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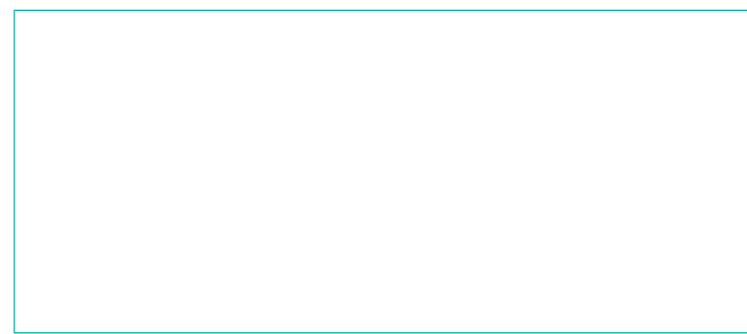
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Manufacturing complies with DIN EN ISO 9001 and ISO 13485.  
 Ziehm Imaging is constantly improving its products and reserves the right to change these specifications without notice.

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*... dedicated to clinical innovation*

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# Ziehm Vision <sup>®</sup>



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*Superior Imaging Quality*  
*Reduced Radiation Exposure*  
*Exceptional Ease of Use*  
*Seamless Integration*

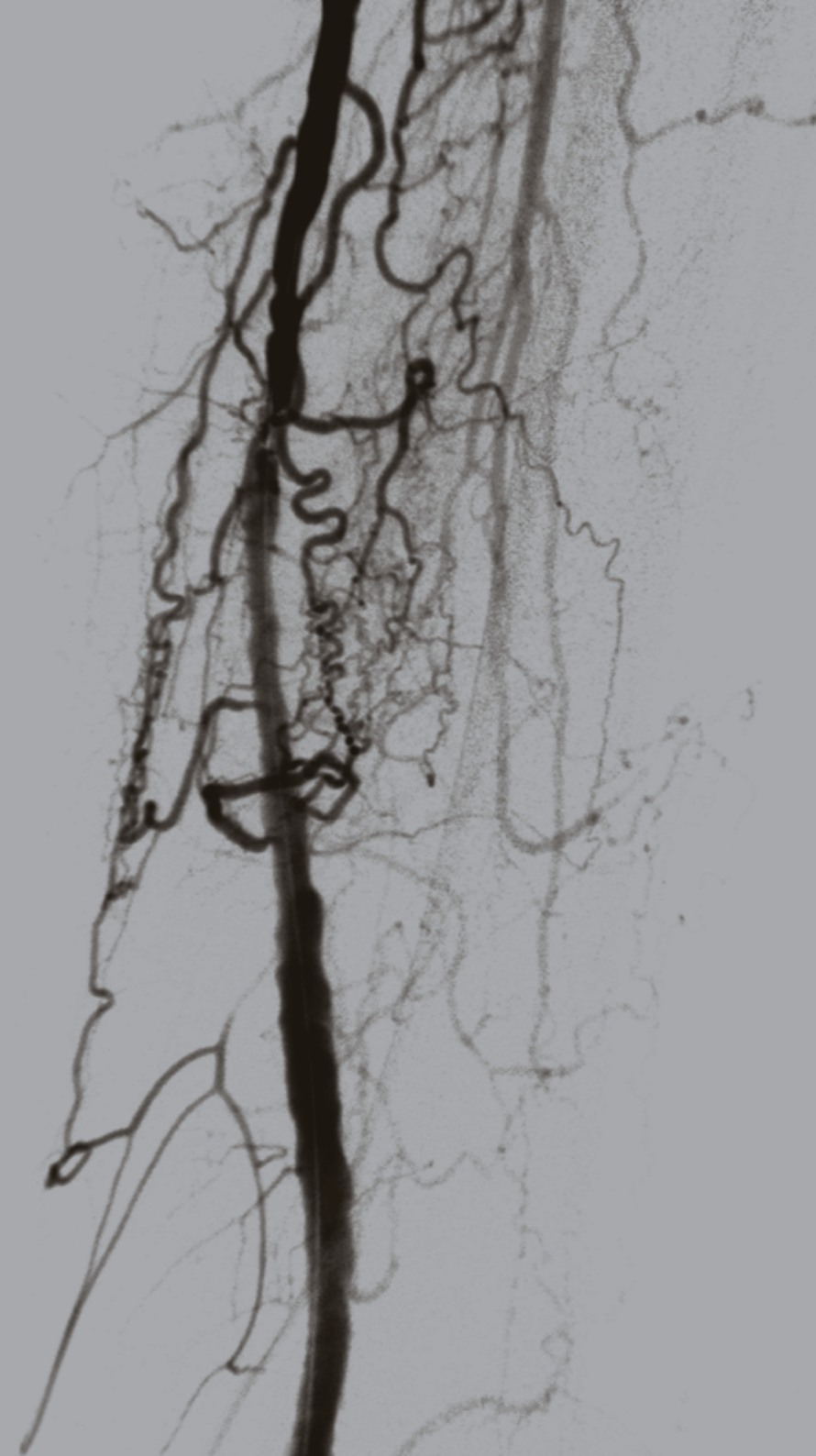
## **Ziehm Vision R.** *Extended Clinical Performance*

