DynamIx HR/Series 5 reader specifications

<table>
<thead>
<tr>
<th>DynamIx HR</th>
<th>DynamIx Series 5</th>
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</thead>
<tbody>
<tr>
<td>Compatible IP</td>
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</tr>
<tr>
<td>ST-VI: 35.4 x 43.0 cm (14” x 17”), 25.2 x 30.3 cm (10” x 12”), 24 x 30 cm, 20.1 x 25.2 cm (8” x 10”), 18 x 24 cm, 15 x 30 cm</td>
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<td>UR-1: 35.4 x 43.0 cm (14” x 17”), 24 x 30 cm, 18 x 24 cm</td>
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Compatible IP cassette
- Type CC: 35.4 x 43.0 cm (14” x 17”), 25.2 x 30.3 cm (10” x 12”), 24 x 30 cm, 20.1 x 25.2 cm (8” x 10”), 18 x 24 cm, 15 x 30 cm
- Type UR: 35.4 x 43.0 cm (14” x 17”), 24 x 30 cm, 18 x 24 cm

Reading resolution
- UR-1: 50µm
- ST-VI: 35.4 x 43.0 cm (14” x 17”), Approx. 93 sec.
- 24 x 30 cm, Approx. 64 sec.
- 18 x 24 cm, Approx. 56 sec.

Cycle time for IP feeding/loading
- UR-1:
  - 35.4 x 43.0 cm (14” x 17”): Approx. 56 sec.
  - 25.2 x 30.3 cm (10” x 12”): Approx. 50 sec.
  - 24 x 30 cm, Approx. 49 sec.
  - 18 x 24 cm, Approx. 40 sec.
  - 15 x 30 cm, Approx. 49 sec.

- ST-VI:
  - 35.4 x 43.0 cm (14” x 17”): Approx. 58 sec.
  - 25.2 x 30.3 cm (10” x 12”): Approx. 50 sec.
  - 24 x 30 cm, Approx. 49 sec.
  - 18 x 24 cm, Approx. 40 sec.
  - 15 x 30 cm, Approx. 49 sec.

Reading gray scale: 12 bits/level

Dimensions (W x D x H)
- ST-VI: 35.4 x 43.0 cm (14” x 17”), 25.2 x 30.3 cm (10” x 12”), 24 x 30 cm, 20.1 x 25.2 cm (8” x 10”), 18 x 24 cm, 15 x 30 cm
- Type CC: 35.4 x 43.0 cm (14” x 17”), 25.2 x 30.3 cm (10” x 12”), 24 x 30 cm, 20.1 x 25.2 cm (8” x 10”), 18 x 24 cm, 15 x 30 cm
- Type UR: 35.4 x 43.0 cm (14” x 17”), 24 x 30 cm, 18 x 24 cm

Weight: 99 kg

Power supply: 120/240VAC, 50/60Hz, 5A

Operating conditions: 15-30°C, 40-80%RH (No dew condensation)

- *24 x 30 cm Type UR cassette requires cassette adaptor when reading

DynaView Workstation V5.0 functions

(1) Automatic image enhancement (brightness, contrast, and edge-enhancement)
(2) Manual brightness/contrast change
(3) Magnification display of whole image
(4) Magnification display of region of interest (ROI)
(5) Measurement of length, angle, and SNR (ASTM Standard E2446-05 compliant)
(6) Estimation of thickness
(7) Input of annotation (text, arrows)
(8) Import and export of images from/to removable media

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

Seeing the past, present, or future? See it all with the high resolution images of DynamIx.

FCR's proprietary image processing technology provides you with enhanced capacity to confirm even the minute interior structures of inspection objects with its new features.

- Proprietary Imaging Plate (IP) FCR Systems

Fujifilm, the absolute pioneer in digitized medical X-ray imaging, advanced into the industrial inspection field in 1989. Through the building up of proprietary technologies such as evidenced by our imaging plate (IP), a total alternative to X-ray film, we have realized evermore efficiency and quality of inspection work with our high clarity images now through DynamIx — an X-ray inspection system product lineup that provides totally reduced shooting time, eliminates the use of chemicals in developing, and the convenience of reusable IPs where stored data can be erased. All to name a few as the alternative solution to conventional X-ray filming.

- DISTINCT
  High resolution

- DIGITAL
  Highly technological

- ECOLOGICAL
  Environment friendly

- Dynamic Range
  Wide dynamic range resulting in wide allowance of X-ray exposure value

- Exposure Data Recognizer
  Automatic image optimization with “EDR”

- High Resolution Reading
  High precision 50µm reading (Dynamix HR)

- High Resolution Monitor
  High resolution and high contrast

- IP Sizes
  35.4 cm x 43.0 cm

- Easy Image Processing
  Adjust images to optimal state according to inspection purpose

- Image Transmission
  Transmit and share digital images with PCs

- Storage Media Versatility
  Allows compact storage of high quality images and quick data retrieval

- Minimized X-ray Exposure
  Maximized image quality with minimum exposure compared to X-ray film

- Totally Dry
  No more darkroom, processing chemicals or water

- Totally Reusable
  Images are reusable with IP, providing the best economical solution

- High precision 12-bit 50µm reading allows inspection of minute image details.
From X-ray exposure to data management, the digitalized workflow brings high productivity.

Having combined a small footprint with high-performance, you can obtain high precision 50µm reading with simple operations.

