



THE
ULTIMATE
C-ARM

ZIEHM VISION RFD
ZIEHM VISION R

THE ULTIMATE C-ARM

Benefit from outstanding image quality at a minimized dose and from unparalleled ease of use and flexibility.

The Ziehm Vision RFD delivers superior image quality previously only expected from fixed installed systems. Equipped with flat-panel technology, the C-arm is the perfect fit for demanding procedures: vascular and cardiac surgery, interventional procedures including EVAR, PTCA and hybrid room applications like heart-valve implantations.

The Ziehm Vision R is a more economical version based on proven image intensifier technology. It meets your requirements in a wide range of clinical applications.

19" TFT MONITORS

Bright, high-contrast images and cine loops with a wide viewing angle.

wireless

WIRELESS VIDEO

Image transfer to external monitors.



ADVANCED ACTIVE COOLING

For extended fluoroscopy time in challenging procedures.

FLAT- PANEL

For distortion-free imaging. C-arm also available as Ziehm Vision R with image intensifier.

FREE SPACE

83.5 cm of free space and extended 165° orbital rotation for simplified positioning.

25 kW GENERATOR

Powerful generator with up to 25 kW for improved penetration of dense anatomy.



Ziehm Vision **R** **FD**

01. IMAGE QUALITY

FOR DEMANDING PROCEDURES

The Ziehm Vision RFD is equipped with the latest flat-panel technology. Combined with finely tuned premium components, it helps you to achieve outstanding results. You can rely on many years of experience and know-how, as Ziehm Imaging was a pioneer in flat-panel technology – it has had these C-arms in the field since 2006.



AVAILABLE CONFIGURATIONS

	Flat-panel (aSi)	20 cmx20 cm	30 cmx30 cm
	Flat-panel (CMOS)	20.5 cmx20.5 cm	-
	Image intensifier	Ø 23 cm	Ø 31 cm

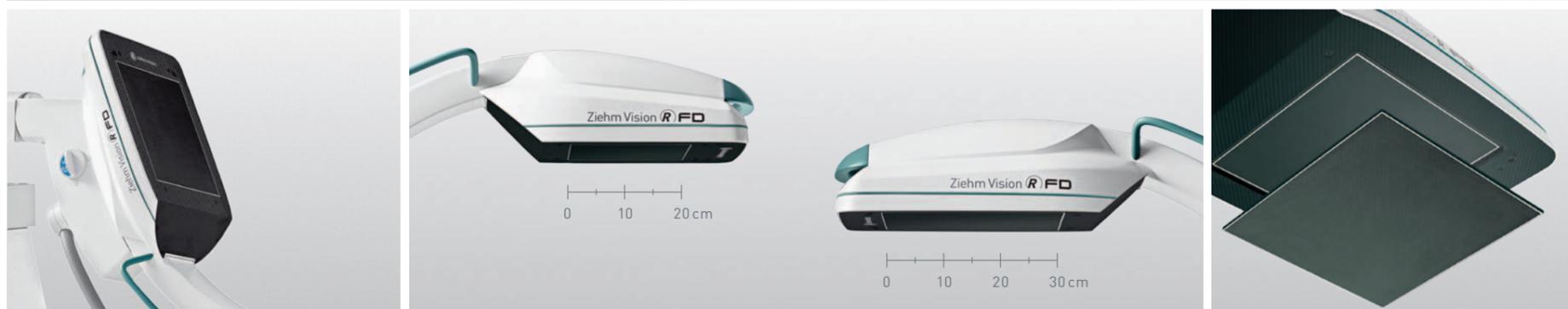


**PREMIUM
COMPONENTS.
OUTSTANDING
RESULTS.**



GREAT FIELD OF VIEW, MORE DETAILS.

The Ziehm Vision RFD is dedicated to challenging procedures such as interventional vascular and cardiac surgery. Ziehm Imaging's flat-panel detectors generate images with 65,536 shades of gray and excellent contrast. The high dynamic range enables visualization of both soft tissue and bone structure. The generous field of view, with up to 30 cm side length, provides comprehensive information with each examination, once only achievable with fixed installed systems. Alternatively, the Ziehm Vision R is available, featuring an image intensifier in different sizes to optimally support your clinical application.



