

GM Pancake Probe

Victoreen® Model 489-110D

- All purpose GM Pancake Probe detects alpha, beta, gamma, and x-ray radiations
- Used in nuclear medicine, diagnostic x-ray, and geological and environmental surveys
- Ideal for emergency response teams



Features

- High detection efficiency
- Ergonomic design
- Lightweight
- Detachable probe cable
- BNC or MHV connector
- Easy to decontaminate

Introduction

The Victoreen Geiger-Mueller (GM) Pancake Probe (Model 489-110D) is a hand-held, thin-window detector designed for alpha, beta, and gamma radiation measurements. It is designed for use in conjunction with the Victoreen Models 990, 190, 290, and other standard GM survey meters, and is configured for operating convenience in table top and floor surveys as well as surveys of personnel and equipment. For storage and carrying ease, the probe fits into the standard handle clip on a survey meter.

To use the probe, attach the connector to the probe input on the survey meter and place the window in proximity to the surface to be surveyed. A screen protects the thin mica window to facilitate rapid frisking of flat surfaces. The open area of the hexagonal stainless steel screen is 86%.

The GM probe comes in two configurations: Model 489-110D with an ABS plastic housing, MHV connector, and foam grip, or Model 489-110E with a BNC connector. This selection of connectors provides the ability to attach the GM probe to most GM survey meters on the market. Specify model number when ordering. Replacement foam grip handles are available: Model 489-130-44. This same probe design is available in a rugged metal housing as Model 489-110C.

Applications

This all purpose GM Pancake Probe is used in a wide range of applications where alpha, beta, gamma and x-ray detection is required. Prime applications for this probe include nuclear medicine counter tops and frisker stations, leakage detection for low energy diagnostic x-ray machines, geological and environmental surveys or any place where there exists the suspicion that some form of radiation is present.

Specifications

Detector Halogen-quenched "Pancake" GM tube

Radiation detected Alpha above 3.5 MeV, beta above 35 keV and gamma above 6 keV

Operating voltage 900 V, compatible with all GM survey meters

Window 15 cm² (1.75 in Ø) mica, 1.4 to 2.0 mg/cm²

Typical background 30 CPM

Sensitivity 3500 CPM/mR/hr

Protective screen Stainless steel, hexagonal pattern providing 86% open area

Construction ABS plastic housing and foam grip handle

Cable Shielded cord, approximately 4.5 ft long MHV coaxial connector or BNC connector

Dimensions

Detector housing

2.5 (w) x 4.25 (d) x 0.875 in (h) (6.36 x 10.8 x 2.2 cm)

Handle

1 in Ø x 6.25 in (d) (2.5 x 16.5 cm) (excluding connector)

Weight 0.63 lb (0.28 g) without cable

Replacement part

Foam Grip Handle (Model 489-130-44)

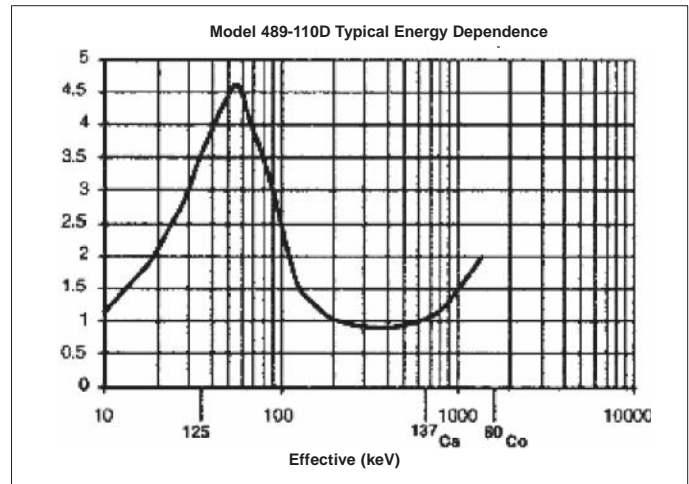
Available model(s)

489-110D GM Pancake Probe with ABS plastic housing, MHV connector, and foam grip handle

489-110E GM Pancake Probe with ABS plastic housing, BNC connector, and foam grip handle

489-110C GM Pancake Probe with metal housing, MHV connector, and foam grip handle

Typical energy dependence



Efficiency The GM Pancake Probe efficiency is shown below. In a recent performance check, the numbers shown represent typical results obtained:

Isotope	% Efficiency
¹⁴ C	5
⁹⁹ Tc	12
¹³⁷ Cs	24
⁹⁰ Sr	59
³⁶ Cl	26
²⁴¹ Am	8
¹²⁹ I	2
²³⁰ Th	15
²³⁹ Pu	12

Note: The efficiency formula used to calculate the % Efficiency is: Eff. % = (CPM x 100) / DPM

For more information, receive our full product catalog, or order online, contact **Radiation Management Services** business of **Fluke Biomedical**: 440.248.9300 or www.flukebiomedical.com/rms.

Specifications are subject to change without notice.

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489-110D-ds rev 4 07 mar 05