PHILIPS

Interventional X-ray

Allura Centron

Making the difference
with Live Image Guidance
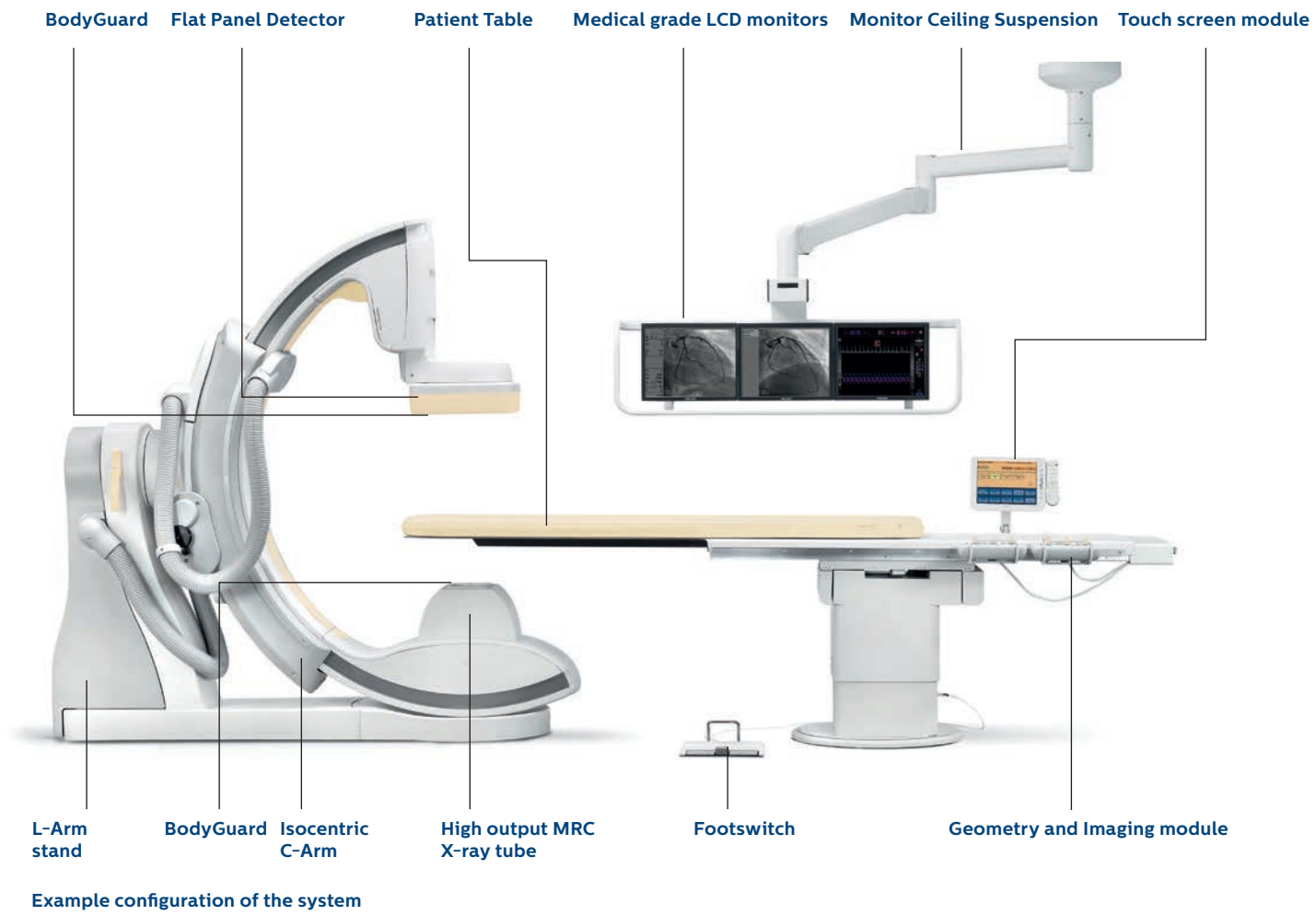
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Introduction

Together we make the difference in minimally invasive treatment to improve patient outcomes and save lives. 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 Allura Centron is a robust interventional X-ray lab designed to handle a variety of procedures at an excellent pace. It is designed for cardiac and EP procedures but is versatile enough for use in neuro and vascular procedures. Its unique combination of excellent image quality, ease of use and the robust Allura series performance make Allura Centron a superb solution. Perfect for today's hospital to manage high procedure load with variety of procedures.

Together, we open doors to new procedures and techniques that truly make a difference to people's lives while driving growth and reducing the cost of care.

1. System Overview

BodyGuard   Flat Panel Detector   Patient Table   Medical grade LCD monitors   Monitor Ceiling Suspension   Touch screen module

L-Arm stand   BodyGuard   Isocentric C-Arm   High output MRC X-ray tube   Footswitch   Geometry and Imaging module

Example configuration of the system

2. Geometry

2.1 Gantry

The Philips Allura Centron provides excellent patient access with a large range of motion capabilities. The stand, monitor suspension and operating modules can be freely positioned for full applicational flexibility. The exclusive BodyGuard patient protection mechanism is designed to protect the patient from unexpected contact between the detector and the body. It uses capacitive sensing to help prevent collision, while allowing stand positioning at up to 25°/sec.

Allura Centron stand with motorized L-arm and C-arm

Features	Specifications
Stand	Floor mount
Iso-center to floor	113.5 cm (44.7 inch)
L-arm rotation	Motorized and manual movement, over 180° with snap positions 90°, 0°, –90° to allow patient access from three sides of the table
L-arm movement speed	12°/sec
L-arm positioning	–90°, 0°, +90° position to allow patient access from three sides of the table
C-arm rotation	In head-end position: 120° LAO, 185° RAO In side position: 90° LAO, 90° RAO
C-arm rotation speed	Up to 25°/sec
C-arm angulation	In head-end position: 90° cranial, 90° caudal. In side position: 185° cranial, 120° caudal
C-arm angulation speed	Up to 25°/sec
Focal spot to iso-center	81 cm (31.9 inch)
Source Image Distance	89.5 cm to 119.5 cm (35.2 to 47.1 inch)
C-arm depth	90 cm (35.4 inch)
Programmable positions	Two positions standard

Coronary	**XperSwing LCA**	**Neuro DSA**	**Peripheral**

Courtesy of: Clinique Pasteur, Toulouse, France and Ruby Hall Clinic, India

2.2 Patient Table

The patient table is a dedicated interventional table that supports variety of applications. A feather-light free floating tabletop helps maintain your region of interest and reduce effort.

