

SECTION 13

Ventilation and Certification Considerations

SECTION 13: VENTILATION AND CERTIFICATION CONSIDERATIONS

When performing certain shop-related activities, it is important to keep adequate ventilation and circulation of air. These activities may include, but are not limited to:

- Welding
- Brazing
- Soldering
- Carpentry activities that produce significant dust
- Cutting certain metals
- Using certain hazardous chemicals



Types of Ventilation

Dust Collection

A dust collection system is required when performing carpentry activities that may produce significant amounts of dust. A dust collector is attached to each dust-producing machine, and transports the dust to a central collection system, where the dust is filtered from the air and the air is exhausted from the system. This reduces the likelihood that workers will breathe in small wood particles in the air.

Hand-Held Power Tool Dust Extraction

Certain powered hand tools, including sanders and grinders, can produce large quantities of dust. Many hand-held power tools are now available with dust extraction and capture technologies designed into the tool. These local exhaust collection methods can be very effective in capturing and decreasing the amount of dust in and around the work area. They also have the advantage of being mobile and can be used in the wide variety of areas where hand-held powered tools are commonly needed. If possible, purchase and use hand-held power tools that are engineered and designed with local exhaust capabilities.

Fume Hoods

Fume hoods are one of the most common methods of ventilation. Working with chemicals inside a fume hood can significantly decrease hazardous fumes in the breathing zone of the worker. Their application, however, may be limited due to the fact that they are stationary and space is limited.

Snorkel Arms

Snorkel arms are movable, flexible ventilation tools that can be placed directly over the work where it's happening on the bench. Snorkel arms are the ideal method of ventilation when a traditional fume hood can't be used (due to the size/weight of the work, location of the hood, etc.).

Spray Booths

Spray booths are a form of ventilation used when spray painting, coating, or glazing. Spray booths are available in different sizes for different applications, which range from fume hood-sized booths to large walk-in booths.

Testing and Certification

All fume hoods, snorkel arms and spray booths must be tested annually to ensure that their airflow is adequate. EH&S or Facilities Services perform these tests annually with an anemometer. Once the fume hood, snorkel arm

or spray booth is determined to have adequate airflow, a certification is issued. Where applicable, operate hoods at the designated sash height to ensure maximum protection and ventilation efficiency. If the airflow is not adequate, the fume hood, snorkel arm or spray booth must be taken out of service until repairs can be made.

Gas-Powered Equipment

Gas-powered equipment should not be used indoors at any time due to ventilation concerns and the potential for exposure to carbon monoxide, an odorless and tasteless toxic gas. Contact EH&S if gas-powered equipment must be used in or near indoor areas.