

Date (dd.mm.yyyy): 04.04.2025

Product description:

Artis zee floor Interv. Card.

1 Product Overview

Included products are listed below:

Item	Description	Qty	Rel
	<u>Artis zee floor Interv. Card.</u>		
1.	Artis zee floor Interv. Card. 14445989 / Country of Origin: DE	1	R
2.	FD as40 Card ins. of as20 14446033 / Country of Origin: DE	1	R
3.	Automap 14432948 / Country of Origin: DE	1	R
4.	4P wireless footswitch inst. of cbl 14432905 / Country of Origin: DE	1	R
5.	DSA/DR acquisition mode 14432921 / Country of Origin: US	1	R
6.	CLEARstent Live + CLEARstent 14434169_530 / Country of Origin:	1	R
7.	Low dose subtraction mode 14432918_524 / Country of Origin:	1	R
8.	LV Analysis 14432942 / Country of Origin: DE	1	R
9.	syngo Valve Guide Engine as40 14432836 / Country of Origin: DE	1	R
10.	syngo LVA Quantification 14432978 / Country of Origin: DE	1	R
11.	syngo iFlow 14432973 / Country of Origin: DE	1	R
12.	syngo Angio Package 14432970 / Country of Origin: DE	1	R
13.	Sensis Vibe Hemo 14443023 / Country of Origin: DE	1	R

14.	Moveable upper body rad. protection 14434157 / Country of Origin: DE	1	R
15.	LED Exam Light 14440512_658 / Country of Origin:	1	R
16.	Lower body radiation protection 14432953 / Country of Origin: GB	1	R
17.	Intercom - Comfort 14440411 / Country of Origin: DE	1	R
18.	Arm rest for radial access small 14440570 / Country of Origin: DE	1	R
19.	Arm rest for radial access wide 14440571 / Country of Origin: DE	1	R
20.	Head holder w/ pad set 14440441 / Country of Origin: DE	1	R
21.	IntraSight cable set 14434220 / Country of Origin: DE	1	R
22.	DICOM RIS-Modality Worklist 14432950 / Country of Origin: DE	1	R
23.	Factory Inst. Artis floor 14440491 / Country of Origin: DE	1	R
24.	Diagnostic Window 100x80 cm 07444990 / Country of Origin: DE	1	R
25.	CAAS IV-LINQ Angio-IVUS/OCT #1 11155157 / Country of Origin: NL	1	R
26.	Large Display 14434172 / Country of Origin: DE	1	R
27.	Large Display video controller 18 14434176 / Country of Origin: DE	1	R
28.	Second display holder 14434166 / Country of Origin: DE	1	R
29.	2 19" b/w displays (live+ref) 14434165 / Country of Origin: DE	1	R

30.	LD High Contrast panel size 55"	1	R
	14443012_subdiagram1_2702 / Country of Origin:		
31.	Large Display diagn. protection	1	R
	14465217_subdiagram1_2798 / Country of Origin:		
	<u>T O T A L quantity is for one system</u>		

Optional products are listed below:

Item	Description	Qty	Rel
	<u>Artis zee floor Interv. Card.</u>		
	<u>T O T A L quantity is for one system</u>		

2 Technical description

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1. Artis zee floor Interv. Card.

System description:

The Artis zee – A PURE® system with single plane is an easy-to-use X-ray angiography system for digital acquisitions and is designed to meet the requirements of state-of-the-art angiography and interventional procedures, with a focus on interventional cardiology.

C-arm floor-mounted stand:

- Up to 5 preprogrammed work positions, additional 50 user-definable work positions and 3 direct positions can be stored and recalled from table side.
- One single joystick for patient angle-oriented operation of C-arm and change of source image distance (SID).
- Integrated, computerized collision protection.
- C-arm positioning 0° to the head end and 35° at the left side C-arm position.
- Double oblique projections:
 - LAO/RAO: ±130°
 - Cranial max. 55°, 52° with isocenter 12 cm above patient positioning tabletop
 - Caudal 45°
- Variable C-arm speeds up to 25°/s.
- Variable focal spot-to-detector distance between 90 cm and 120 cm.
- Isocenter-floor distance 106 cm.
- Focus-isocenter distance 75 cm.

Patient table configuration

Table

- Direct patient access from all sides, both through the swiveling table and large tabletop cantilever.
- Electromechanical release of table swivel at the touch of a button at the table.
- Telescopic foot with motor-driven height adjustment.
- Maximum patient weight: 250 kg. It is possible to install up to 40 kg of additional accessories, plus a further 100 kg for patient resuscitation.
- The table can be rotated to ensure quick access to the patient even in emergency situations.

Tabletop

Narrow-shaped carbon fiber patient positioning tabletop with head-end recess. Ideal for cardiological applications. Tabletop tapered in the thorax area for maximum freedom of C-arm angulation.

Mattress

Matching, special-foam mattress, 4 cm, incl. a latex-free cover.

This visco-elastic comfort mattress reacts to temperature and has the special property of adapting to the individual body shape under the influence of body weight and heat.

Application-specific accessories

Item	Description
	<ul style="list-style-type: none"> - Infusion bottle holder - ECG cable clips - Unilateral armrest: Carbon fiber armrest for cardiology and arm angiography to slide underneath the positioning mattress. - Hand switch for radiation release and additional control functions. <p>If narrow tabletop is selected:</p> <ul style="list-style-type: none"> - Head-end holder: Accessory rail plus holder, which is installed at the head end of the narrow tabletop. For attaching hand grips, shoulder supports, head supports, articulated arm supports, and anesthesia curtain. - Handgrips with support The patient can hold on to these hand grips with his arms above his head resting comfortably on the supports. This is beneficial for examinations requiring the arms to be held in a specific position. The two stainless steel hand grips with two radiolucent arm rests (12.5 x 24.5 cm/ 4.9" x 9.65") are mounted to the accessory rails of the head-end holder. It can only be used in combination with the narrow tabletop and with the head-end holder.

Operating modes

Fluoroscopy

- Digital pulsed fluoroscopy with pulse frequencies of 7.5 p/s, 10 p/s, 15 p/s, and 30 p/s in 1k/12-bit matrix. Pulse rates of 0.5 - 6 p/s are also possible with CAREvision.
- Overlay fade: On-line overlay of the reference image onto the active fluoroscopy. This improves efficiency and safety during interventional procedures because additional information which is clinically necessary can be displayed directly in the live fluoroscopy image.

Card acquisition

Digital card acquisition technology with frame rates of 7.5, 10, 15, and 30 f/s acquisition, display, and storage in 1k matrix.

CARE package

ALARA principle

Siemens follows the ALARA principle: "As Low as Reasonably Achievable"; the CARE package (Combined Applications to Reduce Exposure) was developed based on this research and development principle to protect the examiner and the patient.