Allura Centron patient table with mattress

Standard table

Features	Specifications
Height range (min-max.)	76 cm – 104 cm (29.9 inch – 40.9 inch)
Table top length	293 cm (115.4 inch)
Table top width	50 cm (19.7 inch)
Longitudinal float range	100 cm (39.4 inch)
Lateral float range	±18 cm (7.1 inch)
Max. table load	275 kg (605 lbs)
Max. patient weight	200 kg (440 lbs) + 500 N additional force in case of CPR
Motorized vertical travel	28 cm (11 inch)
Vertical stiffness	33 N/mm

Allura Centron also comes with the option of a Longer Table which provides head-to-toe imaging during interventional procedures.

Longer table

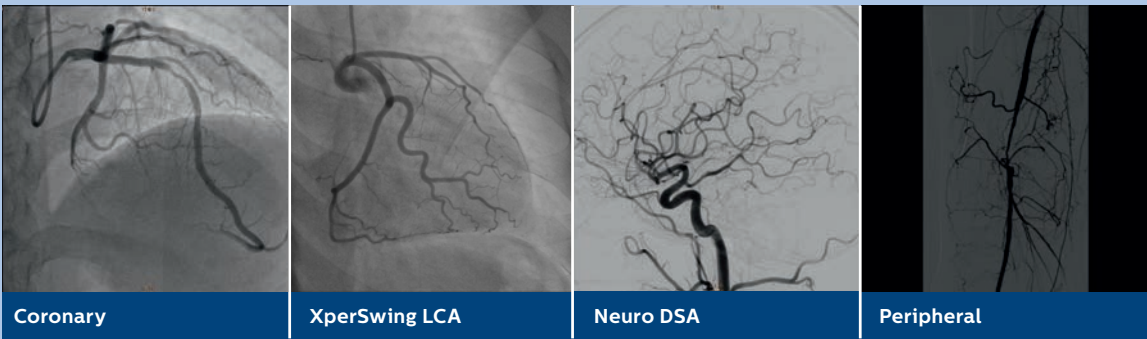| Features	Specifications
Height range (min-max.)	76 cm – 104 cm (29.9 inch – 40.9 inch)
Table top length	365 cm (143.7 inch)
Table top width	50 cm (19.7 inch)
Longitudinal float range	172 cm (67.7 inch)
Lateral float range	±18 cm (7.1 inch)
Max. table load	275 kg (605 lbs)
Max. patient weight	200 kg (440 lbs) + 500 N additional force in case of CPR
Motorized vertical travel	28 cm (11 inch)
Vertical stiffness	16.5 N/mm

Optional

Pivot

Pivot option to optimize transradial access, upper extremity angiography, and patient transfer. It moves with less friction, making it easier to move larger patients. A secure mechanism locks the tabletop in place to prevent it from moving.

Technical specifications of Pivot

0, –13°/+13°, –90°/+90°

Allura Centron MCS with three monitors

2.3 Philips Monitor Ceiling Suspension (MCS)
The Philips Monitor Ceiling Suspension allows flexible and freely rotating positioning with a concave set-up of the monitors for optimum viewing angle.

Features	Specifications
Number of monitors	Three or four monitors
Rotation Range	330°
Height Range	92 cm (36.2 inch)
Radius of rotation (max.)	201 cm (79.1 inch)

Optional

Optional Accessories
Set of arm supports
Table mounted radiation shield
Patient straps
Head support
Longer cardio mattress
Ceiling radiation shield
Arm support pad
Pan handle
Arm support
Examination light
Intercom

Arm support pad

Table mounted radiation shield

Set of arm supports

2.4 Accessories

Standard Accessories
Cardio Patient mattress
Dripstand
Table clamp (3 nos)
Cable holders (15 pieces)
Op-rail accessory clamp

3. User Interface

3.1 User Interface in the examination room
In the examination room, the User Interface comprises the On-Screen Display, the Touch Screen Module, and the Imaging and Geometry Modules. Information is displayed on the On-Screen display in the examination room.

The Geometry and Imaging Module can be positioned at three sides of the patient table. The Modules adjust to the position to retain the intuitive button operation. Both the Geometry and Imaging Module have a removable protection bar that helps prevent unintended activation of system.

Touch Screen Module

User Interface
X-ray indicator
X-ray tube temperature condition
Radiographic parameters: kV, mA, ms
Rotation and angulation of the stand positions
Source Image Distance (SID)
Detector field size display
General system messages
Selected frame speed
Fluoroscopy mode
Integrated fluoroscopy time
Air Kerma X-ray dose (both rate and accumulated Xray dose)
Dose Area Product (both rate and accumulated X-ray dose)
Graphical bars for body zone specific X-ray dose rate and accumulated Air Kerma levels related to the 2Gy level for cardiac procedures
Stopwatch

Viewpad controls
Run and image selection
Exam and run cycle
Review speed
Run and exam overview
Digital zoom
Storing reference run or image to reference monitors
Subtraction and image mask selection
Laser pointer

Touch Screen Module
Acquisition settings
Image processing
USB port for data transfer
Quantitative Analysis (QA), optional
Interventional tools table side control, optional

Geometry Module

Tabletop float

Table height position

Source Image Distance selection

Stand positioning

Store and recall of two scratch stand positions

Emergency stop button

Geometry reset button, which resets stand to a default service configurable starting position

Inhibit Transversal Float

L-Arm positioning

Table pivot lock

Imaging Module

Fluoroscopy mode selection

Positioning of shutters and wedges without radiation

Fluoro storage to record fluoroscopy upto 999 images

Selection of the detector field size

Preferred beam width

Reset of the fluoroscopy buzzer

Fluoroscopy subtract on/off

3.2 User Interface in the control room

The Viewing Console comprises two LCD color monitors. One as data monitor for patient data and system information management, including radiographic parameters, and another one serves as review monitor. The monitors have shared screens.

Data Monitor

Scheduling

Preparation

Acquisition

Review

Report

Archive

Geometry Module   **Imaging Module**

System Information

Stopwatch and time

System Warning & Error Messages

System guidance information

Dose Area Product (DAP) and Air Kerma X-ray dose (both rate and accumulated X-ray dose)

Frame speed settings, fluoroscopy mode and accumulated fluoroscopy time

Exposure and fluoroscopy settings, such as Voltage (kV), Current (mA) and pulse time (ms)

Stand position information, such as rotation, angulation and SID

Magnification Details

Control room User Interface

Review Monitor

The review monitor is a color LCD monitor that shares the screen with data monitor.

