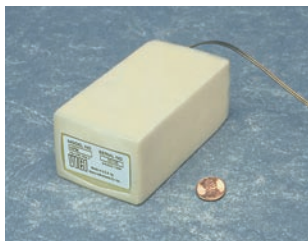


Gas Purifier and Thermal Conductivity Detector



Miniature Gas Purifiers

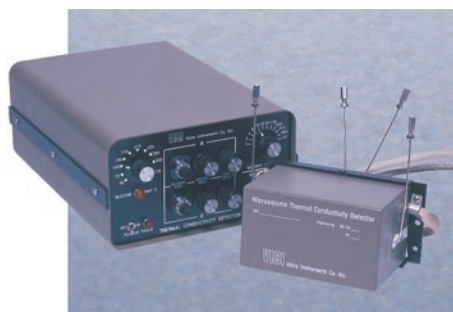
The Valco Miniature Helium Purifier (HPM) and Miniature Nitrogen Purifier (NPM) are designed to be installed in a gas chromatograph's flow path immediately upstream of the injector.

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	