ANEXA nr.1

1: Philips Azurion 7 B20
2: Philips Hemo system with IntelliVue X3
3: Injector angio de presiune înaltă Medrad Mark 7 Arterion
4: 5 zile training on site
5: 36 luni garantie
6: Instalarea echipamentului nou, deinstalarea și instalarea echipamentului vechi.

Pos.	Qty.	Description	Included	
1	1	Azurion 7 B20/15 LN	●	
2	1	FlexVision XL HD + 2 LCD's	●	
3	1	Addl LCD Control Room	●	
4	1	addl 27'' LCD Exam Room	●	
5	1	Examination light	●	
6	1	Vascular/Neuro/Onco Essential.	●	
7	1	Vascular Advanced	●	
8	1	Neuro Advanced.	●	
9	1	XperGuide	●	
10	1	IW Hardware	●	
11	1	FD Rotational Angio	●	
12	1	Subtracted Bolus Chase	●	
13	1	Bolus Chase Reconstruction	●	
14	1	SmartMask Biplane	●	
15	1	Intercom	●	
16	1	Swivel for table base.	●	

17	1	Peripheral X-ray filter	●
18	1	Table top brake kit	●
19	1	Arm support	●
20	1	set of elbow supports	●
21	1	Table mounted radiation shield	●
22	1	Dicom Print compose	●
23	1	DVD writer	●
24	1	Quantitative Vascular Analysis	●
25	4	Isolated Wall Connection Box	●
26	1	CS universal cable carrier	●
27	1	TERMINAL BLOCK (WKN70)	●
28	5	Cabinet Rear Cover	●
29	1	Floorplate Swivel Xper Table	●
30	1	Floorplate for C-stand	●
31	1	Clip rails for Larc (430cm)	●
32	1	Clip rails for MCC (390cm)	●
33	1	MONITOR CEILING CARRIAGE	●
34	1	Cable Management Cabinet	●
1	*1*	*optional ref biplane*	●
2	*1*	*extension to FlexVision Pro*	●
3	*1*	*Single Phase UPS*	●
4	*1*	*Radiation shield*	●

5	*1*	*Physio Viewing*	●
6	*1*	*CO2 VIEW TRACE*	●
7	*1*	*FD Dual Fluoro biplane*	●
8	*1*	*DAP meter biplane*	●
9	*1*	*Wireless footswitch: bi-plane version*	●
10	*1*	*2nd touch screen module*	●
11	*1*	*control module (CR)*	●
12	*1*	*Full system APC*	●
13	*1*	*Xper Flex Cardio on TSM*	●
14	*1*	*Neuro Wedge*	●
15	*1*	*Neuro Head Holder*	●

1 OFFER DESCRIPTION

Chapter 1:
722226 Azurion 7 B20

Pos.	Qty.	Description
1	1	**Azurion 7 B20/15 LN** **Art.Nr: NCVD266** Advanced solution for performing interventions in the neurology domain and complex cardio-vascular interventions Key benefits • The unique ceiling mounted lateral double arc provides full projection flexibility • Optimized utilization of your lab by procedure based workflow • Superb image quality to evaluate small details and vessels with clarity • Intuitive user interaction delivering an easy to use, easy to learn system A vision for innovative neuro interventions With our Live Image Guidance we aim to remove barriers to safer, effective and reproducible treatments, delivering relevant 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 B20/15 LN system is designed to enhance your treatment capabilities and support more effective device guidance and placement in neurology interventions. Additionally, can also be used in cardio/cardio-vascular interventions. This future proof solution is designed around a single, standardized hardware and software platform that can be upgraded and expanded as new needs arise or requirements change. 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 more procedures for more patients, more consistently and efficiently with great ease of use. The Philips Azurion 7 B20/15 LN 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 Card to help safeguard the consistency of interventional procedures and help to minimize preparation errors. The Philips Azurion 7 B20/15 LN 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.

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.

Specifications

The Azurion 7 B20/15 biplane cardiovascular system comprises a floor-mounted C-arm stand, a ceiling suspended double C-arm stand and digital imaging X-ray system for cardiovascular diagnostic and interventional procedures.

The Azurion 7 B20/15 system is an integrated single-host concept. The system comprises five functional building blocks:

1. Geometry

2. X-ray Generation

3. Image Detection

4. User Interface

5. Viewing

1. Geometry

The geometry segment offers full cardiovascular projection possibility.

It includes:

Frontal stand

A motorized frontal floor-mounted -stand.

A rotatable base plate (motorized and manually operated) enables a clear area around the patient table. All stand movements are motorized. The manual and motorized parking movement consists of floor-mounted rotation. Angulation and Rotation of the C-arm is also motorized at high speeds.

Parking of the stand can be done both manual and motorized, over the full range. With electronic auto stop positions. This motorized movement makes positioning in the iso-center easy and accurate. It also features comfortable, single operator control of stand parking. The Azurion stand allows a very wide range of projections, including PA and AP imaging.

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

C-arm rotation range (degrees): 120 LAO to 185 RAO

C-arm angulation range (degrees): 90 CA to 90 CR

(Full angulation capability determined by patient position)

In the side position (185 CR 120 CA degrees position, L-arm perpendicular to patient

table):

The depth of the C arm is 90 cm

The stand provides fully motorized fast movements with variable and configurable maximum speed. Coupled to the BodyGuard detection system, it allows a very high patient throughput, supporting the busiest schedules.

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

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

The variable source image distance between focus and Dynamic

Flat Detector input screen is 89.5 to 119.5 cm

Lateral stand

A motorized lateral ceiling suspended double C-arc stand.

It allows longitudinal manual and motorized movement on ceiling rails for convenient parking.

Operation is safe and secure due to collision protections on X-ray tube, Flat Detector and inside the double C-arc.

The double C-arc enables:

- motor-driven rotation from frontal to left oblique projections of maximum 90 degrees

- motor-driven angulation in the cranial or caudal direction of maximum 45 degrees

The double C-arc allows these angulations at any rotation

manual- or motor-driven axial movement of the Flat Detector

assembly for adjusting the patient/flat detector input screen

distance focus/flat detector input screen distance 87.5-130.3 cm.

The speed of the motorized angulation/rotation movement is 8 degrees/sec whenever the double C-arc is out of its parking position.

Parking of the lateral C-arc stand can be done both manually and motorized, over the full range, with electronic auto stop positions.

Using this motorized movement makes positioning in the isocenter easy and accurate. It also features comfortable, single operator control of stand parking.

The motorized longitudinal movement is max 12 cm/sec over max 315cm.

Patient support

The Standard Table provides feather-light manual float movement, even for heavy patients, thanks to the unique mono-bearing technology. The long flat carbon fiber tabletop provides ample space to place e.g. catheters and guidewires.

It comprises:

- Table top length of 319 cm including OR rails (316 cm excluding OR rails), width of 50 cm

- Metal-free overhang 125 cm

- Floating table-top movement of 120 cm longitudinal and 2 x 18 cm transversal

- Motorized height adjustment from 74 - 102 cm

- Maximum patient weight 250 kg plus 500 N in any longitudinal position of the table top

Table accessory set includes:

- 3 rail accessory clamps.

- A patient mattress. A slow recovery foam mattress with a density of 58 kg/m3. The mattress has a thickness of 5 cm and adapts to the body shape of the patient. It makes the pressure being divided equally and it recovers when the patient is taken off the mattress. The light blue cover is easy to clean. Patients are more relaxed due to the comfort of this mattress, supporting long interventional procedures.

- Drip-stand.

- Set of cable holders.

- Patient straps

2. X-ray Generation

The Azurion 7 B20/15 comprises an integrated dedicated X-ray system, micro-processor controlled Certeray CFD 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.

For each plane, the Certeray CFD 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: 2.5 kW for 0.25 hours, 1.5 kW for 8 hours

- Program selection

- pulsed X-ray up to 3.75 , 7.5 , 15 , 30, 60(optional) frames/s for digital dynamic exposures

- pulsed X-ray for pulsed fluoroscopy (30 | 15 | 7.5 | 3.75 | 1.875 | 1.0 | 0.5 img/s (non Clarity settings))

- minimum exposure time of 2 ms

- automatic kV and mA control for optimal image quality prior to run to save dose

- optimal X-ray tube load incorporated in the Certeray CFD generator

The Azurion 7 B20/15 includes a Maximus ROTALIX Ceramic tube assembly MRC200+ GS 0407 and cooling unit CU 3101 for cardiovascular systems for frontal plane and for the lateral plane a Maximus ROTALIX Ceramic tube assembly MRC200+ GS 05 08 and cooling unit CU 3101 for cardiovascular systems

The X-ray tube MRC200+ GS 04 07 assembly comprising:

- 0.4/0.7 mm nominal focal spot values maximal 30 and 65 kW short time load

- grid switching at pulsed fluoroscopy

- continuous load ability: 4000 W (at 21 degrees C room temp.)

- application of SpectraBeam dose management

- tube housing ROT 1001 for oil-cooled X-ray tube with thermal safety switch

- cooling unit CU 3000 heat exchanger for use in oil-cooled X-ray tube systems

- high voltage cables

The X-ray tube MRC200+ GS 05 08 assembly comprising:

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

- grid switching at pulsed fluoroscopy

- continuous load ability: 4000 W (at 21 degrees C room temp.)

