ziehm imaging

Product portfolio

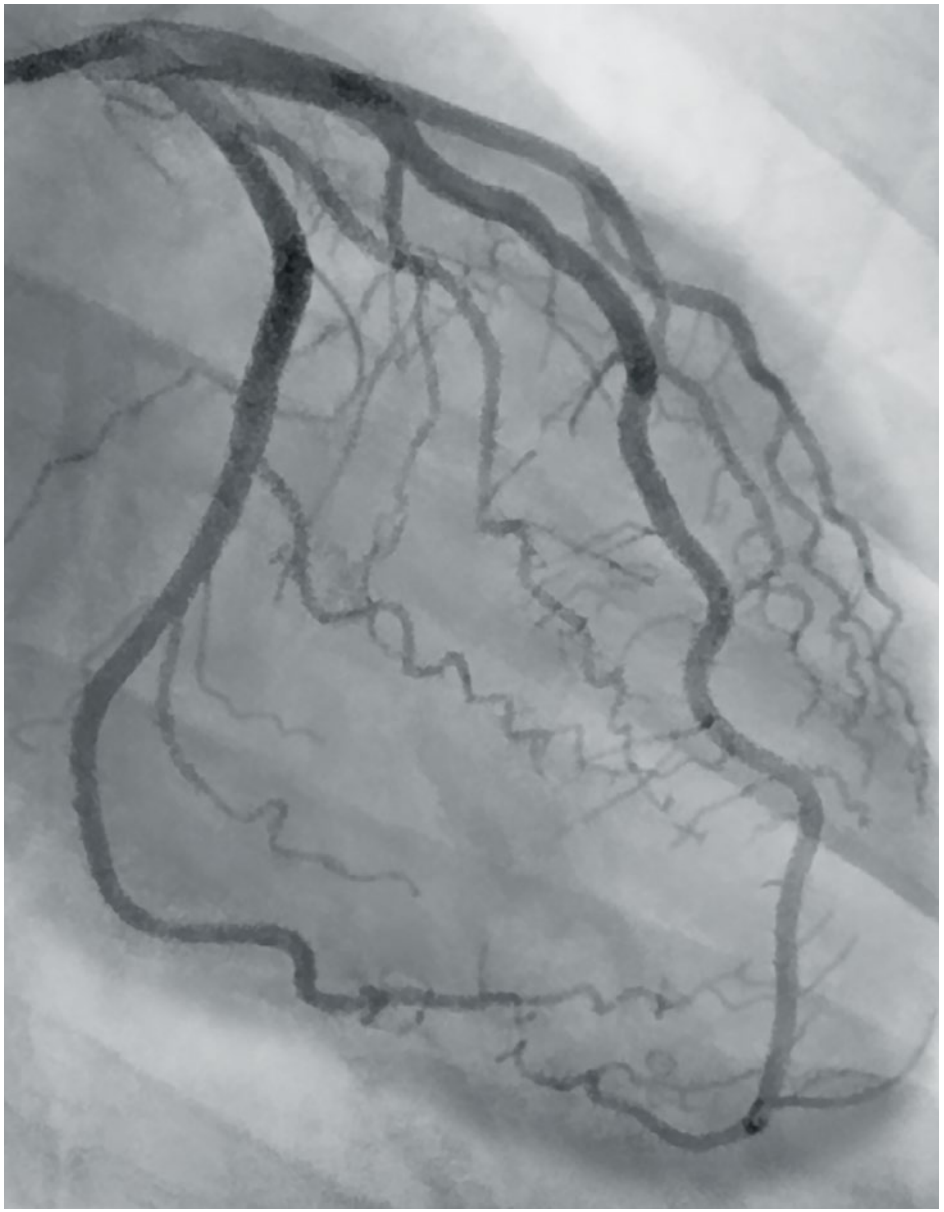
Dedicated to clinical innovations

ALWAYS AHEAD

Ziehm Imaging has been a pioneering company since 1972. As an innovation leader, we are committed to our mission to set new technological standards in mobile imaging. Based on our constant curiosity and forward thinking we create imaging solutions for your needs.