Dose saving

- CAREfilter: Intelligent control software that minimizes X-ray dose. During fluoroscopy and acquisition, special copper prefilters are automatically inserted into the X-ray beam depending on current X-ray transparency, which is calculated continuously. This is necessary to ensure that the optimal prefilter value is always active. This automation makes work easier for the user because the optimal filter setting need not be adjusted manually for each case.
The adaptive Cu prefiltration has five steps (0.1, 0.2, 0.3, 0.6, 0.9 mm) and is used to lower the reference air kerma and improve radiation quality by reducing the low-energy X-ray radiation.
- CAREvision with as20 detector: Pulsed fluoroscopy with additional, reduced pulse rates of 0.5, 1, 2, 3, 4, 6 p/s. Adaptation of pulse rate to the current application requirements for significant reduction of radiation exposure,

Item	Description
	<p>especially during interventional procedures.</p> <ul style="list-style-type: none"> - CAREvision with as40 / as30 detector: Pulsed fluoroscopy with additional, reduced pulse rates of 0.5, 1, 2, 3, 4 p/s. Adaptation of pulse rate to the current application requirements for significant reduction of radiation exposure, especially during interventional procedures. - CAREprofile: Radiation-free positioning of the primary and semi-transparent diaphragms by means of graphic display in the LIH (Last Image Hold). Collimator shutters and semi-transparent filters can be adjusted as a graphical overlay on the last-image-hold without any need for fluoroscopy or radiation. - CAREposition: Radiation-free object repositioning by means of graphic display of the X-ray center beam and image edges in the LIH image. With CAREposition it is possible to reposition the object under visual control without radiation. - In case of table movements, the current position of the central beam and the image edges are superimposed on the LIH image as orientation points. - Low Dose Acquisition: Enables dose savings of up to 67 % during the examination. The Low Dose Acquisition protocol can be released with a separate pedal on the footswitch.

Dose monitoring

- CAREwatch: Display of the measured dose-area product and the calculated patient reference air kerma on the flat-screen display. Electronics unit with DIAMENTOR measurement chamber integrated in the collimator housing for dose acquisition.
Configurable screens on the data display and imaging system monitor:
During fluoroscopy: Reference air kerma rate.
During fluoroscopy interval: Accumulated reference air kerma or dose-area product, or percentage of the reference air kerma limit (total from fluoroscopy and acquisition).
- CAREguard: Monitoring the reference air kerma. If the accumulated reference air kerma exceeds one of the three configurable limits, a warning appears on the live display and tableside on the touchscreen control. This allows ideal monitoring of the accumulated reference air kerma during the examination.
- CAREmonitor: Special model-based monitoring of the measured skin entry dose, considering the geometric conditions of the system (actual device angulation, table position, patient weight, patient size). It then continually displays whether the skin entry dose applied to a specific region of the patient's body exceeds a specific configurable upper limit.
CAREmonitor continually calculates and displays the actual accumulated skin entry dose as a portion of this upper limit. This helps the user to detect a potential patient hazard at an early stage. The patient is therefore better protected against the damaging effects of radiation.

Dose documentation

- CAREreport: Dose information as part of the DICOM Structured Report. After each examination, the information is available in DICOM format and can be sent to a DICOM archive together with the image data, for example. Saving dose information in DICOM format also enables flexible analysis and further processing via a DICOM-capable analysis software/database.
- CARE Analytics: Standalone PC program for analyzing doses in angiography, CT, and radiological examinations. The data can be exported to statistics programs such as Microsoft Office Excel and SPSS for further analysis. CARE Analytics is available for download from the Siemens Intranet.

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CLEAR Max

CLEAR MAX enables maximized image quality through real-time processing of the image data without increasing the radiation dose, enabled by new computer hardware and algorithms. This results in improved contrast and sharpness for better visualization of small vessels, devices, tissue, and bones at the same dose level.

- 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: 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.

In addition, there is Dynamic Density Optimization (DDO) for on-line harmonization of native series and single images.

Image generationX-ray generator

Microprocessor-controlled high-frequency X-ray generator with automatic dose rate control.

- Power output: 100 kW at 100 kV (IEC 60601-2-7 and IEC 60601-2-54).
- SID tracking: Automatic tube current adaptation to focal-spot-to-detector distance.
- CAREmatic: Automatic X-ray control system for fully automatic calculation and optimization of exposure data based on fluoroscopic data.
- Patient transparency monitoring.
- Tube load monitoring with indication in the live display.

The optimal X-ray parameters depend on the transparency of the patient at the current angulation, measured during fluoroscopy. These parameters are continuously calculated and updated. Test shots are no longer required. This ensures superior image quality and minimum radiation exposure for user and patient with every exposure release.

Tube assembly MEGALIX Cat Plus 125/40/90

Dual-focus high-performance X-ray tube assembly with flat emitter technology for angiography, with metal center tube in lubricated spiral groove bearing technology for permanent, noise-free rotation.

- Maximum tube voltage 125 kV
- Focus: 0.4/0.8 (35/90 kW)
- Anode angle 8°
- Maximum anode heat storage capacity: 3,375,000 HU
- Maximum tube current for fluoroscopy: 250 mA

High tube power provides brilliant image quality even with heavier patients. In addition, there is no need for X-ray pauses even during lengthy cases. The X-ray

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tube is completely silent, which is an additional benefit for patient and user.

Flat detector as20

The digital high-resolution dynamic flat detector with integrated removable grid is especially designed to fulfill the requirements of angiographic and interventional applications.

184 µm pixel arrays provide highest spatial resolution and excellent contrast. Fluoroscopy as well as image acquisition are always done in 1k matrix and 14-bit gray scale resolution with high detail visibility. Acquisition frame rates of up to 30 f/s are possible.

Usable input formats:

- Overview: 17.7 cm x 17.7 cm, diagonal 25 cm.
- Zoom 1: 14 cm x 14 cm; diagonal 20 cm.
- Zoom 2: 11 cm x 11 cm, diagonal 16 cm.
- Zoom 3: 7 cm x 7 cm; diagonal 10 cm.

The very compact design with integrated collision protection provides maximum C-arm angulation range for excellent patient access.

The flat detector is mounted on a motorized rotating turntable at the C-arm. This always ensures upright presentation of the anatomy on the monitor screen independent of the relative position of the C-arm to the patient.

Motorized adjustment of the detector-patient distance.

Digital data transfer from the detector to the imaging system is via a high-speed Gigalink fiber-optic cable.

Removable grid:

The grid can easily be removed, saving the user time in examinations not requiring a grid. For example, in pediatrics, where dose saving is especially important.