- application of SpectraBeam dose management

- tube housing ROT 1001 for oil-cooled X-ray tube with thermal safety switch

- cooling unit CU 3000 heat exchanger for use in oil-cooled X-ray tube systems

- high voltage cables

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DoseWise program

Philips DoseWise program is a set of techniques, programs and practices built into the Azurion 7 B20/15 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.

System intrinsic

- optimized 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 optimize image quality and dose efficiency with MRC-GS 0508 X-ray tubes

- pre-filters of 0.2, 0.5 and 1.0 mm CU equivalent can be applied for each plane

- automatic cardiac wedge positioning

- anti-scatter grid, ratio 13:1 in each plane

User selections

- three programmable fluoroscopy modes can be selected from the Imaging UI Each mode has a different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, adaptive harmonization)

- X-ray depth collimator with single semi-transparent wedge filter with manual and automatic positioning.

- Beam Shaping, which means that both shutters and wedges can be positioned on the Last image Hold without the need for X-ray radiation.

- Fluoro Storage, a grab function allows storage and archiving of both a fluoro image or the last 20 seconds (service configurable time) of fluoroscopy run. These images or runs can be archived and reviewed as a regular run.

- removable anti-scatter grids to lower x-ray dose for pediatrics.

User awareness

Radiation Dose Structured Report for 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 analysis, to further reduce X-ray dose.

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

- A graphical bar and numeric displays the actual dose rate (during x-ray) or predictive dose rate (at no radiation)

- Second graphical bar and numeric 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.

3. Image Detection

The Azurion 7 B20/15 comprises the following image detection chain for frontal plane and

Frontal imaging chain:

- 30 x 40 cm (11.6 x 16 inch) (48 cm / 18.9 inch diagonal) 8- mode 20” Dynamic Flat Detector subsystem for fluoroscopy and fluorography procedures

- 8 imaging modes are available, 6”/7”/8”/10.5”/13”/14.4”/17”/19”

- The flat detector subsystem features Access, the detector can be rotated over 90 degrees, it moves from portrait to landscape back and forth

- The digital output of the 20” flat detector is 2480*1920 image matrix at 16 bits depth for the largest mode

- DQE (Detective Quantum Efficiency) >77 % providing high conversion of X-ray into a digital image, while maintaining a high MTF

- The pixel pitch is 154 x 154 microns

Lateral plane:

- A 26 x 33 cm (10 x 13 in.) diagonal 7 mode Dynamic Flat Detector subsystem for fluoroscopy and cine-fluorography.

- A 6”/7”/8”/10.5”/13”/14.4”/15.2” mode Dynamic Flat Detector

- The digital output of the Flat detector is max 1560 x 1440 matrix at 16 bit depth.

- The pixel pitch is 184 micron by 184 micron

- The DQE(0) is 70%, providing high conversion of X-ray into a digital image, while maintaining a high MTF.

Top performance is achieved by a Dedicated Image Pipeline Processor that has an equivalent capability of more than 8000 MIPS and is designed for video speed image processing.

It includes:

- adaptive contour enhancement at 9 x 9 kernel

- adaptive harmonization enhancement at 192 x 192 kernel

- Xres is an award-winning image processing algorithm. Xres is a multiresolution spatial temporal noise reduction and edge enhancement filter. It exploits the full benefits of the digital detector to enhance sharpness and contrast and to reduce noise in the clinical images.

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The Azurion 7 B20/15 has a storage capacity of 100,000 images at matrix size of 1024 x 1024, 10 bit for each plane. A maximum number of examinations is 999, with no limit to the maximum number of images per examination.

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, depending on configuration, at the bottom of the live and reference monitors or on the left side of the FlexVision monitor 58-inch 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 and cumulated dose

- Dose Area Product: cumulated dose

-Graphical bars for Body Zone specific 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. Optionally, it is possible to connect in parallel up to three touch screen modules on the system. The touch screen module has a touch screen, which can be operated when covered with sterile covers. The touch screen module includes multi-modality function that allows control of (depending on configuration):

- Compatible other equipment (e.g. IntraSight, CX50, Interventional Tools, EchoNav, DoseAware, Philips Hemo system)

- Monitor layout (Flexvision, switchable monitors)

- X-Ray settings (Collimation)

- Geometry (Projections and Table)

- Viewing (Series selection and image Processing)

- Quantitative Analysis (optional) - User can start QA from the touch screen module

Viewpad

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

- Series and image selection

- Study cycle

- Study overview

- Store to Reference image file

- Copy image to photo file

- 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

Control modules.

The geometry control module can be positioned at three sides of the patient table, while keeping the button operation intuitively logical. The control module biplane provides the following functionality:

- Tabletop float

- Table height position

- Table tilt angle if function is applicable

- Source Image Distance selection

- Gantry positioning (both frontal and lateral)

- Gantry rotation in an axis perpendicular to the floor (both frontal and lateral)

- 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)

The imaging control module can also be positioned at three sides of the patient table. It provides the following functionality:

- Fluoroscopy Flavor selection defined per setting

- Shutters and Wedge positioning (for both frontal and lateral plane)

- Manual or automatic semi-transparent wedge filter

- 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.

User Interface in Control Room

With Philips Azurion the control room comprises of a review module, an acquisition monitor, and a review monitor. The acquisition and review functions are controlled by a single keyboard and mouse.

The review module offers the basic functions for reviewing images on the acquisition monitor. 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 series cycle

- File, Series, and Image stepping

- Series and file overview

- Reset fluoroscopy buzzer

- Enable/disable X-ray

- Disable Geometry movements

The acquisition monitor is intended to follow live case in the ER. The live images for the frontal and lateral channels are always synchronized and displayed side by side on one monitor. System information is displayed on the bottom of the monitor:

- Stopwatch and Time

- System guidance information

- Dose Area Product (DAP), Cumulative Skin Dose, Skin Dose rate as well as graphical bars for Body Zone specific accumulated skin dose levels

- 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

Patient Administration

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 photo 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 with Checklists and Protocols is intended to make hard copies of the protocol instructions redundant.

Acquisition

The acquisition page contains information on the currently selected patient and allows control of the acquisition settings.

Reviewing

The review page allows for reviewing of patients:

- Previous examination cases

- Review of other DICOM XA or DICOM SC studies.

Archiving

Clinical cases 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.

The review monitor is a 24-inch color TFT-LCD medical grade monitor.

The Review monitor can be used while acquisition is being performed in the examination room and has the following features and possibilities:

- Step through file, series, or images

- File, and series overview

- Contrast, brightness, and edge enhancement settings

- Flagging of series or images for transfer

- 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 instruction for use can also be ordered at no additional cost.

5. Viewing

Viewing in the Examination room

The Azurion 7 B20/15 system comes in a default configuration with two 27-inch color medical grade LCD monitors for clinical image display in the Examination room. These LCD monitors are intended for viewing in the examination room and are designed for medical applications. One of the monitors is used for viewing of frontal and lateral live images. The other monitor serves as the frontal and lateral reference displays. Selection and storing of live to reference monitors are controlled by the infra-red remote-control Viewpad. Depending on the selection of further examination room monitor options the quantity of monitors and display sizes might change.

Examination Room monitors

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 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 500 Cd/m2, default 400 Cd/m2)

- Push buttons for control functions on front

- User programmable and standard reference setting

- On Screen Display

- Internal selectable lookup table for gray-scale transfer function

- Internal power supply (100-240 VAC)

- Integrated LCD projection screen

Unless otherwise stated a flat monitor ceiling suspension for 2 widescreen monitors (2F MCS) is included. MCS includes motorized Height adjustment. The Ceiling suspension allows flexible monitor Positioning over a range of about 360 x 300 cm.

B. Viewing in Control room

The Azurion 7 B20/15 system control room set-up includes as a default configuration two

24" high brightness color LCD monitors. The color monitors are for acquisition and reviewing display. The quantity of monitors and size of the displays might change in case further control room monitor options are selected.

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)

• 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

DICOM compatibility

The Azurion 7 B20/15 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 configured by 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 10-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.

Security

The Philips Azurion system runs on the Windows 10 Operating system and offers features such as OS Hardening, AppLocker, & BitLocker functionality

Remote service

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

Azurion 7 B20 is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)
Language=English

2 1 **FlexVision XL HD + 2 LCD's**

Art.Nr: NCVD032

FlexVision XL HD is an integrated viewing solution designed to give you full control over your viewing environment which brings High Definition viewing.
This FlexVision XL HD is delivered with two 27 inch high brightness color medical grade LCD monitors. The monitors can be mounted on top side or on rear side of the MCS.

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
- Lookup tables for gray-scale, color and DICOM transfer function
- Full protective screen Ingress Protection: IP-21

3. Large color LCD control (touch screen module)
• 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

4. Monitor ceiling suspension
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.

5. Snapshot
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.

3 1 **Addl LCD Control Room**

Art.Nr: FCV0806

Additional 24 inch high brightness color LCD monitor.

Key benefits
• Enhance visibility for a variety of procedures

Get a wider view of the situation
Mix and match the widescreen monitors to make efficient use of your lab space. Each monitor can be connected to different sources so you can see just what you need for different phases and types of procedures. The high definition color widescreen monitors enhance the visibility of fine details and vital signs.

