

Gas-Specific Purifiers/Traps

Description: Airgas® line of gas purifiers combines new synthetic zeolite adsorbent materials technology with a unified gas purifier approach to produce a new generation of gas purification products. Instead of installing three purifiers to remove the three common classes of contaminants (oxygen, moisture and hydrocarbons), these Gas-Specific Purifier Modules combine these capabilities into a single gas-specific purifier module. These modules preferentially remove selected contaminants from the gas.

These modules reduce contaminant levels (from higher than fifty parts per million to less than twenty-five parts per billion) and adsorb a larger number of contaminants than the commonly used adsorbent materials. Their performance is further enhanced by incorporating multiple beds of proprietary adsorbent materials so that each successive bed functions to lower the levels of contaminants in a step function. When these technical features are combined with advanced zeolite adsorbent materials technology, vastly more efficient purifiers are the result.

This new gas-specific purifier technology is so efficient and effective that it is supplied with or recommended by every major mass spectrometer manufacturer to enhance baseline stability and lower the noise of baseline. Capillary column life and performance are improved by preventing contamination of the column with water, oxygen or hydrocarbons.



Design Features

- Reduce carrier gas impurities.
- Decrease GC background noise.
- One purifier removes all three classes of contaminants (oxygen, moisture, and hydrocarbons).
- Increase GC/MS sensitivity and dynamic range.

Specifications

Dimensions	400 cc, 22.5" x 1.5" aluminum tube (50.8 cm x 3.8 cm)
Maximum Pressure	1000 psig
Maximum Temperature	80°C
Packing	Proprietary synthetic zeolite adsorbent
Additional Information	Purifier must be mounted in vertical position

Contaminant Selectivity/Contaminant Outlet Level in ppb (1)

Module	CO	CO ₂	O ₂	N ₂	H ₂ O	THC
Module Selectivity and Purity Specifications						
Helium Purifier	High/<20	High/<10	High/<10	N/A	High/<25	High/<10
Hydrogen Purifier	High/<20	High/<10	High/<10	N/A	High/<25	High/<10
Nitrogen Purifier	High/<20	High/<10	High/<10	N/A	High/<25	High/<10
Air Purifier (2)	High/<20	High/<10	N/A	N/A	High/<25	High/<10
Moisture Trap (3)	High/<20	High/<10	N/A	N/A	High/<25	Moderate/*
Hydrocarbon Trap (3, 4)	N/A	N/A	N/A	N/A	High/<25	N/A
Oxygen Trap (3, 5)	Slight/*	Slight/*	High/<10	High/<25	Moderate/*	N/A

(1) All of the output concentrations are based on a flow rate of 150 mL/minute. (2) Based on vehicle emission zero air. (3) The performance of the trap depends on the gas used; output levels are referenced to 99.995% helium. (4) Do not use for oxygen purification. (5) Do not use if inlet gas has more than 100 ppm hydrocarbons.

* Not detectable.

GAS PURIFIERS

Gas-Specific

Gas-Specific Purifiers/Traps Cont.

Ordering Information

Product Number	Gas Service	Description
Purifiers		
Y40-P1001	Helium	1/8" Fitting
Y40-P1002		1/4" Fitting
Y40-P2001	Hydrogen	1/8" Fitting
Y40-P2002		1/4" Fitting
Y40-P3001	Nitrogen	1/8" Fitting
Y40-P3002		1/4" Fitting
Y40-P4001	Air	1/8" Fitting
Y40-P4002		1/4" Fitting
Traps		
Y40-T1001	Moisture	1/8" Fitting
Y40-T1002		1/4" Fitting
Y40-T2001	Hydrocarbon	1/8" Fitting
Y40-T2002		1/4" Fitting
Y40-T3001	Oxygen	1/8" Fitting
Y40-T3002		1/4" Fitting