

2C. Local Exhaust ventilation (LEV)

See also STFC [SHE Code 20: Gases and Dust](#)

Scope

LEV refers to any powered extraction system that is designed to either remove airborne contaminants from the working area directly, or dilute contaminants by bringing large quantities of air into the breathing zone of the worker.

LEV includes (but is not limited to):

- Fume Cupboards
- On tool extraction
- Nederman arms
- Welding fume extraction hoods
- Shot blasting booths
- Paint booths

Selection and Use

Fume Cupboards:

- New fume cupboards should be designed, manufactured, installed and commissioned to the requirements of EN 14175 - 2003.
- Consideration should be given to:
 - the required use when specifying the lining of the fume cupboard.
 - the use of scrubbing systems if highly corrosive chemicals will be used routinely.
 - whether any components needed to be ATEX rated – if the fume cupboard is to be used with flammable gases.
 - LEV systems employed in handling open radioactive sources (See also [STFC SHE Code 28: Radioactive Open Sources](#)) must only be installed following consultation with the site Radiation Protection Advisor (RPA); and
 - fitting sash stops, sash alarm, some form of flow indicator (fan speed indicator or manometer) and flow failure alarms.

Other LEV:

- New LEV systems should be specific to the work need.
- Consideration should be given to:
 - On-tool extraction vs. capture hood;
 - The size and shape of any capture hood to be used;
 - The location of moveable LEV if it is to be used in more than one area;
 - The need for filtration and ATEX rated electrical equipment if large amounts of dust or flammable gases etc. are to be extracted; and
 - The size of fan to produce the required flow rate.

Cleaning, Checks and Maintenance

- All LEV should be cleaned regularly to prevent build-up of contaminants.
- Filters should be changed/cleaned on a regular basis. Used/contaminated filters should be disposed of as Hazardous Waste.
- Regular checks should be made of:
 - Moving parts that may wear (bearings);
 - Parts that can suffer damage (hoods, ductwork and seals); and
 - Parts that deteriorate with use.

- Given the need for regular and occasionally extensive maintenance, consideration should be given to putting a maintenance contract in place with a specialist

All LEV must undergo a regular statutory inspection – 6 or 12 monthly. This inspection is organised by SHE Group at RAL and Estates at DL and ROE. All LEV MUST be registered with SHE/DL Estates. To register LEV on your site please provide:

- An original certificate of conformity; and
- An original installation and test report.