ARTIS icono

Turn innovation into common practice

Transforming care delivery for cardiovascular interventions.

SIEMENS Healthineers

"91% agree: New technologies and business models offer the opportunity to vastly improve outcomes."

Source: Bernd Montag, Harvard Business Review, Pulse Survey, 2017

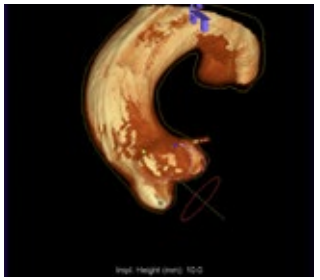
Challenges for minimally invasive interventions

How do you streamline and standardize patient workflows while extending your clinical capacities?

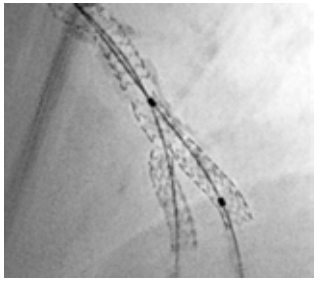
The fields of cardiovascular and vascular interventions are evolving rapidly. From aortic repairs to the treatment of complex anatomies and endovascular recanalizations, new minimally invasive procedures are becoming standard fast – and there's more to come.

Managing patient diversity and procedure volume
Already, the number of minimally invasive procedures is growing by more than ten percent per year[1]. These procedures are becoming more complex, and the number of older, sicker patients in your mix is also increasing. With so many variables in play, standardization and an outstanding imaging quality – regardless of the patient or procedure – are crucial factors for smooth workflows and optimal patient outcomes.

Number of minimally invasive cardiovascular procedures



Aortic Valve Stenosis
TAVI candidates in EU and N-America:
180,000 p.a.
Expansion to low risk:
270,000 p.a.
Potential growth:
+5%



Coronary Artery Disease
~4,800,000 PCI procedures
~7,000,000 diagnostic procedures
Potential growth:
+5%

Abdominal Aortic Aneurysm
220,000 Abdominal Aortic Repair p.a.
56,000 Thoracic Aortic Repair p.a.
Potential growth:
+8%

Data by Decision Research Group, 2018

ARTIS icono – Optimize clinical operations for minimally invasive procedures

To help you speed up interventions and adopt new, complex treatments with confidence, we made ARTIS icono® systems as versatile and easy-to-use as possible. Thanks to procedural intelligence they support standardization yet adapt effortlessly to the needs and preferences of each procedure and operator. We believe this unique blend is the key to transforming care delivery and optimizing your clinical operations. Hence the name: ARTIS icono – an icon of innovation.

Contents

ARTIS icono Case Flows improve usability and standardization

During new and complex procedures, Case Flows help you focus on your patient – not your imaging system.

"Each therapy step has its optimal imaging parameters, but it's tedious to consequently adapt them throughout the clinical procedure. Case Flows combine the multitude of system settings into a one-click selection for each workflow step, resulting in a full utilization of my system's capabilities in daily routine."

Bernhard Meyer MD, Head of Interventional Radiology,
Hannover Medical School, Germany

Case Flows are flexible, context-based sequences of optimized and personalized procedural steps. By changing the position or angulation of the system – with zero joystick interaction – Case Flows always select the correct, dedicated protocol for each desired procedural step. Case Flows ease the start for new team members, and support more consistent outcomes and documentation by letting you standardize workflows across multiple ARTIS icono labs. Users can also create and save their own personal Case Flows.

