

SHIP TO:

MATHER VA B86009
V.A. Medical Center
WAREHOUSE - BLDG. 652
10535 HOSPITAL WAY
MATHER, CA 95655

P.O.# 612-B86009

Line #	Description	Qty
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1	Azurion 7 C20 FlexMove ORT	1
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Advanced solution to seamlessly perform a wide range of open and minimally invasive procedures in a single room

Key benefits

- Optimized utilization of your lab by procedure based workflow
- Intuitive user interaction delivering an easy to use, easy to learn system
- Efficient use of your OR space
- Positioning flexibility and clean floor
- Easy full body patient coverage

Designed to accommodate combined specialties

With our Live Image Guidance we aim to remove barriers to safer, effective and reproducible treatments, delivering clinical value where it's needed most - at the point of patient treatment. Intelligent and intuitive integration of live imaging, patient information, and procedure-based applications optimize real time therapy guidance.

The Philips Azurion 7 C20 with FlexMove and OR table lets you seamlessly perform open, minimally invasive and hybrid procedures in a single room. Procedures can range from EVAR stenting or TAVI to open surgery.

The system is smoothly integrated with OR tables from leading surgical suppliers you trust to create a truly multifunctional room suitable for conventional surgery, hybrid surgery, and interventions.

Its architecture is made to easily integrate with third party applications and devices. A new workflow approach aims to support interventional teams in carrying out procedures for their patients, consistently and efficiently with great ease of use.

The Philips Azurion 7 C20 with FlexMove and OR table uses a range of Procedure Cards to help optimize and standardize system set-up for your cases, from routine to mixed procedures.

Procedure Cards can increase the consistency of exams by offering presets (e.g. most-frequently used, default protocols and user-specified settings) on procedure-, physician- or departmental level. In addition, hospital checklists and/or protocols can be uploaded into the Procedure Cards to help safeguard the consistency of interventional procedures and help to minimize preparation errors.

The Philips Azurion 7 C20 with FlexMove and OR table interventional X-ray suite has been specifically designed to save time by enabling the interventional team to work on all activities in the exam room - and at one or more work spots in the control room at the same time - without interrupting each other. This leads to higher throughput and faster exam turnover and contributes to quality of care.

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To improve dose management, Philips Zero dose positioning enables you to move the stand and table to the region of interest shown on the last clinical image hold before a new acquisition is started, without any radiation

Combined movement of longitudinal and lateral movement of the X-ray system allows the user to examine the patient without the need to pan the table .The wide ceiling rails enables the user to install Laminar Airflow due to the high sterility demands of such a room.

The longer longitudinal ceiling rails allows the user to park the system in the corner when it is not used during a procedure.

Specifications

The Philips Azurion series contain a number of features to support a flexible and patient centric procedural workflow.

The Philips Azurion series (within the limits of the used Operating Room table) are intended for use to perform:

- Image guidance in diagnostic, interventional and minimally invasive surgery procedures for the following clinical application areas: vascular, non-vascular, cardiovascular and neuro procedures.
- Cardiac imaging applications including diagnostics, interventional and minimally invasive surgery procedures.

With this system the patient table is removed and a MAQUET MAGNUS operating table operating table must be added locally.

Performing a complex and/or minimally invasive procedures can be a breath-taking and tense intervention. A highly versatile system which can be adapted to any situation and any type of workflow can be of support for these procedures.

A Philips Azurion system with FlexMove option can provide this versatility. It allows placement in a normal operating theater and allows flexibility during the procedures.

- The ceiling construction enables the use of Laminar Airflow
- In case no imaging is needed, the system can be parked in the corner which allows a normal operating area when doing open surgery. It enables the user to make full use of the lab
- The head-end side of the patient is still available for anesthesia and therefore not blocked by Philips Azurion system.

The Philips Azurion 7 C20 with FlexMove and OR table system comprises five functional building blocks:

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

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Each functional building block is explained in further detail including accessories.

1. Geometry

A.7 C20 FlexMove stand

The Philips Azurion stand is a stable assembly of a ceiling suspended C-arm, connected to a rotatable L-arm. Philips Azurion family with the FlexMove consists of a ceiling Philips Azurion mounted to a longitudinally and laterally moving ceiling carriage providing the following advantages:

- The new X-Y ceiling carriage allows the system to be steered over the patient by using a joy-stick.
- The system can be parked in a stand-by position which gives the physicians all the space they need around the patient. It can be moved into working position in a simple manner whenever needed.
- The new X-Y ceiling carriage allows the system to be moved around the patient and be brought in from any position
- When a minimally invasive procedure has to convert to open surgery, the system can easily be moved out of the way.
- Philips Azurion system with FlexMove takes only limited amount of space around the table and for that reason has limited impact on the workflow of the physicians and staff in the room

The FlexMove option is available for two different ceiling heights being 290cm and 310cm.

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

- L-arm rotation around the patient table: +90, 0, -90 degrees.
- Flexmove coverage: Y stroke 440cm, X-stroke 260cm

FlexMove ceiling rails are not part of the coreblock and will be ordered as predeliverable.

B. Patient Support

The ORT system contains an interface to the Magnus (MAQUET) Operating table The integration of the Magnus (MAQUET) surgery table includes support of:

- Safety: Integrated Emergency Stop; all motorized movements (including table), are stopped when Philips Azurion emergency stop button is pressed; Integrated Collision detection, all motorized movements (including table), are slowed down or stopped when Bodyguard detects the patient
- Workflow: Easy patient positioning with the basic table functions via control module and Magnus (MAQUET) UI controls; table height, tilt, cradle, longitudinal/lateral movement and reset geo. Synchronized patient orientation setting between Magnus (MAQUET) and Philips Azurion.
- Advanced Functionality: Iso-centric tilt features a tilt movement of the table top while keeping the point of rotation fixed in the iso-center of the imaging system. Synchra-tilt synchronizes the stand orientation with the iso-centric tilt movement keeping the view perpendicular to the table top surface.

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The control module includes controls for storage and recall of two freely selectable single plane projections.

2. X-ray Generation

A. Generator

The 7 C20 system comprises an integrated, micro-processor controlled Certeray generator based on high frequency converter technique. The user interface control of this X-ray Generator is incorporated in the touch screen module, review module, and the on-screen displays. The Certeray generator comprises:

- X-ray generator 100 kW
- Voltage range is 40 - 125 kV
- Maximum current 1000 mA at 100 kV
- Maximum continuous power for fluoroscopy: 1.5 kW

Program selection:

- Pulsed X-ray up to 3.75 , 7.5 , 15 , 30, 60(optional) frames/s for digital dynamic exposures
- Frame rate extension to 30 frames per second.

Designed to enhance visualization of complex and pediatric interventions

Frame rate extension to 30Fr/sec increases the system acquisition speed up to 30 frames per second for cardio studies requiring high speed imaging.

- Pulsed X-ray for pulsed fluoroscopy (3.75 , 7.5 , 15 , 25, 30 frames/s).
- Minimum exposure time of 1 ms
- ECG triggered acquisition: allows acquiring one exposure for each QRS peak with selectable delay time
- Automatic kV and mA control for excellent image quality prior to run to save dose
- X-ray tube load incorporated in the Certeray generator
- Pulsed X-ray for (subtracted) acquisition up to 12 frames/s for vascular applications

B. X-ray tube

The 7 C20 system has the Maximus ROTALIX Ceramic grid switch tube assembly MRC200+ GS 0407 integrated.