4,096 shades of gray

Conventional image intensifier

65,536 shades of gray

The Ziehm Vision RFD with flat-panel technology

ABOVE: Flat-panels generate images with 65,536 shades of gray, 16 times more than image intensifiers.

FROM LEFT TO RIGHT: Enhanced positioning with 165° orbital rotation; 20 cm x 20 cm and 30 cm x 30 cm flat-panels fit any application; removable grid for low-dose applications.

COMPACT AND POWERFUL. The monoblock generator with 25 kW delivers crystal-clear images in demanding applications such as endovascular or cardiac procedures, or involving obese patients. Despite its high power reserves, the generator features one of the smallest housings in the industry.



CRYSTAL-CLEAR IMAGES. The C-arm features a highly compact and powerful monoblock generator with up to 25 kW nominal power. This industry-leading high-frequency pulse 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 moving objects. Due to its outstanding generator performance and innovative imaging chain, the systems deliver excellent results – even 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.

25 kW

AVAILABLE CONFIGURATIONS

	7.5 kW generator	- Flat-panel	■ Image intensifier
	20 kW generator	■ Flat-panel	■ Image intensifier
	25 kW generator	■ Flat-panel	- Image intensifier

CONTRAST-RICH DISPLAY.

The Ziehm Vision RFD uses dual 19" flatscreens, which are designed for the highest demands in the OR. With a luminance of up to 1,000 cd/m², they provide surgeons with a clear view of the acquired image.

NEW DESIGN, EXCELLENT BRIGHTNESS. The TFT monitors stand for their exceptional brightness and contrast. Even at a distance, these high-end displays provide the physician with optimal information by visualizing even the finest details – from every angle.

WIRELESS VIDEO TRANSMISSION. Our systems can wirelessly transfer the live X-ray images and cine loops to external monitors in real time. You benefit from fewer cables and more flexibility in the OR.

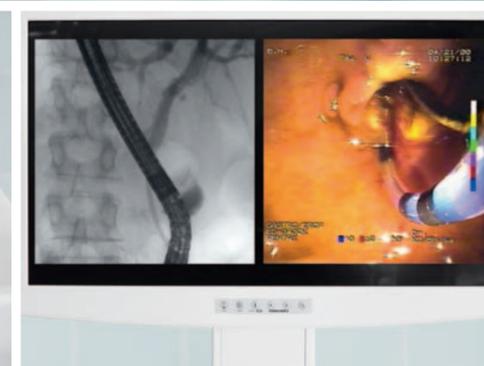
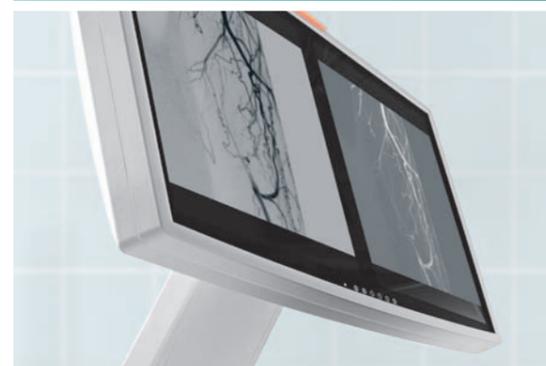
ZIEHM ENDO PACKAGE. The Ziehm Endo Package is a unique configuration designed in cooperation with clinicians to optimize minimally invasive endoscopy procedures (e.g. ERCP) under fluoroscopic X-ray control. A 26" color monitor enables the combined display of the X-ray image and the live endoscopic image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



**SUPERIOR
LUMINANCE**



FROM LEFT TO RIGHT: Dual 19" displays; compact design with integrated radiation lamp; wireless transfer of X-ray images to external monitors; dedicated Endo monitor.



SUPPORTING OPTIMAL IMAGE QUALITY. Every clinical application brings its own specific demands for the C-arm. The Ziehm Vision RFD offers optimally adjusted anatomical programs for different applications. The unique SmartVascular software and dedicated anatomical programs deliver outstanding results in vascular applications.

