

Model 1925-PR

Tritium Heavy Water Leak Detector

Pressure Regulating Equipment

Pressure of input sample streams can be up to 103 kPa. This pressure is immediately reduced to 2-3psi via Pressure Regulating Valves (PRV). Each PRV is associated with Pressure Relieve Valve set to open at 100 kPa, therefore, the pressure in the system can never be more than 100 kPa, which makes it safe to handle. This also makes the instrument Class 6 Nuclear Device.

Fully Integrated Package

Model 1925 -PR is a completely self-contained instrument for real time observation of tritium concentration in water. The instrument is mounted inside of the 200cm tall steel enclosure with reinforced anchoring feet and locked access.

P-10 gas (90% Argon, 10% Methane, non-combustible) cylinder is connected to the unit externally. This quantity is sufficient for 60 days of continuous operation.

The main subassemblies are:

1. Sample water input lines
2. External cooling loop in case of hot samples
3. PRV and RV system with manifolds
4. Water purification system (oil-in-water and micron filter)
5. Sample water pump
6. Detection module
7. Data acquisition electronics module
8. System control module
9. Waste water output line, RV output line and sample bypass output lines
10. Pre-filter

PLC Control

Sampling of input lines and control of alarms and pumps is done by PLC unit placed inside of the System Control Module. There is an alarm provided in case of PLC failure as well as manual override so that the operation can be continued manually until PLC is replaced. Manual operation is a backup system; the unit normally operates in automatic mode.

Routine Maintenance

Scheduled maintenance of consumables is required. P-10 gas cylinder needs to be replenished every 2 months and sample water filters need to be replaced. Also, periodic check of the efficiency and background is recommended if there is a possibility of increased background contamination and due to standard life cycle of electronics components.



TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

7051 ETON AVENUE, CANOGA PARK, CA 91303

P: 818-883-7043 | F: 818-883-6103 | C: 818-836-0381

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

DIVISIONS OF



USNUCLEARCORP