



Mound Technical Solutions, Inc.

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TRITIUM BUBBLER MODEL MRB100

The MRB100 HTO Bubbler is the state-of-the-art, three-vial, single stage tritium bubbler collection instrument. It is a complete HTO collection system. The basis for the design of this instrument began at the DOE's Mound facility in Miamisburg, Ohio in the early 1980's. The same people involved with that development work have developed this device and other models such as our flagship MRB500.

MTS UNIQUELY OFFERS

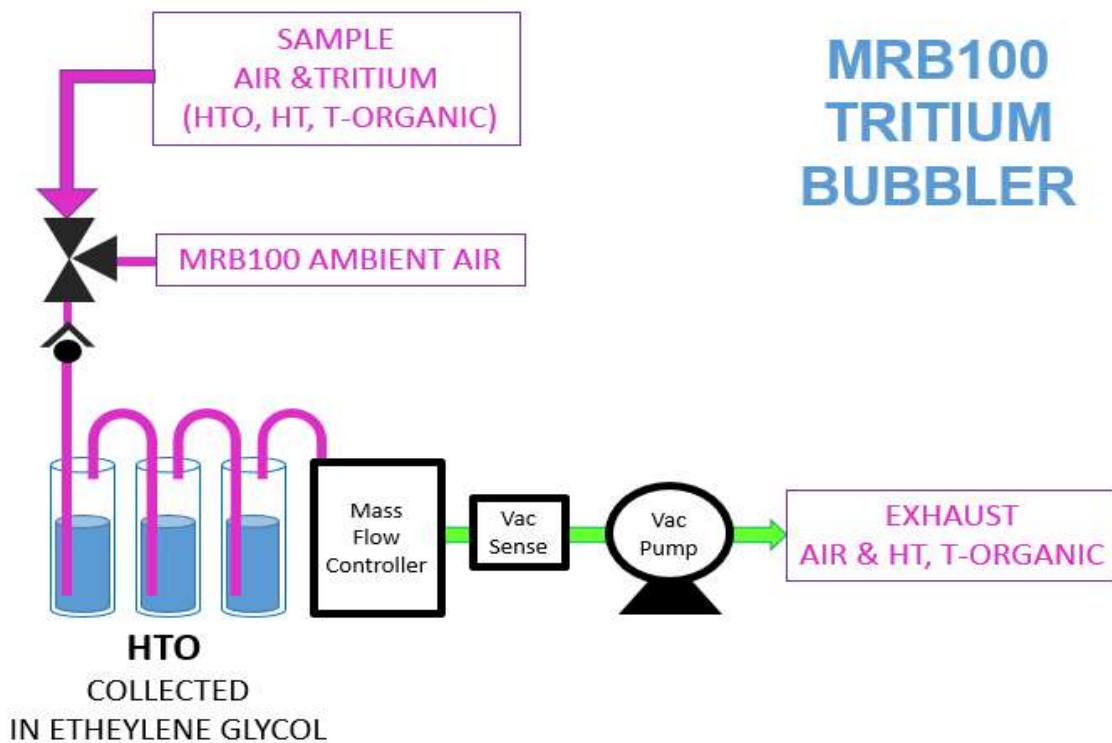
- ◆ Experience in the design, fabrication, maintenance, and evaluation of Bubbler instruments since 1981
- ◆ Evaluation of several designs and components over several years has established a knowledge base for quality and reliable construction
- ◆ Well documented operating and maintenance procedures provide detailed information
- ◆ Comprehensive Quality Assurance testing performed and documented on each production unit
- ◆ Capabilities include follow-up calibration of mass flow controller and complete instrument operational evaluation and calibration
- ◆ Telephone, e-mail, and on-site (fee based) support are provided during and after the one (1) year warranty of materials and workmanship – ask for details
- ◆ All makes of scintillation vials can be used with the instrument making collection vial inventory efficient

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PRINCIPLE OF OPERATION



Sample gas enters the instrument and flows through three (3) standard scintillation counter ready vials of ethylene glycol which retain the HTO component. The sample gas, now less the tritiated water vapor, flows through the precision mass flow controller which regulates the sample flow through the instrument. The user has control over the flow rate in the range of 20 to 200 sccm.

SPECIFICATIONS

Dimensions:..... Width: 16.0" (40.64 cm) ; 19" (48.26 cm) front rack mount tabs
Height: 8.5" (21.60 cm); Depth: 16.0" (40.64 cm), 21.0" (53.34cm) with gate

Weight: 30 lbs

Vacuum Pump: High Reliability, long life for continuous operation (4 year +), oil-less (clean air discharge), easily replaceable carbon vanes, thermal protection

Flow control: Electronic mass flow controller (20-200 sccm/min) with flow display and adjustment located on front panel.

System protection:..... In-line filter to protect flow controller; Check-valve and venting mechanism to protect against glycol transport; Vacuum gauge; Pump monitor; Fault alarms.

Operating parameters: 5 to 40°C and 0 to 95% rh non-condensing.

Sensitivity: Detection limit of ambient air is at least 1E-10 $\mu\text{Ci/cc}$