



Ziehm Vision R

Powerful solution for superior
mobile imaging.



19" TFT color flatscreens
for high contrast images
➤ 05

High resolution thanks
to 1k x 1k technology
➤ 04

Rotating anode with
variable pulse width for
optimal image quality
➤ 04

Advanced Active
Cooling for extended
fluoroscopy time
➤ 10

Powerful monoblock
generator with up to 20 kW
for demanding procedures
➤ 04

Ziehm Vision R. Equipped with a rotating anode 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.

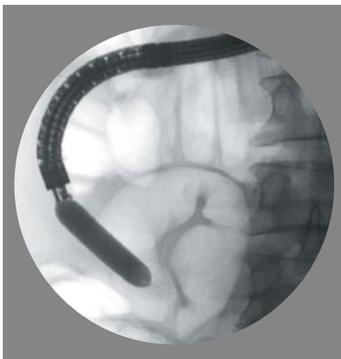
01 / For demanding interventions. A range of finely tuned components deliver outstanding image quality.

Powerful generator for optimal image quality

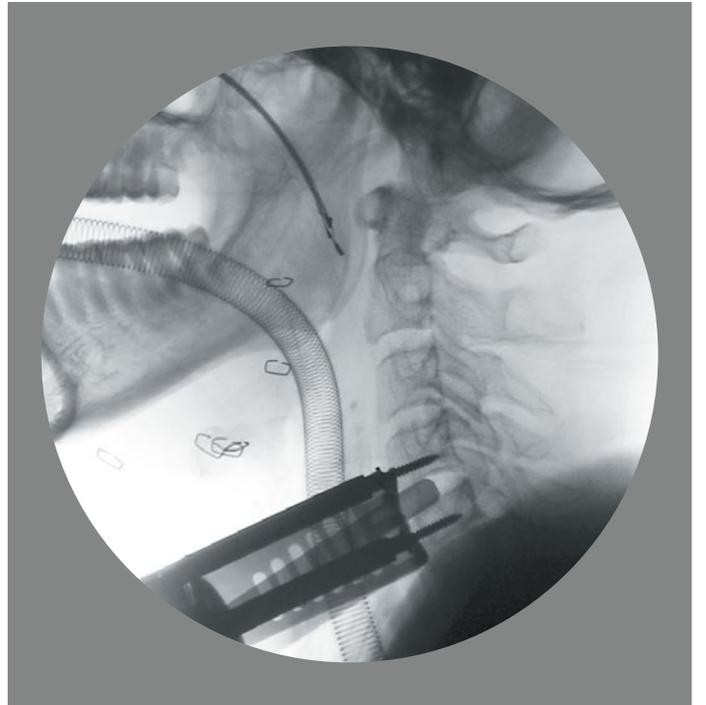
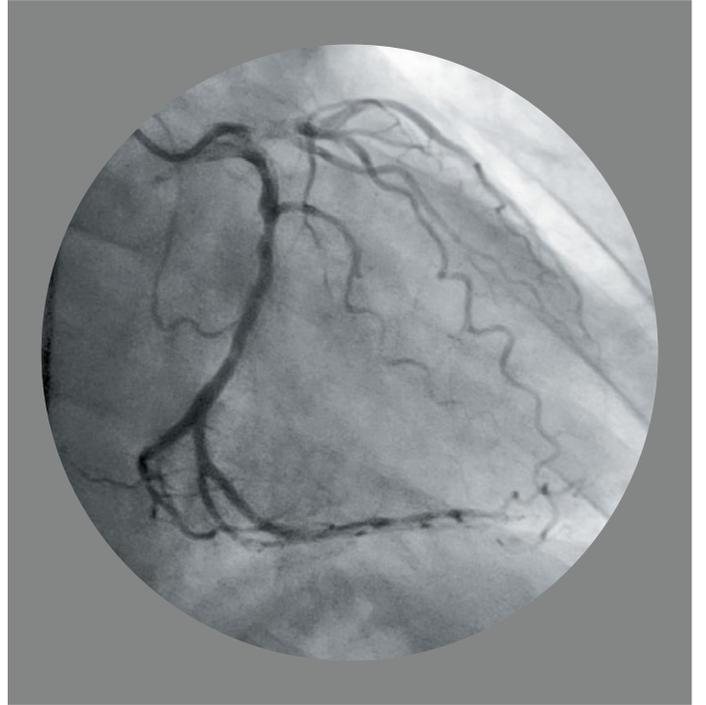
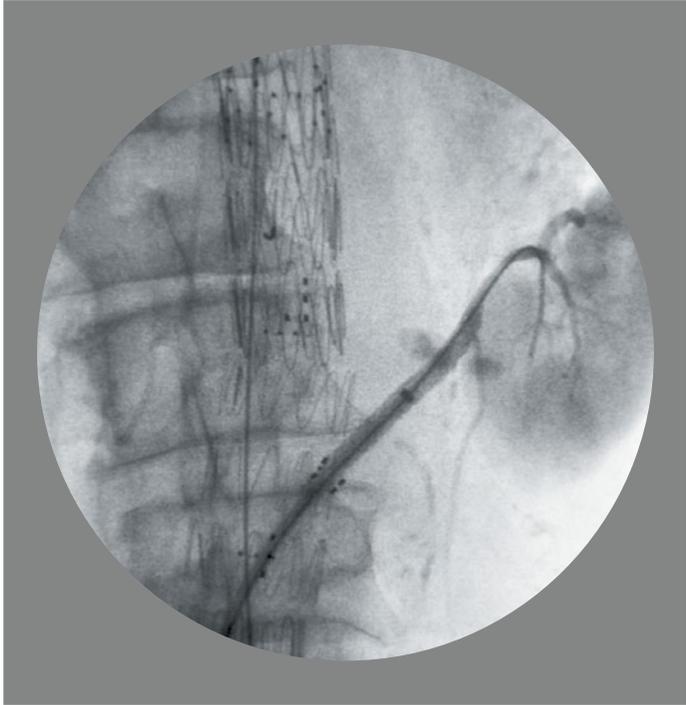
Ziehm Vision R features a highly compact and powerful monoblock generator with a rotating anode. This industry-leading high-frequency pulse generator operates with a variable pulse width between 4 ms and 30 ms. The pulse width, combined with the power reserves of up to 20 kW, make this C-arm the imaging 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 crystal-clear images – even of moving objects. In addition, Ziehm Vision R delivers excellent results during exposures with steep angles and lateral projections.