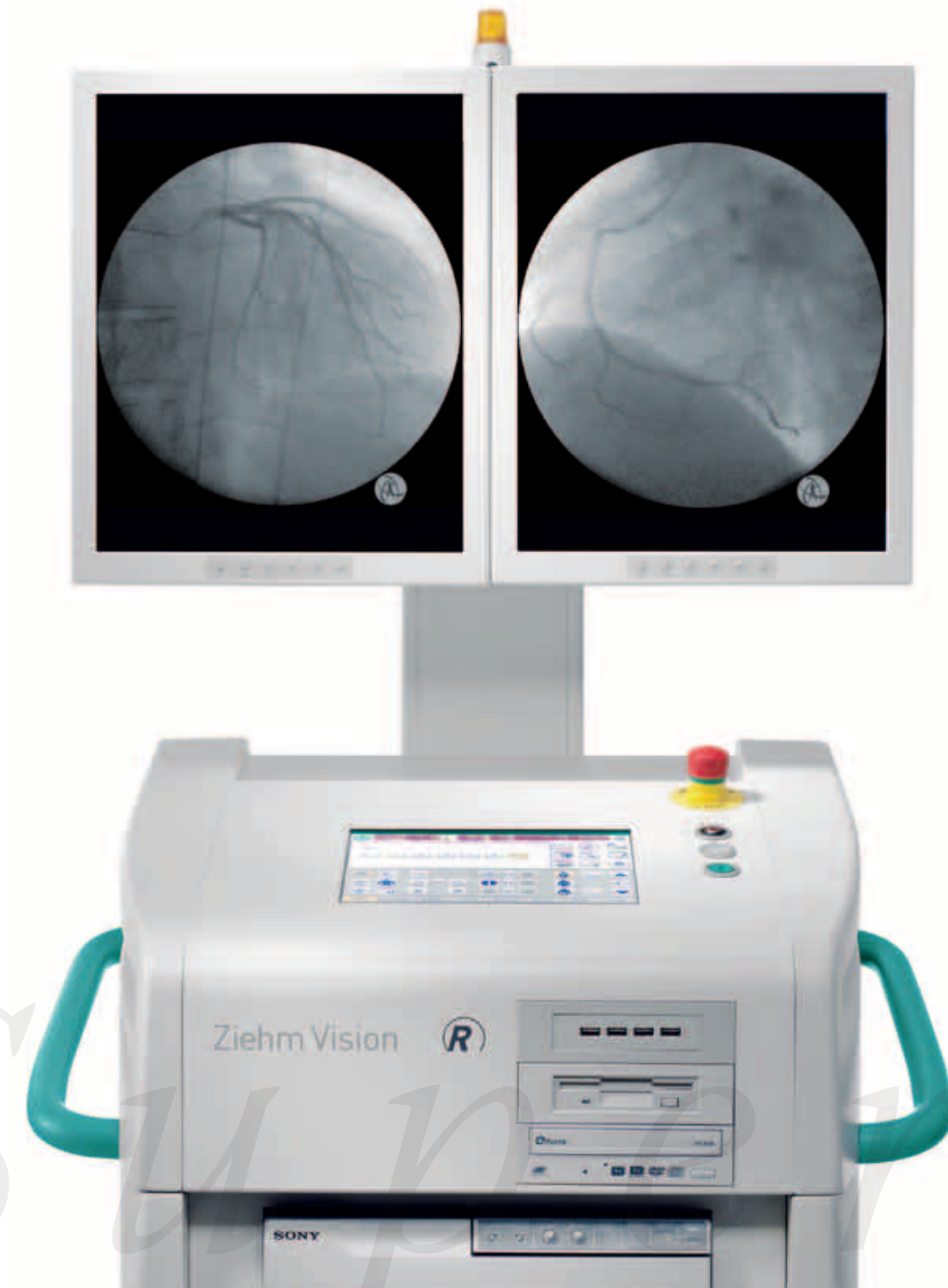
Its powerful, ultra-compact monoblock generator with rotating anode X-ray tube provides outstanding image quality while ensuring consistent dose minimization.