Specifications
The main characteristics for the color monitor are:
- 24 inch color TFT-LCD display
- Native format 1920x1080 Full HD
- High brightness (max 400 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

4 1 **addl 27'' LCD Exam Room**

Art.Nr: FCV0809

Additional 27 inch high brightness color medical grade LCD monitor.

Key benefits
• Enhance visibility for a variety of procedures

Get a wider view of the situation
Mix and match the widescreen monitors to make efficient use of your lab space. Each monitor can display input from different sources so you can see just what you need for different phases and types of procedures. The high definition color widescreen monitors enhance the visibility of fine details and vital signs.

Specifications
This LCD monitor is intended for viewing in the Examination Room and is designed for medical applications.

The main characteristics are:
- 27 inch high brightness color TFT-LCD display
- Native format 1920x1080 Full HD
- Two DVI inputs to display one or two channels (dual view)
- 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 projection screen

5 1 **Examination light**

Art.Nr: NCVA052

• Provides high intensity illumination of treatment area
• Handgrip can be sterilized and used with a disposable cover

Enhance illumination of treatment area
During cardio vascular and neuro vascular procedures, a bright light is sometimes used to better distinguish pathology. The exam light is designed to provide high intensity illumination at 70,000 Lux of the entire treatment area. Its handgrip allows the light beam to be easily positioned and focused. The handgrip can be removed for sterilization and used with a disposable cover.

6 1 **Vascular/Neuro/Onco Essential.**

Art.Nr: NCVC855

This bundle provides the essential tools needed for interventional vascular, neuro and onco procedures.
Understanding the vascular anatomy is crucial for interventional treatment planning and to verify procedural outcome.
3D vascular imaging with SmartCT Angio visualizes complex vasculatures, giving insights

into branching vessels, and reduces the need for sequential DSA acquisitions.
SmartCT Roadmap provides a full 3D view overlaid on live fluoroscopy to improve navigation support of guide wires, catheters and other devices through complex vascular structures.
All functionality is controllable from tableside on the touch screen module allowing full focus on the patient and reducing unnecessary sterility breaks.

SmartCT Angio
SmartCT Angio offers a 3D Rotational Angiography (3D RA) acquisition technique augmented with step-by-step guidance, advanced 3D visualization and measurement tools all accessible on the touch screen module at table side. To support you perform a fast and first-time-right* 3D-RA acquisition and streamline your workflow, you are guided though 4 key steps.
1- Room setup
2- Proper 3D protocol with corresponding suggested injection protocol (when applicable)
3- Collision free Zero dose table iso-centering
4- When to press and release the acquisition button

Once the 3D rotational scan is successfully performed, the acquired 3D image is automatically displayed in the SmartCT 3D visualization tools with the adequate rendering settings and the 3D measurement tools tailored for the selected 3D protocol.

Key Benefits
• 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 procedural outcome verification.

Enhancing 3D functionality
Visualizing the complex spatial relationship between critical and branching vessels often involves several sequential 2D (DSA) acquisitions and radiation dose for the patient. SmartCT Angio offers a 3D-RA (3D Rotational Angiography) acquisition protocol that provides extensive 3D visualization of anatomy and vessels based on a single 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 SmartCT Angio, complex anatomy such as aneurysms, complex anatomy, 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. It also enhances the assessment of complex congenital heart disease anatomy and its relationship to adjacent structures.

Combined with the unique whole body coverage of the X-ray system, specifically designed for 3D imaging, SmartCT Angio can cover cerebral, abdominal, cardiac, and peripheral vasculature as well as other anatomy.

Specifications
4 step Guidance.

1. Room setup
2. Proper 3D protocol with corresponding suggestion of injection protocol (when applicable)
3. Collision free Zero dose table iso-centering

4. When to press and release the acquisition button

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) 125 images are reconstructed into a 3-dimensional model within seconds. Additional reconstructions, using the Reconstructive Zooming Technique, can be performed as well.

Workflow
Step by step acquisition guidance
Automated 3D-RA process from 3D acquisition to 3D Viewing,
3D at touch screen module,
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,
Average
Gradient rendering,
MPR (Multi-Planar Reformatting),
unlimited distance measurements calculated in the same volume, including "Quick measurement".
Volume calculation
Lesion segmentation,
Annotation,
Reconstructive Zooming Technique,
Subtraction of reconstructed volumes,
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.

*Evaluated with clinical users in a simulated lab environment with a total of 17 teams consisting of a physician and a radio-tech, with different levels of experience

SmartCT Roadmap
SmartCT Roadmap facilitates complex interventions by providing live 3D image guidance that can be segmented to emphasize the targeted vessel and lesions, supporting fast and accurate treatment planning. All controlled via the touch screen module at the table. The SmartCT Roadmap overlays a 3D reconstruction of the vessel tree, acquired with a SmartCT 3D acquisition mode (3D RA or CBCT) on your interventional X-ray system, with live fluoro images. Previous projection positions, including the gantry position, table position and field of view, can be easily recalled at the press of a button on the touch screen module to save time. To enhance visibility for different guidewires and anatomy, you can choose your preferred 3D rendering mode, adapt its transparency and contrast, and display the vessel path, segmentation, markings and measurements of the 3D volume on the SmartCT Roadmap.

Key benefits
• Provides full 3D view to enhance navigation of guide wire, catheter, or other devices through complex vascular structures
• Helps to overcome the limitations of 2D roadmaps in visualizing overlapping vessels
• Offers a high level of precision thanks to real-time compensation for gantry, table, and small patient movements
• Accessible via the touch screen module to enhance efficiency during procedures
• Perform a 3D-RA scan without leaving the exam room

Live 3D image guidance
Diagnosing and treating vascular diseases without a clear picture of the relationships between overlapping vessels is a daily challenge for interventionists. SmartCT Roadmap was developed to overcome the inherent limitations of 2D versus 3D in visualizing overlapping vessels and therefore eliminate the need to perform multiple 2D(DSA) runs. 3D Roadmap provides a 3D real-time roadmap that overcomes this challenge by providing dynamic 3D guidance for navigating through vascular structures anywhere in the body.

Specifications
SmartCT Roadmap is based on the visualization of the vessel tree from a SmartCT 3D acquisitions (3D RA, CBCT) activated with one touch of a button on the touch screen module at tableside.

Viewing:
Table side control: bidirectional link between the X-ray system and 3D Roadmap,
3D Automatic Position Control,
3D Follow C-arc,
The 3D roadmap provides the freedom to change:
The angulation of the C-arc,
The rotation of the C-arc,
The Field of View,
The Source to Image Distance,
Landmarking,
Overlay opacity,
WW/WL settings,
Store and review runs,
Store snapshots and movies. Transfer/ export 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.

SmartCT Vessel Analysis
SmartCT Vessel Analysis allows easy inspection of the vessel and device positioning with straightened, curved and cross-section reformats to support treatment planning. The curved MPR view allows you to see the whole vessel segment on one plane. The straightened reformat view of the vessel segment, where the curvature is extracted from the vessel, while preserving the longitudinal and angular position, contains a graph showing the vessel diameter along the segment. The straightened cross-section view displays an indication of the minimum and maximum diameters at the pointer location as you move it over the curved, reformat or straightened reformat view. You can choose your preferred rendering to enhance visibility of guidewires and the stretched vessel view allows you to measure the diameter of the vessel/lumen and the length of the segment/stenosis at three locations. Ring landmarks can be used to mark feeder vessels to aid navigation.

SmartCT is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

7 1 **Vascular Advanced**

Art.Nr: NCVC691

The vascular advanced bundle contains VesselNavigator which provides an intuitive and continuous 3D roadmap to guide you through vasculature during the entire procedure by reusing the 3D vascular anatomical information from existing CTA and MRA datasets.

VesselNavigator
VesselNavigator allows reuse of 3D vascular anatomical information from existing CTA and MRA datasets as a 3D roadmap overlay on a live X-ray image.

Key benefits
• Supports navigation through complex vessel structures
• Reusing a pre-acquired CTA or MRA reduces the need for contrast enhanced runs
• Philips CTA Image Fusion Guidance may lead to shorter procedure times
• Intuitive and easy to use by providing step-by-step workflow guidance

Reduce your need for contrast medium
When delicately navigating a guidewire or inserting a stent in challenging endovasculature, seeing the full perspective of anatomy is crucial. Using X-ray and contrast medium efficiently is also very important, especially for vulnerable patients. VesselNavigator allows reuse of 3D vascular anatomical information from existing CTA and MRA datasets as a 3D roadmap overlay on a live X-ray image. With its excellent visualization, VesselNavigator provides an intuitive and continuous 3D roadmap to guide you through vasculature during the entire procedure. This reduces the need for a contrast enhanced run to create a conventional roadmap.

Unlike 2D angiography images which can be limited by vessel super positioning or foreshortening, VesselNavigator provides three dimensional views of vasculature that allow you to easily define the right projection angle2 for navigation and stent placement. With the use of ring markers you can easily indicate the ostia and landing zones.

Specifications
The essential components of VesselNavigator are:
• 3D roadmap navigation with a personalized visualization of a CT or MR overlay of the

selected vasculature on live fluoro.
• Both 2D and 3D registration for CT or MR image fusion, allowing to choose the registration method for the user's workflow
• Easy, intuitive four step workflow, with one click vessel segmentation
• Ring markers to easily indicate the ostia and landing zones.

