Data Sheet

Artis one

Floor-mounted system for uncompromised imaging

siemens.com/healthcare

Artis one

Floor-mounted system for uncompromised imaging

Artis one is an angiography system that leaves the beaten track.
It marks a new approach to interventional imaging, because it's different in many ways.

This system delivers proven state-of-the-art technology – like the MEGALIX Cat Plus X-ray tube featuring a unique flat emitter. In addition it offers next-generation tools for uncompromised imaging, such as CLEARstent Live* to verify stent positioning in real time.

Intelligent operation is enhanced by a configurable Head-up display, allowing you to interact with the system in a completely new, intuitive way.
So you can keep your attention where you need it.

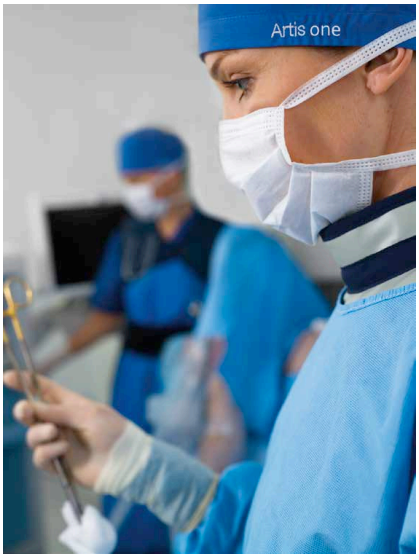
And because the solution is so easy to understand and deploy, it will have a positive impact on your whole organization.
Broaden your procedure mix and hit the sweet spot of your business.

Artis one is an angiography system developed for diagnostic imaging and interventional procedures including, but not limited to, pediatric and obese patients.

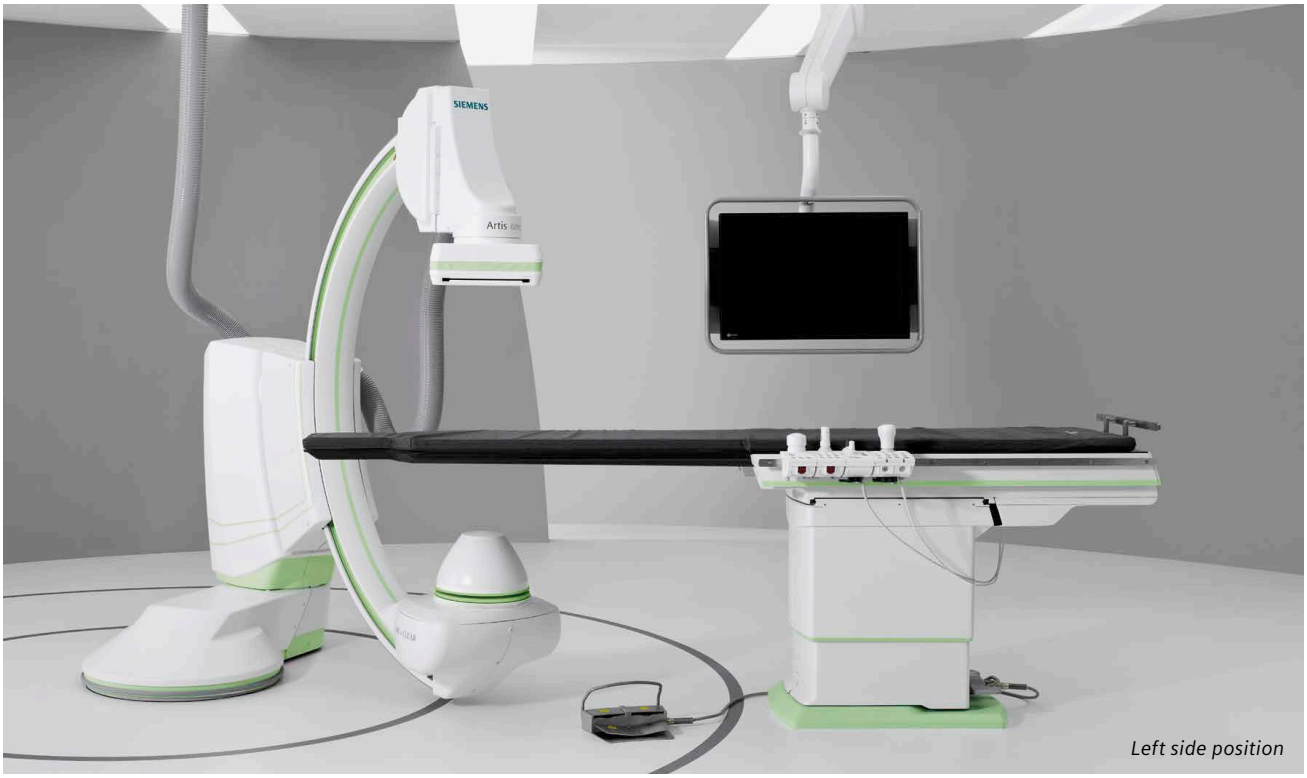
Procedures that can be performed with the Artis one include cardiac angiography, neuro-angiography, general angiography, rotational angiography, multipurpose angiography and whole body radiographic/fluoroscopic procedures as well as support of procedures next to the table for i.e. patient extremities or hybrid procedures.

Meet a system that is designed differently.

Artis one. Designed around you.



* Option



Left side position

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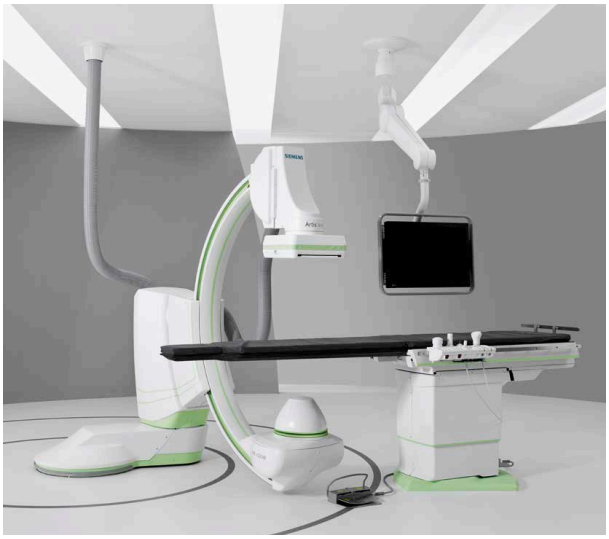
Head-end position

Right-side table rotated



Left-side table rotated

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Artis one – designed for uncompromised imaging, intuitive interaction and positive impact

From unique flat-emitter technology to real-time stent enhancement, Artis one offers proven technology with next-generation imaging tools. The CARE+CLEAR packages come standard, the perfect choice for high image quality at the lowest possible dose.

