

Model 42-5

Neutron Detector & Ball Cart



Ludlum Measurements, Inc.



Specifications

Part Number: 47-1505

INDICATED USE: determine neutron fluences and dose throughout energy spectrum

SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters, and scalars

DETECTOR: 4 mm x 4 mm Lil crystal coupled to a 3.8 cm (1.5 in.) photomultiplier tube

TUBE: 1.2 cm (0.5 in.) diameter magnetically shielded photomultiplier

OPERATING VOLTAGE: typically 400–900 volts

CONNECTOR: series "C" (others available)

MODERATORS: provided with 5.1 cm (2 in.), 7.6 cm (3 in.), 12.7 cm (5 in.), 20.3 cm (8 in.), 25.4 cm (10 in.), and 30.5 cm (12 in.) diameter high density polyethylene spheres. (other sizes available)

ENERGY RANGE: continuous response from thermal to approximately 12 MeV

SENSITIVITY: typically 45 cpm per mrem/hr (AmBe) (with 25.4 cm [10 in.] moderator)

GAMMA REJECTION: 10 cpm or less through 100 mR/hr

CONSTRUCTION:

mobile cart: tubular steel construction with 20.3 cm (8 in.) diameter wheels

detector: anodized aluminum housing, user-adjustable distance from floor (112 - 185 cm; 44 - 73 in.)

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122°F), may be certified to operate from -40 to 65 °C (-40 to 150 °F)

SIZE: 118.8 x 45.7 x 58.3 cm (44 x 18 x 23 in.) lowered; 185.4 cm (73 in.) fully extended (H x W x L)

WEIGHT: 27.2 kg (60 lb) not including moderators

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

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