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## **Allura Clarity FD10 Ceiling**

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The AlluraClarity FD10 (Ceiling) single-plane cardiovascular system comprises a ceiling mounted G-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 FD10 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 FD10 Stand**

The ceiling suspended geometry segment is comprised of the following features:

- A motorized, ceiling suspended Poly Diagnost G-arm, which can be ceiling rotated to allow a three-sided patient approach at maximum free floor space with full body coverage.
  - All stand movements are motorized. The motorized and manual parking movement consists of ceiling rotation and a longitudinal movement. The counterbalanced Dynamic Flat Detector can also be positioned manually or motorized. Angulation and rotation of the Poly-Diagnost G-arm are motorized at high speeds.
  - Parking and longitudinal movement of the Poly-Diagnost G-stand, can be performed either manually either motorized. The longitudinal movement comprises electronic auto-stop positions, to facilitate positioning in the iso-center with ease and accuracy.
  - Single operator control of stand parking or longitudinal positioning provides motorized base rotation at 12 degrees per second from +90 to -90 degrees, and motorized longitudinal movement at 15 cm/s over a maximum range of 260 cm.
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- The projection angles for the Poly-Diagnost G-arm in the head position (orientated parallel to the table) are:
  - Rotation 120 degrees LAO to 120 degrees RAO
  - Angulation 45 degrees cranial to 45 degrees caudal
- Motorized stand movements are variable speed with a configurable maximum speed, allowing:
  - rotation speed up to 25 degrees per second
  - angulation speed up to 18 degrees second
- The depth of the Poly-Diagnost G-arm is 105 cm.
- The stand features BodyGuard capacitive sensing collision avoidance for patient protection.
- The variable source image distance range between the x-ray tube foci and the Dynamic Flat Detector input screen is 86.5 to 123 cm.

## **Patient Support**

### **Xper Table**

- Patient support provided with a flat carbon fiber tabletop
- Tabletop length of 319 cm and tabletop width of 50 cm
- Floating tabletop movement of 120 cm longitudinal and 35 cm transverse
- 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**

- Three rail accessory clamps
- Mattress pad
- Translucent catheterization armrest
- IV Pole
- Set of Cable Holders
- Set of Arm Supports (FCV0248)
- Arm Support (FCV0258)
- Patient straps
- Table-mounted radiation shield
- Antifatigue Mat with Philips logo

## **X-RAY GENERATION**

The AlluraClarity FD10 comprises an integrated dedicated X-ray system, micro-processor controlled 100kW generator, based on high frequency converter technology. The user interface control of this X-ray Generator is incorporated into the Xper module, Xper Desktop 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 can be selected from the Xper Imaging T.S.O. Each mode has a different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, and adaptive harmonization).

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

#### **X-ray Tube**

The AlluraClarity FD10 includes a Maximus ROTALIX Ceramic tube assembly MRC-GS 05 08 and cooling unit CU 3101 for cardio-vascular systems. Comprising:

- 0.5/0.8 mm nominal focal spot values maximal 45 and 85 kW

#### **IMAGE DETECTION**

The Allura Clarity FD10 comprises the following image detection chain:

- A 25 cm (10 in.) diagonal triple-mode Dynamic Flat Detector. It comprises a 6"/8"/10" triple mode Dynamic Flat Detector
- The outer detector box diameter is 37 cm diagonal square
- The digital output of the Flat detector is a 1024 x 1024 matrix at 14 bit depth and the detector pixel pitch is 184 micron by 184 micron
- The DQE (0) is 75% providing high conversion of X-ray into a digital image, while maintaining a high MTF.

#### **VIEWING**

The AlluraClarity FD10 comprises the following components in order to display the clinical images in the control and examination rooms:

##### **Displays**

##### **Examination Room**

Two 19-inch monochrome LCD monitors

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- 19-inch monochrome TFT-LCD display
- 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.

- The first reference channel is for the display of reference images or runs, 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.

## **Control Room**

One 19-inch color LCD monitor

- 19-inch color TFT-LCD display

## **Control Room**

One 19-inch monochrome LCD monitor

- 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.

## **Acquisition**

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

This AlluraClarity offers a storage capacity of:

- 100,000 images at matrix size of 1024 x 1024, 10-bit
- 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.

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The Xper User Interface comprises a range of User Interface modules in the Examination Room, including On-Screen Display.