In 2023, we presented the first flat-panel only portfolio: From compact systems to multidisciplinary 3D imaging and advanced mobile CathLabs we offer the right solution to be ALWAYS AHEAD.

The Ziehm Solo FD offers two additional flat-panel options to ensure access to the best image quality and the extension of clinical capabilities while ensuring financial performance.



More clarity in cardiovascular imaging: Coronary angiography, SIMS Chellum Hospital, India

01 / Orthoscan Mini C-arms[1]

Orthoscan TAU 2020

Orthoscan TAU 1515

Orthoscan TAU 1512

Orthoscan TAU 2020

With the largest field of view on a mini C-arm, Orthoscan TAU 2020 shows more anatomy in full view. The stepless, motorized collimator minimizes radiation by limiting the area of exposure to the region of interest. Cutting-edge Intelligent Dose Reduction technology and pulsed fluoroscopy provide the best in diagnostic image quality while reducing exposure dose to both patients and staff. That's why TAU mini C-arms are the first ones approved for pediatric use.

Orthoscan TAU 1515 / TAU 1512

Orthoscan TAU 1515 and TAU 1512 show anatomy as it needs to be seen. Both systems come with a high-resolution monitor and the advanced touchscreen user interface Orthotouch with new features such as anatomically programmed selections as well as dedicated pediatric settings. Cutting-edge Intelligent Dose Reduction technology provides the best in diagnostic image quality while reducing exposure dose to both patients and staff.

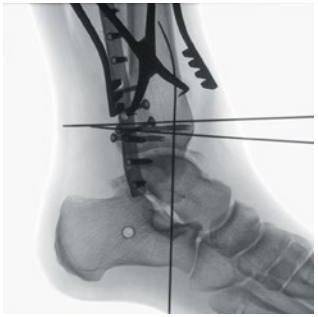
Orthoscan Mobile DI

The Orthoscan Mobile DI is a portable fluoroscopic device that offers a range of connectivity options. The system guarantees ease of movement between exam rooms, satellite clinics and off-site venues due to its lightweight and small footprint. With its flat-panel detector and imaging flexibility, the Mobile DI stands out for its easy positioning and flexible projections.

Imaging technology	Flat-panel, 20 cm x 20 cm	Flat-panel, 15 cm x 15 cm / 15 cm x 12 cm	Flat-panel, 15 cm x 12 cm
Image resolution	2,000 x 2,000	1,500 x 1,500 / 1,500 x 1,200	1,900 x 1,500
Pulsed fluoroscopy	■	■ / –	–
High-resolution LCD monitor	32" or opt. 27"	27" or opt. 32" / 24" or opt. 27"	24"
Stepless collimator	■	–	–
Additional CU filtration	■	■	–
Weight	215.5 kg	215.5 kg	15.9 kg
Orbital movement	160°	160°	–

available ■ | not available –

02 / Compact C-arms



Ziehm Solo FD, IGZO, 31 cm x 31 cm

Ziehm Solo FD, CMOS, 21 cm x 21 cm

Ziehm Solo FD

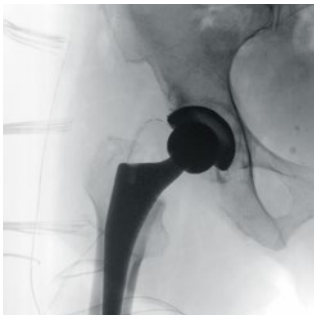
With its all-in-one design, the Ziehm Solo FD is one of the most compact C-arms on the market for even the smallest treatment scenarios. The premium variant Ziehm Solo FD CMOSline[2] delivers excellent image quality and offers a large variety of features to cover a wide range of applications. Versatile viewing options offer maximum flexibility in the OR to support your clinical workflow.