Fewer clicks with EVAR Case Flows

Conventional System

Manual setup and system interaction

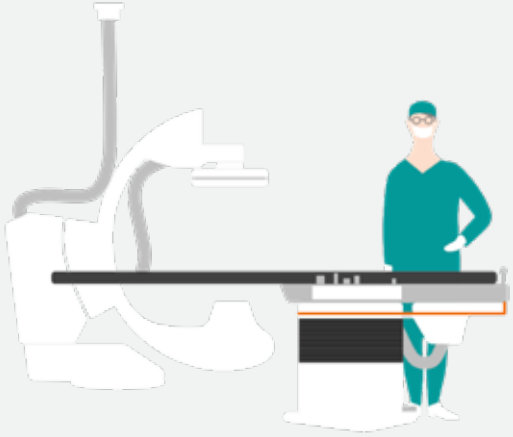
Up to 27 interactions

Using Case Flows

- P
- R
- D
- N

Settings automatically applied

Only 7 interactions



The dedicated EVAR Case Flow saves time and effort, leaving operators free to focus fully on their procedure and patient. Angulations are reached automatically, and instead of twenty-seven clicks, that an ideal workflow may require, all you need are seven. Imaging parameters, collimation and other settings adjust to match your personal preferences for each individual treatment step. This comes effortless to your procedure allowing you to focus on the patient.

Case Flows – faster workflows through procedural intelligence

Case Flows are specially designed to streamline existing procedures and give you more confidence when adding new, complex treatments to your treatment portfolio. Case Flows are dedicated sequences of system settings for each diagnostic and interventional step along a given treatment path. At every procedural step, Case Flows automatically adjust the system settings to match your preferences and the situational needs – everything from imaging parameter, C-arm position, SID and system position to zoom factor, filter/collimation and display layout.

Case Flows – full flexibility for personal preferences

Case Flows are always open for new ideas and demands. Operators can customize their own workstyle preferences, then save the result for reuse. The ability to share these customized Case Flows with colleagues supports best practice and helps to streamline procedure workflows further still.

Improved usability for a better working environment

With a new pilot module and new touch displays, ARTIS icono systems bring a new, intuitive experience to angiography.

Easier, smoother system control
The new pilot module has an intuitive jogwheel for smoother, faster workflows. It fits on the rails of the lower-body radiation protection to allow for comfortable working posture. The integrated dead-man switch enables safer handling, while the shorter control modules put all the controls within easy reach when operators stand close to the patient.

Touch2Move – intelligent drive technology
This intuitive technology is specially designed to simplify system movements. A single button is all it takes to select a function, then move the system with zero joystick interaction. The moment you release the button, the movement stops.

Ergonomic working environment
The new, slimmer tableside modules enable operators to get closer to the patient and permit a comfortable working posture. They provide easy access to the most relevant functions, and help rotating staff get up to speed quickly in operating the system.

Make pre-procedural planning available intra-procedurally
ARTIS icono provides sterile access to your own device in the exam room. During interventions, that means you can make your pre-procedural planning available, access supporting applications and synch your iPad content with the ARTIS displays. Setup and operation are simple and intuitive, and our accessories include a universal tablet holder for secure control.

Innovative clean and control room concept
The new large control room touch displays are a great way to clean up your control room. They put intuitive operation at your fingertips - literally. There's no need to sit when operating the display, and you can opt for a setup with either one or two 32" monitors.

System & positioning flexibility for minimally invasive procedures

When no two patients or procedures are the same, choose a system that's as flexible as your operators.

ARTIS icono floor – your all-round support system
ARTIS icono adapts effortlessly to different users and procedures, reducing training times for new staff, streamlining workflows significantly and improving procedural outcomes. This intuitive system offers advanced 2D, 3D and multimodality support for a wide variety of procedures, from routine to more complex.

Fully-motorized C-arm movements for optimal access
On a minimum floor space of just 25 m^2 (269 sqft), ARTIS icono offers optimal access for all procedures, including radial access. The fully motorized C-arm ensures precise, fast and reproducible positioning, with an unmatched patient coverage of 2.10 m (6.9 ft) longitudinal and 1.90 m (6.2 ft) lateral.

Cone beam CT for your angio suite
With ARTIS icono and *syngo* DynaCT®, fast 3D and soft-tissue imaging are an integral part of your new suite. Highlights include guidance in TACE, PAE and EVAR, plus seamless integration of ultrasound for smooth multimodal guidance in complex interventions.

