

FUJIFILM

VELOCITY^{NEW}U_{fp}

An advanced DR offering high-quality images with less X-ray exposure

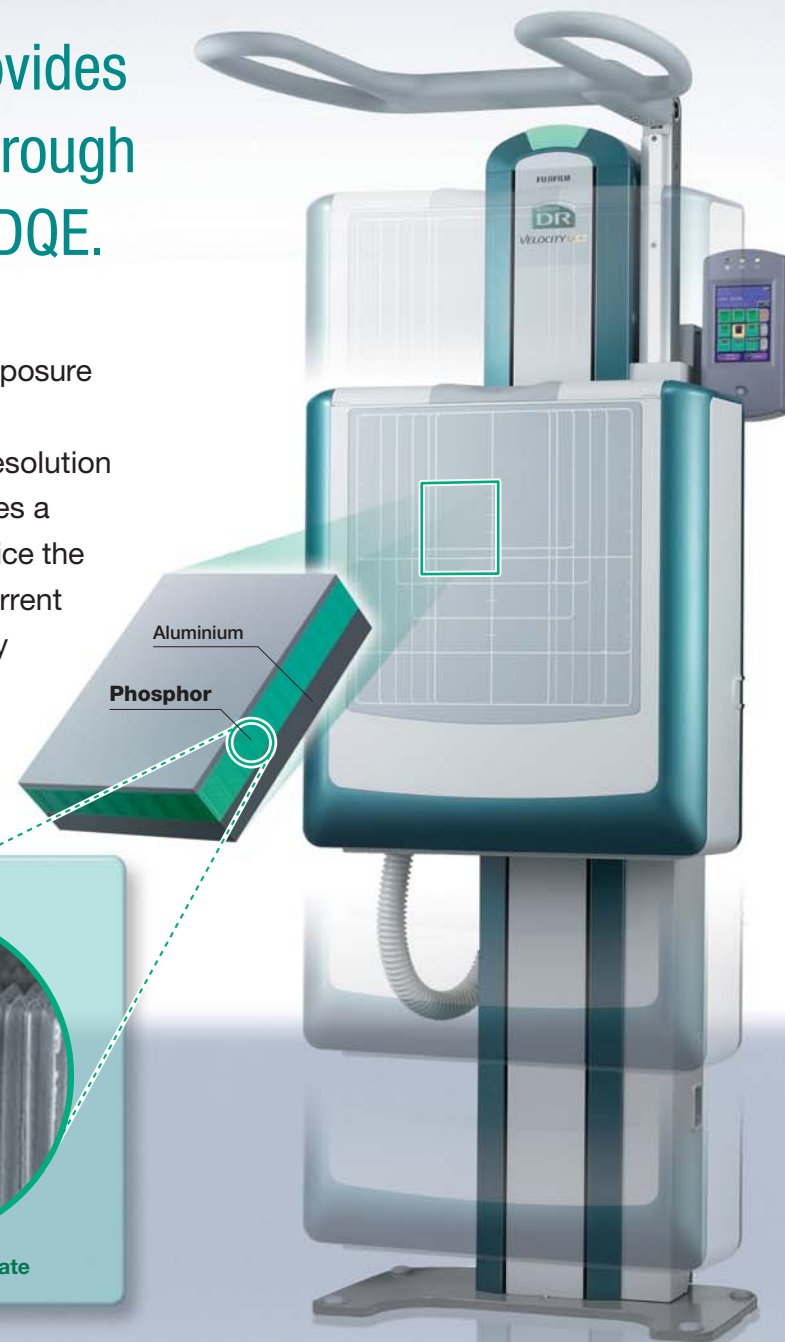
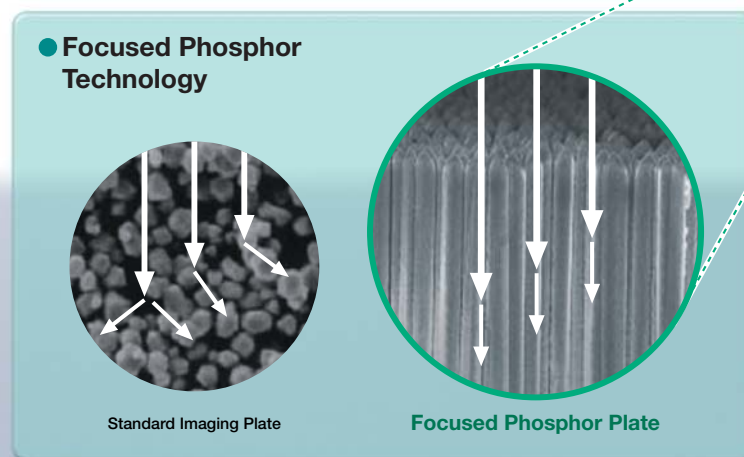


FUJIFILM DIGITAL RADIOGRAPHY SYSTEM



The new FUJIFILM DR provides premium image quality through optimized resolution and DQE.

