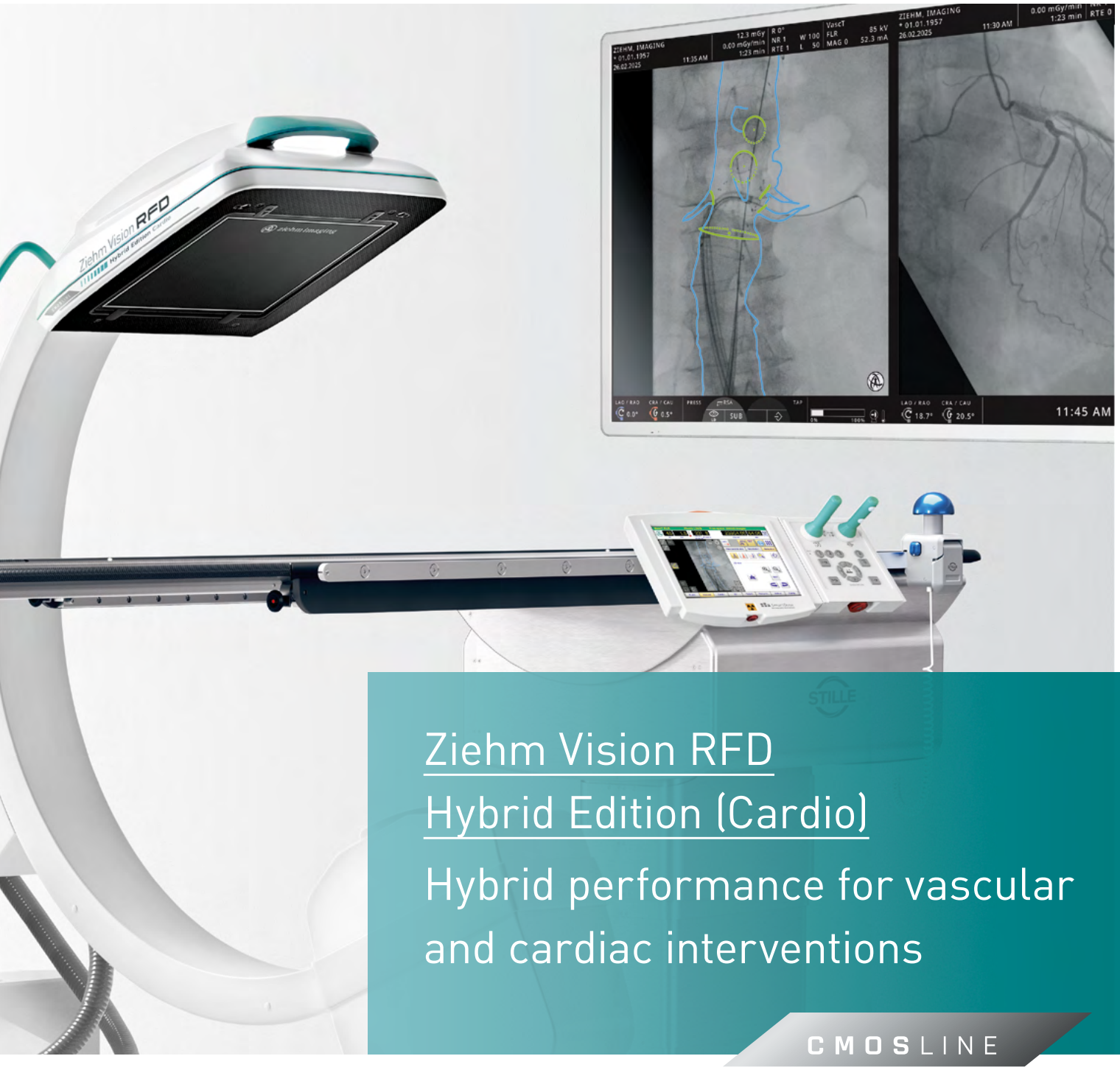
ziehm imaging



Ziehm Vision RFD Hybrid Edition (Cardio)

Hybrid performance for vascular and cardiac interventions

CMOSLINE

Dedicated SmartVascular workflow and cardio operating mode for advanced cardiovascular procedures
↗ 14

Premium imaging with QuantumStream, the first true 2k x 2k imaging chain
↗ 04

Endovascular Navigation[4] inside with image fusion technology
↗ 15

Advanced Active Cooling and integrated energy storage for higher performance levels
↗ 28

Full motorization of all 4 axes with variable isocenter
↗ 26

Pulsed monoblock generator with 30 kW power performance
↗ 06

Ziehm Vision RFD Hybrid Edition (Cardio). An aging population and the shift toward minimally invasive procedures are creating an increased demand for advanced cardiovascular imaging. The Ziehm Vision RFD Hybrid Edition[1,2] (Cardio) CMOSline[3] is the mobile answer to this growing need – combining premium image quality with unmatched flexibility. Featuring QuantumStream, the first true 2k x 2k imaging chain and CMOS detector technology, this system enables precise, high-end imaging in any standard OR. Whether in complex vascular procedures or delicate cardiac interventions, the Ziehm Vision RFD Hybrid Edition (Cardio) delivers hybrid and mobile CathLab performance without the cost, complexity, or installation requirements of a fixed system. This makes it a powerful tool for hospitals looking to expand their capabilities and remain competitive.

01 / Maximize clinical precision with QuantumStream the first 2k x 2k imaging chain

The Ziehm Vision RFD Hybrid Edition (Cardio) elevates intraoperative imaging to a new standard of clarity and detail – for both vascular and cardiac procedures. With its advanced QuantumStream imaging chain, it delivers seamless 2k x 2k resolution from acquisition to display. This allows for deeper insights and confident decision-making even in the most demanding hybrid or cardiac interventions.

QuantumStream – Ziehm Imaging's next-generation imaging chain – is designed to transmit true, non-interpolated 2k x 2k resolution across the entire imaging system. It enables higher imaging efficiency and streamlines intraoperative workflows by delivering superior image clarity, enhanced surgical precision, and ultimately safer interventions with improved patient outcomes – for better care.

