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FD Pulse, FD-OR, Mobile DI Mini C-arms for fluoroscopic imaging of the extremities

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OrthoScan is the leader in the mini C-arm market with a worldwide installed base. Its mini C-arms are used in orthopedic surgery and for digital diagnostic imaging in offices and clinical environments. Mini C-arms are the ideal solution for fluoroscopy of the extremities at minimized dose levels. Due to their light weight, the systems are easy to handle in small spaces and operating rooms and guarantee ease of transfer between exam rooms.

Since 2017 Ziehm Imaging has full distribution rights for the OrthoScan mini C-arms and is the official sales and service representative for these products in Europe, Middle East and Africa. Thus, Ziehm Imaging now covers the complete range of mobile fluoroscopy systems from mini C-arms to high-end full-size C-arms.



01 / OrthoScan FD Pulse. The first and only mini C-arm with pulsed fluoroscopy.

→ Reduced dose

Moving from continuous fluoroscopy to pulsed fluoroscopy with 30 pulses per second, OrthoScan is able to reduce the dose without loss of image quality or detail. Selectable pulse rates – between 30, 15, 7.5, and 2 pps – allow the user to reduce the dose depending upon their imaging needs.

→ Largest flat-panel detector on a mini

A larger detector provides the greatest field of view, enabling the user to see more anatomy. The FD Pulse utilizes the thinnest flat-panel detector housing on the market, allowing the user to place the detector directly on the operating surface and leave the C-arm in the field to reduce OR time and decrease sterility risks.

→ Over-rotation

The OrthoScan mini C-arm design allows for an orbital rotation of 150°. This enables the user to take advantage of the larger field of view without making mechanical adjustments required by competitive equipment.

→ Advanced touchscreen Interface

The advanced OrthoTouch™ user interface allows seamless operation of system controls while still allowing for keyboard functions. OrthoTouch™ provides a familiar experience – similar to a smartphone or tablet – that enhances interaction while viewing detailed anatomy.

→ 24" high resolution monitor

The 24" high resolution diagnostic widescreen monitor allows for a 20% larger viewing area. For viewing fine details of relevant anatomy, the FD Pulse has the largest primary image on the market and a wider viewing angle for increased visibility.



"I value the OrthoScan FD Pulse for its fast and effortless maneuvering in the OR. For me the mini C-arm truly makes my daily clinical work more efficient."

DR. ULF BERTRAM
VULPIUS CLINIC, BAD RAPPENAU, GERMANY



Specifications: OrthoScan FD Pulse

Detector

Detector resolution	1.5 k x 1.5 k
Field of view: full	14.0 cm x 14.0 cm (5.5" x 5.5")
Field of view: collimated	10.9 cm x 10.9 cm (4.3" x 4.3")
Useful array	15.0 cm x 15.0 cm
Pixel spacing	99 microns
Dose rate	AKR, DAP

X-ray monoblock

Focal spot	42.5 microns
kV range	40 – 78 kVp
mA range	0.04 – 0.160 mA
Selectable pulse rate	Cont/30 pps/15 pps/7.5 pps/2 pps

Documentation

Wireless communication	Capable
DICOM 3.0 compliant	Yes
MPPS	Capable
Image capacity	25,000
Video capacity	15 min
Cine loop export	Yes
USB 2.0 ports	Yes
Printer options	2

Software

Operating system	Windows 8.1 embedded
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C-arm

Free space	35.0 cm (13.8")
Arc depth	48.3 cm (19")
Pivot	430°
Lateral rotate (wig-wag)	320°
Orbital rotate	150°
Vertical range	86.4 cm (34")
Distance to cabinet	max 172.7 cm (68")
Distance to wheel base	max 114.3 cm (45")

Display

Monitor	61 cm (24") LCD
Primary "live" image	30.5 cm x 30.5 cm (12.0" x 12.0")
Dual reference images	12.7 cm x 12.7 cm (5.0" x 5.0")
Built-in DICOM calibration	Yes
Extendible monitor arm	Yes – 68.6 cm (27")
Left/right arm swivel & rotation	216° + 370° + 200°
Height adjustable arm	Yes
Monitor handles	Yes
Video output	Yes
Monitor brightness	600 cd/m ²
Touchscreen	Yes

Imaging

Surgical LED lights	Yes
Sterile field controls	Bilateral
Start up time	~50 sec
Temporary image hold	512 images
Cine loop frame rate	30 fps
Snapshot capabilities	Yes
Edge enhancement	Yes
Post process brightness/contrast	Yes
Adaptive noise suppression	Automatic
Manual noise suppression	3 modes
Laser alignment	Yes
Multifunction wireless foot switch	Yes

Dimensions

Weight	181.4 kg (400 lb)
Height	113.0 cm (44.5")
Footprint (W x L)	71.1 cm x 83.8 cm (28" x 33")

02/OrthoScan FD-OR. Set new standards in mini C-arm imaging.