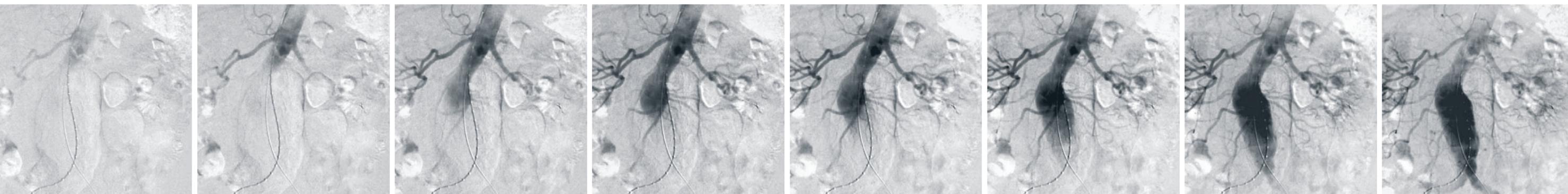
ANATOMICAL PROGRAMS.

To ensure the best image quality, Ziehm Imaging offers pre-configured anatomical programs that optimize the C-arm's settings, such as generator power, filters and noise reduction. Empirical values compiled over decades and the close collaboration with clinical partners lead to optimal system settings. The number of anatomical programs is reduced to a minimum to allow for quick selection.

CONTRAST MEDIUM IMAGING WITH CO₂.

With Ziehm Imaging you stay flexible: In addition to the use of iodinated contrast, we also offer contrast-medium imaging with CO₂. As one of the first manufacturers worldwide, we were able to display CO₂ as a contrast medium with mobile C-arms, including MSA and roadmapping (RSA) with dedicated software.

The advantages of CO₂ are obvious: no allergic reactions and well-tolerated by patients as well as low cost of use.



02. WORKFLOW

SUPPORTING YOUR CLINICAL PROCEDURES.

Ziehm Imaging's comprehensive operating concept makes sure that you can focus on your procedure and not the C-arm: with fast setup, easy integration over WLAN and workflow-oriented software.

INTUITIVE USER INTERFACE. The Vision Center is a rotating and tilting touchscreen control panel mounted on the mobile stand and on the monitor cart. The synchronized user interfaces offer the entire range of functions on both units. The wizard-guided workflow, coupled with clear and easy-to-follow icons, makes operating the imaging system easy and intuitive. With SmartArchive, it has never been easier or faster to access current patient data at any time.



AMT: The Anatomical Marking Tool (AMT) enables the user to apply markings and left / right labels to live images using the touchscreen. It is also a straightforward tool to mark blood vessels branches or implant positions on live images.





BEST-IN-CLASS ERGONOMICS.

The Ziehm Vision RFD has a footprint of only 0.8m². Its compact design and easy-drive system mean it can be maneuvered with minimal effort. All steering and braking functions are activated by color-coded brake handles. All system movements are fully counter-balanced in every position. The wider C-arm opening enabled by the flat-panel and the 165° orbital rotation make it easier for the operator to position the system.

WIRELESS FOOTSWITCH. All imaging functionalities can also be controlled by a wireless footswitch. The OR team benefits from fewer cables on the OR floor and fewer failures due to damaged cables.

SEAMLESS INTEGRATION. The Ziehm Vision RFD's open NetPort interface enables easy integration into existing IT networks. For convenient data management, patient information saved in DICOM 3.0 format can be transferred to PACS or HIS/RIS over WLAN.

Z-CONFERENCE. Z-Conference enables getting a colleague's advice in your surgery room. With the integrated video server, live images can be streamed within the hospital network. Z-Conference supports bidirectional voice transmission: colleagues can communicate with the surgeon in the OR right from their office PC via headset.



1 / PREPARATION AND SETUP.

Fast and convenient attachment of custom sterile drapes.



2 / EASY HANDLING.

Color-coded brake handles allow for clear instructions and straightforward operation in the OR.



3 / SETTINGS.

The Remote Vision Center can be conveniently mounted on both sides of the OR table or alternatively on a separate mobile cart. Bedside control allows sterile operation of all C-arm functions.



