



## Ziehm Vision R

Powerful solution for superior  
mobile imaging.



Ziehm Vision R. Equipped with a rotating anode tube embedded into a powerful monoblock generator, this C-arm achieves optimal image quality at the lowest possible dose. These properties, in combination with the Advanced Active Cooling system, significantly extend operating times, while delivering superb image quality. This makes the Ziehm Vision R particularly suited for demanding procedures in cardiology and vascular surgery including PTCA, PTA and EVAR. The compact design of this mobile C-arm together with its unmatched ease of use benefit both surgeons and operating staff.

## 01 / For demanding interventions. A range of finely tuned components deliver outstanding image quality.

### Powerful generator for optimal image quality

The Ziehm Vision R features a highly compact and powerful monoblock generator with a rotating anode. This industry-leading high-frequency pulsing generator operates with a variable pulse width between 7 ms and 30 ms. The pulsing width, combined with the power reserves of up to 20 kW, make this C-arm the imaging system of choice among physicians specialized in TAVI (transcatheter aortic valve implantation), as well as in vascular procedures such as PTCA, PTA and EVAR. Short, sharp pulses at up to 30 pulses per second produce razor sharp images – even of moving objects. In addition, the Ziehm Vision R delivers excellent results during exposures with steep angles and lateral projections.

### Optimal visualization

The high resolution CCD camera enables anatomic visualization in a high dynamic range and is a key component in the imaging chain. With 1 k x 1 k resolution and more than 4,000 shades of gray, it visualizes even the smallest anatomical structures. This is extremely beneficial in demanding applications like interventional vascular or cardiac procedures. Thanks to automatic adjustment, s-shaped and pincushion distortion is minimized.

### Contrast-rich display

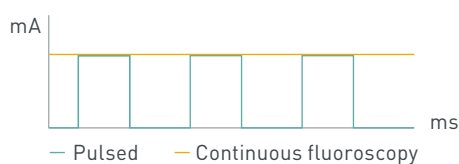
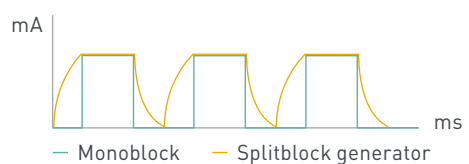
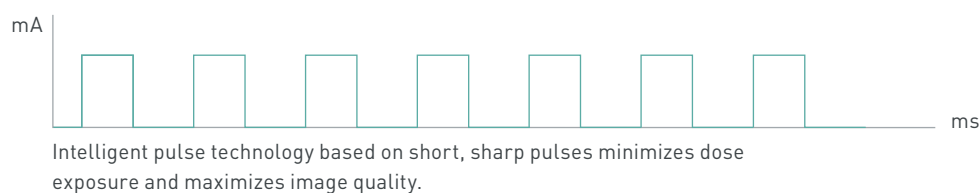
The Ziehm Vision R features dual 19" TFT color flatscreens that stand out for their exceptional brightness and contrast. Even at a distance and from an angled view, these high resolution monitors provide the physician with an optimal visualization of even the finest details.

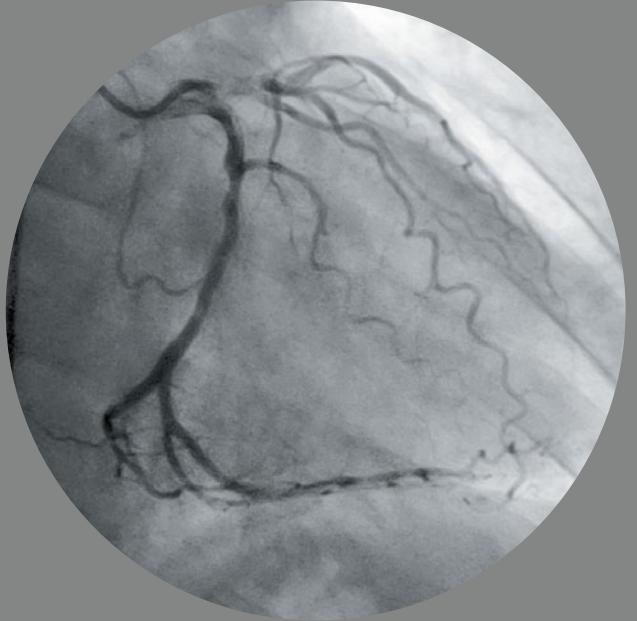
## PreMag for ease of magnification

PreMag is a preview function that allows the operator to simulate the size of a magnified image before taking a second exposure. Based on the first scan, the operator can precisely define the scan region and preview the results of magnifier 1 or 2 without any additional exposure for the patient. Once the magnification has been adjusted the operator may make an exposure if required.

