FUJIFILM

FUJIFILM DR

FUJIFILM DIGITAL RADIOGRAPHY SYSTEM

NEW

VELOCITY Unity FP

A flexible and high-resolution X-ray system with less radiation exposure.

A speedy and easy-to-operate X-ray system performing a wide range of exams with less radiation exposure.

The Fujifilm DR VELOCITY Unity fp enables radiographic exams in various positions including supine and upright. The X-ray tube and the detector both on the U-arm can be perfectly aligned, and the detector can be easily tilted for exams of angled parts such as the knee and skull. The unit has an exceptionally high image processing capability, and is fully motorized ensuring rapid set-up at exam. With the use of the Focused Phosphor Technology, excellent image quality can be obtained with less exposure of radiation.

UNCOMPROMISED IMAGE QUALITY

By a combination of **Focused Phosphor Technology** applied to the built-in detector and FUJIFILM's renowned sophisticated digital image software technologies, the **Image Intelligence™**, the FUJIFILM DR VELOCITY Unity fp offers unparalleled image quality in digital radiology.

Focused Phosphor Technology

With the use of the Focused Phosphor Technology, the X-ray exposure efficiency has been improved without changing the exposure dose.
To increase the X-ray exposure efficiency, we had to improve the Imaging Plate X-ray absorption efficiency significantly.
To improve the Imaging Plate X-ray absorption efficiency, we had to increase the thickness of the phosphor layer substantially.
In practice, the Imaging Plate X-ray absorption efficiency cannot be improved by merely increasing the phosphor layer thickness for the following reasons:

❶ sufficient stimulation light cannot penetrate deep into the phosphor layer because each phosphor particle in the phosphor layer acts as a light scattering medium, and

❷ photo stimulated luminescence (PSL), generated deep within the phosphor layer and containing X-ray information cannot be collected on the Imaging Plate surface.

The new Focused Phosphor Technology uses a thicker phosphor plate than previous models but since the phosphor crystals of the plate are realigned in a columnar structure, it is able to permeate the stimulation light deep into the phosphor layer. The generated PSL is then successfully collected on the focused phosphor plate surface. As a result, the X-ray exposure efficiency is improved.

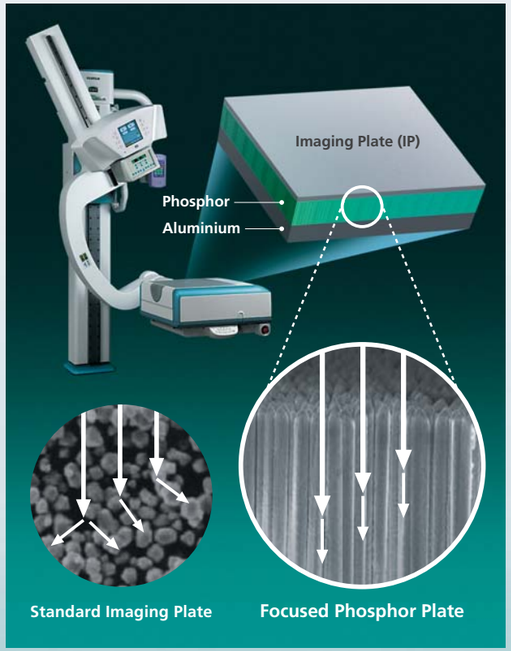


Image Intelligence™

"Image Intelligence™" is a set of sophisticated digital image processing software technologies incorporated in the Fujifilm DR VELOCITY Unity fp. An optimum image for examination is generated with this Image Intelligence technology.