PERFORMANCE
Industry-leading **30 kW** generator

IMAGE ACQUISITION
CMOS detector with **100 µm pixel** size

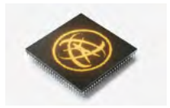


IMAGE PROCESSING
True **2k x 2k resolution** image processing

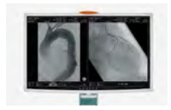
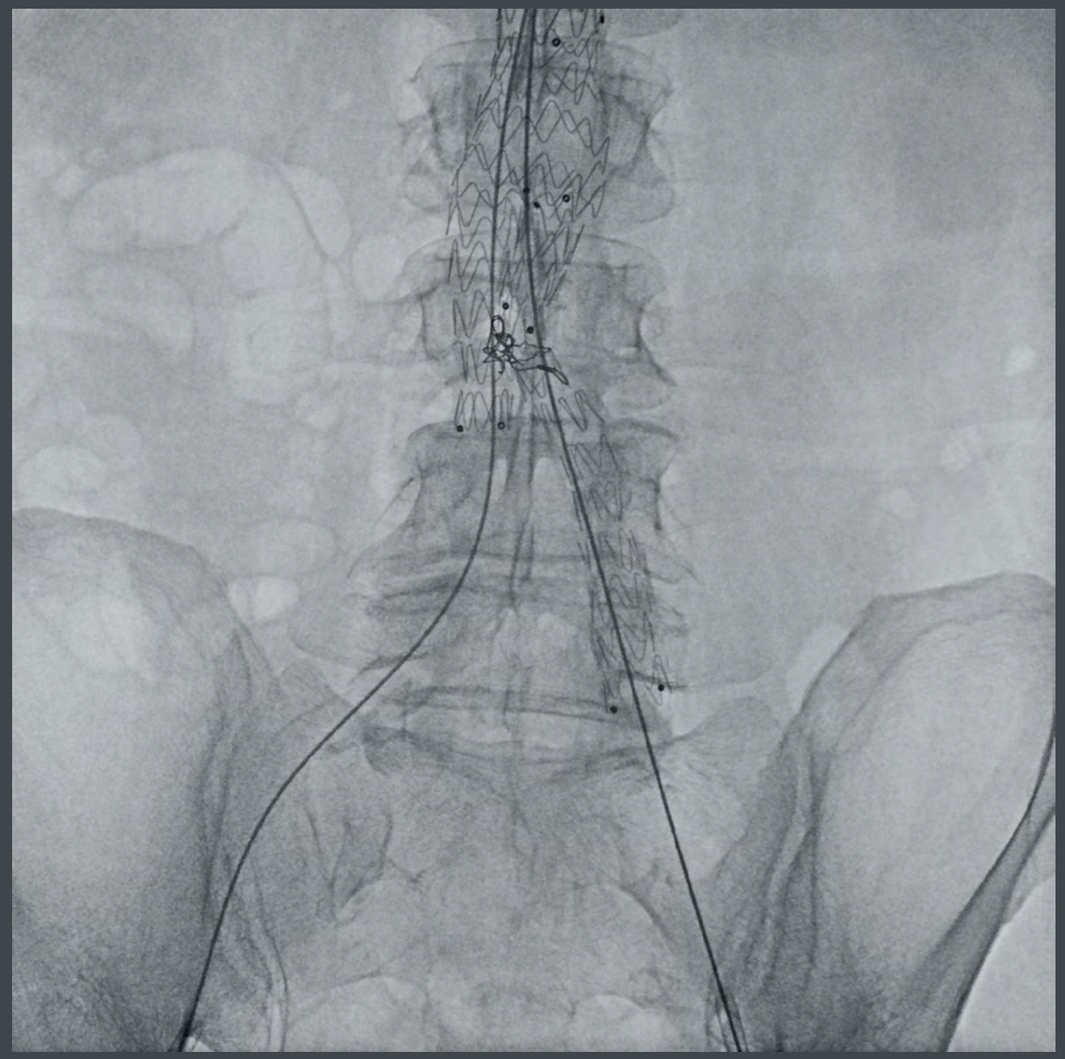


IMAGE OUTPUT
32" **4k** UHD monitor

IMAGE INSIGHTS
Relevant **patient** and **C-arm information**

Clinicians benefit from:
– Sharper image details, especially in magnification modes
– Improved visibility of guidewires, stents, and cardiovascular anatomy
– Smoother transitions in fast-moving objects

Excellent image quality and ease of operation allow for multidisciplinary use of the Ziehm Vision RFD Hybrid Edition (Cardio). The system can be used flexibly in cardio and vascular interventions or complex ortho, trauma and spine procedures.



Snapshot of an endovascular aneurysm repair (EVAR)

Performance within QuantumStream

Unmatched power generator for challenging projections

The first 30 kW generator performance on the market (IEC 60601-2-54) ensures excellent results even during steep angles and lateral projections. The high-frequency generator operates with variable pulse width and optimized image quality while minimizing dose levels. With up to 300 mA, the C-arm provides crystal-clear images even of fast-moving objects like the beating heart or inserted guidewires – making it ideal for cardiovascular procedures. The compact housing of the generator simplifies positioning at the OR table.

Image acquisition and processing within QuantumStream

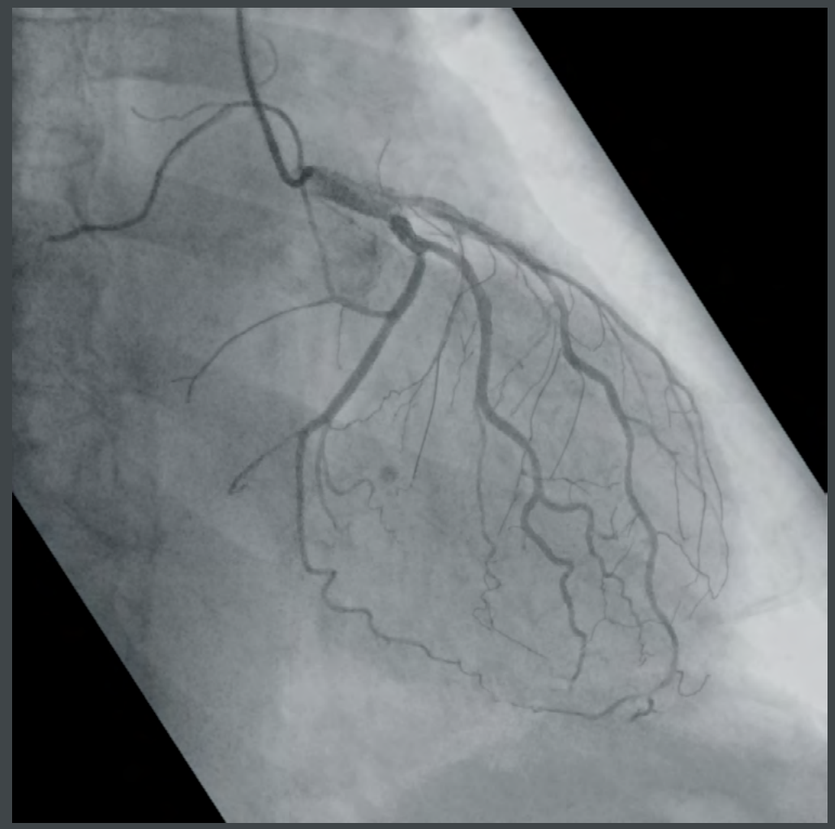
High-resolution CMOS detector

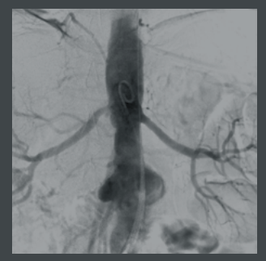
Compared to conventional C-arm detectors, CMOS flat-panels within our premium CMOSline achieve higher spatial resolution with lower noise thanks to their 100 µm pixel size. Combined with true 2k x 2k image processing, the system delivers exceptional imaging precision – especially noticeable in magnification modes. Therefore, the system provides image quality previously only available with fixed systems – while maintaining full mobility and OR compatibility.

The 21 cm x 21 cm detector is optimized for cardiac intervention-focused procedures.

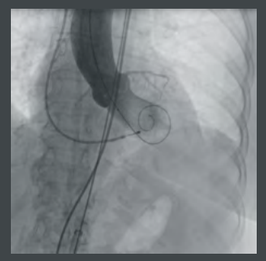
The 31 cm x 31 cm detector is ideal for complex hybrid applications.

Angiography of left coronary arteries





Digital Subtraction Angiography (DSA) of an endovascular aneurysm repair (EVAR)



Angiography before transcatheter aortic valve implantation (TAVI)