## Specially tailored organ programs

The number of cardiovascular procedures in obese patients increases every year. In these cases penetration and image quality can be particularly challenging. A perfect combination of innovative hardware and software components and specially tailored organ programs ensures the best possible image quality.



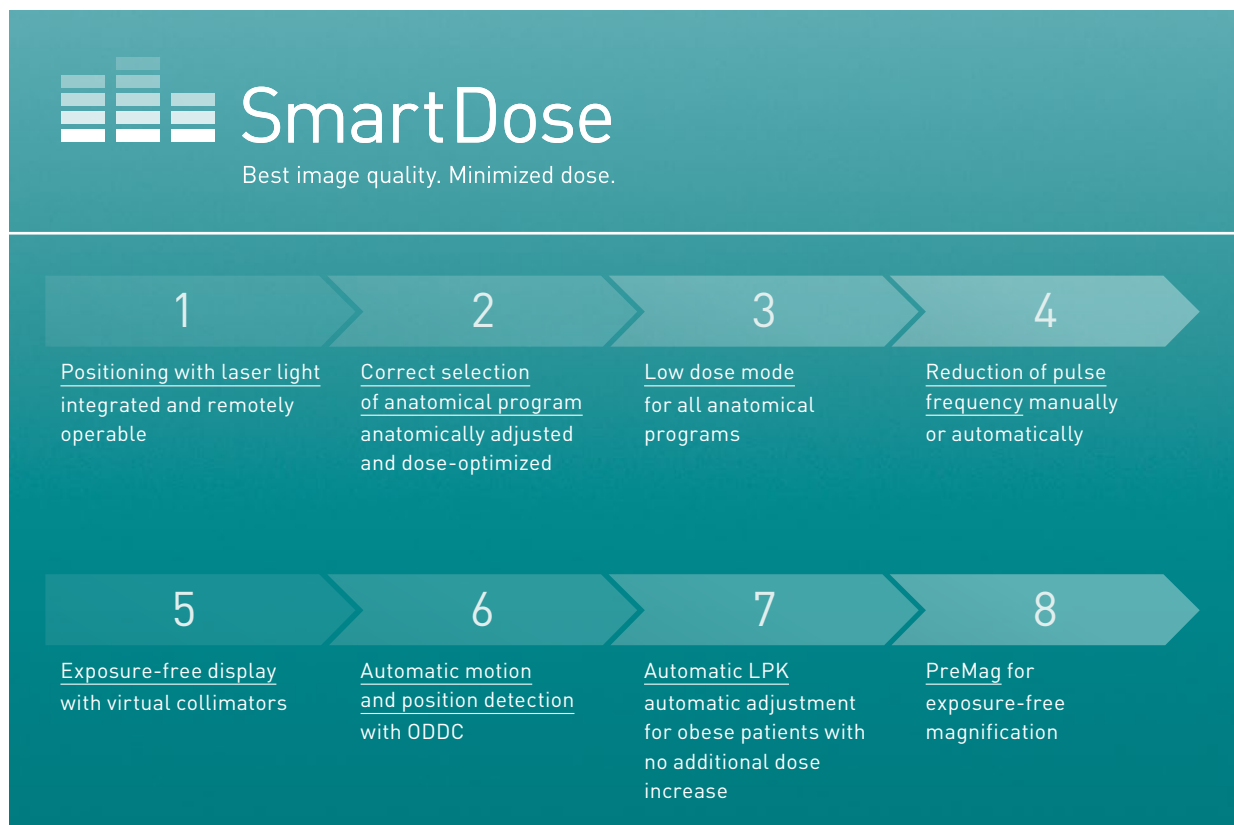




## 02/Smart Dose. Best image quality. Minimized dose.

### Comprehensive concept for dose reduction

Ziehm Imaging has incorporated SmartDose in the current generation of mobile C-arms. This comprehensive concept for dose reduction 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 user-friendly adjustment of dose exposure.



