ARTIS icono ceiling

Redefining precision in embolization

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artis-interventional-angiography-systems/artis-icono-ceiling
ARTIS icono ceiling sets the pace in image guidance for complex interventions – by combining mechanical flexibility and positioning accuracy with 2k imaging and smart workflow guidance.

With its image chain OPTIQ and constant image quality at lowest achievable dose*, ARTIS icono ceiling supports you during super-selective procedures. The system performs accurate 3D imaging with a 200° rotation from the side. The new industry-proven motor drives allow for exact system movements and enable 3D acquisitions in as fast as 2.5 seconds – thereby reducing motion artifacts. ARTIS icono ceiling assists you in anatomical navigation and semi-automatic identification of feeder vessels with smart guidance tools. Confidently perform precise and efficient embolization procedures – as well as many other IR procedures.

* Within the possible exposure parameters and given ARTIS hardware configuration as well as status of SID, collimation and grid.
ARTIS icono ceiling will redefine precision in embolization and will play a key role in expanding precision medicine.

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Simple and precise 3D imaging, everywhere

ARTIS icono ceiling is equipped with Omni Spin C-arm technology that optimizes flexibility, speed, and precision to enhance image quality across the full volume.

Omni Spin delivers accurate 3D acquisitions with high soft-tissue resolution and up to 2.4 meters of coverage from any rail position – with a full 200° of rotation from all sides.

With 95°/s rotations, you can acquire syngo DynaCT images in just 2.5 seconds, which means fewer motion artifacts. With simple and precise 3D imaging, ARTIS icono gives you confidence in procedure planning.

Furthermore, syngo DynaCT can help reduce the risk of unwanted side effects such as non-target embolization intra-procedurally.

Generate 3D acquisitions with excellent spatial and soft tissue resolution whatever your clinical use case is.

Accurate 3D reconstruction with 200° rotation from the side support PAE and UFE

Simulation with 180°

Missing data leads to artifacts in the reconstructed image.

ARTIS icono with 200°

Accurate reconstruction over the entire volume.

![Images of 3D reconstructions](image-url)
**ARTIS icono ceiling with Omni Spin**

- **2.4 m coverage**: 3D acquisitions in flexible ceiling rail positions for 2.4 m coverage with long tabletop.
- **95°/s speed**: Up to 95°/s rotational speed for 3D acquisitions* as fast as 2.5 s.
- **Full 200° rotational 3D**: Acquisition range from head, left and right side.
- **0.5 mm precision**: Siemens industry motor and controller technology enabling a positioning precision of better than 0.5 mm.

* In head side position of the c-arm
Clear visualization in super selective procedures

OPTIQ - constant image quality at lowest achievable dose*

Our newly developed exposure control OPTIQ uses a contrast-based technique, supported by intelligent, self-adjusting algorithms. It automatically considers SID, collimation settings, grid status, and patient thickness – and finds and applies the best suitable combination of the 5 radiation exposure parameters and the detector dose as an additional variable. OPTIQ constantly aims to achieve the requested contrast-to-noise ratio at the lowest possible dose*.

The basis for this complex functionality is a vast database containing 300 million entries. With every image acquisition, the system checks up to 15,000 possible parameter combinations with the goal to select the most dose-efficient one for a specific imaging situation.

* Within the possible exposure parameters and given ARTIS hardware configuration as well as status of SID, collimation and grid. Constant image quality based on CNR.
**ARTIS icono with Structure Scout**

Material-specific imaging to improve contrast and reduce dose

**Structure Scout – optimized visibility of details and devices**
Structure Scout automatically optimizes the visibility of different devices and materials, based on their individual dose absorption property. This material-specific imaging is based on preset values. As a result, the system automatically adapts its exposure control parameters to the material used.

**OPTIQ DSA** uses a sequence of highly optimized X-ray physics, configurable mask-averaging, and six-dimensional motion correction, followed by non-linear multiscale image processing with anisotropic and asymmetric edge enhancement, to customize contrast and sharpness.
Smart guidance for intra-procedural confidence

Smart guidance tools assist you with semi-automatic identification of feeder vessels and anatomical navigation for example in treatment of liver tumors (TAE, TACE, SIRT), or of prostatic hyperplasia (PAE).

In treatment of liver tumors, syngo Embolization Guidance automatically detects the catheter tip that is positioned in the hepatic artery. It then semi-automatically computes a vessel tree starting at the catheter position and comprising vessel branches that feed a user defined lesion.

Predefined color coding facilitates finding the optimal treatment position for each tumor nodule.

**syngo Embolization Guidance**

Easy workflow in “identify vessel”-step:

01 Center the tumor and mark it with a diameter line

02 Automatic detection of the catheter in hepatic artery

03 Automatic detection of vessels between the catheter and the marked lesion

Courtesy: Hannover Medical School, Germany
Redefining your procedure mix

An allrounder for the IR lab

ARTIS icono is specially designed to improve utilization across a broader range of procedures – now and well into the future. Submillimeter accuracy allows you to move the C-arm into pre-defined positions to reuse roadmap masks. This may help to reduce dose and contrast media. With the new Omni Spin, dedicated clinical guidance tools and functionalities for improved workflows enable you to conveniently perform a broad range of procedures.