Optimal visualization

The high resolution CCD camera, which enables anatomic visualization in a high dynamic range, 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, the image is free of S-shaped and pincushion distortion.



An optional endoscopic monitor facilitates minimally invasive endoscopic procedures, conveniently displaying fluoroscopic and color endoscopy images side by side.



Contrast-rich display

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.



Intelligent pulse technology based on short, sharp pulses minimizes dose exposure and maximizes image quality.

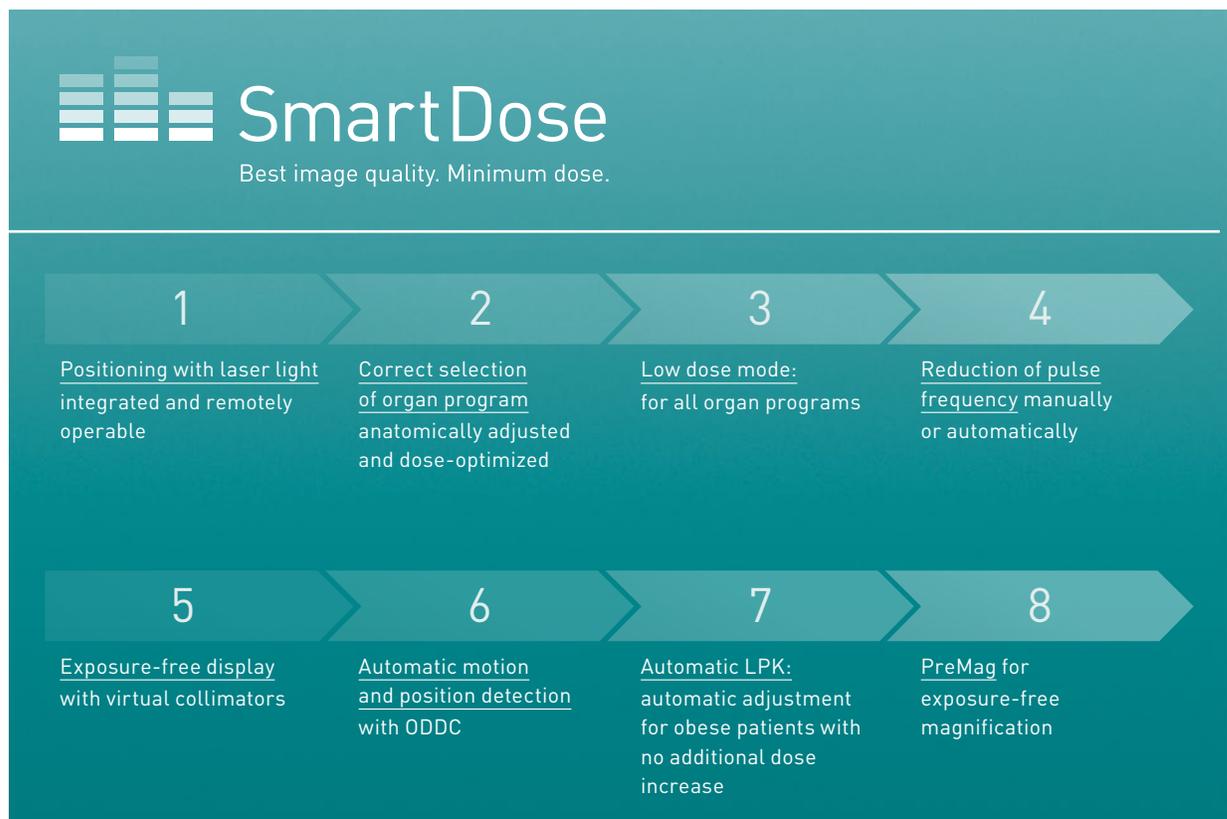




02/Smart Dose. Best image quality. Minimum dose.

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 savings up to 60% Ziehm Imaging sets the benchmark in user-friendly adjustment of dose exposure.



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.

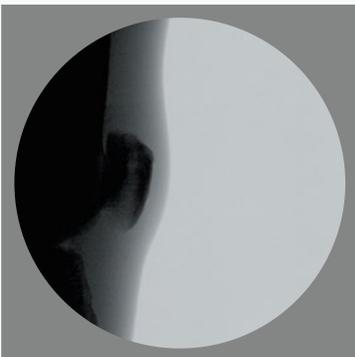
ODDC's measurement cells automatically detect motion. If the patient is not moving, the pulse frequency can be lowered significantly. If, however, motion is detected in the region of interest, the pulse frequency automatically increases to a maximum of 25 frames per second.

