

## Physical

## WPC-1150-5 Specifications

- Sample Detectors: 5" diameter pancake style gas flow proportional sample detector  
Guard Detector: 1 large area gas flow proportional cosmic guard detector  
Gas-PRO™: Failsafe P-10 monitoring system senses breaches in gas flow.  
Gas Flow: Adjustable flow meter 60 cc/min. Includes a rotameter style flow meter for the counting gas.  
Nominal inlet pressure 10 psi (+/- 2 psi)  
Window: Aluminized window with nominal density of 80 µg/cm<sup>2</sup>  
Shield: 4" (10 cm) thick selected virgin lead.  
Size: 25" W x 36" D (63.5 cm W x 91.4 cm D)  
Sample Size: 4.187 Diameter at 1/4" depth standard (Custom sizes available)  
Weight: Installed 1800 lbs (816 kg)  
Shipping 2150 lbs (975.224 kg)  
AC Power: 117Vac, < 2.0A 50/60 Hz; 230 Vac, <1.0A, 50/60 Hz  
Environment: 10-40°C; 20-90% humidity, non-condensing  
Sample Transport: 50 Sample automatic changer with barcode reader with sample range 1 - 999

## Performance

Background:	Alpha	Beta
Typical	0.4 cpm	4 cpm
Warranted	0.5 cpm	5 cpm

(Background values are dependent on environment and altitude. Warranted values are as measured at factory under controlled conditions.)

Efficiency:	Typical	Ni63	20.29%	Sr <sup>90</sup> /Y <sup>90</sup>	62.72%
		Tc <sup>99</sup>	40.64%	Th <sup>230</sup>	26.93%

(Efficiencies are typical values; energy and geometry dependent; as measured at factory under optimized conditions with factory specified sources and P-10gas)

(Observed efficiencies using a 2" distributed electroplated NIST traceable source with the exception of Th<sup>230</sup> which was counted at a depth of 1/4" and is evaporated not electroplated)

Plateau:	Alpha	Beta
Slope	<1.5% / 100V	<5% / 100 V
Length	>1000V	>200V

(Plateau measurements use point sources at optimum geometry using P-10 counting gas. Alpha plateaus use Po<sup>210</sup> Beta plateaus use Sr<sup>90</sup>/Y<sup>90</sup>)

Crosstalk:	Alpha to Beta	Beta to Alpha
Instrument Induced	<0.1%	<0.1%
Naturally Occurring	Source Dependent	Source Dependent

(Refer to Applications Note AN-0108)

**Detector Uniformity:** >95% over active area

**Dead Time Correction:** Tested to 300,000 cpm with < 1.5% dead time loss.

**Count Modes:** Alpha Only, Beta Only and Simultaneous Alpha + Beta

## WPC-1150-5 Ordering Information

Include gas line fittings and tubing, and two-stage gas tank regulators†. Wheeled cart and 50 sample carriers.

2 End Plates, 12 Routine Plates, 4 QC Plates are also included. 1 Year Warranty.

†Tank regulators use a US standard tank thread (CGA-350 .825"-14NGO-LH-EXT) and may require adapters not supplied by Protean.

## Options

120-0023: Ultra-Thin (80 microgram/cm<sup>2</sup>) detector window

Extended Warranty: Extra 1 year

Installation: On-Site Installation and introductory training. Two days on-site. All labor and travel expenses included.

Vista FC Software: Health Physics Applications and Control Software for use in operating the system from a computer.

Vista 2000 Software: Radiochemistry Applications and Control Software for use in operating the system from a computer.

Computer: PC with Monitor and Laser Printer

(All specifications are subject to change without notice.)