Optimum system positions?

At the press of a button – or automatically – Artis one smoothly adapts to your procedure-specific needs. Keep the patient's head free for anesthesia and echography or have room to move during an emergency.

Artis one requires less space and provides large returns.
Short installation time, easy deployment, and energy savings up to 20 %. Address a broader procedure mix – the smartest way to hit the sweet spot of your business.

X-ray tube

The MEGALIX Cat Plus tube is the first angiography X-ray tube to offer the unique flat emitter technology.
This enables a higher current during fluoroscopy resulting in better image quality especially for obese patients.

Integrated 3D imaging*

Parallel processing of the currently examined patient and one additional patient, as well as highspeed C-arm rotation of 60 degrees per second – with integrated 3D.
Two high contrast acquisition modes, quality-optimized with *syngo* DynaCT Cardiac untriggered, dose optimized with *syngo* Dyna3D.

QuickZoom allows to focus and zoom in the control room or at tableside with just one click and thereby helps to save time and speeds up the workflow.

CARE+CLEAR

Combined applications to reduce exposure (CARE) help to reduce radiation dose for the operator and the patient.

The CLEAR applications provide outstanding image quality to increase certainty during interventions.

CLEARstent* and CLEARstent Live*

CLEARstent features static stent enhancement allowing you to get a clear picture of implanted stents, whether it was 5 minutes or 5 months ago. CLEARstent Live takes this to real time and provides stent enhancement during an ongoing acquisition – while the stent is being positioned.

HeartSweep*

During one single sweep, all necessary angulations required for coronary diagnostics are acquired and help to find the optimal projection for treating a lesion. HeartSweep can follow up to 10 different trajectories with configurable movement speeds and simple one-button operation.

Unparalleled coverage

Benefit from patient coverage up to 2.10 m. Peripheral run-offs without moving the patient. Imaging the whole body in one go, with ceiling-like imaging workflows on a floor-mounted system.

Intelligent controls

Artis one features a new, unique heads-up display combined with tactile system operation which allows feeling and operating buttons even when hidden under a cover. This all helps to keep your attention where it's needed, and not on operating the system.

Artis one display

The new Artis one 30" display offers a 90 % larger image display area than conventional 19" screens. It connects to up to 4 external image sources and users can switch between different layouts which can be freely configured for a specific procedure.

Artis one Panoramic Display*

The new Panoramic Display offers an additional 30" screen that is mounted right next to the standard Artis one display. It displays up to 9 additional external image sources in its own configurable layouts, thus keeps even more imaging information visible during the procedure.

*HeartSweep**

* Option

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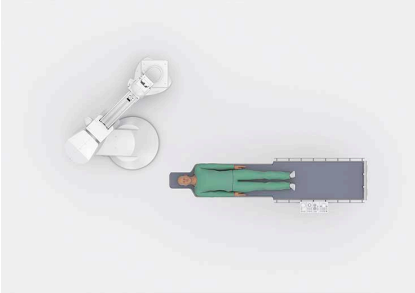
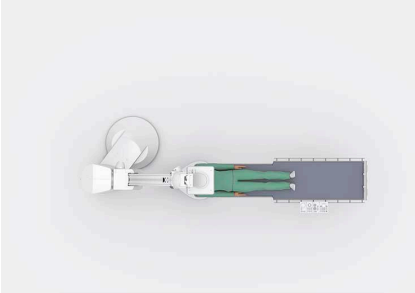
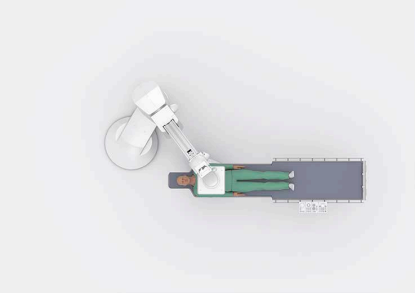
Ideal system positions for every procedure



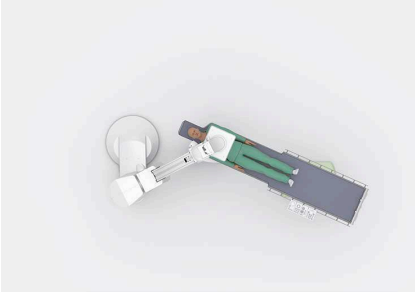
Transfer position



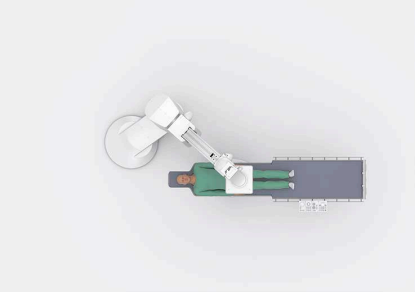
Head-end position (e.g. for PCI)



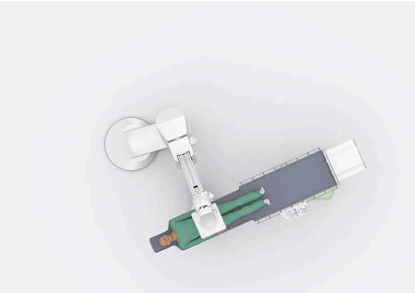
Left-side position



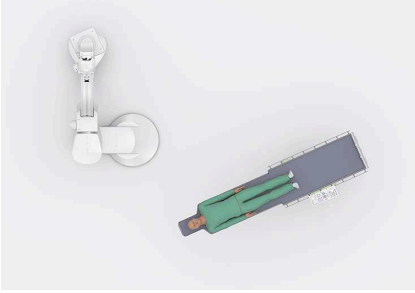
Right-side, table-rotated position (e.g. for pacemaker implantations)