The MRC 200+ GS 04 07 tube assembly and cooling unit CU 3101 for cardiovascular systems comprises:

- 0.4/0.7 mm nominal focal spot values maximal 30 and 65 kW short time load
- Grid switching at pulsed fluoroscopy and low load exposure (to eliminate soft radiation and improve image quality)
- Continuous loadability: 3400 W (at 21 degrees C room temperature) / 4000 W (= Max assembly continuous heat dissipation)
- Application of SpectraBeam dose management
- Tube housing is oil cooled with thermal safety switch

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	<ul style="list-style-type: none"> Maximum anode cooling rate of 1820 kHU/min Anode heat storage capacity of 6.4 [MHUeff] 	

C. System intrinsic

- Fully digital imaging chain in maximizing the utilization and technology of the x-ray generator, x-ray tube, flat detector and image processing.
- Customizable EPX protocols to each application according to user preferences for different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, adaptive harmonization)
- Built-in SpectraBeam filtering of low energy radiation to improve image quality and dose efficiency with MRC200+ X-ray tubes.
- Pre-filters of 0.2, 0.5 and 1.0 mm CU equivalent
- Automatic cardiac wedge positioning
- X-ray depth collimator with single semi-transparent wedge filter with manual and automatic positioning.
- 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.
- Xper Fluoro Storage, a grab function allows storage and archiving of both a fluoro image or the last 20 seconds of fluoroscopy run. These images or runs can be archived and reviewed as a regular run.

D. User selections

- removable anti-scatter grid to lower x-ray dose for pediatrics (grid ratio 13:1)
- ECG triggered acquisition, offering the possibility to acquire images at the same phase of the heart cycle. This applies to the low dose fluoro and exposure program for EP applications. This allows patient dose reduction by lowering the pulse rate to 1 pulse per heart and let the physician still focus on relevant items
- three programmable fluoroscopy modes can be selected from the control module. Each mode has a different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, adaptive harmonization)

The acquisition segment coordinates the parameters for automatic exposure control, ensuring excellent X-ray tube loading for top image quality. Different programs can be selected via the touch screen module and/or via the review module. Several exposure techniques are provided for different types of examination:

- Serial imaging for DA and DSA with automatic exposure setting
- Single shot mode, acquisition frame rates: 0.5 to 12 images/s at 2048 x 2048, 14 bit matrix

Roadmap Pro can be selected from the control module.

In the first Roadmap phase a vessel map is created by live fluoroscopy or by selecting an exposure image (SmartMask) with a vessel map which, in the second Roadmap phase, is superimposed with subtracted live fluoroscopy.

Roadmap Pro features Smart Settings in special clinical modes that are optimized to visualize special materials such as coils and glue.

- Acquisition runs can be done without losing the vessel map of Roadmap Pro.
- Live processing of the vessel map, the device map and the landmark map can be done on the touch screen module.
- Field of View (FoV) can be altered during the second phase.

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- Xres for vascular procedures is standard part of Roadmap Pro.

In Roadmap Pro "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.

E. User dose awareness

DoseWise program: Philips DoseWise program is a set of techniques, programs and practices built into the X-ray system that ensures excellent image quality during each interventional application, while at the same time reducing x-ray dose at every opportunity. The DoseWise comprises of three building blocks to help reduce x-ray dose without compromising diagnostic quality: system intrinsic, user selection and awareness.

On-system monitor display provides and displays body zone specific Air Kerma data (10 zones for cardiac applications) in numeric and graphical bars.

- Graph displays the accumulated Air Kerma dose for the particular body zone of the actual projection
- When the accumulated Air Kerma dose of the particular body zone reaches the critical skin dose level of 2 Gy, it will be indicated on the display and made visible to the x-ray operator.

Radiation Dose Structured Report

Collection of dose relevant parameters and settings and export to a DICOM database (e.g. PACS) (dose information is sent in MPPS message not as Radiation Dose Structure report), according IEC60601-2-43, 2nd Edition. The reported data can be used for, for example:

- Quality improvement: evaluating trends in X-ray dose performance per facility, system and operator. RDSR enables analysis of average dose levels & variance for routinely performed exams and procedures. Also, typical system usage can be extracted from the data, helping to identify root causes behind deviations and measures to improve.
- Analysis of individual patient cases: using dose levels and system usage per procedure
- Alerting for high dose cases, timely identifying patients at risk or deterministic effects, for proper follow-up.

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.

3. Image Detection

The system has a 20 inch flat panel image detector. This detector can be rotated over 90 degrees from portrait to landscape and vice versa.

The image chain with the 20 inch flat panel image detector comprises the following:

- A 30 cm by 40 cm (20 in.) diagonal 8 mode Dynamic Flat Detector subsystem for fluoroscopy and cine-fluorography.

Line #	Description	Qty
	<ul style="list-style-type: none"> 8 modes 30*38/30*30/26*26/22*22/19*19/16*16/13.5*13.5/11*11 cm, Dynamic Flat Detector The outer detector physical housing is 36 x 47.2 cm The digital output of the Flat detector is 1904*2586 pixels at 16 bit depth. The pixel pitch is 154 micron by 154 micron The DQE(0) is >77% providing high conversion of X-ray into a digital image, while maintaining a high MTF. 	

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

Xres is a multi-resolution spatial temporal noise reduction and edge enhancement filter for interventional applications. Xres exploits the full benefits of dynamic digital flat detector imaging to enhance sharpness and contrast and has been designed to reduce noise in fluoroscopy and exposure runs. The settings for Xres Cardio can be customized to improve image quality. Xres is a Philips unique image processing algorithm developed at Philips Research for medical applications. Xres is used with Philips MR and US scanners next to Philips Azurion systems.

4. User Interface

User Interface in Examination Room

The User Interface comprises a variety of User Interface modules in the Examination Room. There is the On-Screen Display, the touch screen module, Viewpad and the control modules.

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

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

Touch screen module

The touch screen module is provided for use at either the tableside or in the control room. The touch screen module has a touch screen, which can be operated when covered with sterile covers. The touch screen module allows control of (depending on configuration):

- 3rd party equipment (e.g. CX50, Interventional Tools, EchoNav, DoseAware)

Line #	Description	Qty
	<ul style="list-style-type: none"> • Monitor layout (Flexvision, switchable viewing) • X-Ray settings (Collimation, Projections, Table, Series and Processing) • Quantitative Analysis (optional) User can only start QA from the touch screen module. No controls like coronary analysis, left ventricular and vessel analysis can be performed on the touch screen module. • Operation of Xcelera, XperIM and IntelliSpace Portal viewing (optional) • Operation of CX50 Ultrasound (optional) 	

2nd Touch Screen Module

Key Benefits

- Control system operations with a second touch screen module

Tablet-like touch screen control

During an intervention flexible control of applications and system operations can support fast decisions and communication with team members. The touch screen module provides fast, tablet-like touch response to control system operations. Up to three touch screen modules can be connected to the X-ray system: on the table, on the pedestal and in the control room.

