Shimadzu Medical Imaging Systems

Passion for Details
Discovering new clinical values in X-ray imaging
In order to "contribute to society through science and technology," we have continually expanded our activities since 1875. At present, our advanced instruments and systems are supporting people in their daily lives through our four main product lines. These consist of medical imaging systems that support accurate and efficient diagnoses and safer patient treatment, analytical & measuring instruments that perform vital roles in a variety of research and development activities, aircraft equipment to ensure flight safety and onboard comfort, and industrial equipment that facilitates the rapid evolution of both semiconductors and cutting-edge devices such as flat panel displays.

Furthermore, by fusing and further developing these technologies, we are creating solutions for the future. Our fervent desire to "contribute to society through science and technology" knows no limits, and is taking us into new areas such as next-generation medical treatment, environmental remediation support, and industrial measurement.
Medical Imaging Systems

Saving Lives Through the Early Detection of Disease

Until we reach the day when any disease can be completely cured by medical treatment, Shimadzu will continue to search for new ways to facilitate the early detection of disease.

Accurate diagnostic imaging information is essential in the early detection and proper treatment of intractable diseases. To enhance your examination efficiency and safety, while reducing radiation dose, we offer a broad range of reliable X-ray imaging systems with world-leading technology and cutting-edge applications based on more than 100 years of our extensive clinical experience in the X-ray field.

Cardiac & Angiography System

Shimadzu cardiovascular and angiography systems provide outstanding image quality and various cutting-edge applications. The better visibility achieved by our systems will enhance the safety and efficiency in your interventional procedures and reduce X-ray dose levels.

Surgical C-arm System

To meet the demands of modern OR and ER, Shimadzu has provided the OPESCOPE with superb operability. The latest ACTEMO in the pinnacle of our evolving OPESCOPE-series developed from customer feedback in our ongoing pursuit for better performance and enhanced functionality.

General Radiography System

General Radiography systems are the must have items to be used most frequently in radiology department. Therefore ease-of-use, high productivity and durability are vital. Fulfilling these requirements, we have a wide range of solutions to best meet your needs, from the most advanced DR (Digital Radiography) systems to basic radiography systems for DR & film.

Mobile X-ray Systems

Countless Shimadzu “MobileArt” and “MobileDaRt” are used and loved all over the world. With the newly named “Evolution” series, we have achieved even more innovations on them. Our latest “MobileArt Evolution” and “Mobile-DaRt Evolution” with FPD provide further advancements in your workflow, expanding into the ER and pediatric NICU etc.
Cardiac & Angiography System

Crossover Angiography System

Trinias series / BRANST alessa MiX package

Our C-arm achieves excellent longitudinal and lateral movements to realize wide imaging coverage safely without moving a patient by tabletop slides or rotations. The latest user-interfaces with outstanding operability help you concentrate on your procedure and patient care. Premium dose reduction and management features ensure patient and operator safety.

SCORE 3D applications Premium Option

3D-Angio software creates high-quality 3D images of vessels. CT-like imaging helps system operators visualize both feeding vessels and diabrosis area structures during procedures.

SCORE Navi/Navi+Plus Premium Option

SCORE Navi/Navi+Plus is an application that utilizes pre-procedure images to support minimally invasive procedures. By linking the C-arm operations to pre-procedure MDCT images, it enables MDCT images to be used as references for interventions, which results in reduced contrast media use.

Trace MAP (SCORE MAP)

Trace MAP supports advanced EVT procedures by automatically overlaying the outline of vascular walls extracted from DSA images onto fluoroscopic images, dramatically improving the visibility of wires and devices.

SCORE RSM

SCORE RSM is an extremely motion tolerant DSA technique. This application is especially effective for tracking across the entire lower extremities, 3D imaging in combination with C-arm movement and examinations on patients who have difficulty holding their breath.

Digital Cardiovascular System

Trinias series MiX package

Trinias F8/C8/B8 MIX packages are the state-of-the-art cardiovascular systems with an 8-inch FPD optimized for PCI procedures. Utilizing our latest technology and features, the Trinias achieves outstanding image quality while minimizing the exposure dose level for both patients and physicians.

Our BRANST safire VC17 ceiling-mounted digital angiography system features a 17 x 17-inch direct-conversion FPD, the largest in its class.

- Class-leading 17 x 17-inch detector covers a wide field of view, while retaining fine-detail resolution of body parts.
- Unrivaled image sharpness from our direct-conversion FPD ensures clear visibility of the finest blood vessels.
- "INTELLISHIELD": Proximity and Touch Sensor are installed on the FPD as the contact avoidance function, providing additional patient safety.

Digital Angiography System

BRANST safire VC17 package
Incorporating of the latest DR imaging expands this system's capability to include digital examinations, ranging from GI to angiographic studies at the highest image quality. A digital spot tower is easy to operate and can be freely manipulated for a high-speed workflow. Utilizing state-of-the-art system engineering and technology, this system's compact design reduces both installation space and costs.