The Ziehm Solo FD is also available with a 21 cm x 21 cm and a 31 cm x 31 cm IGZO flat-panel. The bigger detector size allows to cover larger anatomical regions, such as the entire hip in orthopedics.
Additionally with Ziehm Solo FD lite[3], there is a configuration with a 21 cm x 21 cm flat-panel and a limited option package to serve price-sensitive markets.

	Ziehm Solo FD lite[3]	Ziehm Solo FD	Ziehm Solo FD CMOSLINE
Imaging technology	IGZO, flat-panel, 21 cm x 21 cm	IGZO, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm	CMOS, flat-panel, 21 cm x 21 cm
Detector resolution	1.5 k x 1.5 k	1.5 k x 1.5 k / 2 k x 2 k	2 k x 2 k
Power generator	2.4 kW, pulsed monoblock generator	2.4 kW, pulsed monoblock generator	2.4 kW, pulsed monoblock generator
Ziehm Usability Concept	■	■	■
SmartDose	■	■	■
Remote Solo Center	–	■	■
Ziehm Viewing Station	–	■	■
Advanced heat management	■	■	■
Field Transport Solution	–	■	■
Orbital movement	165°	■/–	■
		165°	165°

available ■ | not available –

03 / Versatile C-arms



Ziehm Vision FD, a-Si, 31 cm x 31 cm

Ziehm Vision FD, CMOS, 21 cm x 21 cm

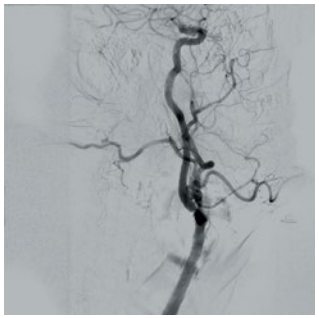
Ziehm Vision FD

The Ziehm Vision FD was the world's first mobile C-arm with flat-panel detector. The device has proven itself in the market for nearly 20 years. The premium variant Ziehm Vision FD CMOSline features latest flat-panel technology for excellent image quality and – thanks to the Advanced Active Cooling – is designed for continuous use. In addition, finely tuned workflows and new software features help to optimize patient outcomes and further increase productivity. The Ziehm Vision FD is also available with a new 21 cm x 21 cm IGZO and a 31 cm x 31 cm a-Si flat-panel. The bigger detector size allows to cover larger anatomical regions in orthopedic and vascular surgery.

Imaging technology	IGZO, flat-panel, 21 cm x 21 cm	a-Si, flat-panel, 31 cm x 31 cm	CMOS, flat-panel, 21 cm x 21 cm
Detector resolution	1.5 k x 1.5 k	2 k x 2 k	2 k x 2 k
Power generator	2.4 kW, pulsed monoblock generator	2.4 kW, pulsed monoblock generator	2.4 kW, pulsed monoblock generator
Ziehm Usability Concept	■	■	■
SmartDose	■	■	■
Advanced Active Cooling (AAC)	■	■	■
Orbital movement	165°	165°	165°

available ■ | not available –

04 / Powerful C-arms



Ziehm Vision RFD, a-Si, 30 cm x 30 cm

Ziehm Vision RFD, CMOS, 31 cm x 31 cm

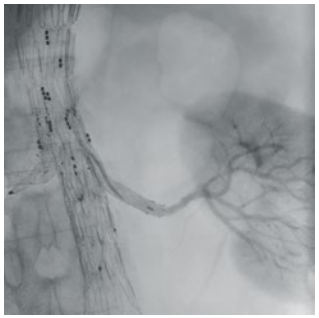
Ziehm Vision RFD

The Ziehm Vision RFD is the model of choice for orthopedics and trauma or demanding cardiovascular interventions. The C-arm is equipped with a powerful generator that penetrates even large anatomy. In addition, Advanced Active Cooling facilitates long and demanding procedures and the intuitive Ziehm Usability Concept[4] helps surgeons ensure consistently high clinical standards. This impressive feature lineup makes the Ziehm Vision RFD ideal for challenging interventions.