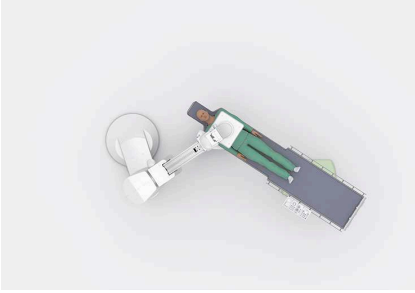
Peri-position



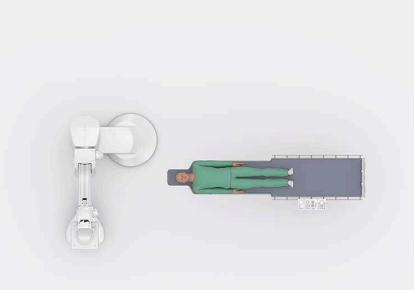
Left-side, OR position (e.g. for AAA treatment)



Extended parking position*



OR position, right-side*



Additional transfer position*

* Additional system positions, examples

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Imaging System

X-ray tube

MEGALIX Cat Plus 125/40/90-125GW

- High-performance X-ray tube
- Up to 40 % higher fluoro power with unique flat emitter technology
- Increased contrast during fluoroscopy, especially for examinations on obese patients
- Oil/water cooled

Max. exposure voltage (IEC 60613)	125 kV	
Focal spot (IEC 60336)	0.4 [1)]	0.8
Nominal power (IEC 60613) (thermal anode reference power = 300 W)	35 kW	90 kW (IEC 60613:1989)
Nominal power (thermal anode reference power = 0 W)	42 kW	112 kW (IEC 60613:1989)
Nominal radiographic anode input power	38 kW	99 kW (IEC 60613:2010)
Anode angle	8°	
Maximum anode heat content	2,500,000 J (3,375,000 HU)	
Maximum heat content of the X-ray tube assembly	3,600,000 J (4,900,000 HU)	
Maximum cooling capacity of the anode	400,000 J/min. (540,000 HU/min.) / 6667 W	
Continuous heat dissipation of the tube assembly	max. 2900 W	
Anode rotation	150/180 Hz (3-phase current)	
Max. anode current in fluoroscopy	250 mA small focus	
Max. anode current in acquisition	800 mA large focus	
Anode input power	10 min 20 min > 30 min	4000 W 3000 W 2500 W
Total filtration (IEC 60601-1-3)	≥ 2.5 mm Al	
Leakage radiation (IEC 60601-1-3)	< 0.44 mGy/h (at 125 kV in 1 m distance: 2500 W)	
Weight	approx. 36 kg (79.4 lbs.)	

Cooling unit

Cooling medium	water (not distilled) with coolant additive
Cooling medium temperature	max. 55 °C
Max. pressure	3.1 bar
Flow rate	3.5 l/min
Weight (cooling system)	< 28 kg (61.73 lbs.) + 6.5 kg (14.33 lbs.) cooling liquid

[1)] With flat emitter technology

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X-ray generator POLYDOROS A100 Plus	
Microprocessor-controlled high-frequency X-ray generator with automatic dose rate control for fluoroscopy and acquisition	
Multi-pulse converter frequency	100 kHz
Max. generator power (IEC 60601-2-7 and IEC 60601-2-54)	1000 mA at 100 kV ≙ 100 kW 800 mA at 125 kV ≙ 100 kW 800 mA at 100 kV ≙ 80 kW
Tube current	0.5 mA to 1000 mA in 0.01 mA steps 0.5 mA to < 800 mA[1)] in 0.01 mA steps
Tube current (pulsed fluoroscopy)	15 mA to 250 mA in 0.01 mA steps (small focus)
Pulse frequency	0.5 p/s to 66 p/s or continuous mode
Pulse time	0.5 ms to 800 ms
Max. continuous power in fluoro mode	3000 W
Tube voltage	40 kV to 125 kV in 0.1 kV steps

[1)] Limited to 800 mA option only available in the People's Republic of China

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Floor-mounted system for uncompromised imaging

Detector as30 (midsize)	
Amorphous silicon flat detector with 39 cm diagonal entrance plane	
High-resolution a-Si matrix with 184 µm pixel size and 16-bit digitization depth	
Integrated collision sensor	yes
Removable grid	yes
Detector rotation	yes
Detector cooling	air cooled
Imaging size	29 cm x 26 cm
Image display matrix	1560 x 1420 pixels
Size incl. housing and collision protection	430 mm x 378 mm with collision protection
Input fields	39, 32, 25, 20, 16, 11 cm (15.35“, 12.6“, 9.84“, 7.87“, 6.3“, 4.33“)
X-ray conversion technology	a-Si with CsI scintillator
Digitization depth	16-bit (65536 gray scale levels)
Pixel pitch	184 µm
Nyquist frequency	2.7 lp/mm
DQE (detective quantum efficiency)	0 lp/mm at 2 µGy: min. 65 %, typical 70 % (RQA5) 1 lp/mm at 2 µGy: typical 52 % (RQA5)
MTF (modulation transfer function)	1 lp/mm: min. 53 %, typical 59 % (according to IEC 62220-1-3)
Signal to electronic noise ratio (SENR)	11 dB typical at 5 nGy (RQA5, 1x1 binning, high gain)

Rotatable collimator
Compact collimator for angiography with rectangular blade and wedge-shaped filter for cardiological applications and DSA
Automatic synchronous rotation of the detector and collimator unit (internal rotation) to compensate for image rotation at different examination positions of the support stand; rotation also possible via remote control enabling upright images of objects or body parts not aligned with the table, e.g. arms (StraightView).

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Operating modes
Fluoroscopy
Digital pulsed fluoroscopy, with 7.5, 10, 15, 30 p/s
Additional fluoroscopy pulse rates from 0.5, 1, 2, 3, 4 p/s (CAREVISION)
Roadmapping (requires DSA option) with automatic pixel shift
Store Monitor: Any image can be stored on the disk
Store Reference: Any image can be stored as a reference image, even during online fluoroscopy
Store Fluoro: 1024 images
Last Image Hold (LIH)
Overlay fade
Online superimposing of active fluoro and reference image (overlay reference)
Fluoro Loop*
Storage and display of dynamic fluoro sequences
The maximum fluoro time that can be saved depends on the pulse frequency selected, e.g., 34 s at 30 p/s, 68 s at 15 p/s
Roadmap
Individual windowing of vessel map and tool image
Cardiac acquisition
Acquisition at 7.5, 10, 15 and 30 f/s, acquisition, display and storage in original matrix, 12-bit
DR – 0.5 - 7.5 f/s
Digital radiography with digital real-time filtering, applicable for single images and series with frame rates from 0.5 f/s to 7.5 f/s (to 30 f/s [1)])
Acquisition, display and storage are performed in original matrix size at a resolution of up to 2.22 megapixels
Time-controlled and manually variable frame rates are included
DSA – 0.5 - 7.5 f/s*
Digital subtraction angiography with digital real-time filtering, applicable for single images and series with frame rates from 0.5 f/s to 7.5 f/s (to 30 f/s [1)])
Acquisition, display and storage are performed in original matrix size at a resolution of up to 2.22 megapixels
Remask, peak opacification for iodine contrast (MaxOpac) and CO_2 contrast (MinOpac), display of anatomical background (Landmark) from 0 to 100 %
Time-controlled and manually variable frame rates are included
High-speed acquisition for DR and DSA*
Acquisition at 10/15/30 f/s
Subtracted display possible only with DSA