ODDC reduces patient dose and overexposure. 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.

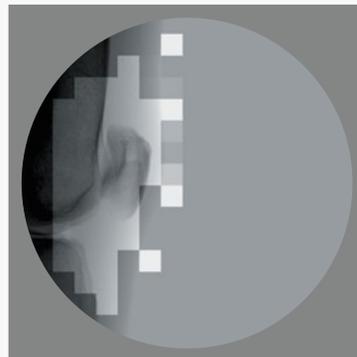
"The average dose reduction when using 25 pulses/sec resulting from object detection and automatic down-pulsing was 21 %, and the maximum dose reduction was 60 %."

(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 minimal 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 extremely 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. 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 left to 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 graphical 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 without the need for hardware changes.

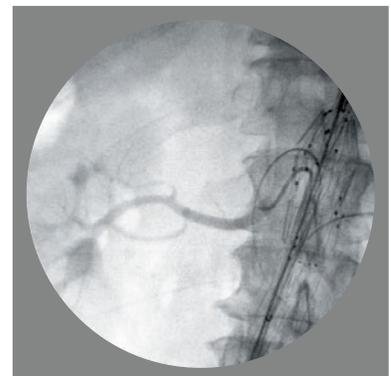
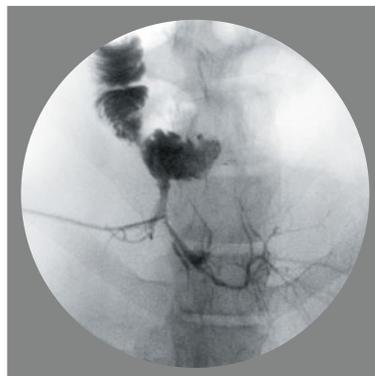
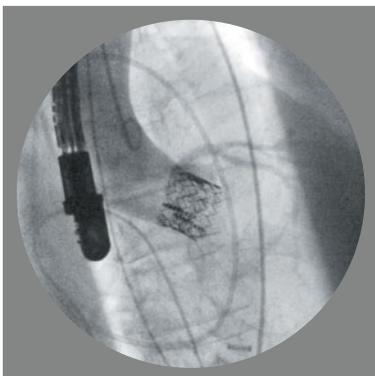
Unique reliability

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 ensures uninterrupted usage even during long and difficult procedures where reliability is crucial.

