

Made for You, Made for Life

Made for the examinee...

For the comfort of the examinee.
For the early detection and effective treatment of breast cancer.
For women, and from a feminine perspective.
A next-generation mammography unit is introduced.

The goal in mammography is "reliable examination of all examinees without discomfort". Toshiba has achieved this goal by introducing this new mammography unit with a sophisticated design. Its soft contours and bright pearl-white body help the examinee to remain comfortable and relaxed. This carefully thought-out design ensures a comfortable examination. This mammography unit is extremely user-friendly, providing improved operability while ensuring high image quality.



- Newly developed compression method
- New armrest based on a new concept
- Flexible X-ray detection fields for AEC
- PC-based control
- User-friendly C-arm

Comfortable Design

Designed with careful consideration for the examinee



C-arm with wide clearance



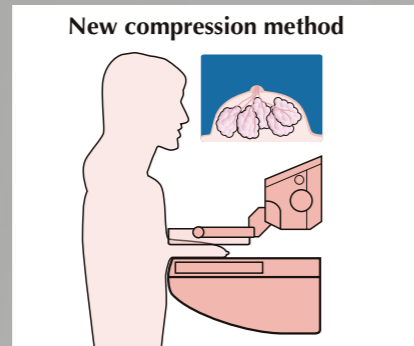
New armrest for comfortable positioning of the examinee



Switches that can be operated by touch typing



Compression plate made of a new material that minimizes discomfort



Newly developed compression method permitting the breast to be compressed more evenly than before



Film markers could be set by one-touch operation

High Quality Image

Designed with careful consideration for the operator



Control panel with improved readability and operability



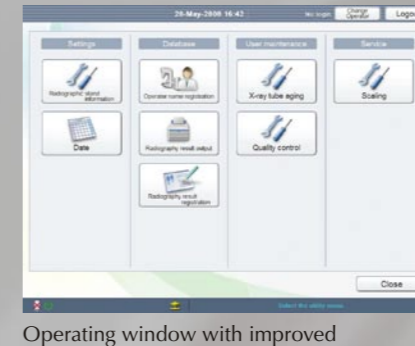
AEC sensor positions: 10 locations, switchable between large and small



X-ray tube specifically designed for mammography



Display monitor (touch-panel color LCD)



Operating window with improved readability (utility window)



Operating window with improved readability (radiography window)

Compression mechanism designed for the examinee (Palm Comp. System)

The material used for the compression plate is softer than the general material and also has lower X-ray absorption. The breast is naturally compressed toward the nipple as though pressed with a gentle hand, permitting the mammary glands to expand comfortably. The compression rate is adjusted according to the compression force, ensuring that the breast is compressed comfortably depending on the expansion of the mammary glands. How can the mammary glands be clearly expanded while minimizing the compression force? To meet this challenge, TOSHIBA developed a new compression plate and compression control mechanism.

Comfortable examination

If the examinee is not comfortable and relaxed, it is difficult to obtain satisfactory images. A new armrest is provided to minimize discomfort. When radiography is performed in the MLO projection, positioning can be performed comfortably using the armrest.

Realise the streamlined clinical environment

The operating switches can be identified without watching the switch, allowing positioning to be performed quickly and efficiently. C-arm up/down movement can be controlled using a footswitch, making it possible to perform positioning when both hands are occupied.

Accurate compression by simple operation

In order to minimize discomfort, compression will automatically released after the exposure. In addition, the breast thickness and compression force can be checked on the display panel.

PC-based control

A PC-based control is employed, permitting the radiographic conditions to be set and checked with ease. In addition, since the console is integrated with the X-ray high-voltage generator, the space requirements for the control room are reduced.

Easy positioning

The SID is increased to 70 cm and the effective range for compression is extended. As a result, the examinee can be positioned with ease. In addition, an isocenter-type C-arm is used. For radiography in the CC, MLO, or ML projections, when positioning is performed to align the system with the breast height, C-arm up/down movement will not be required again for radiography in other projections. C-arm up/down switches are provided at four locations. C-arm operation can be performed easily at all C-arm angles.

X-ray tube specifically designed for mammography

An X-ray tube specifically designed for mammography is employed. The exposure field is optimized, making it possible to obtain the optimal dose distribution according to the X-ray absorption of the breast tissues. Since a high-frequency inverter-type X-ray high-voltage generator is used in combination, X-ray output efficiency has improved and radiography can be completed more quickly even when the radiographic conditions are the same.

Automatic control of the tube voltage for radiography

The tube voltage for radiography is automatically set according to the breast thickness.

Motor-driven beam hardening filters

A molybdenum (Mo) filter and a rhodium (Rh) filter are provided to minimize the exposure dose and maintain high image contrast. These filters can be electrically switched. Normally, the filter is selected automatically according to the tube voltage for radiography and the breast thickness. It is also possible for the operator to select the desired filter.

Automatic Exposure Control (AEC)

An AEC system is provided in the standard configuration, making it possible to obtain images with uniform density. By detecting the breast thickness and breast density appropriate radiographic conditions will be set automatically. Since the AEC sensor position can be selected from 10 locations, the optimal AEC sensor position can be set according to the projection angle. In addition, the AEC sensor can be switched between large and small sizes, allowing the ideal size to be selected according to the breast size. Stable AEC operation is possible even for examinees with small breasts.