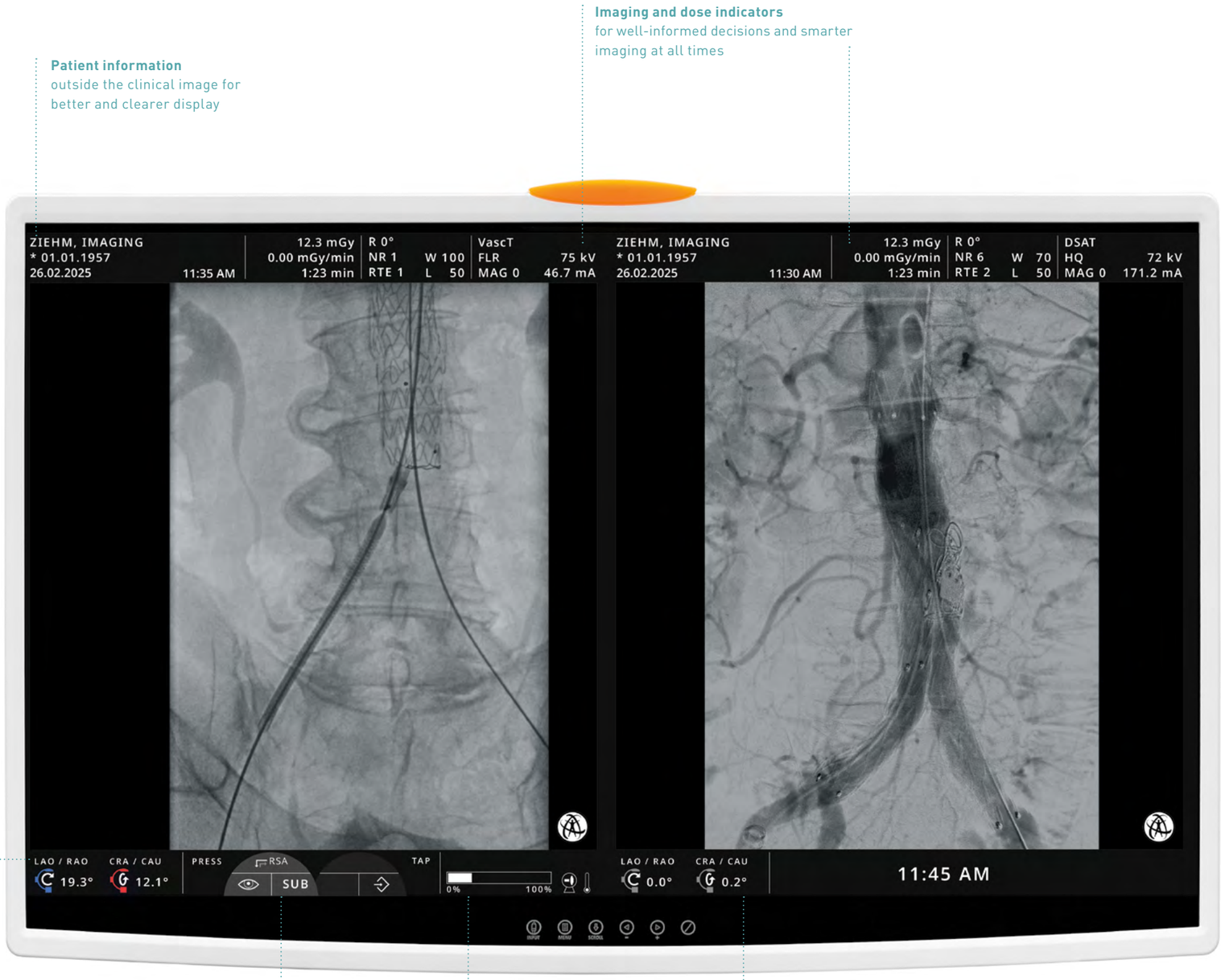
Fluoroscopy of an endovascular aneurysm repair (EVAR)

Image output and Image Insights within QuantumStream

Every detail in sight with 4k UHD and Image Insights

The high-resolution 32" 4k UHD monitor completes the imaging chain. Mounted on an articulating arm (AMA) or directly on our mobile cart, it displays all details of non-interpolated QuantumStream images. Even the most delicate anatomical structures become visible with outstanding clarity – in both vascular and cardiac cases and any further applications. This leads to real-time procedural control and greater confidence in the OR.

Ziehm Imaging's Image Insights show key data directly on the live image – without obscuring critical clinical information. This integration supports efficient communication and informed decisions, especially in fast-paced hybrid OR environments.



Patient information
outside the clinical image for better and clearer display

Imaging and dose indicators
for well-informed decisions and smarter imaging at all times

Live C-arm positioning information
to display orbital movement and angulation

Individual footswitch configuration
to ensure clear and effective C-arm use at all times

Anode heat capacity and oil temperature for safe and sensible use of the C-arm

Stored C-arm positioning information of the reference image to display orbital movement and angulation, allowing the exact same C-arm position to be recalled

02/ Take your OR to the next level with high-end cardiovascular imaging

The sharp rise in cardiovascular disease is leading to an urgent need for hospitals to perform more procedures with fewer resources. The Ziehm Vision RFD Hybrid Edition (Cardio) is available in two variants, tailored either to the specific requirements of vascular surgery or cardiology. Each system delivers premium image quality, workflow efficiency, and mobility without the need for structural changes to the operating room.

One platform. Two solutions.

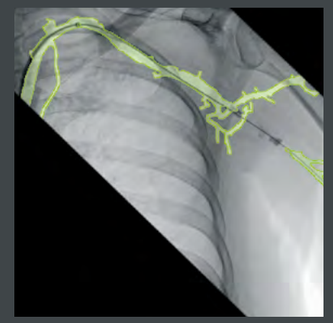
→ Ziehm Vision RFD Hybrid Edition ↗ 12
For advanced vascular interventions, including complex AAA procedures like EVAR, FEVAR and TEVAR

→ Ziehm Vision RFD Hybrid Edition Cardio ↗ 18
Designed for mobile CathLab environments with a focus on interventional cardiology, electrophysiology and structural heart procedures

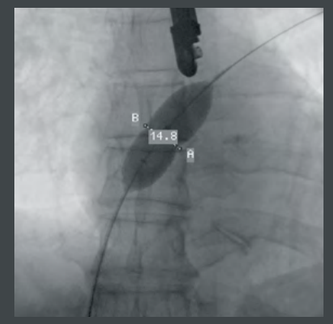
Both variants support fast and reliable decision-making and provide the surgical team with valuable communication and orientation tools. Vessels and anatomical landmarks are now easier to identify thanks to **Enhanced Vessel Visualization** and refined **Measurement Functions**.

The **Anatomical Marking Tool (AMT)** allows clinicians to apply live, color-coded annotations such as vessel markings or implant positions directly on the image – helping improve orientation, planning, and communication during complex cardiovascular procedures.

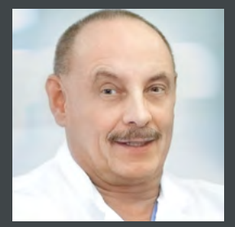
Control angiography after carotid stent implantation



Fluoroscopy of an axillary artery using Enhanced Vessel Visualization



Measurement of a persistent foramen ovale (PFO)



"Thanks to the equivalent image quality and similar setting options, Ziehm Imaging offers with its unique mobile C-arm an additive intraoperative imaging option to the traditional fixed system."[5]

Prof. Dr. Hartmut Gülker
Founder CardioMed Cardiovascular Sciences, Wuppertal, Germany

Ziehm Vision RFD Hybrid Edition

The complete mobile hybrid solution for vascular procedures

The Ziehm Vision RFD Hybrid Edition is more than a mobile C-arm. In combination with a broad variety of components it becomes a fully integrated hybrid imaging solution. This system allows hospitals to perform complex endovascular procedures with the precision and image quality compared to a fixed system, but without the associated cost, space requirements, or construction work.

Key features of the Ziehm Vision RFD Hybrid Edition:

→ SmartVascular

This workflow is dedicated to vascular interventions, enabling seamless transitions between Fluoro, DSA, MSA, and RSA – including intuitive footswitch control.

→ CO_2 angiography

Sensitive treatment with CO_2 contrast agent to expand the range of treatable patients – safely, economically, and with full diagnostic value.

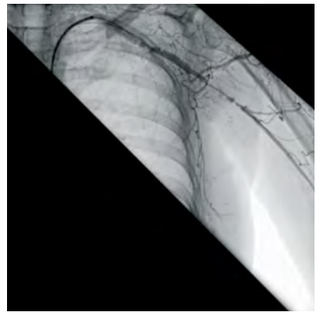
→ Endovascular Navigation

Support of fusion imaging and precise intraoperative guidance for aorto-iliac procedures.

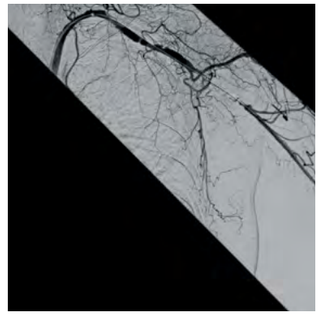
→ Intelligent workflow assistants for more confidence in the OR

To meet the complex requirements of modern endovascular procedures, the Ziehm Vision RFD Hybrid Edition sets the benchmark by offering a complete suite of advanced angiographic tools.

