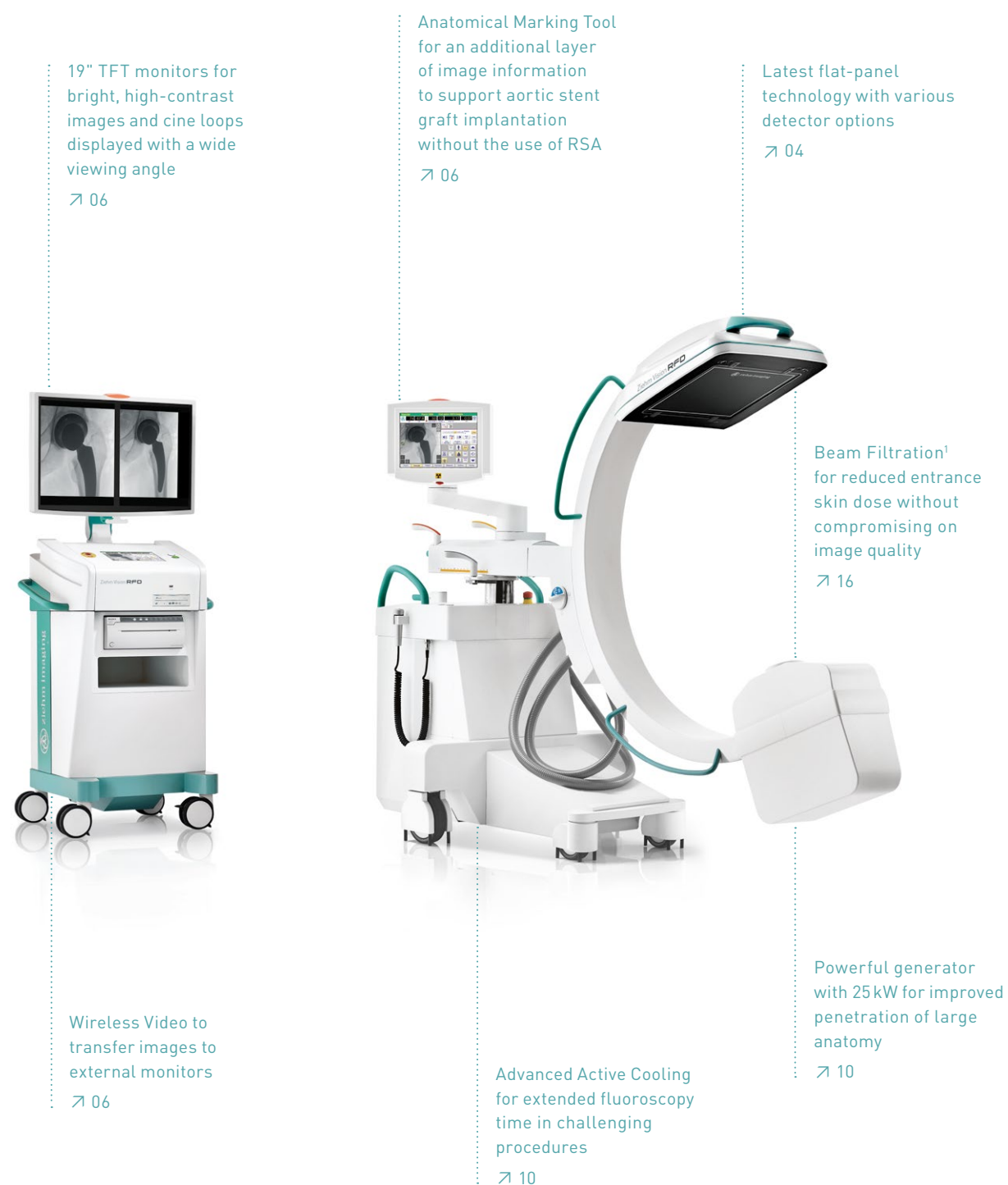




Ziehm Vision RFD

The ultimate C-arm
to outperform



Ziehm Vision RFD. The treatment of cardiovascular and degenerative musculoskeletal conditions calls for high-performance intraoperative imaging technologies. Incorporating the latest IGZO technology for excellent image quality, the Ziehm Vision RFD is the ideal product. In addition to the cardiovascular-focused 21 cm x 21 cm flat-panel version, the Ziehm Vision RFD is available with a 31 cm x 31 cm IGZO flat-panel detector. This is the preferred model for highly demanding orthopedic, trauma or cardiovascular interventions that require more information in one image. Both systems are equipped with a powerful generator for optimum penetration, Advanced Active Cooling to enable longer procedures and an intuitive operating concept for high clinical standards.

