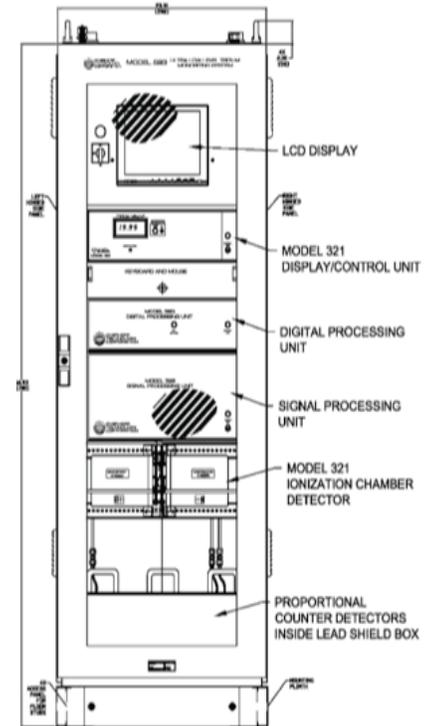


# Ultra-Sensitive Tritium in Water Monitor

## Model 1925-PR and 1925-PR-SEA

### Features

- High Sensitivity – 18,000 PCi/l in 24 Hours
- Detects Tritium in Water Below EPA Drinking Water Standard of 20,000 PCi/l
- Fully Automated, Real-Time and Continuous Operation
- Includes Hydrogen Separator to Separate Hydrogen (Tritium) from Water
- Tritium is Detected by Highly-Sensitive Dual Proportional Counters
- No Waste Generated
- Requires P-10 Gas
- Integrated Computer with Custom Software and Large LCD Display
- Model 1925-PR-SEA Includes Sample Preparation and Robust Plumbing to Withstand Salt Water.



### Application

An ultra-sensitive, fully-automated and real-time instrument used to monitor Tritium in water below the EPA drinking Water Standard of 20,000 PCi/l.

### Description

Detecting Tritium in water at low levels on a real-time, continuous basis is extremely difficult considering Tritium's weak Beta emissions and shielding from the water itself.

**Solution** The 1925-PR includes a hydrogen separator to separate hydrogen (Tritium) from the water. With this separation hydrogen gas can then be measured by highly, sensitive, shielded dual proportional counters.

An optional ionization chamber detector is offered to extend the measurement range (high-end range) and to provide a quicker response time at higher Tritium levels.

### Sensitivity

Sensitivity is to 18,000 pCi/L in 24 hours.

### Fully-Automated, Real-Time Operation

Exceptionally rapid response is due to its unique ability to ignore Radon. The instrument has an electronic time constant.

### No Waste Generated

No liquid scintillant is required and no mixed waste is generated. The proportional counting detectors only require a tank of P-10 gas for operation.



## TECHNICAL ASSOCIATES OVERHOFF TECHNOLOGY

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISIONS OF



USNUCLEARCORP

OTCQB-UCLC

# Ultra-Sensitive Tritium In Water Monitor

## Model 1925-PR and 1925-PR-SEA

### Specifications

#### Detection:

Range	4.5 Decades (Proportional Detectors only), or 6.5 Decades with Ionization Detector
Sensitivity	18,000 pCi/L in 24 hours
Display	10" Color Touch-Screen LCD
Measurement	i) 0 - 10 V, linear
Interface Outputs	ii) Ethernet
Proportional Counters	Balanced pair of copper clad acrylic counter tubes, 1.5 liters total volume each, surrounded by 1" of lead shielding
Ionization Chamber	Dual 2L ionization chambers on one axis with sample flow through both for differential tritium measurement

#### Electronics

##### Alarms, Malfunction

- i) Instrument air low flow
- ii) P-10 gas low
- iii) Chamber or power supply malfunction
- iv) Oxidizer temperature
- v) Low sample flow

##### Alert Conditions

Background high level, tritium loss of signal, background loss of signal, Tritium low counts, and background low counts

##### Alarm Conditions

- i) Tritium alert level
- ii) Tritium high level

##### Alarm Interface

- i) Fail safe relay closures
- ii) Ethernet

#### Pneumatic System

##### Hydrogen Separator

Separates inlet water into hydrogen (containing Tritium) and oxygen; O<sub>2</sub> is mixed, diluted, and exhausted safely.

##### Counter Gas

P - 10 (90% Argon, 10% Methane)  
Supply pressure: 10-14 PSIG (69-97 KPa)

Usage: 400cc per minute @ atmospheric pressure

##### Sample Flow System

Brushless Dual Bearing Diaphragm Pump, flow rate 5 lpm typical

##### Flow Meter

P-10 Gas Flow and Instrument Air Flow Adjustable 0-500 cc/min, Manual set-point 400cc/min

##### Mass Flow Meter

Sample Flow, range 0-250 cc/min, electronically controlled set-point 200cc/min

#### Weight and Dimensions:

##### Dimensions

70.9" [1800mm] High x 23.3" [600mm] Wide x 23.3" [600mm] Deep floor mounted painted steel enclosure with polycarbonate window door and key locking latch on door. Rear-hinged door and hinged side panels. IP-54, Nema 13 Rated

##### Weight

630 lbs (286 kg)

##### Power

115/230V 50/60 Hz, 100 W max.

