

**SHIMADZU**

# PRODUCT DATA

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Inverter type  
Mobile  
X-ray  
System

## MUX-100H series MobileArt Plus

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### GENERAL

The MUX-100H series is a mobile x-ray system. It is designed for radiography examinations in any location away from the main X-Ray department. The unit consists of an inverter X-Ray generator, independent motors for drive wheels, a telescopic tube arm all in a system that can be operated cordlessly.

MUX-100H series has 2 different models, MUX-100H and MUX-100HJ. Column height of MUX-100H is 1930mm, and that of MUX-100HJ is 1780mm.

**FEATURES**

- (1) Clear display of X-ray timing with illumination.  
The equipment clearly displays essential X-ray process information such as “ Standby ” and “Exposure” status using a bright, easy-to-read display.
- (2) Easy movement:  
The unit is easily driven by the unique power assist system. A two motor design allows easy movement of the unit, even in small areas such as between beds or small rooms.
- (3) Easy positioning:  
Because the tube arm is totally balanced, any positioning is fast and quick.
- (4) Wide positioning area:  
By telescopic methods of movements, positioning flexibility is increased.
- (5) Unobstructed visibility:  
Because the wide view design, it can be driven more easily and safely.
- (6) Inverter type generator:  
High frequency, inverter X-ray generator provides consistent exposure output for shorter exposure times.
- (7) Cordless operation:  
Due to the cordless feature, there is no concern about the available power at the patient location. An added feature of this unit is when the battery power is low, you can plug in the unit to any outlet.
- (8) Sharp images:  
By utilizing a small focal spot we are able to produce very sharp images utilizing optimum exposure parameters.
- (9) Self-diagnosis function:  
Messages (error codes) are displayed on the panel to notify the operator of the unit conditions.

**SPECIFICATIONS OF  
MAIN UNIT**

- (1) Rating
  - Maximum tube voltage: 125kV
  - Maximum tube current: 160mA
  - Maximum power: 12.5kW (12.5kW at 0.1 sec)
- (2) Power supply batteries: 12V 7.2Ah × 20pcs
- (3) Adjustment of tube voltage 40 to 125kV in increment of 1kV
- (4) Setting of mAs  
0.32, 0.36, 0.40, 0.45, 0.50, 0.56, 0.63, 0.71, 0.80, 0.90, 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10, 11, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220, 250, 280, 320mAs
- (5) Maximum mAs for each kV
  - 40 to 90kV : 320mAs
  - 91 to 100kV : 280mAs
  - 101 to 110kV : 250mAs
  - 111 to 120kV : 220mAs
  - 121 to 125kV : 200mAs
- (6) X-ray tube focal spot: 0.7mm
- (7) Max. size of X-ray field:  
43cm × 43cm (SID 1m)
- (8) Minimum inherent filtration  
X-ray tube assembly:  
Equivalent to 1.5mmAl,  
measured at 70kV  
Collimator:  
Equivalent to 1.0mmAl,  
measured at 70kV
- (9) Drive  
Drive speed:  
Forward & Backward :  
Approx. 5 km/h (Maximum)  
Grade ability : Maximum 7  
degrees
- (10) Number of cassettes accommodated  
10 cassettes of 14inch × 17inch  
(15 cassettes of 14 inch × 17 inch : optional)
- (11) This unit is not explosion-proof type.

**SPECIFICATIONS OF  
X-RAY TUBE UNIT**

- (1) Max. operating voltage: 125kV
- (2) Effective focal spot size: 0.7 × 0.7 mm
- (3) Max. anode heat storage capacity: 300000HU (212kJ)
- (4) Max. continuous input: 170HU/S (120 W)
- (5) Short time (0.1s) max. input: 15.6 kW
- (6) Max. filament voltage: 15 V
- (7) Max. filament current \*1: 5.6A
- (8) Target material:  
Rhenium Tungsten-faced on molybdenum
- (9) Target angle: 16°
- (10) Focal track diameter: 58mm
- (11) Anode rotation:  
Direction of rotation of anode is counter-clockwise as viewed from cathode side.  
RPM is 60 Hz: 3200 rpm (min-1) or more.
- (12) Inherent filtration:  
Min. 1.5 mm Al at 70 kV
- (13) X-ray protection \*2:  
Less than 0.87 mGy (2.58 × 10<sup>-5</sup> C/kg) in an hour at distance of 1 m from focus.
- (14) Min. ambient temperature: -10°C
- (15) Weight: Approx. 13 kg

**Remarks:**

- \*1 This is max. value which can be used at the time of adjustment of tube current.
- \*2 Conditions of detection for the leakage radiation are
- (1) Max. used tube input 125 kV, 160 W continuously.
  - (2) Repeated radiographic loading to keep the average load to be 71 W (100HU/s) at the max. voltage.