Cardiac collimator

Compact multileaf collimator for cardiac angiography with rectangular blade and wedge-shaped filter.

- Automatic synchronous rotation of detector and collimator unit to compensate image rotation in the different working positions of the support stand.
- Rotation also possible via table side control enabling upright images of objects or body parts not aligned with the table e.g. arms.
- Manual rotation of the detector and collimator unit using the control right on the detector housing.
- Five-step adaptive Cu pre-filtration (CAREfilter) to reduce the equivalent skin dose and improve radiation quality through dose saving for the soft radiation parts. Filter steps: 0.1; 0.2; 0.3; 0.6; 0.9 mm Cu.
- Electronics unit with DIAMENTOR dose measurement chamber integrated in the collimator housing, for acquisition of the dose-area product and the calculated patient entry air Kerma at the patient entrance reference point (CAREwatch).

StraightView

The flat detector and the multileaf collimator are installed on a motorized rotating

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turntable on the C-arm. They automatically line up with the table swivel, thus ensuring upright images of objects which are in line with the table. The flat detector and multileaf collimator can also be rotated together at any angle relative to the table, enabling upright presentation and collimation of objects which are not in line with the table.

Image processing

- Image display as positive and negative, windowing, contrast and brightness control, electronic display shutter, image shift (roaming), vertical and horizontal image inversion, magnifying glass, and zoom functions.
- Storing of single images as reference images for acquisition and fluoroscopy.
- Quantification: angle and length measurements, automatic and manual calibration.
- Text functions: user-definable image annotation, free annotation or by means of text components, comments line for the image, R/L display.
- Fast and direct access to all series, single images, reference images, and photo file images via MULTIMAP. Access possible both in the examination and in the control room for displaying or post-processing images.

Imaging system

Dual architecture

In order to provide highest level system availability, the imaging system consists of two independent computer systems that manage central tasks such as real-time image processing during fluoroscopy or acquisition as well as post-processing and networking functionality separately from one another. This ensures the best possible system performance and availability.

Image storage capacity

25,000 images in 1k/12-bit image matrix. This can be optionally extended to 50,000 / 100,000 images.

Image export and networking

DVD/CD burner

DVD drive for automatic digital image storage in the background on DVD-/CD-ROM for off-line data exchange in DICOM format.

Networking

Network interface (1000 BaseT) with the following integrated DICOM services:

- DICOM Send: Sending of images into the DICOM network: The DICOM Send function enables fully automatic transfer of generated image data to a DICOM archive and/or a DICOM workstation. The user can perform his examinations without interruption, while the system is fully automatically transferring the images to the archive scene by scene. This is a background process, and thus does not interfere with the ongoing fluoroscopy or acquisition.
- DICOM Storage Commitment (StC): Feedback from the image archive. The DICOM StC function automatically gives feedback on whether the generated image data were successfully transferred. This provides the necessary certainty to the user before deleting the acquired images locally in the imaging system.
- DICOM-Query/Retrieve: Retrieval of archived images from a digital archive or from a workstation: Already archived image data from a previous examination can be fully retrieved and is then available for review and processing. The user can request CT or MR system images from the archive and display the

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| | <p>image in the examination room. There is no need for a separate workstation.</p> <ul style="list-style-type: none"> - DICOM Structured Report: All the quantification results obtained on the system as well as all dose information on the individual radiation releases can be saved in DICOM SR (enhanced SR) format and transferred to a DICOM network. |
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Note concerning DICOM interface(s)

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across interfaces with/between partner systems require explicit validation since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer e.g. for the rare case that available configurations are not sufficient. With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

ECG image data

Recording, storage, and display of an ECG lead. The ECG lead is displayed and stored together with the image information.

Display and display suspension

Displays in the exam room

Live and Assist displays are 19" TFT color and gray scale flat screen displays with high luminance and extended viewing angle.

- Screen size: 19" (48 cm)
- Resolution: 1,280 x 1,024 (pixels)
- Excellent brightness for the entire service life: 400 cd/m² at a contrast ratio of 1000:1.
- Flicker-free and distortion-free image display.
- Ambient light sensor for optimum adaptation of the image display to the room brightness.

Reference images are shown on the Assist display.

Data for device and table position, dose data, and system messages are displayed in the examination and control room on both the live and the Assist display.

Displays in the control room

19" high-contrast display for live image display in the control room is included as a desktop version.

Display suspension

Ceiling-mounted, swiveling, rotating, and height-adjustable display suspension system with longitudinal travel. It features two 19" high-contrast TFT displays for live and reference image display in the examination room (Standard configuration – unless modified).

Operation

syngo

The intuitive syngo operating elements allow for managing the whole process

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from preparation of the patient to image post processing in a safe, reliable, and time efficient way.

Footswitch

A 4-pedal wired footswitch to release fluoroscopy, exposure, and table brake as well as a configurable additional function is included as standard.

In the examination room

For an ideal workflow, full operation capabilities for the system can be accessed directly at the patient table. These include complete system operation through modular control elements for controlling C-arm movements, the patient table, and the multileaf collimator.

syngo-based touchscreen with multi-functional joystick for operation of the imaging system, including post-processing and quantification as well as selection of the organ programs. The touchscreen is specifically configurable to individual clinical requirements.

This means that the user can operate the system on their own without having to leave the examination room if this is deemed necessary by the situation.

In the control room

Standard Siemens *syngo* control via country-specific keyboard and mouse for all imaging system functions such as image post-processing, storing, and configuring of organ programs.

Smart Remote Services

Prepared for Smart Remote Services (during warranty, then with service contract):

- Hardware and software remote diagnosis.
- System remote configuration, e.g. adding of a DICOM node.
- Early warning system ensuring system operation.

Customer Care

From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care"*.

These include:

- Initial application training
- Interactive e-learning for various applications
- Free customer magazines
- Arrangements for clinical training via a global network
- Free trial licenses

You will find information on our e-learning program and further details on general "Customer Care" services on the Internet.

* The availability of "Customer Care" services may be restricted for some systems.

User Training

Siemens recognizes the significant investment you are making in purchasing a new imaging system and are determined that you can realize the full capability of this new system. Siemens clinical applications training ensures you have every opportunity to fully utilize your new system.

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Content of user training:

- Handover Training and Follow-up Training.
- Introduction to the functions, options, and handling of the Angiography system.
- Instruction on the use of the Angiography system together with modern, highly developed applications.

Delivery & duration of the user training varies and may be country specific so for additional information please contact your local Siemens representative.

2. **FD as40 Card ins. of as20
as40HDR* flat detector**

The digital high-resolution dynamic flat detector with integrated removable grid is especially designed to fulfill the requirements of interventional imaging.