* Option; [1)] Requires High-speed option

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Operating modes	
Anatomical background [1)]	
Anatomical surroundings visible by fading in the native image	
Setting new mask [1)]	
A new mask can be set with "Move Mask" or "Replace Mask"	
Pixel shift [1)]	
Manual pixel shift, automatic pixel shift, flexible pixel shift (rubber masking)	
CLEARstent*	
Software for enhanced stent visualization, can be activated from tableside	
CLEARstent Live*	
Real-time stent enhancement for facilitation of complex procedures	
3D Imaging* for *syngo* DynaCT Cardiac or *syngo* Dyna3D	
Allows native and subtracted 3D reconstruction based on digital rotational angiography.	
Automatic 3D reconstruction and review in the integrated *syngo* 3D application.	
Rotation speed	up to 60 °/s
Acquisition rate	up to 66 f/s
PERISTEPPING*	
Peripheral digital angiography stepping of the stand without moving the patient, with a single contrast-medium injection performed while observing the contrast medium bolus	
Position-dependent variable frame rates	
Fully automatic exposure control	
The collimator settings are automatically saved for each stepping increment	

* Option; [1)] With DSA option only

Artis one

Floor-mounted system for uncompromised imaging

Operating modes

PERIVISION*

Peripheral digital angiography with stepping of the stand without moving the patient and online subtraction display in one examination procedure with a single contrast-medium injection while observing the contrast medium bolus

One automatically acquired mask image for each individual position

Position-dependent variable frame rates

Fully automatic exposure control

The collimator setting is automatically saved for each stepping increment

ECG-triggered fluoroscopy and acquisition*

ECG-triggered fluoroscopy/acquisition provides a still image of the catheter while compensating for cardiac movement. This enables the use of low pulse frequencies, resulting in a significantly lower dose compared to normal fluoroscopy/acquisition

HeartSweep*

HeartSweep is a dual-axis, rotational angiography following a predefined, configurable trajectory in a single sweep. It supports efficient diagnosis of coronary disease and improves planning of the interventional therapy. HeartSweep can also cover single-axis rotational angiographies, comparable to Dynavision DR.

Acquisition at 7.5, 10, 15 and 30 f/s, acquisition, display and storage in original matrix, 12-bit

Up to 128 acquisition programs per each mode for flexible adjustment of the X-ray and image processing parameters to the different procedures (selectable in the examination room and in the control room)

Additional functions

ECG recording and storage*

Recording, storage and display of an ECG waveform

ECG waveform displayed on the display with synchronous image information

* Option

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CARE	
Combined applications to reduce exposure (CARE) help to reduce radiation dose for the operator and the patient	
CAREfilter	
Five-level adaptive Cu prefiltration (CAREfilter) for reduction of skin dose; automatic selection control based on the absorption of the object	
Filter levels	0.1, 0.2, 0.3, 0.6, 0.9 mm Cu
CAREvision	
Pulsed fluoroscopy with additional reduced pulse frequencies of 0.5, 1.0, 2.0, 3.0, 4.0 p/s	
Pulse frequency can be adjusted to the requirements of each application to significantly reduce radiation exposure, particularly during interventions	
CAREprofile	
Radiation-free positioning of primary and semi-transparent collimators via graphic display in the LIH image on the image display	
CAREposition	
With CAREposition it is possible to perform visually controlled object positioning without radiation	
Radiation-free object positioning via graphic display of the central beam and image edges in the LIH image on the image display	
When the table is moved, the current positions of the central beam and image edges are superimposed on the LIH image by a graphic overlay	
CAREwatch	
A measurement chamber is integrated into the collimator housing for acquisition of dose area product and reference air kerma / reference air kerma rate	
Displayed on the image system display	
Different displays can be configured for fluoroscopy and for fluoro pause:	
During fluoro:	reference air kerma rate
During fluoro pause:	accumulated reference air kerma or dose area product or percentage of a configurable dose limit value (total of fluoroscopy and acquisition)

* Option

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CARE

CAREmonitor

CAREmonitor shows the accumulated peak skin entrance dose according to the current projection in the form of a fill indicator on the live monitor. Any change to the C-arm, table, SID, zoom, or collimator prompts the system to automatically update the calculation.

CAREguard

CAREguard provides an effective way to control skin dose. Three reference air kerma threshold values can be defined. If the accumulated reference air kerma exceeds a configured threshold, a warning sound is given and a pop-up displays on the system.

CAREreport

CAREreport is a DICOM structured dose report; it contains all patient demographics, procedure, and dose information. Using commercially available programs or in-house software, this information can be filtered for further processing, such as dose analysis.

Low-dose acquisition

Low-dose acquisition provides excellent image quality with a dose reduction of up to 67 % in comparison to normal acquisition protocols. One acquisition pedal of the footswitch can be configured as a low-dose acquisition pedal.

Automatic exposure control

Automatic X-ray control operating five fully independent, self-adjusting, and angulation-driven parameters for optimal dose calculation based on fluoroscopic values

* Option

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Imaging system

High-resolution digital imaging system with outstanding image quality due to real-time image processing

CLEAR

CLEAR optimizes image quality through real-time processing of the image data.

CLEARcontrol: The new histogram analysis provides a more homogeneous image impression by harmonizing over- and underexposed areas of the image. This is done fully automatically, thus eliminating any further manual user corrections through windowing.

CLEARview: Dose-dependent filtering of the image data efficiently suppresses image noise, enabling clear, sharp images, even for low-dose acquisitions.

CLEARvessel: Every pixel is analyzed in real time, and vessel edges are shown in high contrast without adding noise to the image.

CLEARmotion: Detection of fine structures and effective compensation of motion artifacts.