VesselNavigator provides the following functions:
• One click vessel segmentation
• 3D landmarks
• Plan angles
• 2D registration
• 3D registration
• Live image guidance; Real-time overlay of the 3D Vessel segmentation on the live 2D X-ray images from the Philips Azurion X-ray system of the same anatomy
• Table tracking
• Table side control

VesselNavigator movies and snapshots can be stored/archived on:
• A PACS systems as DICOM Secondary Capture images or movies.
• USB removable memory device.
• One or multiple DVD's, CD-ROM(s) for easy archiving.
• Hard copy via the (DICOM Print) protocol.

VesselNavigator is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

8 1 **Neuro Advanced.**

Art.Nr: NCVC857

The Neuro Advanced bundle provides the ability to perform 3D soft-tissue Cone-Beam CT (CBCT) imaging right in the neuro suite before and during procedures as well as during post procedural follow-up sessions to aid in the assessment of soft tissue, bone structure, and device deployment.
In the context of stroke treatment, Non-contrast enhanced CBCT of SmartCT Soft Tissue can help in the detection of early ischemic changes and identification of bleedings. Intravenous contrast enhanced CBCT can help to identify the proximal occlusion and supports detection of collaterals. Also, in elective settings Non-contrast enhanced CBCT can be used to depict peri procedural hemorrhagic complications.
SmartCT Vaso our highest resolution CBCT protocol, provides 3D imaging that reveals key information about cerebral vascular structures to support the spatial assessment of vessels in the soft tissue context. It subsequently enhances visualization of endovascular devices (stents, flow diverters, coils, intrasaccular devices) and vessel morphology down to perforator level.

SmartCT Soft Tissue
SmartCT Soft Tissue offers a Cone Beam CT (CBCT) acquisition technique augmented with step-by-step guidance, Advanced 3D visualization and measurement tools all accessible on the touch screen module at table side. To support you perform a fast and first-time-right* CBCT image and streamline your workflow, you are guided though 4 key steps.

1. Room setup
2. Proper 3D protocol with corresponding suggested injection protocol (when applicable)
3. Visual feedback on field of view for a collision free table iso-centering with the possibility to use a required image for zero-dose iso-centering.

4. Visual support on when to press and release the acquisition button.

Once the CBCT scan is successfully performed, the acquired 3D image is automatically displayed in the SmartCT 3D visualization tool with the adequate rendering settings and the 3D measurement tools tailored for the selected 3D protocol.

Key benefits
• Aids in assessment of soft tissue, bone structure, contrast filled vessels and stent deployment
• Fast reconstructions support fast decisions during procedures
• Dual Phase acquisitions allow visualization of arterial and post-arterial contrast enhanced images to support the visualization of the vasculature of interest and the enhancing tissue .

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 surrounding healthy tissue. SmartCT Soft Tissue provides high resolution, high contrast images within seconds. Physicians can use the CBCT images to assess soft tissue, bone structure, contrast filled vessels and stent deployment before, during, and after interventions.

Specifications
SmartCT Soft Tissue protocols are available for brain, thoracic, abdominal, and pelvic imaging to support the treatment of patients with vascular diseases, cancer, or trauma. Furthermore, 3D brain imaging in stroke patients enables the detection of early ischemic changes and identification of bleedings. All protocols can be selected at the tableside via the touch screen module.

With SmartCT Soft Tissue offers:
• up to 60 frames/sec. (frame rate extension to 60 frames/sec is included)
• fast abdominal protocols with 5 to 8 second acquisition times for the X-ray system, thereby minimizing respiratory artifacts.
• Automatic display of the CBCT volume within 8 to 15 seconds after acquisition. No user interaction is required.

SmartCT Soft Tissue offers the possibility to acquire a CBCT using open trajectory with start and stop positions of +55° to -185° respectively. This protocol opens the arc to the left side of the patient allowing for a wider translation of the angiographic table towards this direction; thereby shifting the isocenter of the C-arm to the right lateral side of the patient. This enables visualizing off-centered regions of interest (such as the periphery of the liver) in a single sweep.

The Dual Phase dual view functionality provided by XperCT Dual 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, it is possible to segment multiple lesions at the same time in the viewed datasets.

The CBCT volume can be viewed in the control room and in the examination room on both the FlexVision and the touch screen module. 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 0.125 mm
• Unlimited distance measurements calculated in the same volume, including "Quick measurement" feature
• 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
• Can be controlled via the touch screen module and the mouse at tableside.

The CBCT 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 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 CBCT 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
• 3D automatic position control at tableside: When a working position is selected from the CBCT volume the C-arc steers itself to the selected position
• 3D Follow C-arc at tableside
• CBCT data and 3D-RA with Dual View (provided by 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.

CBCT 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.

*Evaluated with clinical users in a simulated lab environment with a total of 17 teams consisting of a physician and a radio-tech, with different levels of experience

SmartCT Vessel Analysis
SmartCT Vessel Analysis allows easy inspection of the vessel and device positioning with straightened, curved and cross-section reformats to support treatment planning. The curved MPR view allows you to see the whole vessel segment on one plane. The straightened reformat view of the vessel segment, where the curvature is extracted from the vessel, while preserving the longitudinal and angular position, contains a graph showing the vessel diameter along the segment. The straightened cross-section view displays an indication of the minimum and maximum diameters at the pointer location as you move it over the curved, reformat or straightened reformat view. You can choose your preferred rendering to enhance visibility of guidewires and the stretched vessel view allows you to measure the diameter of the vessel/lumen and the length of the segment/stenosis at three locations. Ring landmarks can be used to mark feeder vessels to aid navigation.

SmartCT Artifact Reduction
SmartCT Artifact Reduction offers the possibility to reduce the artifacts caused by metal presence in the vicinity of the region of interest.
When abdominal CBCT runs are selected a Body Mass Index noise reduction is offered..

SmartCT Vaso
SmartCT Vaso offers a high resolution CBCT acquisition technique augmented with step-by-step guidance, advanced 3D visualization and measurement tools all accessible on the touch screen module at table side. To support you perform a fast and first-time-right* CBCT image and streamline your workflow, you are guided though 4 key steps.
1- Room setup
2- Proper 3D protocol with corresponding suggested injection protocol (when applicable)
3- Collision free Zero dose table iso-centering
4- Visual support on when to press and release the acquisition button.

Once the CBCT scan is successfully performed, the acquired high resolution 3D image is automatically displayed in the SmartCT 3D visualization tool with the adequate rendering settings and the 3D measurement tools tailored for the selected 3D protocol.

Key benefits
• Enhances visualization of endovascular devices (stents, flow diverters etc.) and vessel morphology down to perforator level.
• Allows visualization beyond the clot with peri-procedural imaging of the distal vessel aspects in ischemic stroke.

Reveal hidden complexities
The ability to visualize sub-millimeter sized vascular anatomy and endovascular material during neuroradiology interventions enhances the clinician's ability to judge the chances of success and raises their treatment confidence. SmartCT Vaso was designed to meet these requirements and to help clinicians further enhance clinical outcomes.
This novel interventional acquisition technique provides high-resolution CBCT imaging that reveals key information about cerebral vascular structures to support the spatial assessment of vessels in the soft tissue context. It is designed to increase the confidence with which clinicians plan, perform, and follow-up on various endovascular neuro procedures. Three protocols are provided to enhance visualization of different devices and pathology: high resolution SmartCT Vaso, intra-arterial enhanced SmartCT Vaso, and intra-venous enhanced SmartCT Vaso.

*Evaluated with clinical users in a simulated lab environment with a total of 17 teams consisting of a physician and a radio-tech, with different levels of experience

SmartCT is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

9 1 **XperGuide**

Art.Nr: NCVB845

XperGuide provides live 3D needle guidance.

Key benefits
• Shows live advancement of needle for extra guidance
• Requires less X-ray dose than regular CT scans
• Can reduce procedure time significantly compared to regular CT interventions

Perform needle interventions in the Angio suite
Having advanced live image guidance tools on your X-ray system can bring new applications to your Angio suite. XperGuide provides live 3D needle guidance to support a wide range of non-vascular image-guided needle procedures. Virtual needle paths are created on an XperCT dataset or on the previously acquired CT or MR dataset. XperGuide overlays the real-time 2D fluoroscopy images with the 3D volume of XperCT, CT, or MR to visualize the actual needle path versus the virtual path previously planned.

By using an X-ray overlay with CT-like imaging to guide needle interventions, XperGuide can shorten procedure times significantly and support physicians in reducing risks during procedures.

Specifications
The volumetric dataset can be viewed in any slice direction.
A wide range of gantry projections can be used to define the needle path.
Path planning can be done:
• By drawing a virtual needle path on an XperCT, MR or CT slice
• By defining entry and target points on different XperCT, MR or CT slices
• By defining a help line on a 3D volume

The calculated virtual needle paths can be viewed on the XperCT, MR or CT slices, to verify if this path is feasible.
XperGuide supports planning of multiple needle trajectories.
During the needle procedure, XperGuide is fully controlled at tableside.
When XperGuide is active, guidance is automatically active when the fluoro pedal is pressed. The gantry can be positioned in the calculated gantry positions or controlled manually.
The XperGuide images (live 2D fluoro projected over the XperCT, MR or CT volume) will follow the gantry projections.
At table side, XperGuide adapts in real-time to the following parameters:
• Changes in the angulation of the C-arm
• Changes in the rotation of the C-arm
• Changes in the field of view
• Changes in the source image distance

XperGuide runs are stored in the same patient file as all other patient related data. This data can be reviewed at any time.