01 / Trust in over a decade of flat-panel performance enhanced with IGZO imaging technology

Building on more than a decade of experience in flat-panel technology, the Ziehm Vision RFD features the latest IGZO flat-panel technology. In this way, the Ziehm Vision RFD supports the demands of balancing cost-effectiveness and image quality by delivering a solution with exceptional image quality while maintaining overall performance.

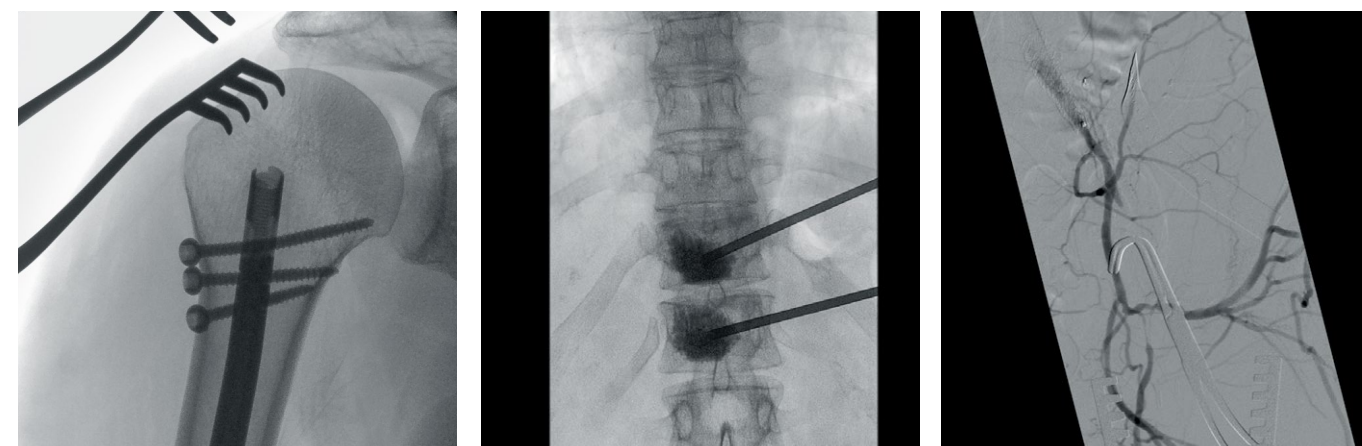
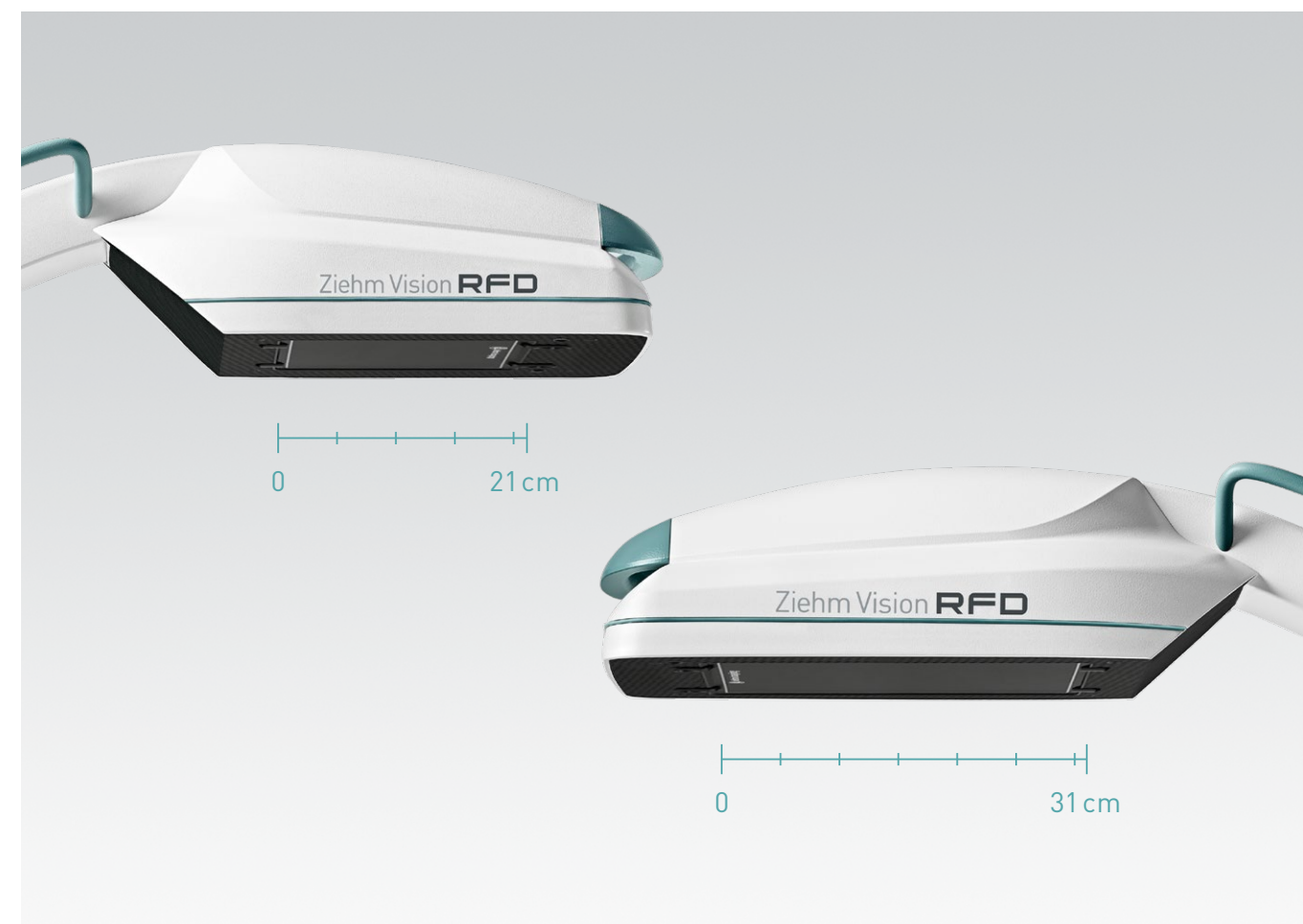
→ IGZO flat-panel technology

