TRITIUM GAS DECONTAMINATION SYSTEM
Model ~ TRI-DECON

FEATURES:
HIGH EFFICIENCY TRITIUM DECONTAMINATION
SYSTEM INCLUDES INLET & OUTLET TRITIUM MEASUREMENT:
- USER SETTABLE UNITS - µCi/l or Bq/m³ etc.
- WIDE RANGE - DIGITAL ACCURACY
- PROGRAMMABLE DIGITAL READOUT
- SENSITIVE FOR OCCUPATIONAL EXPOSURE
- DYNAMIC BACKGROUND COMPENSATION
- BUILT-IN HIGH LEVEL ALARM
- BUILT-IN LOW FLOW ALARM
- IN-LINE

DESCRIPTION:
Technical Associates TRI-DECON is a system for Tritium removal from air or gas.
- A rugged system for harsh environments.
- In-line operated.
- Inlet and outlet hoses allow decontamination of interiors of fume hoods, exhaust stacks, etc.
- User friendly controls are provided.

CONVENIENT & EASY TO USE
MINIATURE TRITIUM GAS REMOVAL FACILITY

PTG-9 ELECTRONICS
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SPECIFICATIONS FOR TRITIUM MONITORS:
MID TO HIGH (PTG-9H) ~ ULTRA LOW (PTG-9)

DETECTOR:
Ranges:
- PTG-9: $1 \times 10^{-3}$ to 10 $\mu$Ci/l (37 KBq/m$^3$ to 3.7 x 10$^7$ Bq/m$^3$)
- PTG-9H: $1 \times 10^{-3}$ to 1 $\mu$Ci/l TO 10,000 $\mu$Ci/l

ELECTRONICS:
Display: Compact, easy to read digital LCD readout.
Smoke, Dust & Ion Elimination: Filter and deionizer reduce effects to negligible level.
Circuit: Electrometer circuit amplifies net difference between 0.7 liter Tritium internal chamber and a sealed background chamber of similar configuration.
Controls: Power, Pump On/Off, Battery Check, Set (calibration aid), Zero Adjust, Meter Programming (Two buttons).
Calibration: Can calibrate internally with Tritium gas, or on a calibration course, or (at a single point) with optional Beta or Gamma source.
Data Port: RS-232 serial port is built in (fully addressable).
Case: Deep drawn aluminum case, with handle and gasket lid, easily cleanable anodized finish.
Backup Battery: 9V rechargeable sealed.
Battery Life: 20 hours between charges. Battery charger is built-in.

WEIGHT & DIMENSIONS:

ELECTRONICS:
Dimensions: Instrument Case (Including handle): 9"W x 13"L x 9" H.
Front Panel: 9" H x 13" Wide.
Weight: 18 lbs.

FULL SYSTEM WEIGHT & DIMENSIONS WILL BE DETERMINED BY THE REQUIRED CAPACITY & FLOW RATE PER CUSTOMER SPECIFICATION.
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**TRI-DECON FLOW PATH**

- Contaminated air or gas enters the system through a pump, goes into the Mid to High level Tritium Inlet Monitor (PTG-9H) to gauge the pre-treatment contamination level.
- It may then go straight into the treatment / decontamination system or be routed into a storage tank for later treatment.
- The treatment system starts with an oxidizer to convert any elemental Tritium (T₂ or HT) into water vapor (T₂O or HTO).
- The gas stream then enters a condenser which routes the liquid water into the water collection trap.
- In line absorber finishes the drying process of the air stream.
- Air stream passes through the low level Tritium exit Monitor (PTG-9).
- The clean sample is sorted to the exhaust.
- The dirty sample is diverted for further scrubbing, repeating the cycle until finished and clean.