ziehmimaging

Ziehm Solo FD

Versatile design meets latest flat-panel technology

Versatile design with configurable viewing options to ensure a maximum of flexibility
↗ 08

Latest CMOS flat-panel technology to achieve significantly more details in the magnification modes
↗ 04

165 degrees of orbital movement to ensure easier patient coverage
↗ 06

Optimized process efficiency with Wireless Footswitch
↗ 10

Enhanced SmartDose functions to reduce dose for patients and staff alike
↗ 12

Pulsed 2.4 kW monoblock generator for higher levels of performance
↗ 04

Ziehm Solo FD. As the size of hospital and surgery center ORs decreases and equipment quantity rises, the demand for imaging systems with smaller footprints is growing. With its all-in-one design, the Ziehm Solo FD is one of the most compact C-arms for even the smallest treatment scenarios on the market – now equipped with CMOS flat-panel technology to perform a broad portfolio of applications. Versatile viewing options and new dimensions in user friendliness offer maximum flexibility in the OR to support your clinical workflow. With the latest improvements in dose regulations, the Ziehm Solo FD ensures best image quality at a minimized dose.

01 / Achieve significantly more details with CMOS flat-panel technology

Optimal soft tissue and bone contrast as well as high spatial resolution and a wide dynamic range are key to displaying detail-rich images of even the smallest anatomical structures. CMOS detector technology delivers on all counts, helping physicians to improve image quality.

→ CMOS flat-panel technology

Image quality and efficiency are the most important but also challenging factors in daily clinical routine. In comparison with conventional C-arms, the latest flat-panel technology CMOS achieves higher spatial resolution due to smaller pixel sizes combined with lower noise levels and a higher read-out speed at full resolution. True resolution, especially in the magnification modes, makes interpolation unnecessary. CMOS technology therefore enables improved overall efficiency.

→ Higher level of performance

The compact monoblock generator provides short, sharp pulses, producing razor-sharp images even if the patient is moving. This intelligent pulse technology also improves dose management. The flat-panel technology is unaffected by magnetic fields and enables distortion-free imaging, with no loss in image quality and more than 65,000 shades of gray.

→ Contrast-rich visualization

The Ziehm Solo FD offers a contrast-rich 19" dual display with high brightness. Even from a distance, the high-end monitors provide the physician with optimal insights by visualizing the finest details – from any angle.