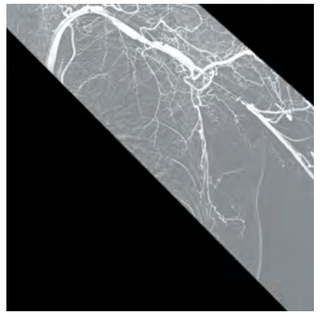
SmartVascular: One-click vascular workflow management
The SmartVascular workflow provides an intuitive, touch-based interface that enables seamless switching between native image (Fluoro), DSA (Digital Subtraction Angiography), MSA (Maximum Opacification Substraction Angiography), and RSA (Roadmapping) – with a single click. It can even be controlled via the preconfigured footswitch for hands-free operation, so that the surgeon can concentrate optimally on the procedure. The performance of RSA directly from a single DSA image saves time and minimizes dose. It transforms demanding interventions into standardized, controlled steps – supporting clinical teams with reliability and repeatability.



Native image



DSA for high-contrast vessel visualization



RSA for precise navigation and tool placement

Open here to discover the Endovascular Navigation Aorto-iliac workflow →

CO_2 angiography: A safe and cost-effective alternative
Contrast medium imaging with CO_2 is an innovative and cost-efficient alternative for patients with allergic reactions or other contraindications to iodinated contrast agents. The Ziehm Vision RFD Hybrid Edition supports CO_2-based imaging in DSA, MSA, and RSA modes using a dedicated CO_2 workflow package.

Despite the alternative contrast medium, images are displayed in the same high-quality format as with iodine – enabling physicians to maintain procedural standards without compromising on image clarity or patient safety.

Endovascular Navigation
Endovascular Navigation enables physicians to plan and perform complex procedures with greater accuracy, confidence, and efficiency. For the first time, image fusion and navigation are integrated directly into a mobile C-arm. This enables advanced navigation to be available in a mobile setting – without the need for a fixed hybrid room.

The navigation software is optimized for standard and complex aorto-iliac procedures:
- EVAR (Endovascular Aneurysm Repair)
- FEVAR (Fenestrated Endovascular Aneurysm Repair)
- TEVAR (Thoracic Endovascular Aneurysm Repair)
- Further complex procedures like IBD (Iliac Branch Devices), CERAB (covered endovascular reconstruction of the aortic bifurcation), kissing as well as renal arteries stenting

Artificial intelligence-based algorithms automatically align pre-op CT scans with live fluoroscopy – adapting in real time to patient, table, or C-arm movement. Surgeons can precisely guide tools and implants in the live images while seeing the details of the anatomy in the 3D view of the CT data – even in challenging anatomical regions. This improves accuracy while helping to reduce contrast medium and radiation.

Stand-alone navigation option with EndoNaut[7]
This plug & play system can be easily added to existing Ziehm Imaging C-arms. It is available for aorto-iliac interventions and procedures on the lower extremities.

Therenva
Part of Ziehm Imaging

Endovascular Navigation Aorto-iliac workflow

1 Plan in minutes with EndoSize

Using AI-based image processing, the planning process becomes fast and highly automated. With just a few inputs, EndoSize[8] analyzes preoperative CT datasets and prepares them for procedural guidance, including:

- → Centerline and vessel segment identification
- → Indication of precise measurements of diameters and lengths
- → Proposal for an appropriate endograft from a uniquely comprehensive catalog
- → Simulation of stent placement and deformation behavior

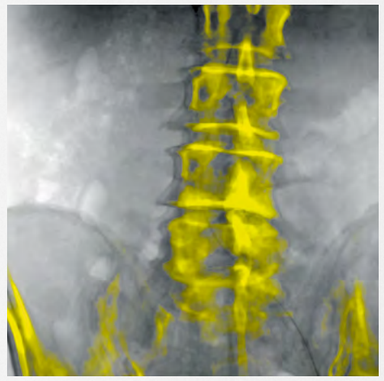
Planning can be completed in just a few minutes – providing a reliable foundation for the intervention.

2 Import data and review the intervention planning directly on the C-arm

The completed planning data is seamlessly transferred to the C-arm. The 3D volume and key planning elements are immediately available on the surgical monitor, such as:

- → Measurement overlays
- → C-arm angles
- → Annotated vessel pathways
- → Keypoints (e.g. landing zones, bifurcations)

This ensures a high level of confidence for the surgery, as the OR team has all critical data at hand.



3 Fusion imaging in real time with automatically updated overlay

During the procedure, vascular image fusion matches the preoperative 3D data with live fluoroscopy – and adapts continuously to patient or equipment movement. The registration process is:

- → Dynamic, updating based on changes in table, C-arm, or patient position
- → Precise, even in complex anatomical areas
- → Predictive, since deformed vascular structures can be shown

This real-time fusion provides visual guidance with anatomical accuracy – potentially reducing contrast media use and helping to minimize radiation dose.

4 Navigate and review directly from the interventional table

All navigation tools are directly accessible from the main system interface, enabling the physician to:

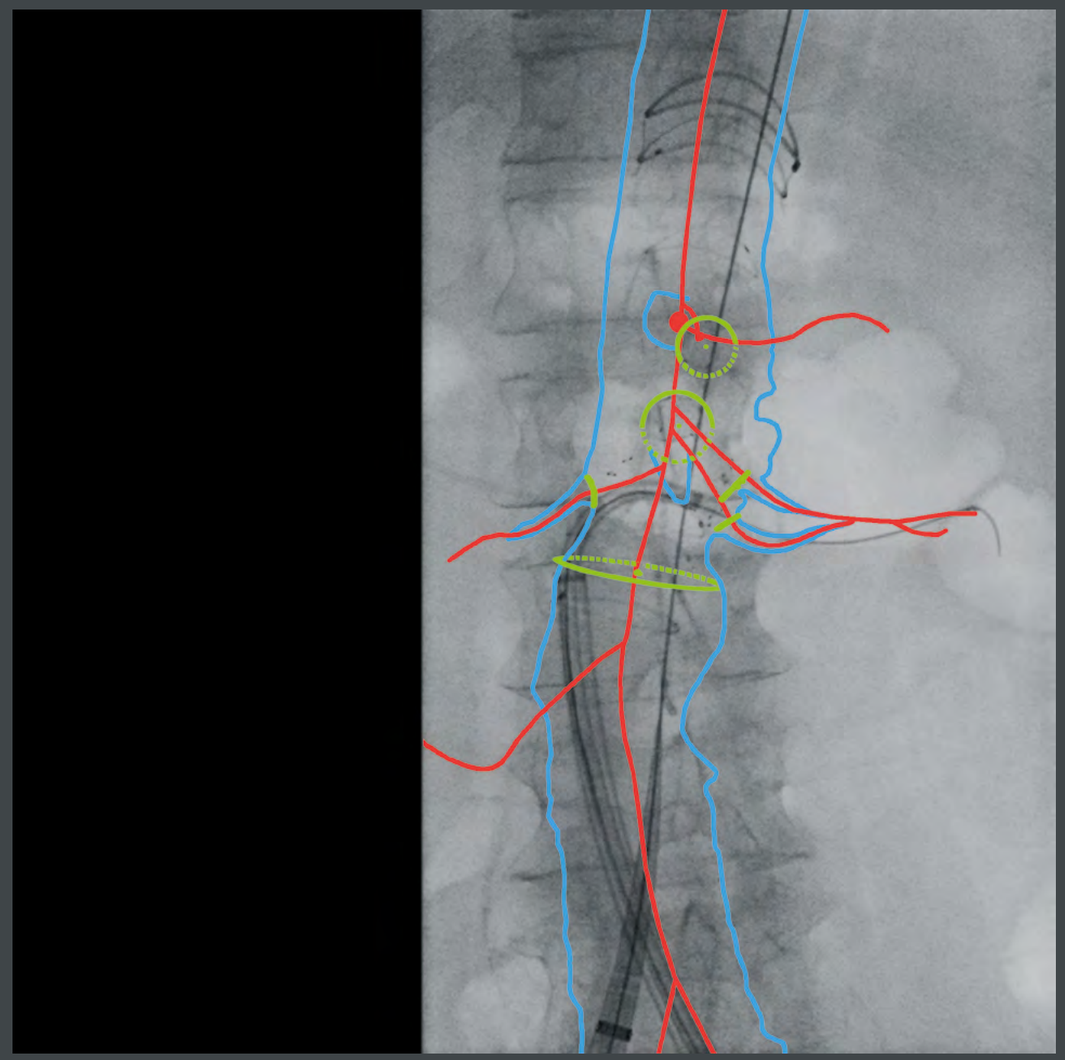
- → Interact with the preoperative planning data directly from the sterile field
- → Navigate intuitively using overlaid anatomical landmarks
- → Track device positioning during stent or graft deployment

Navigation is performed directly at the table without the need for an additional workstation or monitor.

