



ziehm imaging

... dedicated to clinical innovation

Ziehm Vision Family.

Excellence in Mobile C-Arm Imaging.

Vision
Vision Robotics™
VISION **R**
Vision **FO**



Ziehm Imaging.

The No.1 Choice for X-Ray-Based Imaging Solutions.

We focus on the benefits for patients, operators and physicians.

By listening to our customers, employing cutting-edge technologies and keeping a high quality awareness, we set the trend for continuous technological progress and growth. Every new product features a distinctive innovation, thus providing more efficient imaging solutions for our customers.



Functionality.
Mobility.
Connectivity.

Ziehm

With Ziehm Vision, Ziehm Imaging creates a new standard in mobile C-arm functionality including highly demanding minimally invasive and interventional procedures performed in areas such as cardiology, urology, neurology and orthopedics.

Functionality

Featuring the Clear View technology, each procedure benefits from Ziehm Vision's superior imaging performance resulting from a 1k x 1k digital imaging system enhanced with pulsing capabilities and a range of high-brightness monitors. Additionally the unique Vision Center touch-screen control panel provides an intuitive and quick user interface, never seen before in this type of equipment.

Mobility

Although Ziehm Vision is packed with 'Best C-arm' technology, it still provides perfect clinical mobility with the smallest footprint and lightest movements for effortless positioning.

Connectivity

Equipped with the unique Ziehm NetPort connectivity system, Ziehm Vision offers a wide range of DICOM functionalities for optimum network integration.

Ziehm Vision.

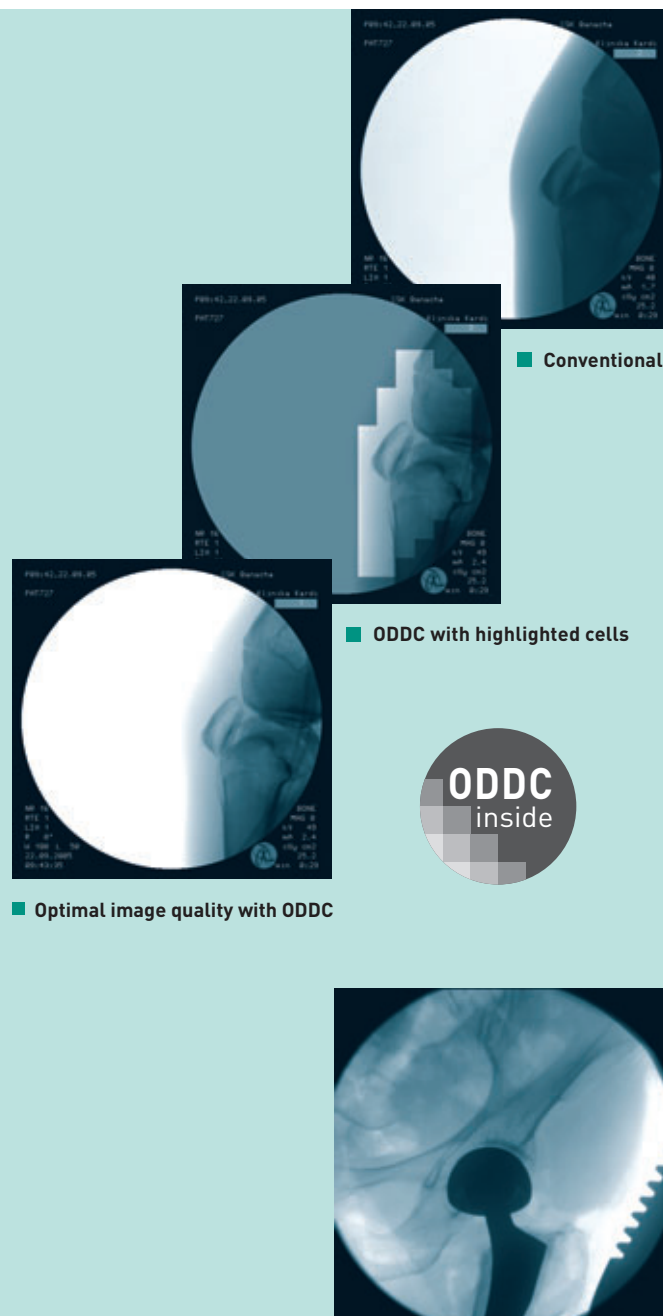
Superior Imaging Performance with Clear View and ODDC.