### **On-Screen Display**

- X-ray indicator and X-ray tube temperature condition
- Gantry position in rotation and angulation and Source Image Distance
- Detector field size display
- Selected Frame speed
- Fluoroscopy mode
- Integrated fluoroscopy time
- Stopwatch
- Skin Dose: dose rate with X-ray, cumulated dose with no X-ray
- Dose Area Product: dose rate with X-ray, cumulated dose with no X-ray
- Graphical bars for indication of Body Zone specific dose rate and accumulated skin dose levels, related to the 2 Gy level

### **Remote Intercom**

A 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.

### **Xper ViewPads**

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

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

### **Tablesides Modules**

One Xper Module is provided for use at either the tableside or in the control room. This module uses 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
  - Automatic positioning recall to allow the stand position to match the reference image.
  - Image Processing
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The Xper Geometry T.S.O. module can be positioned on all sides of the patient table, while keeping the button operation intuitive. The Xper Geometry T.S.O. 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 T.S.O. module can also be positioned at three sides of the patient table, while keeping the button operation intuitive. The Xper Imaging T.S.O. 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
- Shutters positioning
- Reset of the fluoroscopy buzzer

## Pan Handle

The Pan Handle is an extension of the control facility for floating movements of the table top.

## Control Room

The control room comprises an Xper Review Module, a keyboard, 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
- 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), 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
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The workflow is divided in scheduling, preparation, acquisition, review, and archive.

### **Scheduling**

The patients can be added, listed and selected per date, physician, and intervention type. Previous DICOM patient studies can be uploaded with the DICOM Query Retrieve function.

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, i.e. 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 or her own room protocols.

### **Acquisition**

The acquisition page contains information on the current selected patient.

### **Review**

The review page allows for reviewing of patient's:

- 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

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

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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 and archive formats can be selected to the individual needs.

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 or 1024x1024.
- 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.

## **Clinical Education Program for Allura Systems**

### **Essentials OffSite Education:**

Philips will provide up to two (2) Cardiovascular Technologists, Registered Technologists Registered Nurses, or other system operator as selected by customer, with in-depth didactic, tutorial, and hands-on training covering basic functionality and work-flow of the cardiovascular imaging system. In order to provide trainees with the ability to apply all fundamental functioning on their system, and to achieve maximum effectiveness, this class should be attended no earlier than two weeks prior to system installation.

**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



EP cockpit XL for Allura Xper mono-plane system with large 58-inch high resolution color LCD screen in the Exam Room

EP cockpit XL is an integrated EP lab solution supporting an efficient working environment, integrated workflow and enabler for complex procedures.

The EP cockpit XL provides the ability to:

- Reduce the amount of cables, keyboards and displays in the Exam Room and Control Room
- Display information from up to 8 sources simultaneously (incl. third party systems) on the Philips large 58-inch high resolution color LCD screen in the Exam Room.
- Resize & enlarge information at any stage during the case on the Philips large 58-inch high resolution color LCD screen in the Exam Room.
- Select, customize & save viewing lay-outs of the Philips large 58-inch high resolution color LCD screen via the Allura Xper table-side module
- Display information (incl. third party systems) on any of the Philips ultra high-brightness 21-inch color LCD displays in the Control Room.
- Operate connected equipment (incl. third party systems) via the Allura Xper module in the Control Room.
- Select a predefined display setup and keyboard/mouse configuration, or save a custom configuration as a new preset configuration.
- Store any image on any screen and/or all images on all screens as a DICOM Secondary Capture image.

The EP cockpit XL consists of:

#### OmniSwitch

The OmniSwitch is a 15 channel video-switch and 8 channel keyboard/mouse switch, operated from the Allura Xper Module in the Control Room and/or from the Allura Xper table-side module. The OmniSwitch allows the user to direct the video output of all connected medical equipment to the Philips large 58-inch high resolution color LCD screen in the Exam Room (up to 8 sources simultaneously) and to the Philips ultra high-brightness 21-inch color LCD displays in the Control Room (6 or 7 displays).

The OmniSwitch allows the user to switch keyboard/mouse control for the connected medical equipment.

The OmniSwitch can be connected to up to 8 medical equipment systems. These systems can be selected and controlled with 1 or 2 keyboard/mouse combinations in the Control Room.

#### Medical grade, large screen high resolution color LCD display in the Exam Room

This display support the image quality requirements for monochrome X-ray images, color EP signals as well as other images and replace all displays normally delivered with an Allura Xper system for the Exam Room.