The large high dynamic range (HDR) detector, along with the entire 16-bit imaging chain for 3D-imaging, enables intraoperative, cross-sectional imaging (with optional available *syngo* DynaCT) to visualize objects down to 5 HU with up to 4 times greater contrast.

The increased scintillator layer thickness of 750 µm results in a high DQE (Detective Quantum Efficiency) of 77%, thereby improving image quality at low radiation doses.

*Disclaimer:

The products/features in combination with Artis zee (here mentioned) are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens organization for further details.

154 µm pixel arrays provide highest spatial resolution (3.25 LP/mm) and excellent contrast. Acquisition frame rates of up to 60 f/s are possible.

Usable input formats:

- Overview mode 30 cm x 38 cm
- Zoom 1: 30 cm x 30 cm; diagonal 42 cm
- Zoom 2: 22 cm x 22 cm; diagonal 32 cm

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- Zoom 3: 16 cm x 16 cm; diagonal 22 cm
- Zoom 4: 11 cm x 11 cm; diagonal 16 cm
- Zoom 5: 8 cm x 8 cm; diagonal 11 cm

The flat detector is mounted on a motorized rotating turntable at the C-arm. It can be rotated by 90°, so that it can be adjusted to landscape format or portrait format. Any angle in between can be adjusted.

Motorized adjustment of the detector-patient distance.

The as40HDR flat detector offers additional operating functions directly on the detector housing, such as angulation, FD rotation (cranial/caudal, RAO/LAO), and change of the focus-detector distance.

Removable grid:

The grid can easily be removed, saving the user time in examinations not requiring a grid. For example in pediatrics, where dose reduction is especially important.

or

Flat detector as40

The digital high-resolution dynamic flat detector with removable grid is especially designed to fulfill the requirements of angiographic and interventional applications.

The as40 flat detector offers additional operating functions directly on the detector housing, such as angulation, FD rotation (cranial/caudal, RAO/LAO), and change of the focus-detector distance.

154 µm pixel arrays provide highest spatial resolution (3.25 LP/mm) and excellent contrast. Fluoroscopy as well as image acquisition are always done in 14-bit gray scale resolution, allowing excellent detail visibility. Acquisition frame rates of up to 30 f/s are possible.

Usable input formats:

- Overview mode: 30 cm x 38 cm.
- Zoom 1: 30 cm x 30 cm; diagonal 42 cm.
- Zoom 2: 22 cm x 22 cm, diagonal 32 cm.
- Zoom 3: 16 cm x 16 cm; diagonal 22 cm.
- Zoom 4: 11 cm x 11 cm, diagonal 16 cm.
- Zoom 5: 8 cm x 8 cm; diagonal 11 cm.

The very compact design with integrated collision protection provides maximum C-arm angulation range for excellent patient access.

The flat detector is mounted on a motorized rotating turntable at the C-arm. It can be rotated by 90°, so that it can be adjusted to landscape format or portrait format. Any angle in between can be adjusted.

Motorized adjustment of the detector-patient distance.

Digital data transfer from the detector to the imaging system is via a high-speed Gigalink fiber-optic cable.

Removable grid:

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The grid can easily be removed, saving the user time in examinations not requiring a grid. For example in pediatrics, where dose saving is especially important.

Angio collimator

Compact multileaf collimator for DSA and cardiological applications with rectangular diaphragm, wedge-shaped filter diaphragms and finger-shaped graduated filter.

- Automatic synchronous rotation of detector and collimator unit to compensate image rotation in the different working positions of the gantry.
- Manual rotation of the detector and collimator unit using the control right on the detector housing.
- Five-step adaptive Cu pre-filtration (CAREfilter) to reduce the equivalent skin dose and improve radiation quality through dose saving for the soft radiation parts. Filter steps: 0.1; 0.2; 0.3; 0.6; 0.9 mm Cu.
- Independent rotation and shifting of filter diaphragms.
- Electronics unit with DIAMENTOR measurement chamber integrated in the collimator housing, for acquisition of the dose-area product and the calculated patient entry dose (CAREwatch).

Tube assembly MEGALIX Cat Plus 125/20/40/80-122GW

3-focus high-performance X-ray tube with flat emitter technology, metal center tube in lubricated spiral groove bearing technology for permanent, noise-free rotation.

- Maximum tube voltage 125 kV
- Focus: 0.3/0.6 x 0.6*/1.0 (17/38/80 kW)
- Anode angle 12°
- Maximum anode heat storage capacity: 3,375,000 HU
- Maximum tube current for fluoroscopy: 250 mA

* Image quality improved

High tube power provides brilliant image quality even with heavier patients. In addition there is no need for X-ray pauses even during lengthy cases. The X-ray tube is completely silent, which is an additional benefit for patient and user.

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3. **Automap**

Automap optimizes the procedure workflow, especially during interventions. A selected reference image displaying the needed medical information (e.g., before dilatation) is used as the basis for moving the system to the correlated position automatically.

The intervention can be continued immediately without manually repositioning the patient. On the other hand, the system is able to select a reference image for the current device position.

In case of changes in device position, this enables the user to see the corresponding reference images quickly and safely.

4. **4P wireless footswitch inst. of cbl**

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5. **DSA/DR acquisition mode**

Digital acquisition technology with frame rates of 0.5 to 7.5 f/s in 1k/12-bit matrix and digital real-time filtration. Single image and serial acquisitions with time-controlled and manually variable frame rate.

The 1k image matrix with a bit depth of 12-bits allows an excellent image contrast by using 4,096 shades of grey. Thus, the image quality meets highest expectations in angiography and fulfills all prerequisites for precise diagnostics and safe interventions.

With Artis pure systems only

CLEARmap

Special 2D Roadmap operating mode creating a vessel map from a DSA-scene using Maximum Opacification technique. As an additional operating mode, you can also decide to pick one frame out of a DSA run (i.e. for venous access in Roadmap).

This provides improved image quality compared to conventional Roadmap, and reduces x-ray dose and contrast media.

CLEARmatch

Automatic/Online pixel shift processing for most accurate subtracted image display during Roadmap and DSA based on real-time movement detection and compensation.

Six degrees of freedom - vertical, horizontal, rotational, zoom and shearing movement (left and right) - allowing highest possible efficacy. In order to show the most recent information in raw format, the pixel shift operation is applied to the mask image. This optimized way of pixel shifting ensures a perfect match of Roadmap image and native fluoro image, being shown at the Assist monitor.

Digital Subtraction Angiography with frame rates of 0.5 to 7.5 f/s, including pixel shift, remask, roadmap, peak opacification for iodine contrast (MaxOpac), and CO2 contrast (MinOpac); adding of the anatomical background (landmark) from 0 to 100%.