XperGuide runs can be sent to any optional DICOM compatible device (supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D), any PC in a standard PC compatible format (JPEG,AVI) and stored/archived on:
• A PACS systems as DICOM Secondary Capture images or movies
• USB device
• One or multiple DVD's, CD-ROM(s) for easy archiving
• Hard copy via the (DICOM Print) protocol

XperGuide is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

10 1 **IW Hardware**

Art.Nr: NCVD178

Key benefits
• Facilitates the interventional tools and multimodality viewing in exam room and control room
• Supports import and viewing of DICOM compatible data from CT and MR imaging modalities

View multimodality images in exam room and control room
Images from a variety of sources are being increasingly used during interventions for a variety of Live Image Guidance tools. The Interventional Tools Hardware option provides the hardware for our interventional tools. It 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.

Specifications
The Interventional hardware is the hardware for the 3D interventional tools that includes Real Time Link. It enables import and viewing of DICOM compatible data from other imaging modalities.

The Interventional Hardware comprises at least:
• Computer Workstation
• Control Room 24” display
• Internal/external CD-ROM / DVD writer
• Mouse tablet to interact with all the interventional tools at the table side.

Conditionally:
FD Calibration Tool Kit for 3D-RA

Interventional Work spot is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

11 1 **FD Rotational Angio**

Art.Nr: NCVA695

Realtime 3D impressions of complex vasculature

Key benefits
• 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
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.

Specifications
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.
C-arm in side position:
Max. rotation Speed: 30 degrees/s
Max. rotation Angle: 180 degrees
C-arm in head position:
Max. rotation Speed: 55 degrees/s
Max. rotation Angle: 240 degrees
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.

12 1 **Subtracted Bolus Chase**

Art.Nr: NCVA694

Helps to visualize vessel structures when blood flow is difficult to estimate.

Key benefits
• Bolus Chase improves results in case of challenging step movements, a mismatch between blood flow and selected program, or lack of real-time image information.

During digital acquisition in non-subtracted mode with uninterrupted real-time image display, the contrast bolus is followed (chased) interactively by a motorized table scan movement using a hanbd-hold speed controller to adapt the speed of the table scan to the contrast flow. With biplane systems, this Bolus Chase is applied with the lateral channel.

Specifications
• Framespeed can be adapted.
• Bolusrun is followed with a maskrun, using the same speed curve and framespeed that was generated during the bolusrun.
• Viewing is possible in the subtracted and non-subtracted mode. If subtracted viewing is not required, the maskrun can be skipped.
• Subtracted Bolus Chase gives fast, accurate results high patient throughput and efficient patient management.
• Automated exposure control and precise speed control generate high quality images and excellent subtraction cases.

13 1 **Bolus Chase Reconstruction**

Art.Nr: NCVD071

Key benefits
• Obtain a complete overview of peripheral vasculature in seconds
• Use overview image as a roadmap for diagnostic images

Complete overview of peripheral vasculature
Assessment of peripheral vasculature, such as the legs, can be challenging because of their length and the time required to reconstruct images of the entire anatomy. Our BolusChase Reconstruction option provides a complete reconstruction of peripheral vasculature from a single contrast injection in seconds. This overview image can be used as a roadmap next to the original diagnostic images.

Specifications
- In combination with the X-Ray Vascular package it is possible to view subtracted original images next to the reconstructed survey image.
- Calibration routines
- Manual measurements of line lengths (absolute and ratio's) and angles.
- Annotations
A calibration ruler is included in this package.

14 1 **SmartMask Biplane**

Art.Nr: NCVD073

Key benefits
• 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.

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.

Specifications
Alternative to the roadmap Vessel phase, the user can directly select an image from any stored run and use it as the VesselMask ('SmartMask') for the Device phase.

15 1 **Intercom**

Art.Nr: NCVA082

• Enhance communication between exam room and control room

Enhance communication
The remote intercom is used to communicate between the examination and control room. A separate intercom can be connected to the system and placed in the preferred working position in the control room or examination room. The listen function can be selected separately on each intercom. Activating the talk function on a selected intercom automatically disables this function on the other intercom.

16 1 **Swivel for table base.**

Art.Nr: NCVA851

• Simplifies patient positioning
• Easy patient transfer

Simplifies patient positioning
The swivel option with pivot movement allows you to easily move the table to reach upper and lower peripherals for angiographic and interventional procedures. Swivel the table from side-to-side or pivot the table on its vertical axis. The table moves with less friction, making it easier to move larger patients. A secure mechanism locks the tabletop in place to prevent it from moving.

17 1 **Peripheral X-ray filter**

Art.Nr: NCVA101

• Obtain uniform density of lower peripheral areas

Enhance consistency of lower peripheral images
To help clinicians obtain consistent images of lower peripheral anatomy, this option provides a set of flexible X-ray filters. They provide uniform density in angiographic examinations of the lower peripheral area.

18 1 **Table top brake kit**

Art.Nr: NCVB199

• Prevents tabletop movement when power goes off

Prevents tabletop from floating during power off situation
The tabletop brake kit prevents the tabletop from floating in case of a power off situation.
A friction brake is applied to stop the tabletop from moving longitudinally or laterally.

19 1 **Arm support**

Art.Nr: FCV0258

• Enhance patient comfort during catheter usage

Enhance patient comfort during catheter usage
To support the patient's arm when a catheter is used for brachial and radial artery access and arm angiography, the arm support can be attached to the tabletop. The support is made of X-ray transparent material and includes a mattress pad for increased patient comfort.

20 1 **set of elbow supports**

Art.Nr: FCV0248

• Enhances comfort for patient's arms

Comfortable support for patient's arms
These arm supports are designed to support the patient's arms comfortably during examinations and also prevent the patient's arms from hanging over the side of the table.

21 1 **Table mounted radiation shield**

Art.Nr: FCV0625

1.1.1 Protect the upper body from scatter radiation

1.1.1.1 Radiation shields can provide substantial protection from scatter radiation during interventions. The table mounted radiation shield is designed to offer additional protection for the physician and staff against scatter radiation during procedures. The shield consists of two protective parts: a lower shield and an upper shield.The shields can be mounted to either the right or left table accessory rails. Each radiation shield can be easily pivoted into the required working position and parked underneath the tabletop to facilitate patient preparation. The upper shield can be positioned upright to provide protection, or can be folded down for free access to the patient.

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· Specifications- Lower shield measuring 70 cm high x 80 cm wide curved shape, 0.5 mm Pb equivalence- Upper shield measuring 40 cm high x 50 cm wide 0.5 mm Pb equivalence- Mounting clamp- Docking device for wall mounting.The Radiation Shield is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

22 1 **Dicom Print compose**

Art.Nr: NCVA781

• Print images from X-ray system

Share and archive hardcopies of images
To print examination images from the X-ray system, the DICOM Print option can be used to connect the X-ray system to any DICOM printer. This is an automated printing protocol. The option provides Print Manual Overrides, Print Job submission, and Print Job management.

23 1 **DVD writer**

Art.Nr: NCVD097

Key benefits
• Store images and information on DVDs for easy sharing

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.

Specifications
Export and import of X-ray images and X-ray runs to DVD and/or from DVD

24 1 **Quantitative Vascular Analysis**

Art.Nr: NCVD098

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.

25 4 **Isolated Wall Connection Box**

Art.Nr: FCV0588

1.1.2 Isolated Wall Connection box to support the display of an external video source on a monitor in the examination room

1.1.2.1 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.

· Easily stream video to other locations
· Stream video from other modalities on the interventional X-ray suite
· Connect external video in the exam room

SpecificationsThe quantity of the VWCB's has to be calculated as follows:- For each video signal via MultiVision: 1 VWCB (max = 4)- For each video signal to FlexVision XL on Cardio System: 1 VWCB (max = 9)- For each video signal to FlexVision XL on Vascular System: 1 VWCB (max = 8)- For each 3rd party video signal directly connected to an LCD in the MCS: 1x VWCBNote:No VWCB is required in case a video signal is connected directly to a dedicated LCD from the following sources:1) Live/ref Slaving2) Interventional HW (XtraVision), IntelliSpace Portal, Philips Xcelera (only if workstations are powered by Philips X-ray system)3)XperIM

26 1 **CS universal cable carrier**

Art.Nr: FCV0017

• Increase workflow flexibility

Increase workflow flexibility

To accommodate different room layouts, this option provides an additional monitor cable carrier for the clip rails on the ceiling rails. The extra monitor cable hose rail is mounted between the monitor ceiling carriage and the ceiling inlet. This can be used in situations where the ceiling inlet cannot be placed in the middle of the clip rails due to room restrictions. This item is not suitable for mounting the monitor ceiling carriage or the stand hose.

27 1 **TERMINAL BLOCK (WKN70)**

Art.Nr: 459801646011

With the Terminal Block our system is connected to the hospital mains. This pre-delivery article ensures that different cable thicknesses between 13.3mm and 67.4mm (0.52”-2.65”) can be used.