Good soft tissue and bone contrast, as well as high spatial resolution and a wide dynamic range are key to displaying detail-rich images. The IGZO detector technology enables physicians to enhance image quality, delivering high-resolution, low-noise images while minimizing dose levels. The Ziehm Vision RFD is therefore ideally equipped for challenging procedures in cardiovascular interventions and orthopedic, spine, and trauma surgery.

→ Two different flat-panel size options

The Ziehm Vision RFD integrates innovative detector technology for two specialized detector sizes. With the choice of 21 cm x 21 cm and 31 cm x 31 cm flat-panels, the mobile C-arm provides comprehensive information with each examination, previously capable only with fixed room systems. The bigger detector size makes it possible to cover larger anatomical regions in orthopedic and cardiovascular surgery.

Whether cardiovascular or highly demanding orthopedic and trauma procedures, the Ziehm Vision RFD offers solutions to fulfil all those needs.



→ Contrast-rich display

For the excellent display of the crystal-clear X-ray images the Ziehm Vision RFD uses 19" duo-flat-screens, which are designed for the highest demands in the OR. They stand for their exceptional brightness and contrast even at a distance. With Wireless Video you benefit from fewer cables in the OR and the ability to transfer live X-ray images to external monitors.

The Ziehm Endo Package is a unique configuration designed in cooperation with clinicians to optimize minimally invasive endoscopy procedures (e.g. ERCP) under fluoroscopic X-ray control. A 26" color monitor enables the combined display of the X-ray image and the live endoscopic image side by side. The surgical team gains more space as a separate endoscopy monitor becomes unnecessary.

→ Comprehensive tools to support optimal image quality

SmartVascular offers a specialized workflow to meet the needs of complex vascular procedures. It allows to easily switch between Fluoro, DSA, MSA and RSA with just one click. This enables the surgeon to perform an RSA from a single DSA image, which saves precious time in the OR as well as reduces the dose applied to the patient. In addition, SmartVascular features a dedicated footswitch configuration, that supports an easy and intuitive vascular workflow.