Includes the "Advanced Roadmap" additional function which offers the following clinical benefits:

- DSA image can be selected as a mask for Roadmap
- Zoom can be changed during Roadmap
- Catheter and vascular contrast can be changed separately

Unexpected patient movements in DSA acquisitions will deteriorate image quality. Although this can be corrected via manual pixel shift, it is still inconvenient and time consuming for the user. Auto Pixelshift solves this challenge easily maintaining optimal image alignment.

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6. **CLEARstent Live + CLEARstent**

CLEARstent Live allows real-time verification of stent positioning while moving the device. This enables the physician to precisely position the stent in relation to the anatomy of the heart and stents that already have been implanted. Contains both CLEARstent Live license and CLEARstent license.

The CLEARstent imaging function allows an improved display of fine stent structures, i.e. the grid of inflated stents. CLEARstent is a post-processed stent enhancement and may be used also on previously acquired images. Using the CLEARstent function special reference images from any scene or fluoroscopy scene acquired natively will be generated. Composite images are created by averaging several frames of a scene and by considering the alignment of balloon markers. If an ECG signal is available, the heart phase will also be considered.

7. **Low dose subtraction mode**

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8. **LV Analysis**

Scientific measuring program integrated in the imaging system for evaluation of the functionality of the left ventricle.

- Automated and manual contour detection
- Automatic end-diastole/end-systole detection
- Calculation of ejection fraction, volumes, and indices (area, length, and Simpson methods)
- Centerline, radial and regional wall movement analyses
- Automatic and manual calibration methods
- Distance and angle measurement

9. **syngo Valve Guide Engine as40****Contents:**

The *syngo X Workplace* is a dedicated workstation for image postprocessing. Its functionality can be extended with additional software functions to suit specific user or clinical needs in interventional cardiology, interventional radiology, and surgery. The use of the licensed software is limited exclusively to the specific *syngo X Workplace* included with this configuration.

syngo X Workplace PC

The high-performance workstation is equipped with an Open GL accelerator board to support 3D applications. To exchange medical images on DICOM-compatible CD-Rs and DVDs, the system is equipped with a CD/DVD burner.

syngo X Workplace can be connected to an existing network via 1000/100/10 Mbit Ethernet.

Examination room:

19" color flat display or Artis Large Display connection kit.

With this configuration, if an Artis Large Display is ordered - the configuration includes a connection kit for the Artis Large Display. If an Artis Large Display was not ordered a display is delivered additionally for the examination room.

Control room:

19" color flat display or Artis Cockpit connection kit.

In this configuration, there is also one display for the control room or one connection kit for an Artis Cockpit.

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The Siemens 19" LCD color display features very high contrast even under very bright ambient light conditions. The Gamma curve was precisely adapted to the CIE/DICOM recommendation and is thus especially suited for gray scale display.

Disclaimer:

The products/features (here mentioned) are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens organization for further details.

Display is a 19" TFT color flat-screen displays with high luminance and extended viewing angle.

- Screen size: 19" (48 cm)
- Resolution: 1,280 x 1,024 (pixels)
- Excellent brightness for the entire service life: 400 cd/m² at a contrast ratio of 1000:1
- Flicker-free and distortion-free image display
- Ambient light sensor for optimum adaptation of the image display to the room brightness

For software-version older than VD2, we deliver the following LCD color display:

- Screen size: 19" (48 cm)
- Resolution: 1,280 x 1,024 (pixels)
- Excellent brightness for the entire service life: 180 cd/m² at a contrast ration of 800:1
- Flicker-free and distortion-free image display
- Anti-glare screen

The controlled background lighting provides stable lighting throughout the entire product life cycle.

syngo X Workplace Basic User Software

The *syngo X Workplace* software features an intuitive and thus easy to learn user interface developed from prototypes tested in close cooperation with users.

Standard functions such as filming or image review, and optional clinical application software, are performed in individual processes on dedicated task cards. A number of functions and input parameters, as well as the language used, can be selected according to individual requirements.

Package includes the following software licenses

Basic software with CD and dongle for the following functions:

- Patient Browser
- Filming
- Viewer
- System services

Patient Browser:

- Patient management.
- DICOM communication with Send, Receive, Query/Retrieve, Print.
- Reading and importing image data from CDs/DVDs.
- Module for writing DICOM CDs/DVDs for data exchange. Writing is in background mode

Item	Description
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Filming:

A virtual film sheet shows a 1:1 display of the film sheets to be printed. This permits an effective preview of the filming job and the windowing of images, as well as providing a large number of evaluation functions.

Viewer:

The Viewer supports interactive 2D review, evaluation, and documentation functions. Multiple studies from the same patient can be displayed side-by-side for comparison.

- Image display: 1.024² screen matrix, configurable with up to 64 image segments.
- CINE display: Automatic or interactive dynamic presentation technique for the visualization of time and volume series.
- Synchronized viewing of multiple series.
- Measurement and annotation: Text annotation; distance, angle, circle, ROI, and pixel lens, depending on information available from the acquisition system.

System services:

Microsoft Office Word, Excel, PowerPoint plus Outlook are supported (not provided!).

- Any user-selectable file, such as cardiac or angiographic acquisitions, DSA or 3D AVI video sequences, can be burned to CD, or exported to USB stick, to prepare quality presentations and demos of pathologies.
- Network module: For connection to a local Ethernet (Gigabit or 100 Mbit) for communication with networked archives, printers, diagnostic, and therapy workstations, and teleradiology routers.

Scope of functions:

- Network stations can be configured
- Unlimited selection of stations

3D image generation**3D rotational angiography**

In 3D rotational angiography, a sequence of 2D projection images is acquired by a C-arm performing a fast rotation around the isocenter in which the patient is positioned.

Image data are transferred automatically to a *syngo X Workplace* for time-optimized 3D image data reconstruction.

- All parameters required for the 3D reconstruction are included in the organ program. This enables optimized image quality and easy handling, as well as the fastest possible 3D reconstruction.
- Rotation speed is up to 60°/s (Artis ceiling), and 45°/s (Artis floor and Artis biplane).
- Angle triggering allows a reduction in dose through a reduced acquisition frame rate while at the same time achieving better image quality.

3D reconstruction and visualization of a volume are performed in real-time in volume rendering technique, MPR, and MIP. 3D Rotational angiography is used in particular as support in interventional radiology and neuroradiology in the angiography laboratory. Based on dedicated acceleration hardware the primary

Item	Description
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reconstruction results are available in full diagnostic quality in the examination room within 19 seconds for high contrast images and less than 42 seconds for soft tissue DynaCT images. Subsequent secondary reconstructions are available even faster.

