






Leak Detectors and Monitoring Equipment for Dry Cleaning Operations

On July 27, 2006, new federal requirements became effective for all dry cleaners that use the chemical perchloroethylene (PERC) as a dry cleaning solvent. Existing dry cleaning machines (installed between December 9, 1991 and December 21, 2005) must be in compliance with the new standards by July 28, 2008. One of the new rules requires dry cleaners to conduct monthly inspections for PERC leaks using a halogenated hydrocarbon detector or PCE gas analyzer, such as a photo ionization detector or PCE gas analyzer, such as a photo ionization detector. **The detectors are required to sense the vapors at 25 parts per million by volume (ppmv) or greater.** Per EPA rules, a leak is defined as “PCE vapor concentration exceeding 25 ppm by volume (50 ppm as methane) as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.” Common leak sources are the perceptible leaks from hose and pipe connections, fittings, couplings, and valves; door gaskets and seatings; filter gaskets and seatings; pumps; solvents tanks and containers; water separators; muck cookers; stills; exhaust dampers; diverter valves; and cartridge filter housings.

Below you will find information on the types of detectors that may meet U.S. Environmental Protection Agency (EPA) requirements. This is not an endorsement. Please note that this is not an extensive list, further research is recommended to find the best tool for your dry cleaning facility. Prices are subject to change. Sources: California Air Resources Board, EPA and list courtesy of Tennessee Small Business Environmental Assistance Program.







PERC Gas Analyzers - Photoionization Detector (PID)					
Can be used for equipment leak detection (≥ 25 PPM PERC) & Carbon Adsorber Monitoring (300 ppm \pm 75 ppm PERC / 100 ppm \pm 25 ppm). Detectors are calibrated to be solvent specific. Price range \$1,500 - \$3,800.					
	Manufacturer	Model #	Type	Sensitivity	Distributors
	Ion Science	PhoCheck 1000	PID	0.1-4000 ppm 5% accuracy	Ion Science Americas LLC 1-802-244-5153 info@ionscience-americas.com www.ionscience.com
	Rae Systems	MiniRAE 2000 2 sensitivity levels	PID	0-99 ppm / 100-1,999 ppm 2% accuracy	There are multiple vendors who sell the Rae products. Three are listed below: Rae Systems, Llyod Stading 206-310-5906 lstading@raesystems.com www.raesystems.com
	Rae Systems	ToxiRAE Plus 2 sensitivity levels	PID	0-99 ppm / 100 -2000 ppm 2% accuracy	Inspector Tools 1-800-895-4916 www.inspectortools.com Cole-Parmer 1-800-323-4340 www.coleparmer.com
	International Sensor Technology	IQ350-TLV-FALCON	PID	low level (0-100 ppm) / medium level (0-500 ppm)	International Sensor Technology 1-800-478-4271 www.intlsensor.com
	PID Analyzers / HNU	DL-102	PID	less than 1 ppm to 3.000 ppm	PID Analyzers, LLC 1-800-PID-6826 www.hnu.com/

Terms: Note: Make sure equipment is properly calibrated to detect PERC. Work with your supplier.)

- Oz(s)/yr = ounces per year - unit for measuring the rate of the gas flow from a machine leak. [Note: 0.5 oz/yr = ~10 - 15 PPM according to manufacturers]
- ppm = parts per million. A measure of concentration of one part per million parts.
- Non-selective will not distinguish PERC (a halogen) leak from other non- halogenated hydrocarbon gases.
- Halogen selective will measure only the halogen gases (chlorine) and the refrigerant in the refrigerated condenser (chlorine and fluorine).
- Solvent specific is only capable of measuring the flow of the solvent for which it was standardized to detect.

Halogenated Hydrocarbon Detectors

Must detect 25 ppm or more Tetrachloroethylene (Perchloroethylene or Perchloroethene). Price Range \$125 – \$580

	Manufacturer	Model #	Type	Sensitivity	Distributors
	Snap-On Inc	ACT 730 Leak Detector Three levels of sensitivity (5 levels of detection)	Halogen selective	< 0.25 oz/yr	Snap-on Equipment 1-800-225-5786 Clay.Cook@snapon.com http://buy1.snapon.com
	Inficon Inc	Tek-Mate	Heated diode Halogen selective	< 0.4 oz/yr	Nu-Way Products Co. Phillip Farmer 1-800-462-2089 www.inficonrefrigerantleakdetectors.com
	Aeroqual Semiconductor	Aeroqual 200 Leak detector (perchloroethylene)	Solvent specific	0-200 PPM	Kanomax USA, INC 1-800-247-8887 http://kanomax-usa.com/Aeroqual-Series-200.html
	TIF	TIFXP-1A Six tricolor LEDs for visual leak indication, seven sensitivity levels	Halogen selective	< 0.1 oz/yr	There are multiple vendors who sell the TIF products. Four are listed below: Grainger Industrial Supplies www.grainger.com TIF 1-800-327-5060 www.tif.com Network Tool Warehouse 1-800-939-8665 www.ntxtools.com Cleaner Supply 1-800-388-5410 www.cleanersupply.com
		TIFRX-1A Six single color LEDs for visual leak indication, two sensitivity levels	Halogen selective	< 0.25 oz/yr	
		TIFXL-1A One sensitivity level	Non-selective	< 0.4 oz/yr	

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