

FLEXAVISION FD package

Remote Controlled R/F System
Full digital System



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Shimadzu Corporation

Headquarters
 1, Nishinokyo-Kuwabara-cho, Nakagyo-ku, Kyoto 604-8511, Japan
<http://www.shimadzu.com>



Shimadzu Corporation Medical Systems Group has been certified by TÜV Rheinland as a manufacturer of medical equipment and systems in compliance with ISO9001:2008 Quality Management Systems and ISO13485:2003 Medical Equipment Quality Management Systems.

Remarks:

- Every value in this catalogue is a standard value, and it may vary a little from the actual at each site.
- The appearances and specifications are subject to change for reasons of improvement without notice.
- Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
- Before operating this system, you should first thoroughly review the Instruction Manual.

Remote Controlled R/F System

FLEXAVISION

Full digital system

FD Package

Highest Image Quality in Its Class
Comprehensive Full-Digital System

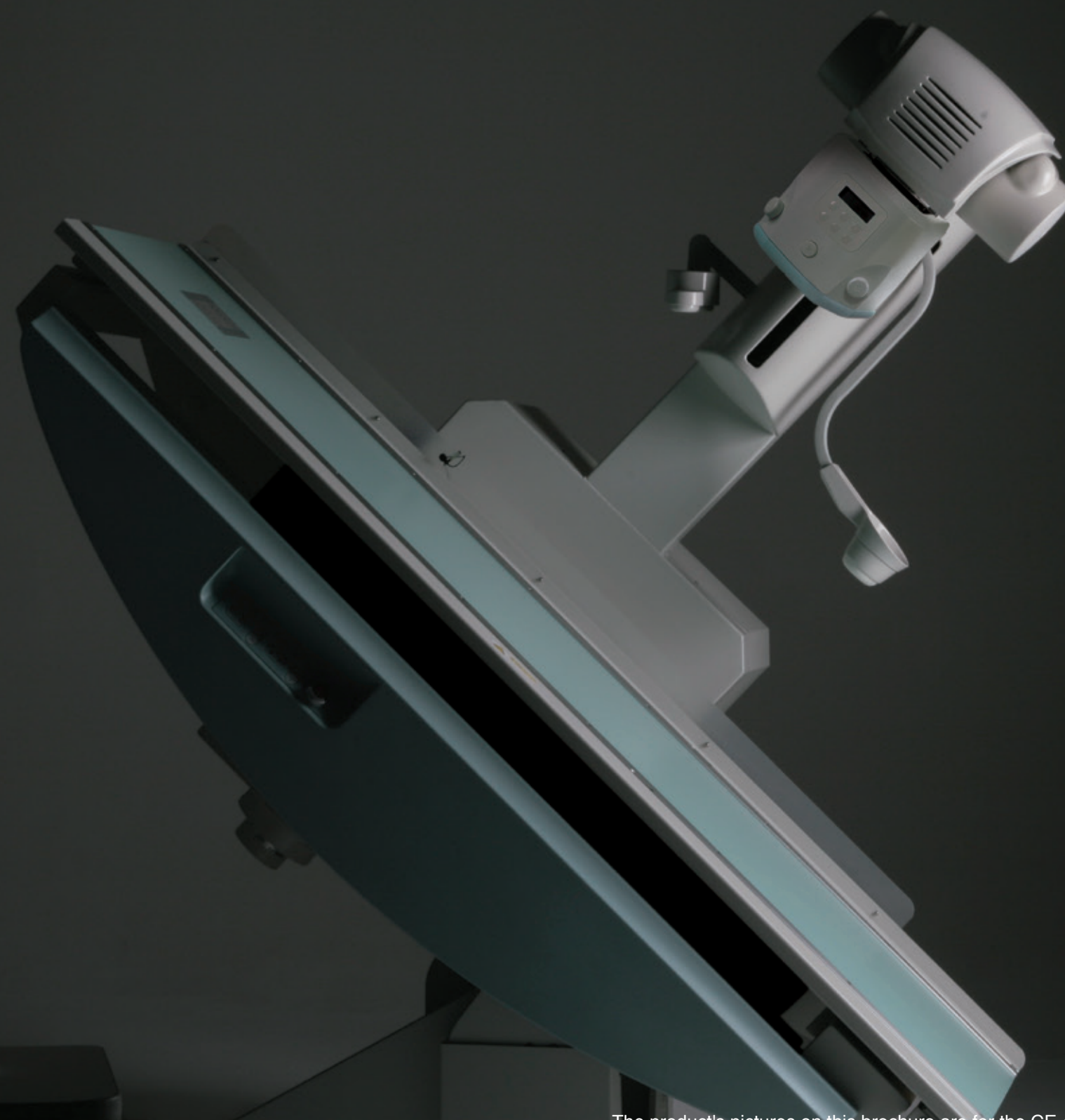
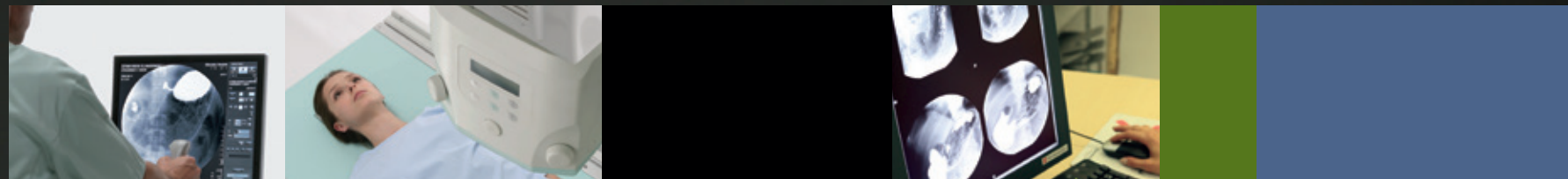
Striving for Exceptional Ease of Use
Table Elevation and Other Functions
for Accommodating a Wide Variety of Examinations