Specifications

The second touch screen module is similar to the standard touch screen 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
- Channel selection for MultiVision
- Automatic position control (optional)
- Quantitative Analysis controls (optional)
- Xcelera and IntelliSpace Portal viewing (optional)
- Interventional tool controls (optional)
- 3D-RA, Dynamic 3D Roadmap (optional)
- StentBoost, 3D-CA (optional)
- XperCT, XperGuide (optional)
- XIM physio monitoring controls (optional)

Connectivity:

A maximum of 3 touch screen modules can be connected to the X-ray system:

- One touch screen module on the table
- One touch screen module in the Control Room
- One touch screen module on the pedestal

Viewpad

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

Line #	Description	Qty
	<ul style="list-style-type: none"> • 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 Viewpad function from life to reference monitor • Laser pointer, intended to point at regions of interest on the image monitors • LED indication of laser pointer on/off and battery low • Subtraction on/off • Remasking • Landmarking 	

Control module.

The control module can be positioned at two sides of the patient table, while keeping the button operation intuitively logical. The control module single-plane provides the following functionality:

- Tabletop float
- Table height position
- Table tilt angle if function is applicable
- Source Image Distance selection
- Gantry positioning
- Gantry rotation in an axis perpendicular to the floor
- Store and recall of two scratch gantry positions including SID
- Geometry reset button, which resets stand and table to a factory-default starting position
- Emergency stop button
- Execute button of the Automatic Positioning Control (APC) if applicable
- Unlocking button for table pivot function (if option is installed)
- Table tilt and cradle controls (if option is installed)
- Fluoroscopy Flavor selection defined per setting
- Shutters and Wedge positioning
- Manual or automatic semi-transparent wedge filter
- Xper Fluoro Storage
- Selection of the Detector field size
- Reset of the fluoroscopy buzzer
- Roadmap Pro activation if function is available

The control module is provided with a protection bar. This removable bar protects the buttons from unintended control.

Pedestal

The pedestal is the flexible work spot for operating the system in the examination room. The pedestal is provided with a control module and has the possibility to hold the X-ray footswitch. A touch screen module is mounted on the pedestal herewith creating a workspot with full system control. The 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 8 meter. The pedestal has been

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designed with stability and ease of use in mind and can be stowed away near the wall connection box when not used.

User Interface in Control Room

The control room comprises a review module, data color monitor and review monitor. The data and review functions are controlled by a single keyboard and mouse. The review module offers the basic functions for review. The most prominent functions can be controlled by the push of a button. The review module comprises the following functionality:

- Power on/off
- File and run cycle
- File, Run, and Image stepping
- Run and file overview
- Reset fluoroscopy timer
- Enable/disable X-ray
- Geo disable

Acquisition monitor. A standard keyboard and mouse control the user interface. The acquisition monitor is intended to follow live case in the ER. System information is displayed on the bottom of the monitor:

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

The acquisition monitor is designed for standard workflow based on scheduling, preparation, acquisition, review, report, and archive.

Scheduling

In the scheduling page it is possible to add new patients (either querying from RIS/CIS or by creating patient locally). 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 Philips Azurion 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.

Procedure Cards

Procedure Cards provide the information of room and patient preparation for each individual physician. Procedure Cards are customizable per setting and allow each physician to provide their own room protocols. Procedure Cards is intended to make hard copies of the protocol instructions redundant.

Acquisition

The acquisition page contains information on the currently selected patient.

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Reviewing

The review page allows for reviewing of patients:

- Previous examination cases
- Review of other DICOM XA or DICOM SC studies.

Quantitative Vascular Analysis

Key benefits

- Allows quantitative assessment of different size vessels such as aortic and peripheral
- Aids confident decision making for device selection, approach angles and follow-up
- Designed for efficiency with single click functions and fast results

Easily obtain objective assessment of aortic and peripheral vasculature to support decision making and allow quantitative assessment of vasculature during vascular interventions, the 2D quantitative vascular analysis option supports quantification such as aortic and peripheral artery dimensions of about 5 to 50 mm from 2D angiographic images. With one click, the relevant segment is detected and a visualization of the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area is created.

Specifications:

- Automated vessel segmentation
- Diameter measurement along selected segment
- Automated obstruction analysis
- Stenosis diameter, stenosis length
- % stenosis diameter, % stenosis area
- Automated and manual calibration routines
- Store result page

Analysis of the targeted vessel segment has been simplified with the single click function. Position the mouse on or close to the stenotic area and click once to detect the relevant segment. The visualization shows the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area.

Archiving

Clinical studies can be archived to a CD/DVD, USB or a PACS. The archive process can be completely automated and customized with settings. Parameters like multiple destinations, archive formats can be selected to the individual needs and wishes for programming under the settings. With Philips Azurion the control room comprises of an acquisition monitor and a review monitor. The review monitor is a 24 inch color TFT-LCD medical grade monitor.

The Graphical User Interface on the Review monitor has the following features and possibilities:

- Step through file, run, or images
- File, and run overview
- Contrast, brightness, and edge enhancement settings
- Flagging of runs or images for transfer

Line #	Description	Qty
	<ul style="list-style-type: none"> • Applying text annotation in images • DICOM printing if available • Executing Quantitative Analysis Packages if available • Subtraction functionality if available 	

This system is delivered with printed instructions for use and/or electronic instructions for use, as well as a quick start leaflet. A printed paper instructions for use can also be ordered at no additional cost.

5. Viewing

A. Viewing in Examination room

Philips Azurion systems come with one 27 inch high brightness color medical grade LCD monitor for clinical image display in the Examination room. This LCD monitor is intended for viewing in the examination room and is designed for medical applications. The monitors is used for combined viewing of live images and reference display. Selection and storing of live to reference monitor is controlled by the infra-red remote-control viewpad or via touch screen module.

The On-Screen Display provides status information on stand rotation-angulation, table height, 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 Air Kerma dose.

The main characteristics are:

- 27 inch high brightness color TFT-LCD display
- Native format 1920x1080 Full HD
- 10 bit gray-scale resolution with gray-scale correction
- Wide viewing angle (approx. 178 degrees)
- High brightness (max 650 Cd/m², default 400 Cd/m²)
- Long term luminance stability through backlight stabilization circuit
- Automatic brightness control with backlight sensor
- Control functions on side
- User programmable and standard reference setting
- On-Screen Display
- Internal selectable lookup table for gray-scale transfer function, including DICOM
- Internal power supply (100-240 VAC)
- Integrated LCD protection screen

Unless otherwise stated, with FlexMove an integration kit HD is supplied for a Monitor Ceiling Suspension (MCS) containing crucial parts for operating the equipment.

B. Viewing in Control room

Philips Azurion includes two 24 inch high brightness color LCD monitors. The color monitors are for acquisition and reviewing display.