Fine moving structures, such as small vessels and guidewires, are detected in the image and motion artifacts are suppressed efficiently. The visibility of small moving vessels and guidewires is improved significantly during fluoroscopy.

CLEARchoice: Allows customization of image quality settings according to user preference.

Image storage capacity

25,000 images in 1k/12-bit matrix

50,000 images in 1k/12-bit matrix*

100,000 images in 1k/12-bit matrix*

General functions

Fast, direct access to all series, single images and reference images, store monitor images, in both the examination room and the control room

Changing window values

Zooming/Panning

Modification on the fly during postprocessing and pre-configurable for each individual acquisition program

Annotation

For inserting predefined or free text and drawing lines, arrows and circles

Distance and angle measurement

Text functions

Preconfigured image labeling using text modules or free annotation, comment line for image, patient positioning annotation

* Option

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Advanced applications

Quantification

QVA – Vascular analysis for vessel diameters of 0.5 mm – 50 mm (not for coronary analysis)*[1)]

Measurement program integrated into the imaging system for exact and reproducible vascular analysis

Automatic contour recognition

Stenosis quantification

Automatic and manual determination of reference diameter

Automatic and manual calibration methods

Diameter measurement

LVA – Left ventricular analysis*[1)/2)]

Scientific measurement program integrated in the imaging system for evaluating the functional efficiency of the left ventricle

Automatic and manual contour recognition

Calculation of the ejection fraction, volumes and indices (area-length and Simpson methods)

Wall motion (centerline, radial and regional methods)

Automatic and manual calibration

Diameter measurement

QCA – Scientific coronary analysis for vessel diameters of 0.5 mm – 7 mm*[1)]

Scientific cardiological vessel analysis with stenosis quantification:

Scientific measurement program integrated into the imaging system for clinically validated, objective, exact and reproducible evaluation of coronary arteries

Automatic contour recognition

Stenosis measurement with geometrical and densitometric calculations

Automatic and manual determination of reference diameter

Automatic and manual calibration methods

Diameter measurement

IZ3D*[1)]

IZ3D offers automated detection and 3D analysis of single and bifurcated coronary arteries from 2D angiographic images.

Out-of-plane magnification and foreshortening errors are minimized by calculating true geometric shape in 3D space from two 2D X-ray projections.

In stent planning mode, a virtual stent can be specified. This virtual stent is then displayed in the 3D image and corresponding markers are overlaid onto live fluoro and acquisition.

Angle/length measurement with automatic calibration

DICOM network connection and *syngo* user interface

Remark: Quantitative Coronary Analysis (QCA) is based on the gold standard in coronary analysis:
CAAS II (Cardiovascular Angiography Analysis System Mark II) by Pie Medical, Netherlands. The CAAS II algorithms were developed at Erasmus University in Rotterdam. They have been clinically validated and are internationally recognized for scientific purposes (multi-center studies).)

* Option; [1)] Operation from control room only; [2)] Only on cardiac acquisition scenes

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CLEARstent*

Uses an image-quality optimized algorithm to improve the visibility of the deployed stent during cardiac interventions

Optionally, contrast dye can be given. CLEARstent then calculates a scene alternating between the contrast-filled lumen and the stent-enhanced image (CLEARstent Dynamic).

Resulting images and scenes can be archived in PACS and reviewed on any DICOM viewer

CLEARstent Live*

CLEARstent Live algorithm stabilizes moving stent images without noticeable delay

CLEARstent Live supports frame rates up to 15 fps

Works even when the device is moved within the coronary vessel or contrast agent is injected, allowing precise stent positioning relative to previously implanted stents and/or vessel anatomy

Processed images are displayed side by side with original scene on assist segment

The stabilized CLEAR stent Live scenes are automatically saved to scene directory allowing for review of resulting DICOM images on any DICOM viewer

3D Imaging*

Integrated 3D with parallel patient processing

New interface for easier and faster tableside 3D manipulation and viewing

QuickZoom: Focus and zoom 3D volumes in the control room or at tableside with just one click

LA Segmentation*

One-click segmentation of anatomical structures in 3D image data, especially the left atrium. Structures can be exported to EP mapping systems (e.g. CARTO).

EP Option

Dedicated measure to improve signal noise in the EP lab. The kit is mounted to the tube and will minimize electromagnetic interference to the other EP recording and EP mapping systems in direct proximity to the system.

* Option

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System specifications

Stand

The Artis one angio system is specifically designed to meet the increasing demands of highly flexible imaging for interventional radiology and interventional cardiology.

C-arm system	
Highly flexible and quick positioning	
Single joystick for patient-angle oriented C-arm and detector movements	
Integrated computerized collision protection	
Programmable positioning	up to 8 system positions,
	additional 70 user-definable positions and 3 direct positions
Isocenter-to-floor distance	107 cm (42.13“)
Focus-to-isocenter distance	75 cm (29.53“)
Patient coverage (free floating tabletop, minimum without repositioning)	210 cm (82.68“) with table movement
C-arm depth	92.5 cm (36.4“)
Stand rotation	motorized programmable positioning
C-arm oblique projections [1)]	± 130° LAO/RAO and + 55°/– 45° CRAN/CAUD at 0° head-end C-arm position; + 81° LAO to – 59° RAO and + 48° CRAN to – 53° CAUD at 35° left-side C-arm position
Angulation speed	variable rotation up to 25°/s with LAO/RAO and 25°/s with CRAN/CAUD; variable rotation, 3D up to 60°/s
Variable focal spot-to-detector distance	approx. 90 cm – 120 cm (35.4“ - 47.24“), speed up to 9 cm/s (3.54“)
Longitudinal C-arm movement	motorized up to 250 mm/s (9.84“/s)
Transversal C-arm movement	motorized up to 150 mm/s (5.9“/s)

Maximum positioning flexibility	
Stand rotation for free positioning of system and table relative to one another, for the following positions, in addition to others:	
Patient access from the left side	
Right-side C-arm positioning	30° relative to the longitudinal axis of the patient and double oblique projections of 55°/69° LAO/RAO and + 45°/– 52° CRAN/CAUD
Stand rotation	motorized from ± 160°
Orthogonal system control oriented to the longitudinal axis of the patient	

Automap stand*
Automatic stand positioning depending on the reference image selected

Automap image*
Automatic reference image selection depending on the current stand positioning

* Option; [1)] Maximum angulations depend on stand position, table position and patient size

