A Wide Range of Features and Options Accommodate Numerous Examination Scenarios

FLEXAVISION is a full-digital R/F system equipped with an extensive range of functions. It was designed to respond easily and flexibly to a wide range of examination requirements, such as examinations of the gastrointestinal tract, chest, and abdomen, as well as specialized examinations required during urology and rehabilitation. This new offering from Shimadzu incorporates the user-friendliness and flexibility needed for our world’s ageing societies.
High-definition, full-digital images from the 1-megapixel CCD camera allow monitoring in both radiography and fluoroscopy modes.

Equipped with a high-definition 1-megapixel CCD camera, the 12-inch (30 cm) image intensifier provides a large field of view. In fluoroscopy and radiography, real-time acquisition of high-definition, full-digital images allows immediate viewing on a monitor.

Digital serial radiography at up to 3 fps (7.5 fps: option) ensures precise image timing in regions such as the esophagus, where contrast medium flow is difficult to capture.

Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-RAM, DVD-R or CD-R can be used as the external storage medium, and data can be saved in DICOM format.

This system can also perform general radiography using large-field 35 x 43 cm cassettes. The use of CR cassettes together with a digital CCD allows the full-digital observation of images.
Our imaging chain extension function allows you to easily secure the area required for a variety of examinations. For example, with VF examinations of patients in wheelchairs, this function eliminates the need to transfer the patient to the table and then raise the table to perform imaging, reducing the operator’s work and patient’s anxiety. This function is also effective for low-magnification standard radiography of the chest and abdomen.

Wide coverage ensures a large examination area
Examination range: 133 cm
(when using 35 × 43 cm cassette)

Allows control of contrast media flow and performance of orthopedic examinations
Table tilting range: -30° to 90°
(Trendelenburg position) (vertical position)

Allows capturing the center of shoulder-joint in orthopedic examination
Lateral table movement: 22 cm

Ensures suitability for general radiography, orthopedic and enema examination
Oblique projection range: -30° to +30°

Shimadzu’s Unique Imaging Chain Extension Function*

X-ray Tube 180° Swing Unit
180° rotation of the X-ray tube/collimator easily and effectively accommodates chest examinations using a bucky stand.

Bedside Switches
Tabletop and imaging chain operation switches are provided on the bedside to allow examinations and positioning while caring for the patient.
Gastrointestinal Examinations

Easily Control Contrast Medium Flow in Upper Gastrointestinal Tract Examinations
Supports radiographic esophageal examinations in the vertical position and Trendelenburg position up to -30˚.

Sub-divisional Digital Radiography
2-frame and 4-frame Digital Radiography is efficient for screening.

Easily Control Contrast Medium Flow in Upper Gastrointestinal Tract Examinations

Accurate Timing of Esophagus Radiography
Digital serial radiography at 3 fps (up to 7.5 fps with option) allows precise timing of esophagus examination.

Accuracy in Tracking Esophagus Radiography

Endoscopic Examination
Easy Access from Tableside
The simple space-saving design of this system makes it easy to perform endoscopic procedures from the tableside. Distance from the bottom of the table to the observation field is 35 cm (using a 12-inch image intensifier), ensuring endoscope positions in fluoroscopic images are captured precisely.

Endoscopic Examination

Orthopedic Examinations

Allows observation of Dynamic Images during Fluoroscopy
Fluoroscopy allows the observation of moving joints in real-time and with the table in vertical position, under a gravity load.

Wide-Range Coverage
Adding an auxiliary tabletop* enables radiography over a large range, from the ankles to the shoulder joints. (*Option)

Optimum Images
High-density resolution and multiple digital image-processing technologies produce optimum-quality images.

Orthopedic Examinations

Additional Examinations
Easy Access from the End of Table
Distance from the far end of the table to the observation field is 29 cm, allowing an easy approach when performing bronchial endoscopy.

Serial Radiography
Moving anatomy can be imaged at 3 fps (up to 7.5 fps with option) using Serial radiography in case of DIP.

Serial radiography 3fps

Endoscopic Examinations

Large Field of View in Digital Radiography
The 12 inch (30 cm) Image Intensifier provides a large examination area which is required in enema examinations.

Large Field of View in Digital Radiography

Angiography
High-speed, high-definition real-time DSA is available at 7.5 fps on a 1024 x 1024 matrix.

Angiography
1140x20

The design, manufacture, and assembly of all parts used in our FLEXAVISION system, including both the X-ray tube and image intensifier as well as the R/F table, DR, and X-ray generator, are performed in-house by Shimadzu. The system’s design reflects our consideration of how to match all related aspects, such as ease of use, reduced X-ray dose, and observation using high-quality images, with the actual examination environment.

Operation Console
FLEXAVISION’s compact console controls the R/F table and the X-ray generator, providing a comfortable operation environment for the operator. The console key layout is designed with the operator in mind, facilitating intuitive and fast operation.

Easy-to-Use Digital System
Our digital image processing unit system is based on highly reliable hardware. Simple operations allow processing of high-quality digital images at high speed. An easy-to-see graphical user interface (GUI) and mouse control provide an intuitive operating environment.