4,096

Conventional image intensifier

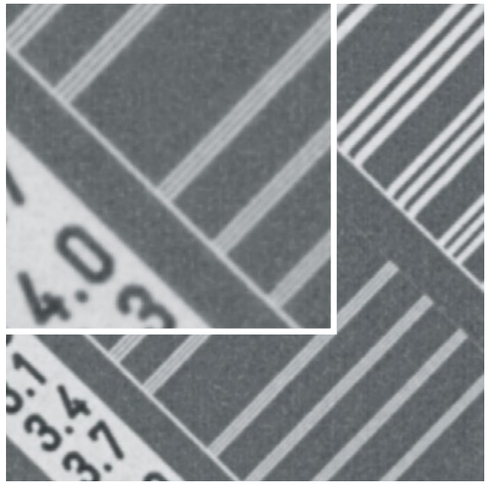
65,536 shades of gray

Ziehm Solo FD with flat-panel technology

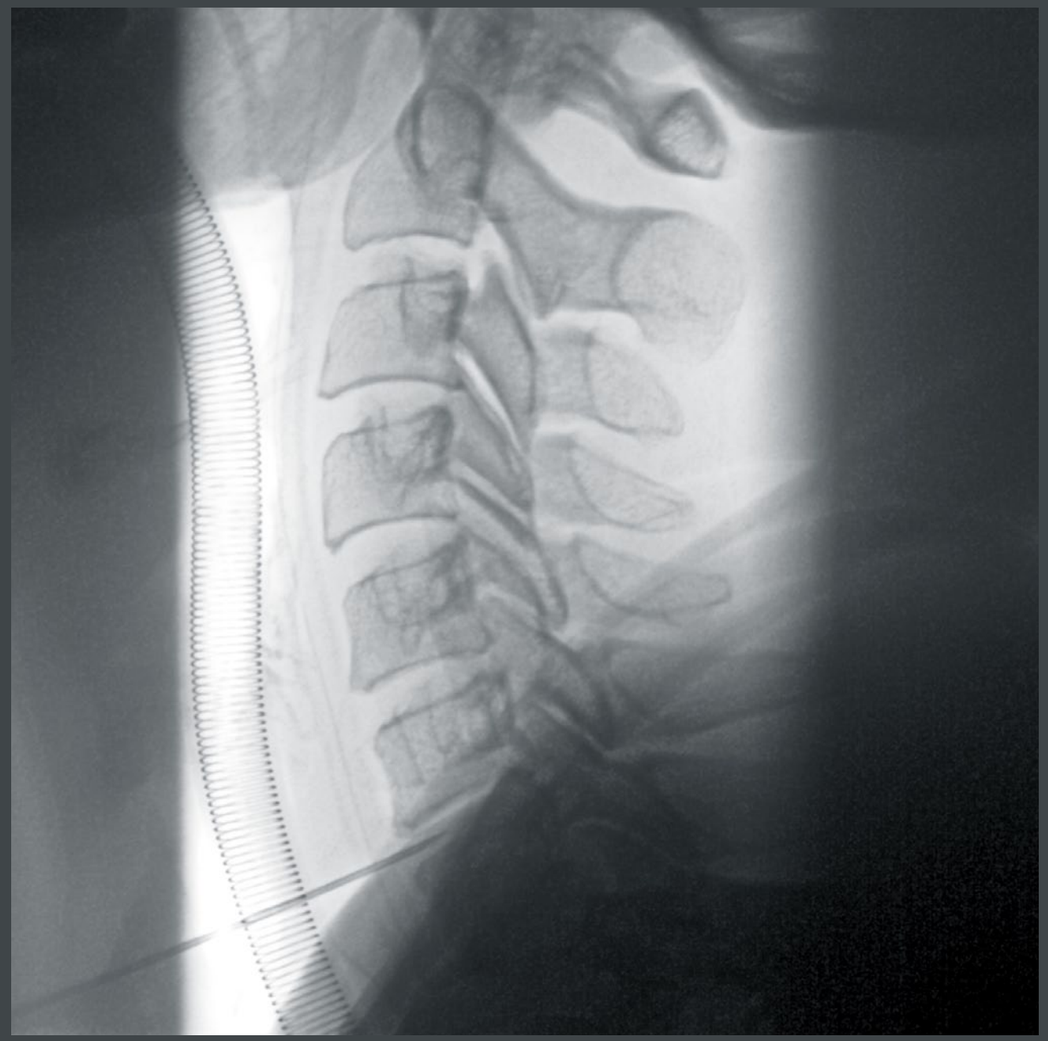
Full size (7.9" x 7.9")

Magnification mode 1 (5.9" x 5.9")

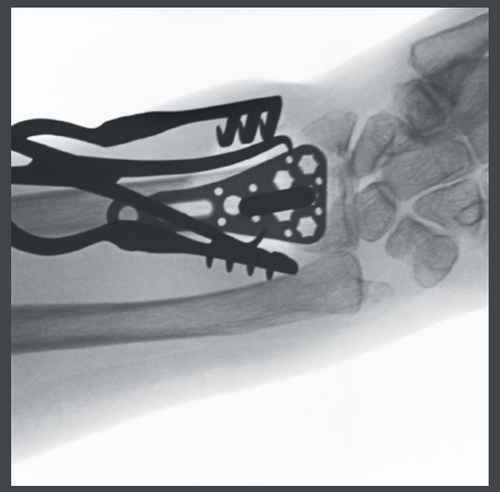
Magnification mode 2 (3.9" x 3.9")



Spatial resolution phantom with more than 4.0 lp/mm visible



Cervical spine



Stabilization of a radius fracture

Adjusting screw for stabilization of syndesmosis

Peripheral revascularization

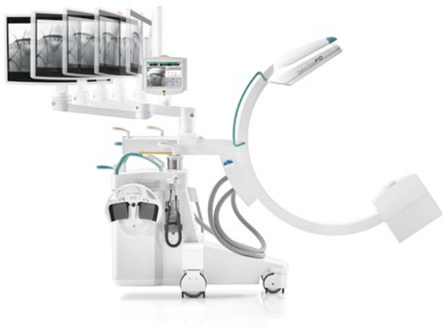
Osteosynthesis of the clavicular

02 / Ensure maximum flexibility with a versatile design

As space in the OR is limited, the demand for imaging systems with smaller footprints is growing. Thanks to the compact design and viewing options, the Ziehm Solo FD enables the hospital to fit every individual need.