4 / TOUCHSCREEN CONTROL.

Ziehm SmartEye offers you a large live reference image on the user interface. You can easily adjust the image settings with just one finger.



5 / WIRELESS IMAGE TRANSMISSION.

Ziehm Imaging offers wireless transmission of X-ray images from the C-arm to external monitors in real time.



6 / LONG-LASTING PROCEDURES.

Advanced Active Cooling keeps the generator at a consistent operating temperature. With heat capacity of 10 million HU, it prevents system failure due to overheating.



7 / FLEXIBILITY.

Due to its unique maneuverability, the system can easily be rolled out of the OR and transferred to another room.

ABOVE: System can be easily moved to another OR.

BELOW: Compact design and color-coded brake handles ensure easy handling.

03. SMART DOSE

BEST IMAGE QUALITY. MINIMIZED DOSE.

SmartDose* is a comprehensive concept for dose reduction. With several new enhancements, it allows the physician and staff to significantly reduce dose while optimizing image quality. SmartDose benefits both patients and staff alike. With significant dose savings, Ziehm Imaging sets the benchmark in userfriendly adjustment of dose exposure.



SmartDose
Best image quality. Minimized dose.

 **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 obese 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

AUTOMATIC ADJUSTMENT OF SETTINGS. The Ziehm Vision RFD greatly simplifies patient positioning and dose control. ODDC (Object Detected Dose Control) places a matrix over the entire field of view and uses 256 measurement cells to analyze the position of the anatomy. All settings are automatically adjusted in real time – from dose to noise reduction.

ODDC's measurement cells detect motion and adapt pulse frequency automatically. If the patient is not moving, the pulse frequency can be lowered significantly. Furthermore, the system compensates for metal objects in the field of view and adjusts generator output and video levels to reduce metal distortion and improve image quality.

 In pediatric surgery, you can significantly lower the C-arm dose with a single click.

* The SmartDose concept includes all above mentioned features. Due to regulatory reasons the availability of each feature may vary. Please contact your local Ziehm Imaging partner for detailed information.

OVERVIEW

OPTIMAL SOLUTIONS. Ziehm Imaging's C-arms set international benchmarks. With a multitude of options, they can be specifically tailored to your needs, making it the ultimate C-arm for any requirement.

SERVICE. Regardless of your needs, our experts are on hand. You can always rely on Ziehm Imaging for flexible and fast service. With Ziehm Remote Service, our remote support solution, we deliver faster and easier problem solving and optimize your system's uptime.

TRAININGS. With Ziehm Academy you can enhance your clinical knowledge, find out more about mobile C-arms and benefit from tailored training.



We would be pleased to consult with you personally. Please scan to give us a call.

ZIEHM VISION R

Powerful solution for excellent mobile imaging.



ZIEHM VISION RFD

The ultimate C-arm.



FEATURES

Flat-panel	-	-	20 cm x 20 cm (aSi) / 20.5 cm x 20.5 cm (CMOS)	30 cm x 30 cm (aSi)
Image intensifier	23 cm	31 cm	-	-
Pulsed monoblock generator	7.5 kW / 20 kW	7.5 kW / 20 kW	20 kW / 25 kW	20 kW / 25 kW
Optional: endoscopic landscape color monitor	■	■	■	■