28 5 **Cabinet Rear Cover**

Art.Nr: 459801079651

Cabinet Rear Cover

29 1 **Floorplate Swivel Xper Table**

Art.Nr: 989600205862

Required as predelivery material for installation of the swivel for table base.

30 1 **Floorplate for C-stand**

Art.Nr: 989600133322

Required as predelivery material for installation of the floor mounted C-stand.

31 1 **Clip rails for Larc (430cm)**

Art.Nr: 459800684211

Ceiling rails with mounting and isolation parts length 430 cm.

32 1 **Clip rails for MCC (390cm)**

Art.Nr: 459800938361

.

· Comprising of: - 2 clip rails length 390 cm- Mounting material for 200 cm track pitch

33 1 **MONITOR CEILING CARRIAGE**

Art.Nr: 459800706722

Monitor ceiling carriage

34 1 **Cable Management Cabinet**

Art.Nr: 459801078711

Cable Management Cabinet

1 1 **optional ref biplane**

Art.Nr: NCVD062

(Opt)

Additional Reference 3 and Reference 4 viewport

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. Optional ref biplane offers an additional video output of the X-ray system offering an additional Ref3 and Ref4 viewport on one LCD monitor.
Combined with the Dual Fluoro option, this enables users to zoom live images during acquisition, while having the Dual Fluoro image of the frontal channel visible on the Ref3 viewport and the Dual Fluoro image of the lateral channel visible on the Ref4 viewport.

2 1 **extension to FlexVision Pro**

Art.Nr: NCVD064

(Opt)

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.

Key benefits
- 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.

Easy tableside control
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.

Specifications
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
• 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

3 1 **Single Phase UPS**

Art.Nr: NCVC201

(Opt)

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 (local) three phase UPS is used, the single phase UPS is not required.

4 1 **Radiation shield**

Art.Nr: FCV0628

(Opt)

• Transparent ceiling mounted shield can be easily positioned where needed
• Can be used in combination with lower body radiation shield

Protect the upper body from scatter radiation
Radiation shields can provide substantial protection from scatter radiation during interventions. The ceiling mounted radiation shield is designed to protect the eyes and upper body of the physician and staff against scatter radiation during procedures. The transparent ceiling mounted shield is equipped with a two section suspension arm. With Azurion 7, the arm can be mounted on the monitor ceiling carriage. This allows the shield to be easily positioned where needed. With Azurion 3, the arm can be mounted on to the ceiling.

It can be used in combination with the table mounted lower body radiation shield.

This option requires a radiation shield bracket.

5 1 **Physio Viewing**

Art.Nr: NCVA093

(Opt)

Physio Viewing is an extension for acquisition storage and display of up to four physiological signals in the X-ray system.

The operator can select one of the recorded physio signals for display together with the acquired image.
It allows ECG-triggered acquisition: allows acquiring one exposure for each QRS peak with a selectable delay time.

Specifications
-Acquisition and storage of a maximum 4 channels of physio data together with the X-ray images
-Setting determined storage on/off of all inputs; recording only in parallel with X-ray acquisition
-Operator can select one recorded physio channel for display

6 1 **CO2 VIEW TRACE**

Art.Nr: NCVA258

(Opt)

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

7 1 **FD Dual Fluoro biplane**

Art.Nr: NCVD133

(Opt)

An additional fluoro display in parallel to the standard fluoro channel

Key benefits
• View subtracted fluoroscopy next to default non subtracted fluoroscopy
• View a digitally zoomed fluoroscopy image next to the default fluoroscopy image

Second fluoro image to support complex interventions
For complex interventions, it can be useful to view the subtracted fluoroscopy image next to the normal fluoroscopy image. The Dual Fluoro option provides an additional fluoro channel in parallel to the default fluoro channel. The dual fluoro option allows to view live digitally zoomed fluoroscopy next to non-zoomed fluoroscopy.

Specifications
The Dual fluoroscopy mode is selected via the touch screen module. The trace subtracted fluoro image will be displayed on the live viewport, the non-subtracted fluoro image is displayed on the reference 3 viewport. In Dual Fluoro mode, the live fluoroscopy image can be zoomed digitally, providing a larger view of the region of interest for complex interventions. The zoomed live fluoroscopy image will be shown on the live viewport, while the entire non zoomed image will be shown on the reference 3 viewport. The fluoro zoom function is controlled via the touch screen module.

8 1 **DAP meter biplane**

Art.Nr: NCVC162

(Opt)

This option provides a physical DAP meter device for the X-ray systems to enable DAP

(Dose Area Product) measurement instead of the standard used DAP calculation.

Key benefits
• In-room awareness of patient dose
• A speedometer for dose rate
• See actual and predicted DAP rates

In-room awareness of patient dose
Medical staff in the interventional suite can benefit from increased dose awareness. Philips X-ray systems are by default equipped with DAP (Dose Area Product) calculation and display. This option is primarily meant for customers where local regulations require a physical DAP measurement device to be present in the X-ray equipment. The Philips DAP (dose area product) meter device measures the amount of radiation during all X-ray examinations.

Specifications
The DAP meter consists of an ionization chamber which measures the amount of radiation (Air Kerma rate) during all X-ray examinations.

9 1 **Wireless footswitch: bi-plane version**

Art.Nr: NCVC200

(Opt)

One wireless footswitch in the Examination Room.

Key benefits
• Reduces clutter around the examination table
• Simplifies preparation and cleanup
• Streamlines workflow in the interventional suite

Reduce clutter and streamline workflow
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.

Specifications
• The bi-plane wireless footswitch is a 6 pedal version;
1. Bi-plane fluoro
2. Channel selection
3. Room light control/Single shot
4. Frontal fluoro
5. Exposure
6. Lateral fluoro.
• The pedals can be configured according customers preferred lay-out.
• The wireless footswitch is working via RF technology and is fully tested and released for medical use. It has an active range up to 10 meters, depending on structures within this range.
• The wireless footswitch has a lithium battery which only needs to be recharged once per week. During recharging the footswitch still can be used and is fully functional. In parallel, a wired footswitch can also be used.
• The status of the battery is indicated by an LED-indication on the footswitch itself, so that the user can decide when the footswitch needs to be recharged.
• The wireless footswitch can easily be cleaned in water. It has high water ingress protection standard (IPX8).
• The wireless footswitch has an on/off switch. It can be switched off when not in use. When the footswitch is active, but not in use, it will go into a sleep-mode. It will be re-

activated when touched or when one of the pedals is pressed.

10 1 **2nd touch screen module**

Art.Nr: NCVD079

(Opt)

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

11 1 **control module (CR)**

Art.Nr: NCVD083

(Opt)

Extension of the control facility for imaging functionality for the Control Room

Key benefits
• Easy system control from a different location
• Intuitive operation thanks to streamlined design

Full control where you need it
To help your interventional suite work as efficiently as possible, no matter what layout or case mix it has, you can choose extra control modules to easily control the system from a different location. Each control module works according to the Philips workflow concept, allowing intuitive operation of the system thanks to the streamlined design.

Specifications
The imaging control module can also be positioned at three sides of the patient table. It provides the following functionality:
- Fluoroscopy Flavor selection defined per setting
- Shutters and Wedge positioning (for both frontal and lateral plane)

- Manual or automatic semi-transparent wedge filter
- Fluoro Storage
- Selection of the Detector field size
- Reset of the fluoroscopy buzzer
- Roadmap Pro activation if function is available

12 1 **Full system APC**

Art.Nr: NCVD248

(Opt)

Store and recall stand-related positions

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 & table related positions. Operators can select a sequence from a pre-defined list or from positions stored during a procedure or use an image to define the position to be recalled.

Specifications
Different modes of Automatic Positioning Control for system are defined:
* Sequence: for recalling a list of user customizable positions of the stand
* Store / Recall: for storing and recalling stand positions during system use.
* Image Reference: an image is used to determine the stand & table position that has to be recalled
* Image Reference 3D: an image from a 3D work spot is used to recall.
* The operator can define a new point of the table (longitudinal, lateral and height) as the new iso-center and recall this table position.

13 1 **Xper Flex Cardio on TSM**

Art.Nr: NCVD091

(Opt)

Control Xper Flex Cardio from table side

Key benefits
• Helps to perform a complete hemodynamic study from tableside.
• Optimizes workflow in the interventional lab by seamlessly integrating Xper Flex Cardio with the X-ray system.

The touch screen module interface acts as a remote control to the Xper Flex Cardio system. The "Hemo" menu on the touch screen module contains a subset of the Xper Flex Cardio features. Changes selected on the touch screen module will be displayed on the Xper Flex Cardio system.
Specifications
Now you can perform common FlexCardio features at table side:
• SNAP (Auto record)
• Obtain/Capture and store hemodynamic waveforms and ECG's
• Cardiac Output measurements
• Monitor scale and sweep speed
• FFR measurements
• NIBP measurement

14 1 **Neuro Wedge**

Art.Nr: FCV0272

(Opt)

• Enhance neuro image quality

Enhance neuro image quality
The neuro wedge is used to position the head in the iso center of the imaging field during neuro radiology examinations.