Designed Considering Patients
Low X-ray Dose

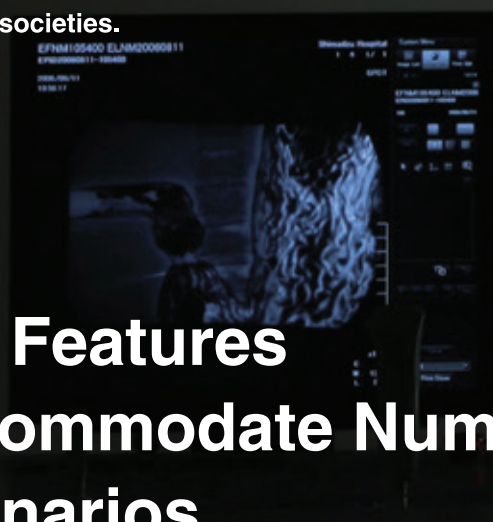
Supporting Hospital IT System Development
Digital Design Supports Improved Work Efficiency

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.



A Wide Range of Features and Options Accommodate Numerous Examination Scenarios



The product's pictures on this brochure are for the CE-compliant type system. Non-CE type system has a slightly-different appearance in some components such as collimator.



Highest Image Quality in Its Class

High-definition, full-digital images from the 1-megapixel CCD camera allow monitoring in both radiography and fluoroscopy modes.

1024 x 1024-Matrix,
12-bit (4096-Gradation),
Full-Digital Images

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.

High-definition 1-megapixel CCD camera
1024 x 1024 matrix, 12 bit

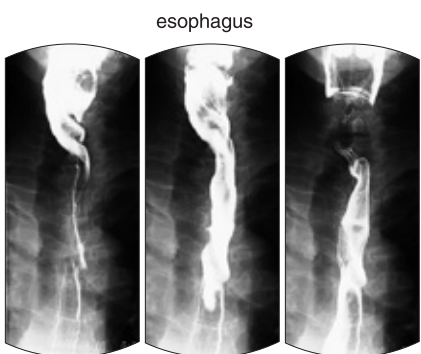
4096 gradations

High-definition, full-digital images

Real-time image acquisition

Serial Radiography

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.



High-Capacity Storage

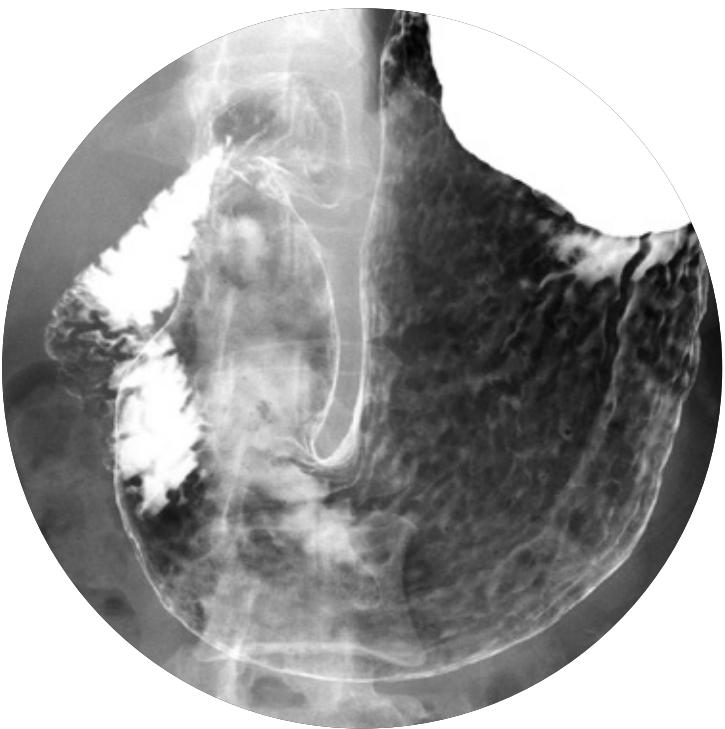
Acquired digital images are recorded in real time to a high-capacity, high-speed digital disk. Since data storage is possible without using low-capacity memory, serial imaging involving large amounts of data can be performed without having to worry about recording capacity. A DVD-RAM, DVD-R or CD-R can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