FNC Flexible Noise Control

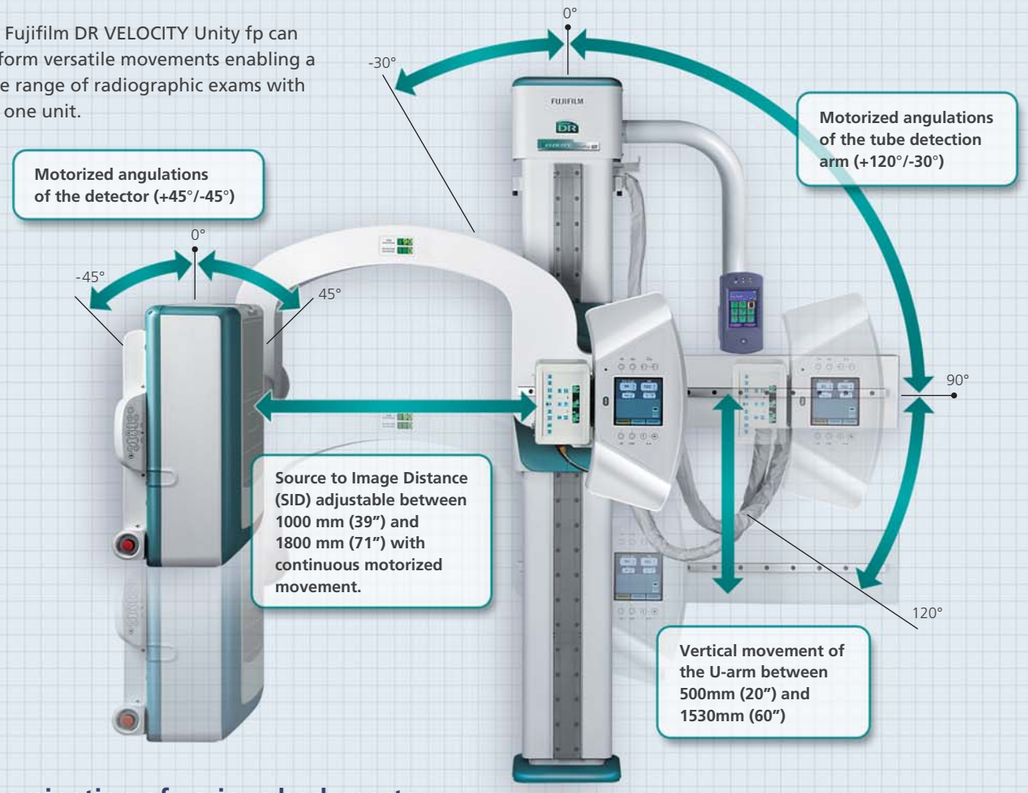
FNC selectively suppresses noise components while maintaining signal contrast, improving granularity in "noisy" anatomical regions.

MFP Multiple Frequency Processing

MFP is optional software that provides greater diagnostic information from a single exposure image through frequency enhancement. MFP improves visibility of both dense and peripheral tissues, simultaneously applying edge-enhancement processing to all structures in an image.

FLEXIBILITY

The Fujifilm DR VELOCITY Unity fp can perform versatile movements enabling a wide range of radiographic exams with just one unit.



Examination of various body parts

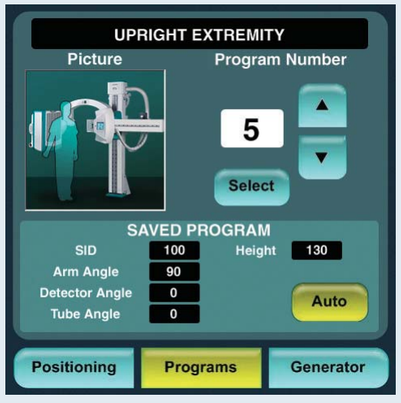
EASY TO CONTROL

Simple and automatic operation

Easy operation using the following:

- Touch buttons located in the X-ray tube cover, around the touch screen display control
- Control panel at the detector side
- Generator console located outside the room
- Infrared remote controller