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Patient tables	
Depending on the diagnostic and therapeutic focus, the patient table enables user-specific application	
Artis one table	
Floor-mounted patient table for angiographic examinations and interventions	
Large unobstructed cantilevered tabletop and wide range of rotation enables access to patient from all sides and easy transfer and positioning	
Telescoping column with motorized height adjustment	
Table control module for operation of all table functions	
Table height	75 cm to 110 cm (29.53“ to 43.3“)
Table width	65 cm (25.6“) incl. rails
Table length	284.5 cm (112“)
Lift speed	5 cm/s (1.97“/s)
Table rotation	± 120° in 3° increments
Manual longitudinal travel	± 62.5 cm (24.6“); [125 cm (49.2“)]
Manual transverse travel	± 17.5 cm (6.9“)
Maximum unobstructed overhang	210 cm (82.7“)
Maximum table load	410 kg (903.9 lbs.) – 250 kg (551.16 lbs.) patient weight – 100 kg (220.46 lbs.) table accessories – 60 kg (132.28 lbs.) cardiopulmonary resuscitation (CPR)

Artis one

Floor-mounted system for uncompromised imaging

Free-floating tabletop

Tabletop/mattress

Narrow form with recess at head end, e.g., for cardiological applications. The tabletop is tapered in the thorax region for the greatest possible freedom of C-arm angulation.

Tabletop	Length: 279.5 cm (110.04“); width: 48.0 cm (18.9“)
Width at foot end	55.5 cm (21.85“)
Width at thorax	48.0 cm (18.9“)
Max. patient weight	250 kg (551.2 lbs.)
Al equivalent tabletop	≤ 1.4 mm (0.06“) at 100 kV, HVL 3.6 mm (0.15“) Al
Al equivalent mattress thin	< 0.6 mm (0.02“) at 100 kV, HVL 3.6 mm (0.15“) Al
Mattress thickness thin	4 cm (1.57“)

Artis one

Floor-mounted system for uncompromised imaging

DCS Artis one	
Fix mounted display ceiling suspension system DCS Artis one for one 30“ display or one 30“ and one additional display (up to 30“*) enables height adjustment and swivel capabilities. Enhanced positioning range and flexibility by double pivot cantilever.	
Travel radius	200 cm (78.74“)
Vertical lift (height adjustment)	52.2 cm (20.6“)
Length of cantilever	100 cm and 100 cm (39.37“)
Rotation range between extension and stand	330°, settings every 30°
Rotation range between extension and cantilever	330°, settings every 30°
Rotation range of displays	330°, settings every 30°

Integrated Data Display
All examination-relevant data of the system and table geometric data, system messages, and dose data with the CAREWATCH option are displayed on the data area on the examination or control room display of the imaging system

* Option

Artis one

Floor-mounted system for uncompromised imaging

Display control room

21" Color Display

21" TFT high-contrast color display for flicker-free, distortion-free image display for X-ray diagnostics as well as interventional therapeutic procedures	
Light weight, high luminance and contrast values	
Ambient light sensor for optimum adaption to the room brightness	
Diagonal screen measurement	21" (54 cm)
Image display	1600 x 1200
Pixel size	0.270 mm x 0.270 mm
Calibrated luminance	270 cd/m^2
Contrast ratio	1500 : 1
Horizontal viewing area	178°
Power consumption	< 48 VA (W)
Power save mode	< 0.5 VA (W)

Display examination room

Display 30"

Selectable display layouts	flexible free
Resolution	2560 x 1600
Pixel size	0.256 mm x 0.256 mm
Contrast ratio	typical 1500 : 1
Maximum luminance	1050 cd/m^2
Calibrated luminance	400 cd/m^2
Display area (W x H)	655.36 x 409.6 mm
Dimensions without stand (W x H x D)	730.9 x 484.9 x 80.6 mm
Weight (net)	approx 14.3 kg (31.5 lbs.)
Power consumption	57 W

* Option

Artis one

Floor-mounted system for uncompromised imaging

StreamLink*

Streaming of the examination room display content via IP network. Supports up to two streaming destinations for remote display on a Windows PC, e.g. in a conference or lecture room.

StreamLink also supports recording of the examination room display for later download.

Requires a separate Windows PC [1] (Windows 7 or 8), with the VLC player plugin for Internet Explorer 10 or higher / Firefox 22 or higher.

Second 21" color display*

Second 21" display, examination room, mounted next to the standard Artis one 30" display*

Third party display, connectable up to 24"

Artis one Panoramic Display*

A second 30" display, identical to the standard 30" Artis one display, mounted in the same display ceiling suspension (DCS).

Displays up to 9 additional external image sources such as mapping systems, recording systems, IVUS or PACS in its own configurable layouts.

Individual image sources can have resolutions of up to 1920 x 1200 pixels, and can be shown unscaled (1:1), scaled up or scaled down, depending on the selected layout. Special scaling algorithms ensure optimal image quality also for physiological curves.

User interactions like switching of layouts and image sources and operation of the external user interfaces, are done from the control room via a cloned Panoramic Display. Operation of the Artis one system is unchanged, as it uses its standard displays.

Operation in the examination room

System operation via modular control elements at the patient table for controlling C-arm movement, patient table and collimators.

Artis one Head-up display and tactile system operation through tableside control for operating the imaging system including post-processing as well as selecting organ programs

Ergonomically designed footswitch for releasing fluoroscopy, acquisition, and table brake, as well as an additional configurable function.

Operation in the control room

Siemens Healthcare universal *syngo* interface using keyboard and mouse for activating system functions such as post-processing, archiving, and configuring fluoro and acquisition programs

Multi-functional hand switch* for acquisition control, switching acquisition frame rates and/or step movements (option for PERISTEPPING and/or PERIVISION)

* Option; [1] Streaming to *syngo* X Workplace or Artis systems is not supported

Artis one

Floor-mounted system for uncompromised imaging

Connectivity

DICOM Functions

DICOM Send

Sends images and series to DICOM networks or workstations

DICOM StC (Storage Commitment)

Receives archiving confirmation from the image archive

DICOM Print*

Prints image material using virtual film sheets via DICOM print laser camera or network laser printer

DICOM Query/Retrieve

Searches for images and series in DICOM networks (Query)

Imports images and series from DICOM networks (Retrieve)

DICOM Get Worklist*

Imports patient and procedure data from a DICOM patient management system

DICOM MPPS* (Modality Performed Procedure Step)

Sends dose data as well as patient examination status to a patient data management system