\* In clinical practice, the use of SmartDose may reduce patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.



## Automatic adjustment of settings

Ziehm Vision R greatly simplifies patient positioning and dose control. ODDC technology (object detected dose control) creates a matrix over the entire scan field and uses 256 measurement cells to scan the region of interest in real time. All settings, including the dose level and noise filters, are automatically adapted to the patient's position.

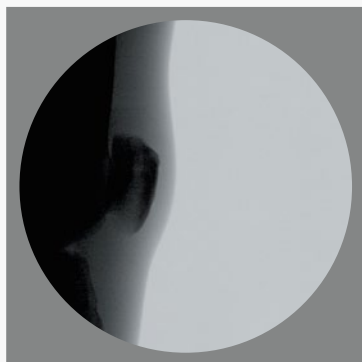
ODDC's measurement cells automatically detect motion. If the patient is not moving, the pulse frequency can be lowered significantly. If, however, motion is detected in the region of interest, the pulse frequency automatically increases to a maximum of 30 frames per second.

ODDC reduces patient dose and improves image quality. The system detects metal parts in the scanned zone (e.g. plates, pins, instruments or implants) and automatically adjusts generator output and video levels to reduce metal distortion and improve image quality.

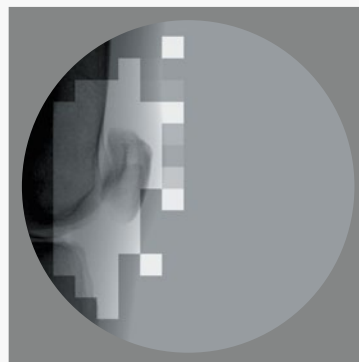
The Gosch<sup>1</sup> study for radiation exposure and image quality showed the average dose reduction when using 25 pulses/ sec resulting from object detection and automatic down-pulsing was 21 %, and the maximum dose reduction was 60 %.

<sup>1</sup> Gosch D. et al. "Influence of Grid and Object Detection on Radiation Exposure and Image Quality using Mobile C-Arms – First Results", RöFo, 09/2007, page 896 onwards

### ODDC highlights



Conventional image quality



ODDC: Grid-controlled adjustment of radiation levels, filters and pulse frequency



Crystal-clear images achieved with minimized doses



## 03 / New dimension in user friendliness. Adapted to clinical workflows with new levels of intuitive guidance.

### Exceptional ease of use

The compact design and easy-drive system of the Ziehm Vision R allow it to be maneuvered with minimal effort. All steer and brake functions are activated via a single lever. All C-arm movements are fully counterbalanced in every position. The compact footprint makes the C-arm easy to handle and position.

### Intuitive user interface

The Vision Center is a rotating and tilting touchscreen control panel mounted on the mobile stand as well as on the monitor cart and is available as an option for tableside mounting. It provides access to the same, synchronized controls found on both units. This intelligent user interface coupled with clear and easy-to-follow icons makes operating the imaging system easy and intuitive. From a concise list of anatomical programs, the operator simply selects the desired option to automatically adjust the imaging parameters to the region of interest, always ensuring the best image quality and lowest dose levels.

### Ziehm SmartEye for full control at your fingertips

Ziehm SmartEye mirrors the monitor image to the touchscreen, giving the user a live replica to keep track of orientation and object positioning. Images can be switched from the left to the right monitor faster than ever with drag and drop. SmartControl functionality means operators only have to slide a finger to adjust brightness, contrast, image mirroring and rotation. The virtual iris and slot collimator is equally intuitive, allowing users to easily preselect collimator settings for the next image.



Ziehm SmartEye with SmartControl marks a new dimension in intuitive image processing



### Fit for the future

The user interface is a touchscreen with an open, modular software architecture, ensuring maximum flexibility. The Ziehm Vision R user interface can be easily upgraded and expanded with software modules.