15 1 **Neuro Head Holder**

Art.Nr: FCV0706

(Opt)

1.1.3 The neuro head holder is designed to position and immobilize the head, improving patient comfort and image quality

1.1.3.1 Enhance patient comfort and reduce artifacts During procedures, patient movements can cause imaging artifacts. The neuro head holder is designed to position and immobilize the head, improving patient comfort and image quality. It can be rotated, angulated, and adjusted in height to the desired position. The unique clamp assembly enables the patient's head to be turned left or right without changing the height, to facilitate easy patient transfer. The aluminum equivalence of the neuro head holder is between 1.0 and 0.5 mm for excellent X-ray translucency.

- Enhance patient comfort
- Reduce image artifacts

Specifications The neuro head holder consists of: - Head support- Inlay- 2 head strapsThe neuro head holder is compatible with all X-ray system tables & table tops (excluding the MAQUET tables).Neuro Head Holder is a Medical Device as defined in Regulation (EU) 2017/745 (EU-MDR)

Chapter 2 Philips Hemo system with IntelliVue X3

Pos.	Qty.	Description	Included	Optional
1	1	Performance CR 1 display	●	
2	1	Live Hemo on XL screen	●	
3	1	CBL 5 Leadset, Grabber, Chest, IEC, ICU	●	
4	1	CBL 5 Leadset, Grabber, IEC, ICU	●	
5	1	Comfort Care Cuff, Pediatric	●	
6	1	Reusable NIBP Comfort Cuff/ adult	●	
7	1	Comfort Care Cuff, Large Adult	●	
8	1	Skin Surface Temperature Probe	●	
9	1	Disp Rad 5 Leadwire Elect Set, IEC	●	
10	1	Adult NIBP Air Hose 3.0m	●	
11	1	XIM 5.1 Mandatory Lic Hemo	●	
12	1	H72 Critical Care Transport SW	●	
13	1	B06 Dual Press and Temp	●	
14	1	SP1 FAST SpO2	●	
15	1	C12 Conventional 12 Lead ECG	●	
16	1	C99 Hemo System-ready	●	
17	1	K14 Dual IBP Adapter	●	
18	1	IntelliVue Dock	●	
19	1	B05 Dual IBP, Temp, C.O.	●	
20	1	K14 Dual IBP Adapter	●	

21	1	Performance CR 1 display	●
22	1	Live Hemo on XL screen	●
23	1	CBL 5 Leadset, Grabber, Chest, IEC, ICU	●
24	1	CBL 5 Leadset, Grabber, IEC, ICU	●
25	1	Comfort Care Cuff, Pediatric	●
26	1	Reusable NIBP Comfort Cuff/ adult	●
27	1	Comfort Care Cuff, Large Adult	●
28	1	Skin Surface Temperature Probe	●
29	1	Disp Rad 5 Leadwire Elect Set, IEC	●
30	1	Adult NIBP Air Hose 3.0m	●
31	1	XIM 5.1 Mandatory Lic Hemo	●
32	1	H72 Critical Care Transport SW	●
33	1	B06 Dual Press and Temp	●
34	1	SP1 FAST SpO2	●
35	1	C12 Conventional 12 Lead ECG	●
36	1	C99 Hemo System-ready	●
37	1	K14 Dual IBP Adapter	●
38	1	IntelliVue Dock	●
39	1	B05 Dual IBP, Temp, C.O.	●
40	1	K14 Dual IBP Adapter	●

722467 Philips Hemo system with IntelliVue X3

Pos.	Qty.	Description
1	1	**Performance CR 1 display** **Art.Nr: NCVD314** NCVD314 Hemo Performance CR 1 display Philips Hemo system Performance configuration: workstation with one display in the control room Philips Interventional Hemodynamic system (Philips Hemo system) brings advanced hemodynamic measurements into the interventional lab to support clinical decision making. The system includes nIntelliVue X3 patient monitor, measurement extension, and IntelliVue Dock to mount the patient monitorat the table side and a workstation in the control room with a user interface designed to simplify hemodynamic monitoring and assessment. The user in the control room can perform hemodynamic analyses and display them in the exam room. Displaying all relevant physiologic waveforms and analyses supports you in making a real-time assessment of the patient's condition during an intervention. The Philips Hemo system functionality includes: · Comprehensive Hemodynamic measurements and analyses · Capture and storage of hemodynamic waveforms · Full disclosure (record, store all waveform data for post case review and analysis) · Printing of the waveforms and hemodynamic analyses · Storage of all patient data · Sharing of patient demographic information with Philips interventional x-ray system The IntelliVue X3 patient monitor plus measurement extension as part of the Philips Hemo system offers the following patient monitoring capabilities: · Non- invasive blood pressure (NIBP) · Pulse oximetry (SpO) · Four invasive blood pressure channels · 12 Lead surface ECG · Thermodilution Cardiac Output · Continuous body temperature · Respiration rate · Variable sampling length: user defined between 5 and 120 sec. The Philips Hemo system Performance Control room configuration provides a single display workstation in the control room. On this workstation you can switch between patient monitoring, hemodynamic analysis or patient demographic, hemodynamic results and reports. All live monitoring information and analysis can be visualized on a medical grade monitor situated in the monitor ceiling suspension in the exam room.

Philips Hemo system hardware:

- Patient monitor (IntelliVue X3, extension and Dock)
- Table mount
- Workstation (including mouse and keyboard)
- 24" LCD display
- Isolation transformer

NOTE: Dedicated live Hemo monitor for Exam room Monitor ceiling suspension must be purchased as part of the x-ray configuration.

An installation kit provides all installation cables required for installation.

2 1 **Live Hemo on XL screen**

Art.Nr: NCVC610

An installation kit that provides all installation cables required for display of the live hemodynamic waveforms on FlexVision.

NOTE: Dedicated live Hemo monitor for Exam room must be purchased as part of the x-ray configuration.

3 1 **CBL 5 Leadset, Grabber, Chest, IEC, ICU**

Art.Nr: M1978A

5 Leadset, Grabber, Chest, IEC

4 1 **CBL 5 Leadset, Grabber, IEC, ICU**

Art.Nr: M1971A

CBL 5 Leadset, Grabber, IEC, ICU

5 1 **Comfort Care Cuff, Pediatric**

Art.Nr: M1572A

Long-life reusable NIBP cuff/pediatric. Premium quality individual cuff w/fluid cap and instructions. For limb circumference 17-24cm. Polyurethane bladder, hose, cover. No latex or PVC.

6 1 **Reusable NIBP Comfort Cuff/ adult**

Art.Nr: M1574A

7 1 **Comfort Care Cuff, Large Adult**

Art.Nr: M1575A

Long-life reusable NIBP cuff/large adult Premium quality individual cuff w/fluid cap and instructions. For limb circumference 37-51 cm. Polyurethane bladder, hose, cover. No latex or PVC.

8 1 **Skin Surface Temperature Probe**

Art.Nr: 21078A

Skin Surface Temperature Probe Reusable; stainless steel disc; epoxy backing; size = 3/8" (9.5mm); length = 10' (3.1m); wgt = 1 lb (454g)

9 1 **Disp Rad 5 Leadwire Elect Set, IEC**

Art.Nr: 989803156271

Disposable, adult, 5-lead ECG monitoring, solid gel electrodes with pre-attached 39 inch (100cm) non-shielded, radiolucent, carbon, IEC color-coded lead wires. Silver/silver chloride (Ag/AgCl) sensor, repositionable. Electrode is rectangular in shape and is 30 mm x 45 mm in size. Packaging is 1 set (5pcs.) per pouch or 60 sets (300pcs) per box. Sold in box quantities only. For use with all adult ECG monitors; NOT for use with Philips Telemetry Transmitters and Transceivers.

10 1 **Adult NIBP Air Hose 3.0m**

Art.Nr: M1599B

Adult Pressure Interconnect Cable 3.0m Length=9.84' (3.0m) 1/bag. Connects to all HP or Agilent resuable & disposable adult/pedi cuffs, not neonatal. This cable is used for classic bedside monitoring.

11 1 **XIM 5.1 Mandatory Lic Hemo**

Art.Nr: NITE428

Mandatory Xper IM and Hemo licenses include Xper IM basic platform, hemo calculation, hemo switch and vital capture.

12 1 **H72 Critical Care Transport SW**

Art.Nr: 867030_H72

H72 Critical Care Transport Software consists of the standard set of clinical and operational patient monitoring functionality plus extended ECG capabilities (Hexad, Full Arrhythmia, ST-Analysis, ST/STE-Map and QT/QTc), the alarm visualization toolset (Alarm Review and Alarm Limits page, direct access to Auto Limits) and Smart Alarm Delay capability, as well as selected data visualization tools (Horizon Trends, Graphical Trends, Timers) together with the ability to largely customize screens. Connectivity to the Patient Information Center PIC iX is part of this software package too.

13 1 **B06 Dual Press and Temp**

Art.Nr: 867030_B06

B06 Add Dual Invasive Pressure and Temperature capability.

14 1 **SP1 FAST SpO2**

Art.Nr: 867030_SP1

SP1 Philips FAST SpO2 technology for Philips SpO2 sensors and validated Nellcor and Masimo sensors.

15 1 **C12 Conventional 12 Lead ECG**

Art.Nr: 867030_C12

C12 Conventional 12 Lead ECG allows the patient monitor to acquire 12 Lead ECGs in diagnostic quality.