High-Capacity Hard Disk

up to 15,000 frames

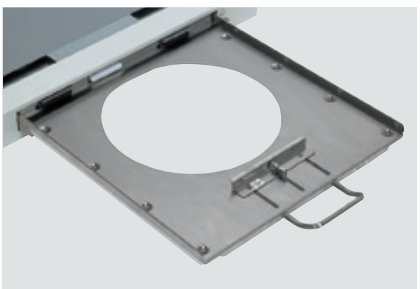
Long-Term Storage

DVD-RAM / DVD-R / CD-R



Cassette tray

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.





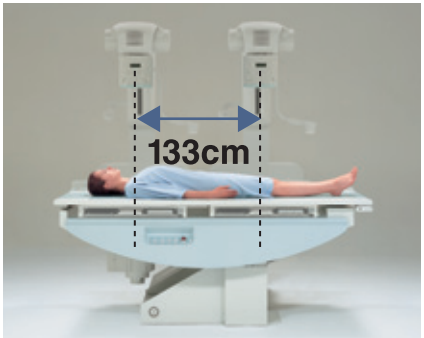
Striving for Exceptional Ease of Use

Allows a Wide Variety of Examination Approaches

FLEXAVISION incorporates a compact, fast-moving table that allows the operator to rapidly perform a variety of examinations, with a large coverage area that accommodates each type of examination range.

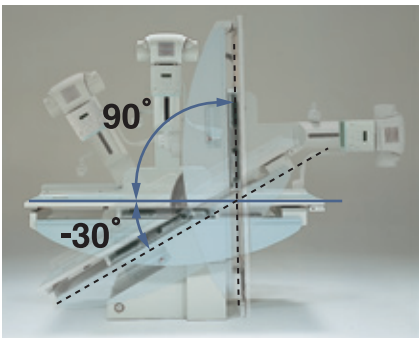
Vertical, longitudinal and oblique imaging chain movement, combined with table tilting and elevation let the operator easily perform approaches in a variety of procedures with a minimum of patient movement.

This coverage minimises patient movement in procedures ranging from gastrointestinal tract imaging, urinary tract imaging, orthopedic examinations and specialized nonvascular IVR.



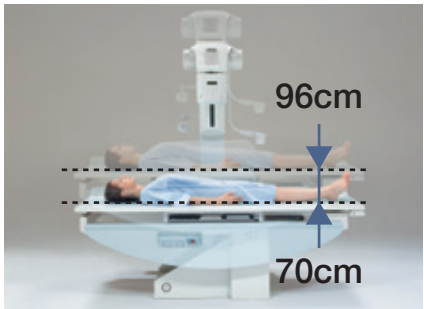
Wide coverage ensures a large examination area

Examination range: **133 cm**
(when using 35 x 43 cm cassette)



Allows control of contrast media flow and performance of orthopedic examinations

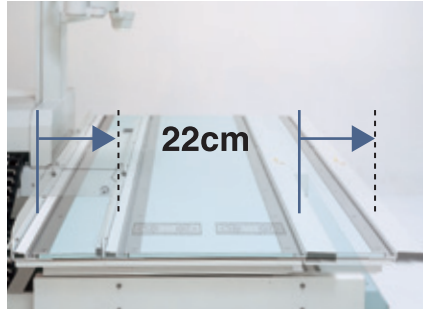
Table tilting range: **-30° to 90°**
(trendelenburg position) (vertical position)



(The system without table elevation is also available.)

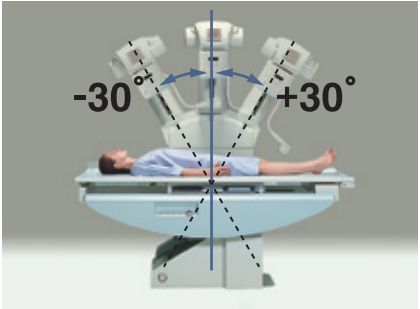
Table elevation range: **70cm to 96cm***

* Optional specification for CE-type.
69cm-95cm elevation option for Non-CE standard type.



Allows capturing the center of shoulder-joint in orthopedic examination

Lateral table movement: **22cm**

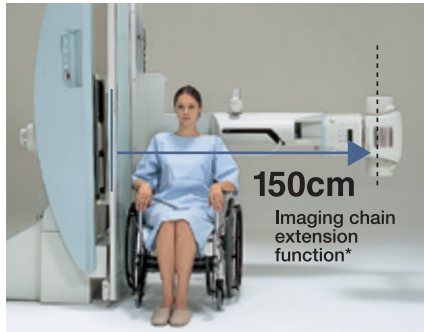


Ensures suitability for general radiography, orthopedic and enema examination

Oblique projection range: **-30° to +30°**

Shimadzu's Unique Imaging Chain Extension Function*

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.