Universal R/F System

BEST-in-CLASS, a true multi-purpose, SONIALVISION system is ideal for a wide variety of examinations, including DR, Barium, Endoscopy, Urological, Gynecological, Orthopedic and Bariatric studies etc., and improves the productivity of your conventional R/F room while supporting high-level procedures with exceptional image quality.

- 139µm pixel superthine resolution FPD achieves outstanding image quality with advanced dose reduction features.
- The large 17 x 17-inch FPD and more than 2 meters longitudinal imaging coverage support various type of examinations very safely without moving the patient.
- Easy upgrade path to advanced imaging applications including "Tomosynthesis", "Slot Radiography" and "RSM-DSA".

Local-controlled Undercouch R/F system

Equipped with a safire direct-conversion FPD for very high-resolution imaging.

- Easy patient transfer with the table lowering down to just 47cm above the floor. Wide and strong tabletop suitable for bariatric procedures, accepting patients of up to 318kg.
- Ready to upgrade with the advanced imaging applications including “Tomosynthesis”, “Slot Radiography” and “RSM-DSA”.

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FPD R/F System

Tomosynthesis is the latest technology providing multiple slices clinical information from only a single tomographic scan, using lower dose than a CT scanner. The clinical benefits spotlighted now are the diagnoses of micro fractures and imaging orthopedic patients with artificial joints, which normally give rise to metal artifacts using conventional imaging methods.

Slot Radiography produces a long image for full spine or full leg etc. in a simple & fast workflow. The unique "Slot Collimation" method provides highly accurate measurements, ideal for orthopedic procedures.

Digital R/F System

- Head-to-toe coverage from the imaging unit’s full longitudinal sliding range at any tilting angle ensures procedures are safe and easy.
- A strong, heavy-duty platform is extremely valuable for bariatric imaging, currently one of the most serious concerns all over the world.
- A perfectly flat tabletop simplifies patient movement and provides the optimal examination environment.
FLEXAVISION F3 package

14 x 17 inch flat panel detector (FPD) which is used for both fluoroscopy and DR imaging.

- The FPD is detachable from the table making it available for general radiography with a wall stand or anywhere within the examination room.
- The X-ray tube can be extended to 1.5m, the optional elevating table and oblique X-ray projection expands the flexibility of this unique system.

* F3 package only

FLEXAVISION HB/FD/SF are the I.I. based systems, providing a wide range of choices in functionality and system configuration, which allows you to select the optimal solution for your individual needs.

A fully balanced C-arm and the unique “Doctor Handle” provide quick & light C-arm positioning and excellent operability.

- The unique Cable-free C-arm structure is ideal for use within the hygienic environment for surgery.
- 1M CCD high definition imaging with various upgrades available for your selection including the Digital Processing Unit and DSA capability for Angiography.

OPESCOPE ACTENO

Intelligent Auto-stitching radiography provides a long leg or a whole spine image quickly, without any complicated operations.

The available DR/FPD solution may vary depending on country or region.

DR NEUTRAL

Shimadzu Radiography system allows flexible DR/FPD combination to create your optimized system.

Patient friendly rubber-cushioned collimator

Dose management by Auto-Filtering and Area Dosimeter option

Speed Stitch

Intelligent Auto-stitching radiography provides a long leg or a whole spine image quickly, without any complicated operations.

Auto Positioning

The auto-positioning feature is interlocked with the APRs. Effortless tube positioning allows the operator to focus on patient care.
The 32kW high-power generator is designed to give the maximum performance and excellent image quality minimizing motion blur even with difficult patients, pediatrics or emergency cases.

The latest EFX version system achieves immediate image display on the monitor in 2 sec. after exposure.

The wireless FPD makes handling easier with various types and sizes to assist the needs of clinical environment.

Shimadzu is the pioneer of DR mobile systems. Combining our excellent mobile X-ray unit with a variety of wireless FPD choices, MobileDaRt Evolution provides ideal workflow and clinical functionality for ward rounds, emergency rooms or the pediatric NICU.

The MobileArt series provides both superb ease-of-use and high-quality images. A wealth of functions make mobile imaging simple and easy.

The motor-driven type, MobileArt Evolution offers generator power choice, Max 32kW or 12.5kW. 32kW-type is ready for DR upgrade.

A manual-drive model of the MobileArt eco is also available.

This system’s space-saving compact design requires a minimum of only 2.7 m x 1.8 m.

A one-touch guide assists the operator for optimum productivity.

Easily accommodated in a variety of locations, this system can be operated using only houseline 100V - 240V AC power.

This radiography system integrates ease-of-use features from top-class systems in a simple manner. With its high image quality due to the large output power and simple operability, this system provides a sense of ease and comfort operation for users.