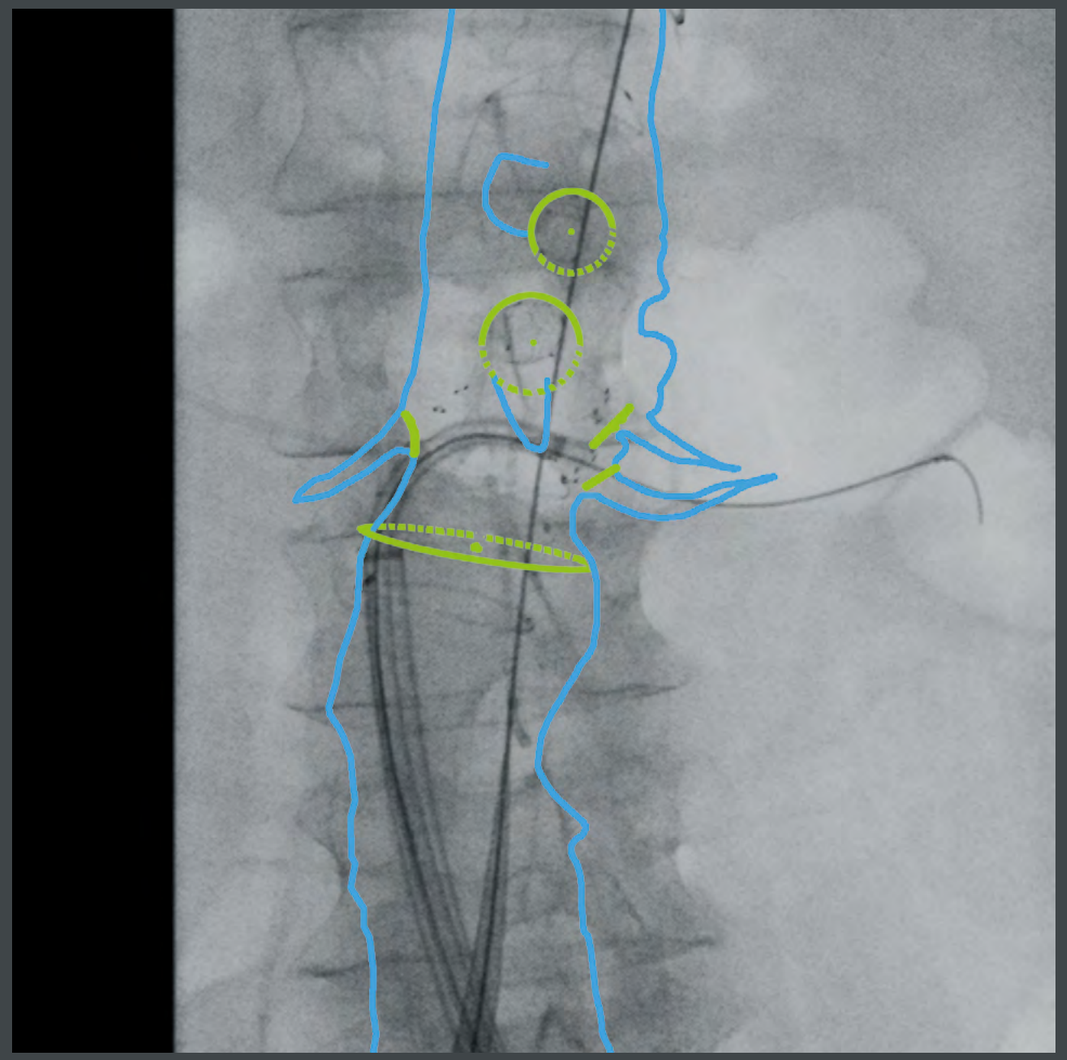
Algorithm based on artificial intelligence

"... We are particularly impressed by the automatic re-registration after changing the position of the C-arm. The savings in procedure time and expected reduction in contrast agent and radiation dose make a real difference for us and our patients in the further course of care."[5]

Prof. Dr. Johannes Kalder
University Hospital Giessen and Marburg, Giessen, Germany



Overlay with centerline of a fenestrated endovascular aneurysm repair (FEVAR) using Endovascular Navigation



Overlay without centerline of a fenestrated endovascular aneurysm repair (FEVAR) using Endovascular Navigation

Ziehm Vision RFD Hybrid Edition Cardio

Mobile CathLab solution for coronary, electro-physiological, and structural heart interventions

The Ziehm Vision RFD Hybrid Edition Cardio is designed to increase capacity and provide a cost-efficient entry point into interventional cardiology. As an alternative to conventional cath lab infrastructures, this mobile setup is ideal for hospitals with limited space or budget, especially in decentralized care structures or emerging markets.

Key features of the mobile CathLab:

→ Modular configuration

Adaptable and fast setup for different OR layouts and clinical workflows

→ Specialized Anatomical Programs (APR)

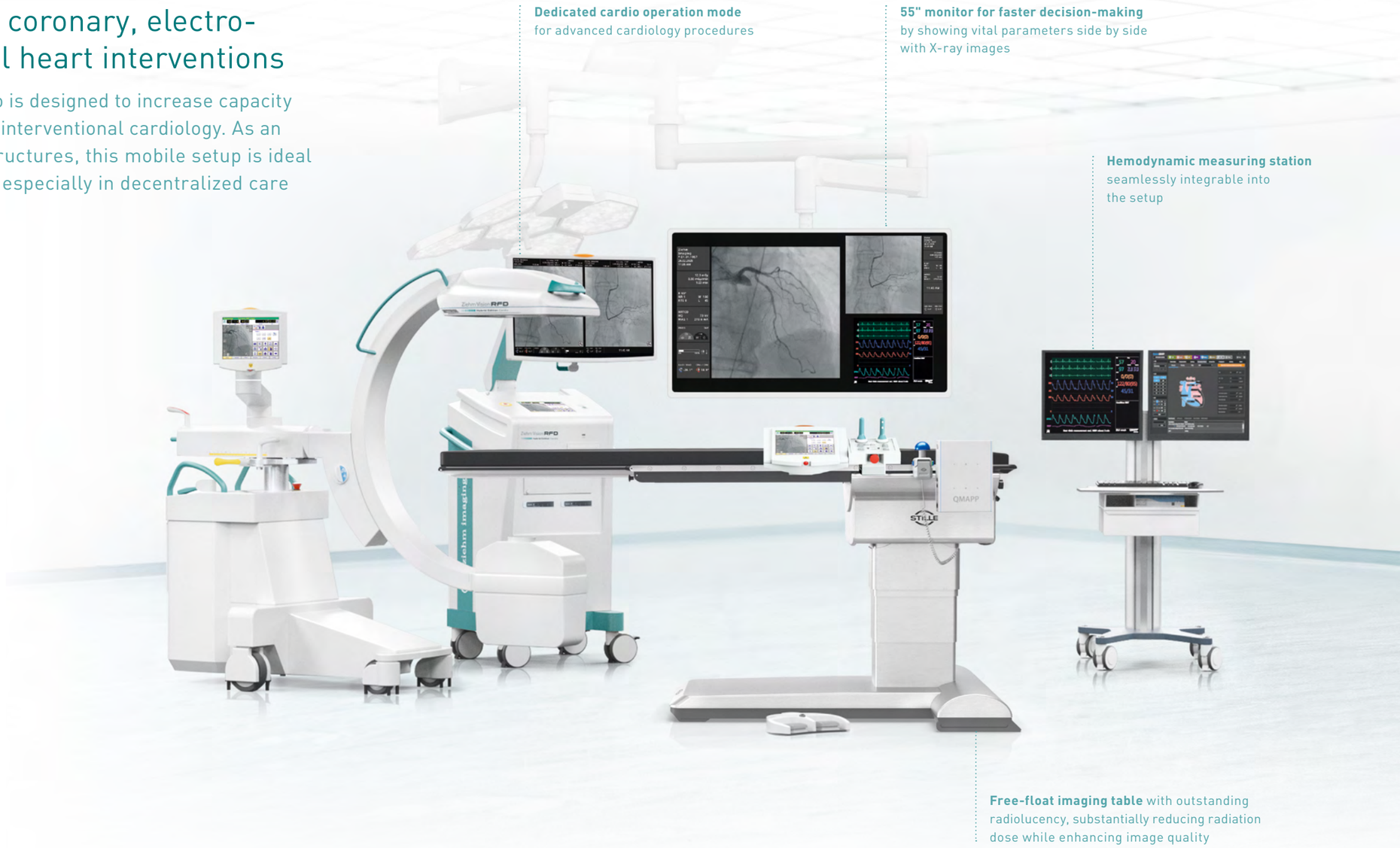
Dedicated cardio package optimized for cardiac imaging