Clear View

Pulse technology – Up to 30 frames/s with the most compact monoblock solution for best patient access and clearest image quality.

1k x 1k HD CCD camera system – Industry-leading high dynamic CCD camera clearly visualizes even the tiniest anatomical structures.

18" high-brightness monochrome TFT monitors – Twin 18" TFT monitors with Intelliguard provide powerful diagnostic performance.



Object Detected Dose Control ODDC

- Real-time image control
- 2 x 256 measurement cells covering the entire field of view
- Optimum histogram in each cell to control dose and video signal

- Independent object positioning
- Better image quality
- Lowest possible dose

- Real-time motion detection
- Automatically adjusts the noise reduction level

- Optimum image quality

- Automatically adjusts the pulse frequency if the object does not move

- At least up to 60% dose savings expected in clinical performance.

- Automatic Metal Correction AMC

- No manual image adjustments
- No flaring
- Optimum image quality

Ziehm Vision.

Vision Center – Unlimited Freedom in Imaging Workflow.

Vision

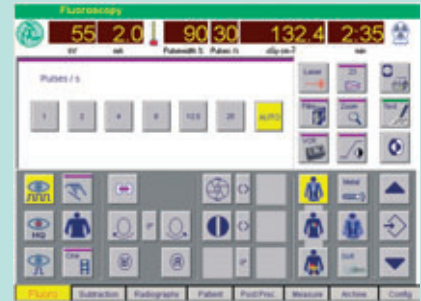
Vision Center

Ease of use – Synchronized TFT touch-screens conveniently mounted on both C-arm and monitor cart make it possible to fully control the system from both units.

Intuitive workflow – Logical user guidance with clear and straightforward icons makes the system pleasant to work with.

Anatomical programs – Application-oriented anatomical programs optimally adjust the system performance to any body region. For perfect image quality and maximum ease of use, only a few special programs are needed.

Fully future-proof – Open architecture ensures unlimited upgradeability.



Ziehm Vision.

Advanced Active Cooling for Almost Unlimited Fluoroscopy Time.

Vis

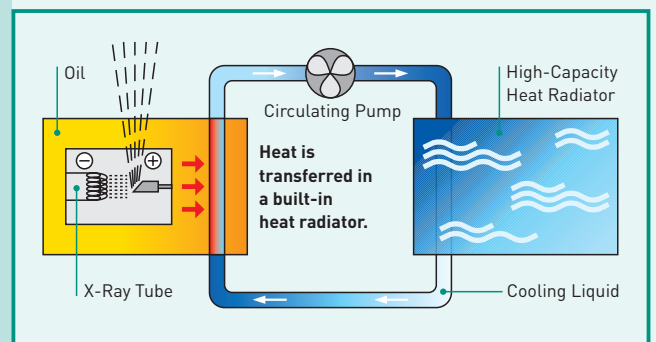


Advanced Active Cooling – Has been specially developed to allow prolonged fluoroscopy times in highly demanding imaging procedures such as vascular, cardiac, electro-physiological and endoscopic applications.

Heat Management – Uses a closed-loop circuit and heat exchanger integrated invisibly within the tube housing. The heat exchanger is linked to a high-capacity heat radiator located in the base of the mobile C-arm.

This almost triples the cooling capacity in comparison to conventional units. And unlike less efficient cooling fans, it remains totally unaffected by the use of sterile plastic covers placed over the tube head.

This enables continuous power with pulsed fluoro in clinical performance.



Ziehm Vision. Comprehensive Archiving – No Loss in Mobility.

ion



Comprehensive Archiving Possibilities for Convenient Image Storage

Ziehm Vision provides a wide range of integrated archiving devices for image storage such as:

- Hard disk
- USB port
- DVD writer

Ziehm Vision offers the possibility to save the images in DICOM and TIF format as well as in downsized DICOM, TIF and JPG format.

The unique Ziehm Vision Monitor cart design can also accommodate a selection of quality video paper or film printers.

A video recorder can also be integrated providing you with all the image documentation options you may require.

Ziehm Vision – Compatibility With the Latest CAS Systems

The combination of the Ziehm Vision with a CAS system creates a surgical environment with excellent real-time image guidance, allowing surgeons to operate with optimum precision and accuracy.

The proven compatibility of Ziehm Vision with various CAS systems, e.g. Medtronic and Brainlab, guarantees the highest level of connectivity and greatest success in any navigation-guided procedure.