Easy positioning, better productivity

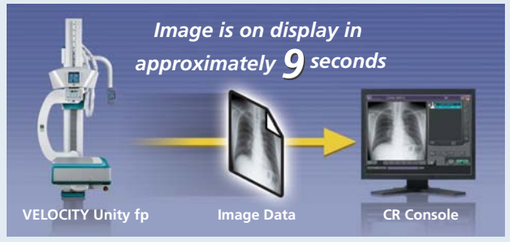


The following can be set automatically from the touch screen panel by selecting a specific position number from the pre-set position list displayed on the screen: SID, arm angle, detector angle, and height. Also the exposure condition (kV, mA, ms) can be set automatically by selecting a body part from the body part list displayed on the CR Console.* These auto-setting functions greatly alleviate the workload of radiologists.

*The CR Console is the central controlling device of the CR system.

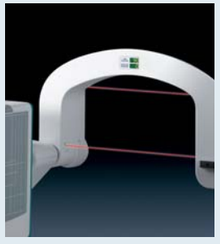
UNPRECEDENTED SPEED

Processing up to 240 IP/hour at 10-pixel/mm resolution, the Fujifilm DR VELOCITY Unity fp ensures immediate results for the operator and less waiting for the patient. The productivity gains seen with this unit are more than just impressive throughput. Since images are processed using FUJIFILM's refined image processing tools, they are in the optimum state for diagnosis when they are displayed. Radiologists do not waste valuable time trying to make the image look acceptable before transmitting them to PACS.



PATIENT SAFETY

The system's dual-speed motorized movement when a button or control is pressed and the intelligent anti-collision mechanism which uses two sensor laser beams ensure patient safety, and quick and easy patient positioning.



USER-FRIENDLY INTERFACE

A convenient verification screen clearly indicates the patient name for quick and easy confirmation, minimizing patient-data errors. A suitable grid size can be selected from this screen to match the type of exam.

FUJIFILM DR VELOCITY Unity fp SPECIFICATIONS

Image Detector (Model: CR-IR 372 RU)

• Image size	43 x 43 cm (17 x 17 inch)
• Pixels	4280 x 4280
• Pixel size	100 microns
• Spatial frequency (Nyquist)	5.0 cy/mm
• Bit Depth	12 bit
• Preview image	Approx. 9 seconds

Universal Arm Stand (Model: VERSO F)

• Vertical height	max. 1530 mm or more min. 500 mm
• Rotation of arm	+120/-30 degree
• Tilting of detector	+/-45 degree*
• SID	1000 – 1800 mm

*The absolute angle of detector is limited from 0 to +110 degree by software.

Generator (Model: SHF515 / SHF535 / SHF635 / SHF835)

• Output	50kW (SHF515, SHF535)/64kW (SHF635)/80kW (SHF835) (SHF835 available in some countries)
• Range of output	40 to 150kVp in 1kVp steps.
• Maximum current	640mA (SHF515, SHF535,SHF635)/800mA (SHF835)
• Console (Model: TPC 12")	12 inch Monitor and Touch screen display

X-Ray Tube (Model: E7252X / E7869X)

• Range of voltage	40 – 150kV
• Focal spot	1.2 mm (Large focus)/0.6 mm (Small focus)
• Anode heat storage capacity	300 kHU (E7252X)/600 kHU (E7869X)

Collimator (Model: 150PBL Collimator)

• Automatic collimator

Image & Information Processor (Model: CR-IR 348CL): Option

• Spatial frequency processing
• Gradation processing
• Dynamic Range compression processing
• Multi-frequency processing (option)
• Flexible noise control processing (option)
• Grid pattern removal processing (option)

Dimensions* (W x D x H)

• Universal arm stand**	2320 x 1465 x 2650 mm (91" x 58" x 104")
• Arm controller	592 x 422 x 600 mm (23" x 17" x 24")
• Generator	592 x 422 x 690 mm (23" x 17" x 27")

*This is approx. value. ** Detector is included

Weight*

• Universal arm stand**	500 kg (1102 lbs.)
• Arm controller	65 kg (143 lbs.)
• Generator	110 kg (243 lbs.)

