**FUJIFILM DR VELOCITY Tfp SPECIFICATIONS**

**Standard Components (some items are sold separately):**
- **FUJIFILM DR VELOCITY Tfp Table-type Image Reader (CR-IR370)**
- **AC-Power Cord**
- **Grid: 121, 101, 81 (density 36 lines/cm, focal distance 100cm)**

**Other System Components:**
- **CR Console (Plus is recommended)**
- **Image Reader: DRYPIX 2000/4000/7000**

**Reading Size (Reference):**
- 12 bit pixel
- 10 bit pixel

**Processing Capacity:**
- Approx. 150 IPs/hour

**Environmental Conditions:**
- Operating Conditions:
  - Temperature: 15°C – 30°C (at 40%RH)
  - Humidity: 40% – 65%RH (no dew condensation)
  - Atmospheric pressure: 860 – 1060 hPa
- Non-operating Conditions:
  - Temperature: 0°C – 45°C
  - Humidity: 10% – 90%RH (at 30°C, no dew condensation)
  - Atmospheric pressure: 650 – 1060 hPa

**Effective Reading Size (mm):**
- 18” x 8” (25.4cm x 20cm)
- 10” x 8” (20cm x 20cm)
- 12” x 10” (25cm x 25cm)
- 14” x 12” (35cm x 35cm)

**Input gray scale**
- 12 bit pixel
- 10 bit pixel

**Output gray scale**
- 12 bit pixel
- 10 bit pixel

**Image Reading**

1. **Reading gray scale**
2. **Output gray scale**
3. **Number of Pixels**
4. **Effective Reading Size (mm)**

**Specifications and PC requirements are subject to change without notice.**
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For details on their availability, contact our local representative.
FUJIFILM’s DR VELOCITY Tfp is a convenient supine-position digital radiography device that uses a columnar crystal X-ray detector attaining twice the DQE (Detective Quantum Efficiency) of current FUJIFILM products. Its significantly improved image quality provides the possibility of reducing X-ray dosage on patients.

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 Tfp offers unparalleled image quality in digital radiology.

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 Tfp 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 Tfp.

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.

Exposure Flexibility

The VELOCITY Tfp makes it possible to pull the exposure unit out from under the tabletop enabling exposure of upper and lower extremity bones that used to require the use of a cassette. Indicator lamps positioned on both sides of the table top for easy confirmation of X-ray and equipment condition can be checked from outside the X-ray exposure room for distinction of the unit’s readiness. The VELOCITY Tfp can handle sizes up to 17” x 17” (43 x 43cm) and provides support for horizontal exposures in 10” x 12” (25 x 30cm) and 8” x 10” (20 x 25cm) sizes.

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.
Specifications

**FUJIFILM DR VELOCITY Tfp SPECIFICATIONS**

**Table Top Size:** 2350mm x 810mm (80” x 32’’)

**Exposure Center:** 470mm (19”)

**Exposure Unit:** 761mm (30”)

**Controller Unit:** 2400mm (95”)

**Power Supply Unit:** 757mm (30”)

**Exposure Center:** 1050mm (41”)

**Effective Reading Size:** 4280mm x 4280mm (17” x 17”)

**Reading Size:** 17” x 17”

**Dimensions:**

- **Weight:** 471kg (1039lbs.)
- **CR Console/Plus/Lite:** 2140mm x 1760mm x 1470mm (84” x 69” x 58”)
- **Power Supply Unit:** 45kg (99lbs.)

**Non-operating Conditions:**

- Temperature: 8°C to 45°C
- Humidity: 10% to 95% (no dew condensation)

**Environmental Conditions:**

- Operating Conditions:
  - Temperature: 15°C (60°F) to 30°C (86°F)
  - Humidity: 45% to 80% (no dew condensation)
  - Atmospheric pressure: 650 – 1050hPa

- Power Supply Conditions:
  - Single phase 50/60Hz: AC200/220/230/240V

**Other System Components:**

- FUJIFILM DR VELOCITY Tfp Table-type Image Reader (CR-IR370)
- Grid: 12:1, 10:1, 8:1 (density 36 lines/cm, focal distance 100cm)
- Table Top Size: 2350mm x 810mm (93” x 32”)
- Maximum Stroke of the Table Top: 575mm (23”)
- Minimum Stroke of the Table Top: 235mm (9”)

**Operating Conditions:**

- **Radiographic Exposure:**
  - Lumbar Spine (Front/Lateral) 40%, Abdomen (Spine) 20%, Upper and Lower Extremity Bones 20%

- **Processing Capacity:**
  - Processing capacity varies depending on the maximum amount of X-ray exposure dose reaching the built-in IP inside VELOCITY Tfp.

- **Effective Reading Size (mm):**
  - 4280 x 4280

- **Number of Pixels:**
  - 2140 x 1050

- **Power Supply Unit:**
  - DC105V 10A/9.1A/8.7A/8.4A

**Reading Specifications:**

- Reading gray scale: 12 bit/pixel
- Output gray scale: 10 bit/pixel

**Image Reading:**

1. Reading gray scale: 12 bit/pixel
2. Output gray scale: 10 bit/pixel

All images are read at the rate of 12 bit/pixel and image densities listed in the table below are applied respectively for each image size when output from the CR Console.

- **Image Reading:**
  - Reading size: 17” x 17”

- **Number of Pixels:**
  - 2140 x 2140

- **Spatial Resolution:**
  - 5.2 (at 15°C, 40%RH) – 8.7 (at 30°C, 80%RH)

**Image Reader:**

- **Table-Type Image Reader:** 471kg (1039lbs.)
- **Power Supply Unit:** 45kg (99lbs.)
- **Controller Unit:** 21kg (46lbs.)
- **Power Supply Unit:** 45kg (99lbs.)

**Image Recorder:**

- FujiFilm DRYPIX 2000/4000/7000

- **Control Unit:** 21kg (46lbs.)

**Network:**

- Single phase 50/60Hz: AC200/220/230/240V

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