Ziehm Vision.

NetPort – Providing the Latest Medical Information Technology.

Exceptional Digital Network Integration

Ziehm Vision features the fully integrated Ziehm NetPort based on DICOM 3.0 communication protocols. Running in Primary Capture mode, Ziehm NetPort is capable of transferring original images and patient data to and from the PACS and/or HIS/RIS, providing you with a completely integrated digital network solution.

> PACS

Picture Archiving and Communication System

> HIS

Hospital Information System

> RIS

Radiology Information System

Using the new DICOM Image Retrieve module implemented in Ziehm NetPort, the surgical team benefits from unrestricted access to all image information available in your PACS. This eliminates the need for an additional workstation or monitor. Ziehm NetPort also supports DICOM Multiframe Class, allowing the transfer of dynamic image sequences to and from the operating room.

Ziehm Imaging provides the most cost-effective access to the DICOM world, with the following comprehensive range of DICOM Classes:

- Storage Class including Multiframe and Storage Commitment
- Print Class
- Media Class
- Worklist Class including Modality Performed Procedure Step (MPPS)
- Query/Retrieve Class
- Verification Class



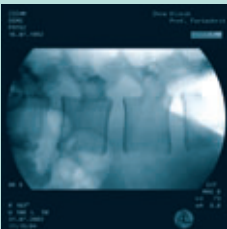
Ziehm Vision. Superior Imaging Performance.

Ziehm Vision offers several application-oriented software packages with special features targeted for different procedures to best meet your clinical needs. The packages consist of a complete Ziehm Vision unit with a single hardware platform. The added functionality in each application package is basically incorporated in software modules. Hence the units are easily upgradeable and innovative features as well as improved performance can be made available to clinicians in a faster and easier way.



The Ortho Package

Provides brilliant image quality and performance in advanced operative orthopedics and trauma surgery.



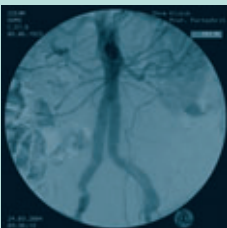
The Ortho Plus Package

Offers enhanced orthopedic possibilities with further functionality in an attractive combination.



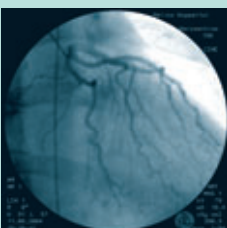
The Vascular Package

Supports a wide range of applications for vascular and endovascular interventional procedures.



The Vascular Plus Package

Is the ideal combination for all more advanced and demanding vascular and interventional procedures.



The Neuro-Cardiovascular Package

Delivers the highest performance and fastest cine loop speed possible for best image quality in interventional vascular procedures.

Ziehm Vision R.

Unlimited Performance.

The Ziehm Vision R offers high power capabilities for demanding interventional vascular procedures such as those performed in cardiology.

The powerful pulse generator with rotating anode is built into an ultra compact monoblock. This provides superb image quality and low dose capabilities. The monoblock's compact design provides the C-arm with excellent maneuverability and easy handling. The Ziehm Vision R administers the lowest possible dose to both patients and staff without the use

of high-tension cables in the generator. This hardware is conveniently built into the generator that you will find mounted on the "C".

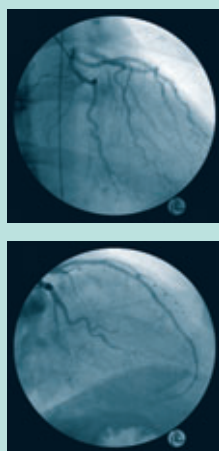
The high-frequency true pulse generator offers industry-leading pulse capabilities from 4 ms up to 30 ms for crisp and crystal-clear images. The short pulse widths are highly appreciated in coronary-angio applications and PTCA for capturing the fastest movements.

The new Advanced ActiveCooling™ system offers 600 watts of continuous power via its enhanced heat exchange system and heat management software. The system will never overheat or break down during long procedures thanks to its unique heat dissipation technology. It is also designed to automatically switch the pulse frequency to the appropriate power level.

The state-of-the-art design of the pulse generator enables high power throughput without the use of an integrated battery package. The latest power technology featuring Ziehm Cap Ultra Capacitors ensures the lowest possible weight and maintenance efforts for your C-arm.