The C-arm's intelligent and compact design together with its unmatched ease of use benefit both surgeons and operating staff. The Vision R can be configured with or without boost caps depending on your clinical needs. The Vision R with the optional vascular package (including boost caps) offers extended power reserves for demanding vascular surgery and interventional and surgical cardiac imaging procedures.



*What Do You Expect?*





### Superior Imaging Quality

#### ClearView

Running in pulse mode with up to 30 frames/s, the Ziehm Vision R produces crisp and crystal clear images. The unique 1k x 1k imaging system with its industry-leading high-dynamic CCD camera enables detail-rich visualization of even the finest anatomical structures.

Completed with high-brightness TFT displays, the Ziehm Vision R offers powerful diagnostic performance and constitutes a real alternative to stationary angiography systems.

ODDC (Object Detected Dose Control) and application-oriented anatomical programs, which optimally adjust the system performance to specific body regions, ensure exceptional image quality combined with maximum ease of use.



### Different Tasks. One Solution

#### Application Packages

A number of application-specific software packages featuring dedicated functions tailored to different clinical requirements are available for the Ziehm Vision R.

Thanks to its versatility, the system can easily and quickly be adapted to many diverse areas of application. Depending on the configuration, it can be used in applications ranging from orthopedics / traumatology to vascular, neurosurgical, as well as interventional and surgical cardiac imaging procedures.



## Object Detected Dose Control – ODDC



### Object Detected Dose Control – ODDC

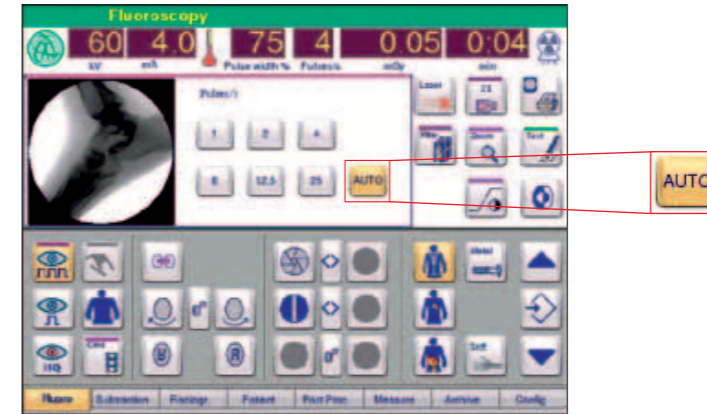
Ziehm's pioneering ODDC software provides automatic image optimization in real time and allows free object positioning, even at the periphery of field of view. Exceptional image quality at minimum dose levels is made possible by a measurement 'grid' covering the entire field of view; a histogram optimization is performed in real-time on each individual grid cell then continuously fine-tunes the X-ray dose and video signal.

Real-time motion detection, which automatically adjusts the noise suppression filter levels and the pulse rate according to the degree of motion found in the image, allows significant dose savings in clinical operation – without sacrificing image quality in any way.

Automatic Metal Correction (AMC) eliminates the need for manual user intervention in order to reduce image flaring. Consequently, the Ziehm Vision R always delivers images of consistently excellent quality, even under adverse conditions.

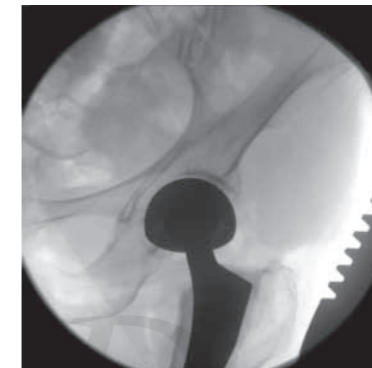
Automatically adjusts the pulse frequency  
No motion in image -> low pulse frequency

- Lowest possible dose
- Significant dose savings expected in clinical performance