The main characteristics for color monitor are:

- 24 inch color TFT-LCD display
- Native format 1920x1080 Full HD
- High brightness (max 400 Cd/m², default 350 Cd/m²)

Line #	Description	Qty
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- Wide viewing angle (approx. 178 degrees)
- Long term luminance stability through backlight stabilization circuit
- Automatic brightness control with backlight sensor
- Control functions on side
- User programmable and standard reference setting
- On-Screen Display
- Internal selectable lookup table for gray-scale transfer function, including DICOM
- Internal power supply (100-240 VAC)
- Integrated USB hub

A Philips Azurion system includes the DICOM Image Interface which enables the export of clinical images to a DICOM destination like a CD-Medical station or a PACS server. 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 DICOM Image Interface transfers through its fast Ethernet link, making images available on-line within seconds. The archive process can be configured by X-ray settings. The images are sent out either in the background, or manually upon completion of the examination. The export format is configurable in 512x512 or 1024x1024 matrix in 8 or 12 bit depth. The examination can be sent to multiple destinations for archiving and reviewing purposes. The 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 Intercom for the Azurion System. The option includes a separate intercom, which is connected independently from the system. This allows placement of the intercom at the preferred working position in the control room and examination room. The listen function can be separately selected on each intercom. Activating the talk function on a selected intercom automatically disables this function on the other intercom.

Uninterruptable Power System (UPS)

Ensures data integrity

A power failure of the hospital mains during an intervention can cause loss of data. If this occurs, the single phase Uninterruptable Power System (UPS) enables a proper shut-down of the X-ray system processor units.

Specifications

In case a full three phase UPS is selected, the single phase UPS is not delivered.

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.

PerformanceBridge Utilization Service.

One year access to the PerformanceBridge Utilization Services for Philips Azurion, starting at installation date.

This service allows you to monitor the utilization of your Philips Azurion X-ray suite by tracking key indicators, as well as other Philips Allura (R3 or above) systems installed at the same location.

Environmental

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At Philips Healthcare, we feel the responsibility towards society and the environment. The latest 7 C20 system is a perfect example of our EcoVision program. By examining every aspect of the 7 C20 design and development through a green eye, we drastically reduced the products environmental impact.

System & table APC

Helps to save time and manage X-ray dose with automatic positioning

Positioning the X-ray system to visualize relevant anatomy from different perspectives can involve a great deal of time and many scout images during interventional procedures. To help save time and manage X-ray dose while working, the Automatic Position Controller (APC) provides an easy way for interventional team members to store and recall stand-related positions.

Specifications

The system APC stand and table positions need to be stored and recalled separately.

Clinical Education Program for Azurion System:

The purchase of the Azurion System includes a StartRight entitlement pool that allows for the customized delivery of educational events to improve staff time to proficiency, knowledge on system features, and improve overall lab efficiency. For new users, the recommended series of educational events includes:

Essentials OffSite Education: Philips will provide up to two (2) Cardiovascular Technologists, Registered Technologists, Registered Nurses, or other system operator as selected by customer, with in-depth didactic, tutorial, and hands-on training covering basic functionality and work-flow of the cardiovascular imaging system. In order to provide trainees with the ability to apply all fundamental functioning on their system, and to achieve maximum effectiveness, this class should be attended no earlier than two weeks prior to system installation. This twenty-eight (28) hour class is located in Cleveland, Ohio, and is scheduled based on your equipment configuration and availability. Due to program updates, the number of class hours is subject to change without notice. Customer will be notified of current, total class hours at the time of registration. This class is a prerequisite to your equipment handover OnSite Education. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. 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. 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

Initial Handover OnSite Education: The primary 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).

Line #	Description	Qty
	<p>FollowUp 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. Students should attend all 16 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.</p> <p>Assessment OnSite Year 1: The primary Philips Education Specialist will perform a two day onsite assessment at the customer site on or close to the first anniversary of the Initial Handover. The Specialist will assess through various means not limited to; physical observation of procedure workflow, tool usage data analysis and staff interviews. The Specialist will then review findings with department head and make recommendations thereof. The Specialist may perform refresher training if required.</p> <p>Education expires one (1) year from installation date (or purchase date if sold separately). Ref#296339296340296341296342-20170209</p>	
2	<p>ClarityIQ.</p> <p>Significantly lower dose- across clinical areas, patients and operators.</p> <p>Key benefits</p> <ul style="list-style-type: none"> • High-quality imaging at low dose levels • Enhanced work environment for staff through active management of scatter radiation • Expands treatment options – enables longer procedures to treat obese and high-risk patients with confidence <p>See with confidence every time</p> <p>Interventions are becoming increasingly complex, which lengthens fluoroscopy time and increases the need for high resolution imaging. New devices can be more difficult to visualize, making it harder to position them precisely. The prevalence of patients with a high BMI can also require increased dose levels to visualize anatomy. All of these factors inspired us to completely redefine the balance in interventional X-ray with AlluraClarity.</p> <p>AlluraClarity with its unique ClarityIQ technology gives you exceptional live image guidance during treatment. What's more, you can confidently manage low X-ray dose levels without changing your way of working. In short, you can see what you have to regardless of patient size.</p> <p>Specifications</p> <p>ClarityIQ technology is the foundation of Philips X-ray systems with AlluraClarity. It offers:</p> <ul style="list-style-type: none"> - Noise and artefact reduction, also on moving structures and objects - Image enhancement and edge sharpening - Automatic real-time patient and table motion correction on live images - A flexible digital imaging pipeline from tube to display that is tailored for each application area - Over 500 clinically fine-tuned system parameters making it possible to filter out more X-ray radiation and use smaller focal spot sizes and shorter pulses with the grid switching technology of Philips MRC tube and accompanying generator 	1
3	coupling to video switching	1

Line #	Description	Qty
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Key benefits

- Easily display any data or clinical information needed to work efficiently

Simplify workflow with flexible viewing control

Having patient data and clinical information easily available on screen can enhance decision making and efficiency during interventions. Coupling to Video switching enables coupling of maximum 4 color outputs (e.g. Interventional tools, Xcelera, XperIM and IntelliSpace Portal).

Specifications

Video splitter box to enable coupling of maximum 4 color outputs (e.g. Interventional tools, Xcelera, XperIM and IntelliSpace Portal) to the switching concept from our partner.

In combination with the MultiSwitch option, the Video splitter box is used to connect a maximum of 3 workstation with a total power dissipation of maximum 1380 W.

For the remaining workstations, up to 4 in total, a second video splitter box needs to be ordered. In addition, 4 splitter units are delivered to enable coupling of up to 4 of the X-ray system Live and Ref signals to the partner video switching system.

The partner system provides fully galvanically isolated DVI extender cables to connect these signals.

4	FlexSpot	1
	Integrated work spot in the Control Room to view, control and manipulate all applications within a single view	

Key benefits

- Access all applications on one compact workplace in the control room
- Set up unlimited custom screen layouts with all relevant information in one view
- Full flexibility of screen layouts (live resize, drag and drop)
- Clutter free and clean control room

Simplify control room workflow

Typical interventional control rooms are equipped with several workstations and controls to support procedures that require extra handling and space. FlexSpot helps you save time and space in the control room by giving you seamless access to all applications on one compact workplace. Easily set up any screen layout desired with all relevant information in one view. Resize, drag and drop items just like a tablet.

Specifications

FlexSpot offers an integrated workspot in the Control Room with one or more high resolution QHD (2560x1440) displays.