Imaging technology	a-Si, flat-panel, 30 cm x 30 cm	IGZO, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm	CMOS, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm
Detector resolution	1.5 k x 1.5 k	1.5 k x 1.5 k / 2 k x 2 k	2 k x 2 k / 3 k x 3 k
Power generator	25 kW, pulsed monoblock generator	25 kW, pulsed monoblock generator	25 kW, pulsed monoblock generator
Ziehm Usability Concept	■	■	■
SmartDose	■	■	■
Advanced Active Cooling (AAC)	■	■	■
Orbital movement	165°	165°	165°

available ■ | not available –

05 / Hybrid Room Solution



Ziehm Vision RFD Hybrid Edition, CMOS

Ziehm Vision RFD Hybrid Edition, CMOS

Ziehm Vision RFD Hybrid Edition

The Ziehm Vision RFD Hybrid Edition[5] is a powerful 30 kW[6] mobile C-arm that is available with CMOS imaging technology to successfully perform during highly demanding interventional cardiovascular procedures – flexible and everywhere – at any time. With its zero room preparation, the comprehensive mobile hybrid solution easily takes your OR to the next level. Combined with intraoperative 3D vascular navigation, the system allows to achieve more accuracy in demanding hybrid OR procedures. Plug in your system and start your hybrid procedure.

Imaging technology	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 / 3 k x 3 k
Power generator	25 kW, pulsed monoblock generator	25 kW / 30 kW[6], pulsed monoblock generator
Ziehm Usability Concept	■	■
SmartDose	■	■
Advanced Active Cooling (AAC)	■	■
Orbital movement	165°	165°
Motorization	Full control of the 4 motorized axes	Full control of the 4 motorized axes
Vascular Image Fusion	Therenva EndoNaut[7]	Therenva EndoNaut[7]

available ■ | not available –

06 / 3D Image Fusion

Since 2007, Therenva has helped physicians to perform high-quality cardiovascular procedures through innovative, well-designed and efficient imaging solutions. The unique EndoSize 3D case planning software has become an essential tool in the daily practice of many physicians and healthcare professionals. By enhancing the skills of the users and their abilities to plan cases quickly and accurately, EndoSize saves time and improves patient care.

Together with our Ziehm Vision RFD Hybrid Edition, we are investing in the future of intraoperative 3D vascular navigation. Therenva's mobile image fusion system gives physicians more accuracy in demanding hybrid OR procedures while minimizing X-ray doses and contrast injections. Two different modules are available: one for aorto-iliac and the other dedicated to peripheral procedures.

For the Aorto-Iliac module, the EndoNaut device allows the fusion of 3D imaging from the preoperative angio CT scan and 2D fluoroscopic imaging acquired with the mobile C-arm to be rendered on a screen thanks to artificial intelligence and deep learning algorithms.

For the Peripheral module, EndoNaut allows the creation of a panorama of the limb (fluoroscopic and angiographic) at the beginning of the operation and its 2D fusion with the live fluoroscopic images to avoid intraoperative contrast media injections.

Therenva
Part of Ziehm Imaging

Endovascular Case Planning with EndoSize

Vascular 3D Image Fusion with EndoNaut

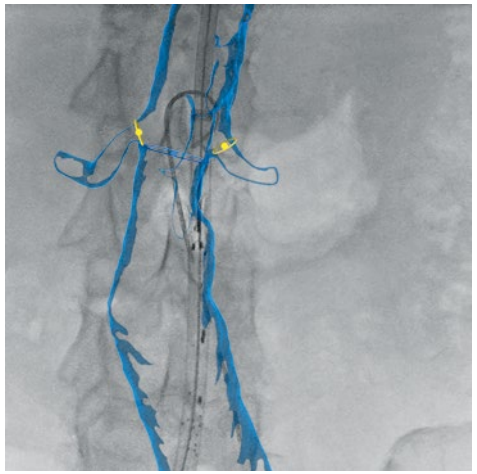
Ziehm Vision RFD Hybrid Edition in combination with Therenva EndoNaut

Save patients with more ease by extending clinical capabilities from daily interventional procedures to more complex cardiovascular procedures like FEVAR