***syngo* DynaCT Sine Spin®: Visualize bleedings even near bony structures**
syngo DynaCT Sine Spin uses a new double oblique trajectory to overcome artifacts from the massive bony structures that surround the basal part of the brain. With a homogeneous soft tissue resolution from cranium to basal, this innovative feature takes 3D whole-brain imaging to new levels of quality and consistency. *syngo* DynaCT Sine Spin is ideal before performing thrombectomy, and after all neurointerventions.

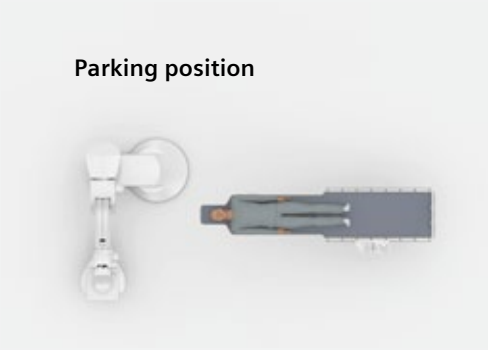
Cone beam CT for your cath lab
ARTIS icono offers full cardiac coverage from the head side position, with new possibilities in steep caudal and cranial angulations. *syngo* DynaCT acquisitions from the head side position support more complex procedures such as structural heart interventions.

“You adapt to your patient’s needs. ARTIS icono adapts to yours.”

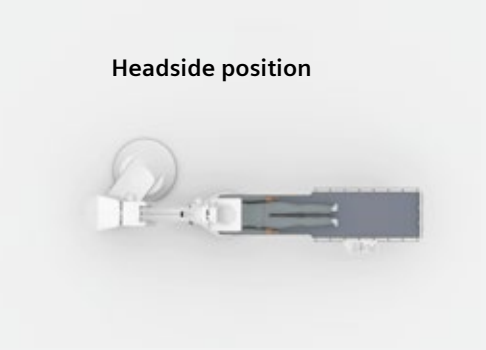
Flexibility and motorized movements of the C-arm support your procedures.

Motorized system positioning

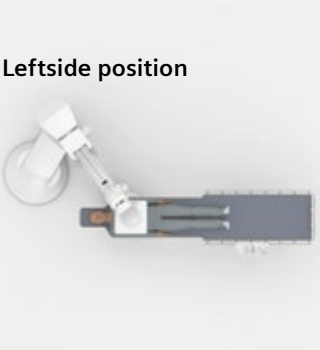
Parking position



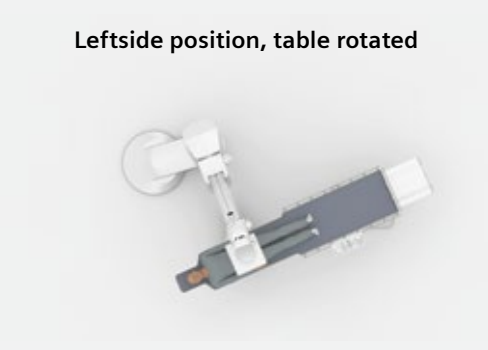
Headside position



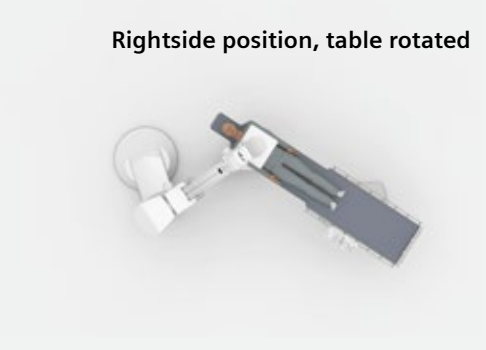
Leftside position

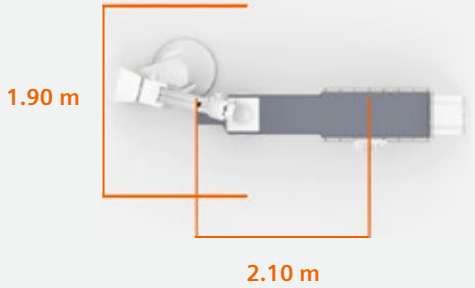


Leftside position, table rotated



Rightside position, table rotated





Positioning flexibility: optimal patient access for many procedures

StraightView supports radial access with upright images in all angles.