Note: For biplane systems rotation angiography is available in plane A only.

syngo DynaCT Cardiac

syngo DynaCT Cardiac for FD as40HDR allows the use of proven *syngo* DynaCT 3D reconstruction for contrasted X-ray projection images of ventricles and vessels of the heart.

syngo DynaCT Cardiac for FD as40HDR contains reconstruction algorithms for

- ECG-triggered 3D acquisitions (multiple C-arm rotations, approx. 30 seconds exposure time)
- as well as for
- Untriggered 3D acquisitions (one C-arm rotation, approx. 5 seconds exposure time).

ECG-triggered DynaCT acquires all projection images in the same cardiac phase. As a consequence, even areas of the heart that are subject to considerable motion can be reconstructed to a sharp DynaCT volume with negligible motion artifacts.

Clinical applications currently supported by DynaCT Cardiac:

Electrophysiology:

- 3D visualization of the left atrium to support ablation of atrial fibrillation (segmentation of the left atrium using electrophysiology guidance, must be ordered separately).
- 3D visualization of the coronary venous tree to support biventricular pacemaker implantation.

Structural Heart Disease:

- Planning, support, and follow-up for heart valve implantation or replacement through 3D visualization of the mitral and aortic valve, and coronary ostia.
- Planning, support, and follow-up for Left Atrial Appendix closure.

Congenital Heart Disease:

- 3D visualization of the congenital heart defects before and after interventions: There are low-dose organ programs especially developed for pediatric acquisitions available.

syngo DynaCT Cardiac is especially suited for the planning, performance, and follow-up of interventions through display of current cardiac 3D morphology directly in the cath lab or hybrid environment.

The *syngo* DynaCT Cardiac Volume can also serve as a basis for magnetic navigation systems (e.g., Niobe Navigant) or can be used by electroanatomical mapping systems (CARTO, Ensite NavX) for increased precision as well as time savings (optional electrophysiology guidance Segmentation required).

syngo DynaCT

syngo DynaCT is especially suited to support radiologists and neuro-radiologists during interventional procedures in the angiography suite with both endovascular

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and non-endovascular procedures. *syngo* DynaCT provides enhanced decision-making during oncology procedures such as chemoembolization and RF-ablations. In neuroradiology, *syngo* DynaCT allows the visualization of bleedings, the ventricular system of the brain and microstent placement.

With *syngo* DynaCT it is possible to visualize a soft tissue difference of 10 HU (Hounsfield Units) of an object 5 mm in size, or 5 HU for an object 10 mm in size, in a Thick-MPR display (measured with a CATPHAN 16 CT phantom with the CTP 515 module). Homogeneous image quality is achieved across the entire image. As a result, critical regions such as the base of the skull can be displayed with a lot fewer artifacts.

DynaCT also offers:

- A new reconstruction algorithm optimized for fan beam geometry.
- A 20sDR-H 109 kV DynaCT acquisition reducing beam hardening artifacts and therefore improving detection of bleedings in DynaCTs with intravenous injection of contrast material.
- Faster 3D acquisition in 4x4 Binning mode.

3D Image Manipulation

The 3D XWP comes with applications that facilitate interactive volume rendering, accelerated by a high-end 3D graphics card. It offers support for large data records of up to 1,600 images (512 x 512 matrix).

In cardiology, radiology and surgery, the three-dimensional information is used for diagnosis, planning of therapy and documentation.

Diagnosis and treatment can be performed in one session. This offers a significant advantage thanks to the fully integrated workflow, for example the

- Transfer of the projection angle (that has been adjusted by the user in the XWP 3D volume) to the C-arm stand.
- Realtime synchronization between reconstructed volume and C-arm position (Volume following the C-arm position).
- Indication whether the angulation can be achieved at the C-arm without collision with the patient or table.

Features:

- Reconstruction protocols for visualization of vessels, bones, clips, and coils.
- The result of the reconstruction can be native or subtracted.
- Modification of reconstruction area to allow zoom via reconstruction.
- Visualization with shading and light source for an improved three-dimensional impression.
- Link between C-arm geometry and reconstructed volume: driving the C-arm to exact projection position according to the view of the reconstructed volume and/or setting the volume to follow real-time C-arm positions.

Image data:

- Viewing of volume data from AX, CT, MR, and PET modalities.
- Loading of two volume data sets simultaneously.
- Multiple Layouts: single (1on1), double (2 on1) and quadruple (4on1) for MPR display.
- Two displays are supported for simultaneous display of two volumes side-by-side.

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Image display modes:

- VRT, Color VRT, MIP, MinIP, and MPR rendering
- Thin slice renderings for VRT, MIP, and MinIP
- Variable light source
- Shading effects

Volume editing:

- Cut planes
- Editing of clip planes and control volumes
- ROI punching

Presets:

- Series-specific bookmarks, to store and retrieve volume visualization parameters.
- Global presets for series-unspecific application of volume visualization parameters.

Output:

- Radial ranges, including macro range definitions.
- 2D and 3D measurements, measurement grid, distance measurement and annotations.
- AVI format export with selectable compression format and compression ratio.
- TIFF, PNG, BMP, JPEG image export.
- Send to film sheet.
- Sending of parallel ranges results to PACS.

3D accessories

Includes the accessories required for 3D setup and calibration.

3D roadmap

The operator can overlay any 3D volume or planning data, or excerpts of it, onto the live fluoro image. Via a Fade in - Fade out with the joystick the degree of visibility of the overlaid information can be determined at any time. This tool offers the physician real-time three-dimensional guidance for more confidence. It avoids repeated injection of contrast material during fluoroscopy by overlaying a 3D vessel tree instead. The 3D roadmap is automatically updated in real-time according to any table, C-arm, zoom and SID changes. Even changes due to patient movement can be manually updated.

The 3D volume can be overlaid on regular fluoro as well as on subtracted fluoro (Roadmap) or acquisition series. The overlay appears on the display of the *syngo* X Workplace, so the 3D Roadmap information is available in parallel with the regular 2D images of the live display of the acquisition system.

Workflow support for valve replacements

Automatic segmentation of the aortic root takes place after intraoperative 3D acquisition. The anatomical markers included on the segmentation results enable determination of the optimum C-arm projection angle for improved orientation.

The system automatically moves the C-arm so that it is aligned perpendicular to the aortic root without additional fluoroscopy. Various display options are available for the subsequent 3D overlay of the aortic root with the fluoro image.

Fusion functionality:

Item	Description
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A fused CT, MR or PET image can be overlaid with live fluoroscopy in combination with 3D roadmap functionality providing information during interventional procedures that are available neither in 2D X-ray nor in 3D rotational angiography.

The package includes 2D/3D Fusion as well as 3D/3D Fusion:

2D/3D Fusion - allows to spatially align any pre-acquired 3D volume of the patient with two 2D X-ray projections. This eases the workflow during the procedures and reduces the X-ray dose because no additional 3D acquisition is required.