Main characteristics are:

- 58-inch, 8 Megapixel color LCD display
- Native resolution: 3840x2160
- Brightness: max 700 Cd/m2 (typical)
- 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 58-inch color LCD screen control

- Resize & enlarge information at any stage during the case via the Allura Xper table-side module in the Exam Room and/or the Allura Xper module in the Control Room.
  - Select, customize & save viewing lay-outs via the Allura Xper table-side module in the Exam
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#### Room

- Select, customize & save viewing lay-outs via Allura Xper module in the Control Room

#### Ultra high-brightness, medical grade, color LCD displays

A total of 6 x ultra high-brightness, medical grade, color LCD displays are provided with EP cockpit XL for use in the Control Room.

These displays support the image quality requirements for monochrome X-ray images, color EP signals as well as other images and replace all displays normally delivered with an Allura Xper system.

Main characteristics are:

- 21.3 inch, 2 Megapixel color LCD display
- Display resolution (up to) : 1600x1200
- Input resolution (up to) : 1920x1200
- Brightness: 550 Cd/m<sup>2</sup>
- Contrast ratio : 800:1
- Wide viewing angle (approx. 170 degrees)
- Constant brightness stabilization control
- Independently selectable brightness settings for monochrome and color images
- Independently selectable lookup table for gray-scale, color and DICOM transfer function

#### Monitor ceiling suspension

A Monitor ceiling suspension for use in the Exam Room carry the large 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 both sides of the table and replaces the Allura monitor ceiling suspension.

Note: Two 21" additional displays (same as used in Control Room) are optional and located on top of the monitor ceiling suspension frame which carry the large 58-inch color LCD screen.

#### Control Room set-up

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

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

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

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

#### Snapshot functionality

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

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

#### Wall Connection Boxes

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

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

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

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

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

Notes:

Life-supporting equipment cannot be connected to the Wall Connection Boxes

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

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

Compatibility

EP cockpit XL is compatible with:

Allura Xper FD10 series from Release 7.6 onwards

Allura Xper FD20 series from Release 7.6 onwards

**Clinical Education Program for EP Cockpit**

**CV EP Cockpit OnSite Education:**

Clinical Education Specialists will provide sixteen (16) hours of CV EP Cockpit OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. Education expires one (1) year from equipment installation date (or purchase date if sold separately).Ref# 263-100615

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**Xper Live/Ref Slaving**

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Xper Live/Ref Slaving

The Xper Live/Ref Slaving will enable the option to slave the Live or Ref video source from the Allura Xper. The total amount of Xper Live/Ref Slaving that can be selected is max 4.

Xper Live/Ref Slaving is possible:

- In Control Room icw FCV0011(B/W monitor in Control Room)
- In Philips MCS (additional monitor excluded from this option)
- Icw FCV0519 1 or 2 MCS from Skytron/Steris

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**RIS / CIS DICOM interface**

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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.

<b>5</b>	<b>**</b>	<b>Lab Reporting</b>	<b>1</b>
Lab Reporting allows the user to generate and print simple reports in modality stand-alone situations. The user is able to incorporate free text and clinical images. The reporting functionality is suited for local printing and email. Part of the report is generated automatically from administrative data (e.g. patient/exam data hospital name) and required data (e.g. run-log dose information and event-log).			

<b>6</b>	<b>**</b>	<b>Rotational Scan</b>	<b>1</b>
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Rotational Scan provides real-time 3D impressions of complex vasculature and the coronary artery tree. It acquires multiple projections with just one contrast injection.

Rotational Scan 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 Scan can save considerable time dose and contrast while providing image detail required for diagnostic and therapeutic decisions.

Rotational Scan is possible with the Allura Xper systems in the side position (ceiling mounted systems) and in the head position which provides the flexibility to perform procedures virtually from head to toe.

#### With Allura Xper FD20

C-arm in side position:

- Max. rotation speed: 30°
- Max. rotation angle: 180°

C-arm in head position:

- Max. rotation Speed: 55°
- Max. rotation Angle: 305°

#### With Allura Xper FD10:

Poly G in side position (ceiling version):

- Max. rotation Speed: 30°
- Max. rotation Angle: 90°

Poly G in head position:

- Max. rotation Speed: 55°
- Max. rotation Angle: 240°

Maximum 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.