→ Intelligent heat management

Prolonged use due to Advanced Active Cooling

→ EndoSize Structural Heart

Advanced preoperative planning of structural heart interventions



→ Space-saving and cost-efficient alternative to fixed cath labs

Flexibility is the main focus of the mobile CathLab. Its modular design lets hospitals select only the components they truly need – from imaging and table options to advanced monitoring or diverse monitor options.

Ziehm Vision RFD Hybrid Edition Cardio

This C-arm is specially optimized for the needs of modern interventional cardiology, electrophysiology and structural heart procedures. Advanced Active Cooling (AAC) ↗28 ensures high image quality even during long and demanding procedures. Combining the market's highest generator capacity (IEC 60601-2-54) with a dedicated cardio tab, clinicians benefit from specialized anatomical programs (APRs) designed to support optimal imaging in coronary and electrophysiological procedures. Whether in high-volume cath lab settings or mobile hybrid ORs, these dedicated cardiology functionalities ensure faster setup, more predictable outcomes, and better support for the entire cardiac team.

Dedicated cardio operating mode enables:

- **Consistently excellent image quality** even in high-motion or steep-angle projections
- **Optimized dose exposure** for sensitive cardiac structures or congenital heart diseases
- **Improved workflow** with all required features available at a single glance

To complete the setup, we offer a broad range of devices from our partners. A selection is shown below.

Surgical imaging table

STILLE imagiQ3 Legacy is a low-dose imaging table featuring True Free Float technology and a highly radiolucent carbon fiber tabletop. It is designed to help improve efficiency and shorten procedure time.

Advanced preoperative planning

EndoSize Structural Heart Edition enables planning of structural heart interventions like TAVI and TMVR with AI-based measurement tools and 3D simulation for optimized treatment strategies.

Hemodynamic monitoring

The Fysicon QMAPP[9] solution is seamlessly integrated into the mobile CathLab setup. Patients' vital signs are displayed side by side with live X-ray images on the 55" 4k monitor. QMAPP features automated report generation and full PACS/EPR connectivity.

55" 4k monitor

Dedicated viewing options simultaneously display cardiac images and vital signs. This supports faster decision-making by showing everything at a glance, including pressure and ECG data from the hemodynamic measurement system, real-time fluoroscopic images from the C-arm, and stored reference images.

Depending on the clinical focus, system components can be tailored accordingly:

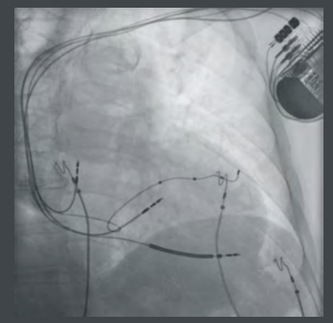
– **Interventional Cardiology**
The 21 cm x 21 cm detector enables precise positioning during coronary angiograms enabling the physician to visualize ideal projections during left and right heart catheterization or coronary interventions. The hemodyamic monitoring and the mobile imaging table complete the mobile CathLab setup.

– **Electrophysiology and Rhythmology**
Electrophysiologists benefit from the larger detector with 31 cm x 31 cm which enables them not only to see the placement of the electrodes in the heart but also the placement across the chest. With two magnification modes, physicians can decide throughout the procedure whether they want to see details or the big picture without increasing the dose. The additional 55" monitor makes it possible to see X-ray images, cardiac mapping and intravascular ultrasound all on one screen which makes the setup ideal for pacemaker implantations, electrophysiological studies or PFO closures.

– **Structural heart procedures**
For cardiac surgery, the system can be equipped either with a 21 cm x 21 cm detector to focus only on cardiology, or a 31 cm x 31 cm detector to stay more flexible in the OR. Enhanced with EndoSize software for AI-based preoperative 3D planning and simulation of implant placement, the setup is ideally suited for transcatheter aortic valve implantations (TAVI), mitral clipping or transcatheter mitral valve replacements (TMVR).

Whether in high-volume cath lab settings or mobile hybrid ORs, these dedicated cardiology functionalities ensure fast setup, predictable outcomes, and comprehensive support for the entire cardiac team.

Angiography of the right coronary artery



Fluoroscopy of a biventricular pacemaker

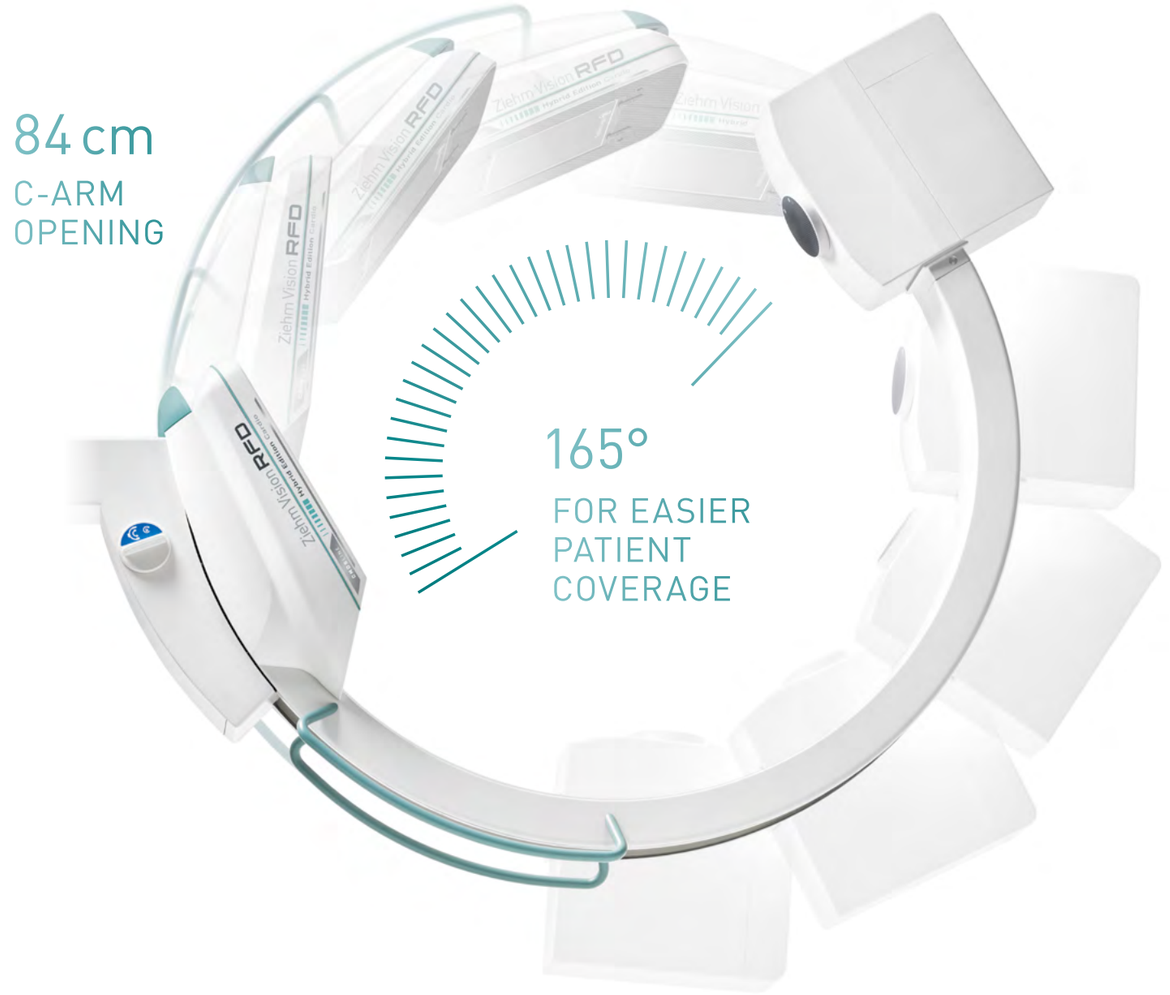
Fluoroscopy of a transcatheter aortic valve implantation (TAVI)