3D/3D Fusion - allows to spatially align two 3D volumes from the same or different modality in such way that the anatomical structures overlay each other. Any *syngo* DynaCT or *syngo* Dyna3D image can be fused with datasets from CT, MR or PET.

Toolbox functionality:

Toolbox is a generic application to interactively mark structures of interest in a 3D volume, e.g. a *syngo* DynaCT image, using points and lines. Analogously to *syngo* 3D Roadmap, these markings are projected onto the live 2D X-ray illustrating the position of the 3D anatomical structure within the live X-ray.

Included functionalities:

- Overlay of any lines and dots drawn on the VRT or MPRs on live 2D image.

This functionality provides an easy link between information that may only be visible in the 3D volume (VRT or MPRs) and the fluoroscopy or roadmap images.

Common functions

In room control functionality

Allows for remote control of the *syngo* X Workplace from the examination room via touchscreen and joystick mounted table-side or on a trolley.

For this, a set of functions is offered in room for 3D image assessment and manipulation, 3D navigation, multimodality image integration, or for actively following the steps of a pre-defined workflow.

***syngo* Expert-i**

syngo Expert-i enables the physician to interact with the *syngo* X Workplace from virtually anywhere.

When clinical questions arise at the *syngo* X Workplace, a second user with a Windows PC can quickly and efficiently access the *syngo* X Workplace via the network. He or she can assume full control of every application on the *syngo* X Workplace and can see all screen content that is displayed for the local user on the main monitor. This allows the parties involved to discuss clinical questions via phone and quickly reach solutions on a joint basis.

DICOM

Industrial standard for the transmission of information between DICOM-compatible units from different manufacturers. The scope of functions is described in detail in the DICOM Conformance Statement and in the standard version includes the Transmission/ Reception, Query/ Retrieve and Basic Print functions.

Note concerning DICOM interface(s)

For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

Item	Description
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The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across interfaces with/between partner systems require explicit validation since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer, e.g. for the rare case that available configurations are not sufficient. With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

10 **syngo LVA Quantification**

Scientific measuring program for functional evaluation of the left ventricle.

- Automated and manual contour detection
- Automatic end-diastole/end-systole detection
- Calculation of ejection fraction, volumes, and indices (area, length, and Simpson methods)
- Centerline, radial and regional wall movement analyses
- Automatic and manual calibration methods
- Distance and angle measurement

Item	Description
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11 **syngo iFlow**

12 **syngo Angio Package**

The *syngo* Angio Viewer enables dynamic review of DSA scenes (in native or subtracted display) and their postprocessing at the *syngo* Workplace, with functions such as:

- Remasking
- Pixelshift
- Anatomic background
- Opacification etc.
- Review of Dynavision and Perivision scenes

Item	Description
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13 **Sensis Vibe Hemo**

Sensis Vibe is the vital core where all events, decisions, measurements, and data from your procedures are captured. It reduces administrative effort and standardizes documentation and reporting* across interventional entities. Sensis Vibe intuitively blends into the rhythm of the interventional floor and tunes up your workflow efficiency.

*For documentation and reporting, see recommended options.

System hardware configuration

HemoBox signal input unit (dimensions 147 x 230 x 80 mm; with cabling, pressure transducer adapter for previous signal input box and mounting kit for Modura table rail and IV poles; liquid ingress protection class IPX4).

For non-invasive blood pressure, four invasive pressure inputs, four invasive pressures dP/dt, SpO2 oxygen saturation, 12-channel ECG, respiration rate from capnography (option). With table-side buttons for balancing, NIBP measurement, cardiac output and muting audible vital signs alarms.

Examination room:

Either cabling kit for connection to Large Display and mid-size display (Artis one) or one

19" monitor with mounting kit and cabling:

- Resolution: 1,280 x 1,024 (pixel)
- Excellent brightness for the entire service life: 137 cd/m² at a contrast ratio of 300:1.
- Flicker-free and distortion-free image display.
- Meeting the strictest medical, safety and EMC emission standards.

Control room:

- PC, keyboard, mouse

19" Monitors:

- Resolution: 1,280 x 1,024 (pixel)
- Excellent brightness for the entire service life: 137 cd/m² at a contrast ratio of 300:1.
- Flicker-free and distortion-free image display.
- Meeting the strictest medical, safety and EMC emission standards.

The "Respiration from ECG" is not longer available in VD15 and later. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

Acquisition softwareSensis Hemo application

Acquisition software to support monitoring and full disclosure recording of vital signs and invasive measurements and calculations of hemodynamic parameters in adult and pediatric cardiovascular interventions, such as left and right heart catheterizations, heart valve examinations and general angiography procedures.

The system features a comprehensive, user-adaptable catheter site list. Pullback measurements can be done using one of the following methods: single pullback, sequential pullback, virtual pullback.

As a standard, the system provides the following calculated and derived

Item	Description
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hemodynamic parameters: pressure calculations, rate of pressure change (dP/dtmax), gradients, shunts, cardiac output, valve area, work and power, cardiac index, flow and stroke volume, resistances, regurgitation.

Measured values, calculated and derived parameters can be compared, analyzed and edited (what-if scenarios) in flow sheet structured by procedure conditions. Sensis Vibe comes with a redesigned, lean user interface for mouse- and keyboard-based operation with customizable hot keys and adjustable split-screen mode.

Waveforms display can be programmed for layout and color. Can be displayed on up to five configurable pages per procedure type.

- Workflow support license
- Vital signs alarms license and audio module
- FFR and DFR licenses to integrate Boston Scientific, Abbott, ACIST and OpSens FFR devices.

Productivity Tools:

- syngo multitasking operating system
- syngo database system
- Sensis Security Manager
- Sensis Communication Manager
- Sensis Configuration Manager
- Artis interface for bi-directional data exchange (patient data, X-ray snapshots, dose data, ECG signal, table-side Sensis operation), ethernet-based.
- Ethernet communication to hospital network
- DICOM worklist
- DICOM MPPS license
- Export waveforms**
- Generic printer interface (see data sheet for minimum requirements)
- Archiving via central DICOM nodes
- Export of discrete values via ASCII flat file or XML.

**These products/features are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

Accessories and parts included in delivery:

- Starter kit vital signs
- ECG cable kit (IEC1 and IEC2)
- HemoBox analog out cable

Recommended options (not included in delivery):

- Sensis UPS
- Sensis Vibe FlashDoc (Master or Client)
- Additional interfaces (if applicable)
- Report workstation licenses to enhance the documentation workflow outside the control room.
- Upgrades to Sensis Vibe or compatible versions for your existing Sensis units.
- Starter kits to ensure everything is in place for your first Sensis Vibe-guided procedure.