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

Operation of Rotational Scan is extremely easy. The procedure is selected set up and executed virtually within 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.

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The rotation end and start positions are easily selected. The procedure is controlled from the exposure hand

- or foot-switch.

**7      \*\*                      Digital subtracted Angio                      1**

The DSA-option allows to extend the application functions with additional vascular studies. DSA features real-time digital subtraction at low frame speeds of 0.5, 1, 2, 3, or 6 frames per second. The DSA programs can be selected per Xper Settings. It offers exposure technique for uncompromised image quality of subtracted images. In addition, this option also allows subtraction on run basis (run-subtract), which can be applied in the Rotational Scan and Bolus Chase Subtract options

This function will comprise following functionality:

- Fluoro-Trace
- Fluoro-Subtract
- Exposure subtract on individual image or run basis
- Mask selection
- Landmarking
- Pixel shift

Compatible with:

- . Allura Xper FD10 Rel 3 onwards
- . Allura Xper FD10/10 Rel 2 onwards

**8      \*\*                      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

**9      \*\*                      Ventricular Quant.Sw                      1**  
**pkg(Xper)**

Left Ventricular Quantification Software Package. Software package for the analysis of single plane Left ventricular angiograms. Calculates the Ejection fraction and local wall motion parameters in different formats.

Functions:

- Various LV-volumes
  - Ejection Fraction
  - Cardiac Output
  - Centerline Wall Motion
  - Slager Wall Motion
  - Regional Wall Motion
  - Calibration routines
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In addition the package allows manual measurements of line lengths (absolute and ratio's) and angulations. Multiple measurements in one image are possible.

Comprising:

- software license

Compatible with:

- . Allura Xper FD 10 Rel 3 and FD10/10 Rel 2 onwards
- . Allura Xper FD20 Rel 2, FD20/10 Rel 2 onwards

**10      \*\*                      Coronary Quant.Sw pkg(Xper)                      1**

Functions:

- diameter measurement along the selected segment
- cross sectional area
- %-stenosis
- pressure gradient values
- stenotic flow reserve
- 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.

Comprising:

- software license

Compatible with:

- . Allura Xper FD 10 Rel 3 and FD10/10 Rel 2 onwards
- . Allura Xper FD20 Rel 2, FD20/10 Rel 2 onwards

**11      \*\*                      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

**12      \*\*                      Pulse Cath Arm Support                      1**

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Facilitates catheterization through 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

- 13      \*\*                                      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:
- pivot device with graduated scale to be mounted on the universal floor plate of the table.

Compatible with Xper Table

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

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

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

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

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

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

The option provides:

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



Compatible with:

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

**15      \*\*                      Cradle extension                      1**

This extension provides the possibility to cradle the table top.

This allows optimal positioning of the patient for f.i. more invasive (surgical) or guided puncture procedures.

Functionality:

- . isocentric cradle with maximum cradle range: -15 degrees to +15 degrees for the full tilt range  
  cradle speed: 3 degrees/sec
- . automatic safeguarding system with manual override
- . easy to use controls

**16      \*\*                      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.

**17      \*\*                      StentBoost sw Rel. 2.0                      1**

StentBoost is a unique interventional tool to improve visualization of stents in the coronary arteries during interventions. This, Philips exclusive, innovative interventional tool produces a highly augmented image of a deployed stent in coronary arteries - while the catheter is still in place. The StentBoost image helps clinicians to make a thorough check of stent expansion, and see the position of stents in relation to other objects, like other stents, without the use of extra contrast or other 'expensive' consumables. This allows interventional cardiologists to immediately take any corrective action required while your patient is still in the examination room.

#### The way it works

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 and items further away from the markers will be greyed out.

The result provides enhanced contrast of the environment surrounding the markers, including the stent, while background noise is faded out.

#### StentBoost Workflow

##### 1. Image acquisition

StentBoost is based on a maximum of 40 frames out of a cine run. Depending on the frames speed this takes the user 2-3 seconds.

##### 2. Image transfer

The run will automatically be transferred to the interventional workstation and show up in the StentBoost software.

The Real time link (NCVA590) is a unique option within the Allura Xper FD10 R.2 and Allura Xper FD10/10 and allows instant access to the StentBoost image.

##### 3. Region of Interest definition

The StentBoost software shows the acquired run with a predefined Region of interest. With the region of interest user has to indicate where the markers of the stent delivery markers are located in the image run.