* SID150cm cannot be selected in the non-CE type system with 1.8/2.0m imaging chain extension unit option.

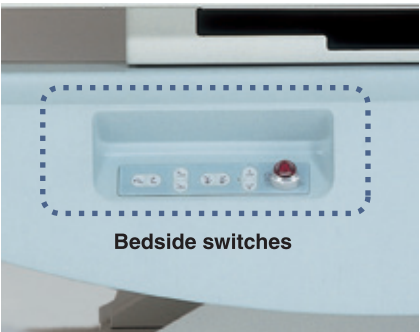
X-ray Tube 180° Swing Unit

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



Bedside Switches

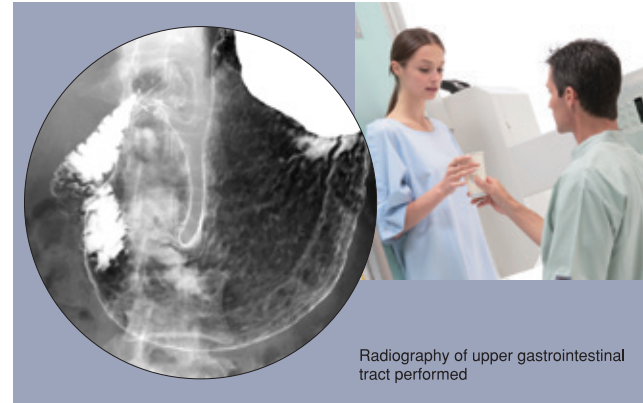
Tabletop and imaging chain operation switches are provided on the bedside to allow examinations and positioning while caring for the patient.



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°.



Accurate Timing of Esophagus Radiography

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



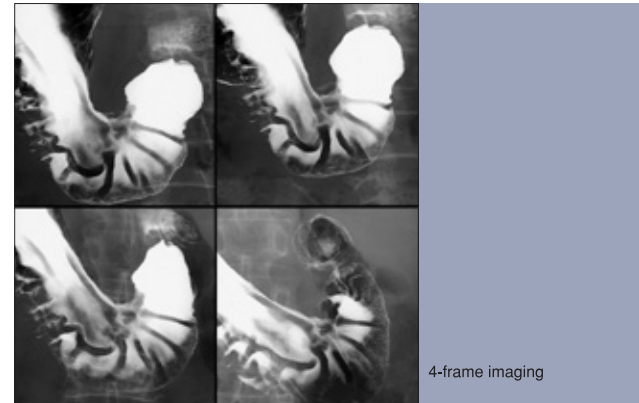
Endoscopic Examination

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.

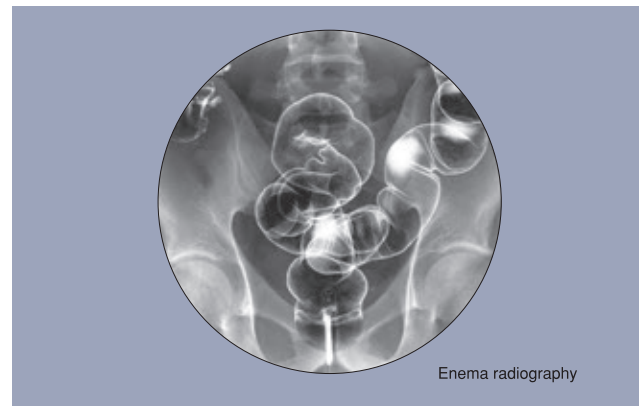
Sub-divisional Digital Radiography

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



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.



Orthopedic Examinations

Allows observation of Dynamic Images during Fluoroscopy

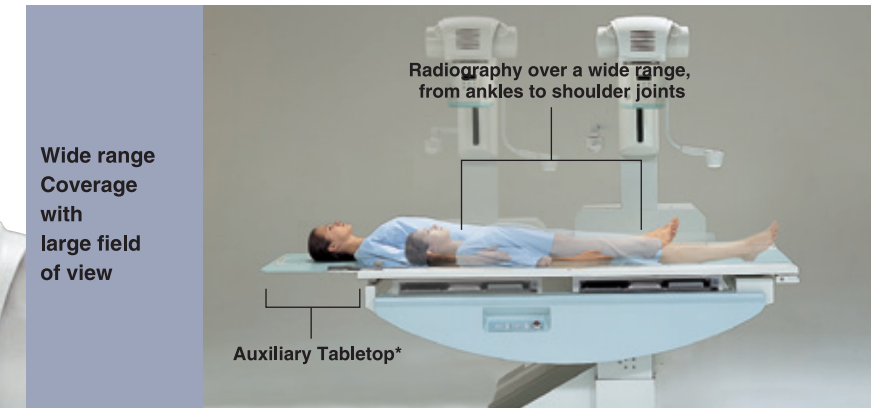
Fluoroscopy allows the observation of moving joints in real-time and with the table in vertical position, under a gravity load.