Review Monitor

Step through file, run or images

File and run overview

Image processing features such as contrast, brightness and edge enhancement

Flagging of runs or images for transfer

Image annotation

Video invert

Zoom and pan image

Electronic shutters

Store/delete images/runs

Store fluoro

Pixel shift

Quantitative Analysis Packages, optional

Subtraction, optional

Move or renew mask option, optional

Landmarking (increase/decrease of subtraction degree),

optional

View trace, optional

Review Module

Power on/off the system

Tagarno wheel to control the review of a patient exam

File and run cycle

Adjustment of contrast, brightness, and edge enhancement

File, run, and image stepping

Run and file overview

Basic review functionality, such as image invert and digital zoom

Go to default settings

Reset fluoroscopy timer and switch X-ray on/off

Optional

Review Module

The Review Module is a review station for basic interventional X-ray viewing needs. The most often used functions can be controlled by the touch of a button.

On/off module is provided, in case review module is not ordered by the customer.

Contrast Injectors

The system can be connected to contrast injectors to enhance procedures.

4. X-Ray Generation

4.1 X-ray generator
The Velara generator is designed for the latest interventional X-ray needs.

Features	Specifications
Generated power	Microprocessor controlled, 100kW high frequency converter generator
Minimum switching time	Quartz-controlled power switch, with a minimum switching time of one ms
Voltage range	40-125kV
Maximum current	1250mA at 80kV
Maximum continuous power	2.4 kW for 0.5 hours, 2 kW for eight hours
Nominal power (highest electrical power)	100 kW (1000mA at 100kV)

4.2 X-ray tube
The Allura Centron is provided with the legendary high power MRC-GS 0407 X-ray tube, which allows for very high heat dissipation, enabling SpectraBeam filtration for a low X-ray dose.

MRC-GS 0407 X-ray tube

Features	Specifications
Focal spot size and loadability	0.4/0.7 nominal focal spot values with maximal 30 and 65 kW loadability respectively based on 250 W anode reference power
Grid switched pulsed fluoroscopy	Yes
Fluoro power for 10 minutes	4,500 W
Fluoro power for 20 minutes	3,500 W
Maximum anode cooling rate	910 kHU/min
Max. anode heat storage	2.4 MHU
Max. assembly heat storage	5.4 MHU
Anode heat dissipation	11000 W
Continuous anode heat dissipation	3,200 W
Max. assembly continuous heat dissipation	3,400 W
Extra pre-filtration	Spectra Beam dose management with 0.2, 0.5 and 1.0 mm Copper equivalent SpectraBeam filters
Cooling liquid	Oil cooled X-ray tube with thermal safety switch
Anode cooling method	Direct anode oil cooling system with 200 mm anode diameter

5. Dose Management

5.1 DoseWise
DoseWise is a set of techniques, programs, and practices that supports excellent image quality, while protecting people in X-ray environments. It's a philosophy that drives Philips to develop innovative new strategies in dose management.
DoseWise focuses on three highly effective strategies for dose management:
• Smart Beam management: use the exact amount of X-ray dose needed per examination.
• Less radiation-on time: choose very low pulse frequencies with major X-ray dose savings, while ensuring diagnostically relevant images.
• More Awareness: simple, easy to read displays and reporting; keeping you aware of dose levels and fully in control.

Spectra Beam
The combination of SpectraBeam with the MRC-GS-0407 tube allows increased X-ray output with better filtration of soft radiation. This provides a low X-ray dose for cardio and vascular applications, while maintaining the same excellent image quality.

Specifications
Copper filters 0.2, 0.5 and 1.0 mm CU equivalent
The filters can be programmed via available settings
Three fluoroscopy/cine modes per application can be selected at tableside.

Beam Shaping
Beam Shaping allows for virtual collimation of the shutters and wedges on the last X-ray image, reducing additional Xray dose during collimation changes.

Double shutters/wedge filters
Double wedge filters provide outstanding image quality in all projections. The wedge filters allow exceptional exposure and hence excellent image quality is maintained (with a low entrance X-ray dose).

Automatic wedge positioning
Wedge filters can be positioned automatically according to gantry positions.

X-ray indicator light
The Allura Centron "X-ray On" indicator light located on the auxiliary box that is clearly visible from virtually anywhere in the room.

5.2 Dose Awareness

Real-time X-ray dose information at tableside
Relevant dose information is integrated in the On-Screen User Interface of the LCD exam room monitors of the Allura Centron. It provides the user with all relevant dose information, including accumulated and rate values of patient Air Kerma and X-ray dose area product. In addition, body zone specific X-ray dose rates are displayed for cardiac procedures. X-ray dose rates can be controlled by the user at tableside, by choosing a different fluoro mode.

X-ray dose information in the control room
X-ray dose information is also available in the control room. Cumulative dose is displayed on the data monitor.

X-ray dose information in the examination report
Examination report data can be provided via the RIS/CIS DICOM two-way interface, to the RIS/CIS (MPPS protocol). A X-ray dose report can optionally be printed or e-mailed (in background) at the end of each examination at the touch of a button. Body zone specific information is included.

DICOM Radiation Dose Structured Report
Collection of dose relevant parameters and settings and export to a DICOM database (e.e. PACS, RIS). The reported data can be used for analysis, to further reduce Xray dose. The DICOM RDSR function collects and exports the required data. The software to provide the DICOM data for analysis and alerting needs to be acquired separately.

Optional

DoseAware

The ability to see your dose exposure in real-time is now possible thanks to Philips DoseAware*. An innovative product that will transform the way you work. Only Philips DoseAware visualizes the invisible nature of radiation so clinicians and staff can see it in real time through a simple and easy to read display and immediately act to change their behavior and work patterns.

Staff working in an X-ray environment wears a Personal Dose Meter (PDM). This PDM measures X-ray dose reception and is wirelessly connected to the Base Station. The BaseStation is mounted in the examination room where all staff can directly see whether received dose is in the red, yellow or green area. X-ray dose history information can be automatically retrieved from any Base Station of from any PDM by using a Cradle with DoseView software of Dose Manager software. Working dose conscious is working healthier.

Staff working in an X-ray environment wears a Personal Dose Meter (PDM).

The BaseStation, a LCD touchscreen displays real time dose data for all PDMs within range, to enable you and your staff to take immediate action.