### Automatic Metal Correction AMC

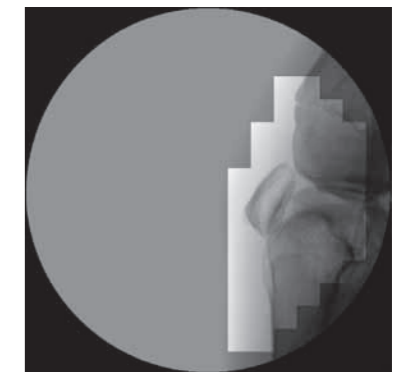
- No manual image adjustments
- No flaring
- Optimum image quality



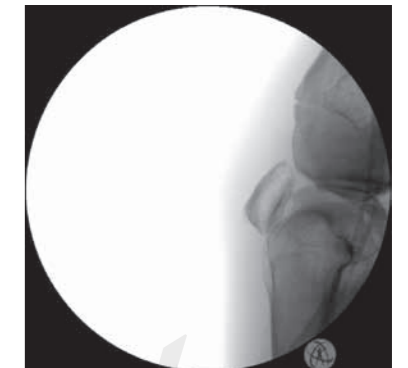
### Conventional



### ODDC with highlighted cells



### Optimal image quality with ODDC



Object Detected Dose Control



## *Superior Imaging Quality*

### **Ziehm Vision R with Endo Option** *The Combination That Makes Sense*

The Endo option is a unique configuration designed in joint cooperation with clinicians to optimize endoscopy procedures under fluoroscopic x-ray control.

In order to assist minimally invasive endoscopic procedures (e.g. ERCP/PTCP) the Ziehm Vision R single monitor cart carries both the fluoroscopic and endoscopic monitors. This configuration allows the endoscopic surgeon the convenience of viewing both the fluoroscopic and color endoscopy image at a single glance. Additionally, the operating team gains more free floor space in the operating room as a separate endoscopic monitor cart becomes unnecessary. The Ziehm Vision R with Endo option is compatible with most popular endoscopes in use today.

#### *Uncompromized Image Quality*

The specialized Ziehm Vision R provides optimal image quality as the dedicated endoscopic imaging software optimises the systems imaging characteristics especially for endoscopic procedures.

#### *Hands-free Automation*

The Ziehm Vision R with the optional Endo functionality focuses fluoroscopic imaging controls through one convenient and simple point of contact – the foot-switch control. When the fluoroscopy foot-switch is activated, image recording switches automatically from endoscopy to fluoroscopy.



*Endo functionality*



## *Reduced Radiation Exposure*

### *Caring for the Patient and the OR Team*

The Ziehm Vision R uses the most innovative technologies to keep X-ray dose levels to a minimum without compromising the outstanding image quality.

Application-oriented anatomical programs, the monoblock generator featuring pulse technology, beam-hardening filters and a host of other carefully targeted functions will help you to achieve substantial dose savings.

Last but not least, significant dose reductions in the daily OR routine are made possible with the unique ODDC (Object Detected Dose Control) technology and its built-in automatic dose reduction feature, which continuously monitors patient motion and readjusts the pulse rate accordingly.

Ziehm Vision R – exceptional image quality combined with a vigilant low-dose approach – for optimum results in the OR.



Reduced Radiation Exposure

## *Exceptional Ease of Use*

### *Convenient Operation*

A small footprint, as well as the monoblock generator's compact design, guarantees excellent maneuverability and easy handling of the C-arm. Although packed with innovative C-arm technology, the Ziehm Vision R still retains perfect clinical mobility and smooth movements for effortless positioning.