- Show internal video sources (e.g. Review, CR Live)
- Show up to 11 external video sources (e.g. Ultrasound, EchoNav, etc.)
- Video sources can be flexibly displayed on FlexSpot through user customizable presets. Users can customize the displayed layout and assign video sources to viewports as desired
- Up to 4 video sources can be displayed on a single FlexSpot display (excluding the add-on FlexSpot).
- Per display, the user can choose between 7 different layouts (positioning of viewports)
- FlexSpot offers user interaction through a keyboard and mouse with which users can seamlessly control all video sources on screen. Seamless means that users can move out of one viewport and into another without needing to press a special keyboard shortcut or use a gesture.
- In systems with both FlexSpot and FlexVision, FlexSpot offers convenient control access of FlexVision from the primary FlexSpot workspot.
- Users can define their own preset groups and preset names.
- Through field service, users can assign their own custom name and icon to a video source (also applies to FlexVision)
- The X-ray status area with all X-ray details is always visible on the primary display of the primary FlexSpot workspot.

Line #	Description	Qty
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- Up to 3 Philips workstations can be integrated into the technical room. With this, the workstations are powered from the system and are fully integrated into the system. Users do not need to separately power on/off these workstations.
- The snapshot function allows the user to store/save a screen-capture of any image on the FlexSpot as a photo image to the current Acquisition Patient study.
- 27 inch high brightness color LCD monitor for clinical image display in the Control Room.

The main characteristics for color monitor are:

- 27 inch color TFT-LCD display
- Native format 2560x1440 Quad HD
- High brightness (max 500 Cd/m2, default 350 Cd/m2)
- Wide viewing angle (approx. 178 degrees)
- Long term luminance stability through backlight stabilization circuit
- Automatic brightness control with backlight sensor
- Control functions on side
- User programmable and standard reference setting
- On Screen Display
- Internal selectable lookup table for gray-scale transfer function, including DICOM
- Internal power supply (100-240 VAC)
- Integrated USB hub

5 **Maquet ORT integration kit** 1

Interface to the Magnus (MAQUET) operating table system

Key benefits

- Modular design to meet the needs of interventional and surgical requirements
- Excellent flexibility

Thanks to its highly modular design, the Maquet OR table can be quickly adapted to meet the needs of new interventional and surgical requirements.

Maquet OR table configurations are available for every specialist field. The OR table can be positioned at extreme tilt and slope angles to provide improved patient access during surgery and to manage cut-and-stitch times during minimally invasive procedures. With the radio translucent OR table, the length and width of the radio translucent areas have been extended significantly to support larger imaging spaces.

Specifications

The ORT system contains an interface to the Magnus (MAQUET) operating table system (fixed column).

The integration of the Magnus (MAQUET) surgery table includes support of:

- Safety: Integrated Emergency Stop; all motorized movements (including table), are stopped when the Philips X-ray system emergency stop button is pressed;
- Integrated Collision detection, all motorized movements (including table), are slowed down or stopped when Bodyguard detects the patient
- Workflow: Easy patient positioning with the basic table functions via control module and Magnus (MAQUET) UI controls; table height, tilt, cradle, longitudinal/lateral movement and reset geo. Synchronized patient orientation setting between Magnus (MAQUET) and Philips X-ray system.
- Advanced Functionality: Iso-centric tilt features a tilt movement of the table top while keeping the point of rotation fixed in the iso-center of the imaging system. Syncra-tilt synchronizes the stand orientation with the iso-centric tilt movement keeping the view perpendicular to the table top surface.

On the User Interface (On-Screen Display) in the Examination room, OR table specific information is displayed:

Line #	Description	Qty
	<ul style="list-style-type: none"> - Table height - Table top tilt and cradle angle (if applicable) <p>The Control Module contains the following OR table functionality:</p> <ul style="list-style-type: none"> - Automatic Position Control option for stand and table positioning - Table top float - Table height position - Table tilt angle (if applicable) - Geometry reset button, which resets stand and table to a factory-default starting position - Unlocking button for table pivot function (if option is installed) - Table tilt and cradle controls (if option is installed) 	
6	<p>Isolated Wall Connection Box</p> <p>Isolated Wall Connection box to support the display of an external video source on a monitor in the examination room.</p> <p>Key benefits</p> <ul style="list-style-type: none"> - Stream video from other modalities on the interventional X-ray suite: - Connect external video in the exam room <p>Easily stream video to other locations</p> <p>Many interventional facilities use video to record and stream images from other modalities on the interventional X-ray suite for training or presentation purposes. The Video Wall Connection Box facilitates connection of the video source via a standard DVI cable/connector and lossless transfer of the video signal over the approximate 30 meter long cable. It can be mounted in the examination room or in the control room, depending on the location of the video source.</p> <p>Specifications</p> <p>The quantity of the VWCB's has to be calculated as follows:</p> <p>For each video signal via MultiVision: 1 VWCB (max = 4)</p> <p>For each video signal to FlexVision XL on Cardio System: 1 VWCB (max = 9)</p> <p>For each video signal to FlexVision XL on Vascular System: 1 VWCB (max = 8)</p> <p>For each 3rd party video signal directly connected to an LCD in the MCS: 1x VWCB.</p> <p>Note:</p> <p>No VWCB is required in case a video signal is connected directly to a dedicated LCD from the following sources:</p> <ol style="list-style-type: none"> 1) Live/ref Slaving 2) Interventional HW (XtraVision), IntelliSpace Portal, Philips Xcelera (only if workstations are powered by Philips X-ray system) 3) XperIM 	8
7	<p>iE33 / EPIQ Video coupling</p> <ul style="list-style-type: none"> • View ultrasound images on the exam room monitors • Gain insight into soft tissue anatomy <p>View ultrasound images in the interventional suite</p> <p>During interventional procedures, ultrasound imaging can provide critical insights into soft tissue anatomy. The iE33 / EPIQ video coupling feature has been designed to integrate iE33 / EPIQ ultrasound images into the interventional suite. It provides the required infrastructure to display iE33 / EPIQ images on the exam room monitors to support decision making during interventions.</p>	1
8	<p>video WCB on rear side 1st MCS</p>	2