* DoseAware does not replace the thermoluminescent dosimeter (TLD) as a legal dosimeter.

6. Imaging

The Allura Centron is equipped with a compact dynamic flat detector which can easily handle complex projections. Image quality and X-ray dose reduction are further enhanced by dedicated image processing.

6.1 Dynamic Flat Detector

Philips next generation dynamic flat detector provides excellent image quality at a low patient X-ray dose.

Features	Specifications
Size of detector housing	62 cm (24.4 inch) diagonal, including BodyGuard
Physical detector size	51 cm (20.3 inch) diagonal
Maximum field of view	39 cm (15 inch) diagonal
Image matrix	1560 x 1440 pixels at 16 bits depth
Detector zoom field	39, 37, 31, 27, 22, 19, 15 cm (15.4, 14.6, 12.2, 10.6, 8.7, 7.5, 5.9 inch) diagonal square formats
Pixel pitch	184 µm x 184 µm
Detector bit depth	16 bits
Nyquist frequency	2.7 lp/mm
DQE (0)	70% at 0 lp/mm
MTF at 1 lp/mm	>53%

Dynamic Flat Detector

6.2 Fluoroscopy

Per application, three fluoro modes are available at tableside which can be programmed via available settings. Each mode can be programmed with a different composition of X-ray dose rate, digital processing and filter settings.

Features	Specifications
Extra pre-filtration	Spectra Beam filters: 0.2, 0.5 and 1.0 mm CU equivalent
Fluoroscopy image processing	Noise and artifact reduction on moving structures and objects, automatic motion compensation to eliminate blur on live images and image enhancement and edge sharpening
Pulse rates	Default at 3.75, 7.5, 15, 25 and 30 pulses per second
Frame grabbing of static fluoros-copy images	Yes
Fluoroscopy storage	Default storage of the last 20 sec., programmable up to 999 images of fluoroscopy for reference or archiving
Grid-switched pulsed fluoroscopy	Yes

Color LCD Monitors in exam room

6.3 Digital acquisition

The Allura Centron system can be customized with a virtually unlimited number of acquisition programs for digital angiography and digital subtraction angiography. Image resolution is upto 1024 x 1024 pixels for interventional Xray imaging. It exploits the benefit of fully digital detector to reduce noise in clinical images.

Acquisition frame rates	1024 x 1024 matrix
Standard configuration	3.75, 7.5, 15, 25, 30 images/sec.

Storage capacity

	1024 x 1024 matrix
Standard configuration	50000 images
Storage extension, optional	100000 images

6.4 Monitors

The system is delivered standard with two color LCD monitors and one optional LCD color monitor in the examination room. These monitors are mounted on Philips Monitor Ceiling Suspension. Two LCD color monitors are standard in the control room.

Medical Grade Color LCD Monitor

| Features	Specifications
Format	Native format 1280 x 1024 SXGA
Wide viewing angle	Yes (approximately 178°)
2 High brightness	Yes, 450 Cd/m^2
Contrast ratio	1000:1
Video signal	Compatible with video signals up to 1280 x 1024

7. Interventional Tools

In close partnership with our clinical partners, Philips continues to enhance the capabilities of interventional tools. Recent Philips innovations have expanded clinical utilization through continuous improvement of acquisition protocols, reduction of reconstruction times and expansion of range of applications.

7.1 StentBoost for coronaries

Find and treat the problem with greater insight and confidence
StentBoost allows you to clearly see your stent in the interventional lab. So you can immediately check positioning, before and after deploying balloons and stents, and confirm stent expansion. This provides greater insight and confidence for cardiology interventions. The full power of angiography becomes remarkably clear with StentBoost. Its enhanced visualization:
• Shows fine details of stent struts, and thinner and drug-eluting stents.
• Supports precise pre and post stent deployment, showing the enhanced stent image in relation to the vessel wall with StentBoost's unique subtraction feature.
• Allows enhanced positioning, especially critical during bifurcation and ostial stenting.
• Enables fine control of pre-dilation, stent expansion, and post-dilation.

This non-invasive tool has no impact on operational costs and procedural workflow. StentBoost is an excellent alternative to intravascular ultrasound (IVUS) when it is not available or when a quick result is required. Potential problems such as suboptimal positioning or under-deployment can be corrected immediately, without applying additional fluoroscopy.
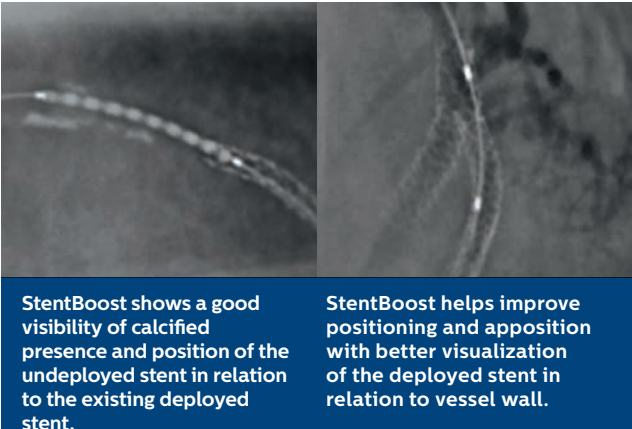
StentBoost shows a good visibility of calcified presence and position of the undeployed stent in relation to the existing deployed stent.

StentBoost helps improve positioning and apposition with better visualization of the deployed stent in relation to vessel wall.

7.2 Allura 3D-RA

As an alternative to acquiring multiple stationary views, Philips Allura 3D-RA generates high-resolution 3D images from a single rotation angiography run. With just one contrast injection, it delivers a 3D reconstructed display in as little as four seconds, quickly providing actionable insight. Allura 3D-RA can help you reach a confident diagnosis with less X-ray radiation and contrast media. Allura 3D-RA offers enhanced visualization of the anatomical vessel structure, helping to clarify the complex spatial relationship between the critical and branching vessels. With easy navigation through a wide range of 3D viewing ad manipulation possibilities, it can be used to select the optimal projection, a substantial benefit to support a swift diagnosis and treatment planning. Reducing contrast load and radiation exposure are critical, particularly for those faced with a lifetime of recurring treatment therapy.
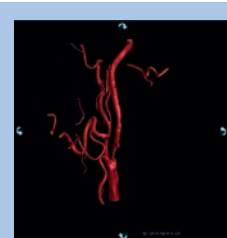
Internal Carotid artery: the 3D RA constructed image clearly showed narrowing of internal carotid artery at origin.

