



Local Exhaust Ventilation

What is local exhaust ventilation?

Local Exhaust Ventilation (LEV) sometimes referred to as a snorkel or elephant trunk is an engineering control used to capture low risk airborne contaminants at or near the source and remove them away from the work place.



How does local exhaust ventilation work?

Local exhaust systems operate in a similar manner to a household vacuum cleaner. Air moving from an area of high pressure to an area of low pressure is created by a fan which draws air through the ventilation system.

What are the differences between a fume hood and local exhaust ventilation?

Unlike a conventional fume hood which provides a barrier between the user and the hazardous material local exhaust ventilation does not. Compared to a fume hood LEV's require larger amounts of makeup air and are extremely susceptible to cross drafts which limit the effective capture radius to within 6" from the source.

How should local exhaust ventilation be used?

Laboratory use of LEV's should only involve low risk contaminant release. Examples include the removal of thermal updrafts from benchtop-heating processes; nuisance odors, dusts or the venting of common laboratory equipment such as gas chromatographs, vacuum pumps and HPLC equipment.

Can I use an LEV for work with hazardous materials?

NO! Local exhaust ventilation should **NOT** be used with: toxic chemicals, poisonous gases, carcinogens, reproductive toxins, corrosives, pyrophoric, biological or radiological materials. In addition LEV's should never be used where a reaction is unknown.

What should I do before working with local exhaust ventilation?

Before working with any LEV system the worker should have training and a basic understanding of the system. Before each use visually inspect the LEV to ensure the unit is not damaged and has adequate air flow (damper knob "on"). If you are unsure that an LEV is an appropriate use for a particular procedure, please contact EHS to for a hazard evaluation.

