

Halogenated Leak Detector Options

Recently, the Environmental Protection Agency (EPA) amended the federal standard for dry cleaners (40 CFR Part 63, Subpart M). The amendment established several new requirements, one of which is that all dry cleaners must conduct monthly inspections for perchloroethylene (PCE) leaks, using a halogenated hydrocarbon detector or PCE gas analyzer. Dry cleaners may use any brand of halogenated hydrocarbon leak detector for the monthly monitoring provided they can demonstrate it meets the requirements of the rule, “portable device capable of detecting vapor concentrations of PCE of 25 parts per million by volume (ppmv) and indicating a concentration of 25 ppmv or greater by emitting an audible or visual signal that varies as the concentration changes.” Facilities are required to repair vapor leaks detected within 24 hours unless parts must be ordered. Dry cleaning machines installed before December 21, 2005 must be in compliance with the new standard as of July 28, 2008. Any machines installed after December 21, 2005 must be in compliance upon startup.

Based on information provided by the California Air Resources Board and leak detector manufacturers, the following units are expected to meet EPA guidelines. This is not an endorsement. Please note that this is not an extensive list. Further research is recommended to find the best leak detector for your dry cleaning facility.

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 Tiger	PID	0.01-20,000 ppm 5% accuracy	Ion Science Americas LLC 1-877-864-7710 www.ionscience.com
Rae Systems	MiniRAE 2000 2 sensitivity levels	PID	0-10,000 ppm 2% accuracy	Rae Systems 1-800-467-9005 www.raegasdetection.com Cole-Parmer 1-800-323-4340 www.coleparmer.com
	ToxiRAE Pro PID	PID	0.1-2,000 ppm 2% accuracy	
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 3000 ppm	PID Analyzers, LLC 1-774-413-5281 www.hnu.com

Halogenated Hydrocarbon Detectors - Must detect 25 ppm or more Tetrachloroethylene (Perchloroethylene or Perchloroethene). Price range \$125 - \$800.				
Manufacturer	Model #	Type	Sensitivity	Distributors
Snap-On Inc.	ACT 730 Leak Detector	Halogen selective	<0.25 oz/yr	Snap-on Equipment 1-877-740-1900 www.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.inficon.products.com
Aeroqual	Aeroqual 200 Leak Detector (perchloroethylene)	Solvent specific	0-200 ppm	www.aeroqual.com
TIF		Halogen selective Halogen selective Non-selective	<0.1 oz/yr <0.25 oz/yr <0.4 oz/yr	Grainger Industrial Supplies www.grainger.com TIF 1-800-327-5060 www.tif.com Network Tool Warehouse Tel: 1-800-939-8665 www.ntxtools.com
Tek-Mate		Perc Detector		Cleaner Supply 1-800-388-5410 www.cleanersupply.com
Nova Systems Products	Bolo Green	Solvent specific	5 ppm	NOVA Systems Products, LLC 2111 Comprehensive Drive Aurora, IL 60505 Phone: 630.499.2130 Fax: 630.499.2132 Email: info@novasystemsproducts.com

Tips for using the detector:

- Learn how it should be calibrated. Most require fresh air prior to testing for leaks. It is recommended you turn the detector on outside of your shop. If you turn it on near a leak, it may calibrate incorrectly.
- Operate your detector according to manufacturer's instructions.
- Check for leaks when they are most likely to occur. Check for leaks during the drying cycle since the dry cleaning machine is operating under pressure. Check for leaks around the distillation unit while it is running. You probably won't find leaks during the wash cycle since perc liquid is being agitated in the drum and the condenser isn't running.
- Place the tip of the detector within one to two inches of the area being checked. Move it slowly back and forth before moving to the next location.
- If the detector beeps rapidly, you may have a leak. Go back to the area where you first detected the beeps. You want to find the exact spot where the detector reliably beeps so you know the precise part or location of the leak.
- If the instrument detects a perc vapor leak or is set off, make sure to air it out before continuing the inspection; otherwise, you may have incorrect results.