Exam protocol can be sent as DICOM image

DICOM SR

Stores quantification results and relevant dose data as DICOM Structured Report and sends it to DICOM network

Ready Processed Images

Configurable transfer mode to store and archive overlays and post-processing results in the image pixels

Networking

Ethernet interface, full-duplex, gigabit transfer rate

* Option

Artis one

Floor-mounted system for uncompromised imaging

Data export

DVD drive for automatic digital image storage (incl. DICOM viewer) on a DVD or CD-R for offline data exchange in DICOM format, JPEG, Bitmap or AVI

Scene recorder* for archiving fluoroscopies and acquisitions on a DVD

USB interface to copy images on a memory stick or on an external hard disk

Integration of the Siemens Recording System

Sensis Interface*

Interface to Sensis hemodynamic and electrophysiological recording system for automatic acquisition or transfer of patient demographic data and system parameters (dose report)

Sensis can be operated tableside via Artis one Head-up display

* Option

Artis one

Floor-mounted system for uncompromised imaging

Injectors

For more information and additional injectors, please refer to the accessories catalog

Standard and optional accessories

Please refer to separate catalog

Remote Service*

Preparation for Siemens Remote Service (SRS):

Allows hardware and software remote diagnosis

Allows remote system configuration, e.g., adding a DICOM node

Early warning system to help ensure system operation (Guardian)

Security Package

syngo* Security Package

SW option for Artis with expanded security features such as user management and audit trail function

* Option

Artis one

Floor-mounted system for uncompromised imaging

Room preparation

Emergency power supply*

Emergency power supply* for the imaging system

Bridging of the imaging system power supply (50/60 Hz) until line voltage is back. In case of power failures of more than 90 seconds the imaging system will be shut down automatically.

Nominal power	2 kVA

Emergency power supply* for all system, table movements and imaging system

Emergency power supply for uninterrupted power supply for all system and table movements, as well as imaging system and monitors for a period of at least 10 min. during a primary power failure.

On-site emergency power supply system is a legal requirement in accordance with IEC 60601-2-43

Nominal power	15 kVA
Line voltage	400 V / 440 V or 480 V; an adaptation to 440/480 V is required.

Emergency power supply* for the entire system incl. emergency fluoro

Emergency power supply for the entire system incl. emergency fluoro for a period of at least 10 minutes during a primary power failure. Uninterrupted power supply for all system and table movements, as well as imaging system and monitors.

Approx. 25 seconds after switching on and restarting the generator, you will be able to work with continuous fluoroscopy in emergency operation mode.

Nominal power	40 kVA
Line voltage	400 V / 440 V or 480 V; an adaptation to 440/480 V is required.

Internal line resistance for generator A100 Plus [1)]

Support of hospital emergency power generator (diesel generator) switch to UPS mode (continuous Fluoro, same as with system EPS when emergency power active

	U_N/P	80 kW	100 kW
	380 V	≤ 135 mOhm	≤ 110 mOhm
	400 V – 460 V	≤ 135 mOhm	≤ 135 mOhm
	480 V	≤ 135 mOhm	≤ 125 mOhm

[1)] To achieve the full generator power, the measured internal line resistance should not exceed the following values. Resistance values in Ohm at U_N ± 10 %

* Option

Artis one

Floor-mounted system for uncompromised imaging

Installation data

Line voltage connection, 3-phase current, TN-S

Generator	**POLYDOROS A100 Plus**
Nominal voltage [1] (3 phase)	380 V, 400 V, 420 V, 440 V, 460 V ± 10 %, 50/60 Hz ± 1 Hz; 480 V, 60 Hz
Fuse	internal 50 A, external 63 A
Power consumption	0.2 kVA system off 1.1 kVA system off (when tube cooling is running) 1.6 kVA system in stand-by 2.5 kVA system in stand-by (when tube cooling is running) 8.0 kVA for fluoroscopy 160 kVA for acquisition
System control cabinet	
Nominal voltage [1] (3 phase)	380 V, 400 V, 420 V, 440 V, 460 V ± 10 %, 50/60 Hz ± 1 Hz; 480 V, 60 Hz
Fuse	internal 8 A, external 25 A slow-blow fuse
Power consumption	max. 7.2 kVA

[1] Max. allowable nominal voltage between phases (L1, L2, L3) and PE 300 V

Weight

Examination room	Stand	approx.	570 kg	(1257 lbs.)
	Display ceiling suspension (DCS) 30“	approx.	100 kg	(221 lbs.)
	Display ceiling suspension (DCS) 30“ + 24“	approx.	117 kg	(258 lbs.)
	Display ceiling suspension (DCS) 30“ + 30“	approx.	125 kg	(276 lbs.)
	Patient table		255 kg	(563 lbs.)
	Injector wall connection box	approx.	5 kg	(11 lbs.)
Control room	Imaging system	approx.	75 kg	(166 lbs.)
	30“ display	approx.	17.5 kg	(38.6 lbs.)
	Display controller	approx.	15 kg	(33 lbs.)
	UPS for image system (option)		13 kg	(29 lbs.)
	Miscellaneous		10 kg	(22 lbs.)
Equipment room	Generator		300 kg	(662 lbs.)
	Cooling system (X-ray tube)		< 39 kg	(< 86 lbs.)
	System control cabinet		270 kg	(595 lbs.)
	Cable cabinet (option)		120 kg	(265 lbs.)

Artis one

Floor-mounted system for uncompromised imaging

Ambient conditions (operation)

General room specifications for:

Examination room, control room and equipment room	Temperature range: Relative humidity: Max. temperature gradient: Barometric pressure:	+ 15 °C to + 30 °C (recommended temp. 22 °C) 20 – 75 % below dew point 5 °C/h 70 kPa – 106 kPa
Imaging system	For climatic conditions, see the general room specifications Air flow: Max. noise level:	 156 m^3/h 53 dB (A)
Generator	For climatic conditions, see the general room specifications Air flow: Max. noise level:	 160 m^3/h 55 dB (A)
System control cabinet	For climatic conditions, see the general room specifications Air flow: Max. noise level:	 295 m^3/h 55 dB (A)
Cooling unit (for MEGALIX X-ray tube)	Cooling air: Air flow: Max. noise level:	+ 15 °C to + 30 °C (frost-free room) 950 m^3/h 55 dB (A) at 50 Hz; 59 dB (A) at 60 Hz
Stand	Mechanical impact: Vibrations:	max. 10 g/16 ms max. 0.1 g/10-200 Hz
Operation altitude	Less than or equal to 3000 meters (10,000 ft)	
Overvoltage category	II	
Pollution degree	2	
Oxygen enriched environment	n/a	

Mobile Artis one installations*

The Artis one mobile kit option enables the installation of an Artis one system in a mobile cath-lab (trailer).