**CONFIGURATION**

- (1) Inverter type high voltage generator
- (2) X-ray tube unit  
CIRCLEX 0.7U163CS-36
- (3) Collimator  
R20C
- (4) Cart

**POWER REQUIREMENTS  
FOR BATTERY CHARGE**

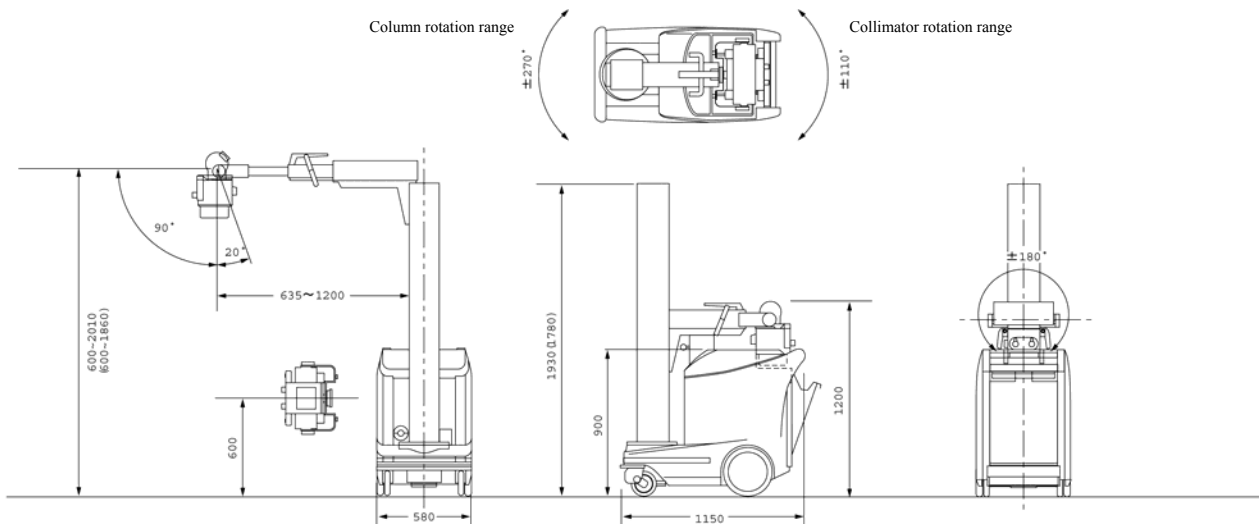
- Type: Single phase, AC
- Frequency: 50/60 Hz
- Standard voltage: 100, 110, 120, 200, 220, 230, 240 V
- Fluctuation of voltage: ±10% from standard voltage

## DIMENSIONS AND WEIGHT

	MUX-100H	MUX-100HJ
Height during transportation	Approx. 1930 mm (76.0 inch) from floor	Approx. 1780mm (70.0inch) from floor
Height of X-ray tube focus in radiography	MAX. Approx. 2010 mm (79.1 inch) from floor MIN. Approx. 600 mm (23.6 inch) from floor	MAX. Approx. 1860 mm (73.2 inch) from floor MIN. Approx. 600 mm (23.6 inch) from floor
Total weight	Approx. 370 kg	

## DIMENSIONS

unit : mm



Figures in brackets are for MUX-100HJ

### Remarks

- \* Every value in this Product Date Sheet 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.



SHIMADZU CORPORATION. International Marketing Division

3. Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan Phone: 81(3)3219-5641 Fax: 81(3)3219-5710  
Cable Add.: SHIMADZU TOKYO

URL <http://www.shimadzu.com>



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