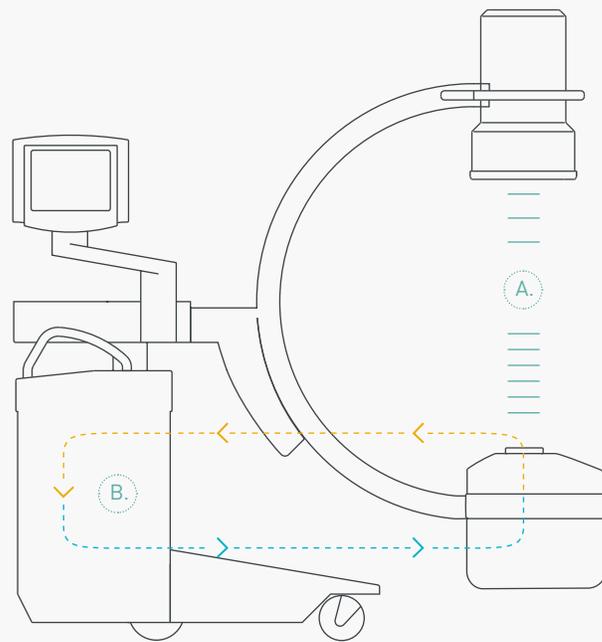
Seamless integration

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



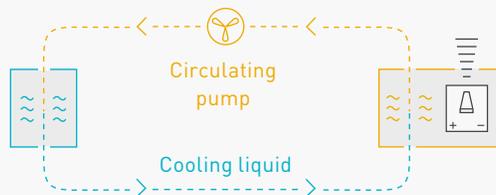
Advanced Active Cooling keeps generator temperatures down while the heat management software automatically adapts the pulse rate



A.
Automatic pulse regulation ensures continuous imaging

B.
Cooling cycle, heat radiator

Built-in heat radiator



Pulsed monoblock generator: Heat is transferred via a heat exchanger into the cooling liquid

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

Outstanding power reserves and high image quality make Ziehm Vision R particularly suited to demanding procedures in vascular and cardiovascular interventions such as EVAR, PTCA and PTA. Furthermore, the capability to display images from endoscopic devices in combination with our color monitors makes it ideal for the viewing of invasive endoscopic procedures.

| Feature | Ziehm Vision R |
|----------------------------------|---|
| 1 k x 1 k technology | • |
| Pulsed monoblock generator | • |
| Performance | 7,5 kW/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 in ² (363 cm ²) |
| Field of view 12" (31 cm) | 92.1 in ² (594 cm ²) |



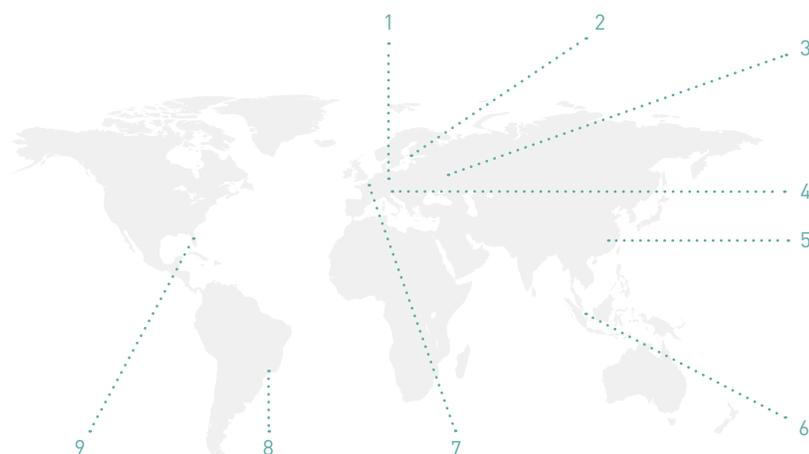
05/Service. We make sure you get the best results from the best products.