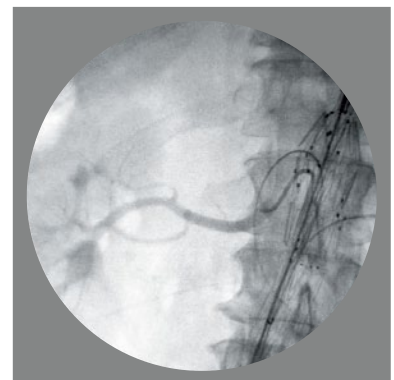
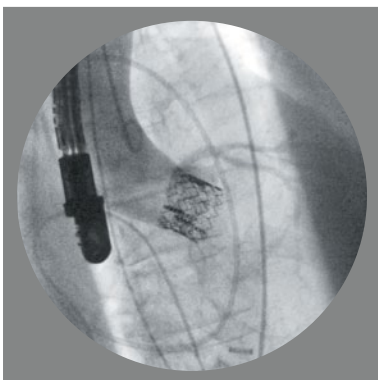
### Unique reliability

C-arms need to be in continuous use during lengthy, demanding procedures such as vascular and cardiac interventions. The unique liquid cooling system, Advanced Active Cooling (AAC), standard on the Ziehm Vision R, is more effective than cooling systems of conventional C-arms and keeps the generator at an ideal operating temperature. This provides uninterrupted usage even during long and difficult procedures where reliability is crucial.