7.3 XperSwing

During a dual axis rotation scan, the C-arm operates on two axes simultaneously, enabling it to swing in a three-dimensional arc around the patient, providing a flexibility of movement that allows it to capture the required coronary images in fewer 'runs'. The system rotates with curved trajectories around the patient, thereby allowing imaging in all desired anatomical views in a single run. The trajectories are pre-programmed and are optimized to maximize the clinical image content, while staying within its boundaries in order to avoid any collisions. Dedicated trajectories are available for the left and the right coronary arteries.

"StentBoost is a great help in daily practice because it is easy to use. It's non invasive, it takes only one acquisition and you have an instant picture of your stent."

**Dr. Koolen, Head of Cardiology
Catharina Hospital Eindhoven, the Netherlands**

8. Additional options

8.1 2D Quantification packages
Quantitative Vascular Analysis (QVA)
QVA is an analytical software package for quantitative analysis. It includes the following functions:

• Calibration routines to enter the scale into the programs (based on the size of the catheter visible in the image).
• Automated Vessel Analysis. This program uses contour detection to calculate vessel dimensions and subsequently analyzes stenosis.
• Vessel diameter and stenotic index. This program measures vessel size and calculates the degree of stenosis.

Quantitative Coronary Analysis (QCA)
This software package provides quantification of stenosis measurements in the coronary arteries. It includes the following functions:

• Diameter measurement along the selected segment
• Cross sectional area
• Percentage of stenosis
• Pressure gradient values
• Stenotic flow reserve
• Calibration routines

Left Ventricular (LVA)
The Left Ventricular package quantifies the status of the left ventricle using various relevant data. It includes the following functions:

• Various Left Ventricular volumes
• Ejection Fraction
• Cardiac Output
• Wall Motion (Centerline, Regional, Slager)
• Calibration routines

Right Ventricular (RVA)
This software package is used to assess ejection fraction and right ventricular volumes. It enables you to perform right ventricular analysis from angiograms. The calculations can be executed from single plane or biplane projections. The package is intended especially for pediatric cardio applications and focuses on easy and efficient wall contour detection. It includes the following functions:

• Calibration routines
• Various Right Ventricular volumes
• Ejection Fraction
• Cardiac output
• Wall Motion (Centerline, Regional, Slager)
• Biplane Ejection Fraction (automatic and manual)

Full Autocal
The Full Autocal option can be used in conjunction with the quantitative analysis packages. When the object to be analyzed (e.g., Left Ventricle , Vessel Segment) is placed in the iso-center, full autocal avoids the need to:

• Acquire an additional image series containing a sphere or grid for calibration purposes, or
• Calibrate manually on a calibration object (e.g., catheter) displayed in the image or image series to be analyzed

8.2 Rotational Scan
Rotation image data can be used for advanced post processings, like 3D reconstructions. Rotational Angiography acquires a range of projections to create real-time, 3D impressions of complex 'cardiovascular' vessels. A contrast vascular run can be followed up with a mask run to allow image/run subtraction. Rotational Angiography can save considerable time and contrast, while providing the image detail required for diagnostic and therapeutic decisions. A rotational scan can be done in both the head and the side positions as a result of rotational scan. The high speed acquisition decreases the amount of contrast medium, while the wide rotation range provides a complete evaluation of anatomy.

Features Rotational Angio		Specifications
Stand in head position	Maximum rotation speed	51°/ sec.
	Maximum rotation angle	240°
Stand in side position	Maximum rotation speed	30°/ sec.
	Maximum rotation angle	180°
Frame speeds		15 and 25 fps

Users can designate speed, as well as a start and end position, through Xper settings.

8.3 Subtraction packages
Digital Subtraction Angiography (DSA)
The Digital Subtraction Angiography (DSA) extends the vascular application functionality of the Allura Centron system. DSA features real-time digital subtraction at low frame speeds of 0.5, 1, 2, 3, 4 or 6 frames per second. The DSA programs can be selected via available settings. The exposure technique provides exceptional image quality for subtracted images.

Roadmap Pro
Advanced subtraction angiography techniques are now being used to support highly complex procedures throughout the body. A roadmap is created by superimposing a live fluoro image on an angiographic image. Roadmap Pro is a software tool that provides a flexible range of features to support all anatomical areas and types of interventions. It offers insight into anatomy, and aids interventionalists in carefully positioning tools and materials, evaluating their effect, and deciding how to proceed during a case. Roadmap Pro comes along with DSA option.

8.4 Xper Flex Cardio
Your need for a small, compact, and reliable hemodynamic measurement system that saves floor space and moves with the table is realized with the Xper Flex Cardio. Xper Flex Cardio may be small in size, but it will have a big impact on your clinical practice thanks to the integrated Fractional Flow Reserve (FFR) measurements and Philips ECG capabilities.

9. Integration Solutions

The DICOM Image Interface enables clinical images to be exported to a destination, such as ViewForum, Xcelera or any third party PACS. The system exports clinical studies in DICOM XA Multi Frame or DICOM Secondary Capture formats.

The DICOM Image Interface speeds up image transfer through its fast Ethernet link, making images available on-line within seconds. The archiving process can be configured via available settings:
• The image archiving is done in the background during or after the procedure.
• The images can be archived automatically in the background with the Continuous Autopush option.
• The export format is configurable in 512 x 512, 1024 x 1024 (unprocessed) matrix.
• The DICOM Image Interface can distribute the examination images to multiple destinations for archiving and reviewing purposes.

• The DICOM Image Interface provides DICOM Store and DICOM Store Commitment Services.
• The Query/Retrieve function allows older DICOM studies to be uploaded in the system.