- Two types of high power generator 32 / 56 kW
- Excellent usability for multi-purpose examinations.
- Wide range X-ray tube column movement
- 4 way floating table
- X-ray tube column swivel
- XD package - The RADspeed fit can be upgraded to a digital system suited to your expansion plans.

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Since 1875, Shimadzu has continued to open up new frontiers in various fields of science and technology with our corporate philosophy: "Contributing to Society through Science and Technology". These are our milestones in the medical imaging fields.

### 1896
- **1896** Succeeded in taking X-ray pictures (First in Japan)

### 1909
- **1909** Japan’s first medical X-ray system
  - Shimadzu completed and installed Japan’s first medical X-ray system at a hospital in Chiba prefecture (today’s National Center for Global Health and Medicine).

### 1918
- **1918** X-ray apparatus "Diana"
  - Mechanical full-wave rectification system with a capacity of 120kVp and 100mA. Dominated Japan’s radiography industry at the time.

### 1922
- **1922** Deep therapy apparatus "Jupiter"
  - Mechanical rectification type provided with two main transformers and two rectifiers.

### 1924
- **1924** Electrical rectifier type X-ray high voltage generator "Polestar" and "Juno"
  - Both used Kenotron high voltage rectifiers.

### 1931
- **1931** Portable X-ray apparatus "Daigo" (the full shieldproof X-ray unit)
  - In those days, most X-ray units which radiated tens of thousands of volts were not covered, and their handling was very dangerous in a dark room. This apparatus was a pioneer of the shieldproof type.

### 1935
- **1935** Diagnostic X-ray apparatus "Katsura"

### 1937
- **1937** Diagnostic X-ray apparatus "Hakusu"
  - Those units conformed to the laws relating to shieldproof and X-ray-proof specifications. The X-ray tube was cooled by oil circulating in a tank, and the high voltage generator was enclosed in the oil tank together with the rectifier and the transformer. This was a full wave rectification system.

### 1938
- **1938** Fluorographic apparatus for mass examination
  - Used for chest examinations to detect tuberculosis.

### 1941
- **1941** X-ray car
  - X-ray car with X-ray apparatus mounted on it for mass screening.

### 1955
- **1955** Belatex for medical use
  - Japan’s first Belatex with 6tMv for medical use.

### 1957
- **1957** Doble rotational type Co60 Therapeutic apparatus "IY-1930" Sonialcassette
  - After administering cobalt-60 to the human body, the gamma rays emitted outside the body from the radionuclide were detected by a sodium iodine scintillator.

### 1959
- **1959** Remote-controlled X-ray TV system
  - Control of all operations was possible from another room, and the radiologist was freed from the risk of being exposed to exposure. World’s first system.

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### 1965
- **1965** SC-201, a compact ECG unit
  - Developed SC-201, the world’s smallest and lightest ECG unit (2.2kg).

### 1968
- **1968** MS-1 cassetteless X-ray TV unit was completed.

### 1969
- **1969** Zoom image amplifier
  - Developed "MEDSCREEN" automatic multifunctional health testing system

### 1970
- **1970** SCT-100N X-ray CT scanner for head

### 1980
- **1980** Developed "PANGIOMAX" stereoscopic magnification system for ventral and abdominal angiography.

### 1985
- **1985** SMT-50, a superconducting NMR system of 0.5T, was put on sale.

### 1990
- **1990** Developed the SIR-9000 digital radiographic system.

### 1992
- **1992** Developed the GIN-1000 digital radiographic system.

### 1996
- **1996** Developed the Cvision multi-functional digital C-arm.<br>
  - Developed the IDR-1000 digital radiographic system.
  - Developed the SonaVision Multi-functional digital R/F system.
  - Developed digital cardiac system HeartSPEED safe incorporating direct conversion FPD first in the world.

### 2001
- **2001** Developed the SonaVision Multi-functional digital R/F system.

### 2003
- **2003** Developed digital cardiac system HeartSPEED safe incorporating direct conversion FPD first in the world.

### 2005
- **2005** Developed digital Mobile X-ray system MobileDaRt incorporating portable FPD first in the world.

### 2007
- **2007** Developed digital angiography system SONIALVISION 3200 incorporating 17 x 17inch directconversion FPD.

### 2010
- **2010** Developed digital Mobile X-ray system MobileDaRt Evolution with multiple FPD choices.

### 2011
- **2011** Developed digital R/F system FLEXAVISION F3 with a portable R/F FPD.

### 2013
- **2013** Developed digital angiography system Thera with sodium SCIENCE X-ray technology in the world.

### 2014
- **2014** Developed digital Universal R/F system SONIALVISION G4 with Stilt Radiography and Tomosynthesis technology first in the world.

### 2015
- **2015** Developed NDI/Best Pro EDGE Package with SpeedStitch, Tomosynthesis and Dual Energy Subtraction technology.
Founded in 1875, Shimadzu Corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support, and application centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our Web site at www.shimadzu.com

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• 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.