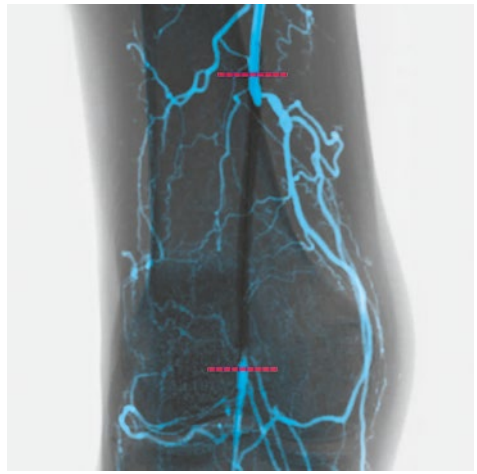
Save precious OR time and boost OR efficiency by empowering the complete cardiovascular workflow with hand-in-hand working solutions

Save dose exposure and reduce contrast media with dose-sensitive hardware and software settings as well as innovative 3D roadmaps

Save overall costs and increase financial performance with a sustainable and affordable alternative to fixed installed hybrid room solutions

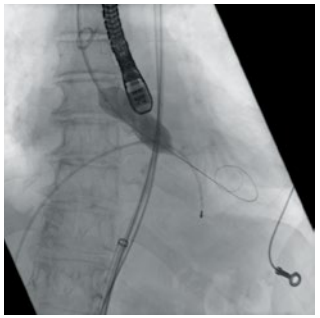


3D Vascular Image Fusion



Dedicated image fusion created from the panoramic view

07 / Mobile CathLab



Ziehm Vision RFD Hybrid Edition, CMOS

Ziehm Vision RFD Hybrid Edition, CMOS

Ziehm Vision RFD Hybrid Edition Cardio

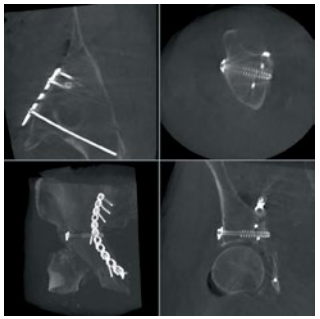
Due to an aging population, we observe a rising burden of cardiovascular diseases. That is why we identified the need for advanced imaging during cardiovascular interventions. Against this background, we developed especially dedicated cardio packages including the first 30 kW generator on the mobile C-arm market as well as sophisticated software applications for our proven Ziehm Vision RFD Hybrid Edition. This enables physicians worldwide to deal with these circumstances in the OR.

Connectivity options for haemodynamic workstations or CathLab-ready monitors complete the mobile CathLab.

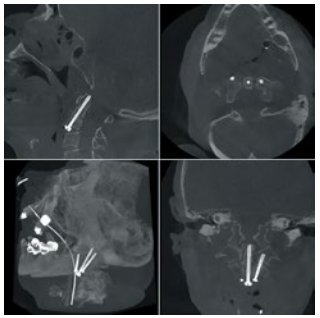
Imaging technology	CMOS, flat-panel, 21 cm x 21 cm / 31 cm x 31 cm
Detector resolution	2 k x 2 k / 3 k x 3 k
Power generator	30 kW[6], pulsed monoblock generator
Ziehm Usability Concept	■
SmartDose	■
Advanced Active Cooling (AAC)	■
Orbital movement	165°
Motorization	Full control of the 4 motorized axes
3D Vascular Image Fusion	Therenva EndoNaut[7]
Haemodynamic workstation	Fysicon QMAPP[8]