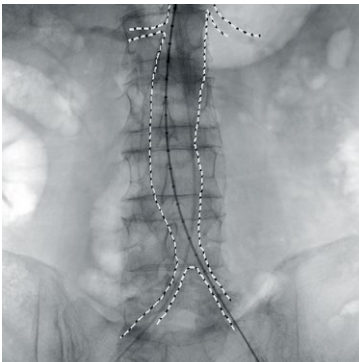
With the introduction of color to our comprehensive set of software functions, Enhanced Vessel Visualization and the improved measurement functions enhance daily communication in the OR and boost fast, efficient and secure decision-making and help to ease daily workflows.

The Anatomical Marking Tool (AMT) enables the user to apply markings and annotations, such as left/right labels, to live images by using the touchscreen. This innovative tool allows marking of blood vessels, branches or implant positions on live images – now also enhanced with color.

Contrast medium imaging with CO₂ is an innovative and cost-efficient alternative for patients with allergic reactions or other contraindications to conventional iodinated contrast agent. With the specialized CO₂ package for the Ziehm Vision RFD, DSA, MSA and RSA images are displayed in the known way as with iodine-based contrast agent.



DSA: Marking of the aneurysm and the aortic branches with the AMT.



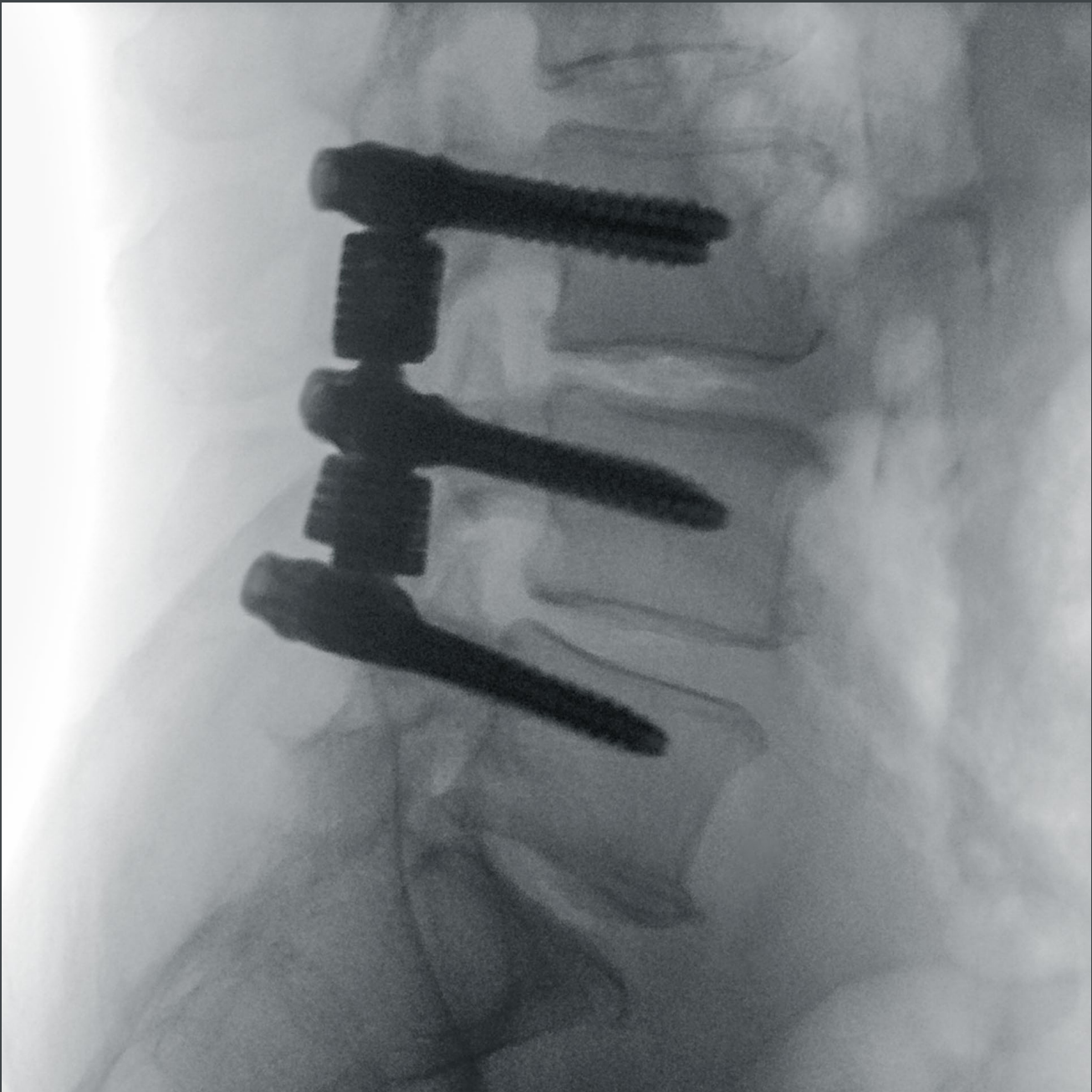
Marking stays in place during stent placement.