##### 4. StentBoost

After definition of the region of interest, the user presses next and within seconds, the boosted image shows up on the screen.

A real time operation user interface is available with StentBoost, providing:

- Review of StentBoost runs, before and after processing
- Viewing tools like Brightness/Contrast, Pan and Zoom to optimize the image displayed
- Automatic stent delivery system marker identification
- Reliability feedback regarding the enhanced run
- Manual quality improvement; Manual correction possibility for marker identification
- View patient info like, Birth date, Gender, Patient ID, Exam ID, Exam date, Run date, Run time, Hospital name, Physician name, RAO/LAO
- Creation of exportable items:
  - movies (AVI format)
  - snapshots (jpeg format)
  - The step 5, 6 and 7 are not mandatory.

##### 5. Calibration

To create a StentBoost image no calibration is needed. For the measurement support tool four calibration methods are included:

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- No calibration
- Auto calibration based on calibration data generated by the Allura Xper system when the autocall function is installed (MCV5681),
- Marker distance of the stent delivery markers,
- Catheter calibration

#### 6. "Measurement"

"Measurement" an option within the StentBoost package supports the clinician in his/her decision-making in determining the percentage of remaining stenosis in the stent.

#### 7. Archiving

Transfer to:

- Optional Hard Copy unit (DICOM Print)
- Optional third party station (snapshots images in DICOM Secondary Capture format)
- Any computer via a web server functionality with images in a standard file format (JPEG, AVI movies)
- 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.

#### 8. StentBoost release 2.0 comprises:

- StentBoost release 2.0 Software Package
- User manual on compact disc
- Software release bulletin
- DICOM Conformance Statement
- StentBoost IQ verification Phantom

#### 9. Compatible with:

- Allura Xper FD10 R 1.x
- Allura Xper FD20
- Allura Xper FD10 R. 2
- Allura Xper FD10/10

#### 10. Pre-requisite for StentBoost R 2.0:

- Interventional Hardware (NCVA106)

18	**	<b>Interventional Hardw.(RT prep)</b>	<b>1</b>
	The interventional hardware is a special platform designed for the Philips interventional software Integris 3D-RA, StentBoost and/or Allura 3D-CA		

The Interventional Hardware comprises at least:

- Dell Workstation
- 2048 MB memory
- Primary hard disk for the Operating system

- Secondary 72 GB hard disk for application data
- Internal CD-ROM
- External DVD writer
- Operating Software
- Microsoft Windows XP Professional UK Operating System

Conditionally:

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

Compatible with:

- Integris series with connectivity release
- Allura Xper series

19	**	<b>Integr EPcockpit XL and EPnav</b>	<b>1</b>
This extension enables the use of EP navigator (NCVB180) inside the integrated EP cockpit platform. There is no need for additional hardware on top of this extension.			
20	**	<b>EP Navigator R5</b>	<b>1</b>
EP navigator facilitates catheter navigation in ablation procedures, by providing a three-dimensional (3D) overlay of the real patient anatomy onto live fluoroscopic images. The 3D anatomy is registered to the fluoroscopy and shows the position of all catheters in relation to the anatomy. EP navigator follows the rotation of the C-arc and the movement of the table.			
The 3D anatomy is obtained using an intra-procedural 3D rotational scan or a pre-procedural cardiac CT or MR scan, from which the cardiac structures (left atrium, right atrium, left ventricle, right ventricle, aorta, coronary sinus, and trachea) are segmented. Automatic segmentation is provided for the left atrium and trachea. User-aided segmentation is possible for other anatomic structures.			
In addition to the overlay functionality onto live fluoroscopic images, the segmented 3D rotational scan, CT or MR anatomy from EP navigator can be seamlessly transferred to a compatible mapping system. This allows navigating catheters on images with real 3D anatomical detail without using X-ray.			
Using the Endo View function, the endocardial surface can be visualized, providing a view of important anatomical structures such as, in the left atrium, the pulmonary veins and the ridge to the left atrial appendage. The Point Tagging function allows the placement of tag markers on the surface of the anatomy, to mark sites of interest such as ablation lesions. Using the snapshot functionality, a screen image of the live screen can be made, perfectly suitable for reporting or teaching purposes			

## Clinical Education Program for EP Navigator

### **CV EP Navigator OnSite Education:**

Clinical Education Specialists will provide sixteen (16) hours of CV EP Navigator OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref# 230-100615