DICOM Radiation Dose Structured Report
Collection of dose relevant parameters and settings and export to a DICOM database (e.e. PACS, RIS). The reported data can be used for analysis, to further reduce Xray dose. The DICOM RDSR function collects and exports the required data. The software to provide the DICOM data for analysis and alerting needs to be acquired separately.
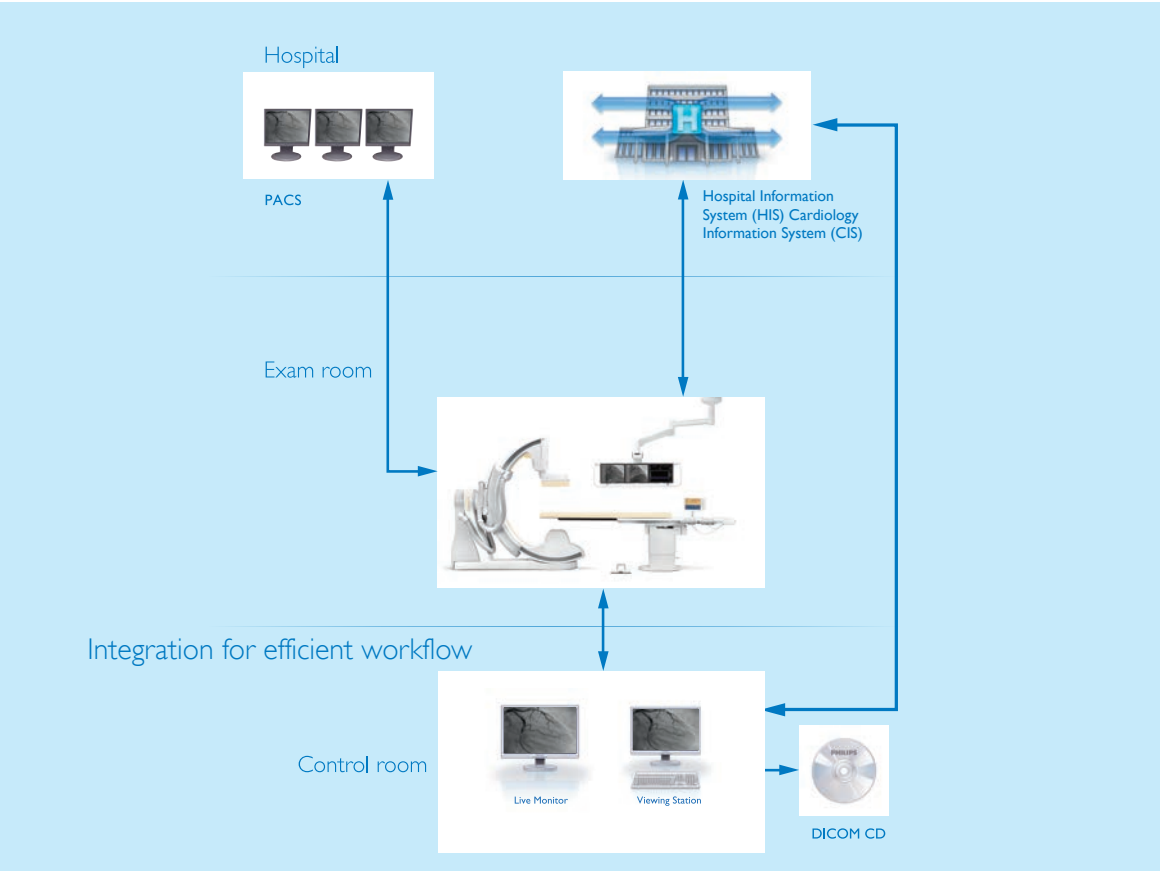
Optional

DICOM Print
DICOM Print provides an interface to any DICOM Printer. It provides Print Preview, Print Compose, Print Manual Overrides, Print Job submission, and Print Job management via automated printing protocols.

RIS/CIS DICOM Interface
This interface option enables two-way communication between the Allura Centron and a local Information System (CIS or RIS) or hemodynamic system. The interface uses the DICOM Worklist Management (DICOM WLM) and Modality Performed Procedure Step (DICOM MPPS) standards. If an information system is present, it is possible to receive patient and examination (request) information and to report examination results.
This option provides the following benefits:
• Eliminates the need to retype patient information on the system
• Can help prevent errors in typing patient name or registration number, which allows for consistency of information throughout the department to prevent problems in archive clusters provides information to and from the information system about the acquired images and radiation dose.

Upon request from the system, the complete worklist with all relevant patient and examination data is returned to the system.

Standard line rate video output
The standard line rate video output option is 625 (525) lines for a 50 (60) Hz video output unit. This option is required to connect a medical DVD/VCR or an additional TV monitor. This option enables you to store fluoro and acquisition data on a DVD/CD as X-ray is being generated during fluoroscopy and exposure.

Continuous autopush
The option provides an additional processor board that is dedicated to archiving. This minimizes interruptions that are caused by other functions that require the image processor, such as patient review. Using the continuous autopush option speeds up archiving and availability of clinical images for review at other PACS destinations.

Hospital

PACS

Hospital Information System (HIS) Cardiology Information System (CIS)

Exam room

Integration for efficient workflow

Control room

Live Monitor   Viewing Station

DICOM CD

10. SmartPath

Your Philips imaging system is designed to be reliable and efficient. Ensuring that it remains so from day one forward, is our commitment to you.

Philips SmartPath is a way to give you easy access to the latest updates, upgrades and innovations throughout the cycle of product ownership. By maintaining your equipment at peak performance, you can realize your full clinical and operational potential and be ready to quickly benefit from next–generation solutions.

Optimize
Improve your system performance through updates to the latest software and hardware standards.