Line #	Description	Qty
	Isolated Wall Connection box on the rear side of the monitor ceiling suspension to support the display of an external video source on a monitor in the examination room.	
	Key benefits <ul style="list-style-type: none"> • Easily connect external video in the exam room Specifications <p>A wall connection box to connect external video (input only), USB and Ethernet. One or two WCB's (option) can be attached on the rear side of the 1st MCS with a bracket. A cable box (also attached to rear side of 1st MCS) can be used to store connected equipment cables. A maximum of two WCBs/cable boxes can be attached.</p>	
9	Quantitative Coronary Analysis	1
	Key benefits <ul style="list-style-type: none"> • Allows quantitative quantification of coronary artery dimensions • Aids confident decision making for device selection, approach angles and follow-up • Designed for efficiency with single click functions and fast results Easily obtain objective assessment of coronary artery <p>To support decision making and allow assessment of vasculature during cardiac interventions, the 2D quantitative coronary analysis supports quantification of coronary artery dimensions of about 1 to 6 mm from 2D angiographic images. With one click, the relevant segment is detected and a visualization of the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area is created.</p> Specifications <ul style="list-style-type: none"> • Automated segmentation of selected coronary • Diameter measurement along the selected segment • Automated obstruction analysis • Stenosis diameter, stenosis length • % stenosis diameter, % stenosis area • Automated and manual calibration routines • Store result page <p>Analysis of the targeted vessel segment has been simplified with the single click function. Position the mouse on or close to the stenotic area and click once to detect the relevant segment. The visualization shows the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area.</p>	
10	3DRA on TSM	1
	<p>Control 3D-RA from table side.</p> Key benefits <ul style="list-style-type: none"> • Designed to enhance efficiency during procedures • Perform a 3D-RA scan without leaving the exam room Table side operation of 3D-RA <p>To enhance efficiency in the interventional or surgical room during procedures, the 3D-RA (3D Rotational Angiography) on touch screen module option allows physicians to perform 3D-RA scans at the table side. 3D-RA provides extensive 3D visualization of anatomy and vessels in just four seconds based on one rotational angiography run and one contrast injection. Its high-resolution 3D reconstructions provide critical information about depth and the relationship of one vessel to another to support the accurate assessment of anatomy and vasculature.</p> Specifications <p>From the 3D-RA menu on the touch screen module, user can rotate, translate, and take snapshots</p>	

Line #	Description	Qty
	<p>of images. Views can be stored and recalled. User can select 3D-APC (3D Automatic Position Control) and follow stand mode.</p> <p>Other 3D-RA functions on the touch screen module:</p> <ul style="list-style-type: none"> • Start mouse mode • Segmentation (window-width/window-level control) • 3D zoom control • Recall Anterior-Posterior view 	
11	<p>FlexSpot secondary monitor</p> <p>FlexSpot secondary monitor</p> <p>Simplify control room workflow</p> <p>This option adds a second QHD (2560x1440) high resolution monitor to the primary FlexSpot workspot.</p> <p>Specifications</p> <p>2nd Display for FlexSpot enables the user to show up to 8 video sources on a single FlexSpot workspot by combining 2 high resolution displays. Keyboard and mouse control is seamless across the 2 displays, see FlexSpot.</p>	1
12	<p>Left Ventricular Analysis</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Allows quantitative quantification of left ventricular volumes • Designed for efficiency with single click functions and fast results <p>Easily obtain objective assessment of coronary artery</p> <p>To support decision making and allow quantitative assessment of anatomy during cardiac interventions, the 2D Left Ventricular Analysis option supports quantification of left ventricular volumes and local wall motion from monoplane angiographic series. It calculates the ejection fraction and local wall motion parameters in different formats. Wall contours can be easily drawn both automatically and manually.</p> <p>Specifications</p> <ul style="list-style-type: none"> • Various LV-volumes: ED, ES, Stroke Volume • Ejection Fraction • Cardiac Output • Centerline Wall Motion • Slager Wall Motion • Automated and manual calibration routines • ECG visualization facilitates image selection for analysis • Store result pages 	1
13	<p>3D-RA R.6</p> <p>3D-RA (3D Rotational Angiography) provides extensive 3D visualization of anatomy and vessels.</p> <p>Key Benefits</p> <ul style="list-style-type: none"> • Provides 3D imaging in the interventional suite to enhance decision making and guidance • Supports accurate assessment of vascular pathologies by providing high-resolution 3D reconstructions of small vessels and lesions • Enhances understanding of vascular anatomy for interventional treatment planning and to verify procedural outcome <p>Enhancing 3D functionality</p> <p>Visualizing the complex spatial relationship between critical and branching vessels often involves several sequential DSA acquisitions and radiation dose for the patient. 3D-RA (3D Rotational Angiography) provides extensive 3D visualization of anatomy and vessels based on a single</p>	1

Line #	Description	Qty
	contrast-enhanced rotational angiogram. Its high-resolution 3D reconstructions provide critical information about depth and the relationship of one vessel to another to support the accurate assessment of anatomy and vasculature.	
	With 3D-RA, complex anatomy such as aneurysms or tortuous vessel structures can be assessed in three dimensions. This enhances the chances of delineating the neck of aneurysms, for example, and its shape and relationship to adjacent arteries.	
	Combined with the unique whole body coverage of the X-ray system, specifically designed for 3D imaging, 3D-RA can cover cerebral, abdominal, and peripheral vasculature as well as other anatomy.	
	Specifications	
	Image Acquisition	
	Image acquisition is performed with the Rotational Angiography feature of the X-ray system with the flexibility to position the C-arm in either head or side (not F12) position.	
	C-arm in head position: scan range of 240 degrees with a rotation speed up to 55 degrees/sec.	
	C-arm in side position: scan range of 180 degrees with a rotation speed up to 30 degrees/sec.	
	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.	
	Workflow	
	Automated 3D-RA process from 3D acquisition to 3D Viewing,	
	3D at touch screen module (option),	
	3D Automatic Position Control (3D-APC),	
	3D Follow C-arc.	
	Calibration	
	3D-RA calibrations are performed by Philips Customer Support.	
	3D-RA calibration data are stable over at least 6 months' time.	
	Viewing	
	Real Time user interface.	
	Philips' CRM (Contrast Resolution Management) Technology.	
	Image rendering:	
	Volume/Surface Rendering,	
	MIP,	
	Endoscopy,	
	SUM (pseudo X-ray image)	
	Gradient rendering,	
	Cut-plane function,	
	Orthoviewer,	
	MPR (Multi-Planar Reformatting),	
	SpineView,	
	5 distance measurements calculated in the same volume, including "Quick measurement".	
	Volume calculation	
	Automated Vessel Analysis (AVA),	
	Computer Assisted Aneurysm Analysis (CAAA),	
	Catheter tip shape simulation,	
	Virtual stenting,	
	Annotation,	
	Interpolative Zoom	

Line #	Description	Qty
	Reconstructive Zooming Technique, Subtraction of reconstructed volumes, Automatic Voxelshift, Set grey values WW/WL, Store/Recall of user defined projections. Archiving Transfer to: Optional Hard Copy unit (DICOM Print), DICOM compatible device, 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), USB device.	
14	FD Rotational Angio Realtime 3D impressions of complex vasculature Key benefits <ul style="list-style-type: none"> • Use 3D imaging to quickly determine the projection angle for treatment in complex vascular interventions, surgery and radiotherapy • Supports assessment of vascular pathologies for diagnostic and therapeutic decisions. Revealing hidden structures <p>The complexity of interventional procedures lies in the fact that every person's pathology is unique. Visualization in three dimensions is therefore vital to aid decision making by the clinician. Rotational angiography provides real-time 3D impressions of complex vasculature and the coronary artery tree. Rotational Angio can be used to quickly determine the projection angle for treatment.</p> Specifications <p>Rotational Angio acquires multiple projections with just one contrast injection via a fast rotational scan of the region of interest. A rotational scan is possible both with the X-ray systems in the side position (ceiling mounted systems) and in the head position, providing the flexibility to perform procedures virtually from head to toe.</p> <p>C-arm in side position: Max. rotation Speed: 30 degrees/s Max. rotation Angle: 180 degrees</p> <p>C-arm in head position: Max. rotation Speed: 55 degrees/s Max. rotation Angle: 240 degrees</p> <p>Max. Frame speeds are given by the frame speed specifications of the system configuration. The very high movement 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. Rotational Angio results are available on the X-ray system. Operation of Rotational Angiography is straight forward: the procedure is selected, set up and executed virtually in a matter of seconds, supporting high patient throughput. A set of dedicated acquisition programs is available on the touch screen module and can be selected at the touch of a button. The Rotational Angio is controlled from the exposure hand- or footswitch.</p>	1
15	extension to FlexVision Pro	1