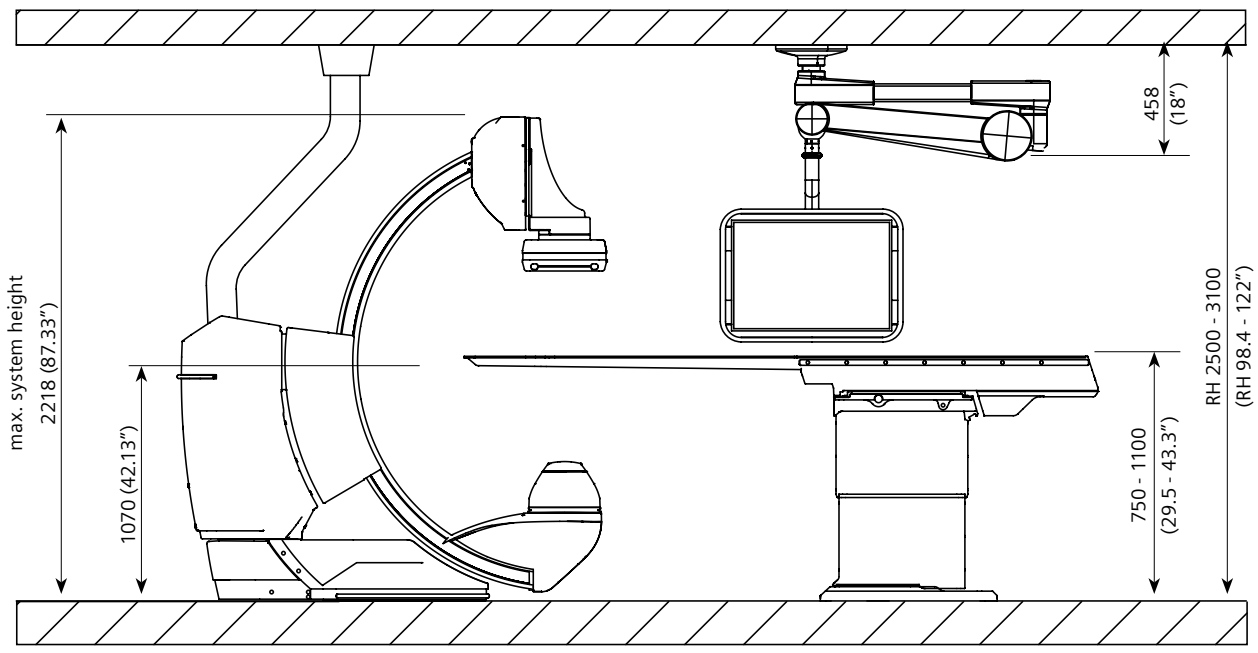
Mobile Artis one systems are typically operated by carriers who set up mobile cath-labs temporarily, e.g. while a hospital's own cath-lab is under construction.

* The Artis one mobile kit option is not commercially available in the United States or some other countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens organization for further details.

Artis one

Floor-mounted system for uncompromised imaging

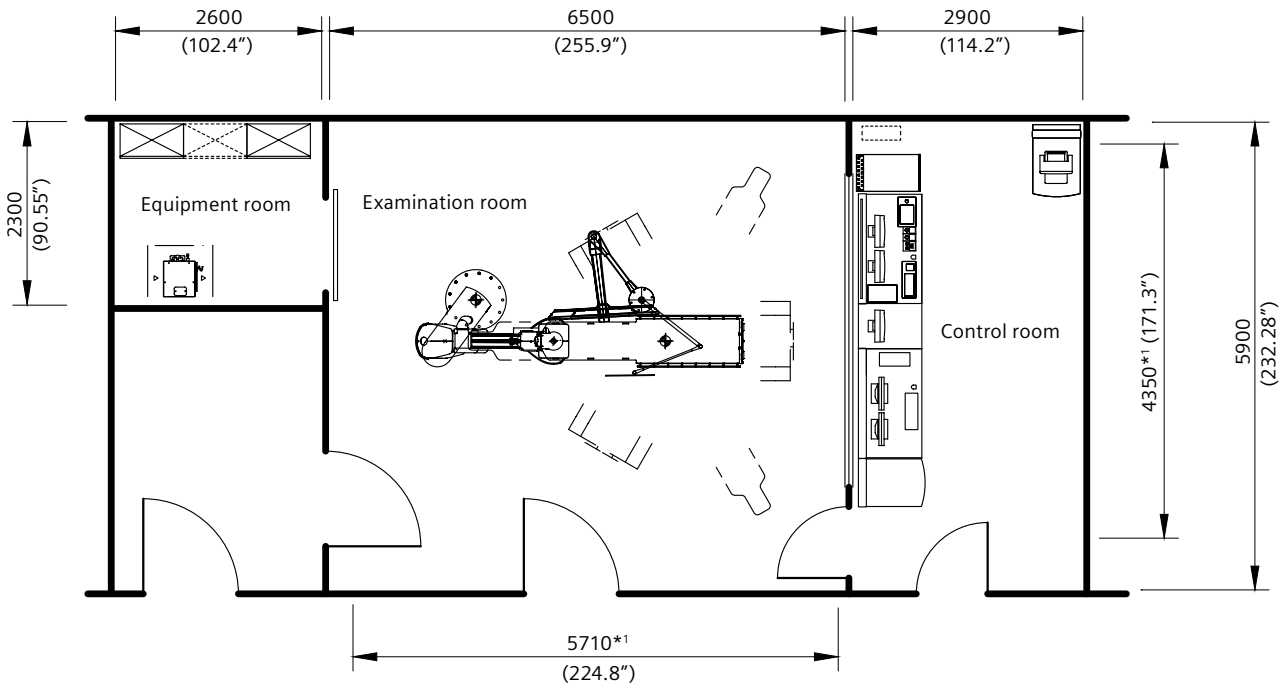
System view (mm)



Artis one

Floor-mounted system for uncompromised imaging

Room layout (mm)



*1 Minimum room size: ca. 25 m²

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For floor-mounted systems 10848600

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