Close to you

Regardless of your needs, our experts are on hand. Thanks to our worldwide network of service centers, you can always rely on Ziehm Imaging for flexible and fast service.

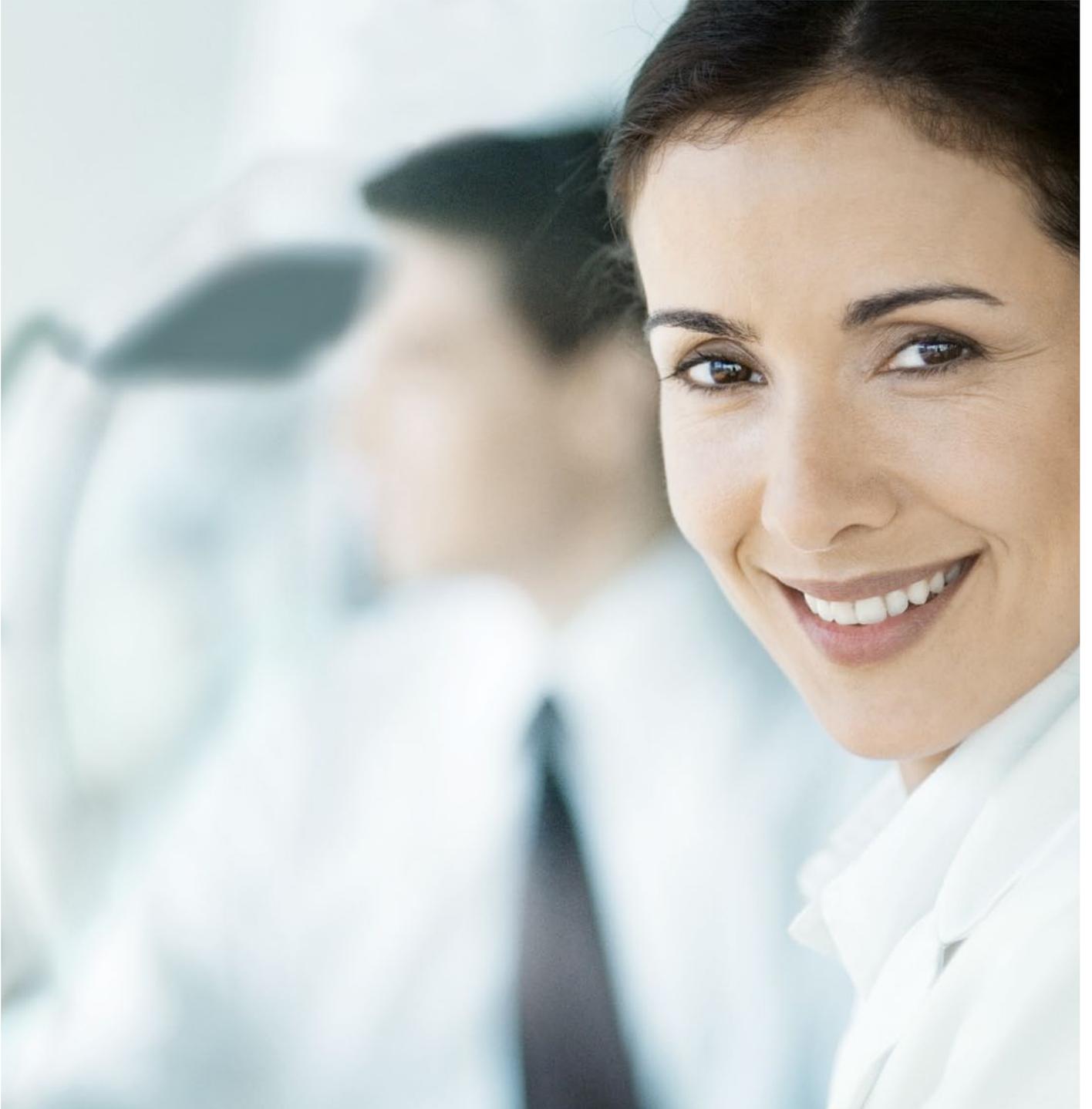
Keeping you at the cutting edge

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



Offices

- | | |
|-------------------------|-------------------------|
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| 2 Kerava (Finland) | 7 Paris (France) |
| 3 Moscow (Russia) | 8 São Paulo (Brazil) |
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