- 21      \*\*                                      3D EP Rotational Scan R5                                      1**
- 3D EP rotational scan reconstructs three-dimensional (3D) cardiac anatomy from a rotational angiography. It provides real-time and 3D anatomic detail during the intervention, in the EP lab itself.
- When used as an overlay onto live fluoroscopic images, this 3D anatomy is used in EP navigator as a roadmap to guide catheter navigation. Alternatively, the segmented 3D anatomy can be transferred to a compatible mapping system to navigate catheters on images with real 3D anatomical detail without using X-ray.
- The 3D EP rotational scan features a unique reduced angular rotation range in head and nurse position to simplify the workflow, e.g. not interfere with anesthesia logistics. All EP navigator functions, such as Endo View and Point Tagging, are available when using 3D EP rotational scan

### **Advanced EP Clinician Workshop**

This physician taught workshop provides instruction and practice acquiring 3D images (3DATG) with your Allura system. It also covers details on sending that image to overlay on fluoro or send it to your mapping system. The 12 hour workshop is located at St Elizabeth's hospital in Boston, MA and is conducted on Friday and Saturday. This hands-on workshop will provide all the details of these procedures from an experienced practitioner who has performed over 250 procedures. More importantly, you will get hours of hands-on practice, working with your own workstation in a small group setting. By the end of the workshop, you will be confident in the protocols and procedures to acquire and use the real time 3D imaging on a X-ray system with confidence. You will have time to discuss best practices with other participants to gain new insights and avoid common pitfalls. This package includes tuition for one clinician to attend this workshop. Travel packages and additional attendee packages can be purchased separately.

- 22      \*\*                                      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/m<sup>2</sup>
  - 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.

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## **DoseAware Bundle**

1

DoseAware is a unique solution providing staff working in an X-Ray environment with direct, real time dose feedback, enabling them to optimize their behaviour and reduce exposure to scattered dose. The DoseAware bundle comprises:

- 1 BaseStation Package
- 10 PDMs
- DoseManager
- 2 PDM racks.

### **Base Station Package**

The Base Station is the heart of the DoseAware system. It offers Online View, which displays real time dose rate and immediate dose data for any Personal Dose Meter (PDM) in range. The Walk-Up View enables easy access to personal dose history and PDM settings.

The Base Station has a touch screen interface and wireless communication with the PDM. The PDM dose information is stored within the Base Station and can be retrieved by the DoseAware Dose Manager software via a standard network interface to complete the DoseAware system with archiving and reporting functions.

The Base Station package includes also:

- a cradle and the DoseView software package that can be installed on a local PC (not included), which has Windows XP or Vista as operating system.
- Mounting material for the Base Station, facilitating mounting on a wall or on a Philips Monitor Ceiling Suspension or a Philips mobile C-arm system.

### **10 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 build-in radio-frequency wireless communication (868.3 Mhz for Europe version, 915 Mhz for USA version) 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, DoseView, and Dose Manager Software.

### **Dose Manager Package**

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.

Core functionality is:

- 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

<b>24</b>	<b>**</b>	<b>Black Anti-Fatigue Floor Mat w/ Blue Logo</b>	<b>2</b>
		Blue Anti-Fatigue Floor Mat w/ Logo	
<b>25</b>	<b>**</b>	<b>Rad Shield w/ Arm (Contoured) 61X76</b>	<b>1</b>
		Contoured Rad Shield with Arm rest. 61X76	
<b>26</b>	<b>**</b>	<b>PIVOTING TABLE-MOUNTED RADIATION SHIELD</b>	<b>1</b>
		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.

<b>27</b>	<b>**</b>	<b>Cable Spooler</b>	<b>1</b>
<b>28</b>	<b>**</b>	<b>M LED 3MC Light</b>	<b>1</b>
		MAVIG M3 MC LED - Multi Color / power Supply Included Includes Portegra2 Ext Spring Arm 75/90cm	
<b>29</b>	<b>**</b>	<b>Ceiling Track w/Column &amp; Handle Ext</b>	<b>2</b>
		Mavig 2.5m Ceiling Track with Ceiling trolley, 360 degree column, and brake handle extension.	
<b>30</b>	<b>**</b>	<b>LED Single Color Exam Lamp</b>	<b>1</b>

## LED Single Color M LED130F Examination Lamp

Portegra2 Extension/Spring Arm Combination with M LED 130F,  
Single Color, incl. Power Supply

Light in new dimension LED lamps support your daily operations through innovative technology and design. In addition to advantages provided by MAVIG with all light equipment, LED technology offers the following enhanced features:

- Faceted multi-lens system
- In-depth illumination
- Superior color rendition
- Extension arm 750mm
- Spring arm 900mm
- LED-Examination-light
- Operating voltage is 24V DC. The lamp is supplied with a transformer, should it be used with 230V.

