

SHIMADZU

PRODUCT DATA

Inverter type
Mobile
X-ray
System

MUX-10

 MobileArt eco

GENERAL

The MUX-10 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, a telescopic tube arm all in a system.

FEATURES

- (1) Easy positioning:
Because the tube arm is totally balanced, any positioning is fast and quick.
- (2) Wide positioning area:
By telescopic methods of movements, positioning flexibility is increased.
- (3) Unobstructed visibility:
Because the wide view design, it can be driven more easily and safely.
- (4) Inverter type generator:
Max. 60kHz high frequency, inverter X-ray generator provides consistent exposure output for shorter exposure times.
- (5) Sharp images:
By utilizing a small focal spot we are able to produce very sharp images.
- (6) 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
Single phase AC 50/60Hz, 1.5kVA
Standard voltage: 100, 110, 120, 200, 220, 230, 240V
- (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, 100mAs (110, 125, 140, 160, 180, 200mAs; option)
- (5) Maximum mAs for each kV

	Standard	200mAs option added
40 to 42kV	100mAs	200mAs
43 to 52kV	80mAs	160mAs
53 to 67kV	63mAs	125mAs
68 to 85kV	50mAs	100mAs
86 to 106kV	40mAs	80mAs
107 to 125kV	32mAs	63mAs

- (6) Minimum exposure time:
3.2msec.
- (7) X-ray tube focal spot: 0.7mm
- (8) Maximum size of X-ray field:
43cm × 43cm (SID 1m)

- (9) Minimum inherent filtration X-ray tube assembly:
Equivalent to 1.5mmAl, measured at 70kV
Collimator:
Equivalent to 1.0mmAl, measured at 70kV
- (10) Number of cassettes accommodated
10 cassettes of 14inch × 17inch
- (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: 140kHU (100kJ)
- (4) Tube assembly heat storage capacity: 1060kHU(750kJ)
- (5) Max. continuous input: 170HU/S (120 W)
- (6) Short time (0.1s) max. input: 15.6 kW
- (7) Max. filament voltage: 15 V
- (8) Max. filament current *1: 5.6A
- (9) Target material: Rhenium Tungsten-faced on molybdenum
- (10) Target angle: 16°
- (11) Focal track diameter: 58mm
- (12) 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.
- (13) Inherent filtration:
Min. 1.5 mm Al at 70 kV
- (14) X-ray protection *2:
Less than 0.87 mGy (2.58×10^{-5} C/kg) in an hour at distance of 1 m from focus.
- (15) Min. ambient temperature: -10° C
- (16) Weight: Approx. 13 kg

(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 0.7U161CS-36
- (3) Collimator R20CA
- (4) Cart

POWER REQUIREMENTS

- 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

Remarks:

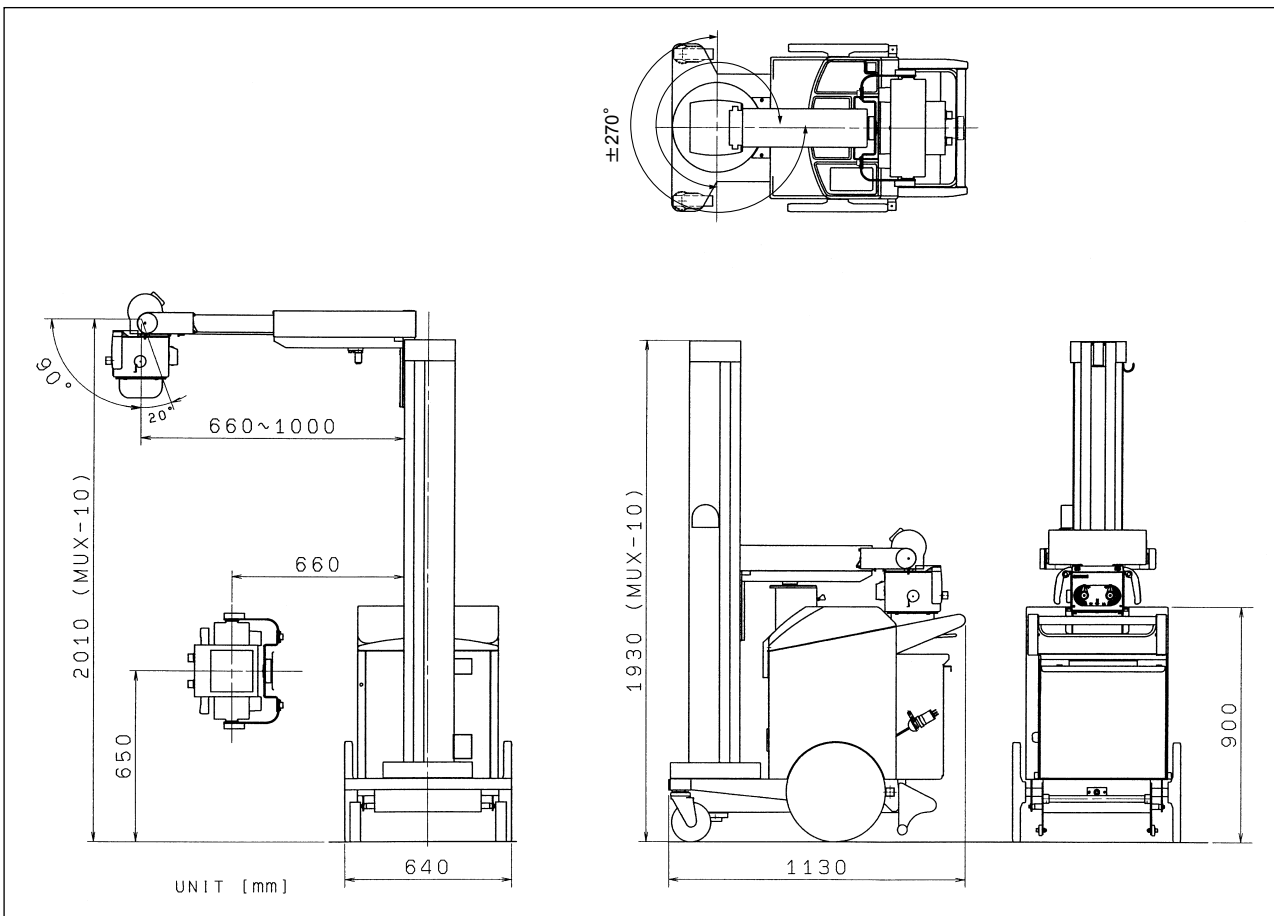
- *1 This is max. value which can be used at the time of adjustment of tube current.
- *2 Conditions of detection for the leakage radiation are
 - (1) Max. used tube input 125 kV, 160 W continuously.

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DIMENSIONS AND WEIGHT

Height during transportation	Approx. 1930 mm (76.0 inch) from floor
Height of X-ray tube focus in radiography	MAX. Approx. 2010 mm (79.1 inch) from floor MIN. Approx. 650 mm (25.6 inch) from floor
Column rotation range	$\pm 270^\circ$

Tube rotation around support arm	$\pm 180^\circ$
Tube rotation around tube axis	Forward 90° , Backward 20°
Rotation of collimator	$\pm 90^\circ$
Total weight	Approx. 260 kg (with 200mAs option, 283kg)



UNIT : mm

Remarks

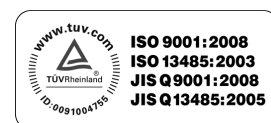
- * Every value in this Product Data Sheet is a standard value, and it may vary a little from the actual at each site.
- * The appearances and specifications are subject to change for reasons of improvement without notice.
- * Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.



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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.