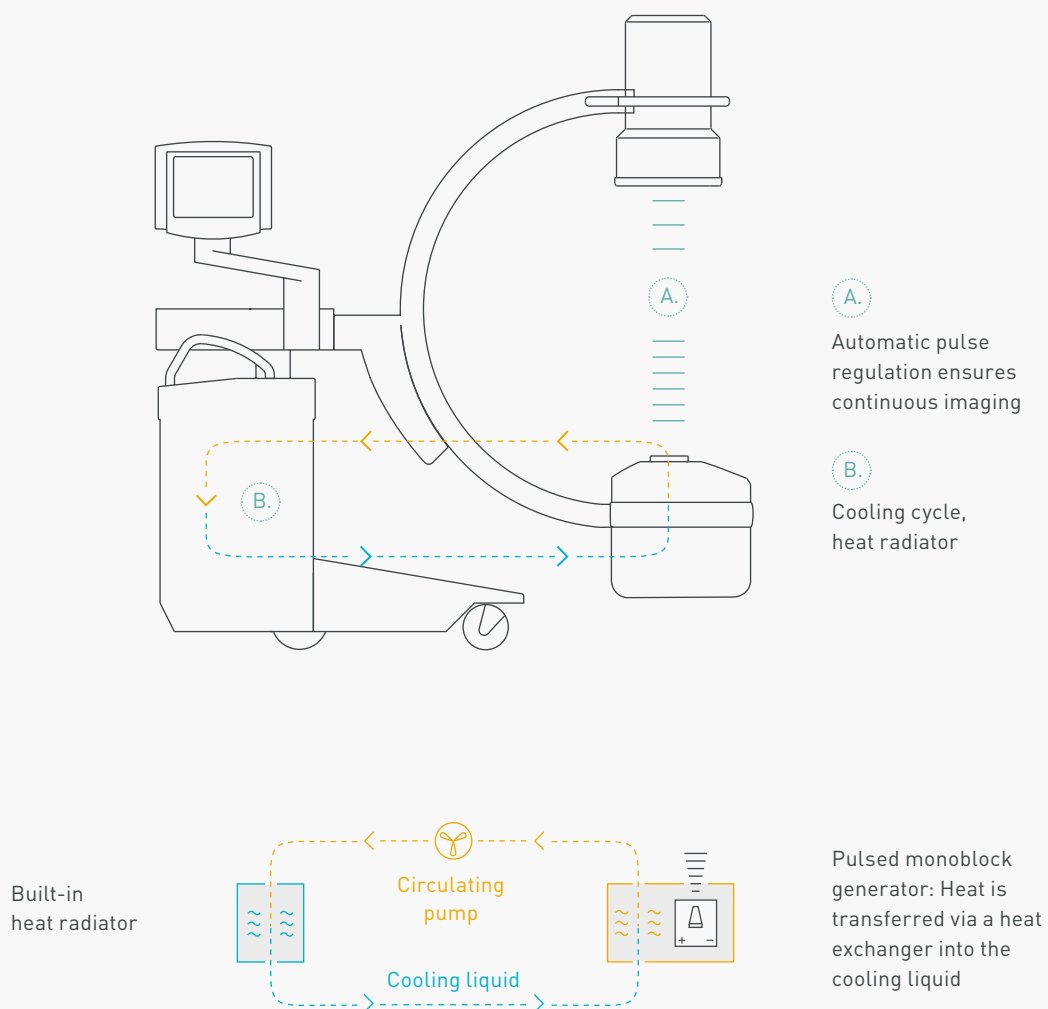
### Seamless integration

The Ziehm Vision R's open interface Ziehm NetPort enables easy integration into existing IT networks. Patient data saved in DICOM 3.0 format can be transferred to a PACS or HIS/RIS system. Data can be retrieved from the monitor cart at any time. Data can also be backed up to DVD or USB and printed on transparencies or paper.

#### Advanced Active Cooling for long and difficult procedures



Advanced Active Cooling keeps generator temperatures down while the heat management software automatically adapts the pulse rate



04/Precision matters. A reliable and powerful solution for the OR.

Outstanding power reserves and high image quality make the Ziehm Vision R particularly suited to demanding procedures in vascular and cardiovascular interventions such as EVAR, PTCA and PTA.

Feature	Ziehm Vision R
1 k x 1 k technology	•
Pulsed monoblock generator	•
Performance	20 kW
ODDC	•
DICOM 3.0	•
WLAN	optional
Advanced Active Cooling	•
C-arm opening	29.9" (76 cm)
Ziehm SmartEye with SmartControl	•
Endoscopic monitor	optional
PreMag	•
Field of view 9" (23 cm)	56.3 in² (363 cm²)
Field of view 12" (31 cm)	92.1 in² (594 cm²)



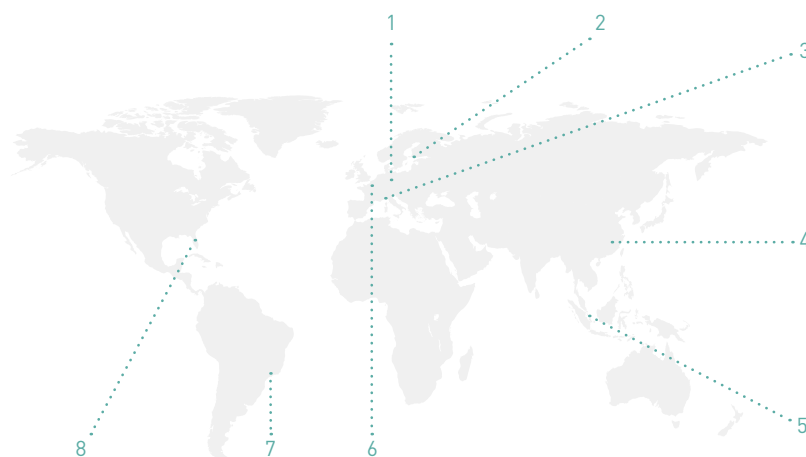
## 05/Service. We make sure you get the best results from our best products.

### Ziehm Imaging's direct service organization

Regardless of your needs, our experts are on hand. We offer nationwide service coverage with 24/7 phone support from our direct service organization. Our service programs cover the lifespan of the product – ranging from complete care, which includes parts and labor, glassware and image intensifier/flat-panel detector coverage, to preventative maintenance only programs. You can always rely on Ziehm Imaging for flexible and fast service.

