

HIGH-PRECISION DIRECTIONAL ION CHAMBER PIC

MAIN FEATURES

- High sensitivity free-air ion chamber
- Specifically designed for collimated beams' measurements
- Large active diameter
- Big active volume
- Extra-thin Mylar window for X-ray monitoring
- Tripod mount
- Coupled to ELSE NUCLEAR's ultra-sensitive electrometer (SATURN series)



DESCRIPTION

PIC is a high-precision directional free-air ion chamber, capable of measuring the intensity of a collimated particle beam passing through its entrance and exit windows.

Light and compact, **PIC** is provided with a special thread compatible with tripods used for standard cameras. It is a very robust device, designed to detect essentially every kind of charged and non-charged particles, ranging from gamma and X-rays to high-energy protons and heavy ions.

PIC collects the charge generated in its active volume by the collimated beam of particles passing through it, thanks to the polarization provided by a high voltage supplier. The large active diameter and the big volume guarantee a high sensitivity even to low beam intensities. The connection to the ELSE NUCLEAR's special ultra-sensitive electrometer allows the **PIC** to work over a very wide dynamic range, up to 9 decades.

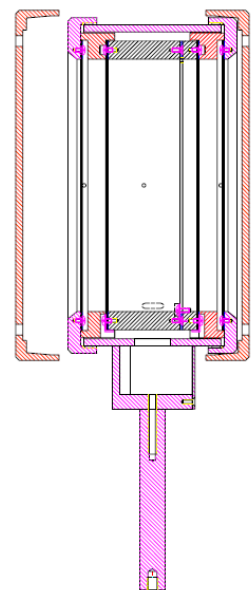
The acquired data are sent on-line via a fast Ethernet connection to a PC, where the ELSE NUCLEAR's user friendly software allows an instantaneous visualization of the differential and integrated data, including their safe storage and management in a database.

TECHNICAL SPECIFICATIONS

- 40 mm active length
- 140 mm active diameter
- Typical output current: 100 fA – 100 nA
- TNC and SHV connectors
- 12 μm Mylar windows metallized with aluminum
- 4 Mylar windows: 2 active + 2 for safety
- Guard ring
- Protective caps for safe storage

APPLICATIONS

- Beam monitor for particle accelerators (linacs, cyclotrons, synchrotrons)
- Reference ion chamber in metrology/calibration laboratories using collimated sources of ionising radiation
- Reference ion chamber for X-ray generators



ACCESSORIES AVAILABLE UPON REQUEST

1. Warranty extension from 12 months to 24 months