Wide-Range Coverage

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

Optimum Images

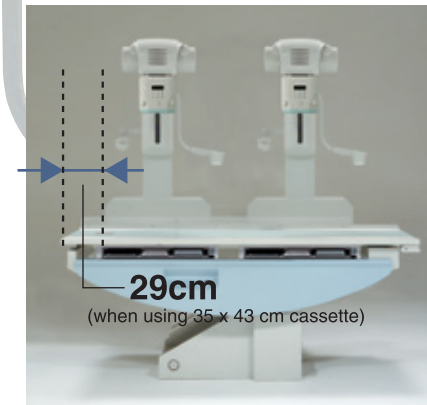
High-density resolution and multiple digital image-processing technologies produce optimum-quality images.



Additional Examinations

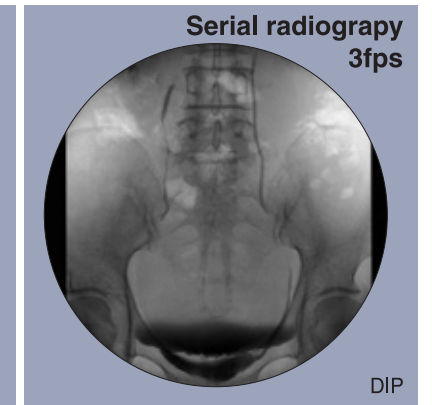
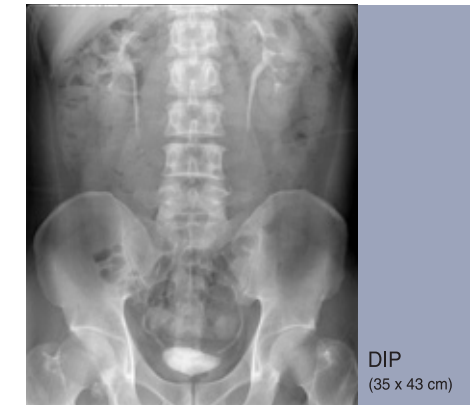
Easy Access from the End of Table

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

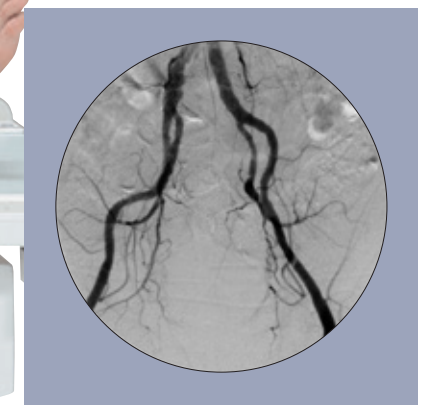
Moving anatomy can be imaged at 3 fps (up to 7.5 fps with option) using Serial radiography in case of DIP.



Angiography

OPTION

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



User-Friendly System Design

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.



Desktop type console with small foot print is also available.

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.



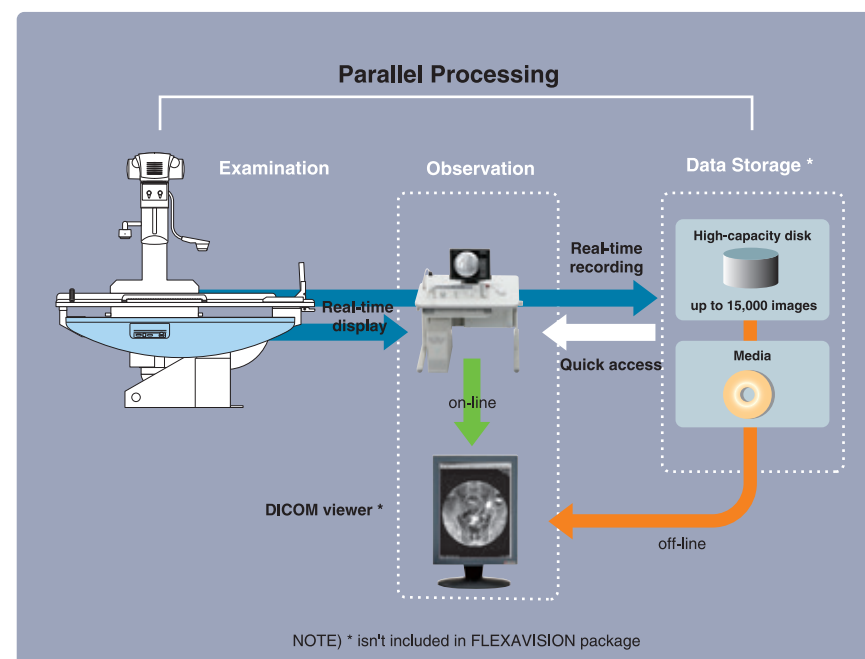
Parallel Processing Improves Work Efficiency

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.