→ Compact design

The Ziehm Solo FD is one of the smallest C-arms on the market. It comes as standard with 19" TFT dual color flatscreens mounted on an articulating monitor arm, eliminating the need for a separate monitor cart. Despite the compact design, 165 degrees of orbital movement enhances easy patient coverage and ensures a maximum of flexibility in the OR – fully counter-balanced in every position.



All-in-one design

All functions required for image capturing, processing and archiving are integrated in the C-arm, without the need for a standalone monitor cart.

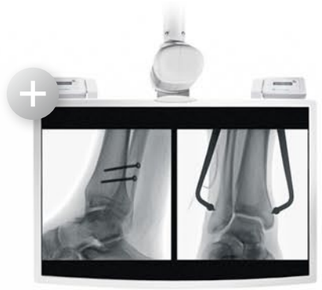
Easy handling

165 degrees of orbital movement and the 34" C-arm opening ideally support your workflow.

→ Flexible configurations

In addition to the compact design of the system, three different viewing options enhance flexibility during interventions to allow the product range to suit individual needs.

These options allow you to conveniently operate the system from the Ziehm Viewing Station, the Remote Solo Center and the C-arm.



Option 1: wall- or ceiling-mounted monitors

This space-saving configuration maximizes available space in the OR and can benefit from wireless integration.

wireless

Option 2: Remote Solo Center

Create sufficient scope for sterile operation with the Remote Solo Center, flexibly mounted to the sides of the OR table or on a separate stand.

Ziehm Solo FD with integrated monitor

This versatile mobile C-arm comes as standard with an integrated monitor to ensure a compact design for small ORs. Furthermore, it can be extended with three different viewing options.

Option 3: Ziehm Viewing Station

The C-arm can be easily supplemented with an extra Viewing Station featuring a 24" landscape splitscreen monitor or dual 19" flatscreen monitors.

03 / Optimize process efficiency with advanced clinical workflows

In the face of time and efficiency pressure, compatible clinical workflows help to operate the C-arm in an easy and intuitive way. Unmistakable communication increases safety in the OR and optimizes efficient patient handling.

→ Wireless Freedom wireless

WLAN allows you to store images wirelessly to the PACS from any location. With Ziehm Wireless Video, live images can be transferred to wall-or ceiling mounted monitors in real-time. Benefit from the wireless dual-plus-footswitch to increase safety due to fewer cables on the OR floor, and increase flexibility, as relevant functions such as initiating X-ray can be controlled wirelessly. Encrypted technology is used for all mentioned features.

→ Fit for the future

The Solo Center is a touchscreen with an open, modular software architecture, ensuring maximum flexibility. This interface can be easily upgraded and expanded with additional software modules without the need for hardware changes.

→ Seamless integration

The open interface, Ziehm NetPort, enables easy integration into existing IT networks. X-rays saved in DICOM 3.0 format are transferred to the PACS, and patient data can be exchanged with HIS/RIS. Data can be retrieved at any time. It can also be backed up to DVD or USB stick and printed on transparencies or paper.

Ziehm SmartEye technology mirrors the live image on the touchscreen, enabling the operator to keep track of orientation and object position.

04/Work with a minimized dose with intelligent dose regulation – now in its next generation

Minimizing dose while maintaining image quality is an important goal worldwide for surgeons, their staff and patients alike. Ziehm Imaging understands and supports this by developing enhancements in different applications to help our customers reach this goal.

→ SmartDose[1]. Best image quality. Minimized dose.