available ■ | not available –

08 / Intraoperative 3D devices



Ziehm Vision RFD 3D, a-Si



Ziehm Vision RFD 3D, CMOS

Ziehm Vision RFD 3D

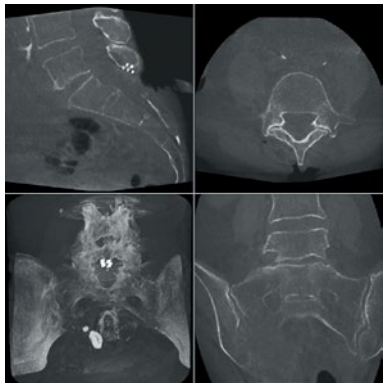
Building on more than 16 years of experience in 3D imaging, the Ziehm Vision RFD 3D features not only proven a-Si technology, but now also the cutting-edge CMOSline[2]. Bundling 2D and 3D functionality for greater intraoperative control, it reduces the need for post-operative CT scans and costly corrective surgeries. The system is equipped with ZIR (Ziehm Iterative Reconstruction) to minimize fan and metal artifacts in 3D reconstruction, so far only known from CT imaging. This makes the Ziehm Vision RFD 3D ideal for high-end orthopedic, trauma and spinal interventions as well as for demanding multidisciplinary use.

Imaging technology	a-Si, flat-panel, 30 cm x 30 cm	CMOS, flat-panel, 31 cm x 31 cm
3D volume size / voxel	16 cm x 16 cm x 16 cm; 320^3 voxel opt.: 10 cm x 10 cm x 10 cm; 320^3 voxel opt.: 19.8 cm x 19.6 cm x 18.0 cm; 320^3 voxel	16 cm x 16 cm x 16 cm; 320^3/512^3 voxel opt.: 10 cm x 10 cm x 10 cm; 320^3/512^3 voxel opt.: 19.8 cm x 19.6 cm x 18.0 cm; 320^3/512^3 voxel
Detector resolution	1.5 k x 1.5 k	3 k x 3 k
Power generator	25 kW, pulsed monoblock generator	25 kW / 30 kW[6], pulsed monoblock generator
Ziehm Usability Concept	■	■
SmartDose	■	■
Advanced Active Cooling (AAC)	■	■
Motorization	Full control of the 4 motorized axes	Full control of the 4 motorized axes
3D scanned information	2D: 165°/ 3D: 180° (SmartScan)	2D: 165° / 3D: 180° (SmartScan)
Open navigation interface For more details see www.ziehm.com/naviport	Brainlab, Stryker, Globus Medical, Medacta, NuVasive	Brainlab, Stryker, Globus Medical, Medacta

available ■ | not available –

09 / Ziehm NaviPort

During complex minimally invasive procedures, high-resolution intraoperative 3D imaging improves confidence and precision during the interventions and reduces the need for revision surgeries. The proven Ziehm NaviPort interface connects the mobile 3D C-arms of Ziehm Imaging to the navigation and robotic-guidance systems of leading providers[9]. The high-resolution 3D data set is transferred seamlessly from the C-arm through Ziehm NaviPort to the navigation system. It gives the surgeon a real-time navigation guide, eliminating the need to register the 3D data record again. The navigation and robotic-guidance software automatically aligns the intraoperatively obtained image data with the patient's anatomy while visualizing surgical instruments on the monitor. As a result, the surgeon can quickly and reliably check and document the results of the intervention.



Ziehm Vision RFD 3D

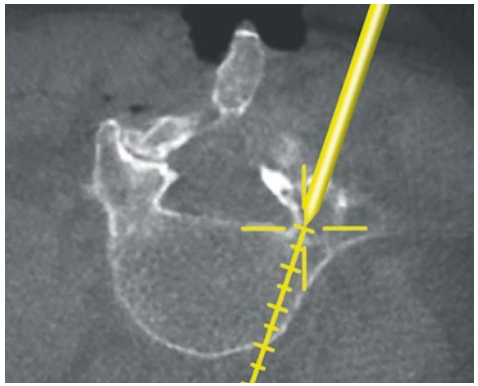


Image-guided navigation

BRAINLAB

Brainlab Spine & Trauma Navigation

Brainlab image-guided surgery platforms Kick and Curve in combination with Ziehm Imaging's intraoperative 3D devices address the demand for meaningful visualization that helps surgeons effectively plan and execute spine and trauma procedures. Surgical instruments are continuously tracked by the infrared camera, with their position visualized on the patient data. This allows for more accurate procedures compared to conventional surgical techniques.

stryker

Stryker Spine Navigation

The navigation systems of Stryker, in combination with Ziehm Imaging's intraoperative 3D devices offer a further excellent solution for navigating spine and trauma procedures. While choosing the right navigation procedure, the infrared camera is set up to track the SpineMask Tracker or patient tracker attached to the patient. For cases not classified as minimally invasive, Stryker also offers an additional registration integrated with a traditional rigidly fixated patient tracker.