Line #	Description	Qty
	<p>Extension to Flexvision large 58 inch high resolution LCD for exam room, enabling flexible screen lay outs and full control (seamless mouse) of up to 11 external sources including third party systems.</p> <p>Key benefits</p> <ul style="list-style-type: none"> - Full control at table side of all applications with seamless mouse control or via touch screen module - Full flexibility of screen layouts (live resize, drag and drop, unlimited number) - To simplify and standardize system set-up for your FlexVision Pro, your personalized layout will come up automatically with ProcedureCards. <p>Easy tableside control</p> <p>With FlexVision Pro, user can control FlexVision and video sources on FlexVision through wireless mouse in Examination Room as well as virtual keyboard and touchpad on the touch screen module in the Examination Room. An operator can resize images and adjust the screen layout during the procedure without going into configuration.</p> <p>Specifications</p> <p>Full control at table side of all applications in the interventional lab (view and control) with a single wireless mouse or with a Touch Screen Module</p> <ul style="list-style-type: none"> • Integration: control of up to 11 external sources • Possibility to configure unlimited flexible screen layouts • Screenshots: with single click all displayed inputs can be captured • Live resize the video window and adjust the screen layout during the procedure without going into configuration • Operate all the video sources displayed on the monitor using the wireless mouse at tableside • Mouse and keyboard function on the touch screen module (TSM) to control (external) sources 	
16	<p>Wireless footswitch: mono-plane version</p> <p>One wireless footswitch in the examination room.</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Reduces clutter around the examination table • Simplifies preparation and cleanup • Streamlines workflow in the interventional suite <p>Reduce clutter and streamline workflow</p> <p>The wireless footswitch option streamlines workflow, reduces clutter, and simplifies preparation and cleanup in the interventional suite. Clinicians can use the footswitch to wirelessly control the X-ray system in the examination room, from any convenient position around the table. No sterile covers are needed with the IPX8 certified waterproof design.</p> <p>Specifications</p> <ul style="list-style-type: none"> • The mono-plane wireless footswitch is a 3 pedal version; one pedal for fluoroscopy, one for exposure and one to control the room light/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. 	1

Line #	Description	Qty
	<ul style="list-style-type: none"> • 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 has high water ingress protection standard (IPX8), it can easily be cleaned in water. <p>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.</p>	
17	<p>SmartMask Monoplane</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Simplifies roadmap procedures by overlaying fluoroscopy with a selected acquired image. • Enables roadmap procedures to manage radiation dose and contrast media by selecting an image from an acquired series as a mask image. <p>Supports navigation during interventions without the need of additional contrast media. SmartMask simplifies roadmap procedures by overlaying fluoroscopy with a selected acquired image in the Live X-ray window.</p> <p>Specifications 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.</p>	1
18	<p>DVD writer</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Store images and information on DVDs for easy sharing <p>Store images and information on DVDs for easy sharing To provide flexible storage options, a DVD writer is available with the Philips X-ray system. Procedural images and information can be stored on DVDs and used for archiving, training and presentations.</p> <p>Specifications Export and import of X-ray images and X-ray runs to DVD and/or from DVD</p>	1
19	<p>Touch Screen Module Pro</p> <p>Extension of Touch Screen Module for easy control of X-Ray images at table site</p> <p>Key benefits</p> <ul style="list-style-type: none"> - Imaging parameters can be quickly and easily adjusted at tableside - Clinical image are shown to support easy navigation. Collimate on the clinical image with one finger. Pinch, zoom, pan and flag images for processing. Position shutters and wedges by simply swiping the image on screen. - All X-ray settings can be easily adjusted to help you effectively manage patient and staff dose <p>Enhance image navigation on the touch screen module This option extends the functionality of the touch screen module, allowing live X-ray images and source images from reference monitors to be displayed on the touch screen module. Shutters and wedges can also be easily positioned with a fingertip by simply dragging them into position. A pointer is also available on screen to improve communication in and between the exam room and control room.</p> <p>Specifications</p> <ul style="list-style-type: none"> - enhance image navigation on the TSM - intuitive control of shutters and wedges by simply dragging the lines shown on top of the image 	1

Line #	Description	Qty
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- provides intuitive zooming and panning functionality (also during fluoroscopy)
- turns the touchscreen into the pointing device in order to improve communication in ER/CR: when activated the pointer is shown on corresponding monitor
!!! Note: Touchpad and Keyboard control from the TSM is NOT part of this option but 'FlexVision Pro' option.
!!! Note: Images shown on the TSM are not meant for diagnostic purposes (image is downscaled, compressed and latency during live/replay maybe higher than on the live monitor)

20 FlexVision XL HD, 3rd p MCS 1

FlexVision XL is an integrated viewing solution designed to give you full control over your viewing environment which brings High Definition viewing.
This FlexVision XL is mounted on 3rd party Monitor Ceiling Suspension.

Key benefits

- Easily access multiple, up to 8, video inputs (including third party systems) video inputs to inform decision making during procedures
- Create custom display templates to support diverse procedures
- The screen layout of the FlexVision XL HD can also be changed from the control room
- Enlarge images to reveal more details and support comfortable working positions

Diagnostic information easily made available at table side

In today's interventional setting, as you perform more complex procedures with smaller devices in complex anatomy, you rely on various types of diagnostic information to guide you. To inform decision making in the exam room, Philips offers an advanced digital workspace called FlexVision HD. You can display multiple images in a variety of custom layouts on a large, high-definition LCD screen. Zoom in and out to enhance fine details, while maintaining an overview of all information. Create custom display templates for specific procedures/physician preferences to easily support diverse procedures.

Specifications

FlexVision XL HD offers:

- Native resolution of FD20 can be displayed.
- Sharp images at full size without zoom
- High Definition display at native resolution for ultimate detail
- Up to 2k*2k image display fully integrated
- Enhanced small vessel visualization

1. DVI video composition unit.

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 Examination Room.

- The DVI video composition unit is operated from the touch screen module.
- The DVI video composition unit supports a wide variety of display formats (up to 1920x1200)
- Up to 11 external inputs are connected to the DVI video composition unit via wall connection box or boxes.

2. Medical grade, high resolution color LCD in the Examination Room

This display supports the image quality requirements for monochrome X-ray images as well as color images and replaces all displays normally delivered with the system for the Examination Room.