Enhance
Take advantage of new functionality, clinical innovations and workflow efficiencies to expand your clinical capabilities.
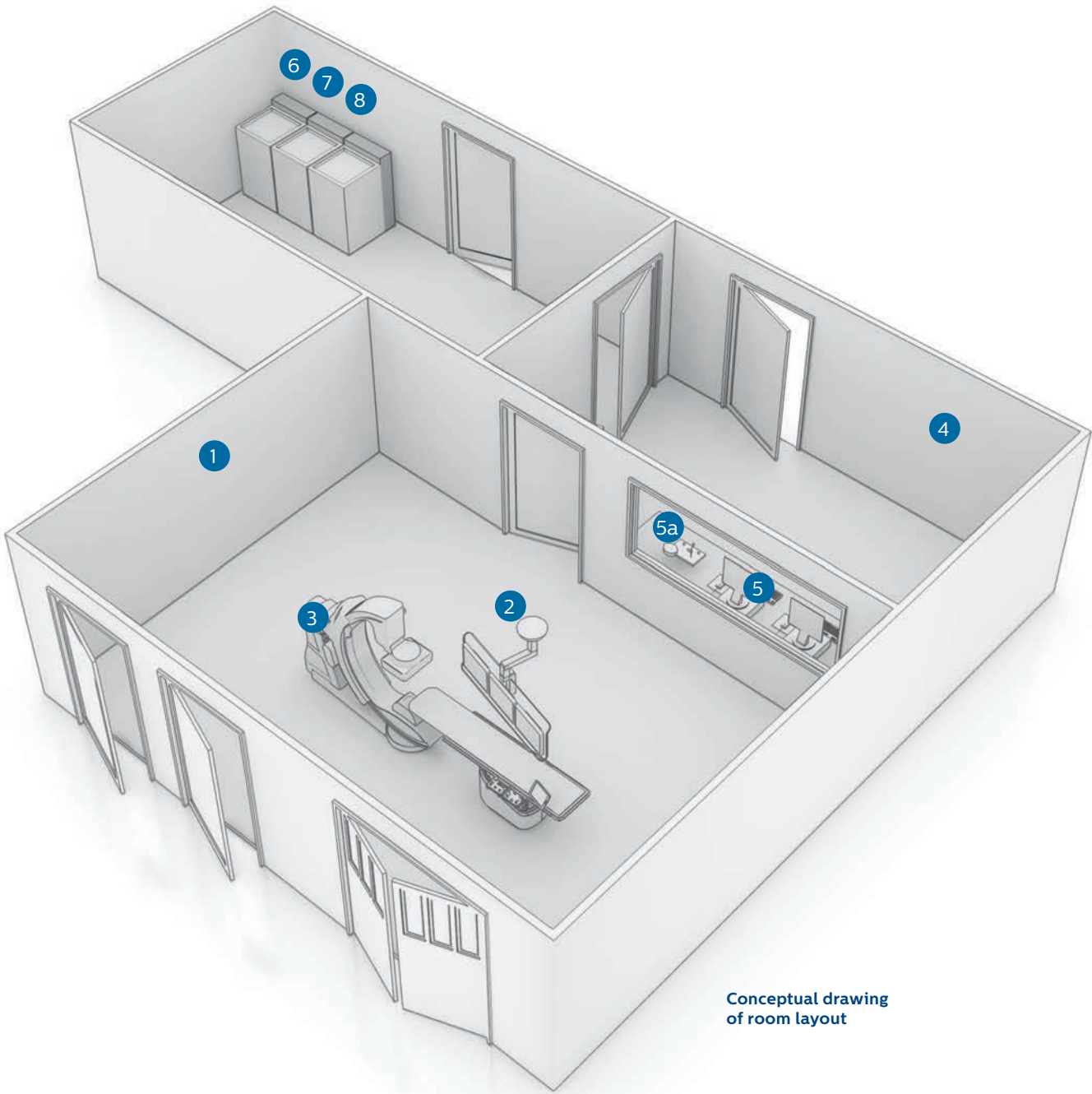
Transform
Retain your competitive edge with conversion or full replacement to next generation solutions.
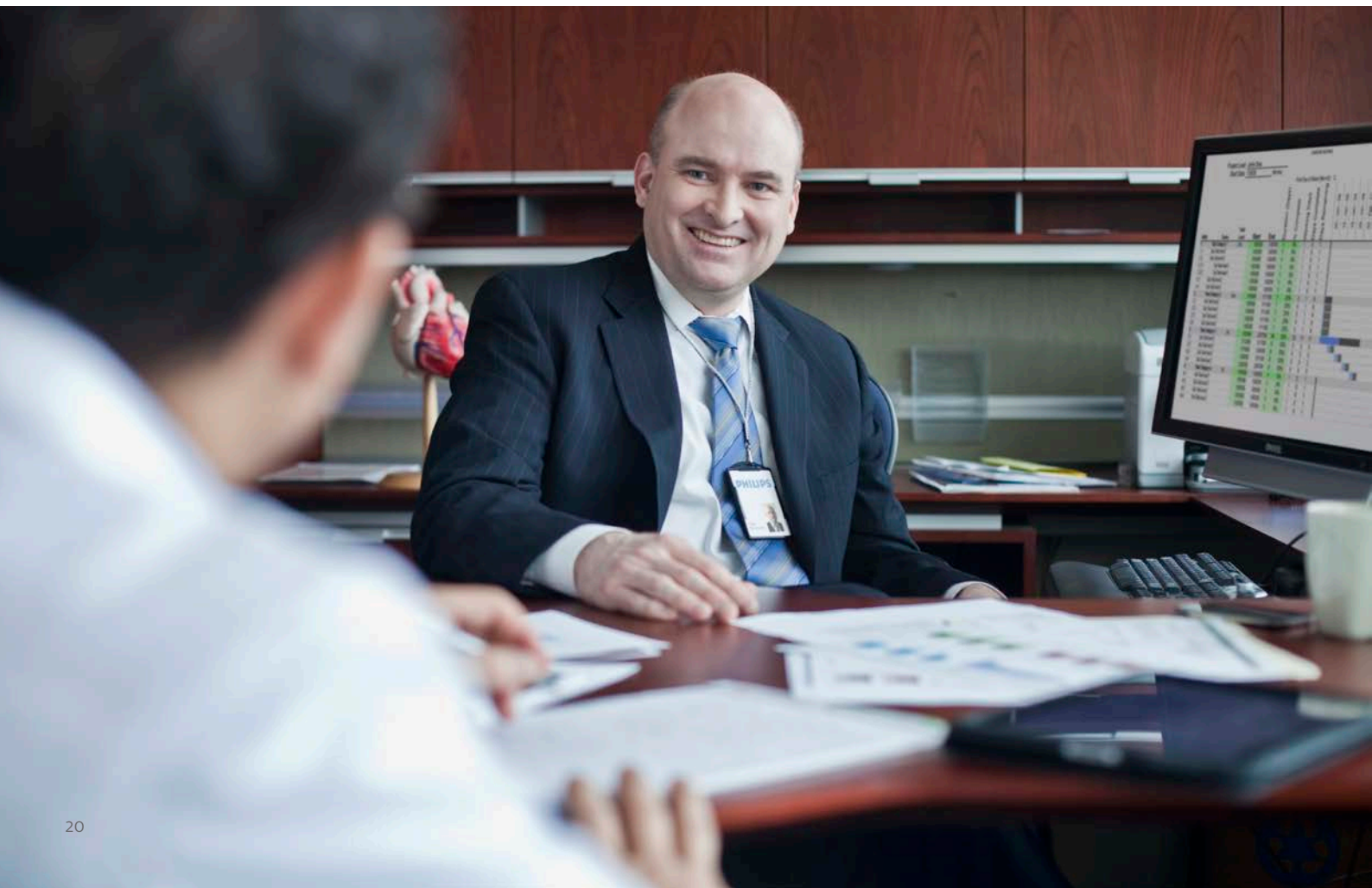
11. Room Layout