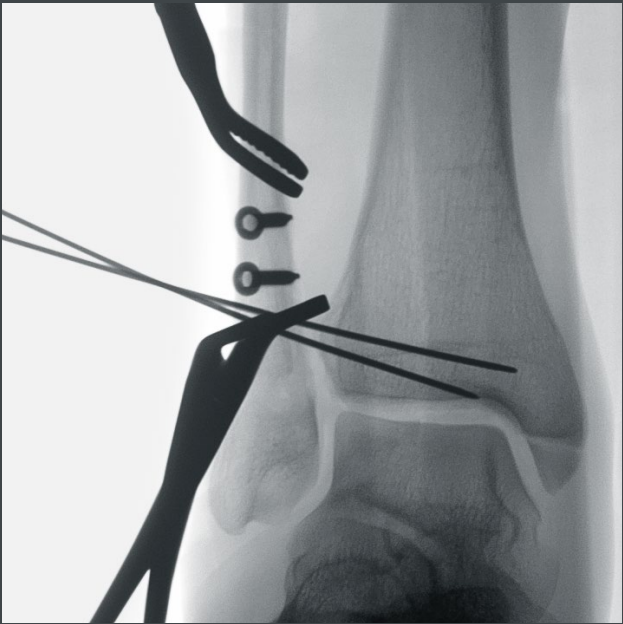
DSA control: successful placement of the stent.



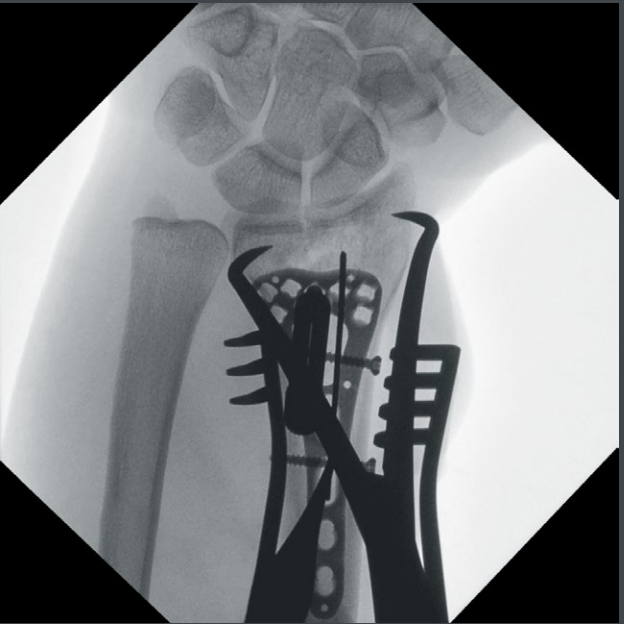
Versatile viewing options offer maximum flexibility in the OR.



Lumbar stabilization lateral



Fibula osteosynthesis



Stabilization of radius fracture



EVAR



Revascularization

02 / Unlock the power to perform with advanced generator and cooling technology

A powerful 25 kW monoblock generator for optimum penetration provides ideal support for surgeons. Advanced Active Cooling keeps the generator at a consistent operating temperature and prevents system failure due to overheating, making the Ziehm Vision RFD a reliable and safe choice for complex procedures.