CLINICAL APPLICATIONS

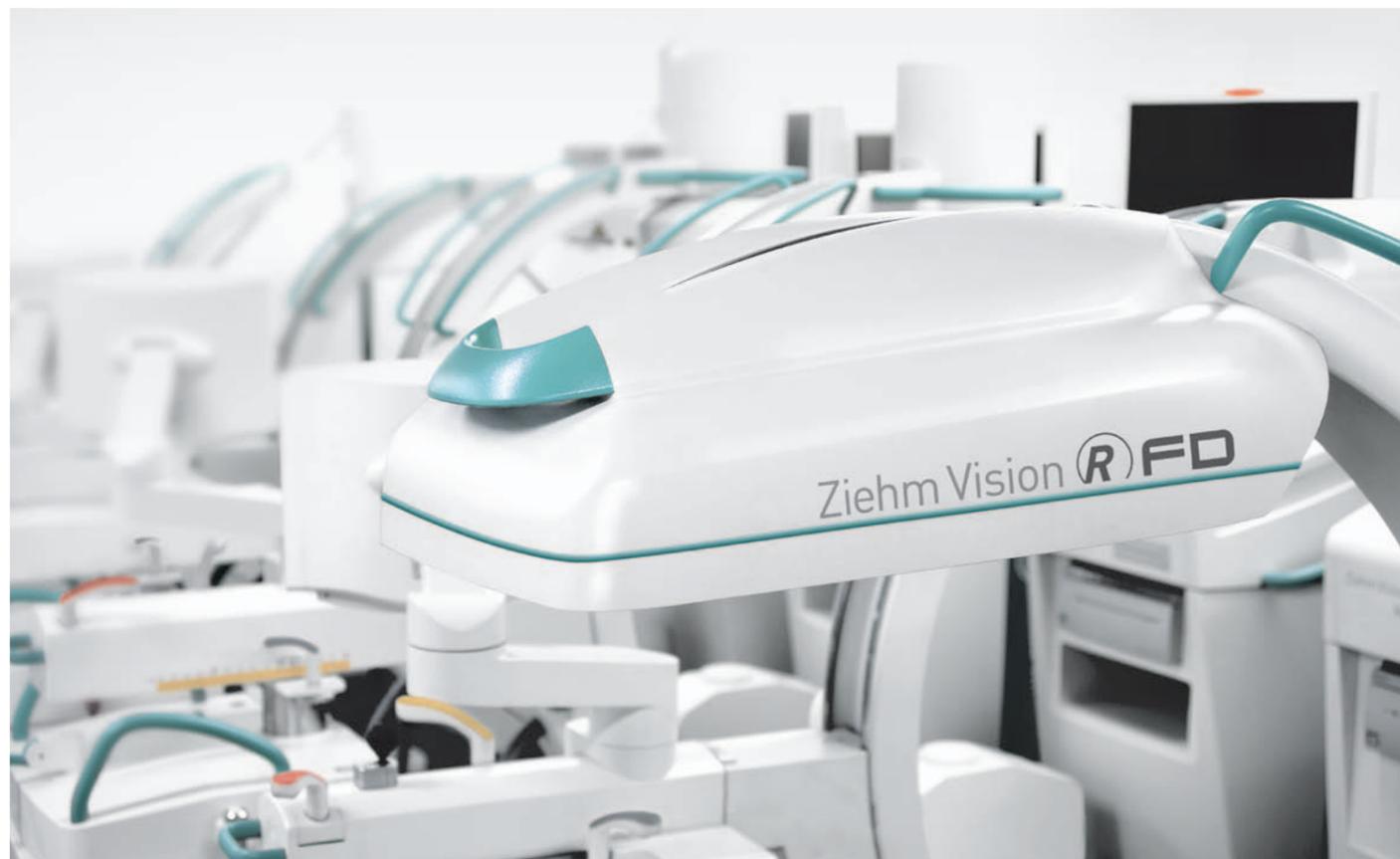
Orthopedics/trauma/spine	••	••	•••	•••
Vascular surgery	••	••	••	•••
Angioplasty	••	••	••	•••
Electrophysiology	••	••	•••	••
Cardiac surgery	••	••	•••	••
Coronary imaging	••	••	•••	••

available ■ | not available - | good • | very good •• | ideal •••

ZIEHM IMAGING THE C-ARM SPECIALIST

With technology "Made in Germany", we have become a market leader for mobile C-arms – in Germany and other European countries. Today, Ziehm Imaging is a global systems provider, employing over 400 people worldwide. Building on competence and creativity, a continuous dialogue and close cooperation with partners, we are elevating the boundaries of mobile X-ray imaging. This is why we can provide best solutions to meet your specific clinical demands.

Ziehm Imaging has received several awards for its groundbreaking technologies, including the iF Design Award 2011, Frost & Sullivan Award 2006, 2007, 2009 and 2011, Stevie Award For Sales & Customer Service 2013 and and Best New Product Award 2014.



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