Parallel Processing Improves Work Efficiency
Even during fluoroscopy or radiography, images can be transferred to a viewer or laser imager. The ability to execute processes independently reduces the time spent waiting for completion of non-examination processes and improves overall work efficiency.

Automatic Image Transfer
This system supports automatic image transfer to DICOM viewers, servers and laser imagers. This function is achieved in the background, so it will improve the throughput.

70% Overall Dose Reduction
The importance of considering x-ray dose increases as the types of examinations performed using X-ray equipment expand. While maintaining stable image quality, the FLEXAVISION system makes it possible to reduce overall X-ray dose as much as 70%.

Low-Dose Pulsed Fluoroscopy
Three types of pulse rates can be selected of 15, 7.5, and 3.75 fps. High-quality images can be observed with less dose to the patient, even during interventional procedures requiring long periods of fluoroscopy.

Beam-Hardening Filter
A beam-hardening filter precisely removes soft X-rays that do not contribute to images. This reduces X-ray dose while maintaining high image quality.

“Last Image Hold” Function
Last Image Hold function (keep display of last image on the monitor after fluoroscopy) can reduce unnecessary exposure.

User-Friendly System Design

![User-Friendly System Design](image)

![Operation Console](image)

![Easy-to-Use Digital System](image)

![Parallel Processing Improves Work Efficiency](image)

![Automatic Image Transfer](image)

![Low-Dose Pulsed Fluoroscopy](image)

![Beam-Hardening Filter](image)

![“Last Image Hold” Function](image)
Digitization for Improved Work Efficiency

With FLEXAVISION, image digitization streamlines tasks involving the observation, storage, and query of images, helping to increase work efficiency.

Real-Time Image Storage in High-Capacity HD

Incorporating a high-capacity hard disk, FLEXAVISION can directly store up to 15,000 images providing you with peace of mind during examinations requiring large storage capacity.

Diagnosis on Monitor

When acquired images are stored in the hard disk, they are also displayed in real time on the monitor. This allows immediate confirmation of images that have been captured during medical examinations, improving examination efficiency.

Media Storage

Data can be stored on DVD-RAM, DVD-R or CD-R discs in DICOM-compliant format. This allows offline observation of images without conversion using a DICOM-compliant medical image observation viewer or server.

Compatibility with DICOM Networks

FLEXAVISION supports DICOM 3.0, the globally recognized standard for medical imaging and communications, including storage, MWM, and print.

Support for DICOM MWM is also available as an option. This enables the online transfer of patient information from a HIS/RIS.

DICOM Print

With DICOM Print as a standard feature, you can easily connect to a laser imager.

Exports Image Data in Multimedia Formats

All image files can be written in JPEG or BMP format to shared folders.
### SPECIFICATIONS

#### R/F Table

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>100 V to 400 V</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>25°C to 35°C</td>
</tr>
<tr>
<td>Material</td>
<td>Stainless steel</td>
</tr>
</tbody>
</table>

#### X-ray Tube

- **Tube Voltages**:
  - 100 kV, 500 mA
  - 125 kV, 630 mA
  - 150 kV, 500 mA

- **Rated Power**:
  - 50 kW
  - 80 kW

- **Control Cabinet**:
  - Remote control
  - Digital processor

#### Metal Image Intensifier (Representative Values)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube voltages</td>
<td>100 kV to 150 kV</td>
</tr>
<tr>
<td>Tube current</td>
<td>300 mA to 500 mA</td>
</tr>
<tr>
<td>Tube temperature</td>
<td>25°C to 30°C</td>
</tr>
</tbody>
</table>

#### Digital Processor

- **Processor Type**:
  - Single-phase 200/220/240 V, 1 kVA

- **Usable Power Supply**:
  - Three-phase 200/220/240 V

- **Usable Power Supply Requirements**:
  - Single-phase 200/220/240 V, 1 kVA

#### Installation Conditions

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Capacity</td>
<td>100 A max.</td>
</tr>
<tr>
<td>Cooling Capacity</td>
<td>100 A min.</td>
</tr>
<tr>
<td>Operating Weight</td>
<td>1000 kg</td>
</tr>
</tbody>
</table>

#### System Power Supply Requirements (Power for the R/F table is provided from the high-voltage X-ray generator)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Power Output</td>
<td>1000 kVA</td>
</tr>
<tr>
<td>Rated Current</td>
<td>1000 A</td>
</tr>
<tr>
<td>Rated Voltage</td>
<td>200/220/240 V</td>
</tr>
</tbody>
</table>

#### A Variety of Options for Supporting Examinations

- **Gastrointestinal / General Radiography Unit**
  - X-ray tube 100 kV unit
  - X-ray tube 200 kV unit

- **Orthopaedic Unit**
  - X-ray tube 100 kV unit
  - X-ray tube 200 kV unit

- **Network-Related Options**
  - DICOM storage
  - DICOM MDM

- **Other Options**
  - Local control
  - Footswitch

#### Dimension

![Dimensions Diagram](attachment:dimensions_diagram.png)

- **Units**: mm

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*Some options cannot be combined. Consult separately for details.*

1. Indicates dimension without table elevation function.
2. Indicates dimension without table elevation function, oblique projection with and chest radiography option.