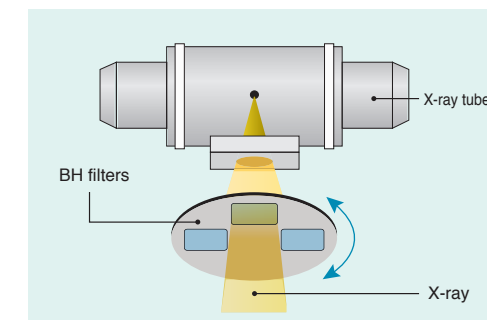
Automatic Image Transfer

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.



Dose Management

FLEXAVISION not only provides high-definition images with the optimal image quality for each examination. It also effectively reduces the total exposure dose in pediatric, gynecological and other examinations where low dose exposures are required.



Pulsed fluoroscopy function

3.75 fps

7.5 fps

15 fps

Lower Dose with a Removable Grid *

The FLEXAVISION grid can be inserted or removed to suit the radiography application. The grid can easily be removed for pediatric, obstetrics and gynecological examinations when the radiation dose to the patient must be kept to a minimum.



Automatic BH Filters Switch to Suit the Examination

Three beam hardening (BH) filters are provided as standard to efficiently remove unnecessary soft X-rays that do not contribute to image quality. The optimal BH filter is automatically selected to suit the examination, so image quality is increased while exposure dose to the patient is reduced.

Reduced X-ray Exposure

Standard equipment pulsed fluoroscopy (HB, FD types) and beam hardening filter reduce exposure to unnecessary X-rays.

* This function is only for CE type system.

Area Dosimeter *

An integrated area dosimeter can be fitted within collimator. The exposure dose reading are displayed on the add-on console.



Supporting Hospital IT System Development

Digitization for Improved Work Efficiency

With FLEXAVISION, image digitization streamlines tasks involving the observation, storage and query of images, while 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.

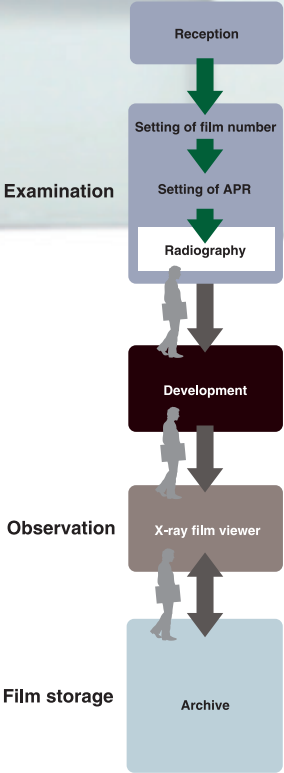
Diagnosis on Monitor

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.

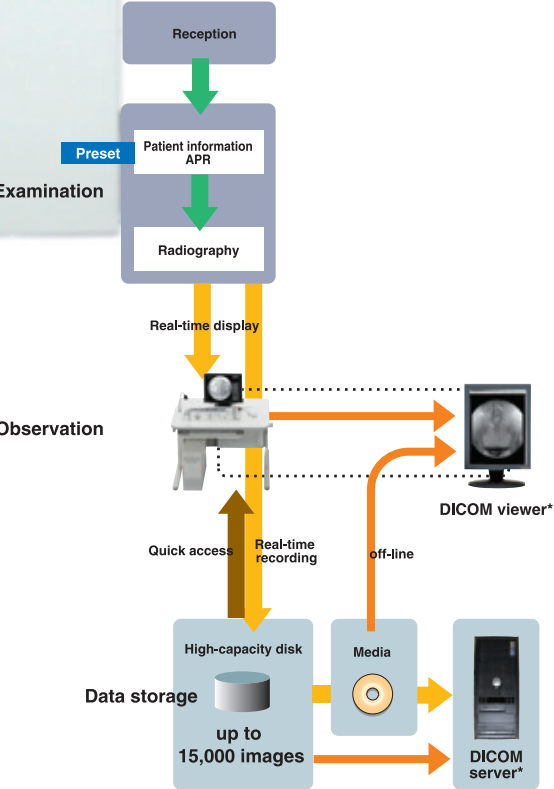
Media Storage

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.