Ready for:

Item	Description
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- Siemens Remote Service (during warranty, option for service contract)
- Interface and database customizing (offered via customer service)

It is mandatory to have a power backup for Sensis. A UPS needs to be provided either by the hospital or purchased from Siemens Healthineers. The minimum requirements for the UPS are defined in the Sensis data sheet.

Training

Siemens Healthineers recognizes the significant investment you are making in purchasing a new recording system and are determined that you are able to realize the full capability of this new system. Siemens clinical applications training ensures you have every opportunity to fully utilize your new system.

Content of user training:

- Instruction on system, operator and patient safety
- Instruction on operation of the system
- Instruction on proper cleaning of the system
- Instruction on basic and advanced waveform set-up and processing

PEPconnect:

Your smarter connection to knowledge in digitalizing healthcare (<https://pep.siemens-info.com>).

Delivery & duration of the user training varies and may be country specific. For additional information please contact your local Siemens Healthineers representative.

14 Moveable upper body rad. protection

Item	Description
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15	LED Exam Light
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16	Lower body radiation protection
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Item	Description
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17	Intercom - Comfort
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18	Arm rest for radial access small
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Item	Description
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19	Arm rest for radial access wide
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20	Head holder w/ pad set
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Item	Description
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21 **IntraSight cable set**

This cable set will be routed through the Artis table in the factory and includes all cables needed to connect the IntraSight components in the Exam Room to those in the control room.

With this item, an additional display is delivered for the examination room if a Large Display was not ordered. If a Large Display is ordered, the configuration includes a connection kit for the Artis Large Display instead of the 19" display.

22 **DICOM RIS-Modality Worklist**

Note concerning DICOM interface(s)

For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

The description in the DICOM Conformance Statement downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across interfaces with/between partner systems require explicit validation since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer, e.g. for the rare case that available configurations are not sufficient.

With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

Item	Description
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23 **Factory Inst. Artis floor**

24 **Diagnostic Window 100x80 cm**

Consisting of the following components:

- Frame made of 2 mm thick quality sheet steel
- Galvanized and painted in RAL 1014
- Radiation protection glass RD 50
- Lead equivalent: 2.1 mm Pb

Lead-glass size (W x H): 100 x 80 cm

Dimensions of the wall opening (W x H): 105 x 85 cm

Item	Description
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25 **CAAS IV-LINQ Angio-IVUS/OCT #1**

Connection with Siemens X-ray system:

- The software loads DICOM files generated by the Siemens X-ray system

Connection with IVUS/OCT system:

- IVUS/OCT files are loaded in DICOM format
- The following IVUS and OCT systems are supported: Boston Scientific, Acist, Volcano, Infraredx, St Jude, Terumo

Training/Installation needs to be ordered separately.

Please be advised that this is not a Siemens Healthineers product, but a third-party software, and special Terms & Conditions may apply. Please contact the original software developer for more details.

26 **Large Display**

Display mount

Preparation for the large display. The large display area allows for both large display and the free positioning of examination-relevant video signals.

The fully integrated tableside control allows for selection from among twelve layout variants.

For the diagnostic color display in TFT technology, with high luminance and extended viewing angle, the gamma curve has been adapted particularly for gray scale display according to the CIE / DICOM recommendation.

Video signals such as live, assist and reference images, *syngo* X Workplace, Sensis/recording systems, PACS, HIS/RIS, ultrasound, ECG, external video, endoscope, mapping systems, system and table position, system messages and dose information can be individually positioned and displayed on the Large Display, if connected.

The extended Roadmap function is included, if DSA is available:

- Native live fluoro image during fluoroscopy, otherwise Last Image Hold.
- Native live fluoro image during roadmap / subtracted fluoroscopy, otherwise Last Image Hold.
- Native live acquisition during DSA acquisition; otherwise native max-fill image.

If the dual reference function is available, parallel static reference images are displayed on both reference monitors.

Bypass concept

Unrestricted

In case of error, such as controller failure, the Large Display switches automatically to bypass mode and emergency fluoroscopy is displayed on the Large Display.

Backup concept

Item	Description
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27 **Large Display video controller 18**

The Large Display video controller 18 receives various internal and external video signals for presentation to scale on the Large Display.

Up to 18 external and internal video sources can be connected (max. 14 DVI-D and 4 analog (VGA) channels).

Important images for diagnostic purposes can be displayed to scale in their original size on the Large Display. Less important, non-diagnostic information can be displayed at a reduced size by the interpolation algorithm for image information integrated in the video controller.

An enlarged or reduced display can be selected individually via the display configurations at the fully integrated tableside control. The video controller then takes over interpolation and adaptation of image size.

In waveform images with high resolution, such as for electrophysiological recording systems, the curves are displayed free of artifacts because of a special interpolation algorithm.

28 **Second display holder**

Item	Description
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29 **2 19" b/w displays (live+ref)**

Flat displays in TFT technology:

- Screen size: 19" (48 cm)
- Resolution: 1280 x 1024 (pixels)
- Excellent brightness for the entire service life: 400 cd/m² at a contrast ratio of 1000:1
- Flicker-free and distortion-free image display
- Ambient light sensor for optimum adaptation of the image display to the room brightness

30 **LD High Contrast panel size 55"****Large color flat display**

The IPS panel technology combined with the large display area represents a new dimension in medical image display.

This technology combines high luminance and high contrast, consistent for all viewing angles. It provides an incomparable image impression especially for gray scale images.

For the diagnostic color display in TFT technology, with high luminance and extended viewing angle, the gamma curve has been adapted particularly for gray scale display according to the CIE / DICOM recommendation.

Technical specification for the 55" display:

- Display size: (W x H) 55", 121 cm x 68 cm
- Screen size: 55", 139 cm
- Resolution: 3840 x 2160 (pixels); 8 megapixels at 4 x HD.
- Color depth: 1.07 10⁹ colors.
- Excellent brightness over the lifetime: 400 cd/m² at a contrast ratio of 1450:1.
- Flicker-free and distortion-free image display.

Backup concept

The Large Display has a backup concept to ensure against power supply failure (2 separate power supplies for the left and right sides of the Large Display).

Item	Description
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31 **Large Display diagn. protection**

The high-quality 55" laminated glass protective screen protects the panel of the monitor against mechanical damage and fluid ingress on the front. The protective screen is suited for clinical image evaluation.

Features:

- The laminated glass enforces high mechanical strength and resistivity against mechanical impact.
- Special coating reduces reflections for a continuous image quality.
- Excellent spectral transmission of at least 98%.
- Screensize: 55"
- Weight: approx. 12kg

Note:

Observe the maximum permissible load of the display suspension.

A combination with other options mounted to the display suspension might be restricted.