Technical data LED 130F:

- Light intensity at 1 meter distance: 60.000 Lux
- Color rendering index: Ra = 95
- Focusable: yes
- Focusable size of the light field: 14-25 cm
- Color temperature: 4500 Kelvin
- Electronic light intensity control at the lamp head: standard dimming range: 50 - 100 %
- Temperature increase in head area: 0.5° C
- Mains: 230 V / 60 Hz
- Power consumption: 28 W
- Number of LEDs: 19
- Life-span of the LEDs: > 40.000 h
- Diameter of the lamp head: 33 cm
- Working distance: 70 - 140 cm
- Height Adjustment: 117 cm

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### Equipment Rack DVI

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The Equipment Rack for EP cockpit allows users of the Philips Allura Xper system to organize all the equipment used in an EP Lab on one moveable rack and removes cable clutter through a cable conduit. This provides a much "cleaner" organized look for the busy EP Lab.

The ceiling-mounted Equipment Rack, located in the Exam Room, can support 3rd party equipment. Cabling for this equipment is guided up through the ceiling mounted suspension. It can be moved by swiveling the ceiling mounted boom. The Equipment Rack can be positioned within a circular range of 1.6 meters.

The Equipment Rack consists of:

- 5 shelves and 1 drawer with flexible mounting position and can support 150kg of equipment weight.
- An infusion extension rod
- An extension arm with a standard VESA mounting plate, on which different types of equipment can be mounted



- A Wall Connection Box (1 of the standard EP cockpit Wall Connection Boxes) with Power (230V, 50Hz), Grounding, Network (RJ45), Keyboard/mouse (USB) and Video (DVI) connections

- 10 country-specific power connectors

Note: For USA/Canada 16 country specific power connectors

- 4 Ethernet network connectors

- Ergonomically operating handles with pneumatic brakes

- Standard gas outlets for O2, NO2, and Vacuum

Notes:

- Life-supporting equipment cannot be connected to the Equipment Rack.

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

- Please contact 3rd party equipment vendor for information and clearance in case of cable routing through equipment rack.

- The Wall Connection Box can be used to connect 3rd party equipment that complies with the following requirements:

- Qualified medical electrical equipment [IEC 60601-1]

- IEC 950 only if connected to an EP cockpit Wall Connection Box mains (230V) connection in the Control Room or otherwise isolated from hospital mains according IEC60601-1.

- Connected to the same earth as the Philips Protective Conductor Bar (PPCB).

- Can be operated with a standard AT 101-key US English keyboard connected through a USB connection.

- Provide video-output that matches the display range of the Color monitor that is used for display. Most display formats up to 1600x1200 are supported.

<b>32</b>	<b>**</b>	<b>Equipment rack Predelivery set</b>	<b>1</b>
		Pre-delivery for Equipment Rack.	

<b>33</b>	<b>**</b>	<b>Electrical Accessory kit OSC</b>	<b>1</b>
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<b>34</b>	<b>**</b>	<b>Pre-Install Bracket</b>	<b>1</b>
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<b>35</b>	<b>**</b>	<b>Pneumatic Regulator</b>	<b>1</b>
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<b>36</b>	<b>**</b>	<b>25 kVA Fluoro only UPS - UPC</b>	<b>1</b>
		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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## **Medrad Mark 7 Arterion Pedestal**

The Arterion Mark 7 Pedestal contrast medium injector can be positioned anywhere at the patient positioning table on a mobile unit, for direct operation of all functions in the examination room.

The injector system includes:

- A mobile pedestal stand with electronics unit and a connection cable to the manual release.
- A support arm with injector head and a control lever for moving the injector head.
- A user control console with large touch screen and corresponding additional monitoring display on the injector head.

Functions

Pressure limitation:

- for 150 ml syringes 689 to 8273 kPa, corresponds to 100 to 1200 psi. .