03 / Plug in and start your hybrid procedure with zero room preparation

The Ziehm Vision RFD Hybrid Edition (Cardio) challenges the notion that hybrid ORs are typically space-intensive and costly. The mobile device requires zero modifications to the OR and is up and running in no time. Easy installation and reduced operating costs make the Ziehm Vision RFD Hybrid Edition (Cardio) efficient, flexible and competitive. Thanks to its small footprint and good maneuverability, this mobile solution enables convenient handling in any OR. Ergonomic features and the Ziehm Usability Concept[10] contribute ideally to efficient clinical workflows – which is particularly important in demanding vascular procedures.

→ Best-in-class ergonomics

With a footprint of 0.8 m², the Ziehm Vision RFD Hybrid Edition (Cardio) is one of the most compact mobile C-arms on the market. With its easy-drive system and the fully motorized C-arm, the system can be maneuvered with minimal effort during long procedures. The big C-arm opening and 165° of orbital movement ideally support the workflow and provide easier patient coverage.



Easy handling

165° of orbital movement and an 84 cm C-arm opening provide ideal support for clinical workflows.

→ Motorization and isocentric movement

The Ziehm Vision RFD Hybrid Edition (Cardio) mobile C-arm is equipped with motorization that allows easy control of all four axes. The operator can either use the Remote Vision Center (touchscreen) or the Position Control Center (joysticks) to move the C-arm into the exact desired position. Operating the device right from the OR table in the sterile field minimizes the time needed and guarantees maximum precision. With the freely selectable isocenter, any given anatomical structure can be displayed from different angles without having to re-adjust the C-arm. The isocenter is held during angulation and orbital movement thanks to the motorized axes. All of this with just one click. Additionally, the Position Control Center allows storage of up to three C-arm positions, which can be recalled during the procedure. The home button brings all movements back to the starting position.

→ Patient safety – a top priority

Our motorized C-arms are equipped with Distance Control – an assistance system supporting non-contact collision protection. In the patient's proximity, the motorized movement is slowed down. The movement stops immediately before entering a predefined zone.

With the stored and displayed C-arm positioning information of the reference image (on the right side of the monitor), exactly the same C-arm position can be recalled at any time. The Position Control Center and the Remote Vision Center enable precise and straightforward movements of the C-arm.

Precise control via Position Control Center combined with display of C-arm coordinates on touchscreen ensure exact and fast positioning of the device.

EXACT C-ARM POSITIONING

TRANS	VERT	LAO/RAO	CRA/CAU
9.5 cm	8.3 cm	-7.4°	6.5°

→ Prolonged use with intelligent heat management

C-arms need to be in continuous use during lengthy, demanding procedures, such as vascular interventions. To ensure consistent system temperature and prevent system failure due to overheating, the Ziehm Vision RFD Hybrid Edition (Cardio) is ideally equipped with Advanced Active Cooling (AAC). Even during complex applications, such as TAVI, angioplasties and FEVAR, this C-arm delivers reliable results for the duration of the entire procedure. In the event of a temperature increase, the pulse frequency is automatically reduced until the generator's temperature has cooled down.

→ Lower cost for faster ROI

Ziehm Imaging's mobile C-arm eliminates the need for a separate control and technical room typically required for fixed systems. This means lower purchase and operating costs leading to a faster return on investment (ROI).

"We want our doctors to work in the best conditions and have access to the latest technology. With the Ziehm Vision RFD Hybrid Edition we can convert any operating room into a hybrid room. In retrospect, it was exactly the right investment for us.[5]

Florin Andronescu
Development Manager,
Sanador Clinic, Bucharest, Romania

Sophisticated system to avoid generator overheating

Advanced Active Cooling keeps generator temperatures down through automatic adaptation of the pulse rate combined with a powerful liquid cooling system.

→ Ziehm Usability Concept

Heavy case loads and a large number of different users call for OR equipment with a highly standardized and ergonomic design. Ziehm Imaging supports this need with the unique Ziehm Usability Concept[10]. Seamlessly integrated workflows offer unmatched levels of usability – anytime, anyplace.

As an innovation and technology leader, Ziehm Imaging has developed the sophisticated yet intuitive Ziehm Usability Concept that combines a unique and finely tuned set of hardware features with seamlessly integrated software functionalities. In a challenging clinical environment, the entire concept is geared toward increasing ease of use in daily tasks. It improves process efficiency and ensures standardized quality levels in the OR for optimized patient outcomes.

COLOR-CODED SCALES AND HANDLES
to ensure clear communication in the OR

MOST COMPACT FOOTPRINT WITH 0.8m²
to fit in even the smallest treatment scenarios

UP TO 165° OF ORBITAL MOVEMENT
to support easier patient coverage

ZIEHM VISION CENTER
featuring an intuitive touch-screen user interface

SMARTEYE
enabling users to keep track of orientation and object position

ANATOMICAL MARKING TOOL
to easily apply markings and labels to fluoroscopic images

WIRELESS DUAL-PLUS FOOTSWITCH
to control all imaging functionalities without any disturbing cables

ZIEHM NETPORT
with WLAN enables easy integration into IT networks

WIRELESS VIDEO
transmitting live X-ray images to external monitors

CONTROL MODULES
for a fast and flexible setup in the sterile field

VERSATILE VIEWING OPTIONS
to offer maximum flexibility in the OR

04 / Reduce exposure significantly with the next-generation SmartDose concept

The Ziehm Vision RFD Hybrid Edition (Cardio) is designed to meet growing demand among surgeons and their staff for minimized dose exposure without compromising on image quality. Optimal filtration and advanced anatomical programs deliver on these demands, making this device perfect for dose-sensitive applications.

→ Best image quality. Minimized dose.

The comprehensive concept consists of a broad, clinically proven application portfolio to address daily challenges of low dose and high image quality. With significant dose savings, Ziehm Imaging sets the benchmark in user-friendly adjustments of dose exposure. SmartDose[11] helps display even the smallest details of complex anatomical areas and reduce dose with intelligent pulse regulation and optimized anatomical programs. Furthermore, dedicated SmartDose functions significantly reduce exposure in pediatric surgery[12].