→ Compact and powerful

This high-frequency generator operates with a variable pulse width, which optimizes the image quality while minimizing dose levels. With up to 25 frames per second, the C-arm provides you with crystal-clear images, even of fast-moving objects. Due to its outstanding generator performance and innovative imaging chain, the systems deliver excellent results – also during exposures with steep angles and lateral projections. The small housing of the compact yet powerful generator further simplifies its positioning at the OR table.

→ Advanced Active Cooling

The unique liquid cooling system Advanced Active Cooling (AAC) supports the mobile C-arm during lengthy, demanding procedures. Even during complex applications such as TAVI, angioplasties and EVAR, the Ziehm Vision RFD thereby 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.

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.



03/ Deliver advanced surgical care with the Ziehm Usability Concept

Best-in-class ergonomics pave the way for an ultra-intuitive operating experience, enabling consistent, high-quality outcomes. With an orbital movement of 165 degrees for easier patient coverage and the Wireless Freedom Concept for added operational safety and flexibility, the Ziehm Vision RFD raises the bar for procedural efficiency.

→ Best-in-class ergonomics

With a footprint of 0.8 m², the Ziehm Vision RFD is one of the most compact mobile C-arms on the market. With its easy-drive system it can be maneuvered with minimal effort during long procedures. The big C-arm opening and 165 degrees of orbital movement ideally support the workflow and provide easier patient coverage. In addition, different-colored scales and handles allow the surgeon and staff to quickly and simply select the desired function.

→ Intuitive user interface

The Ziehm Vision Center is a rotating and tilting touchscreen control panel mounted on the mobile stand as well as on the monitor cart and, optionally, directly at the OR table or on a separate trolley. Up to three synchronized user interfaces offer the entire range of functions on both units. The wizard-guided workflow, coupled with clear and easy-to-follow icons, supports an intuitive operation of the imaging system. With SmartArchive, it has never been more convenient and faster to access the current patient folder at any time.



Easy access even from the sterile field

Ziehm SmartEye technology mirrors the live image on the touchscreen, enabling the operator to keep track of orientation and object position.



Easy handling

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

→ 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 Concept². 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 touchscreen user interface



SMARTEYE
enabling users to keep track of orientation and object position



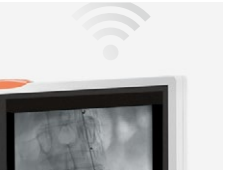
ANATOMICAL MARKING TOOL
to easily apply markings and labels to fluoroscopic images – now enhanced with color



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 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. SmartDose³ 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 surgery⁴.



- | | | |
|---|--|---|
|  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 |



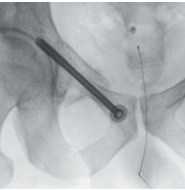
SEPARATE
BROCHURE
AVAILABLE

FEATURES

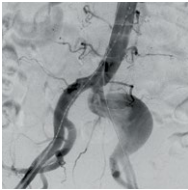
Imaging technology	IGZO, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm	a-Si, flat-panel, 30 cm x 30 cm	CMOS, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm
Detector resolution	1.5 k x 1.5 k / 2 k x 2 k	1.5 k x 1.5 k	2 k x 2 k / 3 k x 3 k
Image Chain	1 k x 1 k	1 k x 1 k	2 k x 2 k (QuantumStream)
Image Insights	–	–	■
Power generator	25 kW, pulsed monoblock generator	25 kW, pulsed monoblock generator	30 kW, pulsed monoblock generator
Ziehm Usability Concept	■	■	■
SmartDose	■	■	■
Advanced Active Cooling	■	■	■
Orbital movement	165°	165°	165°
Optional: endoscopic landscape color monitor	■	■	■

