



The Kr-85 Neutralizer is a bipolar neutralizer that generates positive and negative ions through ionization with the emitted β radiation. Suppose these ions are brought together with an aerosol; a defined equilibrium charge distribution is established, as is necessary for measuring systems, such as scanning mobility particle sizers (e.g., Palas® U-SMPS system). This neutralizer is available in two versions with different activities, 75 MBq, and 370 MBq.

Compared to unipolar neutralization, bipolar neutralization has a significant advantage: regardless of the initial state of charge of the particles, a reproducible equilibrium charge distribution is always established. Bipolar neutralization is mandatory for traceable calibration of a condensation particle counter (e.g., ISO / CD 27891). As the Kr-85 neutralizer is an enclosed radioactive source, additional requirements for documentation and handling regarding radiation protection should be considered. Should you have any questions, we would gladly support and advise you. Regarding the dangers of Kr-85, the following can be said: "Krypton 85 (Kr-85) is a radioactive noble gas. When released, it is practically not absorbed by the body; inhaled Kr-85 is exhaled again. [...] Kr-85 is a radioactive substance with a relatively low radiotoxicity. When Kr-85 is released, it is [generally] sufficient to provide ventilation of the working area for a short while." [KomNet scientific database dialog 6753]

BENEFITS

- Reliable method for defined charge neutralization
- Long lifetime
- Low maintenance
- Low operation costs

APPLICATIONS

- Neutralization for SMPS systems
- Neutralization for filter test systems
- Neutralization for diverse measuring tasks and to avoid particle losses due to electrostatic deposition

DATASHEET

Volume flow	Up to 5 l/min	Housing	Stainless steel
Aerosol outlet connection	Ø _{inside} = 4 mm, Ø _{outside} = 6.5 mm	Activity of the radiator	370 MBq
Type of radiation	β-radiation	Operation principle	Ionisation of air molecules by radioactive radiation
Half-life period of the radiator	10.8 years	Aerosol inlet connection	Ø _{inside} = 4 mm, Ø _{outside} = 6.5 mm
Dimensions	38.3 • 220 mm (Ø • L)	Weight	500 g