→ Thinnest flat-panel detector

The FD-OR utilizes the thinnest flat-panel detector housing on the market, allowing the user to place the detector directly on the operating surface and leave the C-arm in the field to reduce OR time and decrease sterility risks. The compact form factor allows for additional maneuverability during cases and improves workflow.

→ Over-rotation

The OrthoScan mini C-arm design allows for an orbital rotation of 150°. This enables the user to take advantage of the larger field of view without making mechanical adjustments required by competitive equipment.

→ Advanced touchscreen interface

The advanced OrthoTouch™ user interface allows seamless operation of system controls while still allowing for keyboard functions. OrthoTouch™ provides a familiar experience – similar to a smartphone or tablet – that enhances interaction while viewing detailed anatomy.

→ 24" high resolution monitor

The 24" high resolution diagnostic widescreen monitor allows for a 20% larger viewing area. For viewing fine details of relevant anatomy, the FD-OR has the largest primary image on the market and a wider viewing angle for increased visibility.



"I've never seen such detail with any other C-arm unit, both large and small."

ROBERT H. KANG, M.D., F.A.C.S.
CLINICAL ASST. PROFESSOR OF SURGERY, UNIVERSITY OF PITTSBURGH



Specifications: OrthoScan FD-OR

Detector

Detector resolution	2k x 1.5k
Field of view: full	14.0 cm x 10.9 cm (5.5" x 4.3")
Field of view: collimated	10.9 cm x 8.4 cm (4.3" x 3.3")
Useful array	15.0 cm x 12.0 cm
Pixel spacing	75 microns
Dose rate	AKR, DAP

X-ray monoblock

Focal spot	42.5 microns
kV range	40 – 78 kVp
mA range	0.04 – 0.160 mA

Documentation

Wireless communication	Capable
DICOM 3.0 compliant	Yes
MPPS	Capable
Image capacity	25,000
Video capacity	15 min
Cine loop export	Yes
USB 2.0 ports	Yes
Printer options	2

Software

Operating system	Windows 8.1 embedded
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C-arm

Free space	35.0 cm (13.8")
Arc depth	48.3 cm (19")
Pivot	430°
Lateral rotate (wig-wag)	320°
Orbital rotate	150°
Vertical range	86.4 cm (34")
Distance to cabinet	max 172.7 cm (68")
Distance to wheel base	max 114.3 cm (45")

Display

Monitor	61 cm (24") LCD
Primary "live" image	30.5 cm x 24.1 cm (12.0" x 9.5")
Dual reference images	12.7 cm x 10.1 cm (5.0" x 4.0")
Built-in DICOM calibration	Yes
Extendible monitor arm	Yes – 68.6 cm (27")
Left/right arm swivel & rotation	216° + 370° + 200°
Height adjustable arm	Yes
Monitor handles	Yes
Video output	Yes
Monitor brightness	600 cd/m ²
Touchscreen	Yes

Imaging

Surgical LED lights	Yes
Sterile field controls	Bilateral
Start up time	~50 sec
Temporary image hold	512 images
Cine loop frame rate	30 fps
Snapshot capabilities	Yes
Edge enhancement	Yes
Post process brightness/contrast	Yes
Adaptive noise suppression	Automatic
Manual noise suppression	4 modes
Laser alignment	Yes
Multifunction wireless foot switch	Yes

Dimensions

Weight	181.4 kg (400 lb)
Height	113.0 cm (44.5")
Footprint (W x L)	71.1 cm x 83.8 cm (28" x 33")

03/OrthoScan Mobile DI. Digital diagnostic imaging and fluoroscopy.

→ Digital portable imaging & fluoroscopy

Designed for the office or clinic, Mobile DI is a 16 kg self-contained portable mini C-arm capable of digital imaging and fluoroscopy. Mobile DI possesses the smallest footprint on the market for mini C-arms. With the optional wheeled storage case, Mobile DI can be easily transported between satellite clinics and offsite locations.