*This is approx. value. ** Detector is included

Power Supply Requirement

• Detector	200 – 240V±10%, 2.1 2.5A, 50/60Hz (Single phase)
• Universal arm stand	230/240V±10%, 50/60Hz (Single phase)
• Generator	230/240V, 50/60Hz (Single phase) for output 50kW 400V, 50/60Hz (3-phase) for output 50kW 400V, 50/60Hz (3-phase) for output 64kW 480V, 50/60Hz (3-phase) for output 80kW

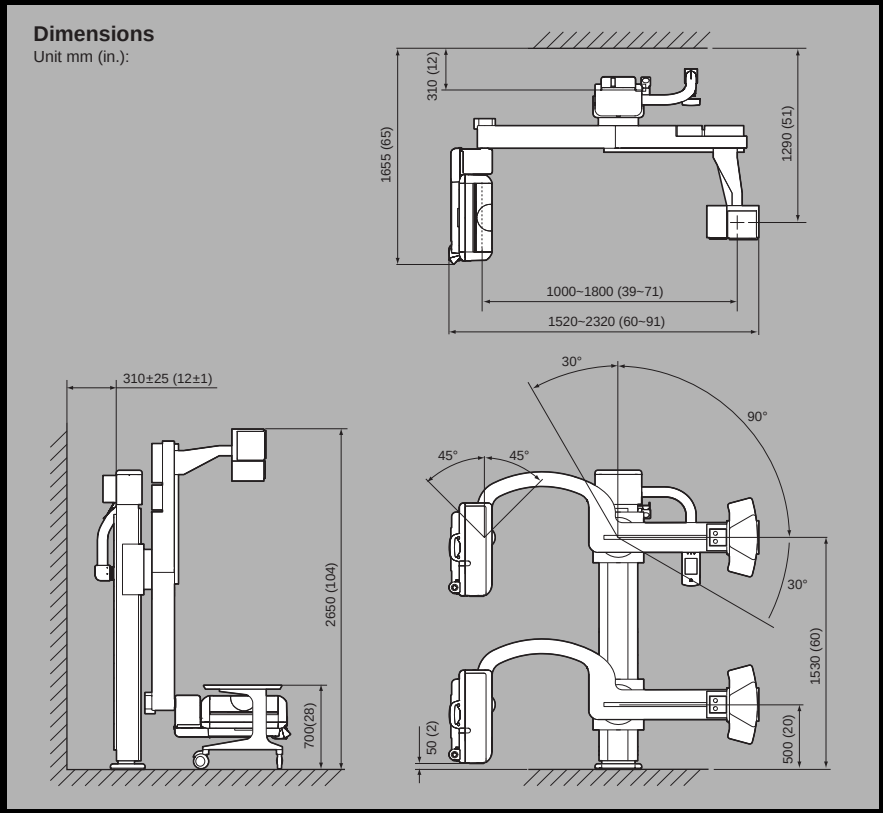
Environment Condition

• Temperature	15 – 30 degree
• Humidity	30 – 75%Rh
• Atmospheric pressure	700 – 1060 hPa

Optional Accessories

• Mobile table	Carbon fiber table (Patient Capacity: 200 kg)
• Grid	10:1 or 8:1, 36 lines/cm, FID 100/140/180 cm
• Ion chamber (Model: ICX-127)	3 field
• Infrared remote controller	
• Ceiling support	
• Cassette holder	
• Long view cassette holder	
• QC phantom holder	

Dimensions
Unit mm (in.):



Specifications are subject to change without notice.
All brand names or trademarks are the property of their respective owners.
All products require the regulatory approval of the importing country.
For details on their availability, contact our local representative.

FUJIFILM DR VELOCITY Unity fp (Model: CR-IR372) CE 0123

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http://www.fujifilm.com/products/medical/

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