The comprehensive concept consists of a broad, clinically proven application portfolio to answer daily challenges of low dose and high image quality. Further reduce dose significantly with dedicated SmartDose functions for pediatric surgery.[2] With significant dose savings, Ziehm Imaging sets the benchmark in user-friendly adjustment of dose exposure. Our latest improvements in SmartDose help to display even the smallest details of challenging anatomical areas and reduce dose with intelligent pulse regulation and optimized anatomical programs.

[1] 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.

[2] Gosch D. et al. "Influence of grid and ODDC on radiation exposure and image quality using mobile C-arms – First results", RöFo, 09/07

LASER POSITIONING DEVICE
integrated in flat-panel/image intensifier and generator housing for accurate placement of C-arm without radiation

REDUCTION OF PULSE FREQUENCY
pulse frequency from 1 to 30 p/s manually or automatically for lower accumulated dose

OBJECT DETECTED DOSE CONTROL (ODDC)
automatically analyzes the area of interest to minimize dose and optimize image quality

ANATOMICAL PROGRAMS – AUTOMATIC ADJUSTMENTS FOR BEST RESULTS
optimize dose and image quality automatically for best results in dedicated anatomical programs

HIGH-SPEED ADR – INTELLIGENT PULSED REGULATION
reduce dose by taking advantage of latest innovations for faster pulse regulation

ZAIP – ADVANCED INSIGHTS IN FAST-MOVING OBJECTS
benefit from latest improvement of ZAIP algorithm and filters for imaging razor-sharp details of guide-wires and even the smallest vessels

LOW DOSE MODE
pediatric key for all anatomical programs to lower dose to the patient

PREMAG
for exposure-free display of magnified X-ray image

AUTOMATIC ADJUSTMENT
automatic adjustment for obese patients with no additional dose increase

REMOVABLE GRID
for pediatric and other dose-sensitive procedures to reduce dose

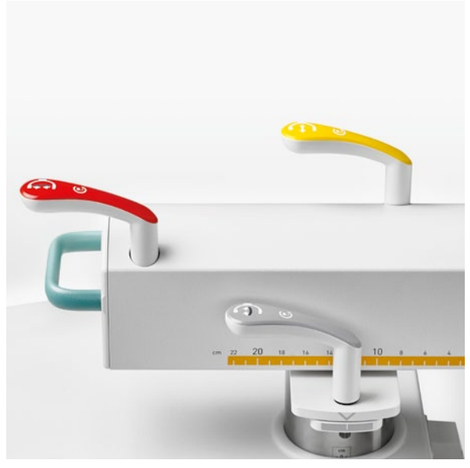
VIRTUAL COLLIMATORS
for exposure-free positioning of collimators

05/Features at a glance

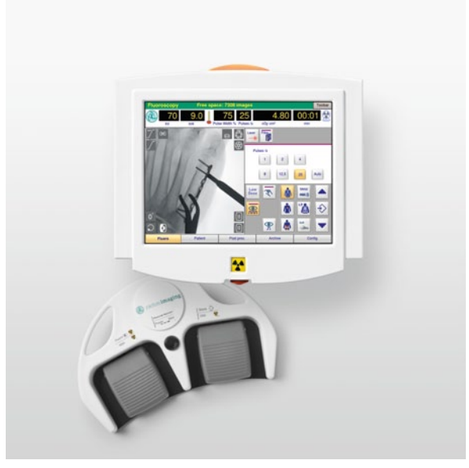
In a challenging healthcare environment, where space requirements and cost sensitivity are the greatest influences, the Ziehm Solo FD puts you forward with a wide range of versatile applications and options to fit your individual needs.

Footprint	8.6 sq ft
C-arm opening	34"
2k x 2k CMOS technology	•
Touchscreen user interface	•
Ziehm SmartEye with SmartControl	•
SmartArchive	•
Color-coded scales and handles	•
Pulsed monoblock generator	•

Anatomical Marking Tool (ATM)	optional
Ziehm Viewing Station	optional
Monitors for existing ceiling support arms	optional
Ziehm NetPort	optional
Interface to 2D navigation systems	optional
Printer/DVD	optional
Cineloop/DSA	optional
Wireless freedom integration (WLAN, Wireless Footswitch and Wireless Video)	optional



Color-coded handles



Wireless Footswitch and Remote Solo Center

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