The STARBoard crafted in carbon fibre with unique, one-piece design makes handling easy.

Requires only

25 m²

Improve your bottom line with a system that provides ceiling-like flexibility but fits into rooms down to 25 m²*

* For ARTIS icono floor systems with standard table

"Every patient is different. And every procedure has different requirements. We need a system that can cover all of them."

Tom Giesler MD, Head of Cardiology and Angiology, MediClin Herzzentrum Coswig, Germany

Multiaxis floorstand supports unique patient coverage

In small rooms from just 25 m² (269 sqft)*, ARTIS icono provides ceiling-like flexibility and ample coverage for patients of a wide range of shapes, sizes and weights.

Peripheral and lateral coverage at its best
ARTIS icono offers unparalleled patient coverage of 2.10 m (6.9 ft) x 1.90 m (6.2 ft) for 2D imaging – plus advanced peripheral imaging when you need to image large patients head first.

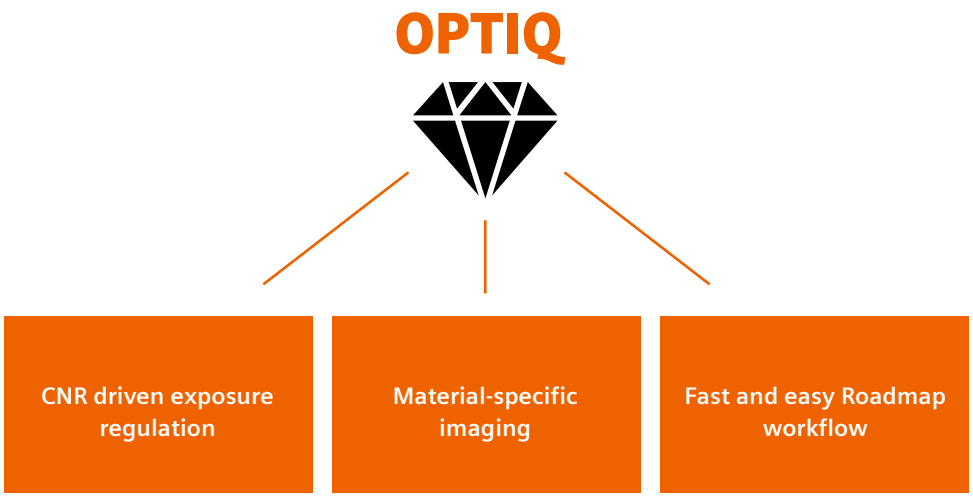
Space at the patient table
The smooth, fast transition from imaging to park position enables free patient access, while the distant park position of the C-arm enables free table access for patient transfers and open surgical treatment. There is no pivot point or mechanical parts under the table, and the head is free for anesthesia or TEE in the 90° left side position.

Fast access in emergency situations
CPR Assist helps operators focus fully on the patient in critical situations. A dedicated button at the pilot module drives the C-arm away from the table, adjusts the table height and retracts the table so reanimation measures can be applied.

Unparalleled coverage ideally supports radial access and shunts
ARTIS icono floor offers ceiling-like imaging with an unparalleled 1.90 m (6.2 ft) of lateral coverage, making it ideal for radial access and shunts. The arm board supports radial, brachial, and axillary access during imaging.

Make light of heavy patients
Designed for a maximum patient weight of 280 kg (617 lbs), the ARTIS multi-tilt table supports even your heaviest patients. With a table load limit of 440 kg (970 lbs), this IPX4-compliant table can additionally handle 100 kg (220 lbs) of accessories and 60 kg (132 lbs) of CPR equipment. The power-assisted tabletop tilts from +15° to -20°, cradles from +15° to -15° and repositions with virtually no force.