Main characteristics are:

- 58-inch, 8 Megapixel color LCD
- Native resolution: 3840x2160
- Brightness: Max: 700 Cd/m2 (typical) stabilized: 400 Cd/m2
- Contrast ratio: 1:4000 (typical)
- Wide viewing angle (approx. 176 degrees)
- Constant brightness stabilization control

Line #	Description	Qty
	<ul style="list-style-type: none"> - Lookup tables for gray-scale, color and DICOM transfer function - Full protective screen Ingress Protection: IP-21 <p>3. Large color LCD control (touch screen module)</p> <ul style="list-style-type: none"> • Enlarge information at any stage during the case via the touch screen module in the Examination Room or Control Room. • Select viewing lay-outs via the touch screen module in the Examination Room. • Create new layouts by matching inputs to desired locations on preset templates. • Adjust the screen layout during the procedure without going into configuration • 20 layouts; each layout is customizable, size of viewports can be customized by end user X-ray status area visible with all X-ray details <p>4. Monitor ceiling suspension</p> <p>Monitor ceiling suspension for use in the Examination Room carries the 58-inch color LCD, 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.</p> <p>5. Snapshot</p> <p>The snapshot function allows the user to store/save a screen-capture of any image on the FlexVision HD as a photo image to the current acquisition patient study.</p>	
21	<p>IW Hardware (FlexSpot)</p> <p>Hardware for the 3D interventional tools combined with FlexSpot.</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Facilitates multimodality viewing in exam room and control room • Supports DICOM compatible data from CT and MR imaging modalities • Provides real-time access to images to support fast results <p>View multimodality images in exam room and control room</p> <p>Images from a variety of sources are being increasingly used during interventions for a variety of Live Image Guidance tools. The Interventional Hardware option provides the hardware for our interventional tools that enables DICOM compatible data from other imaging modalities to be imported and viewed in the exam room and control room. To support fast results, a real-time digital image link is provided between the Interventional Hardware workstation and the X-ray system.</p> <p>Specifications</p> <p>The Interventional hardware is the hardware for the 3D interventional tools that included Real Time Link. It enables import and viewing of DICOM compatible data from other imaging modalities. The Interventional Hardware comprises at least:</p> <ul style="list-style-type: none"> • Computer Workstation • 16 GB memory • 1.5 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:</p> <p>FD Calibration Tool Kit for 3D-RA</p>	1
22	<p>XperCT Dual</p> <p>XperCT Dual allows two scans to be made on the X-ray system at a defined interval, resulting in CT-like images.</p> <p>Key benefits</p> <ul style="list-style-type: none"> • Aids in assessment of soft tissue, bone structure, and stent deployment • Fast reconstructions support fast decisions during procedures • DualPhase acquisitions allow visualization of arterial and post-arterial contrast enhanced images to support oncology interventions 	1

Line #	Description	Qty
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Supports assessment of soft tissue, bone structure, and stent deployment

One of the challenges during interventional procedures is to treat the region of interest without affecting healthy tissue or organs. XperCT Dual is a version of XperCT, which allows two scans to be made on the X-ray system at a defined interval, providing high resolution, high contrast images within seconds. Physicians can use the CT-like images of XperCT Dual to assess soft tissue, bone structure, and stent deployment before, during, and after interventions. This aids in avoiding structures and identifying feeder vessels.

Specifications

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 touch screen module.

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 8 second acquisition times for the X-ray system, 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. BMI Noise Reduction is included to reduce the noise caused by large size patients (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 touch screen module and the mouse at tableside.

The XperCT volume can be matched with (when additional options are available) 3D-RA (3D Rotational Angiography) 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 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

Line #	Description	Qty
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- 3D automatic position control at tableside: When an working position is selected from the XperCT volume the C-arc steers itself to the selected position
 - 3D Follow C-arc at tableside
 - 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 exported to:
- Any optional DICOM compatible device (e.g. PACS/Printer), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
 - 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 device.

23	Mark 7 Arterion, Table Mount	1
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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

Line #	Description	Qty
	<ul style="list-style-type: none"> • 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 	
24	Maquet Hybrid OR Table Column	1
	Hybrid OR Table Column, surface-mounted with installation	
25	Maquet Hybrid CV F2 Package	1
	Transporter	
	Carbon-fibre F2 table top,long Bolus,US	
	Accessory adaptor	
	MAGNUS Joystick, EU	
	Bendable head rest,360° Radiotranslucent	
	IR Hand Control Magnus	
	Mobile Charging Unit for IR Hand Control	
	Side rail extension	
	Retrofit kit into EU-Side Rail	
26	Maquet Surgery Package	1
	2 Pad Assembly, Armboard, Softpad, 3"	
	Body strap, length 2200 mm	
	Transporter	
	Basis Table Top,Individual Configuration	
	Back Plate	
	Extension Plate	
	Cable-Connected Hand Control	
	Dual-Joint Head Rest	

Line #	Description	Qty
	Universal elongation plate USA	
	Motor Driven Joint Module - Back Section	
	2 Armboard, Snaplock, Trigger Release	
27	Black Anti-fatigue Floor Mat w/logo.	1
	Black Anti-fatigue Floor Mat with Philips Logo	
	36" x 60"	
28	IXR Additional Training 24 Hours OnSite	1
	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.	
29	XperCT OnSite Clin Ed	1
	Clinical Education Program for XperCT	
	CV XperCT Handover OnSite Education:	
	Philips Education Specialists will provide eight (08) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Site must be patient-ready. Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.	
	Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref# 335-100615	
	This training is provided only with the purchase of XperCT. If the option is not ordered, training will not be provided.	
30	CV 3DRA OnSite Educ 16h	1
	Clinical Education Program for 3DRA	
	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	
	This training requires the purchase of 3DRA.	
31	CORE Revolution Option	1
	CORE Revolution Option	
	Includes SpinVision PIMr and PIM Cable	
32	Volcano CORE IVUS - Cardiac Bundle	1

Line #	Description	Qty
	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	
	iFR Hyperemia-Free Lesion Assessment Modality CORE Interface, Operator's Manual. Customer agrees that use of the iFR Application Software License Application with interface to CORE 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	
	CORE Control Pad	
	Bedside touchscreen controller offering system control from the sterile field	
33	SyncVision	1
	SyncVision IVUS Co-registration System	
	SyncVision IVUS and IFR Co-registration System	
	SyncVision Workstation CPU, Power Supply, Isolation Transformer Medical Grade, Joystick Controller, Optical USB Mouse and Keyboard, LCD Monitor 19" Philips, Cable Kit, SyncVision System Operator's Guide.	
	End User License Agreement	
	Customer agrees that use of the SyncVision software is subject to the terms of the End User License Agreement, as it may be updated by VOLCANO from the time to time ("EULA"). A copy of the EULA is also available online at www.volcanocorp.com/products/pdf-files/end-user.pdf . The terms of the EULA are incorporated herein by reference.	
	Three (3) Year Software Support Agreement	
	Customer agrees that the initial term of the Software Support Agreement (SSA) is three (3) years, which term shall automatically commence upon installation of SyncVision, This three-year term may be extended upon mutual agreement of the parties and is subject to earlier termination as provided in the SSA. The SSA provides for unspecified updates to the SyncVision software released during the Term of the SSA at no additional cost (should any be commercially released). In the absence of an SSA, future Updates will be made available at additional cost to be determined by VOLCANO). A copy of of the SSA is available from your Volcano Sales Representative on online at www.volcanocorp.com/products/pdf-files/software-support.pdf . The terms of the SSA are incorporated herein by reference.	