

XMB160 XMB225

Technical Data



The compact, low-weight constant potential X-ray systems XMB160 and XMB225 are especially designed for mobile use. All components are arranged on a transportation trolley which has two tilting positions and an eye for a crane hook. This enables one person to carry the whole device to the place of operation very easily. If necessary, all components can be dismantled from the trolley.

The mobile X-ray systems are suited for a wide variety of applications ranging from low density composite material to aluminum and steel products with a thickness up to approx. 38mm (XMB160) respectively 60mm (XMB225).

The X-ray systems are easy to operate. The set-up modes are menu driven. All indications, operating mode and fault diagnosis of internal or external errors are displayed in clear text with the comfort of being able to choose optional languages.

Furthermore up to 100 frequently recurrent exposure data (kV, mA, time, focal spot) can be stored and then retrieved by the program number.

After setting the inspection parameters on the main control unit, the system can be switched ON/OFF via a remote control. An integrated warning lamp indicates X-rays being emitted.

The 40kHz technology ensures a very high system output stability, a precise energy setting and an extremely fast change-over to any selected new value. Any fluctuation or deviation of set values are controlled and corrected within microseconds. In many cases these features reduce inspection times considerably.

All system components are protected against the influence of dust and water, fulfilling the requirements according to IP 54.



Mobile Constant Potential X-Ray Systems

TECHNICAL DATA:

valid for XMB160 as well as XMB225 where not particularly specified.

Operation:

Constant potential with Isowatt feature

Fully automated monitoring of power limits and tubehead specifications

High voltage:

Adjustment range

(four-digit LED display):

Adjustment increments:

Accuracy:

Reproducibility:

H.V. Ripple

(with 10m H.V. cable):

Temperature induced drift:

XMB160

7.5-160kV

0.1kV / step

±1% of demand value ±0.1kV

±0.01% of max. kV value
at a constant temperature

10V/mA, min. 20V

80ppm/°C based on demand value

XMB225

10-225kV

0.1kV / step

±1% of demand value ±0.1kV

±0.01% of max. kV value
at a constant temperature

10V/mA, min. 20V

80ppm/°C based on demand value

Tube current:

Adjustment range

(four-digit LED display):

Adjustment:

Standard range:

High resolution range:

Accuracy

(at constant temperature):

Reproducibility

(at constant temperature):

Temperature drift:

XMB160

0-22.5mA

in 0.05mA steps from 0.5mA-22.5mA

in 0.01mA steps from 0.0mA-22.5mA

±0.2% of demand value ±0.01mA

±2µA

50ppm/°C of demand value

XMB225

0-15mA

in 0.05mA steps from 0.5mA-15mA

in 0.01mA steps from 0.0mA-15mA

±0.2% of demand value ±0.01mA

±2µA

50ppm/°C of demand value

Exposure timer (four-digit LED display):

Input range: in 1 sec. steps up to 10 min.

in 10 sec. steps up to 99 min. and 50 sec

∞ setting for radiosopic application

Programmed operation:

- 100 technique capacity (kV, mA, time, focal spot), programmable through numeric keypad
- 3-level program for automated tube conditioning

Pre-warning:

Adjustable from 1 to 30 seconds; menu-driven selection; input through touch key-pad

Environment (according to IP54):

Duty cycle: 100% (Pmax) at +30°C max, ambient temperature in non-convective air

Operation temperature: -10°C to +30°C, relative humidity 90% at +40°C, non-condensing

Storage Temperature: -25°C to +70°C, relative humidity 95% at +40°C, non-condensing

Focal spot selection:

Key-pad selected: selection indicated by large and small symbols on display panel

Mains supply:

230V +10% -15%, single phase, 50/60Hz, 16A

Safety provisions:

- Two independent, monitored safety circuits (fail-safe, 24V)
- Continuous system functional monitoring with fully automated system shut-down and failure indication
- Automated filament post-heating H.V. capacitor discharge upon termination
- X-ray ON warning lamp monitoring provided (fail-safe)
- Monitoring external coolant flow switch
- Temperature monitoring of power supply and H.V. generator
- Pressure monitoring of H.V. generator

Mechanical Data (System):

Dimensions (wxhxl): 720mm x 1580mm x 1050mm

Weight XMB160 181 kg with 10m H.V. cable

XMB225 187 kg with 10m H.V. cable