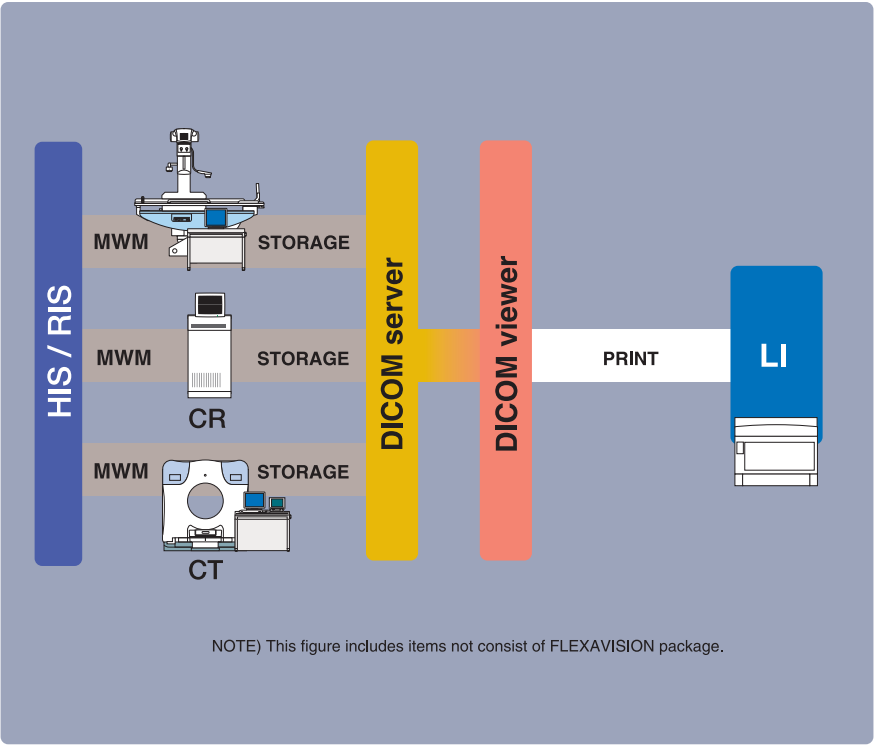
Film Workflow



Digital Data Workflow



NOTE) * isn't included in FLEXAVISION package



Compatibility with DICOM Networks

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

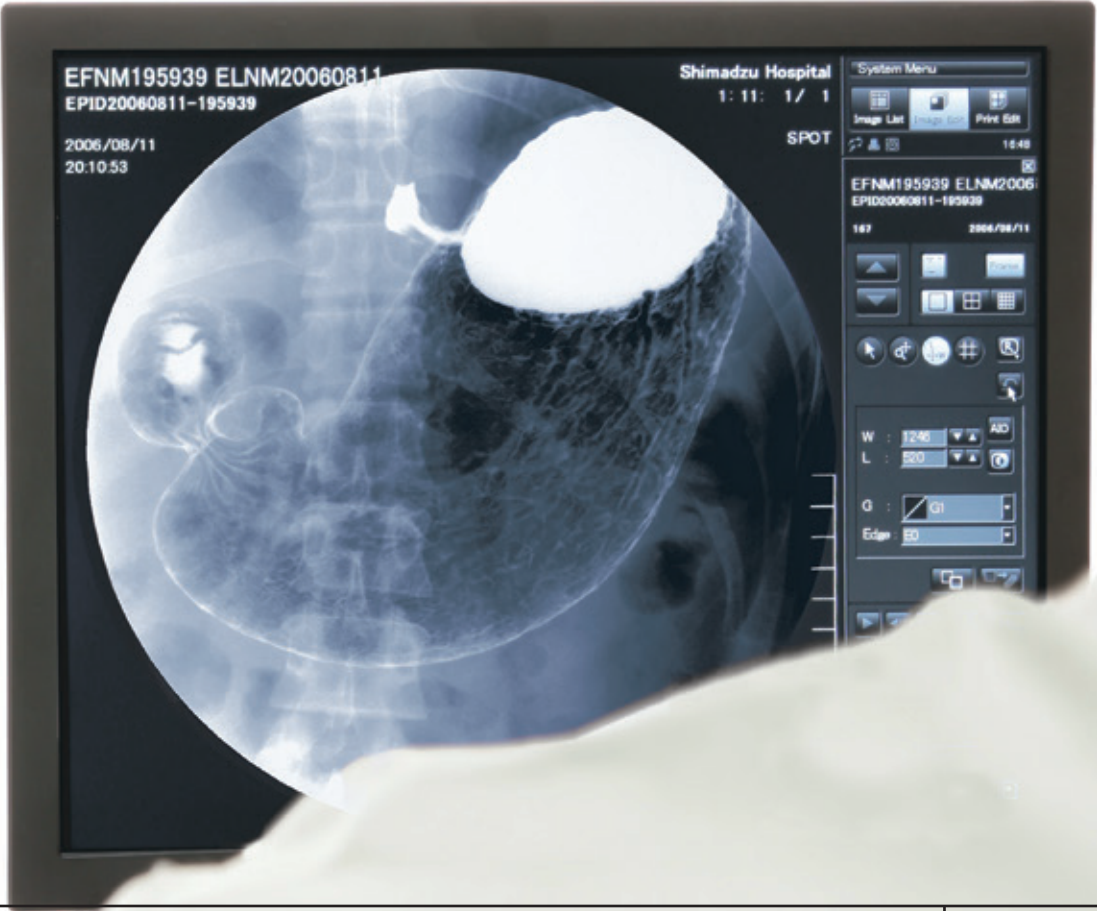
Support for DICOM MWM is also available as an option. This enables the online transfer of patient information from a HIS/RIS.

