRIPTION:

This course is a follow up on the Allura Xper Part 1 course and is intended for modality Engineers that specialize in Cardio Vascular.

3 months Field experience on Allura Xper systems is strongly recommended before attending this part 2 course, this means the engineer has done some installation, pm- and cm visits.

In part 2 the customer support engineer is trained to a technical level which will enable him/her to perform setting to work and extended corrective maintenance on Allura Xper systems, according the customer support philosophy.

Not covered are the Mechanical Installation and Cabling of the Allura Xper System.
These topics are covered in the e-learning: Allura Xper Mechanical Installation.

The following Allura Xper systems are covered:

FD10 release 7.6
FD10/10 release 7.6
FD20 release 7.6
FD20/10 release 7.6
FD20/20 release 7.6

PREREQUISITES:

- XD3866 or XD3966 or XD3970

COURSE OBJECTIVES:

For Allura Xper systems, the engineer will learn how to:

Perform the setting to work, including:

Setting to work of Dicom Store and Storage Commit from Allura towards an Xcelera PACS as well as Setting To Work of the CWIS option towards an Xcelera and/or Hemodynamic system Xper Flex Cardio.

Customizing of common parameters of the Xper database.

Distinguish technical problems from incorrect operating.

Perform extended corrective maintenance; with help of analytical trouble shooting, service documentation and service tools.

Perform a Dicom traffic capture file, with help of the DVTK program (Dicom Network Analyzer), as part of the connectivity Fault Isolation Procedure for analyzing and if needed sending to helpdesk Image quality faultfinding using lower level IQ measurements.

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XD9074 Interventional Tools

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Rel 8.3 E-learning

This course is available on the Philips Learning Center (PLC) website at <http://theonlinelearningcenter.com>

All of the Academy e-learning courses are located on this site in the Course Catalog under the Academy folder and Modality sub-folder.

**** FIRST TIME USER PHILIPS EMPLOYEE ****

You must be registered on this site as a Philips Employee to view Academy courses. After you have registered to the site, log in with your Philips ID.

* After log in *

When your Home page appears, click on the following:

1. 'Course Catalog' link located in the menu bar at the top of the screen.
2. Find and expand the 'Academy' section
3. Select the modality folder that this course applies to.
3. Select the course.
4. Click the 'Get it Now' button.
5. When the Learning Activities page appears, click on the link for this course.
6. You will also need to select the on-line test for this course, follow the same steps above for the on-line test. The test will have the same course code with a "T" at the end. Example: CS9020T

Course Number: XD9074

Course Title: Interventional Tools release 8.3

Update

Course Length: 3 hours

Delivery Method(s): eLearning

Modality: iXR

Location: @Home

Target Audience: Service Engineers

DESCRIPTION:

This course trains the engineer to a technical level which will enable the engineer to perform the service tasks on the Interventional Tools. He/she will be able to execute the Setting to Work and perform Planned Maintenance, Corrective Maintenance and Upgrades on the Interventional Tools release 8.3

This course will be updated to version 3

PREREQUISITES:

- XD9036; Allura Xper FD 20 release 2 to 3 update
- XD3867 or XD3871; Allura Xper release 5/6 part 2
- XD3968; Interventional Tools release 7

COURSE OBJECTIVES:

- After studying this course the student will be able to:
 - operate the Interventional Tools in order to execute the service tasks
 - execute the Setting to Work on Interventional Tools release 8.2
 - perform Planned Maintenance on the Interventional Tools release 8.2
 - perform Corrective Maintenance on Interventional Tools release 8.2
 - perform Remote Software Updates on Interventional Tools Release 8.2

MAJOR TOPICS:

- Operating
- Setting to Work
- Planned Maintenance
- Corrective Maintenance
- Remote Software Update

Course Number: XD3007

Course Title: X-Ray Systems, Basic part 2

Course Length: 5 days

Delivery Method(s): ILT

Modality: DXRLocation: Best

Target Audience: Field Service Engineers

System codes:

DESCRIPTION:

The ILT provides fundamental information on the generation and application of X-rays for diagnostic imaging.

PREREQUISITES:

English Language,
XD9115, X-Ray Systems, Basic part 1

COURSE OBJECTIVES:

After successful completion of this eLearning, the learner will have knowledge on the basics of:

- Medical application
 - The physics of X-rays
 - Radiation protection
 - The building blocks of X-ray systems
 - X-ray tubes
 - Generators
 - Image performance parameters
 - The documentation systems of X-ray systems
 - Planned Maintenance
 - Installation
-

25 kVA Fluoroscopy Only Solution, Release 8.2 Ready.
This system includes the following components:

25 kVA UPS

- 480v AC 3 phase input; 480v AC 3 phase output
- Fully rated Static Bypass Switch
- Input Isolation Transformer; Output AutoTransformer
- Dimensions: 36.3D x 20"W x 59.8H"
- Weight: 998 lbs (approximate).

Universal Power Controller (UPC)

- Combines the Battery Cabinet and Universal Transfer Switch Functions.
- Provides 12.5 Minutes of runtime at full load on battery
- Provides all interconnections to fully integrate into CV Lab.
- All previous 480V system functionality retained from previous separate component design.
- All connections are via external terminal blocks, rear access.
- All breakers are externally accessible from front.
- Isolated compartments for Battery and Switch sections.
- Fully ETL tested and certified UL, cUL and CSA Compliant.
- Dimensions: 31.5"D x 17.2"W x 59.8"H
- Weight: 1020 lbs (approximate).

DC Power Supply

- Artesyn/Emerson Part Number 73610129
- Single Unit Included for Mono Plane Systems
- Dimensions: 13.9" L x 6" W x 3" H
- Weight: 40 lbs (approximate).

Wiring Harness

- Complete Harness connecting UPC and UPS to MA Cabinet, includes control and Auxiliary connections and wire sizes per schematics. 50ft UPC to MA and 15ft UPC to UPS.
 - Shipping Dimensions: Approx 31"L x 28"W x 22"D
 - Weight: 140 lbs (approximate).
-

R8.2.1 UPS Control Kit

- Knife Switch rated 100A at 600V
- 120V rated Aux Switch Contacts
- Wall Mounted NEMA Enclosure
- Dimensions: 20"Hx 15"W x 8"D
- Weight: 25lbs

Included in UPC:

- Contactor MC3

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Trade in Allowance

1

Product: TOSHIBA AMERICA MEDICAL SYSTEMS Infinix VC-i
Serial Number: 295246
Manufacturer: TOSHIBA AMERICA MEDICAL SYSTEMS