→ Mobile accessory cart

The optional Mobile DI accessory cart offers ease of movement between exam rooms, with improved features for users and patients to view X-ray images in real-time. A new articulating mid-mount monitor arm, with increased vertical and horizontal motion, allows for optimal positioning of the display while seated or standing. A redesigned keyboard tray includes conveniently located sidemounted handles for easy manipulation.

→ Additional procedures

Mobile DI allows for additional procedures in the office, improved workflow, and patient satisfaction. Benefits include reductions in patient lead times and potential for increased reimbursement.

→ Advanced touchscreen interface

The advanced OrthoTouch™ user interface allows seamless operation of system controls while still allowing for keyboard functions. OrthoTouch™ provides a familiar experience – similar to a smartphone or tablet – that enhances interaction while viewing detailed anatomy.

→ 24" high resolution monitor

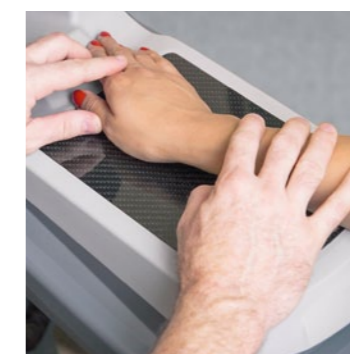
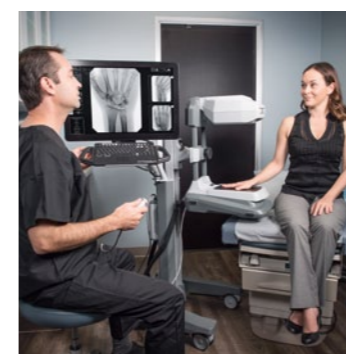
The 24" high resolution diagnostic widescreen monitor allows for a 20% larger viewing area. For viewing fine details of relevant anatomy, the Mobile DI has the largest primary image on the market and a wider viewing angle for increased visibility.



Accessories

OrthoScan offers a range of accessory and connectivity options that expand the diagnostic capability of Mobile DI, allow for additional portability, and maintain clinical excellence.

- Mobile accessory cart
- Weight-bearing foot bench
- Wheeled storage case
- Custom covers and drapes
- Desktop setup



Specifications: OrthoScan Mobile DI

Detector

Detector resolution	2k x 1.5k
Field of view: full	14.0 cm x 10.9 cm (5.5" x 4.3")
Field of view: collimated	10.9 cm x 8.4 cm (4.3" x 3.3")
Useful array	15.0 cm x 12.0 cm
Pixel spacing	75 microns
Dose rate	AKR, DAP

X-ray monoblock

Focal spot	42.5 microns
kV range	40 – 78 kVp
mA range	0.04 – 0.160 mA

Documentation

Wireless communication	Capable
DICOM 3.0 compliant	Yes
MPPS	Capable
Image capacity	25,000
Video capacity	15 min
Cine loop export	Yes
USB 2.0 ports	Yes
Printer options	2

Software

Operating system	Windows 8.1 embedded
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Display

Monitor	61 cm (24") LCD
Video output	HDMI
Monitor brightness	600 cd/m ²
Touchscreen	Yes

Imaging

Weight-bearing foot bench	Optional
Field controls	Single
Start up time	~50 sec
Temporary image hold	512 images
Cine loop frame rate	30fps
Snapshot capabilities	Yes
Edge enhancement	Yes
Post process brightness/contrast	Yes
Adaptive noise suppression	Automatic
Manual noise suppression	4 modes
Laser alignment	Yes
Wired hand or foot switch	Capable

Dimensions

Free space	35.0 cm (13.8")
Mobile DI weight	15.9 kg (35 lb)
Mobile DI height	63.5 cm (25")
Mobile DI footprint (W x L)	30.5 cm x 48.3 cm (12" x 19")
Accessory cart weight	70.3 kg (155 lb)
Accessory cart height	151.4 cm (60")
Accessory cart footprint (W x L)	61.0 cm x 67.3 cm (24" x 27")

OrthoScan EMEA Service Center



Rely on Ziehm Imaging for flexible and fast service to stay at the cutting edge of technology. Tailored service packages and individual upgrade paths keep you competitive in your daily hospital routine.

1. Nuremberg (Germany)
2. Paris (France)
3. Reggio Emilia (Italy)
4. Kerava (Finland)
5. Midrand (South Africa)