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.

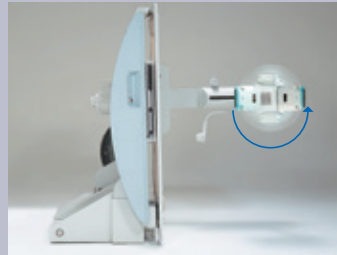


A Variety of Options for Supporting Examinations

■ For Gastro-intestinal / General Radiographic studies

● X-ray tube 180°swing unit

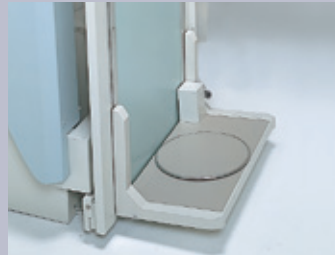
180°rotation of the X-ray tube/collimator easily and effectively accommodates chest examinations using a bucky stand.



● Rolling step

Rolling step has the left-and-right rotational function.

It helps an elderly person to rotate left and right smoothly, and helps a workflow at mass examination.



● X-ray tube swing-out unit

Allows rotating X-ray tube 37°to perform chest radiography with a leader stand



● Imaging chain extension unit

(1.8/ 2.0m extension option is non - CE type only.)

● Compression band

● Mattress

● Oblique projection unit *

● Table elevation function *

● Lateral cassette holder



Compression band

■ For Urogenital / Endoscopic studies

● Drain bag

It is for receiving excrement during the examination of the urethra.



● Leg supports

One pair is mounted on the tabletop to support legs.

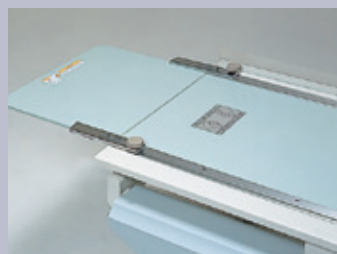


● Auxiliary tabletop

The tabletop extension kit to mount at the head side.

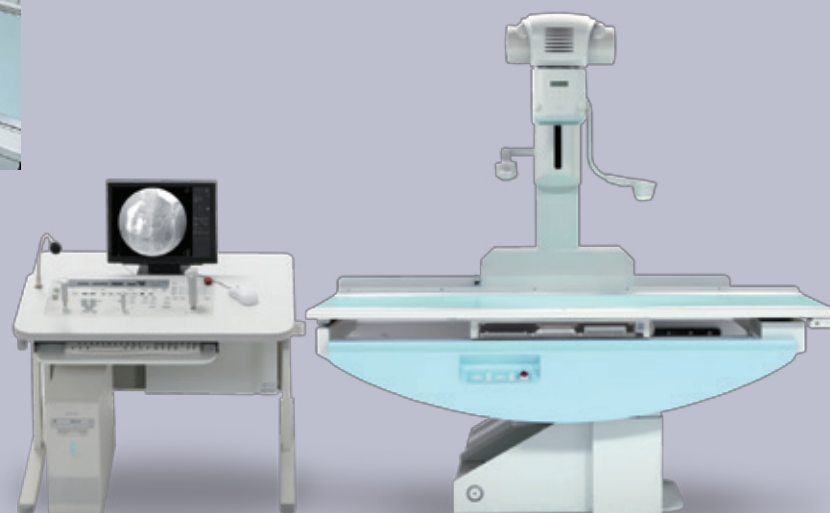
It is useful for flexible positioning in ERCP or lower extremities' studies etc.

Dimension : 650mmx500mm(WxL)



● Endoscope support

● Elbow Rest for Operator in urologic procedures



■ For Network connections

● DICOM storage

● DIOCM MWM

■ Other Options

● 2nd -tube option with CH-200M

Combination with CH-200M allows general radiographic techniques such as lateral and decubitus radiography to be performed on the R/F table.



● 2nd -tube option with FH-series

Combination with FH-series and a radiography stand enables the simple and safe performance of a range of procedures from chest and abdomen radiography to general radiography.



● Foot switch

In examination room, it is possible to control radiography and fluoroscopy by foot.

Left switch: for radiography/
Right switch: for fluoroscopy.



● Local console

● Monitor cart

● Maximum allowable load UP kit *

● Direct phototimer

● Max. 7.5fps SERIAL acquisition

● Max. 7.5fps DSA acquisition



Local Console

*Indicates options installed at the factory.

Note 1)
Some options cannot be compatible with some system configurations.
Please inquire for the details to our sales representative.