* With ARTIS Standard Table



OPTIQ – A new approach to image quality and dose

Constant image quality at low dose is crucial during complex cases. New materials and smaller devices pose new challenges, while neuro procedures in particular demand secure and fast workflows. OPTIQ® is designed to help you master all these challenges and more.

A contrast-noise-ratio driven exposure regulation
The new OPTIQ image chain combines unprecedented image consistency with maximum dose efficiency – regardless of the patient, C-arm angulation or procedure.

This contrast-driven technology uses self-adjusting algorithms to maintain constant image quality automatically, leaving operators free to focus on their patient and procedure. Operators can adjust the contrast/noise balance to suit their specific needs and preferences; SID and collimation settings are factored in automatically.

How can I fully focus on my patient when my imaging system needs my attention?

Material-specific imaging
With new devices and new materials appearing all the time, image guided therapy is facing new challenges. OPTIQ Structure Scout adjusts the X-ray spectrum to material-specific acquisition parameters, allowing for optimal visibility for any structure or device at significantly lower dose.

OPTIQ Roadmap – Knowing the way
Particularly during neuro interventions such as AVM treatments, OPTIQ Roadmap streamlines workflows by clearly showing the way ahead. The 'Progress' and 'Dynamic Progress' modes are invaluable during embolization procedures, and a smart, self-adjusting mixing algorithm delivers crisp, sharp images of complex vessel trees and devices during the device phase. Operators can select any DSA reference image as a Roadmap mask with one click, then 'zoom and pan' onto the target area to save dose and contrast agent. The Subtracted Fluoro mode is directly accessible for enhanced usability.

Without OPTIQ

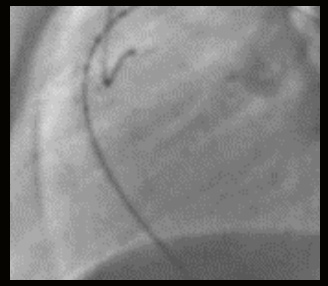
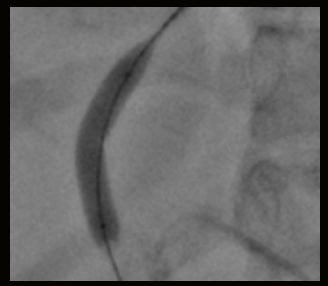
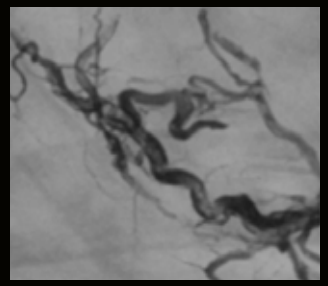


Image at low frame and dose rate

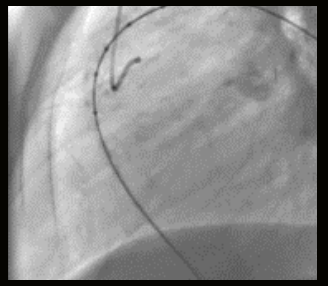


DAP: 0.63 µGy·m²/f

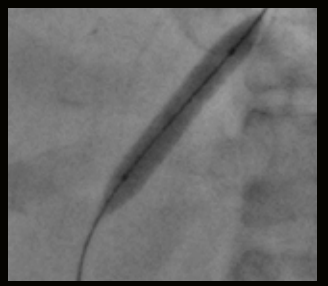


Roadmap

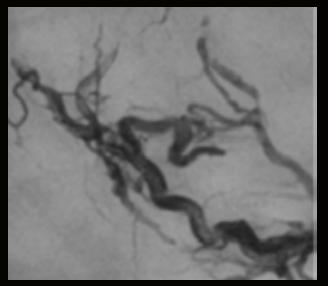
With OPTIQ



Optimized visualisation of devices and catheters



DAP: 0.45 µGy·m²/f



82% less dose at same material visability

ARTIS icono with Mentice VIST® G5 Simulator. ARTIS table-side controls can be used to operate the simulator enabled by the Third Party Broker.

