

# X-Ray Accessories for Calibration Facilities



*Basic construction to accommodate an X-ray tube, X-RAY SHUTTER, FILTER WHEEL and filters*

## Features

- ▶ Basic construction with X-ray tube support
- ▶ FILTER WHEEL with 24 positions software controlled
- ▶ Filters for calibrations with X-ray radiation qualities
- ▶ High speed X-RAY SHUTTER

Calibration benches require a radiation source for radiological calibrations. An X-ray tube in combination with filters and shutter is typically used for calibration with radiological radiation qualities.

- ▶ The basic construction with X-ray tube support is a good solution to ensure stable installation and proper shielding of the tube. It consists of a steel table with lead shielded housing. The platform height is 1250 mm from the floor. The table is levelled by means of four adjustable supports. The tube lead shielding is firmly mounted on a suitable frame which is placed on the tube support platform. Form and dimensions of the lead shielding are customized to fit the X-ray tube housing. The lead thickness is 8 mm. The shielding plates are covered by aluminium sheets for protection against direct touch of the lead absorbers. The X-ray tube support with lead shielding can be combined with the CALIBRATION BENCH. A monitor chamber and a diaphragm holder with a set of diaphragm pairs for different field sizes are included.
- ▶ The X-RAY SHUTTER can be combined with the X-ray tube support. The X-RAY SHUTTER includes two diaphragms which are customized for the focal spot of the used tube for a basic field size. The X-RAY SHUTTER is suitable for X-rays up to 450 kV, the closing time is less than 100 ms and can be controlled by software via TCP/IP.
- ▶ The FILTER WHEEL holds up to 24 metal filters and positions them into the beam to setup different X-ray radiation qualities. The filters are interchangeable. The height of the central beam from floor is 1500 mm.

- ▶ The metal filters with 92 mm diameter are interchangeable. There is a range of Al, Cu, Sn and Pb filters with different thicknesses. The filters are of high 99.9 % purity. The Pb filter even has 99.95 % purity.

X-RAY SHUTTER, FILTER WHEEL and motorized CALIBRATION BENCH are controlled by the BENCH CONTROL UNIT via network cable with TCP/IP interface. The BENCH CONTROL UNIT is connected via one network cable with the PC. The BenchControl software controls all movements, electrometers and readout of the temperature and pressure. A batch mode allows an automatic calibration with predefined filter positions and shutter control.

## Ordering Information

- L981288 Basic construction and X-ray tube support for GE MXR320/26
- L981293 Basic construction and X-ray tube support for YXLON YTU/320-D03
- L981289 Basic construction and X-ray tube support for specified tube
- T90012 X-RAY SHUTTER, software controlled
- L981194 FILTER WHEEL, software controlled
- T43033-MMXX Filter for FILTER WHEEL L981194  
MM is the material and XX is the thickness in mm

*X-ray tubes and tubes changer on request  
Monitor chamber and electrometer required*

- ▶ CALIBRATION BENCH *page 143*
- ▶ Monitor chamber *page 145*
- ▶ UNIDOS<sup>webline</sup> *pages 13 and 138*