

Gas Purifiers

Helium and Nitrogen Purifiers

Carrier gas purity is essential in any application requiring extreme sensitivity. Impurities limit detector sensitivity and can even destroy capillary columns. The Valco HP2 provides "point-of-use" purification of helium or other noble gases, such as Ar, Ne, Kr, and Xe, to sub-ppm levels of reactive gaseous impurities. The NP2 is similar, purifying nitrogen to sub-ppm levels of gaseous impurities.

The purification substrate in Valco gas purifiers is a non-evaporable gettering alloy. This stable alloy is contained in a welded assembly, so the purifiers can be used safely in industrial applications with minimal precautions. The getter is activated by heating, which eliminates the oxide film on the particle surface and allows helium to diffuse into the bulk of the getter particles. The HP2 and NP2 feature a self-regulating design which eliminates the possibility of thermal runaway and maintains the getter material at the optimum temperature.



Standard helium and nitrogen purifiers

Includes universal power supply.

Description	Helium purifier		Nitrogen purifier	
	Prod No		Prod No	
110 VAC	HP2		NP2	
230 VAC	HP2-220		NP2-220	

Replacement getter assembly

Helium	I-23572HP2
Nitrogen	I-23572NP2

HELIUM PURIFIER

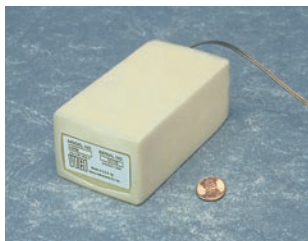
- CE certified
- Gases purified He, Ne, Ar, Kr, Xe, Rn
- Maximum operating pressure 1000 psig
- Impurities removed Outlet impurities less than 10ppb H₂O, H₂, O₂, N₂, NO, NH₃, CO, CO₂, and CH₄, based on 10ppm total inlet impurities. Other impurities removed include CF₄, CCl₄, SiH₄ and light hydrocarbons.
- Impurities **not** removed He, Ne, Ar, Kr, Xe, Rn

NITROGEN PURIFIER

- CE certified
- Gases purified N₂ only
- Impurities removed Outlet impurities less than 10ppb H₂O, H₂, O₂, NO, NH₃, CO, CO₂, and CH₄, based on 10ppm total inlet impurities. Other impurities removed include CF₄, CCl₄, SiH₄ and light hydrocarbons.
- Impurities **not** removed He, Ne, Ar, Kr, Xe, Rn, N₂

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Gas Purifier and Thermal Conductivity Detector



Miniature Gas Purifiers

The Valco Miniature Helium Purifier (HPM) and Miniature Nitrogen Purifier (NPM) are designed to be installed in a gas chromatograph's flow path immediately upstream of the injector.

The HPM/NPM will remove any contaminants introduced by flow controllers, elastomeric tube seals, pressure regulators, crude traps, or other system components that are not completely clean and leak-tight.

Mini helium and nitrogen purifiers

Includes universal power supply.

Description	Nitrogen purifier	
	Prod No	Prod No
110 VAC	HPM	NPM
230 VAC	HPM-220	NPM-220



Microvolume Thermal Conductivity Detector

Our dual filament TCD is a stand-alone unit consisting of the detector housing and a controller with electrometer and temperature controls. The detector cell includes two separate nickel/iron filaments, capable of independent or referenced (differential) operation. Cell volume and geometry are optimized for capillary chromatography and enhanced sensitivity at low flow

rates. (Recommended total flow rate: 2-10 mL/min.) Thermal stability is maintained to $\pm 0.02^{\circ}\text{C}$, resulting in a stable, noise-free signal. A single 0-1 millivolt attenuated output for a strip chart recorder is provided through the signal cable at the rear of the controller, with 0-1 volt and 0-10 volt unattenuated signals available through the remote signal cable.

TCD Thermal conductivity detectors

Description	110 VAC		230 VAC	
	Prod No		Prod No	
Entire unit (cell and electronics)	TCD2-NIFE		TCD2-NIFE-220	
Cell/oven assembly only	Dual filament	TCD2-NIFED	TCD2-NIFED-220	
TCD controller only	TCD2-C		TCD2-C-220	