ARTIS icono – your connectivity hub in the interventional suite

Having all the information you could possibly get at hand is crucial for planning and executing complex procedures – ARTIS icono takes connectivity and communication to the next level.

ARTIS icono systems feature our new Third Party Broker. Designed for easy setup, this unified interface lets you connect different systems via a single connection, using standard protocols. In addition, Third Party Broker enables research in medical engineering and the development of new and in-house applications. It's also the gateway to our Siemens Healthineers Digital Ecosystem.

ARTIS icono – your connectivity hub in cardiovascular care

Coronary Artery Disease

Efficient patient workflows
Point-of-care decision support
Multimodality integration for complex procedures

Structural Heart Disease

Real-time multimodality integration at a fast pace of innovation
Automated therapy guidance to improve outcomes

Arrhythmias

Advanced visualization and multimodality therapy guidance
Reduction of procedure duration and radiation dose

First digital innovations available with partners

Integrate external information and applications
ARTIS icono supports complex PCI procedures by making it easy to integrate OCT imaging, automating registration between angiography and IVUS / OCT, and bringing ultrasound guidance into your suite. You can integrate TrueFusion seamlessly to expand your structural services, and fuse 4D TEE with live fluoroscopy. Operators also benefit from zero-click CT TAVI planning and seamless integration.

materialise
mentice
ARTERYS
HeartFlow
Biosense Webster
esaote
Abbott
ACIST
Boston Scientific
PIA
PIE MEDICAL IMAGING
MEDRAD

ARTIS icono and Third Party Boker: easy connectivity and digitalization for your interventional therapy suite

Technical specs

Installation

ARTIS icono is available as a floor-mounted and biplane system

Required room size

ARTIS icono floor requires a minimum room size of 25 m^2 (269 sqft) with the Standard table and 28 m^2 (301 sqft) with the Multi-tilt table

ARTIS icono biplane requires a minimum room size of 6.4 m times 4.2 m (21 ft times 13.7 ft)

Patient tables

ARTIS multi-tilt table offers

- Virtually no force required for repositioning
- Flexible tilting of +15° / -20° and Cradle: +15° / -15°
- Supports all tabletop angulations, regardless of patient weight up to 280 kg (617 lbs)
- Fast, precise repositioning without moving the patient

ARTIS standard table

- Patient weight up to 280 kg (617 lbs)
- Offers fast, precise repositioning without moving the patient

OPTIQ imaging chain

- Offers constant image quality at a new ALARA benchmark. Regardless of procedure, patient size or C-arm angulation
- Pre-set image quality level is maintained automatically throughout the procedure for maximum dose efficiency.
- This innovative system uses a contrast-driven technique based on automatic parametrization supported by intelligent, self-adjusting algorithms.

Case Flows

- Reduction of preparation and positioning times by optimizing imaging parameters, system positions and display layouts for specific procedures.
- Flexibility in the execution of sequences, adapting to needs and situation.
- Standardization for procedures across multiple ARTIS icono labs with the potential to reduce imaging variations.

Why Siemens Healthineers?

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all supported by digitalizing healthcare.

An estimated 5 million patients globally benefit from our innovative technologies and services every day in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services.

We are a leading medical technology company with over 170 years of experience and 18,000 patents globally. With more than 48,000 dedicated colleagues in 75 countries, we will continue to innovate and shape the future of healthcare.

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The information in this document contains general technical descriptions of specifications and options as well as standard and optional features that do not always have the present in individual cases.

The statements by Siemens' customers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results.

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In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources and waste conservation), we recycle certain components. Using the same extensive quality assurance measures as for factory-new components, we guarantee the quality of these recycled components.

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The clinical overlay on the title is not that of the individual pictured. It was modified for better visualization. Product not commercially available in all countries.

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