

GC Supplies

Combination Traps—Gas Specific



Agilent Big Universal Traps

Big Universal Traps utilize a layered, multi-adsorbent bed packing of the most effective, highest capacity adsorbent materials available today for the removal of oxygen, moisture, hydrocarbons, carbon dioxide and carbon monoxide from helium gas streams. The volume of the various adsorbent materials in the Big Universal Trap was developed through rigorous testing and evaluation in order to assure that breakthrough of the five major contaminant groups occurs as simultaneously as possible as each material achieves complete saturation.

One Big Universal Trap unit will easily purify the contents of 13 “K” size cylinders of 99.997% purity helium to a cumulative level of 100 parts per billion of O₂, H₂O, CO₂, CO and hydrocarbons at a flow rate of up to 8 L/min. All tube fittings are Swagelok brand stainless steel, fitted with 40 micron stainless steel frits for particulate control. Maximum pressure is 500 psi.

Big Universal Traps are ideal for any GC or GC/MS application where helium is employed and assurance of purity is essential. Combining the contents of three individual in-line traps into a single unit reduces the number of potential leaks and the possibility of aspirating contaminants into the gas stream.

Capacity Data:

High Purity Helium—99.997%		Removal Capacity
O ₂	< 5ppm	1.07L
THC*	< 1ppm	20g
H ₂ O	< 5ppm	46g

*Total Hydrocarbons, analysis limited to 3 contaminate groups.

Effluent Concentration:

Research Helium—99.9999%	
Impurities	< 1.0ppm
N ₂	< 0.5ppm
O ₂	< 0.5ppm
THC*	< 0.1ppm
CO+CO ₂	< 0.1ppm
H ₂ O	< 0.2ppm
H ₂	< 0.2ppm
Ar	< 0.1ppm
Ne	< 0.5ppm

*Total Hydrocarbons, analysis limited to 3 contaminate groups.



Big Universal Trap (RMS Series) Ordering Information

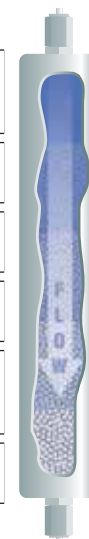
Cat. No.	Gas Purifier Type	Fitting
RMSHY-2	Hydrogen	1/8"
RMSHY-4	Hydrogen	1/4"
RMSH-2	Helium (Ar/Me) ⁺	1/8"
RMSH-4	Helium (Ar/Me) ⁺	1/4"
RMSN-2	Nitrogen	1/8"
RMSN-4	Nitrogen	1/4"

Mounting Bracket for Big Universal Traps

Cat. No.	Description
UMC-5-2	Big mounting clip, 2/pk

⁺ Recommended for GC/MS

Two very high capacity hydrocarbon and moisture sorbents at the inlet for effective contaminant removal
Unique proprietary broad spectrum sorbent material for multiple contaminant removal
Two oxygen scavenging materials for both high capacity and high efficiency oxygen removal
Multiple bed format to allow several step reduction in contaminants
Removal of H ₂ O, O ₂ , halocarbons, hydrocarbons, CO, CO ₂ , H ₂ , and sulfur containing compounds with a single purifier
Very high efficiency sorbents at the outlet for trace contaminant removal



UOP® mat/sen™ Gas Specific Purifiers

- Removes oxygen, moisture, and hydrocarbons
- Replace 3 traps with 1 purifier!
- Decrease baseline noise
- Increase GC/MS sensitivity

Effluent Concentrations

Outlet levels listed indicate PPB concentration based on 50ppm nominal inlet concentration level

Purifier	CO	CO ₂	O ₂	H ₂ O	Sulfur	*NMHC ²
Helium	<1	<1	<1	<1	<1	<3
Hydrogen	<1	<1	<1	<1	<1	<3
Nitrogen	<1	<1	<1	<1	<1	<3
Air	-	-	-	<1	-	<3

* NMHC stands for non-methane hydrocarbons.

Specifications:

- Length: 21"
 - Diameter: 1.5"
 - Max inlet pressure: 300 psi
 - Max flow: 500mL/min
 - Pressure Drop*: 0.30 psi
- *120 psi @ 0 to 500mL/min



UOP Gas Specific Purifiers Ordering Information

Cat. No.	Gas Purifier Type	Fitting
014-1200	Hydrogen	1/8"
014-1202	Hydrogen	1/4"
014-1100	Helium	1/8"
014-1102	Helium	1/4"
014-1300	Nitrogen	1/8"
014-1302	Nitrogen	1/4"
014-1400	Air	1/8"
014-1402	Air	1/4"