■ High-power monoblock solution



■ Unlimited performance for further demanding interventional vascular procedures



Ziehm Vision Robotics™.

Imaging in Motion.

Today's complex interventional procedures necessitate bolus chasing and device tracking. The Ziehm Vision Robotics™, equipped with P.A.D. (Precision Auto Drive), enables interventional specialists instant X/Y axis power-servo movements and automated scanning from head to toe. Allowing for quick, easy and safe bolus chasing with the ability to easily bring the scanner back into position, the Ziehm Vision Robotics™ moves while the patient remains stationary.

Robotics™



Developed with Ziehm's philosophy in mind, the Ziehm Vision Robotics™ exemplifies C-arm innovation by means of its sleek, lightweight, and compact design.

P.A.D. – Precision Auto Drive includes robotic motion control with instant four-way X/Y axis power servo-drive movements.

OP-ONE – Multiple operations in one control mechanism via joystick which incorporates four-way X/Y axis movements, instant fluoroscopy, and image acquisition in real time.

With the ability to glide effortlessly at the touch of your fingers, the Ziehm Vision Robotics™ has once again set a new standard in C-arm functionality.

The Ziehm Vision™ controls are easily accessible allowing the technician to stay in unison with the physician throughout the entire procedure.



■ Complete control at the tip of your finger

■ P.A.D. – Simple, Efficient, Precise.



Currently
only available
in the Americas
(ROW in process)

Ziehm Vision FD.

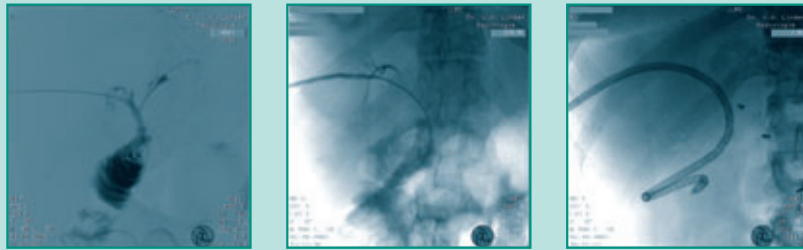
FD – A Class of Its Own.

Ziehm Vision FD takes mobile C-arm Imaging to a new level introducing fully-digital imaging with unique image quality and performance.

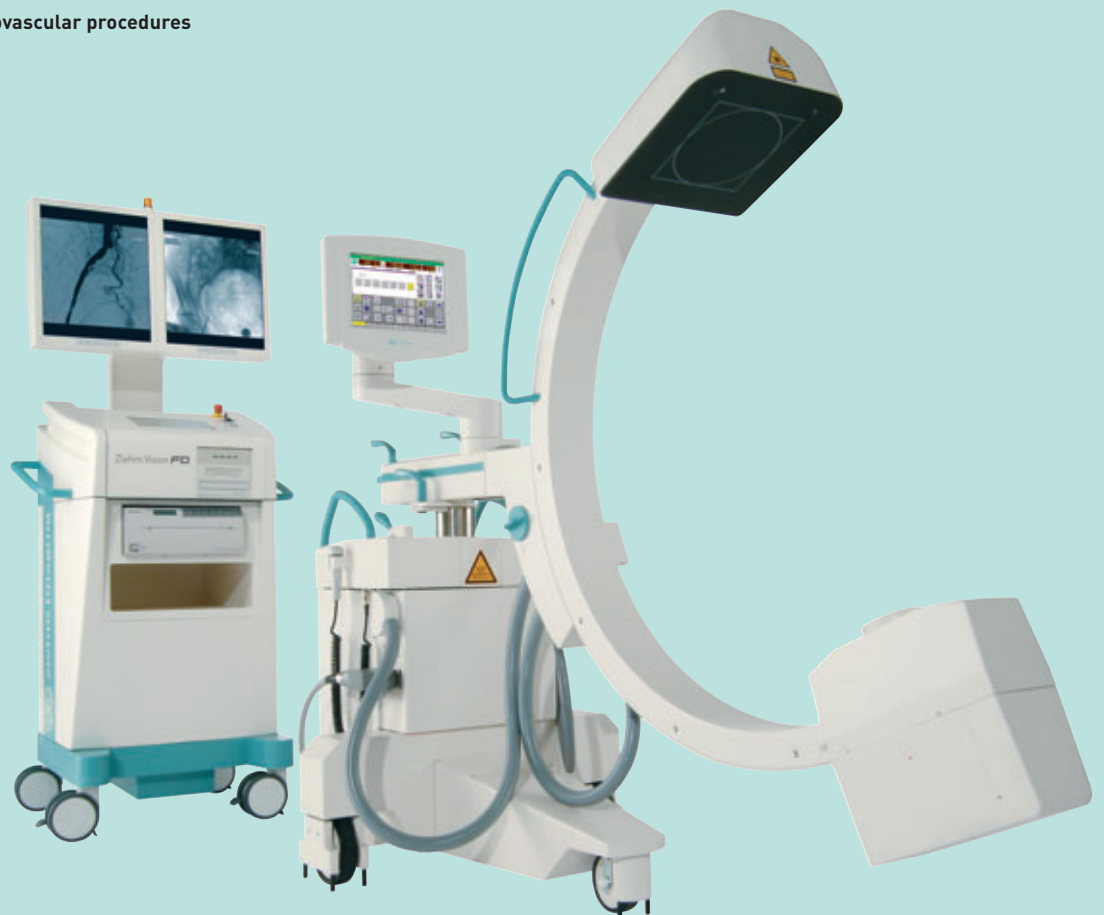
The introduction of digital flat-panel detectors in mobile fluoroscopy marks a quantum leap in the technological development of mobile fluoroscopy. Targeted research in the field of photo semiconductor technology has brought about enormous benefits both for patients and surgeons offering with Ziehm Vision FD better patient access and