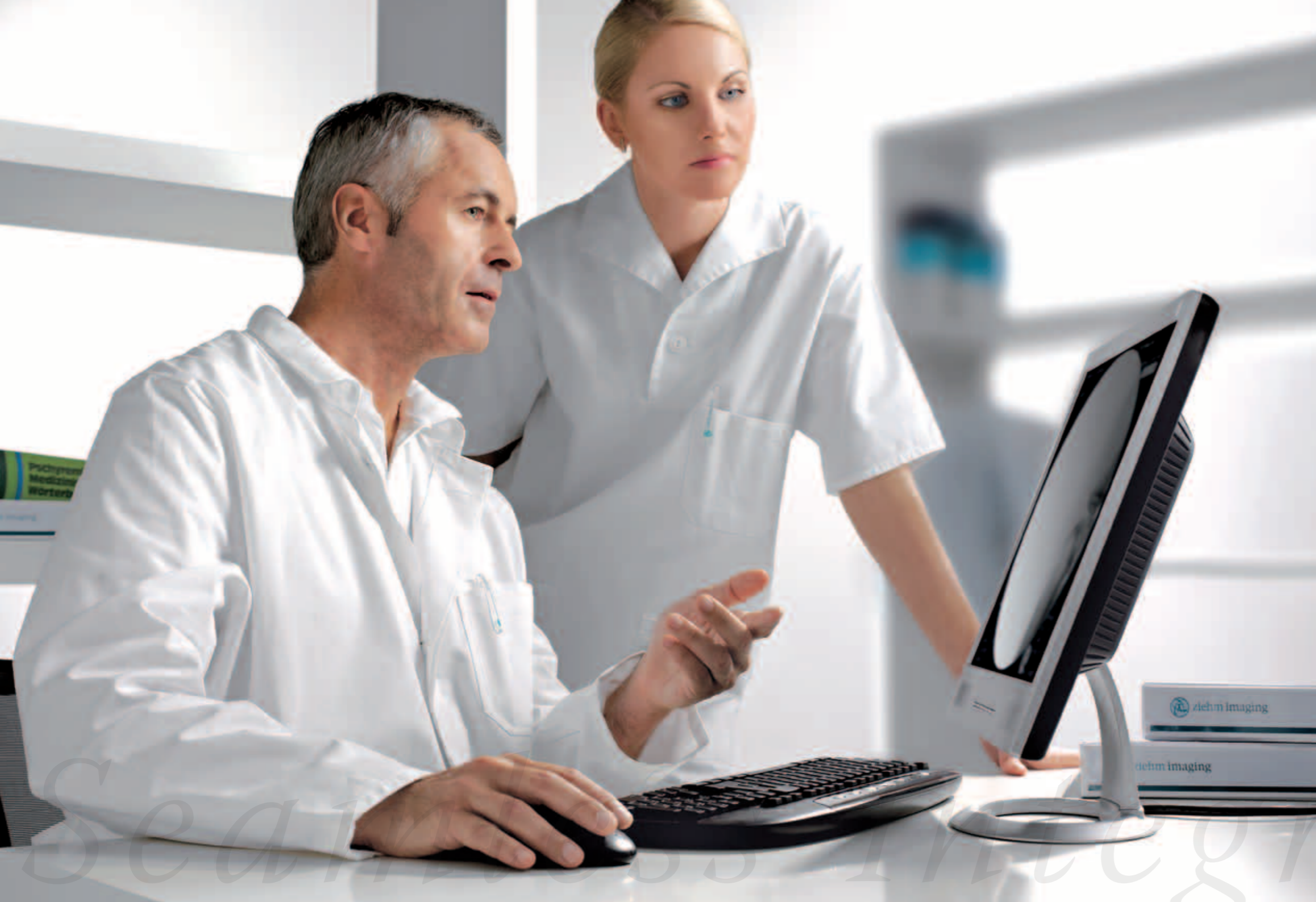
The 'Vision Center', a touchscreen control panel featuring an intuitive and ergonomic interface with logical user guidance and clear icons, makes the unit extremely easy to work with. The Ziehm 'SmartEye' – a live control image provided on the Vision Center – ensures accurate and clear communication between the C-arm operator and the surgeon. Furthermore, the Vision Center's open software architecture gives maximum flexibility when it comes to upgrading and adding new functionality.

The new Advanced Active Cooling system is able to discharge 1200 watts of heat in average clinical operation due to its enhanced heat exchanger and heat management software. Thanks to this innovative heat dissipation technology, overheating during long and demanding procedures is very unlikely.



*Exceptional Ease of Use*





## *Seamless Integration*

### *Full DICOM Functionality*

An outstanding feature of the Ziehm Vision R is the fully integrated Ziehm NetPort interface, which provides comprehensive support for the DICOM 3.0 standard.

Running in 'Primary Capture' mode, Ziehm NetPort is capable of transferring original images as well as patient data to and from the PACS and/or HIS/RIS, thus ensuring lossless digital network integration

### *Extensive Archiving Possibilities*

The Ziehm Vision R is equipped with a broad set of integrated archiving devices for convenient image storage, including:

- hard disk
- USB port
- DVD writer

Images can be saved in DICOM or TIF formats as well as in downsized DICOM or JPG formats.

### *Compatibility with the Latest Navigation Systems*

Combining the Ziehm Vision R with a Computer-Assisted Surgery (CAS) system creates a perfect environment for navigated surgical procedures, allowing surgeons to operate with maximum accuracy and efficiency.

Seamless Integration