available ■ | not available –

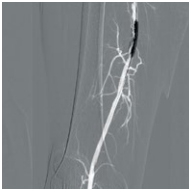
CLINICAL APPLICATIONS



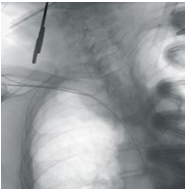
Orthopedics/
Trauma/Spine



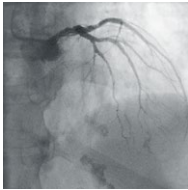
Vascular surgery



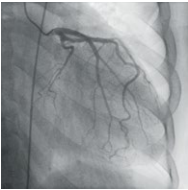
Angioplasty



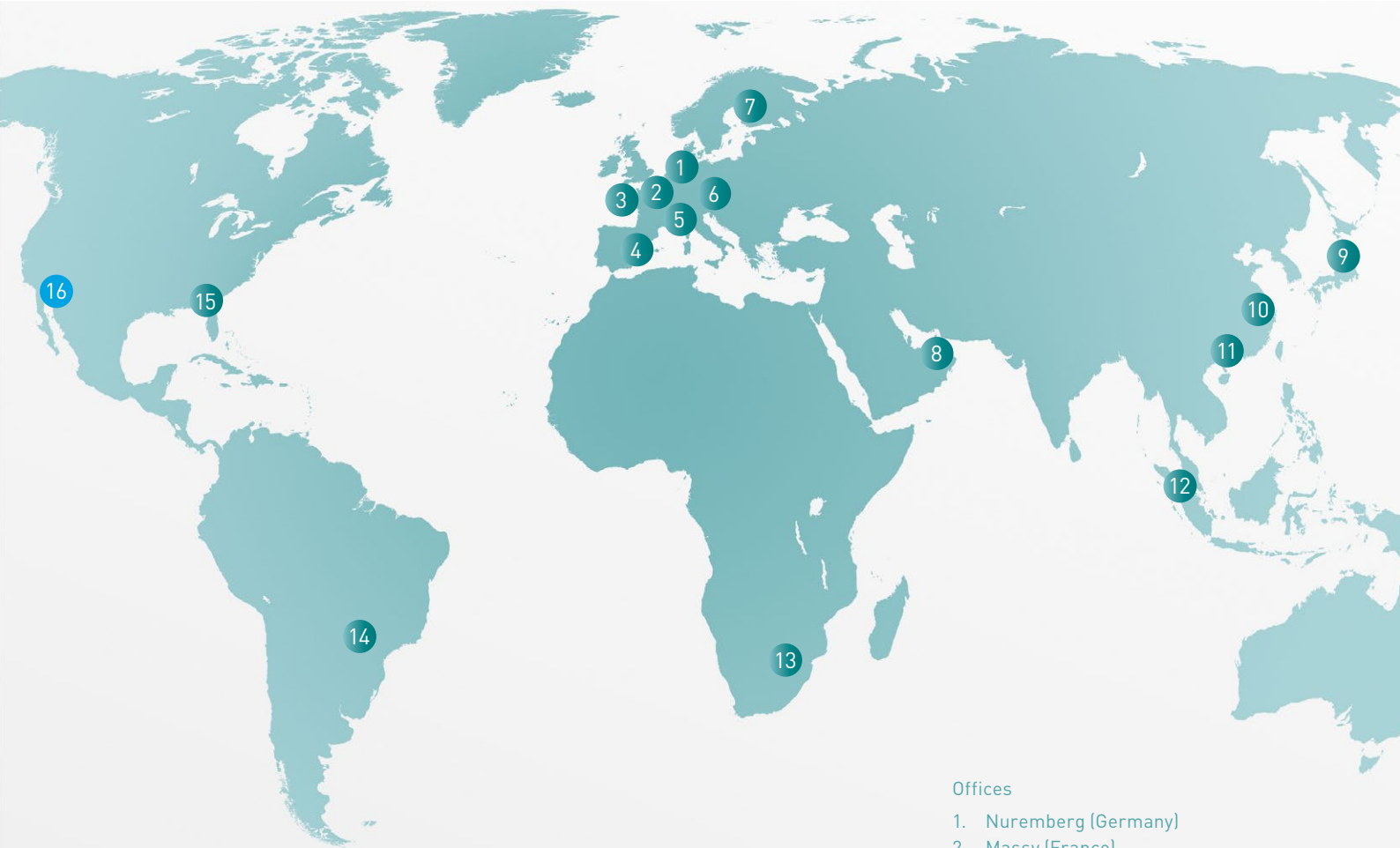
Electrophysiology



Cardiac surgery



Coronary imaging



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- 1. Nuremberg (Germany)
 - 2. Massy (France)
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Make sure to get the best service
for your daily business.

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.

¹ The technology Beam Filtration reduces dose exposure for Ziehm Imaging flat-detector systems in comparison to conventional filtration techniques. Data on file. Results may vary.

² 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.

³ 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.

⁴ 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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