GLOBUS MEDICAL

Globus Medical Robotic Navigation Platform

Together with ExcelsiusGPS of Globus Medical, Ziehm Imaging supports advanced computer-assisted surgery for spine applications with the Ziehm Vision RFD 3D systems. The ExcelsiusGPS combines a rigid robotic arm and full navigation capabilities into one adaptable platform for precise trajectory alignment and visualization in spine surgery.

www.ziehm.com/naviport

Visit our website for more details about further partners like Medacta or NuVasive.

SmartDose Concept

Minimizing dose while maintaining image quality is an important goal worldwide for surgeons, their staff and patients. Ziehm Imaging supports this through further improvements to SmartDose[10] for different applications.

The comprehensive concept consists of a broad, clinically proven application portfolio to address the daily challenges of low dose and high image quality. With significant dose savings, Ziehm Imaging sets the benchmark in user-friendly adjustment of dose exposure.

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

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

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

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

VIRTUAL COLLIMATORS
for exposure-free positioning of collimators

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

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

BEAM FILTRATION[11]
for reduced entrance skin dose without compromising on image quality

SmartDose
Best image quality. Minimized dose.

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[4]. Seamlessly integrated workflows offer unmatched levels of usability – anytime, anyplace.

As the 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.

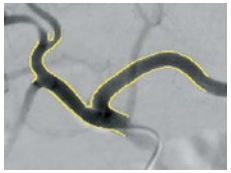
COLOR-CODED SCALES AND HANDLES
to ensure clear communication in the OR

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

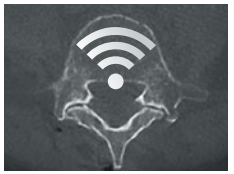
ZIEHM VISION CENTER
featuring an intuitive touchscreen user interface

SMARTEYE
enabling users to keep track of orientation and object position

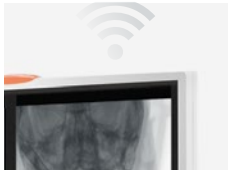


ANATOMICAL MARKING TOOL
to easily apply markings and labels to fluoroscopic images – now enhanced with color

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

Ziehm Global Service

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. Nuremberg (Germany)
2. Massy (France)
3. Rennes, Therenva SAS (France)
4. Valencia (Spain)
5. Reggio Emilia (Italy)
6. Tulln an der Donau (Austria)
7. Kerava (Finland)
8. Dubai (UAE)
9. Tokyo (Japan)
10. Shanghai (China)
11. Guangzhou (China)
12. Singapore (Singapore)
13. Sandton (South Africa)
14. São Paulo (Brazil)
15. Orlando, FL (USA)
16. Scottsdale, AZ, Orthoscan (USA)

[1] Ziehm Imaging is the official Sales and Service representative of Orthoscan mini C-arms in Europe, Middle East and Africa.

[2] CMOSline represents a system configuration that is based on a Ziehm Imaging CMOS flat-panel detector.

[3] Ziehm Solo FD lite represents a group of optional hardware and software that creates an option package on the device named Ziehm Solo FD.

[4] 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.

[5] 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.

[6] 30 kW generator is available in combination with dedicated cardio packages.

[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] 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.

[9] Further partners and country specifications available, see www.ziehm.com/naviport for more details.

[10] 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.

[11] The technology Beam Filtration reduces dose exposure for Ziehm Imaging flat-detector systems in comparison with conventional filtration techniques. Data on File. Results may vary.

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