In radiographic examinations, reducing the exposure dose is an important challenge. The FUJIFILM DR VELOCITY Ufp is a high-resolution upright digital radiography system, which uses a columnar crystal X-ray detector achieving twice the DQE (Detective Quantum Efficiency) of the current FUJIFILM devices thus providing significantly improved image quality.



VELOCITY Ufp

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 Ufp offers unparalleled image quality in digital radiology.

Focused Phosphor Technology

It is essential to increase the X-ray exposure efficiency to improve image quality.

To increase the efficiency, the Imaging Plate X-ray absorption has to be improved. To improve the Imaging Plate absorption, the phosphor layer thickness needs to be appropriately increased.

In practice, the Imaging Plate efficiency cannot be improved by merely increasing the phosphor layer thickness for the following reasons:

- (1) sufficient stimulation light cannot penetrate deep into the phosphor layer because each of the phosphor particles in the phosphor layer acts as a light scattering medium, and
- (2) photo stimulated luminescence (PSL), generated deep inside the phosphor layer and containing X-ray information, cannot be extracted through the IP surface.

The new Focused Phosphor Plate not only increased in thickness but also utilizes a columnar particle structure which acts as a light guide, allowing the stimulation light to reach deep inside the phosphor layer. The PSL generated is then successfully extracted through 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 that are incorporated in the FUJIFILM DR VELOCITY Ufp. 

Software Technology Examples

FNC

Flexible Noise Control

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

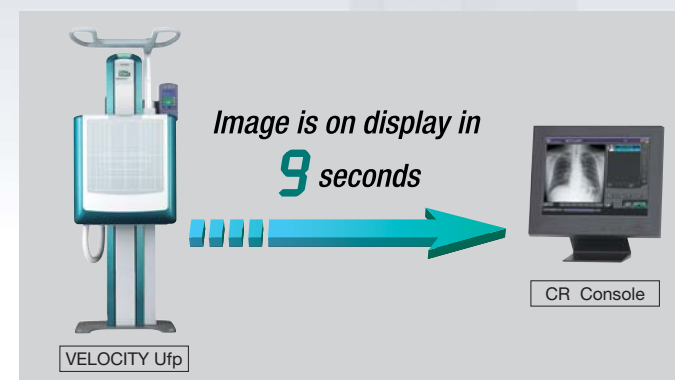
MFP

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.

Unprecedented Speed

Processing up to 240 IP/hour at 10-pixel resolution, the FUJIFILM DR VELOCITY Ufp 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. Technologists do not waste valuable time trying to make the image look acceptable before transmitting them to PACS.



User-Friendly Interface

A convenient verification display can be installed on either side of the detector unit, clearly indicating patient name for quick and easy confirmation to minimized patient-data errors.



Additional features

- Enables the imaging of the lower extremities by lowering the detector-unit to a height of up to 47cm from the floor (to the center point).
- Compact design with an entire unit depth of only 45cm.
- Patient hand grips at the top and side of the unit for added safety.

*Top and side grip handles are optional.

FUJIFILM DR VELOCITY Ufp SPECIFICATIONS

Standard Components (some items are sold separately):

- FUJIFILM DR VELOCITY Ufp Upright Image Reader (Model: CR-IR366)
- AC Power Cord
- Grid: 12:1, 10:1, 8:1 (density 36 lines/cm, focal distance 140cm or 180cm)

Other System Components:

- CR Console Plus/Lite (sold separately)
- Image Recorder : DRYPIX 2000/4000/7000

Reading Sizes (reference):

17" x 17" (43 x 43cm), 14" x 17" (35 x 43cm), 17" x 14" (43 x 35cm),
14" x 14" (35 x 35cm), 10" x 12" (25 x 30cm), 12" x 10" (30 x 25cm),
8" x 10" (20 x 25cm), 10" x 8" (25 x 20cm), 18 x 43cm.