maneuverability together with an unmatched dynamic range for perfect soft tissue and skeleton imaging at the same time.

The combination of fully-digital imaging in advanced applications such as in neurosurgery with navigation systems or Computer Aided Surgery (CAS) opens up new horizons and possibilities with higher accuracy and image quality. The compact design provides outstanding mobility suitable for any procedure, as the C-arm can easily be brought up to the patient instead of vice versa.



■ Interventional endovascular procedures



Ziehm Vision FD.

FD – A Class of Its Own.

FDA in process.

FD

Unique Innovations in Mobile Imaging

Ziehm Vision FD incorporates cutting-edge technology and state-of-the-art-design offering fully-digital imaging with distortion-free images. The flat-panel detector is insensitive to magnetic fields which makes it possible to work close to MRI sites or places where other strong magnetic fields are present.

Distortion-Free Imaging

- Imaging chain insensitive to magnetic fields makes it possible to work close to MRI sites.
- Offers unique integration possibilities with CAS and navigation systems.
- Distortion-free imaging (as opposed to conventional image intensifiers)

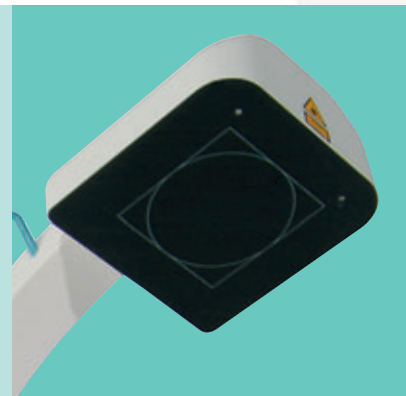
Integrated a-SI Detector

- Amorphous silicon photodiode TFT technology
- Cesium iodide scintillator
- 1024 x 1024 active pixels
- 14 bit AD converter, 32 bit image processing

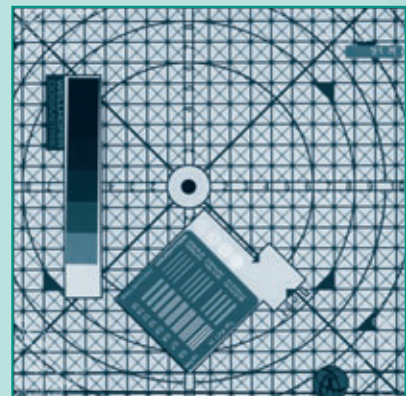
Efficiency and Significant Benefits

- Highest contrast capabilities for state-of-the-art image quality
- Perfect soft tissue & skeleton imaging at the same time
- Low-dose application benefits patients and users
- Pulsed generator with up to 30 frames/sec in full resolution
- Continuous high performance with Ziehm Active Cooling

■ Integrated a-SI detector



■ Distortion-free imaging



■ High-dynamic imaging





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Manufacturing complies with DIN EN ISO 9001:2000.

Ziehm Imaging is constantly improving its products and reserves the right to change these specifications without notice.