16 1 **C99 Hemo System-ready**

Art.Nr: 867030_C99

C99 Hemo System-ready adds basic connectivity of the X3 to the Philips Interventional Hemodynamic system used for advanced hemodynamic monitoring and calculations in a cathlab environment. Option C99 enables a Philips Interventional Hemodynamic System to establish a data connection to one selected X3 (identified by its serial number).

17 1 **K14 Dual IBP Adapter**

Art.Nr: 867030_K14

K14 Dual IBP Adapter for use with #B06 (Dual Press & Temp), enabling dual invasive pressure capability with existing Philips-compatible invasive pressure cables.

18 1 **IntelliVue Dock**

Art.Nr: 867043

IntelliVue Dock. Docking solution for X3 and MX100 monitors, providing mounting, AC power, LAN, and Flexible Sync Out. To be used with standalone IntelliVue X3 or IntelliVue MX100 monitors. Includes Universal Clamp and Cable Management Hook. Note that IntelliVue Dock cannot be used for connecting IntelliVue X3 to an IntelliVue host monitor.

19 1 **B05 Dual IBP, Temp, C.O.**

Art.Nr: 867039_B05

B05 Dual IBP, Temp, C.O.; IntelliVue Hemodynamic Extension with dual Invasive Pressure, one continuous Temperature channel and Right Heart Cardiac Output. The Cardiac Output (C.O.) measurement invasively measures cardiac output and other hemodynamic parameters using a technique called thermodilution. Supports either preloaded syringes or flow-through (CO-Set) technique.

20 1 **K14 Dual IBP Adapter**

Art.Nr: 867039_K14

K14 Dual IBP Adapter for use with #B05, #B06, or #B10, enabling dual invasive pressure capability with existing invasive pressure cables.

21 1 **Performance CR 1 display**

Art.Nr: NCVD314

NCVD314 Hemo Performance CR 1 display

Philips Hemo system Performance configuration: workstation with one display in the control room

Philips Interventional Hemodynamic system (Philips Hemo system) brings advanced hemodynamic measurements into the interventional lab to support clinical decision making.

The system includes nIntelliVue X3 patient monitor, measurement extension, and IntelliVue Dock to mount the patient monitorat the table side and a workstation in the control room with a user interface designed to simplify hemodynamic monitoring and assessment. The user in the control room can perform hemodynamic analyses and display them in the exam room. Displaying all relevant physiologic waveforms and analyses supports you in making a real-time assessment of the patient's condition during an intervention.

The Philips Hemo system functionality includes:

- Comprehensive Hemodynamic measurements and analyses
- Capture and storage of hemodynamic waveforms
- Full disclosure (record, store all waveform data for post case review and analysis)
- Printing of the waveforms and hemodynamic analyses
- Storage of all patient data
- Sharing of patient demographic information with Philips interventional x-ray system

The IntelliVue X3 patient monitor plus measurement extension as part of the Philips Hemo system offers the following patient monitoring capabilities:

- Non- invasive blood pressure (NIBP)
- Pulse oximetry (SpO)
- Four invasive blood pressure channels
- 12 Lead surface ECG
- Thermodilution Cardiac Output
- Continuous body temperature
- Respiration rate
- Variable sampling length: user defined between 5 and 120 sec.

The Philips Hemo system Performance Control room configuration provides a single display workstation in the control room. On this workstation you can switch between patient monitoring, hemodynamic analysis or patient demographic, hemodynamic results and reports. All live monitoring information and analysis can be visualized on a medical grade monitor situated in the monitor ceiling suspension in the exam room.

Philips Hemo system hardware:

- Patient monitor (IntelliVue X3, extension and Dock)
- Table mount
- Workstation (including mouse and keyboard)
- 24" LCD display
- Isolation transformer

NOTE: Dedicated live Hemo monitor for Exam room Monitor ceiling suspension must be purchased as part of the x-ray configuration.

An installation kit provides all installation cables required for installation.

22 1 **Live Hemo on XL screen**

Art.Nr: NCVC610

An installation kit that provides all installation cables required for display of the live hemodynamic waveforms on FlexVision.

NOTE: Dedicated live Hemo monitor for Exam room must be purchased as part of the x-ray configuration.

23 1 **CBL 5 Leadset, Grabber, Chest, IEC, ICU**

Art.Nr: M1978A

5 Leadset, Grabber, Chest, IEC

24 1 **CBL 5 Leadset, Grabber, IEC, ICU**

Art.Nr: M1971A

CBL 5 Leadset, Grabber, IEC, ICU

25 1 **Comfort Care Cuff, Pediatric**

Art.Nr: M1572A

Long-life reusable NIBP cuff/pediatric. Premium quality individual cuff w/fluid cap and instructions. For limb circumference 17-24cm. Polyurethane bladder, hose, cover. No latex or PVC.

26 1 **Reusable NIBP Comfort Cuff/ adult**

Art.Nr: M1574A

27 1 **Comfort Care Cuff, Large Adult**

Art.Nr: M1575A

Long-life reusable NIBP cuff/large adult Premium quality individual cuff w/fluid cap and instructions. For limb circumference 37-51 cm. Polyurethane bladder, hose, cover. No latex or PVC.

28 1 **Skin Surface Temperature Probe**

Art.Nr: 21078A

Skin Surface Temperature Probe Reusable; stainless steel disc; epoxy backing; size = 3/8" (9.5mm); length = 10' (3.1m); wgt = 1 lb (454g)

29 1 **Disp Rad 5 Leadwire Elect Set, IEC**

Art.Nr: 989803156271

Disposable, adult, 5-lead ECG monitoring, solid gel electrodes with pre-attached 39 inch (100cm) non-shielded, radiolucent, carbon, IEC color-coded lead wires. Silver/silver chloride (Ag/AgCl) sensor, repositionable. Electrode is rectangular in shape and is 30 mm x 45 mm in size. Packaging is 1 set (5pcs.) per pouch or 60 sets (300pcs) per box. Sold in box quantities only. For use with all adult ECG monitors; NOT for use with Philips Telemetry Transmitters and Transceivers.

30 1 **Adult NIBP Air Hose 3.0m**

Art.Nr: M1599B

Adult Pressure Interconnect Cable 3.0m Length=9.84' (3.0m) 1/bag. Connects to all HP or Agilent resuable & disposable adult/pedi cuffs, not neonatal. This cable is used for classic bedside monitoring.

31 1 **XIM 5.1 Mandatory Lic Hemo**

Art.Nr: NITE428

Mandatory Xper IM and Hemo licenses include Xper IM basic platform, hemo calculation, hemo switch and vital capture.

32 1 **H72 Critical Care Transport SW**

Art.Nr: 867030_H72

H72 Critical Care Transport Software consists of the standard set of clinical and operational patient monitoring functionality plus extended ECG capabilities (Hexad, Full Arrhythmia, ST-Analysis, ST/STE-Map and QT/QTc), the alarm visualization toolset (Alarm Review and Alarm Limits page, direct access to Auto Limits) and Smart Alarm Delay capability, as well as selected data visualization tools (Horizon Trends, Graphical Trends, Timers) together with the ability to largely customize screens. Connectivity to the Patient Information Center PIC iX is part of this software package too.

33 1 **B06 Dual Press and Temp**

Art.Nr: 867030_B06

B06 Add Dual Invasive Pressure and Temperature capability.

34 1 **SP1 FAST SpO2**

Art.Nr: 867030_SP1

SP1 Philips FAST SpO2 technology for Philips SpO2 sensors and validated Nellcor and Masimo sensors.

35 1 **C12 Conventional 12 Lead ECG**

Art.Nr: 867030_C12

C12 Conventional 12 Lead ECG allows the patient monitor to acquire 12 Lead ECGs in diagnostic quality.

36 1 **C99 Hemo System-ready**

Art.Nr: 867030_C99

C99 Hemo System-ready adds basic connectivity of the X3 to the Philips Interventional Hemodynamic system used for advanced hemodynamic monitoring and calculations in a cathlab environment. Option C99 enables a Philips Interventional Hemodynamic System to establish a data connection to one selected X3 (identified by its serial number).

37 1 **K14 Dual IBP Adapter**

Art.Nr: 867030_K14

K14 Dual IBP Adapter for use with #B06 (Dual Press & Temp), enabling dual invasive pressure capability with existing Philips-compatible invasive pressure cables.

38 1 **IntelliVue Dock**

Art.Nr: 867043

IntelliVue Dock. Docking solution for X3 and MX100 monitors, providing mounting, AC power, LAN, and Flexible Sync Out. To be used with standalone IntelliVue X3 or IntelliVue MX100 monitors. Includes Universal Clamp and Cable Management Hook. Note that IntelliVue Dock cannot be used for connecting IntelliVue X3 to an IntelliVue host monitor.

39 1 **B05 Dual IBP, Temp, C.O.**

Art.Nr: 867039_B05

B05 Dual IBP, Temp, C.O.; IntelliVue Hemodynamic Extension with dual Invasive Pressure, one continuous Temperature channel and Right Heart Cardiac Output. The Cardiac Output (C.O.) measurement invasively measures cardiac output and other hemodynamic parameters using a technique called thermodilution. Supports either preloaded syringes or flow-through (CO-Set) technique.

40	1	**K14 Dual IBP Adapter** **Art.Nr: 867039_K14** K14 Dual IBP Adapter for use with #B05, #B06, or #B10, enabling dual invasive pressure capability with existing invasive pressure cables.