Flow rates for 150 ml syringes:

- 0.1 to 45 ml/s in increments of 0.1 ml/s
- 0.1 to 59.9 ml/min in increments of 0.1 ml/min
- rise/fall: 0 to 9.9 s in increments of 0.1 seconds

Release delay for injection or radiation:

- 0 to 99.9 s in increments of 0.1 s.

Adjustable volume for 150 ml syringes:

- 1 ml to the max. syringe capacity in increments of 1 ml.

Fill rate:

- Variable syringe filling speed 1-20ml/s.

Injection protocols:

- Up to 40 injection protocols possible.

Parameters currently displayed on the touch screen display and on the head display:

- Injection speed
- Injection volume
- Remaining volume
- Injection duration
- Applied pressure

Contrast medium heating:

- Nominal 35°C (95°F)±5°C (9°F)

Injection data memory

- Up to 50 injection data items stored

Included in the scope of delivery

- Injector standard configuration 150 ml
- Philips interface cable
- Operator Manual
- Service manual (English).

Power supply

100-240 VAC 50/60 Hz 1000VA.

## **XD3908EPCOCKPITNAVFLEX4 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

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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

PHILIPS PROPRIETARY MATERIALS SUCH AS DIAGNOSTIC SOFTWARE AND SERVICE DOCUMENTATION ARE NOT INCLUDED IN THE TRAINING AND WILL NOT BE AVAILABLE FOR USE OUTSIDE OF THE TRAINING ENVIRONMENT. THE TRAINEE MUST RETURN ALL PROPRIETARY MATERIALS RECEIVED DURING THE TRAINING AT THE END OF THE TRAINING. CUSTOMER ACKNOWLEDGES AND AGREES THAT NEITHER CUSTOMER NOR TRAINEE WILL RECEIVE A LICENSE TO SUCH PROPRIETARY MATERIALS AND THAT THE TRAINEE MAY NOT BE ABLE TO FULLY UTILIZE THE TRAINING WITHOUT THE USE OF SUCH PROPRIETARY MATERIALS. (CERTAIN LICENSES MAY BE OBTAINED THROUGH PURCHASE OF AN ALLIANCE CO; OP AGREEMENT.) Course dates and location to be finalized by Philips. Philips shall attempt to accommodate Customer requested dates and training location. The price quoted includes course tuition. Travel and living expenses are not included, but may be purchased separately through Philips.

IMPORTANT Notes Regarding Admission to Philips Customer Engineer Training Courses:

1. Trainee must meet all prerequisites
2. Course expires one (1) year from equipment installation date (or purchase date if sold separately)
3. Customer must sign Philips Nondisclosure statement
4. Trainee must sign Philips Nondisclosure statement
5. Customer must sign Philips terms and conditions of training

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**XD3970ALLURAFD7.6PART1C  
TC9**

1

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

Software

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**XD3974ALLURAXPERREL7.6P  
ART2CTC9**

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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

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**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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**XD8982ALLURAXPERCLARITY  
REL8.2CTC5D**

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Allura Xper / Clarity release 8.2

Course Number: XD8982

System Codes: 722-026, 722-027, 722-028, 722-029, 722-033, 722-034, 722-035, 722-036, 722-038, 722-039

Course Title: Allura Xper / Clarity release 8.2

Course Length: 5 days

Delivery Method(s): ILT

Modality: iXR-CV

Location: PHC and CTC

Target Audience: CS Field Service Engineers

**DESCRIPTION:**

This course will provide information on and in insights in the differences between Allura Xper release 8.1 and Allura Xper / Clarity release 8.2.

**PREREQUISITES:**

XD3970, Allura Xper Rel 7.6 part 1(Or history courses XD3966 & XD9065 or XD3875 & XD9065);

Field experience;

XD9906, Allura Xper update to R8.1;

FC9021 Cat Tool.

**COURSE OBJECTIVES:**

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Upon completion of this course and using the appropriate service manuals, the FSE can:

- Identify differences between the 8.1 release and the 8.2 release.
- Recognize new system parts.

- Certeray Generator

- motion control Clea-stand

- FD20 and FD15 detector

- AD7XT and AD7XNT table

- Power Supply gPDU

- Cabinet layout and cable routing

- Identify and sequence the steps to installing an 8.2 release.
  - Identify the new service documentation structure
  - Identify the Diagnostic CM procedures.
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