PERISTEPPING and PERIVISION:
Angiography of the legs with a single injection native and subtracted.

syngo EVAR Guidance automates all steps in the preparation of a pre-procedural CT dataset for 3D guided stent deployment. It overlays 3D information on top of live fluoroscopy and delivers optimized C-arm angulations, a precise 3D overlay, and guidewire and catheter navigation.

Multimodality Fusion in the interventional suite:
Enabling previous CT, MR or PET CT images to be fused with syngo Dyna3D or syngo DynaCT datasets. The syngo Fusion Package displays relevant diagnostic data at a glance, thereby significantly supporting interventional workflows.

Wireless transducers and improved procedural workflow times using automated patient data registration and sending of studies to PACS upon exam completion.
**myNeedle Companion**

**Guidance tools to improve intraprocedural confidence**
myNeedle Companion harmonizes planning and guidance for percutaneous needle procedures across modalities. Workflow and user interface are unified on angiography and CT systems. Image fusion seamlessly combines data from multiple modalities to help you visualize critical anatomical structures.

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* myNeedle Laser is optional.

*Courtesy: University of Frankfurt, Germany (left clinical image); HE GP, Paris, France (right clinical images)
Improved workflows

The state-of-the-art user interface with a new pilot module is designed for faster workflows and intuitive use. Procedural intelligence enables minimal user interaction and faster system positioning.

**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 parameters, C-arm position, SID and system position to zoom factors, filter/collimation and display layout.

**3D Wizard** guides you during 3D acquisitions with the right protocol, injection details and other helpful information.

**Bring your own device (BYOD):** Use your Apple iPad with suitable accessories and show content on the ARTIS Large Display in specific segment to access supporting applications during interventions.

Improved ease of use with ARTIS icono ceiling

Speed up your workflow

- **Case Flows**
  - Faster workflows: Procedural intelligence with minimal user interaction and faster system positioning.

- **3D Wizard**
  - 3D Wizard supports you during 3D acquisitions with the right protocol, injection details and other information.

- **Pilot Module**
  - State of the art user interface with a new pilot module, designed for faster workflows and intuitive use.
Redefining the digital lab of the future

Next-level connectivity and communication
ARTIS icono brings advanced external applications into your angio suite. Integration is seamless with different systems all connected using a single third-party interface (TPI) and standard protocols. The training simulator Mentice VIST® G5 Virtual Patient is a classic example – a perfect symbiosis of external device and angio suite. Simply connect Mentice to your ARTIS icono via the TPI to practice your skills on realistic simulations of your system’s controls.

Get your team up to speed faster with innovative learning approaches. ARTIS icono is available with an innovative, all-encompassing package of onboarding, interactive guidance, and consulting. ExpertGuidance is an equipment training program that delivers efficient onboarding, workflow education, and interactive guidance during procedures. FlexForce Coach delivers comprehensive, staff and performance consulting with experts from Siemens Healthineers. To ensure you make the most of your system’s advanced features, SmartSimulator provides courses in virtual classrooms with a human instructor.

Next-level connectivity and communication
Connect different systems via a single connection using the new 3rd party interface with standard protocols

Enables research in medical engineering and integration of 3rd party software
A future-proof investment

Reliable hardware

Intelligent components increase uptime due to higher reliability. The ceiling stand and the table come with new, intelligent Siemens industrial motor gears and controllers. These components can report their status via a remote service connection, making them significantly more reliable.

Monitoring of X-ray tube

TubeGuard helps to increase your equipment uptime by monitoring and addressing predictable and detectable X-ray tube failures. TubeGuard provides a combination of proactive tube monitoring, AI-based error prediction, and fast, proactive scheduling of service activities when malfunctions are detected.
At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. By constantly bringing breakthrough innovations to market, we enable healthcare professionals to deliver high-quality care, leading to the best possible outcome for patients. Our portfolio, spanning from in vitro and in vivo diagnostics to image-guided therapy and innovative cancer care, is crucial for clinical decision-making and treatment pathways.

Built on a history of innovation going back more than 125 years and with unique strengths in patient twinning, precision therapy, as well as digital, data, and artificial intelligence (AI), we are well positioned to take on the biggest challenges in healthcare. We will continue to build on these strengths to help fight the world’s most threatening diseases, improving the quality of outcomes, and enabling access to care.

As a leader in the industry, we aspire to create better outcomes and experiences for patients no matter where they live or what health issues they are facing. We innovate sustainably to develop scalable solutions that can be tailored to the needs of healthcare providers, and the local health infrastructures.

Motivated by our purpose and guided by our values, we are building an inclusive culture, where we embrace diversity in all its forms. We are a team of 66,000 highly dedicated employees across more than 70 countries passionately pushing the boundaries of what’s possible in healthcare to help improve people’s lives around the world.

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