**IP Reader Units (reader/console)**

- **DynamIx HR** (50µm/100µm)
  - Small footprint
  - Former-type reader HR/Series 5 Reader

- **DynamIx Series 5** (100µm)
  - Small footprint
  - Former-type reader HR/Series 5 Reader

**DynaView Workstation V5.0**

- **Image Display and File Management**
  - DynamIx HR
  - Console
  - IP CASSETTE
    - UR-1: Packing Unit 1 each
      - Standard Resolution Type (100 micron compatible)
      - Size: 35.4 x 43.0 cm (14” x 17”)
      - 24 x 30 cm
      - 18 x 24 cm
    - ST-VI: Packing Unit 1 each
      - Ultra-High Resolution Type (50 micron compatible)

- **Input exposure information**
  - Operate the reader console (select from the menu)
  - Read the IP

- **Display image**
  - Start inspection

- **Export with versatile printers**
  - Print images on various types of printers.

- **X-RAY EXPOSURE**
  - Expose target to IP

- **READING**
  - Input exposure information (with keyboard)
  - Operate the reader console (select from the menu)
  - Read the IP

- **INSPECTION**
  - Display image
  - Start inspection

- **ACCESSORIES**
  - Fujifilm Imaging Plate Industrial
    - Ultra-High Resolution Type (50 micron compatible)
    - ST-VI: Packing Unit 1 each
      - Size: 35.4 x 43.0 cm (14” x 17”)
      - 25.2 x 30.3 cm (10” x 12”)
      - 24 x 30 cm
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- **Media Storage**
  - Store high quality images on DVD with speedy file search functionality.

- **Output with versatile printers**
  - Print images on various types of printers.
See what couldn’t be seen with the X-ray inspection solution that expands capabilities.

Compared with time-consuming conventional analog film processing, the fully-digitalized FCR brings a highly technological and quick solution to the various needs of modern day X-ray inspection with its optimal high resolution images and environment friendly considerations.

### Issues Inherent to X-ray Inspection

1. **Aluminum Castings**
   - Capturing automobile parts
   - Radiographic inspection of castings with varying dimensions requires intricate X-ray voltage adjustment by each component part and also requires the separate capture of the various thin and thick proportions of the target by taking multiple exposure shots or by either using composite film — but that’s with conventional X-ray film.

2. **High Density Circuit Boards**
   - Magnification with the micro-focus device
   - Particularly with conventional radiograph inspection, it takes more time than anticipated to inspect large targets due to minimal range capture with a single exposure and the inherent tendency of the surrounding areas being generally more unsharp than the central area.

3. **Plant Pipes**
   - Take shots with the insulation material intact
   - With plant facilities and piping, rail and road concrete structures — field inspection is the name of the game, requiring the immediate transportability of equipment and the capacity to readily inspect curved surfaces. In particular with pipe inspection, it has always been a work burden in stopping off and re-applying insulation materials and a cause of concern with the consequential negative effects to the human body and our environment.

4. **Aircraft Jet Engine Turbine Blades**
   - Special alloy parts requiring high-accuracy inspection
   - Even the slightest defect would be disastrous with turbines which are completely designed for high heat resistance and high-efficiency, but there are defects that are difficult to discover with 100μm digital reading and retaining finer image quality has been an issue.

5. **Image Transmission**
   - Informed analysis and evaluation
   - Both the inspection of product components under development and the inspection of products in the initial production phase require speedy analysis of the original images on an informed basis between responsible company departments, but they are in different locations.

### FCR Solution 1

**High resolution imaging of dimensional castings — and with a single shot.**

IP does it all with its high resolution and wide dynamic range imaging, and with just one exposure shot. Edge portions are without bluish, adding on to inspection accuracy and efficiency.

### FCR Solution 2

**A clear-cut corner to corner view of even large materials.**

With FCR’s laser reading technology, obtain a distinct image from corner to corner even using the largest IP size of 35.4 × 43.8 cm; making it possible to inspect large materials or large and highly complex electronic parts to the ultimate interior with fair ease.

### FCR Solution 3

**Being light and bearing total flexibility.**

IP serves the best in onsite X-raying of pipes and without taking off that insulation material.

### FCR Solution 4

**High resolution reading and advanced image processing precisely capture even minute defects.**

The FCR inspection scope has been expanded with high resolution of 50μm from our proprietary imaging processing engine which allows for enhanced visibility of precision parts requiring high inspection accuracy.

### FCR Solution 5

**Share image information between factories, research labs, and distant company locations.**

FCR provides enhanced inspection accuracy through the sharing of informed analysis and evaluations even among distant company departments by transmitting images through the Internet.
## DynamIx HR/Series 5 reader specifications

### DynamIx HR

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<tr>
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<th>Specifications</th>
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<td><strong>Dimensions</strong></td>
<td>35.6 x 43.9 cm (14&quot; x 17&quot;)</td>
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<tr>
<td><strong>Reading resolution</strong></td>
<td>U811 100µm, U544 100µm</td>
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<tr>
<td><strong>Cycle time for feeding/loading</strong></td>
<td>Approx. 83 sec, 24 x 30 cm Approx. 66 sec, 18 x 24 cm</td>
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<tr>
<td><strong>Gray scale</strong></td>
<td>12-bit/pixel</td>
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<tr>
<td><strong>Dimensions (WxDxH)</strong></td>
<td>530 x 390 x 410 mm</td>
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<tr>
<td><strong>Weight</strong></td>
<td>96 kg</td>
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<tr>
<td><strong>Power supply</strong></td>
<td>120V/200-240VAC, 50/60Hz, 6A</td>
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<td><strong>Operating conditions</strong></td>
<td>15°C/70°F, 40-80%RH (no dust contamination)</td>
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<td>Approx. 64 sec, 24 x 30 cm Approx. 50 sec, 18 x 24 cm</td>
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