### Keeping you at the cutting edge

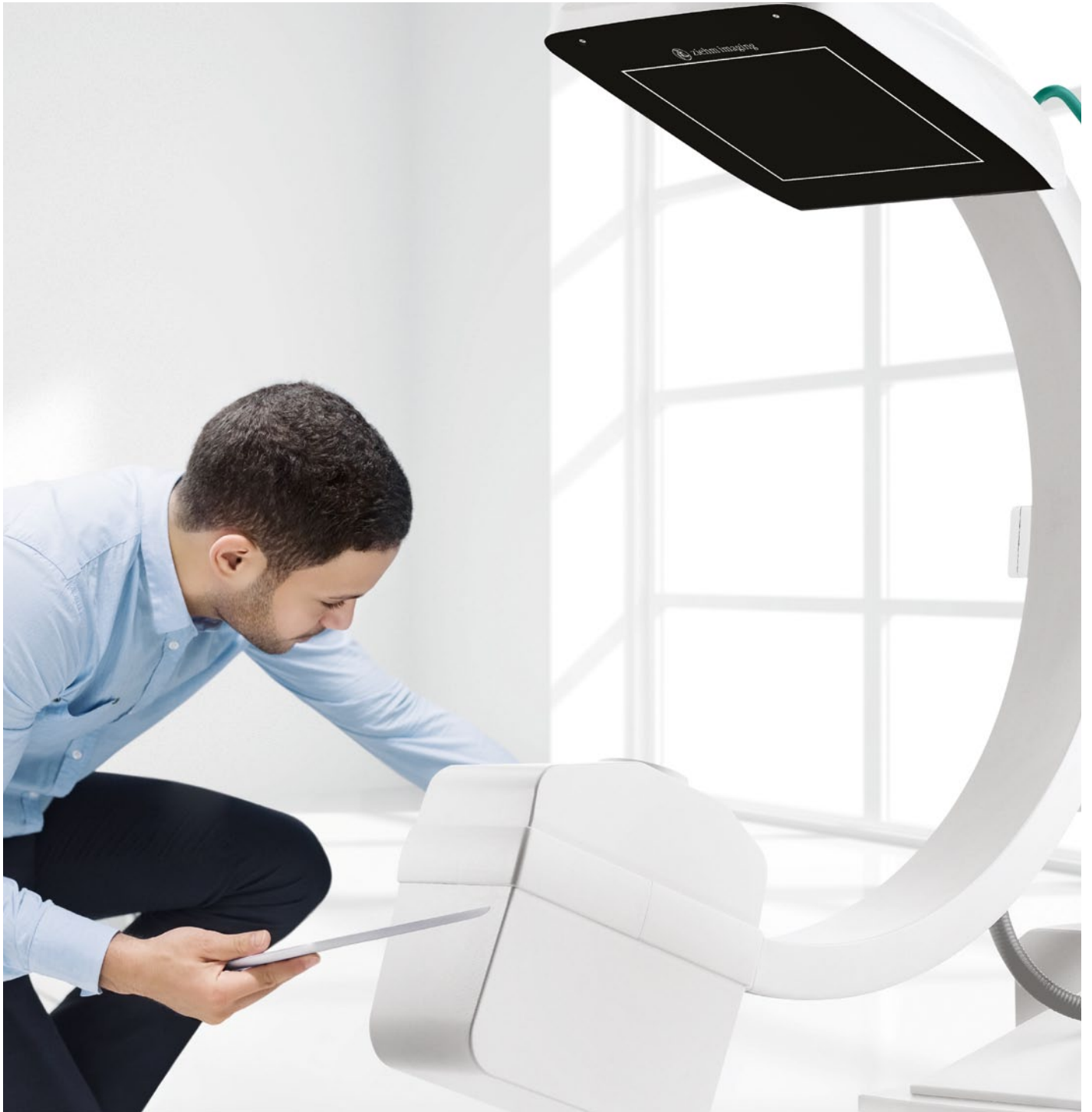
With Ziehm Academy you can enhance your clinical knowledge, find out more about mobile C-arms and receive tailored trainings. The courses cover the full clinical spectrum, from general operator training and technical workshops to high-level training sessions focusing on daily clinical workflows.



#### Offices

- |                         |                         |
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| 2 Kerava (Finland)      | 6 Paris (France)        |
| 3 Reggio Emilia (Italy) | 7 São Paulo (Brazil)    |
| 4 Shanghai (China)      | 8 Orlando, FL (USA)     |







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

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