##### Environmental

5° C to 40° C      0 - 95 % R.H.



## TECHNICAL ASSOCIATES OVERHOFF TECHNOLOGY

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISIONS OF

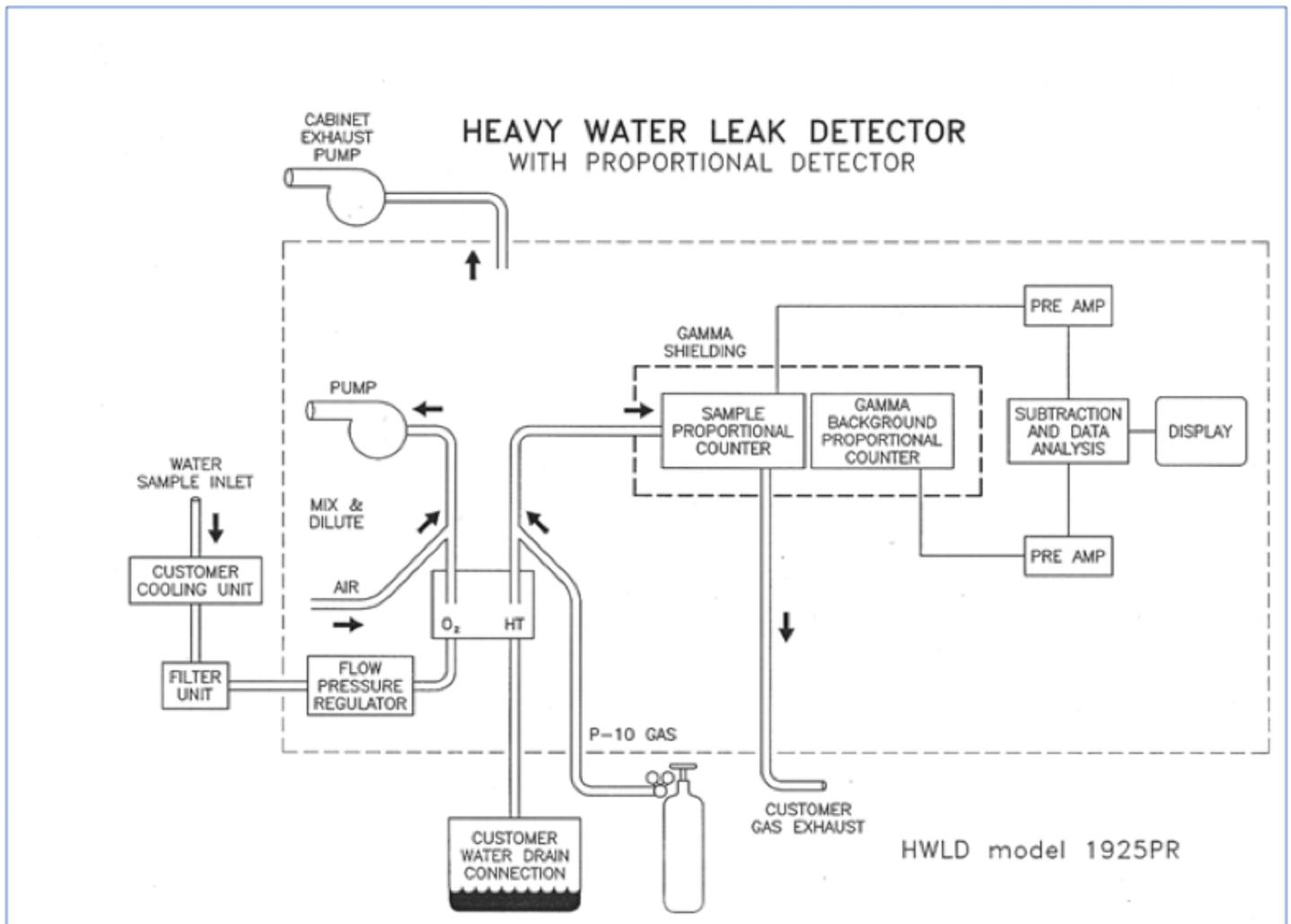


USNUCLEARCORP

OTCQB-UCLC

# Ultra-Sensitive Tritium In Water Monitor

Model 1925-PR and 1925-PR-SEA



Model 1925-PR Flow Path



## TECHNICAL ASSOCIATES OVERHOFF TECHNOLOGY

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISIONS OF



USNUCLEARCORP

OTCQB-UCLC