LASER POSITIONING DEVICE
integrated in flat-panel and generator housing for accurate and dose-free positioning of C-arm

REDUCTION OF PULSE FREQUENCY
manually or fully automatically to lower the accumulated dose

OBJECT DETECTED DOSE CONTROL (ODDC)
to automatically analyze the area of interest and minimize dose while optimizing image quality

ANATOMICAL PROGRAMS
with automatic optimization of dose and image quality for best results

HIGH-SPEED ADR
for intelligent, fast regulation of pulse rate to lower the dose level

ZAIP ALGORITHM AND FILTERS
to display fast-moving objects like guide wires and even the smallest vessels in razor-sharp image quality

LOW DOSE MODE
in all anatomical programs for particularly dose-sensitive procedures, e.g. in pediatrics

PREMAG
for exposure-free magnification of X-ray images

AUTOMATIC ADJUSTMENT
for large patients – with no additional increase in dose

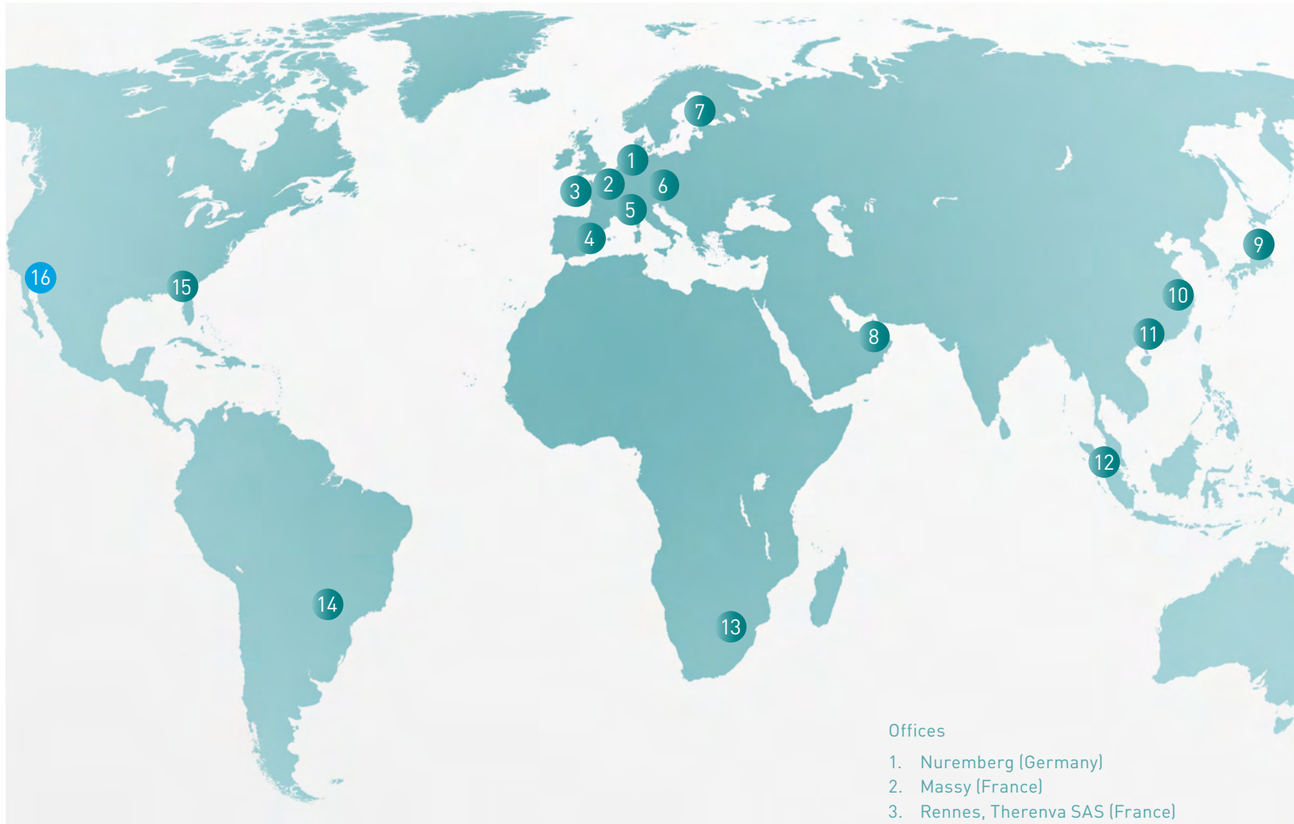
REMOVABLE GRID
to reduce dose in pediatric and other dose-sensitive procedures

VIRTUAL COLLIMATORS
for exposure-free positioning of collimators

BEAM FILTRATION
for reduced entrance skin dose without compromising on image quality

FEATURES	**Ziehm Vision RFD Hybrid Edition**	**Ziehm Vision RFD Hybrid Edition Cardio**	**Ziehm Vision RFD Hybrid Edition**
Flat-panel technology	CMOS, 21 cm x 21 cm / 31 cm x 31 cm	CMOS, 21 cm x 21 cm / 31 cm x 31 cm	a-Si, 30 cm x 30 cm
Detector resolution	2k x 2k / 3k x 3k	2k x 2k / 3k x 3k	1.5k x 1.5k
Imaging chain	2k x 2k (QuantumStream)	2k x 2k (QuantumStream)	1k x 1k
Image Insights	■	■	–
Power generator	30 kW, pulsed monoblock generator	30 kW, pulsed monoblock generator	25 kW, pulsed monoblock generator
Ziehm Usability Concept	■	■	■
SmartDose	■	■	■
Advanced Active Cooling (AAC)	■	■	■
Orbital movement	165°	165°	165°
Motorization	Full control of the 4 motorized axes	Full control of the 4 motorized axes	Full control of the 4 motorized axes
Vascular Image Fusion	Stand-alone solution: EndoNaut[7] Integrated solution: Endovascular Navigation[4]	Stand-alone solution: EndoNaut[7] Integrated solution: Endovascular Navigation[4]	Stand-alone solution: EndoNaut[7]
Hemodynamic workstation	–	Fysicon QMAPP[9]	–

available ■ | not available –



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Rely on Ziehm Imaging for flexible and fast service to stay on the cutting edge of technology. Tailored service packages, remote service and individual upgrade paths keep you competitive in your daily hospital routine.

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www.ziehm.com/RFDHE

[1] The product description and images within this brochure contains optional hardware and software features.
[2] Ziehm Vision RFD Hybrid Edition represents a group of optional hardware and software that creates an option package on the device named Ziehm Vision RFD.
[3] CMOSline represents a system configuration that is based on a Ziehm Imaging CMOS flat-panel detector.
[4] Endovascular Navigation represents an optional medical device software package owned by Therenva SAS. Planning is performed with the software EndoSize, also owned by Therenva SAS. The EndoSize license is included in the Endovascular Navigation software package. Therenva SAS is a subsidiary of Ziehm Imaging GmbH. For more information please visit: www.ziehm.com.
[5] This statement described herein is based on results that were achieved in the customer´s unique setting. There can be no guarantee that other customers will achieve the same result.
[6] This product/feature might not be commercially available in all countries. Due to regulatory reasons its future availability cannot be guaranteed. Please contact your local Ziehm Imaging sales representative for detailed information.
[7] EndoNaut® is a registered trademark of Therenva SAS. In the USA, the EndoNaut® software obtained a substantial equivalence determination and FDA clearance through the CDRH premarket notification process (510(K)). In Europe, the EndoNaut® software is CE marked (class IIb), not eligible for reimbursement. The information provided in the labelling and manual is intended for Healthcare Professionals only. For the safe and successful operation and use of the device, always read the instructions.
[8] EndoSize® is a registered trademark of Therenva SAS. In the USA, the EndoSize® software obtained a substantial equivalence determination and FDA clearance through the CDRH premarket notification process (510(K)). In Europe, the EndoSize® software is CE marked (class IIa), not eligible for reimbursement. The information provided in the labelling and manual is intended for healthcare professionals only. For the safe and successful operation and use of the device, always read the instructions.
[9] QMAPP® is a registered trademark of Fysicon B.V.. In the USA, the QMAPP® software obtained a substantial equivalence determination and FDA clearance through the CDRH premarket notification process (510(K)). In Europe, the QMAPP® software is CE marked (class IIb). The information provided in the labelling and manual is intended for Healthcare Professionals only. For the safe and successful operation and use of the device, always read the instructions.
[10] The Usability Concept includes a variety of hard- and software features. Due to regulatory reasons the availability of each feature may vary. Please contact your local Ziehm Imaging sales representative for detailed information.
[11] The SmartDose concept includes a variety of hard- and software features. Due to regulatory reasons the availability of each feature may vary. Please contact your local Ziehm Imaging sales representative for detailed information.
[12] Gosch D. et al. "Influence of grid and ODDC on radiation exposure and image quality using mobile C-arms – First results," RöFo, 09/07

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