Processing Capacity (in the high-pixel density two-image output format):

When connected to DRYPIX 7000/CR Console Plus

Approx. 240 IPs/hour*

* When operating environment is 25°C, and maximum x-ray amount for the device IP is 12mR.
This figure will vary when temperature and x-ray amount differ.

Time Interval Required Between Exposures:

10 seconds (varies depending on condition)

Time to print on DRYPIX 7000 (14" x 17"):

80 seconds

Time To Display On CR Console:

9 seconds

Reading Gray Scale:

12 bits

Network:

10 Base T/100 Base T

Dimensions (W x D x H):

- Upright Image Reader: 645 x 450 x 1835mm (25" x 18" x 72")
- Control Unit: 260 x 550 x 470mm (10" x 22" x 19")

Weight:

Upright Image Reader: 220kg (485lbs.)

Control Unit: 21kg (46lbs.)

Power Supply Conditions:

Single phase 50/60Hz: AC200/220/230/240V ±10%
5.0/4.5/4.3/4.1A

Environmental Conditions:

- Operating Conditions:
Temperature: 15(at 40%RH) – 30°C(at 80%RH)
Humidity: 40(at 15°C) – 80%RH(at 30°C) [No dew condensation]
Atmospheric pressure: 650 – 1060 hPa
- Non-operating Conditions:
Temperature: 0 – 45°C
Humidity: 10 – 90%RH [No dew condensation]
Atmospheric pressure: 650 – 1060hPa

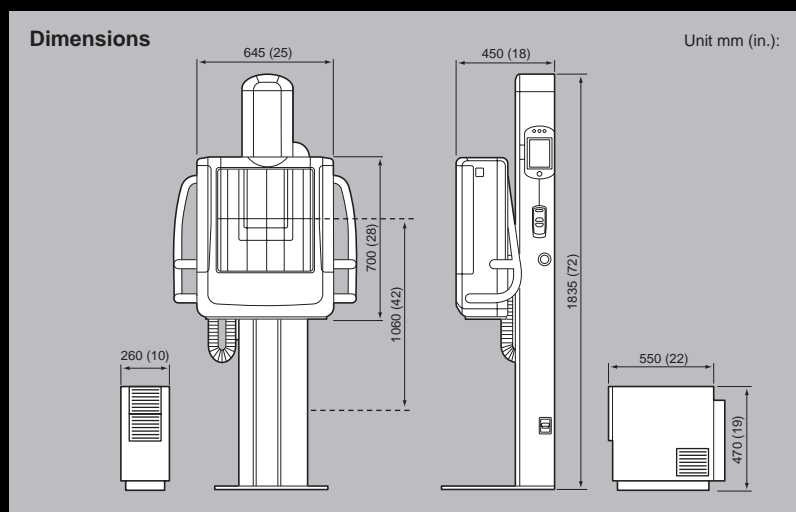
Note: Keep the temperature at 30°C and humidity less than 80%RH
if the non-operating period is less than a week and 30°C and
less than 60%RH if over a week.

Image Reading

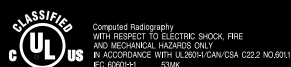
Reading Sampling Rate

Reading Size		12" x 10"	10" x 8"	17" x 17"	14" x 17"	17" x 14"	14" x 14"	10" x 12"	8" x 10"	18 x 43cm
Effective Reading Size (mm)		301.5 x 250.5	251 x 200	428 x 428	352 x 428	428 x 352	352 x 352	250.5 x 301.5	200 x 251	177 x 428
Standard Density	Scanning Density (pixels/mm)	6.7	10	5	5	5	5	6.7	10	5
	Pixel Size	2010 x 1670	2510 x 2000	2140 x 2140	1760 x 2140	2140 x 1760	1760 x 1760	1670 x 2010	2000 x 2510	885 x 2140
High-pixel Density	Scanning Density (pixels/mm)	10	10	10	10	10	10	10	10	10
	Pixel Size	3015 x 2505	2510 x 2000	4280 x 4280	3520 x 4280	4280 x 3520	3520 x 3520	2505 x 3015	2000 x 2510	1770 x 4280

Images are read at the rate of 12pixels/mm and image densities listed in the table are applied respectively for each image size when output from the CR Console.



Specifications and PC requirements are subject to change without notice.
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For details on their availability, contact our local representative.



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