Top view
1. Examination room
2. LCD monitor ceiling suspension
3. Floor mounted stand
4. Control room
5. Centron viewing console
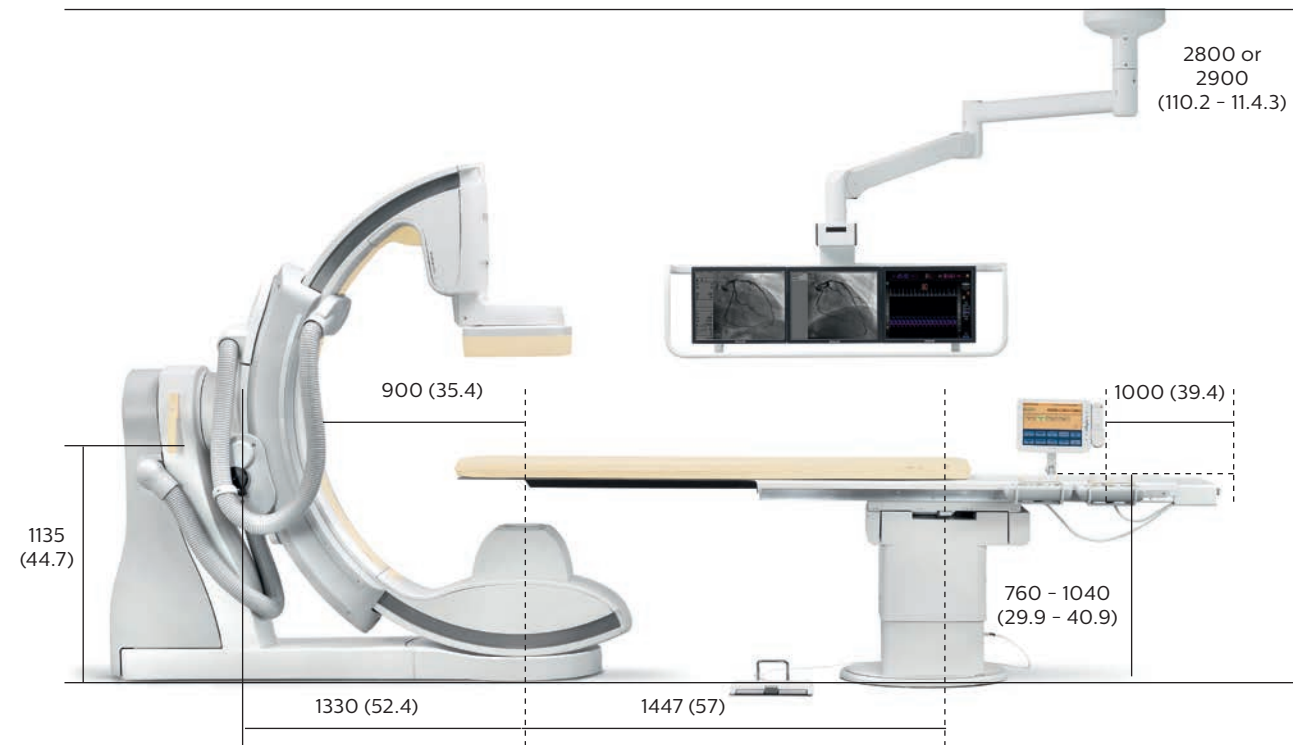5a. Intercom
6. X-cabinet
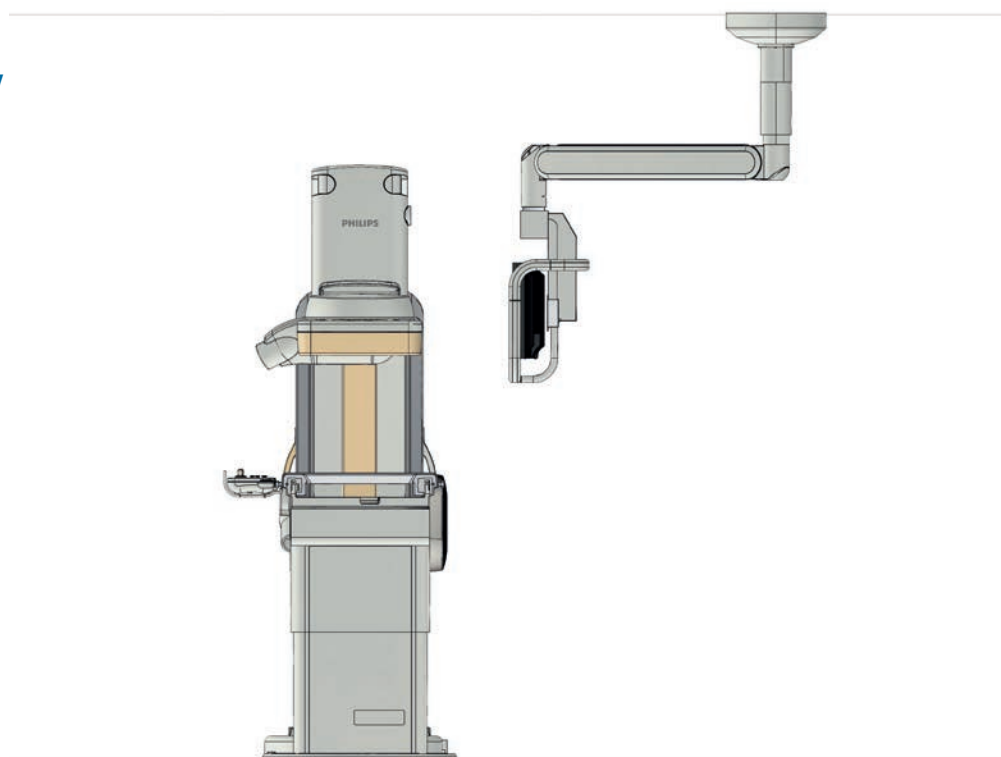7. R-cabinet
8. M-cabinet

Conceptual drawing of room layout

Side View

Dimensions in mm (inch)

2800 or 2900 (110.2 – 11.4.3)

900 (35.4)

1000 (39.4)

1135 (44.7)

760 – 1040 (29.9 – 40.9)

1330 (52.4)

1447 (57)

Front View

12. Image gallery

Versatile system designed for Cardiac, EP and ready for demands of Neuro and Vascular interventions

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