Automatic beam limiting device

In mammography, it is necessary to change the exposure field according to the cassette size (18 cm X 24 cm, 24 cm X 30 cm) and the radiographic technique contact radiography, magnification radiography, etc.. The inclusion of an electrically operated beam limiting device eliminates such troublesome operating procedures. The beam limiting device automatically moves to set the appropriate exposure field according to the units mounted to the C-arm stand.

Compositions

Standard configuration

C-arm stand (including X-ray tube)	One set
X-ray high-voltage generator	One set
Accessories	One unit



Options

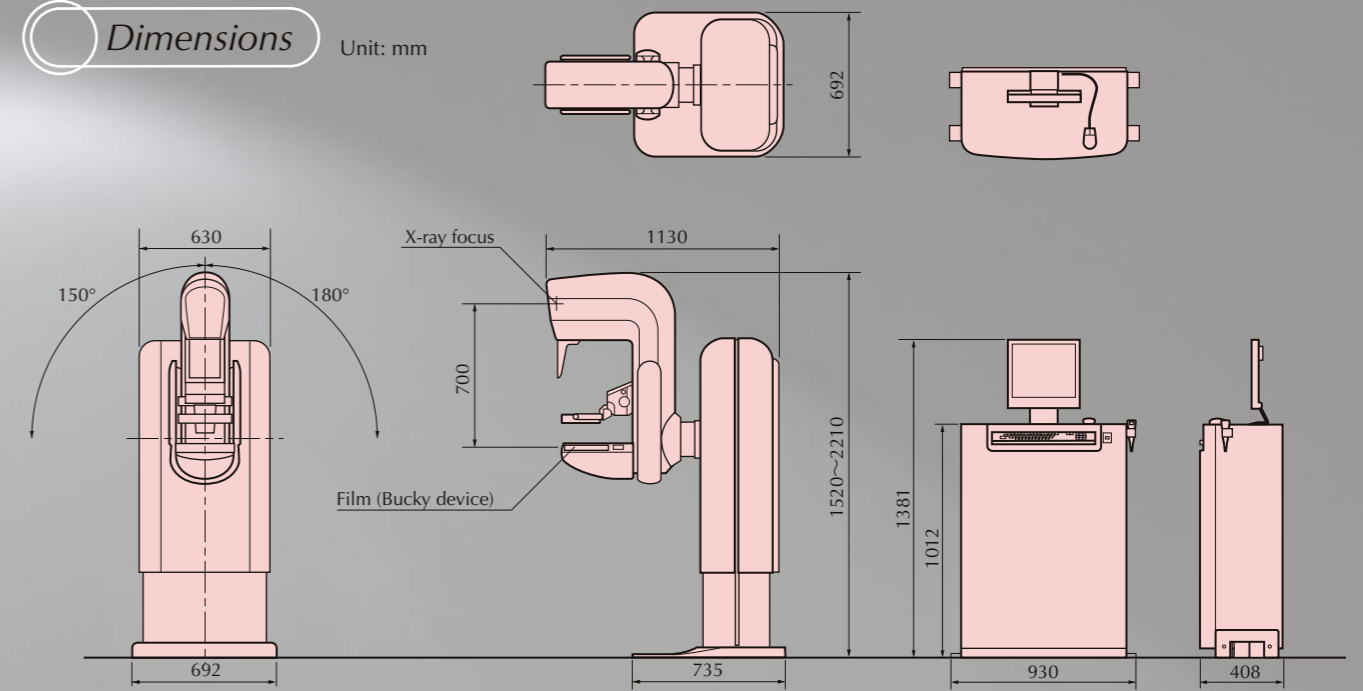
Magnification radiography unit (adaptor for Magnification radiography and compression plate for Magnification radiography)
24 cm × 30 cm radiography unit (24 cm × 30 cm Bucky device, 24 cm × 30 cm compression plate for radiography and film markers)
X-ray protective screen (fixed)
Display panel on the base of the stand
Handswitch for X-ray exposure
Perforated compression plate for breast biopsy
Kit for electrical connection to storage phosphor readers



Adaptor for magnification radiography and compression plate for magnification radiography

Dimensions

Unit: mm

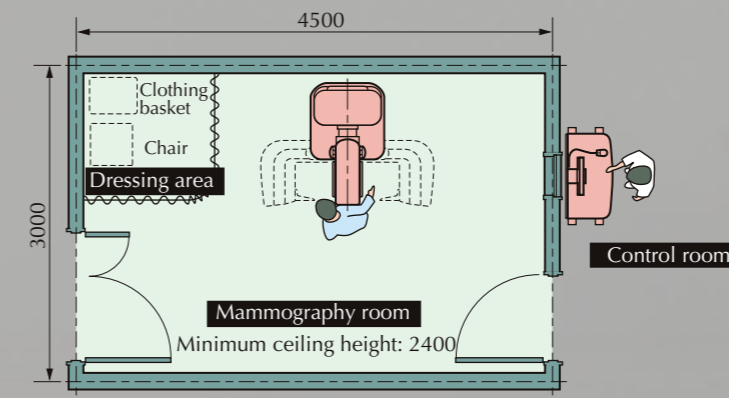


Mass of the C-arm stand: Approx. 350 kg

Mass of the X-ray high-voltage generator: Approx. 190 kg

Typical layout

Unit: mm



TOSHIBA
Leading Innovation >>>

X-ray Mammography Unit
MGU-1000A



TOSHIBA MEDICAL SYSTEMS CORPORATION

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